eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

DoD Type I Data Package

Prepared for:

Tidewater, Inc.
3761 Attucks Drive
Powell OH 43065

Project: Great Kills Park Phase I RI OU2
Soil and Water Samples
Collected on 10/24/18

SDG# TID10

GROUP	SAMPLE NUMBERS
2002262	9867760-9867767

A2LA (DoD) Cert. # 0001.01
PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman

Dana M. Kauffman
Manager

Date: 01/24/2019

Any questions or concerns you might have regarding this data package should be directed to your client representative, Kay Hower at (717) 556-7364.

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

Table of Contents for SDG# TID10

1. Sample Reference List 4
2. Preservation Data 5
3. Methodology Summary/Reference 6
4. Analysis Reports / Field Chain of Custody 10
5. Volatiles by GC/MS Data 137
   a. Case Narrative/Conformance Summary 138
   b. Quality Control and Calibration Summary Forms 143
   c. Sample Data 238
   d. Standards Data 285
   e. Raw QC Data 981
   f. Preparation Logs 1104
6. Semivolatiles by GC/MS Data 1106
   a. Case Narrative/Conformance Summary 1107
   b. Quality Control and Calibration Summary Forms 1110
   c. Sample Data 1170
   d. Standards Data 1256
   e. Raw QC Data 1652
   f. Extraction/Distillation/Digestion Logs 1704
7. Semivolatiles by GC/MS-SIM Data 1724
   a. Case Narrative/Conformance Summary 1725
   b. Quality Control and Calibration Summary Forms 1729
   c. Sample Data 1767
   d. Standards Data 2228
   e. Raw QC Data 2471
   f. Extraction/Distillation/Digestion Logs 2575
8. Herbicides Data 2595
   a. Case Narrative/Conformance Summary 2596
   b. Quality Control and Calibration Summary Forms 2599
   c. Sample Data 2643
   d. Standards Data 2665
   e. Raw QC Data 2726
   f. Extraction/Distillation/Digestion Logs 2751
9. Pesticides Data 2755
   a. Case Narrative/Conformance Summary 2756

b. Quality Control and Calibration Summary Forms 2759
c. Sample Data 2929
d. Standards Data 2980
e. Raw QC Data 3363
f. Extraction/Distillation/Digestion Logs 3407
10. Polychlorinated Biphenyls (PCBs) Data 3411
a. Case Narrative/Conformance Summary 3412
b. Quality Control and Calibration Summary Forms 3415
c. Sample Data 3492
d. Standards Data 3526
e. Raw QC Data 3792
f. Extraction/Distillation/Digestion Logs 3830
11. Dioxins/Furans by HRMS Data 3834
a. Case Narrative/Conformance Summary 3835
b. Quality Control and Calibration Summary Forms 3838
c. Sample Data 3918
d. Standards Data 4168
e. Raw QC Data 5574
f. Extraction Logs 5795
12. Metals in Solid Data 5804
a. Case Narrative/Conformance Summary 5805
b. Sample Data 5809
c. Quality Control and Calibration Summary Forms 5817
d. Raw Data 5873
i. ICP Data 5874
ii. ICP-MS Data 5908
iii. Mercury Data 6002
e. Extraction/Distillation/Digestion Logs 6014
13. Moisture Data 6050

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Reference List for SDG Number TID10 with a Data Package Type of I-DOD

43062 - Tidewater, Inc.

Project: Great Kills Park Phase I RI OU2

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9867760	OU2TB102418-001	10/24/2018 07:45	10/25/2018 10:30
9867761	OU2-1-SS004	10/24/2018 09:15	10/25/2018 10:30
9867762	OU2-1-SS006	10/24/2018 09:50	10/25/2018 10:30
9867763	OU2-1-SS006 MS	10/24/2018 09:50	10/25/2018 10:30
9867764	OU2-1-SS006 MSD	10/24/2018 09:50	10/25/2018 10:30
9867765	OU2-1-SS006 DUP	10/24/2018 09:50	10/25/2018 10:30
9867766	OU2-1-SS002	10/24/2018 10:45	10/25/2018 10:30
9867767	OU2-1-SS008	10/24/2018 11:30	10/25/2018 10:30

eurofins | Lancaster Laboratories

Sample pH Log

SDG: TID10

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
9867760	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	11/6/2018 11:12:23AM	9052

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com

01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11996 VOCs- 25ml Water by 8260C

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

11995 VOCs- Solid by 8260C

The soil sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

10638 Hg - SW, 7471B - U4
00159 Mercury

The solution resulting from the mercury digestion is analyzed by Cold Vapor AA.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7471B, February 2007

13499 Thorium

The solution resulting from the metals digestion is analyzed by Trace ICP.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6010C, February 2007.

06123 Aluminum
06124 Antimony
06125 Arsenic
06126 Barium
06127 Beryllium
06128 Cadmium
06129 Calcium
06131 Chromium
06132 Cobalt
06133 Copper
06134 Iron
06135 Lead
06136 Magnesium
06137 Manganese
06139 Nickel
06140 Potassium
06141 Selenium
06142 Silver
06143 Sodium
06145 Thallium

13502 Uranium
06148 Vanadium
06149 Zinc

The solution resulting from the metals digestion is analyzed by ICP/MS.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6020A, February 2007.

10637 ICP/ICPMS-SW, 3050B - U4

The sample is digested with nitric acid, hydrochloric acid and hydrogen peroxide.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3050B, December 1996

10885 PCBs 8082A/3546

The sample is solvent extracted and exchanged to hexane. Sulfuric acid and florisil cleanups are performed to reduce potential matrix interferences. The extract is analyzed using gas chromatography on two capillary columns (primary and confirmation) with electron capture detectors.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8082A, February 2007.

14587 ocpest 8081B w/GPC & 3546

The sample is solvent extracted and exchanged to hexane. Florisil cleanup is performed to reduce potential matrix interferences. The extract is analyzed using gas chromatography on two capillary columns (primary and confirmation) with electron capture detectors.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8081B, February 2007.

10401 Herbicide soils 8151A Master

The sample is acidified and solvent extracted. The extract is then hydrolyzed, solvent washed, and acidified for final extraction. The chlorophenoxy acids, phenols and related target compounds are converted to the methyl esters using diazomethane. Florisil cleanup is performed to reduce potential matrix interferences.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8151A, December 1996.

04181 Herbicide Soil Extraction

The sample is acidified and solvent extracted. The extract is then hydrolyzed, solvent washed, and acidified for final extraction. The chlorophenoxy acids, phenols and related target compounds are converted to the methyl esters using diazomethane. Florisil cleanup is performed to reduce potential matrix interferences.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Methods 3550C & 8151A, February 2007.

10497 PCB Microwave Soil Extraction
10813 BNA Soil Microwave APP IX
10811 BNA Soil Microwave SIM

The sample aliquot is extracted using microwave extraction with 1:1 methylene chloride and acetone. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3546 Microwave Extraction, Revision 0, February 2007.

10496 PPL Pest. Microwave Extraction

The sample aliquot is extracted using microwave extraction with 1:1 hexane and acetone. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3546 Microwave Extraction, Revision 0, February 2007.

12969 SIM SVOAs 8270D (microwave)

The sample extract is analyzed by capillary column Gas Chromatography/Mass Spectrometry with Selected Ion Monitoring (SIM).

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8270D (SIM), February 2007.

10726 SVOA 8270D (microwave)

The sample extract is analyzed by capillary column Gas Chromatography/Mass Spectrometry.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8270D, February 2007.

13233 D/F in Solids 8290-Conf
12937 Dioxins/Furans in Solids-8290

The method provides procedures for the detection and quantitative measurement of polychlorinated dibenzo-p-dioxins (tetra- through octachlorinated homologues; PCDDs), and polychlorinated dibenzofurans (tetra- through octachlorinated homologues; PCDFs) in a variety of environmental matrices and at part-per-trillion (ppt) to part-per-quadrillion. The method requires the use of high-resolution gas chromatography and high-resolution mass spectrometry (HRGC/HRMS) on purified sample extracts.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8290A, Polychlorinated Dibenzo-p-Dioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by High Resolution Gas Chromatography/High Resolution Mass Spectrometry (HRGC/HRMS)

11030 Dioxins/Furans in Solids - Sox

The samples are extracted with 1:1 Methylene Chloride:Hexane in a Soxhlet - Dean Stark extractor. The extract is concentrated for clean-up or instrumental analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8290A, Polychlorinated Dibenzo-p-Dioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by High Resolution Gas Chromatography/High Resolution Mass Spectrometry (HRGC/HRMS)

07579 GC/MS-5g Field Preserv.MeOH-NC

The sample is collected and preserved with methanol in the field using vials that were prepared and pre-weighed at the laboratory. The vial preparation consists of adding 5 mls of methanol to a 40-ml vial. Once in the field, 5 +/- 0.5 g of soil is added to the vial and then iced at 4 +/- 2 degree C until the time they are returned to the lab. Upon receipt from the field, the container is re-weighed to determine the exact weight of the soil added to the vial. Since an approximate amount of soil is added to the vials in the field, the dilution factors may vary from sample to sample.

Reference: Test Methods for Evaluating Solid Wastes, SW-846, Method 5035A, Revision 1, July 2002.

06176 GC/MS - LL Water Prep

The samples are collected in DI vials in the field. The vial preparation consists of adding 5 mLs of DI water and a stir bar to a 40-ml vial. Once in the field, 5 +/- 0.5 g of soil is to be added to the vial and then iced at 4 +/- 2 degree C until the time they are returned to the lab. Upon receipt from the field, the container is re-weighed to determine the exact weight of the soil added to the vial. The sample is then frozen at -10 to -20 degree C within 48 hours of collection.

Reference: Test Methods for Evaluating Solid Wastes, SW-846, Method 5035A, Revision 1, July 2002.

00111 Moisture
00118 Moisture
00121 Moisture Duplicate

A well-mixed sample is heated by reflected infrared in an aluminum pan and dried to a constant weight. The decrease in weight in weight after drying is calculated as the moisture content.

Reference: SM 2540 G-2011 %Moisture Calculation for Dry Weight Determination

Analysis Reports / Field Chain of Custody

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Tidewater, Inc.
3761 Attucks Drive
Powell OH 43065

Report Date: November 21, 2018 16:58

Project: Great Kills Park Phase I RI OU2

Account #: 43062
Group Number: 2002262
SDG: TID10
PO Number: 2016-007-02
State of Sample Origin: NY

Electronic Copy To	AECOM	Attn: Devon Chicoine
Electronic Copy To	AECOM	Attn: Colleen Scott
Electronic Copy To	Tidewater, Inc.	Attn: Ryan Wensing
Electronic Copy To	AECOM	Attn: John Schroeder

Respectfully Submitted,

Kay Hower

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE
OU2TB102418-001 Water	10/24/2018 07:45	9867760
OU2-1-SS004 Grab Soil	10/24/2018 09:15	9867761
OU2-1-SS006 Grab Soil	10/24/2018 09:50	9867762
OU2-1-SS006 MS Grab Soil	10/24/2018 09:50	9867763
OU2-1-SS006 MSD Grab Soil	10/24/2018 09:50	9867764
OU2-1-SS006 DUP Grab Soil	10/24/2018 09:50	9867765
OU2-1-SS002 Grab Soil	10/24/2018 10:45	9867766
OU2-1-SS008 Grab Soil	10/24/2018 11:30	9867767

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Project Name: Great Kills Park Phase I RI OU2
ELLE Group #: 2002262

General Comments:

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.
Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Sample #s: 9867767

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial.

Sample #s: 9867762, 9867763, 9867764

The recovery for the sample internal standard is outside the QC acceptance limits. The following corrective action was taken: Similar results were obtained for the internal standard in the background, matrix spike and matrix spike duplicate indicating a matrix effect.

Sample #s: 9867761

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from both trials.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit in Trial 2.

Sample #s: 9867766

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from both trials.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit in Trial 2.

Batch #: B183042AA (Sample number(s): 9867761-9867764, 9867766 UNSPK: 9867762)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: 1,1,2,2-Tetrachloroethane, Acetone, Freon 113, 2-Butanone

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Styrene, Bromoform, 1,2-Dichlorobenzene, 1,2,4-Trichlorobenzene, trans-1,3-Dichloropropene, cis-1,3-Dichloropropene, Methylcyclohexane, Bromomethane, Trichloroethene, 1,2-Dibromoethane, Chlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dibromo-3-chloropropane, 4-Methyl-2-pentanone, 2-Hexanone, Xylene (Total)

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: 1,2-Dibromo-3-chloropropane, 1,2,4-Trichlorobenzene, Acetone, 2-Butanone, cis-1,3-Dichloropropene, 4-Methyl-2-pentanone, 2-Hexanone

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 9867761, 9867762, 9867763, 9867764, 9867766, MS, MSD

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9867761, 9867762, 9867763, 9867764, 9867766, MS, MSD

Batch #: B183101AA (Sample number(s): 9867761, 9867766-9867767)

The relative percent difference(s) for the following analyte(s) in the LCS/LCSD were outside acceptance windows: 4-Methyl-2-pentanone

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 9867761RE, 9867766RE, 9867767

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9867761RE, 9867766RE, 9867767

SW-846 8260C 25mL purge, GC/MS Volatiles

Sample #s: 9867760

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 9867761, 9867762, 9867766, 9867767

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.

Batch #: 18302SLI026 (Sample number(s): 9867761-9867764, 9867766-9867767 UNSPK: 9867762)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Hexachlorocyclopentadiene, 3,3'-Dichlorobenzidine, Aniline, Pyridine, 4-Chloroaniline, 3-Nitroaniline, 4-Nitroaniline, Hexachloroethane

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Hexachloroethane, 2-Chloronaphthalene, 2-Nitroaniline

Batch #: 18317SLB026 (Sample number(s): 9867761-9867762, 9867766-9867767)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window: Pyridine

SW-846 8270D SIM, GC/MS Semivolatiles

Sample #s: 9867761, 9867762, 9867763, 9867764, 9867766

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.

The stated QC limits for 1,4-dioxane are advisory only until sufficient data points can be obtained to calculate statistical limits.

The SECC exceeded the +/- 50% of the expected value from the ICAL. Sample and the SECC were reanalyzed and the SECC was once again outside client requirements which indicates a matrix effect.

Sample #s: 9867767

Z=Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.

The stated QC limits for 1,4-dioxane are advisory only until sufficient data points can be obtained to calculate statistical limits.

The SECC exceeded the +/- 50% of the expected value from the ICAL. Sample and the SECC were reanalyzed and the SECC was once again outside client requirements which indicates a matrix effect.

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken:
The sample was re-analyzed and internal standard areas are again outside of the QC acceptance limits, indicating a matrix effect.
The reported data is from both trials.

Batch #: 18302SLH026 (Sample number(s): 9867761-9867764, 9867766-9867767 UNSPK: 9867762)

The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: 1,4-Dioxane

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Naphthalene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene,

bis(2-Ethylhexyl)phthalate

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Benzo(g,h,i)perylene, Di-n-butylphthalate, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, 1,4-Dioxane

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Naphthalene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, 1,4-Dioxane, Di-n-butylphthalate, bis(2-Ethylhexyl)phthalate

Batch #: 18317SLC026 (Sample number(s): 9867761-9867764, 9867766-9867767 UNSPK: 9867762)

The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: 1,4-Dioxane

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Naphthalene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Di-n-butylphthalate

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Di-n-butylphthalate, bis(2-Ethylhexyl)phthalate, Benzo(g,h,i)perylene, 1,4-Dioxane

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Naphthalene, Fluorene, Anthracene, Di-n-butylphthalate, bis(2-Ethylhexyl)phthalate

SW-846 8081B, Pesticides

Sample #s: 9867762, 9867763, 9867764, 9867766

Reporting limits were raised due to interference from the sample matrix.

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

Batch #: 183020030A (Sample number(s): 9867761-9867764, 9867766-9867767 UNSPK: 9867762)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Beta BHC

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Gamma BHC - Lindane, Delta BHC, Gamma Chlordane, p,p-DDD, Endosulfan II, p,p-DDT, Alpha BHC

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Alpha BHC, Beta BHC, Gamma Chlordane, Dieldrin, p,p-DDT, Endrin Aldehyde

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 9867761, 9867762, 9867763, 9867764, 9867766, 9867767, MS, MSD

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9867767

SW-846 8082A Feb 2007 Rev 1, PCBs

Sample #s: 9867761

Reporting limits were raised due to interference from the sample matrix.

Sample #s: 9867762, 9867763, 9867764, 9867766

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

Batch #: 183040031A (Sample number(s): 9867761-9867764, 9867766-9867767 UNSPK: 9867762)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 9867761, 9867762, 9867763, 9867764, 9867766, 9867767, MS, MSD

SW-846 8151A, Herbicides

Sample #s: 9867766, 9867767

Due to the nature of the sample extract matrix, a dilution was used for the analysis. The reporting limits were raised accordingly.

Batch #: 183030010A (Sample number(s): 9867761-9867764, 9867766-9867767 UNSPK: 9867762)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Dinoseb, Dalapon, Dicamba, MCPP (Mecoprop), MCPA

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 9867767

SW-846 8290A Feb 2007 Rev 1, Dioxins/Furans

Sample #s: 9867767

The recovery for labeled compound 13C12-2378-TCDF was outside of QC acceptance limits in the method blanks associated with this sample. The labeled recovery for 13C12-2378-TCDF was within QC limits in the sample, therefore the data is reported.

Batch #: 18299005 (Sample number(s): 9867767)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) Blank

Batch #: 18309016 (Sample number(s): 9867761-9867764, 9867766 UNSPK: 9867762)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: 1234678-HpCDD, OCDD

SW-846 6010C, Metals

Sample #s: 9867761, 9867762, 9867763, 9867764, 9867765, 9867766, 9867767

Outlier recovery/result: CCV RSDs > 5%; Acceptance limits: < 5%
1ST CCV RSD%- 3.8%, reading 0.51, acceptance limits: 0.45-0.55
2ND CCV RSD%- 6.9%, reading 0.50, acceptance limits: 0.45-0.55
3rd CCV RSD%- 5.5%, reading 0.47, acceptance limits: 0.45-0.55

SW-846 6020A, Metals

Batch #: 182991063702A (Sample number(s): 9867761-9867767 UNSPK: 9867762 BKG: 9867762)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Aluminum, Arsenic, Iron, Magnesium, Manganese, Copper

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Antimony, Cadmium, Chromium, Copper, Lead, Nickel, Thallium, Zinc, Iron, Manganese, Vanadium

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Copper, Iron, Manganese, Thallium

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Aluminum, Cadmium, Chromium, Cobalt, Copper, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Thallium

Batch #: 182991063702B (Sample number(s): 9867761-9867767 UNSPK: 9867762 BKG: 9867762)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window:

Calcium

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Calcium, Selenium

Batch #: 182991063702D (Sample number(s): 9867761-9867767 UNSPK: 9867762 BKG: 9867762)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Barium

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Barium

SW-846 7471B, Metals

Batch #: 182991063802 (Sample number(s): 9867761-9867767 UNSPK: 9867762 BKG: 9867762)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Mercury

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Mercury

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Mercury

SM 2540 G-2011 %Moisture Calc, Wet Chemistry

Batch #: 18299820005B (Sample number(s): 9867761-9867767 BKG: 9867762)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Moisture, Moisture, Moisture Duplicate

Sample Description: **OU2TB102418-001 Water**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 07:45
SDG□: TID10-01TB

Tidewater, Inc.
ELLE Sample #: **WW 9867760**
ELLE Group #: **2002262**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C 25mL purge**		ug/l	ug/l	ug/l	ug/l	
11996	Acetone	67-64-1	N.D.	0.9	2.0	5.0	1
11996	Ben□ene	71-43-2	N.D.	0.05	0.2	0.5	1
11996	Bromodichloromethane	75-27-4	N.D.	0.05	0.2	0.5	1
11996	Bromoform	75-25-2	N.D.	0.3	0.5	1.0	1
11996	Bromomethane	74-83-9	N.D.	0.07	0.2	0.5	1
11996	2-Butanone	78-93-3	N.D.	0.6	2.0	5.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.06	0.2	1.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.07	0.2	0.5	1
11996	Chloroben□ene	108-90-7	N.D.	0.06	0.2	0.5	1
11996	Chloroethane	75-00-3	N.D.	0.07	0.2	0.5	1
11996	Chloroform	67-66-3	N.D.	0.09	0.2	0.5	1
11996	Chloromethane	74-87-3	N.D.	0.06	0.2	0.5	1
11996	C□clohexane	110-82-7	N.D.	0.05	0.2	0.5	1
11996	C□clohexanone	108-94-1	N.D.	1.8	7.2	25	1
11996	1□2-Dibromo-3-chloropropane	96-12-8	N.D.	0.1	0.4	0.5	1
11996	Dibromochloromethane	124-48-1	N.D.	0.07	0.2	0.5	1
11996	1□2-Dibromoethane	106-93-4	N.D.	0.06	0.2	0.5	1
11996	1□2-Dichloroben□ene	95-50-1	N.D.	0.06	0.2	0.5	1
11996	1□3-Dichloroben□ene	541-73-1	N.D.	0.06	0.2	0.5	1
11996	1□4-Dichloroben□ene	106-46-7	N.D.	0.07	0.2	0.5	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.05	0.2	0.5	1
11996	1□1-Dichloroethane	75-34-3	N.D.	0.07	0.2	0.5	1
11996	1□2-Dichloroethane	107-06-2	N.D.	0.05	0.2	0.5	1
11996	1□1-Dichloroethene	75-35-4	N.D.	0.06	0.2	0.5	1
11996	cis-1□2-Dichloroethene	156-59-2	N.D.	0.05	0.2	0.5	1
11996	trans-1□2-Dichloroethene	156-60-5	N.D.	0.06	0.2	0.5	1
11996	1□2-Dichloropropane	78-87-5	N.D.	0.06	0.2	0.5	1
11996	cis-1□3-Dichloropropene	10061-01-5	N.D.	0.05	0.2	0.5	1
11996	trans-1□3-Dichloropropene	10061-02-6	N.D.	0.06	0.2	0.5	1
11996	Eth□lben□ene	100-41-4	N.D.	0.06	0.2	0.5	1
11996	Freon 113	76-13-1	N.D.	0.06	0.2	0.5	1
11996	2-Hexanone	591-78-6	N.D.	0.6	2.0	5.0	1
11996	Isoprop□lben□ene	98-82-8	N.D.	0.05	0.2	0.5	1
11996	Meth□l Acetate	79-20-9	N.D.	0.1	0.2	1.0	1
11996	Meth□l Tertiar□But□l Ether	1634-04-4	N.D.	0.05	0.2	0.5	1
11996	4-Meth□l-2-Pentanone	108-10-1	N.D.	0.7	2.0	5.0	1
11996	Meth□lc□clohexane	108-87-2	N.D.	0.05	0.2	0.5	1
11996	Meth□lene Chloride	75-09-2	N.D.	0.07	0.2	0.5	1
11996	St□rene	100-42-5	N.D.	0.05	0.2	0.5	1
11996	1□1□2□2-Tetrachloroethane	79-34-5	N.D.	0.07	0.2	0.5	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2TB102418-001 Water**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 07:45
SDG□: TID10-01TB

Tidewater, Inc.
ELLE Sample #: WW 9867760
ELLE Group #: 2002262
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C 25mL purge**		ug/l	ug/l	ug/l	ug/l	
11996	Tetrachloroethene	127-18-4	N.D.	0.06	0.2	0.5	1
11996	Toluene	108-88-3	N.D.	0.07	0.2	0.5	1
11996	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.06	0.2	0.5	1
11996	1□1□1-Trichloroethane	71-55-6	N.D.	0.06	0.2	0.5	1
11996	1□1□2-Trichloroethane	79-00-5	N.D.	0.06	0.2	0.5	1
11996	Trichloroethene	79-01-6	N.D.	0.06	0.2	0.5	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.05	0.2	0.5	1
11996	Vin□l Chloride	75-01-4	N.D.	0.1	0.2	0.5	1
11996	□□lene (Total)	1330-20-7	N.D.	0.1	0.4	0.5	1

A Method Detection Limit (MDL) standard is anal□□ed to confirm sensitivit□of the instrument for samples with non-detect anal□tes associated with a continuing calibration verification standard exhibiting low response (outside the 20□ D criteria). The MDL standard shows adequate sensitivit□at or below the reporting limit.

Sample Comments

The following anal□te(s) is not covered under our DoD ELAP accreditation:
Thorium b□SW-846 6010C
C□clohexanone b□SW-846 8260C
Bis(2-chloroeth□l)ether b□SW-846 8270D/SW-846 8270D SIM
Di-n-but□l phthalate b□SW-846 8270D SIM
Hexachloroben□ene b□SW-846 8270D SIM

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	VOCs- 25ml Water b□8260C	SW-846 8260C 25mL purge	1	H183094AA	11/06/2018 05:14	□oel G Chachapo□a	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H183094AA	11/06/2018 05:14	□oel G Chachapo□a	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS004 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:15
SDG□: TID10-02

Tidewater, Inc.
ELLE Sample #: SW 9867761
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C**		mg/kg	mg/kg	mg/kg	mg/kg	
11995	Acetone	67-64-1	0.009 □	0.008	0.020	0.026	0.99
11995	Ben□ene	71-43-2	N.D.	0.0006	0.003	0.006	0.99
11995	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	0.006	0.99
11995	Bromoform	75-25-2	N.D.	0.006	0.010	0.013	0.99
11995	Bromomethane	74-83-9	N.D.	0.0009	0.003	0.006	0.99
11995	2-Butanone	78-93-3	N.D.	0.001	0.005	0.013	0.99
11995	Carbon Disulfide	75-15-0	N.D.	0.0008	0.003	0.006	0.99
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0006	0.003	0.006	0.99
11995	Chloroben□ene	108-90-7	N.D.	0.0006	0.003	0.006	0.99
11995	Chloroethane	75-00-3	N.D.	0.001	0.005	0.006	0.99
11995	Chloroform	67-66-3	N.D.	0.0008	0.003	0.006	0.99
11995	Chloromethane	74-87-3	N.D.	0.0008	0.003	0.006	0.99
11995	C□clohexane	110-82-7	N.D.	0.0006	0.003	0.006	0.99
11995	C□clohexanone	108-94-1	N.D.	0.032	0.13	0.32	0.99
11995	1□2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0005	0.001	0.006	0.99
11995	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	0.006	0.99
11995	1□2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	0.006	0.99
11995	1□2-Dichloroben□ene	95-50-1	N.D.	0.0006	0.003	0.006	0.99
11995	1□3-Dichloroben□ene	541-73-1	N.D.	0.0006	0.003	0.006	0.99
11995	1□4-Dichloroben□ene	106-46-7	N.D.	0.0005	0.001	0.006	0.99
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0008	0.003	0.006	0.99
11995	1□1-Dichloroethane	75-34-3	N.D.	0.0006	0.003	0.006	0.99
11995	1□2-Dichloroethane	107-06-2	N.D.	0.0008	0.003	0.006	0.99
11995	1□1-Dichloroethene	75-35-4	N.D.	0.0006	0.003	0.006	0.99
11995	cis-1□2-Dichloroethene	156-59-2	N.D.	0.0006	0.003	0.006	0.99
11995	trans-1□2-Dichloroethene	156-60-5	N.D.	0.0006	0.003	0.006	0.99
11995	1□2-Dichloropropane	78-87-5	N.D.	0.0006	0.003	0.006	0.99
11995	cis-1□3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	0.006	0.99
11995	trans-1□3-Dichloropropene	10061-02-6	N.D.	0.0004	0.001	0.006	0.99
11995	Eth□lben□ene	100-41-4	N.D.	0.0005	0.001	0.006	0.99
11995	Freon 113	76-13-1	N.D.	0.0008	0.003	0.013	0.99
11995	2-Hexanone	591-78-6	N.D.	0.001	0.005	0.013	0.99
11995	Isoprop□lben□ene	98-82-8	N.D.	0.0005	0.001	0.006	0.99
11995	Meth□l Acetate	79-20-9	N.D.	0.001	0.005	0.006	0.99
11995	Meth□l Tertiar□But□l Ether	1634-04-4	N.D.	0.0006	0.003	0.006	0.99
11995	4-Meth□l-2-pentanone	108-10-1	N.D.	0.001	0.005	0.013	0.99
11995	Meth□lc□clohexane	108-87-2	N.D.	0.0008	0.003	0.006	0.99
11995	Meth□lene Chloride	75-09-2	N.D.	0.003	0.005	0.006	0.99
11995	St□rene	100-42-5	N.D.	0.0004	0.001	0.006	0.99
11995	1□1□2□2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	0.006	0.99
11995	Tetrachloroethene	127-18-4	N.D.	0.0006	0.003	0.006	0.99

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS004 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:15
SDG□: TID10-02

Tidewater, Inc.
ELLE Sample #: SW 9867761
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C**		mg/kg	mg/kg	mg/kg	mg/kg	
11995	Toluene	108-88-3	N.D.	0.0008	0.003	0.006	0.99
11995	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.006	0.010	0.013	0.99
11995	1□1□1-Trichloroethane	71-55-6	N.D.	0.0008	0.003	0.006	0.99
11995	1□1□2-Trichloroethane	79-00-5	N.D.	0.0006	0.003	0.006	0.99
11995	Trichloroethene	79-01-6	N.D.	0.0006	0.003	0.006	0.99
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0009	0.003	0.006	0.99
11995	Vin□l Chloride	75-01-4	N.D.	0.0008	0.003	0.006	0.99
11995	□□lene (Total)	1330-20-7	N.D.	0.001	0.003	0.006	0.99
Trial ID: RE							
11995	Acetone	67-64-1	0.052	0.008	0.022	0.028	1.07
11995	Ben□ene	71-43-2	N.D.	0.0007	0.003	0.007	1.07
11995	Bromodichloromethane	75-27-4	N.D.	0.0006	0.001	0.007	1.07
11995	Bromoform	75-25-2	N.D.	0.007	0.011	0.014	1.07
11995	Bromomethane	74-83-9	N.D.	0.001	0.003	0.007	1.07
11995	2-Butanone	78-93-3	N.D.	0.001	0.006	0.014	1.07
11995	Carbon Disulfide	75-15-0	N.D.	0.0008	0.003	0.007	1.07
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0007	0.003	0.007	1.07
11995	Chloroben□ene	108-90-7	N.D.	0.0007	0.003	0.007	1.07
11995	Chloroethane	75-00-3	N.D.	0.001	0.006	0.007	1.07
11995	Chloroform	67-66-3	N.D.	0.0008	0.003	0.007	1.07
11995	Chloromethane	74-87-3	N.D.	0.0008	0.003	0.007	1.07
11995	C□clohexane	110-82-7	N.D.	0.0007	0.003	0.007	1.07
11995	C□clohexanone	108-94-1	N.D.	0.034	0.14	0.34	1.07
11995	1□2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0006	0.001	0.007	1.07
11995	Dibromochloromethane	124-48-1	N.D.	0.0006	0.001	0.007	1.07
11995	1□2-Dibromoethane	106-93-4	N.D.	0.0006	0.001	0.007	1.07
11995	1□2-Dichloroben□ene	95-50-1	N.D.	0.0007	0.003	0.007	1.07
11995	1□3-Dichloroben□ene	541-73-1	N.D.	0.0007	0.003	0.007	1.07
11995	1□4-Dichloroben□ene	106-46-7	N.D.	0.0006	0.001	0.007	1.07
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0008	0.003	0.007	1.07
11995	1□1-Dichloroethane	75-34-3	N.D.	0.0007	0.003	0.007	1.07
11995	1□2-Dichloroethane	107-06-2	N.D.	0.0008	0.003	0.007	1.07
11995	1□1-Dichloroethene	75-35-4	N.D.	0.0007	0.003	0.007	1.07
11995	cis-1□2-Dichloroethene	156-59-2	N.D.	0.0007	0.003	0.007	1.07
11995	trans-1□2-Dichloroethene	156-60-5	N.D.	0.0007	0.003	0.007	1.07
11995	1□2-Dichloropropane	78-87-5	N.D.	0.0007	0.003	0.007	1.07
11995	cis-1□3-Dichloropropene	10061-01-5	N.D.	0.0006	0.001	0.007	1.07
11995	trans-1□3-Dichloropropene	10061-02-6	N.D.	0.0004	0.001	0.007	1.07
11995	Eth□lben□ene	100-41-4	N.D.	0.0006	0.001	0.007	1.07
11995	Freon 113	76-13-1	N.D.	0.0008	0.003	0.014	1.07
11995	2-Hexanone	591-78-6	N.D.	0.001	0.006	0.014	1.07

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS004 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:15
SDG□: TID10-02

Tidewater, Inc.
ELLE Sample #: SW 9867761
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
11995	Isoprop□ben□ene	98-82-8	N.D.	0.0006	0.001	0.007	1.07
11995	Meth□l Acetate	79-20-9	N.D.	0.001	0.006	0.007	1.07
11995	Meth□l Tertiar□But□l Ether	1634-04-4	N.D.	0.0007	0.003	0.007	1.07
11995	4-Meth□l-2-pentanone	108-10-1	N.D.	0.001	0.006	0.014	1.07
11995	Meth□lc□clohexane	108-87-2	N.D.	0.0008	0.003	0.007	1.07
11995	Meth□lene Chloride	75-09-2	N.D.	0.003	0.006	0.007	1.07
11995	St□rene	100-42-5	N.D.	0.0004	0.001	0.007	1.07
11995	1□1□2□2-Tetrachloroethane	79-34-5	N.D.	0.0006	0.001	0.007	1.07
11995	Tetrachloroethene	127-18-4	N.D.	0.0007	0.003	0.007	1.07
11995	Toluene	108-88-3	N.D.	0.0008	0.003	0.007	1.07
11995	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.007	0.011	0.014	1.07
11995	1□1□1-Trichloroethane	71-55-6	N.D.	0.0008	0.003	0.007	1.07
11995	1□1□2-Trichloroethane	79-00-5	N.D.	0.0007	0.003	0.007	1.07
11995	Trichloroethene	79-01-6	N.D.	0.0007	0.003	0.007	1.07
11995	Trichlorofluoromethane	75-69-4	N.D.	0.001	0.003	0.007	1.07
11995	Vin□l Chloride	75-01-4	N.D.	0.0008	0.003	0.007	1.07
11995	□□lene (Total)	1330-20-7	N.D.	0.001	0.003	0.007	1.07

The recover□for the sample internal standard is outside the QC acceptance limits. The following action was ta□en: The sample was re-anal□□ed and the QC is again outside of the acceptance limits□indicating a matrix effect. The data is reported from both trials.

A Method Detection Limit (MDL) standard is anal□□ed to confirm sensitivit□of the instrument for samples with non-detect anal□tes associated with a continuing calibration verification standard exhibiting low response (outside the 20□ D criteria). The MDL standard shows adequate sensitivit□at or below the reporting limit in Trial 2.

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10726	Aniline	62-53-3	N.D.	0.21	0.43	0.64	1
10726	Ben□□l alcohol	100-51-6	N.D.	0.21	0.43	0.64	1
10726	4-Bromophen□l-phen□lether	101-55-3	N.D.	0.026	0.051	0.064	1
10726	Carba□ole	86-74-8	N.D.	0.021	0.043	0.047	1
10726	4-Chloro-3-meth□lphenol	59-50-7	N.D.	0.021	0.043	0.047	1
10726	4-Chloroaniline	106-47-8	N.D.	0.043	0.085	0.21	1
10726	bis(2-Chloroethox□)methane	111-91-1	N.D.	0.021	0.043	0.047	1
10726	bis(2-Chloroeth□l)ether	111-44-4	N.D.	0.030	0.060	0.064	1
10726	2-Chloronaphthalene	91-58-7	N.D.	0.009	0.017	0.043	1
10726	2-Chlorophenol	95-57-8	N.D.	0.021	0.043	0.047	1
10726	4-Chlorophen□l-phen□lether	7005-72-3	N.D.	0.021	0.043	0.047	1
10726	2□2□-ox□bis(1-Chloropropane)	108-60-1	N.D.	0.021	0.043	0.047	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS004 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:15
SDG□: TID10-02

Tidewater, Inc.
ELLE Sample #: SW 9867761
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
	Bis(2-chloroisoprop□l) ether CAS □39638-32-9 and 2□2-Ox□bis(1-chloropropane) CAS □108-60-1 cannot be separated chromatographicall□. The reported result represents the combined total of both compounds.						
10726	Diben□ofuran	132-64-9	N.D.	0.021	0.043	0.047	1
10726	1□2-Dichloroben□ene	95-50-1	0.030 □	0.026	0.051	0.064	1
10726	1□3-Dichloroben□ene	541-73-1	N.D.	0.021	0.043	0.047	1
10726	1□4-Dichloroben□ene	106-46-7	0.068	0.021	0.043	0.047	1
10726	3□3-Dichloroben□idine	91-94-1	N.D.	0.13	0.26	0.43	1
10726	2□4-Dichlorophenol	120-83-2	N.D.	0.021	0.043	0.047	1
10726	Dieth□lphthalate	84-66-2	N.D.	0.085	0.17	0.21	1
10726	2□4-Dimeth□lphenol	105-67-9	N.D.	0.021	0.043	0.047	1
10726	Dimeth□lphthalate	131-11-3	N.D.	0.085	0.17	0.21	1
10726	4□6-Dinitro-2-meth□lphenol	534-52-1	N.D.	0.21	0.43	0.64	1
10726	2□4-Dinitrophenol	51-28-5	N.D.	0.47	0.94	1.3	1
10726	2□4-Dinitrotoluene	121-14-2	N.D.	0.085	0.17	0.21	1
10726	2□6-Dinitrotoluene	606-20-2	N.D.	0.026	0.051	0.064	1
10726	Hexachloroben□ene	118-74-1	N.D.	0.004	0.009	0.021	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.026	0.051	0.064	1
10726	Hexachloroc□clopentadiene	77-47-4	N.D.	0.21	0.43	0.64	1
10726	Hexachloroethane	67-72-1	N.D.	0.043	0.085	0.21	1
10726	Isophorone	78-59-1	N.D.	0.021	0.043	0.047	1
10726	2-Meth□lnaphthalene	91-57-6	0.039 □	0.013	0.026	0.043	1
10726	2-Meth□lphenol	95-48-7	N.D.	0.034	0.068	0.085	1
10726	4-Meth□lphenol	106-44-5	N.D.	0.026	0.051	0.064	1
	3-Meth□lphenol and 4-meth□lphenol cannot be resolved under the chromatographic conditions used for sample anal□sis. The result reported for 4-meth□lphenol represents the combined total of both compounds.						
10726	2-Nitroaniline	88-74-4	N.D.	0.026	0.051	0.064	1
10726	3-Nitroaniline	99-09-2	N.D.	0.085	0.17	0.21	1
10726	4-Nitroaniline	100-01-6	N.D.	0.085	0.17	0.21	1
10726	Nitroben□ene	98-95-3	N.D.	0.034	0.068	0.085	1
10726	2-Nitrophenol	88-75-5	N.D.	0.021	0.043	0.047	1
10726	4-Nitrophenol	100-02-7	N.D.	0.21	0.43	0.64	1
10726	N-Nitroso-di-n-prop□lamine	621-64-7	N.D.	0.026	0.051	0.064	1
10726	N-Nitrosodiphen□lamine	86-30-6	N.D.	0.021	0.043	0.047	1
	N-nitrosodiphen□lamine decomposes in the GC inlet forming diphen□lamine. The result reported for N-nitrosodiphen□lamine represents the combined total of both compounds.						
10726	Di-n-oct□lphthalate	117-84-0	N.D.	0.085	0.17	0.21	1
10726	Pentachlorophenol	87-86-5	N.D.	0.047	0.17	0.21	1
10726	Phenol	108-95-2	N.D.	0.030	0.060	0.064	1
10726	P□ridine	110-86-1	N.D.	0.085	0.17	0.21	1

□□This limit was used in the evaluation of the final result

Sample Description: OU2-1-SS004 Grab Soil
Great Kills Park, NY

Project Name: Great Kills Park Phase I RI OU2

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:15
SDG□: TID10-02

Tidewater, Inc.
ELLE Sample #: SW 9867761
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10726	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.021	0.043	0.047	1
10726	2□4□5-Trichlorophenol	95-95-4	N.D.	0.026	0.051	0.064	1
10726	2□4□6-Trichlorophenol	88-06-2	N.D.	0.026	0.051	0.064	1
Trial ID: RE							
10726	Aniline	62-53-3	N.D.	0.21	0.42	0.64	1
10726	Ben□□l alcohol	100-51-6	N.D.	0.21	0.42	0.64	1
10726	4-Bromophen□l-phen□ether	101-55-3	N.D.	0.025	0.051	0.064	1
10726	Carba□ole	86-74-8	N.D.	0.021	0.042	0.047	1
10726	4-Chloro-3-meth□lphenol	59-50-7	N.D.	0.021	0.042	0.047	1
10726	4-Chloroaniline	106-47-8	N.D.	0.042	0.085	0.21	1
10726	bis(2-Chloroethox□)methane	111-91-1	N.D.	0.021	0.042	0.047	1
10726	bis(2-Chloroeth□l)ether	111-44-4	N.D.	0.030	0.059	0.064	1
10726	2-Chloronaphthalene	91-58-7	N.D.	0.008	0.017	0.042	1
10726	2-Chlorophenol	95-57-8	N.D.	0.021	0.042	0.047	1
10726	4-Chlorophen□l-phen□lether	7005-72-3	N.D.	0.021	0.042	0.047	1
10726	2□2□-ox□bis(1-Chloropropane)	108-60-1	N.D.	0.021	0.042	0.047	1
	Bis(2-chloroisoprop□l) ether CAS □39638-32-9 and 2□2□-Ox□bis(1-chloropropane) CAS □108-60-1 cannot be separated chromatographicall□. The reported result represents the combined total of both compounds.						
10726	Diben□ofuran	132-64-9	N.D.	0.021	0.042	0.047	1
10726	1□2-Dichloroben□ene	95-50-1	0.031 □	0.025	0.051	0.064	1
10726	1□3-Dichloroben□ene	541-73-1	N.D.	0.021	0.042	0.047	1
10726	1□4-Dichloroben□ene	106-46-7	0.060	0.021	0.042	0.047	1
10726	3□3□-Dichloroben□idine	91-94-1	N.D.	0.13	0.25	0.42	1
10726	2□4-Dichlorophenol	120-83-2	N.D.	0.021	0.042	0.047	1
10726	Dieth□lphthalate	84-66-2	N.D.	0.085	0.17	0.21	1
10726	2□4-Dimeth□lphenol	105-67-9	N.D.	0.021	0.042	0.047	1
10726	Dimeth□lphthalate	131-11-3	N.D.	0.085	0.17	0.21	1
10726	4□6-Dinitro-2-meth□lphenol	534-52-1	N.D.	0.21	0.42	0.64	1
10726	2□4-Dinitrophenol	51-28-5	N.D.	0.47	0.93	1.3	1
10726	2□4-Dinitrotoluene	121-14-2	N.D.	0.085	0.17	0.21	1
10726	2□6-Dinitrotoluene	606-20-2	N.D.	0.025	0.051	0.064	1
10726	Hexachloroben□ene	118-74-1	N.D.	0.004	0.008	0.021	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.025	0.051	0.064	1
10726	Hexachloroc□clopentadiene	77-47-4	N.D.	0.21	0.42	0.64	1
10726	Hexachloroethane	67-72-1	N.D.	0.042	0.085	0.21	1
10726	Isophorone	78-59-1	N.D.	0.021	0.042	0.047	1
10726	2-Meth□lnaphthalene	91-57-6	0.035 □	0.013	0.025	0.042	1
10726	2-Meth□lphenol	95-48-7	N.D.	0.034	0.068	0.085	1
10726	4-Meth□lphenol	106-44-5	N.D.	0.025	0.051	0.064	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS004 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:15
SDG□: TID10-02

Tidewater, Inc.
ELLE Sample #: SW 9867761
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
	3-Meth□lphenol and 4-meth□lphenol cannot be resolved under the chromatographic conditions used for sample anal□sis. The result reported for 4-meth□lphenol represents the combined total of both compounds.						
10726	2-Nitroaniline	88-74-4	N.D.	0.025	0.051	0.064	1
10726	3-Nitroaniline	99-09-2	N.D.	0.085	0.17	0.21	1
10726	4-Nitroaniline	100-01-6	N.D.	0.085	0.17	0.21	1
10726	Nitroben□ene	98-95-3	N.D.	0.034	0.068	0.085	1
10726	2-Nitrophenol	88-75-5	N.D.	0.021	0.042	0.047	1
10726	4-Nitrophenol	100-02-7	N.D.	0.21	0.42	0.64	1
10726	N-Nitroso-di-n-prop□lamine	621-64-7	N.D.	0.025	0.051	0.064	1
10726	N-Nitrosodiphen□lamine	86-30-6	N.D.	0.021	0.042	0.047	1
	N-nitrosodiphen□lamine decomposes in the GC inlet forming diphen□lamine. The result reported for N-nitrosodiphen□lamine represents the combined total of both compounds.						
10726	Di-n-oct□lphthalate	117-84-0	N.D.	0.085	0.17	0.21	1
10726	Pentachlorophenol	87-86-5	N.D.	0.047	0.17	0.21	1
10726	Phenol	108-95-2	N.D.	0.030	0.059	0.064	1
10726	P□ridine	110-86-1	N.D.	0.085	0.17	0.21	1
10726	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.021	0.042	0.047	1
10726	2□4□5-Trichlorophenol	95-95-4	N.D.	0.025	0.051	0.064	1
10726	2□4□6-Trichlorophenol	88-06-2	N.D.	0.025	0.051	0.064	1
	Target anal□tes were detected in the method blan□ associated with the samples as noted on the QC Summar□. The following action was ta□en: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.						
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
12969	Acenaphthene	83-32-9	0.002	0.0009	0.002	0.002	1
12969	Acenaphth□lene	208-96-8	0.006	0.0004	0.002	0.002	1
12969	Anthracene	120-12-7	0.009	0.0009	0.002	0.002	1
12969	Ben□o(a)anthracene	56-55-3	0.048	0.0009	0.002	0.002	1
12969	Ben□o(a)p□rene	50-32-8	0.063	0.0009	0.002	0.002	1
12969	Ben□o(b)fluoranthene	205-99-2	0.15	0.0009	0.002	0.002	1
12969	Ben□o(g□h□i)per□lene	191-24-2	0.039	0.0009	0.002	0.002	1
12969	Ben□o(□)fluoranthene	207-08-9	0.052	0.0009	0.002	0.002	1
12969	Di-n-but□lphthalate	84-74-2	0.22	0.009	0.017	0.026	1
12969	Chr□sene	218-01-9	0.087	0.0004	0.002	0.002	1
12969	Diben□(a□h)anthracene	53-70-3	0.013	0.0009	0.002	0.002	1
12969	1□4-Dioxane	123-91-1	0.005	0.0009	0.002	0.002	1
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	0.071	0.013	0.026	0.030	1
12969	Fluoranthene	206-44-0	0.10	0.0009	0.002	0.002	1
12969	Fluorene	86-73-7	0.004	0.0009	0.002	0.002	1
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.037	0.0009	0.002	0.002	1

□□This limit was used in the evaluation of the final result

Sample Description: OU2-1-SS004 Grab Soil
Great Kills Park, NY

Project Name: Great Kills Park Phase I RI OU2

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:15
SDG□: TID10-02

Tidewater, Inc.
ELLE Sample #: SW 9867761
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
12969	Naphthalene	91-20-3	0.10	0.002	0.003	0.004	1
12969	Phenanthrene	85-01-8	0.062	0.0009	0.002	0.002	1
12969	P□rene	129-00-0	0.081	0.0009	0.002	0.002	1
Trial ID: RE							
12969	Acenaphthene	83-32-9	0.003	0.0008	0.002	0.002	1
12969	Acenaphth□lene	208-96-8	0.006	0.0004	0.002	0.002	1
12969	Anthracene	120-12-7	0.011	0.0008	0.002	0.002	1
12969	Ben□o(a)anthracene	56-55-3	0.050	0.0008	0.002	0.002	1
12969	Ben□o(a)p□rene	50-32-8	0.054	0.0008	0.002	0.002	1
12969	Ben□o(b)fluoranthene	205-99-2	0.11	0.0008	0.002	0.002	1
12969	Ben□o(g□h□i)per□lene	191-24-2	0.038	0.0008	0.002	0.002	1
12969	Ben□o(□)fluoranthene	207-08-9	0.033	0.0008	0.002	0.002	1
12969	Di-n-but□lphthalate	84-74-2	0.25	0.008	0.017	0.025	1
12969	Chr□sene	218-01-9	0.075	0.0004	0.002	0.002	1
12969	Diben□(a□h)anthracene	53-70-3	0.012	0.0008	0.002	0.002	1
12969	1□4-Dioxane	123-91-1	0.006	0.0008	0.002	0.002	1
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	0.084	0.013	0.025	0.030	1
12969	Fluoranthene	206-44-0	0.089	0.0008	0.002	0.002	1
12969	Fluorene	86-73-7	0.004	0.0008	0.002	0.002	1
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.038	0.0008	0.002	0.002	1
12969	Naphthalene	91-20-3	0.087	0.002	0.003	0.004	1
12969	Phenanthrene	85-01-8	0.059	0.0008	0.002	0.002	1
12969	P□rene	129-00-0	0.079	0.0008	0.002	0.002	1

Target anal□tes were detected in the method blan□associated with the samples as noted on the QC Summar□. The following action was ta□en: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.

The stated QC limits for 1□4-dioxane are advisor□onl□until sufficient data points can be obtained to calculate statistical limits.

The SECC exceeded the □/- 50□ of the expected value from the ICAL. Sample and the SECC were reanal□□ed and the SECC was once again outside client requirements which indicates a matrix effect.

Herbicides	**SW-846 8151A**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10401	2□4-D	94-75-7	N.D. D1	77	150	230	5
10401	Dalapon	75-99-0	N.D. D2	280	560	580	5
10401	2□4-DB	94-82-6	N.D. D2	63	130	130	5
10401	Dicamba	1918-00-9	N.D. D2	26	51	77	5
10401	Dinoseb	88-85-7	N.D. D2	58	120	150	5
	The QC window for dinoseb is advisor□due to the erratic performance of the anal□te using this method.						
10401	2□4-DP (Dichloroprop)	120-36-5	N.D. D1	58	120	130	5

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS004 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:15
SDG□: TID10-02

Tidewater, Inc.
ELLE Sample #: SW 9867761
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Herbicides	**SW-846 8151A**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10401	MCPA	94-74-6	N.D. D1	4□900	9□700	16□000	5
10401	MCPP (Mecoprop)	93-65-2	N.D. D1	24□000	49□000	49□000	5
10401	2□4□5-T	93-76-5	N.D. D2	5.2	10	11	5
10401	2□4□5-TP	93-72-1	N.D. D2	4.8	9.6	11	5
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	0.093	0.26	0.44	20
10885	PCB-1221	11104-28-2	N.D. D1	0.12	0.26	0.44	20
10885	PCB-1232	11141-16-5	N.D. D1	0.21	0.41	0.44	20
10885	PCB-1242	53469-21-9	N.D. D1	0.085	0.26	0.44	20
10885	PCB-1248	12672-29-6	N.D. D1	0.085	0.26	0.44	20
10885	PCB-1254	11097-69-1	N.D. D1	0.085	0.26	0.44	20
10885	PCB-1260	11096-82-5	N.D. D1	0.13	0.26	0.44	20
10885	PCB-1262	37324-23-5	N.D. D1	0.085	0.26	0.44	20
10885	PCB-1268	11100-14-4	N.D. D1	0.085	0.26	0.44	20
Reporting limits were raised due to interference from the sample matrix.							
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
14587	Aldrin	309-00-2	N.D. D2	4.3	15	21	20
14587	Alpha BHC	319-84-6	N.D. D1	4.3	15	21	20
14587	Beta BHC	319-85-7	N.D. D1	11	23	25	20
14587	Gamma BHC - Lindane	58-89-9	N.D. D2	5.3	15	21	20
14587	Alpha Chlordane	5103-71-9	N.D. D2	4.3	15	21	20
14587	Chlordane	57-74-9	N.D. D1	100	200	430	20
14587	Gamma Chlordane	5103-74-2	N.D. D2	6.3	15	21	20
14587	p□p-DDD	72-54-8	210 D1	8.4	30	43	20
14587	p□p-DDE	72-55-9	630 D1	100	380	540	250
14587	p□p-DDT	50-29-3	830 D1	250	510	540	250
14587	Delta BHC	319-86-8	N.D. D2	11	23	25	20
14587	Dieldrin	60-57-1	N.D. D2	8.4	30	43	20
14587	Endosulfan I	959-98-8	N.D. D2	5.6	15	21	20
14587	Endosulfan II	33213-65-9	N.D. D2	28	56	58	20
14587	Endosulfan Sulfate	1031-07-8	N.D. D2	8.4	30	43	20
14587	Endrin	72-20-8	N.D. D1	17	35	43	20
14587	Endrin Aldeh□de	7421-93-4	N.D. D1	8.4	30	43	20
14587	Endrin Ketone	53494-70-5	N.D. D2	15	46	51	20
14587	Heptachlor	76-44-8	N.D. D1	7.9	16	21	20
14587	Heptachlor Epoxide	1024-57-3	N.D. D2	4.3	15	21	20
14587	Methox□chlor	72-43-5	N.D. D2	46	160	170	20
14587	Toxaphene	8001-35-2	N.D. D1	350	710	840	20

□□This limit was used in the evaluation of the final result

Sample Description: OU2-1-SS004 Grab Soil
Great Kills Park, NY

Project Name: Great Kills Park Phase I RI OU2

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:15
SDG□: TID10-02

Tidewater, Inc.
ELLE Sample #: SW 9867761
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
13499	Thorium	7440-29-1	N.D.	7.93	18.9	47.3	1
	Outlier recover□/result: CCV RSDs □ 5□ □Acceptance limits: < 5□ 1ST CCV RSD□ - 3.8□ □reading 0.51□acceptance limits: 0.45-0.55 2ND CCV RSD□ - 6.9□ □reading 0.50□acceptance limits: 0.45-0.55 3rd CCV RSD□ - 5.5□ □reading 0.47□acceptance limits: 0.45-0.55						
	SW-846 6020A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06123	Aluminum	7429-90-5	5□660	31.6	60.6	75.7	2
06124	Antimon□	7440-36-0	6.47	0.120	0.189	0.379	2
06125	Arsenic	7440-38-2	137	0.127	0.303	0.379	2
06126	Barium	7440-39-3	259	0.365	0.606	0.757	2
06127	Ber□llium	7440-41-7	0.389	0.0216	0.0757	0.0946	2
06128	Cadmium	7440-43-9	1.95	0.0477	0.0946	0.189	2
06129	Calcium	7440-70-2	4□180	64.5	106	132	2
06131	Chromium	7440-47-3	40.7	0.316	0.606	0.757	2
06132	Cobalt	7440-48-4	21.0	0.0553	0.0946	0.189	2
06133	Copper	7440-50-8	260	3.39	6.06	7.57	2
06134	Iron	7439-89-6	130□000	71.0	151	189	20
06135	Lead	7439-92-1	478	0.0477	0.142	0.568	2
06136	Magnesium	7439-95-4	2□290	2.97	9.46	18.9	2
06137	Manganese	7439-96-5	518	0.375	0.946	1.89	2
06139	Nic□el	7440-02-0	66.7	0.322	0.606	0.757	2
06140	Potassium	7440-09-7	812	34.3	60.6	75.7	2
06141	Selenium	7782-49-2	0.523	0.123	0.303	0.379	2
06142	Silver	7440-22-4	2.33	0.0384	0.0757	0.0946	2
06143	Sodium	7440-23-5	406	76.1	136	170	2
06145	Thallium	7440-28-0	0.0825 □	0.0371	0.0757	0.0946	2
13502	Uranium	7440-61-1	0.353	0.0371	0.0946	0.0946	2
06148	Vanadium	7440-62-2	129	0.0812	0.151	0.189	2
06149	□inc	7440-66-6	528	1.15	2.27	2.84	2
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercur□	7439-97-6	0.460	0.0401	0.0858	0.172	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	22.3	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven dr□ing at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS004 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:15
SDG□: TID10-02

Tidewater, Inc.
ELLE Sample #: SW 9867761
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Dioxins/Furans	**SW-846 8290A Feb 2007 Rev 1**		mg/kg	mg/kg	mg/kg	mg/kg	
12937	2378-TCDD	1746-01-6	0.00000191	0.000000167	0.000000378	0.00000126	1
12937	12378-PeCDD	40321-76-4	0.00000444 □	0.000000404	0.00000126	0.00000630	1
12937	123478-HxCDD	39227-28-6	0.00000393 □	0.000000315	0.00000126	0.00000630	1
12937	123678-HxCDD	57653-85-7	0.0000197	0.000000315	0.00000126	0.00000630	1
12937	123789-HxCDD	19408-74-3	0.00000927	0.000000315	0.00000126	0.00000630	1
12937	1234678-HpCDD	35822-46-9	0.000375	0.000000315	0.00000126	0.00000630	1
12937	OCDD	3268-87-9	0.00377	0.00000174	0.00000378	0.0000126	1
13233	2378-TCDF-Conf	51207-31-9	0.0000105 C	0.000000190	0.000000390	0.00000126	1
12937	12378-PeCDF	57117-41-6	0.0000136	0.000000315	0.00000126	0.00000630	1
12937	23478-PeCDF	57117-31-4	0.0000134	0.000000315	0.00000126	0.00000630	1
12937	123478-HxCDF	70648-26-9	0.0000163	0.000000315	0.00000126	0.00000630	1
12937	123678-HxCDF	57117-44-9	0.0000112	0.000000315	0.00000126	0.00000630	1
12937	123789-HxCDF	72918-21-9	0.00000464 □	0.000000315	0.00000126	0.00000630	1
12937	234678-HxCDF	60851-34-5	0.0000139	0.000000315	0.00000126	0.00000630	1
12937	1234678-HpCDF	67562-39-4	0.000354	0.000000315	0.00000126	0.00000630	1
12937	1234789-HpCDF	55673-89-7	0.00000954	0.000000315	0.00000126	0.00000630	1
12937	OCDF	39001-02-0	0.000262	0.000000684	0.00000252	0.0000126	1

Labeled Compounds	%Rec	Windows	LOD (mg/kg)
13C12-2378-TCDF-Conf	49	40 - 135	0.000000303
13C12-2378-TCDD	71	40 - 135	0.000000294
13C12-12378-PeCDD	78	40 - 135	0.000000978
13C12-123478-HxCDD	76	40 - 135	0.000000978
13C12-123678-HxCDD	74	40 - 135	0.000000978
13C12-123789-HxCDD	74	40 - 135	0.000000978
13C12-1234678-HpCDD	70	40 - 135	0.000000978
13C12-OCDD	68	40 - 135	0.00000294
13C12-12378-PeCDF	77	40 - 135	0.000000978
13C12-23478-PeCDF	76	40 - 135	0.000000978
13C12-123478-HxCDF	73	40 - 135	0.000000978
13C12-123678-HxCDF	72	40 - 135	0.000000978
13C12-234678-HxCDF	71	40 - 135	0.000000978
13C12-123789-HxCDF	74	40 - 135	0.000000978
13C12-1234678-HpCDF	72	40 - 135	0.000000978
13C12-1234789-HpCDF	65	40 - 135	0.000000978
13C12-OCDF	64	40 - 135	0.00000196

Dioxins/Furans Data Qualifiers:

B *Detected in Method Blank*
U *Undetected*
J *Estimated concentration between Estimated Detection Limit and Minimum Reporting Level*
E *Exceeds calibration range*
C *Confirmed quantitation on secondary GC column*

□□This limit was used in the evaluation of the final result

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: **OU2-1-SS004 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:15
SDG□: TID10-02

Tidewater, Inc.
ELLE Sample #: SW 9867761
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF

Q *EMPC - Estimated Maximum Possible Concentration*
F *Interference is present*
S *Saturation of detection signal*
(3) *The Labeled Compound spike amount was less than the LOD.*

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS004 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:15
SDG□: TID10-02

Tidewater, Inc.
ELLE Sample #: SW 9867761
ELLE Group #: 2002262
Matrix: Soil

Sample Comments

The following anal□te(s) is not covered under our DoD ELAP accreditation:
Thorium b□SW-846 6010C
C□clohexanone b□SW-846 8260C
Bis(2-chloroeth□l)ether b□SW-846 8270D/SW-846 8270D SIM
Di-n-but□l phthalate b□SW-846 8270D SIM
Hexachloroben□ene b□SW-846 8270D SIM

Eurofins Lancaster Laboratories Environmental□LLC is responsible onl□for the certified testing of samples. We are not directl□responsible for the integrit□of the sample prior to laborator□receipt. An□reported concentrations less than 200 ug/□g ma□be biased low if the□were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid b□8260C	SW-846 8260C	1	B183042AA	10/31/2018 17:24	Stephen C Nolte	0.99
11995	VOCs- Solid b□8260C	SW-846 8260C	2-RE	B183101AA	11/06/2018 22:32	Patric□T Herres	1.07
06176	GC/MS - LL Water Prep	SW-846 5035A	1	201829851683	10/25/2018 16:09	Rebecca Williams	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	201829851683	10/25/2018 16:09	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201829851683	10/24/2018 09:15	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18302SLI026	11/11/2018 23:31	Anthon□P Bauer	1
10726	SVOA 8270D (microwave)	SW-846 8270D	2-RE	18317SLB026	11/16/2018 16:28	William H Saadeh	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18302SLH026	11/07/2018 20:15	Anthon□P Bauer	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	2-RE	18317SLC026	11/16/2018 08:22	□oseph M Gambler	1
10813	BNA Soil Microwave APP I□	SW-846 3546	1	18302SLI026	10/30/2018 07:00	□oshua S Ruth	1
10813	BNA Soil Microwave APP I□	SW-846 3546	2	18317SLB026	11/13/2018 19:20	Sall□L Apple□ard	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18302SLH026	10/30/2018 07:00	□oshua S Ruth	1
10811	BNA Soil Microwave SIM	SW-846 3546	2	18317SLC026	11/13/2018 19:25	Sall□L Apple□ard	1
10401	Herbicide soils 8151A Master	SW-846 8151A	1	183030010A	11/02/2018 09:30	Richard A Shober	5
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183040031A	11/05/2018 01:10	Kirb□B Turner	20
14587	ocpest 8081B w/GPC □ 3546	SW-846 8081B	1	183020030A	11/13/2018 18:56	Lisa A Reinert	20
14587	ocpest 8081B w/GPC □ 3546	SW-846 8081B	1	183020030A	11/16/2018 23:16	Lisa A Reinert	250
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183040031A	11/01/2018 08:00	Ka□la A □udits□□	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	183020030A	10/30/2018 07:00	□oshua S Ruth	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	183030010A	10/30/2018 20:00	Bradle□W VanLeuven	1
13233	D/F in Solids 8290-Conf	SW-846 8290A Feb 2007 Rev 1	1	18309016	11/08/2018 12:25	Michael □iegler	1
12937	Dioxins/Furans in Solids-8290	SW-846 8290A Feb 2007 Rev 1	1	18309016	11/07/2018 03:47	Michael □iegler	1
11030	Dioxins/Furans in Solids - Sox	SW-846 8290A Feb 2007 Rev 1	2	18309016	11/05/2018 14:56	Alex L Barton	1
13499	Thorium	SW-846 6010C	1	182991063702	11/03/2018 07:09	Lisa □Coo□e	1
06123	Aluminum	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2
06124	Antimon□	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS004 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:15
SDG□: TID10-02

Tidewater, Inc.
ELLE Sample #: SW 9867761
ELLE Group #: 2002262
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06125	Arsenic	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2
06126	Barium	SW-846 6020A	1	182991063702D	10/31/2018 20:48	Bradle□M Berlot	2
06127	Ber□llium	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2
06128	Cadmium	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2
06129	Calcium	SW-846 6020A	1	182991063702B	11/13/2018 13:57	Patric□□Engle	2
06131	Chromium	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2
06132	Cobalt	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2
06133	Copper	SW-846 6020A	1	182991063702A	11/13/2018 13:57	Patric□□Engle	2
06134	Iron	SW-846 6020A	1	182991063702A	11/13/2018 13:59	Patric□□Engle	20
06135	Lead	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2
06136	Magnesium	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2
06137	Manganese	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2
06139	Nic□el	SW-846 6020A	1	182991063702A	11/13/2018 13:57	Patric□□Engle	2
06140	Potassium	SW-846 6020A	1	182991063702A	11/06/2018 01:14	Bradle□M Berlot	2
06141	Selenium	SW-846 6020A	1	182991063702B	10/31/2018 20:48	Bradle□M Berlot	2
06142	Silver	SW-846 6020A	1	182991063702A	11/13/2018 13:57	Patric□□Engle	2
06143	Sodium	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2
06145	Thallium	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2
13502	Uranium	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2
06148	Vanadium	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2
06149	□inc	SW-846 6020A	1	182991063702A	10/31/2018 20:48	Bradle□M Berlot	2
00159	Mercur□	SW-846 7471B	1	182991063802	10/29/2018 11:41	Damar□Valentin	1
10637	ICP/ICPMS-SW□3050B - U4	SW-846 3050B	1	182991063702	10/29/2018 05:32	Annamaria Kuhns	1
10638	Hg - SW□7471B - U4	SW-846 7471B	1	182991063802	10/29/2018 07:15	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-2011 □ Moisture Calc	1	18299820005B	10/26/2018 13:46	Larr□E Bevins	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03BKG

Tidewater, Inc.
ELLE Sample #: SW 9867762
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C**		mg/kg	mg/kg	mg/kg	mg/kg	
11995	Acetone	67-64-1	0.033	0.009	0.023	0.029	1.05
11995	Ben□ene	71-43-2	N.D.	0.0007	0.003	0.007	1.05
11995	Bromodichloromethane	75-27-4	N.D.	0.0006	0.001	0.007	1.05
11995	Bromoform	75-25-2	N.D.	0.007	0.012	0.014	1.05
11995	Bromomethane	74-83-9	N.D.	0.001	0.003	0.007	1.05
11995	2-Butanone	78-93-3	N.D.	0.001	0.006	0.014	1.05
11995	Carbon Disulfide	75-15-0	N.D.	0.0009	0.003	0.007	1.05
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0007	0.003	0.007	1.05
11995	Chloroben□ene	108-90-7	N.D.	0.0007	0.003	0.007	1.05
11995	Chloroethane	75-00-3	N.D.	0.001	0.006	0.007	1.05
11995	Chloroform	67-66-3	N.D.	0.0009	0.003	0.007	1.05
11995	Chloromethane	74-87-3	N.D.	0.0009	0.003	0.007	1.05
11995	C□clohexane	110-82-7	N.D.	0.0007	0.003	0.007	1.05
11995	C□clohexanone	108-94-1	N.D.	0.036	0.14	0.36	1.05
11995	1□2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0006	0.001	0.007	1.05
11995	Dibromochloromethane	124-48-1	N.D.	0.0006	0.001	0.007	1.05
11995	1□2-Dibromoethane	106-93-4	N.D.	0.0006	0.001	0.007	1.05
11995	1□2-Dichloroben□ene	95-50-1	N.D.	0.0007	0.003	0.007	1.05
11995	1□3-Dichloroben□ene	541-73-1	N.D.	0.0007	0.003	0.007	1.05
11995	1□4-Dichloroben□ene	106-46-7	N.D.	0.0006	0.001	0.007	1.05
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0009	0.003	0.007	1.05
11995	1□1-Dichloroethane	75-34-3	N.D.	0.0007	0.003	0.007	1.05
11995	1□2-Dichloroethane	107-06-2	N.D.	0.0009	0.003	0.007	1.05
11995	1□1-Dichloroethene	75-35-4	N.D.	0.0007	0.003	0.007	1.05
11995	cis-1□2-Dichloroethene	156-59-2	N.D.	0.0007	0.003	0.007	1.05
11995	trans-1□2-Dichloroethene	156-60-5	N.D.	0.0007	0.003	0.007	1.05
11995	1□2-Dichloropropane	78-87-5	N.D.	0.0007	0.003	0.007	1.05
11995	cis-1□3-Dichloropropene	10061-01-5	N.D.	0.0006	0.001	0.007	1.05
11995	trans-1□3-Dichloropropene	10061-02-6	N.D.	0.0004	0.001	0.007	1.05
11995	Eth□lben□ene	100-41-4	N.D.	0.0006	0.001	0.007	1.05
11995	Freon 113	76-13-1	N.D.	0.0009	0.003	0.014	1.05
11995	2-Hexanone	591-78-6	N.D.	0.001	0.006	0.014	1.05
11995	Isoprop□lben□ene	98-82-8	N.D.	0.0006	0.001	0.007	1.05
11995	Meth□l Acetate	79-20-9	N.D.	0.001	0.006	0.007	1.05
11995	Meth□l Tertiar□But□l Ether	1634-04-4	N.D.	0.0007	0.003	0.007	1.05
11995	4-Meth□l-2-pentanone	108-10-1	N.D.	0.001	0.006	0.014	1.05
11995	Meth□lc□clohexane	108-87-2	N.D.	0.0009	0.003	0.007	1.05
11995	Meth□lene Chloride	75-09-2	N.D.	0.003	0.006	0.007	1.05
11995	St□rene	100-42-5	N.D.	0.0004	0.001	0.007	1.05
11995	1□1□2□2-Tetrachloroethane	79-34-5	N.D.	0.0006	0.001	0.007	1.05
11995	Tetrachloroethene	127-18-4	N.D.	0.0007	0.003	0.007	1.05

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03BKG

Tidewater, Inc.
ELLE Sample #: SW 9867762
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
11995	Toluene	108-88-3	N.D.	0.0009	0.003	0.007	1.05
11995	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.007	0.012	0.014	1.05
11995	1□1□1-Trichloroethane	71-55-6	N.D.	0.0009	0.003	0.007	1.05
11995	1□1□2-Trichloroethane	79-00-5	N.D.	0.0007	0.003	0.007	1.05
11995	Trichloroethene	79-01-6	N.D.	0.0007	0.003	0.007	1.05
11995	Trichlorofluoromethane	75-69-4	N.D.	0.001	0.003	0.007	1.05
11995	Vin□l Chloride	75-01-4	N.D.	0.0009	0.003	0.007	1.05
11995	□□lene (Total)	1330-20-7	N.D.	0.001	0.003	0.007	1.05
	The recover□for the sample internal standard is outside the QC acceptance limits. The following corrective action was ta□en: Similar results were obtained for the internal standard in the bac□ground□matrix spi□e and matrix spi□e duplicate indicating a matrix effect.						
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10726	Aniline	62-53-3	N.D.	0.22	0.45	0.67	1
10726	Ben□□l alcohol	100-51-6	N.D.	0.22	0.45	0.67	1
10726	4-Bromophen□l-phen□lether	101-55-3	N.D.	0.027	0.054	0.067	1
10726	Carba□ole	86-74-8	0.035 □	0.022	0.045	0.049	1
10726	4-Chloro-3-meth□lphenol	59-50-7	N.D.	0.022	0.045	0.049	1
10726	4-Chloroaniline	106-47-8	N.D.	0.045	0.090	0.22	1
10726	bis(2-Chloroethox□)methane	111-91-1	N.D.	0.022	0.045	0.049	1
10726	bis(2-Chloroeth□l)ether	111-44-4	N.D.	0.031	0.063	0.067	1
10726	2-Chloronaphthalene	91-58-7	N.D.	0.009	0.018	0.045	1
10726	2-Chlorophenol	95-57-8	N.D.	0.022	0.045	0.049	1
10726	4-Chlorophen□l-phen□lether	7005-72-3	N.D.	0.022	0.045	0.049	1
10726	2□2□-ox□bis(1-Chloropropane)	108-60-1	N.D.	0.022	0.045	0.049	1
	Bis(2-chloroisoprop□l) ether CAS □39638-32-9 and 2□2□-Ox□bis(1-chloropropane) CAS □108-60-1 cannot be separated chromatographicall□ The reported result represents the combined total of both compounds.						
10726	Diben□ofuran	132-64-9	0.036 □	0.022	0.045	0.049	1
10726	1□2-Dichloroben□ene	95-50-1	N.D.	0.027	0.054	0.067	1
10726	1□3-Dichloroben□ene	541-73-1	N.D.	0.022	0.045	0.049	1
10726	1□4-Dichloroben□ene	106-46-7	0.069	0.022	0.045	0.049	1
10726	3□3□-Dichloroben□idine	91-94-1	N.D.	0.13	0.27	0.45	1
10726	2□4-Dichlorophenol	120-83-2	N.D.	0.022	0.045	0.049	1
10726	Dieth□lphthalate	84-66-2	N.D.	0.090	0.18	0.22	1
10726	2□4-Dimeth□lphenol	105-67-9	N.D.	0.022	0.045	0.049	1
10726	Dimeth□lphthalate	131-11-3	N.D.	0.090	0.18	0.22	1
10726	4□6-Dinitro-2-meth□lphenol	534-52-1	N.D.	0.22	0.45	0.67	1
10726	2□4-Dinitrophenol	51-28-5	N.D.	0.49	0.99	1.3	1
10726	2□4-Dinitrotoluene	121-14-2	N.D.	0.090	0.18	0.22	1
10726	2□6-Dinitrotoluene	606-20-2	N.D.	0.027	0.054	0.067	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03BKG

Tidewater, Inc.
ELLE Sample #: SW 9867762
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10726	Hexachloroben□ene	118-74-1	N.D.	0.004	0.009	0.022	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.027	0.054	0.067	1
10726	Hexachloroc□clopentadiene	77-47-4	N.D.	0.22	0.45	0.67	1
10726	Hexachloroethane	67-72-1	N.D.	0.045	0.090	0.22	1
10726	Isophorone	78-59-1	N.D.	0.022	0.045	0.049	1
10726	2-Meth□lnaphthalene	91-57-6	0.090	0.013	0.027	0.045	1
10726	2-Meth□lphenol	95-48-7	N.D.	0.036	0.072	0.090	1
10726	4-Meth□lphenol	106-44-5	N.D.	0.027	0.054	0.067	1
	3-Meth□lphenol and 4-meth□lphenol cannot be resolved under the chromatographic conditions used for sample anal□sis. The result reported for 4-meth□lphenol represents the combined total of both compounds.						
10726	2-Nitroaniline	88-74-4	N.D.	0.027	0.054	0.067	1
10726	3-Nitroaniline	99-09-2	N.D.	0.090	0.18	0.22	1
10726	4-Nitroaniline	100-01-6	N.D.	0.090	0.18	0.22	1
10726	Nitroben□ene	98-95-3	N.D.	0.036	0.072	0.090	1
10726	2-Nitrophenol	88-75-5	N.D.	0.022	0.045	0.049	1
10726	4-Nitrophenol	100-02-7	N.D.	0.22	0.45	0.67	1
10726	N-Nitroso-di-n-prop□lamine	621-64-7	N.D.	0.027	0.054	0.067	1
10726	N-Nitrosodiphen□lamine	86-30-6	N.D.	0.022	0.045	0.049	1
	N-nitrosodiphen□lamine decomposes in the GC inlet forming diphen□lamine. The result reported for N-nitrosodiphen□lamine represents the combined total of both compounds.						
10726	Di-n-oct□lphthalate	117-84-0	N.D.	0.090	0.18	0.22	1
10726	Pentachlorophenol	87-86-5	N.D.	0.049	0.18	0.22	1
10726	Phenol	108-95-2	N.D.	0.031	0.063	0.067	1
10726	P□ridine	110-86-1	N.D.	0.090	0.18	0.22	1
10726	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.022	0.045	0.049	1
10726	2□4□5-Trichlorophenol	95-95-4	N.D.	0.027	0.054	0.067	1
10726	2□4□6-Trichlorophenol	88-06-2	N.D.	0.027	0.054	0.067	1
Trial ID: RE							
10726	Aniline	62-53-3	N.D.	0.34	0.68	1.0	1
10726	Ben□□l alcohol	100-51-6	N.D.	0.34	0.68	1.0	1
10726	4-Bromophen□l-phen□lether	101-55-3	N.D.	0.041	0.082	0.10	1
10726	Carba□ole	86-74-8	N.D.	0.034	0.068	0.075	1
10726	4-Chloro-3-meth□lphenol	59-50-7	N.D.	0.034	0.068	0.075	1
10726	4-Chloroaniline	106-47-8	N.D.	0.068	0.14	0.34	1
10726	bis(2-Chloroethox□)methane	111-91-1	N.D.	0.034	0.068	0.075	1
10726	bis(2-Chloroeth□l)ether	111-44-4	N.D.	0.048	0.096	0.10	1
10726	2-Chloronaphthalene	91-58-7	N.D.	0.014	0.027	0.068	1
10726	2-Chlorophenol	95-57-8	N.D.	0.034	0.068	0.075	1
10726	4-Chlorophen□l-phen□lether	7005-72-3	N.D.	0.034	0.068	0.075	1
10726	2□2□ox□bis(1-Chloropropane)	108-60-1	N.D.	0.034	0.068	0.075	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03BKG

Tidewater, Inc.
ELLE Sample #: SW 9867762
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
	Bis(2-chloroisoprop□l) ether CAS □39638-32-9 and 2□2-Ox□bis(1-chloropropane) CAS □108-60-1 cannot be separated chromatographicall□. The reported result represents the combined total of both compounds.						
10726	Diben□ofuran	132-64-9	N.D.	0.034	0.068	0.075	1
10726	1□2-Dichloroben□ene	95-50-1	N.D.	0.041	0.082	0.10	1
10726	1□3-Dichloroben□ene	541-73-1	N.D.	0.034	0.068	0.075	1
10726	1□4-Dichloroben□ene	106-46-7	0.034 □	0.034	0.068	0.075	1
10726	3□3-Dichloroben□idine	91-94-1	N.D.	0.21	0.41	0.68	1
10726	2□4-Dichlorophenol	120-83-2	N.D.	0.034	0.068	0.075	1
10726	Dieth□lphthalate	84-66-2	N.D.	0.14	0.27	0.34	1
10726	2□4-Dimeth□lphenol	105-67-9	N.D.	0.034	0.068	0.075	1
10726	Dimeth□lphthalate	131-11-3	N.D.	0.14	0.27	0.34	1
10726	4□6-Dinitro-2-meth□lphenol	534-52-1	N.D.	0.34	0.68	1.0	1
10726	2□4-Dinitrophenol	51-28-5	N.D.	0.75	1.5	2.1	1
10726	2□4-Dinitrotoluene	121-14-2	N.D.	0.14	0.27	0.34	1
10726	2□6-Dinitrotoluene	606-20-2	N.D.	0.041	0.082	0.10	1
10726	Hexachloroben□ene	118-74-1	N.D.	0.007	0.014	0.034	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.041	0.082	0.10	1
10726	Hexachloroc□clopentadiene	77-47-4	N.D.	0.34	0.68	1.0	1
10726	Hexachloroethane	67-72-1	N.D.	0.068	0.14	0.34	1
10726	Isophorone	78-59-1	N.D.	0.034	0.068	0.075	1
10726	2-Meth□lnaphthalene	91-57-6	0.072	0.021	0.041	0.068	1
10726	2-Meth□lphenol	95-48-7	N.D.	0.055	0.11	0.14	1
10726	4-Meth□lphenol	106-44-5	N.D.	0.041	0.082	0.10	1
	3-Meth□lphenol and 4-meth□lphenol cannot be resolved under the chromatographic conditions used for sample anal□sis. The result reported for 4-meth□lphenol represents the combined total of both compounds.						
10726	2-Nitroaniline	88-74-4	N.D.	0.041	0.082	0.10	1
10726	3-Nitroaniline	99-09-2	N.D.	0.14	0.27	0.34	1
10726	4-Nitroaniline	100-01-6	N.D.	0.14	0.27	0.34	1
10726	Nitroben□ene	98-95-3	N.D.	0.055	0.11	0.14	1
10726	2-Nitrophenol	88-75-5	N.D.	0.034	0.068	0.075	1
10726	4-Nitrophenol	100-02-7	N.D.	0.34	0.68	1.0	1
10726	N-Nitroso-di-n-prop□lamine	621-64-7	N.D.	0.041	0.082	0.10	1
10726	N-Nitrosodiphen□lamine	86-30-6	N.D.	0.034	0.068	0.075	1
	N-nitrosodiphen□lamine decomposes in the GC inlet forming diphen□lamine. The result reported for N-nitrosodiphen□lamine represents the combined total of both compounds.						
10726	Di-n-oct□lphthalate	117-84-0	N.D.	0.14	0.27	0.34	1
10726	Pentachlorophenol	87-86-5	N.D.	0.075	0.27	0.34	1
10726	Phenol	108-95-2	N.D.	0.048	0.096	0.10	1
10726	P□ridine	110-86-1	N.D.	0.14	0.27	0.34	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03BKG

Tidewater, Inc.
ELLE Sample #: SW 9867762
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10726	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.034	0.068	0.075	1
10726	2□4□5-Trichlorophenol	95-95-4	N.D.	0.041	0.082	0.10	1
10726	2□4□6-Trichlorophenol	88-06-2	N.D.	0.041	0.082	0.10	1

Target anal□tes were detected in the method blan□associated with the samples as noted on the QC Summar□. The following action was ta□en: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.

GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
12969	Acenaphthene	83-32-9	0.014	0.0009	0.002	0.002	1
12969	Acenaphth□lene	208-96-8	0.017	0.0004	0.002	0.002	1
12969	Anthracene	120-12-7	0.041	0.0009	0.002	0.002	1
12969	Ben□o(a)anthracene	56-55-3	0.19	0.0009	0.002	0.002	1
12969	Ben□o(a)p□rene	50-32-8	0.22	0.0009	0.002	0.002	1
12969	Ben□o(b)fluoranthene	205-99-2	0.53E	0.0009	0.002	0.002	1
12969	Ben□o(g□h□i)per□lene	191-24-2	0.10	0.0009	0.002	0.002	1
12969	Ben□o(□)fluoranthene	207-08-9	0.21	0.0009	0.002	0.002	1
12969	Di-n-but□phthalate	84-74-2	2.7E	0.009	0.018	0.027	1
12969	Chr□sene	218-01-9	0.30	0.0004	0.002	0.002	1
12969	Diben□(a□h)anthracene	53-70-3	0.035	0.0009	0.002	0.002	1
12969	1□4-Dioxane	123-91-1	0.01	0.0009	0.002	0.002	1
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	0.27	0.013	0.027	0.031	1
12969	Fluoranthene	206-44-0	0.41	0.0009	0.002	0.002	1
12969	Fluorene	86-73-7	0.017	0.0009	0.002	0.002	1
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.10	0.0009	0.002	0.002	1
12969	Naphthalene	91-20-3	0.28	0.002	0.004	0.004	1
12969	Phenanthrene	85-01-8	0.23	0.0009	0.002	0.002	1
12969	P□rene	129-00-0	0.37	0.0009	0.002	0.002	1
Trial ID: DL							
12969	Acenaphthene	83-32-9	0.015 □	0.009	0.018	0.022	10
12969	Acenaphth□lene	208-96-8	0.020 □	0.004	0.018	0.022	10
12969	Anthracene	120-12-7	0.054	0.009	0.018	0.022	10
12969	Ben□o(a)anthracene	56-55-3	0.25	0.009	0.018	0.022	10
12969	Ben□o(a)p□rene	50-32-8	0.23	0.009	0.018	0.022	10
12969	Ben□o(b)fluoranthene	205-99-2	0.50	0.009	0.018	0.022	10
12969	Ben□o(g□h□i)per□lene	191-24-2	0.13	0.009	0.018	0.022	10
12969	Ben□o(□)fluoranthene	207-08-9	0.19	0.009	0.018	0.022	10
12969	Di-n-but□phthalate	84-74-2	6.1E	0.090	0.18	0.27	10
12969	Chr□sene	218-01-9	0.33	0.004	0.018	0.022	10
12969	Diben□(a□h)anthracene	53-70-3	0.044	0.009	0.018	0.022	10
12969	1□4-Dioxane	123-91-1	N.D.	0.009	0.018	0.022	10
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	0.31 □	0.13	0.27	0.31	10

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03BKG

Tidewater, Inc.
ELLE Sample #: SW 9867762
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
12969	Fluoranthene	206-44-0	0.51	0.009	0.018	0.022	10
12969	Fluorene	86-73-7	0.021 □	0.009	0.018	0.022	10
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.13	0.009	0.018	0.022	10
12969	Naphthalene	91-20-3	0.33	0.018	0.036	0.045	10
12969	Phenanthrene	85-01-8	0.29	0.009	0.018	0.022	10
12969	P□rene	129-00-0	0.41	0.009	0.018	0.022	10
Trial ID: DL2							
12969	Acenaphthene	83-32-9	N.D.	0.045	0.090	0.11	50
12969	Acenaphth□lene	208-96-8	N.D.	0.022	0.090	0.11	50
12969	Anthracene	120-12-7	0.066 □	0.045	0.090	0.11	50
12969	Ben□o(a)anthracene	56-55-3	0.23	0.045	0.090	0.11	50
12969	Ben□o(a)p□rene	50-32-8	0.23	0.045	0.090	0.11	50
12969	Ben□o(b)fluoranthene	205-99-2	0.55	0.045	0.090	0.11	50
12969	Ben□o(g□h□i)per□lene	191-24-2	0.081 □	0.045	0.090	0.11	50
12969	Ben□o(□)fluoranthene	207-08-9	0.23	0.045	0.090	0.11	50
12969	Di-n-but□phthalate	84-74-2	6.1	0.45	0.90	1.3	50
12969	Chr□sene	218-01-9	0.37	0.022	0.090	0.11	50
12969	Diben□(a□h)anthracene	53-70-3	N.D.	0.045	0.090	0.11	50
12969	1□4-Dioxane	123-91-1	N.D.	0.045	0.090	0.11	50
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	N.D.	0.67	1.3	1.6	50
12969	Fluoranthene	206-44-0	0.53	0.045	0.090	0.11	50
12969	Fluorene	86-73-7	N.D.	0.045	0.090	0.11	50
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.094 □	0.045	0.090	0.11	50
12969	Naphthalene	91-20-3	0.33	0.090	0.18	0.22	50
12969	Phenanthrene	85-01-8	0.30	0.045	0.090	0.11	50
12969	P□rene	129-00-0	0.44	0.045	0.090	0.11	50
Trial ID: RE							
12969	Acenaphthene	83-32-9	0.008	0.001	0.003	0.003	1
12969	Acenaphth□lene	208-96-8	0.021	0.0007	0.003	0.003	1
12969	Anthracene	120-12-7	0.048	0.001	0.003	0.003	1
12969	Ben□o(a)anthracene	56-55-3	0.21	0.001	0.003	0.003	1
12969	Ben□o(a)p□rene	50-32-8	0.22	0.001	0.003	0.003	1
12969	Ben□o(b)fluoranthene	205-99-2	0.40	0.001	0.003	0.003	1
12969	Ben□o(g□h□i)per□lene	191-24-2	0.12	0.001	0.003	0.003	1
12969	Ben□o(□)fluoranthene	207-08-9	0.16	0.001	0.003	0.003	1
12969	Di-n-but□phthalate	84-74-2	3.2E	0.014	0.027	0.041	1
12969	Chr□sene	218-01-9	0.27	0.0007	0.003	0.003	1
12969	Diben□(a□h)anthracene	53-70-3	0.042	0.001	0.003	0.003	1
12969	1□4-Dioxane	123-91-1	0.005	0.001	0.003	0.003	1
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	0.46	0.021	0.041	0.048	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03BKG

Tidewater, Inc.
ELLE Sample #: SW 9867762
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
12969	Fluoranthene	206-44-0	0.38	0.001	0.003	0.003	1
12969	Fluorene	86-73-7	0.013	0.001	0.003	0.003	1
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.13	0.001	0.003	0.003	1
12969	Naphthalene	91-20-3	0.23	0.003	0.005	0.007	1
12969	Phenanthrene	85-01-8	0.21	0.001	0.003	0.003	1
12969	P□rene	129-00-0	0.34	0.001	0.003	0.003	1

Target anal□tes were detected in the method blan□associated with the samples as noted on the QC Summar□. The following action was ta□en: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.

The stated QC limits for 1□4-dioxane are advisor□onl□until sufficient data points can be obtained to calculate statistical limits.

The SECC exceeded the □/- 50□ of the expected value from the ICAL. Sample and the SECC were reanal□□ed and the SECC was once again outside client requirements which indicates a matrix effect.

Herbicides	**SW-846 8151A**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10401	2□4-D	94-75-7	N.D. D1	82	160	250	5
10401	Dalapon	75-99-0	N.D. D2	300	600	610	5
10401	2□4-DB	94-82-6	N.D. D2	67	140	140	5
10401	Dicamba	1918-00-9	N.D. D2	27	55	82	5
10401	Dinoseb	88-85-7	N.D. D2	61	120	160	5
	The QC window for dinoseb is advisor□due to the erratic performance of the anal□te using this method.						
10401	2□4-DP (Dichloroprop)	120-36-5	N.D. D1	61	120	140	5
10401	MCPA	94-74-6	N.D. D1	5□200	10□000	17□000	5
10401	MCPP (Mecoprop)	93-65-2	N.D. D1	26□000	52□000	53□000	5
10401	2□4□5-T	93-76-5	N.D. D2	5.6	11	12	5
10401	2□4□5-TP	93-72-1	N.D. D2	5.1	10	12	5

PCBs	**SW-846 8082A Feb 2007 Rev 1**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	0.024	0.068	0.12	5
10885	PCB-1221	11104-28-2	N.D. D1	0.031	0.068	0.12	5
10885	PCB-1232	11141-16-5	N.D. D1	0.054	0.11	0.12	5
10885	PCB-1242	53469-21-9	N.D. D1	0.022	0.068	0.12	5
10885	PCB-1248	12672-29-6	N.D. D1	0.022	0.068	0.12	5
10885	PCB-1254	11097-69-1	N.D. D1	0.022	0.068	0.12	5
10885	PCB-1260	11096-82-5	0.20 D1	0.033	0.068	0.12	5
10885	PCB-1262	37324-23-5	N.D. D1	0.022	0.068	0.12	5
10885	PCB-1268	11100-14-4	N.D. D1	0.022	0.068	0.12	5

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03BKG

Tidewater, Inc.
ELLE Sample #: SW 9867762
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
14587	Aldrin	309-00-2	N.D. D1	1.2	4.1	5.6	5
14587	Alpha BHC	319-84-6	N.D. D2	1.2	4.1	5.6	5
14587	Beta BHC	319-85-7	N.D. D1	3.0	6.1	6.8	5
14587	Gamma BHC - Lindane	58-89-9	N.D. D2	1.4	4.1	5.6	5
14587	Alpha Chlordane	5103-71-9	N.D. D2	1.2	4.1	5.6	5
14587	Chlordane	57-74-9	N.D. D1	27	54	120	5
14587	Gamma Chlordane	5103-74-2	N.D. D2	1.7	4.1	5.6	5
14587	p□p-DDD	72-54-8	9.0 □D1	2.2	8.1	12	5
14587	p□p-DDE	72-55-9	14 D1	2.2	8.1	12	5
14587	p□p-DDT	50-29-3	24 PD2	5.4	11	12	5
14587	Delta BHC	319-86-8	N.D. D2	3.1	6.1	6.8	5
14587	Dieldrin	60-57-1	N.D. D2	2.2	8.1	12	5
14587	Endosulfan I	959-98-8	N.D. D2	1.5	4.1	5.6	5
14587	Endosulfan II	33213-65-9	N.D. D2	7.5	15	16	5
14587	Endosulfan Sulfate	1031-07-8	N.D. D2	2.2	8.1	12	5
14587	Endrin	72-20-8	N.D. D2	4.6	9.5	12	5
14587	Endrin Aldeh□de	7421-93-4	N.D. D1	2.2	8.1	12	5
14587	Endrin Ketone	53494-70-5	N.D. D1	4.1	12	14	5
14587	Heptachlor	76-44-8	N.D. D1	2.1	4.2	5.6	5
14587	Heptachlor Epoxide	1024-57-3	N.D. D1	1.2	4.1	5.6	5
14587	Methox□chlor	72-43-5	N.D. D2	12	44	45	5
14587	Toxaphene	8001-35-2	N.D. D1	95	190	220	5

Reporting limits were raised due to interference from the sample matrix.

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
13499	Thorium	7440-29-1	11.7 □	9.24	22.1	55.2	1

Outlier recover□/result: CCV RSDs □ 5□ □Acceptance limits: < 5□
1ST CCV RSD□ - 3.8□ □reading 0.51□acceptance limits: 0.45-0.55
2ND CCV RSD□ - 6.9□ □reading 0.50□acceptance limits: 0.45-0.55
3rd CCV RSD□ - 5.5□ □reading 0.47□acceptance limits: 0.45-0.55

	SW-846 6020A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06123	Aluminum	7429-90-5	5□980	36.8	70.6	88.3	2
06124	Antimon□	7440-36-0	10.3	0.139	0.221	0.441	2
06125	Arsenic	7440-38-2	15.6	0.148	0.353	0.441	2
06126	Barium	7440-39-3	739	0.426	0.706	0.883	2
06127	Ber□llium	7440-41-7	0.473	0.0252	0.0883	0.110	2
06128	Cadmium	7440-43-9	4.93	0.0556	0.110	0.221	2
06129	Calcium	7440-70-2	6□010	75.2	124	154	2
06131	Chromium	7440-47-3	62.5	0.368	0.706	0.883	2

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03BKG

Tidewater, Inc.
ELLE Sample #: SW 9867762
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Metals	**SW-846 6020A**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06132	Cobalt	7440-48-4	13.9	0.0644	0.110	0.221	2
06133	Copper	7440-50-8	693	3.95	7.06	8.83	2
06134	Iron	7439-89-6	45□300	8.27	17.7	22.1	2
06135	Lead	7439-92-1	814	0.0556	0.165	0.662	2
06136	Magnesium	7439-95-4	1□450	3.46	11.0	22.1	2
06137	Manganese	7439-96-5	355	0.437	1.10	2.21	2
06139	Nic□el	7440-02-0	75.0	0.375	0.706	0.883	2
06140	Potassium	7440-09-7	861	39.9	70.6	88.3	2
06141	Selenium	7782-49-2	1.24	0.144	0.353	0.441	2
06142	Silver	7440-22-4	8.83	0.0448	0.0883	0.110	2
06143	Sodium	7440-23-5	400	88.7	159	199	2
06145	Thallium	7440-28-0	0.112	0.0432	0.0883	0.110	2
13502	Uranium	7440-61-1	0.560	0.0432	0.110	0.110	2
06148	Vanadium	7440-62-2	29.7	0.0947	0.177	0.221	2
06149	□inc	7440-66-6	1□020	1.34	2.65	3.31	2
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercur□	7439-97-6	2.59	0.394	0.842	1.68	10
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	26.9	0.50	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven dr□ing at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03BKG

Tidewater, Inc.
ELLE Sample #: SW 9867762
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Dioxins/Furans	**SW-846 8290A Feb 2007 Rev 1**		mg/kg	mg/kg	mg/kg	mg/kg	
12937	2378-TCDD	1746-01-6	0.00000241	0.000000179	0.000000404	0.00000135	1
12937	12378-PeCDD	40321-76-4	0.0000172 Q	0.000000432	0.00000135	0.00000673	1
12937	123478-HxCDD	39227-28-6	0.0000189	0.000000337	0.00000135	0.00000673	1
12937	123678-HxCDD	57653-85-7	0.000113	0.000000337	0.00000135	0.00000673	1
12937	123789-HxCDD	19408-74-3	0.0000433	0.000000337	0.00000135	0.00000673	1
12937	1234678-HpCDD	35822-46-9	0.00174	0.000000337	0.00000135	0.00000673	1
12937	OCDD	3268-87-9	0.0106	0.0000186	0.0000404	0.000135	10
13233	2378-TCDF-Conf	51207-31-9	0.0000111 CQ	0.000000203	0.000000417	0.00000135	1
12937	12378-PeCDF	57117-41-6	0.0000169	0.000000337	0.00000135	0.00000673	1
12937	23478-PeCDF	57117-31-4	0.0000323	0.000000337	0.00000135	0.00000673	1
12937	123478-HxCDF	70648-26-9	0.0000355	0.000000337	0.00000135	0.00000673	1
12937	123678-HxCDF	57117-44-9	0.0000379	0.000000337	0.00000135	0.00000673	1
12937	123789-HxCDF	72918-21-9	0.0000132	0.000000337	0.00000135	0.00000673	1
12937	234678-HxCDF	60851-34-5	0.0000389	0.000000337	0.00000135	0.00000673	1
12937	1234678-HpCDF	67562-39-4	0.000623	0.000000337	0.00000135	0.00000673	1
12937	1234789-HpCDF	55673-89-7	0.0000210	0.000000337	0.00000135	0.00000673	1
12937	OCDF	39001-02-0	0.000473	0.000000731	0.00000269	0.0000135	1

Labeled Compounds	%Rec	Windows	LOD (mg/kg)
13C12-2378-TCDF-Conf	54	40 - 135	1.00
13C12-2378-TCDD	70	40 - 135	0.000000295
13C12-12378-PeCDD	72	40 - 135	0.000000984
13C12-123478-HxCDD	76	40 - 135	0.000000984
13C12-123678-HxCDD	71	40 - 135	0.000000984
13C12-123789-HxCDD	73	40 - 135	0.000000984
13C12-1234678-HpCDD	71	40 - 135	0.000000984
13C12-OCDD	95	40 - 135	0.0000295
13C12-2378-TCDF	95	40 - 135	0.00000305
13C12-12378-PeCDF	69	40 - 135	0.000000984
13C12-23478-PeCDF	70	40 - 135	0.000000984
13C12-123478-HxCDF	66	40 - 135	0.000000984
13C12-123678-HxCDF	66	40 - 135	0.000000984
13C12-234678-HxCDF	66	40 - 135	0.000000984
13C12-123789-HxCDF	70	40 - 135	0.000000984
13C12-1234678-HpCDF	67	40 - 135	0.000000984
13C12-1234789-HpCDF	66	40 - 135	0.000000984
13C12-OCDF	57	40 - 135	0.00000197

Dioxins/Furans Data Qualifiers:

B *Detected in Method Blank*
U *Undetected*
J *Estimated concentration between Estimated Detection Limit and Minimum Reporting Level*
E *Exceeds calibration range*

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03BKG

Tidewater, Inc.
ELLE Sample #: SW 9867762
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF

C *Confirmed quantitation on secondary GC column*
Q *EMPC - Estimated Maximum Possible Concentration*
F *Interference is present*
S *Saturation of detection signal*
(3) *The Labeled Compound spike amount was less than the LOD.*

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03BKG

Tidewater, Inc.
ELLE Sample #: SW 9867762
ELLE Group #: 2002262
Matrix: Soil

Sample Comments

The following anal□te(s) is not covered under our DoD ELAP accreditation:
Thorium b□SW-846 6010C
C□clohexanone b□SW-846 8260C
Bis(2-chloroeth□l)ether b□SW-846 8270D/SW-846 8270D SIM
Di-n-but□l phthalate b□SW-846 8270D SIM
Hexachloroben□ene b□SW-846 8270D SIM

Eurofins Lancaster Laboratories Environmental□LLC is responsible onl□for the certified testing of samples. We are not directl□responsible for the integrit□of the sample prior to laborator□receipt. An□reported concentrations less than 200 ug/□g ma□be biased low if the□were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid b□8260C	SW-846 8260C	1	B183042AA	10/31/2018 17:47	Stephen C Nolte	1.05
06176	GC/MS - LL Water Prep	SW-846 5035A	1	201829851683	10/25/2018 16:09	Rebecca Williams	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	201829851683	10/25/2018 16:09	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201829851683	10/24/2018 09:50	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18302SLI026	11/11/2018 23:55	Anthon□P Bauer	1
10726	SVOA 8270D (microwave)	SW-846 8270D	2-RE	18317SLB026	11/16/2018 16:53	William H Saadeh	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18302SLH026	11/07/2018 20:45	Anthon□P Bauer	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	2-DL	18302SLH026	11/08/2018 10:03	□oseph M Gambler	10
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	3-DL2	18302SLH026	11/08/2018 17:03	Anthon□P Bauer	50
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	4-RE	18317SLC026	11/16/2018 10:26	□oseph M Gambler	1
10813	BNA Soil Microwave APP I□	SW-846 3546	1	18302SLI026	10/30/2018 07:00	□oshua S Ruth	1
10813	BNA Soil Microwave APP I□	SW-846 3546	2	18317SLB026	11/13/2018 19:20	Sall□L Apple□ard	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18302SLH026	10/30/2018 07:00	□oshua S Ruth	1
10811	BNA Soil Microwave SIM	SW-846 3546	2	18317SLC026	11/13/2018 19:25	Sall□L Apple□ard	1
10401	Herbicide soils 8151A Master	SW-846 8151A	1	183030010A	11/01/2018 21:22	Richard A Shober	5
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183040031A	11/05/2018 01:21	Kirb□B Turner	5
14587	ocpest 8081B w/GPC □ 3546	SW-846 8081B	1	183020030A	11/13/2018 19:16	Lisa A Reinert	5
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183040031A	11/01/2018 08:00	Ka□la A □udits□□	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	183020030A	10/30/2018 07:00	□oshua S Ruth	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	183030010A	10/30/2018 20:00	Bradle□W VanLeuven	1
13233	D/F in Solids 8290-Conf	SW-846 8290A Feb 2007 Rev 1	1	18309016	11/08/2018 14:30	Michael □iegler	1
12937	Dioxins/Furans in Solids-8290	SW-846 8290A Feb 2007 Rev 1	1	18309016	11/07/2018 04:44	Michael □iegler	1
12937	Dioxins/Furans in Solids-8290	SW-846 8290A Feb 2007 Rev 1	1	18309016	11/08/2018 03:22	Michael □iegler	10

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03BKG

Tidewater, Inc.
ELLE Sample #: SW 9867762
ELLE Group #: 2002262
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11030	Dioxins/Furans in Solids - Sox	SW-846 8290A Feb 2007 Rev 1	2	18309016	11/05/2018 14:56	Alex L Barton	1
13499	Thorium	SW-846 6010C	1	182991063702	11/03/2018 06:29	Lisa □Coo□e	1
06123	Aluminum	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06124	Antimon□	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06125	Arsenic	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06126	Barium	SW-846 6020A	1	182991063702D	10/31/2018 20:12	Bradle□M Berlot	2
06127	Ber□llium	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06128	Cadmium	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06129	Calcium	SW-846 6020A	1	182991063702B	10/31/2018 20:12	Bradle□M Berlot	2
06131	Chromium	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06132	Cobalt	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06133	Copper	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06134	Iron	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06135	Lead	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06136	Magnesium	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06137	Manganese	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06139	Nic□el	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06140	Potassium	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06141	Selenium	SW-846 6020A	1	182991063702B	10/31/2018 20:12	Bradle□M Berlot	2
06142	Silver	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06143	Sodium	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06145	Thallium	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
13502	Uranium	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
06148	Vanadium	SW-846 6020A	1	182991063702A	11/06/2018 00:46	Bradle□M Berlot	2
06149	□inc	SW-846 6020A	1	182991063702A	10/31/2018 20:12	Bradle□M Berlot	2
00159	Mercur□	SW-846 7471B	1	182991063802	10/29/2018 11:12	Damar□Valentin	10
10637	ICP/ICPMS-SW□3050B - U4	SW-846 3050B	1	182991063702	10/29/2018 05:32	Annamaria Kuhns	1
10638	Hg - SW□7471B - U4	SW-846 7471B	1	182991063802	10/29/2018 07:15	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-2011 □ Moisture Calc	1	18299820005B	10/26/2018 13:46	Larr□E Bevins	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MS Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MS

Tidewater, Inc.
ELLE Sample #: SW 9867763
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
11995	Acetone	67-64-1	1.0E	0.008	0.022	0.028	1.03
11995	Ben□ene	71-43-2	0.024	0.0007	0.003	0.007	1.03
11995	Bromodichloromethane	75-27-4	0.022	0.0006	0.001	0.007	1.03
11995	Bromoform	75-25-2	0.014 □	0.007	0.011	0.014	1.03
11995	Bromomethane	74-83-9	0.014	0.001	0.003	0.007	1.03
11995	2-Butanone	78-93-3	0.39	0.001	0.006	0.014	1.03
11995	Carbon Disulfide	75-15-0	0.018	0.0008	0.003	0.007	1.03
11995	Carbon Tetrachloride	56-23-5	0.027	0.0007	0.003	0.007	1.03
11995	Chloroben□ene	108-90-7	0.020	0.0007	0.003	0.007	1.03
11995	Chloroethane	75-00-3	0.026	0.001	0.006	0.007	1.03
11995	Chloroform	67-66-3	0.028	0.0008	0.003	0.007	1.03
11995	Chloromethane	74-87-3	0.028	0.0008	0.003	0.007	1.03
11995	C□clohexane	110-82-7	0.027	0.0007	0.003	0.007	1.03
11995	C□clohexanone	108-94-1	0.57	0.035	0.14	0.35	1.03
11995	1□2-Dibromo-3-chloropropane	96-12-8	0.015	0.0006	0.001	0.007	1.03
11995	Dibromochloromethane	124-48-1	0.022	0.0006	0.001	0.007	1.03
11995	1□2-Dibromoethane	106-93-4	0.021	0.0006	0.001	0.007	1.03
11995	1□2-Dichloroben□ene	95-50-1	0.018	0.0007	0.003	0.007	1.03
11995	1□3-Dichloroben□ene	541-73-1	0.019	0.0007	0.003	0.007	1.03
11995	1□4-Dichloroben□ene	106-46-7	0.019	0.0006	0.001	0.007	1.03
11995	Dichlorodifluoromethane	75-71-8	0.030	0.0008	0.003	0.007	1.03
11995	1□1-Dichloroethane	75-34-3	0.030	0.0007	0.003	0.007	1.03
11995	1□2-Dichloroethane	107-06-2	0.024	0.0008	0.003	0.007	1.03
11995	1□1-Dichloroethene	75-35-4	0.031	0.0007	0.003	0.007	1.03
11995	cis-1□2-Dichloroethene	156-59-2	0.023	0.0007	0.003	0.007	1.03
11995	trans-1□2-Dichloroethene	156-60-5	0.022	0.0007	0.003	0.007	1.03
11995	1□2-Dichloropropane	78-87-5	0.026	0.0007	0.003	0.007	1.03
11995	cis-1□3-Dichloropropene	10061-01-5	0.012	0.0006	0.001	0.007	1.03
11995	trans-1□3-Dichloropropene	10061-02-6	0.015	0.0004	0.001	0.007	1.03
11995	Eth□lben□ene	100-41-4	0.023	0.0006	0.001	0.007	1.03
11995	Freon 113	76-13-1	0.039	0.0008	0.003	0.014	1.03
11995	2-Hexanone	591-78-6	0.055	0.001	0.006	0.014	1.03
11995	Isoprop□lben□ene	98-82-8	0.022	0.0006	0.001	0.007	1.03
11995	Meth□l Acetate	79-20-9	0.028	0.001	0.006	0.007	1.03
11995	Meth□l Tertiar□But□l Ether	1634-04-4	0.027	0.0007	0.003	0.007	1.03
11995	4-Meth□l-2-pentanone	108-10-1	0.080	0.001	0.006	0.014	1.03
11995	Meth□lc□clohexane	108-87-2	0.018	0.0008	0.003	0.007	1.03
11995	Meth□lene Chloride	75-09-2	0.026	0.003	0.006	0.007	1.03
11995	St□rene	100-42-5	0.013	0.0004	0.001	0.007	1.03
11995	1□1□2□2-Tetrachloroethane	79-34-5	0.035	0.0006	0.001	0.007	1.03
11995	Tetrachloroethene	127-18-4	0.021	0.0007	0.003	0.007	1.03

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MS Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MS

Tidewater, Inc.
ELLE Sample #: SW 9867763
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
11995	Toluene	108-88-3	0.028	0.0008	0.003	0.007	1.03
11995	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.007	0.011	0.014	1.03
11995	1□1□1-Trichloroethane	71-55-6	0.026	0.0008	0.003	0.007	1.03
11995	1□1□2-Trichloroethane	79-00-5	0.029	0.0007	0.003	0.007	1.03
11995	Trichloroethene	79-01-6	0.021	0.0007	0.003	0.007	1.03
11995	Trichlorofluoromethane	75-69-4	0.035	0.001	0.003	0.007	1.03
11995	Vin□l Chloride	75-01-4	0.028	0.0008	0.003	0.007	1.03
11995	□□lene (Total)	1330-20-7	0.064	0.001	0.003	0.007	1.03
	The recover□for the sample internal standard is outside the QC acceptance limits. The following corrective action was ta□en: Similar results were obtained for the internal standard in the bac□ground□matrix spi□e and matrix spi□e duplicate indicating a matrix effect.						
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10726	Aniline	62-53-3	N.D.	0.23	0.45	0.68	1
10726	Ben□□l alcohol	100-51-6	2.1	0.23	0.45	0.68	1
10726	4-Bromophen□l-phen□lether	101-55-3	2.0	0.027	0.054	0.068	1
10726	Carba□ole	86-74-8	1.8	0.023	0.045	0.050	1
10726	4-Chloro-3-meth□lphenol	59-50-7	1.8	0.023	0.045	0.050	1
10726	4-Chloroaniline	106-47-8	N.D.	0.045	0.090	0.23	1
10726	bis(2-Chloroethox□)methane	111-91-1	1.8	0.023	0.045	0.050	1
10726	bis(2-Chloroeth□l)ether	111-44-4	1.9	0.032	0.063	0.068	1
10726	2-Chloronaphthalene	91-58-7	1.7	0.009	0.018	0.045	1
10726	2-Chlorophenol	95-57-8	1.9	0.023	0.045	0.050	1
10726	4-Chlorophen□l-phen□lether	7005-72-3	1.7	0.023	0.045	0.050	1
10726	2□2□-ox□bis(1-Chloropropane)	108-60-1	1.8	0.023	0.045	0.050	1
	Bis(2-chloroisoprop□l) ether CAS □39638-32-9 and 2□2□-Ox□bis(1-chloropropane) CAS □108-60-1 cannot be separated chromatographicall□ The reported result represents the combined total of both compounds.						
10726	Diben□ofuran	132-64-9	1.9	0.023	0.045	0.050	1
10726	1□2-Dichloroben□ene	95-50-1	1.9	0.027	0.054	0.068	1
10726	1□3-Dichloroben□ene	541-73-1	1.8	0.023	0.045	0.050	1
10726	1□4-Dichloroben□ene	106-46-7	2.0	0.023	0.045	0.050	1
10726	3□3□-Dichloroben□idine	91-94-1	N.D.	0.14	0.27	0.45	1
10726	2□4-Dichlorophenol	120-83-2	1.8	0.023	0.045	0.050	1
10726	Dieth□lphthalate	84-66-2	1.8	0.090	0.18	0.23	1
10726	2□4-Dimeth□lphenol	105-67-9	0.91	0.023	0.045	0.050	1
10726	Dimeth□lphthalate	131-11-3	1.8	0.090	0.18	0.23	1
10726	4□6-Dinitro-2-meth□lphenol	534-52-1	1.8	0.23	0.45	0.68	1
10726	2□4-Dinitrophenol	51-28-5	3.2	0.50	0.99	1.4	1
10726	2□4-Dinitrotoluene	121-14-2	1.7	0.090	0.18	0.23	1
10726	2□6-Dinitrotoluene	606-20-2	1.7	0.027	0.054	0.068	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MS Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MS

Tidewater, Inc.
ELLE Sample #: SW 9867763
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10726	Hexachloroben□ene	118-74-1	2.1	0.005	0.009	0.023	1
10726	Hexachlorobutadiene	87-68-3	2.1	0.027	0.054	0.068	1
10726	Hexachloroc□clopentadiene	77-47-4	N.D.	0.23	0.45	0.68	1
10726	Hexachloroethane	67-72-1	0.40	0.045	0.090	0.23	1
10726	Isophorone	78-59-1	1.9	0.023	0.045	0.050	1
10726	2-Meth□lnaphthalene	91-57-6	2.0	0.014	0.027	0.045	1
10726	2-Meth□lphenol	95-48-7	1.8	0.036	0.072	0.090	1
10726	4-Meth□lphenol	106-44-5	1.7	0.027	0.054	0.068	1
	3-Meth□lphenol and 4-meth□lphenol cannot be resolved under the chromatographic conditions used for sample anal□sis. The result reported for 4-meth□lphenol represents the combined total of both compounds.						
10726	2-Nitroaniline	88-74-4	1.4	0.027	0.054	0.068	1
10726	3-Nitroaniline	99-09-2	N.D.	0.090	0.18	0.23	1
10726	4-Nitroaniline	100-01-6	N.D.	0.090	0.18	0.23	1
10726	Nitroben□ene	98-95-3	1.8	0.036	0.072	0.090	1
10726	2-Nitrophenol	88-75-5	1.9	0.023	0.045	0.050	1
10726	4-Nitrophenol	100-02-7	1.7	0.23	0.45	0.68	1
10726	N-Nitroso-di-n-prop□lamine	621-64-7	1.9	0.027	0.054	0.068	1
10726	N-Nitrosodiphen□lamine	86-30-6	1.6	0.023	0.045	0.050	1
	N-nitrosodiphen□lamine decomposes in the GC inlet forming diphen□lamine. The result reported for N-nitrosodiphen□lamine represents the combined total of both compounds.						
10726	Di-n-oct□lphthalate	117-84-0	2.1	0.090	0.18	0.23	1
10726	Pentachlorophenol	87-86-5	2.3	0.050	0.18	0.23	1
10726	Phenol	108-95-2	1.9	0.032	0.063	0.068	1
10726	P□ridine	110-86-1	1.1	0.090	0.18	0.23	1
10726	1□2□4-Trichloroben□ene	120-82-1	1.9	0.023	0.045	0.050	1
10726	2□4□5-Trichlorophenol	95-95-4	1.9	0.027	0.054	0.068	1
10726	2□4□6-Trichlorophenol	88-06-2	1.9	0.027	0.054	0.068	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
12969	Acenaphthene	83-32-9	0.045	0.0009	0.002	0.002	1
12969	Acenaphth□lene	208-96-8	0.039	0.0005	0.002	0.002	1
12969	Anthracene	120-12-7	0.058	0.0009	0.002	0.002	1
12969	Ben□o(a)anthracene	56-55-3	0.21	0.0009	0.002	0.002	1
12969	Ben□o(a)p□rene	50-32-8	0.23	0.0009	0.002	0.002	1
12969	Ben□o(b)fluoranthene	205-99-2	0.52E	0.0009	0.002	0.002	1
12969	Ben□o(g□h□i)per□lene	191-24-2	0.098	0.0009	0.002	0.002	1
12969	Ben□o(□)fluoranthene	207-08-9	0.25	0.0009	0.002	0.002	1
12969	Di-n-but□lphthalate	84-74-2	2.6E	0.009	0.018	0.027	1
12969	Chr□sene	218-01-9	0.27	0.0005	0.002	0.002	1
12969	Diben□(a□h)anthracene	53-70-3	0.054	0.0009	0.002	0.002	1
12969	1□4-Dioxane	123-91-1	0.038	0.0009	0.002	0.002	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MS Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MS

Tidewater, Inc.
ELLE Sample #: SW 9867763
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	0.47E	0.014	0.027	0.032	1
12969	Fluoranthene	206-44-0	0.36	0.0009	0.002	0.002	1
12969	Fluorene	86-73-7	0.048	0.0009	0.002	0.002	1
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.11	0.0009	0.002	0.002	1
12969	Naphthalene	91-20-3	0.32	0.002	0.004	0.005	1
12969	Phenanthrene	85-01-8	0.21	0.0009	0.002	0.002	1
12969	P□rene	129-00-0	0.35	0.0009	0.002	0.002	1
Trial ID: RE							
12969	Acenaphthene	83-32-9	0.069	0.001	0.003	0.003	1
12969	Acenaphth□lene	208-96-8	0.079	0.0007	0.003	0.003	1
12969	Anthracene	120-12-7	0.16	0.001	0.003	0.003	1
12969	Ben□o(a)anthracene	56-55-3	0.35	0.001	0.003	0.003	1
12969	Ben□o(a)p□rene	50-32-8	0.36	0.001	0.003	0.003	1
12969	Ben□o(b)fluoranthene	205-99-2	0.67	0.001	0.003	0.003	1
12969	Ben□o(g□h□i)per□lene	191-24-2	0.15	0.001	0.003	0.003	1
12969	Ben□o(□)fluoranthene	207-08-9	0.31	0.001	0.003	0.003	1
12969	Di-n-but□lphthalate	84-74-2	6.9E	0.014	0.027	0.041	1
12969	Chr□sene	218-01-9	0.41	0.0007	0.003	0.003	1
12969	Diben□(a□h)anthracene	53-70-3	0.089	0.001	0.003	0.003	1
12969	1□4-Dioxane	123-91-1	0.046	0.001	0.003	0.003	1
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	0.54	0.020	0.041	0.047	1
12969	Fluoranthene	206-44-0	0.65	0.001	0.003	0.003	1
12969	Fluorene	86-73-7	0.077	0.001	0.003	0.003	1
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.18	0.001	0.003	0.003	1
12969	Naphthalene	91-20-3	0.29	0.003	0.005	0.007	1
12969	Phenanthrene	85-01-8	0.38	0.001	0.003	0.003	1
12969	P□rene	129-00-0	0.57	0.001	0.003	0.003	1

Target anal□tes were detected in the method blan□associated with the samples as noted on the QC Summar□. The following action was ta□en: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.

The stated QC limits for 1□4-dioxane are advisor□onl□until sufficient data points can be obtained to calculate statistical limits.

The SECC exceeded the □/- 50□ of the expected value from the ICAL. Sample and the SECC were reanal□□ed and the SECC was once again outside client requirements which indicates a matrix effect.

Herbicides	**SW-846 8151A**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10401	2□4-D	94-75-7	120	□D1	81	160	240	5
10401	Dalapon	75-99-0	N.D.	D2	300	590	610	5
10401	2□4-DB	94-82-6	130	□PD2	66	140	140	5

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MS Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MS

Tidewater, Inc.
ELLE Sample #: SW 9867763
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Herbicides	**SW-846 8151A**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10401	Dicamba	1918-00-9	N.D.	D2	27	54	81	5
10401	Dinoseb	88-85-7	N.D.	D2	61	120	160	5
	The QC window for dinoseb is advisor□due to the erratic performance of the anal□te using this method.							
10401	2□4-DP (Dichloroprop)	120-36-5	140	D1	61	120	140	5
10401	MCPA	94-74-6	N.D.	D1	5□100	10□000	17□000	5
10401	MCPP (Mecoprop)	93-65-2	N.D.	D1	26□000	51□000	52□000	5
10401	2□4□5-T	93-76-5	13	D2	5.5	11	11	5
10401	2□4□5-TP	93-72-1	12	D2	5.1	10	11	5
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10885	PCB-1016	12674-11-2	0.22	D2	0.024	0.068	0.12	5
10885	PCB-1221	11104-28-2	N.D.	D1	0.031	0.068	0.12	5
10885	PCB-1232	11141-16-5	N.D.	D1	0.054	0.11	0.12	5
10885	PCB-1242	53469-21-9	N.D.	D1	0.022	0.068	0.12	5
10885	PCB-1248	12672-29-6	N.D.	D1	0.022	0.068	0.12	5
10885	PCB-1254	11097-69-1	N.D.	D1	0.022	0.068	0.12	5
10885	PCB-1260	11096-82-5	0.35	D1	0.033	0.068	0.12	5
10885	PCB-1262	37324-23-5	N.D.	D1	0.022	0.068	0.12	5
10885	PCB-1268	11100-14-4	N.D.	D1	0.022	0.068	0.12	5
	The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.							
Pesticides	**SW-846 8081B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
14587	Aldrin	309-00-2	3.2	□D1	1.2	4.1	5.6	5
14587	Alpha BHC	319-84-6	N.D.	D1	1.2	4.1	5.6	5
14587	Beta BHC	319-85-7	12	D2	3.0	6.1	6.8	5
14587	Gamma BHC - Lindane	58-89-9	2.2	□PD2	1.4	4.1	5.6	5
14587	Alpha Chlordane	5103-71-9	3.9	□D1	1.2	4.1	5.6	5
14587	Chlordane	57-74-9	N.D.	D1	27	54	120	5
14587	Gamma Chlordane	5103-74-2	4.6	□PD2	1.7	4.1	5.6	5
14587	p□p-DDD	72-54-8	14	D1	2.2	8.1	12	5
14587	p□p-DDE	72-55-9	19	D1	2.2	8.1	12	5
14587	p□p-DDT	50-29-3	18	PD2	5.4	11	12	5
14587	Delta BHC	319-86-8	N.D.	D2	3.0	6.1	6.8	5
14587	Dieldrin	60-57-1	9.1	□D1	2.2	8.1	12	5
14587	Endosulfan I	959-98-8	3.4	□D2	1.5	4.1	5.6	5
14587	Endosulfan II	33213-65-9	N.D.	D2	7.5	15	16	5
14587	Endosulfan Sulfate	1031-07-8	7.0	□D1	2.2	8.1	12	5
14587	Endrin	72-20-8	8.2	□D1	4.6	9.5	12	5
14587	Endrin Aldeh□de	7421-93-4	9.1	□D1	2.2	8.1	12	5
14587	Endrin Ketone	53494-70-5	12	□D2	4.1	12	14	5

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MS Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MS

Tidewater, Inc.
ELLE Sample #: SW 9867763
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
14587	Heptachlor	76-44-8	3.3 □D1	2.1	4.2	5.6	5
14587	Heptachlor Epoxide	1024-57-3	3.9 □D2	1.2	4.1	5.6	5
14587	Methox□chlor	72-43-5	33 □D1	12	44	45	5
14587	Toxaphene	8001-35-2	N.D. D1	95	190	220	5

Reporting limits were raised due to interference from the sample matrix.

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
13499	Thorium	7440-29-1	68.1	10.3	24.6	61.6	1

Outlier recover□/result: CCV RSDs □5□ □Acceptance limits: < 5□
1ST CCV RSD□ - 3.8□ □reading 0.51□acceptance limits: 0.45-0.55
2ND CCV RSD□ - 6.9□ □reading 0.50□acceptance limits: 0.45-0.55
3rd CCV RSD□ - 5.5□ □reading 0.47□acceptance limits: 0.45-0.55

	SW-846 6020A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06123	Aluminum	7429-90-5	7□520	41.2	78.9	98.6	2
06124	Antimon□	7440-36-0	10.1	0.156	0.246	0.493	2
06125	Arsenic	7440-38-2	17.9	0.165	0.394	0.493	2
06126	Barium	7440-39-3	512	0.476	0.789	0.986	2
06127	Ber□llium	7440-41-7	1.44	0.0281	0.0986	0.123	2
06128	Cadmium	7440-43-9	5.68	0.0621	0.123	0.246	2
06129	Calcium	7440-70-2	5□820	84.1	138	173	2
06131	Chromium	7440-47-3	71.8	0.412	0.789	0.986	2
06132	Cobalt	7440-48-4	75.3	0.0720	0.123	0.246	2
06133	Copper	7440-50-8	1□610	4.41	7.89	9.86	2
06134	Iron	7439-89-6	40□700	9.24	19.7	24.6	2
06135	Lead	7439-92-1	775	0.0621	0.185	0.739	2
06136	Magnesium	7439-95-4	1□980	3.87	12.3	24.6	2
06137	Manganese	7439-96-5	362	0.488	1.23	2.46	2
06139	Nic□el	7440-02-0	83.2	0.419	0.789	0.986	2
06140	Potassium	7440-09-7	3□380	44.6	78.9	98.6	2
06141	Selenium	7782-49-2	3.47	0.161	0.394	0.493	2
06142	Silver	7440-22-4	19.1	0.0500	0.0986	0.123	2
06143	Sodium	7440-23-5	2□760	99.1	177	222	2
06145	Thallium	7440-28-0	0.476	0.0483	0.0986	0.123	2
13502	Uranium	7440-61-1	5.90	0.0483	0.123	0.123	2
06148	Vanadium	7440-62-2	39.2	0.106	0.197	0.246	2
06149	□inc	7440-66-6	1□050	1.50	2.96	3.70	2
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercur□	7439-97-6	2.32	0.400	0.855	1.71	10

□□This limit was used in the evaluation of the final result

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: **OU2-1-SS006 MS Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MS

Tidewater, Inc.
ELLE Sample #: SW 9867763
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Wet Chemistry		**SM 2540 G-2011 %Moisture Calc**	**%**	**%**	**%**	**%**	
00118	Moisture	n.a.	26.9	0.50	0.50	0.50	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MS Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MS

Tidewater, Inc.
ELLE Sample #: SW 9867763
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Dioxins/Furans	**SW-846 8290A Feb 2007 Rev 1**		mg/kg	mg/kg	mg/kg	mg/kg	
12937	2378-TCDD	1746-01-6	0.0000333	0.000000180	0.000000406	0.00000135	1
12937	12378-PeCDD	40321-76-4	0.000175	0.000000435	0.00000135	0.00000677	1
12937	123478-HxCDD	39227-28-6	0.000170	0.000000339	0.00000135	0.00000677	1
12937	123678-HxCDD	57653-85-7	0.000266	0.000000339	0.00000135	0.00000677	1
12937	123789-HxCDD	19408-74-3	0.000198	0.000000339	0.00000135	0.00000677	1
12937	1234678-HpCDD	35822-46-9	0.00195	0.000000339	0.00000135	0.00000677	1
12937	OCDD	3268-87-9	0.0149E	0.00000187	0.00000406	0.0000135	1
12937	2378-TCDF	51207-31-9	0.0000455	0.000000205	0.000000420	0.00000135	1
12937	12378-PeCDF	57117-41-6	0.000168	0.000000339	0.00000135	0.00000677	1
12937	23478-PeCDF	57117-31-4	0.000188	0.000000339	0.00000135	0.00000677	1
12937	123478-HxCDF	70648-26-9	0.000190	0.000000339	0.00000135	0.00000677	1
12937	123678-HxCDF	57117-44-9	0.000178	0.000000339	0.00000135	0.00000677	1
12937	123789-HxCDF	72918-21-9	0.000163	0.000000339	0.00000135	0.00000677	1
12937	234678-HxCDF	60851-34-5	0.000190	0.000000339	0.00000135	0.00000677	1
12937	1234678-HpCDF	67562-39-4	0.000762	0.000000339	0.00000135	0.00000677	1
12937	1234789-HpCDF	55673-89-7	0.000168	0.000000339	0.00000135	0.00000677	1
12937	OCDF	39001-02-0	0.000828	0.000000735	0.00000271	0.0000135	1

Labeled Compounds	%Rec	Windows	LOD (mg/kg)
13C12-2378-TCDD	61	40 - 135	0.000000297
13C12-12378-PeCDD	62	40 - 135	0.000000990
13C12-123478-HxCDD	64	40 - 135	0.000000990
13C12-123678-HxCDD	61	40 - 135	0.000000990
13C12-123789-HxCDD	62	40 - 135	0.000000990
13C12-1234678-HpCDD	68	40 - 135	0.000000990
13C12-OCDD	72	40 - 135	0.00000297
13C12-2378-TCDF	64	40 - 135	0.000000307
13C12-12378-PeCDF	71	40 - 135	0.000000990
13C12-23478-PeCDF	65	40 - 135	0.000000990
13C12-123478-HxCDF	63	40 - 135	0.000000990
13C12-123678-HxCDF	65	40 - 135	0.000000990
13C12-234678-HxCDF	63	40 - 135	0.000000990
13C12-123789-HxCDF	66	40 - 135	0.000000990
13C12-1234678-HpCDF	66	40 - 135	0.000000990
13C12-1234789-HpCDF	69	40 - 135	0.000000990
13C12-OCDF	68	40 - 135	0.00000198

Dioxins/Furans Data Qualifiers:

B *Detected in Method Blank*
U *Undetected*
J *Estimated concentration between Estimated Detection Limit and Minimum Reporting Level*
E *Exceeds calibration range*
C *Confirmed quantitation on secondary GC column*

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MS Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MS

Tidewater, Inc.
ELLE Sample #: SW 9867763
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF

Q *EMPC - Estimated Maximum Possible Concentration*
F *Interference is present*
S *Saturation of detection signal*
(3) *The Labeled Compound spike amount was less than the LOD.*

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MS Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MS

Tidewater, Inc.
ELLE Sample #: SW 9867763
ELLE Group #: 2002262
Matrix: Soil

Sample Comments

The following anal□te(s) is not covered under our DoD ELAP accreditation:
Thorium b□SW-846 6010C
C□clohexanone b□SW-846 8260C
Bis(2-chloroeth□l)ether b□SW-846 8270D/SW-846 8270D SIM
Di-n-but□l phthalate b□SW-846 8270D SIM
Hexachloroben□ene b□SW-846 8270D SIM

Eurofins Lancaster Laboratories Environmental□LLC is responsible onl□for the certified testing of samples. We are not directl□responsible for the integrit□of the sample prior to laborator□receipt. An□reported concentrations less than 200 ug/□g ma□be biased low if the□were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid b□8260C	SW-846 8260C	1	B183042AA	10/31/2018 18:09	Stephen C Nolte	1.03
06176	GC/MS - LL Water Prep	SW-846 5035A	1	201829851683	10/25/2018 16:09	Rebecca Williams	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	201829851683	10/25/2018 16:09	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201829851683	10/24/2018 09:50	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18302SLI026	11/12/2018 00:18	Anthon□P Bauer	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18302SLH026	11/07/2018 21:15	Anthon□P Bauer	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	2-RE	18317SLC026	11/16/2018 10:57	□oseph M Gambler	1
10813	BNA Soil Microwave APP I□	SW-846 3546	1	18302SLI026	10/30/2018 07:00	□oshua S Ruth	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18302SLH026	10/30/2018 07:00	□oshua S Ruth	1
10811	BNA Soil Microwave SIM	SW-846 3546	2	18317SLC026	11/13/2018 19:25	Sall□L Apple□ard	1
10401	Herbicide soils 8151A Master	SW-846 8151A	1	183030010A	11/01/2018 23:01	Richard A Shober	5
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183040031A	11/05/2018 01:32	Kirb□B Turner	5
14587	ocpest 8081B w/GPC □ 3546	SW-846 8081B	1	183020030A	11/13/2018 19:37	Lisa A Reinert	5
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183040031A	11/01/2018 08:00	Ka□la A □udits□□	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	183020030A	10/30/2018 07:00	□oshua S Ruth	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	183030010A	10/30/2018 20:00	Bradle□W VanLeuven	1
12937	Dioxins/Furans in Solids-8290	SW-846 8290A Feb 2007 Rev 1	1	18309016	11/07/2018 08:48	Michael □iegler	1
11030	Dioxins/Furans in Solids - Sox	SW-846 8290A Feb 2007 Rev 1	2	18309016	11/05/2018 14:56	Alex L Barton	1
13499	Thorium	SW-846 6010C	1	182991063702	11/03/2018 06:37	Lisa □Coo□e	1
06123	Aluminum	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06124	Antimon□	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06125	Arsenic	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06126	Barium	SW-846 6020A	1	182991063702D	10/31/2018 20:19	Bradle□M Berlot	2
06127	Ber□llium	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06128	Cadmium	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06129	Calcium	SW-846 6020A	1	182991063702B	10/31/2018 20:19	Bradle□M Berlot	2
06131	Chromium	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MS Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MS

Tidewater, Inc.
ELLE Sample #: SW 9867763
ELLE Group #: 2002262
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06132	Cobalt	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06133	Copper	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06134	Iron	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06135	Lead	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06136	Magnesium	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06137	Manganese	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06139	Nic□el	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06140	Potassium	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06141	Selenium	SW-846 6020A	1	182991063702B	10/31/2018 20:19	Bradle□M Berlot	2
06142	Silver	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06143	Sodium	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06145	Thallium	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
13502	Uranium	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
06148	Vanadium	SW-846 6020A	1	182991063702A	11/06/2018 00:51	Bradle□M Berlot	2
06149	□inc	SW-846 6020A	1	182991063702A	10/31/2018 20:19	Bradle□M Berlot	2
00159	Mercur□	SW-846 7471B	1	182991063802	10/29/2018 11:18	Damar□Valentin	10
10637	ICP/ICPMS-SW□3050B - U4	SW-846 3050B	1	182991063702	10/29/2018 05:32	Annamaria Kuhns	1
10638	Hg - SW□7471B - U4	SW-846 7471B	1	182991063802	10/29/2018 07:15	Annamaria Kuhns	1
00118	Moisture	SM 2540 G-2011 □ Moisture Calc	1	18299820005B	10/26/2018 13:46	Larr□E Bevins	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MSD Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MSD

Tidewater, Inc.
ELLE Sample #: SW 9867764
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
11995	Acetone	67-64-1	0.50	0.008	0.022	0.027	1
11995	Ben□ene	71-43-2	0.026	0.0007	0.003	0.007	1
11995	Bromodichloromethane	75-27-4	0.023	0.0005	0.001	0.007	1
11995	Bromoform	75-25-2	0.016	0.007	0.011	0.014	1
11995	Bromomethane	74-83-9	0.016	0.001	0.003	0.007	1
11995	2-Butanone	78-93-3	0.24	0.001	0.005	0.014	1
11995	Carbon Disulfide	75-15-0	0.019	0.0008	0.003	0.007	1
11995	Carbon Tetrachloride	56-23-5	0.028	0.0007	0.003	0.007	1
11995	Chloroben□ene	108-90-7	0.021	0.0007	0.003	0.007	1
11995	Chloroethane	75-00-3	0.022	0.001	0.005	0.007	1
11995	Chloroform	67-66-3	0.030	0.0008	0.003	0.007	1
11995	Chloromethane	74-87-3	0.029	0.0008	0.003	0.007	1
11995	C□clohexane	110-82-7	0.028	0.0007	0.003	0.007	1
11995	C□clohexanone	108-94-1	0.59	0.034	0.14	0.34	1
11995	1□2-Dibromo-3-chloropropane	96-12-8	0.023	0.0005	0.001	0.007	1
11995	Dibromochloromethane	124-48-1	0.025	0.0005	0.001	0.007	1
11995	1□2-Dibromoethane	106-93-4	0.024	0.0005	0.001	0.007	1
11995	1□2-Dichloroben□ene	95-50-1	0.021	0.0007	0.003	0.007	1
11995	1□3-Dichloroben□ene	541-73-1	0.021	0.0007	0.003	0.007	1
11995	1□4-Dichloroben□ene	106-46-7	0.021	0.0005	0.001	0.007	1
11995	Dichlorodifluoromethane	75-71-8	0.030	0.0008	0.003	0.007	1
11995	1□1-Dichloroethane	75-34-3	0.032	0.0007	0.003	0.007	1
11995	1□2-Dichloroethane	107-06-2	0.027	0.0008	0.003	0.007	1
11995	1□1-Dichloroethene	75-35-4	0.031	0.0007	0.003	0.007	1
11995	cis-1□2-Dichloroethene	156-59-2	0.026	0.0007	0.003	0.007	1
11995	trans-1□2-Dichloroethene	156-60-5	0.024	0.0007	0.003	0.007	1
11995	1□2-Dichloropropane	78-87-5	0.028	0.0007	0.003	0.007	1
11995	cis-1□3-Dichloropropene	10061-01-5	0.016	0.0005	0.001	0.007	1
11995	trans-1□3-Dichloropropene	10061-02-6	0.019	0.0004	0.001	0.007	1
11995	Eth□lben□ene	100-41-4	0.024	0.0005	0.001	0.007	1
11995	Freon 113	76-13-1	0.039	0.0008	0.003	0.014	1
11995	2-Hexanone	591-78-6	0.094	0.001	0.005	0.014	1
11995	Isoprop□lben□ene	98-82-8	0.021	0.0005	0.001	0.007	1
11995	Meth□l Acetate	79-20-9	0.027	0.001	0.005	0.007	1
11995	Meth□l Tertiar□But□l Ether	1634-04-4	0.030	0.0007	0.003	0.007	1
11995	4-Meth□l-2-pentanone	108-10-1	0.11	0.001	0.005	0.014	1
11995	Meth□lc□clohexane	108-87-2	0.020	0.0008	0.003	0.007	1
11995	Meth□lene Chloride	75-09-2	0.029	0.003	0.005	0.007	1
11995	St□rene	100-42-5	0.014	0.0004	0.001	0.007	1
11995	1□1□2□2-Tetrachloroethane	79-34-5	0.042	0.0005	0.001	0.007	1
11995	Tetrachloroethene	127-18-4	0.022	0.0007	0.003	0.007	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MSD Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MSD

Tidewater, Inc.
ELLE Sample #: SW 9867764
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
11995	Toluene	108-88-3	0.029	0.0008	0.003	0.007	1
11995	1□2□4-Trichloroben□ene	120-82-1	0.008 □	0.007	0.011	0.014	1
11995	1□1□1-Trichloroethane	71-55-6	0.027	0.0008	0.003	0.007	1
11995	1□1□2-Trichloroethane	79-00-5	0.032	0.0007	0.003	0.007	1
11995	Trichloroethene	79-01-6	0.022	0.0007	0.003	0.007	1
11995	Trichlorofluoromethane	75-69-4	0.033	0.001	0.003	0.007	1
11995	Vin□l Chloride	75-01-4	0.027	0.0008	0.003	0.007	1
11995	□□lene (Total)	1330-20-7	0.069	0.001	0.003	0.007	1
	The recover□for the sample internal standard is outside the QC acceptance limits. The following corrective action was ta□en: Similar results were obtained for the internal standard in the bac□ground□matrix spi□e and matrix spi□e duplicate indicating a matrix effect.						
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10726	Aniline	62-53-3	N.D.	0.23	0.45	0.68	1
10726	Ben□□l alcohol	100-51-6	2.0	0.23	0.45	0.68	1
10726	4-Bromophen□l-phen□lether	101-55-3	2.0	0.027	0.054	0.068	1
10726	Carba□ole	86-74-8	1.7	0.023	0.045	0.050	1
10726	4-Chloro-3-meth□lphenol	59-50-7	1.8	0.023	0.045	0.050	1
10726	4-Chloroaniline	106-47-8	N.D.	0.045	0.090	0.23	1
10726	bis(2-Chloroethox□)methane	111-91-1	1.8	0.023	0.045	0.050	1
10726	bis(2-Chloroeth□l)ether	111-44-4	1.7	0.032	0.063	0.068	1
10726	2-Chloronaphthalene	91-58-7	2.3	0.009	0.018	0.045	1
10726	2-Chlorophenol	95-57-8	1.8	0.023	0.045	0.050	1
10726	4-Chlorophen□l-phen□lether	7005-72-3	1.8	0.023	0.045	0.050	1
10726	2□2□-ox□bis(1-Chloropropane)	108-60-1	1.7	0.023	0.045	0.050	1
	Bis(2-chloroisoprop□l) ether CAS □39638-32-9 and 2□2□-Ox□bis(1-chloropropane) CAS □108-60-1 cannot be separated chromatographicall□ The reported result represents the combined total of both compounds.						
10726	Diben□ofuran	132-64-9	1.9	0.023	0.045	0.050	1
10726	1□2-Dichloroben□ene	95-50-1	1.8	0.027	0.054	0.068	1
10726	1□3-Dichloroben□ene	541-73-1	1.8	0.023	0.045	0.050	1
10726	1□4-Dichloroben□ene	106-46-7	1.9	0.023	0.045	0.050	1
10726	3□3□-Dichloroben□idine	91-94-1	N.D.	0.14	0.27	0.45	1
10726	2□4-Dichlorophenol	120-83-2	1.9	0.023	0.045	0.050	1
10726	Dieth□lphthalate	84-66-2	1.9	0.090	0.18	0.23	1
10726	2□4-Dimeth□lphenol	105-67-9	1.0	0.023	0.045	0.050	1
10726	Dimeth□lphthalate	131-11-3	1.9	0.090	0.18	0.23	1
10726	4□6-Dinitro-2-meth□lphenol	534-52-1	1.9	0.23	0.45	0.68	1
10726	2□4-Dinitrophenol	51-28-5	3.4	0.50	0.99	1.4	1
10726	2□4-Dinitrotoluene	121-14-2	1.8	0.090	0.18	0.23	1
10726	2□6-Dinitrotoluene	606-20-2	1.8	0.027	0.054	0.068	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MSD Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MSD

Tidewater, Inc.
ELLE Sample #: SW 9867764
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10726	Hexachloroben□ene	118-74-1	2.0	0.005	0.009	0.023	1
10726	Hexachlorobutadiene	87-68-3	2.0	0.027	0.054	0.068	1
10726	Hexachloroc□clopentadiene	77-47-4	N.D.	0.23	0.45	0.68	1
10726	Hexachloroethane	67-72-1	1.0	0.045	0.090	0.23	1
10726	Isophorone	78-59-1	1.8	0.023	0.045	0.050	1
10726	2-Meth□lnaphthalene	91-57-6	1.9	0.014	0.027	0.045	1
10726	2-Meth□lphenol	95-48-7	1.8	0.036	0.072	0.090	1
10726	4-Meth□lphenol	106-44-5	1.7	0.027	0.054	0.068	1
	3-Meth□lphenol and 4-meth□lphenol cannot be resolved under the chromatographic conditions used for sample anal□sis. The result reported for 4-meth□lphenol represents the combined total of both compounds.						
10726	2-Nitroaniline	88-74-4	1.8	0.027	0.054	0.068	1
10726	3-Nitroaniline	99-09-2	N.D.	0.090	0.18	0.23	1
10726	4-Nitroaniline	100-01-6	N.D.	0.090	0.18	0.23	1
10726	Nitroben□ene	98-95-3	1.8	0.036	0.072	0.090	1
10726	2-Nitrophenol	88-75-5	1.8	0.023	0.045	0.050	1
10726	4-Nitrophenol	100-02-7	1.7	0.23	0.45	0.68	1
10726	N-Nitroso-di-n-prop□lamine	621-64-7	1.8	0.027	0.054	0.068	1
10726	N-Nitrosodiphen□lamine	86-30-6	1.9	0.023	0.045	0.050	1
	N-nitrosodiphen□lamine decomposes in the GC inlet forming diphen□lamine. The result reported for N-nitrosodiphen□lamine represents the combined total of both compounds.						
10726	Di-n-oct□lphthalate	117-84-0	1.9	0.090	0.18	0.23	1
10726	Pentachlorophenol	87-86-5	2.2	0.050	0.18	0.23	1
10726	Phenol	108-95-2	1.8	0.032	0.063	0.068	1
10726	P□ridine	110-86-1	1.1	0.090	0.18	0.23	1
10726	1□2□4-Trichloroben□ene	120-82-1	1.8	0.023	0.045	0.050	1
10726	2□4□5-Trichlorophenol	95-95-4	2.0	0.027	0.054	0.068	1
10726	2□4□6-Trichlorophenol	88-06-2	2.0	0.027	0.054	0.068	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
12969	Acenaphthene	83-32-9	0.052	0.0009	0.002	0.002	1
12969	Acenaphth□lene	208-96-8	0.038	0.0005	0.002	0.002	1
12969	Anthracene	120-12-7	0.10	0.0009	0.002	0.002	1
12969	Ben□o(a)anthracene	56-55-3	0.28	0.0009	0.002	0.002	1
12969	Ben□o(a)p□rene	50-32-8	0.29	0.0009	0.002	0.002	1
12969	Ben□o(b)fluoranthene	205-99-2	0.74E	0.0009	0.002	0.002	1
12969	Ben□o(g□h□i)per□lene	191-24-2	0.12	0.0009	0.002	0.002	1
12969	Ben□o(□)fluoranthene	207-08-9	0.34	0.0009	0.002	0.002	1
12969	Di-n-but□lphthalate	84-74-2	3.5E	0.009	0.018	0.027	1
12969	Chr□sene	218-01-9	0.42	0.0005	0.002	0.002	1
12969	Diben□(a□h)anthracene	53-70-3	0.063	0.0009	0.002	0.002	1
12969	1□4-Dioxane	123-91-1	0.053	0.0009	0.002	0.002	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MSD Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MSD

Tidewater, Inc.
ELLE Sample #: SW 9867764
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D SIM**		mg/kg	mg/kg	mg/kg	mg/kg	
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	0.35	0.014	0.027	0.032	1
12969	Fluoranthene	206-44-0	0.67E	0.0009	0.002	0.002	1
12969	Fluorene	86-73-7	0.054	0.0009	0.002	0.002	1
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.14	0.0009	0.002	0.002	1
12969	Naphthalene	91-20-3	0.51E	0.002	0.004	0.005	1
12969	Phenanthrene	85-01-8	0.49E	0.0009	0.002	0.002	1
12969	P□rene	129-00-0	0.55E	0.0009	0.002	0.002	1
Trial ID: RE							
12969	Acenaphthene	83-32-9	0.073	0.001	0.003	0.003	1
12969	Acenaphth□lene	208-96-8	0.072	0.0007	0.003	0.003	1
12969	Anthracene	120-12-7	0.13	0.001	0.003	0.003	1
12969	Ben□o(a)anthracene	56-55-3	0.37	0.001	0.003	0.003	1
12969	Ben□o(a)p□rene	50-32-8	0.36	0.001	0.003	0.003	1
12969	Ben□o(b)fluoranthene	205-99-2	0.62	0.001	0.003	0.003	1
12969	Ben□o(g□h□i)per□lene	191-24-2	0.16	0.001	0.003	0.003	1
12969	Ben□o(□)fluoranthene	207-08-9	0.27	0.001	0.003	0.003	1
12969	Di-n-but□lphthalate	84-74-2	2.5E	0.014	0.027	0.041	1
12969	Chr□sene	218-01-9	0.42	0.0007	0.003	0.003	1
12969	Diben□(a□h)anthracene	53-70-3	0.094	0.001	0.003	0.003	1
12969	1□4-Dioxane	123-91-1	0.058	0.001	0.003	0.003	1
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	0.36	0.020	0.041	0.047	1
12969	Fluoranthene	206-44-0	0.59	0.001	0.003	0.003	1
12969	Fluorene	86-73-7	0.063	0.001	0.003	0.003	1
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.19	0.001	0.003	0.003	1
12969	Naphthalene	91-20-3	0.40	0.003	0.005	0.007	1
12969	Phenanthrene	85-01-8	0.38	0.001	0.003	0.003	1
12969	P□rene	129-00-0	0.60	0.001	0.003	0.003	1

Target anal□tes were detected in the method blan□associated with the samples as noted on the QC Summar□. The following action was ta□en: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.

The stated QC limits for 1□4-dioxane are advisor□onl□until sufficient data points can be obtained to calculate statistical limits.

The SECC exceeded the □/- 50□ of the expected value from the ICAL. Sample and the SECC were reanal□□ed and the SECC was once again outside client requirements which indicates a matrix effect.

Herbicides	**SW-846 8151A**		ug/kg		ug/kg	ug/kg	ug/kg	
10401	2□4-D	94-75-7	130	□D1	82	160	240	5
10401	Dalapon	75-99-0	N.D.	D2	300	600	610	5
10401	2□4-DB	94-82-6	130	□PD2	67	140	140	5

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MSD Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MSD

Tidewater, Inc.
ELLE Sample #: SW 9867764
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Herbicides	**SW-846 8151A**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
10401	Dicamba	1918-00-9	N.D.	D2	27	54	82	5
10401	Dinoseb	88-85-7	N.D.	D2	61	120	160	5
	The QC window for dinoseb is advisor□due to the erratic performance of the anal□te using this method.							
10401	2□4-DP (Dichloroprop)	120-36-5	140	D1	61	120	140	5
10401	MCPA	94-74-6	N.D.	D1	5□200	10□000	17□000	5
10401	MCPP (Mecoprop)	93-65-2	N.D.	D1	26□000	52□000	52□000	5
10401	2□4□5-T	93-76-5	14	D2	5.6	11	12	5
10401	2□4□5-TP	93-72-1	12	D2	5.1	10	12	5
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**mg/kg**		**mg/kg**	**mg/kg**	**mg/kg**	
10885	PCB-1016	12674-11-2	0.23	D2	0.024	0.068	0.12	5
10885	PCB-1221	11104-28-2	N.D.	D1	0.031	0.068	0.12	5
10885	PCB-1232	11141-16-5	N.D.	D1	0.054	0.11	0.12	5
10885	PCB-1242	53469-21-9	N.D.	D1	0.022	0.068	0.12	5
10885	PCB-1248	12672-29-6	N.D.	D1	0.022	0.068	0.12	5
10885	PCB-1254	11097-69-1	N.D.	D1	0.022	0.068	0.12	5
10885	PCB-1260	11096-82-5	0.33	D2	0.033	0.068	0.12	5
10885	PCB-1262	37324-23-5	N.D.	D1	0.022	0.068	0.12	5
10885	PCB-1268	11100-14-4	N.D.	D1	0.022	0.068	0.12	5
	The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.							
Pesticides	**SW-846 8081B**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	
14587	Aldrin	309-00-2	3.2	□D1	1.1	4.0	5.6	5
14587	Alpha BHC	319-84-6	3.4	□D1	1.1	4.0	5.6	5
14587	Beta BHC	319-85-7	7.7	PD1	3.0	6.1	6.7	5
14587	Gamma BHC - Lindane	58-89-9	2.1	□PD2	1.4	4.0	5.6	5
14587	Alpha Chlordane	5103-71-9	3.9	□D1	1.1	4.0	5.6	5
14587	Chlordane	57-74-9	N.D.	D1	27	54	110	5
14587	Gamma Chlordane	5103-74-2	N.D.	D1	1.7	4.0	5.6	5
14587	p□p-DDD	72-54-8	13	D1	2.2	8.1	11	5
14587	p□p-DDE	72-55-9	21	D1	2.2	8.1	11	5
14587	p□p-DDT	50-29-3	26	PD2	5.3	11	11	5
14587	Delta BHC	319-86-8	N.D.	D2	3.0	6.1	6.7	5
14587	Dieldrin	60-57-1	6.1	□PD2	2.2	8.1	11	5
14587	Endosulfan I	959-98-8	3.4	□D2	1.5	4.0	5.6	5
14587	Endosulfan II	33213-65-9	N.D.	D2	7.4	15	16	5
14587	Endosulfan Sulfate	1031-07-8	7.4	□D1	2.2	8.1	11	5
14587	Endrin	72-20-8	8.3	□D1	4.6	9.4	11	5
14587	Endrin Aldeh□de	7421-93-4	5.5	□PD2	2.2	8.1	11	5
14587	Endrin Ketone	53494-70-5	11	□D2	4.0	12	13	5

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MSD Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MSD

Tidewater, Inc.
ELLE Sample #: SW 9867764
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
14587	Heptachlor	76-44-8	4.1 □D2	2.1	4.2	5.6	5
14587	Heptachlor Epoxide	1024-57-3	4.7 □D2	1.1	4.0	5.6	5
14587	Methox□chlor	72-43-5	40 □D1	12	44	45	5
14587	Toxaphene	8001-35-2	N.D. D1	94	190	220	5

Reporting limits were raised due to interference from the sample matrix.

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
13499	Thorium	7440-29-1	62.6	8.62	20.6	51.4	1

Outlier recover□/result: CCV RSDs □5□ □Acceptance limits: < 5□
1ST CCV RSD□ - 3.8□ □reading 0.51□acceptance limits: 0.45-0.55
2ND CCV RSD□ - 6.9□ □reading 0.50□acceptance limits: 0.45-0.55
3rd CCV RSD□ - 5.5□ □reading 0.47□acceptance limits: 0.45-0.55

	SW-846 6020A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06123	Aluminum	7429-90-5	6□930	34.4	65.8	82.3	2
06124	Antimon□	7440-36-0	9.93	0.130	0.206	0.411	2
06125	Arsenic	7440-38-2	18.7	0.138	0.329	0.411	2
06126	Barium	7440-39-3	469	0.397	0.658	0.823	2
06127	Ber□llium	7440-41-7	1.28	0.0235	0.0823	0.103	2
06128	Cadmium	7440-43-9	5.12	0.0518	0.103	0.206	2
06129	Calcium	7440-70-2	6□680	70.1	115	144	2
06131	Chromium	7440-47-3	69.0	0.344	0.658	0.823	2
06132	Cobalt	7440-48-4	68.8	0.0601	0.103	0.206	2
06133	Copper	7440-50-8	624	3.68	6.58	8.23	2
06134	Iron	7439-89-6	58□000	7.71	16.5	20.6	2
06135	Lead	7439-92-1	750	0.0518	0.154	0.617	2
06136	Magnesium	7439-95-4	2□350	3.23	10.3	20.6	2
06137	Manganese	7439-96-5	850	0.407	1.03	2.06	2
06139	Nic□el	7440-02-0	79.4	0.350	0.658	0.823	2
06140	Potassium	7440-09-7	2□840	37.2	65.8	82.3	2
06141	Selenium	7782-49-2	3.02	0.134	0.329	0.411	2
06142	Silver	7440-22-4	20.0	0.0418	0.0823	0.103	2
06143	Sodium	7440-23-5	2□480	82.7	148	185	2
06145	Thallium	7440-28-0	0.379	0.0403	0.0823	0.103	2
13502	Uranium	7440-61-1	5.07	0.0403	0.103	0.103	2
06148	Vanadium	7440-62-2	38.6	0.0883	0.165	0.206	2
06149	□inc	7440-66-6	1□060	1.25	2.47	3.09	2
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercur□	7439-97-6	3.10	0.419	0.897	1.79	10

□□This limit was used in the evaluation of the final result

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: **OU2-1-SS006 MSD Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MSD

Tidewater, Inc.
ELLE Sample #: SW 9867764
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		%	%	%	%	
00118	Moisture	n.a.	26.9	0.50	0.50	0.50	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MSD Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MSD

Tidewater, Inc.
ELLE Sample #: SW 9867764
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Dioxins/Furans	**SW-846 8290A Feb 2007 Rev 1**		mg/kg	mg/kg	mg/kg	mg/kg	
12937	2378-TCDD	1746-01-6	0.0000315	0.000000178	0.000000402	0.00000134	1
12937	12378-PeCDD	40321-76-4	0.000171	0.000000431	0.00000134	0.00000671	1
12937	123478-HxCDD	39227-28-6	0.000168	0.000000335	0.00000134	0.00000671	1
12937	123678-HxCDD	57653-85-7	0.000259	0.000000335	0.00000134	0.00000671	1
12937	123789-HxCDD	19408-74-3	0.000193	0.000000335	0.00000134	0.00000671	1
12937	1234678-HpCDD	35822-46-9	0.00191	0.000000335	0.00000134	0.00000671	1
12937	OCDD	3268-87-9	0.0153E	0.00000185	0.00000402	0.0000134	1
12937	2378-TCDF	51207-31-9	0.0000429	0.000000203	0.000000416	0.00000134	1
12937	12378-PeCDF	57117-41-6	0.000174	0.000000335	0.00000134	0.00000671	1
12937	23478-PeCDF	57117-31-4	0.000175	0.000000335	0.00000134	0.00000671	1
12937	123478-HxCDF	70648-26-9	0.000187	0.000000335	0.00000134	0.00000671	1
12937	123678-HxCDF	57117-44-9	0.000182	0.000000335	0.00000134	0.00000671	1
12937	123789-HxCDF	72918-21-9	0.000155	0.000000335	0.00000134	0.00000671	1
12937	234678-HxCDF	60851-34-5	0.000179	0.000000335	0.00000134	0.00000671	1
12937	1234678-HpCDF	67562-39-4	0.000743	0.000000335	0.00000134	0.00000671	1
12937	1234789-HpCDF	55673-89-7	0.000159	0.000000335	0.00000134	0.00000671	1
12937	OCDF	39001-02-0	0.000797	0.000000728	0.00000268	0.0000134	1

Labeled Compounds	%Rec	Windows	LOD (mg/kg)
13C12-2378-TCDD	55	40 - 135	0.000000294
13C12-12378-PeCDD	61	40 - 135	0.000000980
13C12-123478-HxCDD	60	40 - 135	0.000000980
13C12-123678-HxCDD	59	40 - 135	0.000000980
13C12-123789-HxCDD	60	40 - 135	0.000000980
13C12-1234678-HpCDD	62	40 - 135	0.000000980
13C12-OCDD	64	40 - 135	0.00000294
13C12-2378-TCDF	57	40 - 135	0.000000304
13C12-12378-PeCDF	51	40 - 135	0.000000980
13C12-23478-PeCDF	61	40 - 135	0.000000980
13C12-123478-HxCDF	57	40 - 135	0.000000980
13C12-123678-HxCDF	56	40 - 135	0.000000980
13C12-234678-HxCDF	57	40 - 135	0.000000980
13C12-123789-HxCDF	60	40 - 135	0.000000980
13C12-1234678-HpCDF	58	40 - 135	0.000000980
13C12-1234789-HpCDF	59	40 - 135	0.000000980
13C12-OCDF	59	40 - 135	0.00000196

Dioxins/Furans Data Qualifiers:

B *Detected in Method Blank*
U *Undetected*
J *Estimated concentration between Estimated Detection Limit and Minimum Reporting Level*
E *Exceeds calibration range*
C *Confirmed quantitation on secondary GC column*

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 MSD Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MSD

Tidewater, Inc.
ELLE Sample #: SW 9867764
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF

Q *EMPC - Estimated Maximum Possible Concentration*
F *Interference is present*
S *Saturation of detection signal*
(3) *The Labeled Compound spike amount was less than the LOD.*

□□This limit was used in the evaluation of the final result

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **OU2-1-SS006 MSD Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MSD

Tidewater, Inc.
ELLE Sample #: SW 9867764
ELLE Group #: 2002262
Matrix: Soil

Sample Comments

The following anal□te(s) is not covered under our DoD ELAP accreditation:
Thorium b□SW-846 6010C
C□clohexanone b□SW-846 8260C
Bis(2-chloroeth□l)ether b□SW-846 8270D/SW-846 8270D SIM
Di-n-but□l phthalate b□SW-846 8270D SIM
Hexachloroben□ene b□SW-846 8270D SIM

Eurofins Lancaster Laboratories Environmental□LLC is responsible onl□for the certified testing of samples. We are not directl□responsible for the integrit□of the sample prior to laborator□receipt. An□reported concentrations less than 200 ug/□g ma□be biased low if the□were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid b□8260C	SW-846 8260C	1	B183042AA	10/31/2018 18:32	Stephen C Nolte	1
06176	GC/MS - LL Water Prep	SW-846 5035A	1	201829851683	10/25/2018 16:09	Rebecca Williams	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	201829851683	10/25/2018 16:09	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201829851683	10/24/2018 09:50	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18302SLI026	11/12/2018 00:41	Anthon□P Bauer	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18302SLH026	11/07/2018 21:45	Anthon□P Bauer	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	2-RE	18317SLC026	11/16/2018 11:28	□oseph M Gambler	1
10813	BNA Soil Microwave APP I□	SW-846 3546	1	18302SLI026	10/30/2018 07:00	□oshua S Ruth	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18302SLH026	10/30/2018 07:00	□oshua S Ruth	1
10811	BNA Soil Microwave SIM	SW-846 3546	2	18317SLC026	11/13/2018 19:25	Sall□L Apple□ard	1
10401	Herbicide soils 8151A Master	SW-846 8151A	1	183030010A	11/02/2018 01:47	Richard A Shober	5
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183040031A	11/05/2018 01:43	Kirb□B Turner	5
14587	ocpest 8081B w/GPC □ 3546	SW-846 8081B	1	183020030A	11/13/2018 19:48	Lisa A Reinert	5
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183040031A	11/01/2018 08:00	Ka□la A □udits□□	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	183020030A	10/30/2018 07:00	□oshua S Ruth	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	183030010A	10/30/2018 20:00	Bradle□W VanLeuven	1
12937	Dioxins/Furans in Solids-8290	SW-846 8290A Feb 2007 Rev 1	1	18309016	11/07/2018 09:45	Michael □iegler	1
11030	Dioxins/Furans in Solids - Sox	SW-846 8290A Feb 2007 Rev 1	2	18309016	11/05/2018 14:56	Alex L Barton	1
13499	Thorium	SW-846 6010C	1	182991063702	11/03/2018 06:40	Lisa □Coo□e	1
06123	Aluminum	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06124	Antimon□	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06125	Arsenic	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06126	Barium	SW-846 6020A	1	182991063702D	10/31/2018 20:21	Bradle□M Berlot	2
06127	Ber□llium	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06128	Cadmium	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06129	Calcium	SW-846 6020A	1	182991063702B	10/31/2018 20:21	Bradle□M Berlot	2
06131	Chromium	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2

□□This limit was used in the evaluation of the final result

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **OU2-1-SS006 MSD Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03MSD

Tidewater, Inc.
ELLE Sample #: SW 9867764
ELLE Group #: 2002262
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06132	Cobalt	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06133	Copper	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06134	Iron	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06135	Lead	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06136	Magnesium	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06137	Manganese	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06139	Nic□el	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06140	Potassium	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06141	Selenium	SW-846 6020A	1	182991063702B	10/31/2018 20:21	Bradle□M Berlot	2
06142	Silver	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06143	Sodium	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06145	Thallium	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
13502	Uranium	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
06148	Vanadium	SW-846 6020A	1	182991063702A	11/06/2018 00:53	Bradle□M Berlot	2
06149	□inc	SW-846 6020A	1	182991063702A	10/31/2018 20:21	Bradle□M Berlot	2
00159	Mercur□	SW-846 7471B	1	182991063802	10/29/2018 11:20	Damar□Valentin	10
10637	ICP/ICPMS-SW□3050B - U4	SW-846 3050B	1	182991063702	10/29/2018 05:32	Annamaria Kuhns	1
10638	Hg - SW□7471B - U4	SW-846 7471B	1	182991063802	10/29/2018 07:15	Annamaria Kuhns	1
00118	Moisture	SM 2540 G-2011 □ Moisture Calc	1	18299820005B	10/26/2018 13:46	Larr□E Bevins	1

□□This limit was used in the evaluation of the final result

Sample Description: OU2-1-SS006 DUP Grab Soil
Great Kills Park, NY

Project Name: Great Kills Park Phase I RI OU2

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03DUP

Tidewater, Inc.
ELLE Sample #: SW 9867765
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
13499	Thorium	7440-29-1	14.0 □	8.62	20.6	51.4	1
	Outlier recover□/result: CCV RSDs □ 5□ □Acceptance limits: < 5□ 1ST CCV RSD□ - 3.8□ □reading 0.51□acceptance limits: 0.45-0.55 2ND CCV RSD□ - 6.9□ □reading 0.50□acceptance limits: 0.45-0.55 3rd CCV RSD□ - 5.5□ □reading 0.47□acceptance limits: 0.45-0.55						
	SW-846 6020A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06123	Aluminum	7429-90-5	4□370	34.4	65.8	82.3	2
06124	Antimon□	7440-36-0	8.47	0.130	0.206	0.411	2
06125	Arsenic	7440-38-2	14.6	0.138	0.329	0.411	2
06126	Barium	7440-39-3	479	0.397	0.658	0.823	2
06127	Ber□llium	7440-41-7	0.393	0.0235	0.0823	0.103	2
06128	Cadmium	7440-43-9	3.64	0.0518	0.103	0.206	2
06129	Calcium	7440-70-2	3□820	70.1	115	144	2
06131	Chromium	7440-47-3	45.8	0.344	0.658	0.823	2
06132	Cobalt	7440-48-4	11.2	0.0601	0.103	0.206	2
06133	Copper	7440-50-8	552	3.68	6.58	8.23	2
06134	Iron	7439-89-6	45□400	7.71	16.5	20.6	2
06135	Lead	7439-92-1	780	0.0518	0.154	0.617	2
06136	Magnesium	7439-95-4	1□070	3.23	10.3	20.6	2
06137	Manganese	7439-96-5	286	0.407	1.03	2.06	2
06139	Nic□el	7440-02-0	57.4	0.350	0.658	0.823	2
06140	Potassium	7440-09-7	599	37.2	65.8	82.3	2
06141	Selenium	7782-49-2	0.951	0.134	0.329	0.411	2
06142	Silver	7440-22-4	6.68	0.0418	0.0823	0.103	2
06143	Sodium	7440-23-5	262	82.7	148	185	2
06145	Thallium	7440-28-0	0.0875 □	0.0403	0.0823	0.103	2
13502	Uranium	7440-61-1	0.541	0.0403	0.103	0.103	2
06148	Vanadium	7440-62-2	28.1	0.0883	0.165	0.206	2
06149	□inc	7440-66-6	830	1.25	2.47	3.09	2
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercur□	7439-97-6	2.48	0.400	0.855	1.71	10
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	**%**	
00118	Moisture	n.a.	26.9	0.50	0.50	0.50	1
00121	Moisture Duplicate	n.a.	29.2	0.50	0.50	0.50	1
	The duplicate moisture value is provided to assess the precision of the moisture test. For comparabilit□ purposes□ the initial moisture determination is the value used to perform dr□ weight calculations.						

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS006 DUP Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:50
SDG□: TID10-03DUP

Tidewater, Inc.
ELLE Sample #: SW 9867765
ELLE Group #: 2002262
Matrix: Soil

Sample Comments

The following anal□te(s) is not covered under our DoD ELAP accreditation:
Thorium b□SW-846 6010C
C□clohexanone b□SW-846 8260C
Bis(2-chloroeth□l)ether b□SW-846 8270D/SW-846 8270D SIM
Di-n-but□l phthalate b□SW-846 8270D SIM
Hexachloroben□ene b□SW-846 8270D SIM

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13499	Thorium	SW-846 6010C	1	182991063702	11/03/2018 06:35	Lisa □Coo□e	1
06123	Aluminum	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06124	Antimon□	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06125	Arsenic	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06126	Barium	SW-846 6020A	1	182991063702D	10/31/2018 20:16	Bradle□M Berlot	2
06127	Ber□llium	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06128	Cadmium	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06129	Calcium	SW-846 6020A	1	182991063702B	10/31/2018 20:16	Bradle□M Berlot	2
06131	Chromium	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06132	Cobalt	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06133	Copper	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06134	Iron	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06135	Lead	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06136	Magnesium	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06137	Manganese	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06139	Nic□el	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06140	Potassium	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06141	Selenium	SW-846 6020A	1	182991063702B	10/31/2018 20:16	Bradle□M Berlot	2
06142	Silver	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06143	Sodium	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06145	Thallium	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
13502	Uranium	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
06148	Vanadium	SW-846 6020A	1	182991063702A	11/06/2018 00:49	Bradle□M Berlot	2
06149	□inc	SW-846 6020A	1	182991063702A	10/31/2018 20:16	Bradle□M Berlot	2
00159	Mercur□	SW-846 7471B	1	182991063802	10/29/2018 11:16	Damar□Valentin	10
10637	ICP/ICPMS-SW□3050B - U4	SW-846 3050B	1	182991063702	10/29/2018 05:32	Annamaria Kuhns	1
10638	Hg - SW□7471B - U4	SW-846 7471B	1	182991063802	10/29/2018 07:15	Annamaria Kuhns	1
00118	Moisture	SM 2540 G-2011 □ Moisture Calc	1	18299820005B	10/26/2018 13:46	Larr□E Bevins	1
00121	Moisture Duplicate	SM 2540 G-2011 □ Moisture Calc	1	18299820005B	10/26/2018 13:46	Larr□E Bevins	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS002 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:45
SDG□: TID10-04

Tidewater, Inc.
ELLE Sample #: SW 9867766
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C**		mg/kg	mg/kg	mg/kg	mg/kg	
11995	Acetone	67-64-1	N.D.	0.008	0.021	0.026	0.95
11995	Ben□ene	71-43-2	N.D.	0.0007	0.003	0.007	0.95
11995	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	0.007	0.95
11995	Bromoform	75-25-2	N.D.	0.007	0.010	0.013	0.95
11995	Bromomethane	74-83-9	N.D.	0.0009	0.003	0.007	0.95
11995	2-Butanone	78-93-3	N.D.	0.001	0.005	0.013	0.95
11995	Carbon Disulfide	75-15-0	N.D.	0.0008	0.003	0.007	0.95
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0007	0.003	0.007	0.95
11995	Chloroben□ene	108-90-7	N.D.	0.0007	0.003	0.007	0.95
11995	Chloroethane	75-00-3	N.D.	0.001	0.005	0.007	0.95
11995	Chloroform	67-66-3	N.D.	0.0008	0.003	0.007	0.95
11995	Chloromethane	74-87-3	N.D.	0.0008	0.003	0.007	0.95
11995	C□clohexane	110-82-7	N.D.	0.0007	0.003	0.007	0.95
11995	C□clohexanone	108-94-1	N.D.	0.033	0.13	0.33	0.95
11995	1□2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0005	0.001	0.007	0.95
11995	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	0.007	0.95
11995	1□2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	0.007	0.95
11995	1□2-Dichloroben□ene	95-50-1	N.D.	0.0007	0.003	0.007	0.95
11995	1□3-Dichloroben□ene	541-73-1	N.D.	0.0007	0.003	0.007	0.95
11995	1□4-Dichloroben□ene	106-46-7	N.D.	0.0005	0.001	0.007	0.95
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0008	0.003	0.007	0.95
11995	1□1-Dichloroethane	75-34-3	N.D.	0.0007	0.003	0.007	0.95
11995	1□2-Dichloroethane	107-06-2	N.D.	0.0008	0.003	0.007	0.95
11995	1□1-Dichloroethene	75-35-4	N.D.	0.0007	0.003	0.007	0.95
11995	cis-1□2-Dichloroethene	156-59-2	N.D.	0.0007	0.003	0.007	0.95
11995	trans-1□2-Dichloroethene	156-60-5	N.D.	0.0007	0.003	0.007	0.95
11995	1□2-Dichloropropane	78-87-5	N.D.	0.0007	0.003	0.007	0.95
11995	cis-1□3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	0.007	0.95
11995	trans-1□3-Dichloropropene	10061-02-6	N.D.	0.0004	0.001	0.007	0.95
11995	Eth□lben□ene	100-41-4	N.D.	0.0005	0.001	0.007	0.95
11995	Freon 113	76-13-1	N.D.	0.0008	0.003	0.013	0.95
11995	2-Hexanone	591-78-6	N.D.	0.001	0.005	0.013	0.95
11995	Isoprop□lben□ene	98-82-8	N.D.	0.0005	0.001	0.007	0.95
11995	Meth□l Acetate	79-20-9	N.D.	0.001	0.005	0.007	0.95
11995	Meth□l Tertiar□But□l Ether	1634-04-4	N.D.	0.0007	0.003	0.007	0.95
11995	4-Meth□l-2-pentanone	108-10-1	N.D.	0.001	0.005	0.013	0.95
11995	Meth□lc□clohexane	108-87-2	N.D.	0.0008	0.003	0.007	0.95
11995	Meth□lene Chloride	75-09-2	N.D.	0.003	0.005	0.007	0.95
11995	St□rene	100-42-5	N.D.	0.0004	0.001	0.007	0.95
11995	1□1□2□2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	0.007	0.95
11995	Tetrachloroethene	127-18-4	N.D.	0.0007	0.003	0.007	0.95

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS002 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:45
SDG□: TID10-04

Tidewater, Inc.
ELLE Sample #: SW 9867766
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
11995	Toluene	108-88-3	N.D.	0.0008	0.003	0.007	0.95
11995	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.007	0.010	0.013	0.95
11995	1□1□1-Trichloroethane	71-55-6	N.D.	0.0008	0.003	0.007	0.95
11995	1□1□2-Trichloroethane	79-00-5	N.D.	0.0007	0.003	0.007	0.95
11995	Trichloroethene	79-01-6	N.D.	0.0007	0.003	0.007	0.95
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0009	0.003	0.007	0.95
11995	Vin□l Chloride	75-01-4	N.D.	0.0008	0.003	0.007	0.95
11995	□□lene (Total)	1330-20-7	N.D.	0.001	0.003	0.007	0.95
Trial ID: RE							
11995	Acetone	67-64-1	0.014 □	0.007	0.018	0.023	0.83
11995	Ben□ene	71-43-2	N.D.	0.0006	0.002	0.006	0.83
11995	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	0.006	0.83
11995	Bromoform	75-25-2	N.D.	0.006	0.009	0.011	0.83
11995	Bromomethane	74-83-9	N.D.	0.0008	0.002	0.006	0.83
11995	2-Butanone	78-93-3	N.D.	0.001	0.005	0.011	0.83
11995	Carbon Disulfide	75-15-0	N.D.	0.0007	0.002	0.006	0.83
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0006	0.002	0.006	0.83
11995	Chloroben□ene	108-90-7	N.D.	0.0006	0.002	0.006	0.83
11995	Chloroethane	75-00-3	N.D.	0.001	0.005	0.006	0.83
11995	Chloroform	67-66-3	N.D.	0.0007	0.002	0.006	0.83
11995	Chloromethane	74-87-3	N.D.	0.0007	0.002	0.006	0.83
11995	C□clohexane	110-82-7	N.D.	0.0006	0.002	0.006	0.83
11995	C□clohexanone	108-94-1	N.D.	0.029	0.11	0.29	0.83
11995	1□2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0005	0.001	0.006	0.83
11995	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	0.006	0.83
11995	1□2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	0.006	0.83
11995	1□2-Dichloroben□ene	95-50-1	N.D.	0.0006	0.002	0.006	0.83
11995	1□3-Dichloroben□ene	541-73-1	N.D.	0.0006	0.002	0.006	0.83
11995	1□4-Dichloroben□ene	106-46-7	N.D.	0.0005	0.001	0.006	0.83
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0007	0.002	0.006	0.83
11995	1□1-Dichloroethane	75-34-3	N.D.	0.0006	0.002	0.006	0.83
11995	1□2-Dichloroethane	107-06-2	N.D.	0.0007	0.002	0.006	0.83
11995	1□1-Dichloroethene	75-35-4	N.D.	0.0006	0.002	0.006	0.83
11995	cis-1□2-Dichloroethene	156-59-2	N.D.	0.0006	0.002	0.006	0.83
11995	trans-1□2-Dichloroethene	156-60-5	N.D.	0.0006	0.002	0.006	0.83
11995	1□2-Dichloropropane	78-87-5	N.D.	0.0006	0.002	0.006	0.83
11995	cis-1□3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	0.006	0.83
11995	trans-1□3-Dichloropropene	10061-02-6	N.D.	0.0003	0.001	0.006	0.83
11995	Eth□lben□ene	100-41-4	N.D.	0.0005	0.001	0.006	0.83
11995	Freon 113	76-13-1	N.D.	0.0007	0.002	0.011	0.83
11995	2-Hexanone	591-78-6	N.D.	0.001	0.005	0.011	0.83

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS002 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:45
SDG□: TID10-04

Tidewater, Inc.
ELLE Sample #: SW 9867766
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
11995	Isoprop□ben□ene	98-82-8	N.D.	0.0005	0.001	0.006	0.83
11995	Meth□l Acetate	79-20-9	N.D.	0.001	0.005	0.006	0.83
11995	Meth□l Tertiar□But□l Ether	1634-04-4	N.D.	0.0006	0.002	0.006	0.83
11995	4-Meth□l-2-pentanone	108-10-1	N.D.	0.001	0.005	0.011	0.83
11995	Meth□lc□clohexane	108-87-2	N.D.	0.0007	0.002	0.006	0.83
11995	Meth□lene Chloride	75-09-2	N.D.	0.002	0.005	0.006	0.83
11995	St□rene	100-42-5	N.D.	0.0003	0.001	0.006	0.83
11995	1□1□2□2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	0.006	0.83
11995	Tetrachloroethene	127-18-4	N.D.	0.0006	0.002	0.006	0.83
11995	Toluene	108-88-3	N.D.	0.0007	0.002	0.006	0.83
11995	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.006	0.009	0.011	0.83
11995	1□1□1-Trichloroethane	71-55-6	N.D.	0.0007	0.002	0.006	0.83
11995	1□1□2-Trichloroethane	79-00-5	N.D.	0.0006	0.002	0.006	0.83
11995	Trichloroethene	79-01-6	N.D.	0.0006	0.002	0.006	0.83
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0008	0.002	0.006	0.83
11995	Vin□l Chloride	75-01-4	N.D.	0.0007	0.002	0.006	0.83
11995	□□lene (Total)	1330-20-7	N.D.	0.001	0.002	0.006	0.83

The recover□ for the sample internal standard is outside the QC acceptance limits. The following action was ta□en: The sample was re-anal□□ed and the QC is again outside of the acceptance limits□indicating a matrix effect. The data is reported from both trials.

A Method Detection Limit (MDL) standard is anal□□ed to confirm sensitivit□ of the instrument for samples with non-detect anal□tes associated with a continuing calibration verification standard exhibiting low response (outside the 20□ D criteria). The MDL standard shows adequate sensitivit□ at or below the reporting limit in Trial 2.

GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10726	Aniline	62-53-3	N.D.	0.23	0.46	0.68	1
10726	Ben□□l alcohol	100-51-6	N.D.	0.23	0.46	0.68	1
10726	4-Bromophen□l-phen□lether	101-55-3	N.D.	0.027	0.055	0.068	1
10726	Carba□ole	86-74-8	N.D.	0.023	0.046	0.050	1
10726	4-Chloro-3-meth□lphenol	59-50-7	N.D.	0.023	0.046	0.050	1
10726	4-Chloroaniline	106-47-8	N.D.	0.046	0.091	0.23	1
10726	bis(2-Chloroethox□)methane	111-91-1	N.D.	0.023	0.046	0.050	1
10726	bis(2-Chloroeth□l)ether	111-44-4	N.D.	0.032	0.064	0.068	1
10726	2-Chloronaphthalene	91-58-7	N.D.	0.009	0.018	0.046	1
10726	2-Chlorophenol	95-57-8	N.D.	0.023	0.046	0.050	1
10726	4-Chlorophen□l-phen□lether	7005-72-3	N.D.	0.023	0.046	0.050	1
10726	2□2□-ox□bis(1-Chloropropane)	108-60-1	N.D.	0.023	0.046	0.050	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS002 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:45
SDG□: TID10-04

Tidewater, Inc.
ELLE Sample #: SW 9867766
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
	Bis(2-chloroisoprop□l) ether CAS □39638-32-9 and 2□2-Ox□bis(1-chloropropane) CAS □108-60-1 cannot be separated chromatographicall□. The reported result represents the combined total of both compounds.						
10726	Diben□ofuran	132-64-9	N.D.	0.023	0.046	0.050	1
10726	1□2-Dichloroben□ene	95-50-1	N.D.	0.027	0.055	0.068	1
10726	1□3-Dichloroben□ene	541-73-1	N.D.	0.023	0.046	0.050	1
10726	1□4-Dichloroben□ene	106-46-7	0.026 □	0.023	0.046	0.050	1
10726	3□3-Dichloroben□idine	91-94-1	N.D.	0.14	0.27	0.46	1
10726	2□4-Dichlorophenol	120-83-2	N.D.	0.023	0.046	0.050	1
10726	Dieth□lphthalate	84-66-2	N.D.	0.091	0.18	0.23	1
10726	2□4-Dimeth□lphenol	105-67-9	N.D.	0.023	0.046	0.050	1
10726	Dimeth□lphthalate	131-11-3	N.D.	0.091	0.18	0.23	1
10726	4□6-Dinitro-2-meth□lphenol	534-52-1	N.D.	0.23	0.46	0.68	1
10726	2□4-Dinitrophenol	51-28-5	N.D.	0.50	1.0	1.4	1
10726	2□4-Dinitrotoluene	121-14-2	N.D.	0.091	0.18	0.23	1
10726	2□6-Dinitrotoluene	606-20-2	N.D.	0.027	0.055	0.068	1
10726	Hexachloroben□ene	118-74-1	N.D.	0.005	0.009	0.023	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.027	0.055	0.068	1
10726	Hexachloroc□clopentadiene	77-47-4	N.D.	0.23	0.46	0.68	1
10726	Hexachloroethane	67-72-1	N.D.	0.046	0.091	0.23	1
10726	Isophorone	78-59-1	N.D.	0.023	0.046	0.050	1
10726	2-Meth□lnaphthalene	91-57-6	0.029 □	0.014	0.027	0.046	1
10726	2-Meth□lphenol	95-48-7	N.D.	0.036	0.073	0.091	1
10726	4-Meth□lphenol	106-44-5	N.D.	0.027	0.055	0.068	1
	3-Meth□lphenol and 4-meth□lphenol cannot be resolved under the chromatographic conditions used for sample anal□sis. The result reported for 4-meth□lphenol represents the combined total of both compounds.						
10726	2-Nitroaniline	88-74-4	N.D.	0.027	0.055	0.068	1
10726	3-Nitroaniline	99-09-2	N.D.	0.091	0.18	0.23	1
10726	4-Nitroaniline	100-01-6	N.D.	0.091	0.18	0.23	1
10726	Nitroben□ene	98-95-3	N.D.	0.036	0.073	0.091	1
10726	2-Nitrophenol	88-75-5	N.D.	0.023	0.046	0.050	1
10726	4-Nitrophenol	100-02-7	N.D.	0.23	0.46	0.68	1
10726	N-Nitroso-di-n-prop□lamine	621-64-7	N.D.	0.027	0.055	0.068	1
10726	N-Nitrosodiphen□lamine	86-30-6	N.D.	0.023	0.046	0.050	1
	N-nitrosodiphen□lamine decomposes in the GC inlet forming diphen□lamine. The result reported for N-nitrosodiphen□lamine represents the combined total of both compounds.						
10726	Di-n-oct□lphthalate	117-84-0	N.D.	0.091	0.18	0.23	1
10726	Pentachlorophenol	87-86-5	N.D.	0.050	0.18	0.23	1
10726	Phenol	108-95-2	N.D.	0.032	0.064	0.068	1
10726	P□ridine	110-86-1	N.D.	0.091	0.18	0.23	1

□□This limit was used in the evaluation of the final result

Sample Description: OU2-1-SS002 Grab Soil
Great Kills Park, NY

Project Name: Great Kills Park Phase I RI OU2

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:45
SDG□: TID10-04

Tidewater, Inc.
ELLE Sample #: SW 9867766
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10726	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.023	0.046	0.050	1
10726	2□4□5-Trichlorophenol	95-95-4	N.D.	0.027	0.055	0.068	1
10726	2□4□6-Trichlorophenol	88-06-2	N.D.	0.027	0.055	0.068	1
Trial ID: RE							
10726	Aniline	62-53-3	N.D.	0.23	0.46	0.68	1
10726	Ben□□l alcohol	100-51-6	N.D.	0.23	0.46	0.68	1
10726	4-Bromophen□l-phen□ether	101-55-3	N.D.	0.027	0.055	0.068	1
10726	Carba□ole	86-74-8	N.D.	0.023	0.046	0.050	1
10726	4-Chloro-3-meth□lphenol	59-50-7	N.D.	0.023	0.046	0.050	1
10726	4-Chloroaniline	106-47-8	N.D.	0.046	0.091	0.23	1
10726	bis(2-Chloroethox□)methane	111-91-1	N.D.	0.023	0.046	0.050	1
10726	bis(2-Chloroeth□l)ether	111-44-4	N.D.	0.032	0.064	0.068	1
10726	2-Chloronaphthalene	91-58-7	N.D.	0.009	0.018	0.046	1
10726	2-Chlorophenol	95-57-8	N.D.	0.023	0.046	0.050	1
10726	4-Chlorophen□l-phen□ether	7005-72-3	N.D.	0.023	0.046	0.050	1
10726	2□2□-ox□bis(1-Chloropropane)	108-60-1	N.D.	0.023	0.046	0.050	1
	Bis(2-chloroisoprop□l) ether CAS □39638-32-9 and 2□2□-Ox□bis(1-chloropropane) CAS □108-60-1 cannot be separated chromatographicall□. The reported result represents the combined total of both compounds.						
10726	Diben□ofuran	132-64-9	N.D.	0.023	0.046	0.050	1
10726	1□2-Dichloroben□ene	95-50-1	N.D.	0.027	0.055	0.068	1
10726	1□3-Dichloroben□ene	541-73-1	N.D.	0.023	0.046	0.050	1
10726	1□4-Dichloroben□ene	106-46-7	N.D.	0.023	0.046	0.050	1
10726	3□3□-Dichloroben□idine	91-94-1	N.D.	0.14	0.27	0.46	1
10726	2□4-Dichlorophenol	120-83-2	N.D.	0.023	0.046	0.050	1
10726	Dieth□lphthalate	84-66-2	N.D.	0.091	0.18	0.23	1
10726	2□4-Dimeth□lphenol	105-67-9	N.D.	0.023	0.046	0.050	1
10726	Dimeth□lphthalate	131-11-3	N.D.	0.091	0.18	0.23	1
10726	4□6-Dinitro-2-meth□lphenol	534-52-1	N.D.	0.23	0.46	0.68	1
10726	2□4-Dinitrophenol	51-28-5	N.D.	0.50	1.0	1.4	1
10726	2□4-Dinitrotoluene	121-14-2	N.D.	0.091	0.18	0.23	1
10726	2□6-Dinitrotoluene	606-20-2	N.D.	0.027	0.055	0.068	1
10726	Hexachloroben□ene	118-74-1	N.D.	0.005	0.009	0.023	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.027	0.055	0.068	1
10726	Hexachloroc□clopentadiene	77-47-4	N.D.	0.23	0.46	0.68	1
10726	Hexachloroethane	67-72-1	N.D.	0.046	0.091	0.23	1
10726	Isophorone	78-59-1	N.D.	0.023	0.046	0.050	1
10726	2-Meth□lnaphthalene	91-57-6	0.029 □	0.014	0.027	0.046	1
10726	2-Meth□lphenol	95-48-7	N.D.	0.036	0.073	0.091	1
10726	4-Meth□lphenol	106-44-5	N.D.	0.027	0.055	0.068	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS002 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:45
SDG□: TID10-04

Tidewater, Inc.
ELLE Sample #: SW 9867766
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
	3-Meth□lphenol and 4-meth□lphenol cannot be resolved under the chromatographic conditions used for sample anal□sis. The result reported for 4-meth□lphenol represents the combined total of both compounds.						
10726	2-Nitroaniline	88-74-4	N.D.	0.027	0.055	0.068	1
10726	3-Nitroaniline	99-09-2	N.D.	0.091	0.18	0.23	1
10726	4-Nitroaniline	100-01-6	N.D.	0.091	0.18	0.23	1
10726	Nitroben□ene	98-95-3	N.D.	0.036	0.073	0.091	1
10726	2-Nitrophenol	88-75-5	N.D.	0.023	0.046	0.050	1
10726	4-Nitrophenol	100-02-7	N.D.	0.23	0.46	0.68	1
10726	N-Nitroso-di-n-prop□lamine	621-64-7	N.D.	0.027	0.055	0.068	1
10726	N-Nitrosodiphen□lamine	86-30-6	N.D.	0.023	0.046	0.050	1
	N-nitrosodiphen□lamine decomposes in the GC inlet forming diphen□lamine. The result reported for N-nitrosodiphen□lamine represents the combined total of both compounds.						
10726	Di-n-oct□lphthalate	117-84-0	N.D.	0.091	0.18	0.23	1
10726	Pentachlorophenol	87-86-5	N.D.	0.050	0.18	0.23	1
10726	Phenol	108-95-2	N.D.	0.032	0.064	0.068	1
10726	P□ridine	110-86-1	N.D.	0.091	0.18	0.23	1
10726	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.023	0.046	0.050	1
10726	2□4□5-Trichlorophenol	95-95-4	N.D.	0.027	0.055	0.068	1
10726	2□4□6-Trichlorophenol	88-06-2	N.D.	0.027	0.055	0.068	1
	Target anal□tes were detected in the method blan□ associated with the samples as noted on the QC Summar□. The following action was ta□en: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.						
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
12969	Acenaphthene	83-32-9	0.004	0.0009	0.002	0.002	1
12969	Acenaphth□lene	208-96-8	0.010	0.0005	0.002	0.002	1
12969	Anthracene	120-12-7	0.016	0.0009	0.002	0.002	1
12969	Ben□o(a)anthracene	56-55-3	0.092	0.0009	0.002	0.002	1
12969	Ben□o(a)p□rene	50-32-8	0.10	0.0009	0.002	0.002	1
12969	Ben□o(b)fluoranthene	205-99-2	0.23	0.0009	0.002	0.002	1
12969	Ben□o(g□h□i)per□lene	191-24-2	0.045	0.0009	0.002	0.002	1
12969	Ben□o(□)fluoranthene	207-08-9	0.11	0.0009	0.002	0.002	1
12969	Di-n-but□phthalate	84-74-2	0.22	0.009	0.018	0.027	1
12969	Chr□sene	218-01-9	0.14	0.0005	0.002	0.002	1
12969	Diben□(a□h)anthracene	53-70-3	0.018	0.0009	0.002	0.002	1
12969	1□4-Dioxane	123-91-1	0.004	0.0009	0.002	0.002	1
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	0.067	0.014	0.027	0.032	1
12969	Fluoranthene	206-44-0	0.19	0.0009	0.002	0.002	1
12969	Fluorene	86-73-7	0.004	0.0009	0.002	0.002	1
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.050	0.0009	0.002	0.002	1

□□This limit was used in the evaluation of the final result

Sample Description: OU2-1-SS002 Grab Soil
Great Kills Park, NY

Project Name: Great Kills Park Phase I RI OU2

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:45
SDG□: TID10-04

Tidewater, Inc.
ELLE Sample #: SW 9867766
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
12969	Naphthalene	91-20-3	0.059	0.002	0.004	0.005	1
12969	Phenanthrene	85-01-8	0.081	0.0009	0.002	0.002	1
12969	P□rene	129-00-0	0.15	0.0009	0.002	0.002	1
Trial ID: RE							
12969	Acenaphthene	83-32-9	0.002	0.0009	0.002	0.002	1
12969	Acenaphth□lene	208-96-8	0.009	0.0005	0.002	0.002	1
12969	Anthracene	120-12-7	0.015	0.0009	0.002	0.002	1
12969	Ben□o(a)anthracene	56-55-3	0.074	0.0009	0.002	0.002	1
12969	Ben□o(a)p□rene	50-32-8	0.077	0.0009	0.002	0.002	1
12969	Ben□o(b)fluoranthene	205-99-2	0.17	0.0009	0.002	0.002	1
12969	Ben□o(g□h□i)per□lene	191-24-2	0.048	0.0009	0.002	0.002	1
12969	Ben□o(□)fluoranthene	207-08-9	0.054	0.0009	0.002	0.002	1
12969	Di-n-but□lphthalate	84-74-2	0.34	0.009	0.018	0.027	1
12969	Chr□sene	218-01-9	0.11	0.0005	0.002	0.002	1
12969	Diben□(a□h)anthracene	53-70-3	0.016	0.0009	0.002	0.002	1
12969	1□4-Dioxane	123-91-1	0.003	0.0009	0.002	0.002	1
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	0.072	0.014	0.027	0.032	1
12969	Fluoranthene	206-44-0	0.13	0.0009	0.002	0.002	1
12969	Fluorene	86-73-7	0.004	0.0009	0.002	0.002	1
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.050	0.0009	0.002	0.002	1
12969	Naphthalene	91-20-3	0.060	0.002	0.004	0.005	1
12969	Phenanthrene	85-01-8	0.064	0.0009	0.002	0.002	1
12969	P□rene	129-00-0	0.13	0.0009	0.002	0.002	1

Target anal□tes were detected in the method blan□associated with the samples as noted on the QC Summar□. The following action was ta□en: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.

The stated QC limits for 1□4-dioxane are advisor□onl□until sufficient data points can be obtained to calculate statistical limits.

The SECC exceeded the □/- 50□ of the expected value from the ICAL. Sample and the SECC were reanal□□ed and the SECC was once again outside client requirements which indicates a matrix effect.

Herbicides	**SW-846 8151A**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10401	2□4-D	94-75-7	N.D. D1	81	160	240	5
10401	Dalapon	75-99-0	N.D. D2	300	600	610	5
10401	2□4-DB	94-82-6	N.D. D2	66	140	140	5
10401	Dicamba	1918-00-9	N.D. D2	27	54	81	5
10401	Dinoseb	88-85-7	N.D. D2	61	120	160	5
	The QC window for dinoseb is advisor□due to the erratic performance of the anal□te using this method.						
10401	2□4-DP (Dichloroprop)	120-36-5	N.D. D2	61	120	140	5

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS002 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:45
SDG□: TID10-04

Tidewater, Inc.
ELLE Sample #: SW 9867766
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Herbicides	**SW-846 8151A**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10401	MCPA	94-74-6	N.D. D1	5□200	10□000	17□000	5
10401	MCPP (Mecoprop)	93-65-2	N.D. D1	26□000	52□000	52□000	5
10401	2□4□5-T	93-76-5	N.D. D2	5.6	11	12	5
10401	2□4□5-TP	93-72-1	N.D. D2	5.1	10	12	5
	Due to the nature of the sample extract matrix□a dilution was used for the anal□sis. The reporting limits were raised according□.						
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	0.025	0.068	0.12	5
10885	PCB-1221	11104-28-2	N.D. D1	0.031	0.068	0.12	5
10885	PCB-1232	11141-16-5	N.D. D1	0.055	0.11	0.12	5
10885	PCB-1242	53469-21-9	N.D. D1	0.023	0.068	0.12	5
10885	PCB-1248	12672-29-6	N.D. D1	0.023	0.068	0.12	5
10885	PCB-1254	11097-69-1	N.D. D1	0.023	0.068	0.12	5
10885	PCB-1260	11096-82-5	0.085 □D1	0.034	0.068	0.12	5
10885	PCB-1262	37324-23-5	N.D. D1	0.023	0.068	0.12	5
10885	PCB-1268	11100-14-4	N.D. D1	0.023	0.068	0.12	5
	The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.						
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
14587	Aldrin	309-00-2	N.D. D1	1.2	4.1	5.7	5
14587	Alpha BHC	319-84-6	N.D. D1	1.2	4.1	5.7	5
14587	Beta BHC	319-85-7	N.D. D1	3.0	6.1	6.8	5
14587	Gamma BHC - Lindane	58-89-9	N.D. D1	1.4	4.1	5.7	5
14587	Alpha Chlordane	5103-71-9	3.3 □D1	1.2	4.1	5.7	5
14587	Chlordane	57-74-9	N.D. D1	27	55	120	5
14587	Gamma Chlordane	5103-74-2	3.6 □D1	1.7	4.1	5.7	5
14587	p□p-DDD	72-54-8	8.4 □D1	2.2	8.2	12	5
14587	p□p-DDE	72-55-9	59 D1	2.2	8.2	12	5
14587	p□p-DDT	50-29-3	90 D1	5.4	11	12	5
14587	Delta BHC	319-86-8	N.D. D2	3.1	6.1	6.8	5
14587	Dieldrin	60-57-1	N.D. D2	2.2	8.2	12	5
14587	Endosulfan I	959-98-8	N.D. D1	1.5	4.1	5.7	5
14587	Endosulfan II	33213-65-9	N.D. D2	7.5	15	16	5
14587	Endosulfan Sulfate	1031-07-8	N.D. D2	2.2	8.2	12	5
14587	Endrin	72-20-8	N.D. D1	4.6	9.5	12	5
14587	Endrin Aldeh□de	7421-93-4	N.D. D1	2.2	8.2	12	5
14587	Endrin Ketone	53494-70-5	N.D. D1	4.1	12	14	5
14587	Heptachlor	76-44-8	N.D. D1	2.1	4.2	5.7	5
14587	Heptachlor Epoxide	1024-57-3	N.D. D2	1.2	4.1	5.7	5
14587	Methox□chlor	72-43-5	N.D. D2	12	44	46	5

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS002 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:45
SDG□: TID10-04

Tidewater, Inc.
ELLE Sample #: SW 9867766
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
14587	Toxaphene	8001-35-2	N.D. D1	95	190	220	5
	Reporting limits were raised due to interference from the sample matrix.						
	The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.						
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
13499	Thorium	7440-29-1	9.20 □	9.08	21.7	54.2	1
	Outlier recover□/result: CCV RSDs □ 5□ □Acceptance limits: < 5□ 1ST CCV RSD□ - 3.8□ □reading 0.51□acceptance limits: 0.45-0.55 2ND CCV RSD□ - 6.9□ □reading 0.50□acceptance limits: 0.45-0.55 3rd CCV RSD□ - 5.5□ □reading 0.47□acceptance limits: 0.45-0.55						
	SW-846 6020A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06123	Aluminum	7429-90-5	6□200	36.2	69.3	86.6	2
06124	Antimon□	7440-36-0	5.06	0.137	0.217	0.433	2
06125	Arsenic	7440-38-2	40.8	0.145	0.347	0.433	2
06126	Barium	7440-39-3	250	0.418	0.693	0.866	2
06127	Ber□llium	7440-41-7	0.480	0.0247	0.0866	0.108	2
06128	Cadmium	7440-43-9	1.34	0.0546	0.108	0.217	2
06129	Calcium	7440-70-2	3□290	73.9	121	152	2
06131	Chromium	7440-47-3	50.2	0.362	0.693	0.866	2
06132	Cobalt	7440-48-4	10.5	0.0633	0.108	0.217	2
06133	Copper	7440-50-8	381	3.88	6.93	8.66	2
06134	Iron	7439-89-6	33□700	8.12	17.3	21.7	2
06135	Lead	7439-92-1	425	0.0546	0.162	0.650	2
06136	Magnesium	7439-95-4	2□900	3.40	10.8	21.7	2
06137	Manganese	7439-96-5	264	0.429	1.08	2.17	2
06139	Nic□el	7440-02-0	56.4	0.368	0.693	0.866	2
06140	Potassium	7440-09-7	1□180	39.2	69.3	86.6	2
06141	Selenium	7782-49-2	1.28	0.141	0.347	0.433	2
06142	Silver	7440-22-4	1.67	0.0440	0.0866	0.108	2
06143	Sodium	7440-23-5	125 □	87.1	156	195	2
06145	Thallium	7440-28-0	0.0781 □	0.0425	0.0866	0.108	2
13502	Uranium	7440-61-1	0.488	0.0425	0.108	0.108	2
06148	Vanadium	7440-62-2	31.6	0.0929	0.173	0.217	2
06149	□inc	7440-66-6	424	1.31	2.60	3.25	2
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercur□	7439-97-6	3.42	0.396	0.846	1.69	10
Wet Chemistry	**SM 2540 G-2011** **%Moisture Calc**		**%**	**%**	**%**	**%**	

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS002 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:45
SDG□: TID10-04

Tidewater, Inc.
ELLE Sample #: SW 9867766
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		%	%	%	%	
00111	Moisture	n.a.	27.3	0.50	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven dr□ing at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS002 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:45
SDG□: TID10-04

Tidewater, Inc.
ELLE Sample #: SW 9867766
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Dioxins/Furans	**SW-846 8290A Feb 2007 Rev 1**		mg/kg	mg/kg	mg/kg	mg/kg	
12937	2378-TCDD	1746-01-6	0.00000146 Q	0.000000183	0.000000412	0.00000137	1
12937	12378-PeCDD	40321-76-4	N.D.	0.000000441	0.00000137	0.00000686	1
12937	123478-HxCDD	39227-28-6	0.00000352 □	0.000000343	0.00000137	0.00000686	1
12937	123678-HxCDD	57653-85-7	0.0000141	0.000000343	0.00000137	0.00000686	1
12937	123789-HxCDD	19408-74-3	0.00000760	0.000000343	0.00000137	0.00000686	1
12937	1234678-HpCDD	35822-46-9	0.000247	0.000000343	0.00000137	0.00000686	1
12937	OCDD	3268-87-9	0.00240	0.00000189	0.00000412	0.0000137	1
13233	2378-TCDF-Conf	51207-31-9	0.00000627 C	0.000000207	0.000000426	0.00000137	1
12937	12378-PeCDF	57117-41-6	0.0000108	0.000000343	0.00000137	0.00000686	1
12937	23478-PeCDF	57117-31-4	0.0000137	0.000000343	0.00000137	0.00000686	1
12937	123478-HxCDF	70648-26-9	0.0000147	0.000000343	0.00000137	0.00000686	1
12937	123678-HxCDF	57117-44-9	0.0000161	0.000000343	0.00000137	0.00000686	1
12937	123789-HxCDF	72918-21-9	0.00000505 □	0.000000343	0.00000137	0.00000686	1
12937	234678-HxCDF	60851-34-5	0.0000133	0.000000343	0.00000137	0.00000686	1
12937	1234678-HpCDF	67562-39-4	0.000302	0.000000343	0.00000137	0.00000686	1
12937	1234789-HpCDF	55673-89-7	0.0000107	0.000000343	0.00000137	0.00000686	1
12937	OCDF	39001-02-0	0.000264	0.000000745	0.00000275	0.0000137	1

Labeled Compounds	%Rec	Windows	LOD (mg/kg)
13C12-2378-TCDF-Conf	43	40 - 135	0.000000309
13C12-2378-TCDD	61	40 - 135	0.000000299
13C12-12378-PeCDD	83	40 - 135	0.000000998
13C12-123478-HxCDD	66	40 - 135	0.000000998
13C12-123678-HxCDD	64	40 - 135	0.000000998
13C12-123789-HxCDD	68	40 - 135	0.000000998
13C12-1234678-HpCDD	69	40 - 135	0.000000998
13C12-OCDD	67	40 - 135	0.00000299
13C12-12378-PeCDF	74	40 - 135	0.000000998
13C12-23478-PeCDF	82	40 - 135	0.000000998
13C12-123478-HxCDF	62	40 - 135	0.000000998
13C12-123678-HxCDF	62	40 - 135	0.000000998
13C12-234678-HxCDF	64	40 - 135	0.000000998
13C12-123789-HxCDF	67	40 - 135	0.000000998
13C12-1234678-HpCDF	68	40 - 135	0.000000998
13C12-1234789-HpCDF	66	40 - 135	0.000000998
13C12-OCDF	64	40 - 135	0.00000200

Dioxins/Furans Data Qualifiers:

B *Detected in Method Blank*
U *Undetected*
J *Estimated concentration between Estimated Detection Limit and Minimum Reporting Level*
E *Exceeds calibration range*
C *Confirmed quantitation on secondary GC column*

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS002 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:45
SDG□: TID10-04

Tidewater, Inc.
ELLE Sample #: SW 9867766
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF

Q *EMPC - Estimated Maximum Possible Concentration*
F *Interference is present*
S *Saturation of detection signal*
(3) *The Labeled Compound spike amount was less than the LOD.*

□□This limit was used in the evaluation of the final result

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **OU2-1-SS002 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:45
SDG□: TID10-04

Tidewater, Inc.
ELLE Sample #: SW 9867766
ELLE Group #: 2002262
Matrix: Soil

Sample Comments

The following anal□te(s) is not covered under our DoD ELAP accreditation:
Thorium b□SW-846 6010C
C□clohexanone b□SW-846 8260C
Bis(2-chloroeth□l)ether b□SW-846 8270D/SW-846 8270D SIM
Di-n-but□l phthalate b□SW-846 8270D SIM
Hexachloroben□ene b□SW-846 8270D SIM

Eurofins Lancaster Laboratories Environmental□LLC is responsible onl□for the certified testing of samples. We are not directl□responsible for the integrit□of the sample prior to laborator□receipt. An□reported concentrations less than 200 ug/□g ma□be biased low if the□were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid b□8260C	SW-846 8260C	1	B183042AA	10/31/2018 19:17	Stephen C Nolte	0.95
11995	VOCs- Solid b□8260C	SW-846 8260C	2-RE	B183101AA	11/06/2018 22:55	Patric□T Herres	0.83
06176	GC/MS - LL Water Prep	SW-846 5035A	1	201829851683	10/25/2018 16:09	Rebecca Williams	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	201829851683	10/25/2018 16:09	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201829851683	10/24/2018 10:45	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18302SLI026	11/12/2018 01:05	Anthon□P Bauer	1
10726	SVOA 8270D (microwave)	SW-846 8270D	2-RE	18317SLB026	11/16/2018 17:17	William H Saadeh	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18302SLH026	11/08/2018 11:34	□oseph M Gambler	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	2-RE	18317SLC026	11/16/2018 08:53	□oseph M Gambler	1
10813	BNA Soil Microwave APP I□	SW-846 3546	1	18302SLI026	10/30/2018 07:00	□oshua S Ruth	1
10813	BNA Soil Microwave APP I□	SW-846 3546	2	18317SLB026	11/13/2018 19:20	Sall□L Apple□ard	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18302SLH026	10/30/2018 07:00	□oshua S Ruth	1
10811	BNA Soil Microwave SIM	SW-846 3546	2	18317SLC026	11/13/2018 19:25	Sall□L Apple□ard	1
10401	Herbicide soils 8151A Master	SW-846 8151A	1	183030010A	11/02/2018 10:37	Richard A Shober	5
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183040031A	11/05/2018 01:54	Kirb□B Turner	5
14587	ocpest 8081B w/GPC □ 3546	SW-846 8081B	1	183020030A	11/13/2018 20:09	Lisa A Reinert	5
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183040031A	11/01/2018 08:00	Ka□la A □udits□□	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	183020030A	10/30/2018 07:00	□oshua S Ruth	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	183030010A	10/30/2018 20:00	Bradle□W VanLeuven	1
13233	D/F in Solids 8290-Conf	SW-846 8290A Feb 2007 Rev 1	1	18309016	11/08/2018 15:33	Michael □iegler	1
12937	Dioxins/Furans in Solids-8290	SW-846 8290A Feb 2007 Rev 1	1	18309016	11/07/2018 10:41	Michael □iegler	1
11030	Dioxins/Furans in Solids - Sox	SW-846 8290A Feb 2007 Rev 1	2	18309016	11/05/2018 14:56	Alex L Barton	1
13499	Thorium	SW-846 6010C	1	182991063702	11/03/2018 07:12	Lisa □Coo□e	1
06123	Aluminum	SW-846 6020A	1	182991063702A	10/31/2018 20:50	Bradle□M Berlot	2
06124	Antimon□	SW-846 6020A	1	182991063702A	10/31/2018 20:50	Bradle□M Berlot	2
06125	Arsenic	SW-846 6020A	1	182991063702A	10/31/2018 20:50	Bradle□M Berlot	2

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS002 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:45
SDG□: TID10-04

Tidewater, Inc.
ELLE Sample #: SW 9867766
ELLE Group #: 2002262
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06126	Barium	SW-846 6020A	1	182991063702D	10/31/2018 20:50	Bradle□M Berlot	2
06127	Ber□llium	SW-846 6020A	1	182991063702A	10/31/2018 20:50	Bradle□M Berlot	2
06128	Cadmium	SW-846 6020A	1	182991063702A	10/31/2018 20:50	Bradle□M Berlot	2
06129	Calcium	SW-846 6020A	1	182991063702B	11/13/2018 14:00	Patric□□Engle	2
06131	Chromium	SW-846 6020A	1	182991063702A	10/31/2018 20:50	Bradle□M Berlot	2
06132	Cobalt	SW-846 6020A	1	182991063702A	10/31/2018 20:50	Bradle□M Berlot	2
06133	Copper	SW-846 6020A	1	182991063702A	11/06/2018 01:16	Bradle□M Berlot	2
06134	Iron	SW-846 6020A	1	182991063702A	11/06/2018 01:16	Bradle□M Berlot	2
06135	Lead	SW-846 6020A	1	182991063702A	10/31/2018 20:50	Bradle□M Berlot	2
06136	Magnesium	SW-846 6020A	1	182991063702A	10/31/2018 20:50	Bradle□M Berlot	2
06137	Manganese	SW-846 6020A	1	182991063702A	10/31/2018 20:50	Bradle□M Berlot	2
06139	Nic□el	SW-846 6020A	1	182991063702A	11/06/2018 01:16	Bradle□M Berlot	2
06140	Potassium	SW-846 6020A	1	182991063702A	11/06/2018 01:16	Bradle□M Berlot	2
06141	Selenium	SW-846 6020A	1	182991063702B	10/31/2018 20:50	Bradle□M Berlot	2
06142	Silver	SW-846 6020A	1	182991063702A	11/06/2018 01:16	Bradle□M Berlot	2
06143	Sodium	SW-846 6020A	1	182991063702A	10/31/2018 20:50	Bradle□M Berlot	2
06145	Thallium	SW-846 6020A	1	182991063702A	10/31/2018 20:50	Bradle□M Berlot	2
13502	Uranium	SW-846 6020A	1	182991063702A	10/31/2018 20:50	Bradle□M Berlot	2
06148	Vanadium	SW-846 6020A	1	182991063702A	11/06/2018 01:16	Bradle□M Berlot	2
06149	□inc	SW-846 6020A	1	182991063702A	10/31/2018 20:50	Bradle□M Berlot	2
00159	Mercur□	SW-846 7471B	1	182991063802	10/29/2018 11:49	Damar□Valentin	10
10637	ICP/ICPMS-SW□3050B - U4	SW-846 3050B	1	182991063702	10/29/2018 05:32	Annamaria Kuhns	1
10638	Hg - SW□7471B - U4	SW-846 7471B	1	182991063802	10/29/2018 07:15	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-2011 □ Moisture Calc	1	18299820005B	10/26/2018 13:46	Larr□E Bevins	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS008 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 11:30
SDG□: TID10-05

Tidewater, Inc.
ELLE Sample #: SW 9867767
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C**		mg/kg	mg/kg	mg/kg	mg/kg	
11995	Acetone	67-64-1	0.023 □	0.018	0.048	0.059	1.27
11995	Ben□ene	71-43-2	N.D.	0.001	0.006	0.015	1.27
11995	Bromodichloromethane	75-27-4	N.D.	0.001	0.003	0.015	1.27
11995	Bromoform	75-25-2	N.D.	0.015	0.024	0.030	1.27
11995	Bromomethane	74-83-9	N.D.	0.002	0.006	0.015	1.27
11995	2-Butanone	78-93-3	N.D.	0.003	0.012	0.030	1.27
11995	Carbon Disulfide	75-15-0	N.D.	0.002	0.006	0.015	1.27
11995	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.006	0.015	1.27
11995	Chloroben□ene	108-90-7	N.D.	0.001	0.006	0.015	1.27
11995	Chloroethane	75-00-3	N.D.	0.003	0.012	0.015	1.27
11995	Chloroform	67-66-3	N.D.	0.002	0.006	0.015	1.27
11995	Chloromethane	74-87-3	N.D.	0.002	0.006	0.015	1.27
11995	C□clohexane	110-82-7	N.D.	0.001	0.006	0.015	1.27
11995	C□clohexanone	108-94-1	N.D.	0.074	0.30	0.74	1.27
11995	1□2-Dibromo-3-chloropropane	96-12-8	N.D.	0.001	0.003	0.015	1.27
11995	Dibromochloromethane	124-48-1	N.D.	0.001	0.003	0.015	1.27
11995	1□2-Dibromoethane	106-93-4	N.D.	0.001	0.003	0.015	1.27
11995	1□2-Dichloroben□ene	95-50-1	N.D.	0.001	0.006	0.015	1.27
11995	1□3-Dichloroben□ene	541-73-1	N.D.	0.001	0.006	0.015	1.27
11995	1□4-Dichloroben□ene	106-46-7	N.D.	0.001	0.003	0.015	1.27
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.002	0.006	0.015	1.27
11995	1□1-Dichloroethane	75-34-3	N.D.	0.001	0.006	0.015	1.27
11995	1□2-Dichloroethane	107-06-2	N.D.	0.002	0.006	0.015	1.27
11995	1□1-Dichloroethene	75-35-4	N.D.	0.001	0.006	0.015	1.27
11995	cis-1□2-Dichloroethene	156-59-2	N.D.	0.001	0.006	0.015	1.27
11995	trans-1□2-Dichloroethene	156-60-5	N.D.	0.001	0.006	0.015	1.27
11995	1□2-Dichloropropane	78-87-5	N.D.	0.001	0.006	0.015	1.27
11995	cis-1□3-Dichloropropene	10061-01-5	N.D.	0.001	0.003	0.015	1.27
11995	trans-1□3-Dichloropropene	10061-02-6	N.D.	0.0009	0.003	0.015	1.27
11995	Eth□lben□ene	100-41-4	N.D.	0.001	0.003	0.015	1.27
11995	Freon 113	76-13-1	N.D.	0.002	0.006	0.030	1.27
11995	2-Hexanone	591-78-6	N.D.	0.003	0.012	0.030	1.27
11995	Isoprop□lben□ene	98-82-8	N.D.	0.001	0.003	0.015	1.27
11995	Meth□l Acetate	79-20-9	N.D.	0.003	0.012	0.015	1.27
11995	Meth□l Tertiar□But□l Ether	1634-04-4	N.D.	0.001	0.006	0.015	1.27
11995	4-Meth□l-2-pentanone	108-10-1	N.D.	0.003	0.012	0.030	1.27
11995	Meth□lc□clohexane	108-87-2	N.D.	0.002	0.006	0.015	1.27
11995	Meth□lene Chloride	75-09-2	N.D.	0.006	0.012	0.015	1.27
11995	St□rene	100-42-5	N.D.	0.0009	0.003	0.015	1.27
11995	1□1□2□2-Tetrachloroethane	79-34-5	N.D.	0.001	0.003	0.015	1.27
11995	Tetrachloroethene	127-18-4	N.D.	0.001	0.006	0.015	1.27

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS008 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 11:30
SDG□: TID10-05

Tidewater, Inc.
ELLE Sample #: SW 9867767
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
11995	Toluene	108-88-3	N.D.	0.002	0.006	0.015	1.27
11995	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.015	0.024	0.030	1.27
11995	1□1□1-Trichloroethane	71-55-6	N.D.	0.002	0.006	0.015	1.27
11995	1□1□2-Trichloroethane	79-00-5	N.D.	0.001	0.006	0.015	1.27
11995	Trichloroethene	79-01-6	N.D.	0.001	0.006	0.015	1.27
11995	Trichlorofluoromethane	75-69-4	N.D.	0.002	0.006	0.015	1.27
11995	Vin□l Chloride	75-01-4	N.D.	0.002	0.006	0.015	1.27
11995	□□lene (Total)	1330-20-7	N.D.	0.003	0.006	0.015	1.27

A Method Detection Limit (MDL) standard is anal□□ed to confirm sensitivit□ of the instrument for samples with non-detect anal□tes associated with a continuing calibration verification standard exhibiting low response (outside the 20□ D criteria). The MDL standard shows adequate sensitivit□ at or below the reporting limit.

The recover□ for the sample internal standard is outside the QC acceptance limits. The following action was ta□en: The sample was re-anal□□ed and the QC is again outside of the acceptance limits□ indicating a matrix effect. The data is reported from the initial trial.

GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10726	Aniline	62-53-3	N.D.	0.38	0.77	1.2	1
10726	Ben□□l alcohol	100-51-6	N.D.	0.38	0.77	1.2	1
10726	4-Bromophen□l-phen□lether	101-55-3	N.D.	0.046	0.092	0.12	1
10726	Carba□ole	86-74-8	N.D.	0.038	0.077	0.085	1
10726	4-Chloro-3-meth□lphenol	59-50-7	N.D.	0.038	0.077	0.085	1
10726	4-Chloroaniline	106-47-8	0.21 □	0.077	0.15	0.38	1
10726	bis(2-Chloroethox□)methane	111-91-1	N.D.	0.038	0.077	0.085	1
10726	bis(2-Chloroeth□l)ether	111-44-4	N.D.	0.054	0.11	0.12	1
10726	2-Chloronaphthalene	91-58-7	N.D.	0.015	0.031	0.077	1
10726	2-Chlorophenol	95-57-8	N.D.	0.038	0.077	0.085	1
10726	4-Chlorophen□l-phen□lether	7005-72-3	N.D.	0.038	0.077	0.085	1
10726	2□2□-ox□bis(1-Chloropropane)	108-60-1	N.D.	0.038	0.077	0.085	1
	Bis(2-chloroisoprop□l) ether CAS □39638-32-9 and 2□2□-Ox□bis(1-chloropropane) CAS □108-60-1 cannot be separated chromatographicall□ The reported result represents the combined total of both compounds.						
10726	Diben□ofuran	132-64-9	N.D.	0.038	0.077	0.085	1
10726	1□2-Dichloroben□ene	95-50-1	N.D.	0.046	0.092	0.12	1
10726	1□3-Dichloroben□ene	541-73-1	N.D.	0.038	0.077	0.085	1
10726	1□4-Dichloroben□ene	106-46-7	0.060 □	0.038	0.077	0.085	1
10726	3□3□-Dichloroben□idine	91-94-1	N.D.	0.23	0.46	0.77	1
10726	2□4-Dichlorophenol	120-83-2	N.D.	0.038	0.077	0.085	1
10726	Dieth□lphthalate	84-66-2	N.D.	0.15	0.31	0.38	1
10726	2□4-Dimeth□lphenol	105-67-9	N.D.	0.038	0.077	0.085	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS008 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 11:30
SDG□: TID10-05

Tidewater, Inc.
ELLE Sample #: SW 9867767
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10726	Dimeth□phthalate	131-11-3	N.D.	0.15	0.31	0.38	1
10726	4□6-Dinitro-2-meth□phenol	534-52-1	N.D.	0.38	0.77	1.2	1
10726	2□4-Dinitrophenol	51-28-5	N.D.	0.85	1.7	2.3	1
10726	2□4-Dinitrotoluene	121-14-2	N.D.	0.15	0.31	0.38	1
10726	2□6-Dinitrotoluene	606-20-2	N.D.	0.046	0.092	0.12	1
10726	Hexachloroben□ene	118-74-1	N.D.	0.008	0.015	0.038	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.046	0.092	0.12	1
10726	Hexachloroc□clopentadiene	77-47-4	N.D.	0.38	0.77	1.2	1
10726	Hexachloroethane	67-72-1	N.D.	0.077	0.15	0.38	1
10726	Isophorone	78-59-1	N.D.	0.038	0.077	0.085	1
10726	2-Meth□lnaphthalene	91-57-6	0.037 □	0.023	0.046	0.077	1
10726	2-Meth□lphenol	95-48-7	N.D.	0.062	0.12	0.15	1
10726	4-Meth□lphenol	106-44-5	N.D.	0.046	0.092	0.12	1
	3-Meth□lphenol and 4-meth□lphenol cannot be resolved under the chromatographic conditions used for sample anal□sis. The result reported for 4-meth□lphenol represents the combined total of both compounds.						
10726	2-Nitroaniline	88-74-4	N.D.	0.046	0.092	0.12	1
10726	3-Nitroaniline	99-09-2	N.D.	0.15	0.31	0.38	1
10726	4-Nitroaniline	100-01-6	N.D.	0.15	0.31	0.38	1
10726	Nitroben□ene	98-95-3	N.D.	0.062	0.12	0.15	1
10726	2-Nitrophenol	88-75-5	N.D.	0.038	0.077	0.085	1
10726	4-Nitrophenol	100-02-7	N.D.	0.38	0.77	1.2	1
10726	N-Nitroso-di-n-prop□lamine	621-64-7	N.D.	0.046	0.092	0.12	1
10726	N-Nitrosodiphen□lamine	86-30-6	N.D.	0.038	0.077	0.085	1
	N-nitrosodiphen□lamine decomposes in the GC inlet forming diphen□lamine. The result reported for N-nitrosodiphen□lamine represents the combined total of both compounds.						
10726	Di-n-oct□lphthalate	117-84-0	N.D.	0.15	0.31	0.38	1
10726	Pentachlorophenol	87-86-5	N.D.	0.085	0.31	0.38	1
10726	Phenol	108-95-2	N.D.	0.054	0.11	0.12	1
10726	P□ridine	110-86-1	N.D.	0.15	0.31	0.38	1
10726	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.038	0.077	0.085	1
10726	2□4□5-Trichlorophenol	95-95-4	N.D.	0.046	0.092	0.12	1
10726	2□4□6-Trichlorophenol	88-06-2	N.D.	0.046	0.092	0.12	1
Trial ID: RE							
10726	Aniline	62-53-3	N.D.	0.39	0.78	1.2	1
10726	Ben□□l alcohol	100-51-6	N.D.	0.39	0.78	1.2	1
10726	4-Bromophen□l-phen□lether	101-55-3	N.D.	0.047	0.093	0.12	1
10726	Carba□ole	86-74-8	0.040 □	0.039	0.078	0.086	1
10726	4-Chloro-3-meth□lphenol	59-50-7	N.D.	0.039	0.078	0.086	1
10726	4-Chloroaniline	106-47-8	N.D.	0.078	0.16	0.39	1
10726	bis(2-Chloroethox□)methane	111-91-1	N.D.	0.039	0.078	0.086	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS008 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 11:30
SDG□: TID10-05

Tidewater, Inc.
ELLE Sample #: SW 9867767
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10726	bis(2-Chloroeth□l)ether	111-44-4	N.D.	0.055	0.11	0.12	1
10726	2-Chloronaphthalene	91-58-7	N.D.	0.016	0.031	0.078	1
10726	2-Chlorophenol	95-57-8	N.D.	0.039	0.078	0.086	1
10726	4-Chlorophen□l-phen□lether	7005-72-3	N.D.	0.039	0.078	0.086	1
10726	2□2-ox□bis(1-Chloropropane)	108-60-1	N.D.	0.039	0.078	0.086	1
	Bis(2-chloroisoprop□l) ether CAS □39638-32-9 and 2□2-Ox□bis(1-chloropropane) CAS □108-60-1 cannot be separated chromatographicall□ The reported result represents the combined total of both compounds.						
10726	Diben□ofuran	132-64-9	N.D.	0.039	0.078	0.086	1
10726	1□2-Dichloroben□ene	95-50-1	0.050 □	0.047	0.093	0.12	1
10726	1□3-Dichloroben□ene	541-73-1	N.D.	0.039	0.078	0.086	1
10726	1□4-Dichloroben□ene	106-46-7	0.12	0.039	0.078	0.086	1
10726	3□3-Dichloroben□idine	91-94-1	N.D.	0.23	0.47	0.78	1
10726	2□4-Dichlorophenol	120-83-2	N.D.	0.039	0.078	0.086	1
10726	Dieth□lphthalate	84-66-2	N.D.	0.16	0.31	0.39	1
10726	2□4-Dimeth□lphenol	105-67-9	N.D.	0.039	0.078	0.086	1
10726	Dimeth□lphthalate	131-11-3	N.D.	0.16	0.31	0.39	1
10726	4□6-Dinitro-2-meth□lphenol	534-52-1	N.D.	0.39	0.78	1.2	1
10726	2□4-Dinitrophenol	51-28-5	N.D.	0.86	1.7	2.3	1
10726	2□4-Dinitrotoluene	121-14-2	N.D.	0.16	0.31	0.39	1
10726	2□6-Dinitrotoluene	606-20-2	N.D.	0.047	0.093	0.12	1
10726	Hexachloroben□ene	118-74-1	N.D.	0.008	0.016	0.039	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.047	0.093	0.12	1
10726	Hexachloroc□clopentadiene	77-47-4	N.D.	0.39	0.78	1.2	1
10726	Hexachloroethane	67-72-1	N.D.	0.078	0.16	0.39	1
10726	Isophorone	78-59-1	N.D.	0.039	0.078	0.086	1
10726	2-Meth□lnaphthalene	91-57-6	0.095	0.023	0.047	0.078	1
10726	2-Meth□lphenol	95-48-7	N.D.	0.062	0.12	0.16	1
10726	4-Meth□lphenol	106-44-5	0.093 □	0.047	0.093	0.12	1
	3-Meth□lphenol and 4-meth□lphenol cannot be resolved under the chromatographic conditions used for sample anal□sis. The result reported for 4-meth□lphenol represents the combined total of both compounds.						
10726	2-Nitroaniline	88-74-4	N.D.	0.047	0.093	0.12	1
10726	3-Nitroaniline	99-09-2	N.D.	0.16	0.31	0.39	1
10726	4-Nitroaniline	100-01-6	N.D.	0.16	0.31	0.39	1
10726	Nitroben□ene	98-95-3	N.D.	0.062	0.12	0.16	1
10726	2-Nitrophenol	88-75-5	N.D.	0.039	0.078	0.086	1
10726	4-Nitrophenol	100-02-7	N.D.	0.39	0.78	1.2	1
10726	N-Nitroso-di-n-prop□lamine	621-64-7	N.D.	0.047	0.093	0.12	1
10726	N-Nitrosodiphen□lamine	86-30-6	N.D.	0.039	0.078	0.086	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS008 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 11:30
SDG□: TID10-05

Tidewater, Inc.
ELLE Sample #: SW 9867767
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
	N-nitrosodiphen□lamine decomposes in the GC inlet forming diphen□lamine. The result reported for N-nitrosodiphen□lamine represents the combined total of both compounds.						
10726	Di-n-oct□lphthalate	117-84-0	N.D.	0.16	0.31	0.39	1
10726	Pentachlorophenol	87-86-5	N.D.	0.086	0.31	0.39	1
10726	Phenol	108-95-2	N.D.	0.055	0.11	0.12	1
10726	P□ridine	110-86-1	N.D.	0.16	0.31	0.39	1
10726	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.039	0.078	0.086	1
10726	2□4□5-Trichlorophenol	95-95-4	N.D.	0.047	0.093	0.12	1
10726	2□4□6-Trichlorophenol	88-06-2	N.D.	0.047	0.093	0.12	1
	Target anal□tes were detected in the method blan□associated with the samples as noted on the QC Summar□. The following action was ta□en: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.						
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
12969	Acenaphthene	83-32-9	0.004	0.002	0.003	0.004	1
12969	Acenaphth□lene	208-96-8	0.012	0.0008	0.003	0.004	1
12969	Anthracene	120-12-7	0.027	0.002	0.003	0.004	1
12969	Ben□o(a)anthracene	56-55-3	0.16	0.002	0.003	0.004	1
12969	Ben□o(a)p□rene	50-32-8	0.26	0.002	0.003	0.004	1
12969	Ben□o(b)fluoranthene	205-99-2	1.1E□	0.002	0.003	0.004	1
12969	Ben□o(g□h□i)per□lene	191-24-2	0.13	0.002	0.003	0.004	1
12969	Ben□o(□)fluoranthene	207-08-9	N.D.	0.002	0.003	0.004	1
12969	Di-n-but□lphthalate	84-74-2	0.11	0.015	0.031	0.046	1
12969	Chr□sene	218-01-9	0.46	0.0008	0.003	0.004	1
12969	Diben□(a□h)anthracene	53-70-3	0.047	0.002	0.003	0.004	1
12969	1□4-Dioxane	123-91-1	0.026	0.002	0.003	0.004	1
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	4.1E	0.023	0.046	0.054	1
12969	Fluoranthene	206-44-0	0.27	0.002	0.003	0.004	1
12969	Fluorene	86-73-7	0.006	0.002	0.003	0.004	1
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.15	0.002	0.003	0.004	1
12969	Naphthalene	91-20-3	0.052	0.003	0.006	0.008	1
12969	Phenanthrene	85-01-8	0.099	0.002	0.003	0.004	1
12969	P□rene	129-00-0	0.32	0.002	0.003	0.004	1
Trial ID: DL							
12969	Acenaphthene	83-32-9	N.D.	0.015	0.031	0.038	10
12969	Acenaphth□lene	208-96-8	0.015 □	0.008	0.031	0.038	10
12969	Anthracene	120-12-7	0.038 □	0.015	0.031	0.038	10
12969	Ben□o(a)anthracene	56-55-3	0.20	0.015	0.031	0.038	10
12969	Ben□o(a)p□rene	50-32-8	0.25	0.015	0.031	0.038	10
12969	Ben□o(b)fluoranthene	205-99-2	0.83	0.015	0.031	0.038	10

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS008 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 11:30
SDG□: TID10-05

Tidewater, Inc.
ELLE Sample #: SW 9867767
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
12969	Ben□o(g□h□i)per□lene	191-24-2	0.16	0.015	0.031	0.038	10
12969	Ben□o(□)fluoranthene	207-08-9	0.33	0.015	0.031	0.038	10
12969	Di-n-but□lphthalate	84-74-2	N.D.	0.15	0.31	0.46	10
12969	Chr□sene	218-01-9	0.47	0.008	0.031	0.038	10
12969	Diben□(a□h)anthracene	53-70-3	0.060	0.015	0.031	0.038	10
12969	1□4-Dioxane	123-91-1	N.D.	0.015	0.031	0.038	10
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	4.2	0.23	0.46	0.54	10
12969	Fluoranthene	206-44-0	0.34	0.015	0.031	0.038	10
12969	Fluorene	86-73-7	N.D.	0.015	0.031	0.038	10
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.18	0.015	0.031	0.038	10
12969	Naphthalene	91-20-3	0.060 □	0.031	0.062	0.077	10
12969	Phenanthrene	85-01-8	0.14	0.015	0.031	0.038	10
12969	P□rene	129-00-0	0.29	0.015	0.031	0.038	10
Trial ID: RE							
12969	Acenaphthene	83-32-9	0.004	0.002	0.003	0.004	1
12969	Acenaphth□lene	208-96-8	0.012	0.0008	0.003	0.004	1
12969	Anthracene	120-12-7	0.033	0.002	0.003	0.004	1
12969	Ben□o(a)anthracene	56-55-3	0.17	0.002	0.003	0.004	1
12969	Ben□o(a)p□rene	50-32-8	0.26	0.002	0.003	0.004	1
12969	Ben□o(b)fluoranthene	205-99-2	1.3E□	0.002	0.003	0.004	1
12969	Ben□o(g□h□i)per□lene	191-24-2	0.14	0.002	0.003	0.004	1
12969	Ben□o(□)fluoranthene	207-08-9	N.D.	0.002	0.003	0.004	1
12969	Di-n-but□lphthalate	84-74-2	0.15	0.015	0.031	0.046	1
12969	Chr□sene	218-01-9	0.40	0.0008	0.003	0.004	1
12969	Diben□(a□h)anthracene	53-70-3	0.047	0.002	0.003	0.004	1
12969	1□4-Dioxane	123-91-1	0.015	0.002	0.003	0.004	1
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	3.3E	0.023	0.046	0.054	1
12969	Fluoranthene	206-44-0	0.36	0.002	0.003	0.004	1
12969	Fluorene	86-73-7	0.007	0.002	0.003	0.004	1
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.16	0.002	0.003	0.004	1
12969	Naphthalene	91-20-3	0.059	0.003	0.006	0.008	1
12969	Phenanthrene	85-01-8	0.13	0.002	0.003	0.004	1
12969	P□rene	129-00-0	0.29	0.002	0.003	0.004	1
Trial ID: RE2							
12969	Acenaphthene	83-32-9	0.006	0.002	0.003	0.004	1
12969	Acenaphth□lene	208-96-8	0.024	0.0008	0.003	0.004	1
12969	Anthracene	120-12-7	0.053	0.002	0.003	0.004	1
12969	Ben□o(a)anthracene	56-55-3	0.16	0.002	0.003	0.004	1
12969	Ben□o(a)p□rene	50-32-8	0.23	0.002	0.003	0.004	1
12969	Ben□o(b)fluoranthene	205-99-2	0.95E	0.002	0.003	0.004	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS008 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 11:30
SDG□: TID10-05

Tidewater, Inc.
ELLE Sample #: SW 9867767
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
12969	Ben□o(g□h□i)per□lene	191-24-2	0.17	0.002	0.003	0.004	1
12969	Ben□o(□)fluoranthene	207-08-9	N.D.	0.002	0.003	0.004	1
12969	Di-n-but□phthalate	84-74-2	0.13	0.016	0.031	0.047	1
12969	Chr□sene	218-01-9	0.43	0.0008	0.003	0.004	1
12969	Diben□(a□h)anthracene	53-70-3	0.051	0.002	0.003	0.004	1
12969	1□4-Dioxane	123-91-1	0.074	0.002	0.003	0.004	1
12969	bis(2-Eth□lhex□l)phthalate	117-81-7	2.6E	0.023	0.047	0.055	1
12969	Fluoranthene	206-44-0	0.30	0.002	0.003	0.004	1
12969	Fluorene	86-73-7	0.012	0.002	0.003	0.004	1
12969	Indeno(1□2□3-cd)p□rene	193-39-5	0.19	0.002	0.003	0.004	1
12969	Naphthalene	91-20-3	0.12	0.003	0.006	0.008	1
12969	Phenanthrene	85-01-8	0.18	0.002	0.003	0.004	1
12969	P□rene	129-00-0	0.31	0.002	0.003	0.004	1

□□Ben□o(b)fluoranthene and ben□o(□)fluoranthene were not resolved under the sample anal□sis conditions. The result reported for ben□o(b)fluoranthene represents the combined total of both isomers.

Target anal□tes were detected in the method blan□associated with the samples as noted on the QC Summar□. The following action was ta□en: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.

The stated QC limits for 1□4-dioxane are advisor□onl□until sufficient data points can be obtained to calculate statistical limits.

The SECC exceeded the □/- 50□ of the expected value from the ICAL. Sample and the SECC were reanal□□ed and the SECC was once again outside client requirements which indicates a matrix effect.

The recover□for the sample internal standard is outside the QC acceptance limits. The following action was ta□en:
The sample was re-anal□□ed and internal standard areas are again outside of the QC acceptance limits□indicating a matrix effect.
The reported data is from both trials.

Herbicides	**SW-846 8151A**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10401	2□4-D	94-75-7	N.D. D1	280	560	830	10
10401	Dalapon	75-99-0	N.D. D2	1□000	2□000	2□100	10
10401	2□4-DB	94-82-6	N.D. D2	230	460	490	10
10401	Dicamba	1918-00-9	N.D. D1	93	190	280	10
10401	Dinoseb	88-85-7	N.D. D2	210	420	560	10
	The QC window for dinoseb is advisor□due to the erratic performance of the anal□te using this method.						
10401	2□4-DP (Dichloroprop)	120-36-5	N.D. D1	210	420	460	10
10401	MCPA	94-74-6	N.D. D1	18□000	35□000	58□000	10

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS008 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 11:30
SDG□: TID10-05

Tidewater, Inc.
ELLE Sample #: SW 9867767
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Herbicides	**SW-846 8151A**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
10401	MCPP (Mecoprop)	93-65-2	N.D. D1	88□000	180□000	180□000	10
10401	2□4□5-T	93-76-5	N.D. D2	19	38	39	10
10401	2□4□5-TP	93-72-1	N.D. D2	17	35	39	10
	Due to the nature of the sample extract matrix□a dilution was used for the anal□sis. The reporting limits were raised according□.						
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	1.7	4.6	7.8	200
10885	PCB-1221	11104-28-2	N.D. D1	2.1	4.6	7.8	200
10885	PCB-1232	11141-16-5	N.D. D1	3.7	7.4	7.8	200
10885	PCB-1242	53469-21-9	N.D. D1	1.5	4.6	7.8	200
10885	PCB-1248	12672-29-6	N.D. D1	1.5	4.6	7.8	200
10885	PCB-1254	11097-69-1	7.2 □D1	1.5	4.6	7.8	200
10885	PCB-1260	11096-82-5	N.D. D1	2.3	4.6	7.8	200
10885	PCB-1262	37324-23-5	N.D. D1	1.5	4.6	7.8	200
10885	PCB-1268	11100-14-4	N.D. D1	1.5	4.6	7.8	200
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
14587	Aldrin	309-00-2	N.D. D2	39	140	190	100
14587	Alpha BHC	319-84-6	N.D. D1	39	140	190	100
14587	Beta BHC	319-85-7	N.D. D2	100	210	230	100
14587	Gamma BHC - Lindane	58-89-9	N.D. D2	48	140	190	100
14587	Alpha Chlordane	5103-71-9	910 D1	39	140	190	100
14587	Chlordane	57-74-9	9□000 D2	920	1□800	3□900	100
14587	Gamma Chlordane	5103-74-2	740 D2	58	140	190	100
14587	p□p-DDD	72-54-8	N.D. D1	76	280	390	100
14587	p□p-DDE	72-55-9	110 □D2	76	280	390	100
14587	p□p-DDT	50-29-3	N.D. D2	180	370	390	100
14587	Delta BHC	319-86-8	N.D. D1	100	210	230	100
14587	Dieldrin	60-57-1	N.D. D1	76	280	390	100
14587	Endosulfan I	959-98-8	320 PD1	51	140	190	100
14587	Endosulfan II	33213-65-9	N.D. D2	250	510	530	100
14587	Endosulfan Sulfate	1031-07-8	N.D. D2	76	280	390	100
14587	Endrin	72-20-8	N.D. D2	160	320	390	100
14587	Endrin Aldeh□de	7421-93-4	N.D. D1	76	280	390	100
14587	Endrin Ketone	53494-70-5	N.D. D1	140	420	460	100
14587	Heptachlor	76-44-8	N.D. D1	71	140	190	100
14587	Heptachlor Epoxide	1024-57-3	N.D. D1	39	140	190	100
14587	Methox□chlor	72-43-5	N.D. D2	420	1□500	1□500	100
14587	Toxaphene	8001-35-2	N.D. D1	3□200	6□500	7□600	100

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS008 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 11:30
SDG□: TID10-05

Tidewater, Inc.
ELLE Sample #: SW 9867767
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
13499	Thorium	7440-29-1	N.D.	17.5	41.7	104	1
	Outlier recover□/result: CCV RSDs □ 5□ □Acceptance limits: < 5□ 1ST CCV RSD□ - 3.8□ □reading 0.51□acceptance limits: 0.45-0.55 2ND CCV RSD□ - 6.9□ □reading 0.50□acceptance limits: 0.45-0.55 3rd CCV RSD□ - 5.5□ □reading 0.47□acceptance limits: 0.45-0.55						
	SW-846 6020A		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
06123	Aluminum	7429-90-5	12□900	69.7	134	167	2
06124	Antimon□	7440-36-0	4.90	0.264	0.417	0.834	2
06125	Arsenic	7440-38-2	5.71	0.279	0.668	0.834	2
06126	Barium	7440-39-3	1□040	0.805	1.34	1.67	2
06127	Ber□llium	7440-41-7	0.723	0.0476	0.167	0.209	2
06128	Cadmium	7440-43-9	9.82	0.105	0.209	0.417	2
06129	Calcium	7440-70-2	6□990	142	234	292	2
06131	Chromium	7440-47-3	152	0.697	1.34	1.67	2
06132	Cobalt	7440-48-4	3.76	0.122	0.209	0.417	2
06133	Copper	7440-50-8	1□560	7.47	13.4	16.7	2
06134	Iron	7439-89-6	45□300	15.6	33.4	41.7	2
06135	Lead	7439-92-1	692	0.105	0.313	1.25	2
06136	Magnesium	7439-95-4	2□450	6.55	20.9	41.7	2
06137	Manganese	7439-96-5	98.6	0.826	2.09	4.17	2
06139	Nic□el	7440-02-0	30.9	0.709	1.34	1.67	2
06140	Potassium	7440-09-7	1□900	75.5	134	167	2
06141	Selenium	7782-49-2	7.26	0.272	0.668	0.834	2
06142	Silver	7440-22-4	60.7	0.0847	0.167	0.209	2
06143	Sodium	7440-23-5	363 □	168	300	376	2
06145	Thallium	7440-28-0	0.240	0.0818	0.167	0.209	2
13502	Uranium	7440-61-1	4.25	0.0818	0.209	0.209	2
06148	Vanadium	7440-62-2	34.3	0.179	0.334	0.417	2
06149	□inc	7440-66-6	425	2.53	5.01	6.26	2
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercur□	7439-97-6	12.9	1.76	3.77	7.54	25
Wet Chemistry	**SM 2540 G-2011** **%Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	57.2	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven dr□ing at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS008 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 11:30
SDG□: TID10-05

Tidewater, Inc.
ELLE Sample #: SW 9867767
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Dioxins/Furans	**SW-846 8290A Feb 2007 Rev 1**		mg/kg	mg/kg	mg/kg	mg/kg	
12937	2378-TCDD	1746-01-6	0.00000553	0.000000301	0.000000680	0.00000227	1
12937	12378-PeCDD	40321-76-4	N.D.	0.000000727	0.00000227	0.0000113	1
12937	123478-HxCDD	39227-28-6	0.0000335	0.000000567	0.00000227	0.0000113	1
12937	123678-HxCDD	57653-85-7	0.000156	0.000000567	0.00000227	0.0000113	1
12937	123789-HxCDD	19408-74-3	0.0000708	0.000000567	0.00000227	0.0000113	1
12937	1234678-HpCDD	35822-46-9	0.00484	0.00000567	0.0000227	0.000113	10
12937	OCDD	3268-87-9	0.0468	0.0000313	0.0000680	0.000227	10
12937	2378-TCDF	51207-31-9	0.0000872 C	0.000000342	0.000000703	0.00000227	1
12937	12378-PeCDF	57117-41-6	0.0000403	0.000000567	0.00000227	0.0000113	1
12937	23478-PeCDF	57117-31-4	0.0000372	0.000000567	0.00000227	0.0000113	1
12937	123478-HxCDF	70648-26-9	0.0000856	0.000000567	0.00000227	0.0000113	1
12937	123678-HxCDF	57117-44-9	0.0000527	0.000000567	0.00000227	0.0000113	1
12937	123789-HxCDF	72918-21-9	N.D.	0.000000567	0.00000227	0.0000113	1
12937	234678-HxCDF	60851-34-5	0.0000472	0.000000567	0.00000227	0.0000113	1
12937	1234678-HpCDF	67562-39-4	0.000764	0.000000567	0.00000227	0.0000113	1
12937	1234789-HpCDF	55673-89-7	0.0000582	0.000000567	0.00000227	0.0000113	1
12937	OCDF	39001-02-0	0.00169	0.00000123	0.00000453	0.0000227	1

The recover□for labeled compound 13C12-2378-TCDF was outside of QC acceptance limits in the method blan□s associated with this sample. The labeled recover□for 13C12-2378-TCDF was within QC limits in the sample□ therefore the data is reported.

Labeled Compounds	%Rec	Windows	LOD (mg/kg)
13C12-2378-TCDD	98	40 - 135	0.000000291
13C12-2378-TCDD	100	40 - 135	0.00000291
13C12-12378-PeCDD	93	40 - 135	0.000000970
13C12-12378-PeCDD	110	40 - 135	0.00000970
13C12-123478-HxCDD	83	40 - 135	0.000000970
13C12-123478-HxCDD	93	40 - 135	0.00000970
13C12-123678-HxCDD	81	40 - 135	0.000000970
13C12-123678-HxCDD	93	40 - 135	0.00000970
13C12-123789-HxCDD	86	40 - 135	0.000000970
13C12-123789-HxCDD	93	40 - 135	0.00000970
13C12-1234678-HpCDD	80	40 - 135	0.00000970
13C12-OCDD	85	40 - 135	0.0000291
13C12-2378-TCDF	72	40 - 135	0.000000301
13C12-2378-TCDF	91	40 - 135	0.00000301
13C12-12378-PeCDF	72	40 - 135	0.000000970
13C12-12378-PeCDF	93	40 - 135	0.00000970
13C12-23478-PeCDF	80	40 - 135	0.000000970
13C12-23478-PeCDF	98	40 - 135	0.00000970
13C12-123478-HxCDF	67	40 - 135	0.000000970
13C12-123478-HxCDF	79	40 - 135	0.00000970
13C12-123678-HxCDF	65	40 - 135	0.000000970
13C12-123678-HxCDF	76	40 - 135	0.00000970

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS008 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 11:30
SDG□: TID10-05

Tidewater, Inc.
ELLE Sample #: SW 9867767
ELLE Group #: 2002262
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
Labeled Compounds	**%Rec**	**Windows**	**LOD (mg/kg)**				
13C12-234678-HxCDF	70	40 - 135	0.000000970				
13C12-234678-HxCDF	78	40 - 135	0.00000970				
13C12-123789-HxCDF	70	40 - 135	0.000000970				
13C12-123789-HxCDF	80	40 - 135	0.00000970				
13C12-1234678-HpCDF	69	40 - 135	0.000000970				
13C12-1234678-HpCDF	72	40 - 135	0.00000970				
13C12-1234789-HpCDF	67	40 - 135	0.000000970				
13C12-1234789-HpCDF	68	40 - 135	0.00000970				
13C12-OCDF	61	40 - 135	0.00000194				
13C12-OCDF	68	40 - 135	0.0000194				

Dioxins/Furans Data Qualifiers:

B	*Detected in Method Blank*
U	*Undetected*
J	*Estimated concentration between Estimated Detection Limit and Minimum Reporting Level*
E	*Exceeds calibration range*
C	*Confirmed quantitation on secondary GC column*
Q	*EMPC - Estimated Maximum Possible Concentration*
F	*Interference is present*
S	*Saturation of detection signal*
(3)	*The Labeled Compound spike amount was less than the LOD.*

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS008 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 11:30
SDG□: TID10-05

Tidewater, Inc.
ELLE Sample #: SW 9867767
ELLE Group #: 2002262
Matrix: Soil

Sample Comments

The following anal□te(s) is not covered under our DoD ELAP accreditation:
Thorium b□SW-846 6010C
C□clohexanone b□SW-846 8260C
Bis(2-chloroeth□l)ether b□SW-846 8270D/SW-846 8270D SIM
Di-n-but□l phthalate b□SW-846 8270D SIM
Hexachloroben□ene b□SW-846 8270D SIM

Eurofins Lancaster Laboratories Environmental□LLC is responsible onl□for the certified testing of samples. We are not directl□responsible for the integrit□of the sample prior to laborator□receipt. An□reported concentrations less than 200 ug/□g ma□be biased low if the□were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid b□8260C	SW-846 8260C	1	B183101AA	11/06/2018 23:18	Patric□T Herres	1.27
06176	GC/MS - LL Water Prep	SW-846 5035A	1	201829851683	10/25/2018 16:09	Rebecca Williams	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	201829851683	10/25/2018 16:10	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201829851683	10/24/2018 11:30	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18302SLI026	11/12/2018 01:28	Anthon□P Bauer	1
10726	SVOA 8270D (microwave)	SW-846 8270D	2-RE	18317SLB026	11/16/2018 17:42	William H Saadeh	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18302SLH026	11/07/2018 22:44	Anthon□P Bauer	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	2-RE	18302SLH026	11/08/2018 12:05	□oseph M Gambler	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	3-DL	18302SLH026	11/08/2018 12:35	□oseph M Gambler	10
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	4-RE2	18317SLC026	11/16/2018 09:24	□oseph M Gambler	1
10813	BNA Soil Microwave APP I□	SW-846 3546	1	18302SLI026	10/30/2018 07:00	□oshua S Ruth	1
10813	BNA Soil Microwave APP I□	SW-846 3546	2	18317SLB026	11/13/2018 19:20	Sall□L Apple□ard	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18302SLH026	10/30/2018 07:00	□oshua S Ruth	1
10811	BNA Soil Microwave SIM	SW-846 3546	2	18317SLC026	11/13/2018 19:25	Sall□L Apple□ard	1
10401	Herbicide soils 8151A Master	SW-846 8151A	1	183030010A	11/02/2018 11:10	Richard A Shober	10
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183040031A	11/05/2018 02:05	Kirb□B Turner	200
14587	ocpest 8081B w/GPC □ 3546	SW-846 8081B	1	183020030A	11/13/2018 20:19	Lisa A Reinert	100
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183040031A	11/01/2018 08:00	Ka□la A □udits□□	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	183020030A	10/30/2018 07:00	□oshua S Ruth	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	183030010A	10/30/2018 20:00	Bradle□W VanLeuven	1
12937	Dioxins/Furans in Solids-8290	SW-846 8290A Feb 2007 Rev 1	1	18299005	11/09/2018 17:53	Michael □iegler	10
12937	Dioxins/Furans in Solids-8290	SW-846 8290A Feb 2007 Rev 1	1	18299005	11/12/2018 14:35	Michael □iegler	1
11030	Dioxins/Furans in Solids - Sox	SW-846 8290A Feb 2007 Rev 1	1	18299005	10/26/2018 08:05	Deborah M □immerman	1
13499	Thorium	SW-846 6010C	1	182991063702	11/03/2018 07:15	Lisa □Coo□e	1

□□This limit was used in the evaluation of the final result

Sample Description: **OU2-1-SS008 Grab Soil**
Great Kills Park, NY

Project Name: **Great Kills Park Phase I RI OU2**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 11:30
SDG□: TID10-05

Tidewater, Inc.
ELLE Sample #: SW 9867767
ELLE Group #: 2002262
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06123	Aluminum	SW-846 6020A	1	182991063702A	10/31/2018 20:53	Bradle□M Berlot	2
06124	Antimon□	SW-846 6020A	1	182991063702A	10/31/2018 20:53	Bradle□M Berlot	2
06125	Arsenic	SW-846 6020A	1	182991063702A	10/31/2018 20:53	Bradle□M Berlot	2
06126	Barium	SW-846 6020A	1	182991063702D	10/31/2018 20:53	Bradle□M Berlot	2
06127	Ber□llium	SW-846 6020A	1	182991063702A	10/31/2018 20:53	Bradle□M Berlot	2
06128	Cadmium	SW-846 6020A	1	182991063702A	10/31/2018 20:53	Bradle□M Berlot	2
06129	Calcium	SW-846 6020A	1	182991063702B	11/13/2018 14:02	Patric□□Engle	2
06131	Chromium	SW-846 6020A	1	182991063702A	10/31/2018 20:53	Bradle□M Berlot	2
06132	Cobalt	SW-846 6020A	1	182991063702A	10/31/2018 20:53	Bradle□M Berlot	2
06133	Copper	SW-846 6020A	1	182991063702A	11/06/2018 01:17	Bradle□M Berlot	2
06134	Iron	SW-846 6020A	1	182991063702A	11/06/2018 01:17	Bradle□M Berlot	2
06135	Lead	SW-846 6020A	1	182991063702A	11/13/2018 14:02	Patric□□Engle	2
06136	Magnesium	SW-846 6020A	1	182991063702A	10/31/2018 20:53	Bradle□M Berlot	2
06137	Manganese	SW-846 6020A	1	182991063702A	10/31/2018 20:53	Bradle□M Berlot	2
06139	Nic□el	SW-846 6020A	1	182991063702A	11/06/2018 01:17	Bradle□M Berlot	2
06140	Potassium	SW-846 6020A	1	182991063702A	11/06/2018 01:17	Bradle□M Berlot	2
06141	Selenium	SW-846 6020A	1	182991063702B	10/31/2018 20:53	Bradle□M Berlot	2
06142	Silver	SW-846 6020A	1	182991063702A	10/31/2018 20:53	Bradle□M Berlot	2
06143	Sodium	SW-846 6020A	1	182991063702A	10/31/2018 20:53	Bradle□M Berlot	2
06145	Thallium	SW-846 6020A	1	182991063702A	11/13/2018 14:02	Patric□□Engle	2
13502	Uranium	SW-846 6020A	1	182991063702A	11/13/2018 14:02	Patric□□Engle	2
06148	Vanadium	SW-846 6020A	1	182991063702A	11/06/2018 01:17	Bradle□M Berlot	2
06149	□inc	SW-846 6020A	1	182991063702A	10/31/2018 20:53	Bradle□M Berlot	2
00159	Mercur□	SW-846 7471B	1	182991063802	10/29/2018 11:51	Damar□Valentin	25
10637	ICP/ICPMS-SW□3050B - U4	SW-846 3050B	1	182991063702	10/29/2018 05:32	Annamaria Kuhns	1
10638	Hg - SW□7471B - U4	SW-846 7471B	1	182991063802	10/29/2018 07:15	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-2011 □ Moisture Calc	1	18299820005B	10/26/2018 13:46	Larr□E Bevins	1

□□This limit was used in the evaluation of the final result

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Matrix QC ma not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations to demonstrate precision and accurac at a batch level a LCS/LCSD was performed unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blan s met acceptable method criteria unless otherwise noted on the Anal sis Report.

Method Blank

Analysis Name	Result	DL**	LOD	LOQ
	mg/kg	mg/kg	mg/kg	mg/kg
Batch number: B183042AA	Sample number(s): 9867761-9867764 9867766			
Acetone	N.D.	0.006	0.016	0.020
Ben ene	N.D.	0.0005	0.002	0.005
Bromodichloromethane	N.D.	0.0004	0.001	0.005
Bromoform	N.D.	0.005	0.008	0.010
Bromomethane	N.D.	0.0007	0.002	0.005
2-Butanone	N.D.	0.001	0.004	0.010
Carbon Disulfide	N.D.	0.0006	0.002	0.005
Carbon Tetrachloride	N.D.	0.0005	0.002	0.005
Chloroben ene	N.D.	0.0005	0.002	0.005
Chloroethane	N.D.	0.001	0.004	0.005
Chloroform	N.D.	0.0006	0.002	0.005
Chloromethane	N.D.	0.0006	0.002	0.005
C clohexane	N.D.	0.0005	0.002	0.005
C clohexanone	N.D.	0.025	0.10	0.25
1 2-Dibromo-3-chloropropane	N.D.	0.0004	0.001	0.005
Dibromochloromethane	N.D.	0.0004	0.001	0.005
1 2-Dibromoethane	N.D.	0.0004	0.001	0.005
1 2-Dichloroben ene	N.D.	0.0005	0.002	0.005
1 3-Dichloroben ene	N.D.	0.0005	0.002	0.005
1 4-Dichloroben ene	N.D.	0.0004	0.001	0.005
Dichlorodifluoromethane	N.D.	0.0006	0.002	0.005
1 1-Dichloroethane	N.D.	0.0005	0.002	0.005
1 2-Dichloroethane	N.D.	0.0006	0.002	0.005
1 1-Dichloroethene	N.D.	0.0005	0.002	0.005
cis-1 2-Dichloroethene	N.D.	0.0005	0.002	0.005
trans-1 2-Dichloroethene	N.D.	0.0005	0.002	0.005
1 2-Dichloropropane	N.D.	0.0005	0.002	0.005
cis-1 3-Dichloropropene	N.D.	0.0004	0.001	0.005
trans-1 3-Dichloropropene	N.D.	0.0003	0.001	0.005
Eth lben ene	N.D.	0.0004	0.001	0.005
Freon 113	N.D.	0.0006	0.002	0.010
2-Hexanone	N.D.	0.001	0.004	0.010
Isoprop lben ene	N.D.	0.0004	0.001	0.005
Meth l Acetate	N.D.	0.001	0.004	0.005
Meth l Tertiar But l Ether	N.D.	0.0005	0.002	0.005
4-Meth l-2-pentanone	N.D.	0.001	0.004	0.010
Meth lc clohexane	N.D.	0.0006	0.002	0.005
Meth lene Chloride	N.D.	0.002	0.004	0.005
St rene	N.D.	0.0003	0.001	0.005

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	mg/kg	mg/kg	mg/kg	mg/kg
1 1 2 2-Tetrachloroethane	N.D.	0.0004	0.001	0.005
Tetrachloroethene	N.D.	0.0005	0.002	0.005
Toluene	N.D.	0.0006	0.002	0.005
1 2 4-Trichloroben ene	N.D.	0.005	0.008	0.010
1 1 1-Trichloroethane	N.D.	0.0006	0.002	0.005
1 1 2-Trichloroethane	N.D.	0.0005	0.002	0.005
Trichloroethene	N.D.	0.0005	0.002	0.005
Trichlorofluoromethane	N.D.	0.0007	0.002	0.005
Vin l Chloride	N.D.	0.0006	0.002	0.005
lene (Total)	N.D.	0.001	0.002	0.005
Batch number: B183101AA	Sample number(s): 9867761 9867766-9867767			
Acetone	N.D.	0.006	0.016	0.020
Ben ene	N.D.	0.0005	0.002	0.005
Bromodichloromethane	N.D.	0.0004	0.001	0.005
Bromoform	N.D.	0.005	0.008	0.010
Bromomethane	N.D.	0.0007	0.002	0.005
2-Butanone	N.D.	0.001	0.004	0.010
Carbon Disulfide	N.D.	0.0006	0.002	0.005
Carbon Tetrachloride	N.D.	0.0005	0.002	0.005
Chloroben ene	N.D.	0.0005	0.002	0.005
Chloroethane	N.D.	0.001	0.004	0.005
Chloroform	N.D.	0.0006	0.002	0.005
Chloromethane	N.D.	0.0006	0.002	0.005
C clohexane	N.D.	0.0005	0.002	0.005
C clohexanone	N.D.	0.025	0.10	0.25
1 2-Dibromo-3-chloropropane	N.D.	0.0004	0.001	0.005
Dibromochloromethane	N.D.	0.0004	0.001	0.005
1 2-Dibromoethane	N.D.	0.0004	0.001	0.005
1 2-Dichloroben ene	N.D.	0.0005	0.002	0.005
1 3-Dichloroben ene	N.D.	0.0005	0.002	0.005
1 4-Dichloroben ene	N.D.	0.0004	0.001	0.005
Dichlorodifluoromethane	N.D.	0.0006	0.002	0.005
1 1-Dichloroethane	N.D.	0.0005	0.002	0.005
1 2-Dichloroethane	N.D.	0.0006	0.002	0.005
1 1-Dichloroethene	N.D.	0.0005	0.002	0.005
cis-1 2-Dichloroethene	N.D.	0.0005	0.002	0.005
trans-1 2-Dichloroethene	N.D.	0.0005	0.002	0.005
1 2-Dichloropropane	N.D.	0.0005	0.002	0.005
cis-1 3-Dichloropropene	N.D.	0.0004	0.001	0.005
trans-1 3-Dichloropropene	N.D.	0.0003	0.001	0.005
Eth lben ene	N.D.	0.0004	0.001	0.005
Freon 113	N.D.	0.0006	0.002	0.010
2-Hexanone	N.D.	0.001	0.004	0.010
Isoprop lben ene	N.D.	0.0004	0.001	0.005

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	mg/kg	mg/kg	mg/kg	mg/kg
Meth l Acetate	N.D.	0.001	0.004	0.005
Meth l Tertiar But l Ether	N.D.	0.0005	0.002	0.005
4-Meth l-2-pentanone	N.D.	0.001	0.004	0.010
Meth lc clohexane	N.D.	0.0006	0.002	0.005
Meth lene Chloride	N.D.	0.002	0.004	0.005
St rene	N.D.	0.0003	0.001	0.005
1 1 2 2-Tetrachloroethane	N.D.	0.0004	0.001	0.005
Tetrachloroethene	N.D.	0.0005	0.002	0.005
Toluene	N.D.	0.0006	0.002	0.005
1 2 4-Trichloroben ene	N.D.	0.005	0.008	0.010
1 1 1-Trichloroethane	N.D.	0.0006	0.002	0.005
1 1 2-Trichloroethane	N.D.	0.0005	0.002	0.005
Trichloroethene	N.D.	0.0005	0.002	0.005
Trichlorofluoromethane	N.D.	0.0007	0.002	0.005
Vin l Chloride	N.D.	0.0006	0.002	0.005
lene (Total)	N.D.	0.001	0.002	0.005
	ug/l	ug/l	ug/l	ug/l
Batch number: H183094AA	Sample number(s): 9867760			
Acetone	N.D.	0.9	2.0	5.0
Ben ene	N.D.	0.05	0.2	0.5
Bromodichloromethane	N.D.	0.05	0.2	0.5
Bromoform	N.D.	0.3	0.5	1.0
Bromomethane	N.D.	0.07	0.2	0.5
2-Butanone	N.D.	0.6	2.0	5.0
Carbon Disulfide	N.D.	0.06	0.2	1.0
Carbon Tetrachloride	N.D.	0.07	0.2	0.5
Chloroben ene	N.D.	0.06	0.2	0.5
Chloroethane	N.D.	0.07	0.2	0.5
Chloroform	N.D.	0.09	0.2	0.5
Chloromethane	N.D.	0.06	0.2	0.5
C clohexane	N.D.	0.05	0.2	0.5
C clohexanone	N.D.	1.8	7.2	25
1 2-Dibromo-3-chloropropane	N.D.	0.1	0.4	0.5
Dibromochloromethane	N.D.	0.07	0.2	0.5
1 2-Dibromoethane	N.D.	0.06	0.2	0.5
1 2-Dichloroben ene	N.D.	0.06	0.2	0.5
1 3-Dichloroben ene	N.D.	0.06	0.2	0.5
1 4-Dichloroben ene	N.D.	0.07	0.2	0.5
Dichlorodifluoromethane	N.D.	0.05	0.2	0.5
1 1-Dichloroethane	N.D.	0.07	0.2	0.5
1 2-Dichloroethane	N.D.	0.05	0.2	0.5
1 1-Dichloroethene	N.D.	0.06	0.2	0.5
cis-1 2-Dichloroethene	N.D.	0.05	0.2	0.5
trans-1 2-Dichloroethene	N.D.	0.06	0.2	0.5

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	ug/l	ug/l	ug/l	ug/l
1 2-Dichloropropane	N.D.	0.06	0.2	0.5
cis-1 3-Dichloropropene	N.D.	0.05	0.2	0.5
trans-1 3-Dichloropropene	N.D.	0.06	0.2	0.5
Eth lben ene	N.D.	0.06	0.2	0.5
Freon 113	N.D.	0.06	0.2	0.5
2-Hexanone	N.D.	0.6	2.0	5.0
Isoprop lben ene	N.D.	0.05	0.2	0.5
Meth l Acetate	N.D.	0.1	0.2	1.0
Meth l Tertiar But l Ether	N.D.	0.05	0.2	0.5
4-Meth l-2-Pentanone	N.D.	0.7	2.0	5.0
Meth lc clohexane	N.D.	0.05	0.2	0.5
Meth lene Chloride	N.D.	0.07	0.2	0.5
St rene	N.D.	0.05	0.2	0.5
1 1 2 2-Tetrachloroethane	N.D.	0.07	0.2	0.5
Tetrachloroethene	N.D.	0.06	0.2	0.5
Toluene	N.D.	0.07	0.2	0.5
1 2 4-Trichloroben ene	N.D.	0.06	0.2	0.5
1 1 1-Trichloroethane	N.D.	0.06	0.2	0.5
1 1 2-Trichloroethane	N.D.	0.06	0.2	0.5
Trichloroethene	N.D.	0.06	0.2	0.5
Trichlorofluoromethane	N.D.	0.05	0.2	0.5
Vin l Chloride	N.D.	0.1	0.2	0.5
lene (Total)	N.D.	0.1	0.4	0.5
	mg/kg	mg/kg	mg/kg	mg/kg
Batch number: 18302SLH026	Sample number(s): 9867761-9867764 9867766-9867767			
Acenaphthene	0.002	0.0007	0.001	0.002
Acenaphth lene	N.D.	0.0003	0.001	0.002
Anthracene	0.0007	0.0007	0.001	0.002
Ben o(a)anthracene	N.D.	0.0007	0.001	0.002
Ben o(a)p rene	N.D.	0.0007	0.001	0.002
Ben o(b)fluoranthene	N.D.	0.0007	0.001	0.002
Ben o(g h i)per lene	N.D.	0.0007	0.001	0.002
Ben o( )fluoranthene	N.D.	0.0007	0.001	0.002
Di-n-but lphthalate	N.D.	0.007	0.013	0.020
Chr sene	N.D.	0.0003	0.001	0.002
Diben (a h)anthracene	N.D.	0.0007	0.001	0.002
1 4-Dioxane	N.D.	0.0007	0.001	0.002
bis(2-Eth lhex l)phthalate	N.D.	0.010	0.020	0.023
Fluoranthene	N.D.	0.0007	0.001	0.002
Fluorene	0.002	0.0007	0.001	0.002
Indeno(1 2 3-cd)p rene	N.D.	0.0007	0.001	0.002
Naphthalene	0.031	0.001	0.003	0.003
Phenanthrene	0.003	0.0007	0.001	0.002
P rene	N.D.	0.0007	0.001	0.002

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	mg/kg	mg/kg	mg/kg	mg/kg
Batch number: 18302SLI026	Sample number(s): 9867761-9867764 9867766-9867767			
Aniline	N.D.	0.17	0.33	0.50
Ben l alcohol	N.D.	0.17	0.33	0.50
4-Bromophen l-phen lether	N.D.	0.020	0.040	0.050
Carba ole	N.D.	0.017	0.033	0.037
4-Chloro-3-meth lphenol	N.D.	0.017	0.033	0.037
4-Chloroaniline	N.D.	0.033	0.067	0.17
bis(2-Chloroethox)methane	N.D.	0.017	0.033	0.037
bis(2-Chloroeth l)ether	N.D.	0.023	0.047	0.050
2-Chloronaphthalene	N.D.	0.007	0.013	0.033
2-Chlorophenol	N.D.	0.017	0.033	0.037
4-Chlorophen l-phen lether	N.D.	0.017	0.033	0.037
2 2 ox bis(1-Chloropropane)	N.D.	0.017	0.033	0.037
Diben ofuran	N.D.	0.017	0.033	0.037
1 2-Dichloroben ene	N.D.	0.020	0.040	0.050
1 3-Dichloroben ene	N.D.	0.017	0.033	0.037
1 4-Dichloroben ene	N.D.	0.017	0.033	0.037
3 3 Dichloroben idine	N.D.	0.10	0.20	0.33
2 4-Dichlorophenol	N.D.	0.017	0.033	0.037
Dieth lphthalate	N.D.	0.067	0.13	0.17
2 4-Dimeth lphenol	N.D.	0.017	0.033	0.037
Dimeth lphthalate	N.D.	0.067	0.13	0.17
4 6-Dinitro-2-meth lphenol	N.D.	0.17	0.33	0.50
2 4-Dinitrophenol	N.D.	0.37	0.73	1.0
2 4-Dinitrotoluene	N.D.	0.067	0.13	0.17
2 6-Dinitrotoluene	N.D.	0.020	0.040	0.050
Hexachloroben ene	N.D.	0.003	0.007	0.017
Hexachlorobutadiene	N.D.	0.020	0.040	0.050
Hexachloroc clopentadiene	N.D.	0.17	0.33	0.50
Hexachloroethane	N.D.	0.033	0.067	0.17
Isophorone	N.D.	0.017	0.033	0.037
2-Meth lnaphthalene	0.012	0.010	0.020	0.033
2-Meth lphenol	N.D.	0.027	0.053	0.067
4-Meth lphenol	N.D.	0.020	0.040	0.050
2-Nitroaniline	N.D.	0.020	0.040	0.050
3-Nitroaniline	N.D.	0.067	0.13	0.17
4-Nitroaniline	N.D.	0.067	0.13	0.17
Nitroben ene	N.D.	0.027	0.053	0.067
2-Nitrophenol	N.D.	0.017	0.033	0.037
4-Nitrophenol	N.D.	0.17	0.33	0.50
N-Nitroso-di-n-prop lamine	N.D.	0.020	0.040	0.050
N-Nitrosodiphen lamine	N.D.	0.017	0.033	0.037
Di-n-oct lphthalate	N.D.	0.067	0.13	0.17
Pentachlorophenol	N.D.	0.037	0.13	0.17
Phenol	N.D.	0.023	0.047	0.050

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	mg/kg	mg/kg	mg/kg	mg/kg
P ridine	N.D.	0.067	0.13	0.17
1 2 4-Trichloroben ene	N.D.	0.017	0.033	0.037
2 4 5-Trichlorophenol	N.D.	0.020	0.040	0.050
2 4 6-Trichlorophenol	N.D.	0.020	0.040	0.050
Batch number: 18317SLB026	Sample number(s): 9867761-9867762 9867766-9867767			
Aniline	N.D.	0.17	0.33	0.50
Ben I alcohol	N.D.	0.17	0.33	0.50
4-Bromophen l-phen lether	N.D.	0.020	0.040	0.050
Carba ole	N.D.	0.017	0.033	0.037
4-Chloro-3-meth lphenol	N.D.	0.017	0.033	0.037
4-Chloroaniline	N.D.	0.033	0.067	0.17
bis(2-Chloroethox)methane	N.D.	0.017	0.033	0.037
bis(2-Chloroeth l)ether	N.D.	0.023	0.047	0.050
2-Chloronaphthalene	N.D.	0.007	0.013	0.033
2-Chlorophenol	N.D.	0.017	0.033	0.037
4-Chlorophen l-phen lether	N.D.	0.017	0.033	0.037
2 2 ox bis(1-Chloropropane)	N.D.	0.017	0.033	0.037
Diben ofuran	N.D.	0.017	0.033	0.037
1 2-Dichloroben ene	N.D.	0.020	0.040	0.050
1 3-Dichloroben ene	N.D.	0.017	0.033	0.037
1 4-Dichloroben ene	N.D.	0.017	0.033	0.037
3 3 Dichloroben idine	N.D.	0.10	0.20	0.33
2 4-Dichlorophenol	N.D.	0.017	0.033	0.037
Dieth lphthalate	N.D.	0.067	0.13	0.17
2 4-Dimeth lphenol	N.D.	0.017	0.033	0.037
Dimeth lphthalate	N.D.	0.067	0.13	0.17
4 6-Dinitro-2-meth lphenol	N.D.	0.17	0.33	0.50
2 4-Dinitrophenol	N.D.	0.37	0.73	1.0
2 4-Dinitrotoluene	N.D.	0.067	0.13	0.17
2 6-Dinitrotoluene	N.D.	0.020	0.040	0.050
Hexachloroben ene	N.D.	0.003	0.007	0.017
Hexachlorobutadiene	N.D.	0.020	0.040	0.050
Hexachloroc clopentadiene	N.D.	0.17	0.33	0.50
Hexachloroethane	N.D.	0.033	0.067	0.17
Isophorone	N.D.	0.017	0.033	0.037
2-Meth lnaphthalene	N.D.	0.010	0.020	0.033
2-Meth lphenol	N.D.	0.027	0.053	0.067
4-Meth lphenol	N.D.	0.020	0.040	0.050
2-Nitroaniline	N.D.	0.020	0.040	0.050
3-Nitroaniline	N.D.	0.067	0.13	0.17
4-Nitroaniline	N.D.	0.067	0.13	0.17
Nitroben ene	N.D.	0.027	0.053	0.067
2-Nitrophenol	N.D.	0.017	0.033	0.037
4-Nitrophenol	N.D.	0.17	0.33	0.50

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	mg/kg	mg/kg	mg/kg	mg/kg
N-Nitroso-di-n-propylamine	N.D.	0.020	0.040	0.050
N-Nitrosodiphenylamine	N.D.	0.017	0.033	0.037
Di-n-octylphthalate	N.D.	0.067	0.13	0.17
Pentachlorophenol	N.D.	0.037	0.13	0.17
Phenol	N.D.	0.023	0.047	0.050
Pyridine	N.D.	0.067	0.13	0.17
1,2,4-Trichlorobenzene	N.D.	0.017	0.033	0.037
2,4,5-Trichlorophenol	N.D.	0.020	0.040	0.050
2,4,6-Trichlorophenol	N.D.	0.020	0.040	0.050
Batch number: 18317SLC026	Sample number(s): 9867761-9867764,9867766-9867767			
Acenaphthene	N.D.	0.0007	0.001	0.002
Acenaphthylene	0.0003 J	0.0003	0.001	0.002
Anthracene	N.D.	0.0007	0.001	0.002
Benzo(a)anthracene	N.D.	0.0007	0.001	0.002
Benzo(a)pyrene	N.D.	0.0007	0.001	0.002
Benzo(b)fluoranthene	N.D.	0.0007	0.001	0.002
Benzo(ghi)perylene	N.D.	0.0007	0.001	0.002
Benzo(k)fluoranthene	N.D.	0.0007	0.001	0.002
Di-n-butylphthalate	N.D.	0.007	0.013	0.020
Chrysene	N.D.	0.0003	0.001	0.002
Dibenz(ah)anthracene	N.D.	0.0007	0.001	0.002
1,4-Dioxane	N.D.	0.0007	0.001	0.002
bis(2-Ethylhexyl)phthalate	0.018 J	0.010	0.020	0.023
Fluoranthene	N.D.	0.0007	0.001	0.002
Fluorene	N.D.	0.0007	0.001	0.002
Indeno(123-cd)pyrene	N.D.	0.0007	0.001	0.002
Naphthalene	N.D.	0.001	0.003	0.003
Phenanthrene	N.D.	0.0007	0.001	0.002
Pyrene	N.D.	0.0007	0.001	0.002
	ug/kg	ug/kg	ug/kg	ug/kg
Batch number: 183030010A	Sample number(s): 9867761-9867764,9867766-9867767			
2,4-D	N.D.	12	24	36
Dalapon	N.D.	44	88	90
2,4-DB	N.D.	9.8	20	21
Dicamba	N.D.	4.0	8.0	12
Dinoseb	N.D.	9.0	18	24
2,4-DP (Dichloroprop)	N.D.	9.0	18	20
MCPA	N.D.	760	1,500	2,500
MCPP (Mecoprop)	N.D.	3,800	7,600	7,700
2,4,5-T	N.D.	0.82	1.6	1.7
2,4,5-TP	N.D.	0.75	1.5	1.7
	mg/kg	mg/kg	mg/kg	mg/kg
Batch number: 183040031A	Sample number(s): 9867761-9867764,9867766-9867767			

J Outside of specification
J+This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016	N.D.	0.0036	0.010	0.017
PCB-1221	N.D.	0.0046	0.010	0.017
PCB-1232	N.D.	0.0080	0.016	0.017
PCB-1242	N.D.	0.0033	0.010	0.017
PCB-1248	N.D.	0.0033	0.010	0.017
PCB-1254	N.D.	0.0033	0.010	0.017
PCB-1260	N.D.	0.0049	0.010	0.017
PCB-1262	N.D.	0.0033	0.010	0.017
PCB-1268	N.D.	0.0033	0.010	0.017
	ug/kg	ug/kg	ug/kg	ug/kg
Batch number: 183020030A	Sample number(s): 9867761-9867764 9867766-9867767			
Aldrin	N.D.	0.17	0.60	0.83
Alpha BHC	N.D.	0.17	0.60	0.83
Beta BHC	N.D.	0.44	0.90	1.0
Gamma BHC - Lindane	N.D.	0.21	0.60	0.83
Alpha Chlordane	N.D.	0.17	0.60	0.83
Chlordane	N.D.	4.0	8.0	17
Gamma Chlordane	N.D.	0.25	0.60	0.83
p p-DDD	N.D.	0.33	1.2	1.7
p p-DDE	N.D.	0.33	1.2	1.7
p p-DDT	N.D.	0.79	1.6	1.7
Delta BHC	N.D.	0.45	0.90	1.0
Dieldrin	N.D.	0.33	1.2	1.7
Endosulfan I	N.D.	0.22	0.60	0.83
Endosulfan II	N.D.	1.1	2.2	2.3
Endosulfan Sulfate	N.D.	0.33	1.2	1.7
Endrin	N.D.	0.68	1.4	1.7
Endrin Aldeh de	N.D.	0.33	1.2	1.7
Endrin Ketone	N.D.	0.60	1.8	2.0
Heptachlor	N.D.	0.31	0.62	0.83
Heptachlor Epoxide	N.D.	0.17	0.60	0.83
Methox chlor	N.D.	1.8	6.5	6.7
Toxaphene	N.D.	14	28	33
	mg/kg	mg/kg	mg/kg	mg/kg
Batch number: 182991063702	Sample number(s): 9867761-9867767			
Thorium	N.D.	8.38	20.0	50.0
Batch number: 182991063702A	Sample number(s): 9867761-9867767			
Aluminum	N.D.	33.4	64.0	80.0
Antimon	N.D.	0.126	0.200	0.400
Arsenic	N.D.	0.134	0.320	0.400
Ber llium	N.D.	0.0228	0.0800	0.100
Cadmium	N.D.	0.0504	0.100	0.200
Chromium	N.D.	0.334	0.640	0.800

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	mg/kg	mg/kg	mg/kg	mg/kg
Cobalt	N.D.	0.0584	0.100	0.200
Copper	N.D.	3.58	6.40	8.00
Iron	N.D.	7.50	16.0	20.0
Lead	N.D.	0.0504	0.150	0.600
Magnesium	N.D.	3.14	10.0	20.0
Manganese	N.D.	0.396	1.00	2.00
Nic el	N.D.	0.340	0.640	0.800
Potassium	N.D.	36.2	64.0	80.0
Silver	N.D.	0.0406	0.0800	0.100
Sodium	N.D.	80.4	144	180
Thallium	N.D.	0.0392	0.0800	0.100
Uranium	N.D.	0.0392	0.100	0.100
Vanadium	N.D.	0.0858	0.160	0.200
inc	N.D.	1.21	2.40	3.00
Batch number: 182991063702B	Sample number(s): 9867761-9867767			
Calcium	N.D.	68.2	112	140
Selenium	N.D.	0.130	0.320	0.400
Batch number: 182991063702D	Sample number(s): 9867761-9867767			
Barium	N.D.	0.386	0.640	0.800
Batch number: 182991063802	Sample number(s): 9867761-9867767			
Mercur	N.D.	0.0312	0.0667	0.133

Analysis Name	Result	DL**	LOD	LOQ
	mg/kg	mg/kg	mg/kg	mg/kg
Batch number: 18299005	Sample number(s): 9867767			
2378-TCDD	N.D.	0.000000133	0.000000300	0.00000100
12378-PeCDD	N.D.	0.000000321	0.00000100	0.00000500
123478-HxCDD	N.D.	0.000000250	0.00000100	0.00000500
123678-HxCDD	N.D.	0.000000250	0.00000100	0.00000500
123789-HxCDD	N.D.	0.000000250	0.00000100	0.00000500
1234678-HpCDD	N.D.	0.000000250	0.00000100	0.00000500
OCDD	N.D.	0.00000138	0.00000300	0.0000100
2378-TCDF	N.D.	0.000000151	0.000000310	0.00000100
12378-PeCDF	N.D.	0.000000250	0.00000100	0.00000500
23478-PeCDF	N.D.	0.000000250	0.00000100	0.00000500
123478-HxCDF	N.D.	0.000000250	0.00000100	0.00000500
123678-HxCDF	N.D.	0.000000250	0.00000100	0.00000500
123789-HxCDF	N.D.	0.000000250	0.00000100	0.00000500
234678-HxCDF	N.D.	0.000000250	0.00000100	0.00000500
1234678-HpCDF	N.D.	0.000000250	0.00000100	0.00000500
1234789-HpCDF	N.D.	0.000000250	0.00000100	0.00000500
OCDF	N.D.	0.000000543	0.00000200	0.0000100
Batch number: 18309016	Sample number(s): 9867761-9867764 9867766			

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	mg/kg	mg/kg	mg/kg	mg/kg
2378-TCDD	N.D.	0.000000133	0.000000300	0.00000100
12378-PeCDD	N.D.	0.000000321	0.00000100	0.00000500
123478-HxCDD	N.D.	0.000000250	0.00000100	0.00000500
123678-HxCDD	N.D.	0.000000250	0.00000100	0.00000500
123789-HxCDD	N.D.	0.000000250	0.00000100	0.00000500
1234678-HpCDD	N.D.	0.000000250	0.00000100	0.00000500
OCDD	N.D.	0.00000138	0.00000300	0.0000100
2378-TCDF	N.D.	0.000000151	0.000000310	0.00000100
2378-TCDF-Conf	N.D.	0.000000151	0.000000310	0.00000100
12378-PeCDF	N.D.	0.000000250	0.00000100	0.00000500
23478-PeCDF	N.D.	0.000000250	0.00000100	0.00000500
123478-HxCDF	N.D.	0.000000250	0.00000100	0.00000500
123678-HxCDF	N.D.	0.000000250	0.00000100	0.00000500
123789-HxCDF	N.D.	0.000000250	0.00000100	0.00000500
234678-HxCDF	N.D.	0.000000250	0.00000100	0.00000500
1234678-HpCDF	N.D.	0.000000250	0.00000100	0.00000500
1234789-HpCDF	N.D.	0.000000250	0.00000100	0.00000500
OCDF	N.D.	0.000000543	0.00000200	0.0000100

LCS/LCSD

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: B183042AA	Sample number(s): 9867761-9867764 9867766								
Acetone	0.150	0.135	0.150	0.132	90	88	36-164	2	20
Ben ene	0.0200	0.0194	0.0200	0.0200	97	100	77-121	3	20
Bromodichloromethane	0.0200	0.0191	0.0200	0.0198	95	99	75-127	3	20
Bromoform	0.0200	0.0169	0.0200	0.0178	84	89	67-132	5	20
Bromomethane	0.0200	0.0173	0.0200	0.0173	86	87	53-143	0	20
2-Butanone	0.150	0.125	0.150	0.127	83	85	51-148	1	20
Carbon Disulfide	0.0200	0.0165	0.0200	0.0169	83	84	63-132	2	20
Carbon Tetrachloride	0.0200	0.0186	0.0200	0.0189	93	94	70-135	2	20
Chloroben ene	0.0200	0.0195	0.0200	0.0203	98	101	79-120	4	20
Chloroethane	0.0200	0.0188	0.0200	0.0185	94	93	59-139	1	20
Chloroform	0.0200	0.0201	0.0200	0.0207	101	103	78-123	3	20
Chloromethane	0.0200	0.0206	0.0200	0.0195	103	97	50-136	6	20
C clohexane	0.0200	0.0186	0.0200	0.0188	93	94	67-131	1	20
C clohexanone	0.500	0.333	0.500	0.331	67	66	30-156	0	20
1 2-Dibromo-3-chloropropane	0.0200	0.0181	0.0200	0.0197	91	99	61-132	9	20
Dibromochloromethane	0.0200	0.0185	0.0200	0.0192	93	96	74-126	4	20
1 2-Dibromoethane	0.0200	0.0198	0.0200	0.0208	99	104	78-122	5	20

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1 2-Dichloroben ene	0.0200	0.0196	0.0200	0.0207	98	103	78-121	5	20
1 3-Dichloroben ene	0.0200	0.0192	0.0200	0.0201	96	100	77-121	5	20
1 4-Dichloroben ene	0.0200	0.0195	0.0200	0.0204	97	102	75-120	5	20
Dichlorodifluoromethane	0.0200	0.0164	0.0200	0.0165	82	82	29-149	0	20
1 1-Dichloroethane	0.0200	0.0203	0.0200	0.0206	101	103	76-125	2	20
1 2-Dichloroethane	0.0200	0.0202	0.0200	0.0213	101	106	73-128	5	20
1 1-Dichloroethene	0.0200	0.0197	0.0200	0.0199	98	100	70-131	1	20
cis-1 2-Dichloroethene	0.0200	0.0209	0.0200	0.0215	104	108	77-123	3	20
trans-1 2-Dichloroethene	0.0200	0.0199	0.0200	0.0200	100	100	74-125	0	20
1 2-Dichloropropane	0.0200	0.0206	0.0200	0.0212	103	106	76-123	3	20
cis-1 3-Dichloropropene	0.0200	0.0193	0.0200	0.0201	96	100	74-126	4	20
trans-1 3-Dichloropropene	0.0200	0.0179	0.0200	0.0190	89	95	71-130	6	20
Eth lben ene	0.0200	0.0192	0.0200	0.0199	96	99	76-122	3	20
Freon 113	0.0200	0.0198	0.0200	0.0200	99	100	66-136	1	20
2-Hexanone	0.100	0.0791	0.100	0.0878	79	88	53-145	10	20
Isoprop lben ene	0.0200	0.0194	0.0200	0.0201	97	100	68-134	3	20
Meth l Acetate	0.0200	0.0216	0.0200	0.0230	108	115	53-144	7	20
Meth l Tertiar But l Ether	0.0200	0.0188	0.0200	0.0200	94	100	73-125	6	20
4-Meth l-2-pentanone	0.100	0.0866	0.100	0.0955	87	95	65-135	10	20
Meth lc clohexane	0.0200	0.0198	0.0200	0.0203	99	102	66-133	3	20
Meth lene Chloride	0.0200	0.0190	0.0200	0.0197	95	98	70-128	3	20
St rene	0.0200	0.0185	0.0200	0.0191	92	96	76-124	4	20
1 1 2 2-Tetrachloroethane	0.0200	0.0196	0.0200	0.0211	98	105	70-124	7	20
Tetrachloroethene	0.0200	0.0165	0.0200	0.0171	83	85	73-128	3	20
Toluene	0.0200	0.0190	0.0200	0.0195	95	98	77-121	3	20
1 2 4-Trichloroben ene	0.0200	0.0192	0.0200	0.0206	96	103	67-129	7	20
1 1 1-Trichloroethane	0.0200	0.0170	0.0200	0.0172	85	86	73-130	1	20
1 1 2-Trichloroethane	0.0200	0.0204	0.0200	0.0219	102	109	78-121	7	20
Trichloroethene	0.0200	0.0192	0.0200	0.0200	96	100	77-123	4	20
Trichlorofluoromethane	0.0200	0.0188	0.0200	0.0188	94	94	62-140	0	20
Vin l Chloride	0.0200	0.0189	0.0200	0.0193	94	97	56-135	2	20
lene (Total)	0.0600	0.0579	0.0600	0.0599	96	100	78-124	3	20
Batch number: B183101AA	Sample number(s): 9867761 9867766-9867767								
Acetone	0.150	0.116	0.150	0.136	78	91	36-164	16	20
Ben ene	0.0200	0.0201	0.0200	0.0203	101	101	77-121	1	20
Bromodichloromethane	0.0200	0.0198	0.0200	0.0196	99	98	75-127	1	20
Bromoform	0.0200	0.0171	0.0200	0.0161	86	81	67-132	6	20
Bromomethane	0.0200	0.0160	0.0200	0.0164	80	82	53-143	3	20
2-Butanone	0.150	0.111	0.150	0.129	74	86	51-148	15	20
Carbon Disulfide	0.0200	0.0143	0.0200	0.0145	72	72	63-132	1	20
Carbon Tetrachloride	0.0200	0.0201	0.0200	0.0201	100	101	70-135	0	20
Chloroben ene	0.0200	0.0196	0.0200	0.0198	98	99	79-120	1	20
Chloroethane	0.0200	0.0176	0.0200	0.0178	88	89	59-139	1	20

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	0.0200	0.0206	0.0200	0.0206	103	103	78-123	0	20
Chloromethane	0.0200	0.0190	0.0200	0.0187	95	94	50-136	1	20
C clohexane	0.0200	0.0209	0.0200	0.0210	105	105	67-131	0	20
C clohexanone	0.500	0.431	0.500	0.490	86	98	30-156	13	20
1 2-Dibromo-3-chloropropane	0.0200	0.0190	0.0200	0.0163	95	81	61-132	15	20
Dibromochloromethane	0.0200	0.0187	0.0200	0.0180	93	90	74-126	4	20
1 2-Dibromoethane	0.0200	0.0199	0.0200	0.0188	99	94	78-122	6	20
1 2-Dichloroben ene	0.0200	0.0194	0.0200	0.0196	97	98	78-121	1	20
1 3-Dichloroben ene	0.0200	0.0191	0.0200	0.0193	95	97	77-121	1	20
1 4-Dichloroben ene	0.0200	0.0193	0.0200	0.0195	97	97	75-120	1	20
Dichlorodifluoromethane	0.0200	0.0177	0.0200	0.0177	88	88	29-149	0	20
1 1-Dichloroethane	0.0200	0.0207	0.0200	0.0210	103	105	76-125	1	20
1 2-Dichloroethane	0.0200	0.0209	0.0200	0.0204	105	102	73-128	2	20
1 1-Dichloroethene	0.0200	0.0215	0.0200	0.0217	107	108	70-131	1	20
cis-1 2-Dichloroethene	0.0200	0.0213	0.0200	0.0215	106	107	77-123	1	20
trans-1 2-Dichloroethene	0.0200	0.0207	0.0200	0.0208	103	104	74-125	1	20
1 2-Dichloropropane	0.0200	0.0210	0.0200	0.0212	105	106	76-123	1	20
cis-1 3-Dichloropropene	0.0200	0.0201	0.0200	0.0199	100	99	74-126	1	20
trans-1 3-Dichloropropene	0.0200	0.0187	0.0200	0.0180	94	90	71-130	4	20
Eth lben ene	0.0200	0.0195	0.0200	0.0197	98	99	76-122	1	20
Freon 113	0.0200	0.0231	0.0200	0.0233	115	116	66-136	1	20
2-Hexanone	0.100	0.0832	0.100	0.0688	83	69	53-145	19	20
Isoprop lben ene	0.0200	0.0196	0.0200	0.0201	98	100	68-134	3	20
Meth l Acetate	0.0200	0.0216	0.0200	0.0181	108	91	53-144	17	20
Meth l Tertiar But l Ether	0.0200	0.0184	0.0200	0.0173	92	87	73-125	6	20
4-Meth l-2-pentanone	0.100	0.0921	0.100	0.0748	92	75	65-135	21	20
Meth lc clohexane	0.0200	0.0222	0.0200	0.0222	111	111	66-133	0	20
Meth lene Chloride	0.0200	0.0196	0.0200	0.0195	98	97	70-128	1	20
St rene	0.0200	0.0186	0.0200	0.0187	93	93	76-124	0	20
1 1 2 2-Tetrachloroethane	0.0200	0.0201	0.0200	0.0181	101	91	70-124	10	20
Tetrachloroethene	0.0200	0.0170	0.0200	0.0171	85	86	73-128	1	20
Toluene	0.0200	0.0193	0.0200	0.0196	96	98	77-121	2	20
1 2 4-Trichloroben ene	0.0200	0.0195	0.0200	0.0192	97	96	67-129	1	20
1 1 1-Trichloroethane	0.0200	0.0177	0.0200	0.0179	89	90	73-130	1	20
1 1 2-Trichloroethane	0.0200	0.0206	0.0200	0.0196	103	98	78-121	5	20
Trichloroethene	0.0200	0.0205	0.0200	0.0204	102	102	77-123	0	20
Trichlorofluoromethane	0.0200	0.0198	0.0200	0.0199	99	99	62-140	0	20
Vin l Chloride	0.0200	0.0186	0.0200	0.0186	93	93	56-135	0	20
lene (Total)	0.0600	0.0589	0.0600	0.0593	98	99	78-124	1	20
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: H183094AA	Sample number(s): 9867760								
Acetone	37.5	29.68			79		39-160		
Ben ene	5.00	4.53			91		79-120		

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Bromodichloromethane	5.00	4.69			94		79-125		
Bromoform	5.00	4.93			99		66-130		
Bromomethane	5.00	3.37			67		53-141		
2-Butanone	37.5	32.99			88		56-143		
Carbon Disulfide	5.00	3.85			77		64-133		
Carbon Tetrachloride	5.00	4.53			91		72-136		
Chloroben ene	5.00	4.91			98		82-118		
Chloroethane	5.00	3.49			70		60-138		
Chloroform	5.00	4.67			93		79-124		
Chloromethane	5.00	3.38			68		50-139		
C clohexane	5.00	3.95			79		71-130		
C clohexanone	125	98.72	125	110.52	79	88	26-147	11	30
1 2-Dibromo-3-chloropropane	5.00	4.31			86		62-128		
Dibromochloromethane	5.00	4.97			99		74-126		
1 2-Dibromoethane	5.00	4.98			100		77-121		
1 2-Dichloroben ene	5.00	4.91			98		80-119		
1 3-Dichloroben ene	5.00	4.94			99		80-119		
1 4-Dichloroben ene	5.00	4.96			99		79-118		
Dichlorodifluoromethane	5.00	2.82			56		32-152		
1 1-Dichloroethane	5.00	4.55			91		77-125		
1 2-Dichloroethane	5.00	4.51			90		73-128		
1 1-Dichloroethene	5.00	4.52			90		71-131		
cis-1 2-Dichloroethene	5.00	4.67			93		78-123		
trans-1 2-Dichloroethene	5.00	4.54			91		75-124		
1 2-Dichloropropane	5.00	4.70			94		78-122		
cis-1 3-Dichloropropene	5.00	4.68			94		75-124		
trans-1 3-Dichloropropene	5.00	5.06			101		73-127		
Eth lben ene	5.00	4.93			99		79-121		
Freon 113	5.00	3.96			79		70-136		
2-Hexanone	25	21.46			86		57-139		
Isoprop lben ene	5.00	4.92			98		72-131		
Meth l Acetate	5.00	3.99			80		56-136		
Meth l Tertiar But l Ether	5.00	4.45			89		71-124		
4-Meth l-2-Pentanone	25	21.42			86		67-130		
Meth lc clohexane	5.00	3.74			75		72-132		
Meth lene Chloride	5.00	4.34			87		74-124		
St rene	5.00	5.04			101		78-123		
1 1 2 2-Tetrachloroethane	5.00	4.96			99		71-121		
Tetrachloroethene	5.00	4.82			96		74-129		
Toluene	5.00	4.89			98		80-121		
1 2 4-Trichloroben ene	5.00	4.54			91		69-130		
1 1 1-Trichloroethane	5.00	4.54			91		74-131		
1 1 2-Trichloroethane	5.00	5.18			104		80-119		
Trichloroethene	5.00	4.52			90		79-123		

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Trichlorofluoromethane	5.00	3.45			69		65-141		
Vin l Chloride	5.00	3.47			69		58-137		
lene (Total)	15	14.9			99		79-121		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 18302SLH026	Sample number(s): 9867761-9867764 9867766-9867767								
Acenaphthene	0.0333	0.0342			103		44-111		
Acenaphth lene	0.0333	0.0277			83		39-116		
Anthracene	0.0333	0.0307			92		50-114		
Ben o(a)anthracene	0.0333	0.0301			90		54-122		
Ben o(a)p rene	0.0333	0.0327			98		50-125		
Ben o(b)fluoranthene	0.0333	0.0339			102		53-128		
Ben o(g h i)per lene	0.0333	0.0324			97		49-127		
Ben o( )fluoranthene	0.0333	0.0326			98		56-123		
Di-n-but lphthalate	0.0333	0.0371			111		68-145		
Chr sene	0.0333	0.0315			94		57-118		
Diben (a h)anthracene	0.0333	0.0320			96		50-129		
1 4-Dioxane	0.0333	0.0228			69		70-130		
bis(2-Eth lhex l)phthalate	0.0333	0.0392			118		67-150		
Fluoranthene	0.0333	0.0311			93		55-119		
Fluorene	0.0333	0.0302			91		47-114		
Indeno(1 2 3-cd)p rene	0.0333	0.0319			96		49-130		
Naphthalene	0.0333	0.0367			110		38-111		
Phenanthrene	0.0333	0.0312			94		49-113		
P rene	0.0333	0.0301			90		55-117		
Batch number: 18302SLI026	Sample number(s): 9867761-9867764 9867766-9867767								
Aniline	1.67	0.843			51		44-113		
Ben l alcohol	1.67	1.42			85		29-122		
4-Bromophen l-phen lether	1.67	1.58			95		46-124		
Carba ole	1.67	1.58			95		50-123		
4-Chloro-3-meth lphenol	1.67	1.53			92		45-122		
4-Chloroaniline	1.67	0.936			56		17-106		
bis(2-Chloroethox)methane	1.67	1.48			89		36-121		
bis(2-Chloroeth l)ether	1.67	1.32			79		31-120		
2-Chloronaphthalene	1.67	1.54			92		41-114		
2-Chlorophenol	1.67	1.41			84		34-121		
4-Chlorophen l-phen lether	1.67	1.54			92		45-121		
2 2 -ox bis(1-Chloropropane)	1.67	1.30			78		68-112		
Diben ofuran	1.67	1.58			95		44-120		
1 2-Dichloroben ene	1.67	1.33			80		33-117		
1 3-Dichloroben ene	1.67	1.35			81		30-115		
1 4-Dichloroben ene	1.67	1.37			82		31-115		
3 3 -Dichloroben idine	1.67	1.23			74		22-121		

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2 4-Dichlorophenol	1.67	1.51			91		40-122		
Dieth lphthalate	1.67	1.60			96		50-124		
2 4-Dimeth lphenol	1.67	1.16			70		30-127		
Dimeth lphthalate	1.67	1.60			96		48-124		
4 6-Dinitro-2-meth lphenol	1.67	1.56			94		29-132		
2 4-Dinitrophenol	3.33	3.39			102		41-136		
2 4-Dinitrotoluene	1.67	1.58			95		48-126		
2 6-Dinitrotoluene	1.67	1.56			94		46-124		
Hexachloroben ene	1.67	1.57			94		45-122		
Hexachlorobutadiene	1.67	1.54			93		32-123		
Hexachloroc clopentadiene	3.33	2.51			75		37-161		
Hexachloroethane	1.67	1.35			81		28-117		
Isophorone	1.67	1.46			88		30-122		
2-Meth lnaphthalene	1.67	1.49			89		38-122		
2-Meth lphenol	1.67	1.40			84		32-122		
4-Meth lphenol	1.67	1.39			83		42-126		
2-Nitroaniline	1.67	1.60			96		44-127		
3-Nitroaniline	1.67	1.50			90		33-119		
4-Nitroaniline	1.67	1.30			78		54-103		
Nitroben ene	1.67	1.43			86		34-122		
2-Nitrophenol	1.67	1.48			89		36-123		
4-Nitrophenol	1.67	1.47			88		30-132		
N-Nitroso-di-n-prop lamine	1.67	1.35			81		36-120		
N-Nitrosodiphen lamine	1.67	1.56			94		38-127		
Di-n-oct lphthalate	1.67	1.65			99		45-140		
Pentachlorophenol	1.67	1.64			99		25-133		
Phenol	1.67	1.42			85		34-121		
P ridine	1.67	0.993			60		57-96		
1 2 4-Trichloroben ene	1.67	1.48			89		34-118		
2 4 5-Trichlorophenol	1.67	1.66			99		41-124		
2 4 6-Trichlorophenol	1.67	1.65			99		39-126		
Batch number: 18317SLB026	Sample number(s): 9867761-9867762 9867766-9867767								
Aniline	1.67	0.873	1.67	0.851	52	51	44-113	3	30
Ben l alcohol	1.67	1.38	1.67	1.42	83	85	29-122	3	20
4-Bromophen l-phen lether	1.67	1.31	1.67	1.24	78	75	46-124	5	20
Carba ole	1.67	1.46	1.67	1.40	88	84	50-123	5	20
4-Chloro-3-meth lphenol	1.67	1.55	1.67	1.62	93	97	45-122	5	20
4-Chloroaniline	1.67	0.391	1.67	0.466	23	28	17-106	18	20
bis(2-Chloroethox)methane	1.67	1.34	1.67	1.36	80	81	36-121	2	20
bis(2-Chloroeth l)ether	1.67	1.23	1.67	1.24	74	74	31-120	1	20
2-Chloronaphthalene	1.67	1.29	1.67	1.28	78	77	41-114	1	20
2-Chlorophenol	1.67	1.50	1.67	1.45	90	87	34-121	4	20
4-Chlorophen l-phen lether	1.67	1.37	1.67	1.35	82	81	45-121	2	20

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2 2-ox bis(1-Chloropropane)	1.67	1.21	1.67	1.21	73	73	68-112	0	30
Diben ofuran	1.67	1.41	1.67	1.35	84	81	44-120	4	20
1 2-Dichloroben ene	1.67	1.23	1.67	1.21	74	73	33-117	2	20
1 3-Dichloroben ene	1.67	1.28	1.67	1.21	77	73	30-115	6	20
1 4-Dichloroben ene	1.67	1.30	1.67	1.19	78	71	31-115	10	20
3 3-Dichloroben idine	1.67	0.994	1.67	0.989	60	59	22-121	1	20
2 4-Dichlorophenol	1.67	1.47	1.67	1.52	88	91	40-122	4	20
Dieth phthalate	1.67	1.40	1.67	1.41	84	84	50-124	0	20
2 4-Dimeth phenol	1.67	1.14	1.67	1.19	68	71	30-127	4	20
Dimeth phthalate	1.67	1.41	1.67	1.34	85	80	48-124	5	20
4 6-Dinitro-2-meth phenol	1.67	1.36	1.67	1.33	82	80	29-132	2	20
2 4-Dinitrophenol	3.33	2.48	3.33	2.55	74	77	41-136	3	30
2 4-Dinitrotoluene	1.67	1.43	1.67	1.46	86	88	48-126	2	20
2 6-Dinitrotoluene	1.67	1.44	1.67	1.47	86	88	46-124	2	20
Hexachloroben ene	1.67	1.36	1.67	1.25	82	75	45-122	9	20
Hexachlorobutadiene	1.67	1.33	1.67	1.38	80	83	32-123	4	20
Hexachloroc clopentadiene	3.33	2.14	3.33	1.99	64	60	37-161	7	30
Hexachloroethane	1.67	1.34	1.67	1.26	81	76	28-117	6	20
Isophorone	1.67	1.29	1.67	1.32	77	79	30-122	3	20
2-Meth naphthalene	1.67	1.36	1.67	1.42	82	85	38-122	4	20
2-Meth phenol	1.67	1.31	1.67	1.33	79	80	32-122	1	20
4-Meth phenol	1.67	1.47	1.67	1.48	88	89	42-126	1	20
2-Nitroaniline	1.67	1.50	1.67	1.52	90	91	44-127	1	20
3-Nitroaniline	1.67	1.27	1.67	1.30	76	78	33-119	2	20
4-Nitroaniline	1.67	1.10	1.67	1.07	66	64	54-103	3	30
Nitroben ene	1.67	1.27	1.67	1.28	76	77	34-122	1	20
2-Nitrophenol	1.67	1.41	1.67	1.41	85	84	36-123	0	20
4-Nitrophenol	1.67	1.46	1.67	1.36	88	81	30-132	7	20
N-Nitroso-di-n-prop lamine	1.67	1.28	1.67	1.28	77	77	36-120	0	20
N-Nitrosodiphen lamine	1.67	1.43	1.67	1.36	86	81	38-127	5	20
Di-n-oct phthalate	1.67	1.46	1.67	1.48	88	89	45-140	1	20
Pentachlorophenol	1.67	1.15	1.67	1.11	69	66	25-133	4	20
Phenol	1.67	1.28	1.67	1.26	77	75	34-121	1	20
P ridine	1.67	0.921	1.67	0.834	55	50	57-96	10	30
1 2 4-Trichloroben ene	1.67	1.35	1.67	1.36	81	82	34-118	1	20
2 4 5-Trichlorophenol	1.67	1.49	1.67	1.41	89	85	41-124	5	20
2 4 6-Trichlorophenol	1.67	1.46	1.67	1.48	87	89	39-126	1	20
Batch number: 18317SLC026	Sample number(s): 9867761-9867764 9867766-9867767								
Acenaphthene	0.0333	0.0300			90		44-111		
Acenaphth lene	0.0333	0.0284			85		39-116		
Anthracene	0.0333	0.0295			88		50-114		
Ben o(a)anthracene	0.0333	0.0308			92		54-122		
Ben o(a)p rene	0.0333	0.0315			95		50-125		

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Ben o(b)fluoranthene	0.0333	0.0305			92		53-128		
Ben o(g h i)per lene	0.0333	0.0296			89		49-127		
Ben o( )fluoranthene	0.0333	0.0308			92		56-123		
Di-n-but phthalate	0.0333	0.0396			119		68-145		
Chr sene	0.0333	0.0291			87		57-118		
Diben (a h)anthracene	0.0333	0.0331			99		50-129		
1 4-Dioxane	0.0333	0.0224			67		70-130		
bis(2-Eth lhex l)phthalate	0.0333	0.0437			131		67-150		
Fluoranthene	0.0333	0.0287			86		55-119		
Fluorene	0.0333	0.0294			88		47-114		
Indeno(1 2 3-cd)p rene	0.0333	0.0325			98		49-130		
Naphthalene	0.0333	0.0287			86		38-111		
Phenanthrene	0.0333	0.0288			87		49-113		
P rene	0.0333	0.0293			88		55-117		
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 183030010A	Sample number(s): 9867761-9867764 9867766-9867767								
2 4-D	83.33	85.1			102		28-144		
Dalapon	208.58	171.65			82		15-115		
2 4-DB	83.75	85.95			103		34-142		
Dicamba	8.33	7.85			94		38-132		
Dinoseb	41.75	7.74			19		10-115		
2 4-DP (Dichloroprop)	83.42	85.36			102		28-155		
MCPA	8366.67	8855.01			106		28-135		
MCPP (Mecoprop)	8352.5	10262.49			123		35-143		
2 4 5-T	8.33	8.94			107		31-138		
2 4 5-TP	8.33	9.21			111		43-129		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 183040031A	Sample number(s): 9867761-9867764 9867766-9867767								
PCB-1016	0.167	0.162			97		47-134		
PCB-1260	0.167	0.181			109		53-140		
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 183020030A	Sample number(s): 9867761-9867764 9867766-9867767								
Aldrin	3.33	2.78			84		45-136		
Alpha BHC	3.40	2.75			81		45-137		
Beta BHC	3.33	3.13			94		50-136		
Gamma BHC - Lindane	3.40	2.87			84		49-135		
Alpha Chlordane	3.33	2.88			86		54-133		
Gamma Chlordane	3.33	2.91			87		53-135		
p p-DDD	6.80	6.23			92		56-139		
p p-DDE	6.67	5.63			84		56-134		
p p-DDT	6.80	6.49			95		50-141		

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Delta BHC	3.33	2.95			89		47-139		
Dieldrin	6.80	5.94			87		56-136		
Endosulfan I	3.40	2.32			68		53-132		
Endosulfan II	6.67	4.99			75		53-134		
Endosulfan Sulfate	6.73	6.27			93		55-136		
Endrin	6.73	6.20			92		57-140		
Endrin Aldeh de	6.73	4.97			74		35-137		
Endrin Ketone	6.67	6.33			95		55-136		
Heptachlor	3.40	2.85			84		47-136		
Heptachlor Epoxide	3.33	2.89			87		52-136		
Methox chlor	33.87	31.37			93		52-143		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 182991063702	Sample number(s): 9867761-9867767								
Thorium	50	52.01			104		92-114		
Batch number: 182991063702A	Sample number(s): 9867761-9867767								
Aluminum	200	198.57			99		78-124		
Antimon	0.600	0.606			101		72-124		
Arsenic	1.00	0.935			94		82-118		
Ber lium	0.400	0.396			99		80-120		
Cadmium	0.500	0.458			92		84-116		
Chromium	5.00	5.09			102		83-119		
Cobalt	25	25.67			103		84-115		
Copper	5.00	5.16			103		84-119		
Iron	100	93.04			93		81-124		
Lead	1.50	1.45			97		84-118		
Magnesium	200	198.38			99		80-123		
Manganese	5.00	5.05			101		85-116		
Nic el	5.00	5.21			104		84-119		
Potassium	1000	972.63			97		85-119		
Silver	5.00	5.24			105		83-118		
Sodium	1000	966.92			97		79-125		
Thallium	0.200	0.174			87		83-118		
Uranium	5.00	4.86			97		80-120		
Vanadium	5.00	5.53			111		82-116		
inc	50	52.74			105		82-119		
Batch number: 182991063702B	Sample number(s): 9867761-9867767								
Calcium	400	392.26			98		86-118		
Selenium	1.00	1.01			101		80-119		
Batch number: 182991063702D	Sample number(s): 9867761-9867767								
Barium	5.00	5.09			102		86-116		

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 182991063802	Sample number(s): 9867761-9867767								
Mercur	0.100	0.0927			93		80-124		
	%	%	%	%					
Batch number: 18299820005B	Sample number(s): 9867761-9867767								
Moisture	89.5	89.39			100		99-101		
Moisture	89.5	89.39			100		99-101		
Moisture Duplicate	89.5	89.39			100		99-101		

Analysis Name	OPR Spike Added mg/kg	OPR Conc mg/kg	OPRD Spike Added mg/kg	OPRD Conc mg/kg	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 18299005	Sample number(s): 9867767								
2378-TCDD	0.0000200	0.0000178			89		70-128		
12378-PeCDD	0.000100	0.000103			103		74-125		
123478-HxCDD	0.000100	0.000108			108		72-131		
123678-HxCDD	0.000100	0.000110			110		74-134		
123789-HxCDD	0.000100	0.000105			105		71-138		
1234678-HpCDD	0.000100	0.000104			104		76-125		
OCDD	0.000200	0.000206			103		73-135		
2378-TCDF	0.0000200	0.0000227			114		75-135		
12378-PeCDF	0.000100	0.000111			111		77-131		
23478-PeCDF	0.000100	0.000109			109		75-128		
123478-HxCDF	0.000100	0.000106			106		77-130		
123678-HxCDF	0.000100	0.000110			110		73-134		
123789-HxCDF	0.000100	0.000107			107		74-135		
234678-HxCDF	0.000100	0.000109			109		74-133		
1234678-HpCDF	0.000100	0.000105			105		73-135		
1234789-HpCDF	0.000100	0.000105			105		72-131		
OCDF	0.000200	0.000210			105		66-144		
Batch number: 18309016	Sample number(s): 9867761-9867764 9867766								
2378-TCDD	0.0000200	0.0000222			111		70-128		
12378-PeCDD	0.000100	0.000109			109		74-125		
123478-HxCDD	0.000100	0.000105			105		72-131		
123678-HxCDD	0.000100	0.000105			105		74-134		
123789-HxCDD	0.000100	0.000103			103		71-138		
1234678-HpCDD	0.000100	0.0000977			98		76-125		
OCDD	0.000200	0.000201			100		73-135		
2378-TCDF	0.0000200	0.0000222			111		75-135		
2378-TCDF-Conf	0.0000200	0.0000222			111		75-135		
12378-PeCDF	0.000100	0.000107			107		77-131		
23478-PeCDF	0.000100	0.000107			107		75-128		
123478-HxCDF	0.000100	0.0000997			100		77-130		

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

OPR/OPRD (continued)

Analysis Name	OPR Spike Added mg/kg	OPR Conc mg/kg	OPRD Spike Added mg/kg	OPRD Conc mg/kg	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
123678-HxCDF	0.000100	0.0000979			98		73-134		
123789-HxCDF	0.000100	0.0000967			97		74-135		
234678-HxCDF	0.000100	0.0000990			99		74-133		
1234678-HpCDF	0.000100	0.000101			101		73-135		
1234789-HpCDF	0.000100	0.0000985			98		72-131		
OCDF	0.000200	0.000188			94		66-144		

MS/MSD

Unspi ed (UNSPK) the sample used in conjunction with the matrix spi e

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: B183042AA	Sample number(s): 9867761-9867764 9867766 UNSPK: 9867762									
Acetone	0.0241	0.154	0.728	0.149	0.365	457	228	36-164	67	20
Ben ene	N.D.	0.0205	0.0179	0.0199	0.0191	87	96	77-121	7	20
Bromodichloromethane	N.D.	0.0205	0.0158	0.0199	0.0171	77	86	75-127	8	20
Bromoform	N.D.	0.0205	0.00991	0.0199	0.0119	48	60	67-132	19	20
Bromomethane	N.D.	0.0205	0.0105	0.0199	0.0116	51	58	53-143	10	20
2-Butanone	N.D.	0.154	0.283	0.149	0.177	184	118	51-148	46	20
Carbon Disulfide	N.D.	0.0205	0.0129	0.0199	0.0139	63	70	63-132	7	20
Carbon Tetrachloride	N.D.	0.0205	0.0199	0.0199	0.0205	97	103	70-135	3	20
Chloroben ene	N.D.	0.0205	0.0147	0.0199	0.0157	72	79	79-120	6	20
Chloroethane	N.D.	0.0205	0.0193	0.0199	0.0157	94	79	59-139	20	20
Chloroform	N.D.	0.0205	0.0202	0.0199	0.0218	98	110	78-123	8	20
Chloromethane	N.D.	0.0205	0.0205	0.0199	0.0211	100	106	50-136	3	20
C clohexane	N.D.	0.0205	0.0196	0.0199	0.0208	96	104	67-131	6	20
C clohexanone	N.D.	0.513	0.419	0.498	0.434	82	87	30-156	4	20
1 2-Dibromo-3-chloropropane	N.D.	0.0205	0.0110	0.0199	0.0171	53	86	61-132	44	20
Dibromochloromethane	N.D.	0.0205	0.0161	0.0199	0.0180	78	90	74-126	11	20
1 2-Dibromoethane	N.D.	0.0205	0.0155	0.0199	0.0178	76	89	78-122	13	20
1 2-Dichloroben ene	N.D.	0.0205	0.0132	0.0199	0.0152	64	76	78-121	14	20
1 3-Dichloroben ene	N.D.	0.0205	0.0141	0.0199	0.0154	69	77	77-121	8	20
1 4-Dichloroben ene	N.D.	0.0205	0.0139	0.0199	0.0150	68	76	75-120	8	20
Dichlorodifluoromethane	N.D.	0.0205	0.0221	0.0199	0.0218	108	109	29-149	2	20
1 1-Dichloroethane	N.D.	0.0205	0.0221	0.0199	0.0233	108	117	76-125	5	20
1 2-Dichloroethane	N.D.	0.0205	0.0178	0.0199	0.0201	87	101	73-128	12	20
1 1-Dichloroethene	N.D.	0.0205	0.0227	0.0199	0.0229	111	115	70-131	1	20
cis-1 2-Dichloroethene	N.D.	0.0205	0.0171	0.0199	0.0191	83	96	77-123	12	20
trans-1 2-Dichloroethene	N.D.	0.0205	0.0163	0.0199	0.0177	80	89	74-125	8	20
1 2-Dichloropropane	N.D.	0.0205	0.0193	0.0199	0.0207	94	104	76-123	7	20

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

MS/MSD (continued)

Unspiked (UNSPK) : the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
cis-1,3-Dichloropropene	N.D.	0.0205	0.00845	0.0199	0.0117	41*	59*	74-126	32*	20
trans-1,3-Dichloropropene	N.D.	0.0205	0.0111	0.0199	0.0135	54*	68*	71-130	20	20
Ethylbenzene	N.D.	0.0205	0.0167	0.0199	0.0176	81	88	76-122	5	20
Freon 113	N.D.	0.0205	0.0284	0.0199	0.0283	138*	142*	66-136	0	20
2-Hexanone	N.D.	0.103	0.0404	0.0996	0.0690	39*	69	53-145	52*	20
Isopropylbenzene	N.D.	0.0205	0.0158	0.0199	0.0155	77	78	68-134	2	20
Methyl Acetate	N.D.	0.0205	0.0206	0.0199	0.0199	100	100	53-144	3	20
Methyl Tertiary Butyl Ether	N.D.	0.0205	0.0201	0.0199	0.0219	98	110	73-125	9	20
4-Methyl-2-pentanone	N.D.	0.103	0.0588	0.0996	0.0782	57*	79	65-135	28*	20
Methylcyclohexane	N.D.	0.0205	0.0130	0.0199	0.0144	63*	72	66-133	11	20
Methylene Chloride	N.D.	0.0205	0.0192	0.0199	0.0208	94	105	70-128	8	20
Styrene	N.D.	0.0205	0.00970	0.0199	0.0105	47*	53*	76-124	8	20
1,1,2,2-Tetrachloroethane	N.D.	0.0205	0.0257	0.0199	0.0305	125*	153*	70-124	17	20
Tetrachloroethene	N.D.	0.0205	0.0157	0.0199	0.0163	76	82	73-128	4	20
Toluene	N.D.	0.0205	0.0208	0.0199	0.0212	101	106	77-121	2	20
1,2,4-Trichlorobenzene	N.D.	0.0205	N.D.	0.0199	0.00593	0*	30*	67-129	200*	20
1,1,1-Trichloroethane	N.D.	0.0205	0.0188	0.0199	0.0195	92	98	73-130	3	20
1,1,2-Trichloroethane	N.D.	0.0205	0.0209	0.0199	0.0234	102	118	78-121	12	20
Trichloroethene	N.D.	0.0205	0.0151	0.0199	0.0162	74*	81	77-123	7	20
Trichlorofluoromethane	N.D.	0.0205	0.0252	0.0199	0.0238	123	120	62-140	6	20
Vinyl Chloride	N.D.	0.0205	0.0203	0.0199	0.0197	99	99	56-135	3	20
Xylene (Total)	N.D.	0.0616	0.0470	0.0598	0.0503	76*	84	78-124	7	20
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 18302SLH026	Sample number(s): 9867761-9867764,9867766-9867767 UNSPK: 9867762									
Acenaphthene	0.0104	0.0332	0.0326	0.0330	0.0377	67	83	44-111	15	20
Acenaphthylene	0.0121	0.0332	0.0285	0.0330	0.0274	49	47	39-116	4	20
Anthracene	0.0299	0.0332	0.0426	0.0330	0.0731	38*	131*	50-114	53*	20
Benzo(a)anthracene	0.138	0.0332	0.151	0.0330	0.208	38 (2)	211 (2)	54-122	32*	20
Benzo(a)pyrene	0.160	0.0332	0.165	0.0330	0.211	13 (2)	153 (2)	50-125	25*	20
Benzo(b)fluoranthene	0.364	0.0332	0.382	0.0330	0.539	56 (2)	530 (2)	53-128	34*	20
Benzo(ghi)perylene	0.0728	0.0332	0.0720	0.0330	0.0883	-2*	47*	49-127	20	20
Benzo(k)fluoranthene	0.154	0.0332	0.183	0.0330	0.251	86 (2)	294 (2)	56-123	31*	20
Di-n-butylphthalate	4.47	0.0332	1.93	0.0330	2.56	-7623 (2)	-5771 (2)	68-145	28*	20
Chrysene	0.216	0.0332	0.197	0.0330	0.306	-58 (2)	271 (2)	57-118	43*	20
Dibenz(ah)anthracene	0.0252	0.0332	0.0398	0.0330	0.0458	44*	62	50-129	14	20
1,4-Dioxane	0.00710	0.0332	0.0279	0.0330	0.0384	63*	95	70-130	32*	30
bis(2-Ethylhexyl)phthalate	0.195	0.0332	0.345	0.0330	0.257	453 (2)	190 (2)	67-150	29*	20
Fluoranthene	0.297	0.0332	0.265	0.0330	0.493	-96 (2)	593 (2)	55-119	60*	20
Fluorene	0.0123	0.0332	0.0353	0.0330	0.0397	69	83	47-114	12	20
Indeno(1,2,3-cd)pyrene	0.0756	0.0332	0.0773	0.0330	0.100	5*	74	49-130	26*	20
Naphthalene	0.202	0.0332	0.235	0.0330	0.371	98 (2)	510 (2)	38-111	45*	20
Phenanthrene	0.166	0.0332	0.156	0.0330	0.359	-31 (2)	582 (2)	49-113	79*	20

* Outside of specification
+This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

MS/MSD (continued)

Unspi ed (UNSPK) the sample used in conjunction with the matrix spi e

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
P rene	0.272	0.0332	0.256	0.0330	0.403	-48 (2)	396 (2)	55-117	45	20
Batch number: 18302SLI026	Sample number(s): 9867761-9867764 9867766-9867767 UNSPK: 9867762									
Aniline	N.D.	1.65	N.D.	1.65	N.D.	0	0	44-113	0	20
Ben l alcohol	N.D.	1.65	1.52	1.65	1.45	92	88	29-122	5	20
4-Bromophen l-phen lether	N.D.	1.65	1.48	1.65	1.47	90	89	46-124	0	20
Carba ole	0.0259	1.65	1.35	1.65	1.27	80	76	50-123	5	20
4-Chloro-3-meth lphenol	N.D.	1.65	1.31	1.65	1.30	79	79	45-122	0	20
4-Chloroaniline	N.D.	1.65	N.D.	1.65	N.D.	0	0	17-106	0	20
bis(2-Chloroethox)methane	N.D.	1.65	1.34	1.65	1.30	81	79	36-121	3	20
bis(2-Chloroeth l)ether	N.D.	1.65	1.35	1.65	1.28	82	78	31-120	6	20
2-Chloronaphthalene	N.D.	1.65	1.23	1.65	1.69	75	102	41-114	31	20
2-Chlorophenol	N.D.	1.65	1.41	1.65	1.35	85	82	34-121	4	20
4-Chlorophen l-phen lether	N.D.	1.65	1.27	1.65	1.35	77	82	45-121	6	20
2 2 ox bis(1-Chloropropane)	N.D.	1.65	1.32	1.65	1.25	79	75	68-112	6	20
Diben ofuran	0.0264	1.65	1.37	1.65	1.38	82	82	44-120	0	20
1 2-Dichloroben ene	N.D.	1.65	1.38	1.65	1.31	83	78	33-117	5	20
1 3-Dichloroben ene	N.D.	1.65	1.35	1.65	1.28	82	78	30-115	5	20
1 4-Dichloroben ene	0.0508	1.65	1.46	1.65	1.36	86	79	31-115	8	20
3 3 Dichloroben idine	N.D.	1.65	N.D.	1.65	N.D.	0	0	22-121	0	20
2 4-Dichlorophenol	N.D.	1.65	1.32	1.65	1.38	80	84	40-122	4	20
Dieth lphthalate	N.D.	1.65	1.32	1.65	1.38	80	84	50-124	5	20
2 4-Dimeth lphenol	N.D.	1.65	0.668	1.65	0.767	41	47	30-127	14	20
Dimeth lphthalate	N.D.	1.65	1.35	1.65	1.39	82	84	48-124	3	20
4 6-Dinitro-2-meth lphenol	N.D.	1.65	1.28	1.65	1.36	78	82	29-132	6	20
2 4-Dinitrophenol	N.D.	3.30	2.31	3.30	2.50	70	76	41-136	8	20
2 4-Dinitrotoluene	N.D.	1.65	1.26	1.65	1.31	74	77	48-126	4	20
2 6-Dinitrotoluene	N.D.	1.65	1.27	1.65	1.32	76	80	46-124	4	20
Hexachloroben ene	N.D.	1.65	1.56	1.65	1.48	94	90	45-122	5	20
Hexachlorobutadiene	N.D.	1.65	1.51	1.65	1.44	92	88	32-123	5	20
Hexachloroc clopentadiene	N.D.	3.30	N.D.	3.30	N.D.	0	0	37-161	0	20
Hexachloroethane	N.D.	1.65	0.295	1.65	0.755	18	46	28-117	88	20
Isophorone	N.D.	1.65	1.36	1.65	1.32	82	79	30-122	3	20
2-Meth lnaphthalene	0.0661	1.65	1.45	1.65	1.41	84	81	38-122	3	20
2-Meth lphenol	N.D.	1.65	1.34	1.65	1.34	81	81	32-122	0	20
4-Meth lphenol	N.D.	1.65	1.24	1.65	1.26	74	76	42-126	2	20
2-Nitroaniline	N.D.	1.65	1.05	1.65	1.33	64	81	44-127	24	20
3-Nitroaniline	N.D.	1.65	N.D.	1.65	N.D.	0	0	33-119	0	20
4-Nitroaniline	N.D.	1.65	N.D.	1.65	N.D.	0	0	54-103	0	20
Nitroben ene	N.D.	1.65	1.31	1.65	1.29	78	78	34-122	1	20
2-Nitrophenol	N.D.	1.65	1.37	1.65	1.33	83	81	36-123	3	20
4-Nitrophenol	N.D.	1.65	1.22	1.65	1.22	74	74	30-132	0	20
N-Nitroso-di-n-prop lamine	N.D.	1.65	1.41	1.65	1.34	86	81	36-120	5	20

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

MS/MSD (continued)

Unspiked (UNSPK) : the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
N-Nitrosodiphenylamine	N.D.	1.65	1.18	1.65	1.39	71	84	38-127	16	20
Di-n-octylphthalate	N.D.	1.65	1.57	1.65	1.42	95	86	45-140	10	20
Pentachlorophenol	N.D.	1.65	1.68	1.65	1.60	102	97	25-133	5	20
Phenol	N.D.	1.65	1.37	1.65	1.30	83	79	34-121	5	20
Pyridine	N.D.	1.65	0.798	1.65	0.770	48*	47*	57-96	4	20
1,2,4-Trichlorobenzene	N.D.	1.65	1.38	1.65	1.35	84	82	34-118	2	20
2,4,5-Trichlorophenol	N.D.	1.65	1.40	1.65	1.43	85	87	41-124	3	20
2,4,6-Trichlorophenol	N.D.	1.65	1.42	1.65	1.47	86	89	39-126	4	20
Batch number: 18317SLC026	Sample number(s): 9867761-9867764,9867766-9867767 UNSPK: 9867762									
Acenaphthene	0.00609	0.0495	0.0501	0.0495	0.0531	89	95	44-111	6	20
Acenaphthylene	0.0154	0.0495	0.0575	0.0495	0.0528	85	76	39-116	9	20
Anthracene	0.0352	0.0495	0.115	0.0495	0.0929	162*	117*	50-114	22*	20
Benzo(a)anthracene	0.155	0.0495	0.255	0.0495	0.271	203*	234*	54-122	6	20
Benzo(a)pyrene	0.160	0.0495	0.260	0.0495	0.261	202*	203*	50-125	0	20
Benzo(b)fluoranthene	0.291	0.0495	0.492	0.0495	0.455	407 (2)	332 (2)	53-128	8	20
Benzo(ghi)perylene	0.0869	0.0495	0.109	0.0495	0.117	45*	61	49-127	7	20
Benzo(k)fluoranthene	0.116	0.0495	0.228	0.0495	0.196	228*	163*	56-123	15	20
Di-n-butylphthalate	2.35	0.0495	5.07	0.0495	1.86	5490 (2)	-997 (2)	68-145	93*	20
Chrysene	0.194	0.0495	0.300	0.0495	0.309	212*	231*	57-118	3	20
Dibenz(a,h)anthracene	0.0310	0.0495	0.0647	0.0495	0.0684	68	75	50-129	5	20
1,4-Dioxane	0.00359	0.0495	0.0336	0.0495	0.0426	61*	79	70-130	24	30
bis(2-Ethylhexyl)phthalate	0.337	0.0495	0.398	0.0495	0.264	122 (2)	-146 (2)	67-150	40*	20
Fluoranthene	0.278	0.0495	0.473	0.0495	0.434	395 (2)	315 (2)	55-119	9	20
Fluorene	0.00963	0.0495	0.0562	0.0495	0.0458	94	73	47-114	21*	20
Indeno(1,2,3-cd)pyrene	0.0955	0.0495	0.129	0.0495	0.137	68	85	49-130	6	20
Naphthalene	0.166	0.0495	0.214	0.0495	0.296	96	261*	38-111	32*	20
Phenanthrene	0.153	0.0495	0.281	0.0495	0.277	258*	250*	49-113	1	20
Pyrene	0.249	0.0495	0.418	0.0495	0.437	342 (2)	379 (2)	55-117	4	20
	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 183030010A	Sample number(s): 9867761-9867764,9867766-9867767 UNSPK: 9867762									
2,4-D	N.D.	82.26	91.14	82.78	95.62	111	116	28-144	5	30
Dalapon	N.D.	205.91	N.D.	207.2	N.D.	0*	0*	15-115	0	30
2,4-DB	N.D.	82.68	94.88	83.2	93.95	115	113	34-142	1	30
Dicamba	N.D.	8.23	N.D.	8.28	N.D.	0*	0*	38-132	0	30
Dinoseb	N.D.	41.21	N.D.	41.47	N.D.	0*	0*	10-115	0	30
2,4-DP (Dichloroprop)	N.D.	82.35	99.33	82.86	100.41	121	121	28-155	1	30
MCPA	N.D.	8259.3	N.D.	8311.26	N.D.	0*	0*	28-135	0	30
MCPP (Mecoprop)	N.D.	8245.31	N.D.	8297.19	N.D.	0*	0*	35-143	0	30
2,4,5-T	N.D.	8.23	9.72	8.28	10.03	118	121	31-138	3	30
2,4,5-TP	N.D.	8.23	8.83	8.28	8.81	107	106	43-129	0	30

* Outside of specification
+This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

MS/MSD (continued)

Unspi ed (UNSPK) the sample used in conjunction with the matrix spi e

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183040031A	Sample number(s): 9867761-9867764 9867766-9867767 UNSPK: 9867762									
PCB-1016	N.D.	0.166	0.164	0.166	0.165	99	100	47-134	0	30
PCB-1260	0.146	0.165	0.252	0.166	0.242	64	58	53-140	4	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 183020030A	Sample number(s): 9867761-9867764 9867766-9867767 UNSPK: 9867762									
Aldrin	N.D.	3.30	2.37	3.29	2.34	72	71	45-136	1	30
Alpha BHC	N.D.	3.37	N.D.	3.36	2.52	0	75	45-137	200	30
Beta BHC	N.D.	3.30	8.42	3.29	5.60	255	170	50-136	40	30
Gamma BHC - Lindane	N.D.	3.37	1.61	3.36	1.54	48	46	49-135	4	30
Alpha Chlordane	N.D.	3.30	2.82	3.29	2.88	85	88	54-133	2	30
Gamma Chlordane	N.D.	3.30	3.34	3.29	N.D.	101	0	53-135	200	30
p p-DDD	6.54	6.73	10.11	6.71	9.78	53	48	56-139	3	30
p p-DDE	9.94	6.60	14.13	6.58	15.04	63	78	56-134	6	30
p p-DDT	17.29	6.73	13.47	6.71	19.24	-56	29	50-141	35	30
Delta BHC	N.D.	3.30	N.D.	3.29	N.D.	0	0	47-139	0	30
Dieldrin	N.D.	6.73	6.62	6.71	4.46	98	66	56-136	39	30
Endosulfan I	N.D.	3.37	2.49	3.36	2.51	74	75	53-132	1	30
Endosulfan II	N.D.	6.60	N.D.	6.58	N.D.	0	0	53-134	0	30
Endosulfan Sulfate	N.D.	6.67	5.14	6.64	5.38	77	81	55-136	4	30
Endrin	N.D.	6.67	6.01	6.64	6.06	90	91	57-140	1	30
Endrin Aldeh de	N.D.	6.67	6.63	6.64	3.99	99	60	35-137	50	30
Endrin Ketone	N.D.	6.60	8.57	6.58	8.27	130	126	55-136	4	30
Heptachlor	N.D.	3.37	2.43	3.36	3.02	72	90	47-136	21	30
Heptachlor Epoxide	N.D.	3.30	2.86	3.29	3.41	87	104	52-136	18	30
Methox chlor	N.D.	33.54	24.38	33.42	29.28	73	88	52-143	18	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 182991063702	Sample number(s): 9867761-9867767 UNSPK: 9867762									
Thorium	8.52	45.05	49.78	37.59	45.79	92	99	75-125	8	20
Batch number: 182991063702A	Sample number(s): 9867761-9867767 UNSPK: 9867762									
Aluminum	4369.83	360.36	5496.52	300.75	5064.81	313 (2)	231 (2)	78-124	8	20
Antimon	7.53	1.08	7.38	0.902	7.26	-13 (2)	-29 (2)	72-124	2	20
Arsenic	11.44	1.80	13.05	1.50	13.67	90 (2)	148 (2)	82-118	5	20
Ber llium	0.345	0.721	1.06	0.602	0.933	98	98	80-120	12	20
Cadmium	3.60	0.901	4.16	0.752	3.74	61 (2)	19 (2)	84-116	10	20
Chromium	45.71	9.01	52.45	7.52	50.47	75 (2)	63 (2)	83-119	4	20
Cobalt	10.15	45.05	55.05	37.59	50.3	100	107	84-115	9	20
Copper	506.61	9.01	1173.27	7.52	456.42	7400 (2)	-668 (2)	84-119	88	20
Iron	33138.8	180.18	29781.64	150.38	42382.36	-1863 (2)	6147 (2)	81-124	35	20
Lead	594.69	2.70	566.3	2.26	547.97	-1050 (2)	-2072 (2)	84-118	3	20
Magnesium	1063.16	360.36	1447.3	300.75	1715.45	107	217	80-123	17	20

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

MS/MSD (continued)

Unspi ed (UNSPK) the sample used in conjunction with the matrix spi e

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Manganese	259.46	9.01	264.73	7.52	621.33	58 (2)	4813 (2)	85-116	80	20
Nic el	54.79	9.01	60.79	7.52	58.08	67 (2)	44 (2)	84-119	5	20
Potassium	629.29	1801.8	2468.89	1503.76	2078.21	102	96	85-119	17	20
Silver	6.46	9.01	13.93	7.52	14.59	83	108	83-118	5	20
Sodium	292.47	1801.8	2019.48	1503.76	1811.27	96	101	79-125	11	20
Thallium	0.0820	0.360	0.348	0.301	0.277	74	65	83-118	23	20
Uranium	0.409	4.50	4.32	3.76	3.71	87	88	75-125	15	20
Vanadium	21.69	9.01	28.68	7.52	28.23	78	87	82-116	2	20
inc	745.12	45.05	765.34	37.59	775.29	45 (2)	80 (2)	82-119	1	20
Batch number: 182991063702B	Sample number(s): 9867761-9867767 UNSPK: 9867762									
Calcium	4395.25	720.72	4253.58	601.5	4885.05	-20 (2)	81 (2)	86-118	14	20
Selenium	0.903	1.80	2.54	1.50	2.21	91	87	80-119	14	20
Batch number: 182991063702D	Sample number(s): 9867761-9867767 UNSPK: 9867762									
Barium	540.46	9.01	374.46	7.52	342.51	-1843 (2)	-2633 (2)	86-116	9	20
Batch number: 182991063802	Sample number(s): 9867761-9867767 UNSPK: 9867762									
Mercur	1.89	0.156	1.70	0.164	2.27	-126 (2)	227 (2)	80-124	29	20

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 18309016	Sample number(s): 9867761-9867764 9867766 UNSPK: 9867762									
2378-TCDD	0.00000176	0.0000198	0.0000243	0.0000196	0.0000230	114	108	70-128	6	20
12378-PeCDD	0.0000126	0.0000990	0.000128	0.0000980	0.000125	117	115	74-125	3	20
123478-HxCDD	0.0000138	0.0000990	0.000124	0.0000980	0.000123	111	111	72-131	1	20
123678-HxCDD	0.0000825	0.0000990	0.000194	0.0000980	0.000189	113	109	74-134	3	20
123789-HxCDD	0.0000317	0.0000990	0.000145	0.0000980	0.000141	114	112	71-138	3	20
1234678-HpCDD	0.00127	0.0000990	0.00143	0.0000980	0.00140	153 (2)	127 (2)	76-125	2	20
OCDD	0.00773	0.000198	0.0109	0.000196	0.0111	1600 (2)	1742 (2)	73-135	2	20
2378-TCDF	0.0000104	0.0000198	0.0000333	0.0000196	0.0000314	115	107	75-135	6	20
2378-TCDF-Conf	0.0000104	0.0000198	0.0000333	0.0000196	0.0000314	115	107	75-135	6	20
12378-PeCDF	0.0000124	0.0000990	0.000123	0.0000980	0.000127	111	117	77-131	4	20
23478-PeCDF	0.0000236	0.0000990	0.000138	0.0000980	0.000128	115	106	75-128	7	20
123478-HxCDF	0.0000260	0.0000990	0.000139	0.0000980	0.000137	114	113	77-130	2	20
123678-HxCDF	0.0000277	0.0000990	0.000130	0.0000980	0.000133	104	108	73-134	2	20
123789-HxCDF	0.00000966	0.0000990	0.000119	0.0000980	0.000113	111	106	74-135	5	20
234678-HxCDF	0.0000284	0.0000990	0.000139	0.0000980	0.000131	112	104	74-133	6	20

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

MS/MSD (continued)

Unspiked (UNSPK) the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
1234678-HpCDF	0.000456	0.0000990	0.000557	0.0000980	0.000543	103 (2)	89 (2)	73-135	3	20
1234789-HpCDF	0.0000153	0.0000990	0.000122	0.0000980	0.000116	108	103	72-131	6	20
OCDF	0.000346	0.000198	0.000605	0.000196	0.000583	131	121	66-144	4	20

Laboratory Duplicate

Background (BKG) the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/kg	DUP Conc mg/kg	DUP RPD	DUP RPD Max
Batch number: 182991063702	Sample number(s): 9867761-9867767 BKG: 9867762			
Thorium	8.52	10.23	18 (1)	20
Batch number: 182991063702A	Sample number(s): 9867761-9867767 BKG: 9867762			
Aluminum	4369.83	3191.11	31	20
Antimony	7.53	6.19	19	20
Arsenic	11.44	10.65	7	20
Beryllium	0.345	0.287	18 (1)	20
Cadmium	3.60	2.66	30	20
Chromium	45.71	33.5	31	20
Cobalt	10.15	8.21	21	20
Copper	506.61	403.44	23	20
Iron	33138.8	33209.62	0	20
Lead	594.69	570.39	4	20
Magnesium	1063.16	783.99	30	20
Manganese	259.46	208.72	22	20
Nickel	54.79	41.97	27	20
Potassium	629.29	437.87	36	20
Silver	6.46	4.89	28	20
Sodium	292.47	191.4	42 (1)	20
Thallium	0.0820	0.0639	25 (1)	20
Uranium	0.409	0.396	3	20
Vanadium	21.69	20.57	5	20
Zinc	745.12	606.88	20	20
Batch number: 182991063702B	Sample number(s): 9867761-9867767 BKG: 9867762			
Calcium	4395.25	2792.59	45	20
Selenium	0.903	0.695	26 (1)	20
Batch number: 182991063702D	Sample number(s): 9867761-9867767 BKG: 9867762			
Barium	540.46	349.84	43	20

Outside of specification
This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Laboratory Duplicate (continued)

Background (BKG) - the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/kg	mg/kg		
Batch number: 182991063802	Sample number(s): 9867761-9867767 BKG: 9867762			
Mercury	1.89	1.82	4 (1)	20
	%	%		
Batch number: 18299820005B	Sample number(s): 9867761-9867767 BKG: 9867762			
Moisture	26.89	29.18	8	5
Moisture	26.89	29.18	8	5
Moisture Duplicate	26.89	29.18	8	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- Solid by 8260C
Batch number: B183042AA

	Dibromofluoromethane		1,2-Dichloroethane-d4		Toluene-d8		4-Bromofluorobenzene	
	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)
9867761	106	0.005	104	0.005	128	0.005	64	0.005
9867762	107	0.005	105	0.005	133	0.005	64	0.005
9867763	103	0.005	103	0.005	132	0.005	71	0.005
9867764	104	0.005	105	0.005	130	0.005	74	0.005
9867766	103	0.005	102	0.005	124	0.005	69	0.005
Blank	100	0.005	106	0.005	98	0.005	95	0.005
LCS	101	0.005	107	0.005	99	0.005	99	0.005
LCSD	101	0.005	107	0.005	100	0.005	100	0.005
MS	103	0.005	103	0.005	132	0.005	71	0.005
MSD	104	0.005	105	0.005	130	0.005	74	0.005
Limits:	78-119		71-136		85-116		79-119	

Analysis Name: VOCs- Solid by 8260C
Batch number: B183101AA

	Dibromofluoromethane		1,2-Dichloroethane-d4		Toluene-d8		4-Bromofluorobenzene	
	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)
9867761RE	105	0.005	104	0.005	125	0.005	66	0.005
9867766RE	103	0.004	102	0.004	129	0.004	69	0.004
9867767	113	0.006	115	0.006	136	0.006	61	0.006

- Outside of specification
This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Anal sis Report.

Anal sis Name: VOCs- Solid b 8260C
Batch number: B183101AA

	Dibromofluoromethane %Rec	LOD (mg/kg)	1,2-Dichloroethane-d4 %Rec	LOD (mg/kg)	Toluene-d8 %Rec	LOD (mg/kg)	4-Bromofluorobenzene %Rec	LOD (mg/kg)
Blan	102	0.005	106	0.005	96	0.005	94	0.005
LCS	103	0.005	109	0.005	99	0.005	100	0.005
LCSD	102	0.005	105	0.005	99	0.005	100	0.005
Limits:	78-119		71-136		85-116		79-119	

Anal sis Name: VOCs- 25ml Water b 8260C
Batch number: H183094AA

	Dibromofluoromethane %Rec	LOD (ug/l)	1,2-Dichloroethane-d4 %Rec	LOD (ug/l)	Toluene-d8 %Rec	LOD (ug/l)	4-Bromofluorobenzene %Rec	LOD (ug/l)
9867760	90	0.5	104	0.5	104	0.5	97	0.5
Blan	97	0.5	103	0.5	103	0.5	98	0.5
LCS	96	0.5	102	0.5	104	0.5	100	0.5
LCSD	96	0.5	104	0.5	104	0.5	99	0.5
Limits:	80-119		81-118		89-112		85-114	

Anal sis Name: SIM SVOAs 8270D (microwave)
Batch number: 18302SLH026

	Fluoranthene-d10 %Rec	LOD (mg/kg)	Benzo(a)pyrene-d12 %Rec	LOD (mg/kg)	1-Methylnaphthalene-d10 %Rec	LOD (mg/kg)
9867761	81	0.1 (3)	71	0.1 (3)	83	0.1 (3)
9867762	73	0.1 (3)	65	0.1 (3)	77	0.1 (3)
9867762DL	90	1 (3)	66	1 (3)	93	1 (3)
9867762DL2	90	5 (3)	71	5 (3)	96	5 (3)
9867763	73	0.1 (3)	61	0.1 (3)	80	0.1 (3)
9867764	82	0.1 (3)	55	0.1 (3)	73	0.1 (3)
9867766	82	0.1 (3)	69	0.1 (3)	84	0.1 (3)
9867767	67	0.1 (3)	70	0.1 (3)	76	0.1 (3)
9867767DL	83	1 (3)	70	1 (3)	85	1 (3)
9867767RE	90	0.1 (3)	71	0.1 (3)	75	0.1 (3)
Blan	88	0.2 (3)	84	0.2 (3)	88	0.2 (3)
LCS	86	0.2 (3)	82	0.2 (3)	85	0.2 (3)
MS	73	0.2 (3)	61	0.2 (3)	80	0.2 (3)
MSD	82	0.2 (3)	55	0.2 (3)	73	0.2 (3)
Limits:	54-122		54-122		61-111	

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Anal sis Report.

Anal sis Name: SVOA 8270D (microwave)
Batch number: 18302SLI026

	Phenol-d6		2-Fluorophenol		2,4,6-Tribromophenol		Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)
9867761	83	0.7	87	0.7	79	0.7	81	0.3	85	0.3	94	0.3
9867762	81	0.7	81	0.7	77	0.7	82	0.3	87	0.3	94	0.3
9867763	83	0.7	86	0.7	79	0.7	82	0.3	85	0.3	87	0.3
9867764	79	0.7	82	0.7	82	0.7	79	0.3	86	0.3	87	0.3
9867766	83	0.7	83	0.7	80	0.7	78	0.3	84	0.3	94	0.3
9867767	47	0.7	48	0.7	50	0.7	51	0.3	55	0.3	57	0.3
Blan	81	1	87	1	87	1	84	0.7	86	0.7	100	0.7
LCS	81	1	87	1	95	1	86	0.7	94	0.7	98	0.7
MS	83	1	86	1	79	1	82	0.7	85	0.7	87	0.7
MSD	79	1	82	1	82	1	79	0.7	86	0.7	87	0.7
Limits:	47-120		35-115		39-132		37-122		44-115		54-127	

Anal sis Name: SVOA 8270D (microwave)
Batch number: 18317SLB026

	Phenol-d6		2-Fluorophenol		2,4,6-Tribromophenol		Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)
9867761RE	70	0.7	71	0.7	80	0.7	64	0.3	63	0.3	69	0.3
9867762RE	70	1	71	1	82	1	65	0.5	67	0.5	71	0.5
9867766RE	75	0.7	78	0.7	93	0.7	72	0.3	76	0.3	79	0.3
9867767RE	61	0.7	65	0.7	72	0.7	63	0.3	68	0.3	66	0.3
Blan	73	1	78	1	96	1	74	0.7	75	0.7	82	0.7
LCS	80	1	85	1	98	1	77	0.7	75	0.7	82	0.7
LCSD	79	1	83	1	98	1	77	0.7	75	0.7	81	0.7
Limits:	47-120		35-115		39-132		37-122		44-115		54-127	

Anal sis Name: SIM SVOAs 8270D (microwave)
Batch number: 18317SLC026

	Fluoranthene-d10		Benzo(a)pyrene-d12		1-Methylnaphthalene-d10	
	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)
9867761RE	73	0.1 (3)	62	0.1 (3)	79	0.1 (3)
9867762RE	83	0.2 (3)	62	0.2 (3)	80	0.2 (3)
9867763RE	91	0.2 (3)	69	0.2 (3)	86	0.2 (3)
9867764RE	83	0.2 (3)	70	0.2 (3)	92	0.2 (3)
9867766RE	83	0.1 (3)	70	0.1 (3)	97	0.1 (3)
9867767RE2	84	0.1 (3)	58	0.1 (3)	68	0.1 (3)
Blan	107	0.2 (3)	96	0.2 (3)	107	0.2 (3)

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Anal sis Report.

Anal sis Name: SIM SVOAs 8270D (microwave)
Batch number: 18317SLC026

	Fluoranthene-d10 %Rec	LOD (mg/kg)	Benzo(a)pyrene-d12 %Rec	LOD (mg/kg)	1-Methylnaphthalene-d10 %Rec	LOD (mg/kg)
LCS	90	0.2 (3)	82	0.2 (3)	94	0.2 (3)
MSDRE	83	0.3 (3)	70	0.3 (3)	92	0.3 (3)
MSRE	91	0.3 (3)	69	0.3 (3)	86	0.3 (3)
Limits:	54-122		54-122		61-111	

Anal sis Name: ocpest 8081B w/GPC 3546
Batch number: 183020030A

	Tetrachloro-m-xylene-D1 %Rec	LOD (ug/kg)	Decachlorobiphenyl-D1 %Rec	LOD (ug/kg)	Tetrachloro-m-xylene-D2 %Rec	LOD (ug/kg)	Decachlorobiphenyl-D2 %Rec	LOD (ug/kg)
9867761	106	20 (3)	363	20 (3)	102	20 (3)	386	20 (3)
9867762	84	5.0	704	5.0	153	5.0	730	5.0
9867763	81	5.0	596	5.0	73	5.0	659	5.0
9867764	81	4.9	730	4.9	70	4.9	741	4.9
9867766	93	5.0	213	5.0	88	5.0	230	5.0
9867767	97	99 (3)	259	99 (3)	92	99 (3)	0	99 (3)
Blan	87	1.0	105	1.0	81	1.0	112	1.0
LCS	87	1.0	102	1.0	85	1.0	109	1.0
MS	81	5.0	596	5.0	73	5.0	659	5.0
MSD	81	4.9	730	4.9	70	4.9	741	4.9
Limits:	42-129		39-152		42-129		39-152	

Anal sis Name: Herbicide soils 8151A Master
Batch number: 183030010A

	2,4-DCAA-D1 %Rec	LOD (ug/kg)	2,4-DCAA-D2 %Rec	LOD (ug/kg)
9867761	110	33	108	33
9867762	101	33	119	33
9867763	101	33	116	33
9867764	104	33	118	33
9867766	99	33	104	33
9867767	152	66	128	66
Blan	89	6.7	84	6.7
LCS	95	6.7	97	6.7
MS	101	33	116	33
MSD	104	33	118	33

 Outside of specification
 This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Anal sis Report.

Anal sis Name: Herbicide soils 8151A Master
Batch number: 183030010A

Limits:	27-122	27-122

Anal sis Name: PCBs 8082A/3546
Batch number: 183040031A

	Tetrachloro-m-xylene-D1		Decachlorobiphenyl-D1		Tetrachloro-m-xylene-D2		Decachlorobiphenyl-D2	
	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)
9867761	85	0.020 (3)	291	0.020 (3)	85	0.020 (3)	284	0.020 (3)
9867762	84	0.0050	757	0.0050	83	0.0050	765	0.0050
9867763	80	0.0050	678	0.0050	79	0.0050	654	0.0050
9867764	81	0.0050	604	0.0050	77	0.0050	578	0.0050
9867766	90	0.0050	196	0.0050	88	0.0050	194	0.0050
9867767	237	0.20 (3)	356	0.20 (3)	227	0.20 (3)	238	0.20 (3)
Blan	107	0.0010	102	0.0010	104	0.0010	102	0.0010
LCS	108	0.0010	106	0.0010	107	0.0010	105	0.0010
MS	80	0.0050	678	0.0050	79	0.0050	654	0.0050
MSD	81	0.0050	604	0.0050	77	0.0050	578	0.0050
Limits:	44-130		45-143		44-130		45-143	

Anal sis Name: Dioxins/Furans in Solids-8290
Batch number: 18299005

	13C12-2378-TCDD		13C12-12378-PeCDD		13C12-123478-HxCDD		13C12-123678-HxCDD		13C12-123789-HxCDD		13C12-1234678-HpCDD	
	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)
9867767	98	0.000000291	93	0.000000970	83	0.000000970	81	0.000000970	86	0.000000970	80	0.00000970
9867767DL	100	0.00000291	110	0.00000970	93	0.00000970	93	0.00000970	93	0.00000970	80	0.00000970
Blan	57	0.000000300	55	0.00000100	69	0.00000100	69	0.00000100	65	0.00000100	73	0.00000100
OPR	85	0.000000300	78	0.00000100	77	0.00000100	76	0.00000100	80	0.00000100	92	0.00000100
Limits:	40-135		40-135		40-135		40-135		40-135		40-135	

	13C12-OCDD		13C12-2378-TCDF		13C12-12378-PeCDF		13C12-23478-PeCDF		13C12-123478-HxCDF		13C12-123678-HxCDF	
	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)
9867767	85	0.0000291	72	0.000000301	72	0.000000970	80	0.000000970	67	0.000000970	65	0.000000970
9867767DL	85	0.0000291	91	0.00000301	93	0.00000970	98	0.00000970	79	0.00000970	76	0.00000970
Blan	74	0.00000300	38	0.000000310	48	0.00000100	43	0.00000100	58	0.00000100	62	0.00000100
OPR	67	0.00000300	74	0.000000310	72	0.00000100	79	0.00000100	71	0.00000100	76	0.00000100
Limits:	40-135		40-135		40-135		40-135		40-135		40-135	

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc. Group Number: 2002262
Reported: 11/21/2018 16:58

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Dioxins/Furans in Solids-8290
Batch number: 18299005

	13C12-234678-HxCDF		13C12-123789-HxCDF		13C12-1234678-HpCDF		13C12-1234789-HpCDF		13C12-OCDF	
	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)
9867767	70	0.000000970	70	0.000000970	69	0.000000970	67	0.000000970	61	0.00000194
9867767DL	78	0.00000970	80	0.00000970	72	0.00000970	68	0.00000970	68	0.0000194
Blank	51	0.00000100	57	0.00000100	78	0.00000100	58	0.00000100	56	0.00000200
OPR	72	0.00000100	79	0.00000100	102	0.00000100	73	0.00000100	58	0.00000200
Limits:	40-135		40-135		40-135		40-135		40-135	

Analysis Name: Dioxins/Furans in Solids-8290
Batch number: 18309016

	13C12-2378-TCDD		13C12-12378-PeCDD		13C12-123478-HxCDD		13C12-123678-HxCDD		13C12-123789-HxCDD		13C12-1234678-HpCDD	
	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)
9867761	71	0.000000294	78	0.000000978	76	0.000000978	74	0.000000978	74	0.000000978	70	0.000000978
9867762	70	0.000000295	72	0.000000984	76	0.000000984	71	0.000000984	73	0.000000984	71	0.000000984
9867766	61	0.000000299	83	0.000000998	66	0.000000998	64	0.000000998	68	0.000000998	69	0.000000998
Limits:	40-135		40-135		40-135		40-135		40-135		40-135	

	13C12-OCDD		13C12-12378-PeCDF		13C12-23478-PeCDF		13C12-123478-HxCDF		13C12-123678-HxCDF	
	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)
9867761	68	0.00000294	77	0.000000978	76	0.000000978	73	0.000000978	72	0.000000978
9867762	95	0.0000295	69	0.000000984	70	0.000000984	66	0.000000984	66	0.000000984
9867766	67	0.00000299	74	0.000000998	82	0.000000998	62	0.000000998	62	0.000000998
Limits:	40-135		40-135		40-135		40-135		40-135	

	13C12-234678-HxCDF		13C12-123789-HxCDF		13C12-1234678-HpCDF		13C12-1234789-HpCDF		13C12-OCDF		13C12-2378-TCDF-Conf	
	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)
9867761	71	0.000000978	74	0.000000978	72	0.000000978	65	0.000000978	64	0.00000196	49	0.000000303
9867762	66	0.000000984	70	0.000000984	67	0.000000984	66	0.000000984	57	0.00000197	54	1.00
9867766	64	0.000000998	67	0.000000998	68	0.000000998	66	0.000000998	64	0.00000200	43	0.000000309
Limits:	40-135		40-135		40-135		40-135		40-135		40-135	

	13C12-2378-TCDF	
	%Rec	LOD (mg/kg)
9867762DL	95	0.00000305

Outside of specification
This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Anal sis Report.

Anal sis Name: Dioxins/Furans in Solids-8290
Batch number: 18309016

Limits: 40-135

	13C12-2378-TCDD %Rec	13C12-2378-TCDD LOD (mg/kg)	13C12-12378-PeCDD %Rec	13C12-12378-PeCDD LOD (mg/kg)	13C12-123478-HxCDD %Rec	13C12-123478-HxCDD LOD (mg/kg)	13C12-123678-HxCDD %Rec	13C12-123678-HxCDD LOD (mg/kg)	13C12-123789-HxCDD %Rec	13C12-123789-HxCDD LOD (mg/kg)	13C12-1234678-HpCDD %Rec	13C12-1234678-HpCDD LOD (mg/kg)
9867763	61	0.000000297	62	0.000000990	64	0.000000990	61	0.000000990	62	0.000000990	68	0.000000990
9867764	55	0.000000294	61	0.000000980	60	0.000000980	59	0.000000980	60	0.000000980	62	0.000000980
Limits:	40-135		40-135		40-135		40-135		40-135		40-135	

	13C12-2378-TCDF %Rec	13C12-2378-TCDF LOD (mg/kg)	13C12-12378-PeCDF %Rec	13C12-12378-PeCDF LOD (mg/kg)	13C12-23478-PeCDF %Rec	13C12-23478-PeCDF LOD (mg/kg)	13C12-123478-HxCDF %Rec	13C12-123478-HxCDF LOD (mg/kg)	13C12-123678-HxCDF %Rec	13C12-123678-HxCDF LOD (mg/kg)
9867763	64	0.000000307	71	0.000000990	65	0.000000990	63	0.000000990	65	0.000000990
9867764	57	0.000000304	51	0.000000980	61	0.000000980	57	0.000000980	56	0.000000980
Limits:	40-135		40-135		40-135		40-135		40-135	

	13C12-234678-HxCDF %Rec	13C12-234678-HxCDF LOD (mg/kg)	13C12-123789-HxCDF %Rec	13C12-123789-HxCDF LOD (mg/kg)	13C12-1234678-HpCDF %Rec	13C12-1234678-HpCDF LOD (mg/kg)	13C12-1234789-HpCDF %Rec	13C12-1234789-HpCDF LOD (mg/kg)	13C12-OCDF %Rec	13C12-OCDF LOD (mg/kg)
9867763	63	0.000000990	66	0.000000990	66	0.000000990	69	0.000000990	68	0.00000198
9867764	57	0.000000980	60	0.000000980	58	0.000000980	59	0.000000980	59	0.00000196
Limits:	40-135		40-135		40-135		40-135		40-135	

	13C12-OCDD %Rec	13C12-OCDD LOD (mg/kg)
9867763RE	72	0.00000297
9867764RE	64	0.00000294
Limits:	40-135	

	13C12-2378-TCDD %Rec	13C12-2378-TCDD LOD (mg/kg)	13C12-12378-PeCDD %Rec	13C12-12378-PeCDD LOD (mg/kg)	13C12-123478-HxCDD %Rec	13C12-123478-HxCDD LOD (mg/kg)	13C12-123678-HxCDD %Rec	13C12-123678-HxCDD LOD (mg/kg)	13C12-123789-HxCDD %Rec	13C12-123789-HxCDD LOD (mg/kg)	13C12-1234678-HpCDD %Rec	13C12-1234678-HpCDD LOD (mg/kg)
Blan	73	0.000000300	73	0.00000100	74	0.00000100	74	0.00000100	78	0.00000100	79	0.00000100
MSDRE	55	0.000000294	61	0.000000980	60	0.000000980	59	0.000000980	60	0.000000980	62	0.000000980
MSRE	61	0.000000297	62	0.000000990	64	0.000000990	61	0.000000990	62	0.000000990	68	0.000000990
OPR	57	0.000000300	62	0.00000100	62	0.00000100	60	0.00000100	61	0.00000100	59	0.00000100

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspi ed result was more than four times the spi e added.
(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 11/21/2018 16:58

Group Number: 2002262

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Dioxins/Furans in Solids-8290
Batch number: 18309016

Limits:	40-135		40-135		40-135		40-135		40-135		40-135	
	13C12-OCDD		13C12-2378-TCDF		13C12-12378-PeCDF		13C12-23478-PeCDF		13C12-123478-HxCDF		13C12-123678-HxCDF	
	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)
Blan	72	0.00000300	75	0.000000310	76	0.00000100	78	0.00000100	74	0.00000100	75	0.00000100
MSDRE	64	0.00000294	57	0.000000304	51	0.000000980	61	0.000000980	57	0.000000980	56	0.000000980
MSRE	72	0.00000297	64	0.000000307	71	0.000000990	65	0.000000990	63	0.000000990	65	0.000000990
OPR	52	0.00000300	61	0.000000310	61	0.00000100	66	0.00000100	54	0.00000100	57	0.00000100

Limits:	40-135		40-135		40-135		40-135		40-135		40-135	
	13C12-234678-HxCDF		13C12-123789-HxCDF		13C12-1234678-HpCDF		13C12-1234789-HpCDF		13C12-OCDF		13C12-2378-TCDF-Conf	
	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)	%Rec	LOD (mg/kg)
Blan	75	0.00000100	71	0.00000100	80	0.00000100	69	0.00000100	62	0.00000200	48	0.000000310
MSDRE	57	0.000000980	60	0.000000980	58	0.000000980	59	0.000000980	59	0.00000196	57	0.000000304
MSRE	63	0.000000990	66	0.000000990	66	0.000000990	69	0.000000990	68	0.00000198	64	0.000000307
OPR	54	0.00000100	55	0.00000100	59	0.00000100	48	0.00000100	44	0.00000200	61	0.000000310

Limits:	40-135		40-135		40-135		40-135		40-135		40-135	

Outside of specification
This limit was used in the evaluation of the final result for the blan
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspied result was more than four times the spie added.
(3) The surrogate spie amount was less than the LOD.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 43062 Group # 2002262 Sample # 9867760-67

COC # 561372

Client Information

Client: Tidewater	Acct. #:
Project Name/#: GKP Phase 1 RI OU2/2016-007	PWSID #:
Project Manager: Ryan Wensink	P.O. #: 2016-007-02
Sampler: John C Schroeder	Quote #:
State where samples were collected: New York	For Compliance: Yes ☐ No ☒

Matrix: Soil ☒ Sediment ☐ Tissue ☐ Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☐ Other:

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only: FSC: ____ SCR#: ____

Preservation Codes: H=HCl, T=Thiosulfate, N=HNO_3, B=NaOH, S=H_2SO_4, P=H_3PO_4, F=Field Filtered, O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water	Other	Total # of Containers	VOCs (8260c)/% Moisture ✓	SVOCs (8270D)	PAHs (8270D-SIM)	Inorganics (6020A)	Mercury (7471B)	Pesticides (8081B)	PCBs (8082A)	Herbicides (8151A)	Dioxins/Furans (8290A)		Remarks
OU2TB102418-001	102418	0745	✓			TB		2	X										trip blank, VOCs only
OU2-1-SS004	102418	0915	✓		X			6	X	X	X	X	X	X	X	X	X		surface soil
OU2-1-SS006	102418	0950	✓		X			18	X	X	X	X	X	X	X	X	X		surface soil, MS/MSD
OU2-1-SS002	102418	1045	✓		X			6	X	X	X	X	X	X	X	X	X		surface soil
OU2-1-SS008	102418	1130	✓		X			6	X	X	X	X	X	X	X	X	X		surface soil

[signature] 10/24/18

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: colleen.scott@aecom.com ryan.wensink@tideh20.net

E-mail address: devon.chicoine@aecom.com

Relinquished by	Date	Time	Received by	Date	Time
[signature]	102418	1730	FedEx	102418	1730
			[signature]	10/24	10:30

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) — Type VI (Raw Data Only)

Type III (Reduced non-CLP) — NJ DKQP — TX TRRP-13

NYSDEC Category A or B — MA MCP — CT RCP

EDD Required? Yes No

If yes, format: contact Ryan Wensink

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____

Temperature upon receipt 0.0 °C

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

7044 0717

TIDEWATER INC
RADIOLOGICAL SERVICES

2002262

Location	Great Kills Park	Survey Type	Shipping		Survey Log #	GKP- 012
Cooler No	GKP - 012	Surveyor	H. White		Date	10/24/18

Shipping Survey

Smear Results in dpm/100 cm^2			Dose Rate (microR)	
Location	α Result	β result	Location	γ result
Right	<MDA	<MDA	Right Side	4
Back	<MDA	<MDA	Back Side	4
Left	<MDA	<MDA	Left Side	4
Front Side	<MDA	<MDA	Front Side	4
Top	<MDA	<MDA	Top	4
Bottom	<MDA	<MDA	Bottom	4

Meter	3030 E	MircoRem
Serial No.	217607	19142
Detector	43-10	
Serial No.	229364	
Cal Due Date	9/10/2019	
MDA	2α/200βγ	

Comments

Dose Rate on contact 4

Surveyor:	H. White	10/24/18	Reviewer:	B. Cole	10/24/18
Signature:	H. White	Date	Signature:	B. Cole	Date

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 231110

Group Number(s): 2002262

Client: Tidewater

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/25/2018 10:30
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ariel Garcia (15332) at 12:34 on 10/25/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	0.0	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-5994
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

eurofins | Lancaster Laboratories Environmental

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

eurofins | Lancaster Laboratories Environmental

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID10

GC/MS Volatiles

Fraction: Volatiles by GC/MS

VOCs- 25ml Water by 8260C

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9867760	OU2TB102418-001	X		1	Trip Blank
9867761	OU2-1-SS004		X	0.99	
9867762	OU2-1-SS006		X	1.05	Unspiked
9867763	OU2-1-SS006 MS		X	1.03	Matrix Spike
9867764	OU2-1-SS006 MSD		X	1	Matrix Spike Duplicate
9867766	OU2-1-SS002		X	0.95	
9867767	OU2-1-SS008		X	1.27	

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

(Sample number(s): 9867766-9867767RE: Analysis: 11995)
The VOA soil weight is outside the acceptable weight range.
See the VOA Prep Summary Sheet for the affected sample(s).

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

(Sample number(s): 9867760: Analysis: 11996)
The response for a target analyte(s) in the initial and/or continuing calibration verification criteria marginally exceeds the DoD acceptance criteria. Due to the marginal nature of the outlier(s), the data is reported.

(Sample number(s): 9867767RE: Analysis: 11995)
The response for a target analyte(s) in the initial and/or continuing calibration verification criteria marginally exceeds the DoD acceptance

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID10

GC/MS Volatiles

Fraction: Volatiles by GC/MS

criteria. Due to the marginal nature of the outlier(s), the data is reported.

(Sample number(s): 9867761RE, 9867766RE: Analysis: 11995)
The response for a target analyte(s) in the initial and/or continuing calibration verification criteria marginally exceeds the DoD acceptance criteria in Trial 2. Due to the marginal nature of the outlier(s), the data is reported.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

The % RPD for target analyte(s) in the Laboratory Control Spike/Spike Duplicate is outside the QC acceptance limits as noted on the QC Summary. Since the individual % recovery is within the acceptance limits, the data is reported.

Batch#: B183101AA (Sample number(s): 9867761, 9867766-9867767)
The relative percent difference(s) for the following analyte(s) in the LCS/LCSD is outside the acceptance window: 4-Methyl-2-pentanone

MS/MSD

Batch#: B183042AA (Sample number(s): 9867761-9867764, 9867766, UNSPK: 9867762)
The relative percent difference(s) for the following analyte(s) in the MS/MSD is outside the acceptance window: 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-chloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-pentanone, Acetone, cis-1,3-Dichloropropene
The recovery(ies) for the following analyte(s) in the MS were below the acceptance window: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2-Hexanone, 4-Methyl-2-pentanone, Bromomethane, Chlorobenzene, Methylcyclohexane, Trichloroethene, Xylene (Total)
The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: 2-Butanone
The recovery(ies) for the following analyte(s) in the MS and MSD were below the acceptance window: 1,2,4-Trichlorobenzene, 1,2-Dichlorobenzene, Bromoform, cis-1,3-Dichloropropene, Styrene, trans-1,3-Dichloropropene
The recovery(ies) for the following analyte(s) in the MS and MSD exceeded the acceptance window indicating a positive bias: 1,1,2,2-Tetrachloroethane, Acetone, Freon 113

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID10

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Batch#: B183112AA (Sample number(s): 9867767)
The recovery(ies) for the following surrogate(s) exceeded the acceptance window: Toluene-d8 (9867767RE)
The recovery(ies) for the following surrogate(s) were below the acceptance window: 4-Bromofluorobenzene (9867767RE)

Batch#: B183101AA (Sample number(s): 9867761, 9867766-9867767)
The recovery(ies) for the following surrogate(s) exceeded the acceptance window: Toluene-d8 (9867761RE, 9867766RE, 9867767)
The recovery(ies) for the following surrogate(s) were below the acceptance window: 4-Bromofluorobenzene (9867761RE, 9867766RE, 9867767)

Batch#: B183042AA (Sample number(s): 9867761-9867764, 9867766, UNSPK: 9867762)
The recovery(ies) for the following surrogate(s) exceeded the acceptance window: Toluene-d8 (9867761, 9867762 UNSPK, 9867763, 9867764, 9867766)
The recovery(ies) for the following surrogate(s) were below the acceptance window: 4-Bromofluorobenzene (9867761, 9867762 UNSPK, 9867763, 9867764, 9867766)

SAMPLE ANALYSIS:

(Sample number(s): 9867766: Analysis: 11995)
The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from both trials.
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit in Trial 2.

(Sample number(s): 9867761: Analysis: 11995)
The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from both trials.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID10

GC/MS Volatiles

Fraction: Volatiles by GC/MS

continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit in Trial 2.

(Sample number(s): 9867762-9867764: Analysis: 11995)
The recovery for the sample internal standard is outside the QC acceptance limits. The following corrective action was taken: Similar results were obtained for the internal standard in the background, matrix spike and matrix spike duplicate indicating a matrix effect.

(Sample number(s): 9867760: Analysis: 11996)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

(Sample number(s): 9867767: Analysis: 11995)
A Method Detection Limit (MDL) standard is analyzed for the initial trial to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.
The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

eurofins | Lancaster Laboratories Environmental

Quality Control Reference List
GC/MS Volatiles

CLIENT: Tidewater, Inc.
SDG: TID10

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 25ml Water by 8260C	H183094AA	VBLKH96	11/05/2018 22:48
		LCSH96	11/05/2018 21:22
		LCSH97	11/05/2018 21:43
		LCDH97	11/05/2018 22:05
		9867760	11/06/2018 05:14
VOCs- Solid by 8260C	B183042AA	VBLKB86	10/31/2018 11:25
		LCSB86	10/31/2018 10:14
		LCDB86	10/31/2018 10:37
		9867761	10/31/2018 17:24
		9867762 UNSPK	10/31/2018 17:47
		9867763 MS	10/31/2018 18:09
		9867764 MSD	10/31/2018 18:32
		9867766	10/31/2018 19:17
VOCs- Solid by 8260C	B183101AA	VBLKB93	11/06/2018 20:41
		LCSB93	11/06/2018 21:07
		LCDB93	11/06/2018 21:29
		9867761RE	11/06/2018 22:32
		9867766RE	11/06/2018 22:55
		9867767	11/06/2018 23:18
VOCs- Solid by 8260C	B183112AA	VBLKB97	11/07/2018 10:32
		LCSB97	11/07/2018 09:01
		LCDB97	11/07/2018 09:24
		9867767RE	11/07/2018 11:35

Fraction: Volatiles by GC/MS

B183042AA / VBLKB86 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Dichlorodifluoromethane	10/31/18	N.D.	mg/kg	0.0006	0.002	0.005
Chloromethane	10/31/18	N.D.	mg/kg	0.0006	0.002	0.005
Vinyl Chloride	10/31/18	N.D.	mg/kg	0.0006	0.002	0.005
Bromomethane	10/31/18	N.D.	mg/kg	0.0007	0.002	0.005
Chloroethane	10/31/18	N.D.	mg/kg	0.001	0.004	0.005
Trichlorofluoromethane	10/31/18	N.D.	mg/kg	0.0007	0.002	0.005
1,1-Dichloroethene	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005
Freon 113	10/31/18	N.D.	mg/kg	0.0006	0.002	0.010
Acetone	10/31/18	N.D.	mg/kg	0.006	0.016	0.020
Carbon Disulfide	10/31/18	N.D.	mg/kg	0.0006	0.002	0.005
Methyl Acetate	10/31/18	N.D.	mg/kg	0.001	0.004	0.005
Methylene Chloride	10/31/18	N.D.	mg/kg	0.002	0.004	0.005
trans-1,2-Dichloroethene	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005
Methyl Tertiary Butyl Ether	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005
1,1-Dichloroethane	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005
2-Butanone	10/31/18	N.D.	mg/kg	0.001	0.004	0.010
cis-1,2-Dichloroethene	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005
Chloroform	10/31/18	N.D.	mg/kg	0.0006	0.002	0.005
1,1,1-Trichloroethane	10/31/18	N.D.	mg/kg	0.0006	0.002	0.005
Cyclohexane	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005
Carbon Tetrachloride	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005
Benzene	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005
1,2-Dichloroethane	10/31/18	N.D.	mg/kg	0.0006	0.002	0.005
Trichloroethene	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005
Methylcyclohexane	10/31/18	N.D.	mg/kg	0.0006	0.002	0.005
1,2-Dichloropropane	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005
Bromodichloromethane	10/31/18	N.D.	mg/kg	0.0004	0.001	0.005
cis-1,3-Dichloropropene	10/31/18	N.D.	mg/kg	0.0004	0.001	0.005
4-Methyl-2-pentanone	10/31/18	N.D.	mg/kg	0.001	0.004	0.010
Toluene	10/31/18	N.D.	mg/kg	0.0006	0.002	0.005
trans-1,3-Dichloropropene	10/31/18	N.D.	mg/kg	0.0003	0.001	0.005
1,1,2-Trichloroethane	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005
Tetrachloroethene	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005
2-Hexanone	10/31/18	N.D.	mg/kg	0.001	0.004	0.010
Dibromochloromethane	10/31/18	N.D.	mg/kg	0.0004	0.001	0.005
1,2-Dibromoethane	10/31/18	N.D.	mg/kg	0.0004	0.001	0.005
Chlorobenzene	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005
Ethylbenzene	10/31/18	N.D.	mg/kg	0.0004	0.001	0.005
Xylene (Total)	10/31/18	N.D.	mg/kg	0.001	0.002	0.005
Styrene	10/31/18	N.D.	mg/kg	0.0003	0.001	0.005
Bromoform	10/31/18	N.D.	mg/kg	0.005	0.008	0.010
Isopropylbenzene	10/31/18	N.D.	mg/kg	0.0004	0.001	0.005
Cyclohexanone	10/31/18	N.D.	mg/kg	0.025	0.10	0.25
1,1,2,2-Tetrachloroethane	10/31/18	N.D.	mg/kg	0.0004	0.001	0.005
1,3-Dichlorobenzene	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005

Fraction: Volatiles by GC/MS

B183042AA / VBLKB86 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
1,4-Dichlorobenzene	10/31/18	N.D.	mg/kg	0.0004	0.001	0.005
1,2-Dichlorobenzene	10/31/18	N.D.	mg/kg	0.0005	0.002	0.005
1,2-Dibromo-3-chloropropane	10/31/18	N.D.	mg/kg	0.0004	0.001	0.005
1,2,4-Trichlorobenzene	10/31/18	N.D.	mg/kg	0.005	0.008	0.010

B183101AA / VBLKB93 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Dichlorodifluoromethane	11/06/18	N.D.	mg/kg	0.0006	0.002	0.005
Chloromethane	11/06/18	N.D.	mg/kg	0.0006	0.002	0.005
Vinyl Chloride	11/06/18	N.D.	mg/kg	0.0006	0.002	0.005
Bromomethane	11/06/18	N.D.	mg/kg	0.0007	0.002	0.005
Chloroethane	11/06/18	N.D.	mg/kg	0.001	0.004	0.005
Trichlorofluoromethane	11/06/18	N.D.	mg/kg	0.0007	0.002	0.005
1,1-Dichloroethene	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
Freon 113	11/06/18	N.D.	mg/kg	0.0006	0.002	0.010
Acetone	11/06/18	N.D.	mg/kg	0.006	0.016	0.020
Carbon Disulfide	11/06/18	N.D.	mg/kg	0.0006	0.002	0.005
Methyl Acetate	11/06/18	N.D.	mg/kg	0.001	0.004	0.005
Methylene Chloride	11/06/18	N.D.	mg/kg	0.002	0.004	0.005
trans-1,2-Dichloroethene	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
Methyl Tertiary Butyl Ether	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
1,1-Dichloroethane	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
2-Butanone	11/06/18	N.D.	mg/kg	0.001	0.004	0.010
cis-1,2-Dichloroethene	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
Chloroform	11/06/18	N.D.	mg/kg	0.0006	0.002	0.005
1,1,1-Trichloroethane	11/06/18	N.D.	mg/kg	0.0006	0.002	0.005
Cyclohexane	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
Carbon Tetrachloride	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
Benzene	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
1,2-Dichloroethane	11/06/18	N.D.	mg/kg	0.0006	0.002	0.005
Trichloroethene	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
Methylcyclohexane	11/06/18	N.D.	mg/kg	0.0006	0.002	0.005
1,2-Dichloropropane	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
Bromodichloromethane	11/06/18	N.D.	mg/kg	0.0004	0.001	0.005
cis-1,3-Dichloropropene	11/06/18	N.D.	mg/kg	0.0004	0.001	0.005
4-Methyl-2-pentanone	11/06/18	N.D.	mg/kg	0.001	0.004	0.010
Toluene	11/06/18	N.D.	mg/kg	0.0006	0.002	0.005
trans-1,3-Dichloropropene	11/06/18	N.D.	mg/kg	0.0003	0.001	0.005
1,1,2-Trichloroethane	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
Tetrachloroethene	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
2-Hexanone	11/06/18	N.D.	mg/kg	0.001	0.004	0.010
Dibromochloromethane	11/06/18	N.D.	mg/kg	0.0004	0.001	0.005
1,2-Dibromoethane	11/06/18	N.D.	mg/kg	0.0004	0.001	0.005
Chlorobenzene	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
Ethylbenzene	11/06/18	N.D.	mg/kg	0.0004	0.001	0.005

Fraction: Volatiles by GC/MS

B183101AA / VBLKB93 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Xylene (Total)	11/06/18	N.D.	mg/kg	0.001	0.002	0.005
Styrene	11/06/18	N.D.	mg/kg	0.0003	0.001	0.005
Bromoform	11/06/18	N.D.	mg/kg	0.005	0.008	0.010
Isopropylbenzene	11/06/18	N.D.	mg/kg	0.0004	0.001	0.005
Cyclohexanone	11/06/18	N.D.	mg/kg	0.025	0.10	0.25
1,1,2,2-Tetrachloroethane	11/06/18	N.D.	mg/kg	0.0004	0.001	0.005
1,3-Dichlorobenzene	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
1,4-Dichlorobenzene	11/06/18	N.D.	mg/kg	0.0004	0.001	0.005
1,2-Dichlorobenzene	11/06/18	N.D.	mg/kg	0.0005	0.002	0.005
1,2-Dibromo-3-chloropropane	11/06/18	N.D.	mg/kg	0.0004	0.001	0.005
1,2,4-Trichlorobenzene	11/06/18	N.D.	mg/kg	0.005	0.008	0.010

B183112AA / VBLKB97 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Dichlorodifluoromethane	11/07/18	N.D.	mg/kg	0.0006	0.002	0.005
Chloromethane	11/07/18	N.D.	mg/kg	0.0006	0.002	0.005
Vinyl Chloride	11/07/18	N.D.	mg/kg	0.0006	0.002	0.005
Bromomethane	11/07/18	N.D.	mg/kg	0.0007	0.002	0.005
Chloroethane	11/07/18	N.D.	mg/kg	0.001	0.004	0.005
Trichlorofluoromethane	11/07/18	N.D.	mg/kg	0.0007	0.002	0.005
1,1-Dichloroethene	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
Freon 113	11/07/18	N.D.	mg/kg	0.0006	0.002	0.010
Acetone	11/07/18	N.D.	mg/kg	0.006	0.016	0.020
Carbon Disulfide	11/07/18	N.D.	mg/kg	0.0006	0.002	0.005
Methyl Acetate	11/07/18	N.D.	mg/kg	0.001	0.004	0.005
Methylene Chloride	11/07/18	N.D.	mg/kg	0.002	0.004	0.005
trans-1,2-Dichloroethene	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
Methyl Tertiary Butyl Ether	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
1,1-Dichloroethane	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
2-Butanone	11/07/18	N.D.	mg/kg	0.001	0.004	0.010
cis-1,2-Dichloroethene	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
Chloroform	11/07/18	N.D.	mg/kg	0.0006	0.002	0.005
1,1,1-Trichloroethane	11/07/18	N.D.	mg/kg	0.0006	0.002	0.005
Cyclohexane	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
Carbon Tetrachloride	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
Benzene	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
1,2-Dichloroethane	11/07/18	N.D.	mg/kg	0.0006	0.002	0.005
Trichloroethene	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
Methylcyclohexane	11/07/18	N.D.	mg/kg	0.0006	0.002	0.005
1,2-Dichloropropane	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
Bromodichloromethane	11/07/18	N.D.	mg/kg	0.0004	0.001	0.005
cis-1,3-Dichloropropene	11/07/18	N.D.	mg/kg	0.0004	0.001	0.005
4-Methyl-2-pentanone	11/07/18	N.D.	mg/kg	0.001	0.004	0.010
Toluene	11/07/18	N.D.	mg/kg	0.0006	0.002	0.005
trans-1,3-Dichloropropene	11/07/18	N.D.	mg/kg	0.0003	0.001	0.005

Fraction: Volatiles by GC/MS

B183112AA / VBLKB97 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
1,1,2-Trichloroethane	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
Tetrachloroethene	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
2-Hexanone	11/07/18	N.D.	mg/kg	0.001	0.004	0.010
Dibromochloromethane	11/07/18	N.D.	mg/kg	0.0004	0.001	0.005
1,2-Dibromoethane	11/07/18	N.D.	mg/kg	0.0004	0.001	0.005
Chlorobenzene	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
Ethylbenzene	11/07/18	N.D.	mg/kg	0.0004	0.001	0.005
Xylene (Total)	11/07/18	N.D.	mg/kg	0.001	0.002	0.005
Styrene	11/07/18	N.D.	mg/kg	0.0003	0.001	0.005
Bromoform	11/07/18	N.D.	mg/kg	0.005	0.008	0.010
Isopropylbenzene	11/07/18	N.D.	mg/kg	0.0004	0.001	0.005
Cyclohexanone	11/07/18	N.D.	mg/kg	0.025	0.10	0.25
1,1,2,2-Tetrachloroethane	11/07/18	N.D.	mg/kg	0.0004	0.001	0.005
1,3-Dichlorobenzene	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
1,4-Dichlorobenzene	11/07/18	N.D.	mg/kg	0.0004	0.001	0.005
1,2-Dichlorobenzene	11/07/18	N.D.	mg/kg	0.0005	0.002	0.005
1,2-Dibromo-3-chloropropane	11/07/18	N.D.	mg/kg	0.0004	0.001	0.005
1,2,4-Trichlorobenzene	11/07/18	N.D.	mg/kg	0.005	0.008	0.010

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: TID10
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H183094AA / VBLKH96 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Dichlorodifluoromethane	11/05/18	N.D.	ug/l	0.05	0.2	0.5
Chloromethane	11/05/18	N.D.	ug/l	0.06	0.2	0.5
Vinyl Chloride	11/05/18	N.D.	ug/l	0.1	0.2	0.5
Bromomethane	11/05/18	N.D.	ug/l	0.07	0.2	0.5
Chloroethane	11/05/18	N.D.	ug/l	0.07	0.2	0.5
Trichlorofluoromethane	11/05/18	N.D.	ug/l	0.05	0.2	0.5
1,1-Dichloroethene	11/05/18	N.D.	ug/l	0.06	0.2	0.5
Freon 113	11/05/18	N.D.	ug/l	0.06	0.2	0.5
Acetone	11/05/18	N.D.	ug/l	0.9	2.0	5.0
Carbon Disulfide	11/05/18	N.D.	ug/l	0.06	0.2	1.0
Methyl Acetate	11/05/18	N.D.	ug/l	0.1	0.2	1.0
Methylene Chloride	11/05/18	N.D.	ug/l	0.07	0.2	0.5
trans-1,2-Dichloroethene	11/05/18	N.D.	ug/l	0.06	0.2	0.5
Methyl Tertiary Butyl Ether	11/05/18	N.D.	ug/l	0.05	0.2	0.5
1,1-Dichloroethane	11/05/18	N.D.	ug/l	0.07	0.2	0.5
2-Butanone	11/05/18	N.D.	ug/l	0.6	2.0	5.0
cis-1,2-Dichloroethene	11/05/18	N.D.	ug/l	0.05	0.2	0.5
Chloroform	11/05/18	N.D.	ug/l	0.09	0.2	0.5
1,1,1-Trichloroethane	11/05/18	N.D.	ug/l	0.06	0.2	0.5
Cyclohexane	11/05/18	N.D.	ug/l	0.05	0.2	0.5
Carbon Tetrachloride	11/05/18	N.D.	ug/l	0.07	0.2	0.5
Benzene	11/05/18	N.D.	ug/l	0.05	0.2	0.5
1,2-Dichloroethane	11/05/18	N.D.	ug/l	0.05	0.2	0.5
Trichloroethene	11/05/18	N.D.	ug/l	0.06	0.2	0.5
Methylcyclohexane	11/05/18	N.D.	ug/l	0.05	0.2	0.5
1,2-Dichloropropane	11/05/18	N.D.	ug/l	0.06	0.2	0.5
Bromodichloromethane	11/05/18	N.D.	ug/l	0.05	0.2	0.5
cis-1,3-Dichloropropene	11/05/18	N.D.	ug/l	0.05	0.2	0.5
4-Methyl-2-Pentanone	11/05/18	N.D.	ug/l	0.7	2.0	5.0
Toluene	11/05/18	N.D.	ug/l	0.07	0.2	0.5
trans-1,3-Dichloropropene	11/05/18	N.D.	ug/l	0.06	0.2	0.5
1,1,2-Trichloroethane	11/05/18	N.D.	ug/l	0.06	0.2	0.5
Tetrachloroethene	11/05/18	N.D.	ug/l	0.06	0.2	0.5
2-Hexanone	11/05/18	N.D.	ug/l	0.6	2.0	5.0
Dibromochloromethane	11/05/18	N.D.	ug/l	0.07	0.2	0.5
1,2-Dibromoethane	11/05/18	N.D.	ug/l	0.06	0.2	0.5
Chlorobenzene	11/05/18	N.D.	ug/l	0.06	0.2	0.5
Ethylbenzene	11/05/18	N.D.	ug/l	0.06	0.2	0.5
Xylene (Total)	11/05/18	N.D.	ug/l	0.1	0.4	0.5
Styrene	11/05/18	N.D.	ug/l	0.05	0.2	0.5
Bromoform	11/05/18	N.D.	ug/l	0.3	0.5	1.0
Isopropylbenzene	11/05/18	N.D.	ug/l	0.05	0.2	0.5
Cyclohexanone	11/05/18	N.D.	ug/l	1.8	7.2	25
1,1,2,2-Tetrachloroethane	11/05/18	N.D.	ug/l	0.07	0.2	0.5
1,3-Dichlorobenzene	11/05/18	N.D.	ug/l	0.06	0.2	0.5

Fraction: Volatiles by GC/MS

H183094AA / VBLKH96 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
1,4-Dichlorobenzene	11/05/18	N.D.	ug/l	0.07	0.2	0.5
1,2-Dichlorobenzene	11/05/18	N.D.	ug/l	0.06	0.2	0.5
1,2-Dibromo-3-chloropropane	11/05/18	N.D.	ug/l	0.1	0.4	0.5
1,2,4-Trichlorobenzene	11/05/18	N.D.	ug/l	0.06	0.2	0.5

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: TID10
Matrix: SOLID

Fraction: Volatiles by GC/MS

B183042AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	0.05 mg/kg	Spike Added	0.05 mg/kg	Spike Added	0.05 mg/kg	Spike Added	0.05 mg/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKB86	106	71 - 136	95	79 - 119	100	78 - 119	98	85 - 116
LCSB86	107	71 - 136	99	79 - 119	101	78 - 119	99	85 - 116
LCDB86	107	71 - 136	100	79 - 119	101	78 - 119	100	85 - 116
9867761	104	71 - 136	64 *	79 - 119	106	78 - 119	128 *	85 - 116
9867762 UNSPK	105	71 - 136	64 *	79 - 119	107	78 - 119	133 *	85 - 116
9867763 MS	103	71 - 136	71 *	79 - 119	103	78 - 119	132 *	85 - 116
9867764 MSD	105	71 - 136	74 *	79 - 119	104	78 - 119	130 *	85 - 116
9867766	102	71 - 136	69 *	79 - 119	103	78 - 119	124 *	85 - 116

B183101AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	0.05 mg/kg	Spike Added	0.05 mg/kg	Spike Added	0.05 mg/kg	Spike Added	0.05 mg/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKB93	106	71 - 136	94	79 - 119	102	78 - 119	96	85 - 116
LCSB93	109	71 - 136	100	79 - 119	103	78 - 119	99	85 - 116
LCDB93	105	71 - 136	100	79 - 119	102	78 - 119	99	85 - 116
9867761RE	104	71 - 136	66 *	79 - 119	105	78 - 119	125 *	85 - 116
9867766RE	102	71 - 136	69 *	79 - 119	103	78 - 119	129 *	85 - 116
9867767	115	71 - 136	61 *	79 - 119	113	78 - 119	136 *	85 - 116

B183112AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	0.05 mg/kg	Spike Added	0.05 mg/kg	Spike Added	0.05 mg/kg	Spike Added	0.05 mg/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKB97	104	71 - 136	94	79 - 119	101	78 - 119	95	85 - 116
LCSB97	104	71 - 136	99	79 - 119	100	78 - 119	99	85 - 116
LCDB97	105	71 - 136	99	79 - 119	102	78 - 119	99	85 - 116
9867767RE	115	71 - 136	55 *	79 - 119	111	78 - 119	141 *	85 - 116

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: TID10
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H183094AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKH96	103	81 - 118	98	85 - 114	97	80 - 119	103	89 - 112
LCSH96	102	81 - 118	100	85 - 114	96	80 - 119	104	89 - 112
LCDH97	104	81 - 118	99	85 - 114	96	80 - 119	104	89 - 112
9867760	104	81 - 118	97	85 - 114	90	80 - 119	104	89 - 112

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 9867762 MS: 9867763 MSD: 9867764 **Analyte**	Batch: **B183042AA** (Sample number(s): 9867761-9867764, 9867766)								
	Spike Added mg/kg MS/MSD	**Unspiked Conc mg/kg**	**MS Conc mg/kg**	**MSD Conc mg/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	0.0205 / 0.0199	N.D.	0.0221	0.0218	108	109	29-149	2	20
Chloromethane	0.0205 / 0.0199	N.D.	0.0205	0.0211	100	106	50-136	3	20
Vinyl Chloride	0.0205 / 0.0199	N.D.	0.0203	0.0197	99	99	56-135	3	20
Bromomethane	0.0205 / 0.0199	N.D.	0.0105	0.0116	51 *	58	53-143	10	20
Chloroethane	0.0205 / 0.0199	N.D.	0.0193	0.0157	94	79	59-139	20	20
Trichlorofluoromethane	0.0205 / 0.0199	N.D.	0.0252	0.0238	123	120	62-140	6	20
1,1-Dichloroethene	0.0205 / 0.0199	N.D.	0.0227	0.0229	111	115	70-131	1	20
Freon 113	0.0205 / 0.0199	N.D.	0.0284	0.0283	138 *	142 *	66-136	0	20
Acetone	0.154 / 0.149	0.0241	0.728	0.365	457 *	228 *	36-164	67 *	20
Carbon Disulfide	0.0205 / 0.0199	N.D.	0.0129	0.0139	63	70	63-132	7	20
Methyl Acetate	0.0205 / 0.0199	N.D.	0.0206	0.0199	100	100	53-144	3	20
Methylene Chloride	0.0205 / 0.0199	N.D.	0.0192	0.0208	94	105	70-128	8	20
trans-1,2-Dichloroethene	0.0205 / 0.0199	N.D.	0.0163	0.0177	80	89	74-125	8	20
Methyl Tertiary Butyl Ether	0.0205 / 0.0199	N.D.	0.0201	0.0219	98	110	73-125	9	20
1,1-Dichloroethane	0.0205 / 0.0199	N.D.	0.0221	0.0233	108	117	76-125	5	20
2-Butanone	0.154 / 0.149	N.D.	0.283	0.177	184 *	118	51-148	46 *	20
cis-1,2-Dichloroethene	0.0205 / 0.0199	N.D.	0.0171	0.0191	83	96	77-123	12	20
Chloroform	0.0205 / 0.0199	N.D.	0.0202	0.0218	98	110	78-123	8	20
1,1,1-Trichloroethane	0.0205 / 0.0199	N.D.	0.0188	0.0195	92	98	73-130	3	20
Cyclohexane	0.0205 / 0.0199	N.D.	0.0196	0.0208	96	104	67-131	6	20

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 9867762 MS: 9867763 MSD: 9867764 **Analyte**	Batch: **B183042AA** (Sample number(s): 9867761-9867764, 9867766)								
	Spike Added mg/kg MS/MSD	**Unspiked Conc mg/kg**	**MS Conc mg/kg**	**MSD Conc mg/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Carbon Tetrachloride	0.0205 / 0.0199	N.D.	0.0199	0.0205	97	103	70-135	3	20
Benzene	0.0205 / 0.0199	N.D.	0.0179	0.0191	87	96	77-121	7	20
1,2-Dichloroethane	0.0205 / 0.0199	N.D.	0.0178	0.0201	87	101	73-128	12	20
Trichloroethene	0.0205 / 0.0199	N.D.	0.0151	0.0162	74 *	81	77-123	7	20
Methylcyclohexane	0.0205 / 0.0199	N.D.	0.0130	0.0144	63 *	72	66-133	11	20
1,2-Dichloropropane	0.0205 / 0.0199	N.D.	0.0193	0.0207	94	104	76-123	7	20
Bromodichloromethane	0.0205 / 0.0199	N.D.	0.0158	0.0171	77	86	75-127	8	20
cis-1,3-Dichloropropene	0.0205 / 0.0199	N.D.	0.00845	0.0117	41 *	59 *	74-126	32 *	20
4-Methyl-2-pentanone	0.103 / 0.0996	N.D.	0.0588	0.0782	57 *	79	65-135	28 *	20
Toluene	0.0205 / 0.0199	N.D.	0.0208	0.0212	101	106	77-121	2	20
trans-1,3-Dichloropropene	0.0205 / 0.0199	N.D.	0.0111	0.0135	54 *	68 *	71-130	20	20
1,1,2-Trichloroethane	0.0205 / 0.0199	N.D.	0.0209	0.0234	102	118	78-121	12	20
Tetrachloroethene	0.0205 / 0.0199	N.D.	0.0157	0.0163	76	82	73-128	4	20
2-Hexanone	0.103 / 0.0996	N.D.	0.0404	0.0690	39 *	69	53-145	52 *	20
Dibromochloromethane	0.0205 / 0.0199	N.D.	0.0161	0.0180	78	90	74-126	11	20
1,2-Dibromoethane	0.0205 / 0.0199	N.D.	0.0155	0.0178	76 *	89	78-122	13	20
Chlorobenzene	0.0205 / 0.0199	N.D.	0.0147	0.0157	72 *	79	79-120	6	20
Ethylbenzene	0.0205 / 0.0199	N.D.	0.0167	0.0176	81	88	76-122	5	20
Xylene (Total)	0.0616 / 0.0598	N.D.	0.0470	0.0503	76 *	84	78-124	7	20

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 9867762 MS: 9867763 MSD: 9867764 **Analyte**	Batch: **B183042AA** (Sample number(s): 9867761-9867764, 9867766)								
	Spike Added mg/kg MS/MSD	**Unspiked Conc mg/kg**	**MS Conc mg/kg**	**MSD Conc mg/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Styrene	0.0205 / 0.0199	N.D.	0.00970	0.0105	47 *	53 *	76-124	8	20
Bromoform	0.0205 / 0.0199	N.D.	0.00991	0.0119	48 *	60 *	67-132	19	20
Isopropylbenzene	0.0205 / 0.0199	N.D.	0.0158	0.0155	77	78	68-134	2	20
Cyclohexanone	0.513 / 0.498	N.D.	0.419	0.434	82	87	30-156	4	20
1,1,2,2-Tetrachloroethane	0.0205 / 0.0199	N.D.	0.0257	0.0305	125 *	153 *	70-124	17	20
1,3-Dichlorobenzene	0.0205 / 0.0199	N.D.	0.0141	0.0154	69 *	77	77-121	8	20
1,4-Dichlorobenzene	0.0205 / 0.0199	N.D.	0.0139	0.0150	68 *	76	75-120	8	20
1,2-Dichlorobenzene	0.0205 / 0.0199	N.D.	0.0132	0.0152	64 *	76 *	78-121	14	20
1,2-Dibromo-3-chloropropane	0.0205 / 0.0199	N.D.	0.0110	0.0171	53 *	86	61-132	44 *	20
1,2,4-Trichlorobenzene	0.0205 / 0.0199	N.D.	N.D.	0.00593	0 *	30 *	67-129	200 *	20

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSB86 LCSD: LCDB86	Batch: **B183042AA** (Sample number(s): 9867761-9867764, 9867766)							
Analyte	**Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	0.0200	0.0164	0.0165	82	82	29-149	0	20
Chloromethane	0.0200	0.0206	0.0195	103	97	50-136	6	20
Vinyl Chloride	0.0200	0.0189	0.0193	94	97	56-135	2	20
Bromomethane	0.0200	0.0173	0.0173	86	87	53-143	0	20
Chloroethane	0.0200	0.0188	0.0185	94	93	59-139	1	20
Trichlorofluoromethane	0.0200	0.0188	0.0188	94	94	62-140	0	20
1,1-Dichloroethene	0.0200	0.0197	0.0199	98	100	70-131	1	20
Freon 113	0.0200	0.0198	0.0200	99	100	66-136	1	20
Acetone	0.150	0.135	0.132	90	88	36-164	2	20
Carbon Disulfide	0.0200	0.0165	0.0169	83	84	63-132	2	20
Methyl Acetate	0.0200	0.0216	0.0230	108	115	53-144	7	20
Methylene Chloride	0.0200	0.0190	0.0197	95	98	70-128	3	20
trans-1,2-Dichloroethene	0.0200	0.0199	0.0200	100	100	74-125	0	20
Methyl Tertiary Butyl Ether	0.0200	0.0188	0.0200	94	100	73-125	6	20
1,1-Dichloroethane	0.0200	0.0203	0.0206	101	103	76-125	2	20
2-Butanone	0.150	0.125	0.127	83	85	51-148	1	20
cis-1,2-Dichloroethene	0.0200	0.0209	0.0215	104	108	77-123	3	20
Chloroform	0.0200	0.0201	0.0207	101	103	78-123	3	20
1,1,1-Trichloroethane	0.0200	0.0170	0.0172	85	86	73-130	1	20
Cyclohexane	0.0200	0.0186	0.0188	93	94	67-131	1	20
Carbon Tetrachloride	0.0200	0.0186	0.0189	93	94	70-135	2	20
Benzene	0.0200	0.0194	0.0200	97	100	77-121	3	20
1,2-Dichloroethane	0.0200	0.0202	0.0213	101	106	73-128	5	20
Trichloroethene	0.0200	0.0192	0.0200	96	100	77-123	4	20
Methylcyclohexane	0.0200	0.0198	0.0203	99	102	66-133	3	20
1,2-Dichloropropane	0.0200	0.0206	0.0212	103	106	76-123	3	20
Bromodichloromethane	0.0200	0.0191	0.0198	95	99	75-127	3	20
cis-1,3-Dichloropropene	0.0200	0.0193	0.0201	96	100	74-126	4	20
4-Methyl-2-pentanone	0.100	0.0866	0.0955	87	95	65-135	10	20
Toluene	0.0200	0.0190	0.0195	95	98	77-121	3	20
trans-1,3-Dichloropropene	0.0200	0.0179	0.0190	89	95	71-130	6	20
1,1,2-Trichloroethane	0.0200	0.0204	0.0219	102	109	78-121	7	20
Tetrachloroethene	0.0200	0.0165	0.0171	83	85	73-128	3	20
2-Hexanone	0.100	0.0791	0.0878	79	88	53-145	10	20
Dibromochloromethane	0.0200	0.0185	0.0192	93	96	74-126	4	20
1,2-Dibromoethane	0.0200	0.0198	0.0208	99	104	78-122	5	20
Chlorobenzene	0.0200	0.0195	0.0203	98	101	79-120	4	20
Ethylbenzene	0.0200	0.0192	0.0199	96	99	76-122	3	20
Xylene (Total)	0.0600	0.0579	0.0599	96	100	78-124	3	20
Styrene	0.0200	0.0185	0.0191	92	96	76-124	4	20
Bromoform	0.0200	0.0169	0.0178	84	89	67-132	5	20
Isopropylbenzene	0.0200	0.0194	0.0201	97	100	68-134	3	20

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSB86 LCSD: LCDB86 **Analyte**	Batch: **B183042AA** (Sample number(s): 9867761-9867764, 9867766) **Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Cyclohexanone	0.500	0.333	0.331	67	66	30-156	0	20
1,1,2,2-Tetrachloroethane	0.0200	0.0196	0.0211	98	105	70-124	7	20
1,3-Dichlorobenzene	0.0200	0.0192	0.0201	96	100	77-121	5	20
1,4-Dichlorobenzene	0.0200	0.0195	0.0204	97	102	75-120	5	20
1,2-Dichlorobenzene	0.0200	0.0196	0.0207	98	103	78-121	5	20
1,2-Dibromo-3-chloropropane	0.0200	0.0181	0.0197	91	99	61-132	9	20
1,2,4-Trichlorobenzene	0.0200	0.0192	0.0206	96	103	67-129	7	20

LCS: LCSB93 LCSD: LCDB93 **Analyte**	Batch: **B183101AA** (Sample number(s): 9867761, 9867766-9867767) **Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	0.0200	0.0177	0.0177	88	88	29-149	0	20
Chloromethane	0.0200	0.0190	0.0187	95	94	50-136	1	20
Vinyl Chloride	0.0200	0.0186	0.0186	93	93	56-135	0	20
Bromomethane	0.0200	0.0160	0.0164	80	82	53-143	3	20
Chloroethane	0.0200	0.0176	0.0178	88	89	59-139	1	20
Trichlorofluoromethane	0.0200	0.0198	0.0199	99	99	62-140	0	20
1,1-Dichloroethene	0.0200	0.0215	0.0217	107	108	70-131	1	20
Freon 113	0.0200	0.0231	0.0233	115	116	66-136	1	20
Acetone	0.150	0.116	0.136	78	91	36-164	16	20
Carbon Disulfide	0.0200	0.0143	0.0145	72	72	63-132	1	20
Methyl Acetate	0.0200	0.0216	0.0181	108	91	53-144	17	20
Methylene Chloride	0.0200	0.0196	0.0195	98	97	70-128	1	20
trans-1,2-Dichloroethene	0.0200	0.0207	0.0208	103	104	74-125	1	20
Methyl Tertiary Butyl Ether	0.0200	0.0184	0.0173	92	87	73-125	6	20
1,1-Dichloroethane	0.0200	0.0207	0.0210	103	105	76-125	1	20
2-Butanone	0.150	0.111	0.129	74	86	51-148	15	20
cis-1,2-Dichloroethene	0.0200	0.0213	0.0215	106	107	77-123	1	20
Chloroform	0.0200	0.0206	0.0206	103	103	78-123	0	20
1,1,1-Trichloroethane	0.0200	0.0177	0.0179	89	90	73-130	1	20
Cyclohexane	0.0200	0.0209	0.0210	105	105	67-131	0	20
Carbon Tetrachloride	0.0200	0.0201	0.0201	100	101	70-135	0	20
Benzene	0.0200	0.0201	0.0203	101	101	77-121	1	20
1,2-Dichloroethane	0.0200	0.0209	0.0204	105	102	73-128	2	20
Trichloroethene	0.0200	0.0205	0.0204	102	102	77-123	0	20
Methylcyclohexane	0.0200	0.0222	0.0222	111	111	66-133	0	20
1,2-Dichloropropane	0.0200	0.0210	0.0212	105	106	76-123	1	20
Bromodichloromethane	0.0200	0.0198	0.0196	99	98	75-127	1	20
cis-1,3-Dichloropropene	0.0200	0.0201	0.0199	100	99	74-126	1	20
4-Methyl-2-pentanone	0.100	0.0921	0.0748	92	75	65-135	21 *	20
Toluene	0.0200	0.0193	0.0196	96	98	77-121	2	20

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSB93 LCSD: LCDB93 **Analyte**	Batch: **B183101AA** (Sample number(s): 9867761, 9867766-9867767)							
	Spike Added mg/kg	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
trans-1,3-Dichloropropene	0.0200	0.0187	0.0180	94	90	71-130	4	20
1,1,2-Trichloroethane	0.0200	0.0206	0.0196	103	98	78-121	5	20
Tetrachloroethene	0.0200	0.0170	0.0171	85	86	73-128	1	20
2-Hexanone	0.100	0.0832	0.0688	83	69	53-145	19	20
Dibromochloromethane	0.0200	0.0187	0.0180	93	90	74-126	4	20
1,2-Dibromoethane	0.0200	0.0199	0.0188	99	94	78-122	6	20
Chlorobenzene	0.0200	0.0196	0.0198	98	99	79-120	1	20
Ethylbenzene	0.0200	0.0195	0.0197	98	99	76-122	1	20
Xylene (Total)	0.0600	0.0589	0.0593	98	99	78-124	1	20
Styrene	0.0200	0.0186	0.0187	93	93	76-124	0	20
Bromoform	0.0200	0.0171	0.0161	86	81	67-132	6	20
Isopropylbenzene	0.0200	0.0196	0.0201	98	100	68-134	3	20
Cyclohexanone	0.500	0.431	0.490	86	98	30-156	13	20
1,1,2,2-Tetrachloroethane	0.0200	0.0201	0.0181	101	91	70-124	10	20
1,3-Dichlorobenzene	0.0200	0.0191	0.0193	95	97	77-121	1	20
1,4-Dichlorobenzene	0.0200	0.0193	0.0195	97	97	75-120	1	20
1,2-Dichlorobenzene	0.0200	0.0194	0.0196	97	98	78-121	1	20
1,2-Dibromo-3-chloropropane	0.0200	0.0190	0.0163	95	81	61-132	15	20
1,2,4-Trichlorobenzene	0.0200	0.0195	0.0192	97	96	67-129	1	20

LCS: LCSB97 LCSD: LCDB97 **Analyte**	Batch: **B183112AA** (Sample number(s): 9867767)							
	Spike Added mg/kg	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	0.0200	0.0165	0.0169	82	84	29-149	2	20
Chloromethane	0.0200	0.0198	0.0197	99	99	50-136	0	20
Vinyl Chloride	0.0200	0.0188	0.0192	94	96	56-135	2	20
Bromomethane	0.0200	0.0172	0.0173	86	86	53-143	1	20
Chloroethane	0.0200	0.0184	0.0183	92	92	59-139	1	20
Trichlorofluoromethane	0.0200	0.0188	0.0188	94	94	62-140	0	20
1,1-Dichloroethene	0.0200	0.0230	0.0230	115	115	70-131	0	20
Freon 113	0.0200	0.0252	0.0254	126	127	66-136	1	20
Acetone	0.150	0.119	0.112	80	75	36-164	6	20
Carbon Disulfide	0.0200	0.0193	0.0197	96	99	63-132	2	20
Methyl Acetate	0.0200	0.0210	0.0214	105	107	53-144	2	20
Methylene Chloride	0.0200	0.0201	0.0205	101	103	70-128	2	20
trans-1,2-Dichloroethene	0.0200	0.0217	0.0220	109	110	74-125	1	20
Methyl Tertiary Butyl Ether	0.0200	0.0188	0.0199	94	99	73-125	6	20
1,1-Dichloroethane	0.0200	0.0218	0.0221	109	111	76-125	1	20
2-Butanone	0.150	0.114	0.110	76	73	51-148	3	20
cis-1,2-Dichloroethene	0.0200	0.0224	0.0226	112	113	77-123	1	20
Chloroform	0.0200	0.0213	0.0217	107	109	78-123	2	20

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSB97 LCSD: LCDB97 **Analyte**	Batch: **B183112AA** (Sample number(s): 9867767)							
	Spike Added mg/kg	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,1,1-Trichloroethane	0.0200	0.0188	0.0191	94	95	73-130	2	20
Cyclohexane	0.0200	0.0231	0.0233	115	117	67-131	1	20
Carbon Tetrachloride	0.0200	0.0214	0.0217	107	108	70-135	1	20
Benzene	0.0200	0.0210	0.0216	105	108	77-121	3	20
1,2-Dichloroethane	0.0200	0.0212	0.0219	106	109	73-128	3	20
Trichloroethene	0.0200	0.0215	0.0216	108	108	77-123	0	20
Methylcyclohexane	0.0200	0.0242	0.0246	121	123	66-133	2	20
1,2-Dichloropropane	0.0200	0.0217	0.0222	109	111	76-123	2	20
Bromodichloromethane	0.0200	0.0201	0.0208	100	104	75-127	3	20
cis-1,3-Dichloropropene	0.0200	0.0201	0.0212	101	106	74-126	5	20
4-Methyl-2-pentanone	0.100	0.0753	0.0835	75	83	65-135	10	20
Toluene	0.0200	0.0205	0.0208	102	104	77-121	1	20
trans-1,3-Dichloropropene	0.0200	0.0183	0.0196	92	98	71-130	7	20
1,1,2-Trichloroethane	0.0200	0.0203	0.0212	102	106	78-121	4	20
Tetrachloroethene	0.0200	0.0180	0.0183	90	91	73-128	2	20
2-Hexanone	0.100	0.0670	0.0750	67	75	53-145	11	20
Dibromochloromethane	0.0200	0.0183	0.0194	91	97	74-126	6	20
1,2-Dibromoethane	0.0200	0.0194	0.0201	97	101	78-122	4	20
Chlorobenzene	0.0200	0.0203	0.0208	102	104	79-120	2	20
Ethylbenzene	0.0200	0.0207	0.0208	104	104	76-122	0	20
Xylene (Total)	0.0600	0.0620	0.0625	103	104	78-124	1	20
Styrene	0.0200	0.0192	0.0195	96	98	76-124	2	20
Bromoform	0.0200	0.0162	0.0172	81	86	67-132	6	20
Isopropylbenzene	0.0200	0.0208	0.0211	104	105	68-134	1	20
Cyclohexanone	0.500	0.345	0.349	69	70	30-156	1	20
1,1,2,2-Tetrachloroethane	0.0200	0.0186	0.0197	93	99	70-124	6	20
1,3-Dichlorobenzene	0.0200	0.0198	0.0202	99	101	77-121	2	20
1,4-Dichlorobenzene	0.0200	0.0199	0.0203	100	101	75-120	2	20
1,2-Dichlorobenzene	0.0200	0.0199	0.0203	99	102	78-121	2	20
1,2-Dibromo-3-chloropropane	0.0200	0.0167	0.0176	84	88	61-132	5	20
1,2,4-Trichlorobenzene	0.0200	0.0199	0.0201	99	100	67-129	1	20

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: TID10
Matrix: LIQUID

GC/MS Volatiles
Fraction: Volatiles by GC/MS

LCS: LCSH96	Batch: **H183094AA** (Sample number(s): 9867760)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	2.82	NA	56	NA	32-152	NA	NA
Chloromethane	5.00	3.38	NA	68	NA	50-139	NA	NA
Vinyl Chloride	5.00	3.47	NA	69	NA	58-137	NA	NA
Bromomethane	5.00	3.37	NA	67	NA	53-141	NA	NA
Chloroethane	5.00	3.49	NA	70	NA	60-138	NA	NA
Trichlorofluoromethane	5.00	3.45	NA	69	NA	65-141	NA	NA
1,1-Dichloroethene	5.00	4.52	NA	90	NA	71-131	NA	NA
Freon 113	5.00	3.96	NA	79	NA	70-136	NA	NA
Acetone	37.5	29.68	NA	79	NA	39-160	NA	NA
Carbon Disulfide	5.00	3.85	NA	77	NA	64-133	NA	NA
Methyl Acetate	5.00	3.99	NA	80	NA	56-136	NA	NA
Methylene Chloride	5.00	4.34	NA	87	NA	74-124	NA	NA
trans-1,2-Dichloroethene	5.00	4.54	NA	91	NA	75-124	NA	NA
Methyl Tertiary Butyl Ether	5.00	4.45	NA	89	NA	71-124	NA	NA
1,1-Dichloroethane	5.00	4.55	NA	91	NA	77-125	NA	NA
2-Butanone	37.5	32.99	NA	88	NA	56-143	NA	NA
cis-1,2-Dichloroethene	5.00	4.67	NA	93	NA	78-123	NA	NA
Chloroform	5.00	4.67	NA	93	NA	79-124	NA	NA
1,1,1-Trichloroethane	5.00	4.54	NA	91	NA	74-131	NA	NA
Cyclohexane	5.00	3.95	NA	79	NA	71-130	NA	NA
Carbon Tetrachloride	5.00	4.53	NA	91	NA	72-136	NA	NA
Benzene	5.00	4.53	NA	91	NA	79-120	NA	NA
1,2-Dichloroethane	5.00	4.51	NA	90	NA	73-128	NA	NA
Trichloroethene	5.00	4.52	NA	90	NA	79-123	NA	NA
Methylcyclohexane	5.00	3.74	NA	75	NA	72-132	NA	NA
1,2-Dichloropropane	5.00	4.70	NA	94	NA	78-122	NA	NA
Bromodichloromethane	5.00	4.69	NA	94	NA	79-125	NA	NA
cis-1,3-Dichloropropene	5.00	4.68	NA	94	NA	75-124	NA	NA
4-Methyl-2-Pentanone	25	21.42	NA	86	NA	67-130	NA	NA
Toluene	5.00	4.89	NA	98	NA	80-121	NA	NA
trans-1,3-Dichloropropene	5.00	5.06	NA	101	NA	73-127	NA	NA
1,1,2-Trichloroethane	5.00	5.18	NA	104	NA	80-119	NA	NA
Tetrachloroethene	5.00	4.82	NA	96	NA	74-129	NA	NA
2-Hexanone	25	21.46	NA	86	NA	57-139	NA	NA
Dibromochloromethane	5.00	4.97	NA	99	NA	74-126	NA	NA
1,2-Dibromoethane	5.00	4.98	NA	100	NA	77-121	NA	NA
Chlorobenzene	5.00	4.91	NA	98	NA	82-118	NA	NA
Ethylbenzene	5.00	4.93	NA	99	NA	79-121	NA	NA
Xylene (Total)	15	14.9	NA	99	NA	79-121	NA	NA
Styrene	5.00	5.04	NA	101	NA	78-123	NA	NA
Bromoform	5.00	4.93	NA	99	NA	66-130	NA	NA
Isopropylbenzene	5.00	4.92	NA	98	NA	72-131	NA	NA

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSH96	Batch: **H183094AA** (Sample number(s): 9867760)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,1,2,2-Tetrachloroethane	5.00	4.96	NA	99	NA	71-121	NA	NA
1,3-Dichlorobenzene	5.00	4.94	NA	99	NA	80-119	NA	NA
1,4-Dichlorobenzene	5.00	4.96	NA	99	NA	79-118	NA	NA
1,2-Dichlorobenzene	5.00	4.91	NA	98	NA	80-119	NA	NA
1,2-Dibromo-3-chloropropane	5.00	4.31	NA	86	NA	62-128	NA	NA
1,2,4-Trichlorobenzene	5.00	4.54	NA	91	NA	69-130	NA	NA

LCS: LCSH97 LCSD: LCDH97	Batch: **H183094AA** (Sample number(s): 9867760)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Cyclohexanone	125	98.72	110.52	79	88	26-147	11	30

Fraction: Volatiles by GC/MS

11996: VOCs- 25ml Water by 8260C Analyte Name	Default DL	Default LOD	Default LOQ	Units
Dichlorodifluoromethane	.05	.2	0.5	ug/l
Chloromethane	.06	.2	0.5	ug/l
Vinyl Chloride	.1	.2	0.5	ug/l
Bromomethane	.07	.2	0.5	ug/l
Chloroethane	.07	.2	0.5	ug/l
Trichlorofluoromethane	.05	.2	0.5	ug/l
1,1-Dichloroethene	.06	.2	0.5	ug/l
Freon 113	.06	.2	0.5	ug/l
Acetone	.9	2	5.0	ug/l
Carbon Disulfide	.06	.2	1.0	ug/l
Methyl Acetate	.1	.2	1.0	ug/l
Methylene Chloride	.07	.2	0.5	ug/l
trans-1,2-Dichloroethene	.06	.2	0.5	ug/l
Methyl Tertiary Butyl Ether	.05	.2	0.5	ug/l
1,1-Dichloroethane	.07	.2	0.5	ug/l
2-Butanone	.6	2	5.0	ug/l
cis-1,2-Dichloroethene	.05	.2	0.5	ug/l
Chloroform	.09	.2	0.5	ug/l
1,1,1-Trichloroethane	.06	.2	0.5	ug/l
Cyclohexane	.05	.2	0.5	ug/l
Carbon Tetrachloride	.07	.2	0.5	ug/l
Benzene	.05	.2	0.5	ug/l
1,2-Dichloroethane	.05	.2	0.5	ug/l
Trichloroethene	.06	.2	0.5	ug/l
Methylcyclohexane	.05	.2	0.5	ug/l
1,2-Dichloropropane	.06	.2	0.5	ug/l
Bromodichloromethane	.05	.2	0.5	ug/l
cis-1,3-Dichloropropene	.05	.2	0.5	ug/l
4-Methyl-2-Pentanone	.7	2	5.0	ug/l
Toluene	.07	.2	0.5	ug/l
trans-1,3-Dichloropropene	.06	.2	0.5	ug/l
1,1,2-Trichloroethane	.06	.2	0.5	ug/l
Tetrachloroethene	.06	.2	0.5	ug/l
2-Hexanone	.6	2	5.0	ug/l
Dibromochloromethane	.07	.2	0.5	ug/l
1,2-Dibromoethane	.06	.2	0.5	ug/l
Chlorobenzene	.06	.2	0.5	ug/l
Ethylbenzene	.06	.2	0.5	ug/l
Xylene (Total)	.1	.4	0.5	ug/l
Styrene	.05	.2	0.5	ug/l
Bromoform	.3	.5	1.0	ug/l
Isopropylbenzene	.05	.2	0.5	ug/l
Cyclohexanone	1.8	7.2	25	ug/l
1,1,2,2-Tetrachloroethane	.07	.2	0.5	ug/l
1,3-Dichlorobenzene	.06	.2	0.5	ug/l
1,4-Dichlorobenzene	.07	.2	0.5	ug/l
1,2-Dichlorobenzene	.06	.2	0.5	ug/l

Fraction: Volatiles by GC/MS

11996: VOCs- 25ml Water by 8260C Analyte Name	Default DL	Default LOD	Default LOQ	Units
1,2-Dibromo-3-chloropropane	.1	.4	0.5	ug/l
1,2,4-Trichlorobenzene	.06	.2	0.5	ug/l

11995: VOCs- Solid by 8260C Analyte Name	Default DL	Default LOD	Default LOQ	Units
Dichlorodifluoromethane	0.0006	0.002	0.005	mg/kg
Chloromethane	0.0006	0.002	0.005	mg/kg
Vinyl Chloride	0.0006	0.002	0.005	mg/kg
Bromomethane	0.0007	0.002	0.005	mg/kg
Chloroethane	0.001	0.004	0.005	mg/kg
Trichlorofluoromethane	0.0007	0.002	0.005	mg/kg
1,1-Dichloroethene	0.0005	0.002	0.005	mg/kg
Freon 113	0.0006	0.002	0.010	mg/kg
Acetone	0.006	0.016	0.020	mg/kg
Carbon Disulfide	0.0006	0.002	0.005	mg/kg
Methyl Acetate	0.001	0.004	0.005	mg/kg
Methylene Chloride	0.002	0.004	0.005	mg/kg
trans-1,2-Dichloroethene	0.0005	0.002	0.005	mg/kg
Methyl Tertiary Butyl Ether	0.0005	0.002	0.005	mg/kg
1,1-Dichloroethane	0.0005	0.002	0.005	mg/kg
2-Butanone	0.001	0.004	0.010	mg/kg
cis-1,2-Dichloroethene	0.0005	0.002	0.005	mg/kg
Chloroform	0.0006	0.002	0.005	mg/kg
1,1,1-Trichloroethane	0.0006	0.002	0.005	mg/kg
Cyclohexane	0.0005	0.002	0.005	mg/kg
Carbon Tetrachloride	0.0005	0.002	0.005	mg/kg
Benzene	0.0005	0.002	0.005	mg/kg
1,2-Dichloroethane	0.0006	0.002	0.005	mg/kg
Trichloroethene	0.0005	0.002	0.005	mg/kg
Methylcyclohexane	0.0006	0.002	0.005	mg/kg
1,2-Dichloropropane	0.0005	0.002	0.005	mg/kg
Bromodichloromethane	0.0004	0.001	0.005	mg/kg
cis-1,3-Dichloropropene	0.0004	0.001	0.005	mg/kg
4-Methyl-2-pentanone	0.001	0.004	0.010	mg/kg
Toluene	0.0006	0.002	0.005	mg/kg
trans-1,3-Dichloropropene	0.0003	0.001	0.005	mg/kg
1,1,2-Trichloroethane	0.0005	0.002	0.005	mg/kg
Tetrachloroethene	0.0005	0.002	0.005	mg/kg
2-Hexanone	0.001	0.004	0.010	mg/kg
Dibromochloromethane	0.0004	0.001	0.005	mg/kg
1,2-Dibromoethane	0.0004	0.001	0.005	mg/kg
Chlorobenzene	0.0005	0.002	0.005	mg/kg
Ethylbenzene	0.0004	0.001	0.005	mg/kg
Xylene (Total)	0.001	0.002	0.005	mg/kg
Styrene	0.0003	0.001	0.005	mg/kg
Bromoform	0.005	0.008	0.010	mg/kg
Isopropylbenzene	0.0004	0.001	0.005	mg/kg

Fraction: Volatiles by GC/MS

11995: VOCs- Solid by 8260C Analyte Name	Default DL	Default LOD	Default LOQ	Units
Cyclohexanone	0.025	0.10	0.25	mg/kg
1,1,2,2-Tetrachloroethane	0.0004	0.001	0.005	mg/kg
1,3-Dichlorobenzene	0.0005	0.002	0.005	mg/kg
1,4-Dichlorobenzene	0.0004	0.001	0.005	mg/kg
1,2-Dichlorobenzene	0.0005	0.002	0.005	mg/kg
1,2-Dibromo-3-chloropropane	0.0004	0.001	0.005	mg/kg
1,2,4-Trichlorobenzene	0.005	0.008	0.010	mg/kg

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: bs12t10.d BFB Injection Date: 09/12/18

Instrument ID: HP09953 BFB Injection Time: 11:40

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.29
75	30.0 - 60.0% of mass 95	44.06
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.68
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	93.54
175	5.0 - 9.0% of mass 174	6.64 (7.10)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.38 (96.62)1
177	5.0 - 9.0% of mass 176	5.91 (6.54)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	bs12i10.d	09/12/18	13:13
02	VSTD100	bs12i11.d	09/12/18	13:36
03	VSTD50	bs12i13.d	09/12/18	13:59
04	VSTD20	bs12i14.d	09/12/18	14:22
05	VSTD10	bs12i15.d	09/12/18	14:45
06	VSTD4	bs12i16.d	09/12/18	15:08
07	VSTD1	bs12i17.d	09/12/18	15:30
08	MDL0.5 - MDL0.5	bs12m10.d	09/12/18	15:53
09	ICVB01	bs12v10.d	09/12/18	16:16
10	VSTD300	bs12i20.d	09/12/18	17:01
11	VSTD100	bs12i21.d	09/12/18	17:24
12	VSTD50	bs12i22.d	09/12/18	17:47
13	VSTD20	bs12i23.d	09/12/18	18:10
14	VSTD10	bs12i24.d	09/12/18	18:33
15	VSTD4	bs12i25.d	09/12/18	18:55
16	MDLB1.0 - MDLB1.0	bs12m20.d	09/12/18	19:18
17	ICVSM11	bs12v20.d	09/12/18	19:41

FORM V VOA

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: bc31t10.d BFB Injection Date: 10/31/18

Instrument ID: HP09953 BFB Injection Time: 08:14

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.44
75	30.0 - 60.0% of mass 95	43.52
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.91
173	Less than 2.0% of mass 174	0.41 (0.43)1
174	Greater than 50.0% of mass 95	96.21
175	5.0 - 9.0% of mass 174	7.01 (7.28)1
176	Greater than 95.0%, but less than 101.0% of mass 174	93.87 (97.57)1
177	5.0 - 9.0% of mass 176	6.12 (6.52)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	bc31c10.d	10/31/18	09:03
02	LCSB85	bc31l10.d	10/31/18	10:14
03	LCSB86	bc31l20.d	10/31/18	10:14
04	LCDB85	bc31l11.d	10/31/18	10:37
05	LCDB86	bc31l21.d	10/31/18	10:37
06	VBLKB85	bc31b10.d	10/31/18	11:25
07	VBLKB86	bc31b20.d	10/31/18	11:25
08	9865717	bc31s11.d	10/31/18	12:05
09	9865718	bc31s13.d	10/31/18	12:51
10	9866495	bc31s14.d	10/31/18	13:14
11	9866496	bc31s15.d	10/31/18	13:37
12	9866497	bc31s16.d	10/31/18	14:00
13	9866498	bc31s17.d	10/31/18	14:22
14	9866499	bc31s18.d	10/31/18	14:45
15	9867815	bc31s19.d	10/31/18	15:08
16	9867816	bc31s20.d	10/31/18	15:31
17	9867817	bc31s21.d	10/31/18	15:53
18	9867818	bc31s22.d	10/31/18	16:16
19	9866466RE	bc31s33.d	10/31/18	16:39
20	9866467RE	bc31s34.d	10/31/18	17:02
21	9867761	bc31s35.d	10/31/18	17:24
22	9867762	bc31s36.d	10/31/18	17:47

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: bc31t10.d BFB Injection Date: 10/31/18

Instrument ID: HP09953 BFB Injection Time: 08:14

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.44
75	30.0 - 60.0% of mass 95	43.52
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.91
173	Less than 2.0% of mass 174	0.41 (0.43)1
174	Greater than 50.0% of mass 95	96.21
175	5.0 - 9.0% of mass 174	7.01 (7.28)1
176	Greater than 95.0%, but less than 101.0% of mass 174	93.87 (97.57)1
177	5.0 - 9.0% of mass 176	6.12 (6.52)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	9867763MS	bc31s37.d	10/31/18	18:09
24	9867764MSD	bc31s38.d	10/31/18	18:32
25	9867815MS	bc31s23.d	10/31/18	18:54
26	9867766	bc31s39.d	10/31/18	19:17
27	9870990	bc31s41.d	10/31/18	19:39
28	SECC050	bc31ec1.d	10/31/18	20:02

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: bn06t01.d BFB Injection Date: 11/06/18

Instrument ID: HP09953 BFB Injection Time: 19:12

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.70
75	30.0 - 60.0% of mass 95	44.52
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.88
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	93.46
175	5.0 - 9.0% of mass 174	6.67 (7.14)1
176	Greater than 95.0%, but less than 101.0% of mass 174	91.23 (97.62)1
177	5.0 - 9.0% of mass 176	6.14 (6.73)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	bn06c01.d	11/06/18	19:51
02	MDL050 - MDL050	bn06m01.d	11/06/18	20:16
03	MDLB50 - MDLB50	bn06m10.d	11/06/18	20:16
04	VBLKB93	bn06b01.d	11/06/18	20:41
05	VBLKB94	bn06b05.d	11/06/18	20:41
06	LCSB93	bn06s01.d	11/06/18	21:07
07	LCSB94	bn06s31.d	11/06/18	21:07
08	LCDB93	bn06s02.d	11/06/18	21:29
09	LCDB94	bn06s32.d	11/06/18	21:29
10	9867761RE	bn06s03.d	11/06/18	22:32
11	9867766RE	bn06s04.d	11/06/18	22:55
12	9867767	bn06s05.d	11/06/18	23:18
13	9870251	bn06s06.d	11/06/18	23:41
14	9870252	bn06s07.d	11/07/18	00:04
15	9870253	bn06s08.d	11/07/18	00:27
16	9872065	bn06s09.d	11/07/18	00:50
17	SECC050	bn06ec5.d	11/07/18	01:16
18	9867824RE	bn06s33.d	11/07/18	02:01
19	9878580	bn06s34.d	11/07/18	02:24
20	9878581	bn06s35.d	11/07/18	02:46
21	9878584	bn06s36.d	11/07/18	03:09
22	9878585	bn06s37.d	11/07/18	03:32

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: bn06t01.d BFB Injection Date: 11/06/18

Instrument ID: HP09953 BFB Injection Time: 19:12

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.70
75	30.0 - 60.0% of mass 95	44.52
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.88
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	93.46
175	5.0 - 9.0% of mass 174	6.67 (7.14)1
176	Greater than 95.0%, but less than 101.0% of mass 174	91.23 (97.62)1
177	5.0 - 9.0% of mass 176	6.14 (6.73)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	9882246	bn06s38.d	11/07/18	03:55
24	9883608	bn06s39.d	11/07/18	04:18
25	9883609	bn06s40.d	11/07/18	04:41
26	9883610	bn06s41.d	11/07/18	05:03
27	9878583	bn06s42.d	11/07/18	05:25
28	9878582	bn06s43.d	11/07/18	05:48

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: bn07t01.d BFB Injection Date: 11/07/18

Instrument ID: HP09953 BFB Injection Time: 07:35

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.97
75	30.0 - 60.0% of mass 95	44.55
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.08
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	90.87
175	5.0 - 9.0% of mass 174	6.51 (7.17)1
176	Greater than 95.0%, but less than 101.0% of mass 174	88.34 (97.22)1
177	5.0 - 9.0% of mass 176	5.85 (6.62)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	bn07c01.d	11/07/18	08:13
02	VSTD50	bn07c02.d	11/07/18	08:36
03	LCSB95	bn07l01.d	11/07/18	09:01
04	LCSB97	bn07l31.d	11/07/18	09:01
05	LCSB98	bn07l61.d	11/07/18	09:01
06	LCDB95	bn07l02.d	11/07/18	09:24
07	LCDB97	bn07l32.d	11/07/18	09:24
08	LCDB98	bn07l62.d	11/07/18	09:24
09	LCSB96	bn07l03.d	11/07/18	09:47
10	LCDB96	bn07l04.d	11/07/18	10:10
11	VBLKB95	bn07b01.d	11/07/18	10:32
12	VBLKB97	bn07b30.d	11/07/18	10:32
13	VBLKB98	bn07b60.d	11/07/18	10:32
14	9867767RE	bn07s33.d	11/07/18	11:35
15	9872065RE	bn07s34.d	11/07/18	11:58
16	9870252RE	bn07s35.d	11/07/18	12:21
17	9870253RE	bn07s36.d	11/07/18	12:44
18	9884806	bn07s37.d	11/07/18	13:07
19	9884807	bn07s38.d	11/07/18	13:30
20	9884808	bn07s39.d	11/07/18	13:52
21	9884809	bn07s40.d	11/07/18	14:15
22	9884810MS	bn07s41.d	11/07/18	14:38

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: bn07t01.d BFB Injection Date: 11/07/18

Instrument ID: HP09953 BFB Injection Time: 07:35

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.97
75	30.0 - 60.0% of mass 95	44.55
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.08
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	90.87
175	5.0 - 9.0% of mass 174	6.51 (7.17)1
176	Greater than 95.0%, but less than 101.0% of mass 174	88.34 (97.22)1
177	5.0 - 9.0% of mass 176	5.85 (6.62)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	9884811MSD	bn07s42.d	11/07/18	15:00
24	9884813	bn07s43.d	11/07/18	15:23
25	9884814	bn07s44.d	11/07/18	15:46
26	9884815	bn07s45.d	11/07/18	16:08
27	9878918	bn07s02.d	11/07/18	16:30
28	9878916MS	bn07s03.d	11/07/18	16:53
29	9878917MSD	bn07s04.d	11/07/18	17:16
30	9878916MS	bn07s05.d	11/07/18	17:38
31	9878917MSD	bn07s06.d	11/07/18	18:01
32	9878915	bn07s07.d	11/07/18	18:24
33	SECC050	bn07c03.d	11/07/18	18:47
34	9876025	bn07s61.d	11/07/18	19:10
35	9876033	bn07s62.d	11/07/18	19:32

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: hy02t07.d BFB Injection Date: 05/02/18

Instrument ID: HP19094 BFB Injection Time: 18:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.13
75	30.0 - 60.0% of mass 95	52.51
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.69
173	Less than 2.0% of mass 174	0.74 (0.91)1
174	Greater than 50.0% of mass 95	81.35
175	5.0 - 9.0% of mass 174	6.02 (7.39)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.44 (96.43)1
177	5.0 - 9.0% of mass 176	5.34 (6.81)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	hy02i11.d	05/02/18	19:15
02	VSTD10	hy02i12.d	05/02/18	19:36
03	VSTD5	hy02i13.d	05/02/18	19:58
04	VSTD2	hy02i14.d	05/02/18	20:19
05	VSTD1	hy02i15.d	05/02/18	20:40
06	VSTD.5	hy02i16.d	05/02/18	21:02
07	VSTD.2	hy02i17.d	05/02/18	21:23
08	MDL0.1 - MDL0.1	hy02m11.d	05/02/18	21:45
09	LCSH88	hy02v11.d	05/02/18	22:07

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: hs24t05.d BFB Injection Date: 09/24/18

Instrument ID: HP19094 BFB Injection Time: 17:53

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.30
75	30.0 - 60.0% of mass 95	48.01
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.23
173	Less than 2.0% of mass 174	0.88 (0.99)1
174	Greater than 50.0% of mass 95	88.37
175	5.0 - 9.0% of mass 174	6.59 (7.45)1
176	Greater than 95.0%, but less than 101.0% of mass 174	86.23 (97.58)1
177	5.0 - 9.0% of mass 176	6.27 (7.28)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	hs24i01.d	09/24/18	18:29
02	VSTD10	hs24i02.d	09/24/18	18:50
03	VSTD5	hs24i03.d	09/24/18	19:11
04	VSTD2	hs24i04.d	09/24/18	19:33
05	VSTD1	hs24i05.d	09/24/18	19:54
06	VSTD.5	hs24i06.d	09/24/18	20:16
07	VSTD.2	hs24i07.d	09/24/18	20:37
08	MDL0.1 - MDL0.1	hs24m01.d	09/24/18	20:59
09	ICVHLG	hs24v01.d	09/24/18	21:20

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: hn05t05.d BFB Injection Date: 11/05/18

Instrument ID: HP19094 BFB Injection Time: 19:34

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.24
75	30.0 - 60.0% of mass 95	47.28
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.97
173	Less than 2.0% of mass 174	0.97 (1.10)1
174	Greater than 50.0% of mass 95	87.59
175	5.0 - 9.0% of mass 174	7.08 (8.08)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.77 (95.64)1
177	5.0 - 9.0% of mass 176	5.80 (6.92)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	hn05c01.d	11/05/18	20:18
02	VSTD10	hn05c02.d	11/05/18	20:39
03	LCSH94	hn05s42.d	11/05/18	21:22
04	LCSH96	hn05s72.d	11/05/18	21:22
05	LCSH95	hn05s43.d	11/05/18	21:43
06	LCSH97	hn05s73.d	11/05/18	21:43
07	LCDH95	hn05s44.d	11/05/18	22:05
08	LCDH97	hn05s74.d	11/05/18	22:05
09	MDL94 - MDL94	hn05m01.d	11/05/18	22:26
10	MDL96 - MDL96	hn05m05.d	11/05/18	22:26
11	VBLKH94	hn05b05.d	11/05/18	22:48
12	VBLKH96	hn05b10.d	11/05/18	22:48
13	9868189	hn05s45.d	11/05/18	23:09
14	9868190	hn05s46.d	11/05/18	23:31
15	9868188	hn05s47.d	11/05/18	23:52
16	9868184	hn05s48.d	11/06/18	00:14
17	9868185	hn05s49.d	11/06/18	00:35
18	9868186	hn05s50.d	11/06/18	00:56
19	9868187	hn05s51.d	11/06/18	01:18
20	9868187MS	hn05s52.d	11/06/18	01:39
21	9868187MSD	hn05s53.d	11/06/18	02:01
22	9876332	hn05s75.d	11/06/18	02:22

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: hn05t05.d BFB Injection Date: 11/05/18

Instrument ID: HP19094 BFB Injection Time: 19:34

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.24
75	30.0 - 60.0% of mass 95	47.28
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.97
173	Less than 2.0% of mass 174	0.97 (1.10)1
174	Greater than 50.0% of mass 95	87.59
175	5.0 - 9.0% of mass 174	7.08 (8.08)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.77 (95.64)1
177	5.0 - 9.0% of mass 176	5.80 (6.92)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	9876334	hn05s76.d	11/06/18	02:44
24	9876335MS	hn05s77.d	11/06/18	03:05
25	9876336MSD	hn05s78.d	11/06/18	03:26
26	9876335MS1	hn05s79.d	11/06/18	03:48
27	9876336MSD1	hn05s80.d	11/06/18	04:09
28	9876342	hn05s81.d	11/06/18	04:31
29	9866460	hn05s82.d	11/06/18	04:52
30	9867760	hn05s83.d	11/06/18	05:14
31	9870250	hn05s84.d	11/06/18	05:35
32	9872059	hn05s85.d	11/06/18	05:57
33	9874410	hn05s86.d	11/06/18	06:18
34	9876331	hn05s87.d	11/06/18	06:40
35	SECC010	hn05ec5.d	11/06/18	07:01
36	SECD010	hn05ec6.d	11/06/18	07:22

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date(s): 09/12/18 09/12/18

Heated Purge: (Y/N) Y Calibration Times: 13:13 15:30

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = bs12i17.d RRF 4 = bs12i16.d RRF 10= bs12i15.d
RRF 20= bs12i14.d RRF 50= bs12i13.d RRF100= bs12i11.d RRF300= bs12i10.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.3747	0.5345	0.5213	0.4622	0.4268	0.4236	0.4174	0.4515	13	AVG #
Chloromethane	#0.4885	0.5120	0.5027	0.4785	0.4339	0.4285	0.4135	0.4654	8	AVG #
Vinyl Chloride	#0.4014	0.3993	0.3971	0.3687	0.3371	0.3248	0.3098	0.3626	11	AVG #
Bromomethane	#0.3523	0.3618	0.3665	0.3391	0.3100	0.2929	0.2366	0.3227	14	AVG #
Chloroethane	#0.1934	0.2234	0.2246	0.2067	0.1906	0.1787	0.1480	0.1951	14	AVG #
Dichlorofluoromethane	0.5145	0.5107	0.5127	0.4899	0.4473	0.4343	0.3926	0.4717	10	AVG
Trichlorofluoromethane	#0.4443	0.5613	0.5614	0.5172	0.4812	0.4760	0.4529	0.4992	10	AVG #
Ethanol	0.1767	0.1423	0.1294	0.1198	0.1163	0.1216	0.1068	0.1304	18	AVG
Freon 123a	0.4350	0.3788	0.3345	0.3334	0.3007	0.2947	0.2624	0.3342	17	AVG
Acrolein	3.3320	2.4427	2.7495	2.0904	2.1312	2.1258	2.0356	2.4153	20	AVG
1,1-Dichloroethene	#0.2538	0.2720	0.2603	0.2655	0.2474	0.2402	0.2168	0.2508	7	AVG #
Acetone	#2.8015	1.9546	1.8448	1.2443	1.0916	1.0933	1.0171	1.5782	42	2NDDEG #
Freon 113	#0.2193	0.2773	0.2609	0.2738	0.2501	0.2499	0.2292	0.2515	9	AVG #
2-Propanol	1.0384	0.9281	1.0157	0.9245	1.0054	0.9435	0.9056	0.9659	5	AVG
Methyl Iodide	0.5945	0.6358	0.6223	0.6379	0.6045	0.5865	0.5407	0.6032	6	AVG
Carbon Disulfide	#0.9555	1.0655	1.0403	1.0738	1.0031	0.9818	0.9060	1.0037	6	AVG #
Methyl Acetate	#	0.1408	0.1289	0.1412	0.1262	0.1181	0.1166	0.1286	8	AVG #
Allyl Chloride	0.3610	0.3471	0.3354	0.3545	0.3316	0.3214	0.2977	0.3355	6	AVG
Methylene Chloride	#0.3504	0.3145	0.3034	0.3026	0.2798	0.2707	0.2538	0.2964	11	AVG #
t-Butyl alcohol	1.4059	1.4144	1.3872	1.3059	1.3390	1.2215	1.1187	1.3132	8	AVG
Acrylonitrile	0.1191	0.0867	0.0987	0.0875	0.0764	0.0704	0.0707	0.0871	20	AVG
Methyl Tertiary Butyl Ether	#0.7663	0.7160	0.7167	0.7629	0.7291	0.6735	0.6301	0.7135	7	AVG #
trans-1,2-Dichloroethene	#0.2984	0.3072	0.2993	0.3112	0.2909	0.2786	0.2564	0.2917	6	AVG #
n-Hexane	0.3475	0.3636	0.3571	0.3489	0.3103	0.3188	0.2847	0.3330	9	AVG
1,1-Dichloroethane	#0.4497	0.4868	0.4792	0.5011	0.4830	0.4733	0.4379	0.4730	5	AVG #
di-Isopropyl ether	0.8675	0.9001	0.8924	0.9388	0.9028	0.8695	0.8089	0.8828	5	AVG
2-Chloro-1,3-butadiene	0.3800	0.4426	0.4242	0.4471	0.4245	0.4168	0.3826	0.4168	6	AVG
Ethyl t-butyl ether	0.8285	0.8355	0.8350	0.8878	0.8591	0.8160	0.7580	0.8314	5	AVG
2-Butanone	#7.8272	6.6563	7.9535	5.5472	5.4154	5.8227	5.7689	6.4273	17	AVG #
cis-1,2-Dichloroethene	#0.2944	0.3207	0.3164	0.3327	0.3258	0.3209	0.3057	0.3166	4	AVG #
2,2-Dichloropropane	0.3289	0.3537	0.3512	0.3641	0.3492	0.3453	0.3214	0.3448	4	AVG
Propionitrile	1.5511	1.7589	1.6675	1.7393	1.8505	1.7718	1.7305	1.7242	5	AVG
Methacrylonitrile	0.1053	0.0900	0.0947	0.1036	0.1010	0.0932	0.0933	0.0973	6	AVG
Bromochloromethane	0.1630	0.1628	0.1658	0.1753	0.1722	0.1713	0.1671	0.1682	3	AVG
Tetrahydrofuran	1.2957	1.6561	1.9108	1.5240	1.5421	1.6362	1.6420	1.6010	12	AVG
Chloroform	#0.4674	0.4910	0.4788	0.5034	0.4892	0.4777	0.4532	0.4801	3	AVG #
1,1,1-Trichloroethane	#0.4719	0.5648	0.4966	0.5190	0.4727	0.4692	0.4468	0.4916	8	AVG #
Cyclohexane	#0.4155	0.5013	0.4731	0.4951	0.4611	0.4584	0.4282	0.4618	7	AVG #
Cyclohexane(2)	#0.3541	0.5197	0.4187	0.5125	0.4116	0.4103	0.3940	0.4316	14	AVG #
Cyclohexane(3)	#0.1305	0.1590	0.1481	0.1547	0.1467	0.1458	0.1375	0.1460	7	AVG #
1,1-Dichloropropene	0.3140	0.3749	0.3646	0.3826	0.3659	0.3603	0.3382	0.3572	7	AVG
Carbon Tetrachloride	#0.3046	0.3774	0.3779	0.3980	0.3904	0.3907	0.3743	0.3733	8	AVG #
Isobutyl Alcohol	0.4899	0.4740	0.4652	0.4382	0.4858	0.4535	0.4231	0.4614	5	AVG
Benzene	#1.1963	1.1678	1.1374	1.1766	1.1450	1.1124	1.0475	1.1404	4	AVG #
1,2-Dichloroethane	#0.3795	0.3293	0.3230	0.3395	0.3247	0.3122	0.2956	0.3291	8	AVG #
1,2-Dichloroethane(2)	#0.0298	0.0343	0.0325	0.0346	0.0331	0.0323	0.0323	0.0327	5	AVG #<-
t-Amyl methyl ether	0.7765	0.7584	0.7572	0.8262	0.7989	0.7473	0.7090	0.7676	5	AVG
n-Heptane	0.2923	0.3070	0.3087	0.3398	0.3028	0.2967	0.2791	0.3037	6	AVG
n-Butanol	0.3473	0.3600	0.3999	0.3717	0.4254	0.4183	0.3819	0.3864	8	AVG
Trichloroethene	#0.2782	0.3061	0.2978	0.3126	0.2999	0.3017	0.2855	0.2974	4	AVG #
Methylcyclohexane	#0.3789	0.4959	0.4632	0.4962	0.4710	0.4769	0.4577	0.4628	9	AVG #
1,2-Dichloropropane	#0.2499	0.2766	0.2690	0.2843	0.2803	0.2743	0.2615	0.2708	4	AVG #

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date(s): 09/12/18 09/12/18

Heated Purge: (Y/N) Y Calibration Times: 13:13 15:30

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = bs12i17.d RRF 4 = bs12i16.d RRF 10= bs12i15.d
RRF 20= bs12i14.d RRF 50= bs12i13.d RRF100= bs12i11.d RRF300= bs12i10.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Methyl Methacrylate	0.1781	0.1681	0.1657	0.1831	0.1847	0.1702	0.1720	0.1746	4	AVG
1,4-Dioxane	0.1255	0.1526	0.1624	0.1576	0.1777	0.1756	0.1694	0.1601	11	AVG
Dibromomethane	0.1724	0.1585	0.1610	0.1721	0.1688	0.1640	0.1624	0.1656	3	AVG
Bromodichloromethane	#0.2981	0.3196	0.3295	0.3558	0.3630	0.3547	0.3469	0.3382	7	AVG #
2-Nitropropane	3.1877	3.1997	4.3402	2.8752	2.9571	3.2660	3.3206	3.3067	15	AVG
2-Chloroethyl Vinyl Ether	0.1310	0.1292	0.1427	0.1517	0.1532	0.1450	0.1455	0.1426	7	AVG
cis-1,3-Dichloropropene	#0.3587	0.3867	0.3983	0.4326	0.4399	0.4280	0.4145	0.4084	7	AVG #
4-Methyl-2-pentanone	#0.2295	0.1875	0.3681	0.2264	0.2148	0.2304	0.2131	0.2385	25	2NDDEG #
Toluene	#0.9263	1.0000	0.9588	0.9975	0.9709	0.9552	0.8915	0.9571	4	AVG #
trans-1,3-Dichloropropene	#0.4080	0.4199	0.4408	0.4839	0.4996	0.4851	0.4721	0.4585	8	AVG #
Ethyl Methacrylate	0.4521	0.4201	0.4200	0.4649	0.4813	0.4394	0.4378	0.4451	5	AVG
1,1,2-Trichloroethane	#0.3306	0.3058	0.2989	0.3192	0.3223	0.3010	0.2964	0.3106	4	AVG #
Tetrachloroethene	#0.4006	0.4669	0.6352	0.5674	0.4461	0.6787	0.4750	0.5243	20	AVG #
1,3-Dichloropropane	0.5087	0.5009	0.4911	0.5203	0.5169	0.4905	0.4726	0.5001	3	AVG
2-Hexanone	#0.1962	0.1581	0.3739	0.2045	0.1935	0.2191	0.1891	0.2192	32	2NDDEG #
Dibromochloromethane	#0.2959	0.3248	0.3379	0.3724	0.3989	0.3865	0.3887	0.3578	11	AVG #
1,2-Dibromoethane	#0.3009	0.3144	0.3118	0.3358	0.3412	0.3231	0.3191	0.3209	4	AVG #
1-Chlorohexane	0.4109	0.4871	0.4804	0.5021	0.4919	0.4910	0.4658	0.4756	6	AVG
Chlorobenzene	#1.1024	1.1553	1.1129	1.1524	1.1564	1.1080	1.0352	1.1175	4	AVG #
1,1,1,2-Tetrachloroethane	0.3132	0.3667	0.3630	0.3937	0.4141	0.4020	0.3999	0.3789	9	AVG
Ethylbenzene	#1.7060	1.8609	1.8130	1.8902	1.8748	1.8094	1.6470	1.8002	5	AVG #
m+p-Xylene	#0.6926	0.7548	0.7394	0.7789	0.7774	0.7535	0.6454	0.7346	7	AVG #
o-Xylene	#0.6693	0.7414	0.7264	0.7749	0.7806	0.7584	0.6896	0.7344	6	AVG #
Styrene	#1.1056	1.2031	1.1960	1.2652	1.3106	1.2644	1.1299	1.2107	6	AVG #
Bromoform	#0.1825	0.1891	0.1942	0.2266	0.2562	0.2468	0.2656	0.2230	15	AVG #
Isopropylbenzene	#1.7082	1.9313	1.8621	1.9758	1.9546	1.8885	1.6373	1.8511	7	AVG #
Cyclohexanone	0.4266	0.5193	0.6541	0.6215	0.4989	0.6956	0.6398	0.5794	17	AVG
1,1,2,2-Tetrachloroethane	#0.7397	0.7006	0.6472	0.7152	0.7438	0.6524	0.6971	0.6994	5	AVG #
Bromobenzene	0.9289	0.9357	0.8946	0.9186	0.9374	0.8910	0.9065	0.9161	2	AVG
trans-1,4-Dichloro-2-butene	0.1653	0.1511	0.1742	0.1797	0.1868	0.1698	0.1743	0.1716	7	AVG
1,2,3-Trichloropropane	0.2155	0.2050	0.1925	0.2144	0.2191	0.1980	0.2072	0.2074	5	AVG
n-Propylbenzene	3.4084	3.8852	3.6981	3.8355	3.7714	3.6048	3.1498	3.6219	7	AVG
2-Chlorotoluene	0.8187	0.8910	0.8493	0.8504	0.8595	0.8341	0.8461	0.8499	3	AVG
1,3,5-Trimethylbenzene	2.4998	2.9618	2.8448	2.9621	2.9730	2.8657	2.5042	2.8016	8	AVG
4-Chlorotoluene	0.8296	0.8902	0.8592	0.8758	0.8970	0.8624	0.8130	0.8610	4	AVG
tert-Butylbenzene	0.5882	0.6980	0.6492	0.6833	0.7120	0.6608	0.6155	0.6581	7	AVG
Pentachloroethane	0.3929	0.4446	0.2223	0.3918	0.5646	0.2394	0.4991	0.3935	32	AVG
1,2,4-Trimethylbenzene	2.7950	3.0154	2.9294	3.0562	3.0798	2.9389	2.6361	2.9215	5	AVG
sec-Butylbenzene	3.2683	3.8336	3.6592	3.7861	3.7530	3.5952	3.0715	3.5667	8	AVG
1,3-Dichlorobenzene	#1.7612	1.7615	1.6669	1.7440	1.7631	1.6872	1.6512	1.7193	3	AVG #
p-Isopropyltoluene	2.9834	3.4229	3.2558	3.3581	3.4184	3.2530	2.6820	3.1962	9	AVG
1,4-Dichlorobenzene	#1.9863	1.8618	1.7710	1.8131	1.8204	1.7416	1.5532	1.7925	7	AVG #
1,2,3-Trimethylbenzene	3.0366	3.2948	3.1600	3.3292	3.2514	3.2047	2.7685	3.1493	6	AVG
Benzyl Chloride	0.1811	0.1940	0.2087	0.2488	0.2641	0.2530	0.2856	0.2336	17	AVG
1,3-Diethylbenzene	1.7618	2.0381	1.9545	2.0971	2.0437	2.0549	1.8813	1.9759	6	AVG
1,4-Diethylbenzene	1.9012	2.1240	2.0740	2.2052	2.1944	2.1574	1.6985	2.0506	9	AVG
n-Butylbenzene	1.3547	1.5230	1.5026	1.5773	1.5723	1.5091	1.3556	1.4849	6	AVG
1,2-Dichlorobenzene	#1.8498	1.7703	1.6636	1.7345	1.7788	1.6564	1.3127	1.6809	10	AVG #
1,2-Diethylbenzene	1.6130	1.8075	1.7142	1.8126	1.7669	1.7717	1.6146	1.7286	5	AVG
1,2-Dibromo-3-chloropropane	#0.1227	0.1088	0.1091	0.1272	0.1302	0.1199	0.1329	0.1215	8	AVG #
1,3,5-Trichlorobenzene	1.3019	1.3190	1.2522	1.3517	1.3707	1.3181	1.2925	1.3152	3	AVG
1,2,4-Trichlorobenzene	#1.3360	1.2529	1.1698	1.2671	1.2656	1.2044	1.1809	1.2395	5	AVG #

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date(s): 09/12/18 09/12/18

Heated Purge: (Y/N) Y Calibration Times: 13:13 15:30

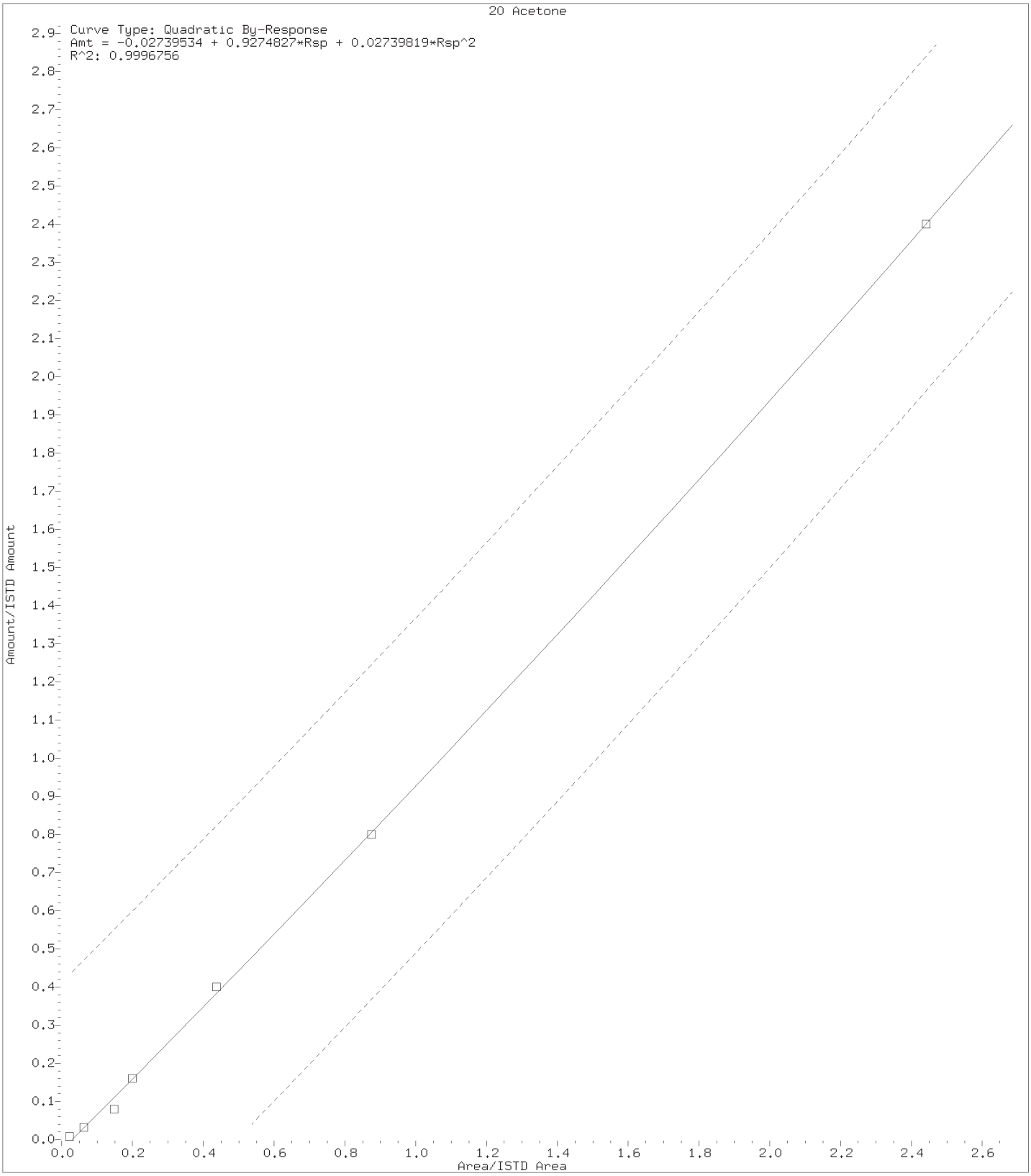
Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = bs12i17.d RRF 4 = bs12i16.d RRF 10= bs12i15.d
RRF 20= bs12i14.d RRF 50= bs12i13.d RRF100= bs12i11.d RRF300= bs12i10.d

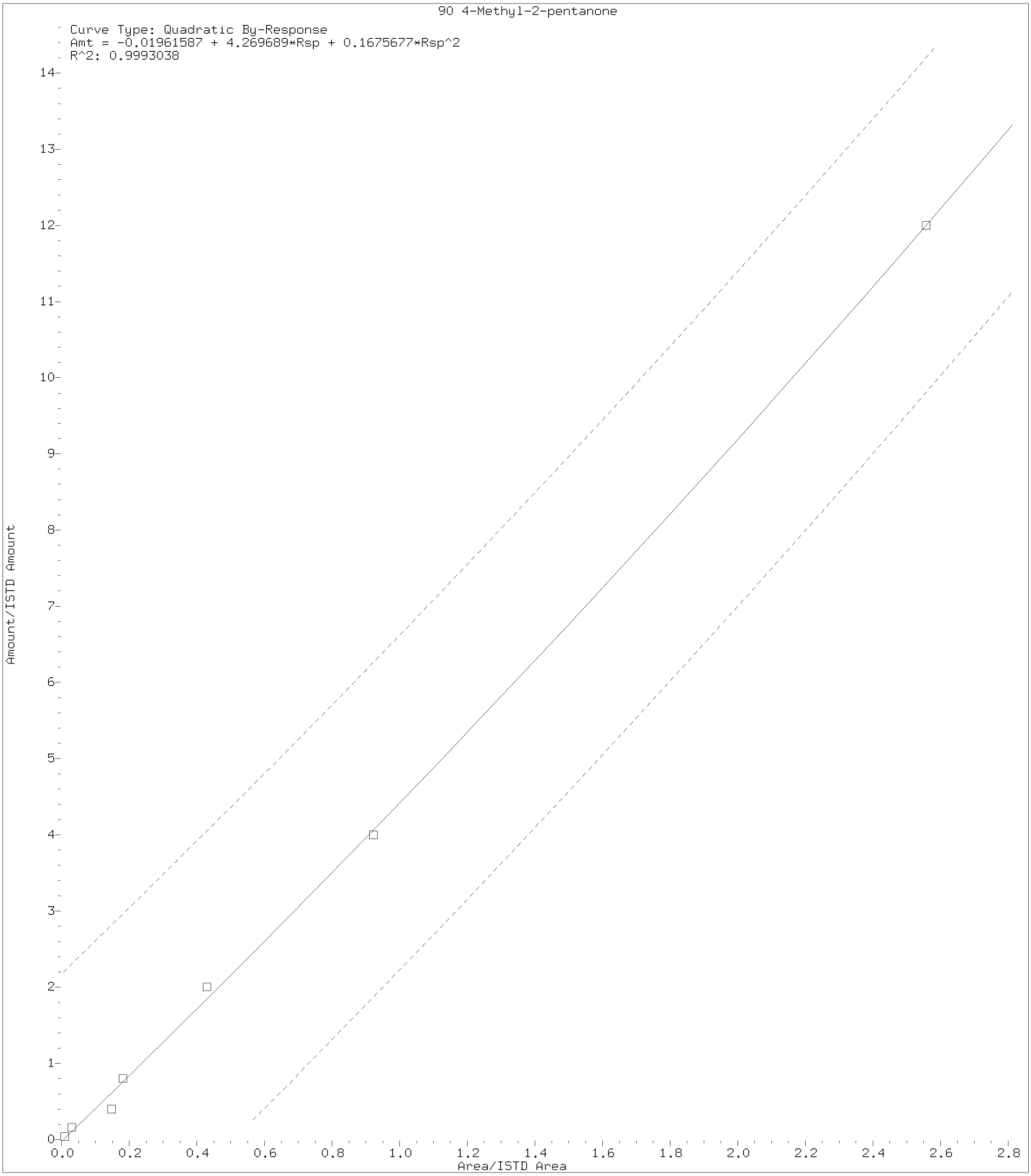
COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Hexachlorobutadiene	0.4921	0.5784	0.5406	0.6019	0.6022	0.5641	0.5795	0.5655	7	AVG
Naphthalene	3.7032	2.9888	2.7610	3.0552	2.9609	2.7000	2.4426	2.9445	13	AVG
1,2,3-Trichlorobenzene	1.2727	1.1930	1.1336	1.2280	1.2077	1.1337	1.1056	1.1820	5	AVG
2-Methylnaphthalene	2.4373	1.9503	1.9556	2.1216	1.9210	1.8973	1.6583	1.9916	12	AVG
Dibromofluoromethane	0.2513	0.2485	0.2478	0.2512	0.2501	0.2484	0.2469	0.2492	1	AVG
Dibromofluoromethane(2)	0.2525	0.2507	0.2507	0.2559	0.2545	0.2522	0.2519	0.2526	1	AVG
1,2-Dichloroethane-d4	0.0545	0.0524	0.0541	0.0568	0.0537	0.0523	0.0516	0.0536	3	AVG
1,2-Dichloroethane-d4(2)	0.2475	0.2333	0.2378	0.2462	0.2339	0.2271	0.2253	0.2359	4	AVG
1,2-Dichloroethane-d4(3)	0.0358	0.0338	0.0341	0.0348	0.0350	0.0337	0.0333	0.0344	3	AVG
Toluene-d8	1.2864	1.3052	1.2918	1.2901	1.2905	1.3007	1.2687	1.2905	1	AVG
Toluene-d8(2)	0.8327	0.8433	0.8354	0.8393	0.8393	0.8409	0.8311	0.8374	1	AVG
4-Bromofluorobenzene	0.4687	0.4679	0.4652	0.4710	0.4725	0.4669	0.4786	0.4701	1	AVG
4-Bromofluorobenzene(2)	0.4293	0.4280	0.4335	0.4324	0.4337	0.4347	0.4374	0.4327	1	AVG

Average %RSD 8

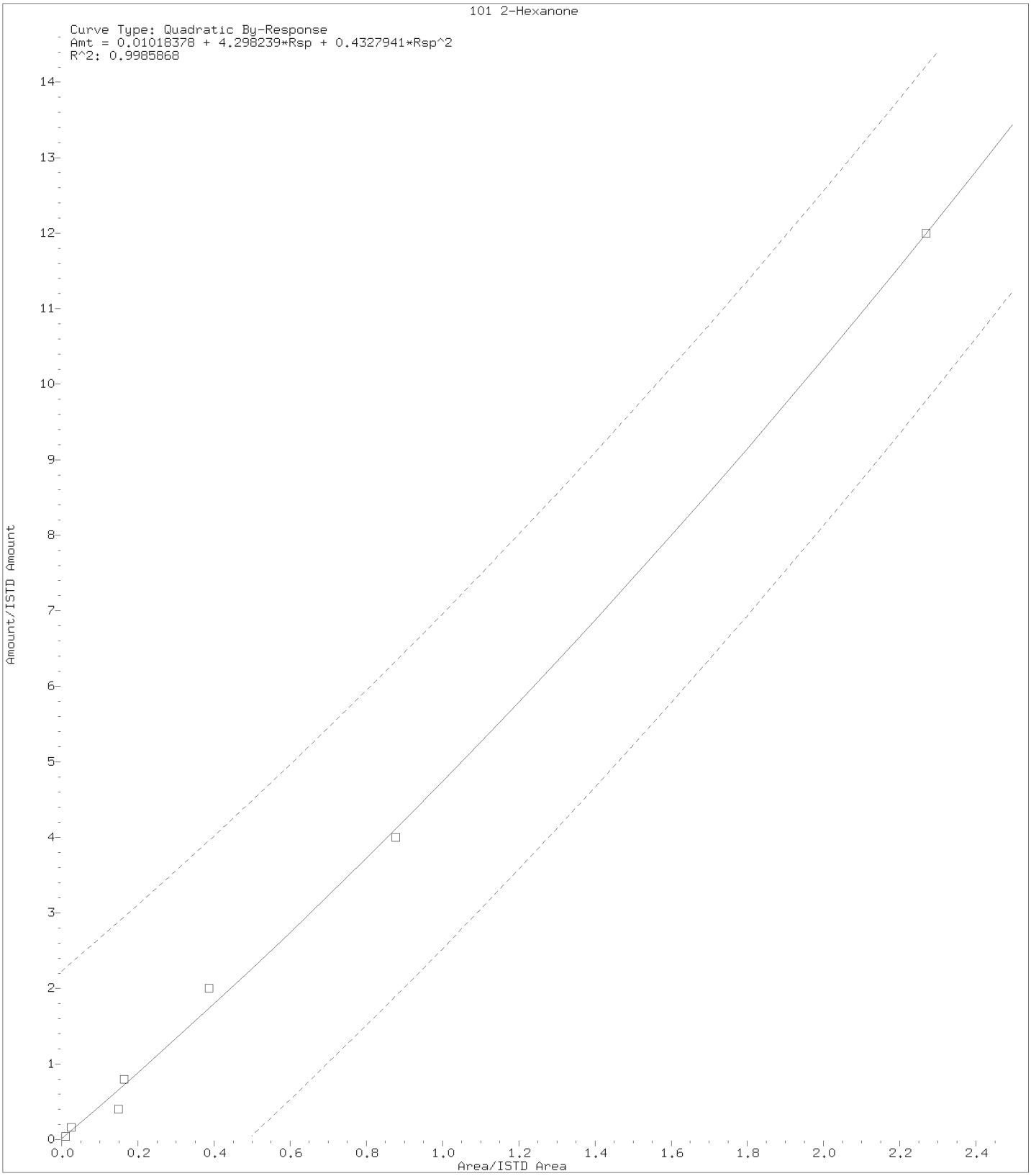
Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.



Digitally signed by Patrick T. Herres on 09/12/2018 at 20:06.
Target 3.5 esignature user ID: pth10165



Digitally signed by Patrick T. Herres on 09/12/2018 at 20:06.
Target 3.5 esignature user ID: pth10165



Digitally signed by Patrick T. Herres on 09/12/2018 at 20:06.
Target 3.5 esignature user ID: pth10165

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP09953.i/18sep12i.b/bs12i10.d	VSTD300
/chem2/HP09953.i/18sep12i.b/bs12i11.d	VSTD100
/chem2/HP09953.i/18sep12i.b/bs12i13.d	VSTD050
/chem2/HP09953.i/18sep12i.b/bs12i14.d	VSTD020
/chem2/HP09953.i/18sep12i.b/bs12i15.d	VSTD010
/chem2/HP09953.i/18sep12i.b/bs12i16.d	VSTD004
/chem2/HP09953.i/18sep12i.b/bs12i17.d	VSTD001

Area Summary

File ID:

Internal Standard Name	bs12i10.d	bs12i11.d	bs12i13.d	bs12i14.d	bs12i15.d	bs12i16.d	bs12i17.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	103473	100388	107301	112901	103557	91708	124933	106323	10	Yes
Fluorobenzene	1230156	1210132	1213056	1179216	1144543	1142455	1123003	1177509	4	Yes
Chlorobenzene-d5	957052	933610	940298	912072	888796	881395	879725	913278	3	Yes
1,4-Dichlorobenzene-d4	535094	539993	544910	525313	500174	492725	497298	519358	4	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	bs12i10.d	bs12i11.d	bs12i13.d	bs12i14.d	bs12i15.d	bs12i16.d	bs12i17.d	Avg. RT
t-Butyl alcohol-d10	1.924	1.924	1.930	1.924	1.936	1.924	1.924	1.927
Fluorobenzene	3.950	3.950	3.950	3.950	3.950	3.950	3.950	3.950
Chlorobenzene-d5	7.144	7.144	7.144	7.144	7.144	7.144	7.144	7.144
1,4-Dichlorobenzene-d4	9.230	9.224	9.224	9.224	9.230	9.230	9.230	9.228

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 09/12/2018 at 20:05.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 ICV Date: 09/12/18 Time: 16:16

Lab File ID: bs12v10.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4515	0.3415	15.13	20	-24	#
# Chloromethane	0.4654	0.4407	18.94	20	-5	#
# Vinyl Chloride	0.3626	0.3446	19.01	20	-5	#
# Bromomethane	0.3227	0.2742	16.99	20	-15	#
# Chloroethane	0.1951	0.1838	18.85	20	-6	#
Dichlorofluoromethane	0.4717	0.4774	20.24	20	1	
# Trichlorofluoromethane	0.4992	0.4383	17.56	20	-12	#
Ethanol	0.1304	0.1245	954.11	1000	-5	
Freon 123a	0.3342	0.3106	18.59	20	-7	
Acrolein	2.4153	2.1599	134.14	150	-11	
# 1,1-Dichloroethene	0.2508	0.2770	22.08	20	10	#
# Acetone	1.5782	1.0401	140.52	150	-6	#
# Freon 113	0.2515	0.2409	19.16	20	-4	#
2-Propanol	0.9659	0.8831	137.14	150	-9	
Methyl Iodide	0.6032	0.6055	20.08	20	0	
# Carbon Disulfide	1.0037	1.0039	20.00	20	0	#
# Methyl Acetate	0.1286	0.1315	20.45	20	2	#
Allyl Chloride	0.3355	0.3462	20.64	20	3	
# Methylene Chloride	0.2964	0.3171	21.40	20	7	#
t-Butyl alcohol	1.3132	1.2089	184.11	200	-8	
Acrylonitrile	0.0871	0.0712	81.82	100	-18	
# Methyl Tertiary Butyl Ether	0.7135	0.6945	19.47	20	-3	#
# trans-1,2-Dichloroethene	0.2917	0.3203	21.96	20	10	#
n-Hexane	0.3330	0.3041	18.26	20	-9	
# 1,1-Dichloroethane	0.4730	0.4886	20.66	20	3	#
di-Isopropyl ether	0.8828	0.8738	19.79	20	-1	
2-Chloro-1,3-butadiene	0.4168	0.4043	19.40	20	-3	
Ethyl t-butyl ether	0.8314	0.7930	19.08	20	-5	
# 2-Butanone	6.4273	5.3088	123.90	150	-17	#
# cis-1,2-Dichloroethene	0.3166	0.3382	21.36	20	7	#
2,2-Dichloropropane	0.3448	0.3638	21.10	20	5	
Propionitrile	1.7242	1.6921	147.21	150	-2	
Methacrylonitrile	0.0973	0.0933	143.81	150	-4	
Bromochloromethane	0.1682	0.1611	19.15	20	-4	
Tetrahydrofuran	1.6010	1.5247	95.24	100	-5	
# Chloroform	0.4801	0.5049	21.03	20	5	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 ICV Date: 09/12/18 Time: 16:16

Lab File ID: bs12v10.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.4916	0.4897	19.92	20	0	#
# Cyclohexane	0.4618	0.4199	18.18	20	-9	#
1,1-Dichloropropene	0.3572	0.3681	20.61	20	3	
# Carbon Tetrachloride	0.3733	0.3824	20.49	20	2	#
Isobutyl Alcohol	0.4614	0.4081	442.22	500	-12	
# Benzene	1.1404	1.1510	20.19	20	1	#
# 1,2-Dichloroethane	0.3291	0.3430	20.84	20	4	#
t-Amyl methyl ether	0.7676	0.7373	19.21	20	-4	
n-Heptane	0.3037	0.2744	18.07	20	-10	
n-Butanol	0.3864	0.3420	885.09	1000	-11	
# Trichloroethene	0.2974	0.3048	20.50	20	2	#
# Methylcyclohexane	0.4628	0.4289	18.54	20	-7	#
# 1,2-Dichloropropane	0.2708	0.2858	21.10	20	6	#
Methyl Methacrylate	0.1746	0.1602	18.35	20	-8	
1,4-Dioxane	0.1601	0.1487	464.44	500	-7	
Dibromomethane	0.1656	0.1683	20.32	20	2	
# Bromodichloromethane	0.3382	0.3549	20.99	20	5	#
2-Nitropropane	3.3067	2.7552	16.66	20	-17	
2-Chloroethyl Vinyl Ether	0.1426	0.1401	19.65	20	-2	
# cis-1,3-Dichloropropene	0.4084	0.4259	20.85	20	4	#
# 4-Methyl-2-pentanone	0.2385	0.2047	87.83	100	-12	#
# Toluene	0.9571	0.9703	20.28	20	1	#
# trans-1,3-Dichloropropene	0.4585	0.4558	19.88	20	-1	#
Ethyl Methacrylate	0.4451	0.4043	18.17	20	-9	
# 1,1,2-Trichloroethane	0.3106	0.3197	20.58	20	3	#
# Tetrachloroethene	0.5243	0.5769	22.01	20	10	#
1,3-Dichloropropane	0.5001	0.4977	19.90	20	0	
# 2-Hexanone	0.2192	0.1838	82.47	100	-18	#
# Dibromochloromethane	0.3578	0.3642	20.35	20	2	#
# 1,2-Dibromoethane	0.3209	0.3241	20.20	20	1	#
1-Chlorohexane	0.4756	0.4704	19.78	20	-1	
# Chlorobenzene	1.1175	1.1299	20.22	20	1	#
1,1,1,2-Tetrachloroethane	0.3789	0.3838	20.26	20	1	
# Ethylbenzene	1.8002	1.8248	20.27	20	1	#
# m+p-Xylene	0.7346	0.7560	41.17	40	3	#
# o-Xylene	0.7344	0.7492	20.40	20	2	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 ICV Date: 09/12/18 Time: 16:16

Lab File ID: bs12v10.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Styrene	1.2107	1.2375	20.44	20	2	#
# Bromoform	0.2230	0.2060	18.48	20	-8	#
# Isopropylbenzene	1.8511	1.9212	20.76	20	4	#
Cyclohexanone	0.5794	0.5928	511.56	500	2	
# 1,1,2,2-Tetrachloroethane	0.6994	0.6832	19.54	20	-2	#
Bromobenzene	0.9161	0.9017	19.69	20	-2	
trans-1,4-Dichloro-2-butene	0.1716	0.1697	98.86	100	-1	
1,2,3-Trichloropropane	0.2074	0.2079	20.05	20	0	
n-Propylbenzene	3.6219	3.7521	20.72	20	4	
2-Chlorotoluene	0.8499	0.8517	20.04	20	0	
1,3,5-Trimethylbenzene	2.8016	2.9313	20.93	20	5	
4-Chlorotoluene	0.8610	0.8574	19.91	20	0	
tert-Butylbenzene	0.6581	0.6687	20.32	20	2	
Pentachloroethane	0.3935	0.3162	16.07	20	-20	
1,2,4-Trimethylbenzene	2.9215	2.9471	20.18	20	1	
sec-Butylbenzene	3.5667	3.6955	20.72	20	4	
# 1,3-Dichlorobenzene	1.7193	1.6950	19.72	20	-1	#
p-Isopropyltoluene	3.1962	3.3415	20.91	20	5	
# 1,4-Dichlorobenzene	1.7925	1.7676	19.72	20	-1	#
1,2,3-Trimethylbenzene	3.1493	3.1496	20.00	20	0	
Benzyl Chloride	0.2336	0.2073	17.75	20	-11	
1,3-Diethylbenzene	1.9759	1.9171	19.40	20	-3	
1,4-Diethylbenzene	2.0506	1.9761	19.27	20	-4	
n-Butylbenzene	1.4849	1.4955	20.14	20	1	
# 1,2-Dichlorobenzene	1.6809	1.7141	20.40	20	2	#
1,2-Diethylbenzene	1.7286	1.7013	19.68	20	-2	
# 1,2-Dibromo-3-chloropropane	0.1215	0.1141	18.78	20	-6	#
1,3,5-Trichlorobenzene	1.3152	1.2763	19.41	20	-3	
# 1,2,4-Trichlorobenzene	1.2395	1.2035	19.42	20	-3	#
Hexachlorobutadiene	0.5655	0.5816	20.57	20	3	
Naphthalene	2.9445	2.8149	19.12	20	-4	
1,2,3-Trichlorobenzene	1.1820	1.1729	19.84	20	-1	
2-Methylnaphthalene	1.9916	1.7706	17.78	20	-11	

Average %Drift 5

Compounds with required minimum RRF.
Maximum % Drift = 30 %

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 09/24/18 09/24/18

Heated Purge: (Y/N) Y Calibration Times: 18:29 20:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hs24i07.d RRF0.5= hs24i06.d RRF 1 = hs24i05.d
RRF 2 = hs24i04.d RRF 5 = hs24i03.d RRF 10= hs24i02.d RRF 25= hs24i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.3380	0.3844	0.3955	0.3840	0.4097	0.4153	0.4089	0.3908	7	AVG #
Chloromethane	#0.3666	0.3812	0.3853	0.3730	0.3900	0.3939	0.3892	0.3827	3	AVG #
Vinyl Chloride	#0.3437	0.3452	0.3656	0.3476	0.3655	0.3717	0.3695	0.3584	3	AVG #
1,3-Butadiene	0.4071	0.3994	0.4295	0.4025	0.4024	0.4033	0.3977	0.4060	3	AVG
Bromomethane	#0.2658	0.2790	0.2802	0.2752	0.2802	0.2863	0.2838	0.2786	2	AVG #
Chloroethane	#0.2153	0.2148	0.2244	0.2134	0.2173	0.2205	0.2162	0.2174	2	AVG #
Dichlorofluoromethane	0.4863	0.4967	0.5291	0.5160	0.5340	0.5250	0.5325	0.5171	4	AVG
Trichlorofluoromethane	#0.4040	0.4488	0.4614	0.4428	0.4717	0.4709	0.4699	0.4528	5	AVG #
Ethyl ether	0.1522	0.1489	0.1504	0.1542	0.1545	0.1583	0.1563	0.1535	2	AVG
Freon 123a	0.2447	0.2821	0.2934	0.2879	0.3015	0.3019	0.2965	0.2869	7	AVG
Acrolein	2.1198	2.0592	2.1962	2.0635	2.3423	2.4323	2.3181	2.2188	7	AVG
1,1-Dichloroethene	#0.1600	0.1855	0.2038	0.1994	0.2077	0.2075	0.2086	0.1961	9	AVG #
Freon 113	#0.1774	0.2175	0.2391	0.2337	0.2475	0.2531	0.2494	0.2311	11	AVG #
Acetone	#3.2559	2.8395	2.9519	2.8356	2.9753	3.0172	2.9856	2.9801	5	AVG #
Methyl Iodide	0.3727	0.3995	0.4135	0.4033	0.4227	0.4255	0.4237	0.4087	5	AVG
Carbon Disulfide	#0.5967	0.6051	0.6303	0.6060	0.6379	0.6471	0.6440	0.6239	3	AVG #
Allyl Chloride	0.3543	0.3501	0.3714	0.3743	0.3829	0.3890	0.3870	0.3727	4	AVG
Methyl Acetate	#	8.0473	8.9174	8.2822	8.4178	8.3747	8.1582	8.3663	4	AVG #
Methylene Chloride	#0.2543	0.2082	0.2246	0.2127	0.2144	0.2186	0.2156	0.2212	7	AVG #
t-Butyl Alcohol	0.8075	0.8290	0.8990	0.8853	0.8581	0.9014	0.7939	0.8535	5	AVG
Acrylonitrile	3.6046	3.6151	3.8689	3.5796	4.0954	4.1849	3.9920	3.8486	7	AVG
trans-1,2-Dichloroethene	#0.2055	0.2092	0.2290	0.2160	0.2279	0.2325	0.2290	0.2213	5	AVG #
Methyl Tertiary Butyl Ether	#0.3525	0.3879	0.4149	0.4082	0.4218	0.4292	0.4083	0.4032	6	AVG #
n-Hexane	0.2565	0.3255	0.3632	0.3491	0.3833	0.3933	0.3923	0.3519	14	AVG
1,1-Dichloroethane	#0.3762	0.4022	0.4348	0.4176	0.4398	0.4430	0.4357	0.4213	6	AVG #
di-Isopropyl Ether	0.7011	0.7115	0.7555	0.7496	0.7609	0.7819	0.7771	0.7482	4	AVG
2-Chloro-1,3-Butadiene	0.3109	0.3474	0.3840	0.3818	0.4066	0.4138	0.4095	0.3791	10	AVG
Ethyl t-butyl ether	0.5277	0.5761	0.6125	0.6028	0.6146	0.6262	0.5944	0.5935	6	AVG
cis-1,2-Dichloroethene	#0.2191	0.2336	0.2512	0.2409	0.2547	0.2573	0.2548	0.2445	6	AVG #
2,2-Dichloropropane	0.2529	0.2750	0.3029	0.3083	0.3200	0.3278	0.3195	0.3009	9	AVG
2-Butanone	#4.7407	4.4717	4.8604	4.4839	5.2815	5.3633	4.9464	4.8783	7	AVG #
Propionitrile	1.1750	1.3038	1.3751	1.2700	1.4479	1.4295	1.2676	1.3241	7	AVG
Methacrylonitrile	4.3615	4.3517	4.7414	4.3969	5.1979	5.2827	5.0894	4.7745	9	AVG
Bromochloromethane	0.1024	0.0949	0.1024	0.1048	0.1062	0.1068	0.1056	0.1033	4	AVG
Tetrahydrofuran	1.2361	1.1778	1.2836	1.2200	1.3946	1.4399	1.3263	1.2969	7	AVG
Chloroform	#0.3416	0.3782	0.4144	0.3892	0.4020	0.4101	0.4064	0.3917	6	AVG #
1,1,1-Trichloroethane	#0.2842	0.3160	0.3433	0.3371	0.3555	0.3569	0.3525	0.3351	8	AVG #
Cyclohexane	#0.3470	0.4028	0.4493	0.4389	0.4704	0.4796	0.4739	0.4374	11	AVG #
Cyclohexane(2)	#0.2914	0.3151	0.3783	0.3668	0.3893	0.3943	0.3892	0.3606	11	AVG #
Cyclohexane(3)	#0.1022	0.1183	0.1318	0.1288	0.1387	0.1419	0.1407	0.1289	11	AVG #
1,1-Dichloropropene	0.2759	0.2910	0.3278	0.3191	0.3346	0.3387	0.3371	0.3177	8	AVG
Carbon Tetrachloride	#0.2319	0.2693	0.2968	0.2885	0.3032	0.3144	0.3103	0.2878	10	AVG #
Isobutyl Alcohol	0.2897	0.3375	0.3434	0.3190	0.3348	0.3491	0.3379	0.3302	6	AVG
Benzene	#0.8848	0.9069	0.9593	0.9138	0.9669	0.9701	0.9685	0.9386	4	AVG #
1,2-Dichloroethane	#0.2384	0.2152	0.2154	0.2064	0.2100	0.2143	0.2124	0.2160	5	AVG #
t-Amyl methyl ether	0.4510	0.4674	0.5059	0.4955	0.5077	0.5220	0.4947	0.4920	5	AVG
n-Heptane	0.2678	0.3330	0.3732	0.3588	0.3968	0.4037	0.4063	0.3628	14	AVG
n-Butanol	0.2534	0.2553	0.2725	0.2718	0.2920	0.3060	0.3017	0.2790	8	AVG
Trichloroethene	#0.2151	0.2224	0.2471	0.2423	0.2494	0.2532	0.2529	0.2403	6	AVG #
Methylcyclohexane	#0.4063	0.4157	0.4453	0.4529	0.4752	0.4906	0.4911	0.4539	8	AVG #
1,2-Dichloropropane	#0.2175	0.2096	0.2288	0.2255	0.2362	0.2385	0.2379	0.2277	5	AVG #
Methyl Methacrylate	7.4866	7.5623	8.6561	8.1346	9.7939	10.147	10.081	8.8375	13	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 09/24/18 09/24/18

Heated Purge: (Y/N) Y Calibration Times: 18:29 20:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hs24i07.d RRF0.5= hs24i06.d RRF 1 = hs24i05.d
RRF 2 = hs24i04.d RRF 5 = hs24i03.d RRF 10= hs24i02.d RRF 25= hs24i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dibromomethane	0.0859	0.0918	0.0963	0.0957	0.0964	0.0974	0.0982	0.0945	5	AVG
1,4-Dioxane		0.0512	0.0674	0.0735	0.0717	0.0692	0.0699	0.0672	12	AVG
Bromodichloromethane	#0.2375	0.2374	0.2531	0.2486	0.2658	0.2725	0.2772	0.2560	6	AVG #
2-Nitropropane	2.1943	2.1326	2.3103	2.2662	2.7615	2.9069	2.9516	2.5034	14	AVG
cis-1,3-Dichloropropene	#0.2646	0.2677	0.2918	0.2956	0.3133	0.3253	0.3282	0.2981	9	AVG #
4-Methyl-2-Pentanone	#10.423	10.703	12.049	11.150	13.294	13.683	13.638	12.134	12	AVG #
Toluene	#0.6968	0.7194	0.7473	0.7411	0.7565	0.7709	0.7625	0.7421	4	AVG #
trans-1,3-Dichloropropene	#0.2330	0.2716	0.2792	0.2845	0.2990	0.3169	0.3174	0.2859	10	AVG #
Ethyl Methacrylate	0.2095	0.2309	0.2354	0.2500	0.2537	0.2684	0.2669	0.2450	9	AVG
1,1,2-Trichloroethane	#0.1691	0.1575	0.1727	0.1725	0.1711	0.1785	0.1739	0.1708	4	AVG #
Tetrachloroethene	#0.2956	0.3305	0.3401	0.3373	0.3460	0.3515	0.3460	0.3353	6	AVG #
1,3-Dichloropropane	0.2838	0.2841	0.3046	0.3097	0.3104	0.3149	0.3111	0.3026	4	AVG
2-Hexanone	#7.3199	7.3166	8.1580	7.5786	9.0091	9.2952	9.1412	8.2598	11	AVG #
Dibromochloromethane	#0.1948	0.1857	0.1947	0.2070	0.2115	0.2179	0.2208	0.2046	6	AVG #
1,2-Dibromoethane	#0.1471	0.1541	0.1589	0.1562	0.1643	0.1719	0.1680	0.1601	5	AVG #
1-Chlorohexane	0.4437	0.4223	0.4433	0.4259	0.4476	0.4585	0.4569	0.4426	3	AVG
Chlorobenzene	#0.7275	0.7494	0.8164	0.7808	0.8015	0.8151	0.8204	0.7873	5	AVG #
1,1,1,2-Tetrachloroethane	0.2148	0.2441	0.2605	0.2596	0.2721	0.2837	0.2840	0.2598	9	AVG
Ethylbenzene	#1.2688	1.3813	1.4741	1.4462	1.4984	1.5393	1.5444	1.4504	7	AVG #
m+p-Xylene	#0.4752	0.5146	0.5391	0.5376	0.5603	0.5690	0.5701	0.5380	6	AVG #
o-Xylene	#0.4328	0.4897	0.5241	0.5154	0.5368	0.5477	0.5536	0.5143	8	AVG #
Styrene	#0.6878	0.7466	0.8289	0.8287	0.8757	0.8924	0.9000	0.8229	10	AVG #
Bromoform	#0.0962	0.1042	0.1113	0.1109	0.1171	0.1227	0.1250	0.1125	9	AVG #
Isopropylbenzene	#1.1958	1.3049	1.4259	1.4006	1.4806	1.4990	1.5215	1.4040	8	AVG #
1,1,2,2-Tetrachloroethane	#0.3905	0.3709	0.3819	0.3843	0.4123	0.4144	0.4225	0.3967	5	AVG #
Bromobenzene	0.5278	0.5708	0.6063	0.6016	0.6293	0.6307	0.6550	0.6030	7	AVG
trans-1,4-Dichloro-2-butene	3.2707	3.2389	3.7050	3.4423	4.2002	4.3536	4.3928	3.8005	13	AVG
1,2,3-Trichloropropane	0.0983	0.1022	0.1028	0.1034	0.1042	0.1033	0.1036	0.1025	2	AVG
n-Propylbenzene	2.8181	3.0518	3.2914	3.2490	3.4590	3.4886	3.5948	3.2790	8	AVG
2-Chlorotoluene	0.5518	0.6185	0.6460	0.6324	0.6632	0.6645	0.6753	0.6360	7	AVG
1,3,5-Trimethylbenzene	1.8494	2.0479	2.2234	2.2089	2.3773	2.3691	2.4731	2.2213	10	AVG
4-Chlorotoluene	0.5465	0.6043	0.6553	0.6366	0.6706	0.6636	0.6842	0.6373	7	AVG
tert-Butylbenzene	0.3899	0.4598	0.4952	0.4960	0.5055	0.5106	0.5245	0.4831	9	AVG
Pentachloroethane	0.3255	0.3274	0.3543	0.3751	0.4049	0.4175	0.4346	0.3770	12	AVG
1,2,4-Trimethylbenzene	1.8578	2.1050	2.2557	2.2683	2.4136	2.4170	2.5493	2.2667	10	AVG
sec-Butylbenzene	2.3074	2.5867	2.9178	2.8538	3.0767	3.1336	3.2726	2.8784	12	AVG
1,3-Dichlorobenzene	#1.0200	1.1416	1.2276	1.1973	1.2481	1.2485	1.3039	1.1981	8	AVG #
p-Isopropyltoluene	1.8768	2.1348	2.3564	2.3843	2.5700	2.6128	2.7544	2.3842	13	AVG
1,4-Dichlorobenzene	#1.0899	1.0941	1.1950	1.1603	1.2155	1.2175	1.2607	1.1761	6	AVG #
1,2,3-Trimethylbenzene	1.0207	0.9774	1.0183	1.0334	1.0455	1.0757	1.1084	1.0399	4	AVG
Benzyl Chloride		0.1092	0.1229	0.1383	0.1502	0.1669	0.1729	0.1434	17	AVG
n-Butylbenzene	0.9426	1.0785	1.2030	1.1681	1.2616	1.2878	1.3425	1.1834	12	AVG
1,2-Dichlorobenzene	#0.9680	1.0221	1.0665	1.0569	1.0918	1.0822	1.1123	1.0571	5	AVG #
1,2-Dibromo-3-chloropropane	#1.6120	1.6792	2.1671	1.8688	2.3036	2.3298	2.4378	2.0569	16	AVG #
1,3,5-Trichlorobenzene	0.7724	0.8416	0.8987	0.8625	0.9221	0.9492	0.9929	0.8913	8	AVG
1,2,4-Trichlorobenzene	#0.6328	0.6854	0.7128	0.7113	0.7490	0.7750	0.8160	0.7260	8	AVG #
Hexachlorobutadiene	0.2548	0.2553	0.2675	0.2668	0.2841	0.2891	0.3032	0.2744	7	AVG
Naphthalene	0.9415	1.0203	1.1133	1.1358	1.2217	1.2836	1.3262	1.1489	12	AVG
1,2,3-Trichlorobenzene	0.5182	0.5589	0.5959	0.5792	0.6174	0.6490	0.6602	0.5970	8	AVG
Dibromofluoromethane	0.2512	0.2521	0.2524	0.2530	0.2528	0.2517	0.2511	0.2520	0	AVG
Dibromofluoromethane(2)	0.2598	0.2573	0.2615	0.2599	0.2578	0.2618	0.2579	0.2594	1	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 09/24/18 09/24/18

Heated Purge: (Y/N) Y Calibration Times: 18:29 20:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hs24i07.d RRF0.5= hs24i06.d RRF 1 = hs24i05.d
RRF 2 = hs24i04.d RRF 5 = hs24i03.d RRF 10= hs24i02.d RRF 25= hs24i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
1,2-Dichloroethane-d4	0.0442	0.0434	0.0434	0.0451	0.0436	0.0447	0.0432	0.0439	2	AVG
1,2-Dichloroethane-d4(2)	0.2145	0.2128	0.2150	0.2127	0.2086	0.2137	0.2105	0.2125	1	AVG
1,2-Dichloroethane-d4(3)	0.0282	0.0281	0.0289	0.0277	0.0280	0.0285	0.0276	0.0281	2	AVG
Toluene-d8	1.3052	1.2869	1.2788	1.3015	1.2877	1.2898	1.2594	1.2870	1	AVG
Toluene-d8(2)	0.8344	0.8306	0.8301	0.8441	0.8303	0.8321	0.8133	0.8307	1	AVG
4-Bromofluorobenzene	0.4770	0.4703	0.4684	0.4767	0.4646	0.4676	0.4556	0.4686	2	AVG
4-Bromofluorobenzene(2)	0.4124	0.4112	0.4059	0.4114	0.4017	0.4081	0.3976	0.4069	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/18sep24i.b/hs24i01.d	VSTD025
/chem2/HP19094.i/18sep24i.b/hs24i02.d	VSTD010
/chem2/HP19094.i/18sep24i.b/hs24i03.d	VSTD005
/chem2/HP19094.i/18sep24i.b/hs24i04.d	VSTD002
/chem2/HP19094.i/18sep24i.b/hs24i05.d	VSTD001
/chem2/HP19094.i/18sep24i.b/hs24i06.d	VSTD0.5
/chem2/HP19094.i/18sep24i.b/hs24i07.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	hs24i01.d	hs24i02.d	hs24i03.d	hs24i04.d	hs24i05.d	hs24i06.d	hs24i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	123769	126410	127180	147863	137024	140183	136477	134129	6	Yes
Fluorobenzene	2609636	2675616	2745022	2771401	2758903	2743076	2763999	2723950	2	Yes
Chlorobenzene-d5	2080614	2091043	2142668	2139668	2171615	2144655	2139400	2129952	2	Yes
1,4-Dichlorobenzene-d4	1041754	1077251	1089195	1109693	1123390	1119082	1132249	1098945	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	hs24i01.d	hs24i02.d	hs24i03.d	hs24i04.d	hs24i05.d	hs24i06.d	hs24i07.d	Avg. RT
t-Butyl Alcohol-d10	4.470	4.483	4.482	4.476	4.470	4.477	4.482	4.477
Fluorobenzene	7.970	7.970	7.963	7.964	7.963	7.964	7.970	7.966
Chlorobenzene-d5	11.384	11.384	11.384	11.384	11.383	11.384	11.384	11.384
1,4-Dichlorobenzene-d4	13.255	13.249	13.249	13.249	13.249	13.249	13.249	13.250

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 09/25/2018 at 07:39.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 09/24/18 Time: 21:20

Lab File ID: hs24v01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3908	0.3172	4.06	5	-19	#
# Chloromethane	0.3827	0.3497	4.57	5	-9	#
# Vinyl Chloride	0.3584	0.3392	4.73	5	-5	#
1,3-Butadiene	0.4060	0.3387	4.17	5	-17	
# Bromomethane	0.2786	0.2311	4.15	5	-17	#
# Chloroethane	0.2174	0.1959	4.51	5	-10	#
Dichlorofluoromethane	0.5171	0.4978	4.81	5	-4	
# Trichlorofluoromethane	0.4528	0.4031	4.45	5	-11	#
Ethyl ether	0.1535	0.1414	4.61	5	-8	
Freon 123a	0.2869	0.2963	5.16	5	3	
Acrolein	2.2188	1.8796	31.77	37.5	-15	
# 1,1-Dichloroethene	0.1961	0.2212	5.64	5	13	#
# Freon 113	0.2311	0.2437	5.27	5	5	#
# Acetone	2.9801	2.5719	32.36	37.5	-14	#
Methyl Iodide	0.4087	0.3967	4.85	5	-3	
# Carbon Disulfide	0.6239	0.5961	4.78	5	-4	#
Allyl Chloride	0.3727	0.3366	4.52	5	-10	
# Methyl Acetate	8.3663	7.1758	4.29	5	-14	#
# Methylene Chloride	0.2212	0.2191	4.95	5	-1	#
t-Butyl Alcohol	0.8535	0.8243	48.29	50	-3	
Acrylonitrile	3.8486	3.5584	23.11	25	-8	
# trans-1,2-Dichloroethene	0.2213	0.2368	5.35	5	7	#
# Methyl Tertiary Butyl Ether	0.4032	0.3967	4.92	5	-2	#
n-Hexane	0.3519	0.3623	5.15	5	3	
# 1,1-Dichloroethane	0.4213	0.4392	5.21	5	4	#
di-Isopropyl Ether	0.7482	0.7508	5.02	5	0	
2-Chloro-1,3-Butadiene	0.3791	0.3807	5.02	5	0	
Ethyl t-butyl ether	0.5935	0.5760	4.85	5	-3	
# cis-1,2-Dichloroethene	0.2445	0.2605	5.33	5	7	#
2,2-Dichloropropane	0.3009	0.3204	5.32	5	6	
# 2-Butanone	4.8783	4.5905	35.29	37.5	-6	#
Propionitrile	1.3241	1.3362	37.84	37.5	1	
Methacrylonitrile	4.7745	4.5420	35.67	37.5	-5	
Bromochloromethane	0.1033	0.0938	4.54	5	-9	
Tetrahydrofuran	1.2969	1.2254	23.62	25	-6	
# Chloroform	0.3917	0.4191	5.35	5	7	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 09/24/18 Time: 21:20

Lab File ID: hs24v01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
# 1,1,1-Trichloroethane	0.3351	0.3556	5.31	5	6	#
# Cyclohexane	0.4374	0.4418	5.05	5	1	#
1,1-Dichloropropene	0.3177	0.3305	5.20	5	4	
# Carbon Tetrachloride	0.2878	0.3045	5.29	5	6	#
Isobutyl Alcohol	0.3302	0.3194	120.92	125	-3	
# Benzene	0.9386	0.9606	5.12	5	2	#
# 1,2-Dichloroethane	0.2160	0.2161	5.00	5	0	#
t-Amyl methyl ether	0.4920	0.4796	4.87	5	-3	
n-Heptane	0.3628	0.3736	5.15	5	3	
n-Butanol	0.2790	0.2586	231.70	250	-7	
# Trichloroethene	0.2403	0.2508	5.22	5	4	#
# Methylcyclohexane	0.4539	0.4251	4.68	5	-6	#
# 1,2-Dichloropropane	0.2277	0.2359	5.18	5	4	#
Methyl Methacrylate	8.8375	8.4056	4.76	5	-5	
Dibromomethane	0.0945	0.0974	5.15	5	3	
1,4-Dioxane	0.0672	0.0678	126.10	125	1	
# Bromodichloromethane	0.2560	0.2699	5.27	5	5	#
2-Nitropropane	2.5034	2.0564	4.11	5	-18	
# cis-1,3-Dichloropropene	0.2981	0.3034	5.09	5	2	#
# 4-Methyl-2-Pentanone	12.134	11.2665	23.21	25	-7	#
# Toluene	0.7421	0.7621	5.14	5	3	#
# trans-1,3-Dichloropropene	0.2859	0.2900	5.07	5	1	#
Ethyl Methacrylate	0.2450	0.2371	4.84	5	-3	
# 1,1,2-Trichloroethane	0.1708	0.1782	5.22	5	4	#
# Tetrachloroethene	0.3353	0.3454	5.15	5	3	#
1,3-Dichloropropane	0.3026	0.3017	4.98	5	0	
# 2-Hexanone	8.2598	7.5207	22.76	25	-9	#
# Dibromochloromethane	0.2046	0.2117	5.17	5	3	#
# 1,2-Dibromoethane	0.1601	0.1646	5.14	5	3	#
1-Chlorohexane	0.4426	0.4372	4.94	5	-1	
# Chlorobenzene	0.7873	0.7981	5.07	5	1	#
1,1,1,2-Tetrachloroethane	0.2598	0.2675	5.15	5	3	
# Ethylbenzene	1.4504	1.4813	5.11	5	2	#
# m+p-Xylene	0.5380	0.5552	10.32	10	3	#
# o-Xylene	0.5143	0.5235	5.09	5	2	#
# Styrene	0.8229	0.8625	5.24	5	5	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 09/24/18 Time: 21:20

Lab File ID: hs24v01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
# Bromoform	0.1125	0.1136	5.05	5	1	#
# Isopropylbenzene	1.4040	1.4667	5.22	5	4	#
# 1,1,2,2-Tetrachloroethane	0.3967	0.3962	4.99	5	0	#
Bromobenzene	0.6030	0.6209	5.15	5	3	
trans-1,4-Dichloro-2-butene	3.8005	3.6717	24.15	25	-3	
1,2,3-Trichloropropane	0.1025	0.1010	4.92	5	-2	
n-Propylbenzene	3.2790	3.4213	5.22	5	4	
2-Chlorotoluene	0.6360	0.6495	5.11	5	2	
1,3,5-Trimethylbenzene	2.2213	2.2866	5.15	5	3	
4-Chlorotoluene	0.6373	0.6518	5.11	5	2	
tert-Butylbenzene	0.4831	0.4924	5.10	5	2	
Pentachloroethane	0.3770	0.3672	4.87	5	-3	
1,2,4-Trimethylbenzene	2.2667	2.3009	5.08	5	2	
sec-Butylbenzene	2.8784	3.0190	5.24	5	5	
# 1,3-Dichlorobenzene	1.1981	1.2031	5.02	5	0	#
p-Isopropyltoluene	2.3842	2.5039	5.25	5	5	
# 1,4-Dichlorobenzene	1.1761	1.1959	5.08	5	2	#
1,2,3-Trimethylbenzene	1.0399	0.9939	4.78	5	-4	
Benzyl Chloride	0.1434	0.1356	4.73	5	-5	
n-Butylbenzene	1.1834	1.2376	5.23	5	5	
# 1,2-Dichlorobenzene	1.0571	1.0599	5.01	5	0	#
# 1,2-Dibromo-3-chloropropane	2.0569	2.1820	5.30	5	6	#
1,3,5-Trichlorobenzene	0.8913	0.9013	5.06	5	1	
# 1,2,4-Trichlorobenzene	0.7260	0.7345	5.06	5	1	#
Hexachlorobutadiene	0.2744	0.2834	5.16	5	3	
Naphthalene	1.1489	1.1935	5.19	5	4	
1,2,3-Trichlorobenzene	0.5970	0.6118	5.12	5	2	

Average %Drift 5

Compounds with required minimum RRF.
Maximum % Drift = 30 %

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 05/02/18 05/02/18

Heated Purge: (Y/N) Y Calibration Times: 19:15 21:23

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hy02i17.d RRF0.5= hy02i16.d RRF 1 = hy02i15.d
RRF 2 = hy02i14.d RRF 5 = hy02i13.d RRF 10= hy02i12.d RRF 25= hy02i11.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dimethyl ether	0.3386	0.3353	0.2933	0.3164	0.3235	0.3148	0.3253	0.3210	5	AVG
Acetonitrile	1.3045	1.3808	1.2557	1.1805	1.1636	1.0924	1.0738	1.2073	9	AVG
Vinyl Acetate	0.3155	0.2879	0.2935	0.3123	0.2982	0.3172	0.3162	0.3058	4	AVG
Methyl Acrylate	0.0917	0.0916	0.0965	0.0933	0.0946	0.0954	0.0975	0.0944	2	AVG
1-Chlorobutane	0.4459	0.3974	0.3542	0.4876	0.4909	0.4956	0.4897	0.4516	12	AVG
Chloroacetonitrile	0.0036	0.0030	0.0039	0.0040	0.0031	0.0041	0.0046	0.0038	15	AVG
2-Chloroethyl vinyl ether	0.0762	0.0858	0.0872	0.0926	0.0953	0.0974	0.0984	0.0904	9	AVG
cis-1,4-Dichloro-2-butene	5.6633	6.5513	5.6636	6.1849	7.9391	6.6860	6.6395	6.4754	12	AVG
Cyclohexanone	0.3645	0.2849	0.3292	0.3093	0.3122	0.3993	0.3058	0.3293	12	AVG
Hexachloroethane	0.3743	0.3585	0.3237	0.4363	0.4562	0.4921	0.5058	0.4210	17	AVG

Average %RSD 10

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/18may02b.b/hy02i11.d	VSTD025
/chem2/HP19094.i/18may02b.b/hy02i12.d	VSTD010
/chem2/HP19094.i/18may02b.b/hy02i13.d	VSTD005
/chem2/HP19094.i/18may02b.b/hy02i14.d	VSTD002
/chem2/HP19094.i/18may02b.b/hy02i15.d	VSTD001
/chem2/HP19094.i/18may02b.b/hy02i16.d	VSTD0.5
/chem2/HP19094.i/18may02b.b/hy02i17.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	hy02i11.d	hy02i12.d	hy02i13.d	hy02i14.d	hy02i15.d	hy02i16.d	hy02i17.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	98437	91579	74336	92293	90627	78931	87604	87687	9	Yes
Fluorobenzene	2303816	2321054	2326423	2301576	2267030	2334989	2247400	2300327	1	Yes
Chlorobenzene-d5	1683927	1697976	1698280	1681083	1663736	1693467	1641487	1679994	1	Yes
1,4-Dichlorobenzene-d4	883503	883093	890934	885161	872428	891691	866486	881899	1	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	hy02i11.d	hy02i12.d	hy02i13.d	hy02i14.d	hy02i15.d	hy02i16.d	hy02i17.d	Avg. RT
t-Butyl Alcohol-d10	4.458	4.489	4.495	4.470	4.483	4.464	4.476	4.476
Fluorobenzene	7.970	7.976	7.976	7.970	7.970	7.970	7.970	7.971
Chlorobenzene-d5	11.396	11.396	11.396	11.396	11.396	11.396	11.396	11.396
1,4-Dichlorobenzene-d4	13.267	13.267	13.268	13.268	13.268	13.267	13.267	13.267

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 05/02/2018 at 22:25.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 05/02/18 Time: 22:07

Lab File ID: hy02v11.d Init. Calib. Date(s): 05/02/18 05/02/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dimethyl ether	0.3210	0.3151	4.91	5	-2
Acetonitrile	1.2073	1.3135	40.80	37.5	9
Vinyl Acetate	0.3058	0.2888	11.80	12.5	-6
Methyl Acrylate	0.0944	0.0999	26.46	25	6
1-Chlorobutane	0.4516	0.4576	5.07	5	1
Chloroacetonitrile	0.0038	0.0037	247.49	250	-1
2-Chloroethyl vinyl ether	0.0904	0.0919	5.08	5	2
cis-1,4-Dichloro-2-butene	6.4754	6.7681	13.06	12.5	5
Cyclohexanone	0.3293	0.3493	132.59	125	6
Hexachloroethane	0.4210	0.4432	5.26	5	5

Average %Drift 4

Compounds with required minimum RRF.
Maximum % Drift = 30 %

page 1 of 1 FORM VII VOA

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09953.i/18sep12i.b/bs12i17.d
/chem2/HP09953.i/18sep12i.b/bs12i16.d
/chem2/HP09953.i/18sep12i.b/bs12i15.d
/chem2/HP09953.i/18sep12i.b/bs12i14.d
/chem2/HP09953.i/18sep12i.b/bs12i13.d
/chem2/HP09953.i/18sep12i.b/bs12i11.d
/chem2/HP09953.i/18sep12i.b/bs12i10.d

File /chem2/HP09953.i/18sep12i.b/bs12i13.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09953.i/18oct31a.b/bc31c10.d

RT Summary

Internal Standard Name	File ID: bc31c10.d	ICAL RT	In Spec
t-Butyl alcohol-d10	1.930	1.930	Yes
Fluorobenzene	3.950	3.950	Yes
Chlorobenzene-d5	7.144	7.144	Yes
1,4-Dichlorobenzene-d4	9.224	9.224	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: bc31c10.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	126446	107301	53650	214602	Yes
Fluorobenzene	1454583	1213056	606528	2426112	Yes
Chlorobenzene-d5	1120551	940298	470149	1880596	Yes
1,4-Dichlorobenzene-d4	656321	544910	272455	1089820	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 10/31/2018 at 09:25

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date: 10/31/18 Time: 09:03

Lab File ID: bc31c10.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Dichlorodifluoromethane	0.4515	0.4837	53.57	50	7	#
#	Chloromethane	0.4654	0.4658	50.05	50	0	#
#	Vinyl Chloride	0.3626	0.3652	50.36	50	1	#
#	Bromomethane	0.3227	0.3404	52.75	50	5	#
#	Chloroethane	0.1951	0.2061	52.83	50	6	#
#	Trichlorofluoromethane	0.4992	0.5416	54.25	50	9	#
	Ethanol	0.1304	0.1190	2280.38	2500	-9	
	Freon 123a	0.3342	0.3057	45.73	50	-9	
	Acrolein	2.4153	2.5208	521.83	500	4	
#	1,1-Dichloroethene	0.2508	0.2545	50.73	50	1	#
#	Acetone	1.5782	1.1982	105.86	100	6	#
#	Freon 113	0.2515	0.2867	56.99	50	14	#
	2-Propanol	0.9659	1.0908	282.33	250	13	
	Methyl Iodide	0.6032	0.5975	49.53	50	-1	
#	Carbon Disulfide	1.0037	0.9493	47.29	50	-5	#
#	Methyl Acetate	0.1286	0.1371	53.28	50	7	#
	Allyl Chloride	0.3355	0.3687	54.94	50	10	
#	Methylene Chloride	0.2964	0.2768	46.68	50	-7	#
	t-Butyl alcohol	1.3132	1.3342	254.00	250	2	
	Acrylonitrile	0.0871	0.0773	44.36	50	-11	
#	Methyl Tertiary Butyl Ether	0.7135	0.6748	47.29	50	-5	#
#	trans-1,2-Dichloroethene	0.2917	0.2893	49.58	50	-1	#
	n-Hexane	0.3330	0.4042	60.70	50	21	<-
#	1,1-Dichloroethane	0.4730	0.4911	51.91	50	4	#
	di-Isopropyl ether	0.8828	0.8738	49.49	50	-1	
	2-Chloro-1,3-butadiene	0.4168	0.4272	51.25	50	2	
	Ethyl t-butyl ether	0.8314	0.7821	47.03	50	-6	
#	2-Butanone	6.4273	6.0588	94.27	100	-6	#
#	cis-1,2-Dichloroethene	0.3166	0.3301	52.13	50	4	#
	2,2-Dichloropropane	0.3448	0.3816	55.33	50	11	
	Propionitrile	1.7242	1.9079	276.62	250	11	
	Methacrylonitrile	0.0973	0.0995	127.84	125	2	
	Bromochloromethane	0.1682	0.1749	52.00	50	4	
	Tetrahydrofuran	1.6010	1.6512	103.14	100	3	
#	Chloroform	0.4801	0.4904	51.07	50	2	#
#	1,1,1-Trichloroethane	0.4916	0.4367	44.42	50	-11	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date: 10/31/18 Time: 09:03

Lab File ID: bc31c10.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Cyclohexane	0.4618	0.4919	53.25	50	7	#
#	Cyclohexane(2)	0.4316	0.5110	59.20	50	18	#
#	Cyclohexane(3)	0.1460	0.1535	52.56	50	5	#
	1,1-Dichloropropene	0.3572	0.3812	53.36	50	7	
#	Carbon Tetrachloride	0.3733	0.3768	50.47	50	1	#
	Isobutyl Alcohol	0.4614	0.5107	691.84	625	11	
#	Benzene	1.1404	1.1498	50.41	50	1	#
#	1,2-Dichloroethane	0.3291	0.3263	49.57	50	-1	#
#	1,2-Dichloroethane(2)	0.0327	0.0331	50.69	50	1	#<-
	t-Amyl methyl ether	0.7676	0.7093	46.20	50	-8	
	n-Heptane	0.3037	0.4176	68.74	50	37	<-
	n-Butanol	0.3864	0.4213	1363.17	1250	9	
#	Trichloroethene	0.2974	0.3073	51.67	50	3	#
#	Methylcyclohexane	0.4628	0.5476	59.16	50	18	#
#	1,2-Dichloropropane	0.2708	0.2803	51.75	50	4	#
	Methyl Methacrylate	0.1746	0.1707	48.89	50	-2	
	1,4-Dioxane	0.1601	0.1784	696.25	625	11	
	Dibromomethane	0.1656	0.1690	51.01	50	2	
#	Bromodichloromethane	0.3382	0.3460	51.15	50	2	#
	2-Nitropropane	3.3067	2.6116	78.98	100	-21	<-
	2-Chloroethyl Vinyl Ether	0.1426	0.1231	43.16	50	-14	
#	cis-1,3-Dichloropropene	0.4084	0.4290	52.53	50	5	#
#	4-Methyl-2-pentanone	0.2385	0.2240	96.35	100	-4	#
#	Toluene	0.9571	0.9709	50.72	50	1	#
#	trans-1,3-Dichloropropene	0.4585	0.4758	51.89	50	4	#
	Ethyl Methacrylate	0.4451	0.4294	48.24	50	-4	
#	1,1,2-Trichloroethane	0.3106	0.3221	51.85	50	4	#
#	Tetrachloroethene	0.5243	0.4650	44.35	50	-11	#
	1,3-Dichloropropane	0.5001	0.5135	51.33	50	3	
#	2-Hexanone	0.2192	0.2007	90.30	100	-10	#
#	Dibromochloromethane	0.3578	0.3764	52.59	50	5	#
#	1,2-Dibromoethane	0.3209	0.3312	51.61	50	3	#
	1-Chlorohexane	0.4756	0.5119	53.82	50	8	
#	Chlorobenzene	1.1175	1.1375	50.89	50	2	#
	1,1,1,2-Tetrachloroethane	0.3789	0.3964	52.31	50	5	
#	Ethylbenzene	1.8002	1.8655	51.82	50	4	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date: 10/31/18 Time: 09:03

Lab File ID: bc31c10.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	m+p-Xylene	0.7346	0.7676	104.49	100	4	#
#	o-Xylene	0.7344	0.7537	51.32	50	3	#
#	Styrene	1.2107	1.2273	50.68	50	1	#
#	Bromoform	0.2230	0.2290	51.35	50	3	#
#	Isopropylbenzene	1.8511	1.9660	53.10	50	6	#
	Cyclohexanone	0.5794	0.5119	552.17	625	-12	
#	1,1,2,2-Tetrachloroethane	0.6994	0.7537	53.88	50	8	#
	Bromobenzene	0.9161	0.9044	49.36	50	-1	
	trans-1,4-Dichloro-2-butene	0.1716	0.1828	133.11	125	6	
	1,2,3-Trichloropropane	0.2074	0.2186	52.69	50	5	
	n-Propylbenzene	3.6219	3.8621	53.32	50	7	
	2-Chlorotoluene	0.8499	0.8472	49.84	50	0	
	1,3,5-Trimethylbenzene	2.8016	2.9135	52.00	50	4	
	4-Chlorotoluene	0.8610	0.8709	50.57	50	1	
	tert-Butylbenzene	0.6581	0.7203	54.72	50	9	
	Pentachloroethane	0.3935	0.5497	69.84	50	40	<-
	1,2,4-Trimethylbenzene	2.9215	3.0014	51.37	50	3	
	sec-Butylbenzene	3.5667	3.7998	53.27	50	7	
#	1,3-Dichlorobenzene	1.7193	1.7544	51.02	50	2	#
	p-Isopropyltoluene	3.1962	3.4394	53.80	50	8	
#	1,4-Dichlorobenzene	1.7925	1.7948	50.06	50	0	#
	1,2,3-Trimethylbenzene	3.1493	3.1027	49.26	50	-1	
	Benzyl Chloride	0.2336	0.3009	64.41	50	29	<-
	1,3-Diethylbenzene	1.9759	2.0666	52.29	50	5	
	1,4-Diethylbenzene	2.0506	2.2382	54.57	50	9	
	n-Butylbenzene	1.4849	1.6420	55.29	50	11	
#	1,2-Dichlorobenzene	1.6809	1.7441	51.88	50	4	#
	1,2-Diethylbenzene	1.7286	1.7318	50.09	50	0	
#	1,2-Dibromo-3-chloropropane	0.1215	0.1219	50.14	50	0	#
	1,3,5-Trichlorobenzene	1.3152	1.4363	54.61	50	9	
#	1,2,4-Trichlorobenzene	1.2395	1.3220	53.33	50	7	#
	Hexachlorobutadiene	0.5655	0.6546	57.88	50	16	
	Naphthalene	2.9445	2.9242	49.66	50	-1	
	1,2,3-Trichlorobenzene	1.1820	1.2626	53.41	50	7	
	2-Methylnaphthalene	1.9916	1.8298	45.94	50	-8	
	Dibromofluoromethane	0.2492	0.2485	49.86	50	0	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date: 10/31/18 Time: 09:03

Lab File ID: bc31c10.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dibromofluoromethane(2)	0.2526	0.2557	50.60	50	1
1,2-Dichloroethane-d4	0.0536	0.0553	51.53	50	3
1,2-Dichloroethane-d4(2)	0.2359	0.2355	49.92	50	0
1,2-Dichloroethane-d4(3)	0.0344	0.0351	51.08	50	2
Toluene-d8	1.2905	1.2980	50.29	50	1
Toluene-d8(2)	0.8374	0.8434	50.36	50	1
4-Bromofluorobenzene	0.4701	0.4570	48.61	50	-3
4-Bromofluorobenzene(2)	0.4327	0.4363	50.41	50	1

Average %Drift 6

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d
Report Date: 11/14/2018 21:17

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP09953.i
Client ID: SECC050
Lab Sample ID: SECC050
Sublist used: B183042.sub

Injection Date and Time: 31-OCT-2018 20:02
Initial Calibration Date(s): 12-SEP-2018 12-SEP-2018
Initial Calibration Time(s): 13:13 18:55
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Dichlorodifluoromethane	0.45147	0.43090	0.01	-4.6	50.0
Chloromethane	0.46535	0.43444	0.01	-6.6	50.0
Vinyl Chloride	0.36261	0.32786	0.01	-9.6	50.0
Bromomethane	0.32273	0.32817	0.01	1.7	50.0
Chloroethane	0.19506	0.19579	0.01	0.4	50.0
Trichlorofluoromethane	0.49918	0.49947	0.01	0.1	50.0
1,1-Dichloroethene	0.25085	0.23240	0.01	-7.4	50.0
Acetone	100.000	108.289	0.01	8.3	50.0
Freon 113	0.25150	0.25370	0.01	0.9	50.0
Carbon Disulfide	1.00370	0.88732	0.01	-11.6	50.0
Methyl Acetate	0.12863	0.13033	0.01	1.3	50.0
Methylene Chloride	0.29644	0.27977	0.01	-5.6	50.0
Methyl Tertiary Butyl Ether	0.71352	0.66703	0.01	-6.5	50.0
trans-1,2-Dichloroethene	0.29171	0.27530	0.01	-5.6	50.0
1,1-Dichloroethane	0.47301	0.48164	0.01	1.8	50.0
2-Butanone	6.42731	6.52166	0.01	1.5	50.0
cis-1,2-Dichloroethene	0.31664	0.32223	0.01	1.8	50.0
Bromochloromethane	0.16822	0.17407	0.01	3.5	50.0
Chloroform	0.48010	0.49033	0.01	2.1	50.0
1,1,1-Trichloroethane	0.49157	0.40861	0.01	-16.9	50.0
Cyclohexane	0.46181	0.43631	0.01	-5.5	50.0
Carbon Tetrachloride	0.37334	0.35008	0.01	-6.2	50.0
Benzene	1.14044	1.12134	0.01	-1.7	50.0
1,2-Dichloroethane	0.32911	0.33255	0.01	1.0	50.0
Trichloroethene	0.29740	0.29150	0.01	-2.0	50.0
Methylcyclohexane	0.46282	0.47598	0.01	2.8	50.0
1,2-Dichloropropane	0.27083	0.28030	0.01	3.5	50.0
Bromodichloromethane	0.33821	0.34142	0.01	0.9	50.0
cis-1,3-Dichloropropene	0.40839	0.41960	0.01	2.7	50.0
4-Methyl-2-pentanone	100.000	87.004	0.01	-13.0	50.0
Toluene	0.95715	0.92826	0.01	-3.0	50.0
trans-1,3-Dichloropropene	0.45848	0.46217	0.01	0.8	50.0
1,1,2-Trichloroethane	0.31061	0.31556	0.01	1.6	50.0
Tetrachloroethene	0.52428	0.44792	0.01	-14.6	50.0
2-Hexanone	100.000	83.397	0.01	-16.6	50.0
Dibromochloromethane	0.35786	0.36547	0.01	2.1	50.0
1,2-Dibromoethane	0.32089	0.32589	0.01	1.6	50.0
Chlorobenzene	1.11751	1.12223	0.01	0.4	50.0
1,1,1,2-Tetrachloroethane	0.37894	0.39007	0.01	2.9	50.0
Ethylbenzene	1.80019	1.80906	0.01	0.5	50.0
m+p-Xylene	0.73459	0.73583	0.01	0.2	50.0
o-Xylene	0.73438	0.72919	0.01	-0.7	50.0
Xylene (Total)	0.73452	0.73362	0.01	-0.1	50.0
Styrene	1.21068	1.22036	0.01	0.8	50.0
Bromoform	0.22299	0.22092	0.01	-0.9	50.0
Isopropylbenzene	1.85113	1.85681	0.01	0.3	50.0
Cyclohexanone	0.57941	0.54215	0.01	-6.4	50.0
1,1,2,2-Tetrachloroethane	0.69943	0.70092	0.01	0.2	50.0

Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d
Report Date: 11/14/2018 21:17

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP09953.i
Client ID: SECC050
Lab Sample ID: SECC050
Sublist used: B183042.sub

Injection Date and Time: 31-OCT-2018 20:02
Initial Calibration Date(s): 12-SEP-2018 12-SEP-2018
Initial Calibration Time(s): 13:13 18:55
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
1,3-Dichlorobenzene	1.71930	1.67327	0.01	-2.7	50.0
1,4-Dichlorobenzene	1.79250	1.71397	0.01	-4.4	50.0
1,2-Dichlorobenzene	1.68089	1.69314	0.01	0.7	50.0
1,2-Dibromo-3-chloropropane	0.12152	0.10904	0.01	-10.3	50.0
1,2,4-Trichlorobenzene	1.23953	1.18906	0.01	-4.1	50.0
1,2,3-Trichlorobenzene	1.18203	1.16576	0.01	-1.4	50.0
Surrogate Standards	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Dibromofluoromethane	0.24919	0.25551	0.01	2.5	20.5
1,2-Dichloroethane-d4	0.05364	0.05330	0.01	-0.6	20.5
Toluene-d8	1.29048	1.30425	0.01	1.1	20.5
4-Bromofluorobenzene	0.47011	0.46580	0.01	-0.9	20.5

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09953.i/18sep12i.b/bs12i17.d
/chem2/HP09953.i/18sep12i.b/bs12i16.d
/chem2/HP09953.i/18sep12i.b/bs12i15.d
/chem2/HP09953.i/18sep12i.b/bs12i14.d
/chem2/HP09953.i/18sep12i.b/bs12i13.d
/chem2/HP09953.i/18sep12i.b/bs12i11.d
/chem2/HP09953.i/18sep12i.b/bs12i10.d

File /chem2/HP09953.i/18sep12i.b/bs12i13.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09953.i/18nov06a.b/bn06c01.d

RT Summary

Internal Standard Name	File ID: bn06c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	1.924	1.930	Yes
Fluorobenzene	3.944	3.950	Yes
Chlorobenzene-d5	7.144	7.144	Yes
1,4-Dichlorobenzene-d4	9.224	9.224	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: bn06c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	121316	107301	53650	214602	Yes
Fluorobenzene	1367264	1213056	606528	2426112	Yes
Chlorobenzene-d5	1101888	940298	470149	1880596	Yes
1,4-Dichlorobenzene-d4	661749	544910	272455	1089820	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 11/06/2018 at 20:25

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date: 11/06/18 Time: 19:51

Lab File ID: bn06c01.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4515	0.5742	63.59	50	27	#<-
# Chloromethane	0.4654	0.4886	52.50	50	5	#
# Vinyl Chloride	0.3626	0.3871	53.38	50	7	#
# Bromomethane	0.3227	0.3465	53.68	50	7	#
# Chloroethane	0.1951	0.2111	54.10	50	8	#
# Trichlorofluoromethane	0.4992	0.6065	60.75	50	22	#<-
Ethanol	0.1304	0.1180	2262.51	2500	-9	
Freon 123a	0.3342	0.3056	45.73	50	-9	
Acrolein	2.4153	2.0260	419.40	500	-16	
# 1,1-Dichloroethene	0.2508	0.2428	48.40	50	-3	#
# Acetone	1.5782	1.0167	88.59	100	-11	#
# Freon 113	0.2515	0.3005	59.75	50	20	#
2-Propanol	0.9659	0.9063	234.58	250	-6	
Methyl Iodide	0.6032	0.5754	47.70	50	-5	
# Carbon Disulfide	1.0037	0.7629	38.00	50	-24	#<-
# Methyl Acetate	0.1286	0.1417	55.10	50	10	#
Allyl Chloride	0.3355	0.3894	58.02	50	16	
# Methylene Chloride	0.2964	0.2618	44.15	50	-12	#
t-Butyl alcohol	1.3132	1.0548	200.81	250	-20	
Acrylonitrile	0.0871	0.0700	40.22	50	-20	
# Methyl Tertiary Butyl Ether	0.7135	0.6444	45.16	50	-10	#
# trans-1,2-Dichloroethene	0.2917	0.2762	47.34	50	-5	#
n-Hexane	0.3330	0.4215	63.30	50	27	<-
# 1,1-Dichloroethane	0.4730	0.4683	49.50	50	-1	#
di-Isopropyl ether	0.8828	0.8481	48.03	50	-4	
2-Chloro-1,3-butadiene	0.4168	0.4163	49.93	50	0	
Ethyl t-butyl ether	0.8314	0.7502	45.12	50	-10	
# 2-Butanone	6.4273	5.1528	80.17	100	-20	#
# cis-1,2-Dichloroethene	0.3166	0.3087	48.75	50	-2	#
2,2-Dichloropropane	0.3448	0.3648	52.89	50	6	
Propionitrile	1.7242	1.6617	240.93	250	-4	
Methacrylonitrile	0.0973	0.0909	116.83	125	-7	
Bromochloromethane	0.1682	0.1841	54.73	50	9	
Tetrahydrofuran	1.6010	1.4165	88.48	100	-12	
# Chloroform	0.4801	0.4627	48.19	50	-4	#
# 1,1,1-Trichloroethane	0.4916	0.4199	42.71	50	-15	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date: 11/06/18 Time: 19:51

Lab File ID: bn06c01.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Cyclohexane	0.4618	0.5111	55.34	50	11	#
# Cyclohexane(2)	0.4316	0.5275	61.12	50	22	#<-
# Cyclohexane(3)	0.1460	0.1594	54.58	50	9	#
1,1-Dichloropropene	0.3572	0.3651	51.10	50	2	
# Carbon Tetrachloride	0.3733	0.3728	49.92	50	0	#
Isobutyl Alcohol	0.4614	0.3886	526.41	625	-16	
# Benzene	1.1404	1.0801	47.36	50	-5	#
# 1,2-Dichloroethane	0.3291	0.3048	46.31	50	-7	#
# 1,2-Dichloroethane(2)	0.0327	0.0306	46.81	50	-6	#<-
t-Amyl methyl ether	0.7676	0.6920	45.07	50	-10	
n-Heptane	0.3037	0.4453	73.30	50	47	<-
n-Butanol	0.3864	0.3087	998.86	1250	-20	
# Trichloroethene	0.2974	0.2901	48.76	50	-2	#
# Methylcyclohexane	0.4628	0.6363	68.75	50	37	#<-
# 1,2-Dichloropropane	0.2708	0.2657	49.05	50	-2	#
Methyl Methacrylate	0.1746	0.1577	45.18	50	-10	
1,4-Dioxane	0.1601	0.1481	578.28	625	-7	
Dibromomethane	0.1656	0.1562	47.16	50	-6	
# Bromodichloromethane	0.3382	0.3203	47.35	50	-5	#
2-Nitropropane	3.3067	2.3008	69.58	100	-30	<-
2-Chloroethyl Vinyl Ether	0.1426	0.1229	43.11	50	-14	
# cis-1,3-Dichloropropene	0.4084	0.3993	48.89	50	-2	#
# 4-Methyl-2-pentanone	0.2385	0.1883	80.61	100	-19	#
# Toluene	0.9571	0.8753	45.73	50	-9	#
# trans-1,3-Dichloropropene	0.4585	0.4289	46.77	50	-6	#
Ethyl Methacrylate	0.4451	0.3803	42.73	50	-15	
# 1,1,2-Trichloroethane	0.3106	0.2822	45.42	50	-9	#
# Tetrachloroethene	0.5243	0.4344	41.43	50	-17	#
1,3-Dichloropropane	0.5001	0.4604	46.03	50	-8	
# 2-Hexanone	0.2192	0.1645	73.59	100	-26	#<-
# Dibromochloromethane	0.3578	0.3292	45.99	50	-8	#
# 1,2-Dibromoethane	0.3209	0.2952	46.00	50	-8	#
1-Chlorohexane	0.4756	0.4836	50.84	50	2	
# Chlorobenzene	1.1175	1.0346	46.29	50	-7	#
1,1,1,2-Tetrachloroethane	0.3789	0.3494	46.10	50	-8	
# Ethylbenzene	1.8002	1.7132	47.58	50	-5	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date: 11/06/18 Time: 19:51

Lab File ID: bn06c01.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	m+p-Xylene	0.7346	0.6991	95.17	100	-5	#
#	o-Xylene	0.7344	0.6727	45.80	50	-8	#
#	Styrene	1.2107	1.1076	45.74	50	-9	#
#	Bromoform	0.2230	0.1990	44.61	50	-11	#
#	Isopropylbenzene	1.8511	1.7588	47.51	50	-5	#
	Cyclohexanone	0.5794	0.4982	537.43	625	-14	
#	1,1,2,2-Tetrachloroethane	0.6994	0.6029	43.10	50	-14	#
	Bromobenzene	0.9161	0.7852	42.86	50	-14	
	trans-1,4-Dichloro-2-butene	0.1716	0.1602	116.70	125	-7	
	1,2,3-Trichloropropane	0.2074	0.1850	44.61	50	-11	
	n-Propylbenzene	3.6219	3.4423	47.52	50	-5	
	2-Chlorotoluene	0.8499	0.7448	43.82	50	-12	
	1,3,5-Trimethylbenzene	2.8016	2.5493	45.50	50	-9	
	4-Chlorotoluene	0.8610	0.7845	45.56	50	-9	
	tert-Butylbenzene	0.6581	0.6192	47.04	50	-6	
	Pentachloroethane	0.3935	0.5318	67.56	50	35	<-
	1,2,4-Trimethylbenzene	2.9215	2.6404	45.19	50	-10	
	sec-Butylbenzene	3.5667	3.3254	46.62	50	-7	
#	1,3-Dichlorobenzene	1.7193	1.5623	45.44	50	-9	#
	p-Isopropyltoluene	3.1962	3.0536	47.77	50	-4	
#	1,4-Dichlorobenzene	1.7925	1.5900	44.35	50	-11	#
	1,2,3-Trimethylbenzene	3.1493	3.0613	48.60	50	-3	
	Benzyl Chloride	0.2336	0.2657	56.86	50	14	
	1,3-Diethylbenzene	1.9759	2.0694	52.37	50	5	
	1,4-Diethylbenzene	2.0506	2.2520	54.91	50	10	
	n-Butylbenzene	1.4849	1.4784	49.78	50	0	
#	1,2-Dichlorobenzene	1.6809	1.5209	45.24	50	-10	#
	1,2-Diethylbenzene	1.7286	1.7210	49.78	50	0	
#	1,2-Dibromo-3-chloropropane	0.1215	0.0979	40.28	50	-19	#
	1,3,5-Trichlorobenzene	1.3152	1.2455	47.35	50	-5	
#	1,2,4-Trichlorobenzene	1.2395	1.1155	45.00	50	-10	#
	Hexachlorobutadiene	0.5655	0.5562	49.17	50	-2	
	Naphthalene	2.9445	2.3873	40.54	50	-19	
	1,2,3-Trichlorobenzene	1.1820	1.0358	43.81	50	-12	
	2-Methylnaphthalene	1.9916	1.7210	43.21	50	-14	
	Dibromofluoromethane	0.2492	0.2563	51.43	50	3	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date: 11/06/18 Time: 19:51

Lab File ID: bn06c01.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dibromofluoromethane(2)	0.2526	0.2615	51.75	50	3
1,2-Dichloroethane-d4	0.0536	0.0543	50.64	50	1
1,2-Dichloroethane-d4(2)	0.2359	0.2360	50.03	50	0
1,2-Dichloroethane-d4(3)	0.0344	0.0356	51.81	50	4
Toluene-d8	1.2905	1.2683	49.14	50	-2
Toluene-d8(2)	0.8374	0.8223	49.10	50	-2
4-Bromofluorobenzene	0.4701	0.4697	49.96	50	0
4-Bromofluorobenzene(2)	0.4327	0.4425	51.13	50	2

Average %Drift 10

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Data File: /chem2/HP09953.i/18nov06a.b/bn06ec5.d
Report Date: 11/07/2018 04:29

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP09953.i
Client ID: SECC050
Lab Sample ID: SECC050
Sublist used: 25809.sub

Injection Date and Time: 07-NOV-2018 01:16
Initial Calibration Date(s): 12-SEP-2018 12-SEP-2018
Initial Calibration Time(s): 13:13 18:55
Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Dichlorodifluoromethane	0.45147	0.53031	0.01	17.5	50.0
Chloromethane	0.46535	0.46219	0.01	-0.7	50.0
Vinyl Chloride	0.36261	0.36320	0.01	0.2	50.0
Bromomethane	0.32273	0.33440	0.01	3.6	50.0
Chloroethane	0.19506	0.20225	0.01	3.7	50.0
Trichlorofluoromethane	0.49918	0.57239	0.01	14.7	50.0
1,1-Dichloroethene	0.25085	0.23326	0.01	-7.0	50.0
Acetone	100.000	89.307	0.01	-10.7	50.0
Freon 113	0.25150	0.28240	0.01	12.3	50.0
Carbon Disulfide	1.00370	0.73663	0.01	-26.6	50.0
Methyl Acetate	0.12863	0.13770	0.01	7.1	50.0
Methylene Chloride	0.29644	0.25418	0.01	-14.3	50.0
Methyl Tertiary Butyl Ether	0.71352	0.62809	0.01	-12.0	50.0
trans-1,2-Dichloroethene	0.29171	0.26446	0.01	-9.3	50.0
1,1-Dichloroethane	0.47301	0.44711	0.01	-5.5	50.0
2-Butanone	6.42731	5.32314	0.01	-17.2	50.0
cis-1,2-Dichloroethene	0.31664	0.29722	0.01	-6.1	50.0
Chloroform	0.48010	0.44381	0.01	-7.6	50.0
1,1,1-Trichloroethane	0.49157	0.39913	0.01	-18.8	50.0
Cyclohexane	0.46181	0.48308	0.01	4.6	50.0
Carbon Tetrachloride	0.37334	0.35102	0.01	-6.0	50.0
Benzene	1.14044	1.04183	0.01	-8.6	50.0
1,2-Dichloroethane	0.32911	0.29276	0.01	-11.0	50.0
Trichloroethene	0.29740	0.27772	0.01	-6.6	50.0
Methylcyclohexane	0.46282	0.58712	0.01	26.9	50.0
1,2-Dichloropropane	0.27083	0.25426	0.01	-6.1	50.0
Bromodichloromethane	0.33821	0.30780	0.01	-9.0	50.0
cis-1,3-Dichloropropene	0.40839	0.38307	0.01	-6.2	50.0
4-Methyl-2-pentanone	100.000	79.158	0.01	-20.8	50.0
Toluene	0.95715	0.84923	0.01	-11.3	50.0
trans-1,3-Dichloropropene	0.45848	0.40827	0.01	-11.0	50.0
1,1,2-Trichloroethane	0.31061	0.27609	0.01	-11.1	50.0
Tetrachloroethene	0.52428	0.43739	0.01	-16.6	50.0
2-Hexanone	100.000	72.654	0.01	-27.3	50.0
Dibromochloromethane	0.35786	0.32248	0.01	-9.9	50.0
1,2-Dibromoethane	0.32089	0.28936	0.01	-9.8	50.0
Chlorobenzene	1.11751	1.00162	0.01	-10.4	50.0
Ethylbenzene	1.80019	1.64646	0.01	-8.5	50.0
m+p-Xylene	0.73459	0.67738	0.01	-7.8	50.0
o-Xylene	0.73438	0.66386	0.01	-9.6	50.0
Xylene (Total)	0.73452	0.67287	0.01	-8.4	50.0
Styrene	1.21068	1.08377	0.01	-10.5	50.0
Bromoform	0.22299	0.19489	0.01	-12.6	50.0
Isopropylbenzene	1.85113	1.70746	0.01	-7.8	50.0
Cyclohexanone	0.57941	0.50427	0.01	-13.0	50.0
1,1,2,2-Tetrachloroethane	0.69943	0.59163	0.01	-15.4	50.0
1,3-Dichlorobenzene	1.71930	1.47769	0.01	-14.1	50.0
1,4-Dichlorobenzene	1.79250	1.51993	0.01	-15.2	50.0

Data File: /chem2/HP09953.i/18nov06a.b/bn06ec5.d
Report Date: 11/07/2018 04:29

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP09953.i
Client ID: SECC050
Lab Sample ID: SECC050
Sublist used: 25809.sub

Injection Date and Time: 07-NOV-2018 01:16
Initial Calibration Date(s): 12-SEP-2018 12-SEP-2018
Initial Calibration Time(s): 13:13 18:55
Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
1,2-Dichlorobenzene	1.68089	1.45880	0.01	-13.2	50.0
1,2-Dibromo-3-chloropropane	0.12152	0.09724	0.01	-20.0	50.0
1,2,4-Trichlorobenzene	1.23953	1.07824	0.01	-13.0	50.0
Surrogate Standards	**ICAL Avg. RRF**	**SECC RRF**	**Min. RRF**	**% Diff.**	**Max. %Diff.**
Dibromofluoromethane	0.24919	0.25620	0.01	2.8	20.5
1,2-Dichloroethane-d4	0.05364	0.05529	0.01	3.1	20.5
Toluene-d8	1.29048	1.27932	0.01	-0.9	20.5
4-Bromofluorobenzene	0.47011	0.46529	0.01	-1.0	20.5

page 2

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09953.i/18sep12i.b/bs12i17.d
/chem2/HP09953.i/18sep12i.b/bs12i16.d
/chem2/HP09953.i/18sep12i.b/bs12i15.d
/chem2/HP09953.i/18sep12i.b/bs12i14.d
/chem2/HP09953.i/18sep12i.b/bs12i13.d
/chem2/HP09953.i/18sep12i.b/bs12i11.d
/chem2/HP09953.i/18sep12i.b/bs12i10.d

File /chem2/HP09953.i/18sep12i.b/bs12i13.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09953.i/18nov07a.b/bn07c01.d

RT Summary

File ID:

Internal Standard Name	bn07c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	1.930	1.930	Yes
Fluorobenzene	3.950	3.950	Yes
Chlorobenzene-d5	7.144	7.144	Yes
1,4-Dichlorobenzene-d4	9.224	9.224	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

File ID:

Internal Standard Name	bn07c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	112993	107301	53650	214602	Yes
Fluorobenzene	1318042	1213056	606528	2426112	Yes
Chlorobenzene-d5	1051055	940298	470149	1880596	Yes
1,4-Dichlorobenzene-d4	630040	544910	272455	1089820	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 11/07/2018 at 08:52

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date: 11/07/18 Time: 08:13

Lab File ID: bn07c01.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4515	0.5195	57.54	50	15	#
# Chloromethane	0.4654	0.4633	49.78	50	0	#
# Vinyl Chloride	0.3626	0.3695	50.95	50	2	#
# Bromomethane	0.3227	0.3421	53.01	50	6	#
# Chloroethane	0.1951	0.2051	52.56	50	5	#
# Trichlorofluoromethane	0.4992	0.5658	56.67	50	13	#
Ethanol	0.1304	0.1227	2350.88	2500	-6	
Freon 123a	0.3342	0.3144	47.04	50	-6	
Acrolein	2.4153	2.3202	480.31	500	-4	
# 1,1-Dichloroethene	0.2508	0.2439	48.61	50	-3	#
# Acetone	1.5782	1.0867	95.24	100	-5	#
# Freon 113	0.2515	0.3010	59.85	50	20	#
2-Propanol	0.9659	0.9889	255.96	250	2	
Methyl Iodide	0.6032	0.5803	48.11	50	-4	
# Carbon Disulfide	1.0037	0.7626	47.10	50	-6	#
# Methyl Acetate	0.1286	0.1323	51.44	50	3	#
Allyl Chloride	0.3355	0.3677	54.79	50	10	
# Methylene Chloride	0.2964	0.2690	45.37	50	-9	#
t-Butyl alcohol	1.3132	1.0991	209.24	250	-16	
Acrylonitrile	0.0871	0.0748	42.97	50	-14	
# Methyl Tertiary Butyl Ether	0.7135	0.6760	47.37	50	-5	#
# trans-1,2-Dichloroethene	0.2917	0.2851	48.86	50	-2	#
n-Hexane	0.3330	0.4306	64.66	50	29	<-
# 1,1-Dichloroethane	0.4730	0.4896	51.76	50	4	#
di-Isopropyl ether	0.8828	0.8862	50.19	50	0	
2-Chloro-1,3-butadiene	0.4168	0.4273	51.25	50	3	
Ethyl t-butyl ether	0.8314	0.7967	47.91	50	-4	
# 2-Butanone	6.4273	5.8449	90.94	100	-9	#
# cis-1,2-Dichloroethene	0.3166	0.3241	51.17	50	2	#
2,2-Dichloropropane	0.3448	0.3852	55.86	50	12	
Propionitrile	1.7242	1.7865	259.02	250	4	
Methacrylonitrile	0.0973	0.0960	123.29	125	-1	
Bromochloromethane	0.1682	0.1791	53.22	50	6	
Tetrahydrofuran	1.6010	1.6177	101.05	100	1	
# Chloroform	0.4801	0.4914	51.18	50	2	#
# 1,1,1-Trichloroethane	0.4916	0.4429	45.05	50	-10	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date: 11/07/18 Time: 08:13

Lab File ID: bn07c01.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Cyclohexane	0.4618	0.5297	57.35	50	15	#
# Cyclohexane(2)	0.4316	0.4741	54.93	50	10	#
# Cyclohexane(3)	0.1460	0.1658	56.75	50	13	#
1,1-Dichloropropene	0.3572	0.3824	53.52	50	7	
# Carbon Tetrachloride	0.3733	0.3921	52.52	50	5	#
Isobutyl Alcohol	0.4614	0.4058	549.69	625	-12	
# Benzene	1.1404	1.1451	50.21	50	0	#
# 1,2-Dichloroethane	0.3291	0.3241	49.24	50	-2	#
# 1,2-Dichloroethane(2)	0.0327	0.0328	50.12	50	0	#<-
t-Amyl methyl ether	0.7676	0.7168	46.69	50	-7	
n-Heptane	0.3037	0.4669	76.85	50	54	<-
n-Butanol	0.3864	0.3124	1010.61	1250	-19	
# Trichloroethene	0.2974	0.3055	51.35	50	3	#
# Methylcyclohexane	0.4628	0.5995	64.77	50	30	#<-
# 1,2-Dichloropropane	0.2708	0.2819	52.05	50	4	#
Methyl Methacrylate	0.1746	0.1611	46.15	50	-8	
1,4-Dioxane	0.1601	0.1519	592.88	625	-5	
Dibromomethane	0.1656	0.1658	50.05	50	0	
# Bromodichloromethane	0.3382	0.3399	50.25	50	1	#
2-Nitropropane	3.3067	2.6762	80.93	100	-19	
2-Chloroethyl Vinyl Ether	0.1426	0.1260	44.19	50	-12	
# cis-1,3-Dichloropropene	0.4084	0.4245	51.98	50	4	#
# 4-Methyl-2-pentanone	0.2385	0.2092	89.79	100	-10	#
# Toluene	0.9571	0.9359	48.89	50	-2	#
# trans-1,3-Dichloropropene	0.4585	0.4454	48.57	50	-3	#
Ethyl Methacrylate	0.4451	0.3975	44.66	50	-11	
# 1,1,2-Trichloroethane	0.3106	0.2994	48.19	50	-4	#
# Tetrachloroethene	0.5243	0.4529	43.19	50	-14	#
1,3-Dichloropropane	0.5001	0.4831	48.30	50	-3	
# 2-Hexanone	0.2192	0.1790	80.24	100	-20	#
# Dibromochloromethane	0.3578	0.3488	48.73	50	-3	#
# 1,2-Dibromoethane	0.3209	0.3117	48.56	50	-3	#
1-Chlorohexane	0.4756	0.5072	53.32	50	7	
# Chlorobenzene	1.1175	1.0897	48.76	50	-2	#
1,1,1,2-Tetrachloroethane	0.3789	0.3742	49.38	50	-1	
# Ethylbenzene	1.8002	1.8220	50.61	50	1	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date: 11/07/18 Time: 08:13

Lab File ID: bn07c01.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# m+p-Xylene	0.7346	0.7480	101.82	100	2	#
# o-Xylene	0.7344	0.7229	49.22	50	-2	#
# Styrene	1.2107	1.1787	48.68	50	-3	#
# Bromoform	0.2230	0.2054	46.06	50	-8	#
# Isopropylbenzene	1.8511	1.8888	51.02	50	2	#
Cyclohexanone	0.5794	0.4735	510.73	625	-18	
# 1,1,2,2-Tetrachloroethane	0.6994	0.6373	45.56	50	-9	#
Bromobenzene	0.9161	0.8352	45.59	50	-9	
trans-1,4-Dichloro-2-butene	0.1716	0.1631	118.81	125	-5	
1,2,3-Trichloropropane	0.2074	0.1881	45.36	50	-9	
n-Propylbenzene	3.6219	3.6552	50.46	50	1	
2-Chlorotoluene	0.8499	0.7940	46.71	50	-7	
1,3,5-Trimethylbenzene	2.8016	2.7567	49.20	50	-2	
4-Chlorotoluene	0.8610	0.8261	47.97	50	-4	
tert-Butylbenzene	0.6581	0.6738	51.19	50	2	
Pentachloroethane	0.3935	0.5309	67.45	50	35	<-
1,2,4-Trimethylbenzene	2.9215	2.8153	48.18	50	-4	
sec-Butylbenzene	3.5667	3.6254	50.82	50	2	
# 1,3-Dichlorobenzene	1.7193	1.6469	47.89	50	-4	#
p-Isopropyltoluene	3.1962	3.2872	51.42	50	3	
# 1,4-Dichlorobenzene	1.7925	1.6876	47.07	50	-6	#
1,2,3-Trimethylbenzene	3.1493	3.0134	47.84	50	-4	
Benzyl Chloride	0.2336	0.2738	58.61	50	17	
1,3-Diethylbenzene	1.9759	2.0234	51.20	50	2	
1,4-Diethylbenzene	2.0506	2.1885	53.36	50	7	
n-Butylbenzene	1.4849	1.5814	53.25	50	6	
# 1,2-Dichlorobenzene	1.6809	1.6000	47.59	50	-5	#
1,2-Diethylbenzene	1.7286	1.6807	48.61	50	-3	
# 1,2-Dibromo-3-chloropropane	0.1215	0.1015	41.78	50	-16	#
1,3,5-Trichlorobenzene	1.3152	1.3403	50.96	50	2	
# 1,2,4-Trichlorobenzene	1.2395	1.2040	48.57	50	-3	#
Hexachlorobutadiene	0.5655	0.6145	54.33	50	9	
Naphthalene	2.9445	2.5639	43.54	50	-13	
1,2,3-Trichlorobenzene	1.1820	1.1321	47.89	50	-4	
2-Methylnaphthalene	1.9916	1.7220	43.23	50	-14	
Dibromofluoromethane	0.2492	0.2533	50.83	50	2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09953 Calibration Date: 11/07/18 Time: 08:13

Lab File ID: bn07c01.d Init. Calib. Date(s): 09/12/18 09/12/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dibromofluoromethane(2)	0.2526	0.2586	51.18	50	2
1,2-Dichloroethane-d4	0.0536	0.0557	51.95	50	4
1,2-Dichloroethane-d4(2)	0.2359	0.2376	50.37	50	1
1,2-Dichloroethane-d4(3)	0.0344	0.0353	51.40	50	3
Toluene-d8	1.2905	1.2723	49.30	50	-1
Toluene-d8(2)	0.8374	0.8294	49.52	50	-1
4-Bromofluorobenzene	0.4701	0.4685	49.83	50	0
4-Bromofluorobenzene(2)	0.4327	0.4411	50.97	50	2

Average %Drift 7

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Data File: /chem2/HP09953.i/18nov07a.b/bn07c03.d
Report Date: 11/07/2018 23:00

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP09953.i
Client ID: SECC050
Lab Sample ID: SECC050
Sublist used: B183112.sub

Injection Date and Time: 07-NOV-2018 18:47
Initial Calibration Date(s): 12-SEP-2018 12-SEP-2018
Initial Calibration Time(s): 13:13 18:55
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Dichlorodifluoromethane	0.45147	0.41398	0.01	-8.3	50.0
Chloromethane	0.46535	0.41121	0.01	-11.6	50.0
Vinyl Chloride	0.36261	0.33227	0.01	-8.4	50.0
Bromomethane	0.32273	0.32187	0.01	-0.3	50.0
Chloroethane	0.19506	0.19590	0.01	0.4	50.0
Trichlorofluoromethane	0.49918	0.53899	0.01	8.0	50.0
1,1-Dichloroethene	0.25085	0.23707	0.01	-5.5	50.0
Acetone	100.000	99.154	0.01	-0.8	50.0
Freon 113	0.25150	0.28464	0.01	13.2	50.0
Carbon Disulfide	1.00370	0.88941	0.01	-11.4	50.0
Methyl Acetate	0.12863	0.13383	0.01	4.0	50.0
Methylene Chloride	0.29644	0.26631	0.01	-10.2	50.0
Methyl Tertiary Butyl Ether	0.71352	0.64666	0.01	-9.4	50.0
trans-1,2-Dichloroethene	0.29171	0.27296	0.01	-6.4	50.0
1,1-Dichloroethane	0.47301	0.47522	0.01	0.5	50.0
2-Butanone	6.42731	5.93774	0.01	-7.6	50.0
cis-1,2-Dichloroethene	0.31664	0.31668	0.01	0.0	50.0
Chloroform	0.48010	0.47488	0.01	-1.1	50.0
1,1,1-Trichloroethane	0.49157	0.42231	0.01	-14.1	50.0
Cyclohexane	0.46181	0.50031	0.01	8.3	50.0
Carbon Tetrachloride	0.37334	0.37076	0.01	-0.7	50.0
Benzene	1.14044	1.10238	0.01	-3.3	50.0
1,2-Dichloroethane	0.32911	0.31574	0.01	-4.1	50.0
Trichloroethene	0.29740	0.28952	0.01	-2.7	50.0
Methylcyclohexane	0.46282	0.56589	0.01	22.3	50.0
1,2-Dichloropropane	0.27083	0.27060	0.01	-0.1	50.0
Bromodichloromethane	0.33821	0.32715	0.01	-3.3	50.0
cis-1,3-Dichloropropene	0.40839	0.40240	0.01	-1.5	50.0
4-Methyl-2-pentanone	100.000	88.209	0.01	-11.8	50.0
Toluene	0.95715	0.89050	0.01	-7.0	50.0
trans-1,3-Dichloropropene	0.45848	0.42090	0.01	-8.2	50.0
1,1,2-Trichloroethane	0.31061	0.28952	0.01	-6.8	50.0
Tetrachloroethene	0.52428	0.42843	0.01	-18.3	50.0
2-Hexanone	100.000	78.522	0.01	-21.5	50.0
Dibromochloromethane	0.35786	0.33375	0.01	-6.7	50.0
1,2-Dibromoethane	0.32089	0.30250	0.01	-5.7	50.0
Chlorobenzene	1.11751	1.05058	0.01	-6.0	50.0
Ethylbenzene	1.80019	1.72704	0.01	-4.1	50.0
m+p-Xylene	0.73459	0.70706	0.01	-3.7	50.0
o-Xylene	0.73438	0.68969	0.01	-6.1	50.0
Xylene (Total)	0.73452	0.70127	0.01	-4.5	50.0
Styrene	1.21068	1.12865	0.01	-6.8	50.0
Bromoform	0.22299	0.19866	0.01	-10.9	50.0
Isopropylbenzene	1.85113	1.77441	0.01	-4.1	50.0
Cyclohexanone	0.57941	0.50331	0.01	-13.1	50.0
1,1,2,2-Tetrachloroethane	0.69943	0.60982	0.01	-12.8	50.0
1,3-Dichlorobenzene	1.71930	1.54876	0.01	-9.9	50.0
1,4-Dichlorobenzene	1.79250	1.59059	0.01	-11.3	50.0

Data File: /chem2/HP09953.i/18nov07a.b/bn07c03.d
Report Date: 11/07/2018 23:00

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP09953.i
Client ID: SECC050
Lab Sample ID: SECC050
Sublist used: B183112.sub

Injection Date and Time: 07-NOV-2018 18:47
Initial Calibration Date(s): 12-SEP-2018 12-SEP-2018
Initial Calibration Time(s): 13:13 18:55
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
1,2-Dichlorobenzene	1.68089	1.54161	0.01	-8.3	50.0
1,2-Dibromo-3-chloropropane	0.12152	0.10006	0.01	-17.7	50.0
1,2,4-Trichlorobenzene	1.23953	1.09256	0.01	-11.9	50.0
Surrogate Standards	**ICAL Avg. RRF**	**SECC RRF**	**Min. RRF**	**% Diff.**	**Max. %Diff.**
Dibromofluoromethane	0.24919	0.25484	0.01	2.3	20.5
1,2-Dichloroethane-d4	0.05364	0.05429	0.01	1.2	20.5
Toluene-d8	1.29048	1.26866	0.01	-1.7	20.5
4-Bromofluorobenzene	0.47011	0.52807	0.01	12.3	20.5

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/18sep24i.b/hs24i07.d
/chem2/HP19094.i/18sep24i.b/hs24i06.d
/chem2/HP19094.i/18sep24i.b/hs24i05.d
/chem2/HP19094.i/18sep24i.b/hs24i04.d
/chem2/HP19094.i/18sep24i.b/hs24i03.d
/chem2/HP19094.i/18sep24i.b/hs24i02.d
/chem2/HP19094.i/18sep24i.b/hs24i01.d

File /chem2/HP19094.i/18sep24i.b/hs24i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/18nov05b.b/hn05c01.d

RT Summary

Internal Standard Name	File ID: hn05c01.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.483	4.483	Yes
Fluorobenzene	7.970	7.970	Yes
Chlorobenzene-d5	11.384	11.384	Yes
1,4-Dichlorobenzene-d4	13.249	13.249	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: hn05c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	122842	126410	63205	252820	Yes
Fluorobenzene	2556545	2675616	1337808	5351232	Yes
Chlorobenzene-d5	1866671	2091043	1045522	4182086	Yes
1,4-Dichlorobenzene-d4	922290	1077251	538626	2154502	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 11/05/18 Time: 20:18

Lab File ID: hn05c01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3908	0.3030	7.75	10	-22	#<-
# Chloromethane	0.3827	0.2964	7.74	10	-23	#<-
# Vinyl Chloride	0.3584	0.2774	7.74	10	-23	#<-
1,3-Butadiene	0.4060	0.2831	6.97	10	-30	<-
# Bromomethane	0.2786	0.2196	7.88	10	-21	#<-
# Chloroethane	0.2174	0.1681	7.73	10	-23	#<-
Dichlorofluoromethane	0.5171	0.3910	7.56	10	-24	<-
# Trichlorofluoromethane	0.4528	0.3529	7.79	10	-22	#<-
Ethyl ether	0.1535	0.1363	8.88	10	-11	
Freon 123a	0.2869	0.2425	8.45	10	-15	
Acrolein	2.2188	1.9700	443.93	500	-11	
# 1,1-Dichloroethene	0.1961	0.1734	8.85	10	-12	#
# Freon 113	0.2311	0.1860	8.05	10	-20	#
# Acetone	2.9801	2.3026	77.27	100	-23	#<-
Methyl Iodide	0.4087	0.3510	8.59	10	-14	
# Carbon Disulfide	0.6239	0.5302	8.50	10	-15	#
Allyl Chloride	0.3727	0.3291	8.83	10	-12	
# Methyl Acetate	8.3663	7.3450	8.78	10	-12	#
# Methylene Chloride	0.2212	0.1845	8.34	10	-17	#
t-Butyl Alcohol	0.8535	0.7623	178.64	200	-11	
Acrylonitrile	3.8486	3.5613	46.27	50	-7	
# trans-1,2-Dichloroethene	0.2213	0.1916	8.66	10	-13	#
# Methyl Tertiary Butyl Ether	0.4032	0.3586	8.89	10	-11	#
n-Hexane	0.3519	0.2908	8.26	10	-17	
# 1,1-Dichloroethane	0.4213	0.3777	8.96	10	-10	#
di-Isopropyl Ether	0.7482	0.6586	8.80	10	-12	
2-Chloro-1,3-Butadiene	0.3791	0.3438	9.07	10	-9	
Ethyl t-butyl ether	0.5935	0.5109	8.61	10	-14	
# cis-1,2-Dichloroethene	0.2445	0.2179	8.91	10	-11	#
2,2-Dichloropropane	0.3009	0.2692	8.95	10	-11	
# 2-Butanone	4.8783	4.6474	95.27	100	-5	#
Propionitrile	1.3241	1.3262	200.32	200	0	
Methacrylonitrile	4.7745	4.4432	93.06	100	-7	
Bromochloromethane	0.1033	0.0905	8.77	10	-12	
Tetrahydrofuran	1.2969	1.2164	93.80	100	-6	
# Chloroform	0.3917	0.3470	8.86	10	-11	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 11/05/18 Time: 20:18

Lab File ID: hn05c01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
	COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
#	1,1,1-Trichloroethane	0.3351	0.2901	8.66	10	-13	#
#	Cyclohexane	0.4374	0.3653	8.35	10	-16	#
#	Cyclohexane(2)	0.3606	0.2980	8.26	10	-17	#
#	Cyclohexane(3)	0.1289	0.1084	8.41	10	-16	#
	1,1-Dichloropropene	0.3177	0.2801	8.82	10	-12	
#	Carbon Tetrachloride	0.2878	0.2505	8.70	10	-13	#
	Isobutyl Alcohol	0.3302	0.3108	470.65	500	-6	
#	Benzene	0.9386	0.8279	8.82	10	-12	#
#	1,2-Dichloroethane	0.2160	0.1836	8.50	10	-15	#
	t-Amyl methyl ether	0.4920	0.4229	8.59	10	-14	
	n-Heptane	0.3628	0.3028	8.34	10	-17	
	n-Butanol	0.2790	0.2751	985.97	1000	-1	
#	Trichloroethene	0.2403	0.2119	8.82	10	-12	#
#	Methylcyclohexane	0.4539	0.3682	8.11	10	-19	#
#	1,2-Dichloropropane	0.2277	0.2038	8.95	10	-10	#
	Methyl Methacrylate	8.8375	8.3724	9.47	10	-5	
	Dibromomethane	0.0945	0.0844	8.93	10	-11	
	1,4-Dioxane	0.0672	0.0692	514.83	500	3	
#	Bromodichloromethane	0.2560	0.2312	9.03	10	-10	#
	2-Nitropropane	2.5034	2.5405	101.48	100	1	
#	cis-1,3-Dichloropropene	0.2981	0.2742	9.20	10	-8	#
#	4-Methyl-2-Pentanone	12.134	11.5838	95.46	100	-5	#
#	Toluene	0.7421	0.6955	9.37	10	-6	#
#	trans-1,3-Dichloropropene	0.2859	0.2843	9.94	10	-1	#
	Ethyl Methacrylate	0.2450	0.2451	10.01	10	0	
#	1,1,2-Trichloroethane	0.1708	0.1610	9.43	10	-6	#
#	Tetrachloroethene	0.3353	0.3068	9.15	10	-8	#
	1,3-Dichloropropane	0.3026	0.2858	9.44	10	-6	
#	2-Hexanone	8.2598	7.8228	94.71	100	-5	#
#	Dibromochloromethane	0.2046	0.1989	9.72	10	-3	#
#	1,2-Dibromoethane	0.1601	0.1531	9.57	10	-4	#
	1-Chlorohexane	0.4426	0.3956	8.94	10	-11	
#	Chlorobenzene	0.7873	0.7379	9.37	10	-6	#
	1,1,1,2-Tetrachloroethane	0.2598	0.2503	9.63	10	-4	
#	Ethylbenzene	1.4504	1.3709	9.45	10	-5	#
#	m+p-Xylene	0.5380	0.5077	18.88	20	-6	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 11/05/18 Time: 20:18

Lab File ID: hn05c01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# o-Xylene	0.5143	0.4876	9.48	10	-5	#
# Styrene	0.8229	0.8031	9.76	10	-2	#
# Bromoform	0.1125	0.1087	9.66	10	-3	#
# Isopropylbenzene	1.4040	1.3183	9.39	10	-6	#
# 1,1,2,2-Tetrachloroethane	0.3967	0.3849	9.70	10	-3	#
Bromobenzene	0.6030	0.5886	9.76	10	-2	
trans-1,4-Dichloro-2-butene	3.8005	3.5678	93.88	100	-6	
1,2,3-Trichloropropane	0.1025	0.1003	9.78	10	-2	
n-Propylbenzene	3.2790	3.2470	9.90	10	-1	
2-Chlorotoluene	0.6360	0.6174	9.71	10	-3	
1,3,5-Trimethylbenzene	2.2213	2.1738	9.79	10	-2	
4-Chlorotoluene	0.6373	0.6216	9.75	10	-2	
tert-Butylbenzene	0.4831	0.4787	9.91	10	-1	
Pentachloroethane	0.3770	0.3789	10.05	10	0	
1,2,4-Trimethylbenzene	2.2667	2.2341	9.86	10	-1	
sec-Butylbenzene	2.8784	2.8582	9.93	10	-1	
# 1,3-Dichlorobenzene	1.1981	1.1518	9.61	10	-4	#
p-Isopropyltoluene	2.3842	2.3828	9.99	10	0	
# 1,4-Dichlorobenzene	1.1761	1.1173	9.50	10	-5	#
1,2,3-Trimethylbenzene	1.0399	0.9838	9.46	10	-5	
Benzyl Chloride	0.1434	0.1511	10.54	10	5	
n-Butylbenzene	1.1834	1.1787	9.96	10	0	
# 1,2-Dichlorobenzene	1.0571	0.9839	9.31	10	-7	#
# 1,2-Dibromo-3-chloropropane	2.0569	1.7398	8.46	10	-15	#
1,3,5-Trichlorobenzene	0.8913	0.8117	9.11	10	-9	
# 1,2,4-Trichlorobenzene	0.7260	0.6252	8.61	10	-14	#
Hexachlorobutadiene	0.2744	0.2478	9.03	10	-10	
Naphthalene	1.1489	0.9917	8.63	10	-14	
1,2,3-Trichlorobenzene	0.5970	0.4906	8.22	10	-18	
Dibromofluoromethane	0.2520	0.2412	9.57	10	-4	
Dibromofluoromethane(2)	0.2594	0.2467	9.51	10	-5	
1,2-Dichloroethane-d4	0.0439	0.0433	9.86	10	-1	
1,2-Dichloroethane-d4(2)	0.2125	0.2146	10.10	10	1	
1,2-Dichloroethane-d4(3)	0.0281	0.0276	9.81	10	-2	
Toluene-d8	1.2870	1.3311	10.34	10	3	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 11/05/18 Time: 20:18

Lab File ID: hn05c01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
Toluene-d8(2)	0.8307	0.8499	10.23	10	2
4-Bromofluorobenzene	0.4686	0.4594	9.80	10	-2
4-Bromofluorobenzene(2)	0.4069	0.3942	9.69	10	-3

Average %Drift 9

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Data File: /chem2/HP19094.i/18nov05b.b/hn05ec5.d
Report Date: 11/06/2018 07:41

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP19094.i
Client ID: SECC010
Lab Sample ID: SECC010
Sublist used: 25789-SM.sub
Injection Date and Time: 06-NOV-2018 07:01
Initial Calibration Date(s): 02-MAY-2018 24-SEP-2018
Initial Calibration Time(s): 19:15 20:37
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Dichlorodifluoromethane	0.39081	0.32731	0.01	-16.2	50.0
Chloromethane	0.38274	0.30371	0.01	-20.6	50.0
Vinyl Chloride	0.35841	0.28691	0.01	-19.9	50.0
Bromomethane	0.27864	0.23124	0.01	-17.0	50.0
Chloroethane	0.21739	0.16989	0.01	-21.8	50.0
Trichlorofluoromethane	0.45279	0.36993	0.01	-18.3	50.0
1,1-Dichloroethene	0.19607	0.18371	0.01	-6.3	50.0
Freon 113	0.23109	0.20694	0.01	-10.5	50.0
Acetone	2.98014	2.64497	0.01	-11.2	50.0
Carbon Disulfide	0.62388	0.55636	0.01	-10.8	50.0
Methyl Acetate	8.36626	7.10296	0.01	-15.1	50.0
Methylene Chloride	0.22120	0.19546	0.01	-11.6	50.0
trans-1,2-Dichloroethene	0.22129	0.18823	0.01	-14.9	50.0
Methyl Tertiary Butyl Ether	0.40325	0.36074	0.01	-10.5	50.0
1,1-Dichloroethane	0.42133	0.39233	0.01	-6.9	50.0
cis-1,2-Dichloroethene	0.24451	0.22508	0.01	-7.9	50.0
2-Butanone	4.87826	4.53031	0.01	-7.1	50.0
Chloroform	0.39172	0.31987	0.01	-18.3	50.0
1,1,1-Trichloroethane	0.33506	0.27419	0.01	-18.2	50.0
Cyclohexane	0.43741	0.34409	0.01	-21.3	50.0
Carbon Tetrachloride	0.28777	0.23734	0.01	-17.5	50.0
Benzene	0.93862	0.76876	0.01	-18.1	50.0
1,2-Dichloroethane	0.21601	0.16808	0.01	-22.2	50.0
Trichloroethene	0.24033	0.22012	0.01	-8.4	50.0
Methylcyclohexane	0.45388	0.39848	0.01	-12.2	50.0
1,2-Dichloropropane	0.22773	0.21515	0.01	-5.5	50.0
Bromodichloromethane	0.25602	0.24490	0.01	-4.3	50.0
cis-1,3-Dichloropropene	0.29807	0.28444	0.01	-4.6	50.0
4-Methyl-2-Pentanone	12.13435	11.60228	0.01	-4.4	50.0
Toluene	0.74209	0.68904	0.01	-7.1	50.0
trans-1,3-Dichloropropene	0.28594	0.28508	0.01	-0.3	50.0
1,1,2-Trichloroethane	0.17076	0.16274	0.01	-4.7	50.0
Tetrachloroethene	0.33529	0.30517	0.01	-9.0	50.0
2-Hexanone	8.25980	8.13105	0.01	-1.6	50.0
Dibromochloromethane	0.20466	0.19891	0.01	-2.8	50.0
1,2-Dibromoethane	0.16005	0.15645	0.01	-2.3	50.0
Chlorobenzene	0.78730	0.73569	0.01	-6.6	50.0
Ethylbenzene	1.45036	1.36459	0.01	-5.9	50.0
m+p-Xylene	0.53796	0.50733	0.01	-5.7	50.0
o-Xylene	0.51431	0.48674	0.01	-5.4	50.0
Xylene (Total)	0.53008	0.50046	0.01	-5.6	50.0
Styrene	0.82286	0.79008	0.01	-4.0	50.0
Bromoform	0.11248	0.11022	0.01	-2.0	50.0
Isopropylbenzene	1.40404	1.31111	0.01	-6.6	50.0
1,1,2,2-Tetrachloroethane	0.39667	0.38854	0.01	-2.0	50.0
1,3-Dichlorobenzene	1.19815	1.16099	0.01	-3.1	50.0
1,4-Dichlorobenzene	1.17614	1.12474	0.01	-4.4	50.0
1,2-Dichlorobenzene	1.05712	0.88795	0.01	-16.0	50.0

Data File: /chem2/HP19094.i/18nov05b.b/hn05ec5.d
Report Date: 11/06/2018 07:41

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP19094.i Injection Date and Time: 06-NOV-2018 07:01
Client ID: SECC010 Initial Calibration Date(s): 02-MAY-2018 24-SEP-2018
Lab Sample ID: SECC010 Initial Calibration Time(s): 19:15 20:37
Sublist used: 25789-SM.sub Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
1,2-Dibromo-3-chloropropane	2.05690	1.63444	0.01	-20.5	50.0
1,2,4-Trichlorobenzene	0.72604	0.57576	0.01	-20.7	50.0
Surrogate Standards	**ICAL Avg. RRF**	**SECC RRF**	**Min. RRF**	**% Diff.**	**Max. %Diff.**
Dibromofluoromethane	0.25204	0.22546	0.01	-10.5	20.5
1,2-Dichloroethane-d4	0.04394	0.04125	0.01	-6.1	20.5
Toluene-d8	1.28704	1.31750	0.01	2.4	20.5
4-Bromofluorobenzene	0.46859	0.45671	0.01	-2.5	20.5

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/18may02b.b/hy02i17.d
/chem2/HP19094.i/18may02b.b/hy02i16.d
/chem2/HP19094.i/18may02b.b/hy02i15.d
/chem2/HP19094.i/18may02b.b/hy02i14.d
/chem2/HP19094.i/18may02b.b/hy02i13.d
/chem2/HP19094.i/18may02b.b/hy02i12.d
/chem2/HP19094.i/18may02b.b/hy02i11.d

File /chem2/HP19094.i/18may02b.b/hy02i12.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/18nov05b.b/hn05c02.d

RT Summary

Internal Standard Name	File ID: hn05c02.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.482	4.489	Yes
Fluorobenzene	7.963	7.976	Yes
Chlorobenzene-d5	11.377	11.396	Yes
1,4-Dichlorobenzene-d4	13.249	13.267	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: hn05c02.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	119910	91579	45790	183158	Yes
Fluorobenzene	2569937	2321054	1160527	4642108	Yes
Chlorobenzene-d5	1862937	1697976	848988	3395952	Yes
1,4-Dichlorobenzene-d4	923209	883093	441546	1766186	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 11/05/18 Time: 20:39

Lab File ID: hn05c02.d Init. Calib. Date(s): 05/02/18 05/02/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Acetonitrile	1.2073	0.8551	283.29	400	-29	<-
Vinyl Acetate	0.3058	0.2541	8.31	10	-17	
Methyl Acrylate	0.0944	0.0902	47.80	50	-4	
1-Chlorobutane	0.4516	0.3955	8.76	10	-12	
Chloroacetonitrile	0.0038	0.0051	683.19	500	37	
2-Chloroethyl vinyl ether	0.0904	0.0824	9.11	10	-9	
cis-1,4-Dichloro-2-butene	6.4754	3.8651	11.94	20	-40	<-
Cyclohexanone	0.3293	0.3453	524.25	500	5	
Hexachloroethane	0.4210	0.4328	10.28	10	3	

Average %Drift 17

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

page 1 of 1

Data File: /chem2/HP19094.i/18nov05b.b/hn05ec6.d
Report Date: 11/06/2018 07:41

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP19094.i
Client ID: SECD010
Lab Sample ID: SECD010
Sublist used: 25789SM.sub

Injection Date and Time: 06-NOV-2018 07:22
Initial Calibration Date(s): 02-MAY-2018 24-SEP-2018
Initial Calibration Time(s): 19:15 20:37
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Cyclohexanone	0.32931	0.32534	0.01	-1.2	50.0

Surrogate Standards	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Dibromofluoromethane	0.25204	0.24097	0.01	-4.4	20.5
1,2-Dichloroethane-d4	0.04394	0.04495	0.01	2.3	20.5
Toluene-d8	1.28704	1.32295	0.01	2.8	20.5
4-Bromofluorobenzene	0.46859	0.45844	0.01	-2.2	20.5

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): bc31c10.d Date Analyzed: 10/31/18

Instrument ID: HP09953 Time Analyzed: 09:03

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	126446	1.930	1454583	3.950	1120551	7.144	656321	9.224
UPPER LIMIT	252892	2.430	2909166	4.450	2241102	7.644	1312642	9.724
LOWER LIMIT	63223	1.430	727292	3.450	560276	6.644	328160	8.724
LAB SAMPLE ID								
01 LCSB85	132096	1.930	1461172	3.944	1159575	7.144	681114	9.224
02 LCSB86	132096	1.930	1461172	3.944	1159575	7.144	681114	9.224
03 LCDB85	137376	1.918	1426823	3.944	1125913	7.144	652054	9.224
04 LCDB86	137376	1.918	1426823	3.944	1125913	7.144	652054	9.224
05 VBLKB85	140050	1.924	1371595	3.938	1056268	7.144	600674	9.224
06 VBLKB86	140050	1.924	1371595	3.938	1056268	7.144	600674	9.224
07 9865717	96658	1.924	1223870	3.950	968350	7.144	542715	9.230
08 9865718	81417	1.924	817852	3.944	639202	7.144	344482	9.230
09 9866495	110474	1.930	1285588	3.944	987362	7.144	551844	9.224
10 9866496	101667	1.924	1265773	3.944	942939	7.144	483614	9.224
11 9866497	110993	1.924	1273811	3.944	975205	7.144	543950	9.224
12 9866498	88193	1.930	1195471	3.950	890357	7.144	414365	9.224
13 9866499	82465	1.924	1209972	3.950	892086	7.144	406204	9.230
14 9867815	102050	1.924	1196749	3.944	929266	7.144	497363	9.224
15 9867816	90295	1.924	1133616	3.944	865332	7.144	455886	9.224
16 9867817	32964 *	1.894	250901*	3.944	195058 *	7.150	99365 *	9.230
17 9867818	102370	1.912	1149758	3.938	860731	7.144	427948	9.224
18 9866466RE	102328	1.924	1108071	3.944	735072	7.144	255498 *	9.230
19 9866467RE	102743	1.918	1151951	3.944	800914	7.144	313254 *	9.230
20 9867761	53744 *	1.906	1069801	3.944	597089	7.144	155346 *	9.230
21 9867762	56264 *	1.930	1025913	3.944	542162 *	7.144	140215 *	9.230
22 9867763MS	31285 *	1.912	1108527	3.944	611803	7.144	179088 *	9.230

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): bc31c10.d Date Analyzed: 10/31/18

Instrument ID: HP09953 Time Analyzed: 09:03

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	126446	1.930	1454583	3.950	1120551	7.144	656321	9.224
UPPER LIMIT	252892	2.430	2909166	4.450	2241102	7.644	1312642	9.724
LOWER LIMIT	63223	1.430	727292	3.450	560276	6.644	328160	8.724
LAB SAMPLE ID								
23 9867764MSD	69540	1.918	1112465	3.944	631002	7.144	194039 *	9.230
24 9867815MS	82278	1.906	1238754	3.938	938092	7.144	539172	9.224
25 9867766	47634 *	1.912	1144745	3.944	672988	7.144	187407 *	9.230
26 9870990	109802	1.918	1076890	3.944	636810	7.144	183250 *	9.230
27 SECC050	92974	1.906	1253351	3.944	967311	7.144	585137	9.224

IS1 (TBA)=t-Butyl alcohol-d10 UPPER LIMIT = + 100%
IS2 (FBZ)=Fluorobenzene of internal standard area.
IS3 (CBZ)=Chlorobenzene-d5 LOWER LIMIT = - 50%
IS4 (DCB)=1,4-Dichlorobenzene-d4 of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): bn06c01.d Date Analyzed: 11/06/18

Instrument ID: HP09953 Time Analyzed: 19:51

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)			IS2(FBZ)			IS3(CBZ)			IS4(DCB)		
	AREA	#	RT	AREA	#	RT	AREA	#	RT	AREA	#	RT
12 HOUR STD	121316		1.924	1367264		3.944	1101888		7.144	661749		9.224
UPPER LIMIT	242632		2.424	2734528		4.444	2203776		7.644	1323498		9.724
LOWER LIMIT	60658		1.424	683632		3.444	550944		6.644	330874		8.724
LAB SAMPLE ID												
01 MDL050 - MD	126430		1.918	1316180		3.944	1065107		7.144	602098		9.224
02 MDLB50 - MD	126430		1.918	1316180		3.944	1065107		7.144	602098		9.224
03 VBLKB93	106420		1.924	1179305		3.944	959320		7.144	538378		9.230
04 VBLKB94	106420		1.924	1179305		3.944	959320		7.144	538378		9.230
05 LCSB93	142440		1.924	1348442		3.944	1093863		7.144	639786		9.224
06 LCSB94	142440		1.924	1348442		3.944	1093863		7.144	639786		9.224
07 LCDB93	99308		1.924	1323832		3.944	1063185		7.144	622740		9.224
08 LCDB94	99308		1.924	1323832		3.944	1063185		7.144	622740		9.224
09 9867761RE	36060	*	1.918	1267208		3.944	744155		7.144	194760	*	9.230
10 9867766RE	37500	*	1.912	1172636		3.944	650337		7.144	163287	*	9.230
11 9867767	69214		1.918	909232		3.944	408623	*	7.144	105116	*	9.230
12 9870251	86399		1.912	1231270		3.944	933285		7.144	416749		9.230
13 9870252	56493	*	1.924	1177955		3.944	765773		7.144	271312	*	9.230
14 9870253	84604		1.918	1205911		3.944	772988		7.144	277499	*	9.230
15 9872065	82209		1.936	1254924		3.944	712048		7.144	208843	*	9.230
16 SECC050	119430		1.918	1389195		3.944	1099731		7.144	668359		9.224
17 9867824RE	90046		1.918	1211642		3.950	851462		7.144	319589	*	9.230
18 9878580	120224		1.918	1225842		3.944	861601		7.144	370347		9.230
19 9878581	115390		1.906	1064267		3.944	635351		7.144	181356	*	9.230
20 9878584	125730		1.918	1238790		3.944	975047		7.144	493160		9.230
21 9878585	113686		1.906	1166870		3.944	847735		7.144	369518		9.230
22 9882246	93004		1.918	1227191		3.944	918165		7.144	406201		9.230

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): bn06c01.d Date Analyzed: 11/06/18

Instrument ID: HP09953 Time Analyzed: 19:51

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	121316	1.924	1367264	3.944	1101888	7.144	661749	9.224
UPPER LIMIT	242632	2.424	2734528	4.444	2203776	7.644	1323498	9.724
LOWER LIMIT	60658	1.424	683632	3.444	550944	6.644	330874	8.724
LAB SAMPLE ID								
23 9883608	121571	1.912	1266413	3.938	1017960	7.144	565885	9.230
24 9883609	121027	1.924	1291044	3.950	1058363	7.144	574377	9.230
25 9883610	112045	1.918	1247627	3.938	998937	7.144	536785	9.224
26 9878583	104761	1.912	1150910	3.944	865458	7.144	428719	9.224
27 9878582	124946	1.924	1198609	3.944	951738	7.144	510541	9.230

IS1 (TBA)=t-Butyl alcohol-d10 UPPER LIMIT = + 100%
IS2 (FBZ)=Fluorobenzene of internal standard area.
IS3 (CBZ)=Chlorobenzene-d5 LOWER LIMIT = - 50%
IS4 (DCB)=1,4-Dichlorobenzene-d4 of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): bn07c01.d Date Analyzed: 11/07/18

Instrument ID: HP09953 Time Analyzed: 08:13

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	112993	1.930	1318042	3.950	1051055	7.144	630040	9.224
UPPER LIMIT	225986	2.430	2636084	4.450	2102110	7.644	1260080	9.724
LOWER LIMIT	56496	1.430	659021	3.450	525528	6.644	315020	8.724
LAB SAMPLE ID								
01 LCSB95	117629	1.918	1327711	3.944	1052922	7.144	628677	9.224
02 LCSB97	117629	1.918	1327711	3.944	1052922	7.144	628677	9.224
03 LCSB98	117629	1.918	1327711	3.944	1052922	7.144	628677	9.224
04 LCDB95	129391	1.912	1318617	3.944	1068273	7.144	633484	9.224
05 LCDB97	129391	1.912	1318617	3.944	1068273	7.144	633484	9.224
06 LCDB98	129391	1.912	1318617	3.944	1068273	7.144	633484	9.224
07 LCSB96	116967	1.924	1309126	3.944	1047266	7.144	582498	9.224
08 LCDB96	109267	1.912	1285302	3.938	1035323	7.144	569212	9.224
09 VBLKB95	112643	1.924	1220326	3.944	999590	7.144	564314	9.230
10 VBLKB97	112643	1.924	1220326	3.944	999590	7.144	564314	9.230
11 VBLKB98	112643	1.924	1220326	3.944	999590	7.144	564314	9.230
12 9867767RE	19896 *	1.918	907622	3.950	388536 *	7.150	84453 *	9.230
13 9872065RE	14610 *	1.918	1068481	3.950	528647	7.144	111309 *	9.230
14 9870252RE	67907	1.918	1122707	3.950	726755	7.144	253204 *	9.230
15 9870253RE	83249	1.924	1150260	3.950	758402	7.144	273395 *	9.230
16 9884806	70210	1.924	1066065	3.950	539681	7.144	147802 *	9.230
17 9884807	57415	1.912	792482	3.944	347450 *	7.144	94597 *	9.230
18 9884808	100448	1.912	1227829	3.944	888596	7.144	354812	9.230
19 9884809	85747	1.918	882245	3.944	634349	7.144	242551 *	9.230
20 9884810MS	88376	1.906	1249549	3.938	904919	7.144	377574	9.224
21 9884811MSD	64093	1.912	956740	3.950	670449	7.144	265568 *	9.230
22 9884813	86593	1.918	1008578	3.944	525043 *	7.144	145882 *	9.230

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): bn07c01.d Date Analyzed: 11/07/18

Instrument ID: HP09953 Time Analyzed: 08:13

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	112993	1.930	1318042	3.950	1051055	7.144	630040	9.224
UPPER LIMIT	225986	2.430	2636084	4.450	2102110	7.644	1260080	9.724
LOWER LIMIT	56496	1.430	659021	3.450	525528	6.644	315020	8.724
LAB SAMPLE ID								
23 9884814	55580 *	1.924	1020642	3.950	549405	7.144	145365 *	9.230
24 9884815	102670	1.930	1229998	3.950	901769	7.144	359042	9.230
25 9878918	100582	1.912	1224725	3.944	984078	7.144	533266	9.230
26 9878916MS	68248	1.906	995631	3.938	759392	7.144	422761	9.224
27 9878917MSD	100094	1.930	1279804	3.950	1005412	7.144	557040	9.230
28 9878916MS	99518	1.918	1288828	3.950	1040711	7.144	560923	9.230
29 9878917MSD	114818	1.918	1169177	3.950	954735	7.144	527386	9.230
30 9878915	104908	1.930	1252840	3.950	1016426	7.144	548612	9.230
31 SECC050	103899	1.912	1259287	3.944	1010657	7.144	613454	9.224
32 9876025	113302	1.912	1247369	3.944	1002877	7.144	548706	9.224
33 9876033	120329	1.918	1232794	3.944	1010238	7.144	558185	9.230

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): hn05c01.d Date Analyzed: 11/05/18

Instrument ID: HP19094 Time Analyzed: 20:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	122842	4.483	2556545	7.970	1866671	11.384	922290	13.249
UPPER LIMIT	245684	4.983	5113090	8.470	3733342	11.884	1844580	13.749
LOWER LIMIT	61421	3.983	1278272	7.470	933336	10.884	461145	12.749
LAB SAMPLE ID								
01 LCSH94	131378	4.476	2595876	7.964	1875552	11.378	945698	13.249
02 LCSH96	131378	4.476	2594120	7.964	1875552	11.378	945698	13.249
03 LCSH95	122558	4.489	2570241	7.964	1839489	11.378	937740	13.249
04 LCSH97	122558	4.489	2570449	7.964	1839489	11.378	937740	13.249
05 LCDH95	122312	4.482	2585990	7.964	1868311	11.377	942166	13.249
06 LCDH97	125004	4.482	2585990	7.964	1868311	11.377	942166	13.249
07 MDL94 - MDL	119847	4.483	2568972	7.964	1846609	11.378	930548	13.249
08 MDL96 - MDL	119847	4.483	2568972	7.964	1846609	11.378	930548	13.249
09 VBLKH94	116767	4.476	2555930	7.963	1855788	11.377	936548	13.249
10 VBLKH96	116767	4.476	2555930	7.963	1855788	11.377	936548	13.249
11 9868189	99710	4.470	2552394	7.970	1856307	11.377	941709	13.249
12 9868190	112931	4.470	2510183	7.964	1837063	11.378	928830	13.249
13 9868188	87610	4.488	2512432	7.964	1805403	11.377	923535	13.249
14 9868184	107291	4.477	2462750	7.964	1808254	11.378	919564	13.249
15 9868185	115373	4.489	2500029	7.964	1828006	11.378	908528	13.249
16 9868186	77363	4.489	2457368	7.964	1800805	11.378	912392	13.249
17 9868187	107645	4.495	2473499	7.964	1795896	11.377	918200	13.249
18 9868187MS	115721	4.464	2529341	7.964	1818126	11.377	923765	13.249
19 9868187MSD	134353	4.482	2566752	7.964	1850435	11.377	932549	13.249
20 9876332	72413	4.483	2522280	7.964	1831375	11.378	936825	13.249
21 9876334	120833	4.488	2270871	7.964	1835228	11.377	937159	13.249
22 9876335MS	99126	4.470	2488944	7.964	1818323	11.378	926876	13.249

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): hn05c01.d Date Analyzed: 11/05/18

Instrument ID: HP19094 Time Analyzed: 20:18

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	122842	4.483	2556545	7.970	1866671	11.384	922290	13.249
UPPER LIMIT	245684	4.983	5113090	8.470	3733342	11.884	1844580	13.749
LOWER LIMIT	61421	3.983	1278272	7.470	933336	10.884	461145	12.749
LAB SAMPLE ID								
23 9876336MSD	102631	4.483	2492076	7.970	1702614	11.384	915365	13.249
24 9876335MS1	116899	4.483	2507483	7.964	1839540	11.378	932013	13.249
25 9876336MSD1	86414	4.452	2420278	7.964	1774386	11.378	919226	13.249
26 9876342	119137	4.495	2519988	7.970	1843317	11.378	927171	13.249
27 9866460	119159	4.495	2525981	7.964	1832790	11.378	924904	13.249
28 9867760	107790	4.482	2399521	7.964	1813313	11.377	923440	13.249
29 9870250	115666	4.489	2171726	7.964	1612124	11.378	854926	13.249
30 9872059	115080	4.470	2494666	7.964	1829287	11.378	920815	13.249
31 9874410	120264	4.483	2488544	7.964	1835826	11.378	932154	13.249
32 9876331	111627	4.470	2439294	7.964	1804412	11.378	904519	13.249
33 SECC010	121222	4.476	2378952	7.964	1843369	11.378	906263	13.249
34 SECD010	98836	4.470	2124872	7.964	1564857	11.378	799490	13.249

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

Sample Data

Volatiles by GC/MS

T1001 Lancaster Laboratories 9867760
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05s83.d Injection date and time: **06-NOV-2018 05:14**
Data file Sample Info. Line: T1001;9867760;1;0;;TID10;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 10:49 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18nov05b.b/hn05b10.d**

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: **25789**
Calibration date and time (Last Method Edit): 05-NOV-2018 22:04
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18nov05b.b/hn05c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9367;9274

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.482(0.000)	475	65	107790	(-12)	50.00	
63) Fluorobenzene	7.964(0.006)	1046	96	2399521	(-6)	10.00	
97) Chlorobenzene-d5	11.377(0.006)	1606	117	1813313	(-3)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249(0.000)	1913	152	923440	(0)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.073(-0.001)	113	544040	8.996	90%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.531(-0.001)	102	110071	10.440	104%		81 - 118
82) Toluene-d8	(3)	9.945(0.000)	98	2419512	10.367	104%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371(-0.001)	95	825126	9.711	97%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.05	0.5
2) Chloromethane	(2)			Not Detected					0.06	0.5
5) Vinyl Chloride	(2)			Not Detected					0.1	0.5
7) Bromomethane	(2)			Not Detected					0.07	0.5
8) Chloroethane	(2)			Not Detected					0.07	0.5
10) Trichlorofluoromethane	(2)			Not Detected					0.05	0.5
15) 1,1-Dichloroethene	(2)			Not Detected					0.06	0.5
16) Freon 113	(2)			Not Detected					0.06	0.5
14) Acetone	(1)			Not Detected					0.9	5
18) Carbon Disulfide	(2)			Not Detected					0.06	1
21) Methyl Acetate	(1)			Not Detected					0.1	1
23) Methylene Chloride	(2)			Not Detected					0.07	0.5
31) trans-1,2-Dichloroethene	(2)			Not Detected					0.06	0.5
30) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.05	0.5
33) 1,1-Dichloroethane	(2)			Not Detected					0.07	0.5
39) cis-1,2-Dichloroethene	(2)			Not Detected					0.05	0.5
38) 2-Butanone	(1)			Not Detected					0.6	5
49) Chloroform	(2)			Not Detected					0.09	0.5
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.06	0.5
52) Cyclohexane	(2)			Not Detected					0.05	0.5
54) Carbon Tetrachloride	(2)			Not Detected					0.07	0.5
58) Benzene	(2)			Not Detected					0.05	0.5
59) 1,2-Dichloroethane	(2)			Not Detected					0.05	0.5
67) Trichloroethene	(2)			Not Detected					0.06	0.5
69) Methylcyclohexane	(2)			Not Detected					0.05	0.5
70) 1,2-Dichloropropane	(2)			Not Detected					0.06	0.5
74) Bromodichloromethane	(2)			Not Detected					0.05	0.5
80) cis-1,3-Dichloropropene	(2)			Not Detected					0.05	0.5
81) 4-Methyl-2-Pentanone	(1)			Not Detected					0.7	5
83) Toluene	(3)			Not Detected					0.07	0.5

Digitally signed by Jennifer K. Howe on 11/06/2018 at 10:53. Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05s83.d Injection date and time: **06-NOV-2018 05:14**
Data file Sample Info. Line: T1001;9867760;1;0;;TID10;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 10:49 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18nov05b.b/hn05b10.d**

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: **25789**
Calibration date and time (Last Method Edit): 05-NOV-2018 22:04
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18nov05b.b/hn05c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

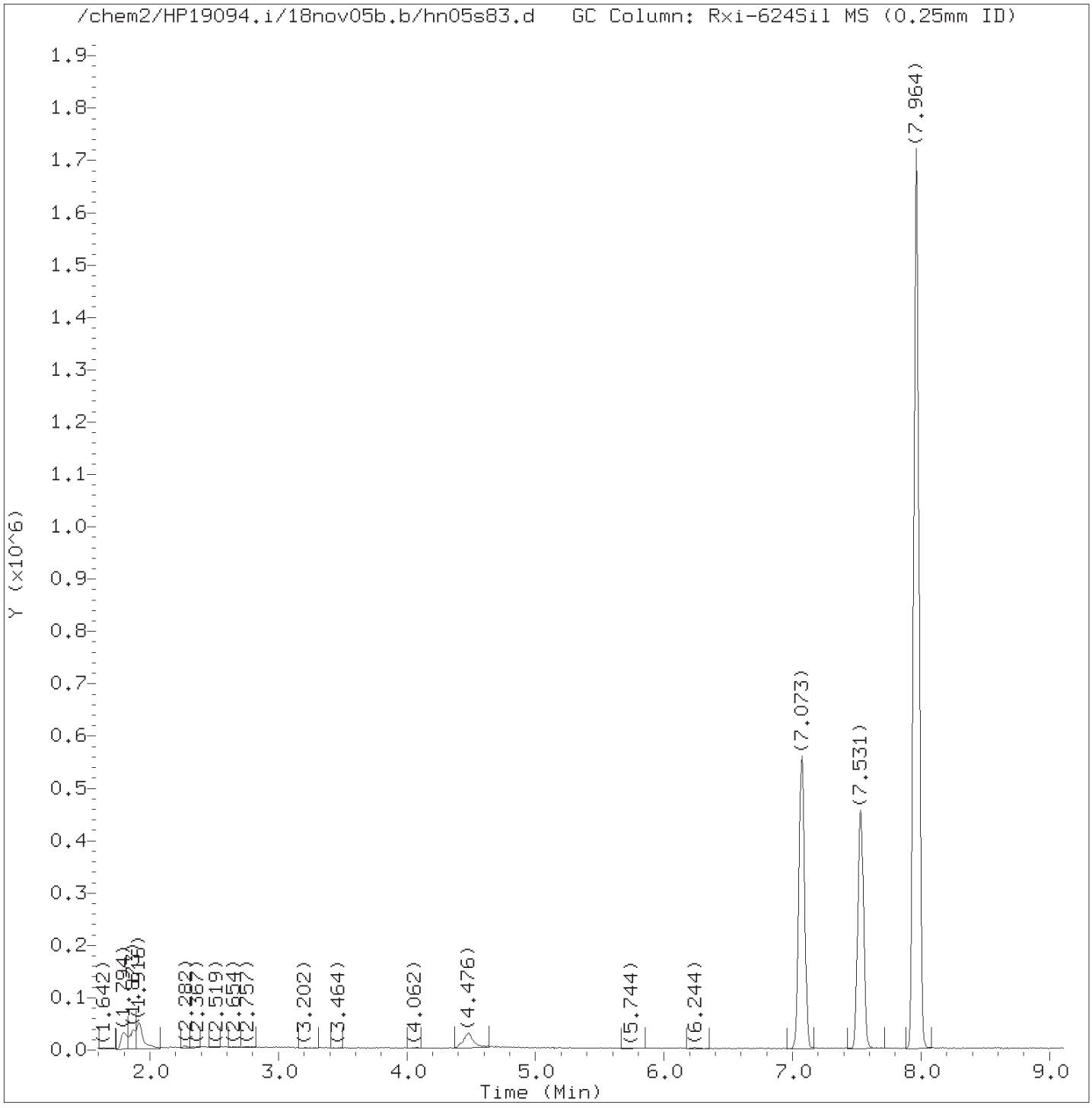
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.06	0.5
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.06	0.5
89) Tetrachloroethene	(3)				Not Detected					0.06	0.5
91) 2-Hexanone	(1)				Not Detected					0.6	5
93) Dibromochloromethane	(3)				Not Detected					0.07	0.5
95) 1,2-Dibromoethane	(3)				Not Detected					0.06	0.5
98) Chlorobenzene	(3)				Not Detected					0.06	0.5
100) Ethylbenzene	(3)				Not Detected					0.06	0.5
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	0.5
106) Styrene	(3)				Not Detected					0.05	0.5
107) Bromoform	(3)				Not Detected					0.3	1
108) Isopropylbenzene	(3)				Not Detected					0.05	0.5
112) Cyclohexanone	(1)				Not Detected					2	25
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.07	0.5
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.06	0.5
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.07	0.5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.06	0.5
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.1	0.5
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.06	0.5

Total number of targets = 51

Digitally signed by Jennifer K. Howe on 11/06/2018 at 10:53. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

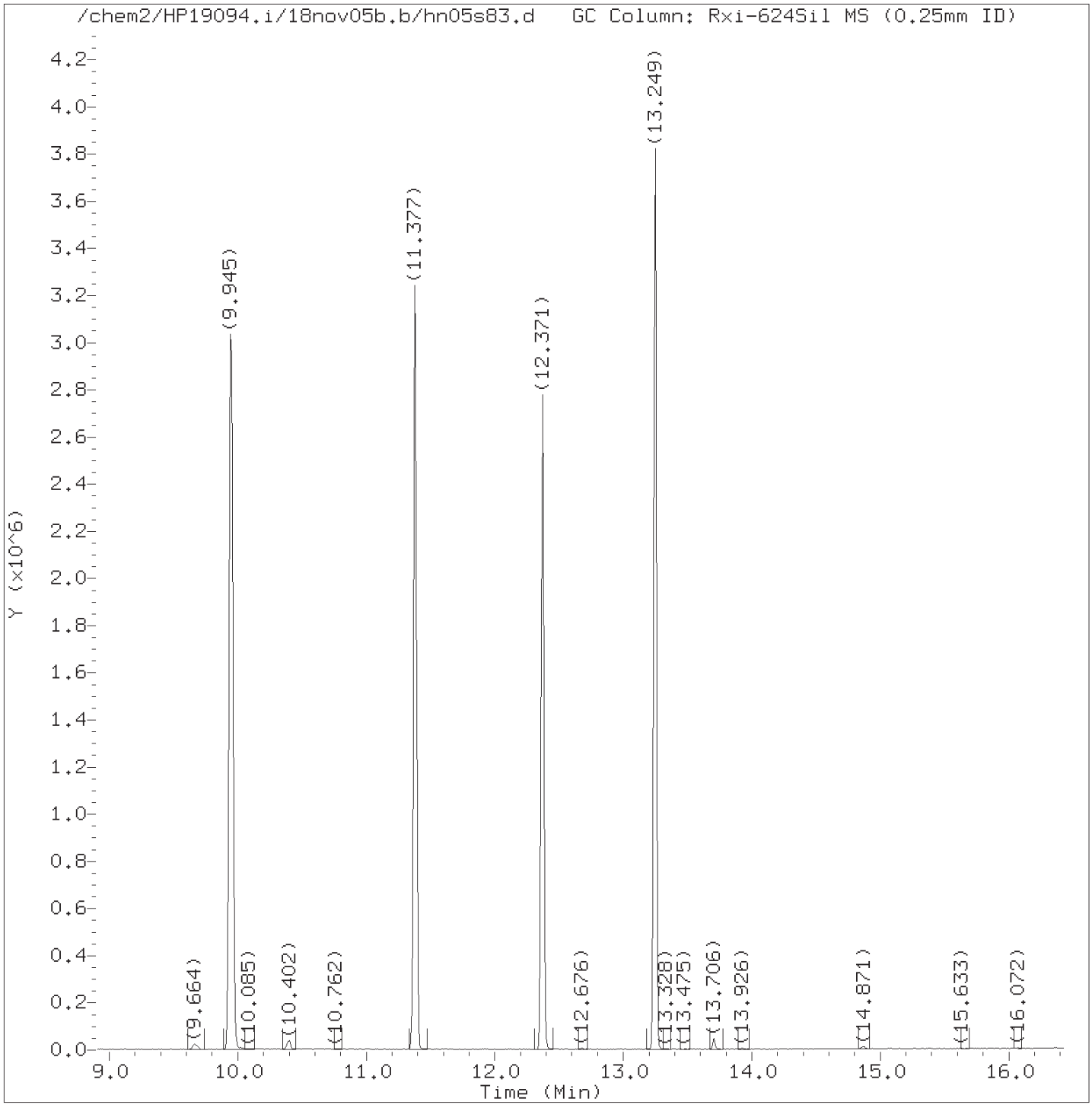
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s83.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 05:14 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 05-NOV-2018 22:04
Date, time and analyst ID of latest file update: 06-Nov-2018 10:49 jkh09052

Sample Name: T1001 Lab Sample ID: 9867760

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:53.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s83.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 05:14 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 05-NOV-2018 22:04
Date, time and analyst ID of latest file update: 06-Nov-2018 10:49 jkh09052

Sample Name: T1001 Lab Sample ID: 9867760

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:53.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s83.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 05:14 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 05-NOV-2018 22:04
Date, time and analyst ID of latest file update: 06-Nov-2018 10:49 jkh09052

Sample Name: T1001 Lab Sample ID: 9867760

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.482	65	107790	50.000
50)$Dibromofluoromethane	(2)	7.073	113	544040	8.996
57)$1,2-Dichloroethane-d4	(2)	7.531	102	110071	10.440
63)*Fluorobenzene	(2)	7.964	96	2399521	10.000
82)$Toluene-d8	(3)	9.945	98	2419512	10.367
97)*Chlorobenzene-d5	(3)	11.377	117	1813313	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	825126	9.711
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	923440	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:53.
Target 3.5 esignature user ID: jkh09052

T1002 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9867761

Data file: /chem2/HP09953.i/18oct31a.b/bc31s35.d Injection date and time: **31-OCT-2018 17:24**
Data file Sample Info. Line: T1002;9867761;2;0;;TID10;DODSW;;bc31b20; Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 31-Oct-2018 18:25 pth10165

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 31-OCT-2018 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: **050A** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **0.99**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5.04 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.906	(0.024)	177	65	53744	(-57)	250.00	*
70) Fluorobenzene	3.944	(0.006)	512	96	1069801	(-26)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	597089	(-47)	50.00	
140) 1,4-Dichlorobenzene-d4	9.230	(-0.006)	1381	152	155346	(-76)	50.00	*

*** = Internal Standard area outside QC limits**

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.311	(0.000)	113	281892	52.871	106%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.615	(0.000)	102	59870	52.171	104%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	988536	64.146	128%	*	85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	179118	31.906	64%	*	79 - 119

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)				Not Detected					0.6	5
4) Chloromethane	(2)				Not Detected					0.6	5
5) Vinyl Chloride	(2)				Not Detected					0.6	5
9) Bromomethane	(2)				Not Detected					0.7	5
10) Chloroethane	(2)				Not Detected					1	5
13) Trichlorofluoromethane	(2)				Not Detected					0.7	5
19) 1,1-Dichloroethene	(2)				Not Detected					0.5	5
20) Acetone	(1)	1.632	(-0.004)	58	3205	7.003	6.95		J	6	20
22) Freon 113	(2)				Not Detected					0.6	10
25) Carbon Disulfide	(2)				Not Detected					0.6	5
27) Methyl Acetate	(2)				Not Detected					1	5
31) Methylene Chloride	(2)				Not Detected					2	5
34) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.5	5
35) trans-1,2-Dichloroethene	(2)				Not Detected					0.5	5
40) 1,1-Dichloroethane	(2)				Not Detected					0.5	5
44) 2-Butanone	(1)				Not Detected					1	10
45) cis-1,2-Dichloroethene	(2)				Not Detected					0.5	5
54) Chloroform	(2)				Not Detected					0.6	5
57) 1,1,1-Trichloroethane	(2)				Not Detected					0.6	5
58) Cyclohexane	(2)				Not Detected					0.5	5
61) Carbon Tetrachloride	(2)				Not Detected					0.5	5
64) Benzene	(2)				Not Detected					0.5	5
67) 1,2-Dichloroethane	(2)				Not Detected					0.6	5
75) Trichloroethene	(2)				Not Detected					0.5	5
76) Methylcyclohexane	(2)				Not Detected					0.6	5
77) 1,2-Dichloropropane	(2)				Not Detected					0.5	5
84) Bromodichloromethane	(2)				Not Detected					0.4	5
89) cis-1,3-Dichloropropene	(2)				Not Detected					0.4	5

Digitally signed by Patrick T. Herres on 10/31/2018 at 18:25. Target 3.5 esignature user ID: pth10165

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18oct31a.b/bc31s35.d Injection date and time: **31-OCT-2018 17:24**
Data file Sample Info. Line: T1002;9867761;2;0;;TID10;DODSW;;bc31b20; Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 31-Oct-2018 18:25 pth10165

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 31-OCT-2018 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: **050A** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **0.99**

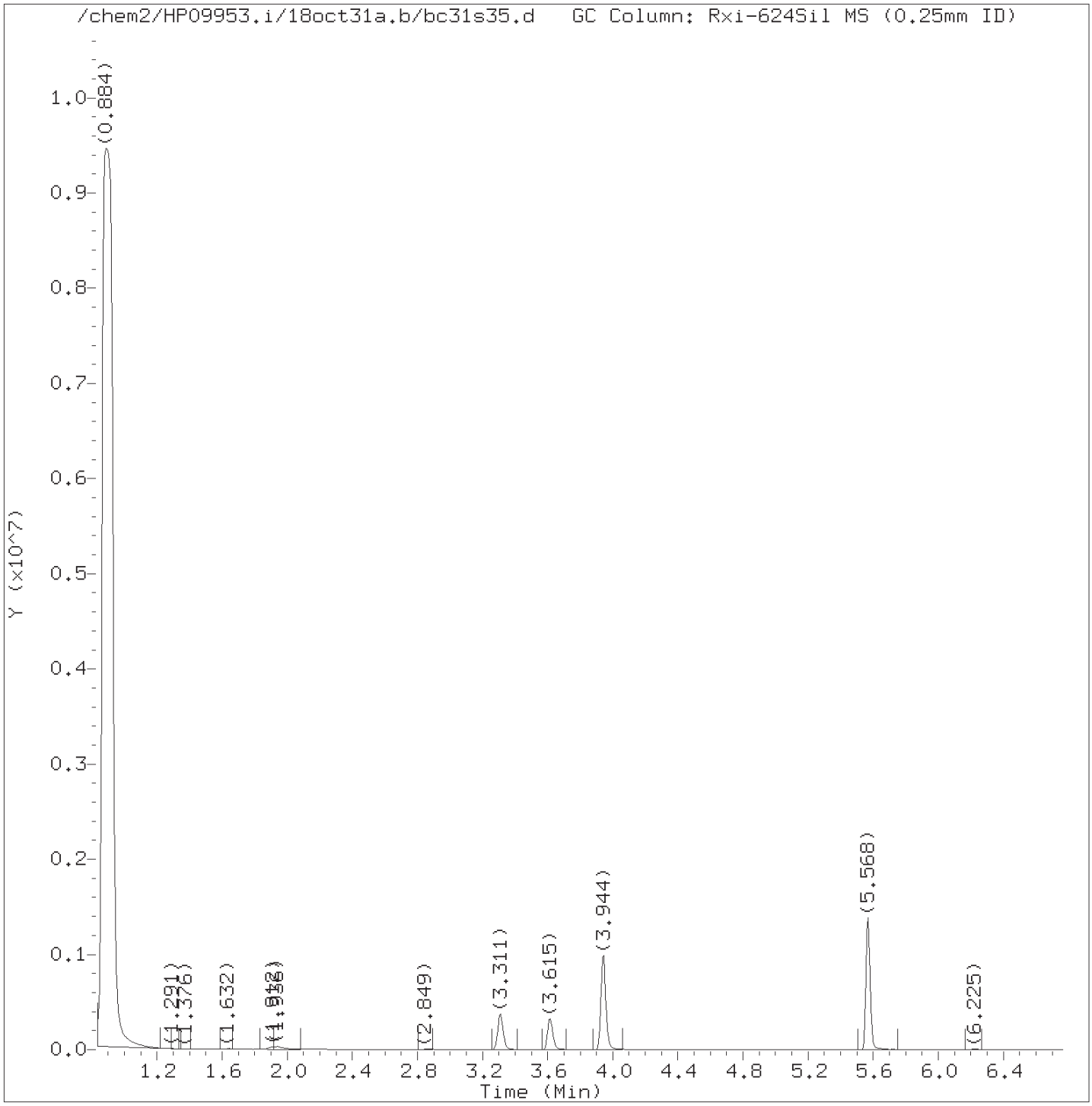
Volume Purged (Vt): 5 ml Sample Weight (Ws): 5.04 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
90) 4-Methyl-2-pentanone	(2)				Not Detected					1	10
92) Toluene	(3)				Not Detected					0.6	5
93) trans-1,3-Dichloropropene	(3)				Not Detected					0.3	5
96) 1,1,2-Trichloroethane	(3)				Not Detected					0.5	5
98) Tetrachloroethene	(3)				Not Detected					0.5	5
101) 2-Hexanone	(3)				Not Detected					1	10
103) Dibromochloromethane	(3)				Not Detected					0.4	5
104) 1,2-Dibromoethane	(3)				Not Detected					0.4	5
107) Chlorobenzene	(3)				Not Detected					0.5	5
109) Ethylbenzene	(3)				Not Detected					0.4	5
110) m+p-Xylene	(3)				Not Detected					1	5
111) o-Xylene	(3)				Not Detected					0.4	5
112) Xylene (Total)	(3)				Not Detected					1	5
113) Styrene	(3)				Not Detected					0.3	5
114) Bromoform	(3)				Not Detected					5	10
115) Isopropylbenzene	(3)				Not Detected					0.4	5
118) Cyclohexanone	(1)				Not Detected					25	250
120) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.4	5
138) 1,3-Dichlorobenzene	(4)				Not Detected					0.5	5
141) 1,4-Dichlorobenzene	(4)				Not Detected					0.4	5
147) 1,2-Dichlorobenzene	(4)				Not Detected					0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.4	5
153) 1,2,4-Trichlorobenzene	(4)				Not Detected					5	10

Total number of targets = 51

Digitally signed by Patrick T. Herres on 10/31/2018 at 18:25. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/02/2018 at 10:18. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

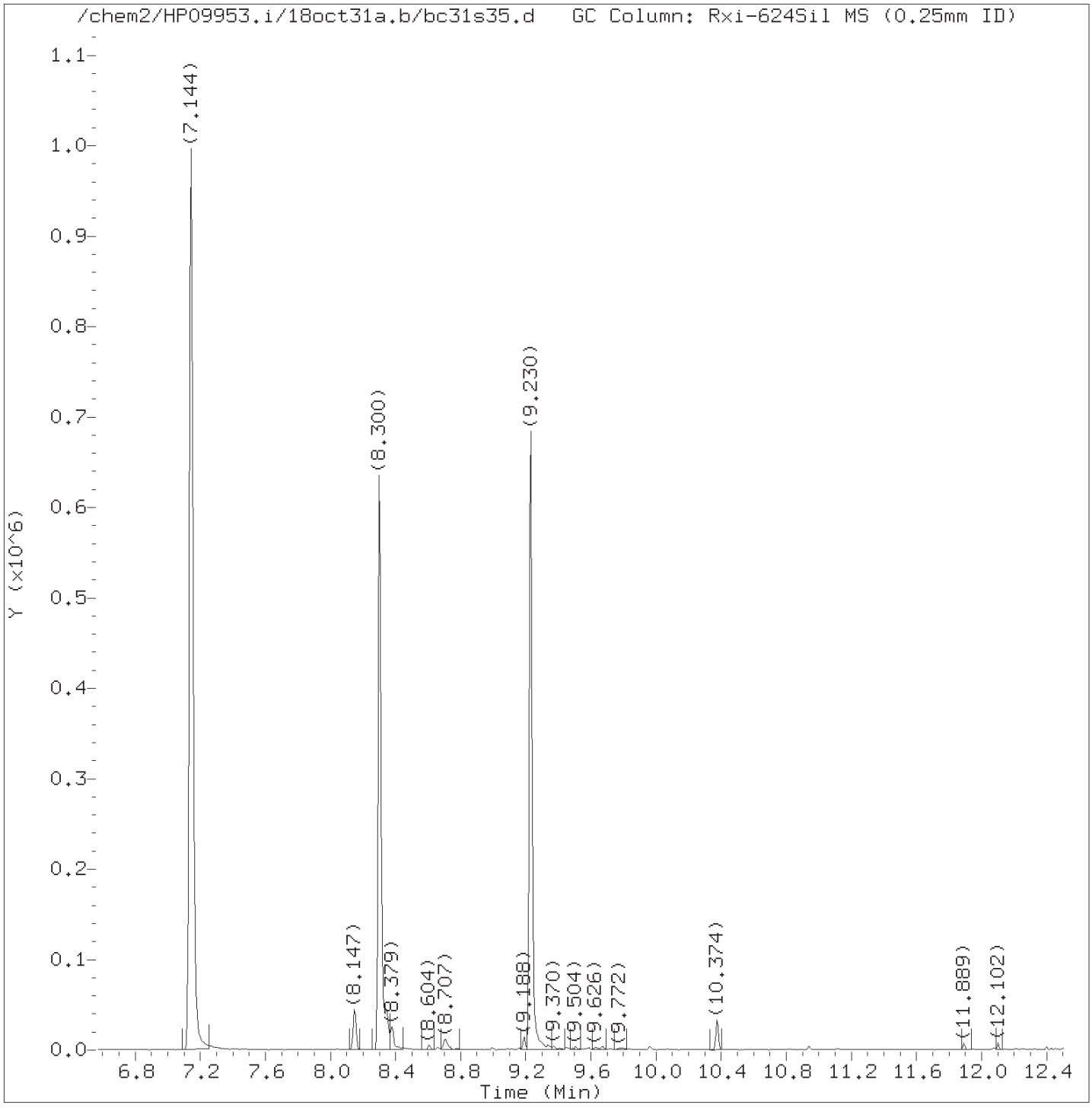
Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s35.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 17:24 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:25 pth10165

Sample Name: T1002 Lab Sample ID: 9867761

Digitally signed by Patrick T. Herres
on 10/31/2018 at 18:25.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s35.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 17:24 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:25 pth10165

Sample Name: T1002 Lab Sample ID: 9867761

Digitally signed by Patrick T. Herres
on 10/31/2018 at 18:25.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s35.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 17:24 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:25 pth10165

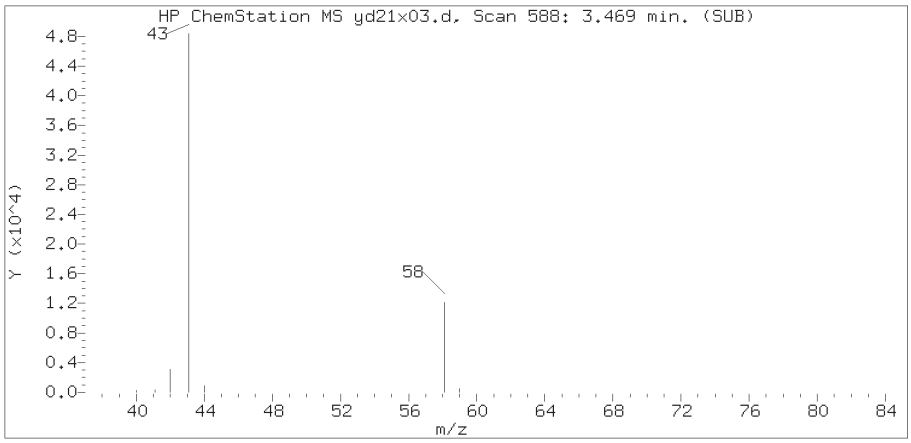
Sample Name: T1002 Lab Sample ID: 9867761

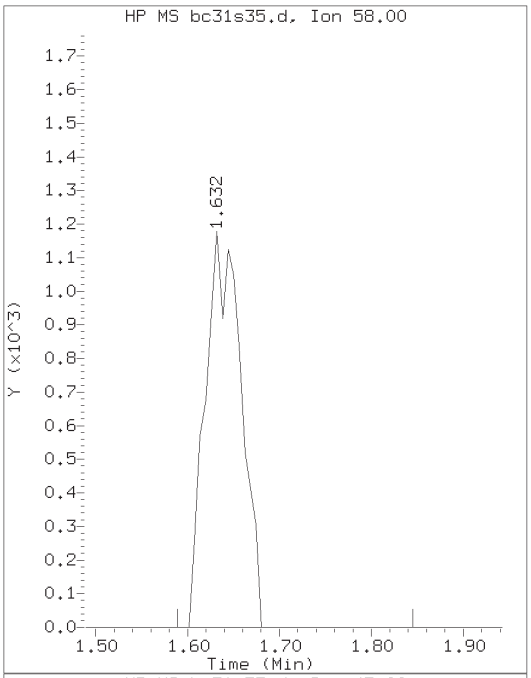
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
20) Acetone	(1)	1.632	58	3205	7.003
30)*t-Butyl alcohol-d10	(1)	1.906	65	53744	250.000
56)$Dibromofluoromethane	(2)	3.311	113	281892	52.871
63)$1,2-Dichloroethane-d4	(2)	3.615	102	59870	52.171
70)*Fluorobenzene	(2)	3.944	96	1069801	50.000
91)$Toluene-d8	(3)	5.568	98	988536	64.146
105)*Chlorobenzene-d5	(3)	7.144	117	597089	50.000
119)$4-Bromofluorobenzene	(3)	8.300	95	179118	31.906
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	155346	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

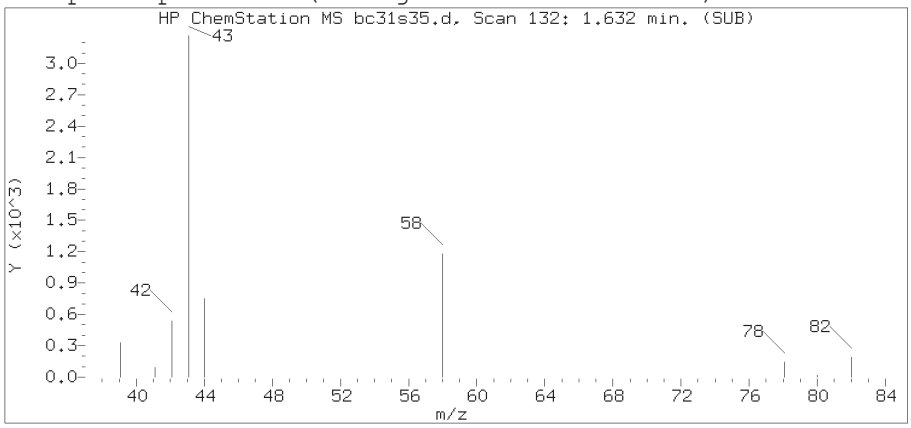
Digitally signed by Patrick T. Herres
on 10/31/2018 at 18:25.
Target 3.5 esignature user ID: pth10165

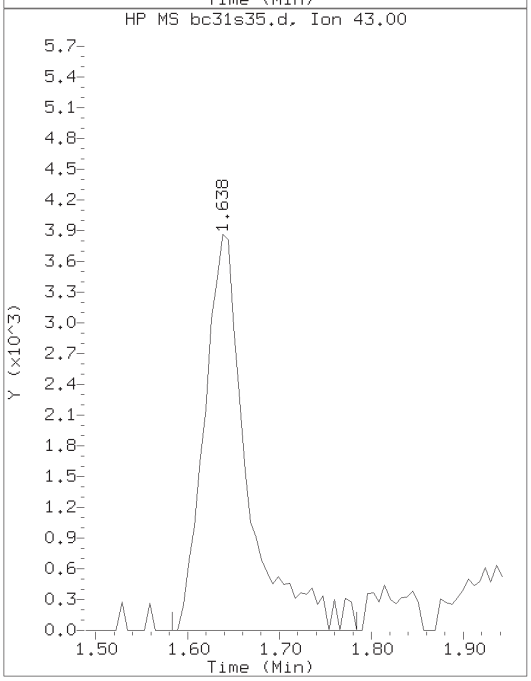
Reference Standard Spectrum for Acetone



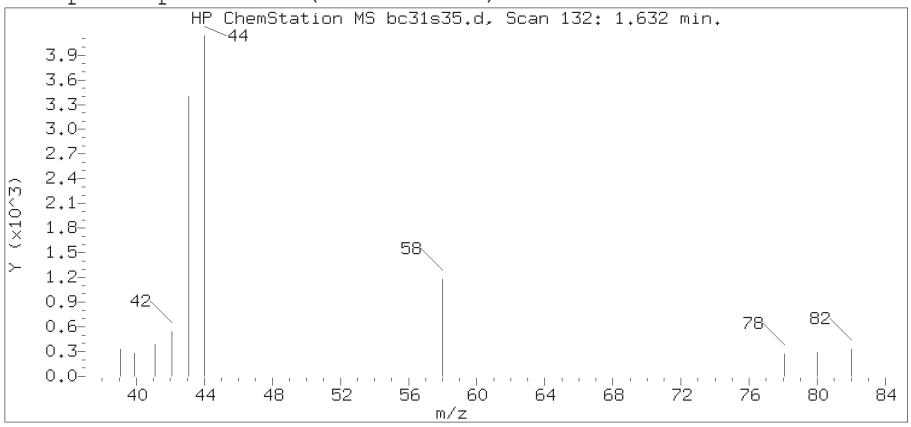


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09953.i/18oct31a.b/bc31s35.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 17:24 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:25 pth10165

Sample Name: T1002 Lab Sample ID: 9867761

Compound Number : 20
Compound Name : Acetone
Scan Number : 132
Retention Time (minutes): 1.632
Relative Retention Time :-0.00449
Quant Ion : 58.00
Area (flag) : 3205
On-Column Amount (ng) : 7.0030

Digitally signed by Patrick T. Herres on 10/31/2018 at 18:25.
Target 3.5 esignature user ID: pth10165.

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov06a.b/bn06s03.d Injection date and time: **06-NOV-2018 22:32**
Data file Sample Info. Line: T1002RE;9867761RE;2;0;;TID10;DODSW;;bn06b01; Instrument ID: **HP09953.i** Batch: **B183101AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 00:42 pth10165

Blank Data file reference: **/chem2/HP09953.i/18nov06a.b/bn06b01.d**

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 06-NOV-2018 21:35
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov06a.b/bn06c01.d**

Bottle Code: **050B** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.07**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 4.67 g

Analysis Comments:9274, 9367

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.918(0.006)	179	65	36060	(-70)	250.00	*
70) Fluorobenzene	3.944(0.000)	512	96	1267208	(-7)	50.00	
105) Chlorobenzene-d5	7.144(0.000)	1038	117	744155	(-32)	50.00	
140) 1,4-Dichlorobenzene-d4	9.230(-0.006)	1381	152	194760	(-71)	50.00	*

*** = Internal Standard area outside QC limits**

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.305(0.003)	113	330042	52.259	105%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.615(0.002)	102	70450	51.827	104%		71 - 136
91) Toluene-d8	(3)	5.568(0.000)	98	1200997	62.531	125%	*	85 - 116
119) 4-Bromofluorobenzene	(3)	8.300(0.000)	95	230634	32.963	66%	*	79 - 119

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
2) Dichlorodifluoromethane	(2)			Not Detected					0.6	5
4) Chloromethane	(2)			Not Detected					0.6	5
5) Vinyl Chloride	(2)			Not Detected					0.6	5
9) Bromomethane	(2)			Not Detected					0.7	5
10) Chloroethane	(2)			Not Detected					1	5
13) Trichlorofluoromethane	(2)			Not Detected					0.7	5
19) 1,1-Dichloroethene	(2)			Not Detected					0.5	5
20) Acetone	(1)	1.644(-0.002)	58	6895	37.737	40.40			6	21
22) Freon 113	(2)			Not Detected					0.6	11
25) Carbon Disulfide	(2)			Not Detected					0.6	5
27) Methyl Acetate	(2)			Not Detected					1	5
31) Methylene Chloride	(2)			Not Detected					2	5
34) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.5	5
35) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	5
40) 1,1-Dichloroethane	(2)			Not Detected					0.5	5
44) 2-Butanone	(1)			Not Detected					1	11
45) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	5
54) Chloroform	(2)			Not Detected					0.6	5
57) 1,1,1-Trichloroethane	(2)			Not Detected					0.6	5
58) Cyclohexane	(2)			Not Detected					0.5	5
61) Carbon Tetrachloride	(2)			Not Detected					0.5	5
64) Benzene	(2)			Not Detected					0.5	5
67) 1,2-Dichloroethane	(2)			Not Detected					0.6	5
75) Trichloroethene	(2)			Not Detected					0.5	5
76) Methylcyclohexane	(2)			Not Detected					0.6	5
77) 1,2-Dichloropropane	(2)			Not Detected					0.5	5
84) Bromodichloromethane	(2)			Not Detected					0.4	5

Digitally signed by Patrick T. Herres on 11/07/2018 at 00:43. Target 3.5 esignature user ID: pth10165

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov06a.b/bn06s03.d Injection date and time: **06-NOV-2018 22:32**
Data file Sample Info. Line: T1002RE;9867761RE;2;0;;TID10;DODSW;;bn06b01; Instrument ID: **HP09953.i** Batch: **B183101AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 00:42 pth10165

Blank Data file reference: **/chem2/HP09953.i/18nov06a.b/bn06b01.d**

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 06-NOV-2018 21:35
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov06a.b/bn06c01.d**

Bottle Code: **050B** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.07**

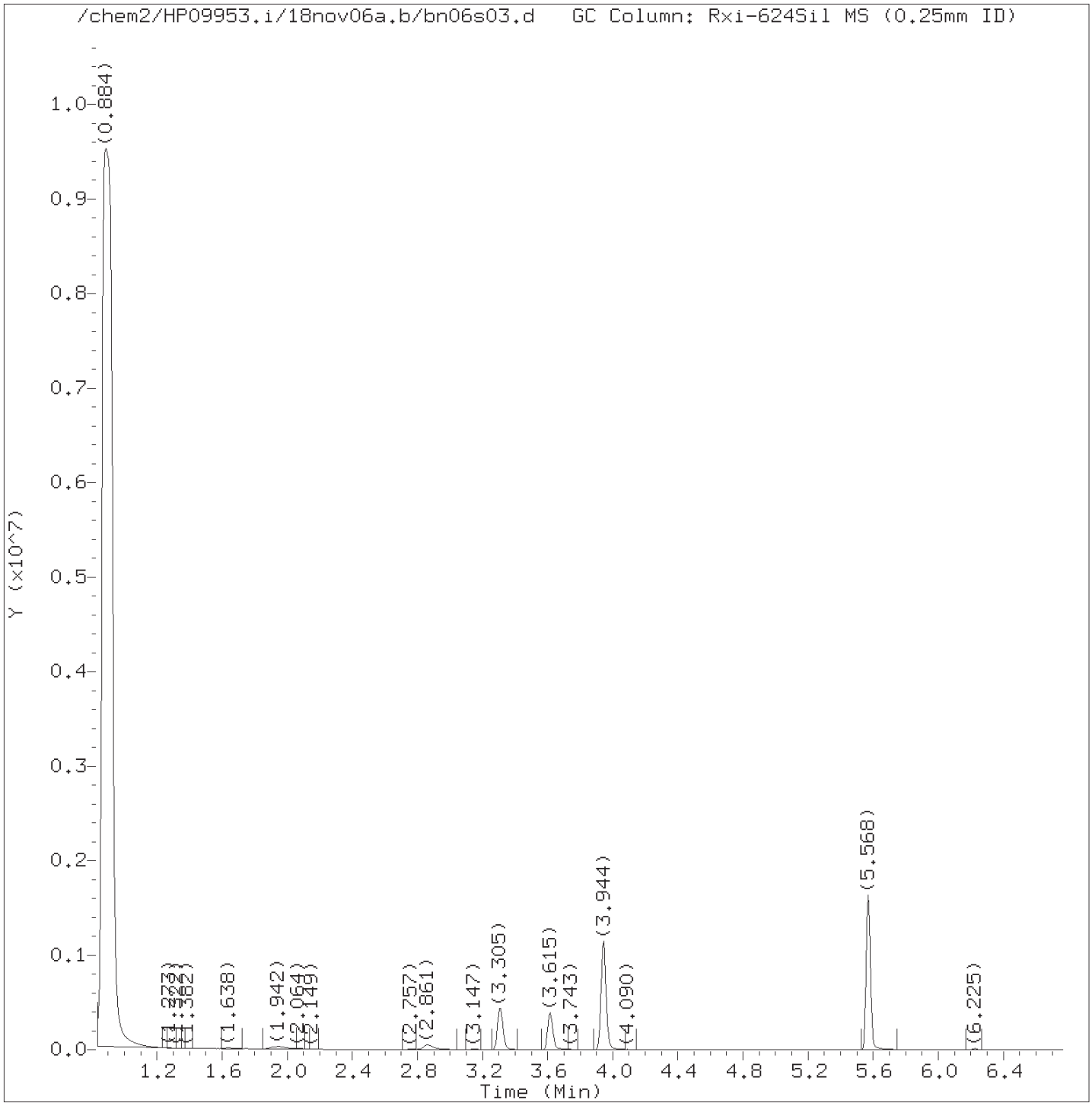
Volume Purged (Vt): 5 ml Sample Weight (Ws): 4.67 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
89) cis-1,3-Dichloropropene	(2)				Not Detected					0.4	5
90) 4-Methyl-2-pentanone	(2)				Not Detected					1	11
92) Toluene	(3)				Not Detected					0.6	5
93) trans-1,3-Dichloropropene	(3)				Not Detected					0.3	5
96) 1,1,2-Trichloroethane	(3)				Not Detected					0.5	5
98) Tetrachloroethene	(3)				Not Detected					0.5	5
101) 2-Hexanone	(3)				Not Detected					1	11
103) Dibromochloromethane	(3)				Not Detected					0.4	5
104) 1,2-Dibromoethane	(3)				Not Detected					0.4	5
107) Chlorobenzene	(3)				Not Detected					0.5	5
109) Ethylbenzene	(3)				Not Detected					0.4	5
110) m+p-Xylene	(3)				Not Detected					1	5
111) o-Xylene	(3)				Not Detected					0.4	5
112) Xylene (Total)	(3)				Not Detected					1	5
113) Styrene	(3)				Not Detected					0.3	5
114) Bromoform	(3)				Not Detected					5	11
115) Isopropylbenzene	(3)				Not Detected					0.4	5
118) Cyclohexanone	(1)				Not Detected					27	270
120) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.4	5
138) 1,3-Dichlorobenzene	(4)				Not Detected					0.5	5
141) 1,4-Dichlorobenzene	(4)				Not Detected					0.4	5
147) 1,2-Dichlorobenzene	(4)				Not Detected					0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.4	5
153) 1,2,4-Trichlorobenzene	(4)				Not Detected					5	11

Total number of targets = 51

Digitally signed by Patrick T. Herres on 11/07/2018 at 00:43. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Robin C. Runkle on 11/12/2018 at 11:31. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

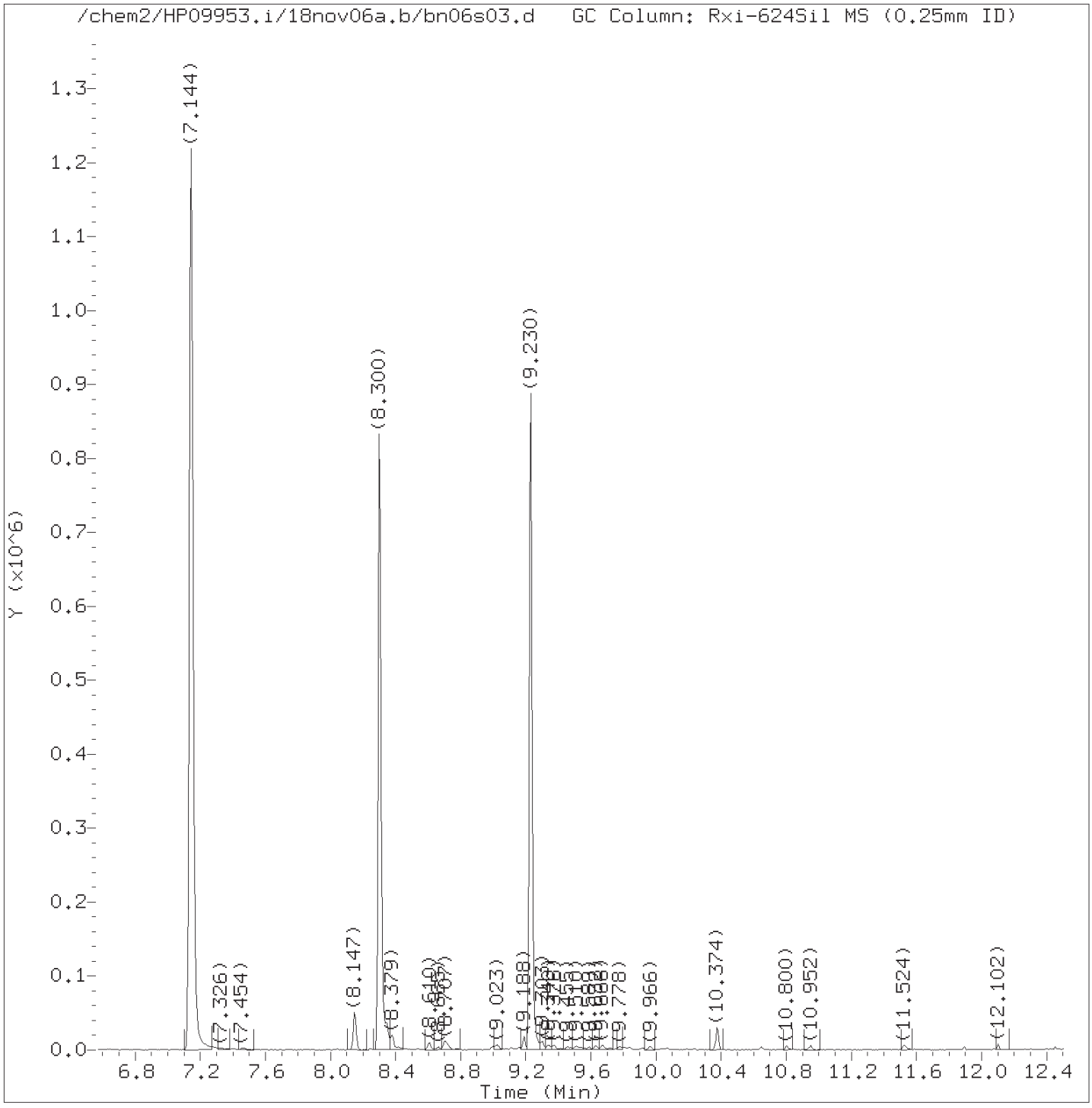
Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s03.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 22:32 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 00:42 pth10165

Sample Name: T1002RE Lab Sample ID: 9867761RE

Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:43.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s03.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 22:32 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 00:42 pth10165

Sample Name: T1002RE Lab Sample ID: 9867761RE

Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:43.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s03.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 22:32 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 00:42 pth10165

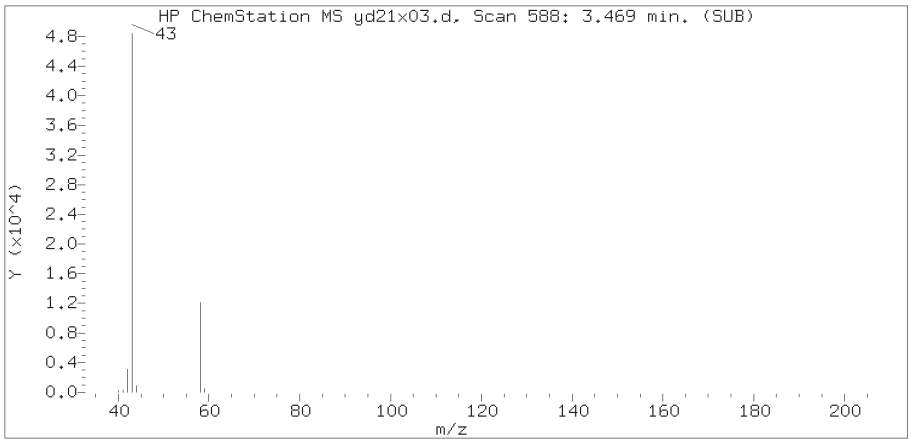
Sample Name: T1002RE Lab Sample ID: 9867761RE

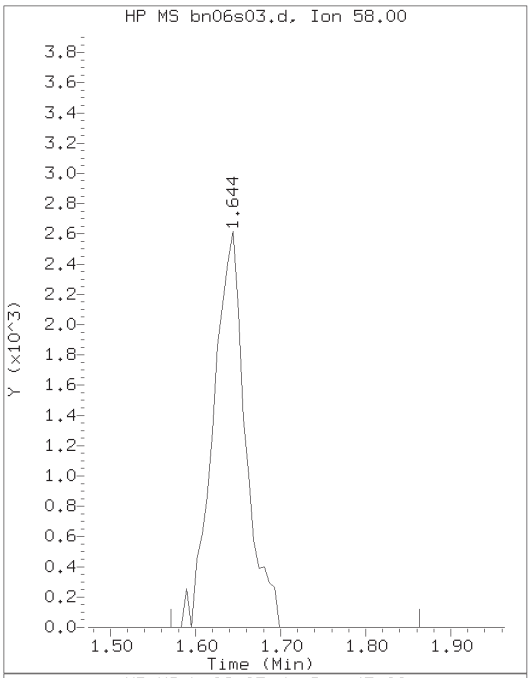
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
20) Acetone	(1)	1.644	58	6895	37.737
30)*t-Butyl alcohol-d10	(1)	1.918	65	36060	250.000
56)$Dibromofluoromethane	(2)	3.305	113	330042	52.259
63)$1,2-Dichloroethane-d4	(2)	3.615	102	70450	51.827
70)*Fluorobenzene	(2)	3.944	96	1267208	50.000
91)$Toluene-d8	(3)	5.568	98	1200997	62.531
105)*Chlorobenzene-d5	(3)	7.144	117	744155	50.000
119)$4-Bromofluorobenzene	(3)	8.300	95	230634	32.963
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	194760	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

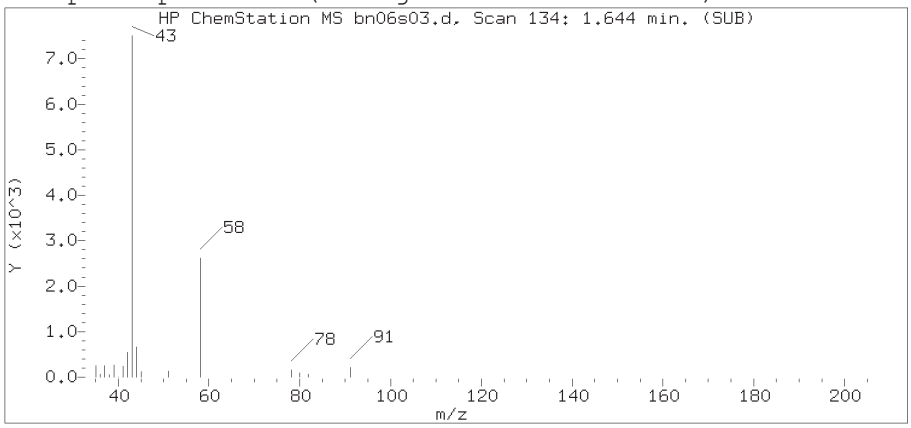
Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:43.
Target 3.5 esignature user ID: pth10165

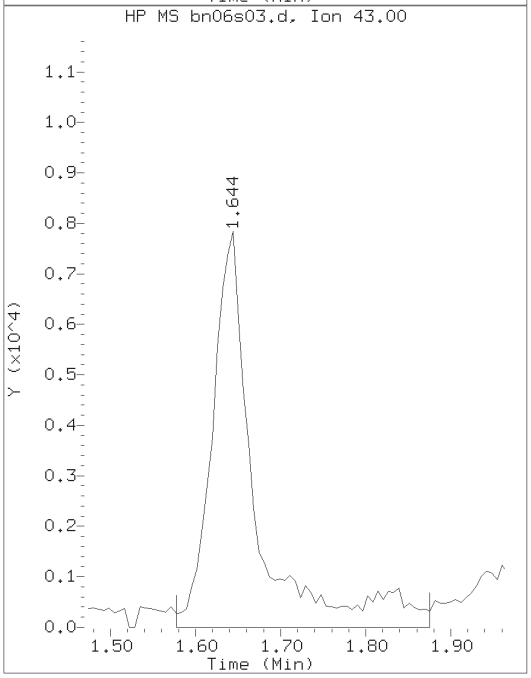
Reference Standard Spectrum for Acetone



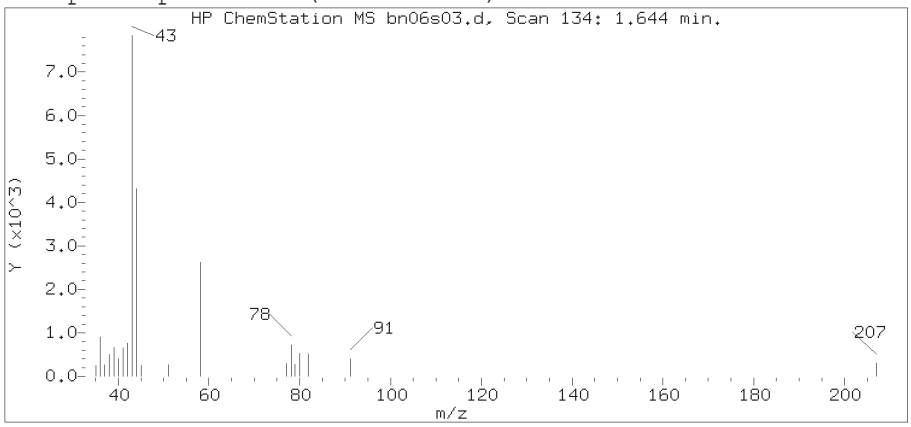


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09953.i/18nov06a.b/bn06s03.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 22:32 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 00:42 pth10165

Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number : 20
Compound Name : Acetone
Scan Number : 134
Retention Time (minutes): 1.644
Relative Retention Time :-0.00272
Quant Ion : 58.00
Area (flag) : 6895
On-Column Amount (ng) : 37.7374

Digitally signed by Patrick T. Herres on 11/07/2018 at 00:43.
Target 3.5 esignature user ID: pth10165

T1003 Lancaster Laboratories 9867762
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18oct31a.b/bc31s36.d Injection date and time: **31-OCT-2018 17:47**
Data file Sample Info. Line: T1003;9867762;2;0;;TID10;DODSW;;bc31b20; Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 31-Oct-2018 18:27 pth10165

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 31-OCT-2018 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: **050A** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.05**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 4.74 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.930	(0.000)	181	65	56264	(-56)	250.00	*
70) Fluorobenzene	3.944	(0.006)	512	96	1025913	(-29)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	542162	(-52)	50.00	*
140) 1,4-Dichlorobenzene-d4	9.230	(-0.006)	1381	152	140215	(-79)	50.00	*

*** = Internal Standard area outside QC limits**

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.311	(0.000)	113	274333	53.654	107%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.615	(0.000)	102	57858	52.574	105%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	932144	66.615	133%	*	85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	164218	32.215	64%	*	79 - 119

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)				Not Detected					0.6	5
4) Chloromethane	(2)				Not Detected					0.6	5
5) Vinyl Chloride	(2)				Not Detected					0.6	5
9) Bromomethane	(2)				Not Detected					0.7	5
10) Chloroethane	(2)				Not Detected					1	5
13) Trichlorofluoromethane	(2)				Not Detected					0.7	5
19) 1,1-Dichloroethene	(2)				Not Detected					0.5	5
20) Acetone	(1)	1.650	(-0.003)	58	7177	22.840	24.09			6	21
22) Freon 113	(2)				Not Detected					0.6	11
25) Carbon Disulfide	(2)				Not Detected					0.6	5
27) Methyl Acetate	(2)				Not Detected					1	5
31) Methylene Chloride	(2)				Not Detected					2	5
34) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.5	5
35) trans-1,2-Dichloroethene	(2)				Not Detected					0.5	5
40) 1,1-Dichloroethane	(2)				Not Detected					0.5	5
44) 2-Butanone	(1)				Not Detected					1	11
45) cis-1,2-Dichloroethene	(2)				Not Detected					0.5	5
54) Chloroform	(2)				Not Detected					0.6	5
57) 1,1,1-Trichloroethane	(2)				Not Detected					0.6	5
58) Cyclohexane	(2)				Not Detected					0.5	5
61) Carbon Tetrachloride	(2)				Not Detected					0.5	5
64) Benzene	(2)				Not Detected					0.5	5
67) 1,2-Dichloroethane	(2)				Not Detected					0.6	5
75) Trichloroethene	(2)				Not Detected					0.5	5
76) Methylcyclohexane	(2)				Not Detected					0.6	5
77) 1,2-Dichloropropane	(2)				Not Detected					0.5	5
84) Bromodichloromethane	(2)				Not Detected					0.4	5
89) cis-1,3-Dichloropropene	(2)				Not Detected					0.4	5

Digitally signed by Patrick T. Herres on 10/31/2018 at 18:28. Target 3.5 esignature user ID: pth10165

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18oct31a.b/bc31s36.d Injection date and time: **31-OCT-2018 17:47**
Data file Sample Info. Line: T1003;9867762;2;0;;TID10;DODSW;;bc31b20; Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 31-Oct-2018 18:27 pth10165

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 31-OCT-2018 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: **050A** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.05**

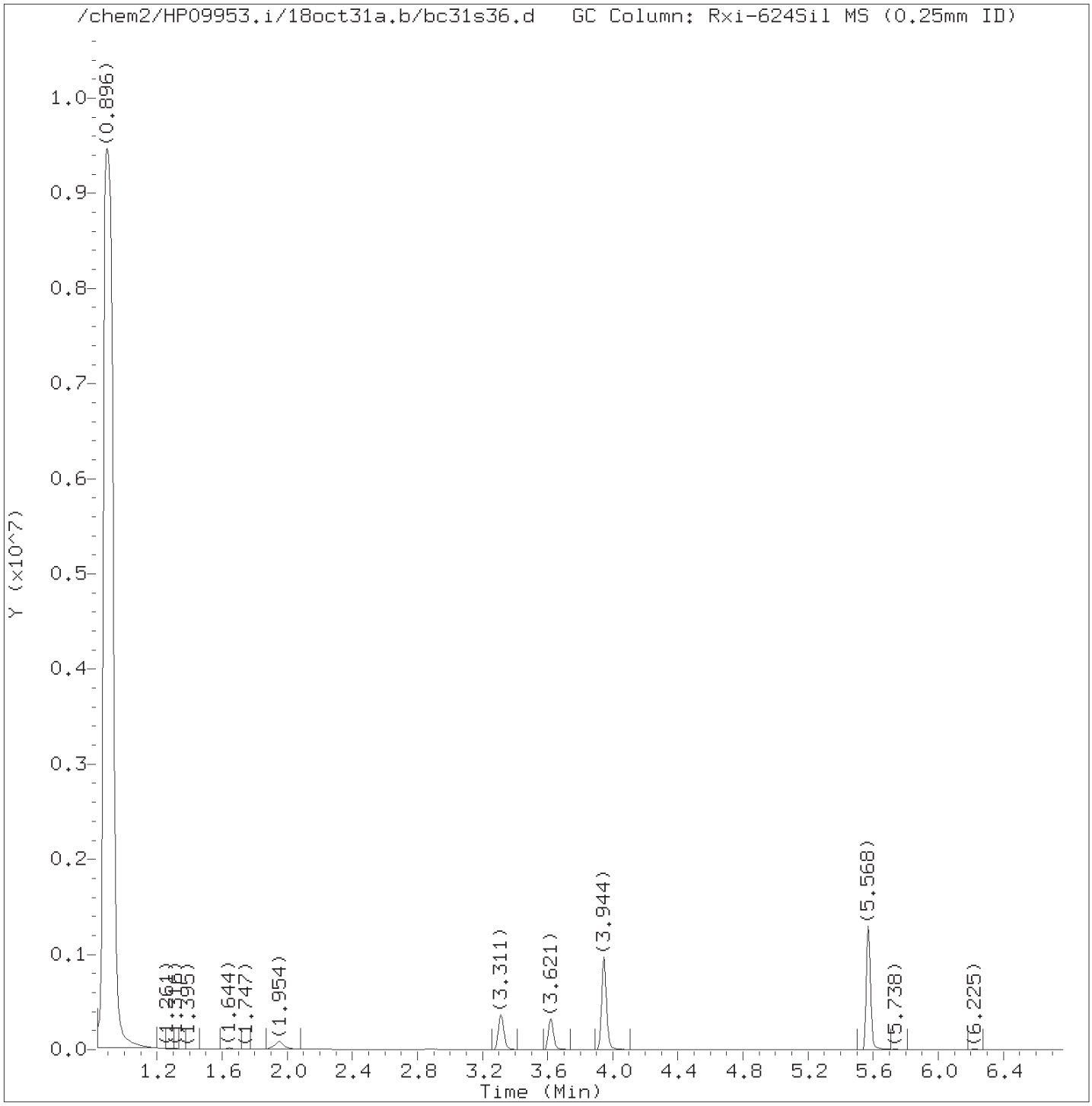
Volume Purged (Vt): 5 ml Sample Weight (Ws): 4.74 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
90) 4-Methyl-2-pentanone	(2)				Not Detected					1	11
92) Toluene	(3)				Not Detected					0.6	5
93) trans-1,3-Dichloropropene	(3)				Not Detected					0.3	5
96) 1,1,2-Trichloroethane	(3)				Not Detected					0.5	5
98) Tetrachloroethene	(3)				Not Detected					0.5	5
101) 2-Hexanone	(3)				Not Detected					1	11
103) Dibromochloromethane	(3)				Not Detected					0.4	5
104) 1,2-Dibromoethane	(3)				Not Detected					0.4	5
107) Chlorobenzene	(3)				Not Detected					0.5	5
109) Ethylbenzene	(3)				Not Detected					0.4	5
110) m+p-Xylene	(3)				Not Detected					1	5
111) o-Xylene	(3)				Not Detected					0.4	5
112) Xylene (Total)	(3)				Not Detected					1	5
113) Styrene	(3)				Not Detected					0.3	5
114) Bromoform	(3)				Not Detected					5	11
115) Isopropylbenzene	(3)				Not Detected					0.4	5
118) Cyclohexanone	(1)				Not Detected					26	260
120) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.4	5
138) 1,3-Dichlorobenzene	(4)				Not Detected					0.5	5
141) 1,4-Dichlorobenzene	(4)				Not Detected					0.4	5
147) 1,2-Dichlorobenzene	(4)				Not Detected					0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.4	5
153) 1,2,4-Trichlorobenzene	(4)				Not Detected					5	11

Total number of targets = 51

Digitally signed by Patrick T. Herres on 10/31/2018 at 18:28. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/02/2018 at 10:18. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

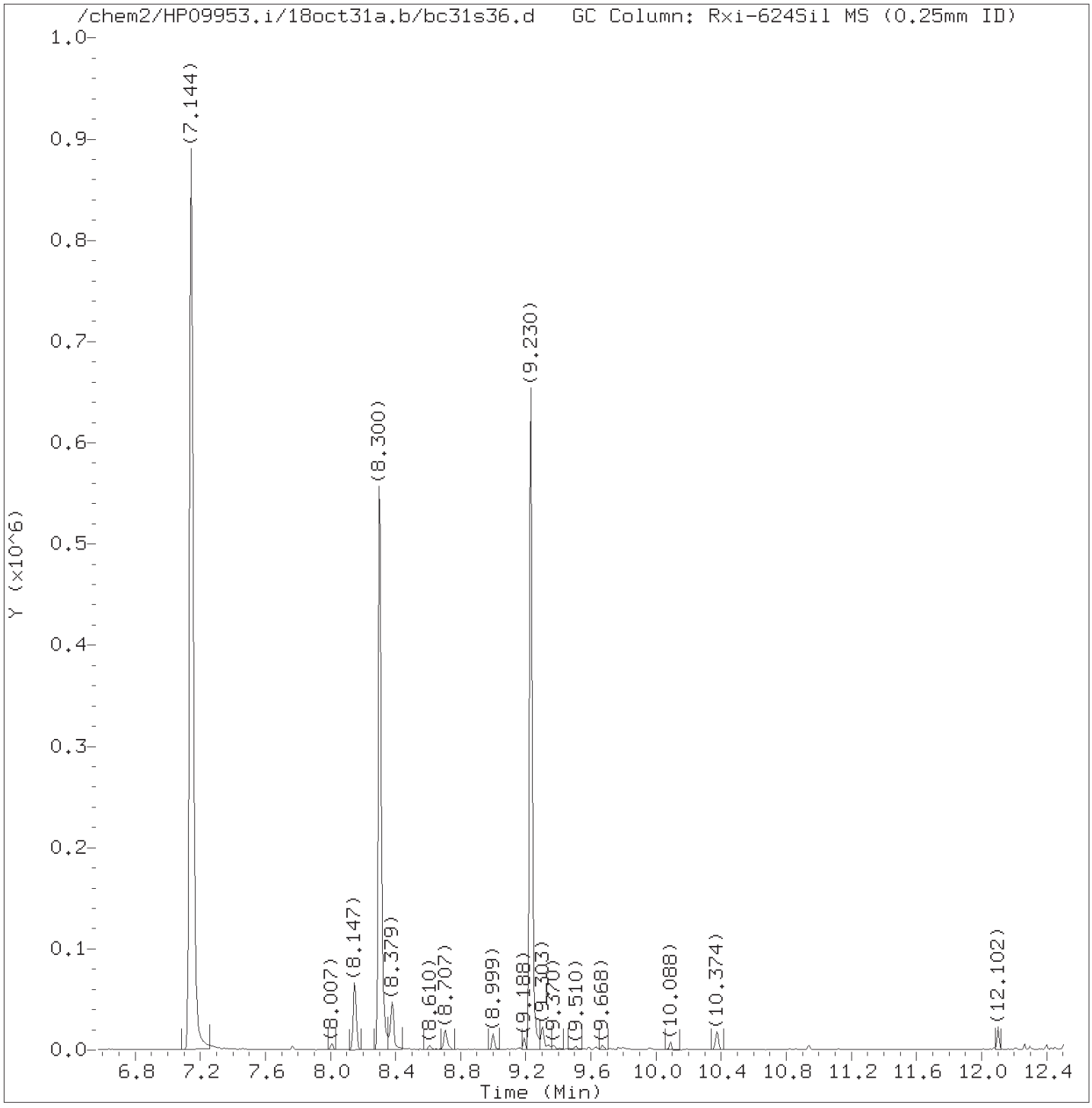
Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s36.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 17:47 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:27 pth10165

Sample Name: T1003 Lab Sample ID: 9867762

Digitally signed by Patrick T. Herres
on 10/31/2018 at 18:28.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s36.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 17:47 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:27 pth10165

Sample Name: T1003 Lab Sample ID: 9867762

Digitally signed by Patrick T. Herres
on 10/31/2018 at 18:28.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s36.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 17:47 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:27 pth10165

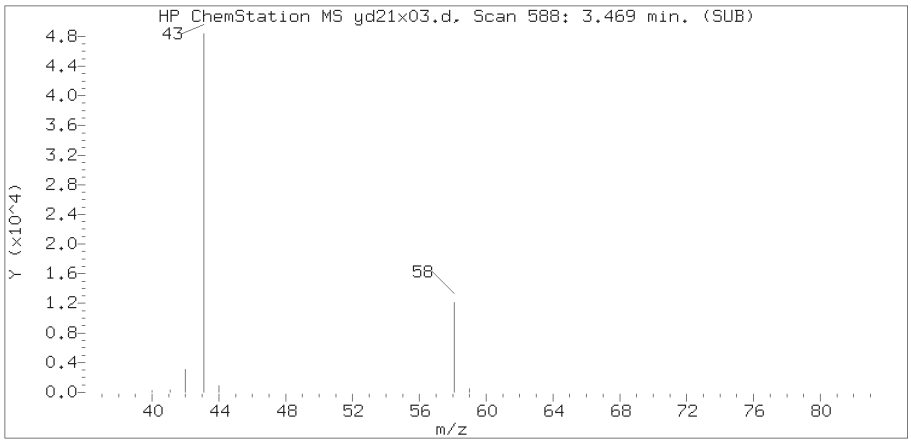
Sample Name: T1003 Lab Sample ID: 9867762

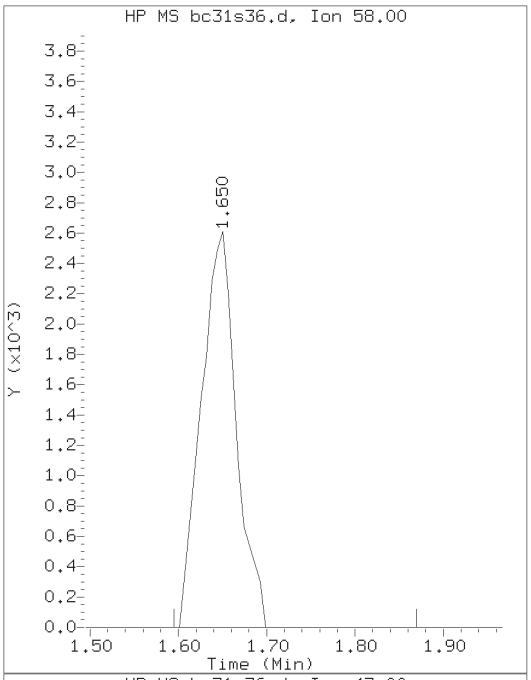
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
20) Acetone	(1)	1.650	58	7177	22.840
30)*t-Butyl alcohol-d10	(1)	1.930	65	56264	250.000
56)$Dibromofluoromethane	(2)	3.311	113	274333	53.654
63)$1,2-Dichloroethane-d4	(2)	3.615	102	57858	52.574
70)*Fluorobenzene	(2)	3.944	96	1025913	50.000
91)$Toluene-d8	(3)	5.568	98	932144	66.615
105)*Chlorobenzene-d5	(3)	7.144	117	542162	50.000
119)$4-Bromofluorobenzene	(3)	8.300	95	164218	32.215
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	140215	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

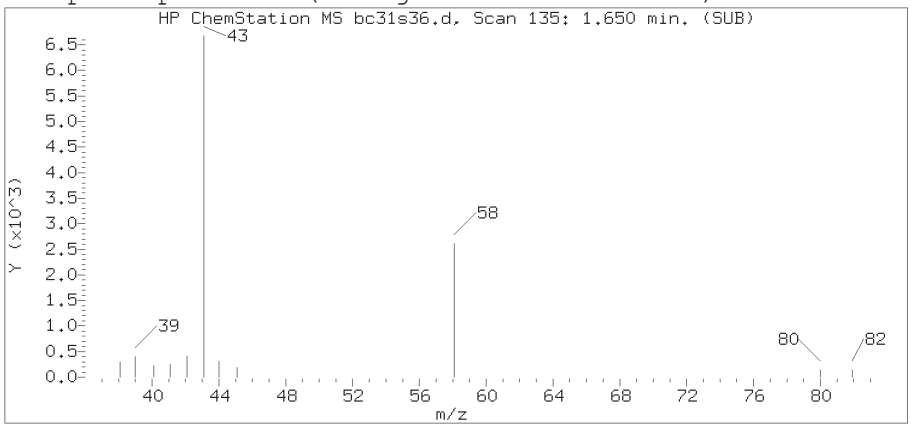
Digitally signed by Patrick T. Herres
on 10/31/2018 at 18:28.
Target 3.5 esignature user ID: pth10165

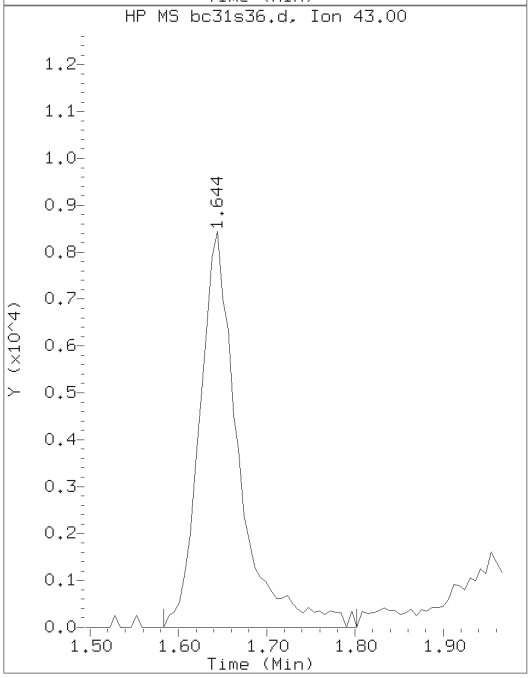
Reference Standard Spectrum for Acetone



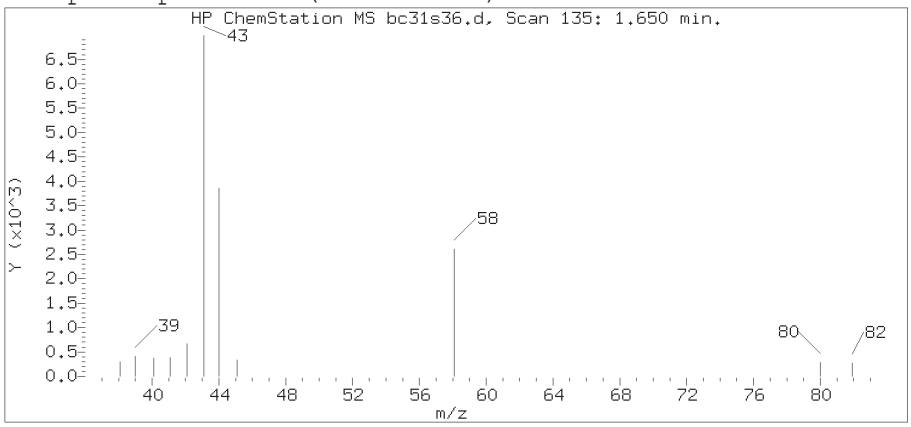


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09953.i/18oct31a.b/bc31s36.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 17:47 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:27 pth10165

Sample Name: T1003 Lab Sample ID: 9867762

Compound Number : 20
Compound Name : Acetone
Scan Number : 135
Retention Time (minutes): 1.650
Relative Retention Time :-0.00314
Quant Ion : 58.00
Area (flag) : 7177
On-Column Amount (ng) : 22.8399

Digitally signed by Patrick T. Herres on 10/31/2018 at 18:28.
Target 3.5 esignature user ID: pth10165

T1004 Lancaster Laboratories 9867766
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18oct31a.b/bc31s39.d Injection date and time: **31-OCT-2018 19:17**
Data file Sample Info. Line: T1004;9867766;2;0;;TID10;DODSW;;bc31b20; Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 31-Oct-2018 20:20 pth10165

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 31-OCT-2018 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: **050A** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **0.95**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5.29 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.912	(0.018)	178	65	47634	(-62)	250.00	*
70) Fluorobenzene	3.944	(0.006)	512	96	1144745	(-21)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	672988	(-40)	50.00	
140) 1,4-Dichlorobenzene-d4	9.230	(-0.006)	1381	152	187407	(-71)	50.00	*

*** = Internal Standard area outside QC limits**

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.317	(-0.001)	113	294661	51.648	103%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.621	(-0.001)	102	62858	51.189	102%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1074077	61.837	124%	*	85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	219498	34.689	69%	*	79 - 119

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)				Not Detected					0.6	5
4) Chloromethane	(2)				Not Detected					0.6	5
5) Vinyl Chloride	(2)				Not Detected					0.6	5
9) Bromomethane	(2)				Not Detected					0.7	5
10) Chloroethane	(2)				Not Detected					0.9	5
13) Trichlorofluoromethane	(2)				Not Detected					0.7	5
19) 1,1-Dichloroethene	(2)				Not Detected					0.5	5
20) Acetone	(1)				Not Detected					6	19
22) Freon 113	(2)				Not Detected					0.6	9
25) Carbon Disulfide	(2)				Not Detected					0.6	5
27) Methyl Acetate	(2)				Not Detected					0.9	5
31) Methylene Chloride	(2)				Not Detected					2	5
34) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.5	5
35) trans-1,2-Dichloroethene	(2)				Not Detected					0.5	5
40) 1,1-Dichloroethane	(2)				Not Detected					0.5	5
44) 2-Butanone	(1)				Not Detected					0.9	9
45) cis-1,2-Dichloroethene	(2)				Not Detected					0.5	5
54) Chloroform	(2)				Not Detected					0.6	5
57) 1,1,1-Trichloroethane	(2)				Not Detected					0.6	5
58) Cyclohexane	(2)				Not Detected					0.5	5
61) Carbon Tetrachloride	(2)				Not Detected					0.5	5
64) Benzene	(2)				Not Detected					0.5	5
67) 1,2-Dichloroethane	(2)				Not Detected					0.6	5
75) Trichloroethene	(2)				Not Detected					0.5	5
76) Methylcyclohexane	(2)				Not Detected					0.6	5
77) 1,2-Dichloropropane	(2)				Not Detected					0.5	5
84) Bromodichloromethane	(2)				Not Detected					0.4	5
89) cis-1,3-Dichloropropene	(2)				Not Detected					0.4	5

Digitally signed by Patrick T. Herres on 10/31/2018 at 20:20. Target 3.5 esignature user ID: pth10165

T1004 Lancaster Laboratories 9867766
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18oct31a.b/bc31s39.d Injection date and time: **31-OCT-2018 19:17**
Data file Sample Info. Line: T1004;9867766;2;0;;TID10;DODSW;;bc31b20; Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 31-Oct-2018 20:20 pth10165

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 31-OCT-2018 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: **050A** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **0.95**

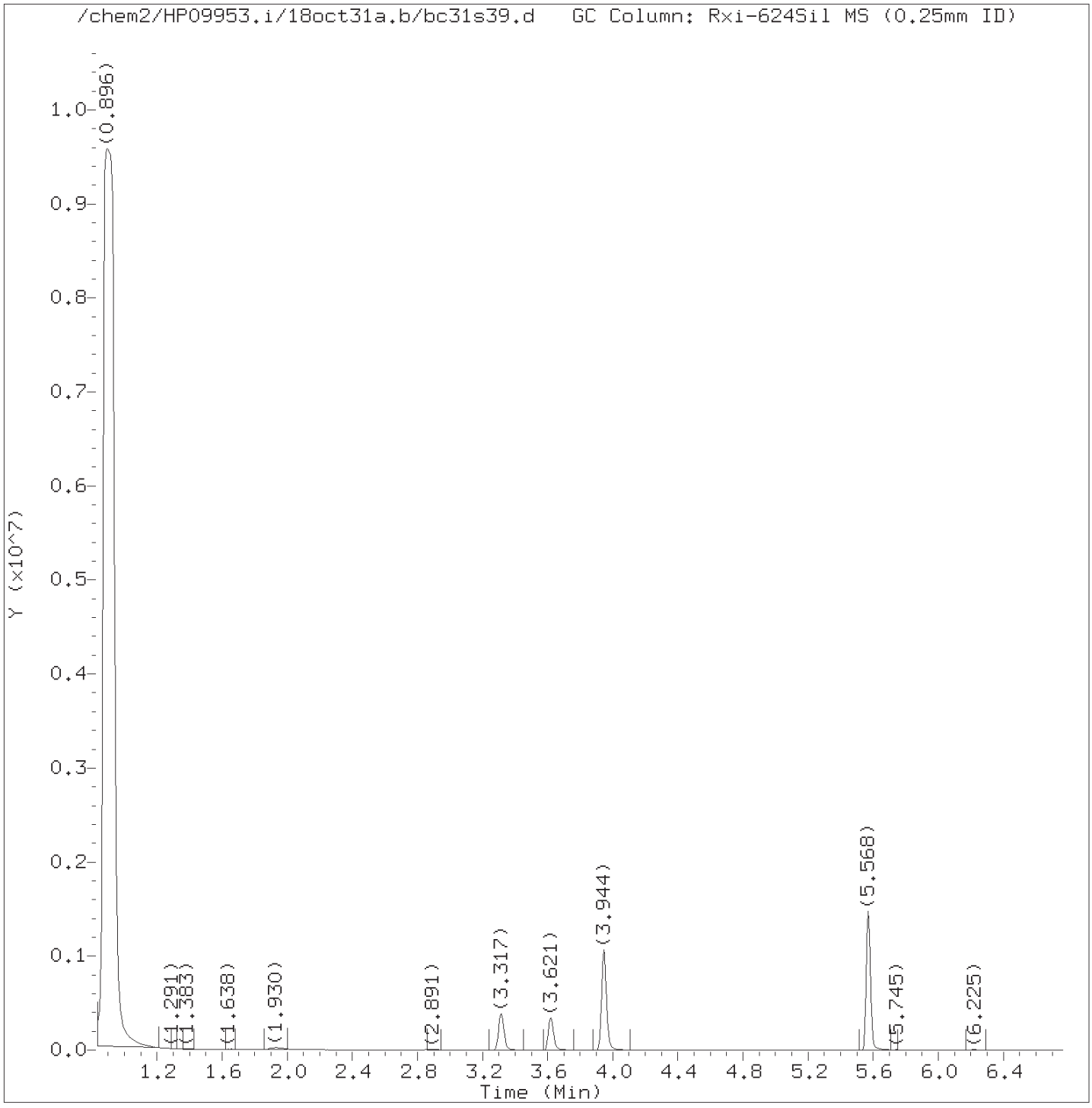
Volume Purged (Vt): 5 ml Sample Weight (Ws): 5.29 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
90) 4-Methyl-2-pentanone	(2)				Not Detected					0.9	9
92) Toluene	(3)				Not Detected					0.6	5
93) trans-1,3-Dichloropropene	(3)				Not Detected					0.3	5
96) 1,1,2-Trichloroethane	(3)				Not Detected					0.5	5
98) Tetrachloroethene	(3)				Not Detected					0.5	5
101) 2-Hexanone	(3)				Not Detected					0.9	9
103) Dibromochloromethane	(3)				Not Detected					0.4	5
104) 1,2-Dibromoethane	(3)				Not Detected					0.4	5
107) Chlorobenzene	(3)				Not Detected					0.5	5
109) Ethylbenzene	(3)				Not Detected					0.4	5
110) m+p-Xylene	(3)				Not Detected					0.9	5
111) o-Xylene	(3)				Not Detected					0.4	5
112) Xylene (Total)	(3)				Not Detected					0.9	5
113) Styrene	(3)				Not Detected					0.3	5
114) Bromoform	(3)				Not Detected					5	9
115) Isopropylbenzene	(3)				Not Detected					0.4	5
118) Cyclohexanone	(1)				Not Detected					24	240
120) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.4	5
138) 1,3-Dichlorobenzene	(4)				Not Detected					0.5	5
141) 1,4-Dichlorobenzene	(4)				Not Detected					0.4	5
147) 1,2-Dichlorobenzene	(4)				Not Detected					0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.4	5
153) 1,2,4-Trichlorobenzene	(4)				Not Detected					5	9

Total number of targets = 51

Digitally signed by Patrick T. Herres on 10/31/2018 at 20:20. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/02/2018 at 10:18. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

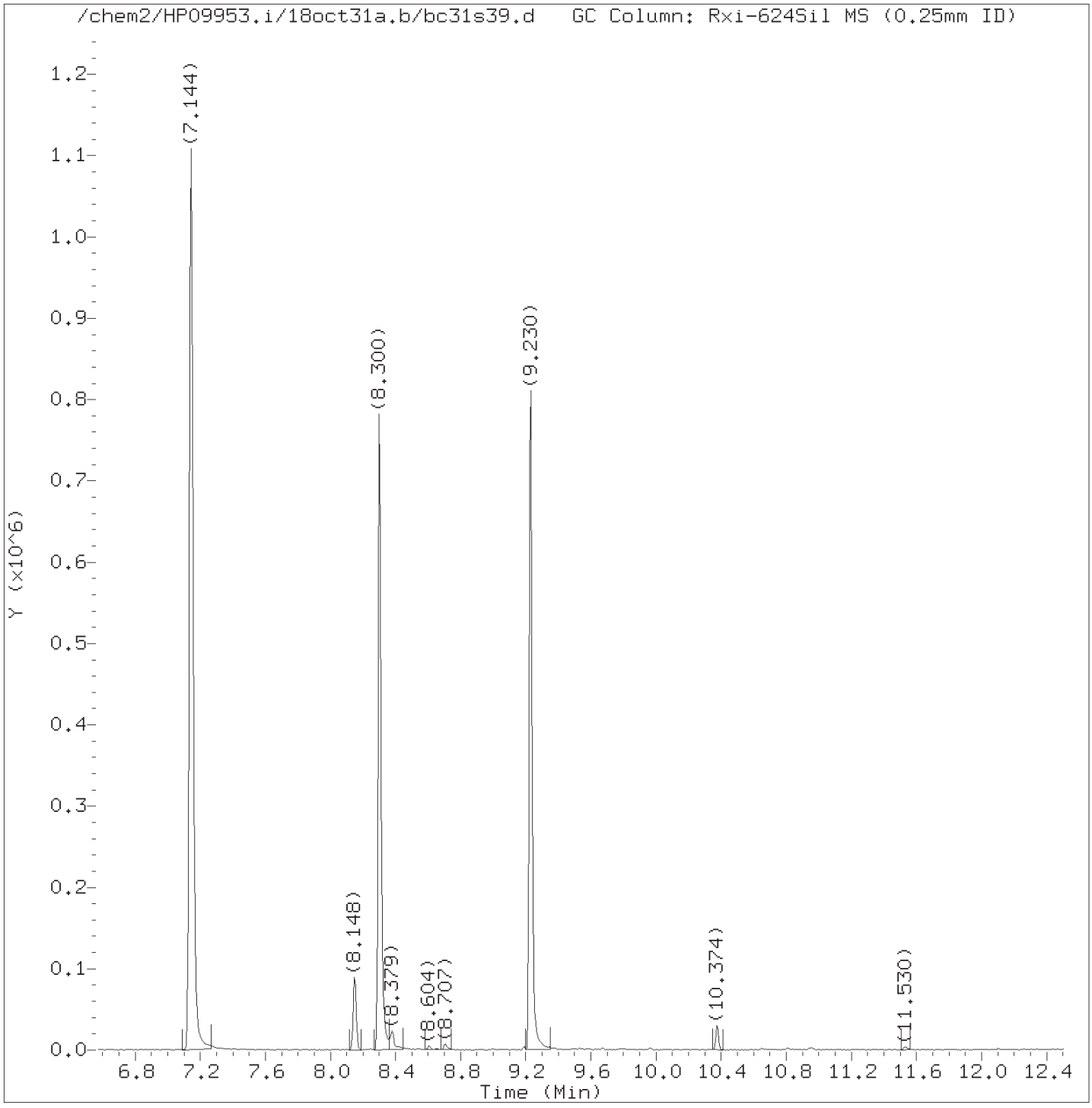
Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s39.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 19:17 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 20:20 pth10165

Sample Name: T1004 Lab Sample ID: 9867766

Digitally signed by Patrick T. Herres
on 10/31/2018 at 20:20.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s39.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 19:17 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 20:20 pth10165

Sample Name: T1004 Lab Sample ID: 9867766

Digitally signed by Patrick T. Herres
on 10/31/2018 at 20:20.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s39.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 19:17 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 20:20 pth10165

Sample Name: T1004 Lab Sample ID: 9867766

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
30)*t-Butyl alcohol-d10	(1)	1.912	65	47634	250.000
56)$Dibromofluoromethane	(2)	3.317	113	294661	51.648
63)$1,2-Dichloroethane-d4	(2)	3.621	102	62858	51.189
70)*Fluorobenzene	(2)	3.944	96	1144745	50.000
91)$Toluene-d8	(3)	5.568	98	1074077	61.837
105)*Chlorobenzene-d5	(3)	7.144	117	672988	50.000
119)$4-Bromofluorobenzene	(3)	8.300	95	219498	34.689
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	187407	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 10/31/2018 at 20:20.
Target 3.5 esignature user ID: pth10165

T1004RE

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9867766RE

Data file: /chem2/HP09953.i/18nov06a.b/bn06s04.d Injection date and time: **06-NOV-2018 22:55**
Data file Sample Info. Line: T1004RE;9867766RE;2;0;;TID10;DODSW;;bn06b01; Instrument ID: **HP09953.i** Batch: **B183101AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 00:44 pth10165

Blank Data file reference: **/chem2/HP09953.i/18nov06a.b/bn06b01.d**

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 06-NOV-2018 21:35
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov06a.b/bn06c01.d**

Bottle Code: **050B** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **0.83**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 6.01 g

Analysis Comments:9274, 9367

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.912(0.012)	178	65	37500 (-69)	250.00	*
70) Fluorobenzene	3.944(0.000)	512	96	1172636 (-14)	50.00	
105) Chlorobenzene-d5	7.144(0.000)	1038	117	650337 (-41)	50.00	
140) 1,4-Dichlorobenzene-d4	9.230(-0.006)	1381	152	163287 (-75)	50.00	*

*** = Internal Standard area outside QC limits**

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.311(0.002)	113	302427	51.748	103%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.621(0.000)	102	64411	51.206	102%		71 - 136
91) Toluene-d8	(3)	5.568(0.000)	98	1083677	64.562	129%	*	85 - 116
119) 4-Bromofluorobenzene	(3)	8.299(0.000)	95	210929	34.496	69%	*	79 - 119

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
2) Dichlorodifluoromethane	(2)			Not Detected					0.5	4
4) Chloromethane	(2)			Not Detected					0.5	4
5) Vinyl Chloride	(2)			Not Detected					0.5	4
9) Bromomethane	(2)			Not Detected					0.6	4
10) Chloroethane	(2)			Not Detected					0.8	4
13) Trichlorofluoromethane	(2)			Not Detected					0.6	4
19) 1,1-Dichloroethene	(2)			Not Detected					0.4	4
20) Acetone	(1)	1.638(-0.002)	58	3073	12.198	10.15		J	5	17
22) Freon 113	(2)			Not Detected					0.5	8
25) Carbon Disulfide	(2)			Not Detected					0.5	4
27) Methyl Acetate	(2)			Not Detected					0.8	4
31) Methylene Chloride	(2)			Not Detected					2	4
34) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.4	4
35) trans-1,2-Dichloroethene	(2)			Not Detected					0.4	4
40) 1,1-Dichloroethane	(2)			Not Detected					0.4	4
44) 2-Butanone	(1)			Not Detected					0.8	8
45) cis-1,2-Dichloroethene	(2)			Not Detected					0.4	4
54) Chloroform	(2)			Not Detected					0.5	4
57) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	4
58) Cyclohexane	(2)			Not Detected					0.4	4
61) Carbon Tetrachloride	(2)			Not Detected					0.4	4
64) Benzene	(2)			Not Detected					0.4	4
67) 1,2-Dichloroethane	(2)			Not Detected					0.5	4
75) Trichloroethene	(2)			Not Detected					0.4	4
76) Methylcyclohexane	(2)			Not Detected					0.5	4
77) 1,2-Dichloropropane	(2)			Not Detected					0.4	4
84) Bromodichloromethane	(2)			Not Detected					0.3	4

Digitally signed by Patrick T. Herres on 11/07/2018 at 00:44. Target 3.5 esignature user ID: pth10165

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov06a.b/bn06s04.d Injection date and time: **06-NOV-2018 22:55**
Data file Sample Info. Line: T1004RE;9867766RE;2;0;;TID10;DODSW;;bn06b01; Instrument ID: **HP09953.i** Batch: **B183101AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 00:44 pth10165

Blank Data file reference: **/chem2/HP09953.i/18nov06a.b/bn06b01.d**

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 06-NOV-2018 21:35
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov06a.b/bn06c01.d**

Bottle Code: **050B** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **0.83**

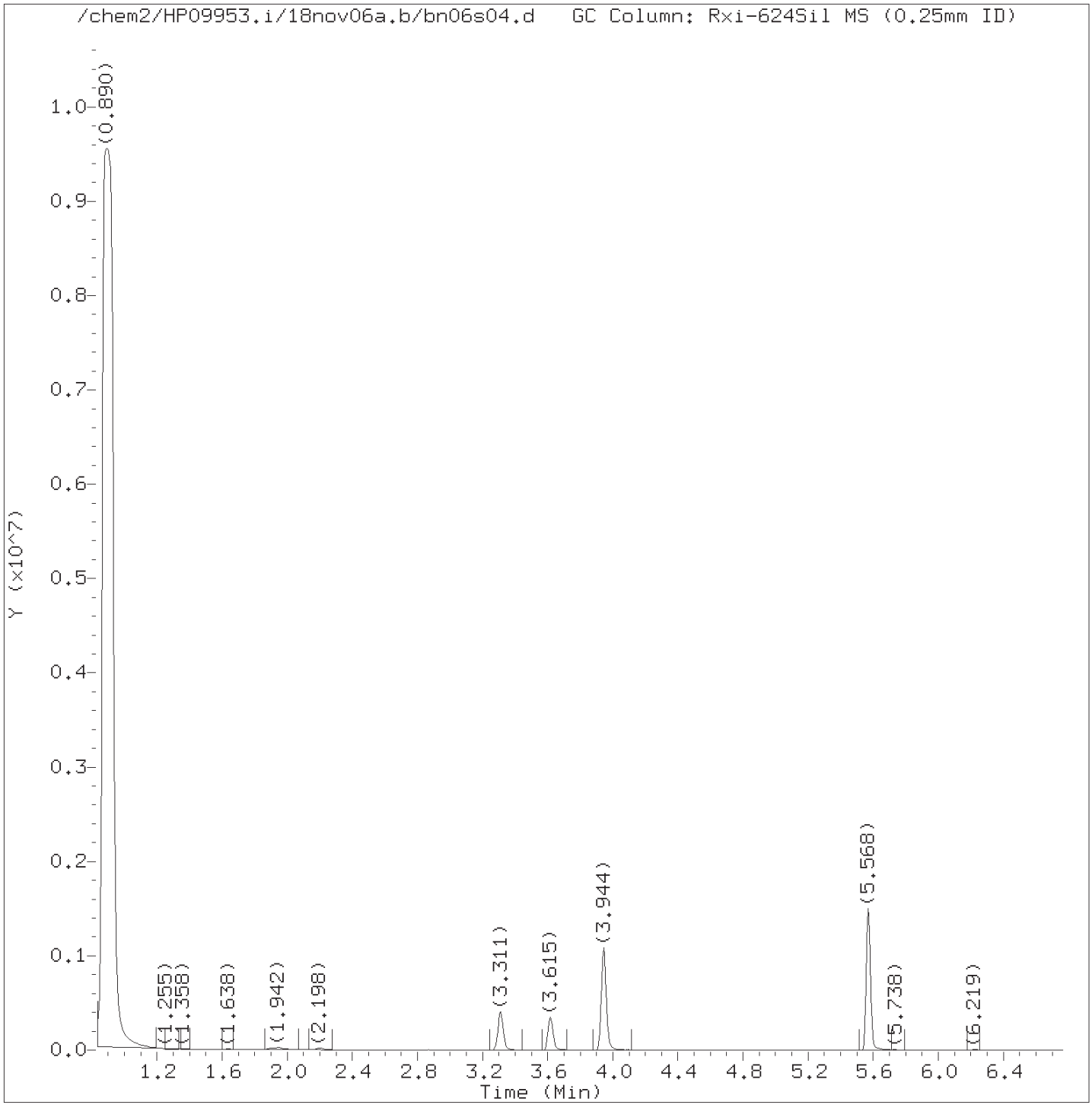
Volume Purged (Vt): 5 ml Sample Weight (Ws): 6.01 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
89) cis-1,3-Dichloropropene	(2)				Not Detected					0.3	4
90) 4-Methyl-2-pentanone	(2)				Not Detected					0.8	8
92) Toluene	(3)				Not Detected					0.5	4
93) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	4
96) 1,1,2-Trichloroethane	(3)				Not Detected					0.4	4
98) Tetrachloroethene	(3)				Not Detected					0.4	4
101) 2-Hexanone	(3)				Not Detected					0.8	8
103) Dibromochloromethane	(3)				Not Detected					0.3	4
104) 1,2-Dibromoethane	(3)				Not Detected					0.3	4
107) Chlorobenzene	(3)				Not Detected					0.4	4
109) Ethylbenzene	(3)				Not Detected					0.3	4
110) m+p-Xylene	(3)				Not Detected					0.8	4
111) o-Xylene	(3)				Not Detected					0.3	4
112) Xylene (Total)	(3)				Not Detected					0.8	4
113) Styrene	(3)				Not Detected					0.2	4
114) Bromoform	(3)				Not Detected					4	8
115) Isopropylbenzene	(3)				Not Detected					0.3	4
118) Cyclohexanone	(1)				Not Detected					21	210
120) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.3	4
138) 1,3-Dichlorobenzene	(4)				Not Detected					0.4	4
141) 1,4-Dichlorobenzene	(4)				Not Detected					0.3	4
147) 1,2-Dichlorobenzene	(4)				Not Detected					0.4	4
151) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	4
153) 1,2,4-Trichlorobenzene	(4)				Not Detected					4	8

Total number of targets = 51

Digitally signed by Patrick T. Herres on 11/07/2018 at 00:44. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Robin C. Runkle on 11/12/2018 at 11:31. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

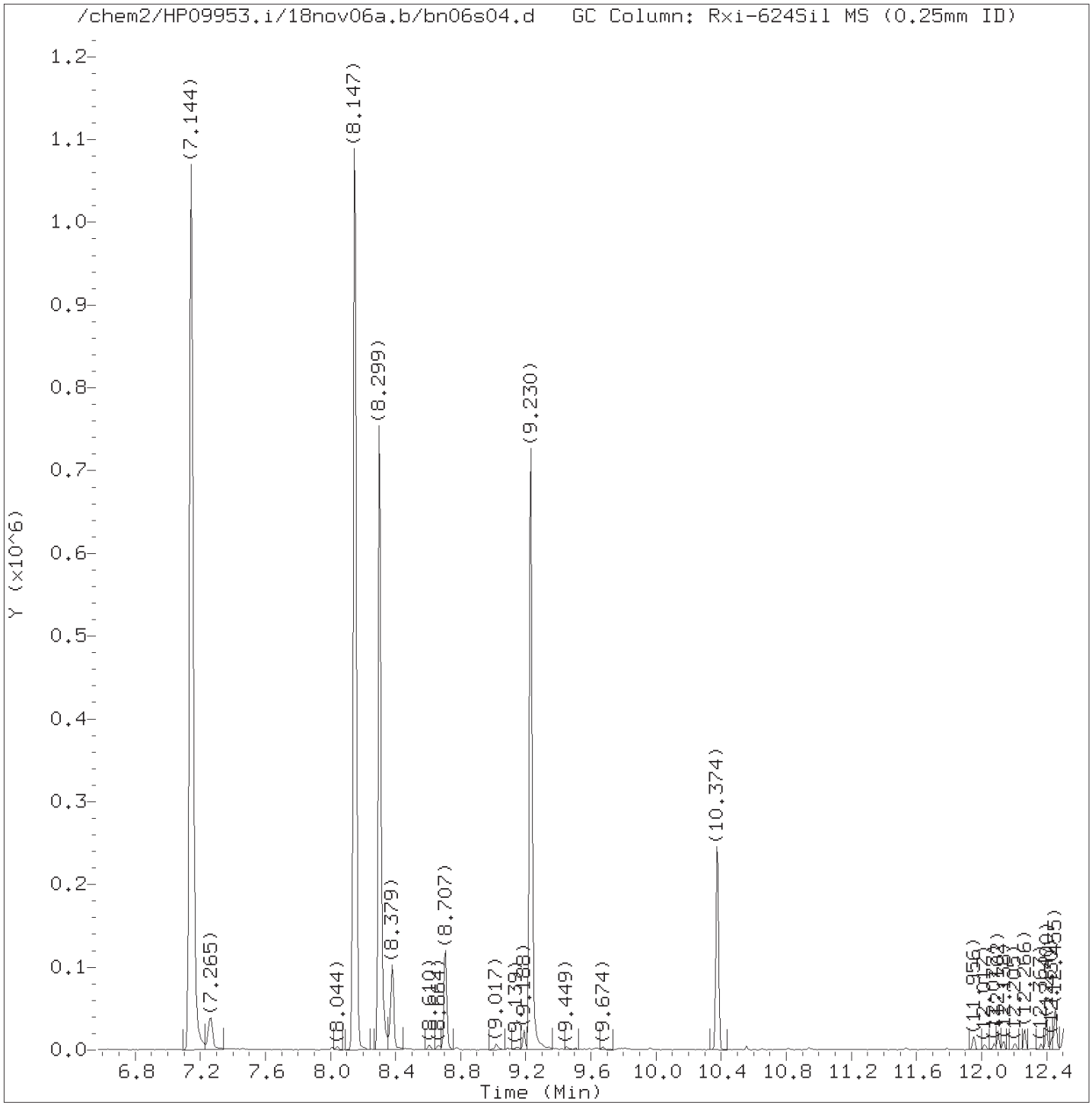
Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s04.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 22:55 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 00:44 pth10165

Sample Name: T1004RE Lab Sample ID: 9867766RE

Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:44.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s04.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 22:55 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 00:44 pth10165

Sample Name: T1004RE Lab Sample ID: 9867766RE

Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:44.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s04.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 22:55 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 00:44 pth10165

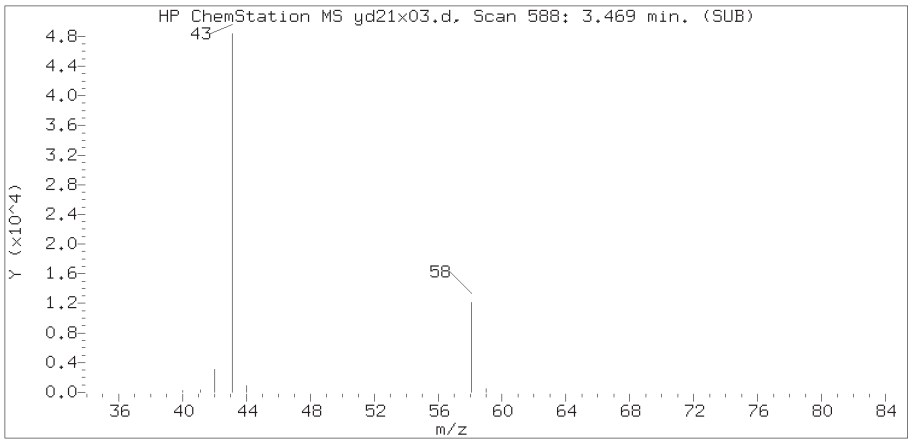
Sample Name: T1004RE Lab Sample ID: 9867766RE

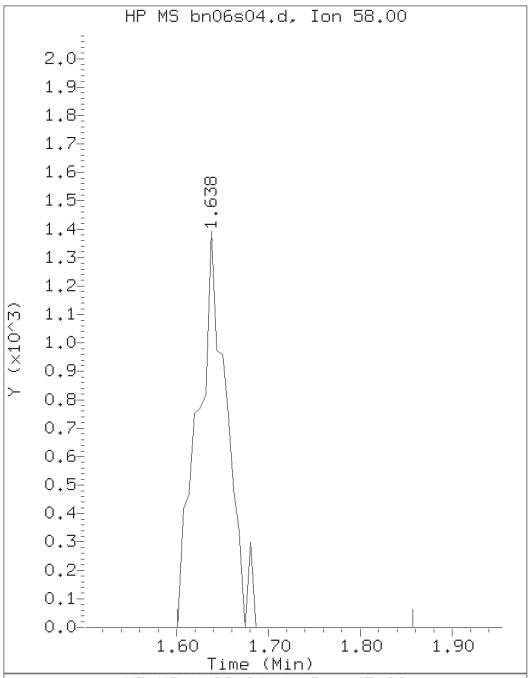
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
20) Acetone	(1)	1.638	58	3073	12.198
30)*t-Butyl alcohol-d10	(1)	1.912	65	37500	250.000
56)$Dibromofluoromethane	(2)	3.311	113	302427	51.748
63)$1,2-Dichloroethane-d4	(2)	3.621	102	64411	51.206
70)*Fluorobenzene	(2)	3.944	96	1172636	50.000
91)$Toluene-d8	(3)	5.568	98	1083677	64.562
105)*Chlorobenzene-d5	(3)	7.144	117	650337	50.000
119)$4-Bromofluorobenzene	(3)	8.299	95	210929	34.496
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	163287	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

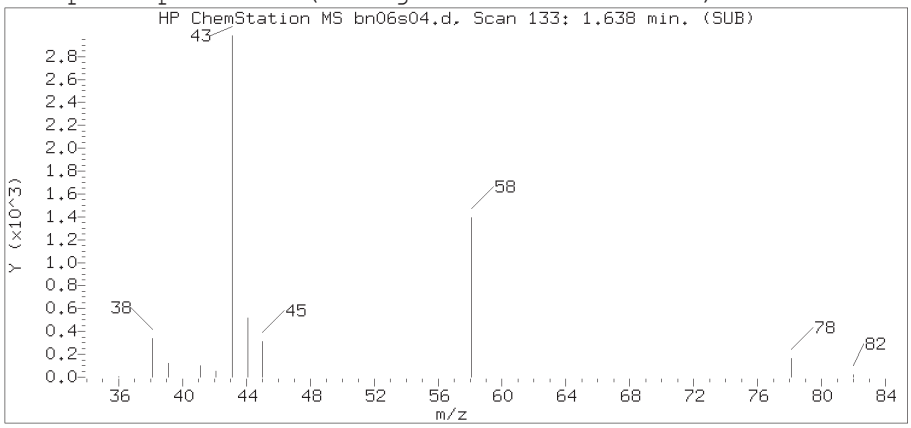
Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:44.
Target 3.5 esignature user ID: pth10165

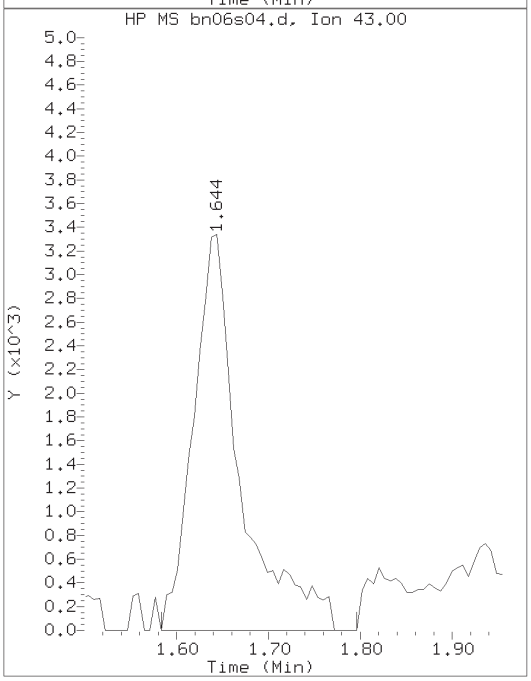
Reference Standard Spectrum for Acetone



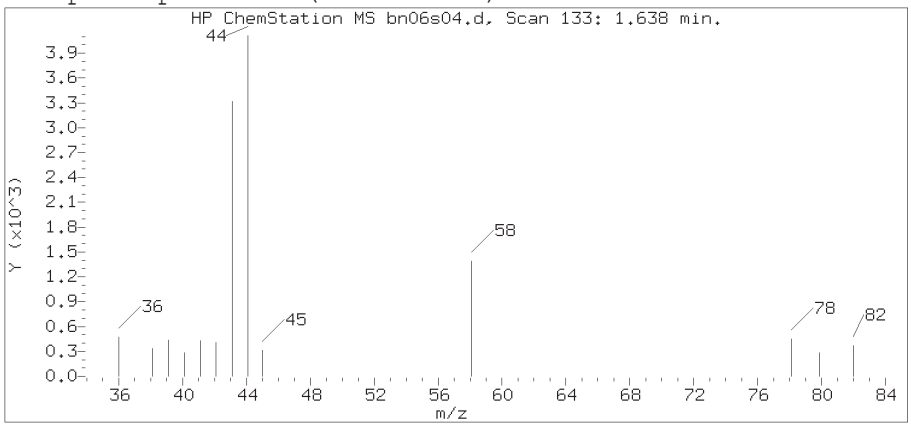


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09953.i/18nov06a.b/bn06s04.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 22:55 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 00:44 pth10165

Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number : 20
Compound Name : Acetone
Scan Number : 133
Retention Time (minutes): 1.638
Relative Retention Time :-0.00226
Quant Ion : 58.00
Area (flag) : 3073
On-Column Amount (ng) : 12.1982

Digitally signed by Patrick T. Herres on 11/07/2018 at 00:44.
Target 3.5 esignature user ID: pth10165

T1005 Lancaster Laboratories 9867767
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov06a.b/bn06s05.d Injection date and time: **06-NOV-2018 23:18**
Data file Sample Info. Line: T1005;9867767;2;0;;TID10;DODSW;;bn06b01; Instrument ID: **HP09953.i** Batch: **B183101AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 00:45 pth10165

Blank Data file reference: **/chem2/HP09953.i/18nov06a.b/bn06b01.d**

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 06-NOV-2018 21:35
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov06a.b/bn06c01.d**

Bottle Code: **050B** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.27**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 3.93 g

Analysis Comments:9274, 9367

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.918(0.006)	179	65	69214	(-43)	250.00	
70) Fluorobenzene	3.944(0.000)	512	96	909232	(-33)	50.00	
105) Chlorobenzene-d5	7.144(0.000)	1038	117	408623	(-63)	50.00	*
140) 1,4-Dichlorobenzene-d4	9.230(-0.006)	1381	152	105116	(-84)	50.00	*

*** = Internal Standard area outside QC limits**

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.311(0.002)	113	255469	56.377	113%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.621(0.000)	102	56106	57.525	115%		71 - 136
91) Toluene-d8	(3)	5.568(0.000)	98	716414	67.930	136%	*	85 - 116
119) 4-Bromofluorobenzene	(3)	8.300(0.000)	95	116544	30.335	61%	*	79 - 119

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
2) Dichlorodifluoromethane	(2)			Not Detected					0.8	6
4) Chloromethane	(2)			Not Detected					0.8	6
5) Vinyl Chloride	(2)			Not Detected					0.8	6
9) Bromomethane	(2)			Not Detected					0.9	6
10) Chloroethane	(2)			Not Detected					1	6
13) Trichlorofluoromethane	(2)			Not Detected					0.9	6
19) 1,1-Dichloroethene	(2)			Not Detected					0.6	6
20) Acetone	(1)	1.644(-0.002)	58	4325	7.667	9.75		J	8	25
22) Freon 113	(2)			Not Detected					0.8	13
25) Carbon Disulfide	(2)			Not Detected					0.8	6
27) Methyl Acetate	(2)			Not Detected					1	6
31) Methylene Chloride	(2)			Not Detected					3	6
34) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.6	6
35) trans-1,2-Dichloroethene	(2)			Not Detected					0.6	6
40) 1,1-Dichloroethane	(2)			Not Detected					0.6	6
44) 2-Butanone	(1)			Not Detected					1	13
45) cis-1,2-Dichloroethene	(2)			Not Detected					0.6	6
54) Chloroform	(2)			Not Detected					0.8	6
57) 1,1,1-Trichloroethane	(2)			Not Detected					0.8	6
58) Cyclohexane	(2)			Not Detected					0.6	6
61) Carbon Tetrachloride	(2)			Not Detected					0.6	6
64) Benzene	(2)			Not Detected					0.6	6
67) 1,2-Dichloroethane	(2)			Not Detected					0.8	6
75) Trichloroethene	(2)			Not Detected					0.6	6
76) Methylcyclohexane	(2)			Not Detected					0.8	6
77) 1,2-Dichloropropane	(2)			Not Detected					0.6	6
84) Bromodichloromethane	(2)			Not Detected					0.5	6

Digitally signed by Patrick T. Herres on 11/07/2018 at 00:45. Target 3.5 esignature user ID: pth10165

T1005 Lancaster Laboratories 9867767
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov06a.b/bn06s05.d Injection date and time: **06-NOV-2018 23:18**
Data file Sample Info. Line: T1005;9867767;2;0;;TID10;DODSW;;bn06b01; Instrument ID: **HP09953.i** Batch: **B183101AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 00:45 pth10165

Blank Data file reference: **/chem2/HP09953.i/18nov06a.b/bn06b01.d**

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 06-NOV-2018 21:35
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov06a.b/bn06c01.d**

Bottle Code: **050B** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.27**

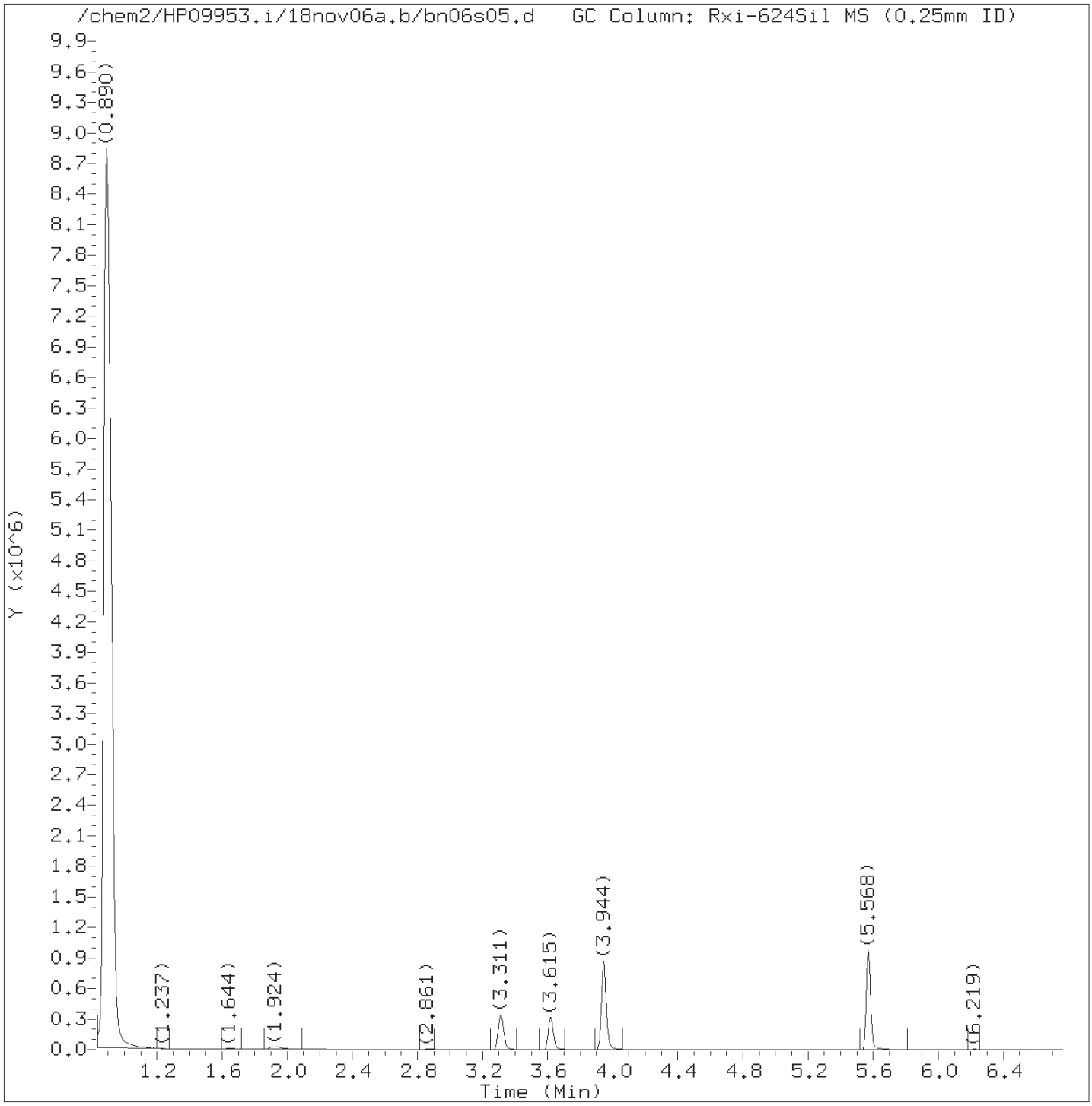
Volume Purged (Vt): 5 ml Sample Weight (Ws): 3.93 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
89) cis-1,3-Dichloropropene	(2)				Not Detected					0.5	6
90) 4-Methyl-2-pentanone	(2)				Not Detected					1	13
92) Toluene	(3)				Not Detected					0.8	6
93) trans-1,3-Dichloropropene	(3)				Not Detected					0.4	6
96) 1,1,2-Trichloroethane	(3)				Not Detected					0.6	6
98) Tetrachloroethene	(3)				Not Detected					0.6	6
101) 2-Hexanone	(3)				Not Detected					1	13
103) Dibromochloromethane	(3)				Not Detected					0.5	6
104) 1,2-Dibromoethane	(3)				Not Detected					0.5	6
107) Chlorobenzene	(3)				Not Detected					0.6	6
109) Ethylbenzene	(3)				Not Detected					0.5	6
110) m+p-Xylene	(3)				Not Detected					1	6
111) o-Xylene	(3)				Not Detected					0.5	6
112) Xylene (Total)	(3)				Not Detected					1	6
113) Styrene	(3)				Not Detected					0.4	6
114) Bromoform	(3)				Not Detected					6	13
115) Isopropylbenzene	(3)				Not Detected					0.5	6
118) Cyclohexanone	(1)				Not Detected					32	320
120) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	6
138) 1,3-Dichlorobenzene	(4)				Not Detected					0.6	6
141) 1,4-Dichlorobenzene	(4)				Not Detected					0.5	6
147) 1,2-Dichlorobenzene	(4)				Not Detected					0.6	6
151) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.5	6
153) 1,2,4-Trichlorobenzene	(4)				Not Detected					6	13

Total number of targets = 51

Digitally signed by Patrick T. Herres on 11/07/2018 at 00:45. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Robin C. Runkle on 11/12/2018 at 11:31. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

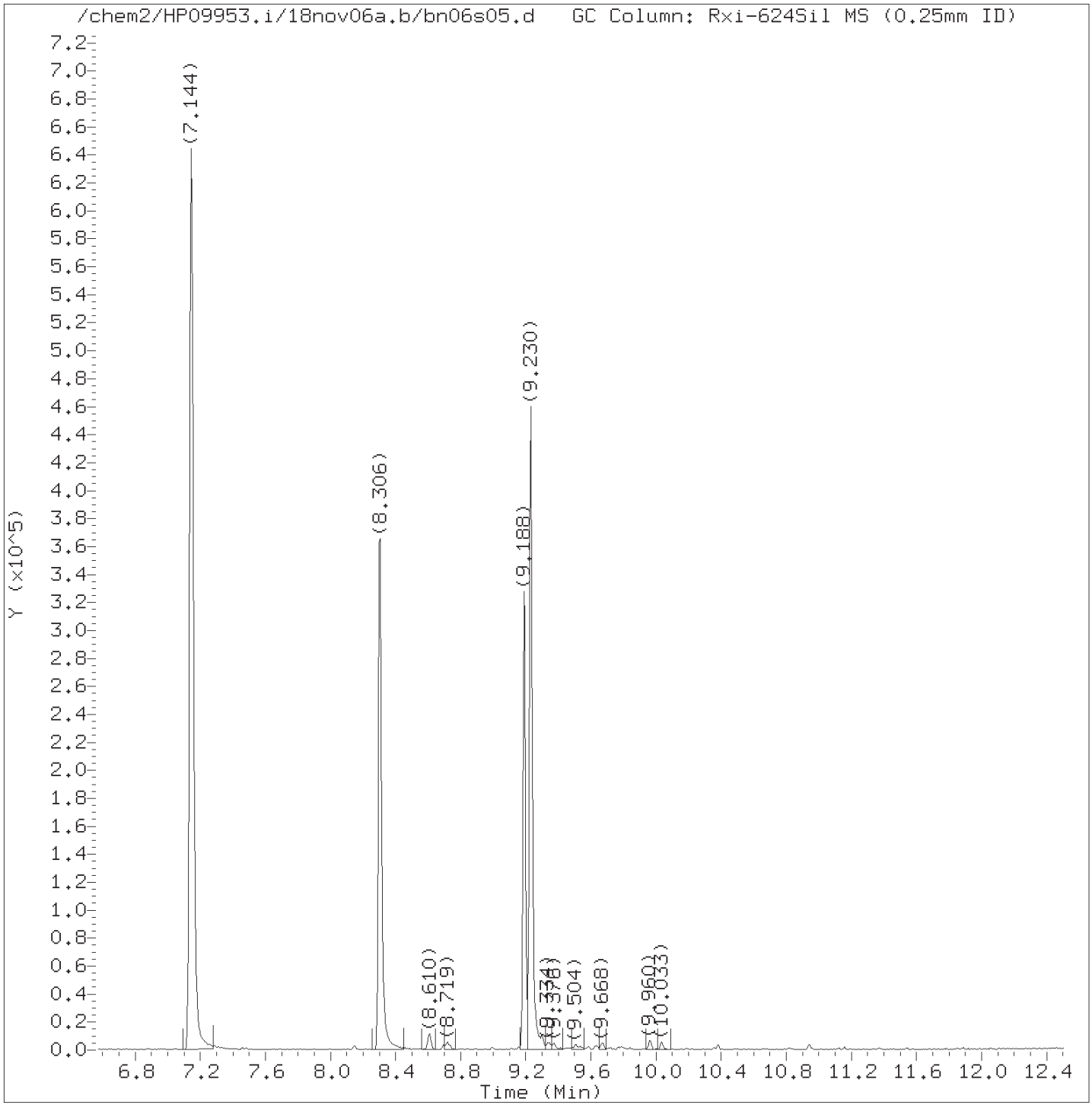
Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s05.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 23:18 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 00:45 pth10165

Sample Name: T1005 Lab Sample ID: 9867767

Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:45.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s05.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 23:18 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 00:45 pth10165

Sample Name: T1005 Lab Sample ID: 9867767

Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:45.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s05.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 23:18 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 00:45 pth10165

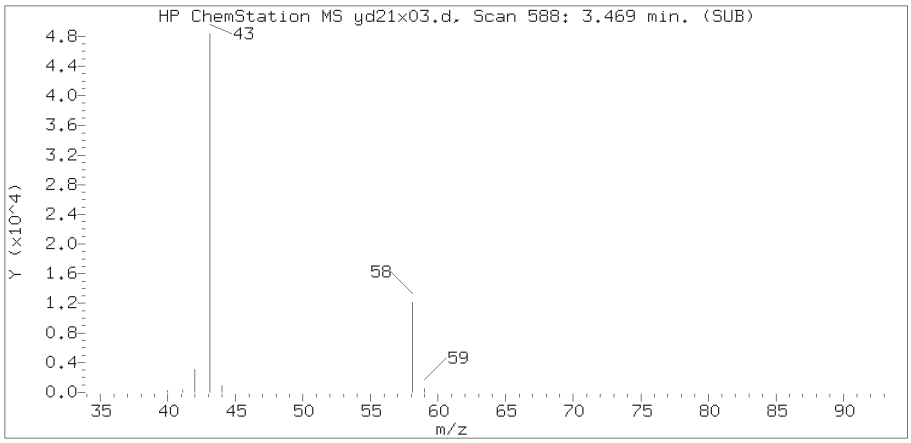
Sample Name: T1005 Lab Sample ID: 9867767

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
20) Acetone	(1)	1.644	58	4325	7.667
30)*t-Butyl alcohol-d10	(1)	1.918	65	69214	250.000
56)$Dibromofluoromethane	(2)	3.311	113	255469	56.377
63)$1,2-Dichloroethane-d4	(2)	3.621	102	56106	57.525
70)*Fluorobenzene	(2)	3.944	96	909232	50.000
91)$Toluene-d8	(3)	5.568	98	716414	67.930
105)*Chlorobenzene-d5	(3)	7.144	117	408623	50.000
119)$4-Bromofluorobenzene	(3)	8.300	95	116544	30.335
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	105116	50.000

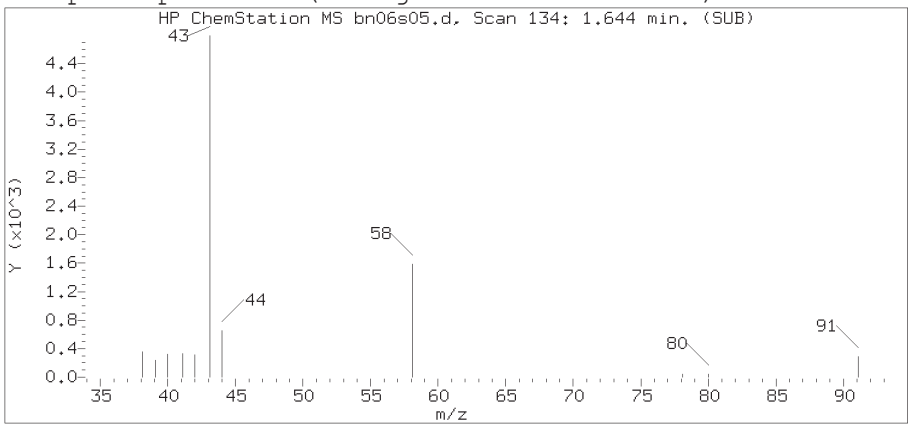
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:45.
Target 3.5 esignature user ID: pth10165

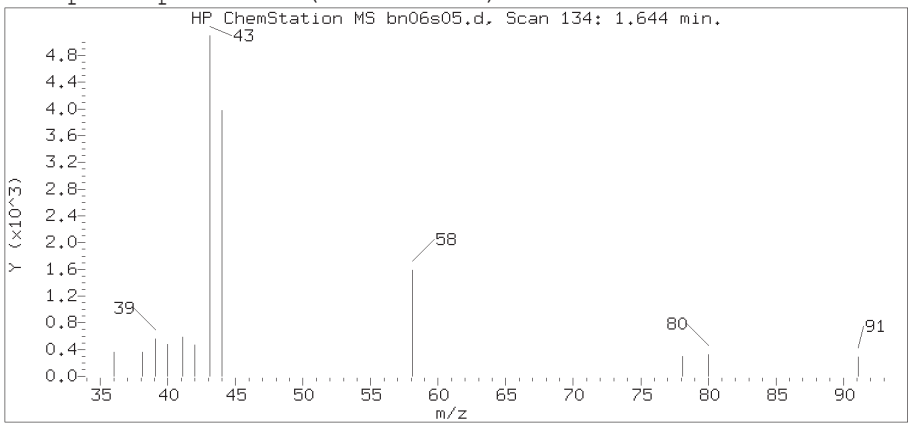
Reference Standard Spectrum for Acetone

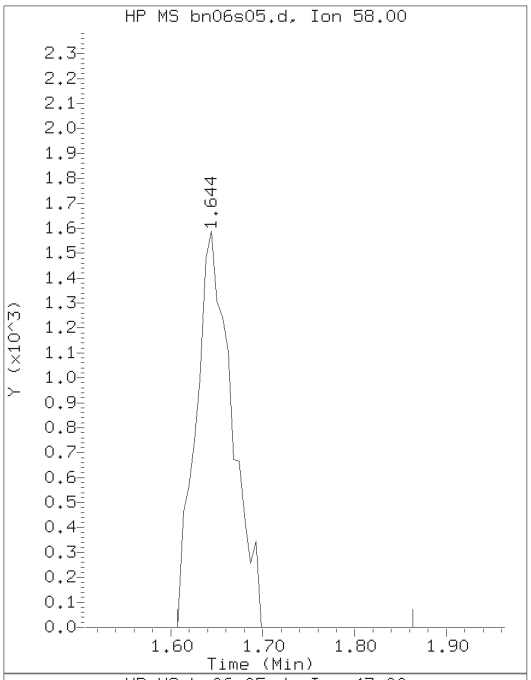


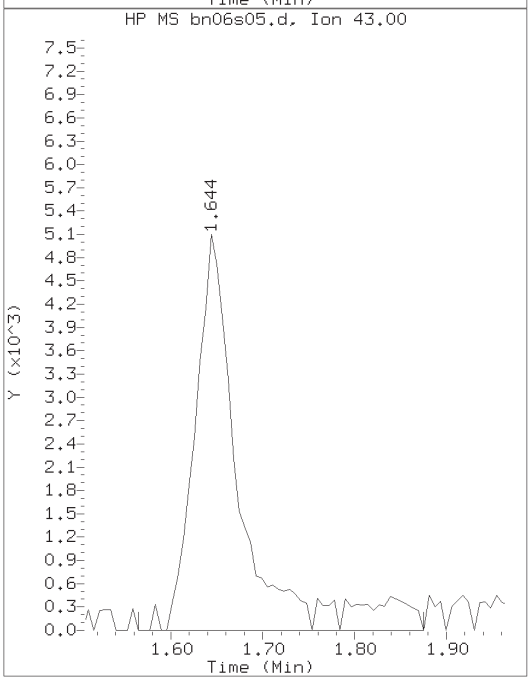
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem2/HP09953.i/18nov06a.b/bn06s05.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 23:18 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 00:45 pth10165

Sample Name: T1005 Lab Sample ID: 9867767

Compound Number : 20
Compound Name : Acetone
Scan Number : 134
Retention Time (minutes): 1.644
Relative Retention Time :-0.00272
Quant Ion : 58.00
Area (flag) : 4325
On-Column Amount (ng) : 7.6669

Digitally signed by Patrick T. Herres on 11/07/2018 at 00:45.
Target 3.5 esignature user ID: pth10165

Data file: /chem2/HP09953.i/18nov07a.b/bn07s33.d Injection date and time: **07-NOV-2018 11:35**
Data file Sample Info. Line: T1005RE;9867767RE;2;0;;TID10;DODSW;;bn07b30; Instrument ID: **HP09953.i** Batch: **B183112AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 14:44 jkh09052

Blank Data file reference: **/chem2/HP09953.i/18nov07a.b/bn07b30.d**

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 07-NOV-2018 10:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov07a.b/bn07c01.d**

Bottle Code: **050A** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.21**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 4.13 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.918	(0.012)	179	65	19896	(-82)	250.00	*
70) Fluorobenzene	3.950	(0.000)	513	96	907622	(-31)	50.00	
105) Chlorobenzene-d5	7.150	(-0.006)	1039	117	388536	(-63)	50.00	*
140) 1,4-Dichlorobenzene-d4	9.230	(-0.006)	1381	152	84453	(-87)	50.00	*

*** = Internal Standard area outside QC limits**

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.317	(0.000)	113	250634	55.408	111%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.621	(0.000)	102	55772	57.284	115%		71 - 136
91) Toluene-d8	(3)	5.574	(0.000)	98	705763	70.379	141%	*	85 - 116
119) 4-Bromofluorobenzene	(3)	8.306	(0.000)	95	100649	27.552	55%	*	79 - 119

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)				Not Detected					0.7	6
4) Chloromethane	(2)				Not Detected					0.7	6
5) Vinyl Chloride	(2)				Not Detected					0.7	6
9) Bromomethane	(2)				Not Detected					0.8	6
10) Chloroethane	(2)				Not Detected					1	6
13) Trichlorofluoromethane	(2)				Not Detected					0.8	6
19) 1,1-Dichloroethene	(2)				Not Detected					0.6	6
20) Acetone	(1)	1.650	(-0.008)	58	3838	38.135	46.17			7	24
22) Freon 113	(2)				Not Detected					0.7	12
25) Carbon Disulfide	(2)				Not Detected					0.7	6
27) Methyl Acetate	(2)				Not Detected					1	6
31) Methylene Chloride	(2)				Not Detected					2	6
34) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.6	6
35) trans-1,2-Dichloroethene	(2)				Not Detected					0.6	6
40) 1,1-Dichloroethane	(2)				Not Detected					0.6	6
44) 2-Butanone	(1)				Not Detected					1	12
45) cis-1,2-Dichloroethene	(2)				Not Detected					0.6	6
54) Chloroform	(2)				Not Detected					0.7	6
57) 1,1,1-Trichloroethane	(2)				Not Detected					0.7	6
58) Cyclohexane	(2)				Not Detected					0.6	6
61) Carbon Tetrachloride	(2)				Not Detected					0.6	6
64) Benzene	(2)				Not Detected					0.6	6
67) 1,2-Dichloroethane	(2)				Not Detected					0.7	6
75) Trichloroethene	(2)				Not Detected					0.6	6
76) Methylcyclohexane	(2)				Not Detected					0.7	6
77) 1,2-Dichloropropane	(2)				Not Detected					0.6	6
84) Bromodichloromethane	(2)				Not Detected					0.5	6
89) cis-1,3-Dichloropropene	(2)				Not Detected					0.5	6

Digitally signed by Jennifer K. Howe on 11/07/2018 at 14:50. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP09953.i/18nov07a.b/bn07s33.d Injection date and time: **07-NOV-2018 11:35**
Data file Sample Info. Line: T1005RE;9867767RE;2;0;;TID10;DODSW;;bn07b30; Instrument ID: **HP09953.i** Batch: **B183112AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 14:44 jkh09052

Blank Data file reference: **/chem2/HP09953.i/18nov07a.b/bn07b30.d**

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 07-NOV-2018 10:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov07a.b/bn07c01.d**

Bottle Code: **050A** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.21**

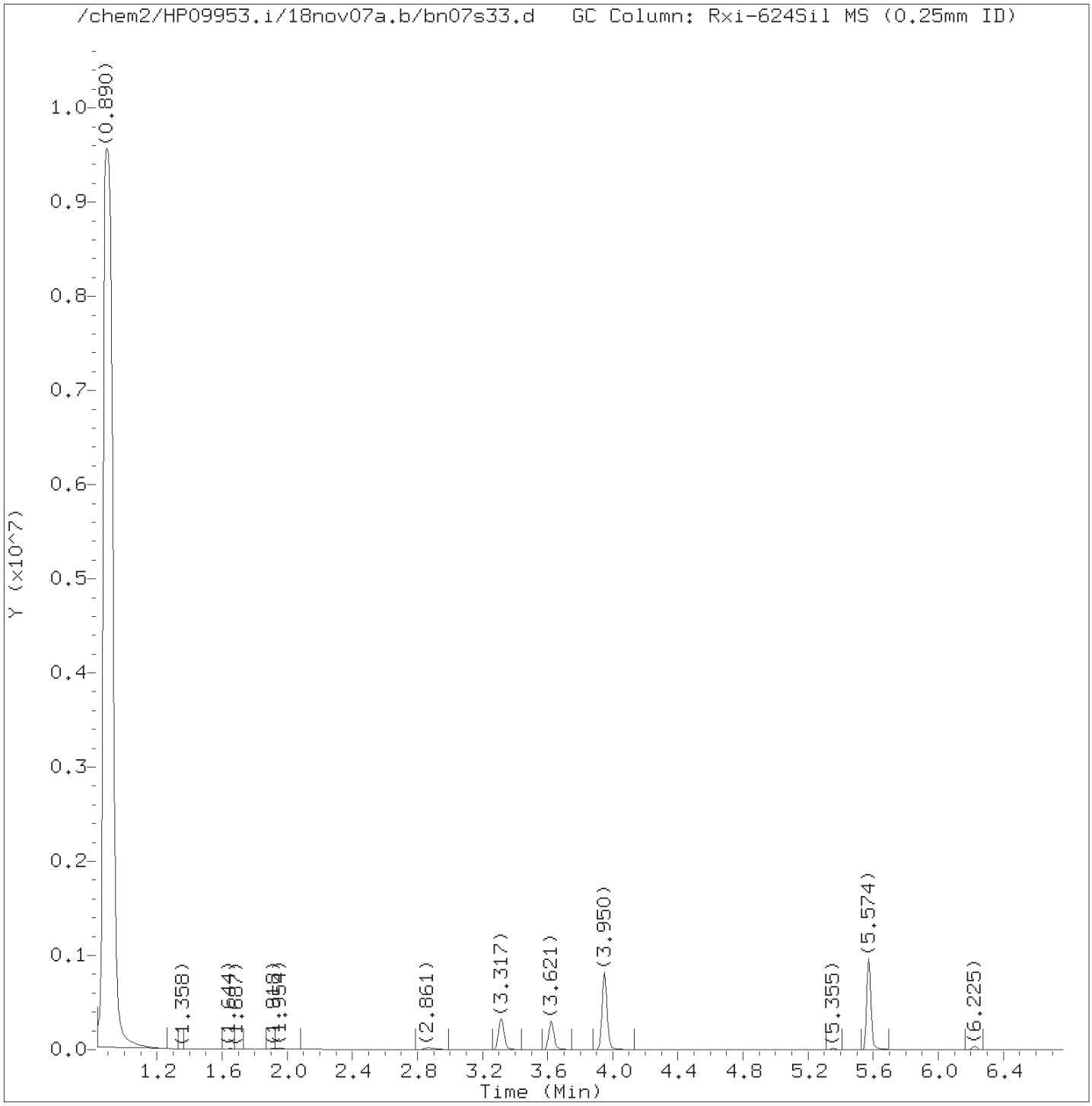
Volume Purged (Vt): 5 ml Sample Weight (Ws): 4.13 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
90) 4-Methyl-2-pentanone	(2)				Not Detected					1	12
92) Toluene	(3)				Not Detected					0.7	6
93) trans-1,3-Dichloropropene	(3)				Not Detected					0.4	6
96) 1,1,2-Trichloroethane	(3)				Not Detected					0.6	6
98) Tetrachloroethene	(3)				Not Detected					0.6	6
101) 2-Hexanone	(3)				Not Detected					1	12
103) Dibromochloromethane	(3)				Not Detected					0.5	6
104) 1,2-Dibromoethane	(3)				Not Detected					0.5	6
107) Chlorobenzene	(3)				Not Detected					0.6	6
109) Ethylbenzene	(3)				Not Detected					0.5	6
110) m+p-Xylene	(3)				Not Detected					1	6
111) o-Xylene	(3)				Not Detected					0.5	6
112) Xylene (Total)	(3)				Not Detected					1	6
113) Styrene	(3)				Not Detected					0.4	6
114) Bromoform	(3)				Not Detected					6	12
115) Isopropylbenzene	(3)				Not Detected					0.5	6
118) Cyclohexanone	(1)				Not Detected					30	300
120) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	6
138) 1,3-Dichlorobenzene	(4)				Not Detected					0.6	6
141) 1,4-Dichlorobenzene	(4)				Not Detected					0.5	6
147) 1,2-Dichlorobenzene	(4)				Not Detected					0.6	6
151) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.5	6
153) 1,2,4-Trichlorobenzene	(4)				Not Detected					6	12

Total number of targets = 51

Digitally signed by Jennifer K. Howe on 11/07/2018 at 14:50. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kerri E. Legerlotz on 11/12/2018 at 14:18. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

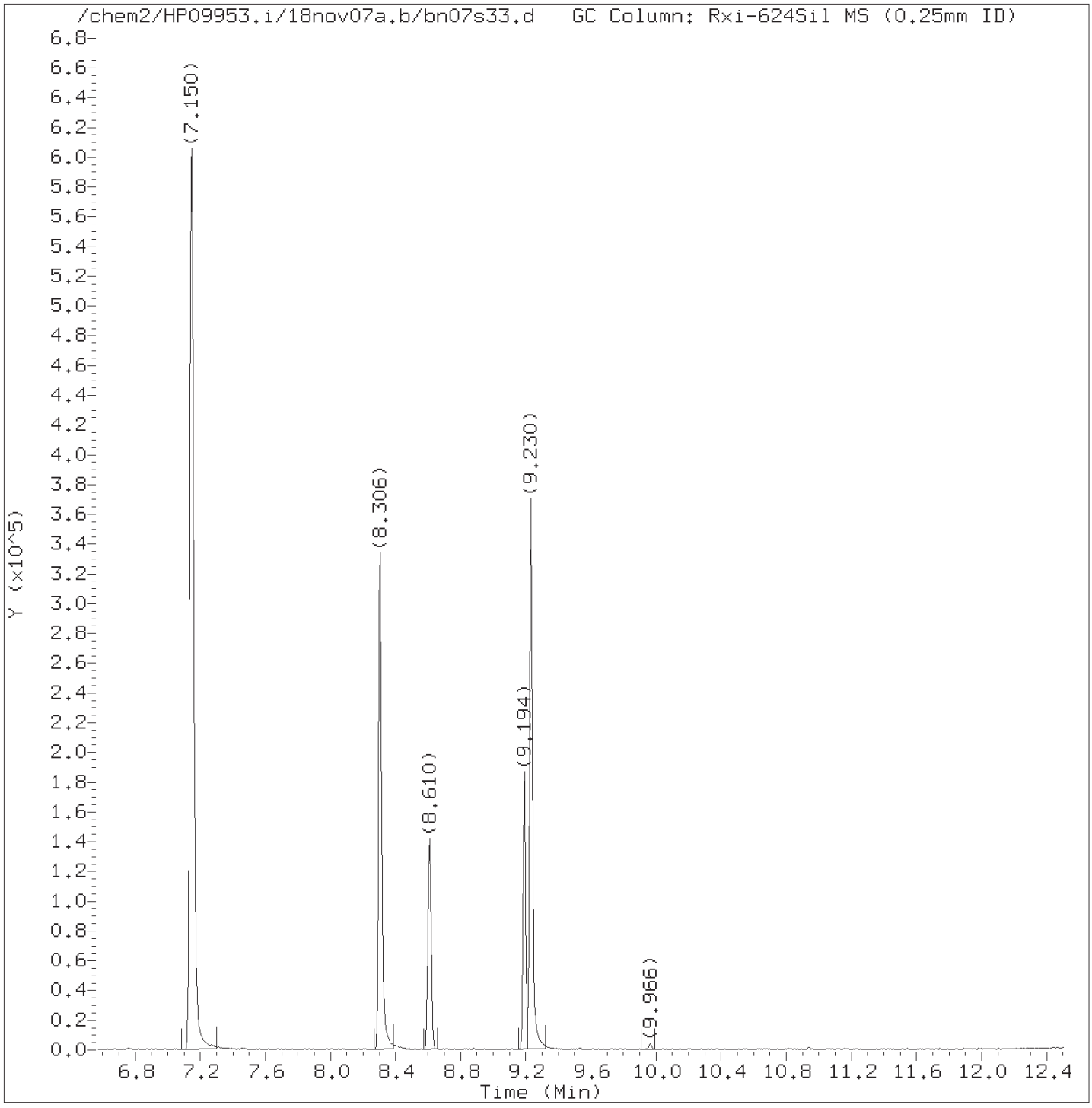
Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07s33.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 11:35 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 25809
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 14:44 jkh09052

Sample Name: T1005RE Lab Sample ID: 9867767RE

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 14:50.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07s33.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 11:35 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 25809
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 14:44 jkh09052

Sample Name: T1005RE Lab Sample ID: 9867767RE

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 14:50.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07s33.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 11:35 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 25809
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 14:44 jkh09052

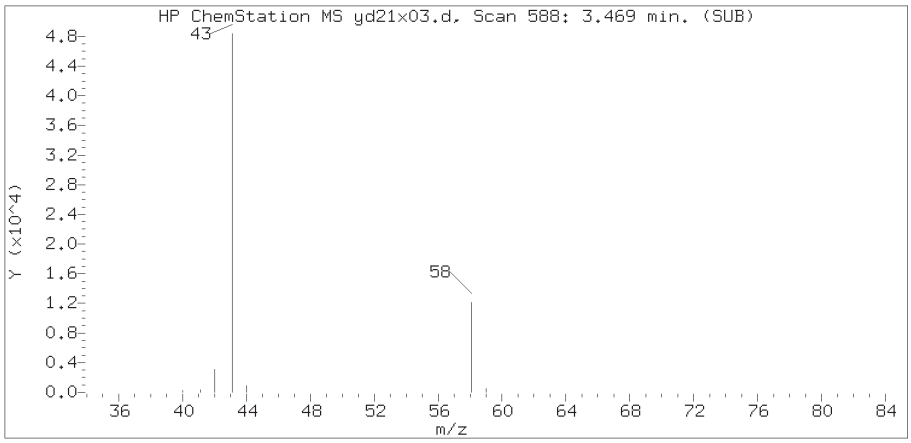
Sample Name: T1005RE Lab Sample ID: 9867767RE

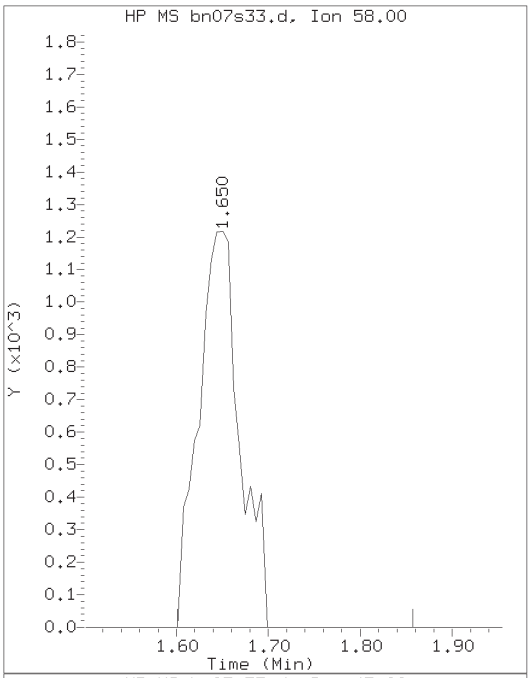
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
20) Acetone	(1)	1.650	58	3838	38.135
30)*t-Butyl alcohol-d10	(1)	1.918	65	19896	250.000
56)$Dibromofluoromethane	(2)	3.317	113	250634	55.408
63)$1,2-Dichloroethane-d4	(2)	3.621	102	55772	57.284
70)*Fluorobenzene	(2)	3.950	96	907622	50.000
91)$Toluene-d8	(3)	5.574	98	705763	70.379
105)*Chlorobenzene-d5	(3)	7.150	117	388536	50.000
119)$4-Bromofluorobenzene	(3)	8.306	95	100649	27.552
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	84453	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

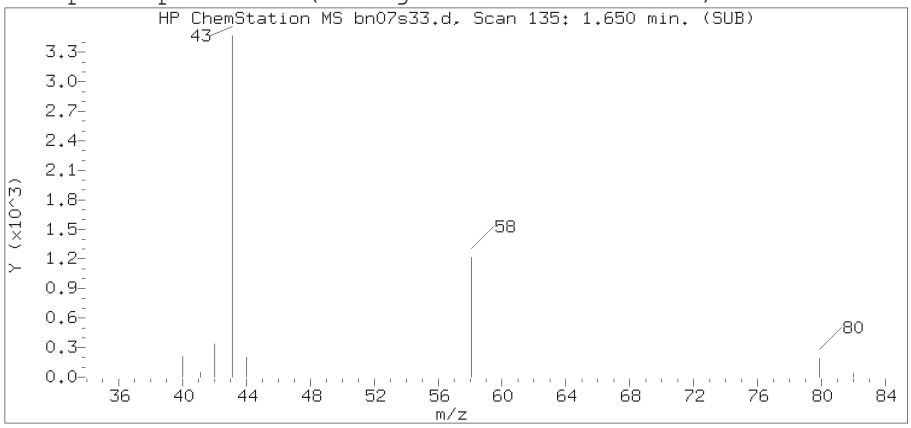
Digitally signed by Jennifer K. Howe
on 11/07/2018 at 14:50.
Target 3.5 esignature user ID: jkh09052

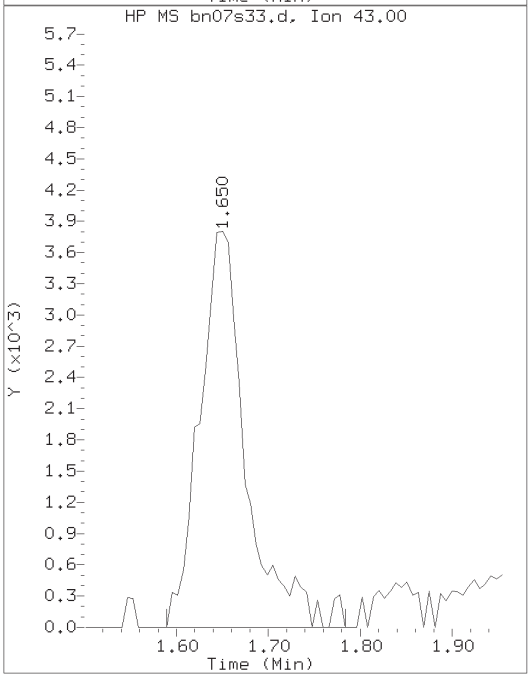
Reference Standard Spectrum for Acetone



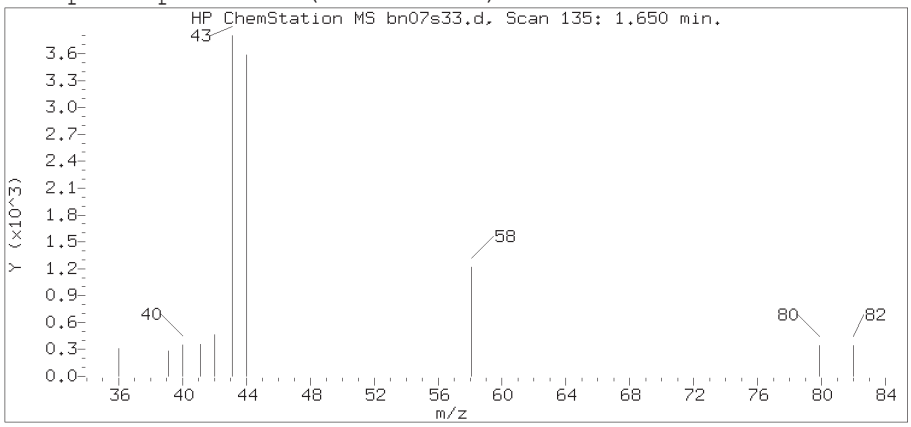


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP09953.i/18nov07a.b/bn07s33.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 11:35 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 25809
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 14:44 jkh09052

Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number : 20
Compound Name : Acetone
Scan Number : 135
Retention Time (minutes): 1.650
Relative Retention Time :-0.00856
Quant Ion : 58.00
Area (flag) : 3838
On-Column Amount (ng) : 38.1346

Digitally signed by Jennifer K. Howe on 11/07/2018 at 14:50.
Target 3.5 esignature user ID: jkh09052

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09953 **HP #24**

Data Directory Path is - C:\MSDCHEM\1\DATA\18sep12i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
scn10072	BS12T10.D	50NGBFB	09/12/2018	11:40		
scn10072	BS12X10.D	CLNBLK	09/12/2018	12:04		
scn10072	BS12X11.D	CLNBLK	09/12/2018	12:27		
scn10072	BS12X12.D	CLNBLK	09/12/2018	12:50		
scn10072	BS12I10.D	VSTD300	09/12/2018	13:13		
scn10072	BS12I11.D	VSTD100	09/12/2018	13:36		
scn10072	BS12I13.D	VSTD050	09/12/2018	13:59		
scn10072	BS12I14.D	VSTD020	09/12/2018	14:22		
scn10072	BS12I15.D	VSTD010	09/12/2018	14:45		
scn10072	BS12I16.D	VSTD004	09/12/2018	15:08		
scn10072	BS12I17.D	VSTD001	09/12/2018	15:30		
scn10072	BS12M10.D	MDL0.5	09/12/2018	15:53		
scn10072	BS12V10.D	ICVB01	09/12/2018	16:16		
scn10072	BS12X13.D	CLNBLK	09/12/2018	16:38		
scn10072	BS12I20.D	VSTD300	09/12/2018	17:01		
scn10072	BS12I21.D	VSTD100	09/12/2018	17:24		
scn10072	BS12I22.D	VSTD050	09/12/2018	17:47		
scn10072	BS12I23.D	VSTD020	09/12/2018	18:10		
scn10072	BS12I24.D	VSTD010	09/12/2018	18:33		
scn10072	BS12I25.D	VSTD004	09/12/2018	18:55		
scn10072	BS12M20.D	MDL1.0	09/12/2018	19:18		
scn10072	BS12V20.D	ICVB11	09/12/2018	19:41		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - D:\DATA\18SEP24I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
jkh09052	HS24T05.D	BFB AUG07-18	09/24/2018	17:53		
JKH09052	HS24X01.D	blk	09/24/2018	18:07		
JKH09052	HS24i01.D	VSTD025	09/24/2018	18:29		
JKH09052	HS24i02.D	VSTD010	09/24/2018	18:50		
JKH09052	HS24i03.D	VSTD005	09/24/2018	19:11		
JKH09052	HS24i04.D	VSTD002	09/24/2018	19:33		
JKH09052	HS24i05.D	VSTD001	09/24/2018	19:54		
JKH09052	HS24i06.D	VSTD0.5	09/24/2018	20:16		
JKH09052	HS24i07.D	VSTD0.2	09/24/2018	20:37		
JKH09052	HS24M01.D	MDL0.1	09/24/2018	20:59		
JKH09052	HS24V01.D	ICVHLG	09/24/2018	21:20		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - D:\DATA\18MAY02B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
DVV10203	HY02T05.D	BFB FEB13-18	05/02/2018	18:06		
DVV10203	HY02T06.D	BFB FEB13-18	05/02/2018	18:15		
DVV10203	HY02T07.D	BFB FEB13-18	05/02/2018	18:32		
DVV10203	HY02X11.D	blk	05/02/2018	18:54		
DVV10203	HY02I11.D	VSTD025	05/02/2018	19:15		
DVV10203	HY02I12.D	VSTD010	05/02/2018	19:36		
DVV10203	HY02I13.D	VSTD005	05/02/2018	19:58		
DVV10203	HY02I14.D	VSTD002	05/02/2018	20:19		
DVV10203	HY02I15.D	VSTD001	05/02/2018	20:40		
DVV10203	HY02I16.D	VSTD0.5	05/02/2018	21:02		
DVV10203	HY02I17.D	VSTD0.2	05/02/2018	21:23		
DVV10203	HY02M11.D	MDL0.1	05/02/2018	21:45		
DVV10203	HY02V11.D	ICVHSM	05/02/2018	22:07		
DVV10203	HY02V12.D	ICVDHSM	05/02/2018	22:28		
DVV10203	HY02C01.D	VSTD010	05/02/2018	22:49	H181221AA	
DVV10203	HY02S01.D	LCSH87	05/02/2018	23:11	H181221AA	
DVV10203	HY02S02.D	LCDH87	05/02/2018	23:32	H181221AA	
DVV10203	HY02X60.D	BLK	05/02/2018	23:53	H181221AA	
DVV10203	HY02B01.D	VBLKH87	05/03/2018	00:15	H181221AA	
DVV10203	HY02S05.D	9571212DL	05/03/2018	00:36	H181221AA	10
DVV10203	HY02S06.D	9573419	05/03/2018	00:58	H181221AA	
DVV10203	HY02S07.D	9583593	05/03/2018	01:20	H181221AA	
DVV10203	HY02S08.D	9583706	05/03/2018	01:41	H181221AA	
DVV10203	HY02S09.D	9583587	05/03/2018	02:03	H181221AA	
DVV10203	HY02S10.D	9583594	05/03/2018	02:24	H181221AA	
DVV10203	HY02S11.D	9583707	05/03/2018	02:46	H181221AA	
DVV10203	HY02S12.D	9583590	05/03/2018	03:07	H181221AA	
DVV10203	HY02S13.D	9583592	05/03/2018	03:28	H181221AA	
DVV10203	HY02S14.D	9583708	05/03/2018	03:50	H181221AA	
DVV10203	HY02S15.D	9583709	05/03/2018	04:11	H181221AA	
DVV10203	HY02S16.D	9583710	05/03/2018	04:33	H181221AA	
DVV10203	HY02S17.D	9583713	05/03/2018	04:55	H181221AA	
DVV10203	HY02S18.D	9583711	05/03/2018	05:16	H181221AA	10
DVV10203	HY02S19.D	9583711DL	05/03/2018	05:38	H181221AA	100
DVV10203	HY02S20.D	9583712	05/03/2018	05:59	H181221AA	1000
DVV10203	HY02S21.D	9583712DL	05/03/2018	06:21	H181221AA	10000

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09953 **HP #24**

Data Directory Path is - c:\msdchem\1\data\18oct31a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
scn10072	BC31T10.D	50NGBFB	10/31/2018	08:14	B183041AA	
scn10072	BC31X10.D	VBLKB85	10/31/2018	08:39	B183041AA	
scn10072	BC31C10.D	VSTD050	10/31/2018	09:03	B183041AA	
scn10072	BC31L10.D	LCSB85	10/31/2018	10:14	B183041AA	
scn10072	BC31L11.D	LCDB85	10/31/2018	10:37	B183041AA	
scn10072	BC31X11.D	VBLKB85	10/31/2018	11:00	B183041AA	
scn10072	BC31B10.D	VBLKB85	10/31/2018	11:25	B183041AA	
scn10072	BC31S11.D	9865717	10/31/2018	12:05	B183041AA	
scn10072	BC31S12.D	9865717MS	10/31/2018	12:28	B183041AA	
scn10072	BC31S13.D	9865718	10/31/2018	12:51	B183041AA	
scn10072	BC31S14.D	9866495	10/31/2018	13:14	B183041AA	
scn10072	BC31S15.D	9866496	10/31/2018	13:37	B183041AA	
scn10072	BC31S16.D	9866497	10/31/2018	14:00	B183041AA	
scn10072	BC31S17.D	9866498	10/31/2018	14:22	B183041AA	
scn10072	BC31S18.D	9866499	10/31/2018	14:45	B183041AA	
scn10072	BC31S19.D	9867815	10/31/2018	15:08	B183041AA	
scn10072	BC31S20.D	9867816	10/31/2018	15:31	B183041AA	
scn10072	BC31S21.D	9867817	10/31/2018	15:53	B183041AA	
scn10072	BC31S22.D	9867818	10/31/2018	16:16	B183041AA	
scn10072	BC31S33.D	9866466RE	10/31/2018	16:39	B183042AA	
scn10072	BC31S34.D	9866467RE	10/31/2018	17:02	B183042AA	
scn10072	BC31S35.D	9867761	10/31/2018	17:24	B183042AA	
scn10072	BC31S36.D	9867762	10/31/2018	17:47	B183042AA	
scn10072	BC31S37.D	9867763MS	10/31/2018	18:09	B183042AA	
scn10072	BC31S38.D	9867764MSD	10/31/2018	18:32	B183042AA	
scn10072	BC31S23.D	9867815MS	10/31/2018	18:54	B183041AA	
scn10072	BC31S39.D	9867766	10/31/2018	19:17	B183042AA	
scn10072	BC31S41.D	9870990	10/31/2018	19:39	B183042AA	
scn10072	BC31EC1.D	SECC050	10/31/2018	20:02	B183042AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09953 **HP #24**

Data Directory Path is - c:\msdchem\1\data\18nov06A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
PTH10165	BN06T01.D	NG50 BFB	11/06/2018	19:12		
PTH10165	BN06X05.D	VBLKB93	11/06/2018	19:28	B183101AA	
PTH10165	BN06C01.D	VSTD050	11/06/2018	19:51	B183101AA	
PTH10165	BN06M01.D	MDL050	11/06/2018	20:16	B183101AA	
PTH10165	BN06B01.D	VBLKB93	11/06/2018	20:41	B183101AA	
PTH10165	BN06S01.D	LCSB93	11/06/2018	21:07	B183101AA	
PTH10165	BN06S02.D	LCDB93	11/06/2018	21:29	B183101AA	
PTH10165	BN06S03.D	9867761RE	11/06/2018	22:32	B183101AA	
PTH10165	BN06S04.D	9867766RE	11/06/2018	22:55	B183101AA	
PTH10165	BN06S05.D	9867767	11/06/2018	23:18	B183101AA	
PTH10165	BN06S06.D	9870251	11/06/2018	23:41	B183101AA	
PTH10165	BN06S07.D	9870252	11/07/2018	00:04	B183101AA	
PTH10165	BN06S08.D	9870253	11/07/2018	00:27	B183101AA	
PTH10165	BN06S09.D	9872065	11/07/2018	00:50	B183101AA	
PTH10165	BN06EC5.D	SECC050	11/07/2018	01:16	B183101AA	
PTH10165	BN06X18.D	CLNBLANK	11/07/2018	01:38	B183101AA	
PTH10165	BN06S33.D	9867824RE	11/07/2018	02:01	B183102AA	
PTH10165	BN06S34.D	9878580	11/07/2018	02:24	B183102AA	
PTH10165	BN06S35.D	9878581	11/07/2018	02:46	B183102AA	
PTH10165	BN06S36.D	9878584	11/07/2018	03:09	B183102AA	
PTH10165	BN06S37.D	9878585	11/07/2018	03:32	B183102AA	
PTH10165	BN06S38.D	9882246	11/07/2018	03:55	B183102AA	
PTH10165	BN06S39.D	9883608	11/07/2018	04:18	B183102AA	
PTH10165	BN06S40.D	9883609	11/07/2018	04:41	B183102AA	
PTH10165	BN06S41.D	9883610	11/07/2018	05:03	B183102AA	
PTH10165	BN06S42.D	9878583	11/07/2018	05:25	B183102AA	
PTH10165	BN06S43.D	9878582	11/07/2018	05:48	B183102AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09953 **HP #24**

Data Directory Path is - c:\msdchem\1\data\18nov07A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
jkh09052	BN07T01.D	NG50 BFB	11/07/2018	07:35		
JKH09052	BN07X00.D	VBLKB95	11/07/2018	07:50	B183111AA	
JKH09052	BN07C01.D	VSTD050	11/07/2018	08:13	B183111AA	
JKH09052	BN07C02.D	VSTD050	11/07/2018	08:36	B183111AA	
JKH09052	BN07L01.D	LCSB95	11/07/2018	09:01	B183111AA	
JKH09052	BN07L02.D	LCDB95	11/07/2018	09:24	B183111AA	
JKH09052	BN07L03.D	LCSB96	11/07/2018	09:47	B183111AA	
JKH09052	BN07L04.D	LCDB96	11/07/2018	10:10	B183111AA	
JKH09052	BN07B01.D	VBLKB95	11/07/2018	10:32	B183111AA	
JKH09052	BN07S33.D	9867767RE	11/07/2018	11:35	B183112AA	
JKH09052	BN07S34.D	9872065RE	11/07/2018	11:58	B183112AA	
JKH09052	BN07S35.D	9870252RE	11/07/2018	12:21	B183112AA	
JKH09052	BN07S36.D	9870253RE	11/07/2018	12:44	B183112AA	
JKH09052	BN07S37.D	9884806	11/07/2018	13:07	B183112AA	
JKH09052	BN07S38.D	9884807	11/07/2018	13:30	B183112AA	
JKH09052	BN07S39.D	9884808	11/07/2018	13:52	B183112AA	
JKH09052	BN07S40.D	9884809	11/07/2018	14:15	B183112AA	
JKH09052	BN07S41.D	9884810MS	11/07/2018	14:38	B183112AA	
JKH09052	BN07S42.D	9884811MSD	11/07/2018	15:00	B183112AA	
JKH09052	BN07S43.D	9884813	11/07/2018	15:23	B183112AA	
JKH09052	BN07S44.D	9884814	11/07/2018	15:46	B183112AA	
JKH09052	BN07S45.D	9884815	11/07/2018	16:08	B183112AA	
JKH09052	BN07S02.D	9878918	11/07/2018	16:30	B183111AA	
JKH09052	BN07S03.D	9878916MS	11/07/2018	16:53	B183111AA	
JKH09052	BN07S04.D	9878917MSD	11/07/2018	17:16	B183111AA	
JKH09052	BN07S05.D	9878916MS	11/07/2018	17:38	B183111AA	
JKH09052	BN07S06.D	9878917MSD	11/07/2018	18:01	B183111AA	
JKH09052	BN07S07.D	9878915	11/07/2018	18:24	B183111AA	
JKH09052	BN07C03.D	SECC050	11/07/2018	18:47	B183112AA	
JKH09052	BN07S61.D	9876025	11/07/2018	19:10	B183111AA	
JKH09052	BN07S62.D	9876033	11/07/2018	19:32	B183111AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - d:\data\18nov05B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
JGC14951	HN05T05.D	50NGBFB	11/05/2018	19:34	H183093AA	
JGC14951	HN05X01.D	VBLKH94	11/05/2018	19:57	H183093AA	
JGC14951	HN05C01.D	VSTD010	11/05/2018	20:18	H183093AA	
JGC14951	HN05C02.D	VSTD010	11/05/2018	20:39	H183093AA	
JGC14951	HN05S41.D	LCSH94	11/05/2018	21:00	H183093AA	
JGC14951	HN05S42.D	LCDH94	11/05/2018	21:22	H183093AA	
JGC14951	HN05S43.D	LCSH95	11/05/2018	21:43	H183093AA	
JGC14951	HN05S44.D	LCDH95	11/05/2018	22:05	H183093AA	
JGC14951	HN05M01.D	MDL94	11/05/2018	22:26	H183093AA	
JGC14951	HN05B05.D	VBLKH94	11/05/2018	22:48	H183093AA	
JGC14951	HN05S45.D	9868189	11/05/2018	23:09	H183093AA	
JGC14951	HN05S46.D	9868190	11/05/2018	23:31	H183093AA	
JGC14951	HN05S47.D	9868188	11/05/2018	23:52	H183093AA	
JGC14951	HN05S48.D	9868184	11/06/2018	00:14	H183093AA	
JGC14951	HN05S49.D	9868185	11/06/2018	00:35	H183093AA	
JGC14951	HN05S50.D	9868186	11/06/2018	00:56	H183093AA	
JGC14951	HN05S51.D	9868187	11/06/2018	01:18	H183093AA	
JGC14951	HN05S52.D	9868187MS	11/06/2018	01:39	H183093AA	
JGC14951	HN05S53.D	9868187MSD	11/06/2018	02:01	H183093AA	
JGC14951	HN05S75.D	9876332	11/06/2018	02:22	H183094AA	
JGC14951	HN05S76.D	9876334	11/06/2018	02:44	H183094AA	
JGC14951	HN05S77.D	9876335MS	11/06/2018	03:05	H183094AA	
JGC14951	HN05S78.D	9876336MSD	11/06/2018	03:26	H183094AA	
JGC14951	HN05S79.D	9876335MS	11/06/2018	03:48	H183094AA	
JGC14951	HN05S80.D	9876335MSD	11/06/2018	04:09	H183094AA	
JGC14951	HN05S81.D	9876342	11/06/2018	04:31	H183094AA	
JGC14951	HN05S82.D	9866460	11/06/2018	04:52	H183094AA	
JGC14951	HN05S83.D	9867760	11/06/2018	05:14	H183094AA	
JGC14951	HN05S84.D	9870250	11/06/2018	05:35	H183094AA	
JGC14951	HN05S85.D	9872059	11/06/2018	05:57	H183094AA	
JGC14951	HN05S86.D	9874410	11/06/2018	06:18	H183094AA	
JGC14951	HN05S87.D	9876331	11/06/2018	06:40	H183094AA	
JGC14951	HN05EC5.D	SECC010	11/06/2018	07:01	H183094AA	
JGC14951	HN05EC6.D	SECD010	11/06/2018	07:22	H183094AA	

Data File: /chem2/HP09953.i/18sep12i.b/bs12t10.d

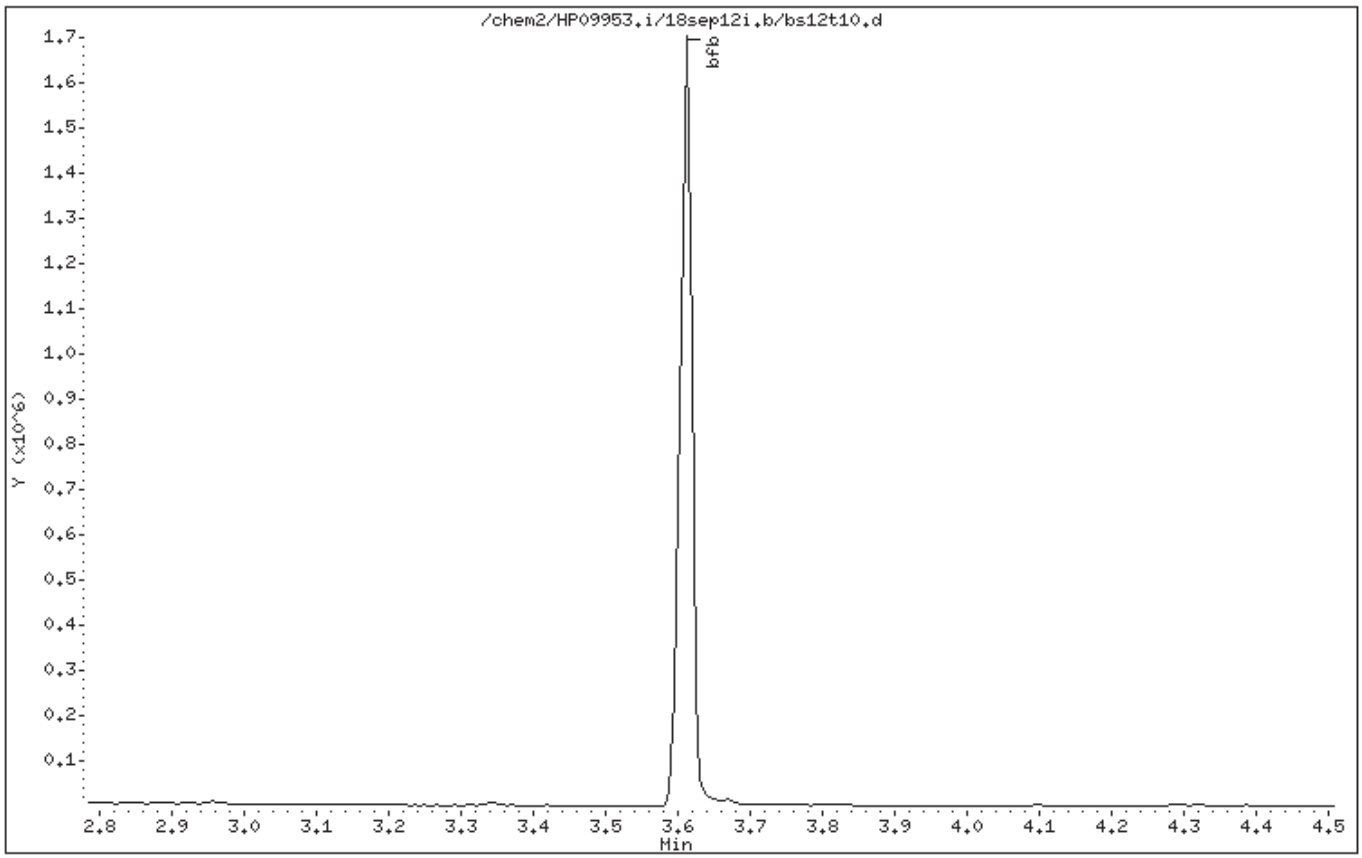
Date : 12-SEP-2018 11:40

Client ID: AUG0718 Instrument: HP09953.i

Sample Info: AUG0718;50NGBFB;2;3;;;;

Operator: scn10072

Column phase: DB-624 Column diameter: 0.18



Digitally signed by Stephen C. Nolte on 09/12/2018 at 11:49.
Target 3.5 esignature user ID: scn10072

Data File: /chem2/HP09953.i/18sep12i.b/bs12t10.d

Date : 12-SEP-2018 11:40

Client ID: AUG0718

Instrument: HP09953.i

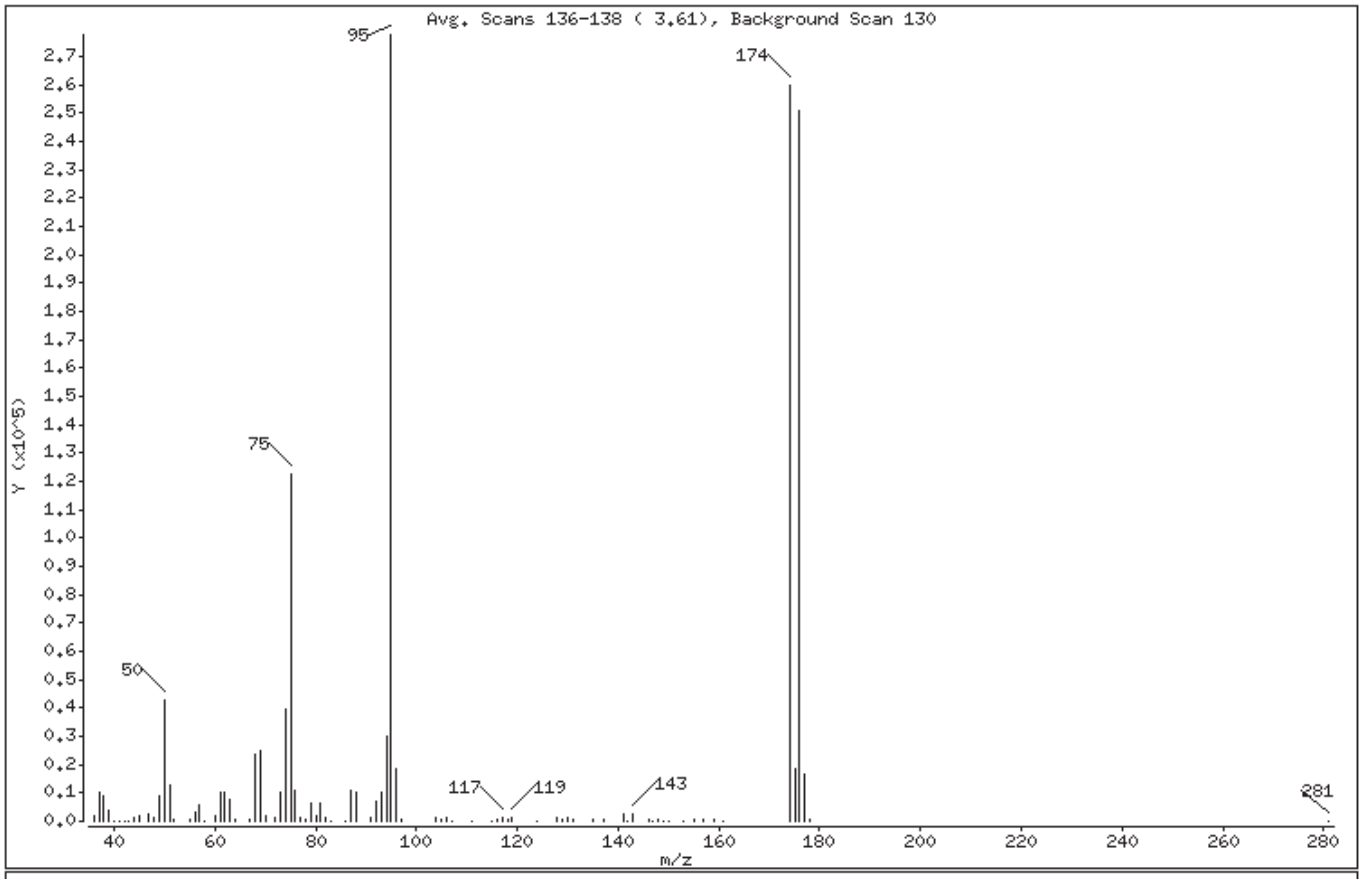
Sample Info: AUG0718;50NGBFB;2;3;;;;

Operator: scn10072

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.29
75	30.00 - 60.00% of mass 95	44.06
96	5.00 - 9.00% of mass 95	6.68
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	93.54
175	5.00 - 9.00% of mass 174	6.64 (7.10)
176	95.00 - 101.00% of mass 174	90.38 (96.62)
177	5.00 - 9.00% of mass 176	5.91 (6.54)

Digitally signed by Stephen C. Nolte on 09/12/2018 at 11:49.
Target 3.5 esignature user ID: scn10072

Date : 12-SEP-2018 11:40

Client ID: AUG0718 Instrument: HP09953.i

Sample Info: AUG0718;50NGBFB;2;3;;;;

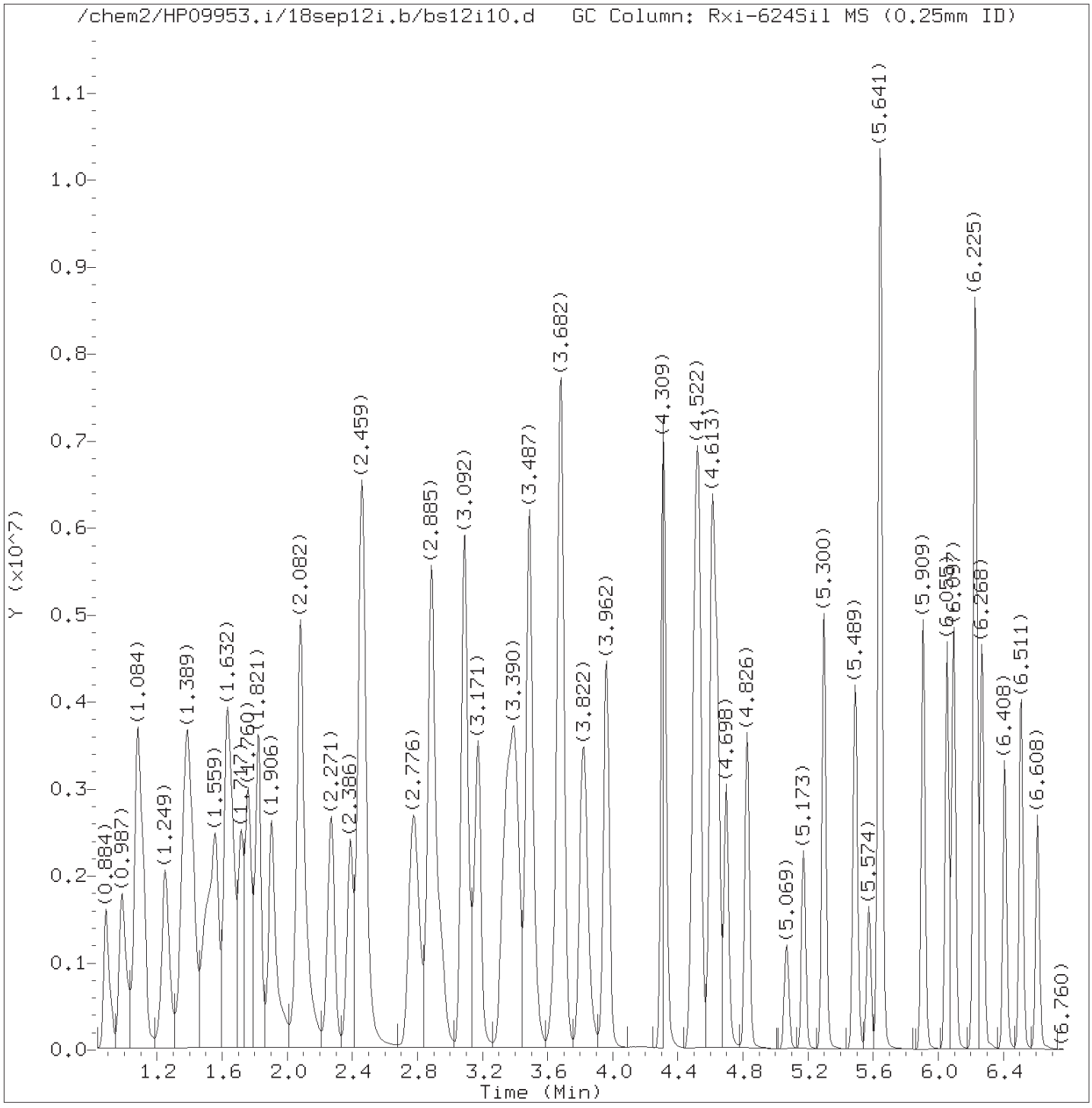
Operator: scn10072

Column phase: DB-624 Column diameter: 0.18

Data File: bs12t10.d
Spectrum: Avg. Scans 136-138 (3.61), Background Scan 130
Location of Maximum: 95.00
Number of points: 87

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2020	62.00	10237	91.00	986	135.00	427
37.00	10377	63.00	7694	92.00	6986	137.00	426
38.00	9243	64.00	770	93.00	10505	141.00	2380
39.00	3788	67.00	687	94.00	29872	142.00	232
40.00	207	68.00	23736	95.00	277696	143.00	2643
41.00	11	69.00	24600	96.00	18536	146.00	390
42.00	87	70.00	1948	97.00	659	147.00	86
43.00	131	72.00	1271	104.00	1064	148.00	656
44.00	1131	73.00	10314	105.00	489	149.00	89
45.00	2100	74.00	39400	106.00	1098	150.00	226
47.00	2405	75.00	122376	107.00	99	153.00	122
48.00	1206	76.00	10756	111.00	173	155.00	696
49.00	8651	77.00	1421	115.00	227	157.00	516
50.00	42456	78.00	869	116.00	908	159.00	366
51.00	12926	79.00	6330	117.00	1595	161.00	121
52.00	633	80.00	1945	118.00	882	174.00	259776
55.00	553	81.00	6502	119.00	1435	175.00	18448
56.00	3429	82.00	1409	124.00	85	176.00	251008
57.00	5912	83.00	95	128.00	994	177.00	16408
58.00	224	86.00	237	129.00	492	178.00	447
60.00	1950	87.00	10914	130.00	1032	281.00	83
61.00	10311	88.00	10407	131.00	398		

Digitally signed by Stephen C. Nolte on 09/12/2018 at 11:49.
Target 3.5 esignature user ID: scn10072



Total Ion Chromatogram (TIC)

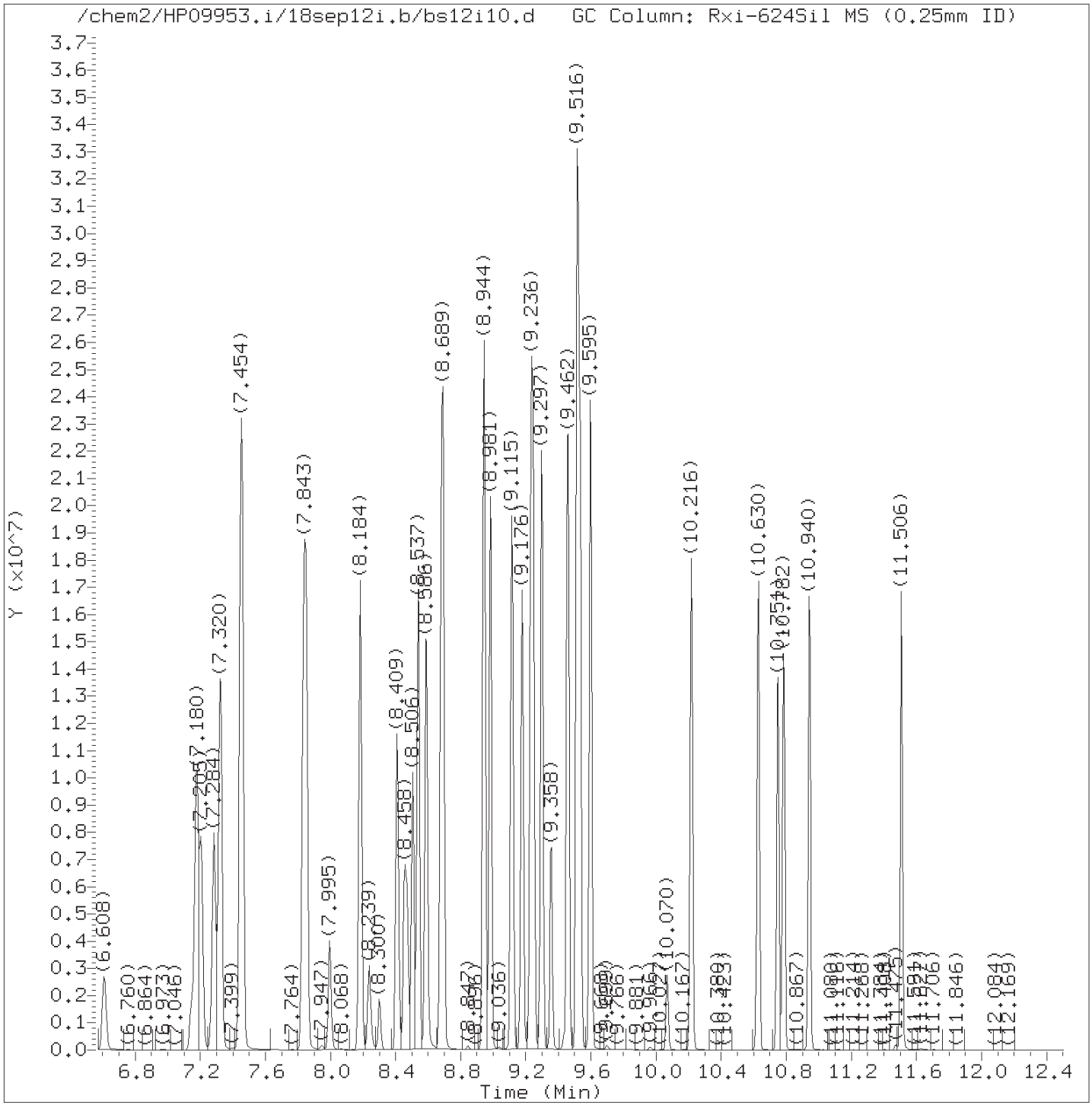
Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.981	85	3080787	277.358
4) Chloromethane	(2)	1.072	50	3051945	266.566
5) Vinyl Chloride	(2)	1.121	62	2286633	256.309
9) Bromomethane	(2)	1.249	94	1746152	219.914
10) Chloroethane	(2)	1.267	64	1092179	227.584
11) Dichlorofluoromethane	(2)	1.370	67	2897912	249.692
13) Trichlorofluoromethane	(2)	1.413	101	3342963	272.196
15) Ethanol	(1)	1.443	45	663222	12284.657
17) Freon 123a	(2)	1.516	67	1936467	235.518
18) Acrolein	(1)	1.559	56	2527613	2528.401
19) 1,1-Dichloroethene	(2)	1.626	96	1599960	259.247
20) Acetone	(1)	1.644	58	252577	599.959
22) Freon 113	(2)	1.656	101	1691741	273.407
23) 2-Propanol	(1)	1.717	45	562235	1406.384
24) Methyl Iodide	(2)	1.717	142	3990575	268.915
25) Carbon Disulfide	(2)	1.766	76	6686876	270.787
27) Methyl Acetate	(2)	1.827	43	860964M	272.051
29) Allyl Chloride	(2)	1.827	41	2197397M	266.178
31) Methylene Chloride	(2)	1.906	84	1872953	256.802
30)*t-Butyl alcohol-d10	(1)	1.924	65	103473	250.000
32) t-Butyl alcohol	(1)	1.979	59	694534	1277.809
33) Acrylonitrile	(2)	2.052	53	521644	243.486
35) trans-1,2-Dichloroethene	(2)	2.082	96	1892160	263.641
34) Methyl Tertiary Butyl Ether	(2)	2.094	73	4651054	264.945
38) n-Hexane	(2)	2.271	57	2101008	256.468
40) 1,1-Dichloroethane	(2)	2.386	63	3232199	277.739
41) di-Isopropyl ether	(2)	2.459	45	5970536	274.873
42) 2-Chloro-1,3-butadiene	(2)	2.459	53	2823815	275.354
43) Ethyl t-butyl ether	(2)	2.776	59	5595074	273.524
45) cis-1,2-Dichloroethene	(2)	2.885	96	2256347	289.633
44) 2-Butanone	(1)	2.897	43	1432625	538.538
47) 2,2-Dichloropropane	(2)	2.903	77	2372605	279.656
49) Propionitrile	(1)	2.946	54	1074342	1505.417
46) 1,2-Dichloroethene (Total)	(2)		96	4148507	553.273
51) Methacrylonitrile	(2)	3.086	67	1721999	719.302
52) Bromochloromethane	(2)	3.092	128	1233466	298.024
53) Tetrahydrofuran	(1)	3.135	71	407778	615.391
54) Chloroform	(2)	3.171	83	3345376	283.218

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	3.317	113	303763	49.546
56)$Dibromofluoromethane	(2)	3.317	111	309827	49.850
57) 1,1,1-Trichloroethane	(2)	3.348	97	3297703	272.668
58) Cyclohexane	(2)	3.396	56	3160269	278.144
58) Cyclohexane	(2)	3.396	84	2907987	273.869
58) Cyclohexane	(2)	3.396	69	1014671	282.379
60) 1,1-Dichloropropene	(2)	3.487	75	2496231	284.029
61) Carbon Tetrachloride	(2)	3.494	117	2762680	300.772
63)$1,2-Dichloroethane-d4	(2)	3.627	102	63485	48.110
63)$1,2-Dichloroethane-d4	(2)	3.621	65	277186	47.765
63)$1,2-Dichloroethane-d4	(2)	3.621	104	41025	48.527
62) Isobutyl Alcohol	(1)	3.652	41	656685	3438.756
64) Benzene	(2)	3.676	78	7731834	275.563
67) 1,2-Dichloroethane	(2)	3.694	62	2181967	269.470
67) 1,2-Dichloroethane	(2)	3.694	98	238107	296.010
68) t-Amyl methyl ether	(2)	3.822	73	5232773	277.064
70)*Fluorobenzene	(2)	3.950	96	1230156	50.000
72) n-Heptane	(2)	3.962	43	2059871	275.640
75) Trichloroethene	(2)	4.309	95	2107240	287.990
73) n-Butanol	(1)	4.315	56	1185542	7413.883
76) Methylcyclohexane	(2)	4.510	83	3378204	296.675
77) 1,2-Dichloropropane	(2)	4.528	63	1929835	289.622
81) Dibromomethane	(2)	4.649	93	1198792	294.192
80) 1,4-Dioxane	(1)	4.686	88	262862M	3966.558
79) Methyl Methacrylate	(2)	4.698	69	1269410	295.564
84) Bromodichloromethane	(2)	4.826	83	2560691	307.734
85) 2-Nitropropane	(1)	5.069	41	824628	602.534
87) 2-Chloroethyl Vinyl Ether	(2)	5.173	63	1074111	306.142
89) cis-1,3-Dichloropropene	(2)	5.300	75	3059710	304.516
90) 4-Methyl-2-pentanone	(2)	5.489	43	3146162	599.815
91)$Toluene-d8	(3)	5.574	98	1214180	49.155
91)$Toluene-d8	(3)	5.574	100	795416	49.623
92) Toluene	(3)	5.641	92	5119307	279.425
93) trans-1,3-Dichloropropene	(3)	5.909	75	2711085	308.927
94) 1,3-Dichloropropene (total)	(3)		100	5770795	613.443
95) Ethyl Methacrylate	(3)	6.055	69	2513765	295.083
96) 1,1,2-Trichloroethane	(3)	6.097	97	1702105	286.290
98) Tetrachloroethene	(3)	6.225	166	2727692	271.813

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
99) 1,3-Dichloropropane	(3)	6.268	76	2713939	283.497
101) 2-Hexanone	(3)	6.408	43	2171445	599.528
103) Dibromochloromethane	(3)	6.511	129	2231751	325.816
104) 1,2-Dibromoethane	(3)	6.608	107	1832136	298.284
105)*Chlorobenzene-d5	(3)	7.144	117	957052	50.000
107) Chlorobenzene	(3)	7.174	112	5944730	277.916
106) 1-Chlorohexane	(3)	7.205	91	2674699	293.818
108) 1,1,1,2-Tetrachloroethane	(3)	7.284	131	2296075	316.555
109) Ethylbenzene	(3)	7.320	91	9457855	274.478
110) m+p-Xylene	(3)	7.454	106	7412693	527.185
111) o-Xylene	(3)	7.837	106	3960184	281.726
113) Styrene	(3)	7.849	104	6488206	279.982
112) Xylene (Total)	(3)		106	11372877	808.911
114) Bromoform	(3)	7.995	173	1525174	357.321
115) Isopropylbenzene	(3)	8.184	105	9402149	265.354
118) Cyclohexanone	(1)	8.239	55	993019A	4140.833
119)$4-Bromofluorobenzene	(3)	8.300	95	458031	50.901
119)$4-Bromofluorobenzene	(3)	8.300	174	418633	50.544
121) Bromobenzene	(4)	8.409	156	2910525	296.873
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	2238120	299.004
123) 1,2,3-Trichloropropane	(4)	8.470	110	665320M	299.775
122) trans-1,4-Dichloro-2-butene	(4)	8.506	53	1399372	761.884
124) n-Propylbenzene	(4)	8.543	91	10112785	260.900
126) 2-Chlorotoluene	(4)	8.592	126	2716538	298.678
130) 4-Chlorotoluene	(4)	8.683	126	2610273	283.269
129) 1,3,5-Trimethylbenzene	(4)	8.695	105	8040053	268.156
133) tert-Butylbenzene	(4)	8.944	134	1976135	280.567
134) Pentachloroethane	(4)	8.944	167	1602509	380.491
135) 1,2,4-Trimethylbenzene	(4)	8.981	105	8463279	270.687
136) sec-Butylbenzene	(4)	9.115	105	9861110	258.345
138) 1,3-Dichlorobenzene	(4)	9.176	146	5301157	288.111
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	535094	50.000
139) p-Isopropyltoluene	(4)	9.236	119	8610791	251.736
141) 1,4-Dichlorobenzene	(4)	9.249	146	4986557	259.946
142) 1,2,3-Trimethylbenzene	(4)	9.297	105	8888584	263.728
143) Benzyl Chloride	(4)	9.358	126	916823	366.713
144) 1,3-Diethylbenzene	(4)	9.462	119	6039928	285.631
145) 1,4-Diethylbenzene	(4)	9.516	119	5453105	248.480

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

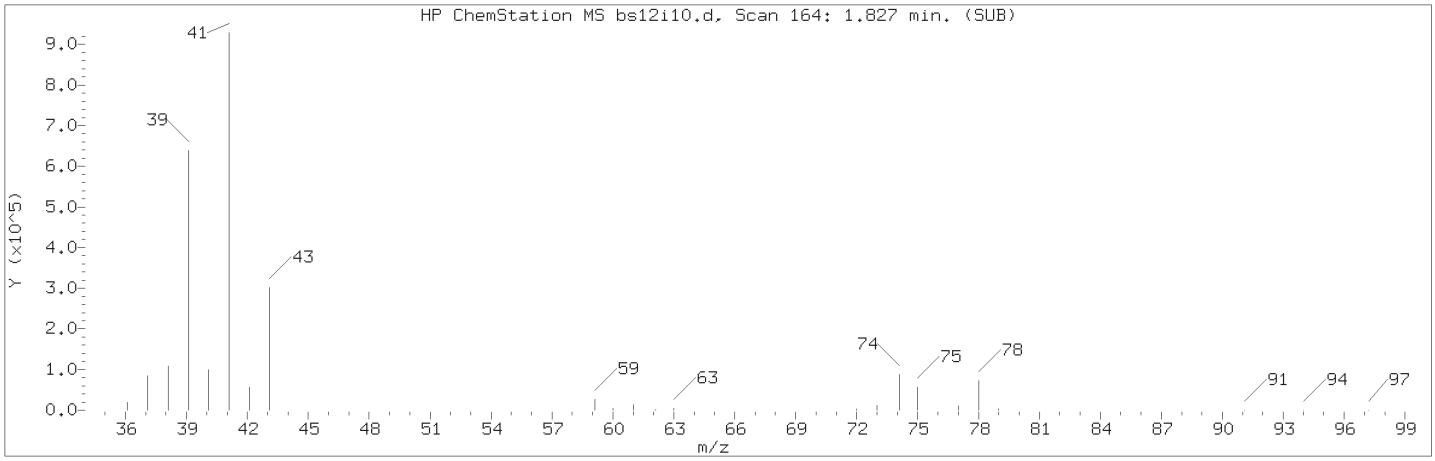
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

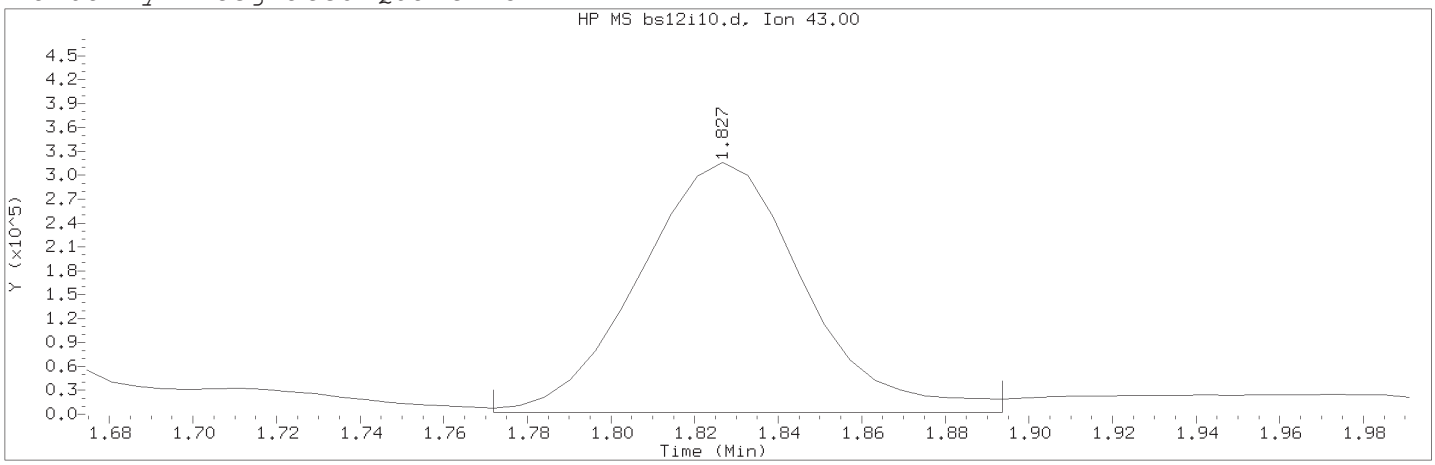
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2-Dichlorobenzene	(4)	9.516	146	4214666	234.296
146) n-Butylbenzene	(4)	9.535	92	4352277	273.869
148) 1,2-Diethylbenzene	(4)	9.595	119	5183778	280.210
149) Diethylbenzene (total)	(4)		100	16676811	814.321
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	426564	328.000
152) 1,3,5-Trichlorobenzene	(4)	10.216	180	4149530	294.823
153) 1,2,4-Trichlorobenzene	(4)	10.630	180	3791375	285.812
154) Hexachlorobutadiene	(4)	10.751	225	1860668	307.429
155) Naphthalene	(4)	10.782	128	7842133	248.863
156) 1,2,3-Trichlorobenzene	(4)	10.940	180	3549716	280.611
157) 2-Methylnaphthalene	(4)	11.506	142	5324175	249.796

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

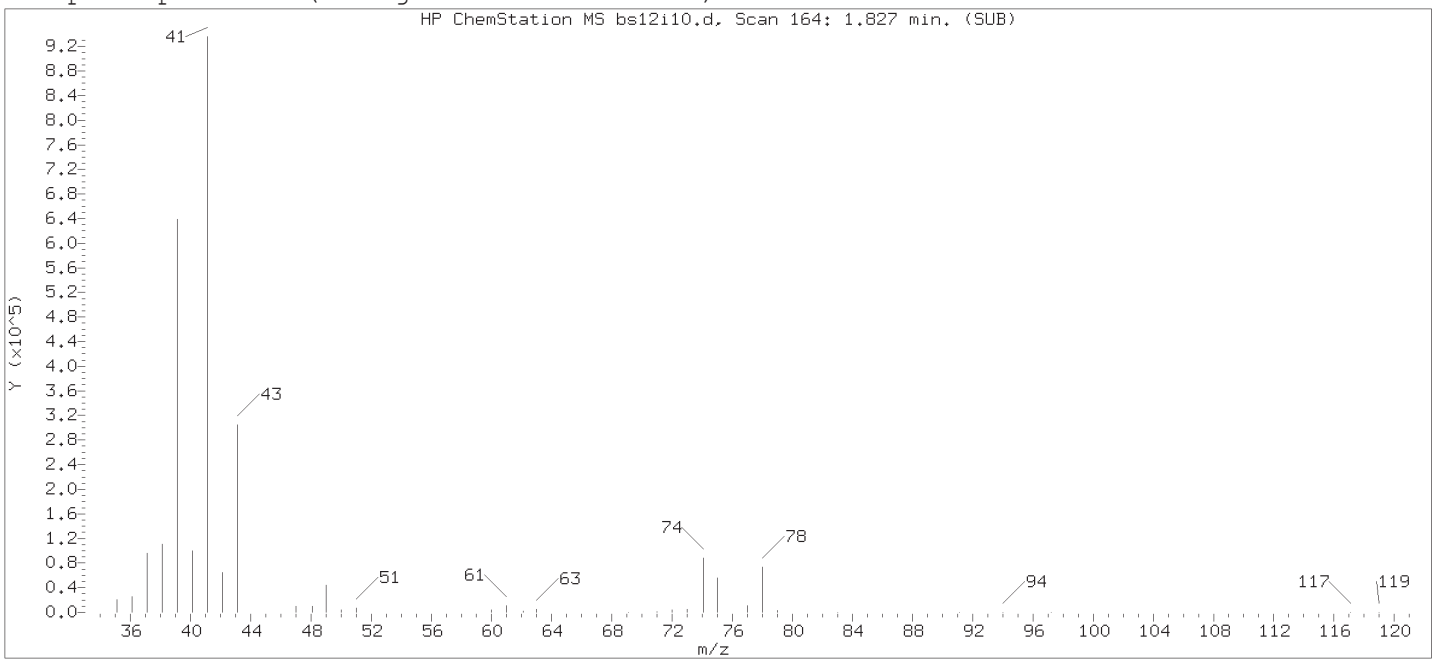
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 164
Retention Time (minutes): 1.827
Quant Ion : 43.00
Area (flag) : 860964M
On-Column Amount (ng) : 272.0508
Integration start scan : 154 Integration stop scan: 174
Y at integration start : 2458 Y at integration end: 2458

Reason for manual integration: improper integration

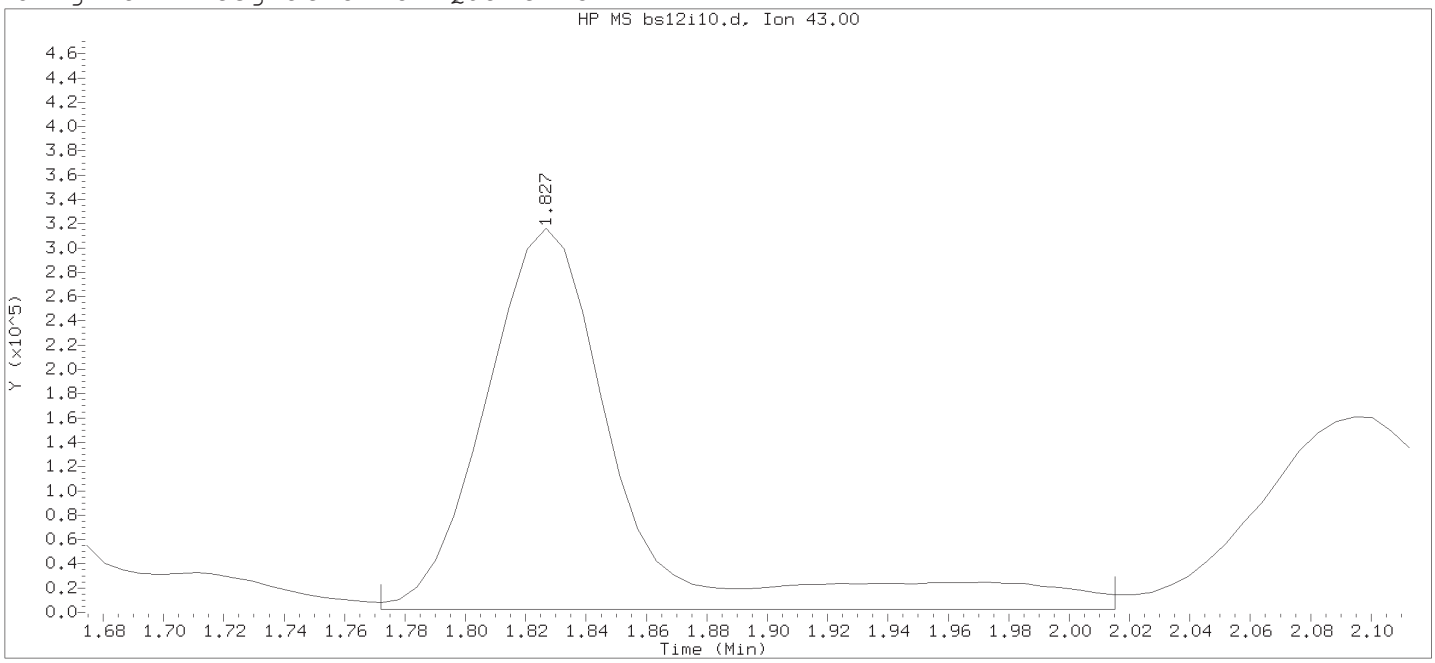
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

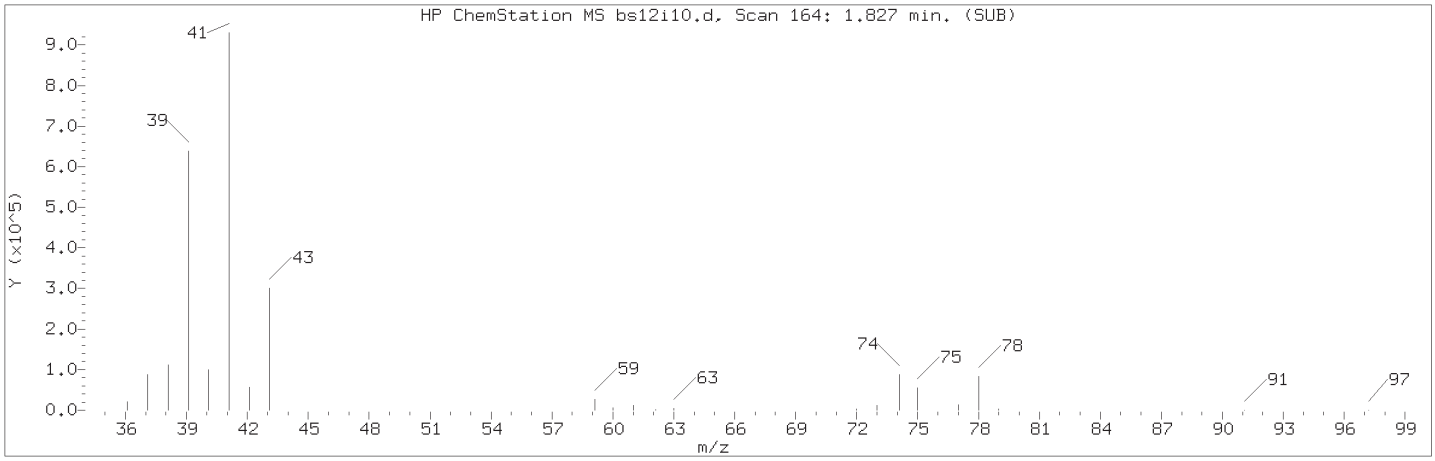
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 13:28
Date, time and analyst ID of latest file update: 12-Sep-2018 13:28 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

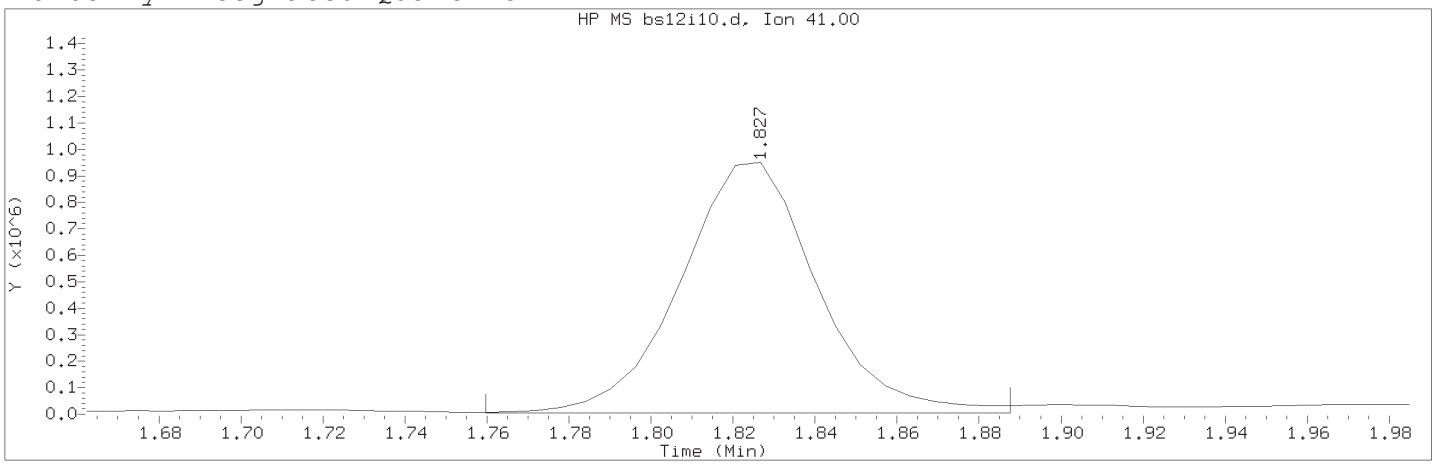
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 164
Retention Time (minutes): 1.827
Quant Ion : 43.00
Area : 1001508
On-column Amount (ng) : 208.2576
Integration start scan : 154 Integration stop scan: 194
Y at integration start : 2458 Y at integration end: 2458

Digitally signed by Jennifer K. Howe on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

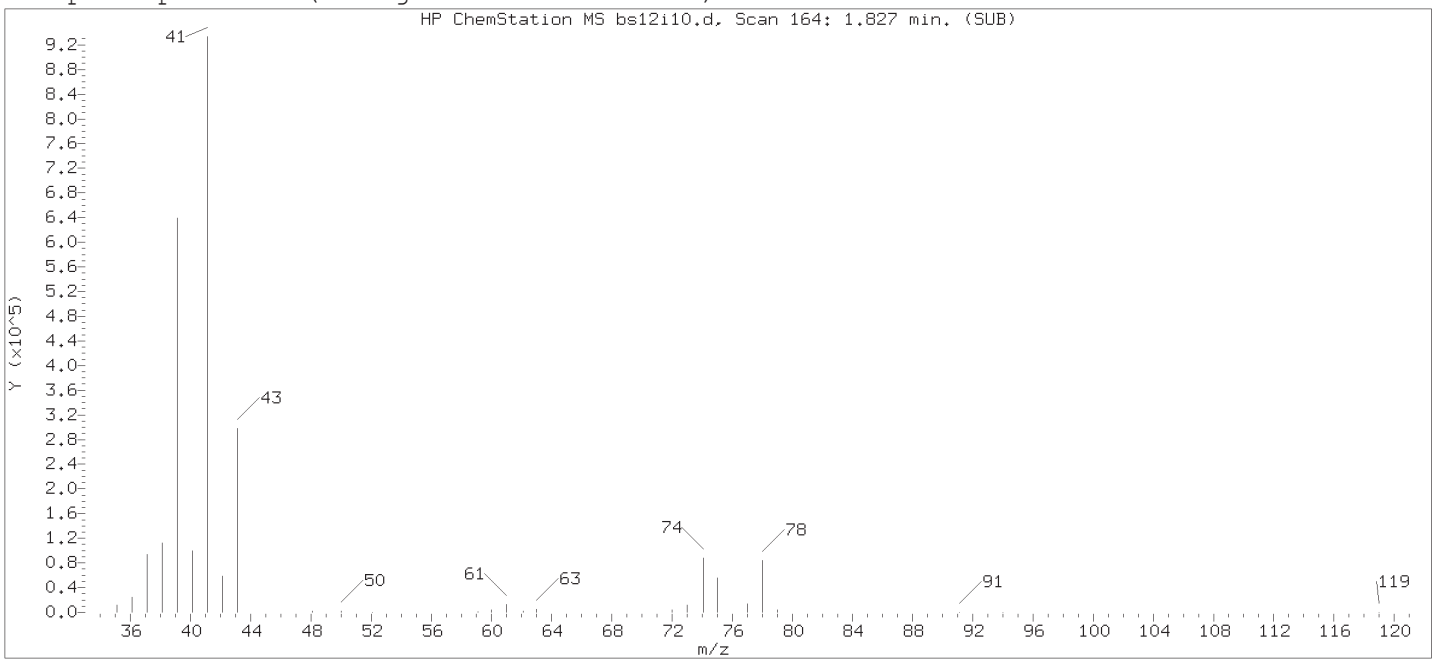
Compound Number : 29
Compound Name : Allyl Chloride
Scan Number : 164
Retention Time (minutes): 1.827
Quant Ion : 41.00
Area (flag) : 2197397M
On-Column Amount (ng) : 266.1780
Integration start scan : 152 Integration stop scan: 173
Y at integration start : 4837 Y at integration end: 4837

Reason for manual integration: improper integration

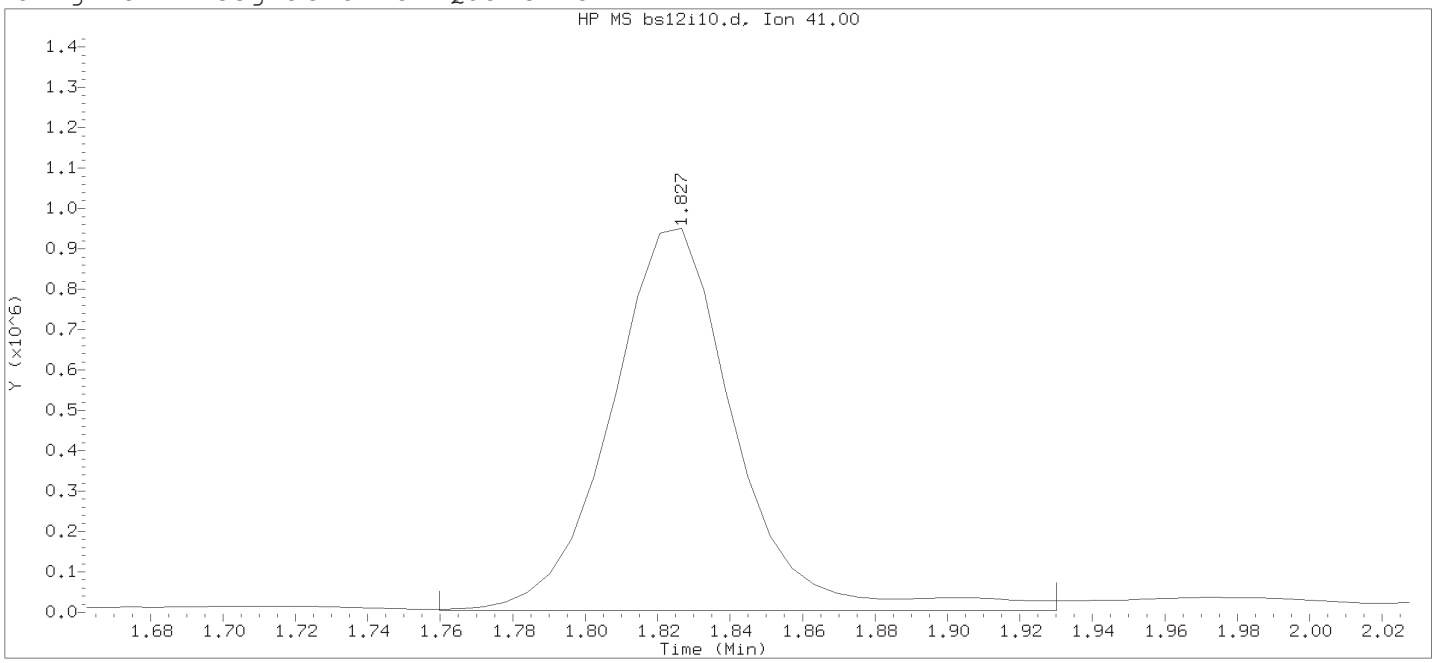
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

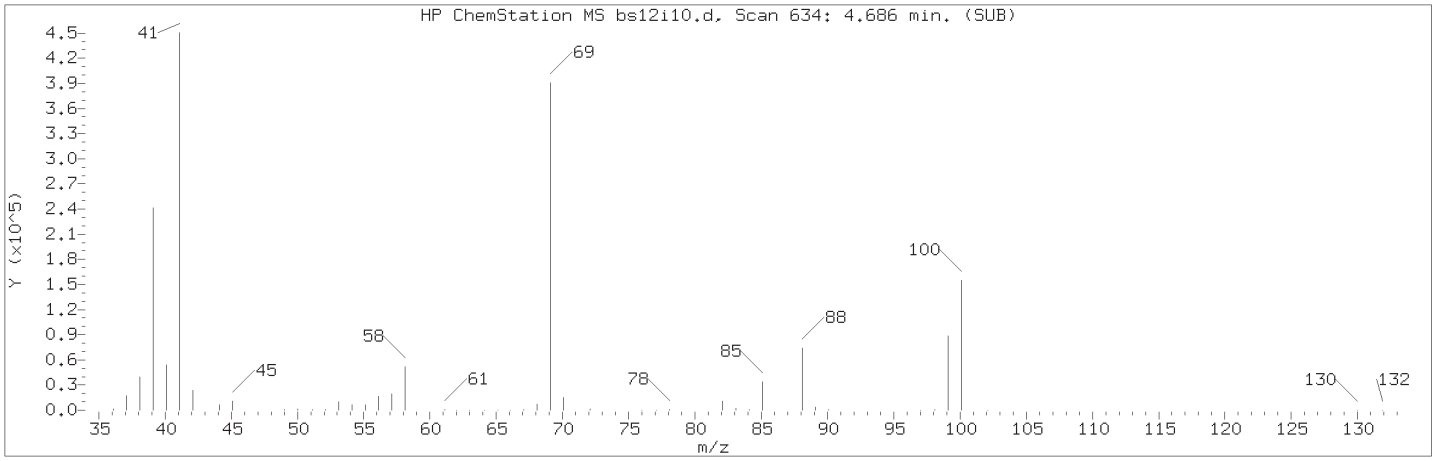
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 13:28
Date, time and analyst ID of latest file update: 12-Sep-2018 13:28 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

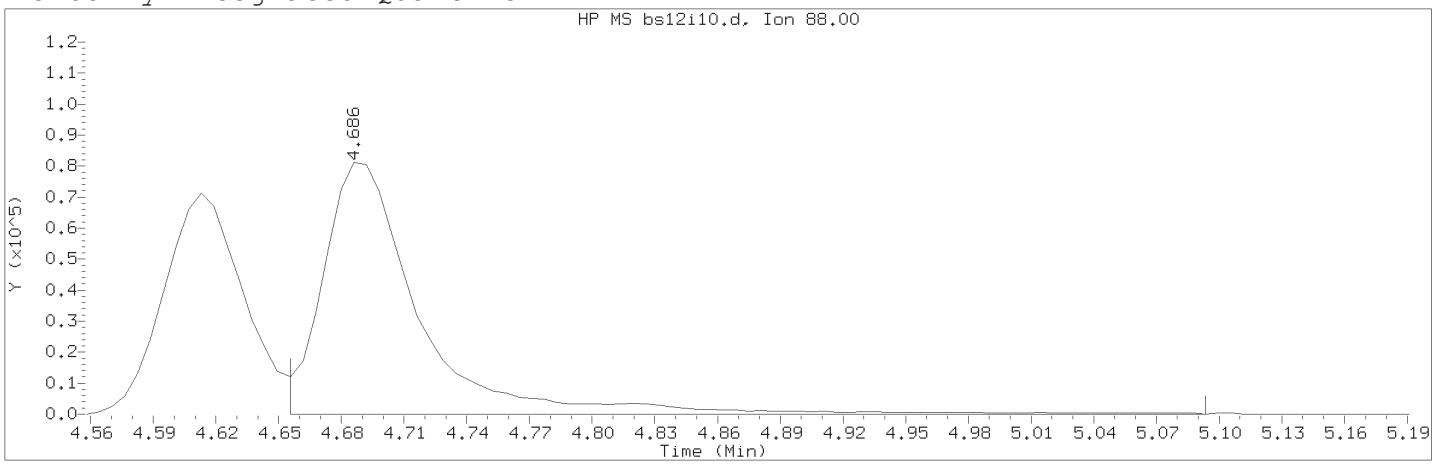
Compound Number : 29
Compound Name : Allyl Chloride
Scan Number : 164
Retention Time (minutes): 1.827
Quant Ion : 41.00
Area : 2262713
On-column Amount (ng) : 210.4982
Integration start scan : 152 Integration stop scan: 180
Y at integration start : 4837 Y at integration end: 4837

Digitally signed by Jennifer K. Howe on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

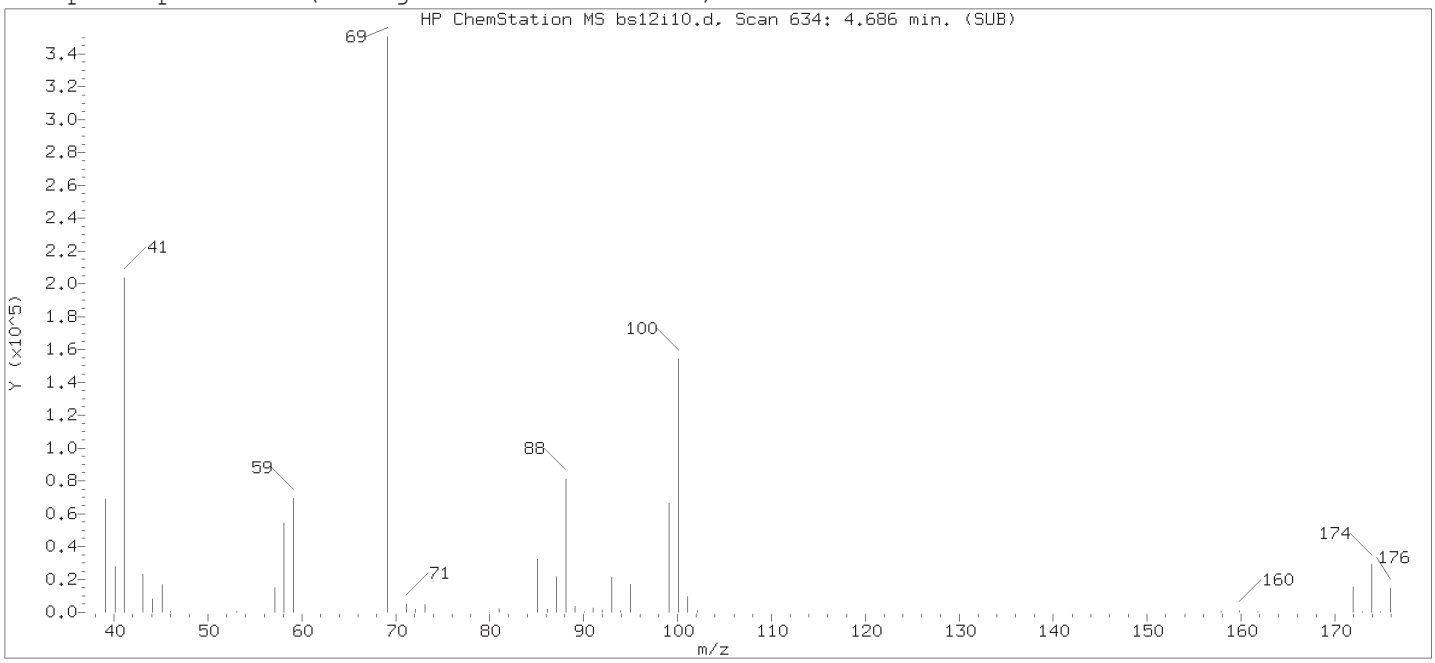
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 634
Retention Time (minutes): 4.686
Quant Ion : 88.00
Area (flag) : 262862M
On-Column Amount (ng) : 3966.5579
Integration start scan : 628 Integration stop scan: 700
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

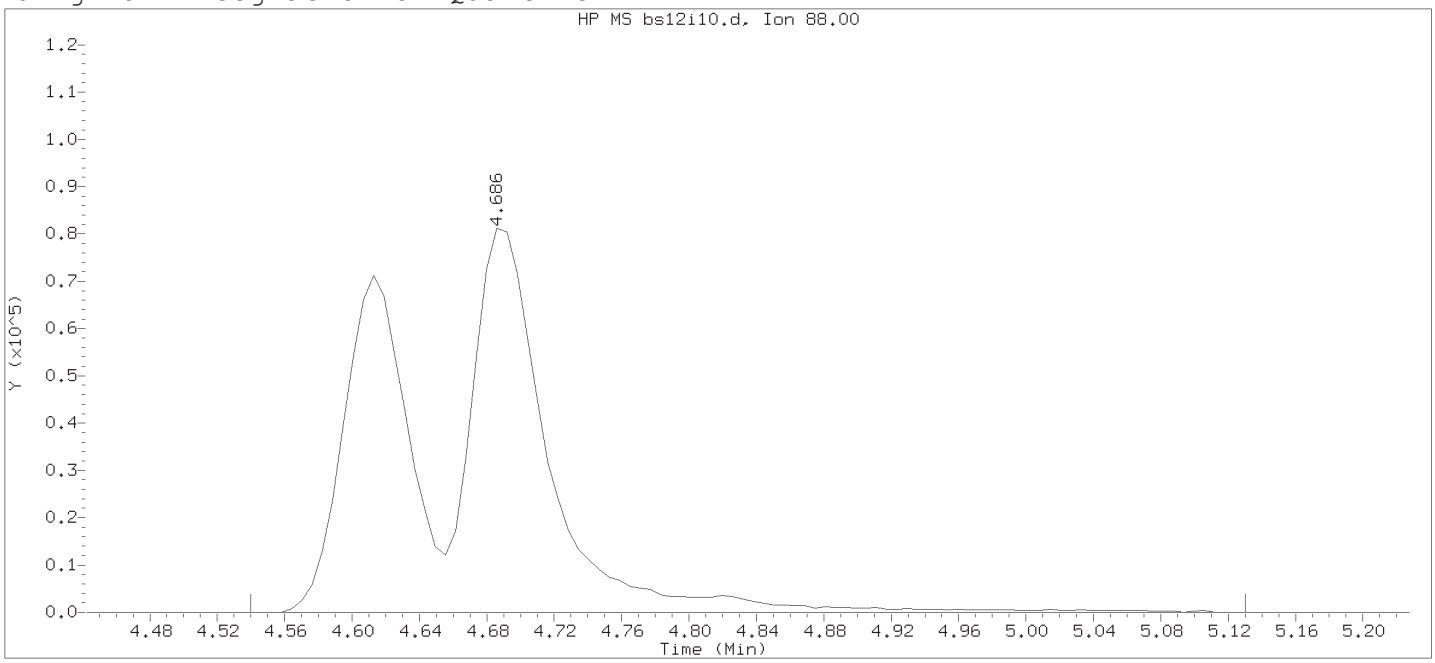
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

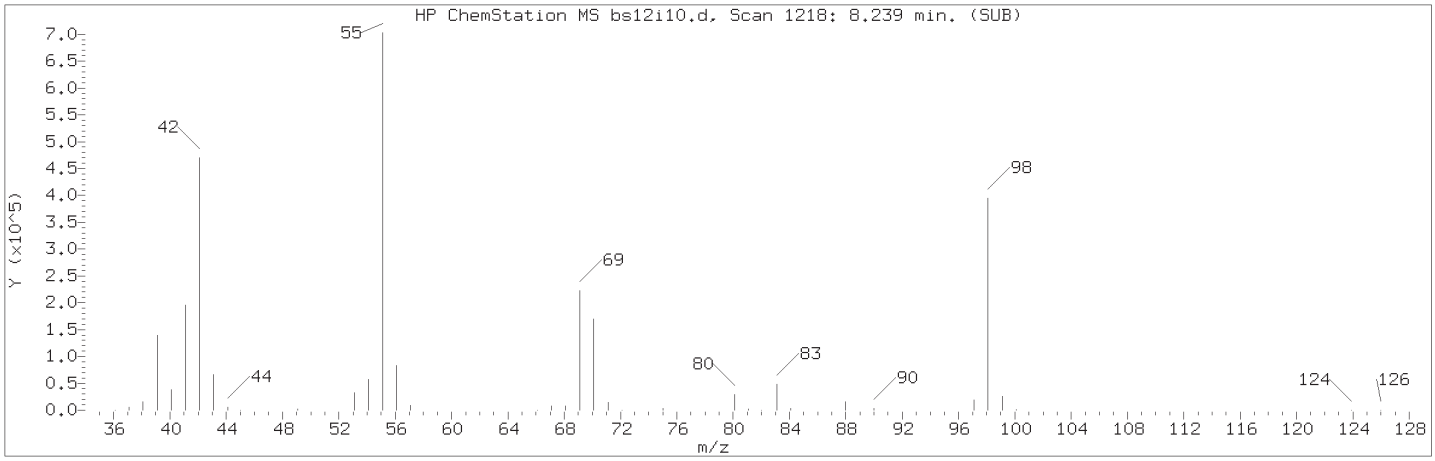
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 13:28
Date, time and analyst ID of latest file update: 12-Sep-2018 13:28 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

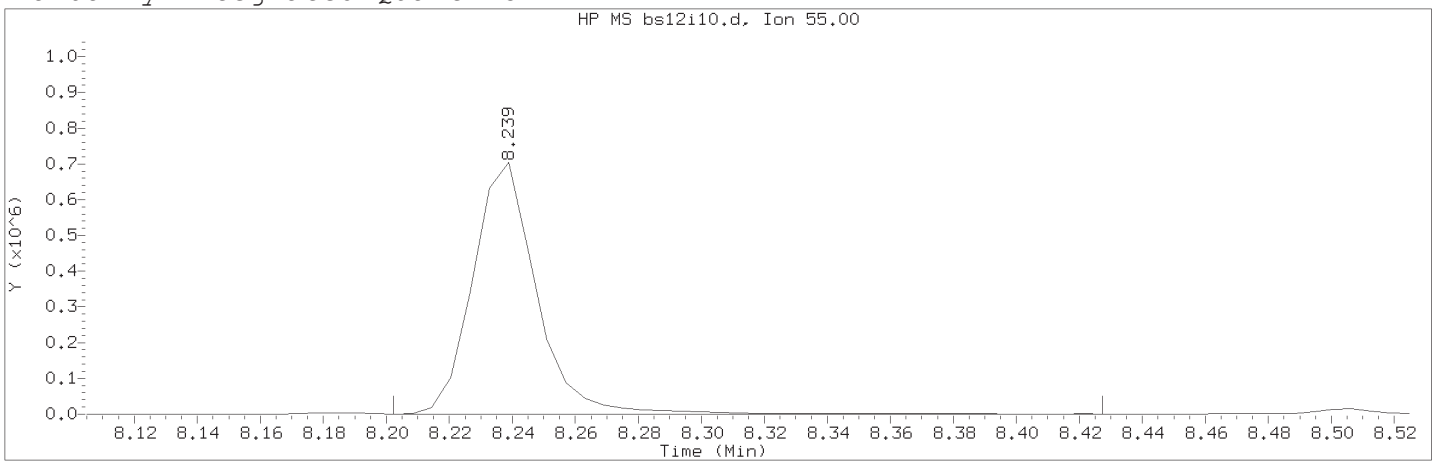
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 634
Retention Time (minutes): 4.686
Quant Ion : 88.00
Area : 448350
On-column Amount (ng) : 6565.7648
Integration start scan : 609 Integration stop scan: 706
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkh09072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

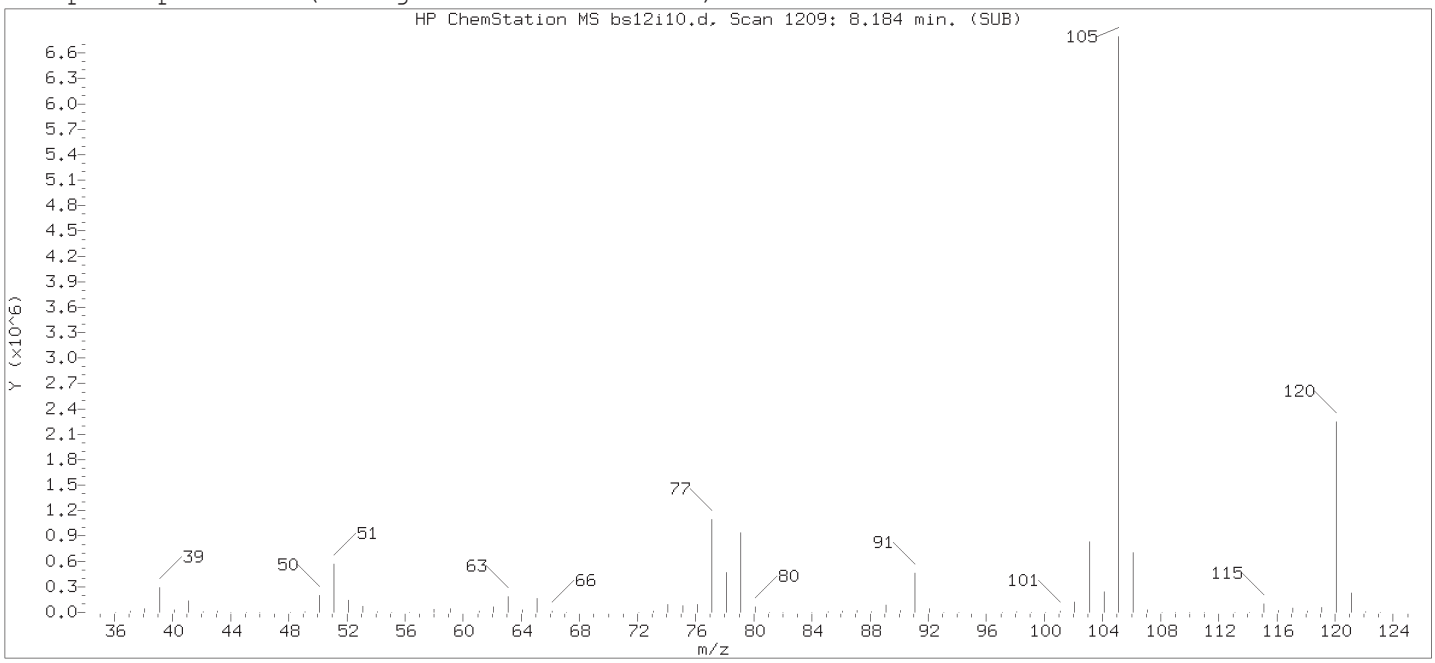
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1218
Retention Time (minutes): 8.239
Quant Ion : 55.00
Area (flag) : 993019A
On-Column Amount (ng) : 4140.8325
Integration start scan : 1211 Integration stop scan: 1248
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

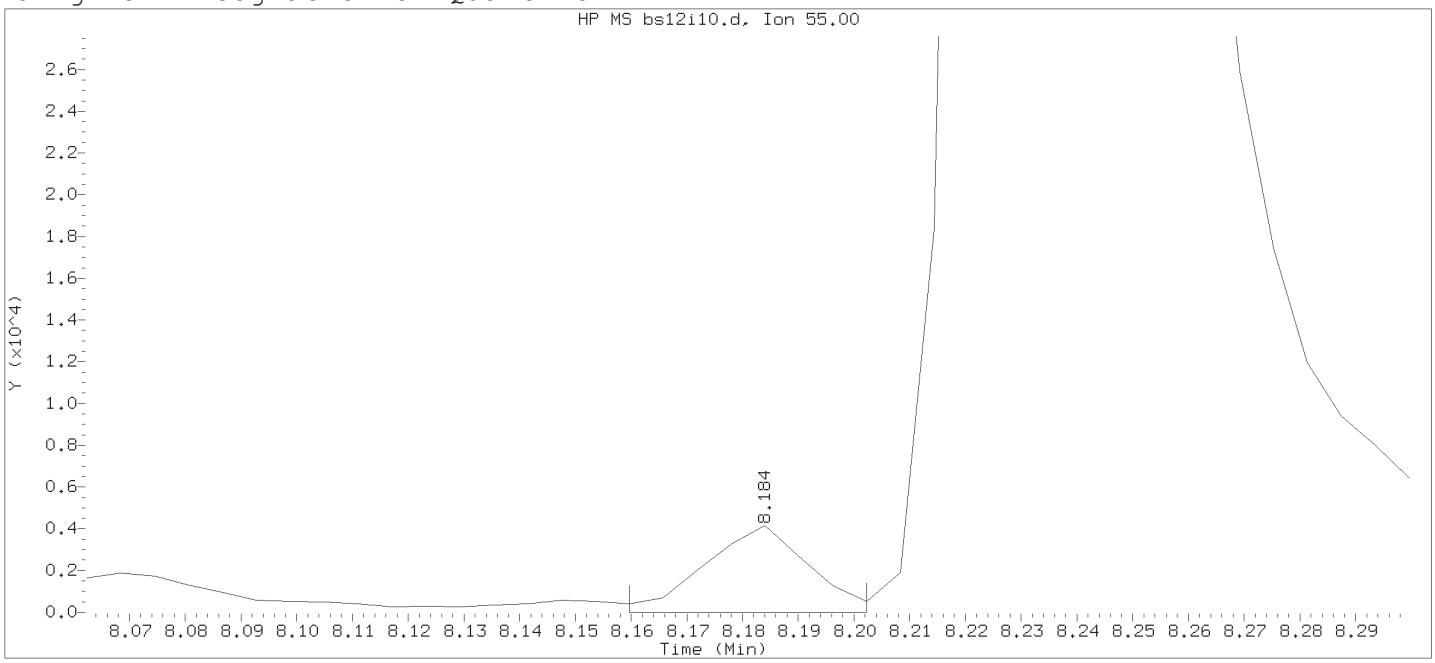
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

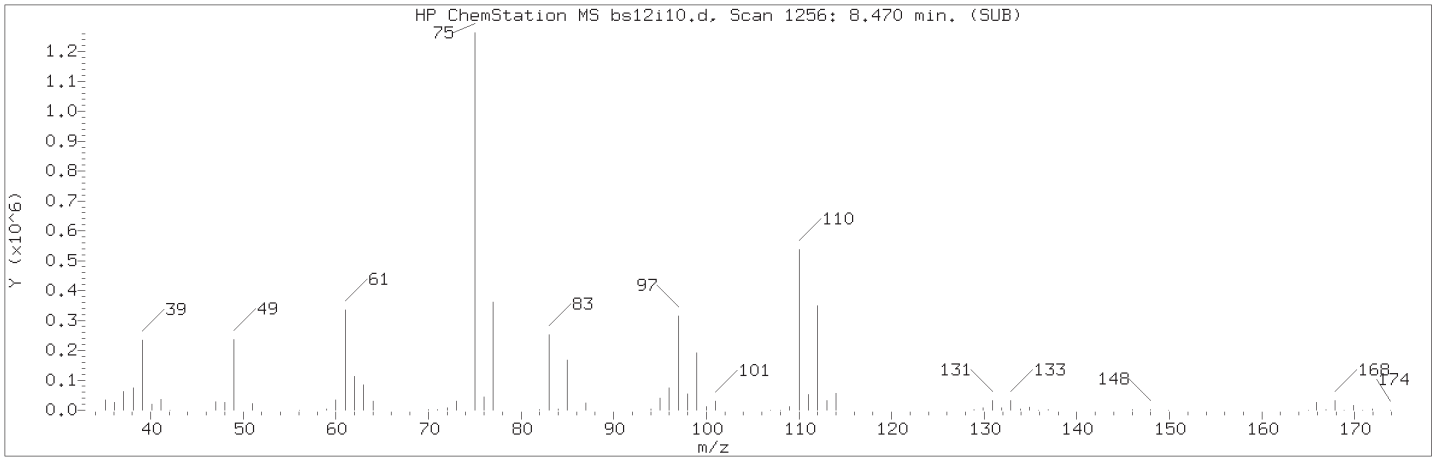
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 13:28
Date, time and analyst ID of latest file update: 12-Sep-2018 13:28 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

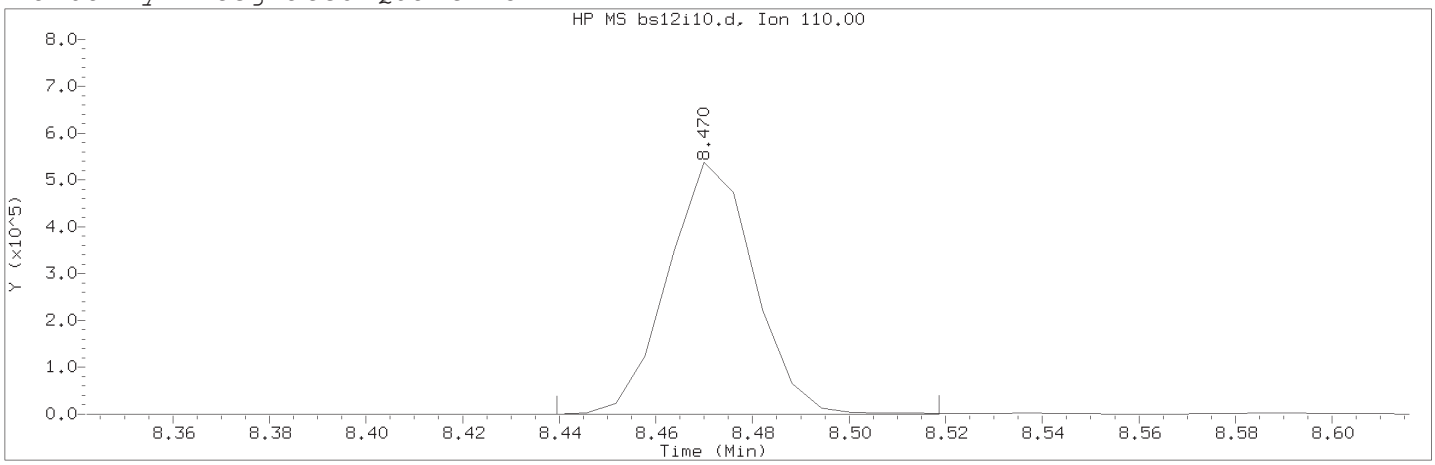
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1209
Retention Time (minutes): 8.184
Quant Ion : 55.00
Area : 5331
On-column Amount (ng) : 16.1464
Integration start scan : 1204 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

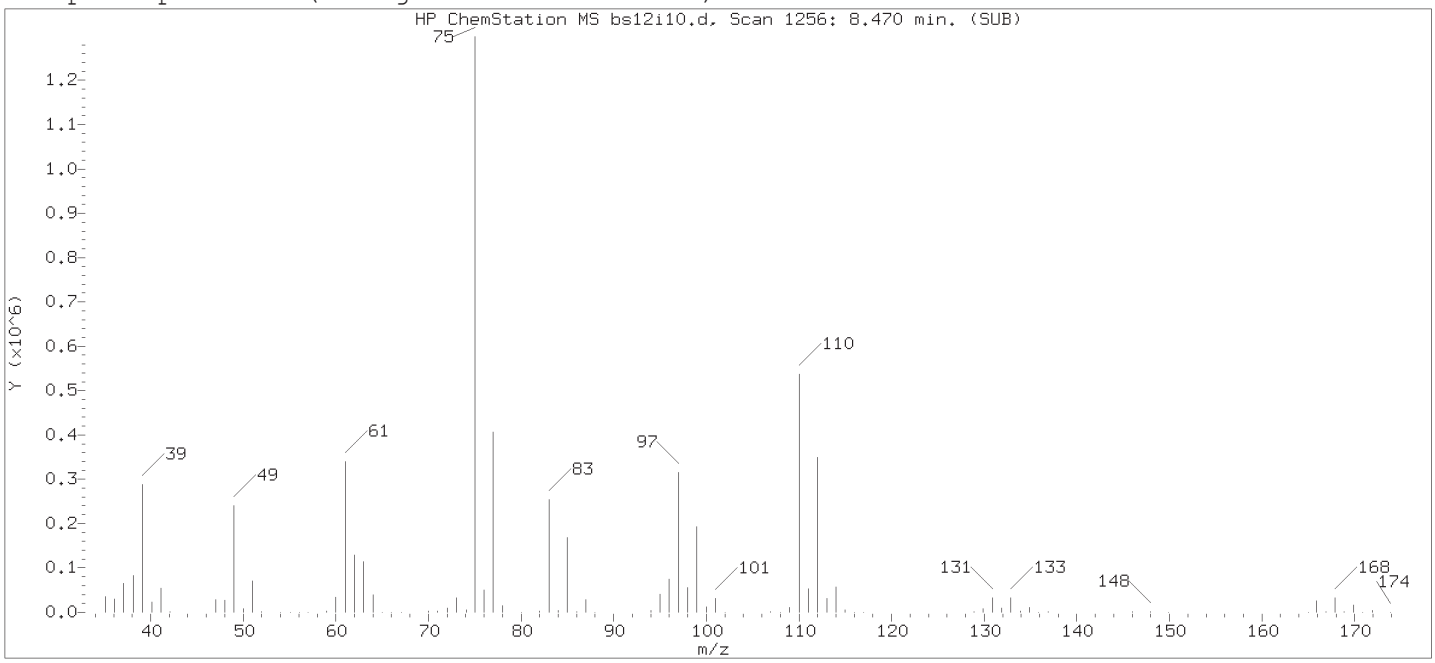
Compound Number : 123
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1256
Retention Time (minutes): 8.470
Quant Ion : 110.00
Area (flag) : 665320M
On-Column Amount (ng) : 299.7754
Integration start scan : 1250 Integration stop scan: 1263
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

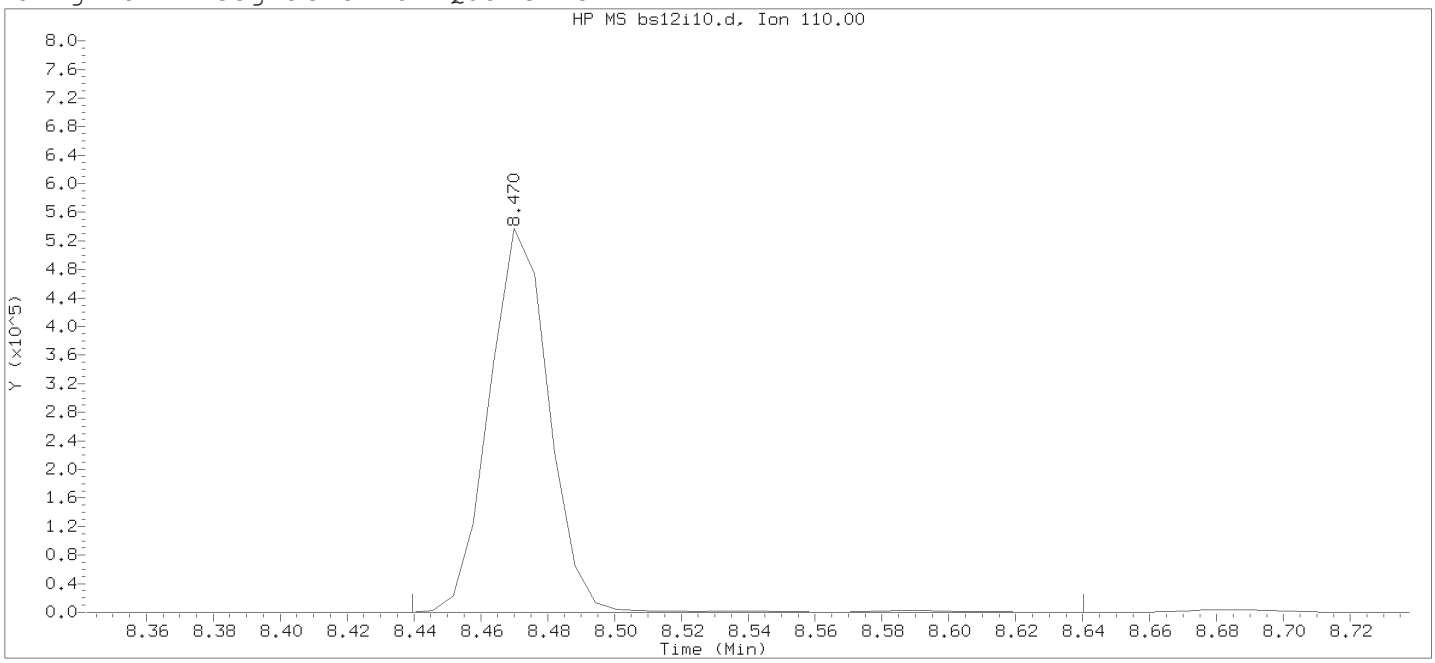
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



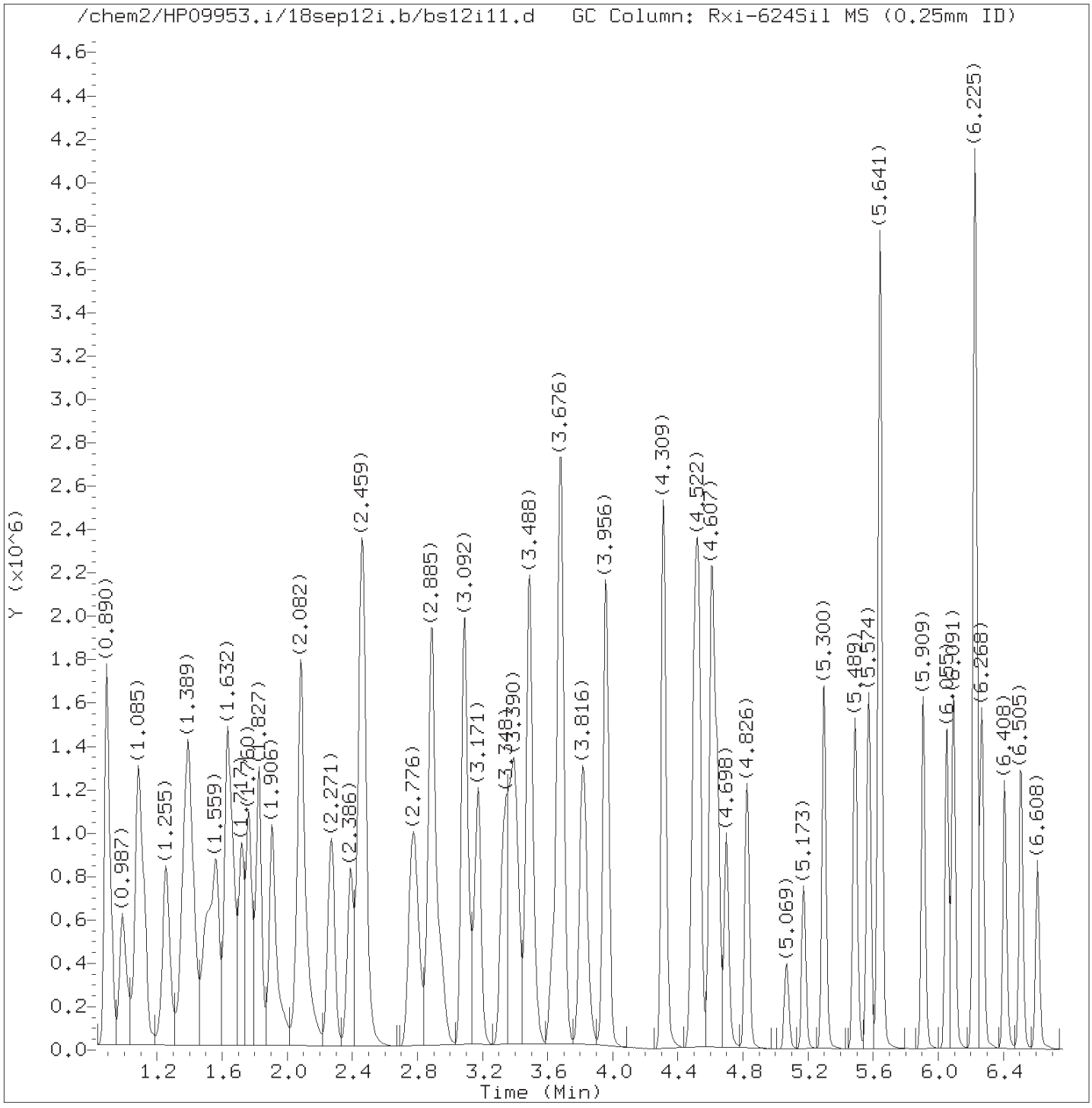
Data File: /chem2/HP09953.i/18sep12i.b/bs12i10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:13 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 13:28
Date, time and analyst ID of latest file update: 12-Sep-2018 13:28 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number	: 123		
Compound Name	: 1,2,3-Trichloropropane		
Scan Number	: 1256		
Retention Time (minutes)	: 8.470		
Quant Ion	: 110.00		
Area	: 673154		
On-column Amount (ng)	: 290.5198		
Integration start scan	: 1250	Integration stop scan:	1283
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 09:59.
Target 3.5 esignature user ID: jkhowe



Total Ion Chromatogram (TIC)

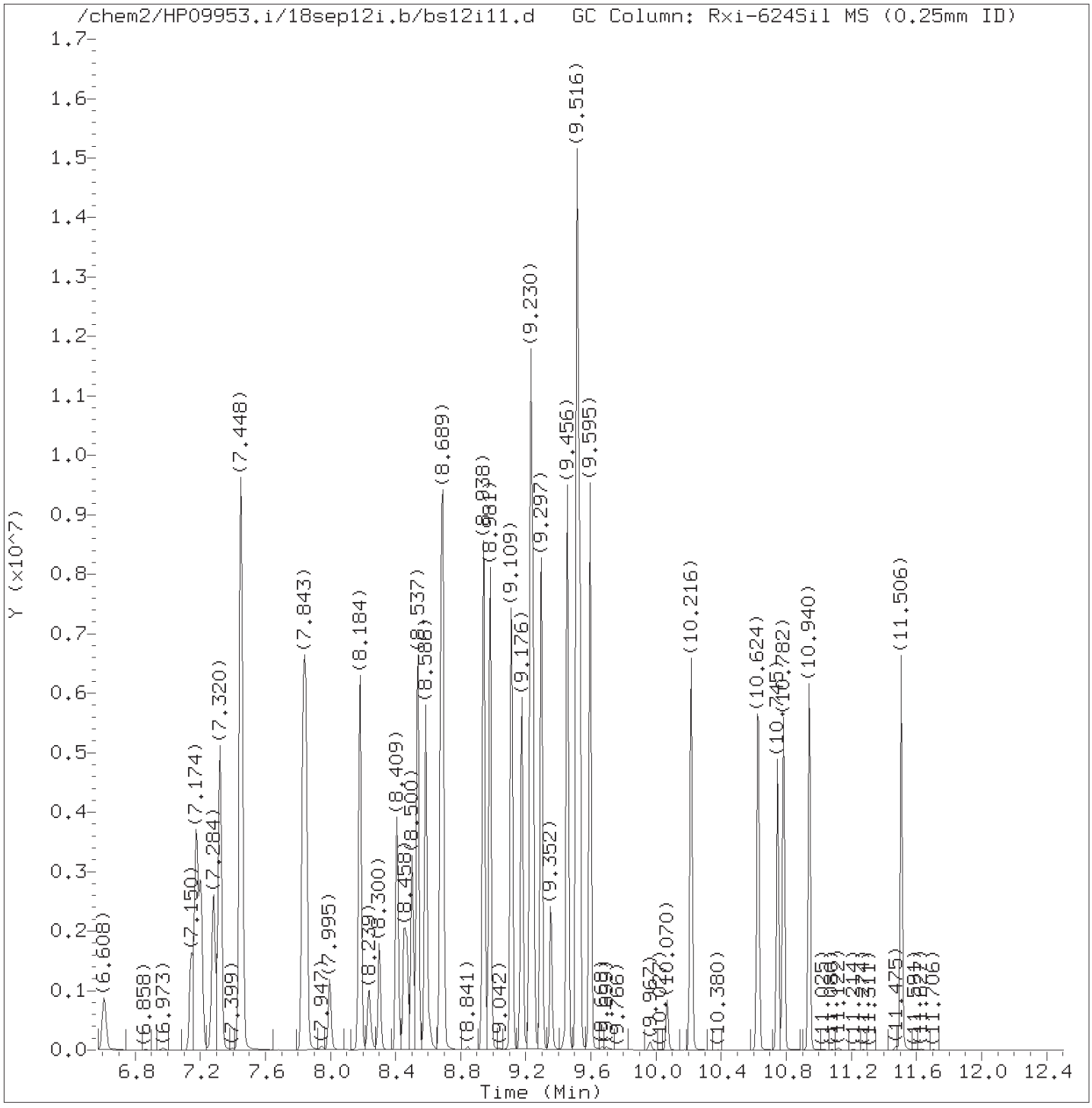
Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i11.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:36 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i11.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:36 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i11.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:36 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.987	85	1025105	93.816
4) Chloromethane	(2)	1.078	50	1036965	92.070
5) Vinyl Chloride	(2)	1.121	62	786218	89.586
9) Bromomethane	(2)	1.249	94	709007	90.771
10) Chloroethane	(2)	1.267	64	432417	91.597
11) Dichlorofluoromethane	(2)	1.370	67	1051154	92.069
13) Trichlorofluoromethane	(2)	1.419	101	1151957	95.349
15) Ethanol	(1)	1.443	45	244207	4662.378
17) Freon 123a	(2)	1.516	67	713185	88.175
18) Acrolein	(1)	1.565	56	853637	880.144
19) 1,1-Dichloroethene	(2)	1.632	96	581381	95.762
20) Acetone	(1)	1.644	58	87807	201.203
22) Freon 113	(2)	1.656	101	604755	99.353
23) 2-Propanol	(1)	1.717	45	189432	488.410
24) Methyl Iodide	(2)	1.723	142	1419423	97.234
25) Carbon Disulfide	(2)	1.766	76	2376290	97.821
29) Allyl Chloride	(2)	1.827	41	777983M	95.799
27) Methyl Acetate	(2)	1.833	43	285749	91.786
31) Methylene Chloride	(2)	1.906	84	655189	91.320
30)*t-Butyl alcohol-d10	(1)	1.924	65	100388	250.000
32) t-Butyl alcohol	(1)	1.979	59	245256	465.090
33) Acrylonitrile	(2)	2.058	53	170470	80.886
35) trans-1,2-Dichloroethene	(2)	2.082	96	674380	95.518
34) Methyl Tertiary Butyl Ether	(2)	2.100	73	1630064	94.392
38) n-Hexane	(2)	2.271	57	771671	95.756
40) 1,1-Dichloroethane	(2)	2.386	63	1145625	100.071
41) di-Isopropyl ether	(2)	2.459	45	2104307	98.482
42) 2-Chloro-1,3-butadiene	(2)	2.465	53	1008793	99.997
43) Ethyl t-butyl ether	(2)	2.776	59	1974842	98.141
45) cis-1,2-Dichloroethene	(2)	2.885	96	776553	101.330
47) 2,2-Dichloropropane	(2)	2.897	77	835695	100.132
44) 2-Butanone	(1)	2.897	43	467620	181.185
49) Propionitrile	(1)	2.946	54	355738	513.795
46) 1,2-Dichloroethene (Total)	(2)		96	1450933	196.849
51) Methacrylonitrile	(2)	3.086	67	563665	239.346
52) Bromochloromethane	(2)	3.098	128	414624	101.837
53) Tetrahydrofuran	(1)	3.135	71	131403	204.399
54) Chloroform	(2)	3.171	83	1156216	99.504

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i11.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:36 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	3.317	113	300603	49.842
56)$Dibromofluoromethane	(2)	3.317	111	305137	49.908
57) 1,1,1-Trichloroethane	(2)	3.348	97	1135699	95.458
58) Cyclohexane	(2)	3.396	56	1109538	99.269
58) Cyclohexane	(2)	3.396	84	993120	95.078
58) Cyclohexane	(2)	3.396	69	352970	99.856
60) 1,1-Dichloropropene	(2)	3.481	75	872004	100.861
61) Carbon Tetrachloride	(2)	3.494	117	945700	104.662
63)$1,2-Dichloroethane-d4	(2)	3.627	102	63243	48.719
63)$1,2-Dichloroethane-d4	(2)	3.621	65	274762	48.131
63)$1,2-Dichloroethane-d4	(2)	3.621	104	40750	48.999
62) Isobutyl Alcohol	(1)	3.652	41	227646	1228.710
64) Benzene	(2)	3.676	78	2692413	97.546
67) 1,2-Dichloroethane	(2)	3.694	62	755585	94.858
67) 1,2-Dichloroethane	(2)	3.694	98	78164	98.780
68) t-Amyl methyl ether	(2)	3.816	73	1808625	97.347
70)*Fluorobenzene	(2)	3.950	96	1210132	50.000
72) n-Heptane	(2)	3.962	43	718143	97.688
73) n-Butanol	(1)	4.309	56	419940	2706.832
75) Trichloroethene	(2)	4.309	95	730142	101.437
76) Methylcyclohexane	(2)	4.503	83	1154114	103.032
77) 1,2-Dichloropropane	(2)	4.528	63	663907	101.285
81) Dibromomethane	(2)	4.643	93	396991	99.037
80) 1,4-Dioxane	(1)	4.692	88	88148M	1371.020
79) Methyl Methacrylate	(2)	4.698	69	411841	97.478
84) Bromodichloromethane	(2)	4.826	83	858359	104.861
85) 2-Nitropropane	(1)	5.069	41	262295	197.542
87) 2-Chloroethyl Vinyl Ether	(2)	5.173	63	350880	101.662
89) cis-1,3-Dichloropropene	(2)	5.300	75	1035760	104.789
90) 4-Methyl-2-pentanone	(2)	5.489	43	1115427	202.915
91)$Toluene-d8	(3)	5.574	98	1214365	50.397
91)$Toluene-d8	(3)	5.574	100	785056	50.206
92) Toluene	(3)	5.641	92	1783498	99.792
93) trans-1,3-Dichloropropene	(3)	5.909	75	905761	105.803
94) 1,3-Dichloropropene (total)	(3)		100	1941521	210.592
95) Ethyl Methacrylate	(3)	6.055	69	820389	98.721
96) 1,1,2-Trichloroethane	(3)	6.091	97	562018	96.904
98) Tetrachloroethene	(3)	6.225	166	1267351	129.462

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i11.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:36 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
99) 1,3-Dichloropropane	(3)	6.268	76	915802	98.066
101) 2-Hexanone	(3)	6.408	43	818369	205.449
103) Dibromochloromethane	(3)	6.511	129	721590	107.991
104) 1,2-Dibromoethane	(3)	6.608	107	603389	100.702
105)*Chlorobenzene-d5	(3)	7.144	117	933610	50.000
107) Chlorobenzene	(3)	7.174	112	2068821	99.146
106) 1-Chlorohexane	(3)	7.205	91	916829	103.243
108) 1,1,1,2-Tetrachloroethane	(3)	7.284	131	750692	106.095
109) Ethylbenzene	(3)	7.320	91	3378588	100.513
110) m+p-Xylene	(3)	7.448	106	2814060	205.159
111) o-Xylene	(3)	7.831	106	1416131	103.273
113) Styrene	(3)	7.849	104	2360880	104.436
112) Xylene (Total)	(3)		106	4230191	308.431
114) Bromoform	(3)	7.995	173	460769	110.661
115) Isopropylbenzene	(3)	8.184	105	3526164	102.017
118) Cyclohexanone	(1)	8.233	55	349174A	1500.781
119)$4-Bromofluorobenzene	(3)	8.300	95	435886M	49.657
119)$4-Bromofluorobenzene	(3)	8.300	174	405858	50.232
121) Bromobenzene	(4)	8.409	156	962300	97.264
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	704613	93.279
123) 1,2,3-Trichloropropane	(4)	8.470	110	213873	95.491
122) trans-1,4-Dichloro-2-butene	(4)	8.500	53	458424	247.323
124) n-Propylbenzene	(4)	8.537	91	3893123	99.528
126) 2-Chlorotoluene	(4)	8.586	126	900795	98.142
130) 4-Chlorotoluene	(4)	8.677	126	931409	100.160
129) 1,3,5-Trimethylbenzene	(4)	8.689	105	3094931	102.287
133) tert-Butylbenzene	(4)	8.944	134	713622	100.399
134) Pentachloroethane	(4)	8.944	167	258558	60.834
135) 1,2,4-Trimethylbenzene	(4)	8.981	105	3174000	100.595
136) sec-Butylbenzene	(4)	9.109	105	3882732	100.799
138) 1,3-Dichlorobenzene	(4)	9.176	146	1822187	98.135
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	539993	50.000
139) p-Isopropyltoluene	(4)	9.230	119	3513141	101.775
141) 1,4-Dichlorobenzene	(4)	9.243	146	1880902	97.160
142) 1,2,3-Trimethylbenzene	(4)	9.297	105	3460991	101.758
143) Benzyl Chloride	(4)	9.352	126	273286	108.318
144) 1,3-Diethylbenzene	(4)	9.456	119	2219269	103.998
145) 1,4-Diethylbenzene	(4)	9.516	119	2329919	105.204

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i11.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:36 Analyst ID: scn10072

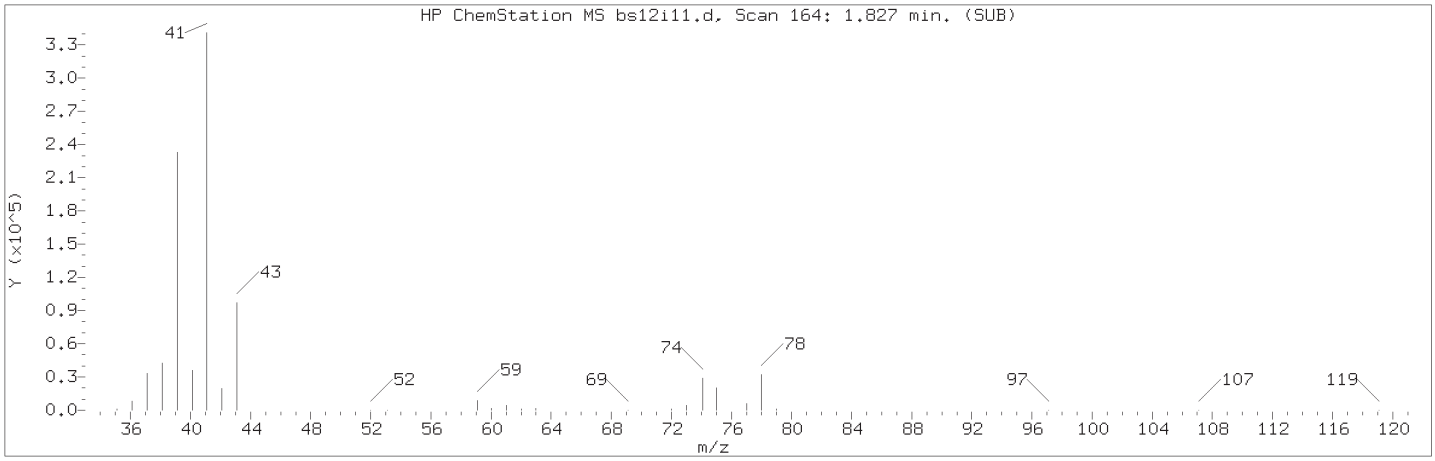
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD100 Lab Sample ID: VSTD100

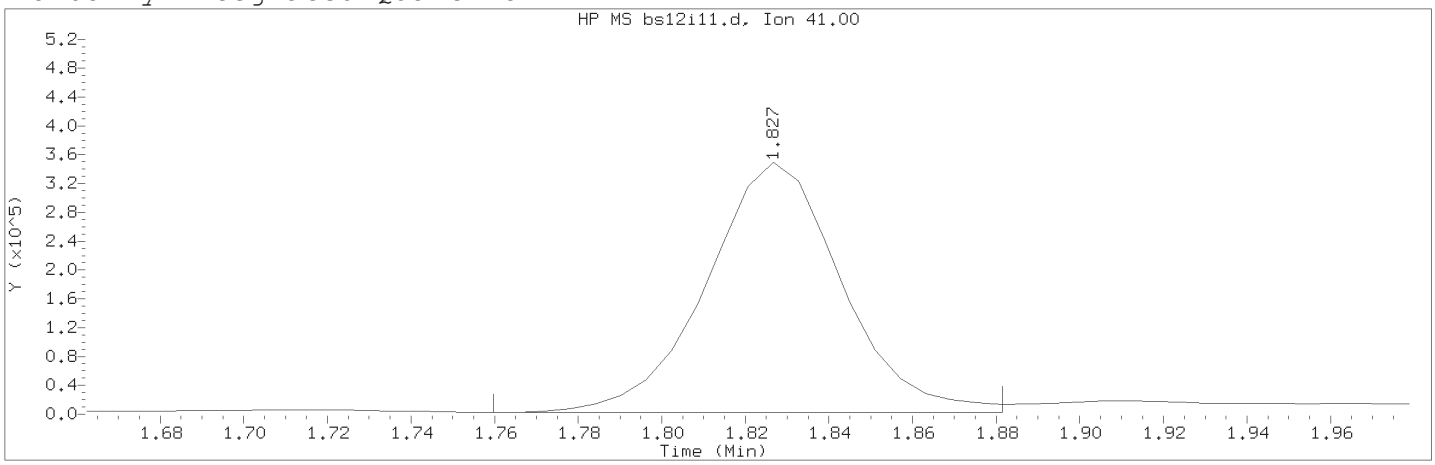
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2-Dichlorobenzene	(4)	9.516	146	1788896	98.544
146) n-Butylbenzene	(4)	9.528	92	1629811	101.626
148) 1,2-Diethylbenzene	(4)	9.595	119	1913391	102.490
149) Diethylbenzene (total)	(4)		100	6462579	311.692
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	129490	98.666
152) 1,3,5-Trichlorobenzene	(4)	10.216	180	1423486	100.221
153) 1,2,4-Trichlorobenzene	(4)	10.630	180	1300685	97.162
154) Hexachlorobutadiene	(4)	10.745	225	609227	99.746
155) Naphthalene	(4)	10.782	128	2915926	91.695
156) 1,2,3-Trichlorobenzene	(4)	10.940	180	1224399	95.913
157) 2-Methylnaphthalene	(4)	11.506	142	2049080	95.265

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i11.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:36 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD100 Lab Sample ID: VSTD100

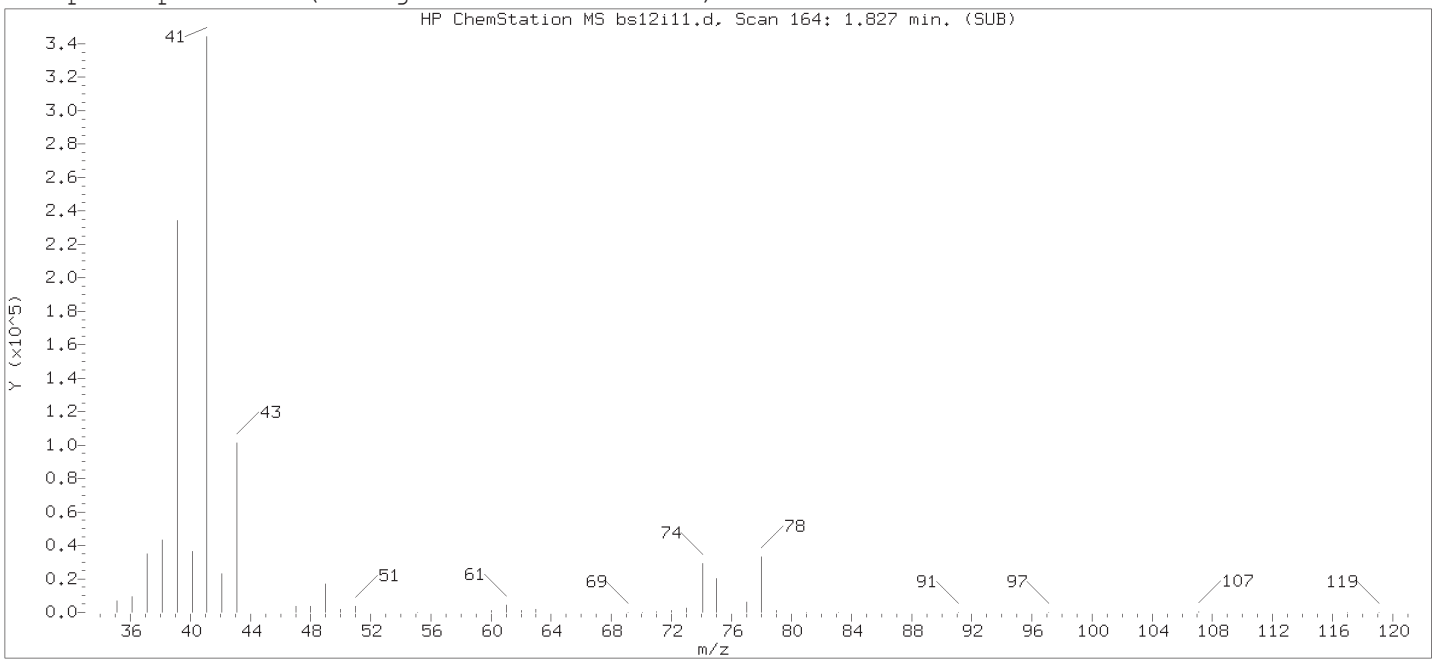
Compound Number : 29
Compound Name : Allyl Chloride
Scan Number : 164
Retention Time (minutes): 1.827
Quant Ion : 41.00
Area (flag) : 777983M
On-Column Amount (ng) : 95.7990
Integration start scan : 152 Integration stop scan: 172
Y at integration start : 2433 Y at integration end: 2433

Reason for manual integration: improper integration

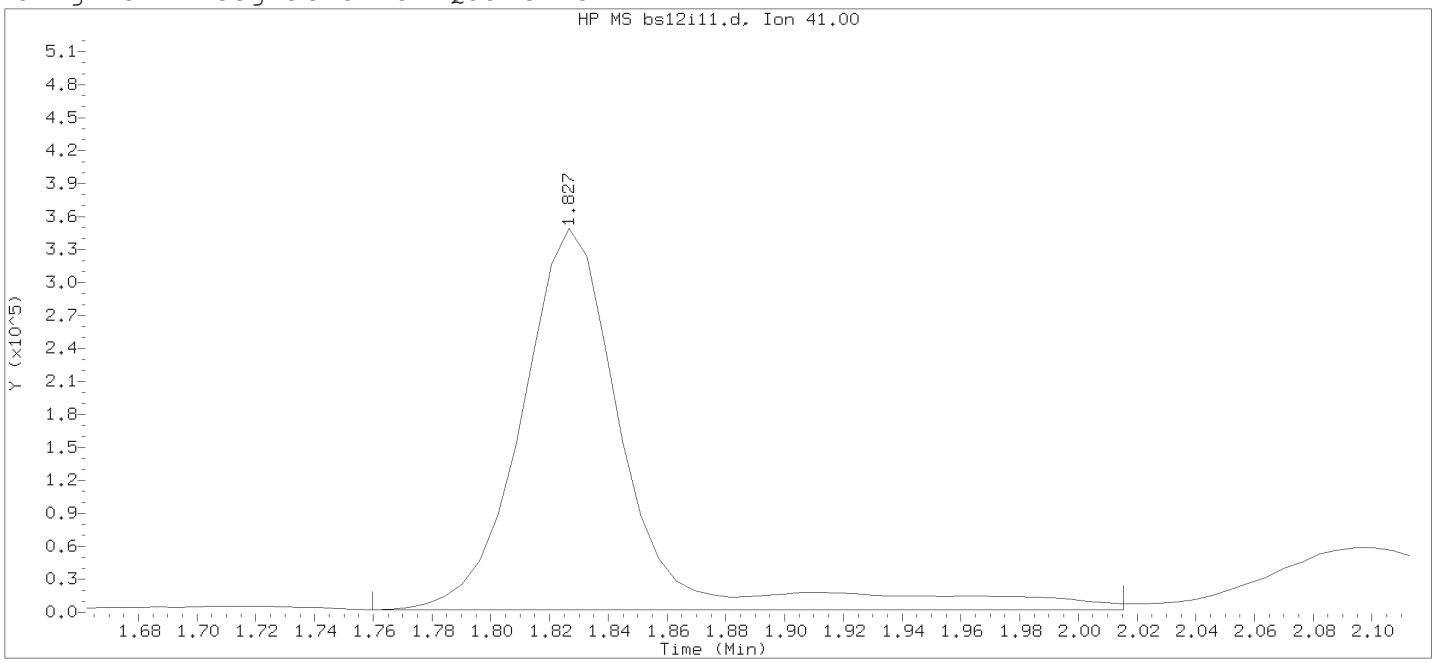
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i11.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:36 Analyst ID: scn10072

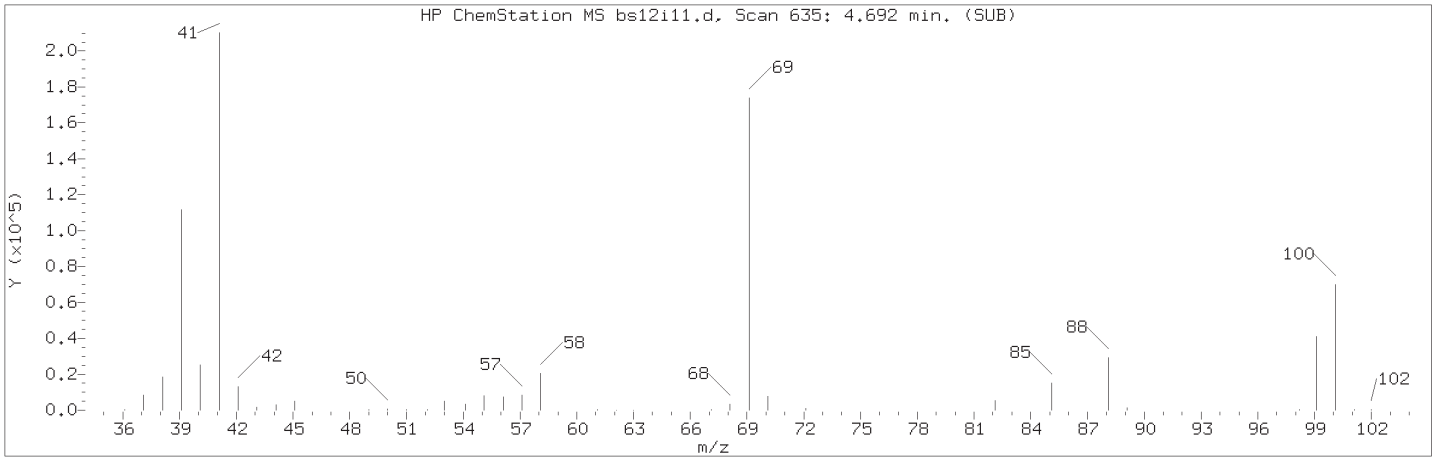
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 13:51
Date, time and analyst ID of latest file update: 12-Sep-2018 13:51 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

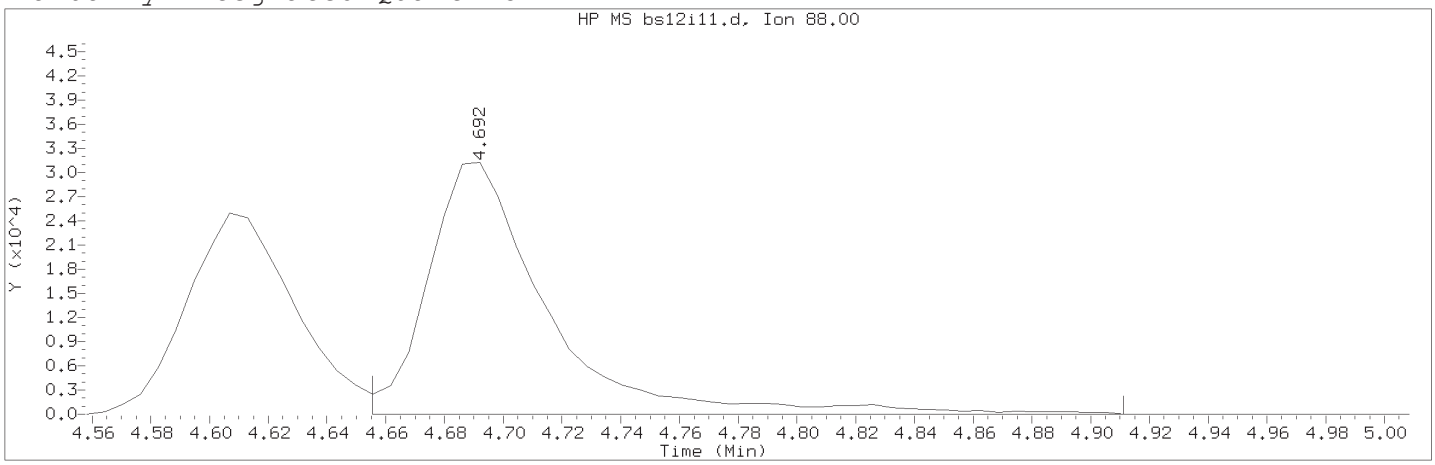
Compound Number : 29
Compound Name : Allyl Chloride
Scan Number : 164
Retention Time (minutes): 1.827
Quant Ion : 41.00
Area : 872570
On-column Amount (ng) : 85.8683
Integration start scan : 152 Integration stop scan: 194
Y at integration start : 2433 Y at integration end: 2433

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i11.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:36 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD100 Lab Sample ID: VSTD100

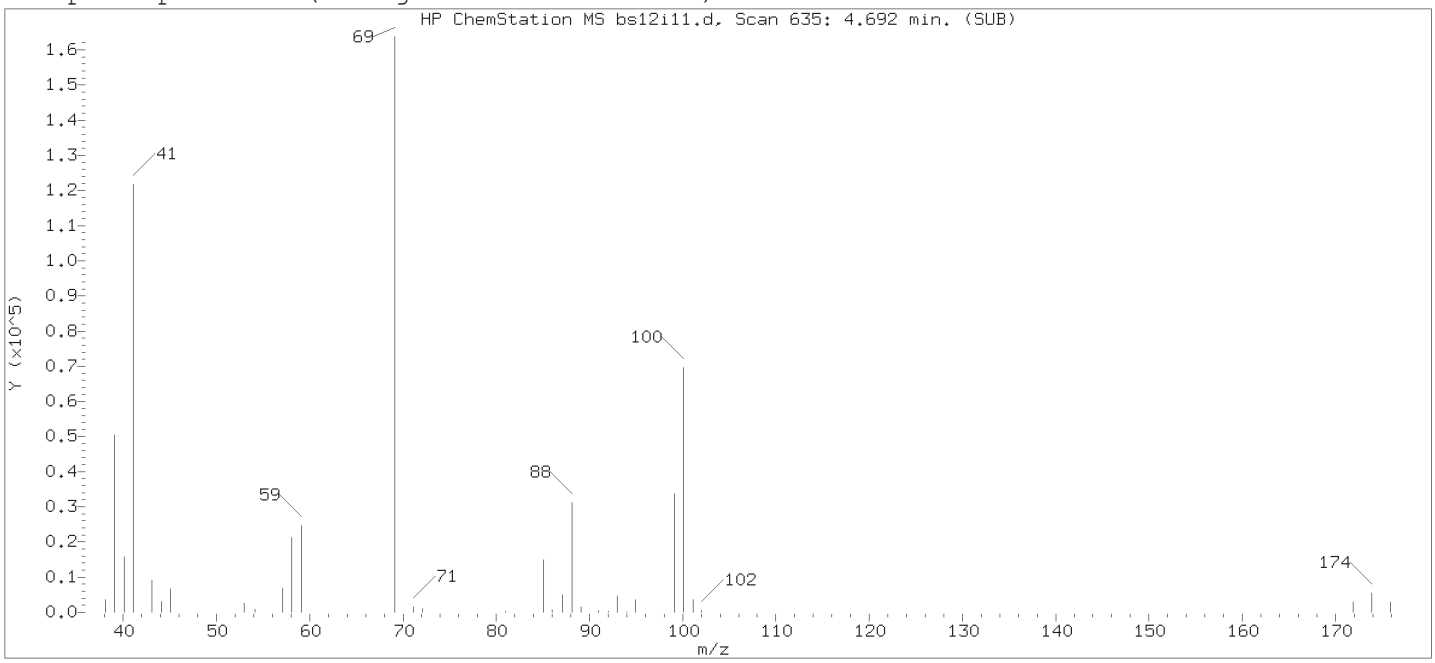
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area (flag) : 88148M
On-Column Amount (ng) : 1371.0197
Integration start scan : 628 Integration stop scan: 670
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

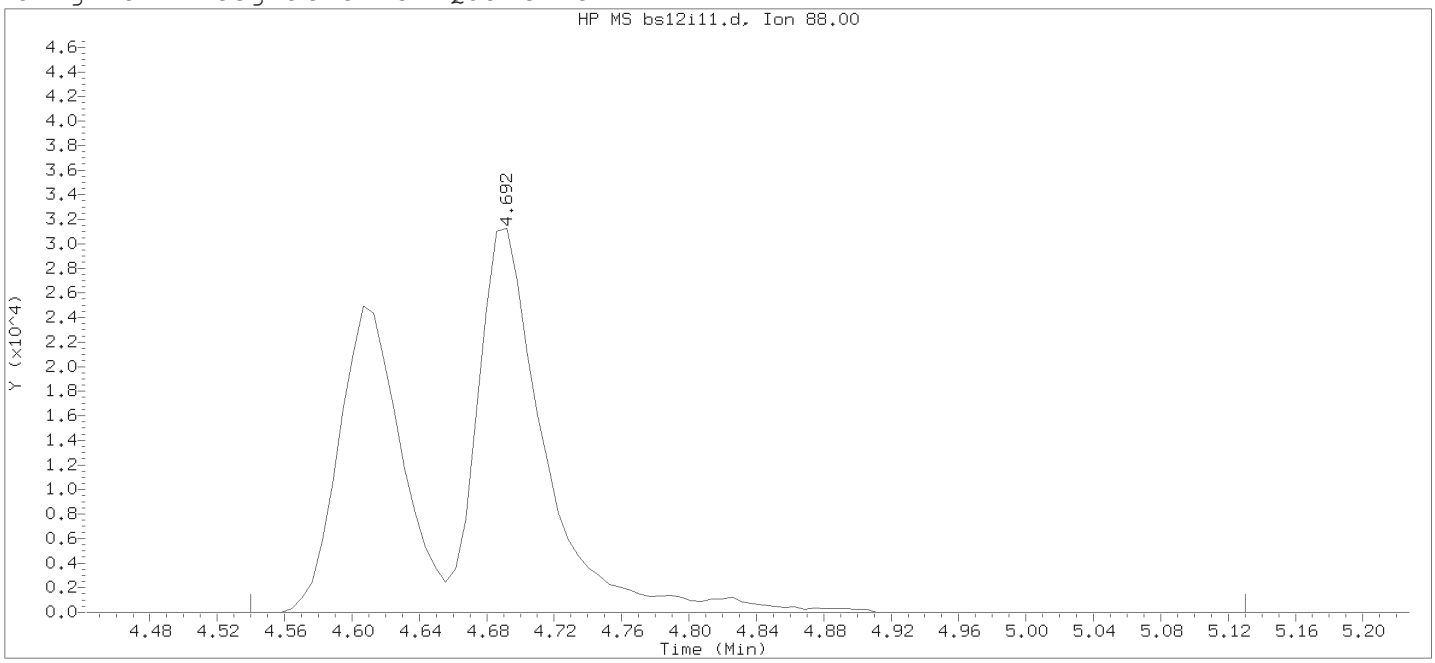
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i11.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:36 Analyst ID: scn10072

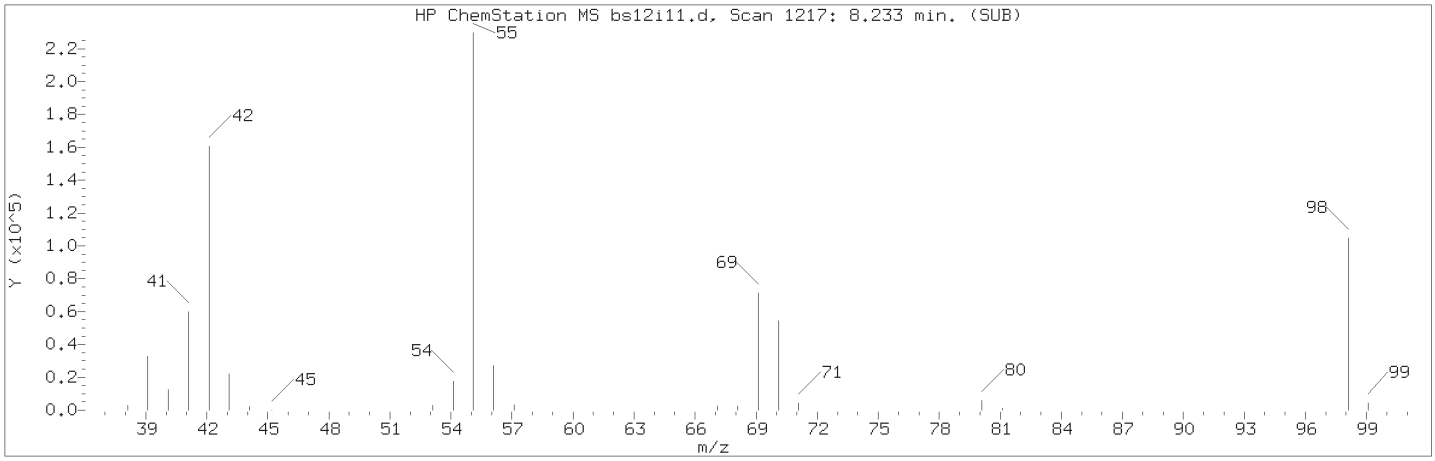
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 13:51
Date, time and analyst ID of latest file update: 12-Sep-2018 13:51 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

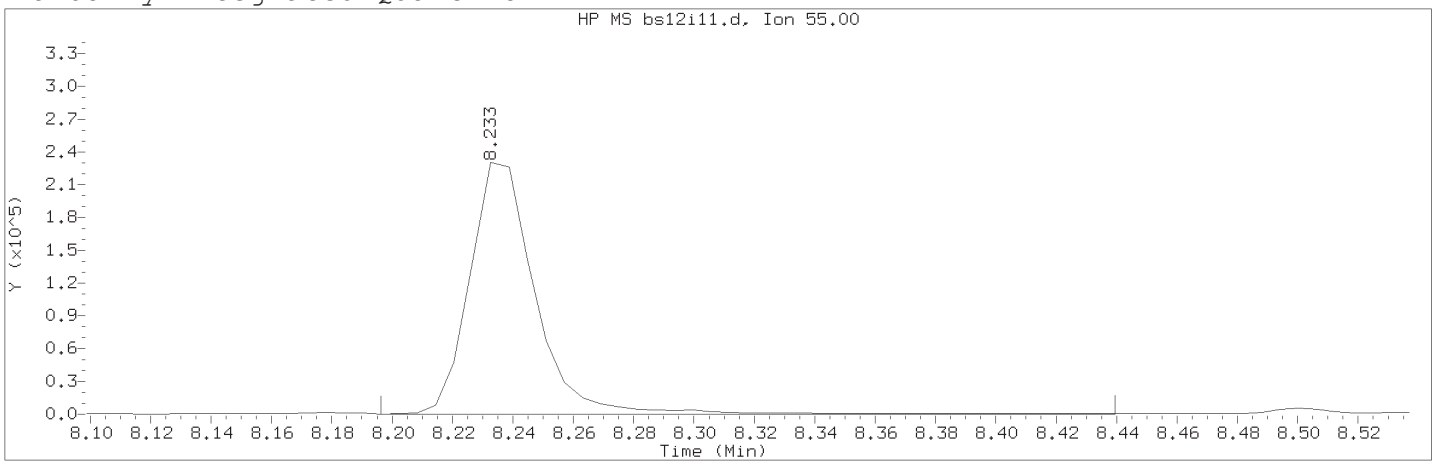
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area : 151385
On-column Amount (ng) : 1983.2627
Integration start scan : 609 Integration stop scan: 706
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jhowe9252

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i11.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:36 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD100 Lab Sample ID: VSTD100

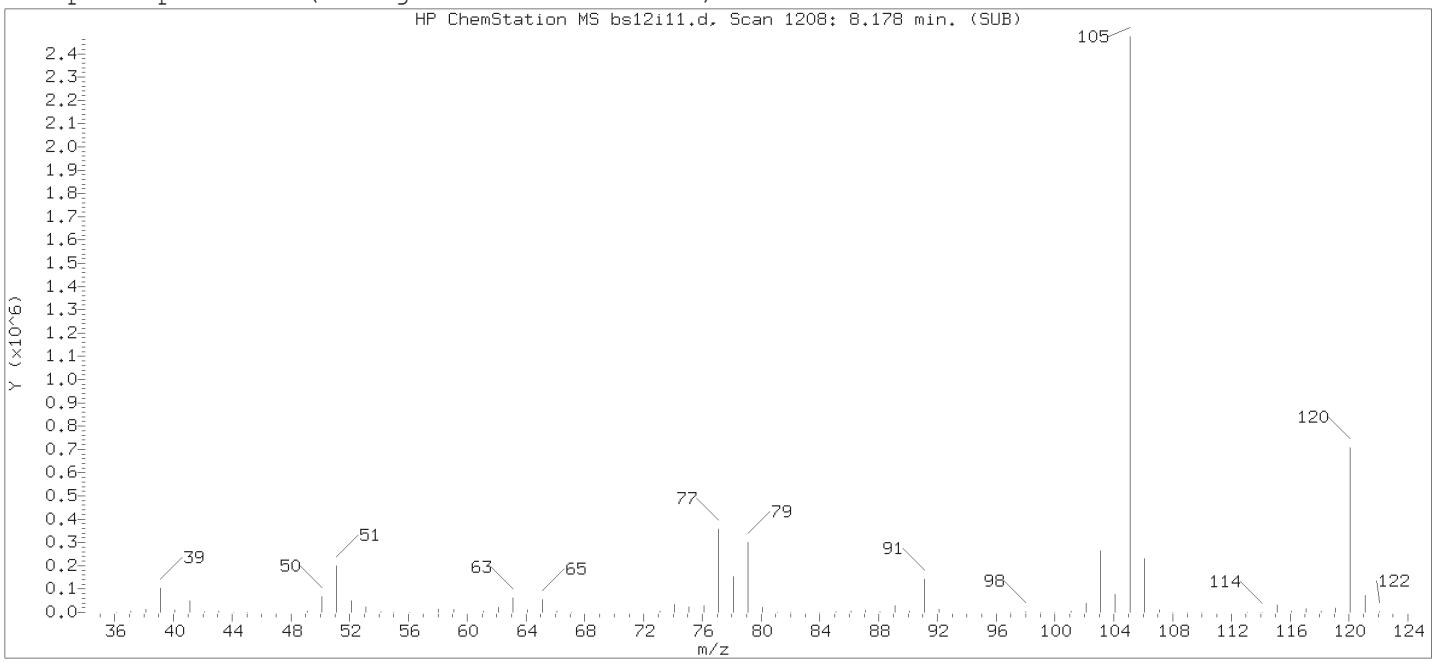
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1217
Retention Time (minutes): 8.233
Quant Ion : 55.00
Area (flag) : 349174A
On-Column Amount (ng) : 1500.7807
Integration start scan : 1210 Integration stop scan: 1250
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

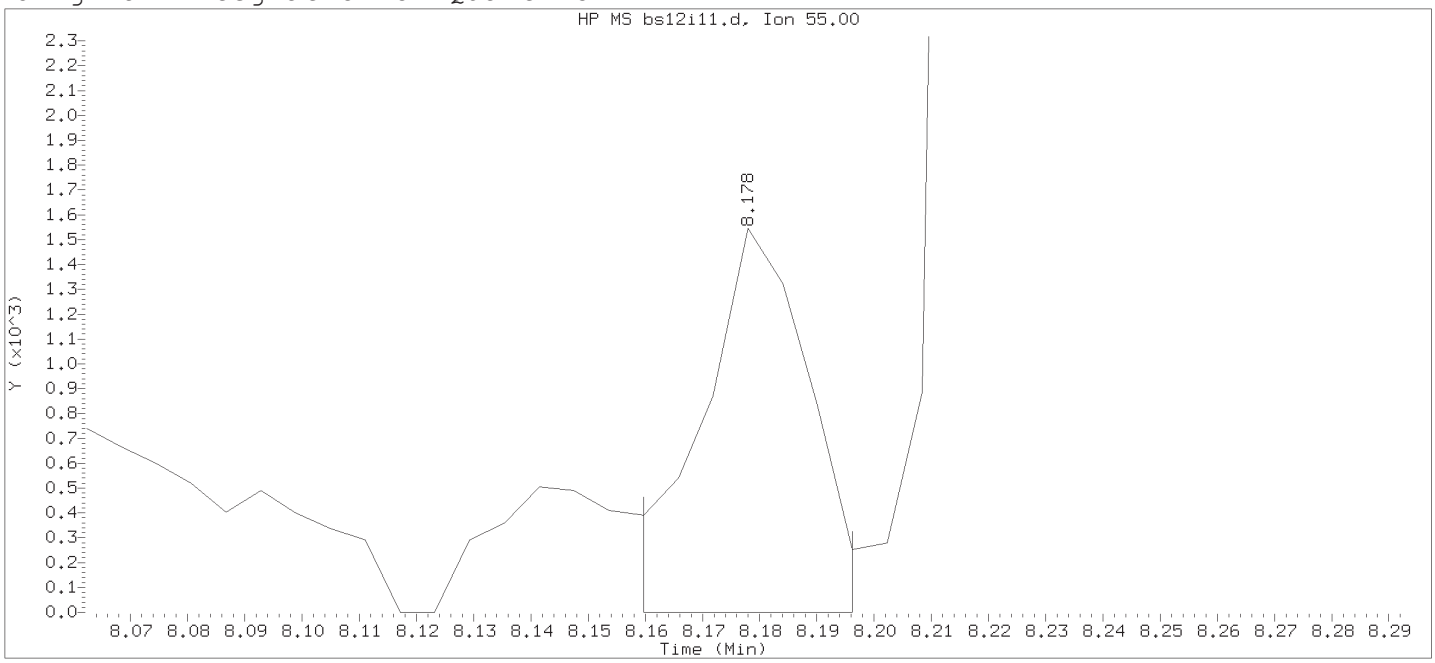
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i11.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:36 Analyst ID: scn10072

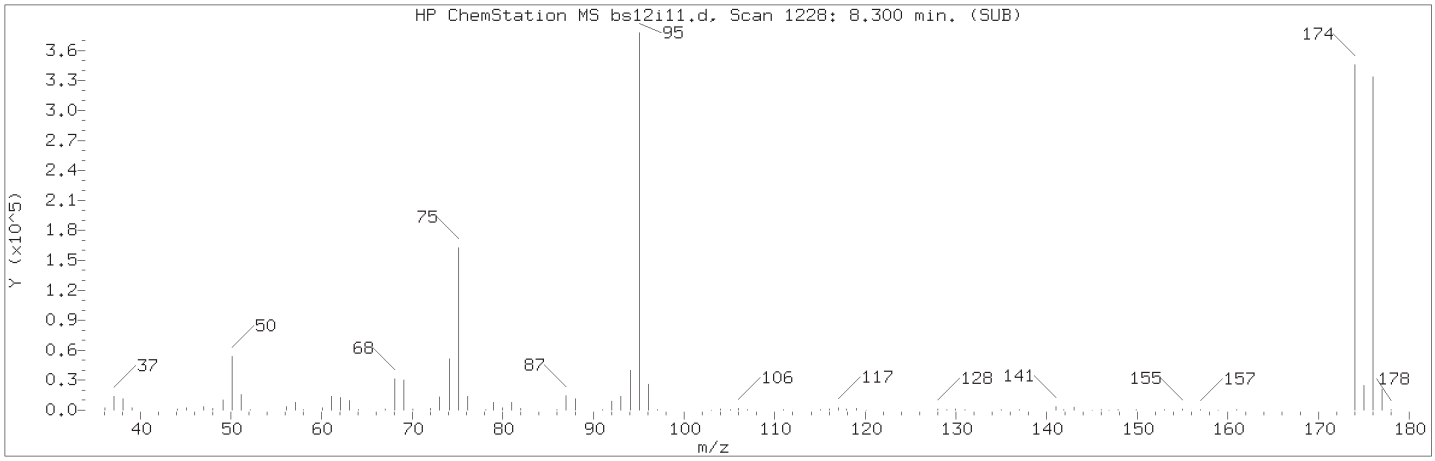
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 13:51
Date, time and analyst ID of latest file update: 12-Sep-2018 13:51 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

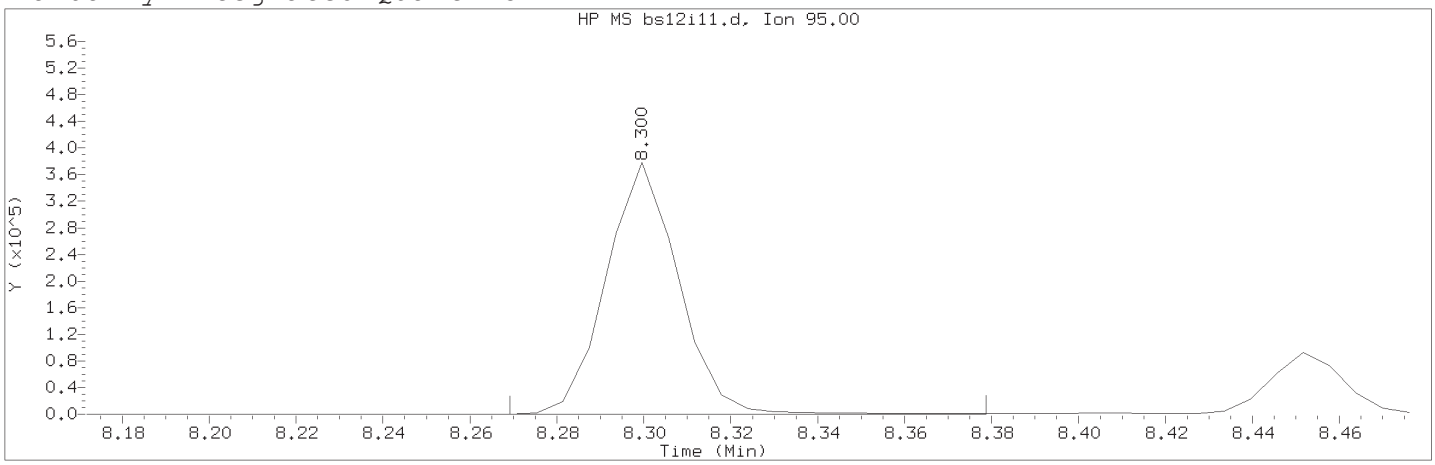
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1208
Retention Time (minutes): 8.178
Quant Ion : 55.00
Area : 1983
On-column Amount (ng) : 7.6026
Integration start scan : 1204 Integration stop scan: 1210
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i11.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:36 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD100 Lab Sample ID: VSTD100

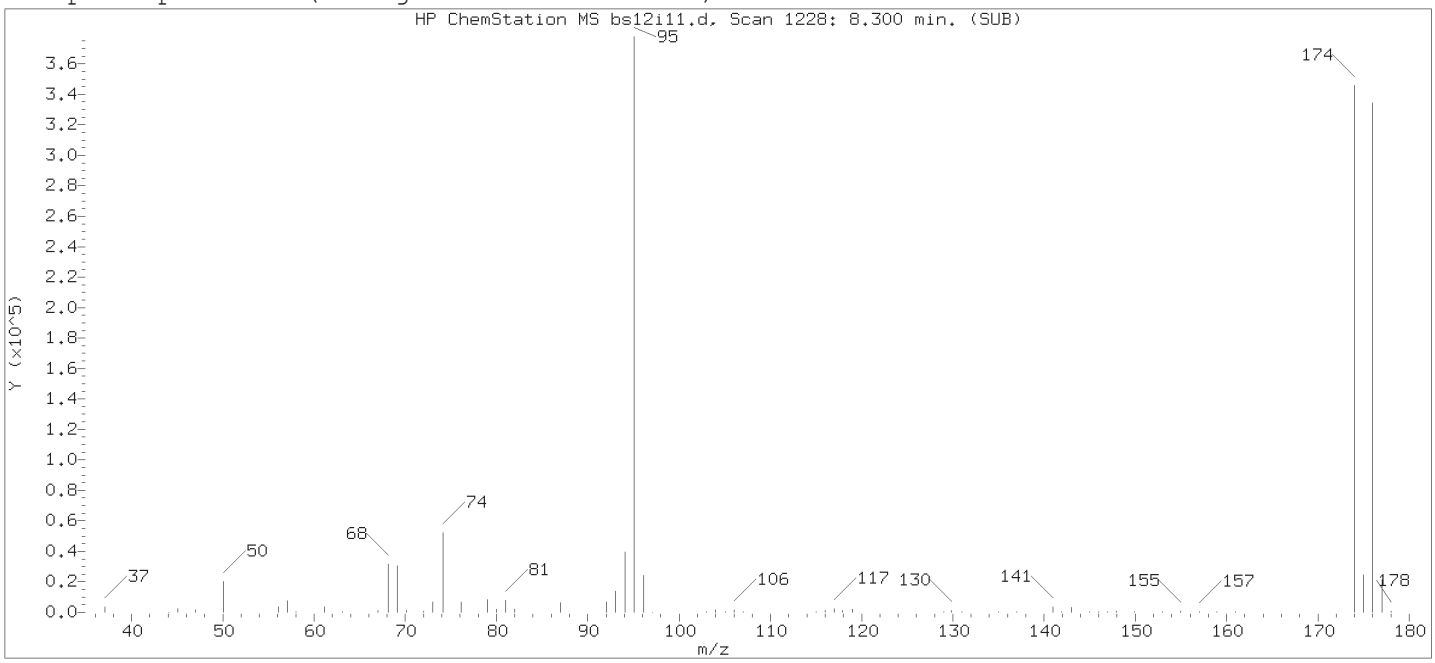
Compound Number : 119
Compound Name : 4-Bromofluorobenzene
Scan Number : 1228
Retention Time (minutes): 8.300
Quant Ion : 95.00
Area (flag) : 435886M
On-Column Amount (ng) : 49.6566
Integration start scan : 1222 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

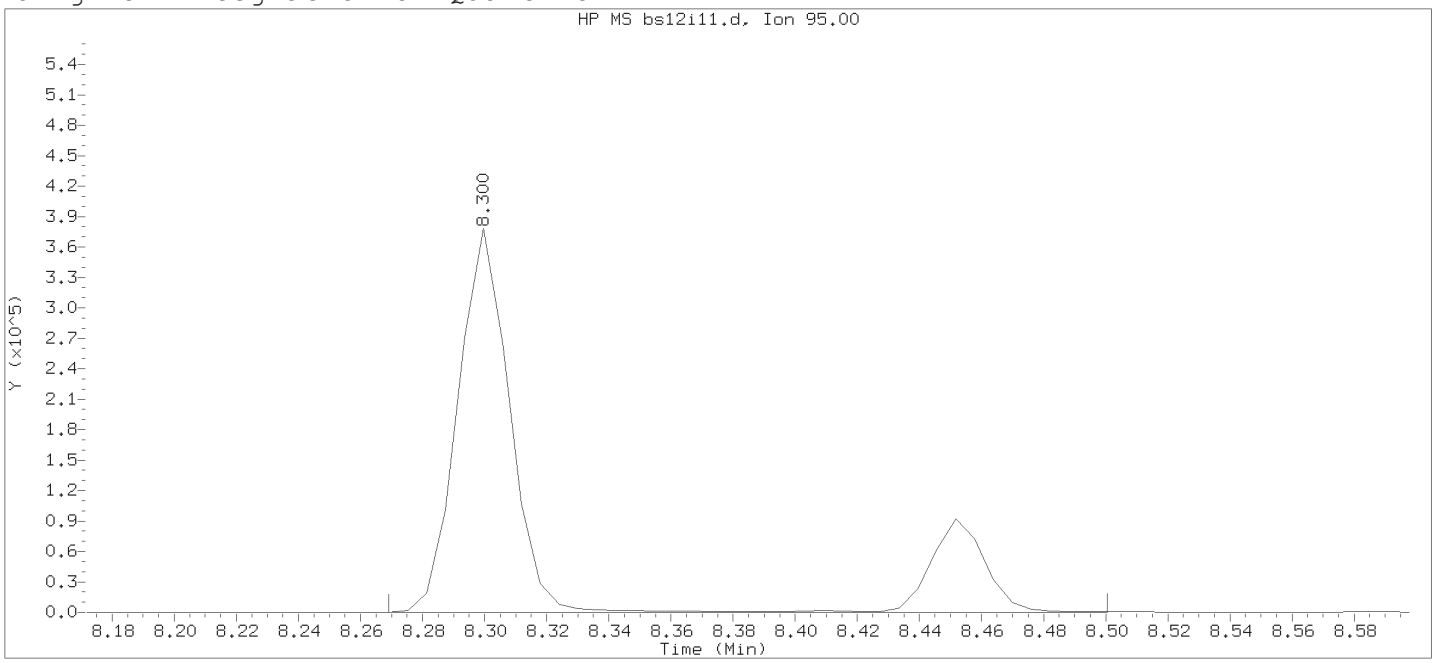
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



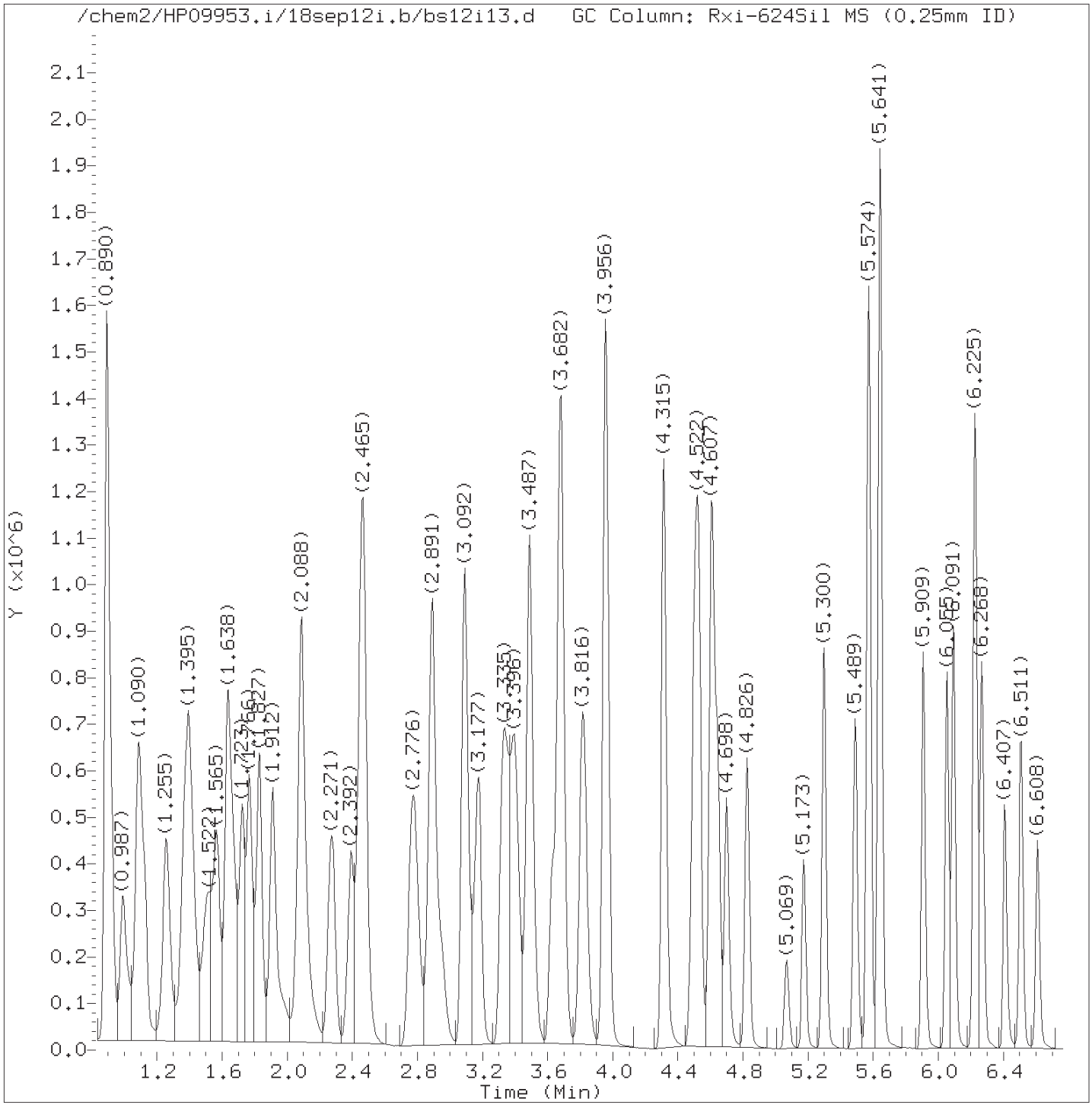
Data File: /chem2/HP09953.i/18sep12i.b/bs12i11.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:36 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 13:51
Date, time and analyst ID of latest file update: 12-Sep-2018 13:51 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number	: 119		
Compound Name	: 4-Bromofluorobenzene		
Scan Number	: 1228		
Retention Time (minutes)	: 8.300		
Quant Ion	: 95.00		
Area	: 548389		
On-column Amount (ng)	: 58.1311		
Integration start scan	: 1222	Integration stop scan:	1260
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe



Total Ion Chromatogram (TIC)

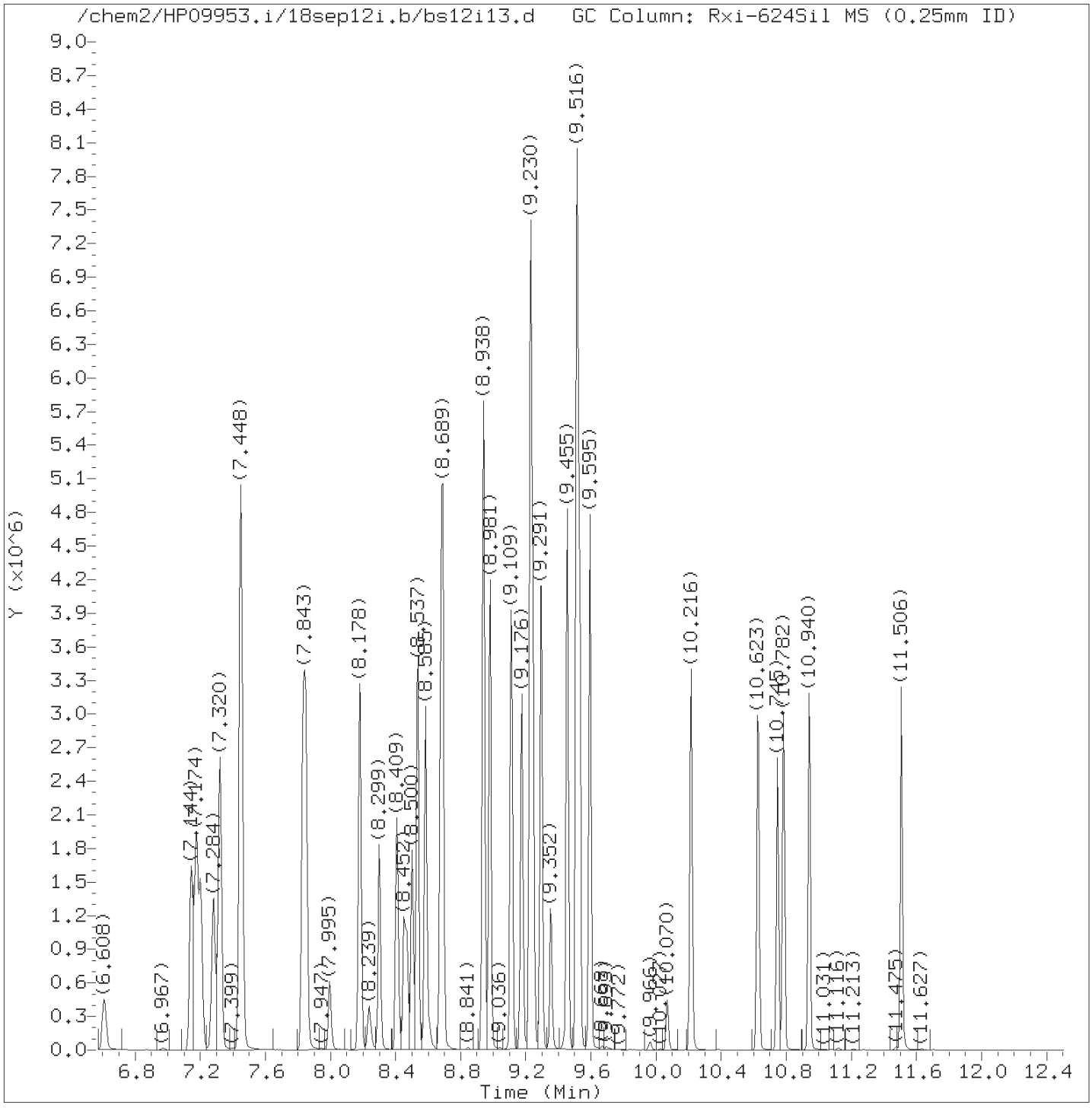
Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.987	85	517738	47.268
4) Chloromethane	(2)	1.078	50	526359	46.622
5) Vinyl Chloride	(2)	1.127	62	408925	46.483
9) Bromomethane	(2)	1.255	94	376048	48.028
10) Chloroethane	(2)	1.273	64	231180	48.852
11) Dichlorofluoromethane	(2)	1.376	67	542599	47.411
13) Trichlorofluoromethane	(2)	1.419	101	583726	48.199
15) Ethanol	(1)	1.455	45	124784	2228.878
17) Freon 123a	(2)	1.516	67	364730	44.985
18) Acrolein	(1)	1.571	56	457364	441.185
19) 1,1-Dichloroethene	(2)	1.632	96	300077	49.308
20) Acetone	(1)	1.650	58	46851	95.699
22) Freon 113	(2)	1.662	101	303415	49.727
23) 2-Propanol	(1)	1.723	45	107878	260.221
24) Methyl Iodide	(2)	1.723	142	733254	50.109
25) Carbon Disulfide	(2)	1.766	76	1216787	49.969
29) Allyl Chloride	(2)	1.827	41	402274M	49.416
27) Methyl Acetate	(2)	1.833	43	153058	49.046
31) Methylene Chloride	(2)	1.912	84	339367	47.187
30)*t-Butyl alcohol-d10	(1)	1.930	65	107301	250.000
32) t-Butyl alcohol	(1)	1.979	59	143674	254.902
33) Acrylonitrile	(2)	2.064	53	92633	43.848
35) trans-1,2-Dichloroethene	(2)	2.088	96	352918	49.866
34) Methyl Tertiary Butyl Ether	(2)	2.100	73	884472	51.094
38) n-Hexane	(2)	2.277	57	376357	46.589
40) 1,1-Dichloroethane	(2)	2.392	63	585928	51.058
41) di-Isopropyl ether	(2)	2.459	45	1095189	51.131
42) 2-Chloro-1,3-butadiene	(2)	2.465	53	514890	50.915
43) Ethyl t-butyl ether	(2)	2.776	59	1042155	51.666
45) cis-1,2-Dichloroethene	(2)	2.885	96	395198	51.444
47) 2,2-Dichloropropane	(2)	2.897	77	423618	50.635
44) 2-Butanone	(1)	2.897	43	232433	84.257
49) Propionitrile	(1)	2.952	54	198561	268.307
46) 1,2-Dichloroethene (Total)	(2)		96	748116	101.310
51) Methacrylonitrile	(2)	3.086	67	306415	129.798
52) Bromochloromethane	(2)	3.098	128	208878	51.180
53) Tetrahydrofuran	(1)	3.141	71	66188	96.323
54) Chloroform	(2)	3.177	83	593415	50.946

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	3.323	113	303438	50.191
56)$Dibromofluoromethane	(2)	3.317	111	308740	50.375
57) 1,1,1-Trichloroethane	(2)	3.347	97	573359	48.076
58) Cyclohexane	(2)	3.396	56	559281	49.918
58) Cyclohexane	(2)	3.396	84	499349	47.691
58) Cyclohexane	(2)	3.396	69	177991	50.232
60) 1,1-Dichloropropene	(2)	3.487	75	443874	51.217
61) Carbon Tetrachloride	(2)	3.500	117	473550	52.282
63)$1,2-Dichloroethane-d4	(2)	3.627	102	65163M	50.077
63)$1,2-Dichloroethane-d4	(2)	3.627	65	283686	49.575
63)$1,2-Dichloroethane-d4	(2)	3.621	104	42453	50.924
62) Isobutyl Alcohol	(1)	3.652	41	130322	658.090
64) Benzene	(2)	3.676	78	1388964	50.201
67) 1,2-Dichloroethane	(2)	3.694	62	393860	49.327
67) 1,2-Dichloroethane	(2)	3.700	98	40138	50.602
68) t-Amyl methyl ether	(2)	3.816	73	969094	52.035
70)*Fluorobenzene	(2)	3.950	96	1213056	50.000
72) n-Heptane	(2)	3.962	43	367260	49.837
73) n-Butanol	(1)	4.315	56	228249	1376.452
75) Trichloroethene	(2)	4.315	95	363777	50.417
76) Methylcyclohexane	(2)	4.503	83	571335	50.882
77) 1,2-Dichloropropane	(2)	4.528	63	340031	51.750
81) Dibromomethane	(2)	4.643	93	204792	50.966
80) 1,4-Dioxane	(1)	4.692	88	47660M	693.527
79) Methyl Methacrylate	(2)	4.698	69	224091	52.912
84) Bromodichloromethane	(2)	4.826	83	440305	53.660
85) 2-Nitropropane	(1)	5.069	41	126922	89.430
87) 2-Chloroethyl Vinyl Ether	(2)	5.173	63	185838	53.714
89) cis-1,3-Dichloropropene	(2)	5.300	75	533639	53.859
90) 4-Methyl-2-pentanone	(2)	5.489	43	521027	92.260
91)$Toluene-d8	(3)	5.574	98	1213492	50.002
91)$Toluene-d8	(3)	5.574	100	789204	50.112
92) Toluene	(3)	5.641	92	912919	50.717
93) trans-1,3-Dichloropropene	(3)	5.909	75	469763	54.483
94) 1,3-Dichloropropene (total)	(3)		100	1003402	108.342
95) Ethyl Methacrylate	(3)	6.055	69	452531	54.068
96) 1,1,2-Trichloroethane	(3)	6.091	97	303081	51.886
98) Tetrachloroethene	(3)	6.225	166	419479	42.546

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
99) 1,3-Dichloropropane	(3)	6.268	76	486043	51.677
101) 2-Hexanone	(3)	6.407	43	363984	86.972
103) Dibromochloromethane	(3)	6.511	129	375086	55.735
104) 1,2-Dibromoethane	(3)	6.608	107	320862	53.169
105)*Chlorobenzene-d5	(3)	7.144	117	940298	50.000
107) Chlorobenzene	(3)	7.174	112	1087318	51.738
106) 1-Chlorohexane	(3)	7.204	91	462535	51.715
108) 1,1,1,2-Tetrachloroethane	(3)	7.284	131	389333	54.633
109) Ethylbenzene	(3)	7.320	91	1762847	52.072
110) m+p-Xylene	(3)	7.448	106	1462042	105.832
111) o-Xylene	(3)	7.831	106	734000	53.147
113) Styrene	(3)	7.849	104	1232376	54.128
112) Xylene (Total)	(3)		106	2196042	158.979
114) Bromoform	(3)	7.995	173	240914	57.448
115) Isopropylbenzene	(3)	8.178	105	1837936	52.796
118) Cyclohexanone	(1)	8.239	55	133827	538.142
119)$4-Bromofluorobenzene	(3)	8.299	95	444281M	50.253
119)$4-Bromofluorobenzene	(3)	8.299	174	407782	50.112
121) Bromobenzene	(4)	8.409	156	510787	51.162
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	405311	53.173
123) 1,2,3-Trichloropropane	(4)	8.470	110	119395	52.827
122) trans-1,4-Dichloro-2-butene	(4)	8.500	53	254523	136.078
124) n-Propylbenzene	(4)	8.537	91	2055081	52.064
126) 2-Chlorotoluene	(4)	8.585	126	468343	50.566
130) 4-Chlorotoluene	(4)	8.677	126	488794	52.089
129) 1,3,5-Trimethylbenzene	(4)	8.689	105	1619998	53.058
133) tert-Butylbenzene	(4)	8.938	134	387985	54.093
134) Pentachloroethane	(4)	8.944	167	307672	71.736
135) 1,2,4-Trimethylbenzene	(4)	8.981	105	1678196	52.708
136) sec-Butylbenzene	(4)	9.109	105	2045037	52.612
138) 1,3-Dichlorobenzene	(4)	9.176	146	960719	51.273
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	544910	50.000
139) p-Isopropyltoluene	(4)	9.230	119	1862718	53.475
141) 1,4-Dichlorobenzene	(4)	9.242	146	991943	50.778
142) 1,2,3-Trimethylbenzene	(4)	9.297	105	1771707	51.620
143) Benzyl Chloride	(4)	9.352	126	143889	56.516
144) 1,3-Diethylbenzene	(4)	9.455	119	1113615	51.715
145) 1,4-Diethylbenzene	(4)	9.516	119	1195739	53.504

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

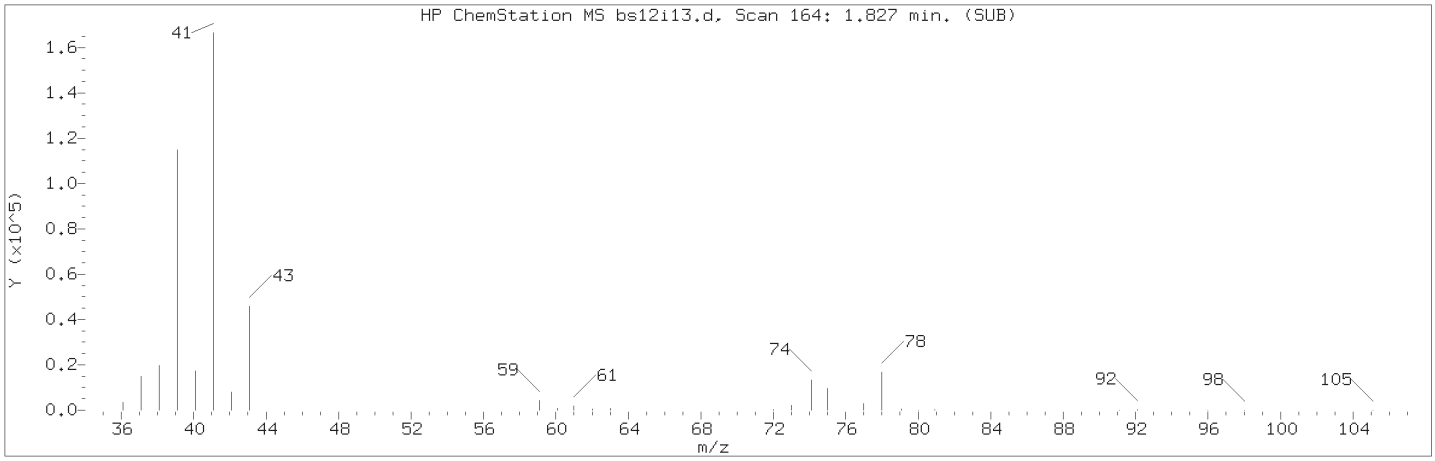
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

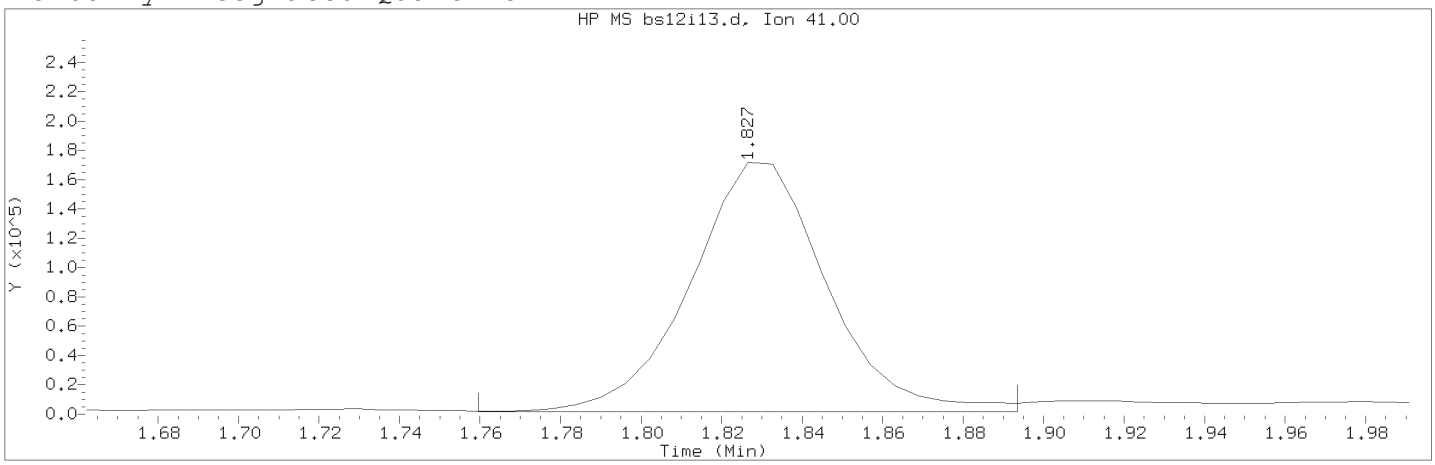
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2-Dichlorobenzene	(4)	9.516	146	969281	52.912
146) n-Butylbenzene	(4)	9.528	92	856761	52.941
148) 1,2-Diethylbenzene	(4)	9.595	119	962791	51.106
149) Diethylbenzene (total)	(4)		100	3272145	156.325
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	70932	53.560
152) 1,3,5-Trichlorobenzene	(4)	10.216	180	746931	52.113
153) 1,2,4-Trichlorobenzene	(4)	10.629	180	689655	51.053
154) Hexachlorobutadiene	(4)	10.745	225	328164	53.244
155) Naphthalene	(4)	10.782	128	1613423	50.278
156) 1,2,3-Trichlorobenzene	(4)	10.940	180	658066	51.084
157) 2-Methylnaphthalene	(4)	11.506	142	1046747	48.226

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

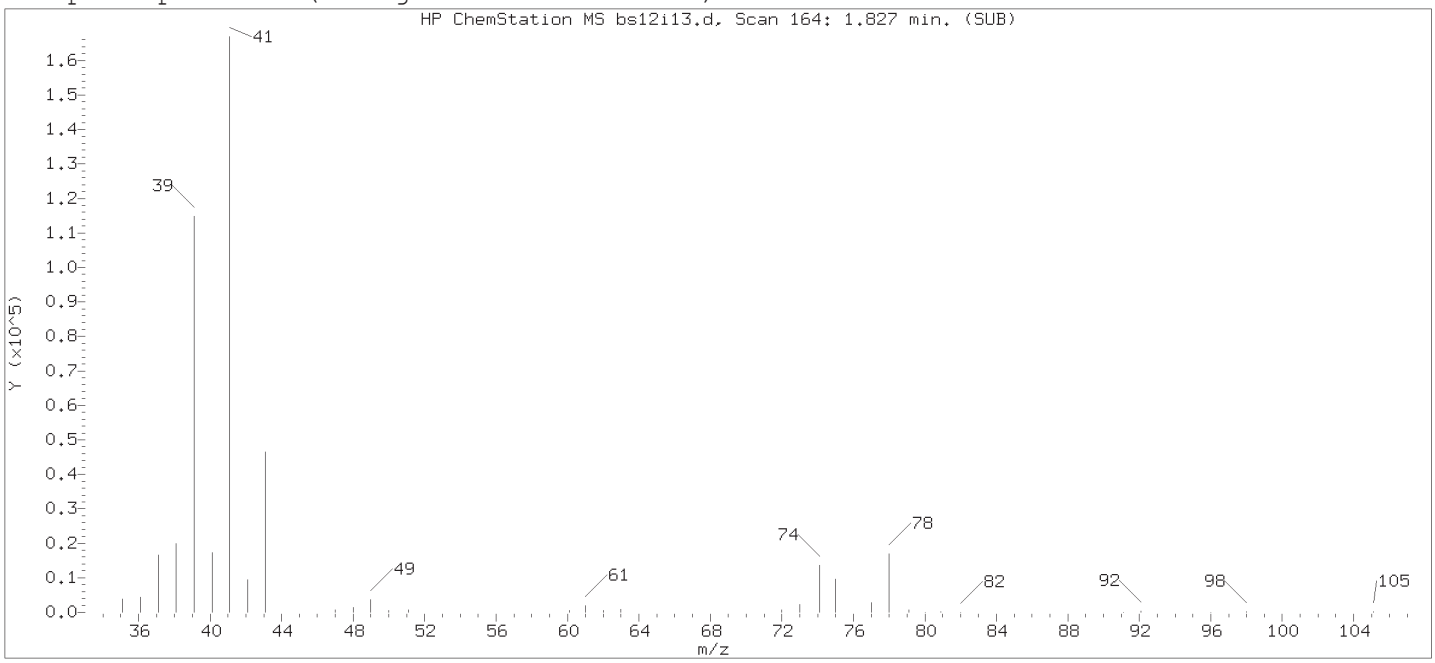
Compound Number : 29
Compound Name : Allyl Chloride
Scan Number : 164
Retention Time (minutes): 1.827
Quant Ion : 41.00
Area (flag) : 402274M
On-Column Amount (ng) : 49.4157
Integration start scan : 152 Integration stop scan: 174
Y at integration start : 1538 Y at integration end: 1538

Reason for manual integration: improper integration

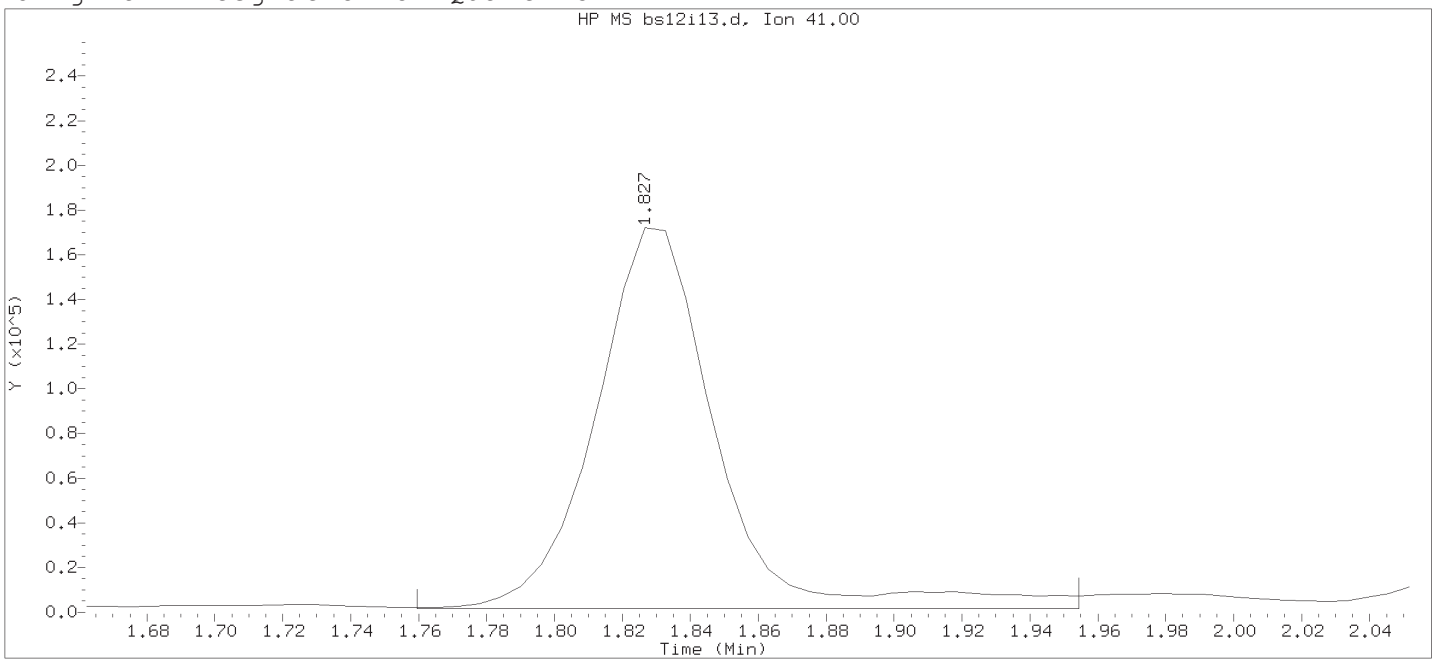
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

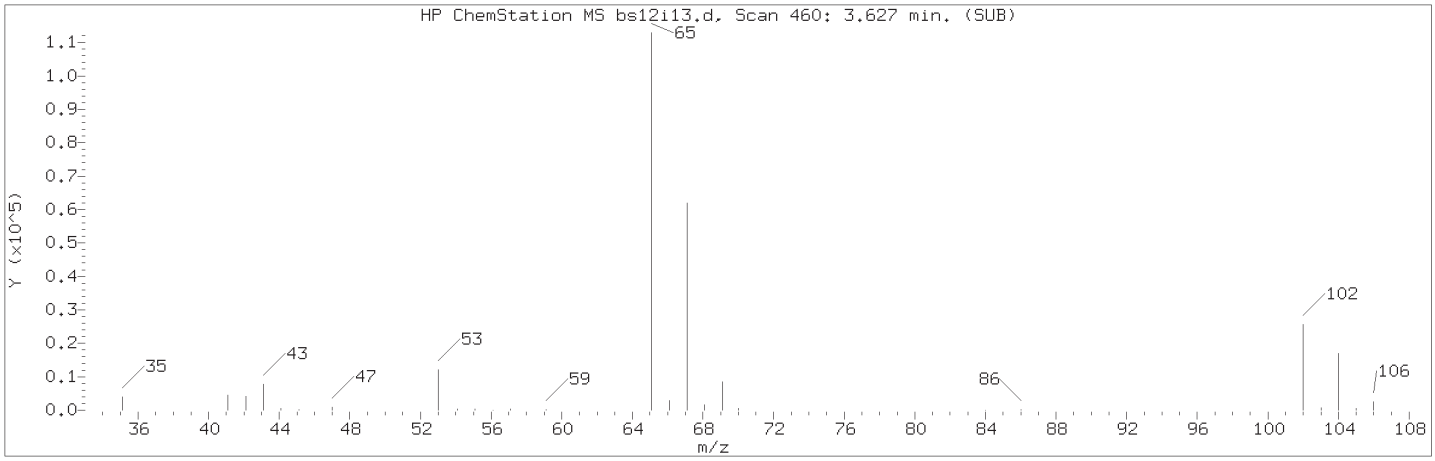
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 14:14
Date, time and analyst ID of latest file update: 12-Sep-2018 14:14 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

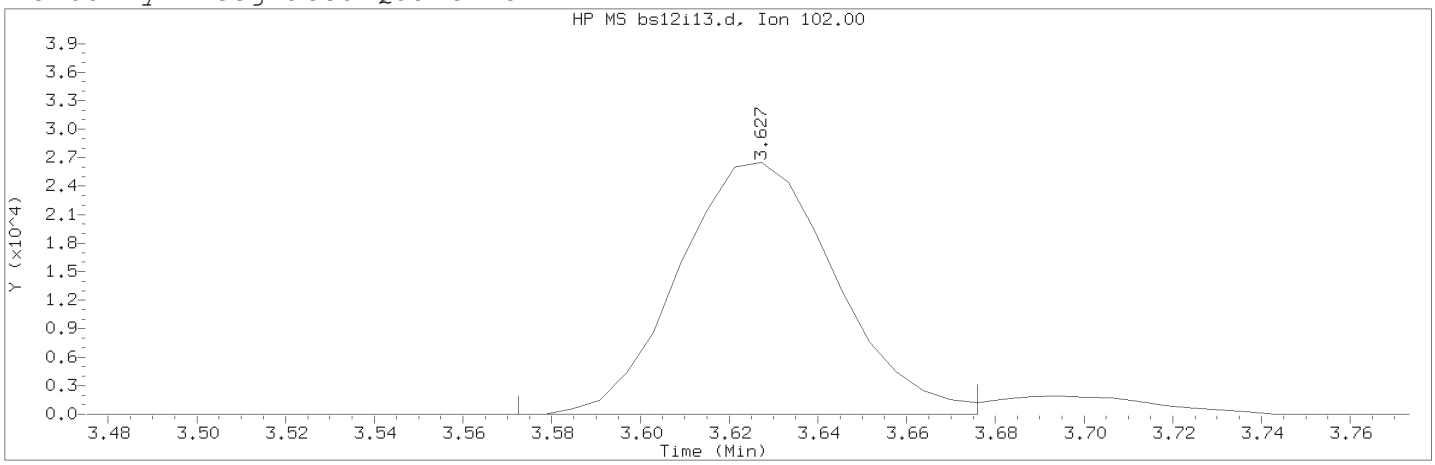
Compound Number : 29
Compound Name : Allyl Chloride
Scan Number : 164
Retention Time (minutes): 1.827
Quant Ion : 41.00
Area : 425458
On-column Amount (ng) : 43.9800
Integration start scan : 152 Integration stop scan: 184
Y at integration start : 1538 Y at integration end: 1538

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

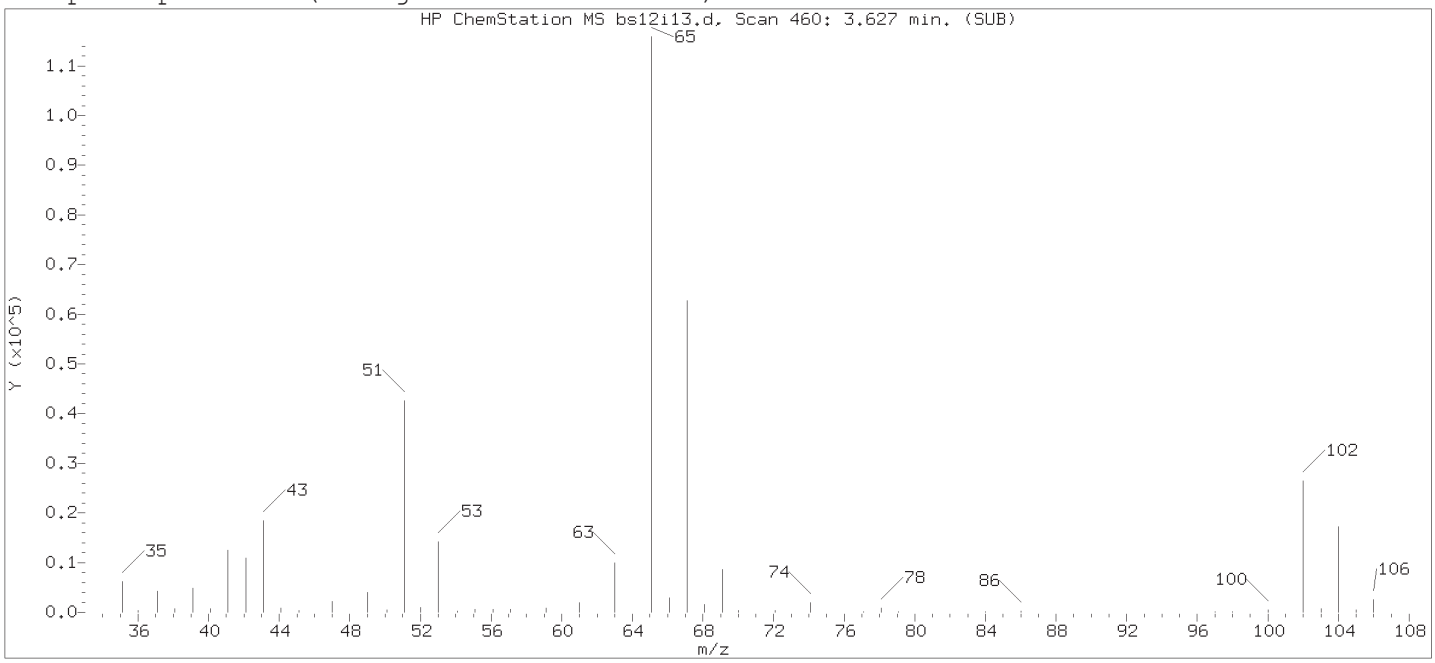
Compound Number : 63
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 460
Retention Time (minutes): 3.627
Quant Ion : 102.00
Area (flag) : 65163M
On-Column Amount (ng) : 50.0774
Integration start scan : 450 Integration stop scan: 467
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

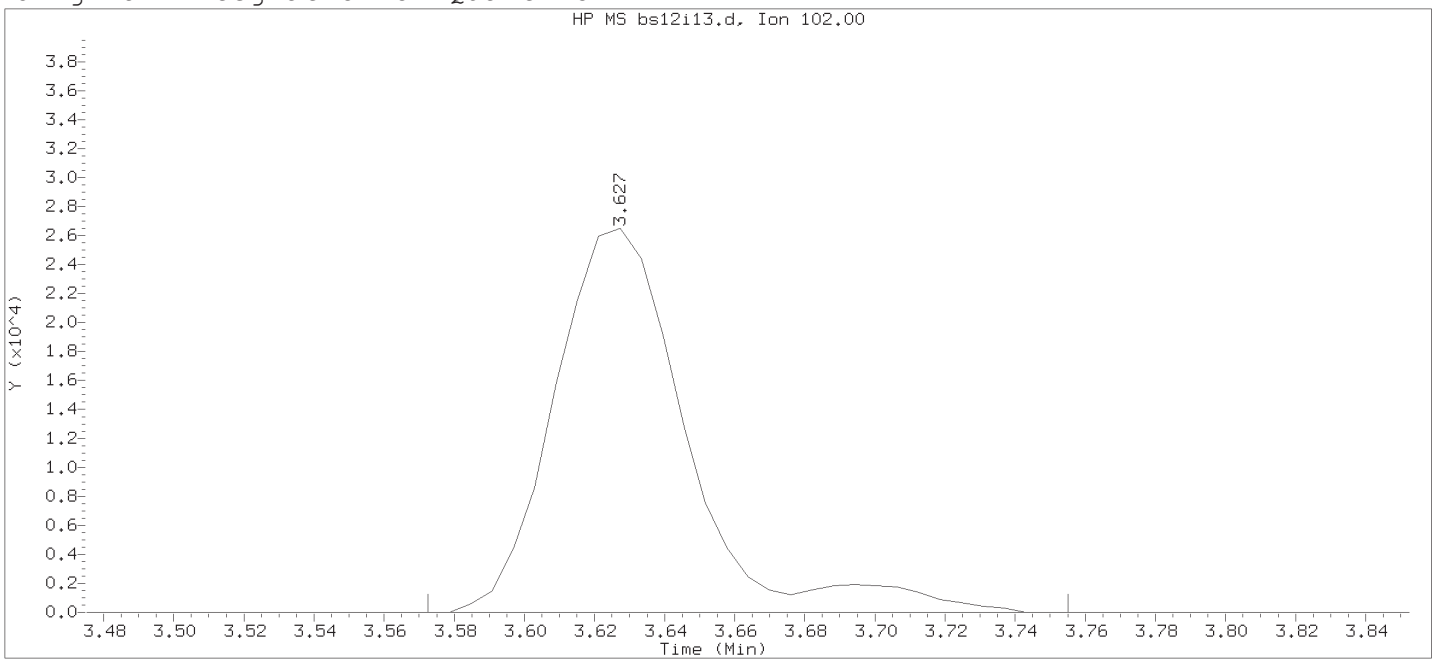
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

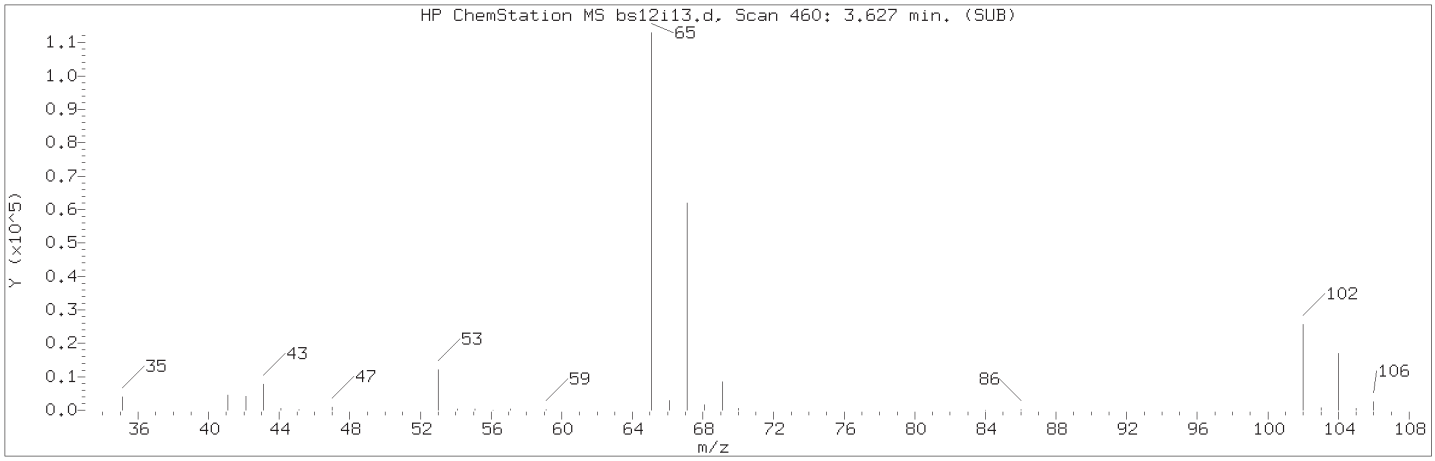
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 14:14
Date, time and analyst ID of latest file update: 12-Sep-2018 14:14 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

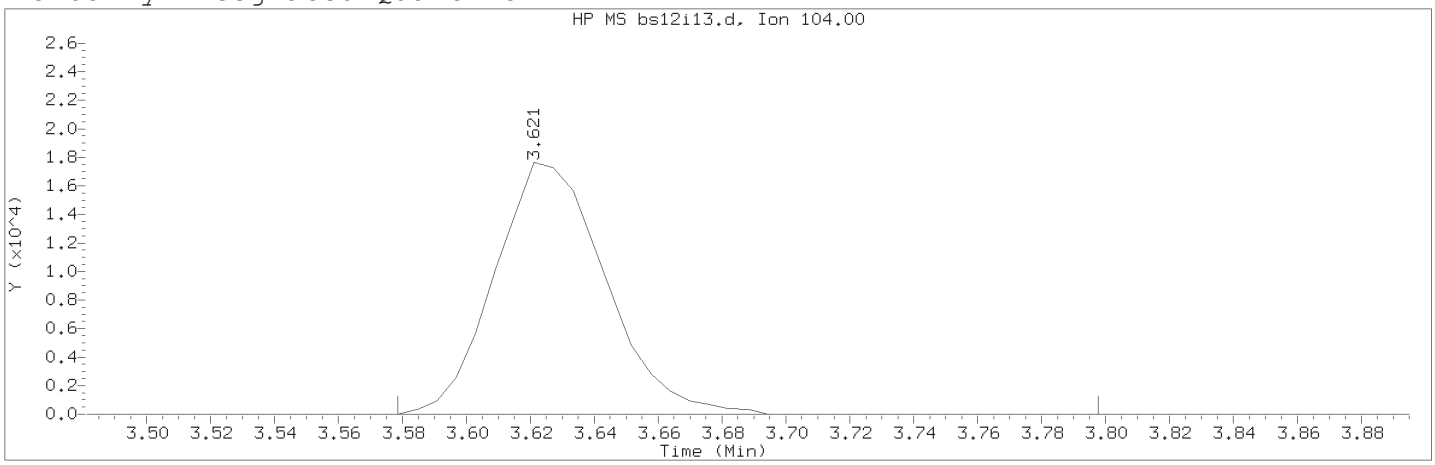
Compound Number : 63
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 460
Retention Time (minutes): 3.627
Quant Ion : 102.00
Area : 69709
On-column Amount (ng) : 52.2918
Integration start scan : 450 Integration stop scan: 480
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

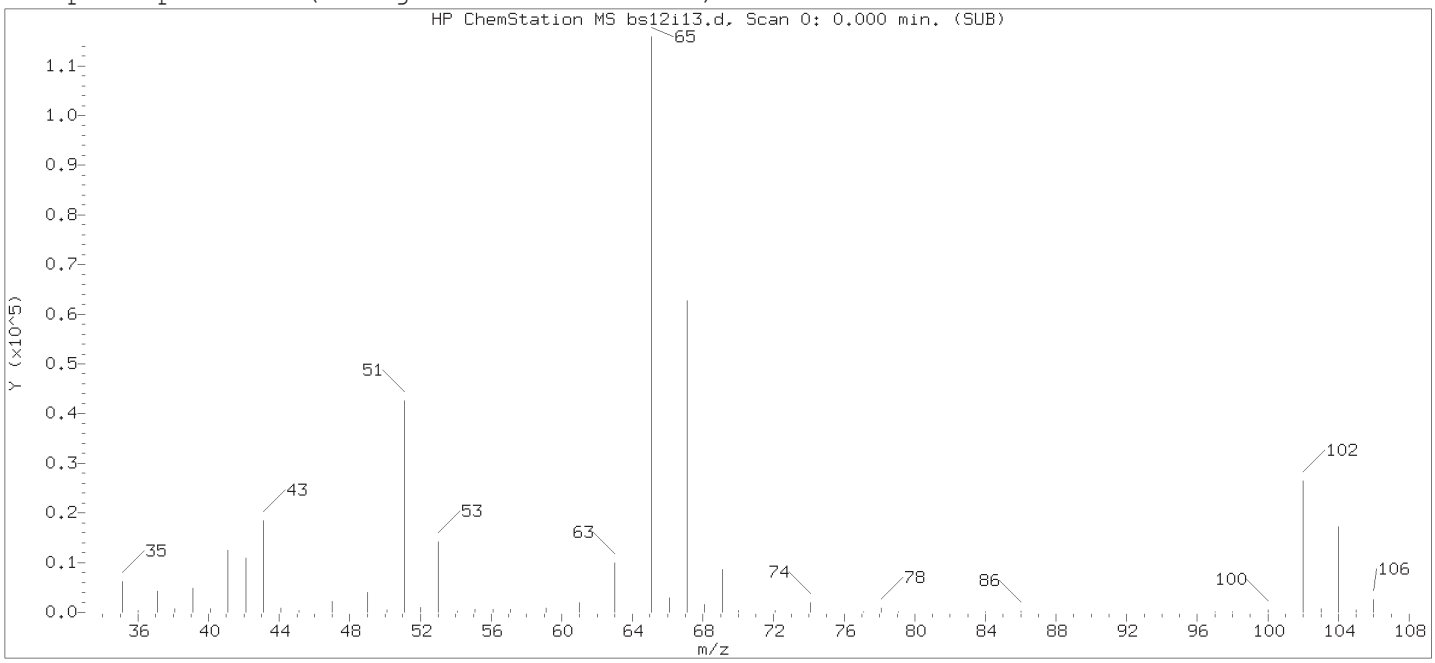
Compound Number : 63
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 459
Retention Time (minutes): 3.621
Quant Ion : 104.00
Area (flag) : 42453M
On-Column Amount (ng) : 50.9237
Integration start scan : 451 Integration stop scan: 487
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

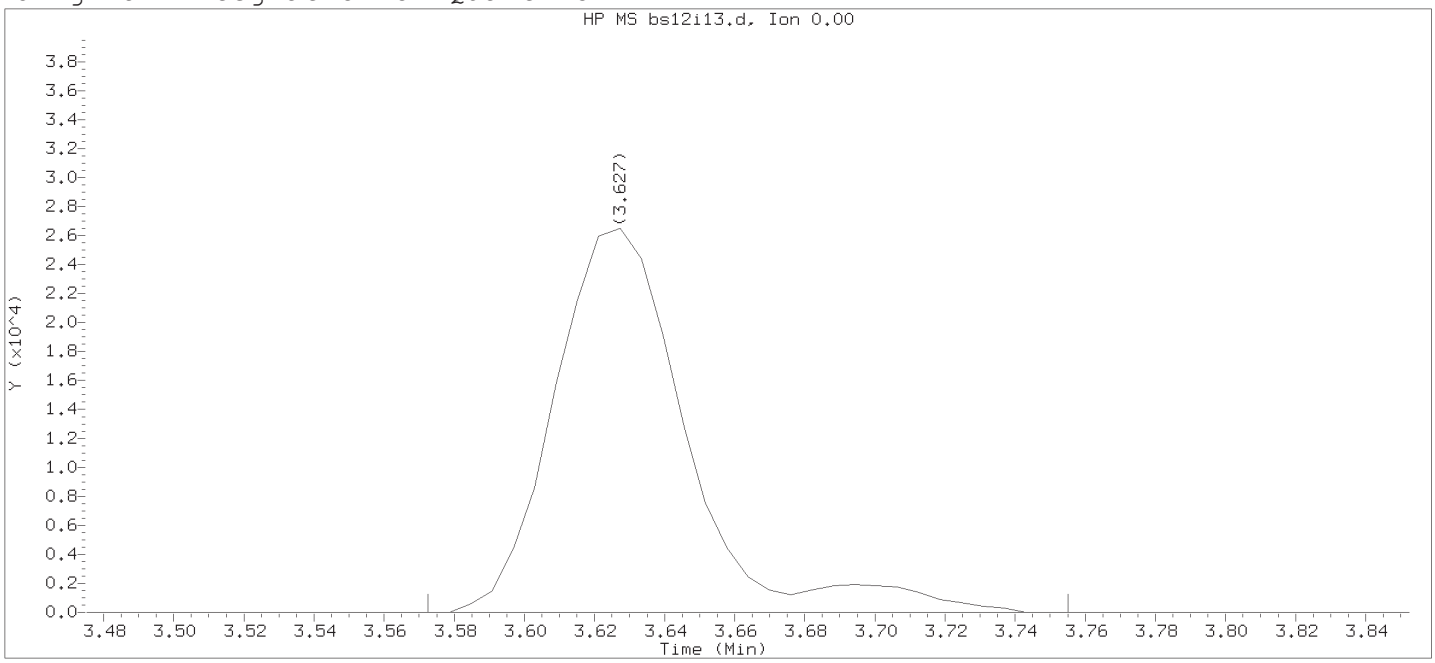
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

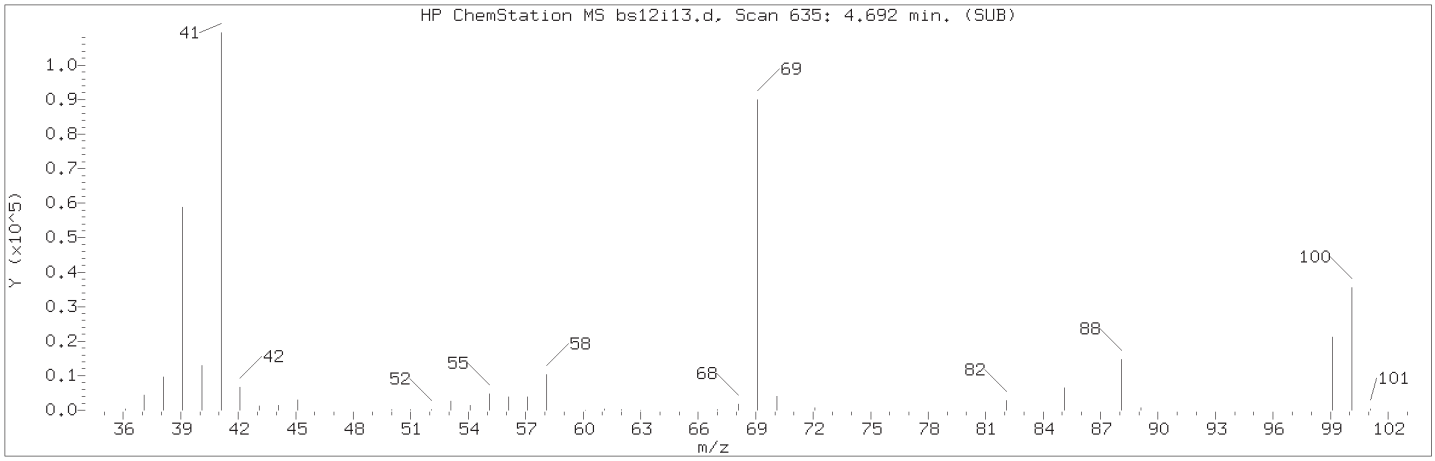
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 14:14
Date, time and analyst ID of latest file update: 12-Sep-2018 14:14 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

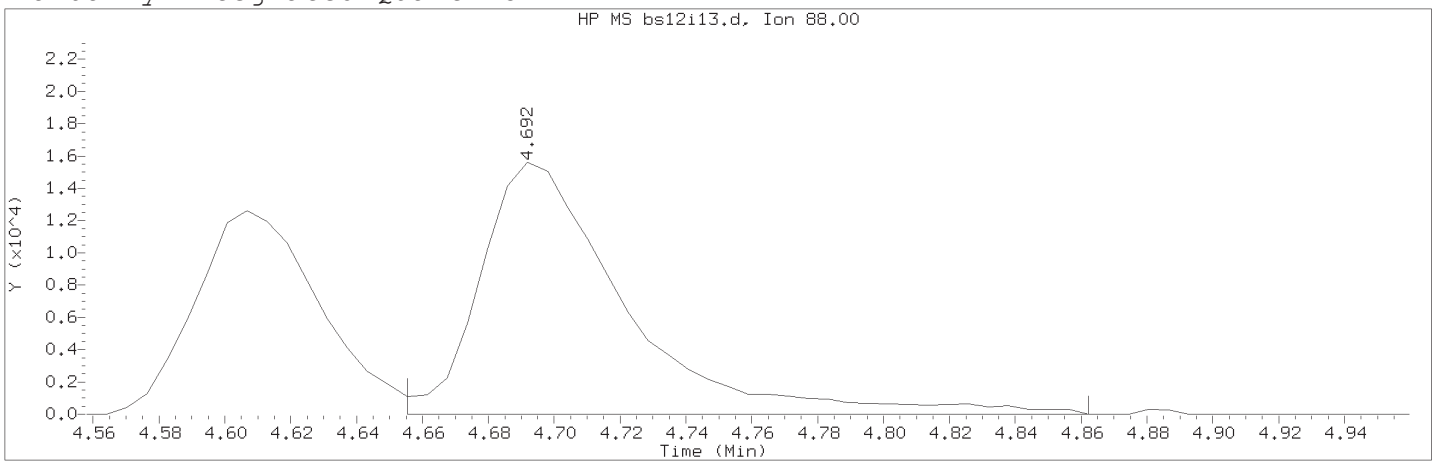
Compound Number : 0
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 0.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 0 Integration stop scan: 0
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe9372

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

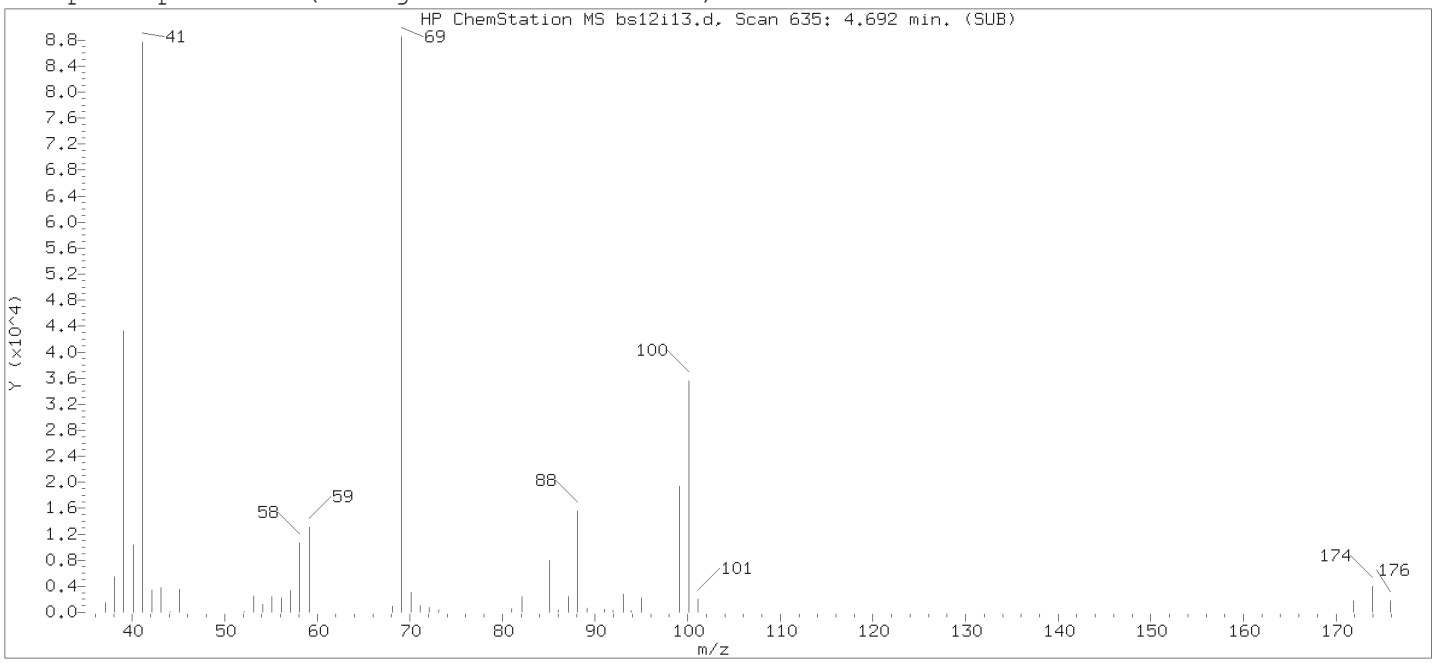
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area (flag) : 47660M
On-Column Amount (ng) : 693.5269
Integration start scan : 628 Integration stop scan: 662
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

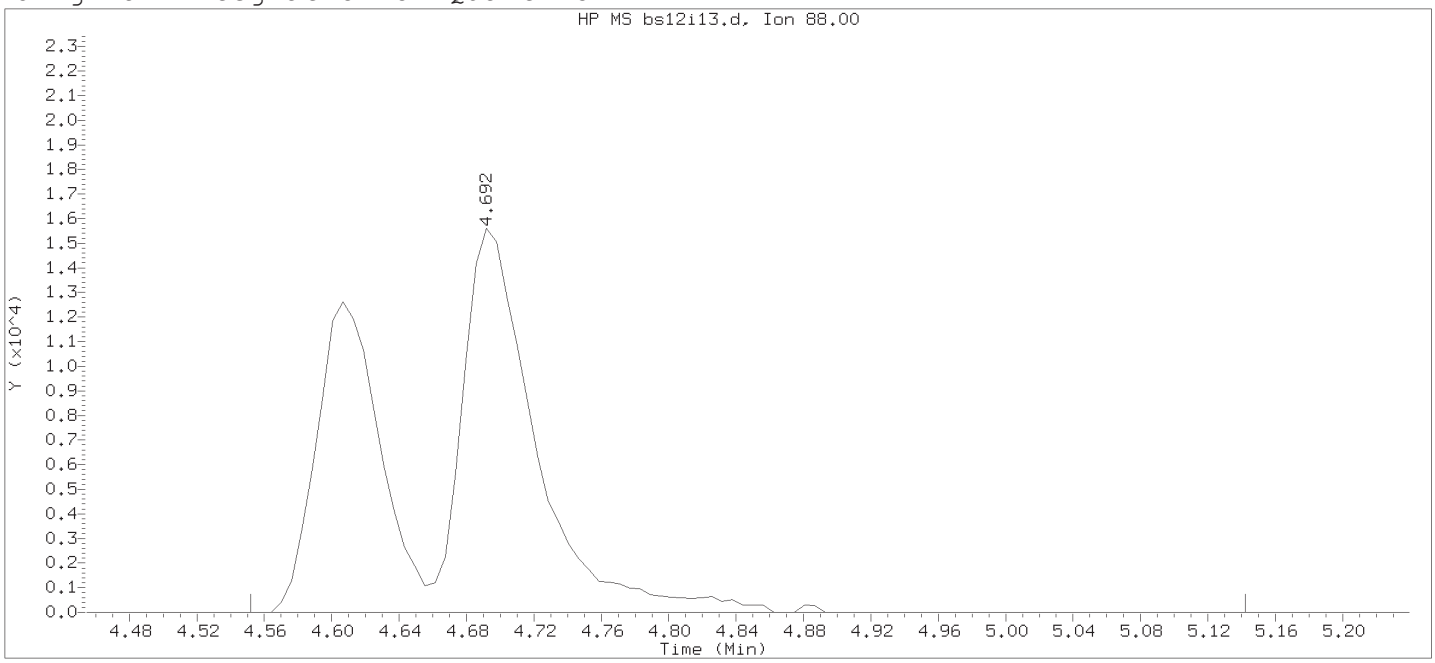
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

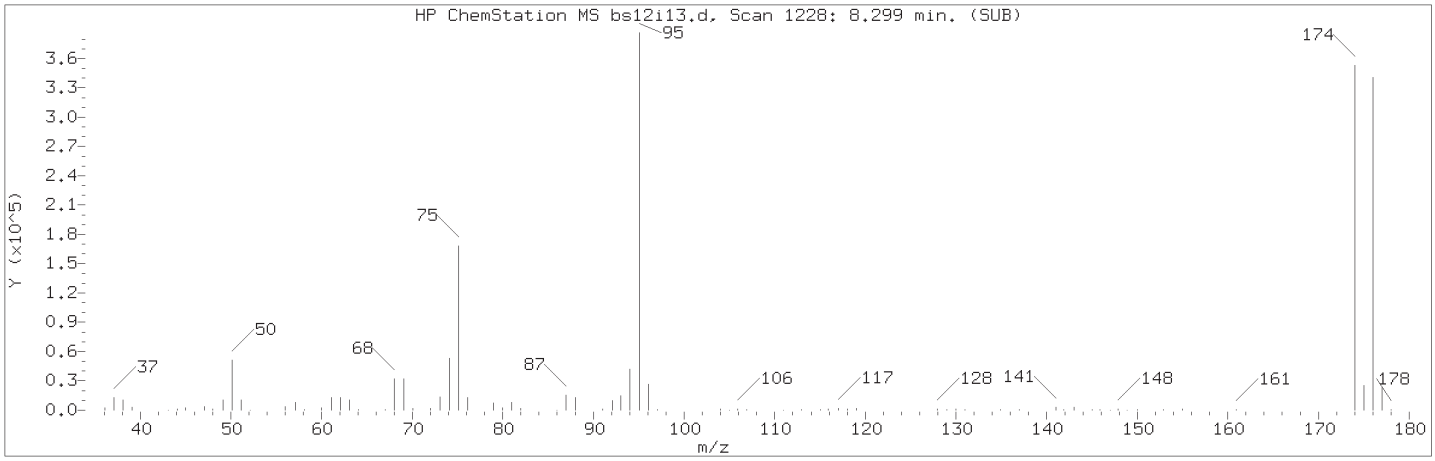
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 14:14
Date, time and analyst ID of latest file update: 12-Sep-2018 14:14 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

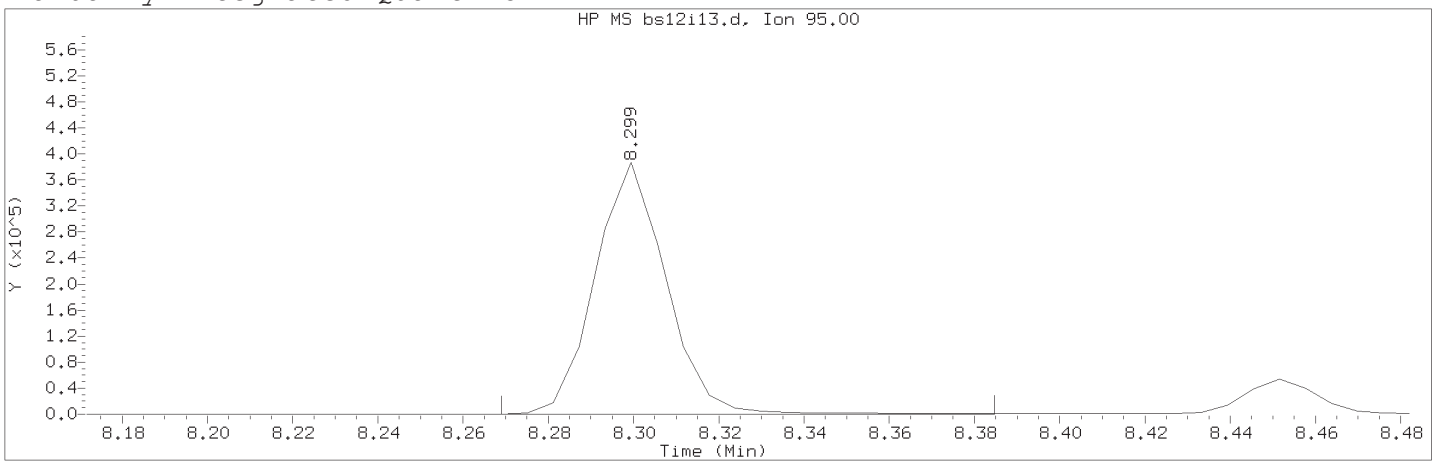
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area : 80509
On-column Amount (ng) : 880.1982
Integration start scan : 611 Integration stop scan: 708
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

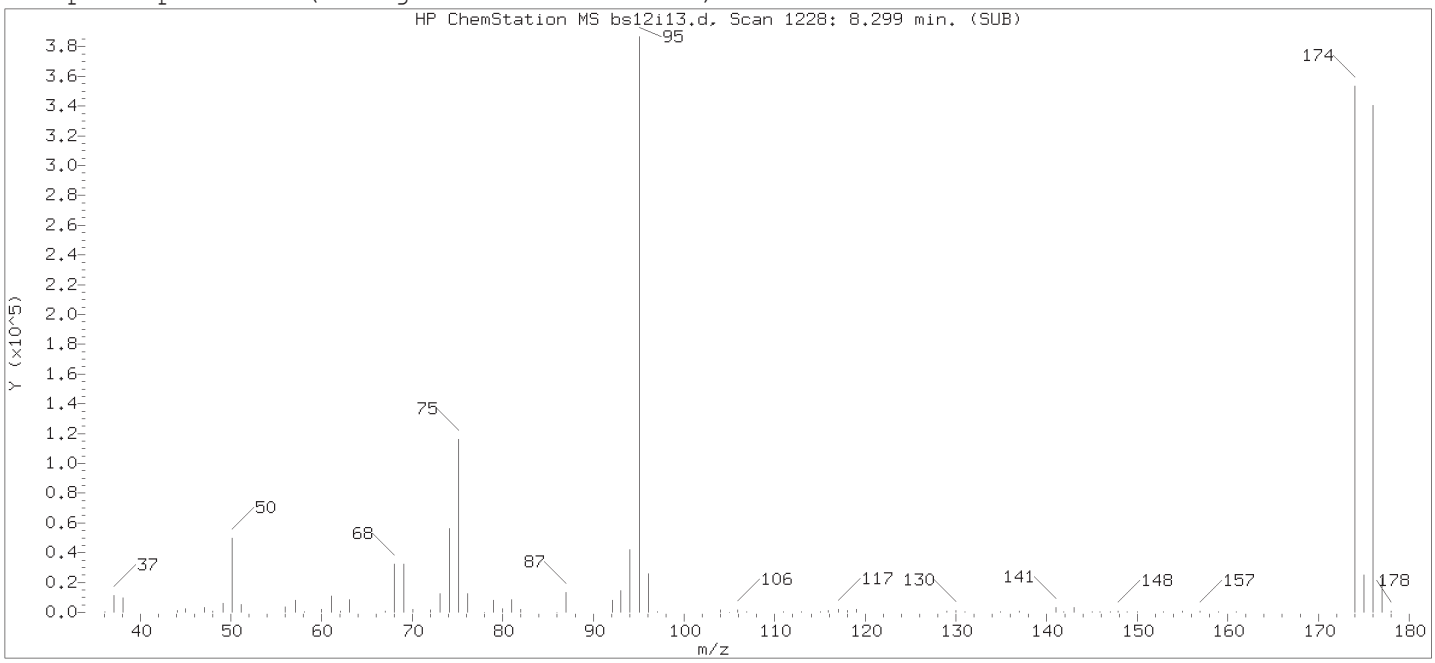
Compound Number : 119
Compound Name : 4-Bromofluorobenzene
Scan Number : 1228
Retention Time (minutes): 8.299
Quant Ion : 95.00
Area (flag) : 444281M
On-Column Amount (ng) : 50.2530
Integration start scan : 1222 Integration stop scan: 1241
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

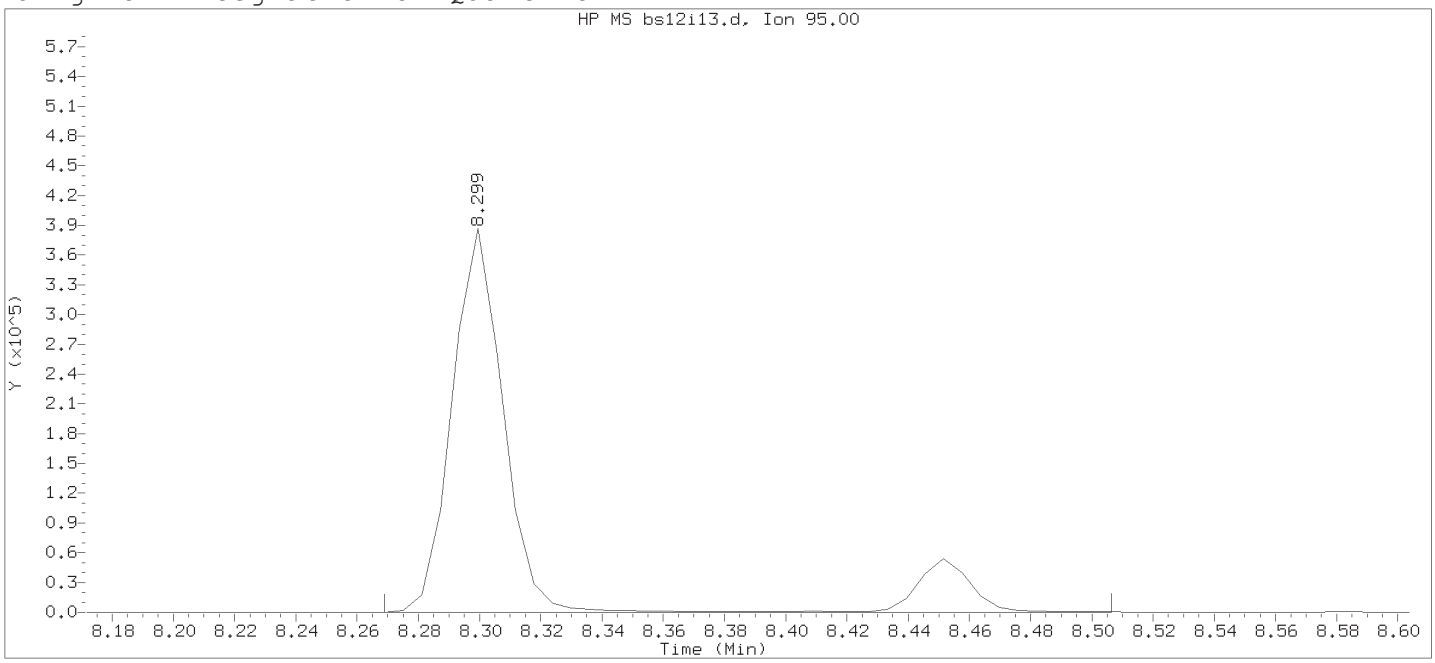
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



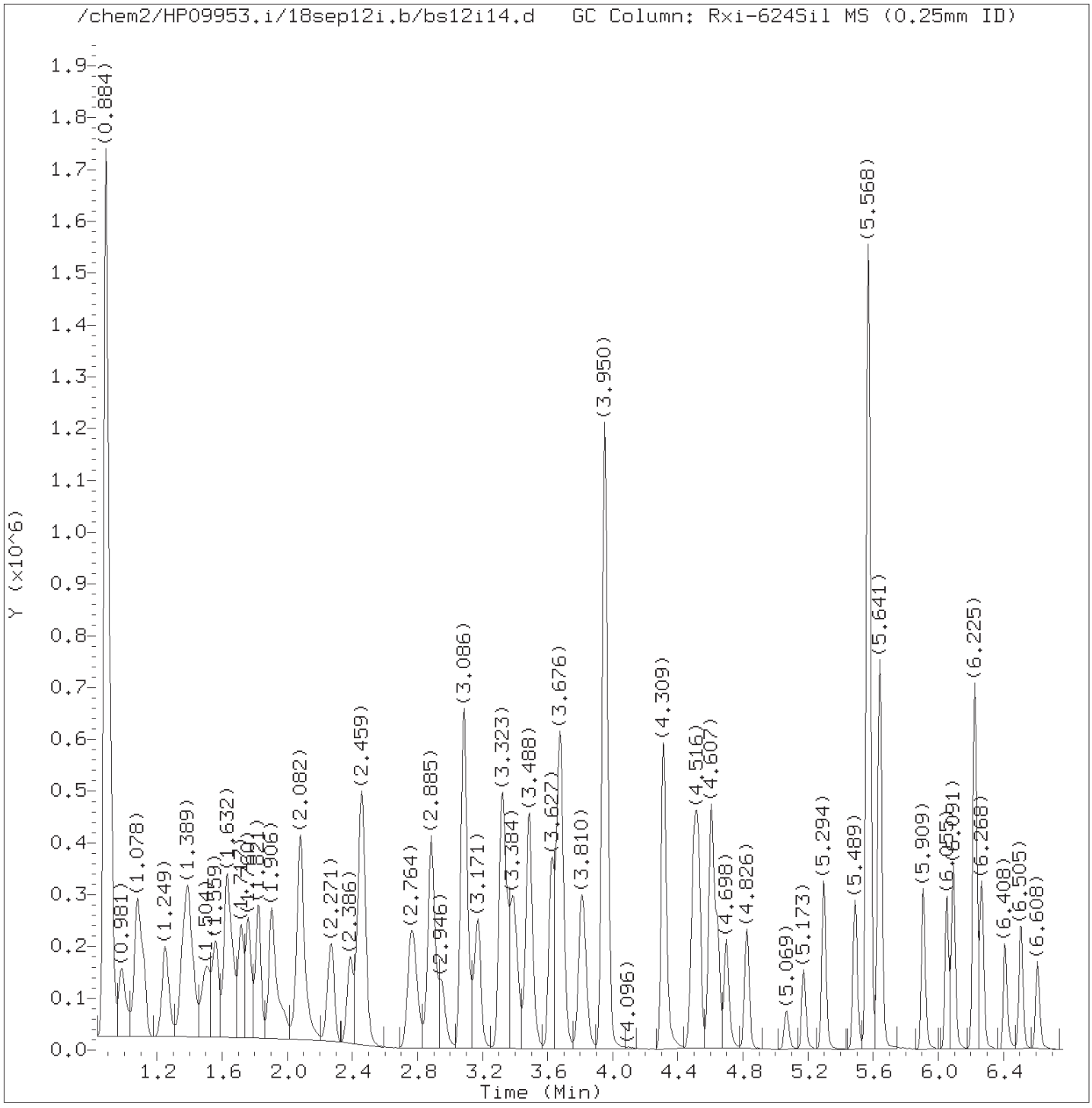
Data File: /chem2/HP09953.i/18sep12i.b/bs12i13.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 13:59 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 14:14
Date, time and analyst ID of latest file update: 12-Sep-2018 14:14 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 119		
Compound Name	: 4-Bromofluorobenzene		
Scan Number	: 1228		
Retention Time (minutes)	: 8.299		
Quant Ion	: 95.00		
Area	: 510197		
On-column Amount (ng)	: 52.8672		
Integration start scan	: 1222	Integration stop scan:	1261
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe



Total Ion Chromatogram (TIC)

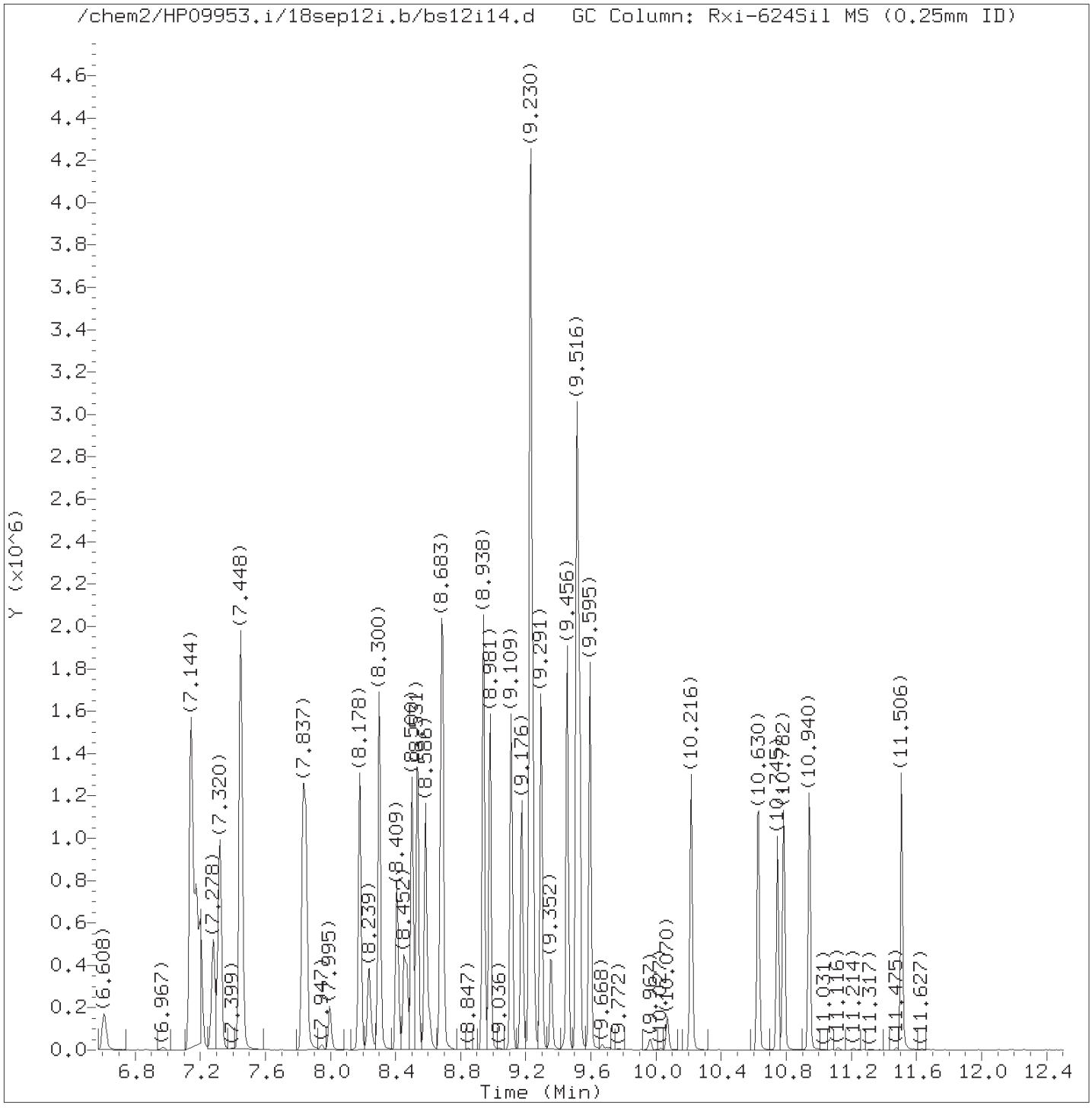
Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i14.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:22 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i14.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:22 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i14.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:22 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.987	85	217997	20.474
4) Chloromethane	(2)	1.072	50	225709	20.566
5) Vinyl Chloride	(2)	1.121	62	173889	20.333
9) Bromomethane	(2)	1.249	94	159926	21.011
10) Chloroethane	(2)	1.267	64	97509	21.196
11) Dichlorofluoromethane	(2)	1.370	67	231074	20.770
13) Trichlorofluoromethane	(2)	1.413	101	243966	20.723
15) Ethanol	(1)	1.450	45	108233	1837.355
17) Freon 123a	(2)	1.504	67	157259	19.952
18) Acrolein	(1)	1.565	56	188810	173.097
19) 1,1-Dichloroethene	(2)	1.626	96	125222	21.167
20) Acetone	(1)	1.638	58	22478	39.587
22) Freon 113	(2)	1.650	101	129133	21.771
23) 2-Propanol	(1)	1.717	45	83500	191.426
24) Methyl Iodide	(2)	1.717	142	300881	21.152
25) Carbon Disulfide	(2)	1.760	76	506487	21.396
27) Methyl Acetate	(2)	1.827	43	66625	21.962
29) Allyl Chloride	(2)	1.827	41	167221	21.131
31) Methylene Chloride	(2)	1.906	84	142721	20.414
30)*t-Butyl alcohol-d10	(1)	1.924	65	112901	250.000
32) t-Butyl alcohol	(1)	1.979	59	117952	198.887
33) Acrylonitrile	(2)	2.058	53	41284	20.102
35) trans-1,2-Dichloroethene	(2)	2.082	96	146766	21.333
34) Methyl Tertiary Butyl Ether	(2)	2.094	73	359831	21.383
38) n-Hexane	(2)	2.271	57	164580	20.958
40) 1,1-Dichloroethane	(2)	2.386	63	236353	21.187
41) di-Isopropyl ether	(2)	2.453	45	442826	21.268
42) 2-Chloro-1,3-butadiene	(2)	2.459	53	210908	21.454
43) Ethyl t-butyl ether	(2)	2.764	59	418786	21.357
45) cis-1,2-Dichloroethene	(2)	2.885	96	156913	21.012
47) 2,2-Dichloropropane	(2)	2.897	77	171749	21.118
44) 2-Butanone	(1)	2.897	43	100205	34.523
49) Propionitrile	(1)	2.952	54	157095	201.747
46) 1,2-Dichloroethene (Total)	(2)		96	303679	42.345
51) Methacrylonitrile	(2)	3.086	67	244448	106.520
52) Bromochloromethane	(2)	3.092	128	82708	20.847
53) Tetrahydrofuran	(1)	3.141	71	27529	38.076
54) Chloroform	(2)	3.171	83	237444	20.970

* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i14.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:22 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	3.317	113	296234	50.406
56)$Dibromofluoromethane	(2)	3.317	111	301792	50.655
57) 1,1,1-Trichloroethane	(2)	3.342	97	244815	21.117
58) Cyclohexane	(2)	3.390	56	233537	21.442
58) Cyclohexane	(2)	3.390	84	241732	23.749
58) Cyclohexane	(2)	3.390	69	72985	21.189
60) 1,1-Dichloropropene	(2)	3.481	75	180479	21.423
61) Carbon Tetrachloride	(2)	3.494	117	187746	21.323
63)$1,2-Dichloroethane-d4	(2)	3.621	102	66984	52.954
63)$1,2-Dichloroethane-d4	(2)	3.621	65	290306	52.187
63)$1,2-Dichloroethane-d4	(2)	3.621	104	41001	50.593
62) Isobutyl Alcohol	(1)	3.652	41	98948	474.876
64) Benzene	(2)	3.676	78	554969	20.634
67) 1,2-Dichloroethane	(2)	3.694	62	160140	20.631
67) 1,2-Dichloroethane	(2)	3.694	98	16316	21.160
68) t-Amyl methyl ether	(2)	3.816	73	389705	21.525
70)*Fluorobenzene	(2)	3.950	96	1179216	50.000
72) n-Heptane	(2)	3.962	43	160267	22.372
75) Trichloroethene	(2)	4.309	95	147466	21.024
73) n-Butanol	(1)	4.315	56	167841	961.958
76) Methylcyclohexane	(2)	4.503	83	234042	21.442
77) 1,2-Dichloropropane	(2)	4.528	63	134084	20.992
81) Dibromomethane	(2)	4.643	93	81190	20.785
80) 1,4-Dioxane	(1)	4.692	88	35590M	492.202
79) Methyl Methacrylate	(2)	4.698	69	86375	20.980
84) Bromodichloromethane	(2)	4.826	83	167807	21.038
85) 2-Nitropropane	(1)	5.069	41	51938	34.781
87) 2-Chloroethyl Vinyl Ether	(2)	5.173	63	71550	21.274
89) cis-1,3-Dichloropropene	(2)	5.294	75	204068	21.187
90) 4-Methyl-2-pentanone	(2)	5.489	43	213612	37.966
91)$Toluene-d8	(3)	5.568	98	1176681	49.986
91)$Toluene-d8	(3)	5.568	100	765504	50.112
92) Toluene	(3)	5.641	92	363899	20.842
93) trans-1,3-Dichloropropene	(3)	5.909	75	176524	21.107
94) 1,3-Dichloropropene (total)	(3)		100	380592	42.294
95) Ethyl Methacrylate	(3)	6.055	69	169601M	20.891
96) 1,1,2-Trichloroethane	(3)	6.091	97	116469	20.556
98) Tetrachloroethene	(3)	6.225	166	207015	21.646

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i14.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:22 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
99) 1,3-Dichloropropane	(3)	6.268	76	189813	20.806
101) 2-Hexanone	(3)	6.408	43	149251	36.354
103) Dibromochloromethane	(3)	6.511	129	135862	20.813
104) 1,2-Dibromoethane	(3)	6.608	107	122496	20.927
105)*Chlorobenzene-d5	(3)	7.144	117	912072	50.000
107) Chlorobenzene	(3)	7.174	112	420425	20.624
106) 1-Chlorohexane	(3)	7.205	91	183176	21.114
108) 1,1,1,2-Tetrachloroethane	(3)	7.278	131	143640	20.780
109) Ethylbenzene	(3)	7.320	91	689604	21.000
110) m+p-Xylene	(3)	7.448	106	568364	42.415
111) o-Xylene	(3)	7.831	106	282697	21.103
113) Styrene	(3)	7.849	104	461574M	20.900
112) Xylene (Total)	(3)		106	851061	63.518
114) Bromoform	(3)	7.995	173	82674	20.324
115) Isopropylbenzene	(3)	8.178	105	720830	21.347
118) Cyclohexanone	(1)	8.233	55	140336	536.326
119)$4-Bromofluorobenzene	(3)	8.300	95	429577	50.094
119)$4-Bromofluorobenzene	(3)	8.300	174	394370	49.963
121) Bromobenzene	(4)	8.409	156	193012	20.054
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	150280	20.451
123) 1,2,3-Trichloropropane	(4)	8.470	110	45055	20.679
122) trans-1,4-Dichloro-2-butene	(4)	8.500	53	188841	104.728
124) n-Propylbenzene	(4)	8.531	91	805945	21.180
126) 2-Chlorotoluene	(4)	8.586	126	178682	20.012
130) 4-Chlorotoluene	(4)	8.677	126	184030	20.343
129) 1,3,5-Trimethylbenzene	(4)	8.689	105	622418	21.146
133) tert-Butylbenzene	(4)	8.938	134	143583	20.765
134) Pentachloroethane	(4)	8.938	167	82330	19.912
135) 1,2,4-Trimethylbenzene	(4)	8.981	105	642194	20.922
136) sec-Butylbenzene	(4)	9.109	105	795561	21.231
138) 1,3-Dichlorobenzene	(4)	9.176	146	366465	20.288
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	525313	50.000
139) p-Isopropyltoluene	(4)	9.230	119	705621	21.013
141) 1,4-Dichlorobenzene	(4)	9.243	146	380980	20.230
142) 1,2,3-Trimethylbenzene	(4)	9.291	105	699542	21.142
143) Benzyl Chloride	(4)	9.358	126	52288	21.304
144) 1,3-Diethylbenzene	(4)	9.456	119	440648	21.226
145) 1,4-Diethylbenzene	(4)	9.516	119	463361	21.507

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i14.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:22 Analyst ID: scn10072

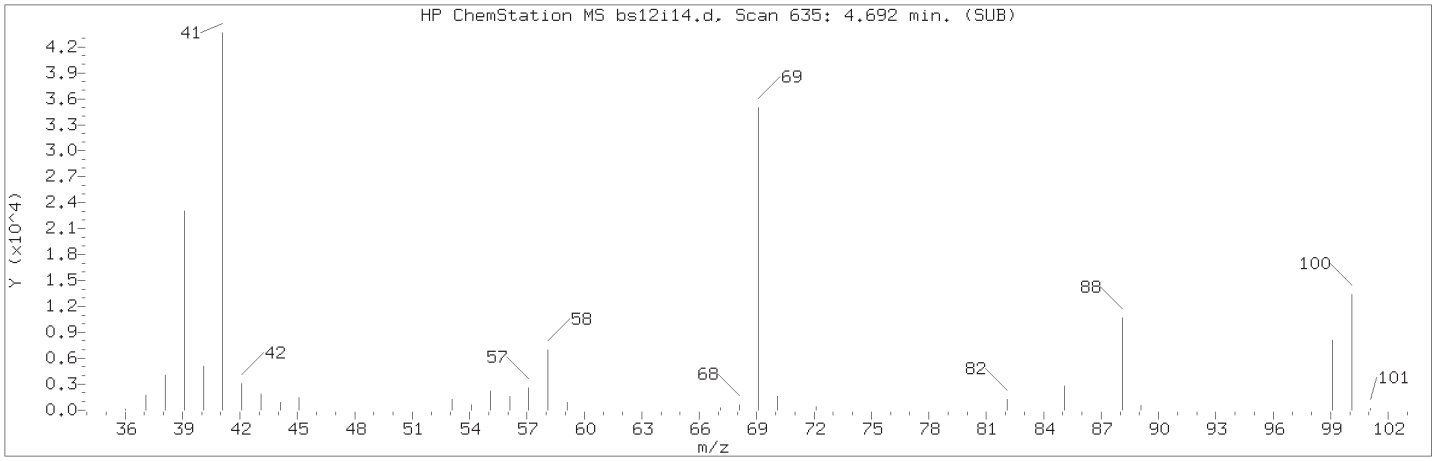
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD020 Lab Sample ID: VSTD020

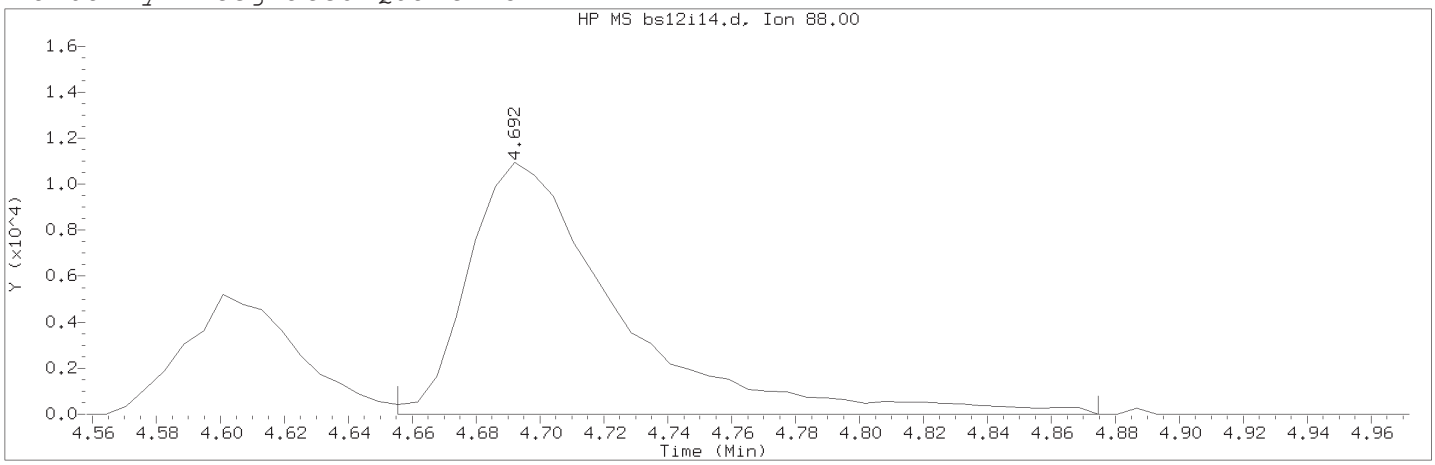
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2-Dichlorobenzene	(4)	9.516	146	364466	20.638
146) n-Butylbenzene	(4)	9.529	92	331426	21.243
148) 1,2-Diethylbenzene	(4)	9.595	119	380864	20.971
149) Diethylbenzene (total)	(4)		100	1284873	63.704
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	26721	20.929
152) 1,3,5-Trichlorobenzene	(4)	10.216	180	284034	20.556
153) 1,2,4-Trichlorobenzene	(4)	10.630	180	266257	20.445
154) Hexachlorobutadiene	(4)	10.745	225	126479	21.287
155) Naphthalene	(4)	10.782	128	641966	20.752
156) 1,2,3-Trichlorobenzene	(4)	10.940	180	258033	20.778
157) 2-Methylnaphthalene	(4)	11.506	142	445804	21.305

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i14.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:22 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD020 Lab Sample ID: VSTD020

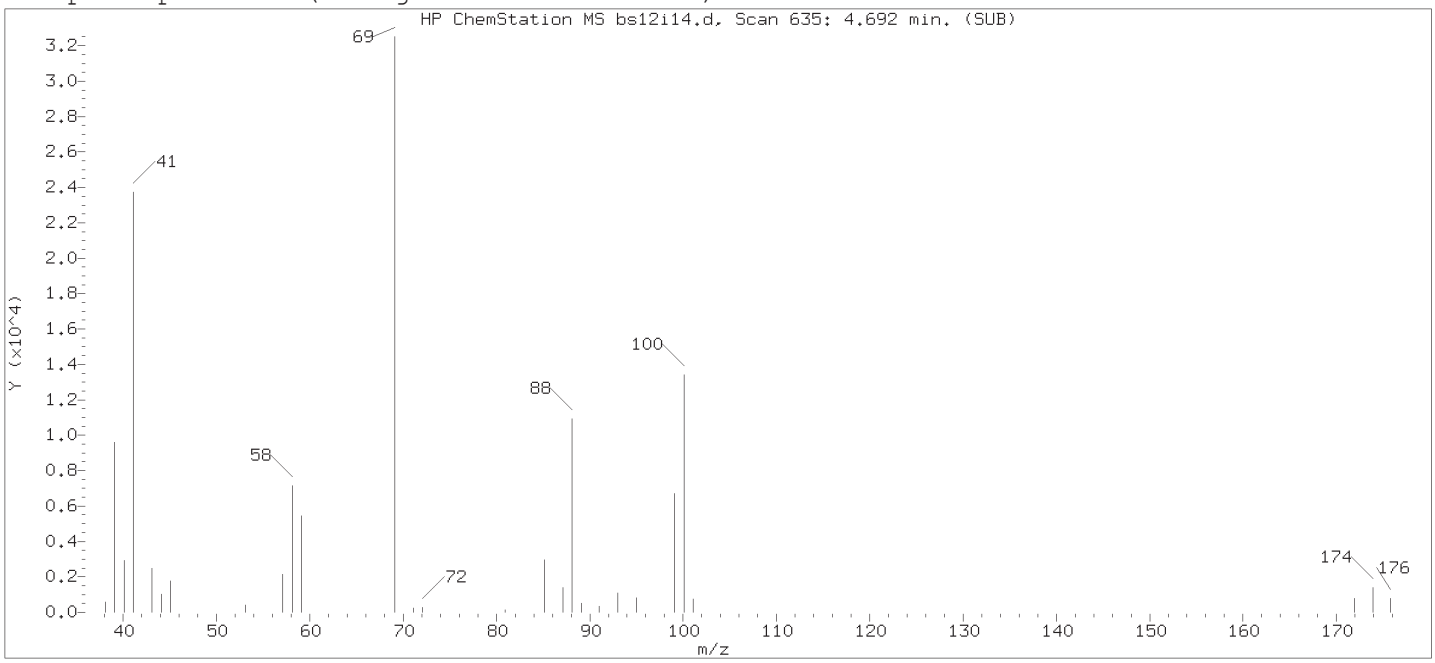
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area (flag) : 35590M
On-Column Amount (ng) : 492.2018
Integration start scan : 628 Integration stop scan: 664
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

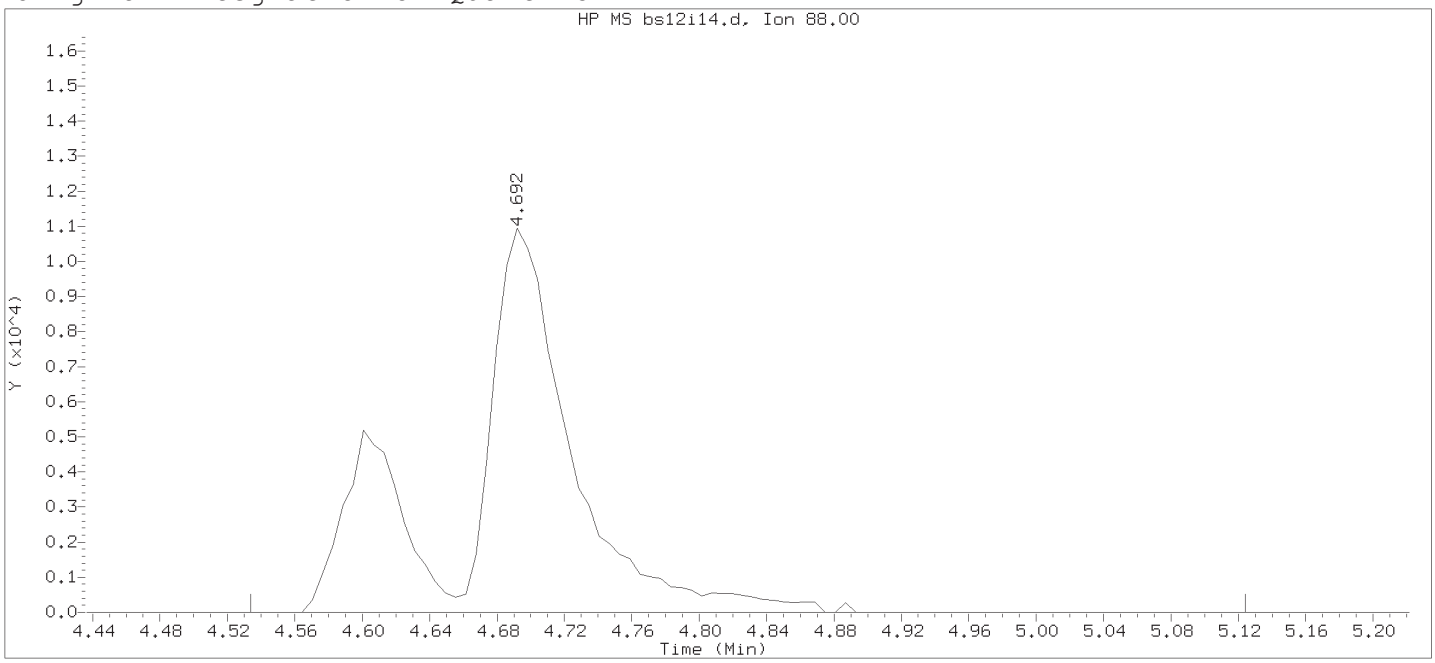
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i14.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:22 Analyst ID: scn10072

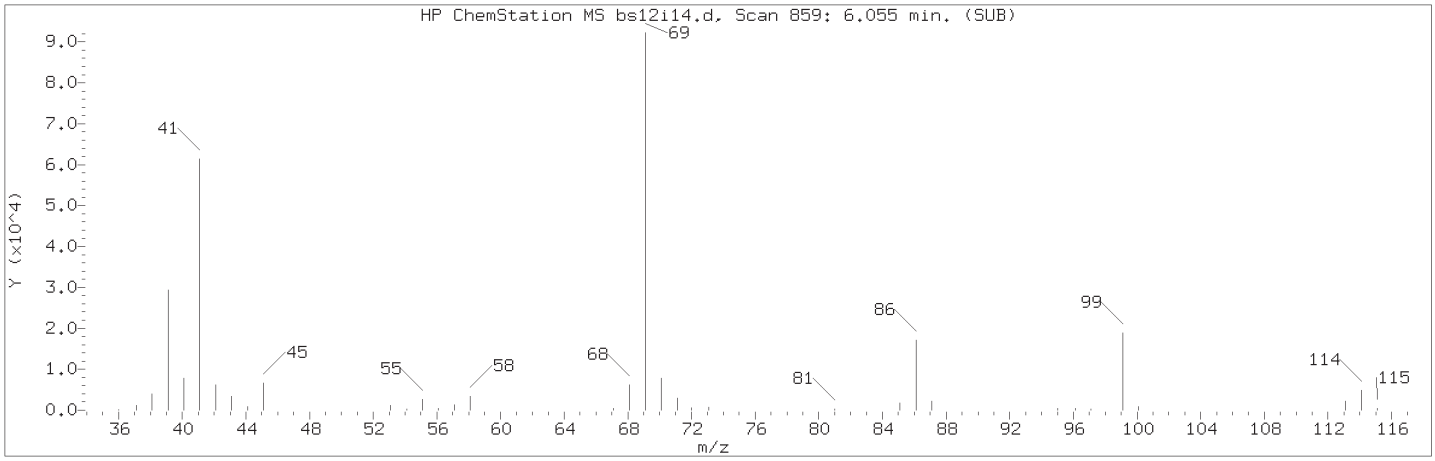
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 14:37
Date, time and analyst ID of latest file update: 12-Sep-2018 14:37 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

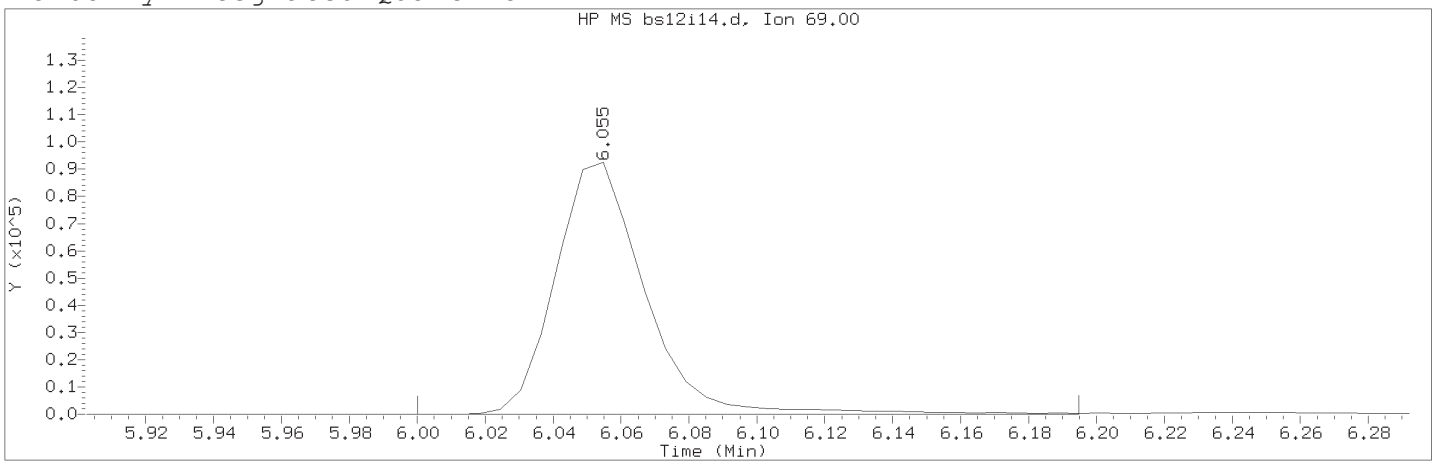
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area : 48561
On-column Amount (ng) : 484.2561
Integration start scan : 608 Integration stop scan: 705
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i14.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:22 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD020 Lab Sample ID: VSTD020

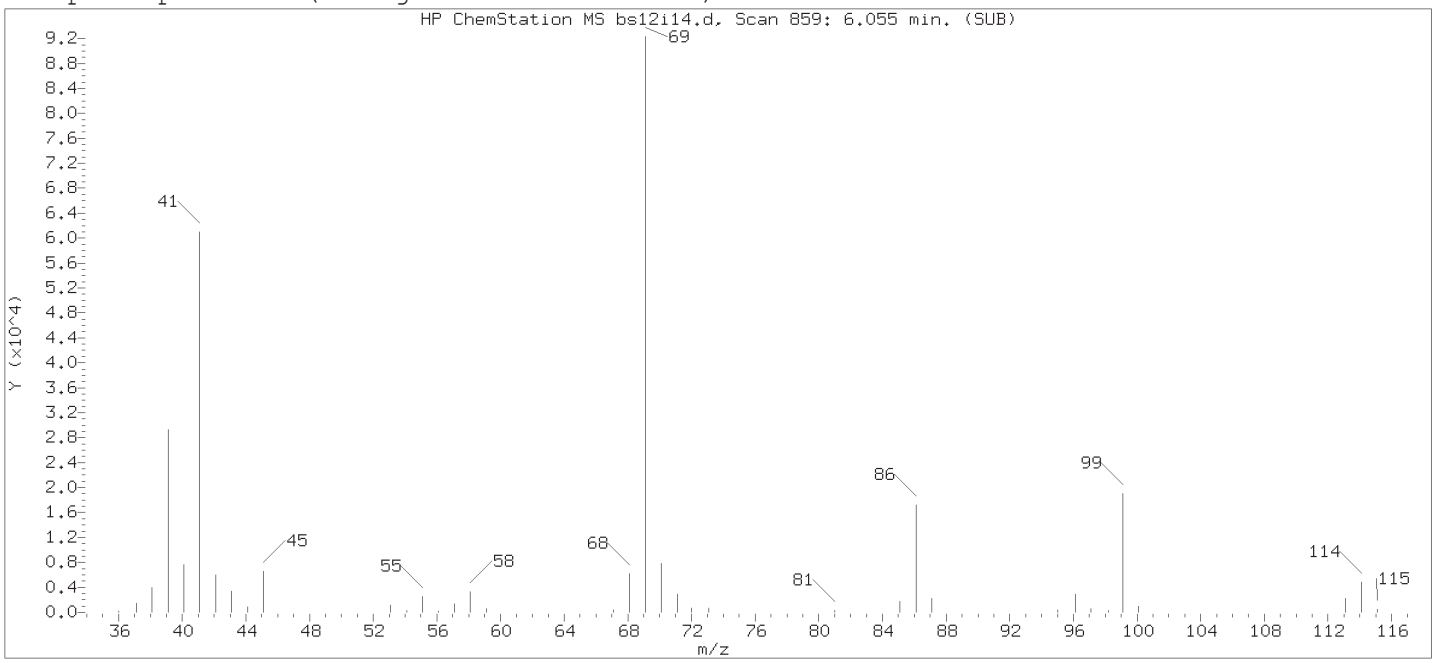
Compound Number : 95
Compound Name : Ethyl Methacrylate
Scan Number : 859
Retention Time (minutes): 6.055
Quant Ion : 69.00
Area (flag) : 169601M
On-Column Amount (ng) : 20.8908
Integration start scan : 849 Integration stop scan: 881
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

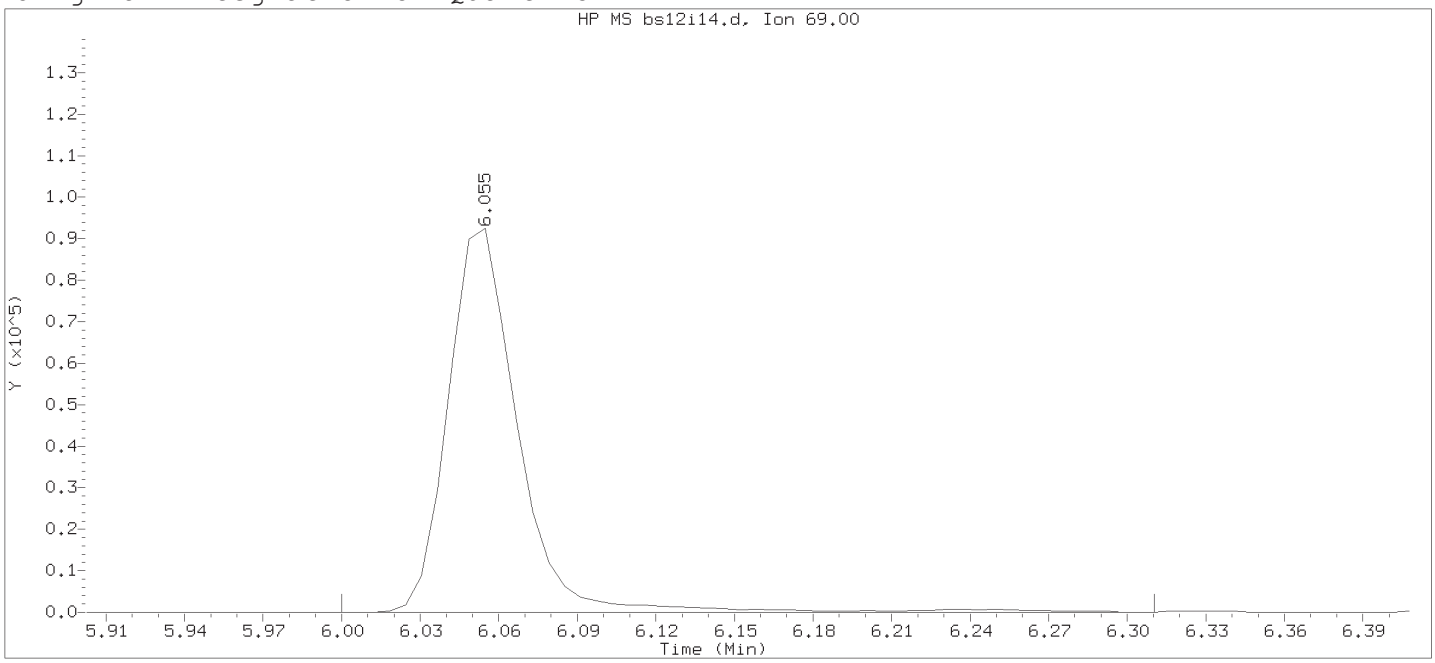
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i14.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:22 Analyst ID: scn10072

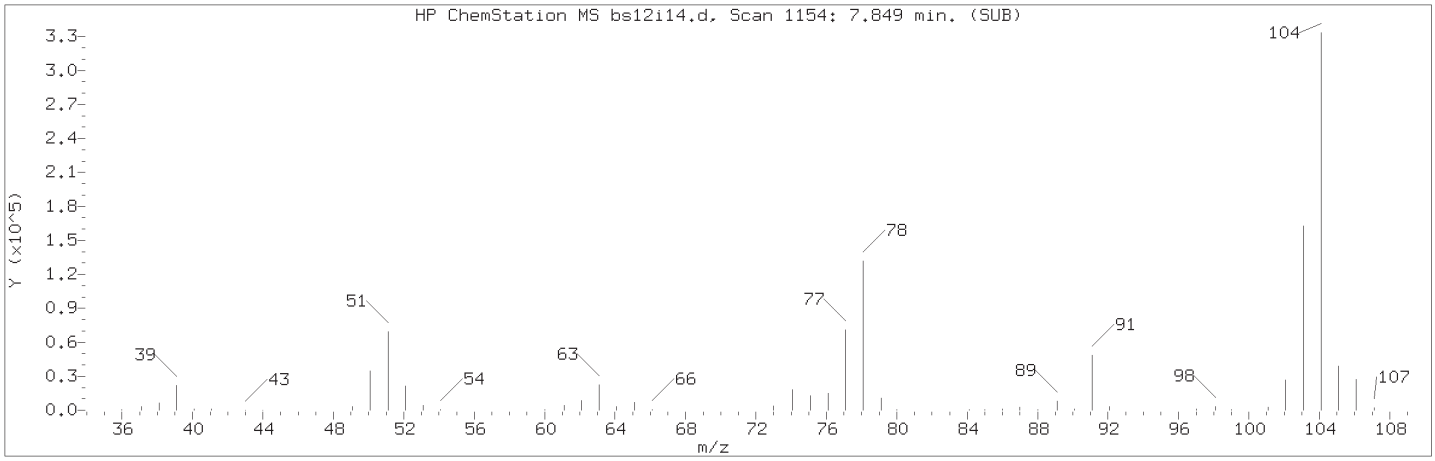
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 14:37
Date, time and analyst ID of latest file update: 12-Sep-2018 14:37 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

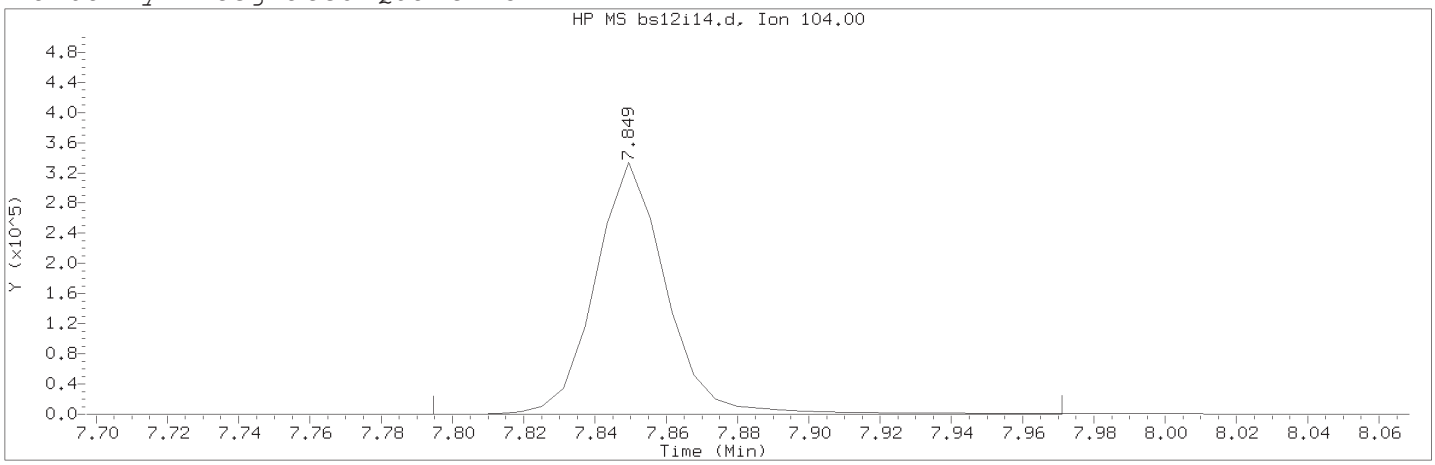
Compound Number	: 95		
Compound Name	: Ethyl Methacrylate		
Scan Number	: 859		
Retention Time (minutes)	: 6.055		
Quant Ion	: 69.00		
Area	: 172211		
On-column Amount (ng)	: 21.9821		
Integration start scan	: 849	Integration stop scan:	900
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i14.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:22 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD020 Lab Sample ID: VSTD020

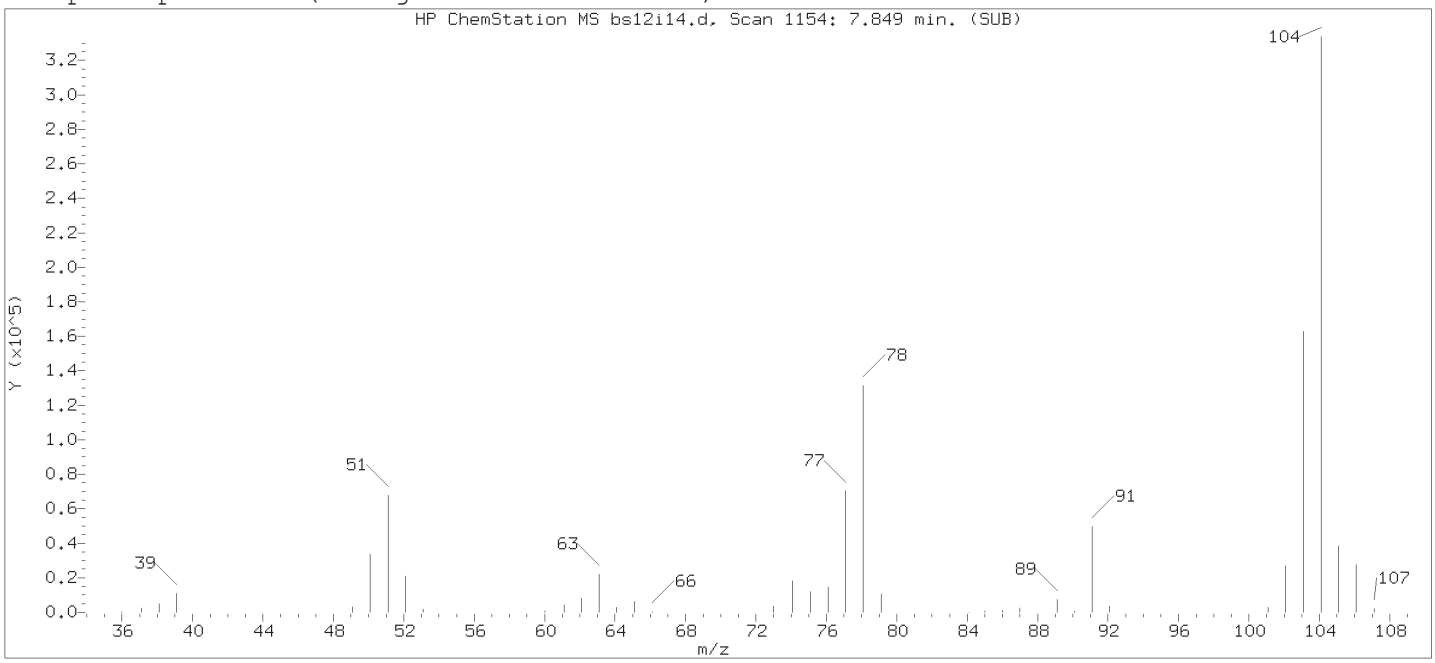
Compound Number : 113
Compound Name : Styrene
Scan Number : 1154
Retention Time (minutes): 7.849
Quant Ion : 104.00
Area (flag) : 461574M
On-Column Amount (ng) : 20.9004
Integration start scan : 1144 Integration stop scan: 1173
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

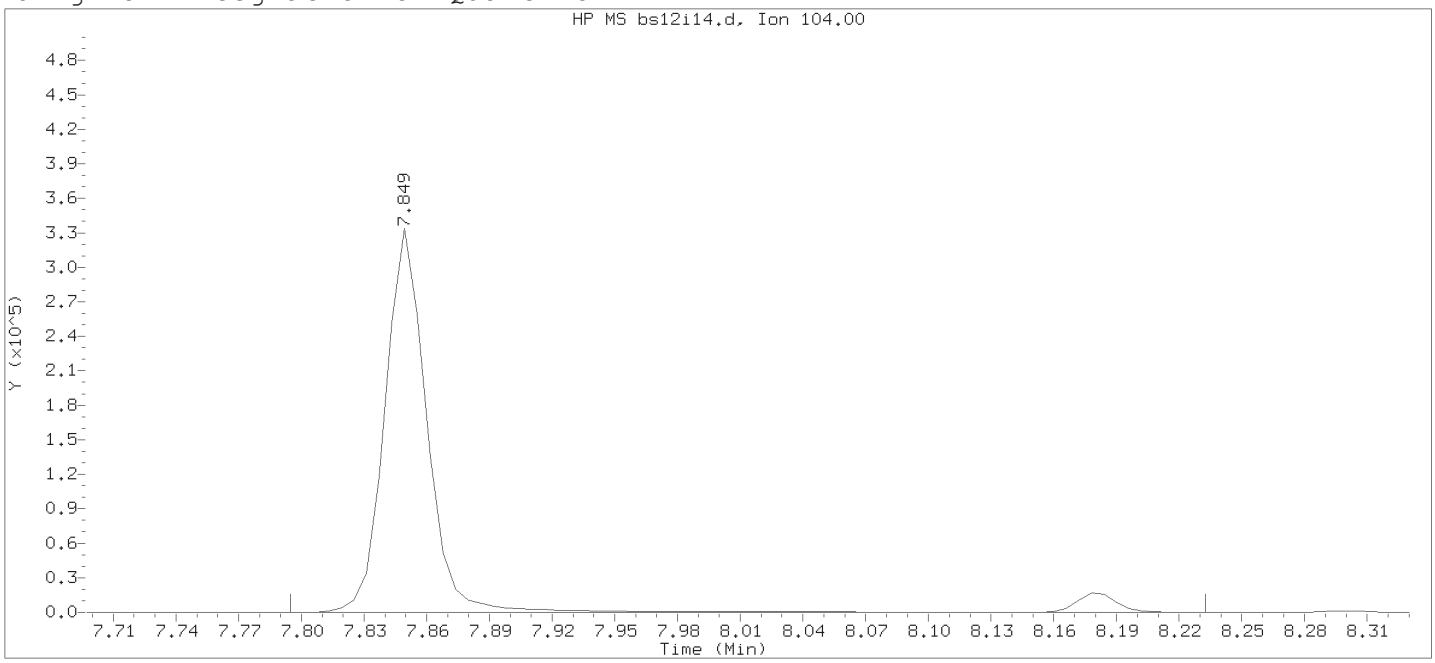
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



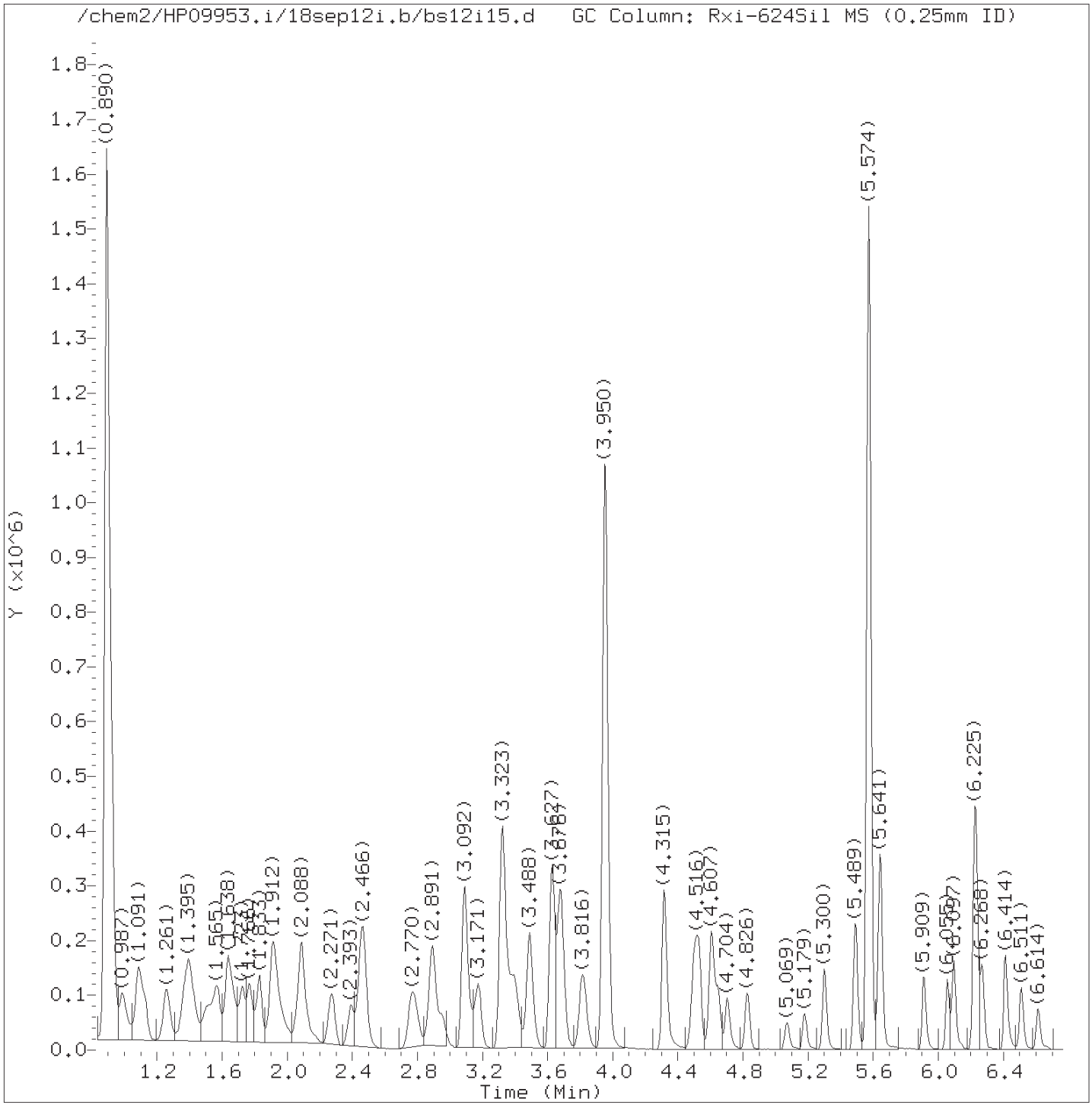
Data File: /chem2/HP09953.i/18sep12i.b/bs12i14.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:22 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 14:37
Date, time and analyst ID of latest file update: 12-Sep-2018 14:37 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 113		
Compound Name	: Styrene		
Scan Number	: 1154		
Retention Time (minutes)	: 7.849		
Quant Ion	: 104.00		
Area	: 485521		
On-column Amount (ng)	: 23.6331		
Integration start scan	: 1144	Integration stop scan:	1216
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe



Total Ion Chromatogram (TIC)

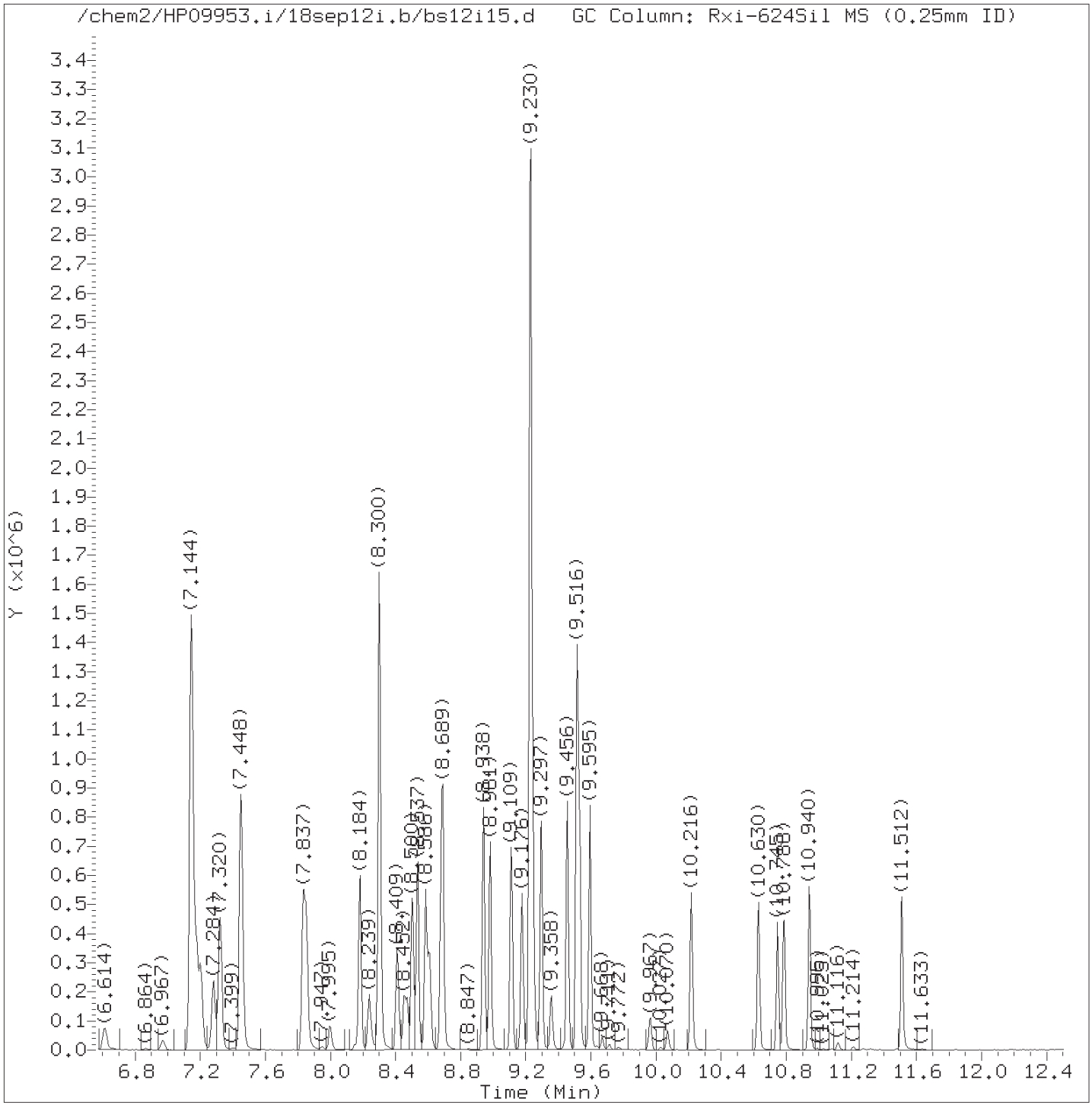
Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.993	85	119322	11.546
4) Chloromethane	(2)	1.078	50	115062	10.802
5) Vinyl Chloride	(2)	1.127	62	90910	10.952
9) Bromomethane	(2)	1.255	94	83885	11.355
10) Chloroethane	(2)	1.273	64	51424	11.517
11) Dichlorofluoromethane	(2)	1.377	67	117365	10.869
13) Trichlorofluoromethane	(2)	1.419	101	128504	11.246
15) Ethanol	(1)	1.450	45	53616	992.307
17) Freon 123a	(2)	1.516	67	76561	10.008
18) Acrolein	(1)	1.571	56	113894	113.837
19) 1,1-Dichloroethene	(2)	1.632	96	59587	10.377
20) Acetone	(1)	1.650	58	15283	27.520
22) Freon 113	(2)	1.656	101	59729	10.375
23) 2-Propanol	(1)	1.723	45	42075	105.162
24) Methyl Iodide	(2)	1.723	142	142452	10.318
25) Carbon Disulfide	(2)	1.772	76	238128	10.364
27) Methyl Acetate	(2)	1.833	43	29501	10.019
29) Allyl Chloride	(2)	1.833	41	76780	9.996
31) Methylene Chloride	(2)	1.912	84	69443	10.234
30)*t-Butyl alcohol-d10	(1)	1.936	65	103557	250.000
32) t-Butyl alcohol	(1)	1.991	59	57460M	105.630
33) Acrylonitrile	(2)	2.064	53	22595	11.336
35) trans-1,2-Dichloroethene	(2)	2.088	96	68522	10.262
34) Methyl Tertiary Butyl Ether	(2)	2.094	73	164051	10.044
38) n-Hexane	(2)	2.271	57	81732	10.723
40) 1,1-Dichloroethane	(2)	2.393	63	109700	10.131
41) di-Isopropyl ether	(2)	2.453	45	204279	10.108
42) 2-Chloro-1,3-butadiene	(2)	2.466	53	97100	10.177
43) Ethyl t-butyl ether	(2)	2.776	59	191141	10.043
45) cis-1,2-Dichloroethene	(2)	2.891	96	72426	9.992
47) 2,2-Dichloropropane	(2)	2.904	77	80385	10.184
44) 2-Butanone	(1)	2.904	43	65891	24.749
49) Propionitrile	(1)	2.952	54	69074	96.711
46) 1,2-Dichloroethene (Total)	(2)		96	140948	20.254
51) Methacrylonitrile	(2)	3.086	67	108354	48.646
52) Bromochloromethane	(2)	3.098	128	37958	9.857
53) Tetrahydrofuran	(1)	3.141	71	15830	23.870
54) Chloroform	(2)	3.177	83	109597	9.972

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	3.323	113	283652M	49.727
56)$Dibromofluoromethane	(2)	3.323	111	286968	49.626
57) 1,1,1-Trichloroethane	(2)	3.348	97	113684	10.103
58) Cyclohexane	(2)	3.396	56	108296	10.244
58) Cyclohexane	(2)	3.396	84	95849	9.702
58) Cyclohexane	(2)	3.396	69	33910	10.143
60) 1,1-Dichloropropene	(2)	3.488	75	83462	10.207
61) Carbon Tetrachloride	(2)	3.500	117	86512	10.123
63)$1,2-Dichloroethane-d4	(2)	3.621	102	61931	50.443
63)$1,2-Dichloroethane-d4	(2)	3.627	65	272164	50.408
63)$1,2-Dichloroethane-d4	(2)	3.627	104	39038	49.630
62) Isobutyl Alcohol	(1)	3.652	41	48172	252.050
64) Benzene	(2)	3.676	78	260353	9.973
67) 1,2-Dichloroethane	(2)	3.700	62	73940	9.815
67) 1,2-Dichloroethane	(2)	3.700	98	7441	9.942
68) t-Amyl methyl ether	(2)	3.816	73	173340	9.865
70)*Fluorobenzene	(2)	3.950	96	1144543	50.000
72) n-Heptane	(2)	3.962	43	70656	10.162
75) Trichloroethene	(2)	4.315	95	68176	10.014
73) n-Butanol	(1)	4.321	56	82816	517.476
76) Methylcyclohexane	(2)	4.503	83	106038	10.009
77) 1,2-Dichloropropane	(2)	4.528	63	61580	9.933
81) Dibromomethane	(2)	4.649	93	36857M	9.722
80) 1,4-Dioxane	(1)	4.692	88	16813M	253.500
79) Methyl Methacrylate	(2)	4.704	69	37925	9.491
84) Bromodichloromethane	(2)	4.826	83	75420	9.742
85) 2-Nitropropane	(1)	5.069	41	35957	26.252
87) 2-Chloroethyl Vinyl Ether	(2)	5.179	63	32665	10.007
89) cis-1,3-Dichloropropene	(2)	5.300	75	91178	9.753
90) 4-Methyl-2-pentanone	(2)	5.489	43	168523	30.634
91)$Toluene-d8	(3)	5.574	98	1148103	50.049
91)$Toluene-d8	(3)	5.574	100	742543	49.882
92) Toluene	(3)	5.641	92	170428	10.017
93) trans-1,3-Dichloropropene	(3)	5.915	75	78349	9.613
94) 1,3-Dichloropropene (total)	(3)		100	169527	19.367
95) Ethyl Methacrylate	(3)	6.055	69	74650	9.436
96) 1,1,2-Trichloroethane	(3)	6.097	97	53140	9.624
98) Tetrachloroethene	(3)	6.225	166	112906	12.115

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
99) 1,3-Dichloropropane	(3)	6.274	76	87303	9.820
101) 2-Hexanone	(3)	6.414	43	132933	33.239
103) Dibromochloromethane	(3)	6.511	129	60057	9.441
104) 1,2-Dibromoethane	(3)	6.614	107	55427	9.717
105)*Chlorobenzene-d5	(3)	7.144	117	888796	50.000
107) Chlorobenzene	(3)	7.174	112	197832	9.959
106) 1-Chlorohexane	(3)	7.205	91	85393	10.101
108) 1,1,1,2-Tetrachloroethane	(3)	7.284	131	64523	9.579
109) Ethylbenzene	(3)	7.320	91	322276	10.071
110) m+p-Xylene	(3)	7.448	106	262885	20.132
111) o-Xylene	(3)	7.831	106	129124	9.891
113) Styrene	(3)	7.849	104	212604	9.879
112) Xylene (Total)	(3)		106	392009	30.023
114) Bromoform	(3)	7.995	173	34523	8.709
115) Isopropylbenzene	(3)	8.184	105	331007	10.059
118) Cyclohexanone	(1)	8.239	55	67734	282.218
119)$4-Bromofluorobenzene	(3)	8.300	95	413507	49.482
119)$4-Bromofluorobenzene	(3)	8.300	174	385320	50.095
121) Bromobenzene	(4)	8.409	156	89488	9.765
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	64745	9.254
123) 1,2,3-Trichloropropane	(4)	8.470	110	19254M	9.281
122) trans-1,4-Dichloro-2-butene	(4)	8.500	53	87133	50.751
124) n-Propylbenzene	(4)	8.537	91	369937	10.210
126) 2-Chlorotoluene	(4)	8.586	126	84957	9.993
130) 4-Chlorotoluene	(4)	8.677	126	85954	9.979
129) 1,3,5-Trimethylbenzene	(4)	8.689	105	284579	10.154
133) tert-Butylbenzene	(4)	8.938	134	64945	9.864
134) Pentachloroethane	(4)	8.944	167	22237	5.648
135) 1,2,4-Trimethylbenzene	(4)	8.981	105	293039	10.027
136) sec-Butylbenzene	(4)	9.109	105	366051M	10.259
138) 1,3-Dichlorobenzene	(4)	9.176	146	166746	9.695
139) p-Isopropyltoluene	(4)	9.230	119	325696	10.186
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	500174	50.000
141) 1,4-Dichlorobenzene	(4)	9.243	146	177166	9.880
142) 1,2,3-Trimethylbenzene	(4)	9.297	105	316109	10.034
143) Benzyl Chloride	(4)	9.358	126	20881	8.935
144) 1,3-Diethylbenzene	(4)	9.456	119	195519	9.892
145) 1,4-Diethylbenzene	(4)	9.516	119	207470	10.114

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

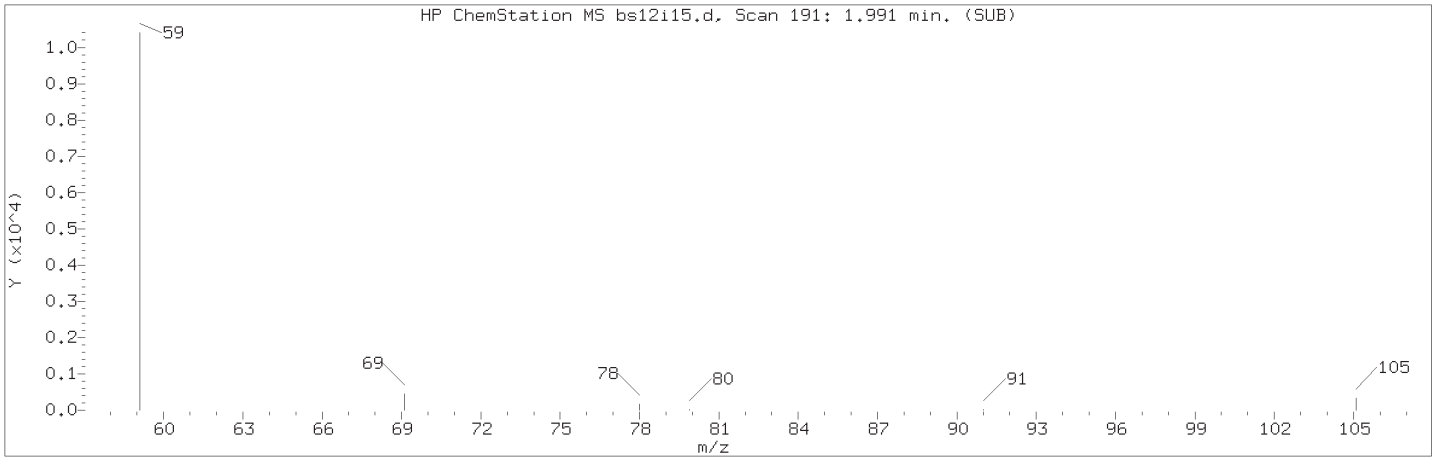
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

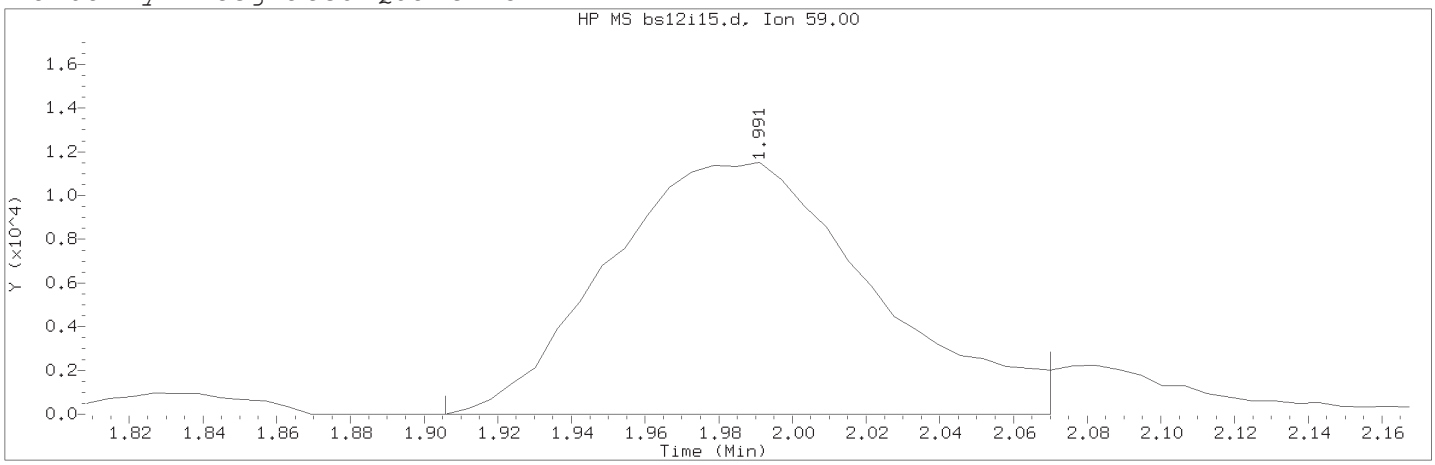
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2-Dichlorobenzene	(4)	9.516	146	166420	9.897
146) n-Butylbenzene	(4)	9.529	92	150316	10.119
148) 1,2-Diethylbenzene	(4)	9.595	119	171481	9.917
149) Diethylbenzene (total)	(4)		100	574470	29.922
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	10916	8.980
152) 1,3,5-Trichlorobenzene	(4)	10.216	180	125262	9.521
153) 1,2,4-Trichlorobenzene	(4)	10.630	180	117020	9.437
154) Hexachlorobutadiene	(4)	10.745	225	54074	9.558
155) Naphthalene	(4)	10.788	128	276196	9.377
156) 1,2,3-Trichlorobenzene	(4)	10.940	180	113397	9.590
157) 2-Methylnaphthalene	(4)	11.512	142	195624	9.819

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

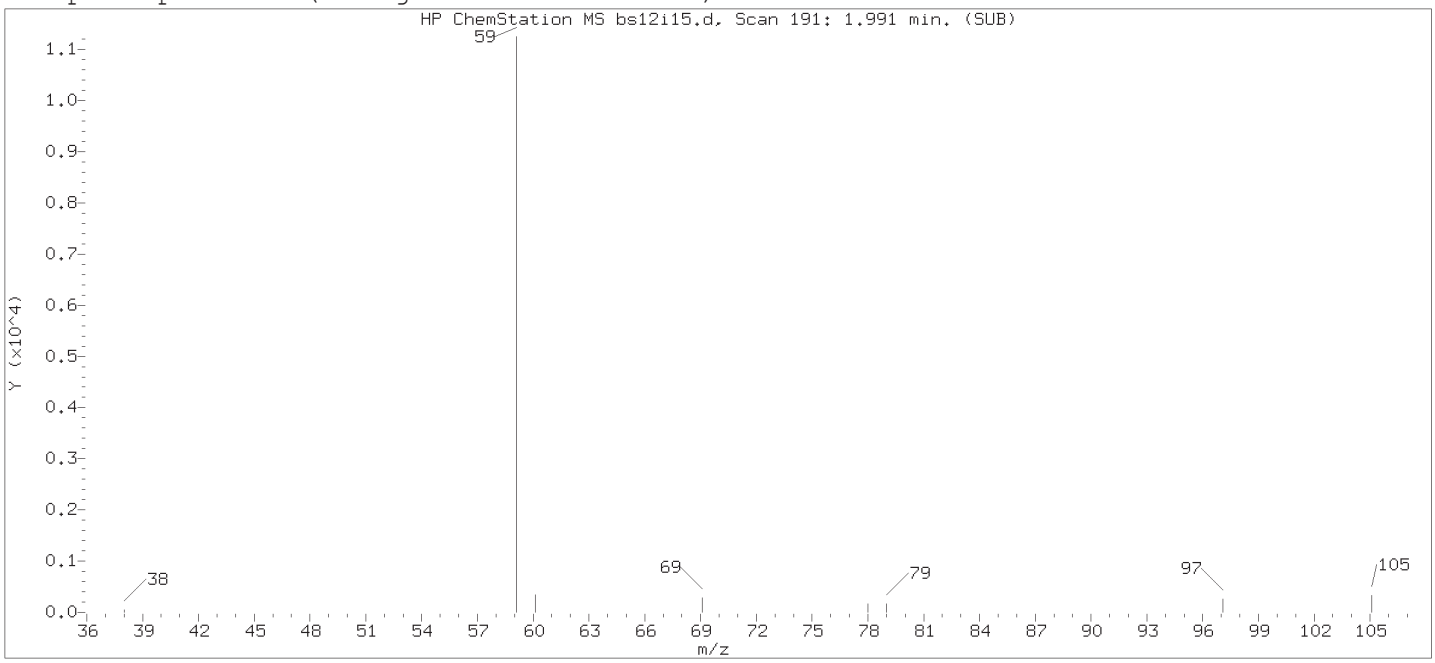
Compound Number : 32
Compound Name : t-Butyl alcohol
Scan Number : 191
Retention Time (minutes): 1.991
Quant Ion : 59.00
Area (flag) : 57460M
On-Column Amount (ng) : 105.6296
Integration start scan : 176 Integration stop scan: 203
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

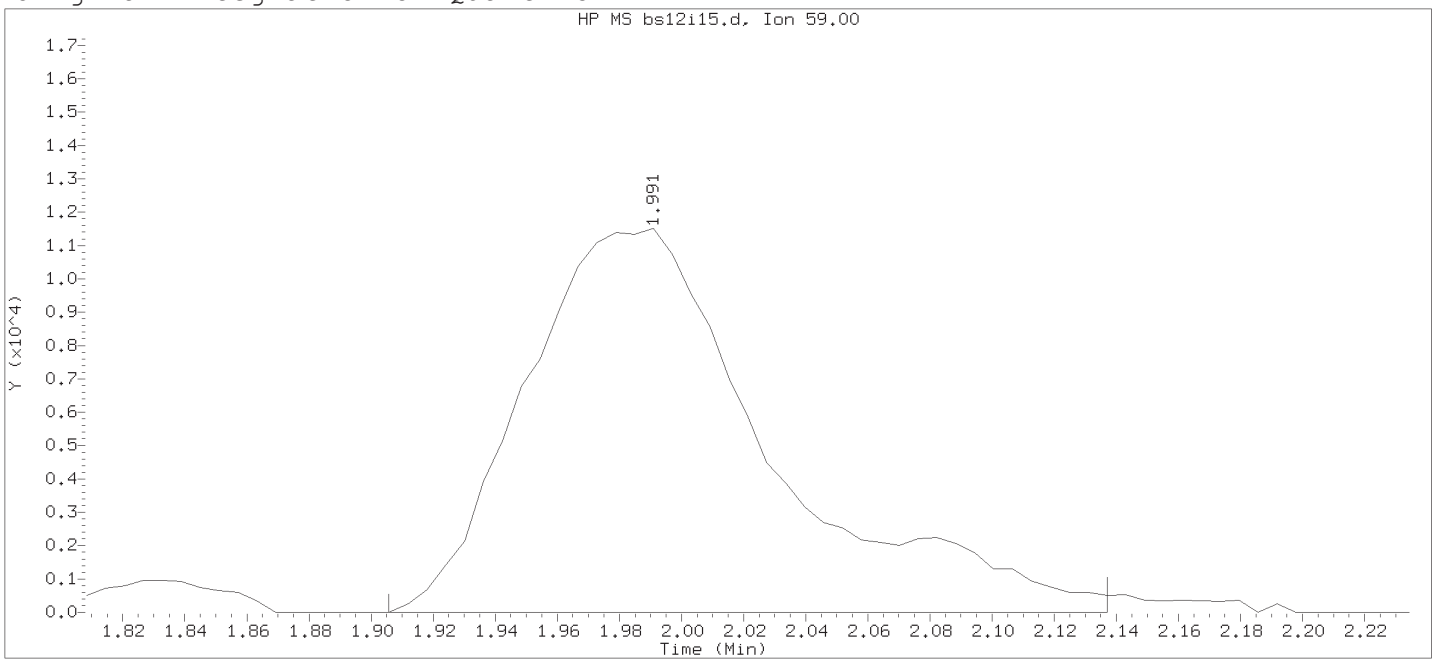
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

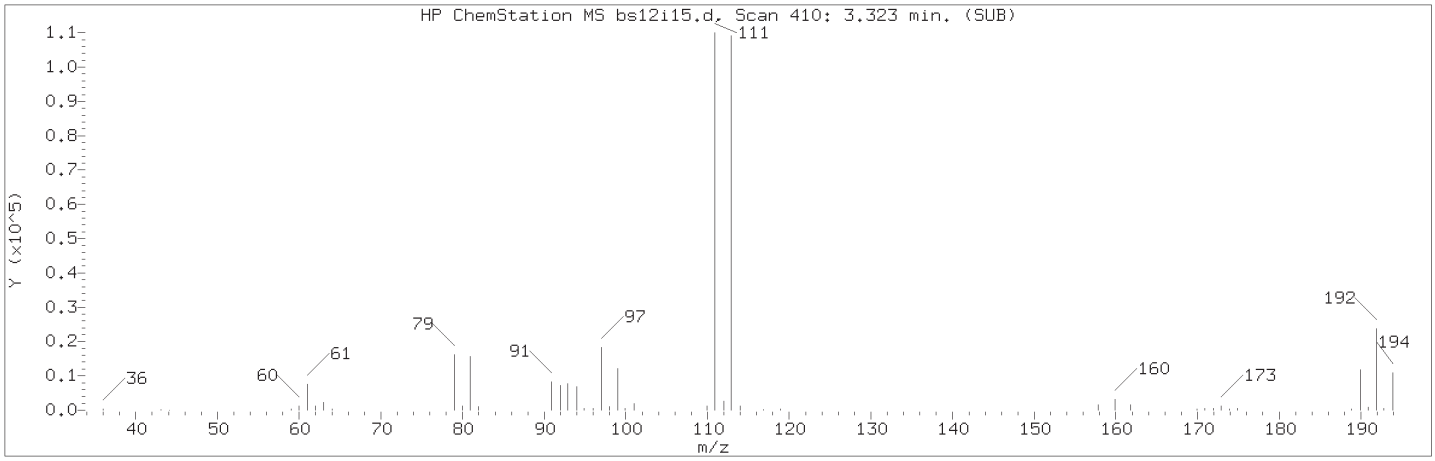
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:00
Date, time and analyst ID of latest file update: 12-Sep-2018 15:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

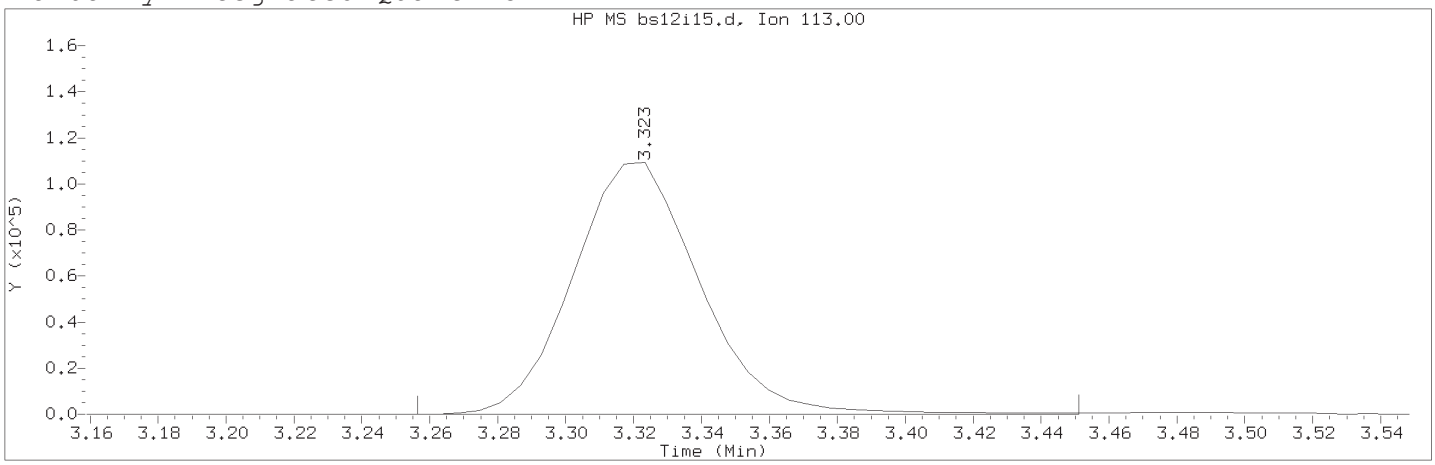
Compound Number : 32
Compound Name : t-Butyl alcohol
Scan Number : 191
Retention Time (minutes): 1.991
Quant Ion : 59.00
Area : 62591
On-column Amount (ng) : 117.1464
Integration start scan : 176 Integration stop scan: 214
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

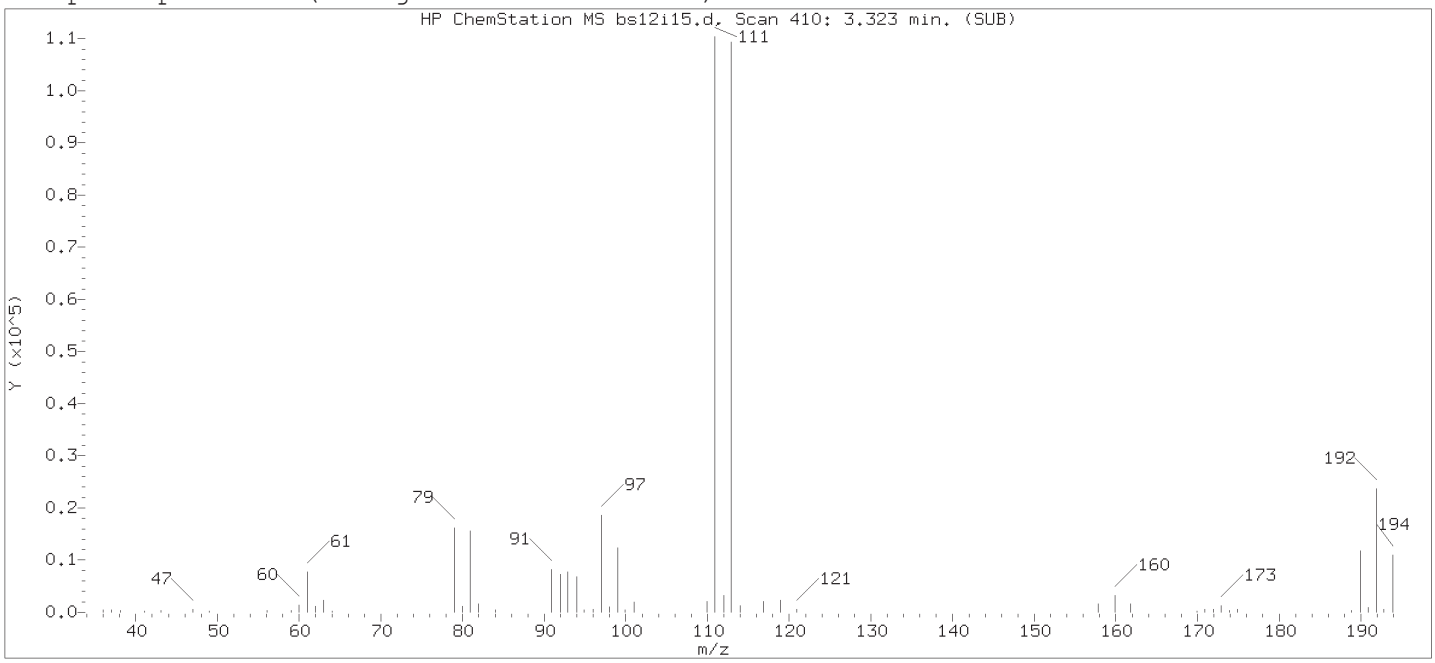
Compound Number : 56
Compound Name : Dibromofluoromethane
Scan Number : 410
Retention Time (minutes): 3.323
Quant Ion : 113.00
Area (flag) : 283652M
On-Column Amount (ng) : 49.7269
Integration start scan : 398 Integration stop scan: 430
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

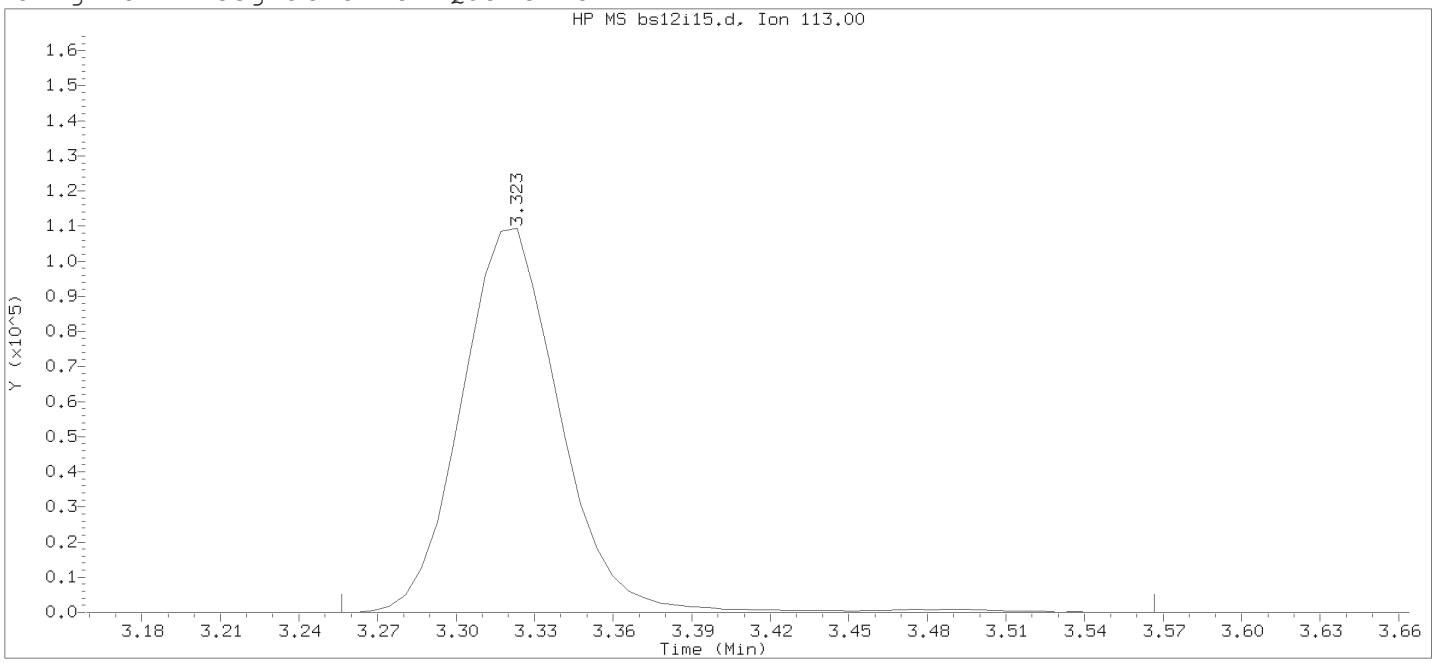
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

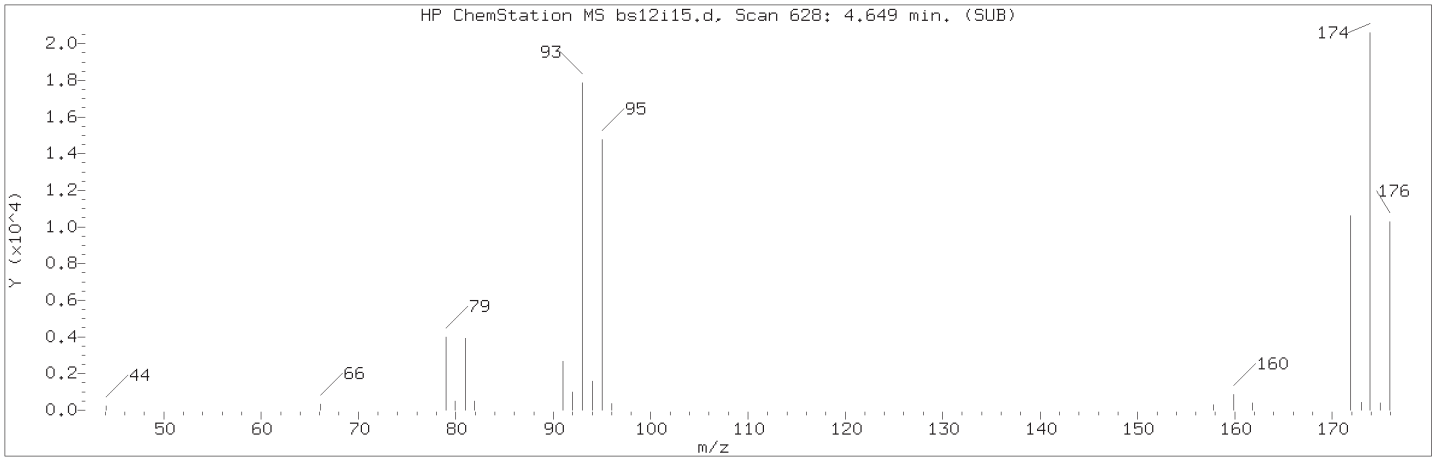
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:00
Date, time and analyst ID of latest file update: 12-Sep-2018 15:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

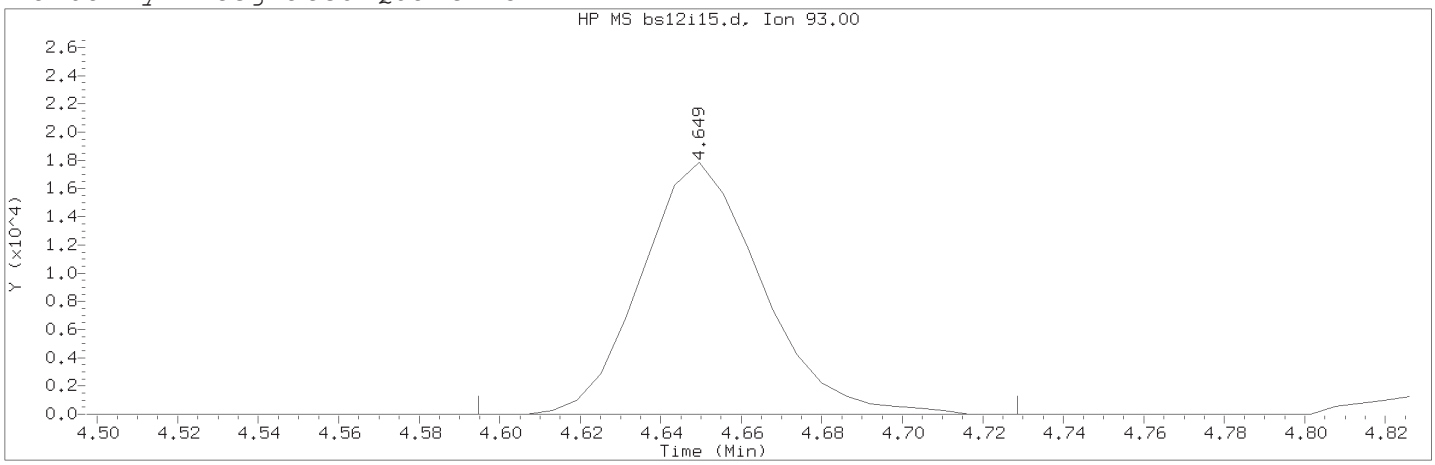
Compound Number	: 56		
Compound Name	: Dibromofluoromethane		
Scan Number	: 410		
Retention Time (minutes)	: 3.323		
Quant Ion	: 113.00		
Area	: 286341		
On-column Amount (ng)	: 50.2629		
Integration start scan	: 398	Integration stop scan:	449
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

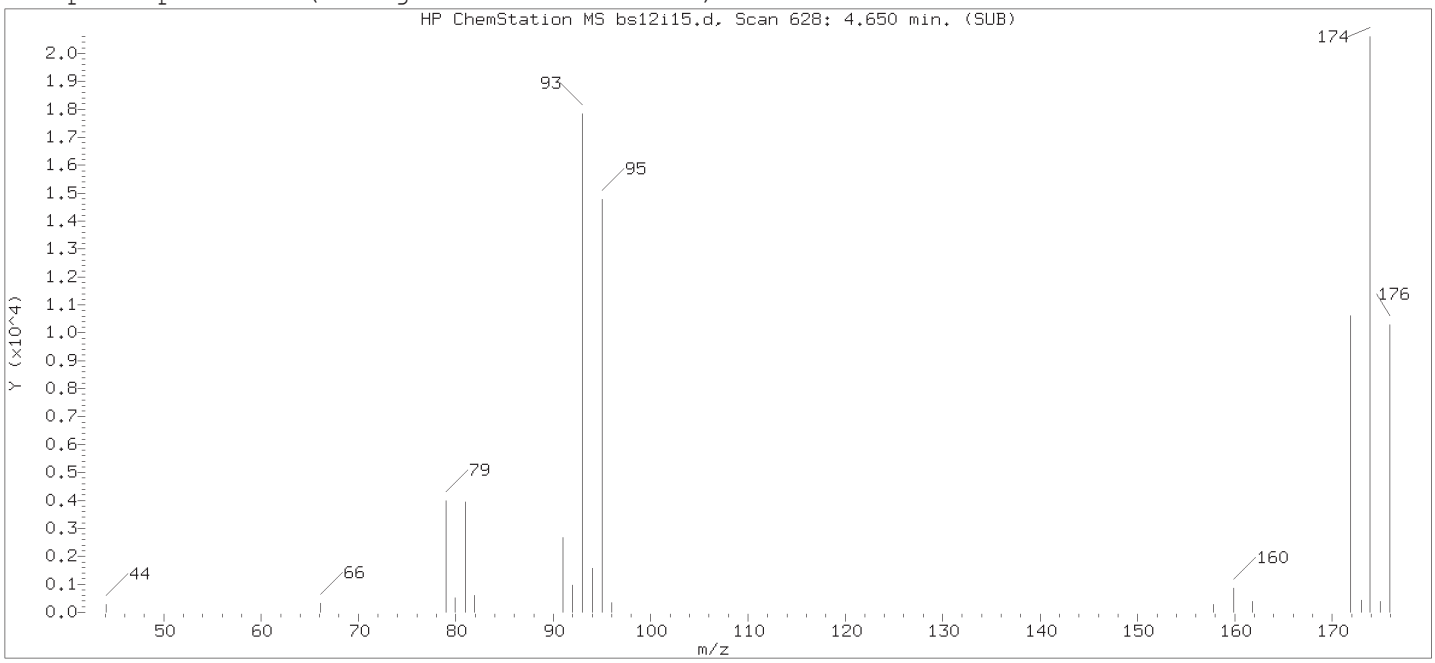
Compound Number : 81
Compound Name : Dibromomethane
Scan Number : 628
Retention Time (minutes): 4.649
Quant Ion : 93.00
Area (flag) : 36857M
On-Column Amount (ng) : 9.7216
Integration start scan : 618 Integration stop scan: 640
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

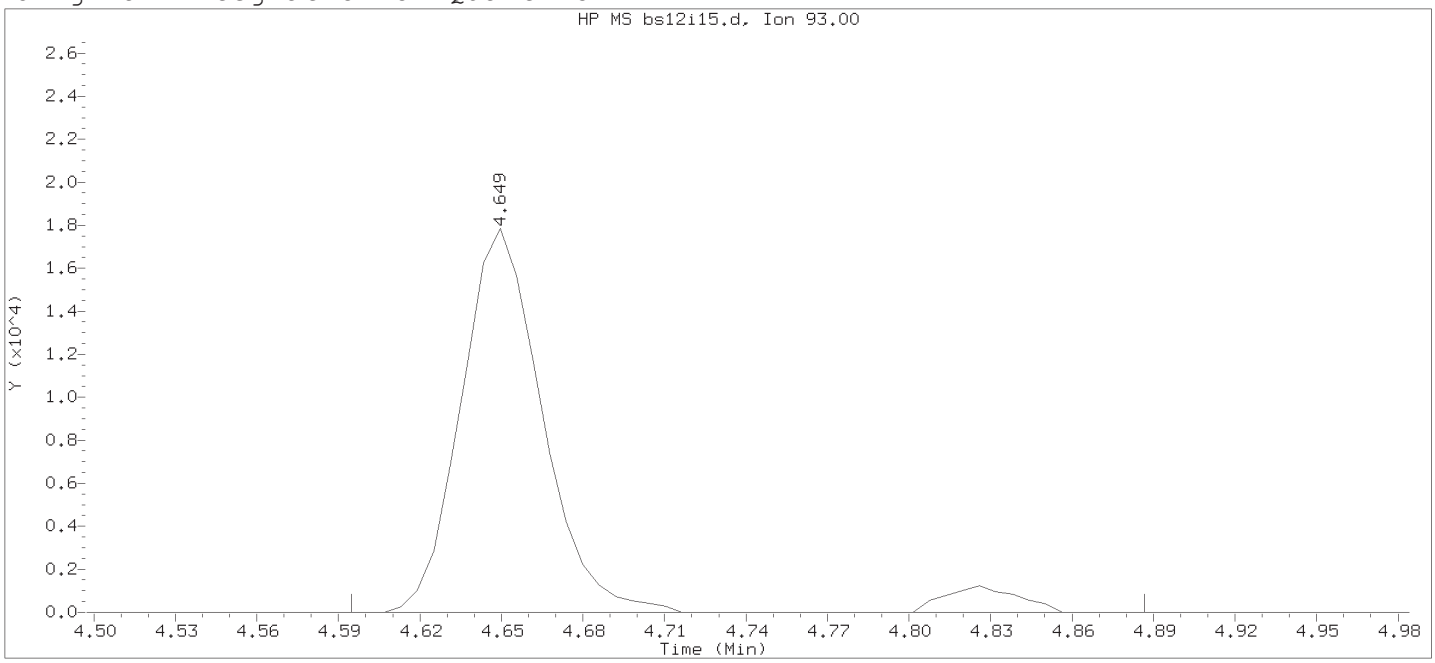
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

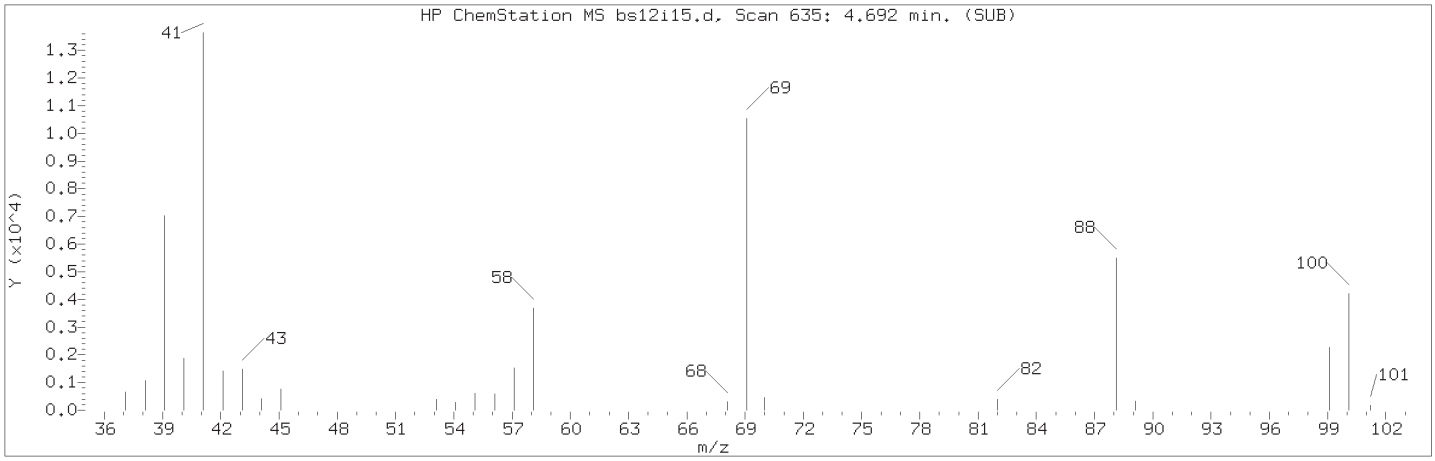
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:00
Date, time and analyst ID of latest file update: 12-Sep-2018 15:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

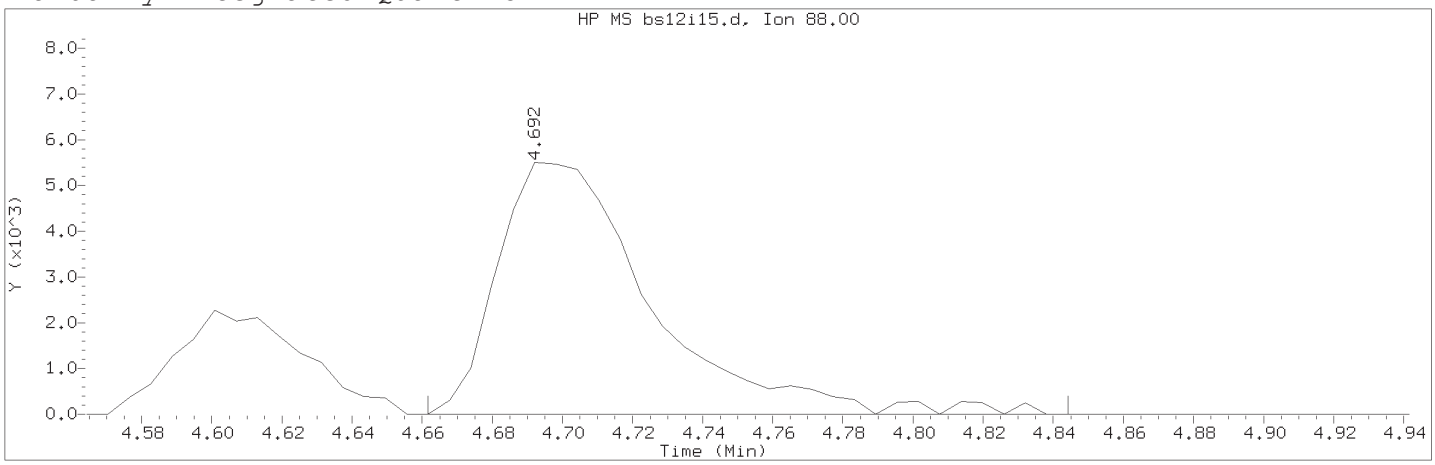
Compound Number : 81
Compound Name : Dibromomethane
Scan Number : 628
Retention Time (minutes): 4.649
Quant Ion : 93.00
Area : 39163
On-column Amount (ng) : 10.5178
Integration start scan : 618 Integration stop scan: 666
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

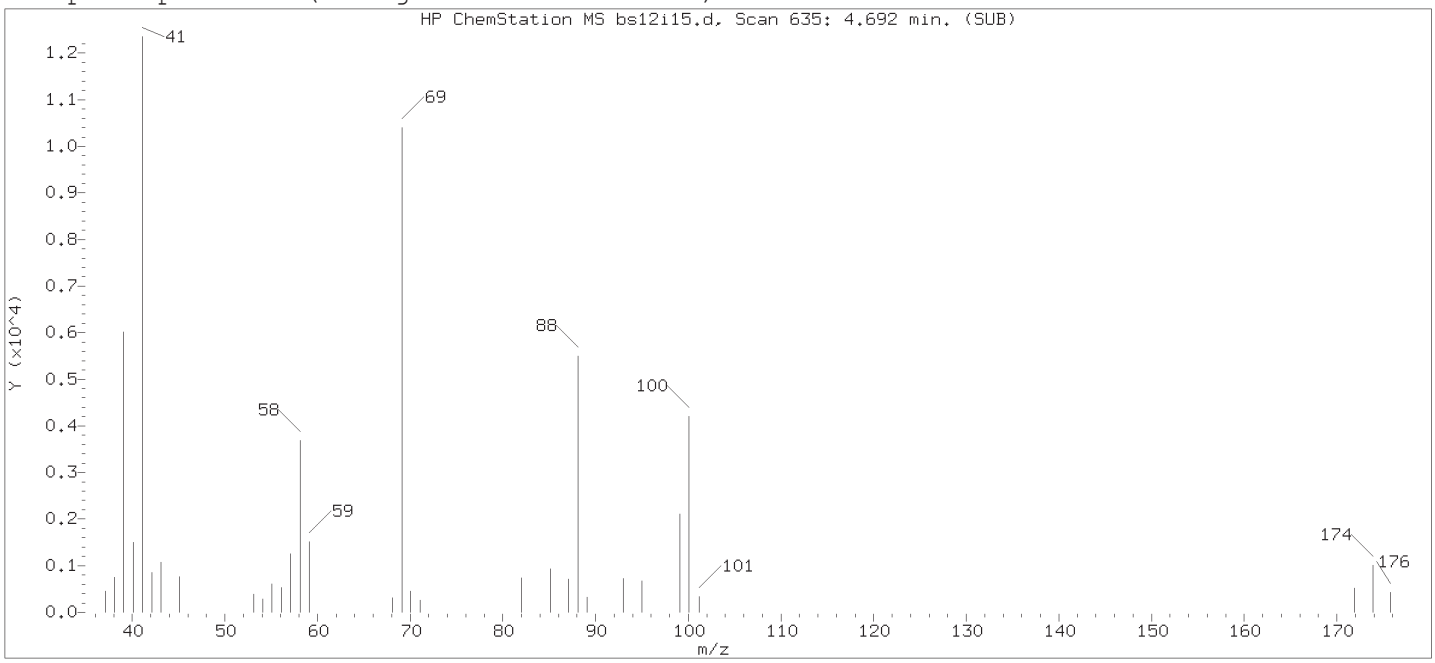
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area (flag) : 16813M
On-Column Amount (ng) : 253.5005
Integration start scan : 629 Integration stop scan: 659
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

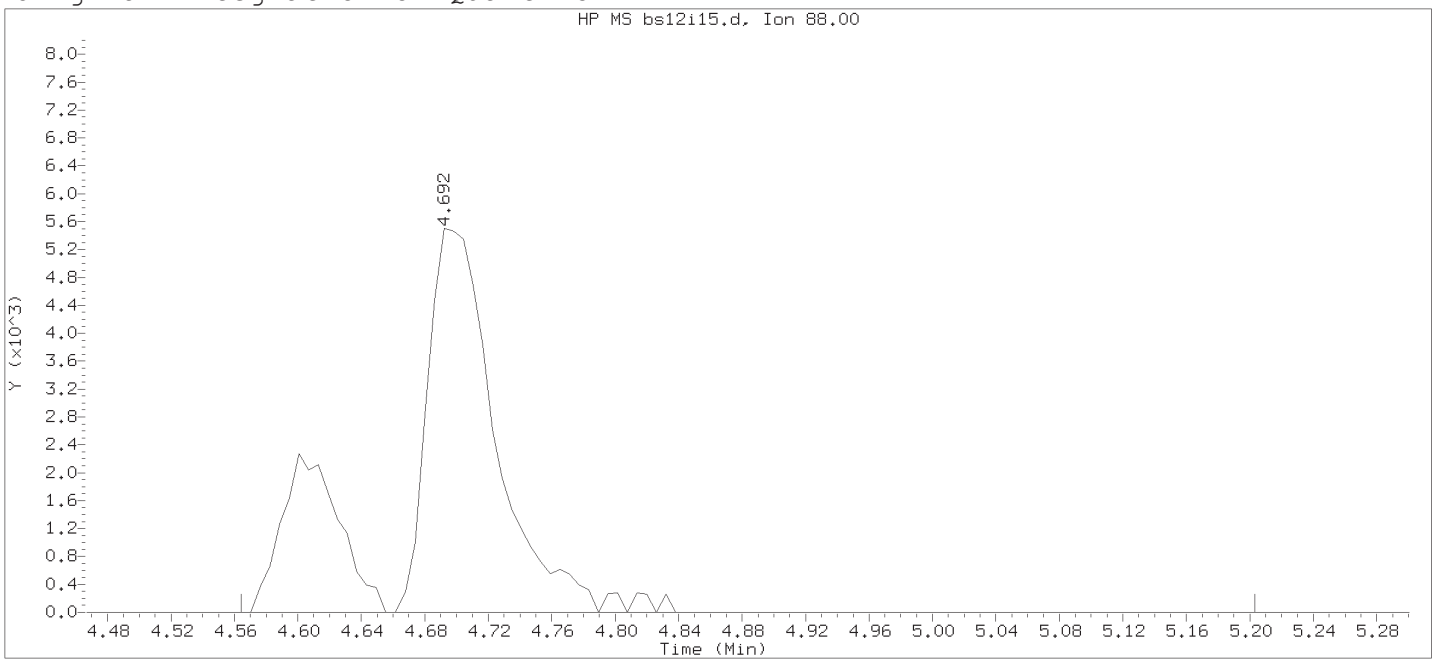
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

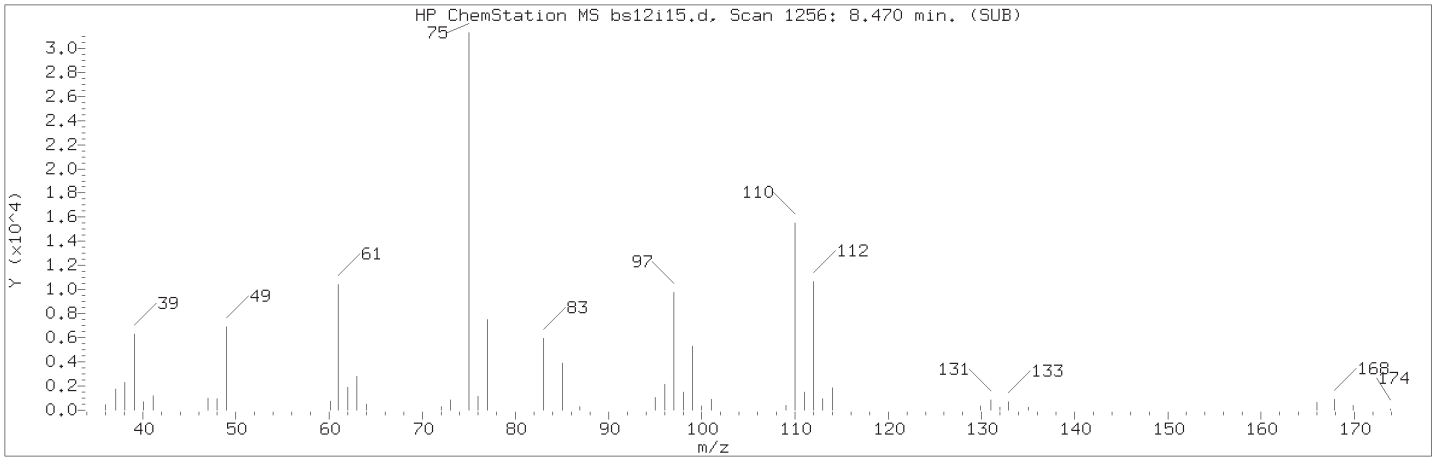
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:00
Date, time and analyst ID of latest file update: 12-Sep-2018 15:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

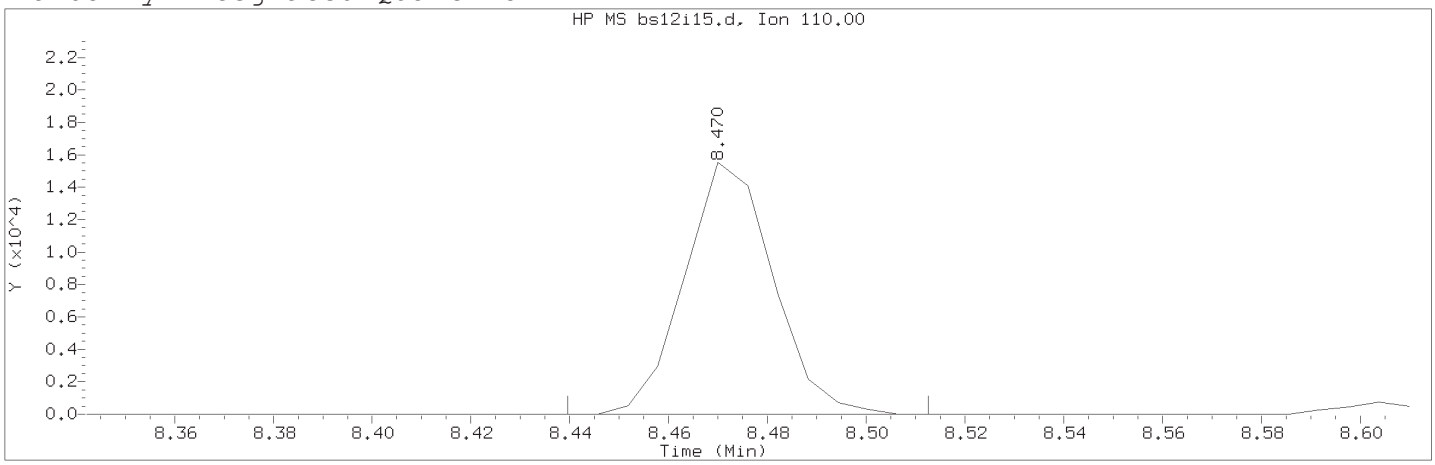
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area : 22608
On-column Amount (ng) : 229.4064
Integration start scan : 613 Integration stop scan: 718
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

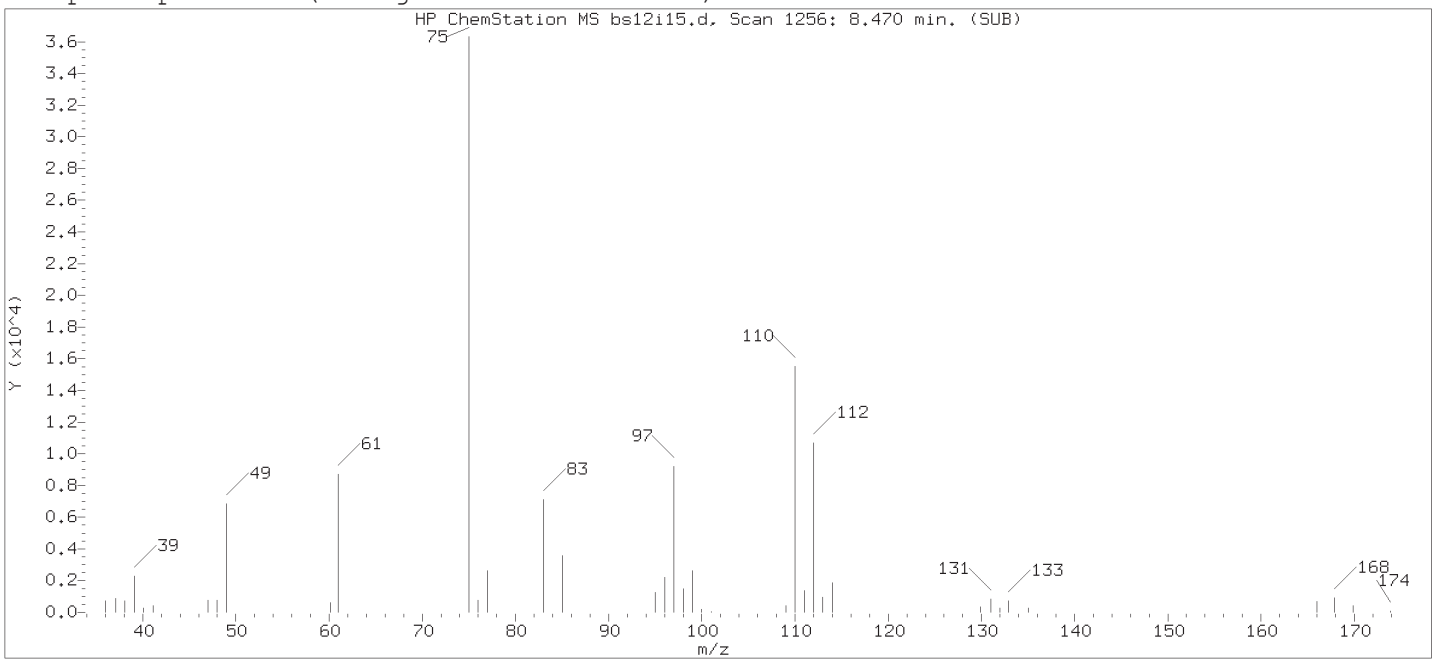
Compound Number : 123
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1256
Retention Time (minutes): 8.470
Quant Ion : 110.00
Area (flag) : 19254M
On-Column Amount (ng) : 9.2810
Integration start scan : 1250 Integration stop scan: 1262
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

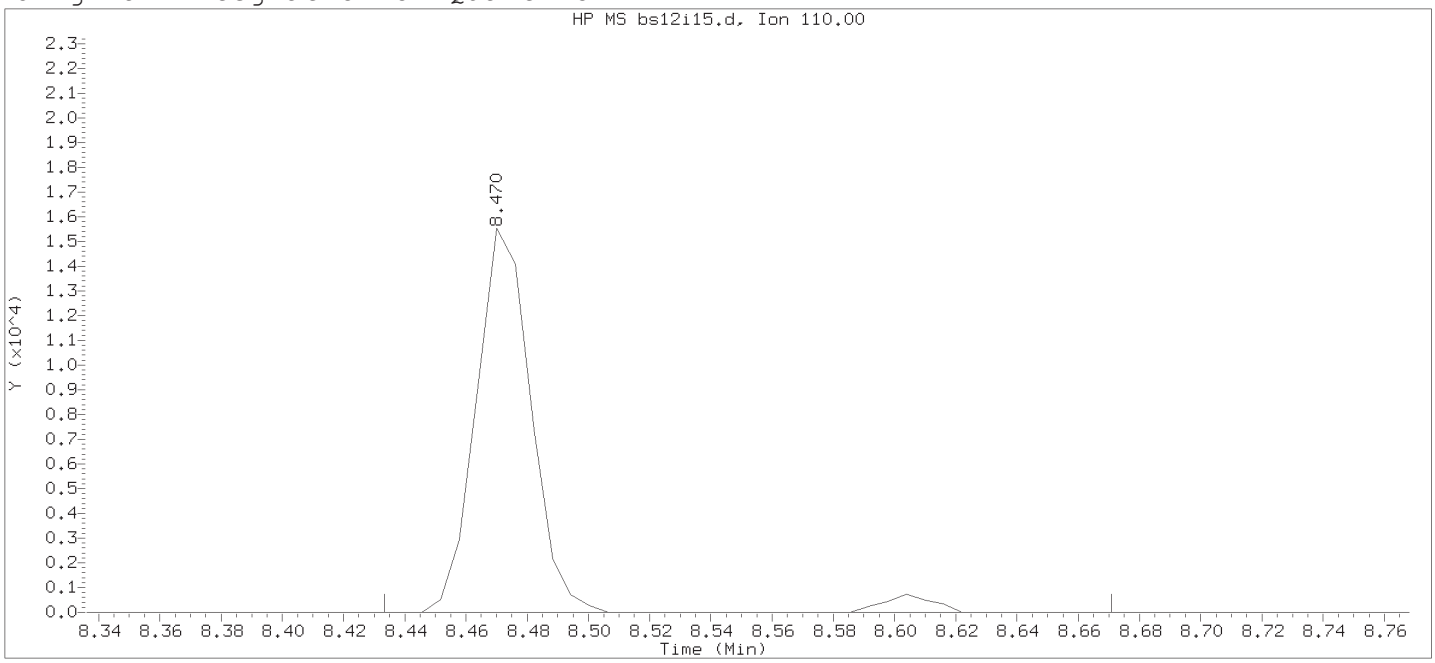
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

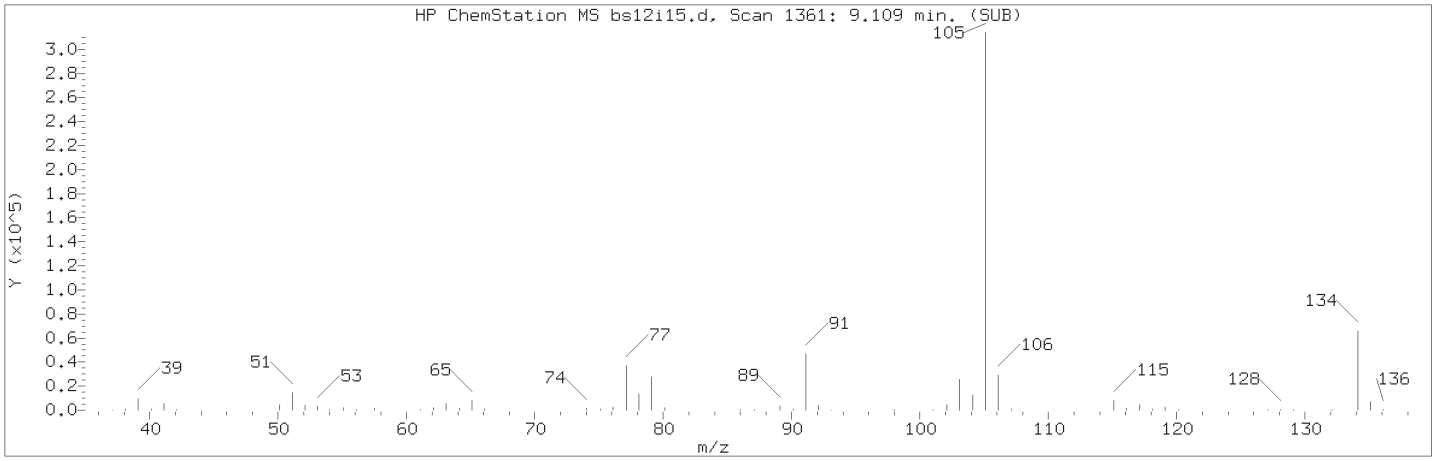
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:00
Date, time and analyst ID of latest file update: 12-Sep-2018 15:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

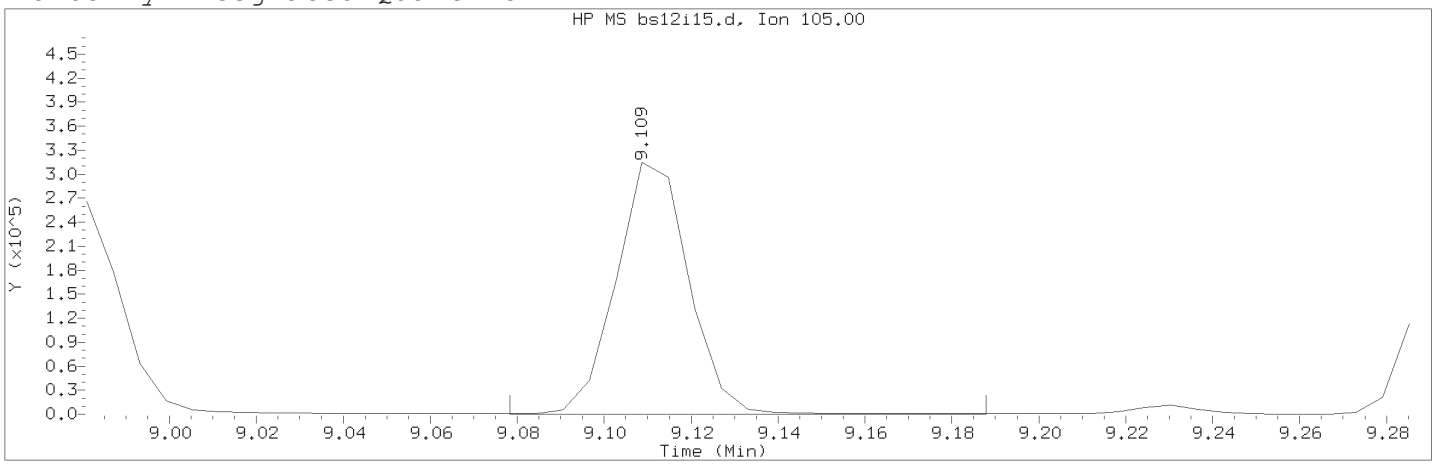
Compound Number : 123
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1256
Retention Time (minutes): 8.470
Quant Ion : 110.00
Area : 20073
On-column Amount (ng) : 9.8750
Integration start scan : 1249 Integration stop scan: 1288
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

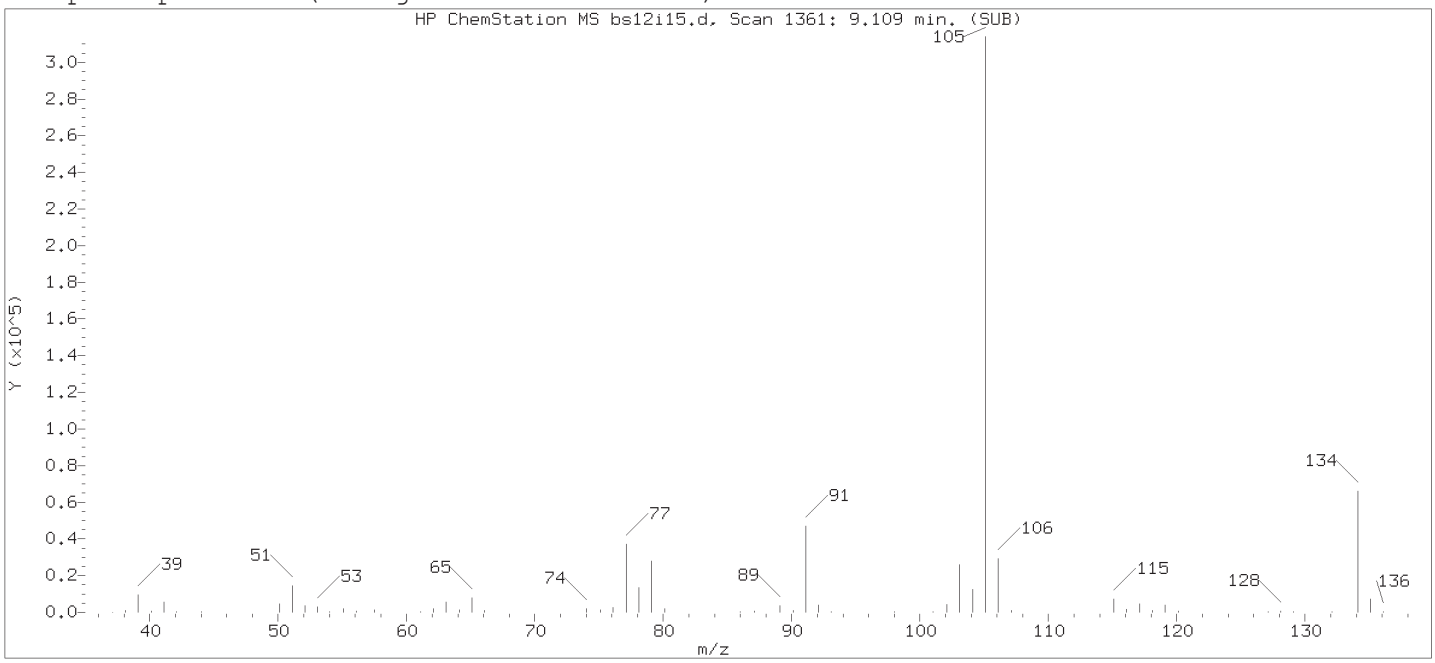
Compound Number : 136
Compound Name : sec-Butylbenzene
Scan Number : 1361
Retention Time (minutes): 9.109
Quant Ion : 105.00
Area (flag) : 366051M
On-Column Amount (ng) : 10.2595
Integration start scan : 1355 Integration stop scan: 1373
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

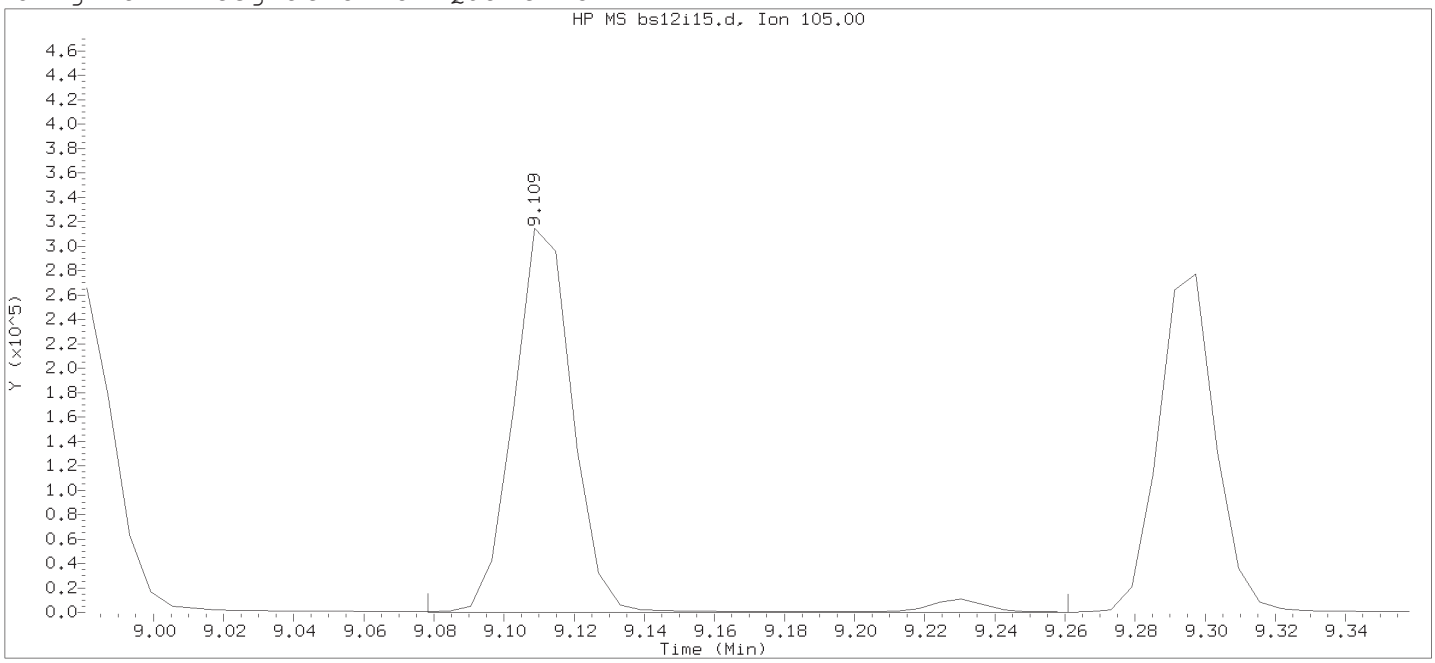
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



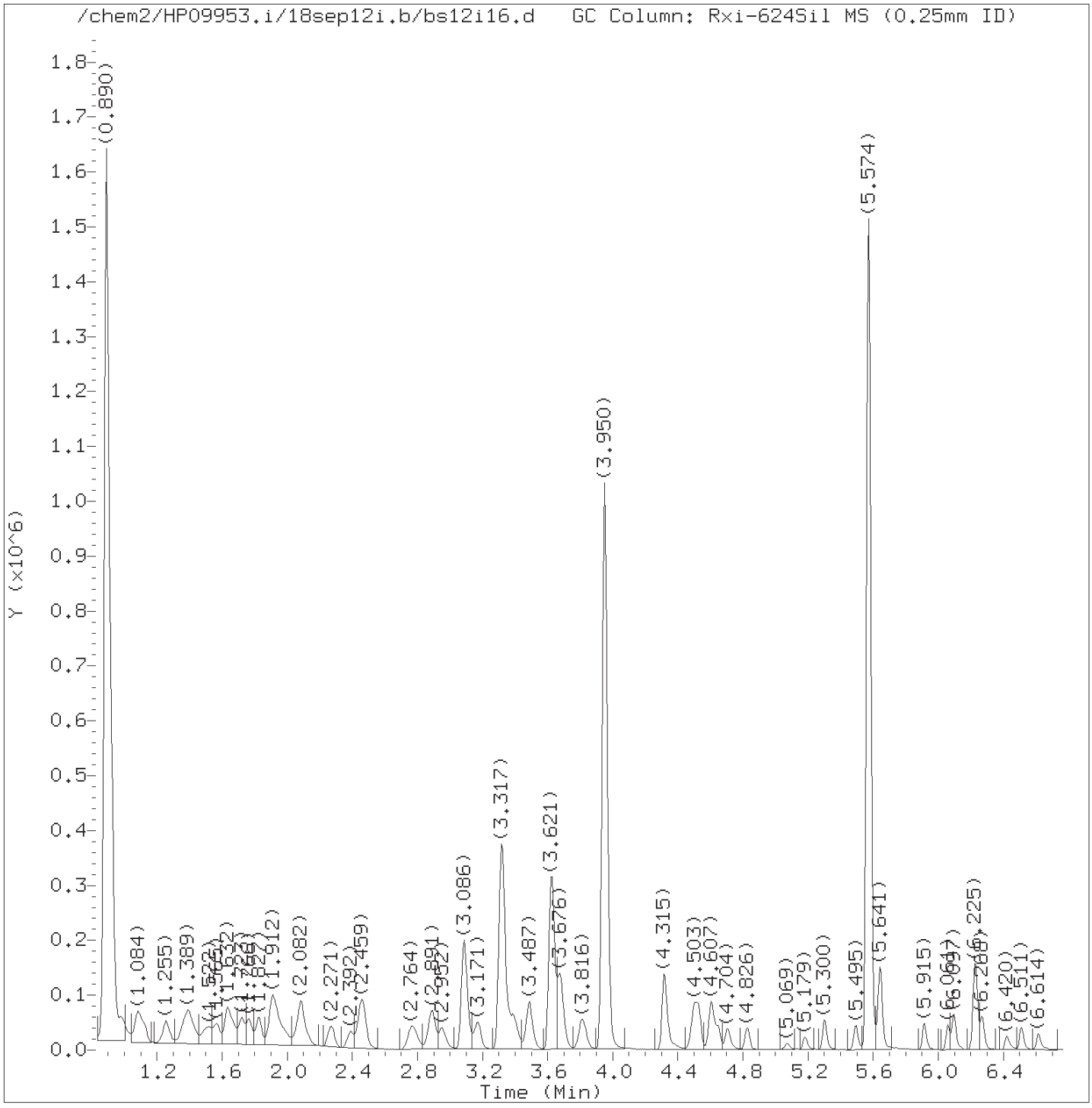
Data File: /chem2/HP09953.i/18sep12i.b/bs12i15.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 14:45 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:00
Date, time and analyst ID of latest file update: 12-Sep-2018 15:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 136
Compound Name : sec-Butylbenzene
Scan Number : 1361
Retention Time (minutes): 9.109
Quant Ion : 105.00
Area : 378283
On-column Amount (ng) : 10.8880
Integration start scan : 1355 Integration stop scan: 1385
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe



Total Ion Chromatogram (TIC)

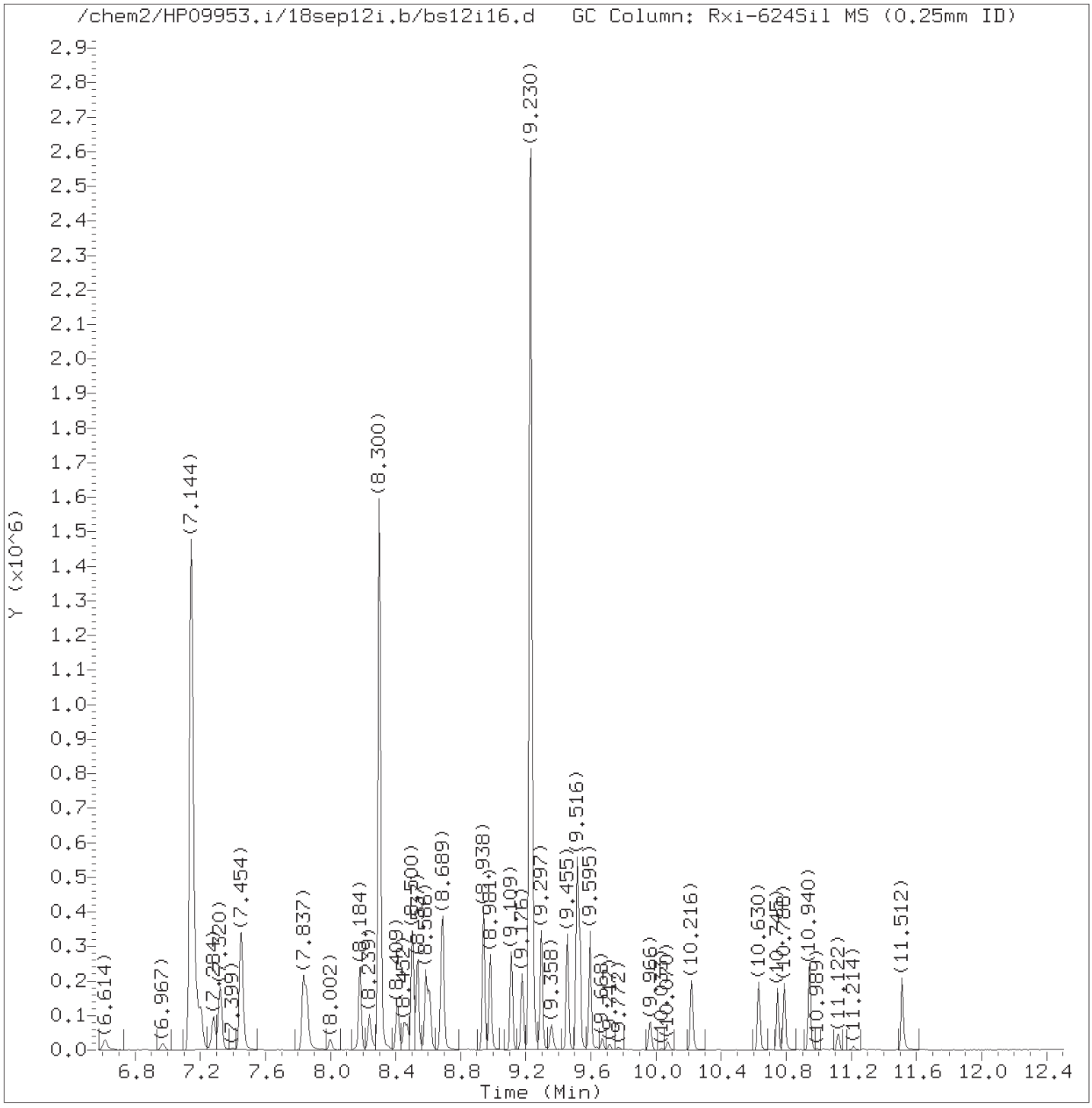
Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.987	85	48847M	4.735
4) Chloromethane	(2)	1.078	50	46793	4.401
5) Vinyl Chloride	(2)	1.127	62	36495M	4.405
9) Bromomethane	(2)	1.255	94	33064	4.484
10) Chloroethane	(2)	1.273	64	20422	4.582
11) Dichlorofluoromethane	(2)	1.370	67	46679	4.331
13) Trichlorofluoromethane	(2)	1.419	101	51300	4.498
15) Ethanol	(1)	1.450	45	26107	545.608
17) Freon 123a	(2)	1.516	67	34620	4.534
18) Acrolein	(1)	1.571	56	35842	40.453
19) 1,1-Dichloroethene	(2)	1.632	96	24859	4.337
20) Acetone	(1)	1.650	58	5736	7.681
22) Freon 113	(2)	1.656	101	25341	4.410
23) 2-Propanol	(1)	1.723	45	27238	76.874
24) Methyl Iodide	(2)	1.723	142	58108	4.216
25) Carbon Disulfide	(2)	1.766	76	97380	4.246
27) Methyl Acetate	(2)	1.827	43	12866	4.378
29) Allyl Chloride	(2)	1.827	41	31726	4.138
31) Methylene Chloride	(2)	1.906	84	28742	4.243
30)*t-Butyl alcohol-d10	(1)	1.924	65	91708	250.000
32) t-Butyl alcohol	(1)	1.985	59	41509	86.166
33) Acrylonitrile	(2)	2.064	53	7928	3.985
35) trans-1,2-Dichloroethene	(2)	2.082	96	28074	4.212
34) Methyl Tertiary Butyl Ether	(2)	2.094	73	65438	4.014
38) n-Hexane	(2)	2.271	57	33233	4.368
40) 1,1-Dichloroethane	(2)	2.386	63	44488	4.116
41) di-Isopropyl ether	(2)	2.447	45	82269	4.078
42) 2-Chloro-1,3-butadiene	(2)	2.459	53	40456	4.248
43) Ethyl t-butyl ether	(2)	2.764	59	76358	4.019
45) cis-1,2-Dichloroethene	(2)	2.885	96	29311	4.051
47) 2,2-Dichloropropane	(2)	2.897	77	32328	4.103
44) 2-Butanone	(1)	2.903	43	19534	8.285
49) Propionitrile	(1)	2.952	54	51619	81.610
46) 1,2-Dichloroethene (Total)	(2)		96	57385	8.263
51) Methacrylonitrile	(2)	3.086	67	82272	37.004
52) Bromochloromethane	(2)	3.098	128	14877	3.870
53) Tetrahydrofuran	(1)	3.141	71	4860	8.275
54) Chloroform	(2)	3.171	83	44874	4.091

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	3.317	113	283949	49.870
56)$Dibromofluoromethane	(2)	3.317	111	286363	49.611
57) 1,1,1-Trichloroethane	(2)	3.348	97	51617	4.596
58) Cyclohexane	(2)	3.390	56	45815	4.342
58) Cyclohexane	(2)	3.402	84	47502	4.817
58) Cyclohexane	(2)	3.396	69	14531	4.354
60) 1,1-Dichloropropene	(2)	3.487	75	34260	4.197
61) Carbon Tetrachloride	(2)	3.494	117	34489	4.043
63)$1,2-Dichloroethane-d4	(2)	3.621	102	59869	48.852
63)$1,2-Dichloroethane-d4	(2)	3.621	65	266571	49.463
63)$1,2-Dichloroethane-d4	(2)	3.621	104	38650	49.227
62) Isobutyl Alcohol	(1)	3.652	41	34776	205.468
64) Benzene	(2)	3.676	78	106731	4.096
67) 1,2-Dichloroethane	(2)	3.694	62	30094	4.002
67) 1,2-Dichloroethane	(2)	3.694	98	3134	4.195
68) t-Amyl methyl ether	(2)	3.816	73	69317	3.952
70)*Fluorobenzene	(2)	3.950	96	1142455	50.000
72) n-Heptane	(2)	3.962	43	28055	4.042
75) Trichloroethene	(2)	4.315	95	27974	4.117
73) n-Butanol	(1)	4.321	56	52824	372.718
76) Methylcyclohexane	(2)	4.503	83	45325	4.286
77) 1,2-Dichloropropane	(2)	4.528	63	25279	4.085
81) Dibromomethane	(2)	4.649	93	14488M	3.828
80) 1,4-Dioxane	(1)	4.698	88	11198M	190.654
79) Methyl Methacrylate	(2)	4.710	69	15368	3.853
84) Bromodichloromethane	(2)	4.826	83	29212	3.780
85) 2-Nitropropane	(1)	5.075	41	9390	7.741
87) 2-Chloroethyl Vinyl Ether	(2)	5.179	63	11805	3.623
89) cis-1,3-Dichloropropene	(2)	5.300	75	35345	3.788
90) 4-Methyl-2-pentanone	(2)	5.495	43	34269	5.430
91)$Toluene-d8	(3)	5.574	98	1150416	50.571
91)$Toluene-d8	(3)	5.574	100	743261	50.349
92) Toluene	(3)	5.641	92	70511	4.179
93) trans-1,3-Dichloropropene	(3)	5.915	75	29610	3.664
94) 1,3-Dichloropropene (total)	(3)		100	64955	7.451
95) Ethyl Methacrylate	(3)	6.061	69	29622	3.776
96) 1,1,2-Trichloroethane	(3)	6.097	97	21562M	3.938
98) Tetrachloroethene	(3)	6.231	166	32921	3.562

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
99) 1,3-Dichloropropane	(3)	6.268	76	35316	4.006
101) 2-Hexanone	(3)	6.420	43	22296	6.107
103) Dibromochloromethane	(3)	6.511	129	22905	3.631
104) 1,2-Dibromoethane	(3)	6.614	107	22166	3.919
105)*Chlorobenzene-d5	(3)	7.144	117	881395	50.000
107) Chlorobenzene	(3)	7.174	112	81464	4.135
106) 1-Chlorohexane	(3)	7.205	91	34344	4.097
108) 1,1,1,2-Tetrachloroethane	(3)	7.284	131	25858	3.871
109) Ethylbenzene	(3)	7.320	91	131212	4.135
110) m+p-Xylene	(3)	7.454	106	106441	8.220
111) o-Xylene	(3)	7.831	106	52280	4.038
113) Styrene	(3)	7.856	104	84830	3.975
112) Xylene (Total)	(3)		106	158721	12.258
114) Bromoform	(3)	7.995	173	13331	3.391
115) Isopropylbenzene	(3)	8.184	105	136181	4.173
118) Cyclohexanone	(1)	8.239	55	38100	179.256
119)$4-Bromofluorobenzene	(3)	8.300	95	412385M	49.762
119)$4-Bromofluorobenzene	(3)	8.300	174	377195	49.451
121) Bromobenzene	(4)	8.415	156	36882	4.085
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	27615	4.006
123) 1,2,3-Trichloropropane	(4)	8.476	110	8079M	3.953
122) trans-1,4-Dichloro-2-butene	(4)	8.500	53	59570	35.222
124) n-Propylbenzene	(4)	8.537	91	153146	4.291
126) 2-Chlorotoluene	(4)	8.586	126	35123	4.194
130) 4-Chlorotoluene	(4)	8.683	126	35091	4.136
129) 1,3,5-Trimethylbenzene	(4)	8.689	105	116748	4.229
133) tert-Butylbenzene	(4)	8.938	134	27513	4.242
134) Pentachloroethane	(4)	8.944	167	17526	4.519
135) 1,2,4-Trimethylbenzene	(4)	8.981	105	118860	4.128
136) sec-Butylbenzene	(4)	9.109	105	151112	4.299
138) 1,3-Dichlorobenzene	(4)	9.176	146	69434	4.098
139) p-Isopropyltoluene	(4)	9.230	119	134924	4.284
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	492725	50.000
141) 1,4-Dichlorobenzene	(4)	9.243	146	73390	4.155
142) 1,2,3-Trimethylbenzene	(4)	9.297	105	129876	4.185
143) Benzyl Chloride	(4)	9.358	126	7646	3.321
144) 1,3-Diethylbenzene	(4)	9.455	119	80337	4.126
145) 1,4-Diethylbenzene	(4)	9.516	119	83724	4.143

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

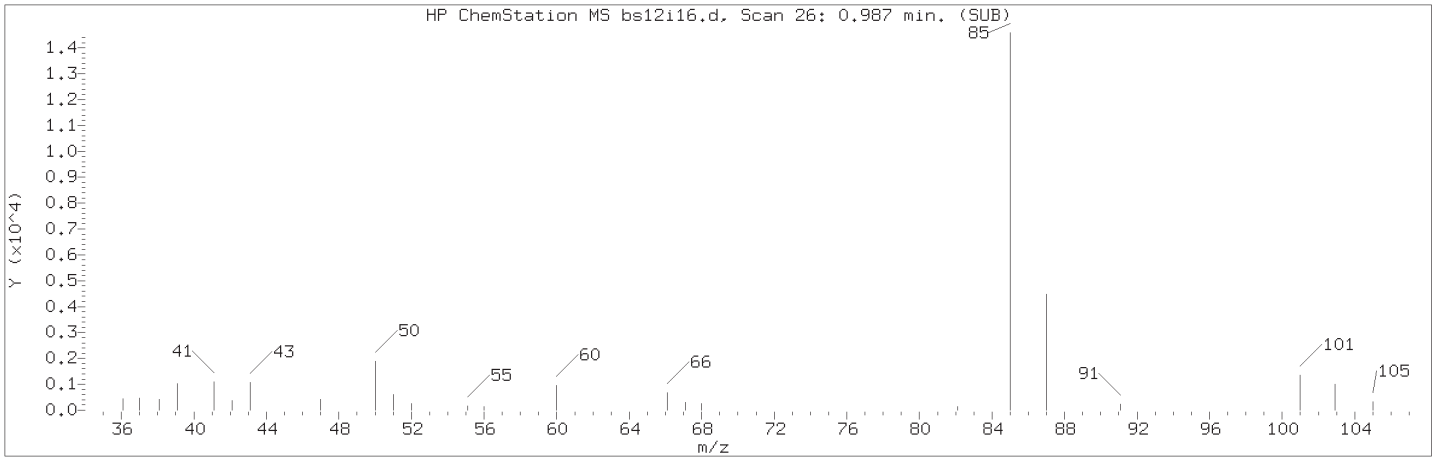
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD004 Lab Sample ID: VSTD004

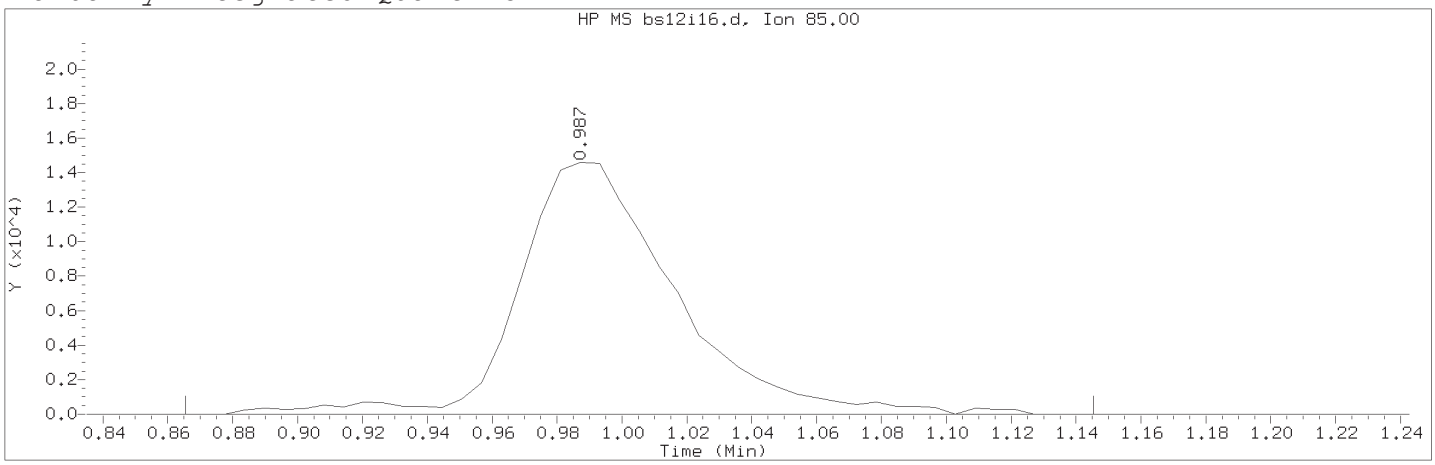
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2-Dichlorobenzene	(4)	9.516	146	69783	4.213
146) n-Butylbenzene	(4)	9.535	92	60035	4.103
148) 1,2-Diethylbenzene	(4)	9.595	119	71248	4.182
149) Diethylbenzene (total)	(4)		100	235309	12.451
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	4287	3.580
152) 1,3,5-Trichlorobenzene	(4)	10.222	180	51991	4.012
153) 1,2,4-Trichlorobenzene	(4)	10.630	180	49385	4.043
154) Hexachlorobutadiene	(4)	10.745	225	22798	4.091
155) Naphthalene	(4)	10.788	128	117811	4.060
156) 1,2,3-Trichlorobenzene	(4)	10.946	180	47024	4.037
157) 2-Methylnaphthalene	(4)	11.512	142	76878	3.917

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD004 Lab Sample ID: VSTD004

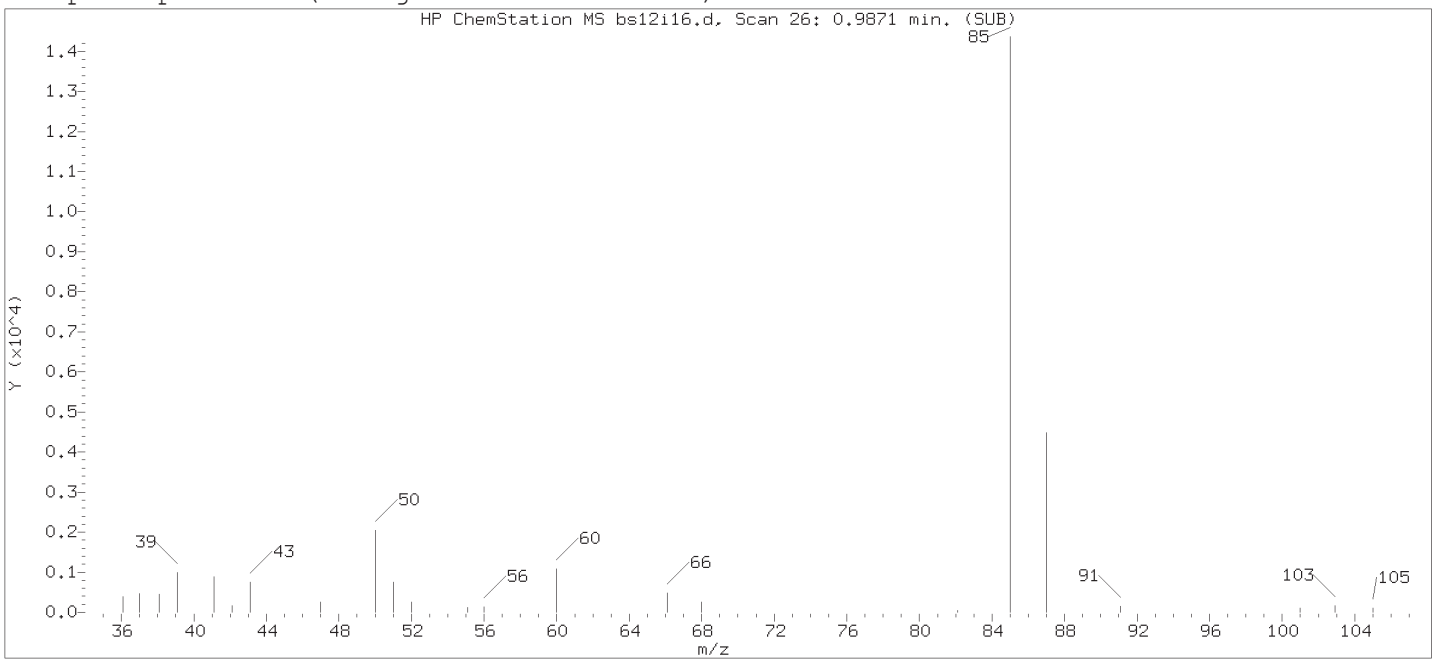
Compound Number : 2
Compound Name : Dichlorodifluoromethane
Scan Number : 26
Retention Time (minutes): 0.987
Quant Ion : 85.00
Area (flag) : 48847M
On-Column Amount (ng) : 4.7352
Integration start scan : 5 Integration stop scan: 51
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

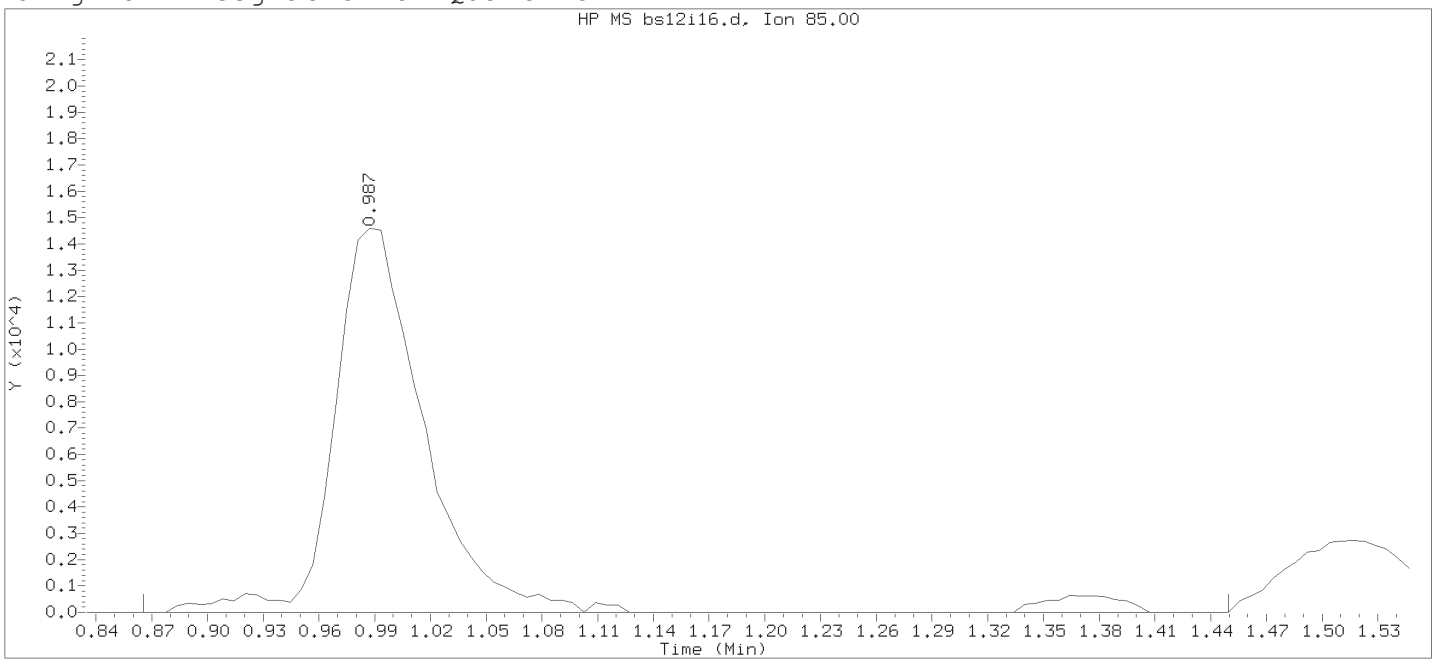
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

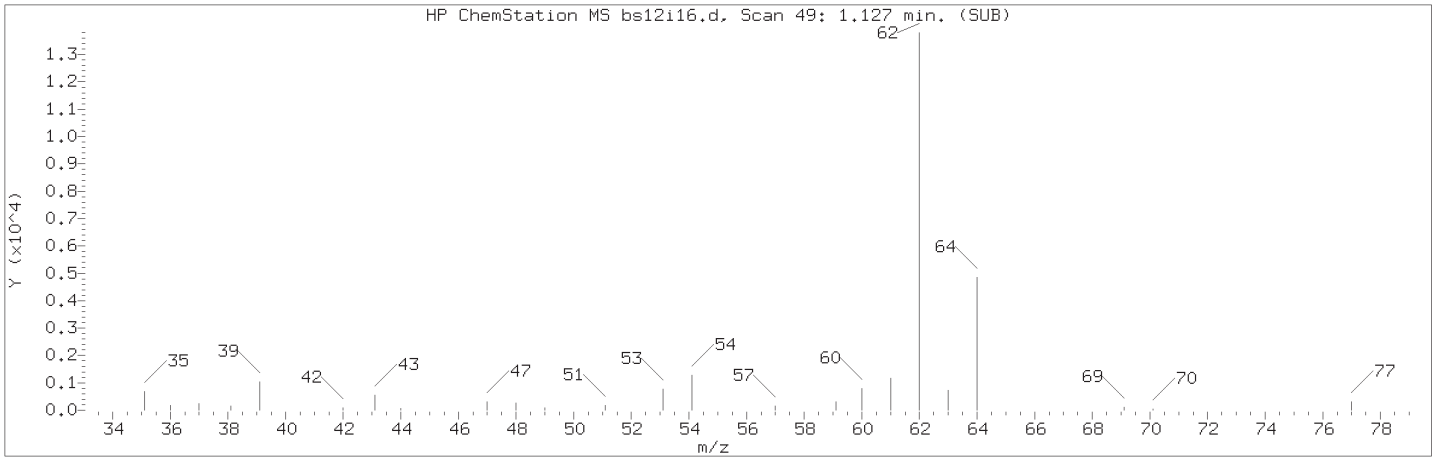
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:23
Date, time and analyst ID of latest file update: 12-Sep-2018 15:23 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

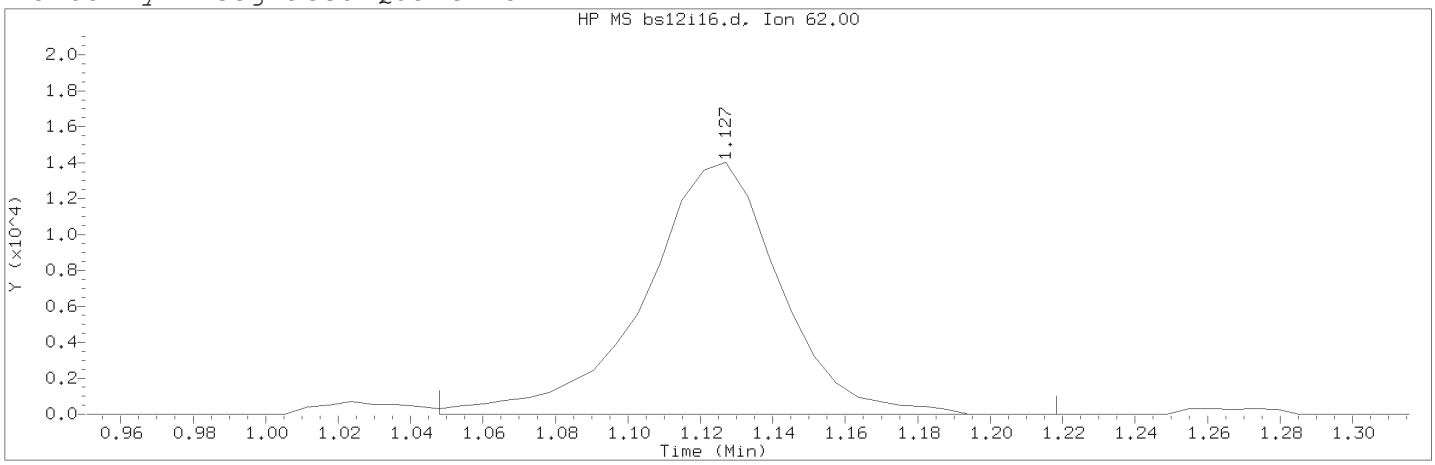
Compound Number : 2
Compound Name : Dichlorodifluoromethane
Scan Number : 26
Retention Time (minutes): 0.987
Quant Ion : 85.00
Area : 50749
On-column Amount (ng) : 4.9498
Integration start scan : 5 Integration stop scan: 101
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD004 Lab Sample ID: VSTD004

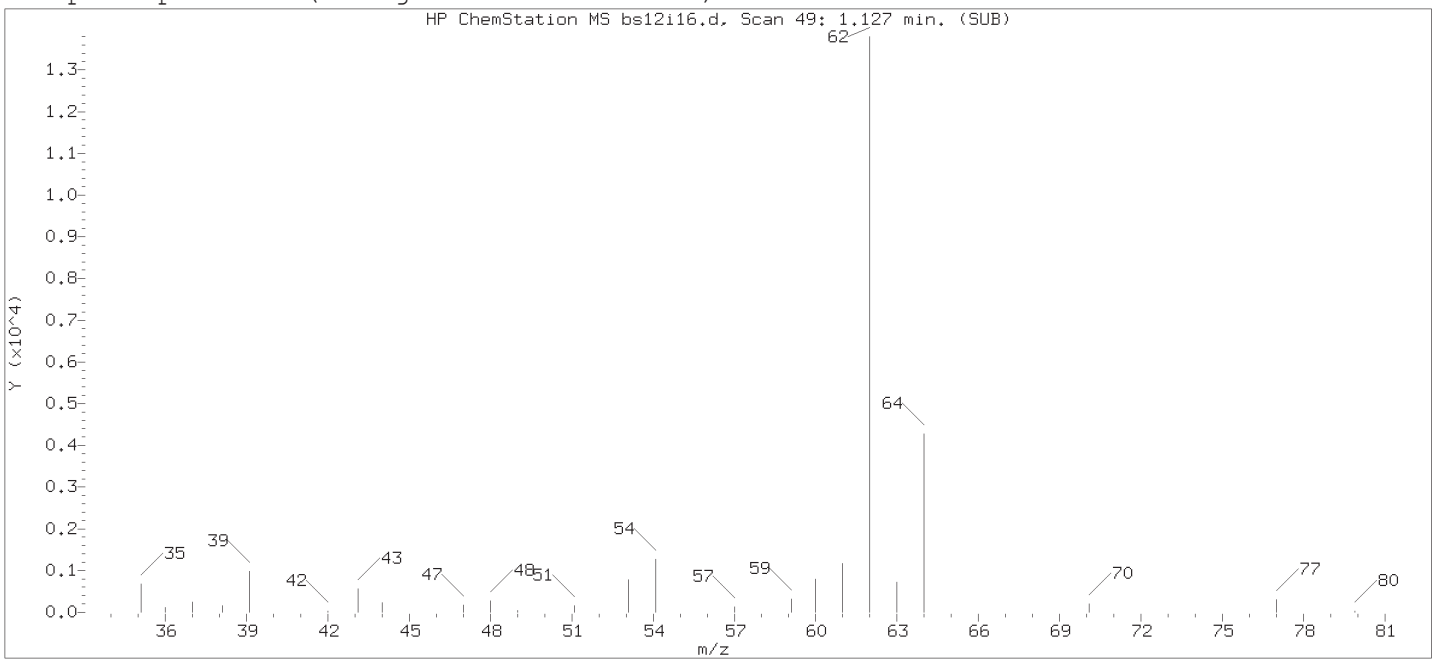
Compound Number : 5
Compound Name : Vinyl Chloride
Scan Number : 49
Retention Time (minutes): 1.127
Quant Ion : 62.00
Area (flag) : 36495M
On-Column Amount (ng) : 4.4048
Integration start scan : 35 Integration stop scan: 63
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

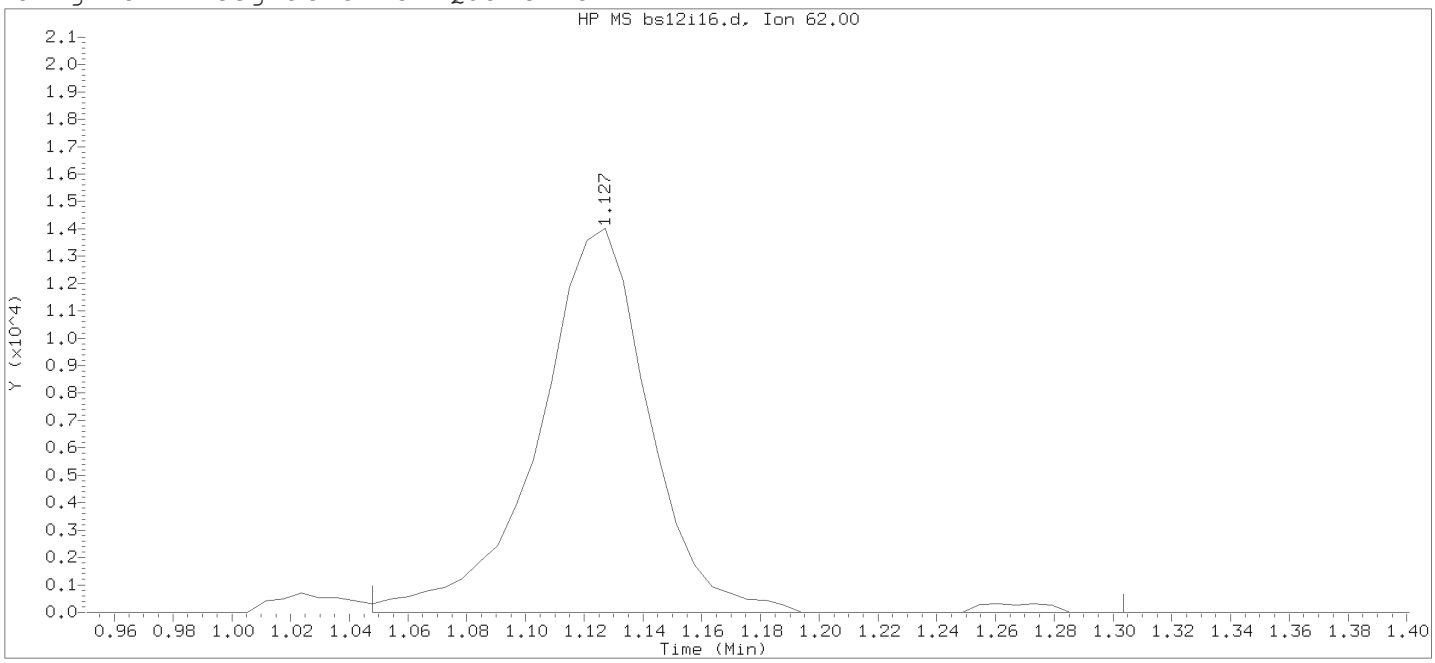
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

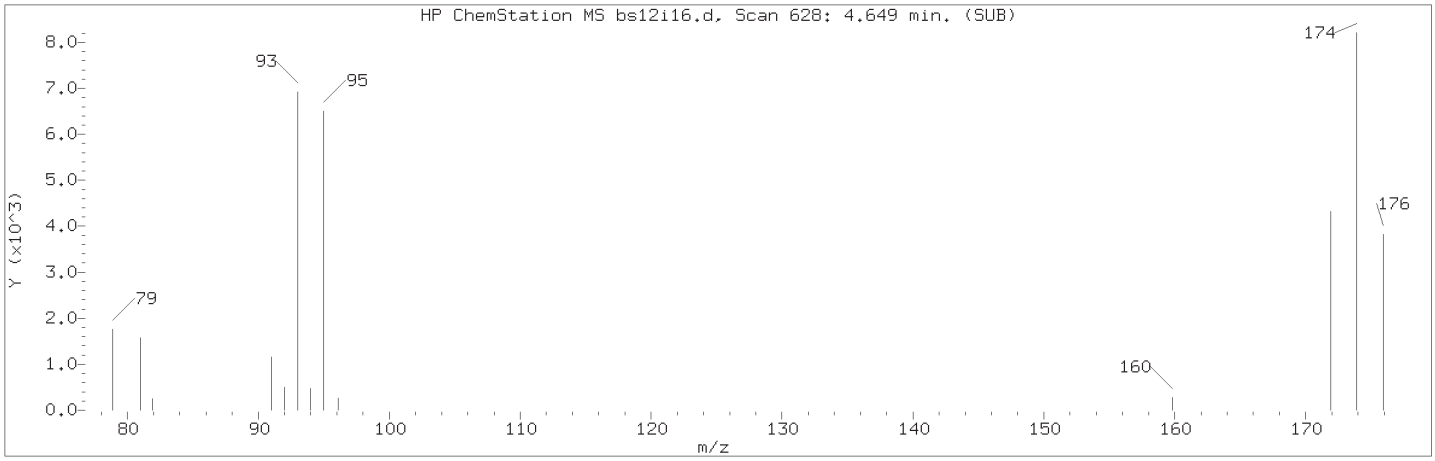
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:23
Date, time and analyst ID of latest file update: 12-Sep-2018 15:23 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

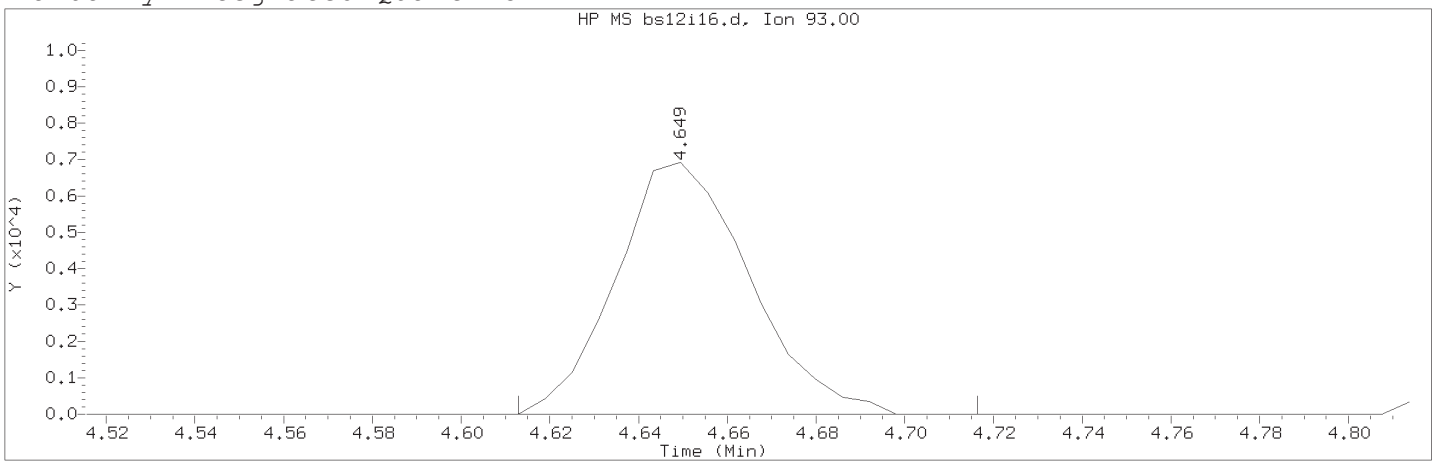
Compound Number : 5
Compound Name : Vinyl Chloride
Scan Number : 49
Retention Time (minutes): 1.127
Quant Ion : 62.00
Area : 36968
On-column Amount (ng) : 4.4383
Integration start scan : 35 Integration stop scan: 77
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jhowe9512

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD004 Lab Sample ID: VSTD004

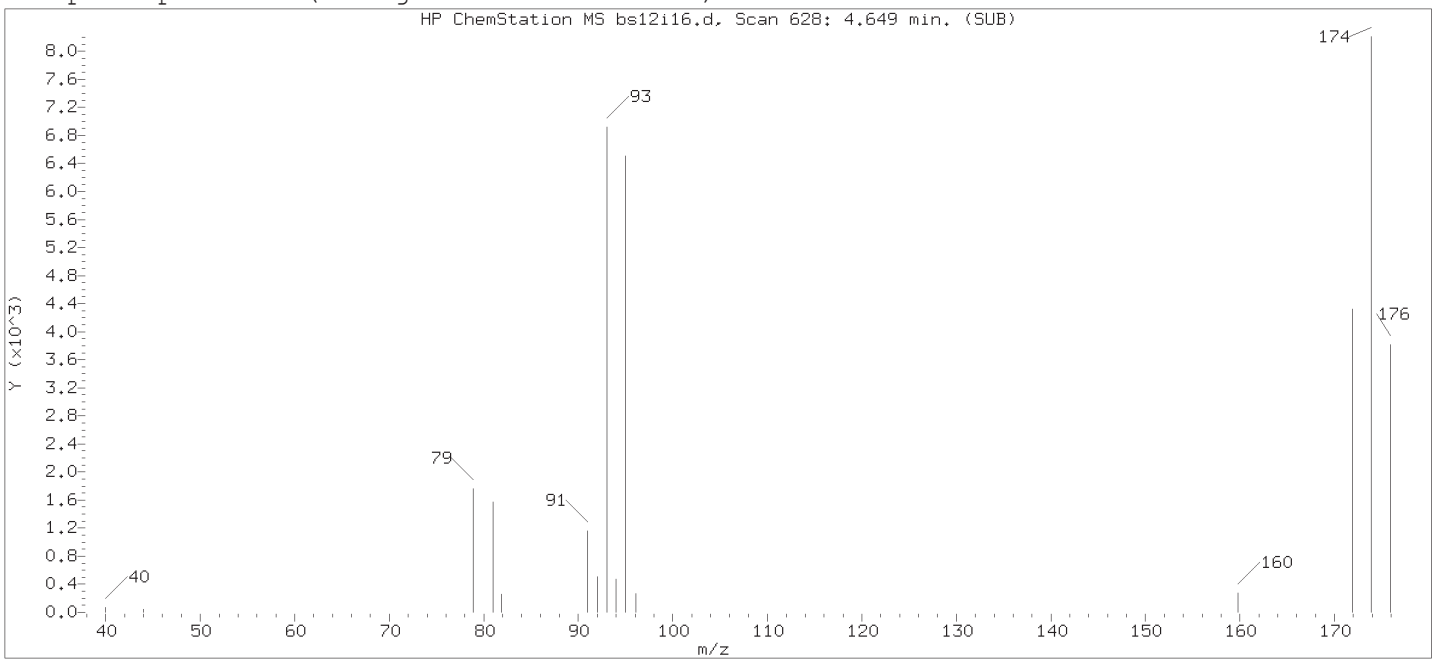
Compound Number : 81
Compound Name : Dibromomethane
Scan Number : 628
Retention Time (minutes): 4.649
Quant Ion : 93.00
Area (flag) : 14488M
On-Column Amount (ng) : 3.8284
Integration start scan : 621 Integration stop scan: 638
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

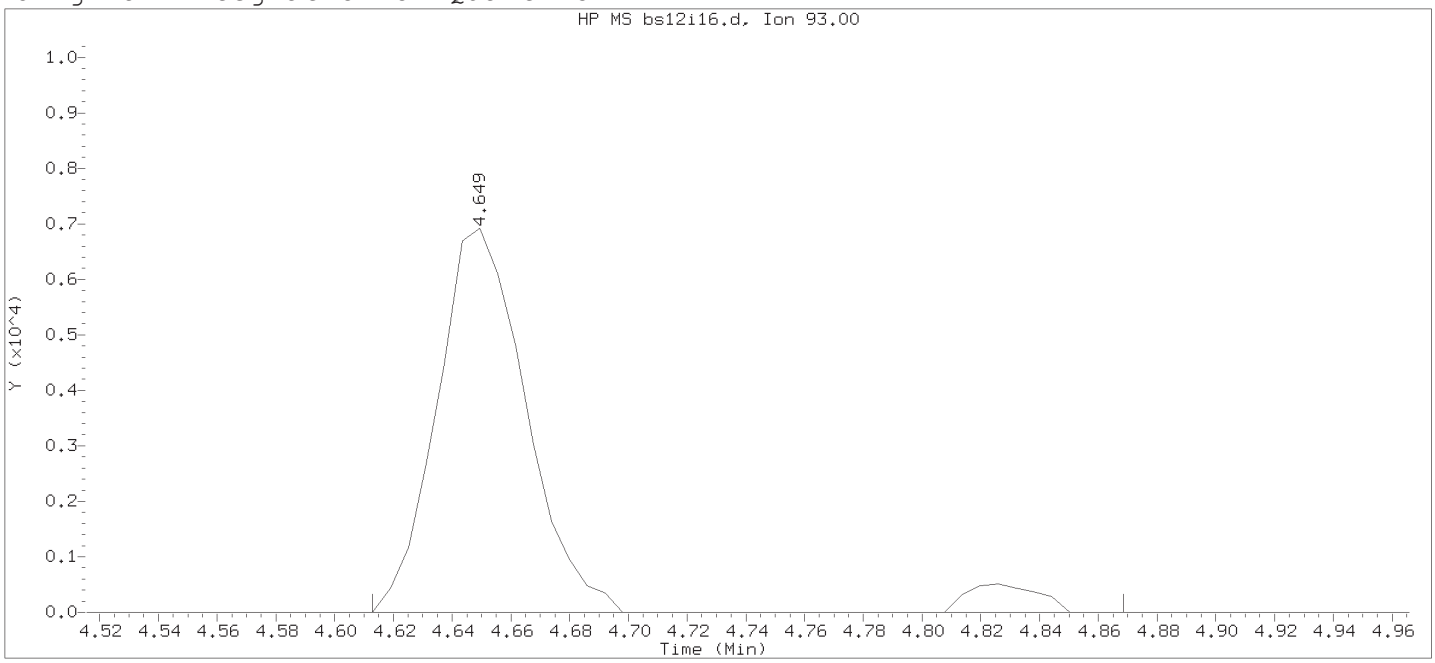
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

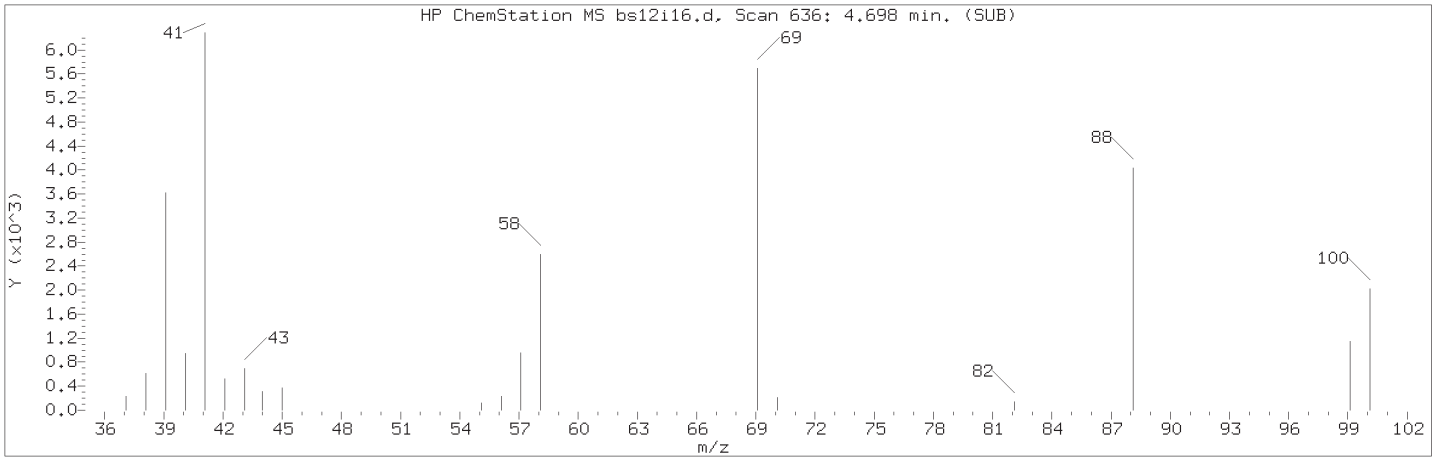
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:23
Date, time and analyst ID of latest file update: 12-Sep-2018 15:23 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

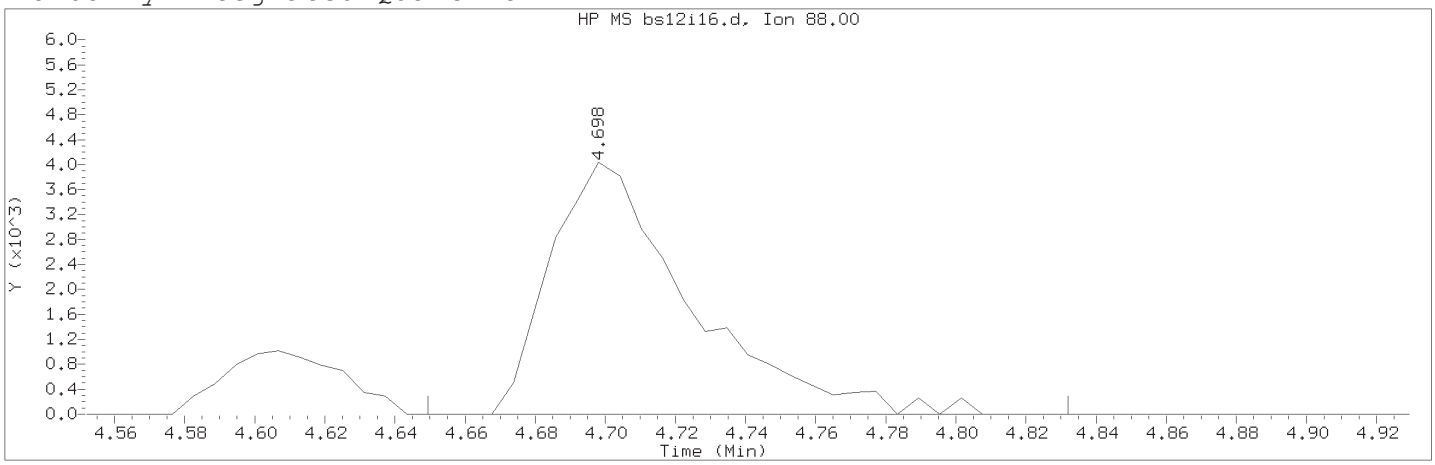
Compound Number : 81
Compound Name : Dibromomethane
Scan Number : 628
Retention Time (minutes): 4.649
Quant Ion : 93.00
Area : 15367
On-column Amount (ng) : 4.1124
Integration start scan : 621 Integration stop scan: 663
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD004 Lab Sample ID: VSTD004

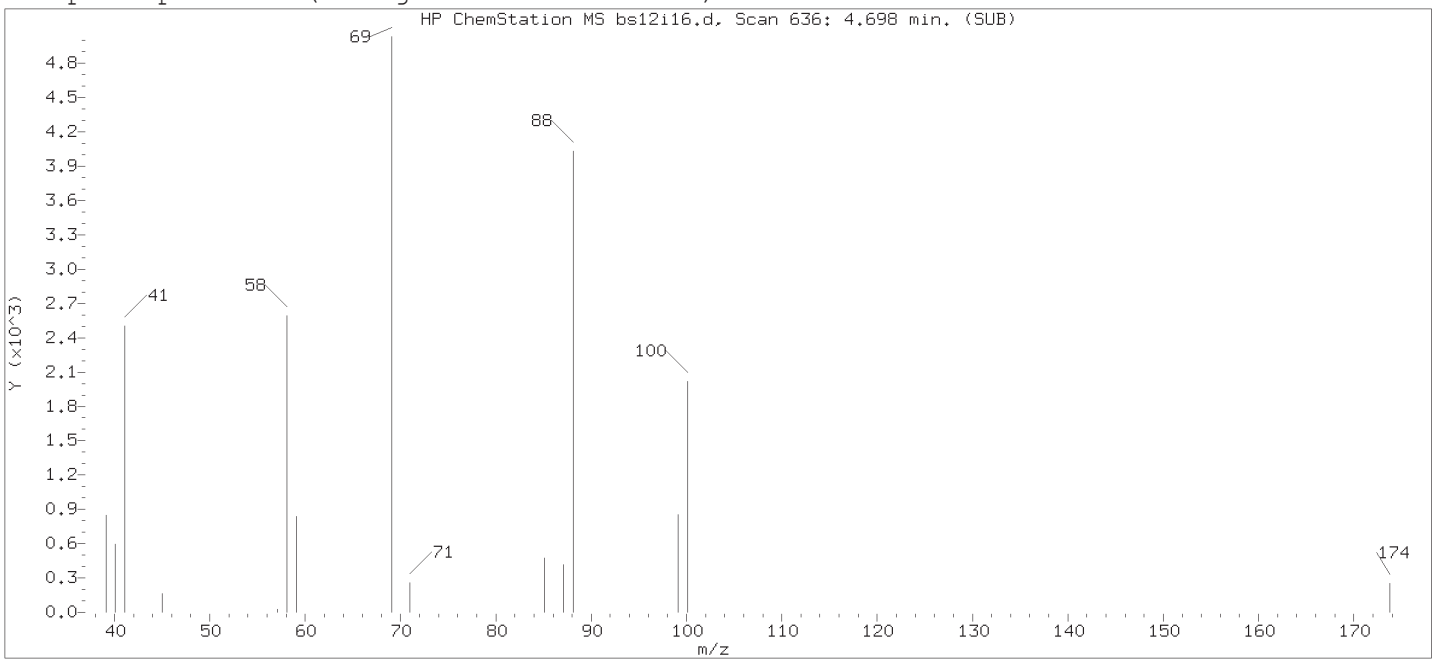
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 636
Retention Time (minutes): 4.698
Quant Ion : 88.00
Area (flag) : 11198M
On-Column Amount (ng) : 190.6542
Integration start scan : 627 Integration stop scan: 657
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

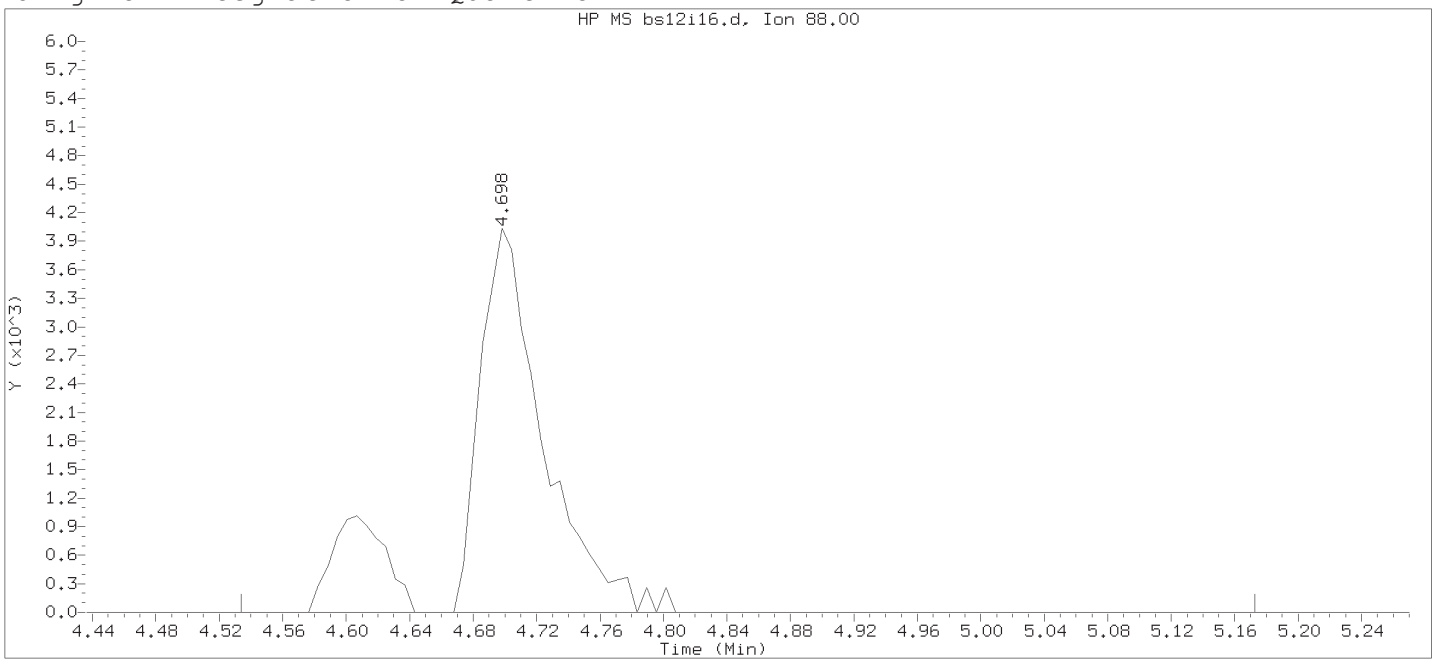
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

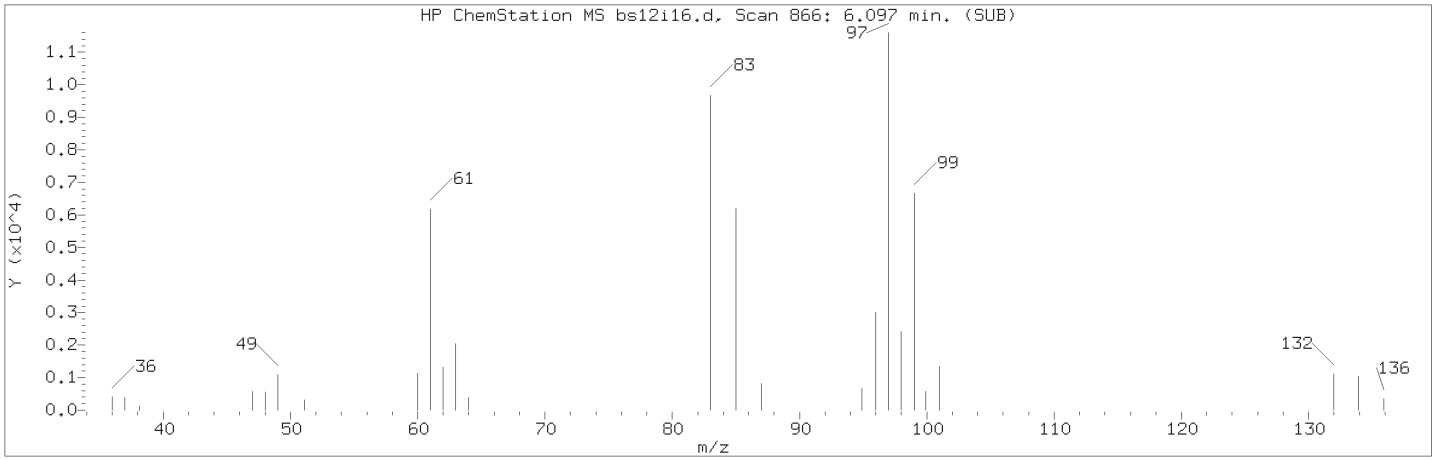
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:23
Date, time and analyst ID of latest file update: 12-Sep-2018 15:23 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

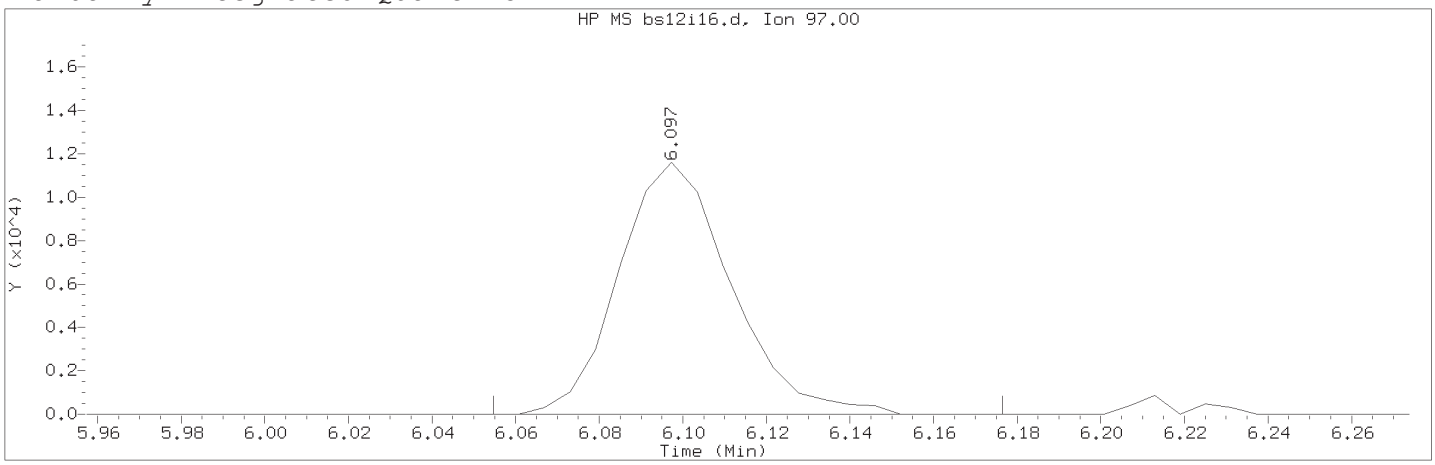
Compound Number	: 80
Compound Name	: 1,4-Dioxane
Scan Number	: 636
Retention Time (minutes)	: 4.698
Quant Ion	: 88.00
Area	: 13597
On-column Amount (ng)	: 147.3581
Integration start scan	: 608 Integration stop scan: 713
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD004 Lab Sample ID: VSTD004

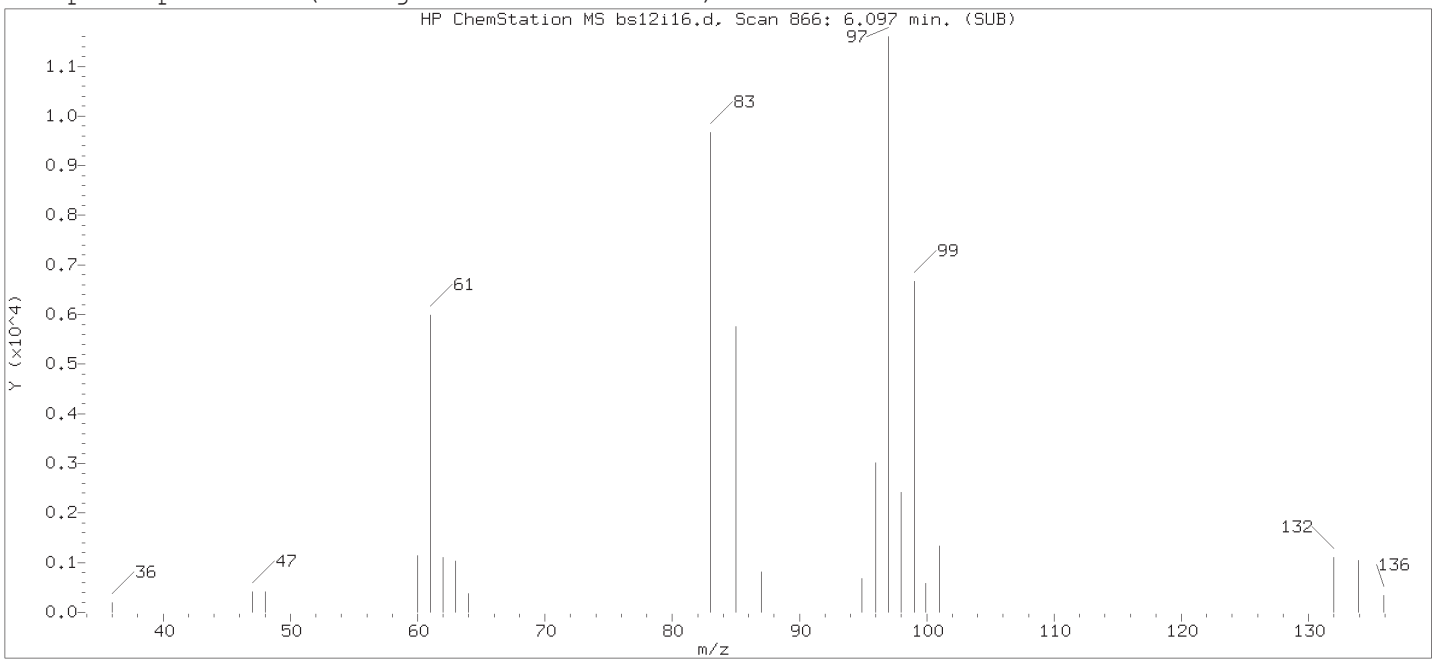
Compound Number : 96
Compound Name : 1,1,2-Trichloroethane
Scan Number : 866
Retention Time (minutes): 6.097
Quant Ion : 97.00
Area (flag) : 21562M
On-Column Amount (ng) : 3.9380
Integration start scan : 858 Integration stop scan: 878
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

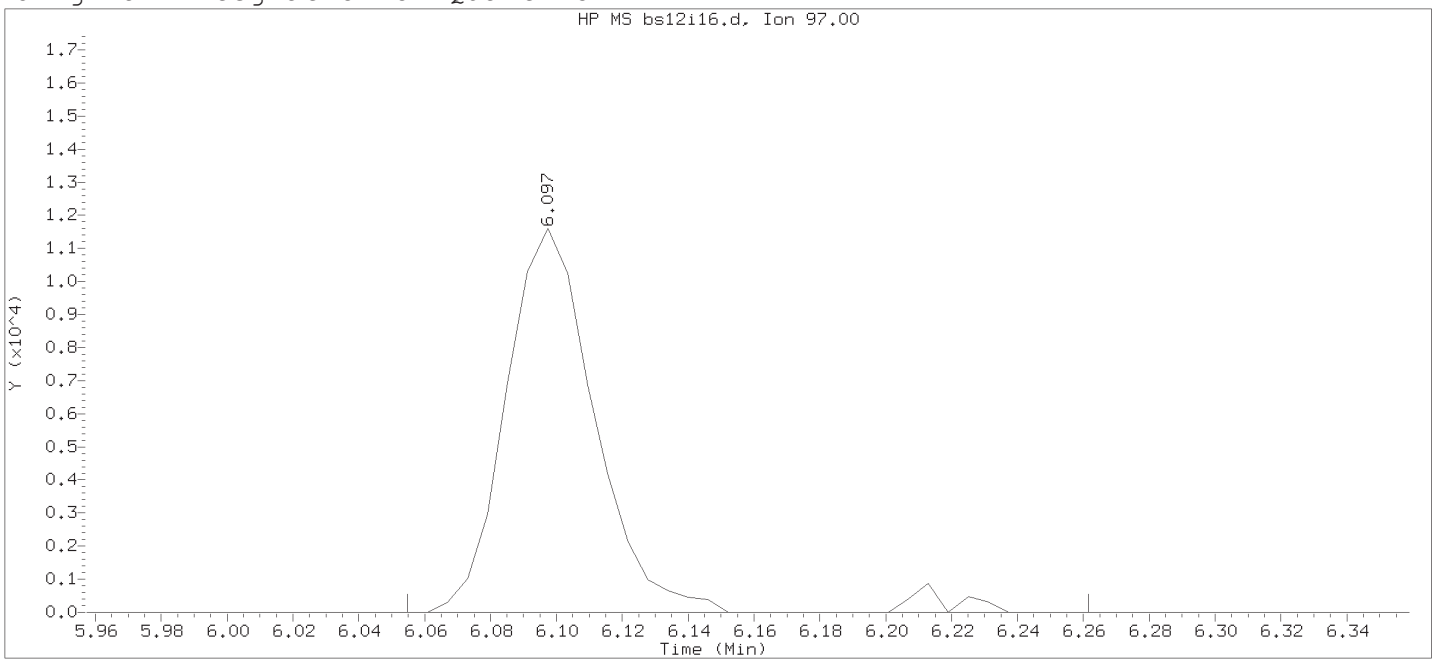
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

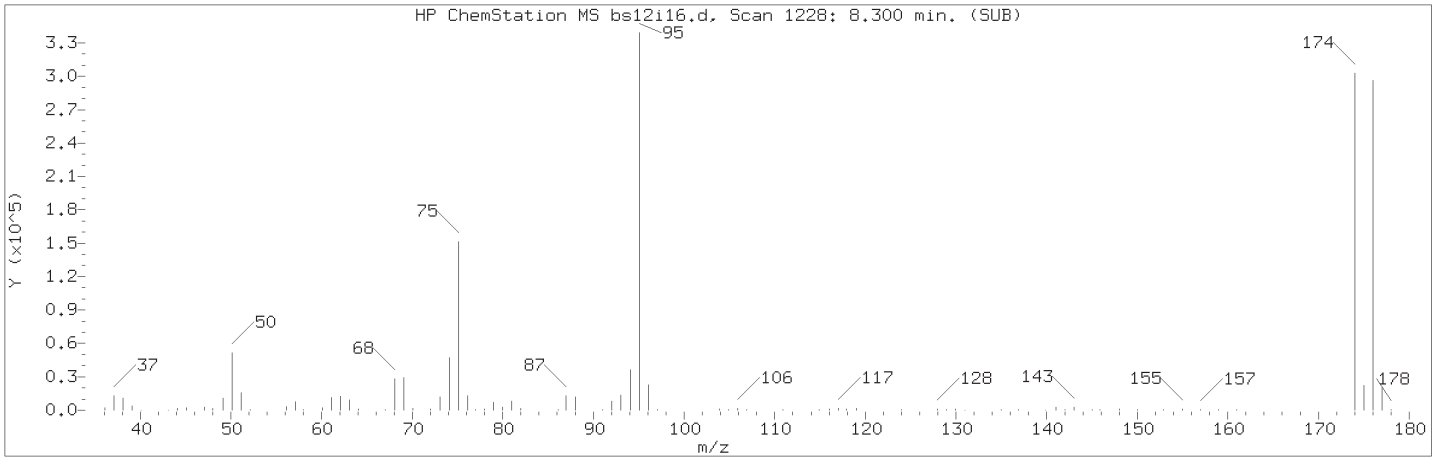
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:23
Date, time and analyst ID of latest file update: 12-Sep-2018 15:23 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

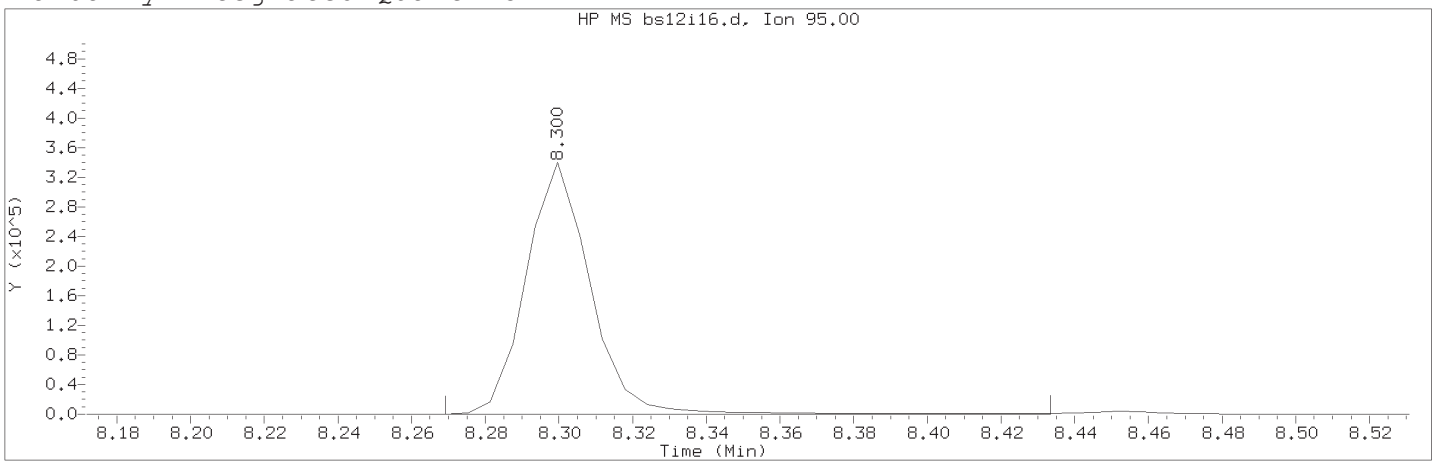
Compound Number : 96
Compound Name : 1,1,2-Trichloroethane
Scan Number : 866
Retention Time (minutes): 6.097
Quant Ion : 97.00
Area : 22317
On-column Amount (ng) : 4.1700
Integration start scan : 858 Integration stop scan: 892
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jhowe9372

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD004 Lab Sample ID: VSTD004

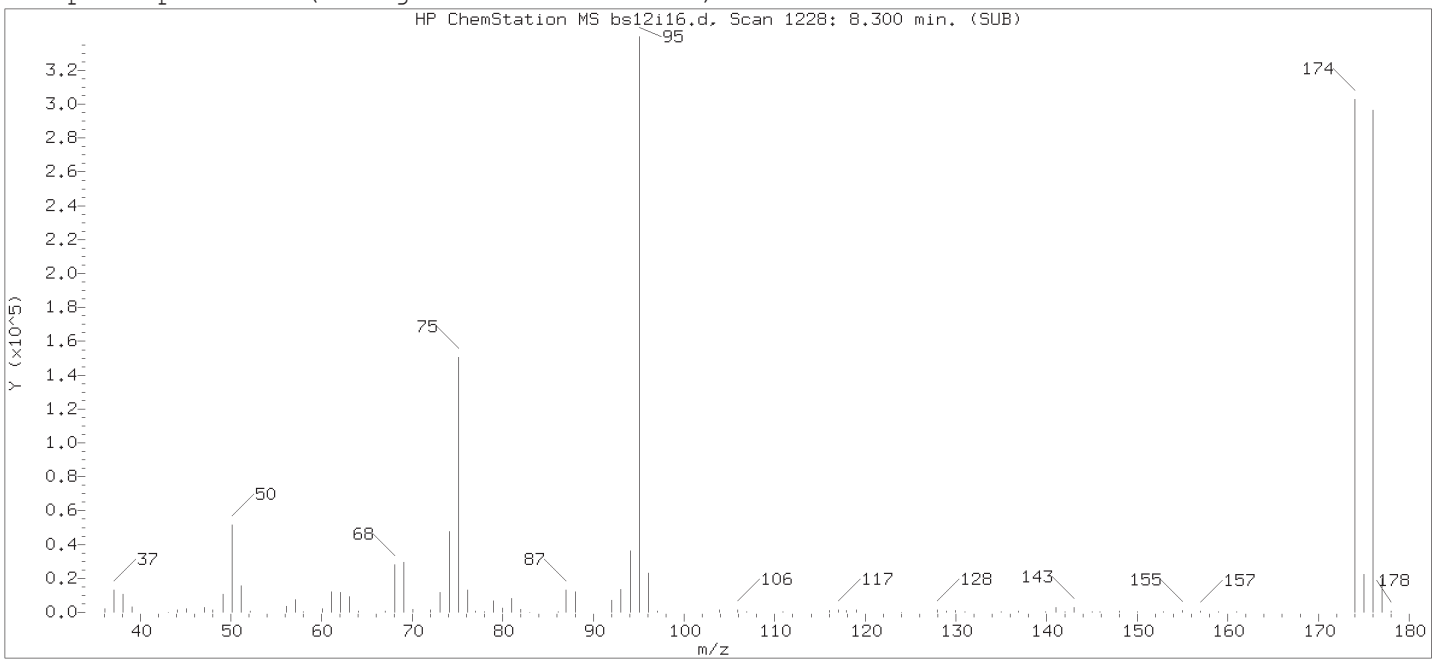
Compound Number : 119
Compound Name : 4-Bromofluorobenzene
Scan Number : 1228
Retention Time (minutes): 8.300
Quant Ion : 95.00
Area (flag) : 412385M
On-Column Amount (ng) : 49.7625
Integration start scan : 1222 Integration stop scan: 1249
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

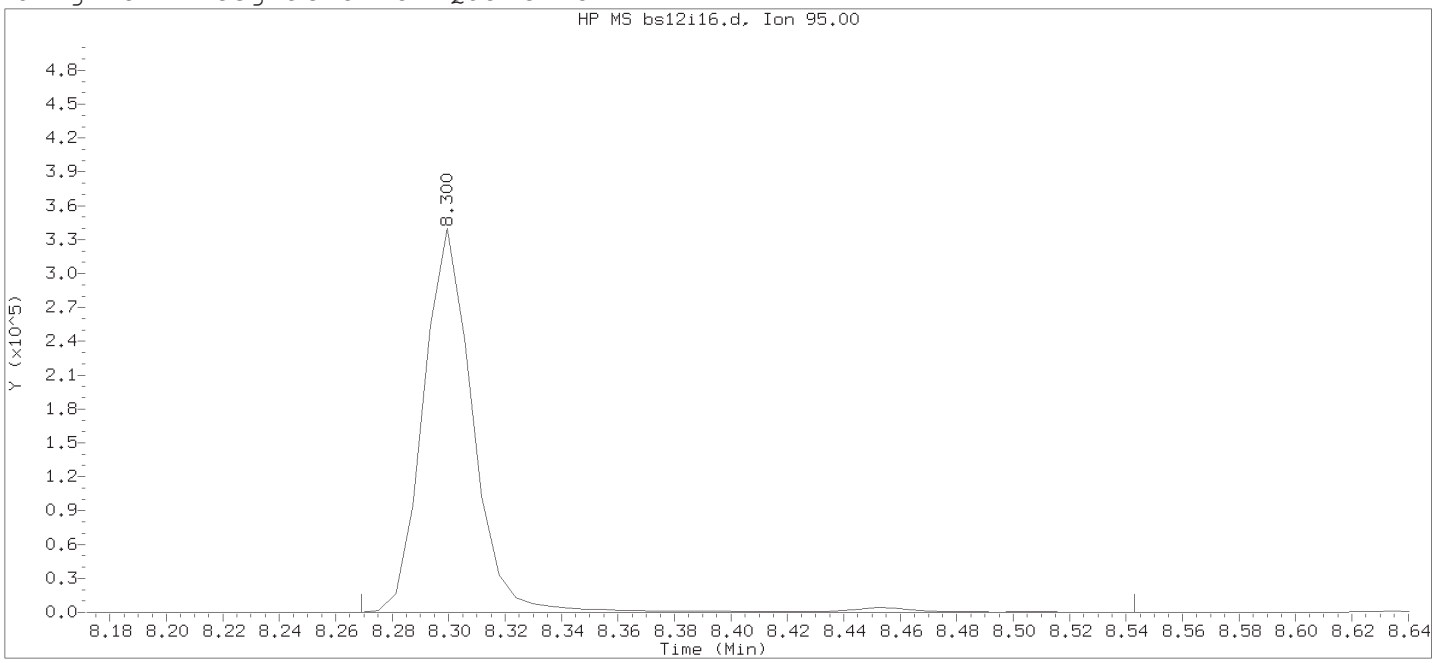
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

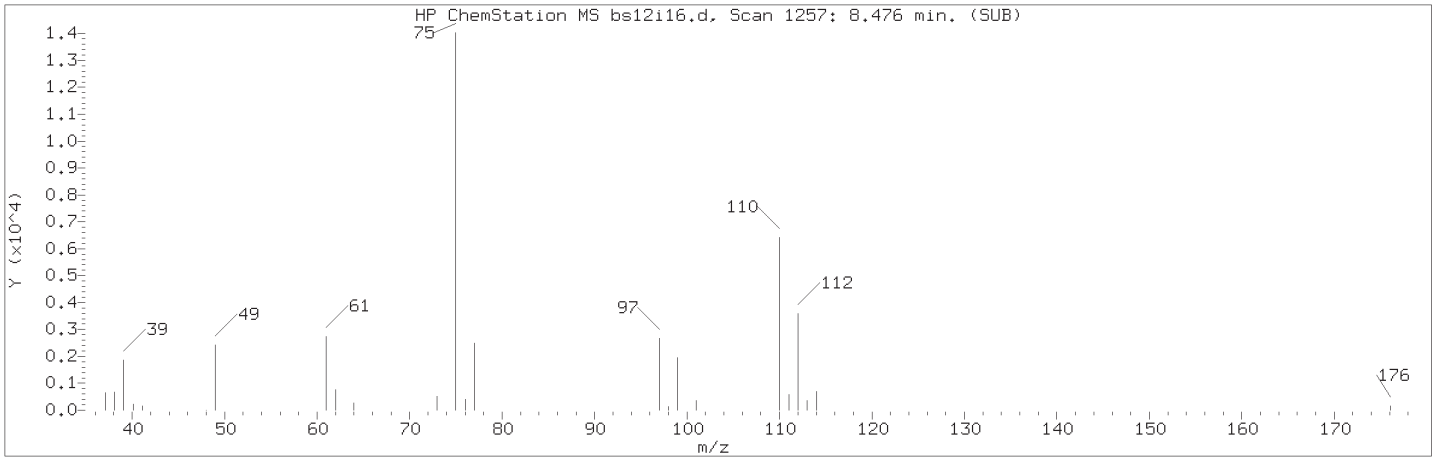
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:23
Date, time and analyst ID of latest file update: 12-Sep-2018 15:23 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

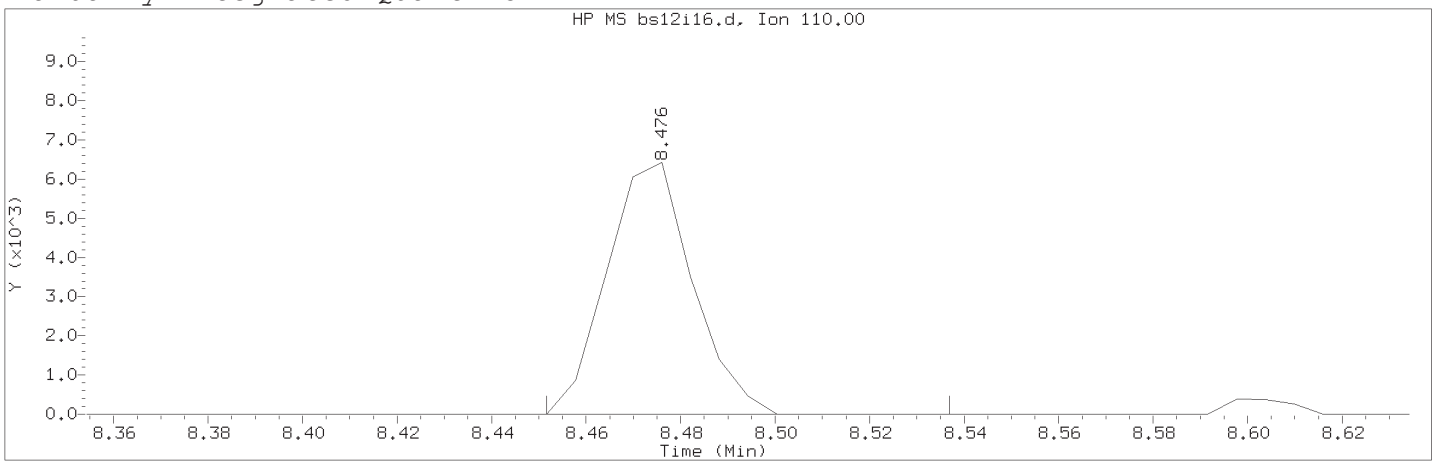
Compound Number	: 119		
Compound Name	: 4-Bromofluorobenzene		
Scan Number	: 1228		
Retention Time (minutes)	: 8.300		
Quant Ion	: 95.00		
Area	: 418619		
On-column Amount (ng)	: 47.3704		
Integration start scan	: 1222	Integration stop scan:	1267
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD004 Lab Sample ID: VSTD004

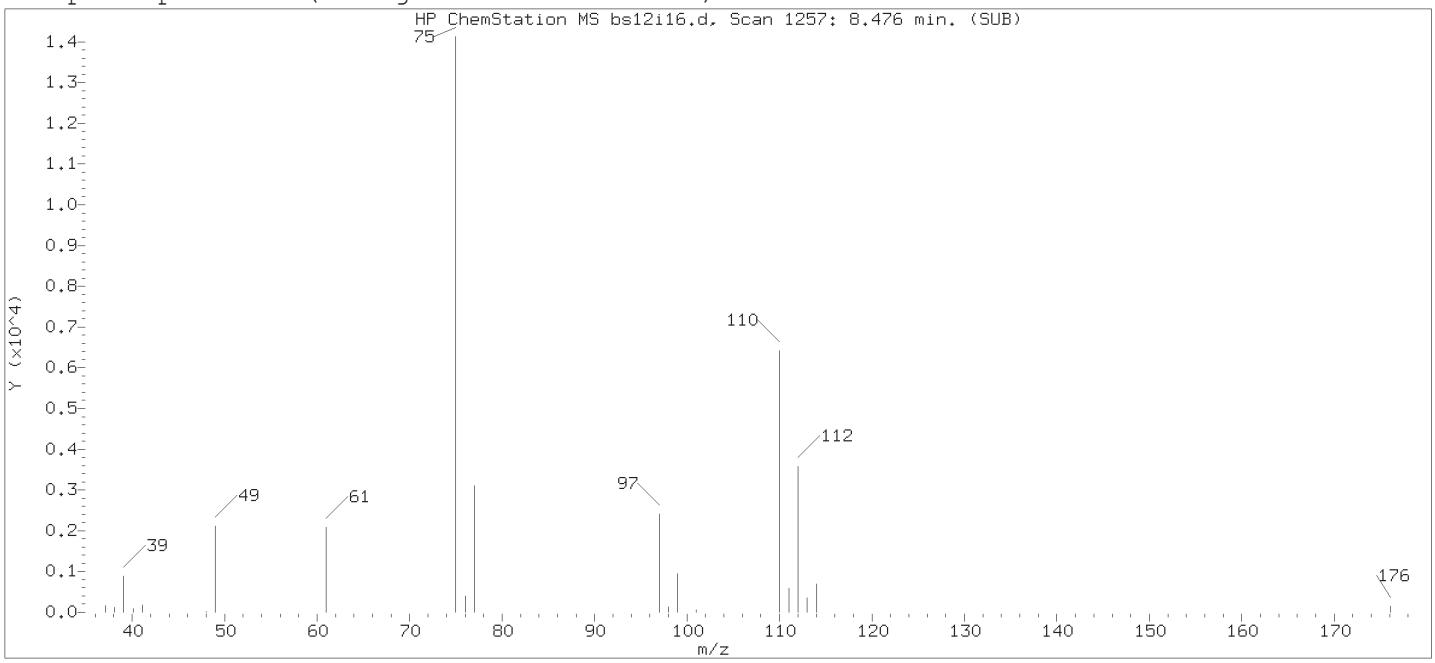
Compound Number : 123
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1257
Retention Time (minutes): 8.476
Quant Ion : 110.00
Area (flag) : 8079M
On-Column Amount (ng) : 3.9532
Integration start scan : 1252 Integration stop scan: 1266
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

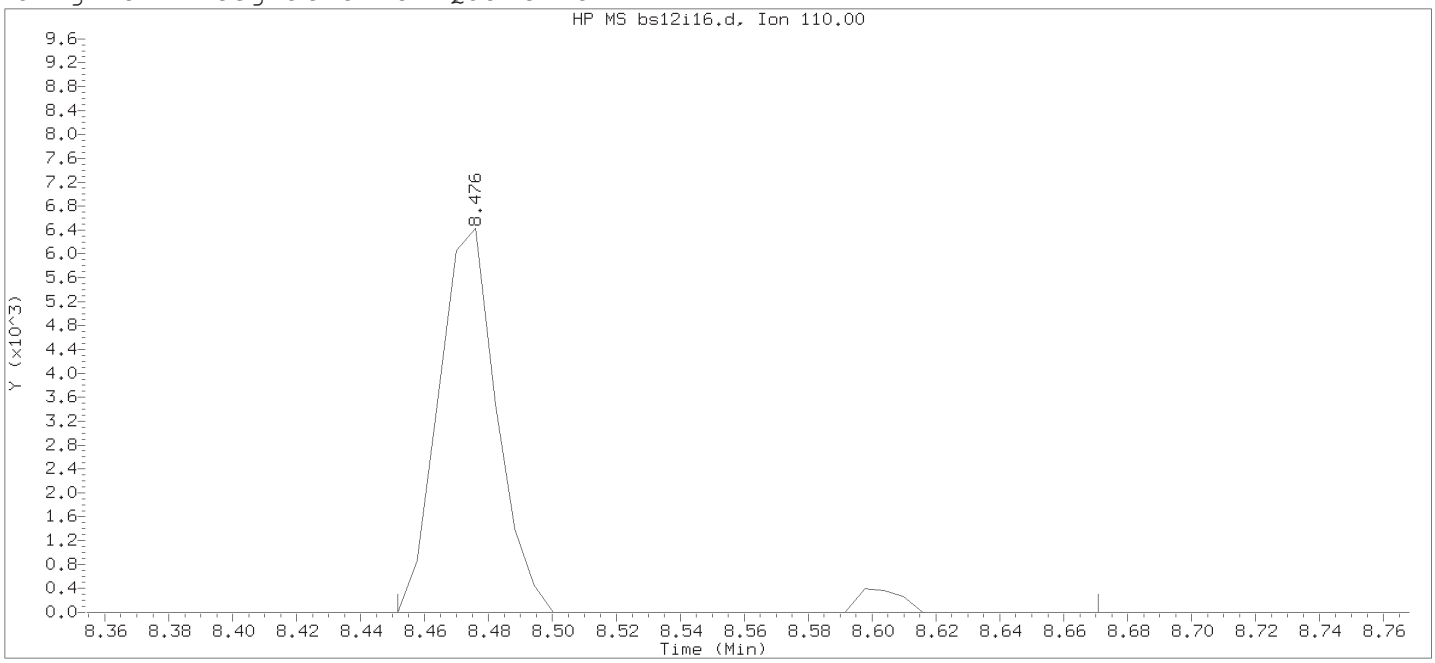
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



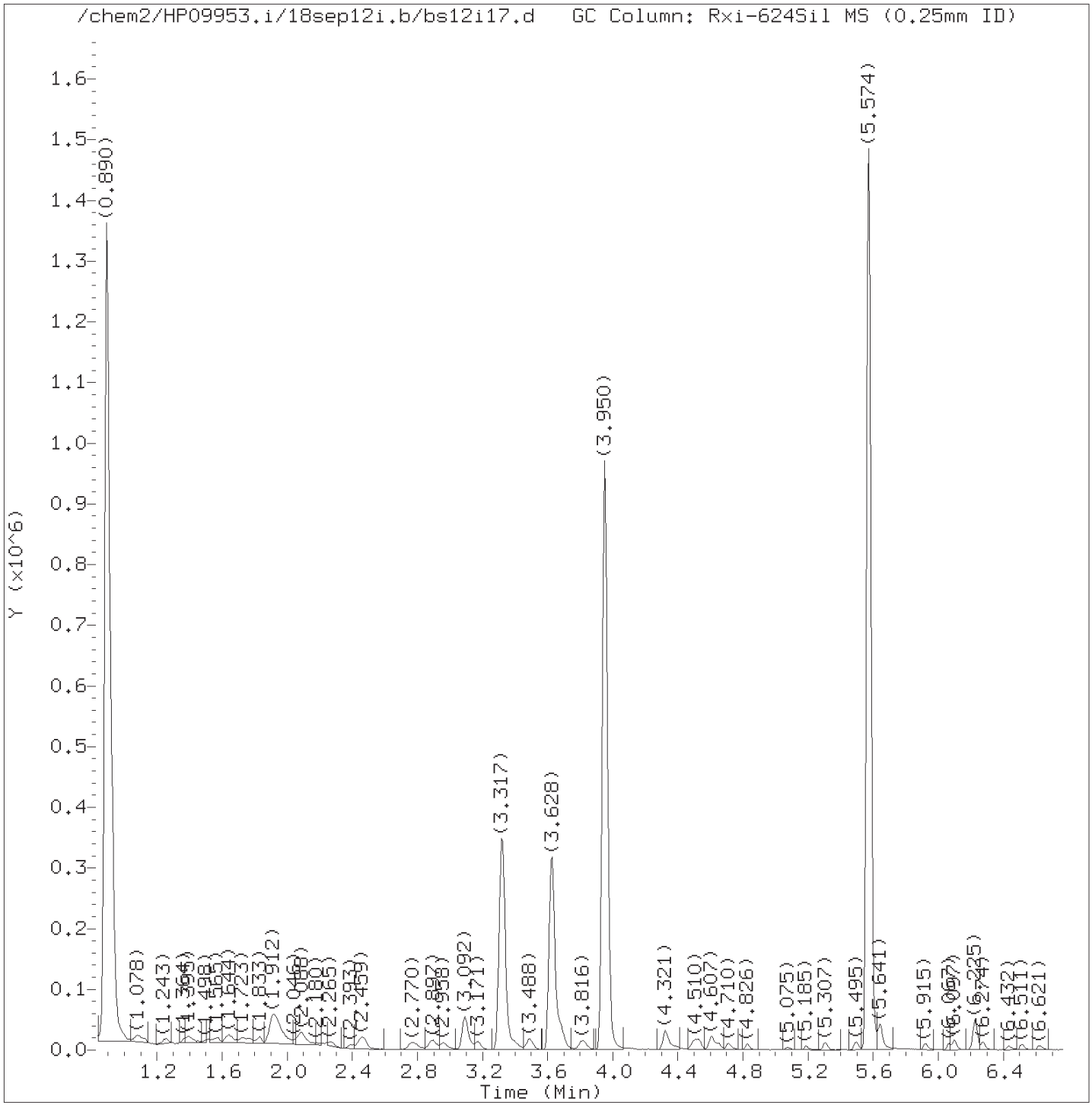
Data File: /chem2/HP09953.i/18sep12i.b/bs12i16.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:08 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:23
Date, time and analyst ID of latest file update: 12-Sep-2018 15:23 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 123
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1257
Retention Time (minutes): 8.476
Quant Ion : 110.00
Area : 8452
On-column Amount (ng) : 4.1931
Integration start scan : 1252 Integration stop scan: 1288
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe9512



Total Ion Chromatogram (TIC)

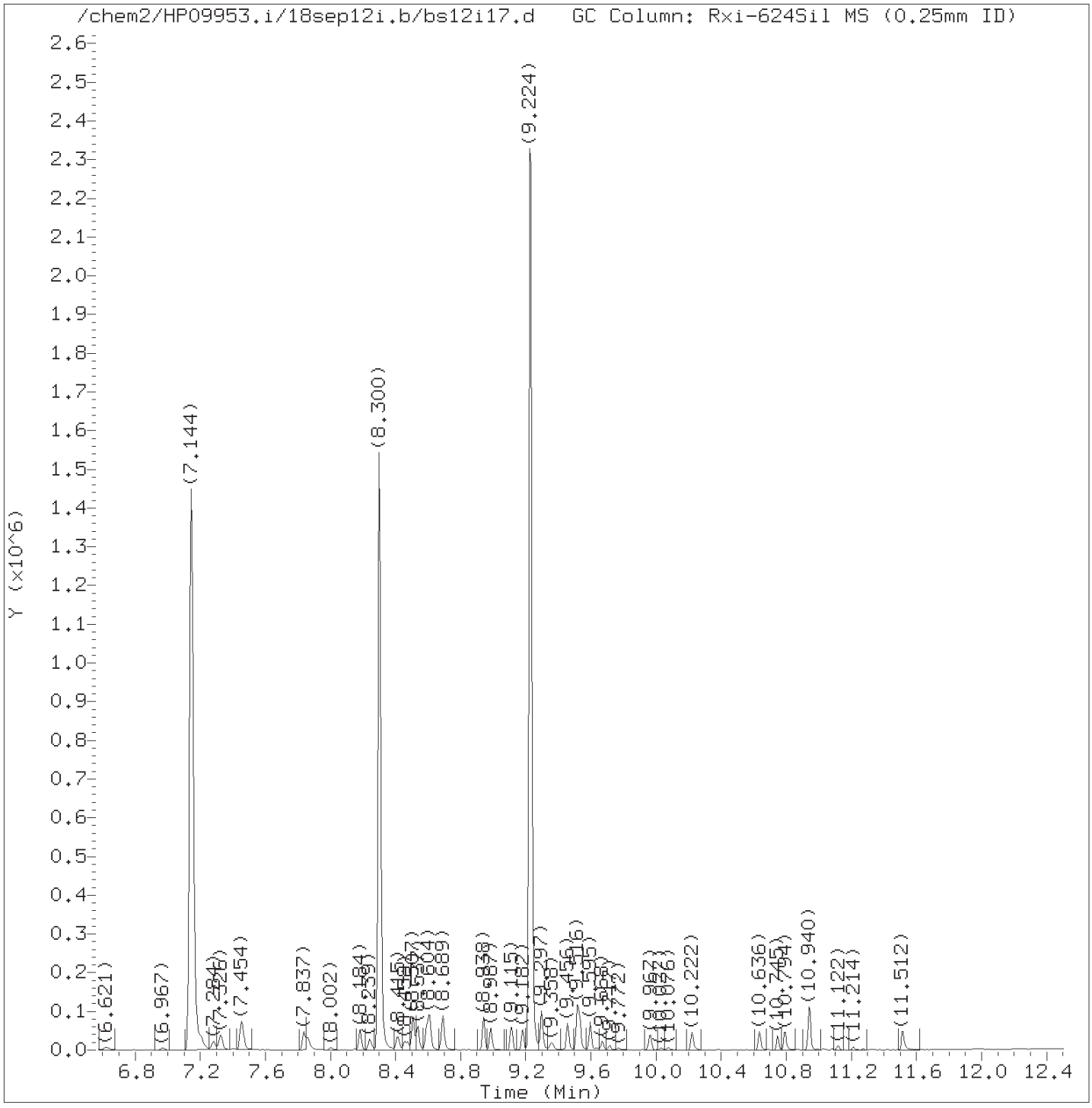
Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.993	85	8415	0.830
4) Chloromethane	(2)	1.072	50	10971M	1.050
5) Vinyl Chloride	(2)	1.127	62	9016	1.107
9) Bromomethane	(2)	1.255	94	7913	1.092
10) Chloroethane	(2)	1.267	64	4343M	0.991
11) Dichlorofluoromethane	(2)	1.383	67	11556	1.091
13) Trichlorofluoromethane	(2)	1.419	101	9979M	0.890
15) Ethanol	(1)	1.468	45	11039	169.349
17) Freon 123a	(2)	1.510	67	9770	1.302
18) Acrolein	(1)	1.571	56	16651	13.795
19) 1,1-Dichloroethene	(2)	1.632	96	5700	1.012
20) Acetone	(1)	1.650	58	2800	0.000
22) Freon 113	(2)	1.656	101	4926	0.872
23) 2-Propanol	(1)	1.717	45	10378	21.501
24) Methyl Iodide	(2)	1.723	142	13353	0.986
25) Carbon Disulfide	(2)	1.772	76	21461	0.952
29) Allyl Chloride	(2)	1.833	41	8107	1.076
27) Methyl Acetate	(2)	1.839	43	5090	1.762
31) Methylene Chloride	(2)	1.912	84	7871	1.182
30)*t-Butyl alcohol-d10	(1)	1.924	65	124933	250.000
32) t-Butyl alcohol	(1)	1.979	59	14051	21.411
33) Acrylonitrile	(2)	2.070	53	2675	1.368
34) Methyl Tertiary Butyl Ether	(2)	2.088	73	17212	1.074
35) trans-1,2-Dichloroethene	(2)	2.088	96	6702	1.023
38) n-Hexane	(2)	2.277	57	7804	1.044
40) 1,1-Dichloroethane	(2)	2.393	63	10101	0.951
41) di-Isopropyl ether	(2)	2.453	45	19483	0.983
42) 2-Chloro-1,3-butadiene	(2)	2.466	53	8534	0.912
43) Ethyl t-butyl ether	(2)	2.770	59	18608	0.996
45) cis-1,2-Dichloroethene	(2)	2.885	96	6612	0.930
47) 2,2-Dichloropropane	(2)	2.897	77	7387	0.954
44) 2-Butanone	(1)	2.910	43	7823	2.436
49) Propionitrile	(1)	2.958	54	15503	17.992
46) 1,2-Dichloroethene (Total)	(2)		96	13314	1.953
51) Methacrylonitrile	(2)	3.092	67	23645	10.819
52) Bromochloromethane	(2)	3.098	128	3661	0.969
53) Tetrahydrofuran	(1)	3.153	71	1295	1.619
54) Chloroform	(2)	3.177	83	10498	0.974

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	3.317	113	282179	50.418
56)$Dibromofluoromethane	(2)	3.317	111	283554	49.976
57) 1,1,1-Trichloroethane	(2)	3.348	97	10599	0.960
58) Cyclohexane	(2)	3.390	56	9333	0.900
58) Cyclohexane	(2)	3.402	84	7954	0.821
58) Cyclohexane	(2)	3.402	69	2930	0.893
60) 1,1-Dichloropropene	(2)	3.488	75	7053	0.879
61) Carbon Tetrachloride	(2)	3.500	117	6842	0.816
63)$1,2-Dichloroethane-d4	(2)	3.628	102	61250	50.845
63)$1,2-Dichloroethane-d4	(2)	3.621	65	277966	52.470
63)$1,2-Dichloroethane-d4	(2)	3.621	104	40209	52.100
62) Isobutyl Alcohol	(1)	3.658	41	12241	53.090
64) Benzene	(2)	3.676	78	26870	1.049
67) 1,2-Dichloroethane	(2)	3.700	62	8524	1.153
67) 1,2-Dichloroethane	(2)	3.700	98	670	0.912
68) t-Amyl methyl ether	(2)	3.810	73	17441	1.012
70)*Fluorobenzene	(2)	3.950	96	1123003	50.000
72) n-Heptane	(2)	3.962	43	6564	0.962
75) Trichloroethene	(2)	4.315	95	6249	0.936
73) n-Butanol	(1)	4.327	56	17355	89.888
76) Methylcyclohexane	(2)	4.504	83	8510	0.819
77) 1,2-Dichloropropane	(2)	4.528	63	5612	0.923
81) Dibromomethane	(2)	4.650	93	3873	1.041
80) 1,4-Dioxane	(1)	4.698	88	3137M	39.206
79) Methyl Methacrylate	(2)	4.710	69	4001	1.020
84) Bromodichloromethane	(2)	4.826	83	6695	0.881
85) 2-Nitropropane	(1)	5.075	41	3186	1.928
87) 2-Chloroethyl Vinyl Ether	(2)	5.185	63	2942	0.919
89) cis-1,3-Dichloropropene	(2)	5.307	75	8056	0.878
90) 4-Methyl-2-pentanone	(2)	5.495	43	10307	0.979
91)$Toluene-d8	(3)	5.574	98	1131654	49.841
91)$Toluene-d8	(3)	5.574	100	732521	49.716
92) Toluene	(3)	5.641	92	16298	0.968
93) trans-1,3-Dichloropropene	(3)	5.915	75	7179	0.890
94) 1,3-Dichloropropene (total)	(3)		100	15235	1.768
95) Ethyl Methacrylate	(3)	6.067	69	7954	1.016
96) 1,1,2-Trichloroethane	(3)	6.104	97	5816M	1.064
98) Tetrachloroethene	(3)	6.225	166	7048	0.764

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
99) 1,3-Dichloropropane	(3)	6.280	76	8950	1.017
101) 2-Hexanone	(3)	6.432	43	6904M	2.351
103) Dibromochloromethane	(3)	6.511	129	5206	0.827
104) 1,2-Dibromoethane	(3)	6.621	107	5294	0.938
105)*Chlorobenzene-d5	(3)	7.144	117	879725	50.000
107) Chlorobenzene	(3)	7.174	112	19396	0.986
106) 1-Chlorohexane	(3)	7.205	91	7229	0.864
108) 1,1,1,2-Tetrachloroethane	(3)	7.284	131	5511	0.827
109) Ethylbenzene	(3)	7.326	91	30017	0.948
110) m+p-Xylene	(3)	7.454	106	24371	1.886
111) o-Xylene	(3)	7.837	106	11776	0.911
113) Styrene	(3)	7.862	104	19452	0.913
112) Xylene (Total)	(3)		106	36147	2.797
114) Bromoform	(3)	8.002	173	3211	0.818
115) Isopropylbenzene	(3)	8.184	105	30055	0.923
118) Cyclohexanone	(1)	8.239	55	10660M	36.816
119)$4-Bromofluorobenzene	(3)	8.300	95	412333	49.851
119)$4-Bromofluorobenzene	(3)	8.300	174	377639	49.603
121) Bromobenzene	(4)	8.415	156	9239	1.014
120) 1,1,2,2-Tetrachloroethane	(4)	8.458	83	7357	1.058
123) 1,2,3-Trichloropropane	(4)	8.476	110	2143M	1.039
122) trans-1,4-Dichloro-2-butene	(4)	8.507	53	16445	9.634
124) n-Propylbenzene	(4)	8.537	91	33900	0.941
126) 2-Chlorotoluene	(4)	8.592	126	8143	0.963
130) 4-Chlorotoluene	(4)	8.683	126	8251	0.963
129) 1,3,5-Trimethylbenzene	(4)	8.695	105	24863	0.892
133) tert-Butylbenzene	(4)	8.938	134	5850	0.894
134) Pentachloroethane	(4)	8.945	167	3908	0.998
135) 1,2,4-Trimethylbenzene	(4)	8.987	105	27799	0.957
136) sec-Butylbenzene	(4)	9.115	105	32506M	0.916
138) 1,3-Dichlorobenzene	(4)	9.182	146	17517	1.024
139) p-Isopropyltoluene	(4)	9.230	119	29673	0.933
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	497298	50.000
141) 1,4-Dichlorobenzene	(4)	9.243	146	19756	1.108
142) 1,2,3-Trimethylbenzene	(4)	9.297	105	30202	0.964
143) Benzyl Chloride	(4)	9.364	126	1801	0.775
144) 1,3-Diethylbenzene	(4)	9.456	119	17523	0.892
145) 1,4-Diethylbenzene	(4)	9.516	119	18909	0.927

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

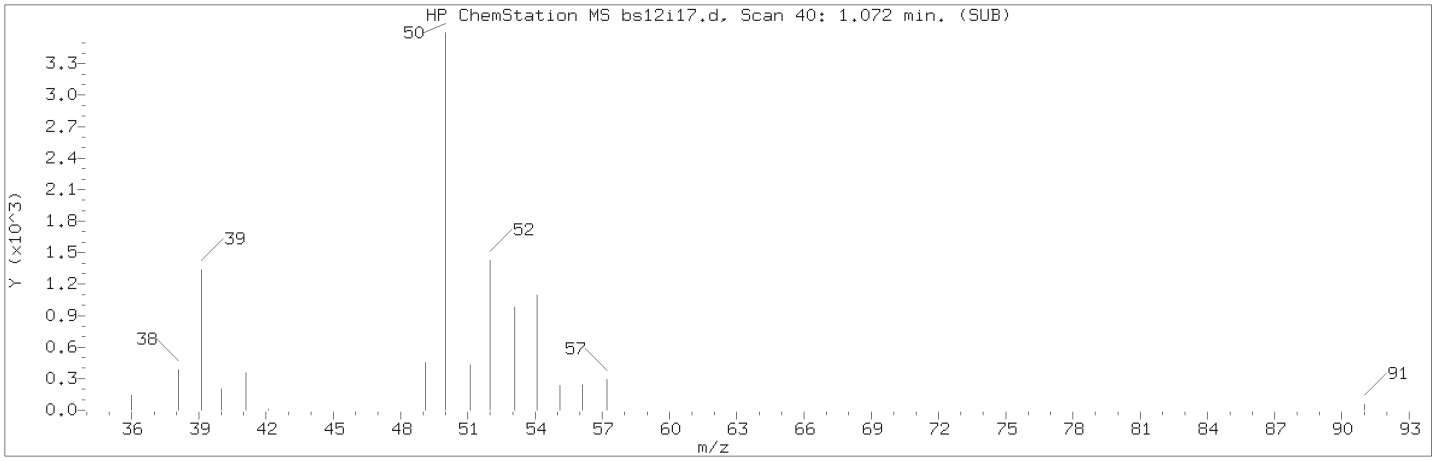
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

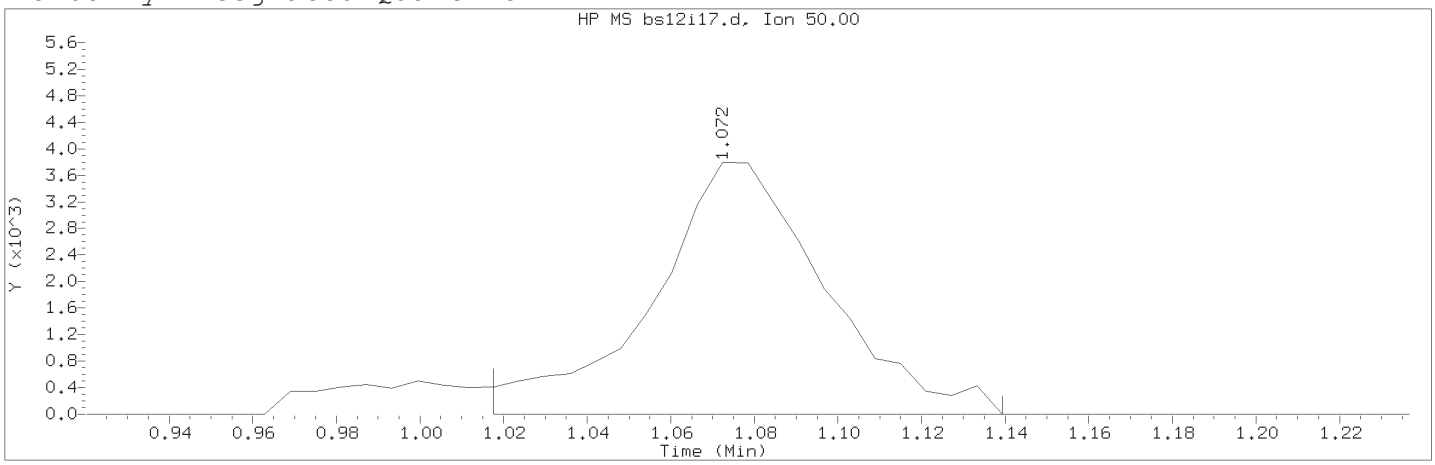
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2-Dichlorobenzene	(4)	9.522	146	18398	1.100
146) n-Butylbenzene	(4)	9.535	92	13474	0.912
148) 1,2-Diethylbenzene	(4)	9.595	119	16043	0.933
149) Diethylbenzene (total)	(4)		100	52475	2.752
151) 1,2-Dibromo-3-chloropropane	(4)	10.076	75	1220	1.009
152) 1,3,5-Trichlorobenzene	(4)	10.222	180	12949	0.990
153) 1,2,4-Trichlorobenzene	(4)	10.636	180	13288	1.078
154) Hexachlorobutadiene	(4)	10.745	225	4894	0.870
155) Naphthalene	(4)	10.794	128	36832	1.258
156) 1,2,3-Trichlorobenzene	(4)	10.946	180	12658	1.077
157) 2-Methylnaphthalene	(4)	11.518	142	24241	1.224

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

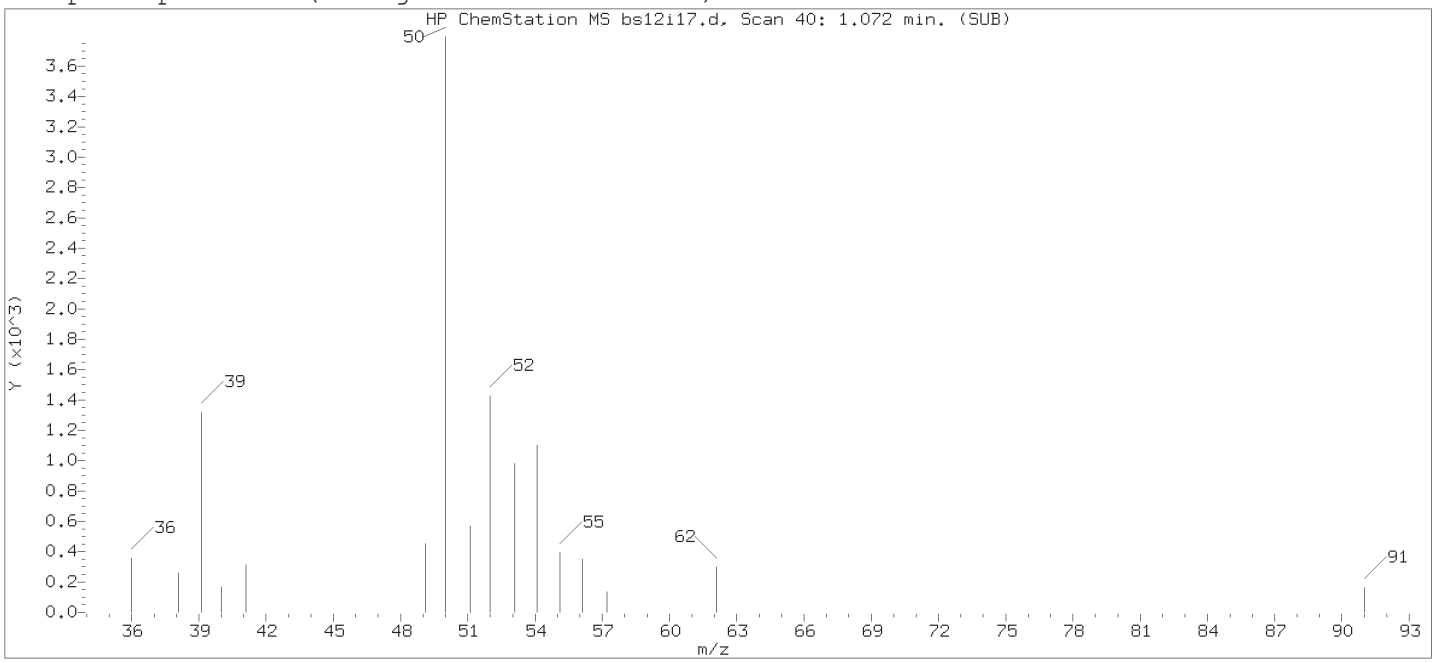
Compound Number : 4
Compound Name : Chloromethane
Scan Number : 40
Retention Time (minutes): 1.072
Quant Ion : 50.00
Area (flag) : 10971M
On-Column Amount (ng) : 1.0497
Integration start scan : 30 Integration stop scan: 50
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

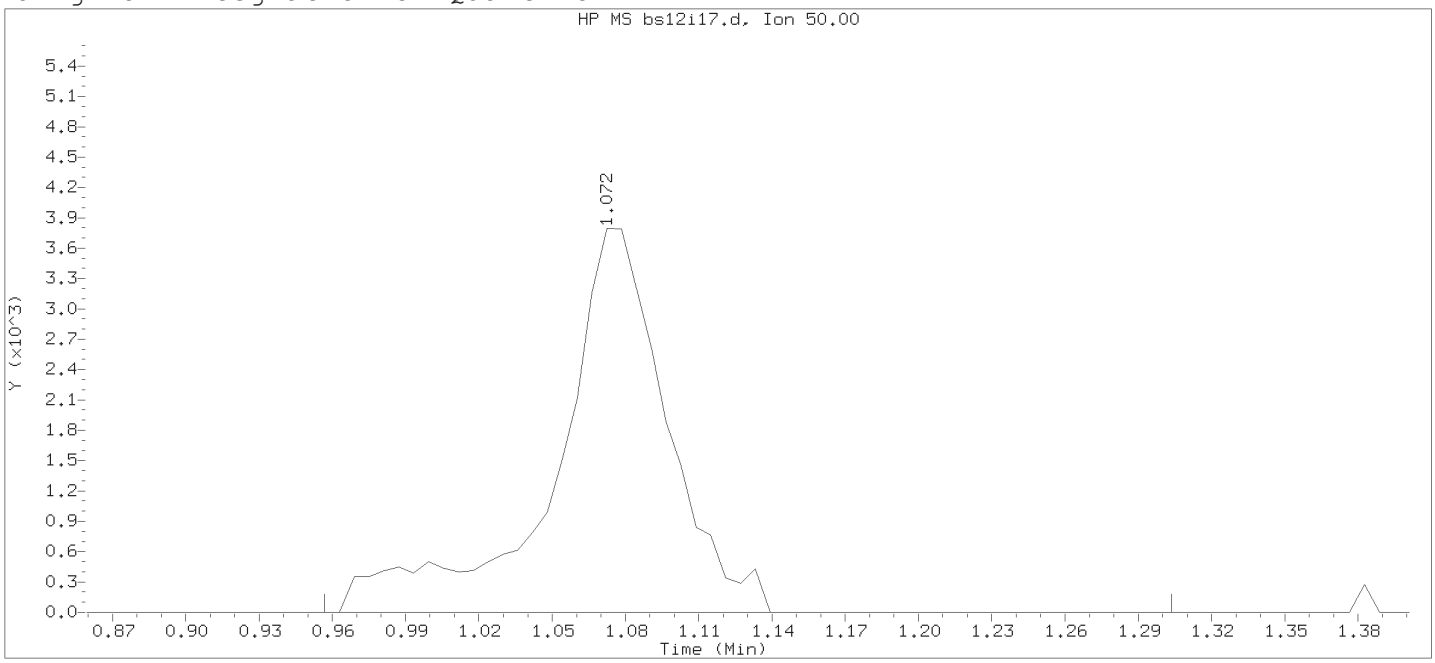
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

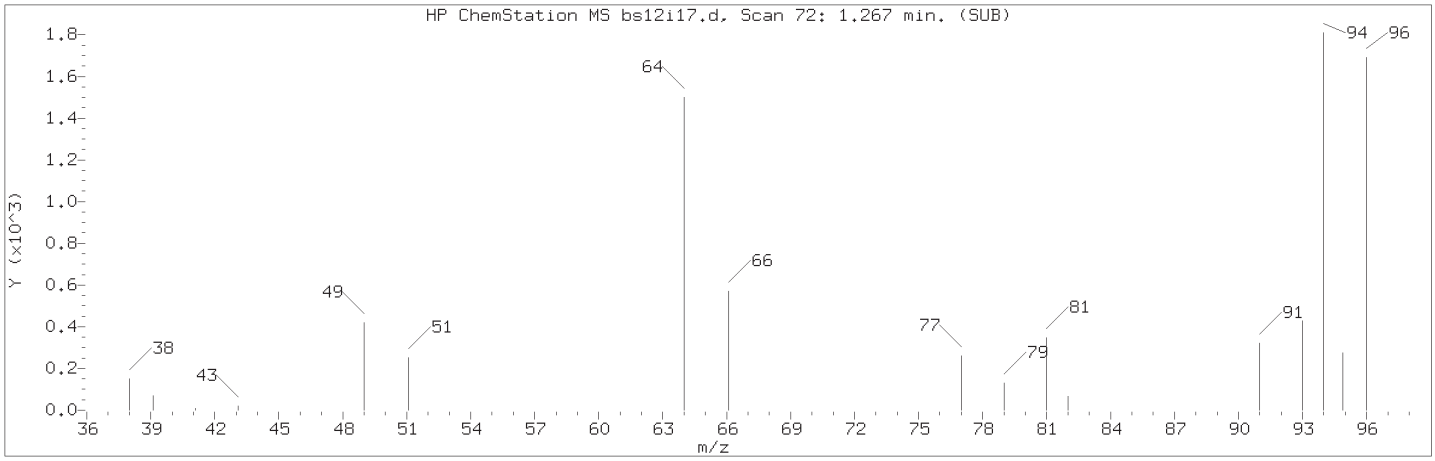
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 15:45 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

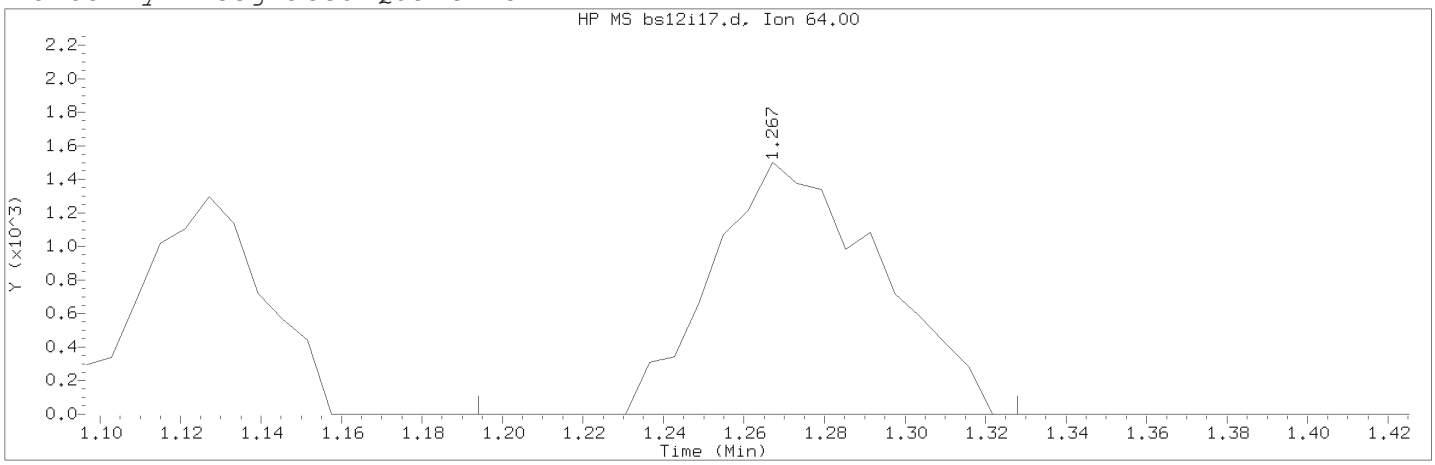
Compound Number	: 4		
Compound Name	: Chloromethane		
Scan Number	: 40		
Retention Time (minutes)	: 1.072		
Quant Ion	: 50.00		
Area	: 12170		
On-column Amount (ng)	: 1.1456		
Integration start scan	: 20	Integration stop scan:	77
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

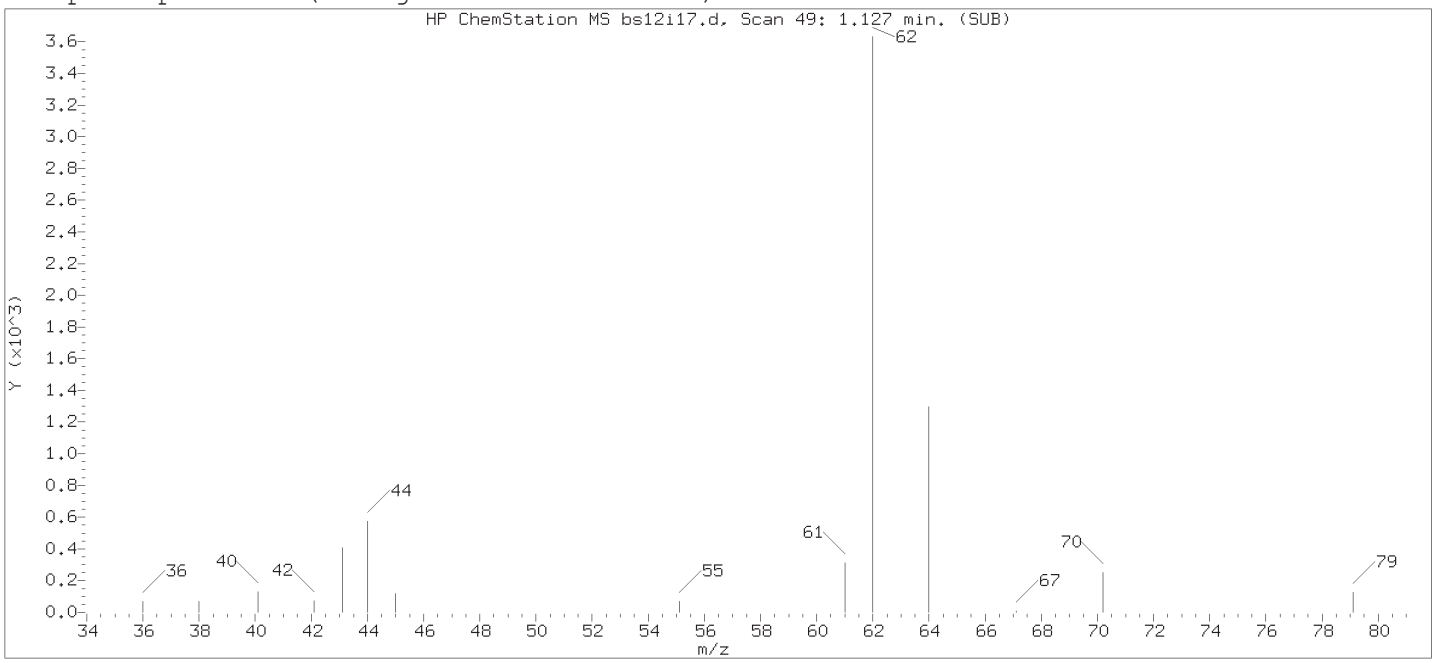
Compound Number : 10
Compound Name : Chloroethane
Scan Number : 72
Retention Time (minutes): 1.267
Quant Ion : 64.00
Area (flag) : 4343M
On-Column Amount (ng) : 0.9913
Integration start scan : 59 Integration stop scan: 81
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

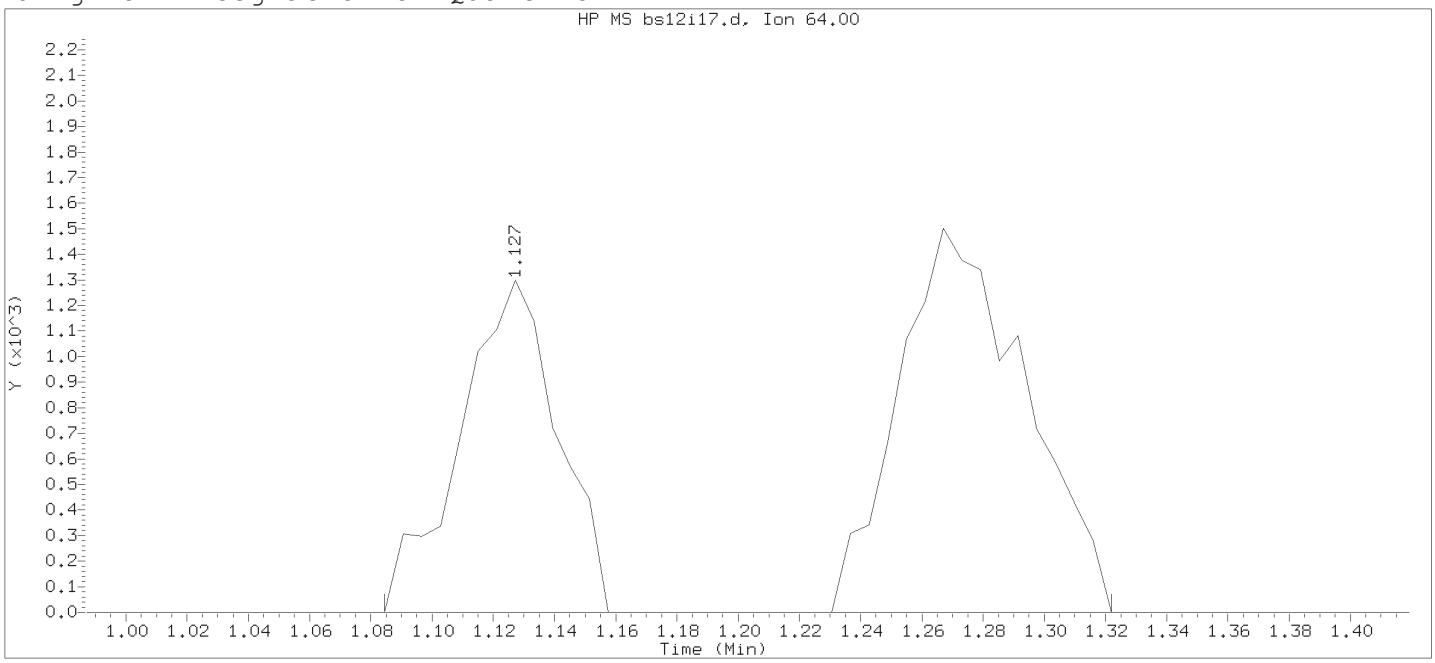
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

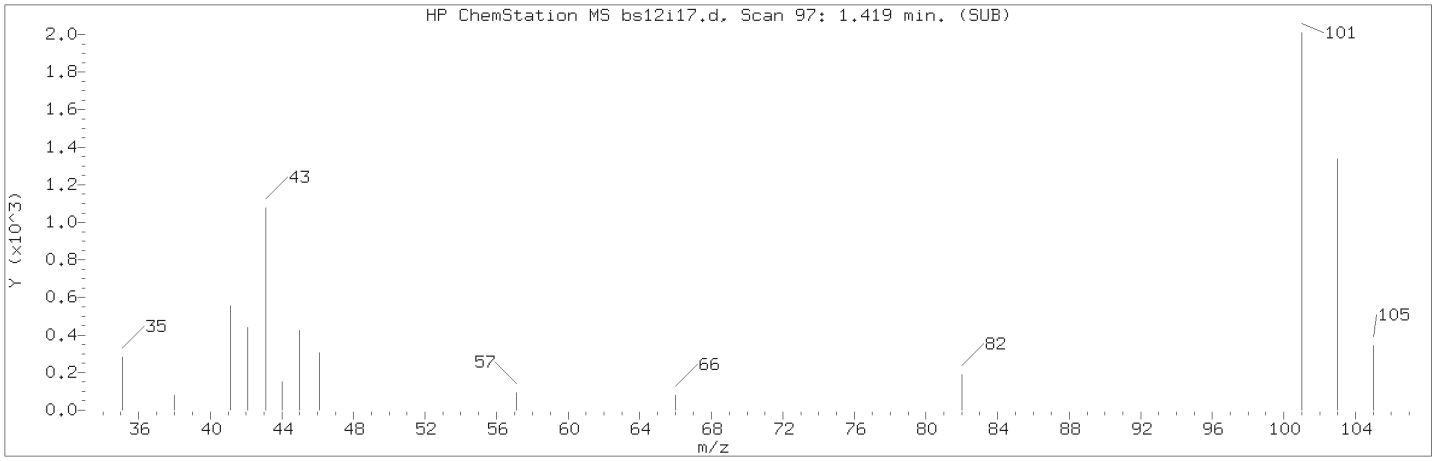
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 15:45 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

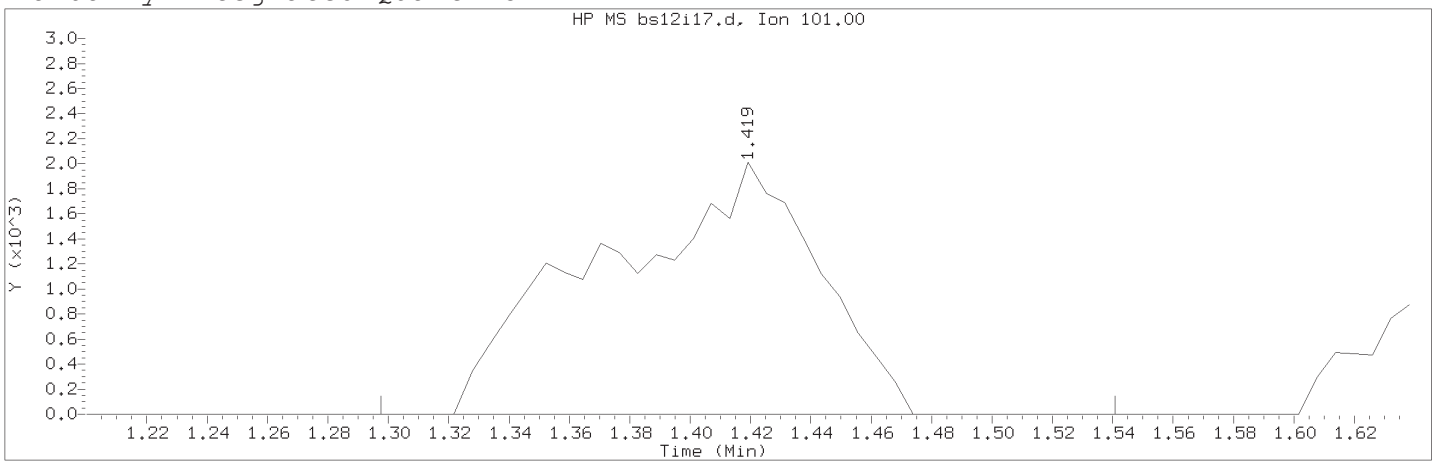
Compound Number : 10
Compound Name : Chloroethane
Scan Number : 49
Retention Time (minutes): 1.127
Quant Ion : 64.00
Area : 7229
On-column Amount (ng) : 1.5082
Integration start scan : 41 Integration stop scan: 80
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe0512

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

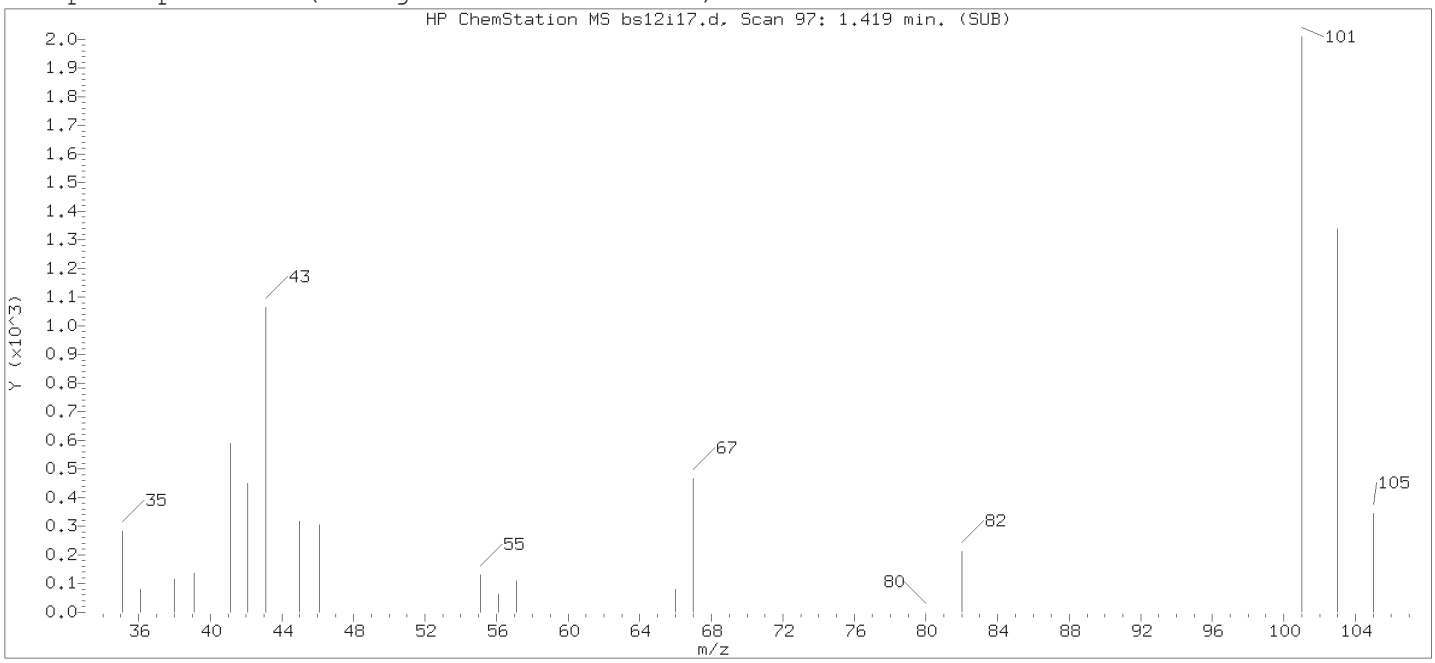
Compound Number : 13
Compound Name : Trichlorofluoromethane
Scan Number : 97
Retention Time (minutes): 1.419
Quant Ion : 101.00
Area (flag) : 9979M
On-Column Amount (ng) : 0.8901
Integration start scan : 76 Integration stop scan: 116
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

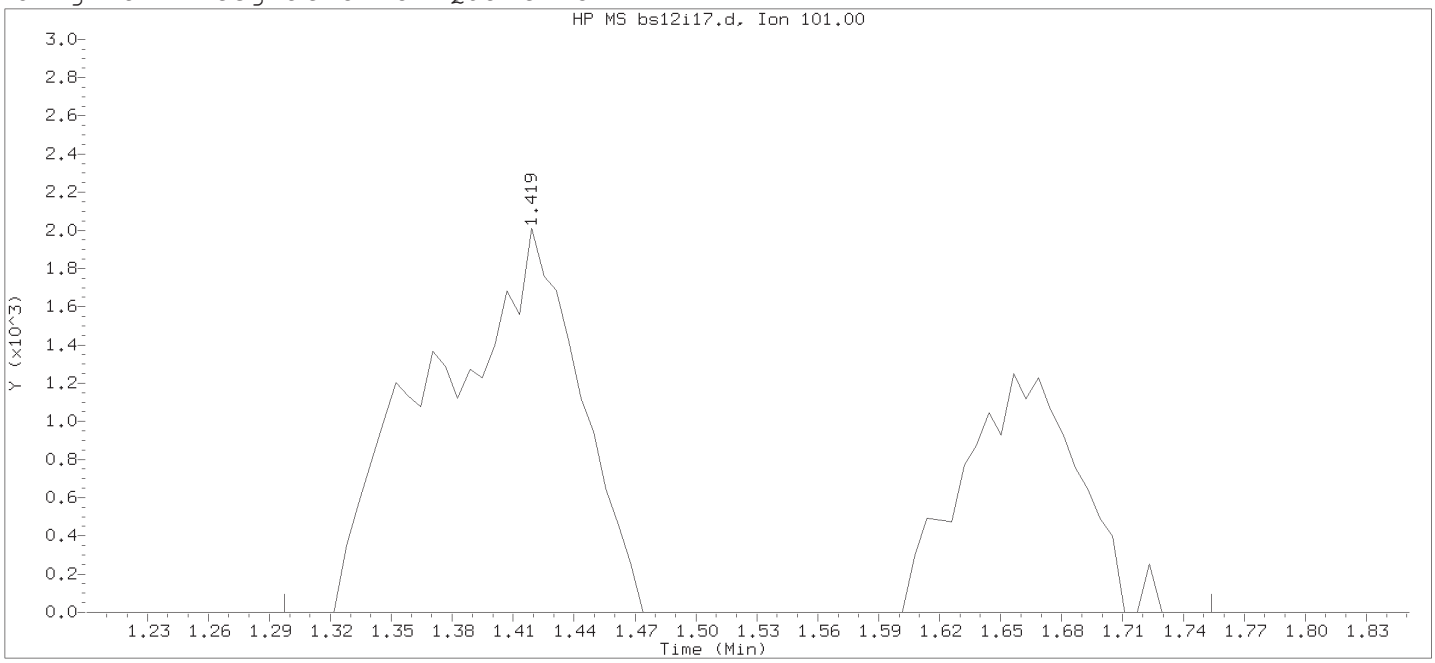
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

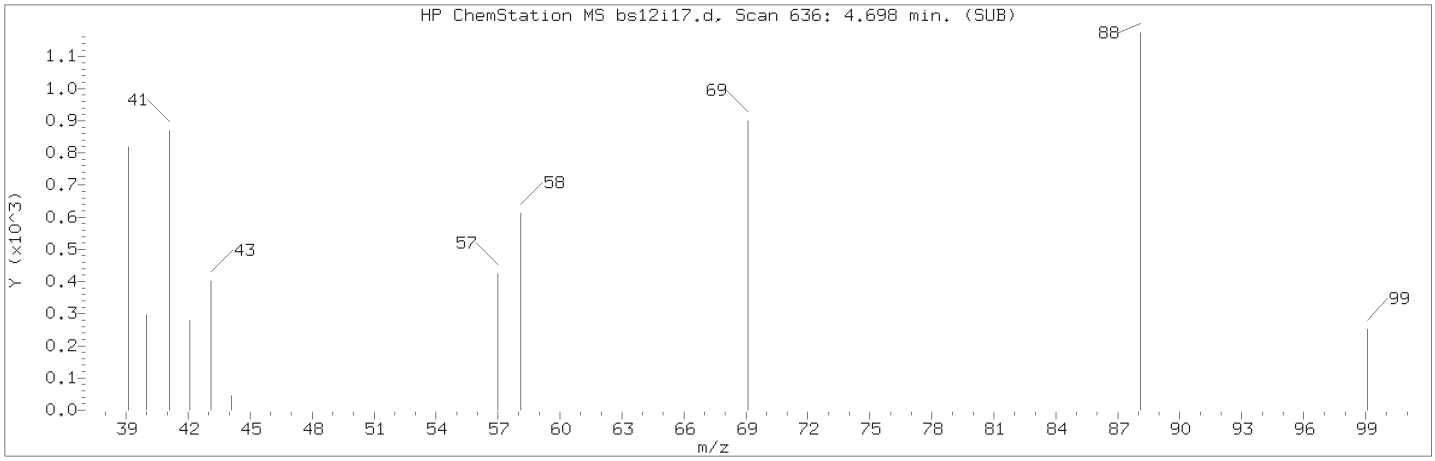
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 15:45 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

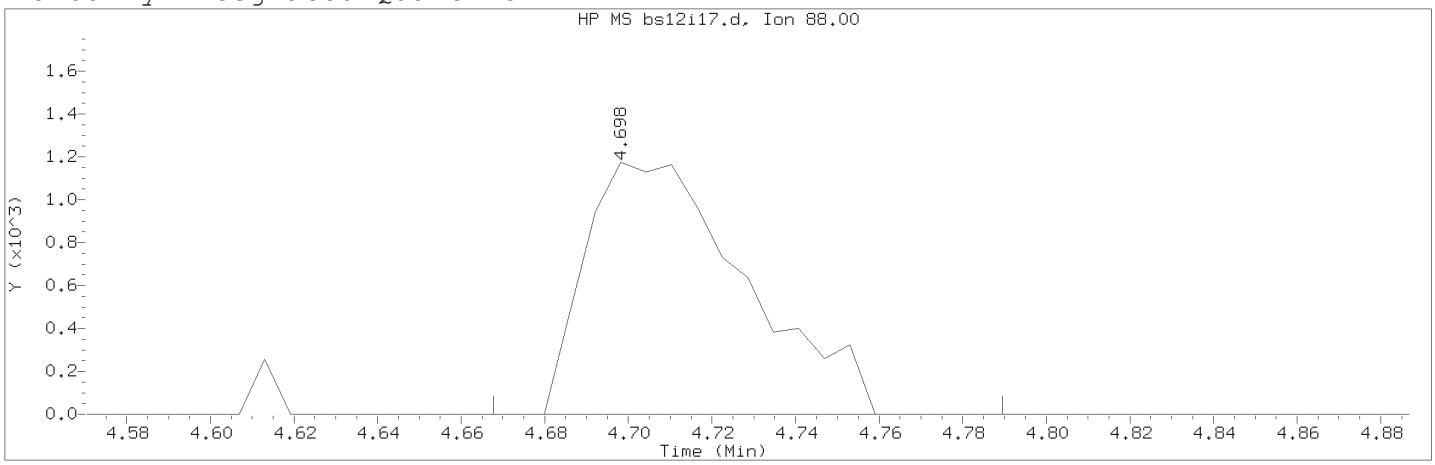
Compound Number : 13
Compound Name : Trichlorofluoromethane
Scan Number : 97
Retention Time (minutes): 1.419
Quant Ion : 101.00
Area : 14906
On-column Amount (ng) : 1.2510
Integration start scan : 76 Integration stop scan: 151
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

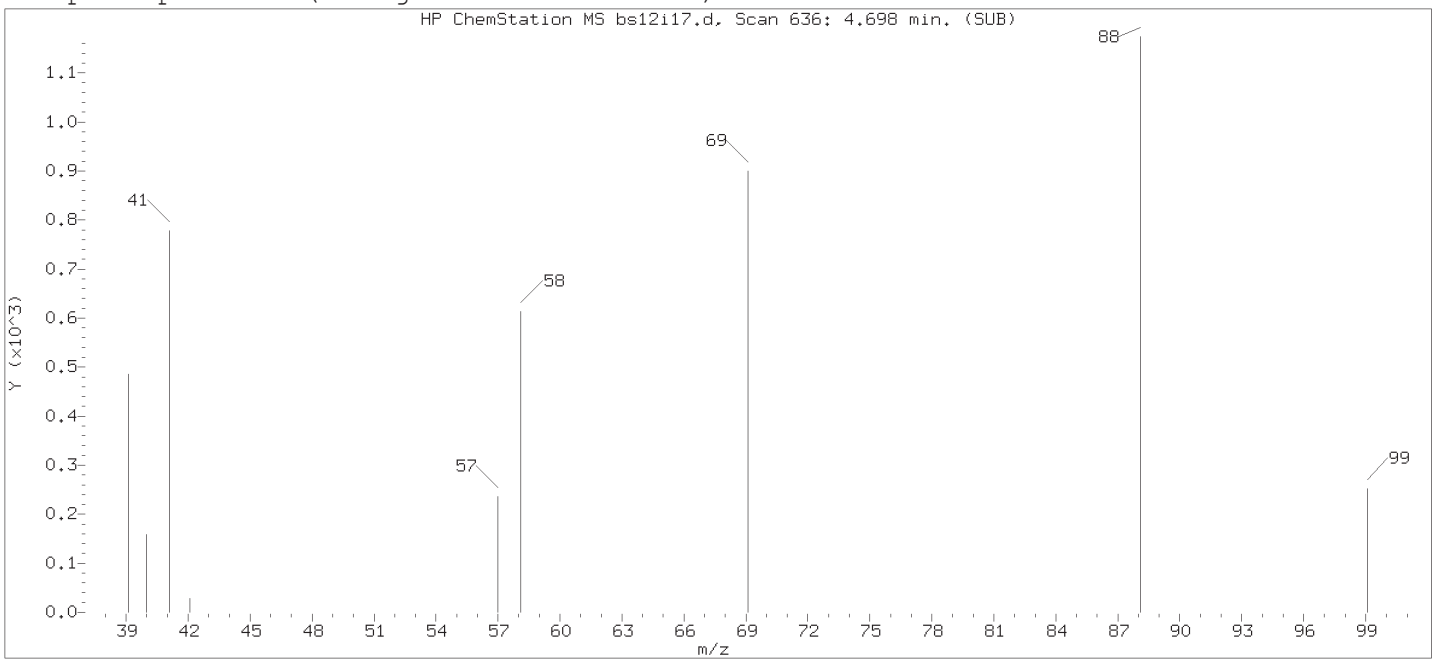
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 636
Retention Time (minutes): 4.698
Quant Ion : 88.00
Area (flag) : 3137M
On-Column Amount (ng) : 39.2058
Integration start scan : 630 Integration stop scan: 650
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

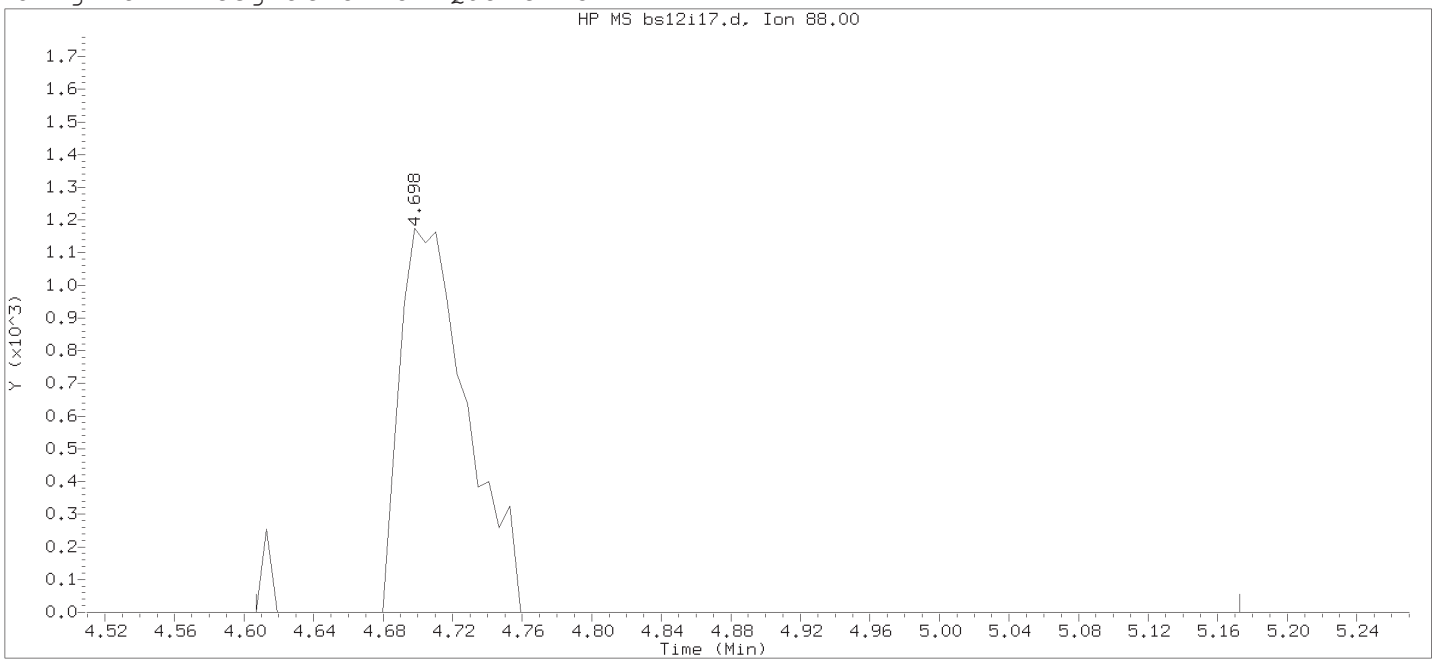
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

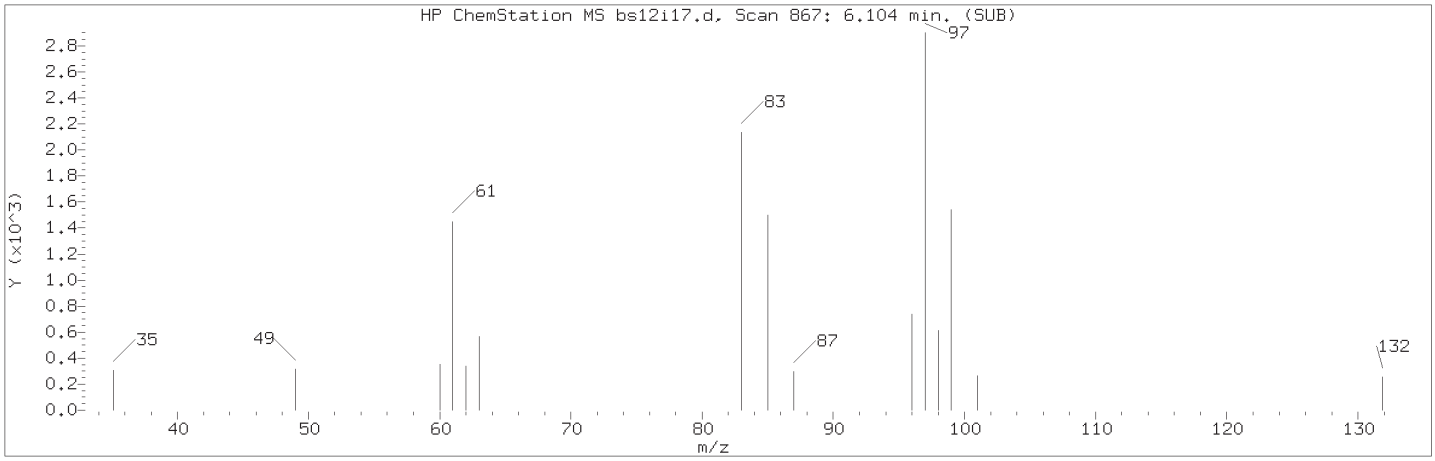
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 15:45 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

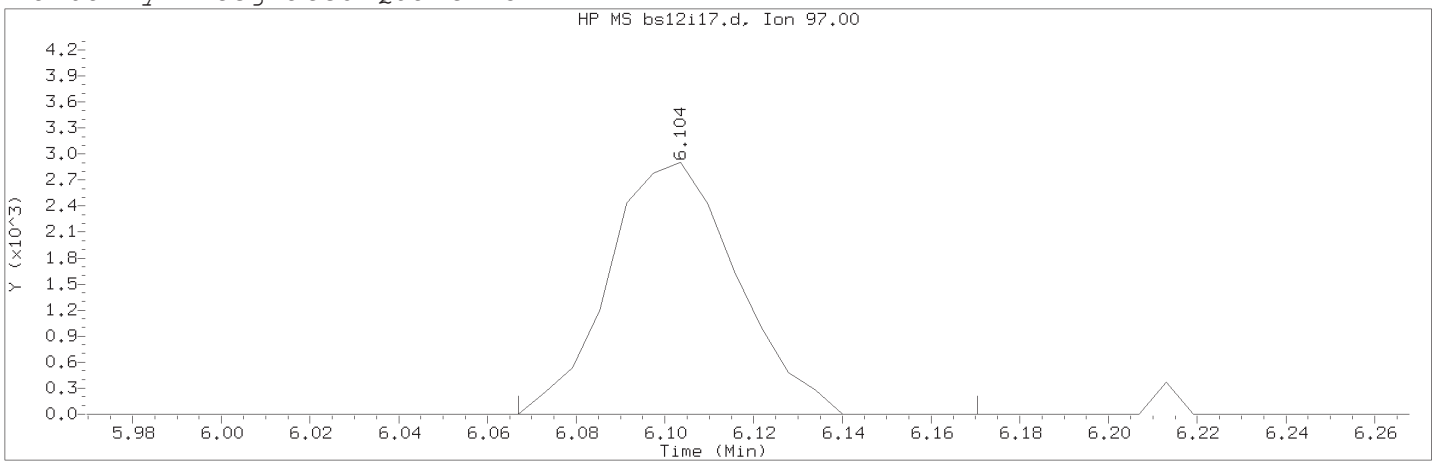
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 636
Retention Time (minutes): 4.698
Quant Ion : 88.00
Area : 3230
On-column Amount (ng) : 25.7002
Integration start scan : 620 Integration stop scan: 713
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

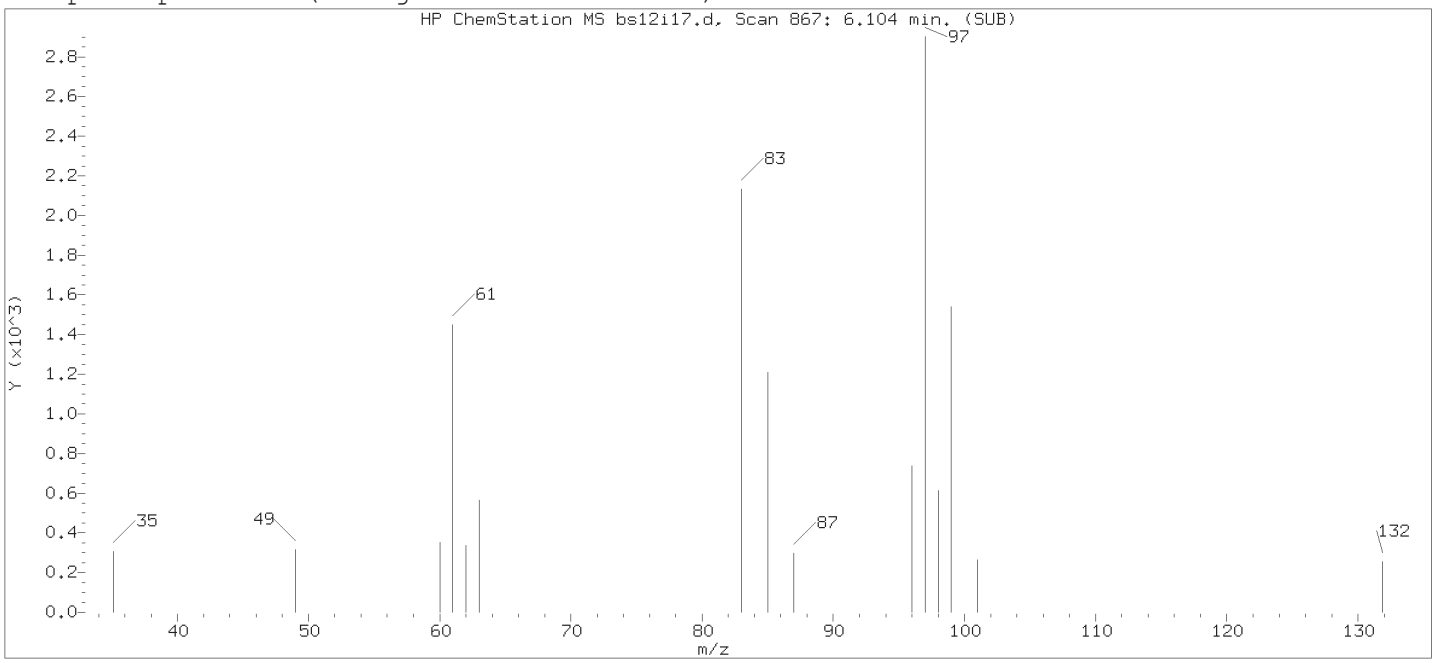
Compound Number : 96
Compound Name : 1,1,2-Trichloroethane
Scan Number : 867
Retention Time (minutes): 6.104
Quant Ion : 97.00
Area (flag) : 5816M
On-Column Amount (ng) : 1.0642
Integration start scan : 860 Integration stop scan: 877
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

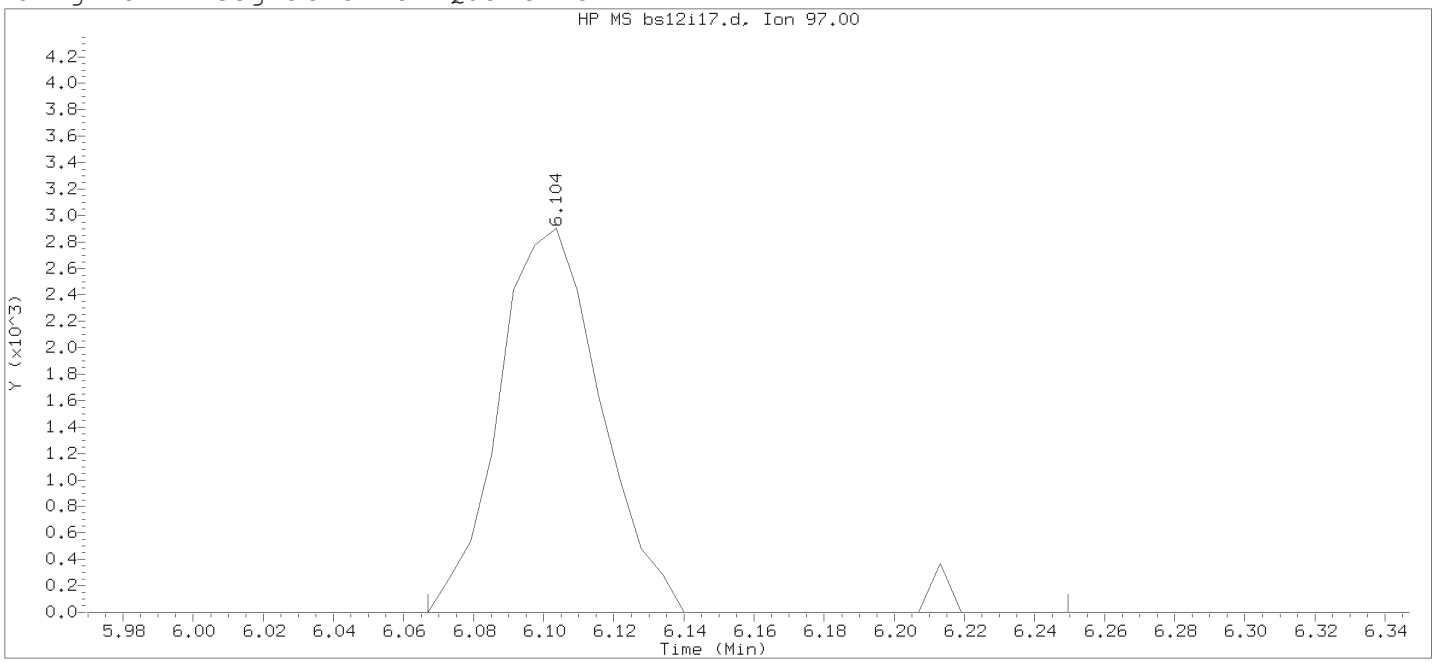
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

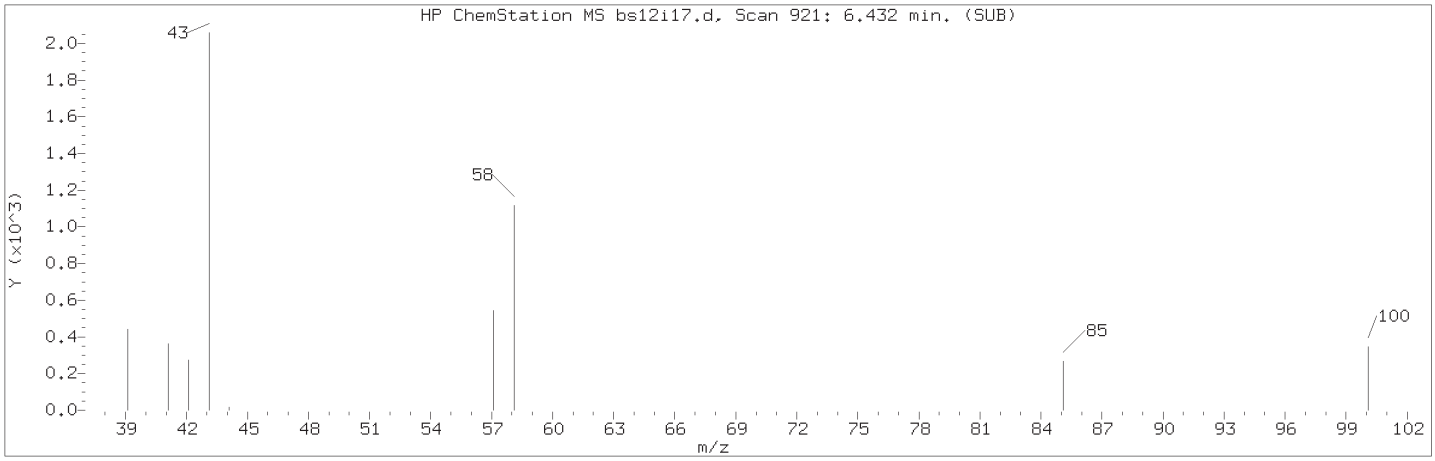
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 15:45 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

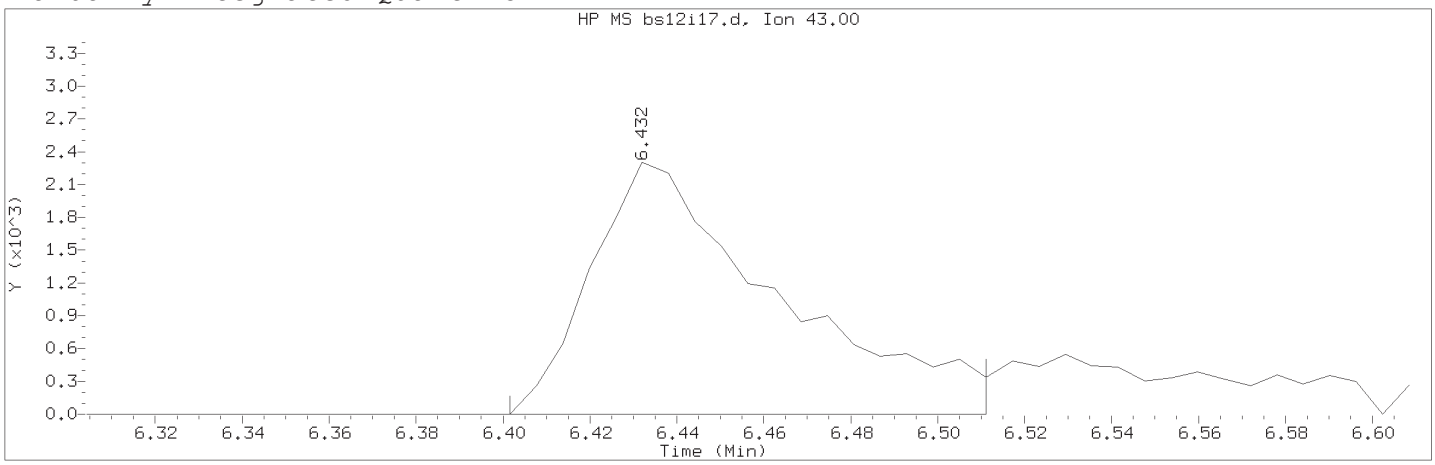
Compound Number : 96
Compound Name : 1,1,2-Trichloroethane
Scan Number : 867
Retention Time (minutes): 6.104
Quant Ion : 97.00
Area : 5951
On-column Amount (ng) : 1.0799
Integration start scan : 860 Integration stop scan: 890
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jhowe0072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

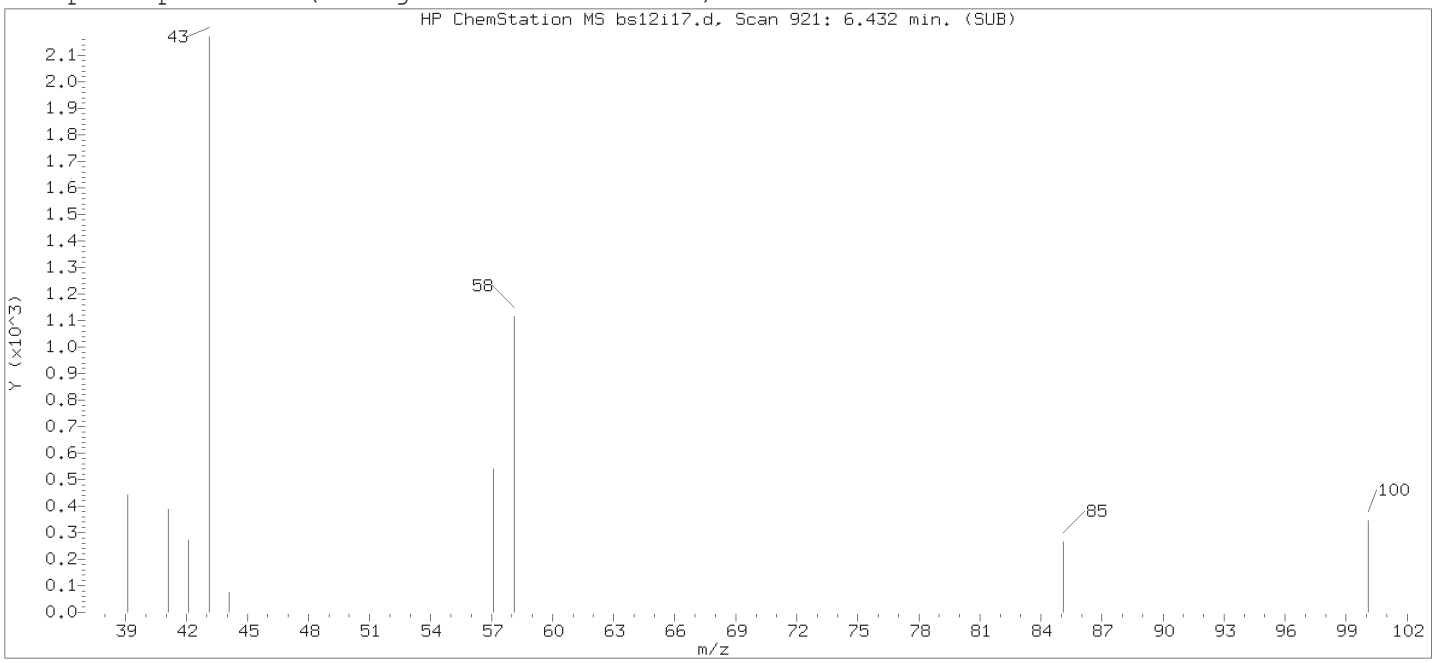
Compound Number : 101
Compound Name : 2-Hexanone
Scan Number : 921
Retention Time (minutes): 6.432
Quant Ion : 43.00
Area (flag) : 6904M
On-Column Amount (ng) : 2.3508
Integration start scan : 915 Integration stop scan: 933
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

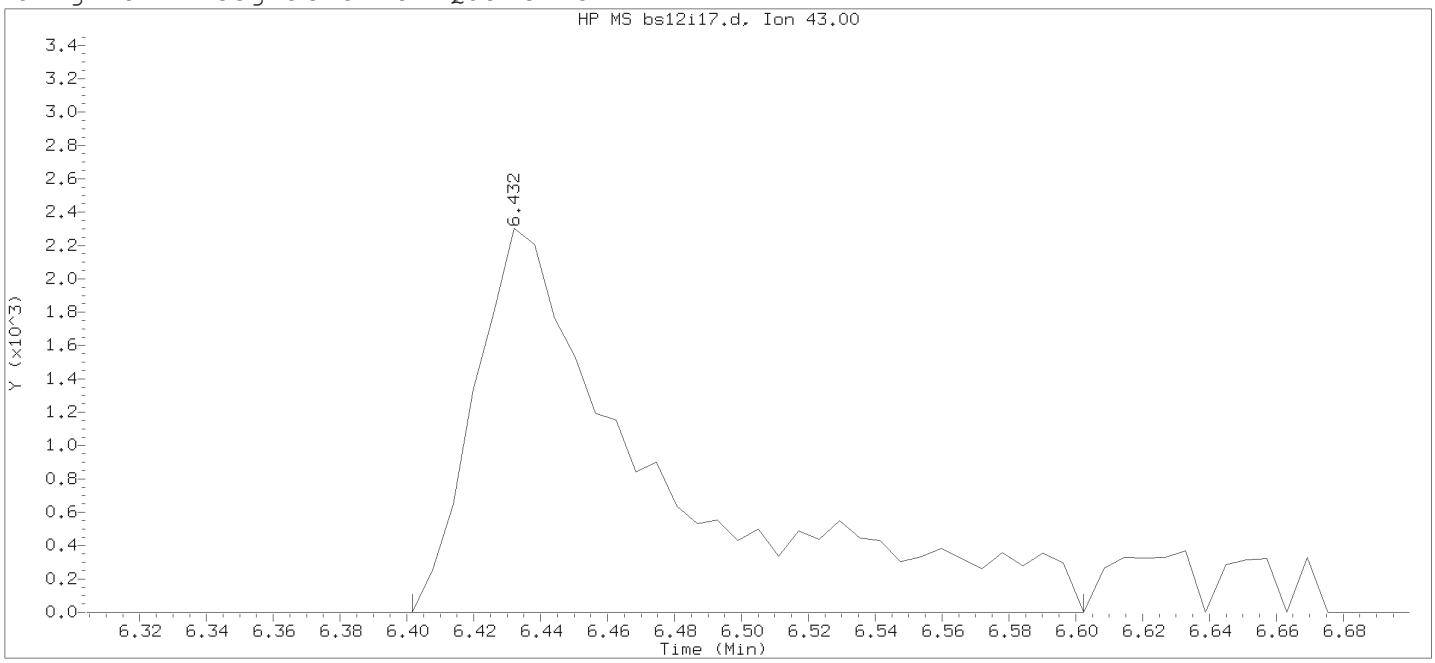
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

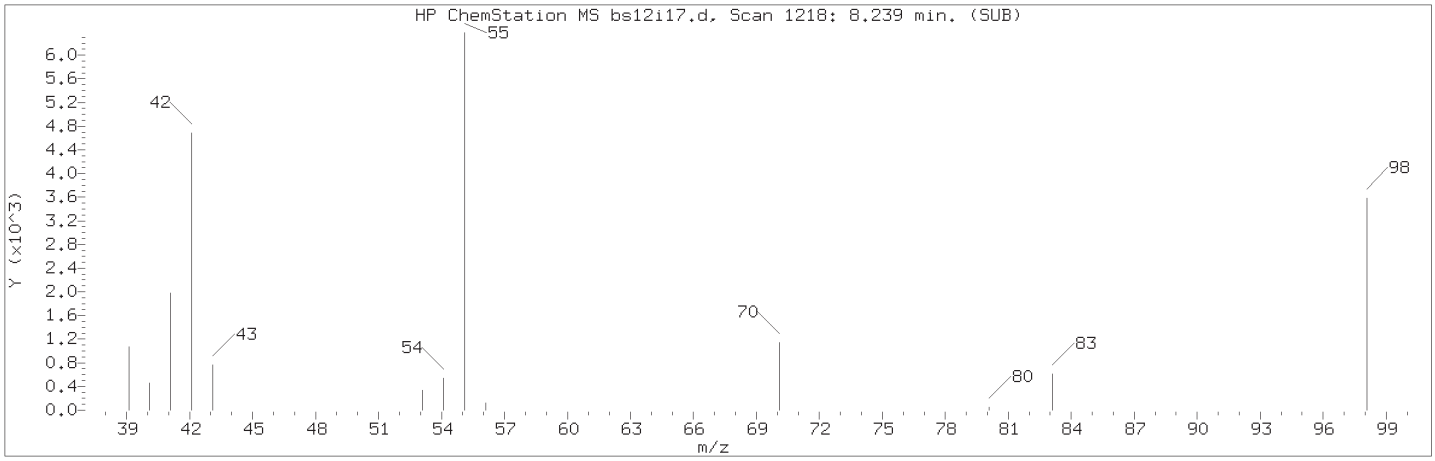
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 15:45 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

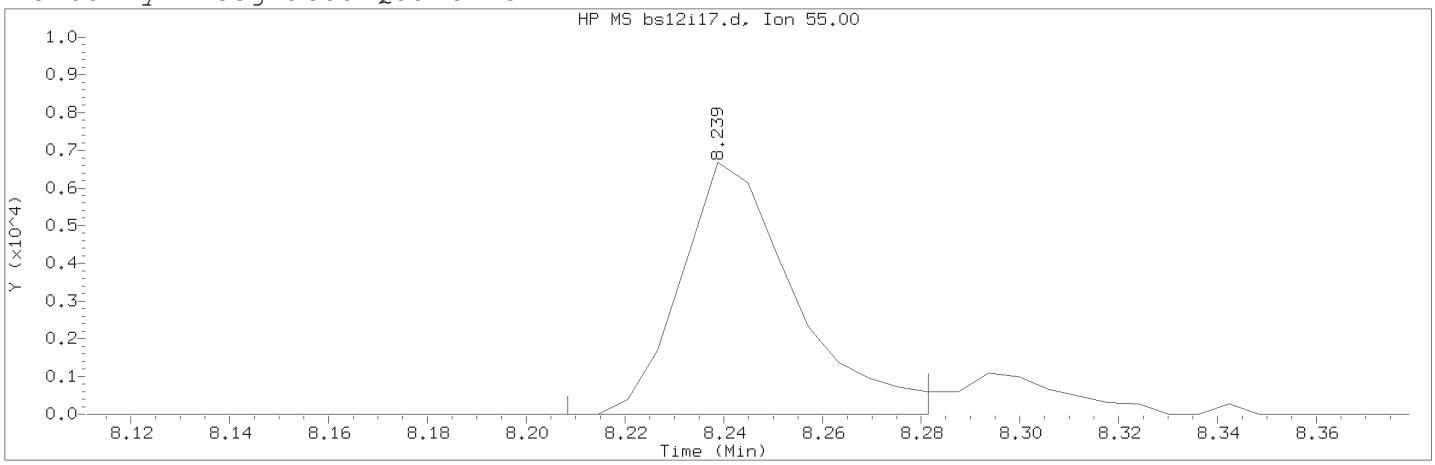
Compound Number : 101
Compound Name : 2-Hexanone
Scan Number : 921
Retention Time (minutes): 6.432
Quant Ion : 43.00
Area : 8816
On-column Amount (ng) : 2.2076
Integration start scan : 915 Integration stop scan: 948
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

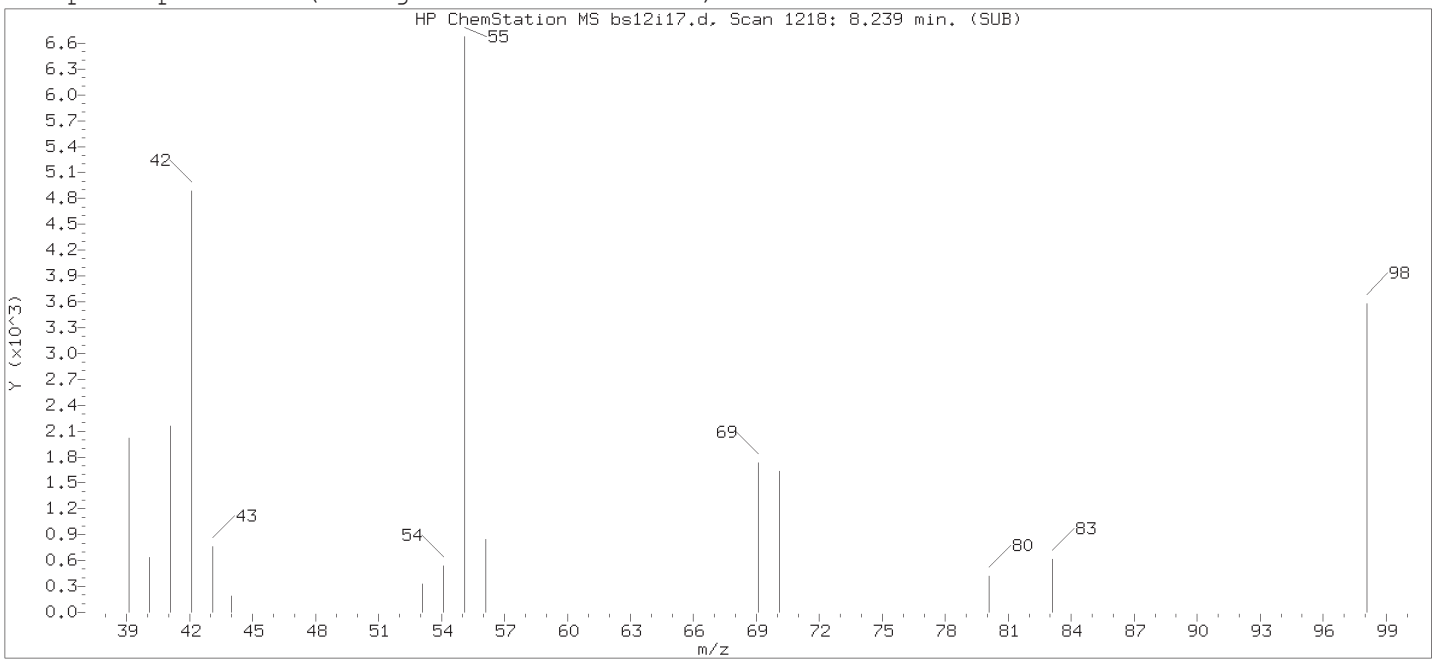
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1218
Retention Time (minutes): 8.239
Quant Ion : 55.00
Area (flag) : 10660M
On-Column Amount (ng) : 36.8160
Integration start scan : 1212 Integration stop scan: 1224
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

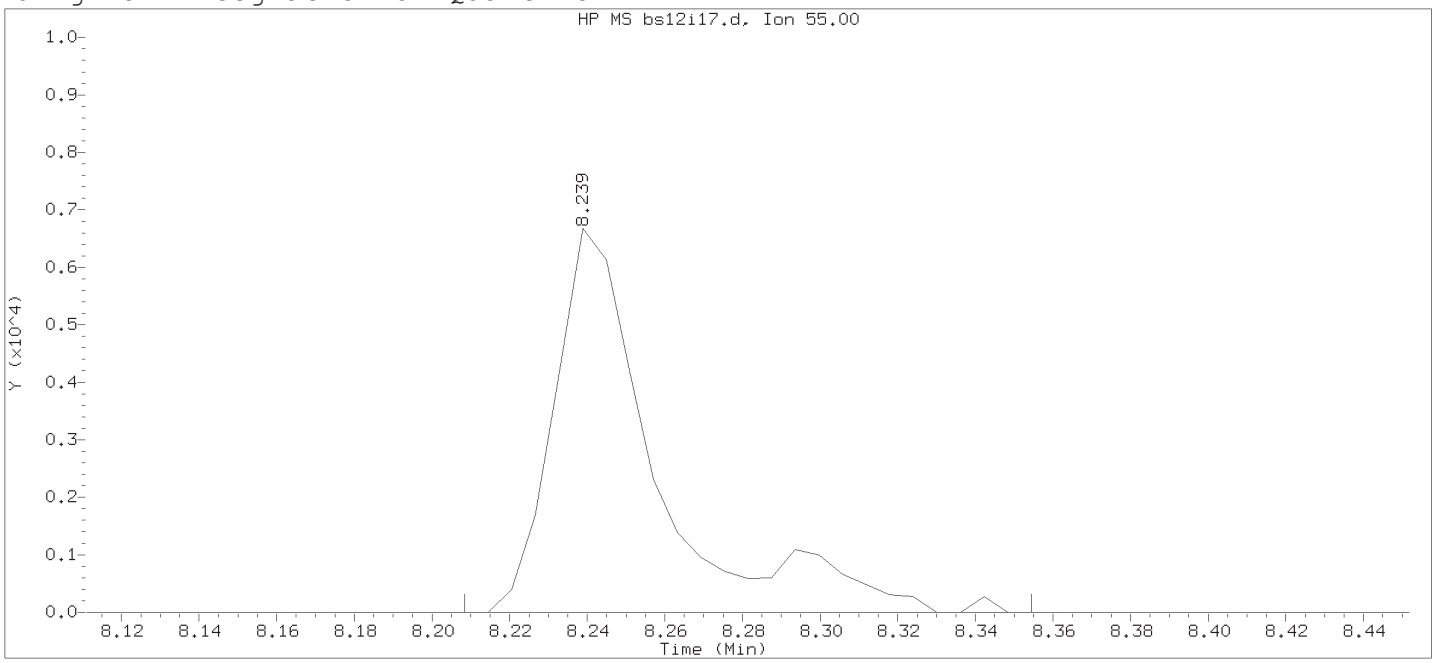
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

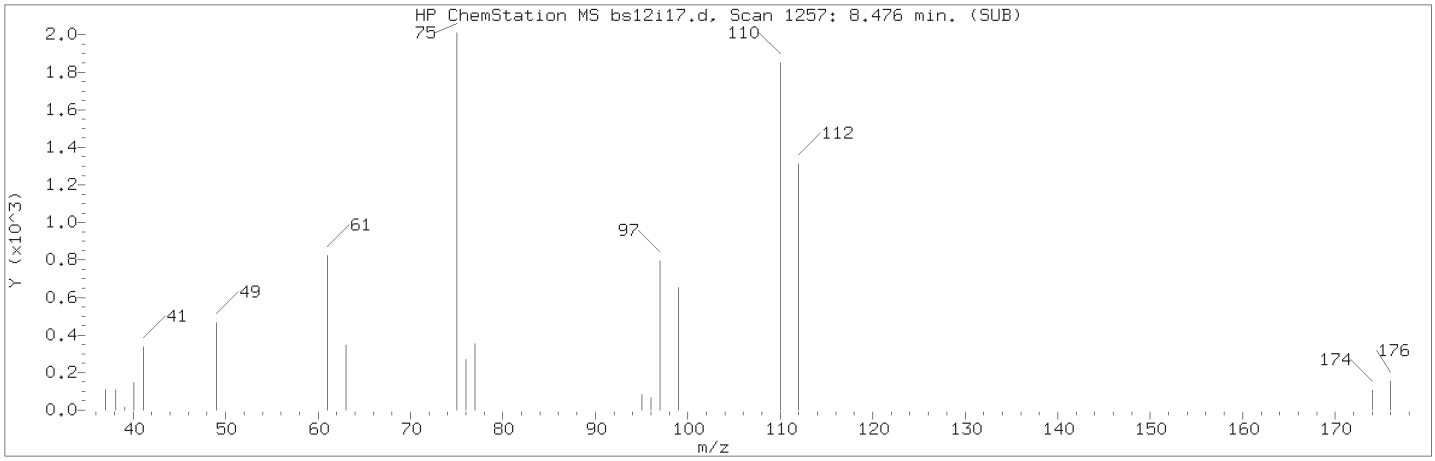
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 15:45 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

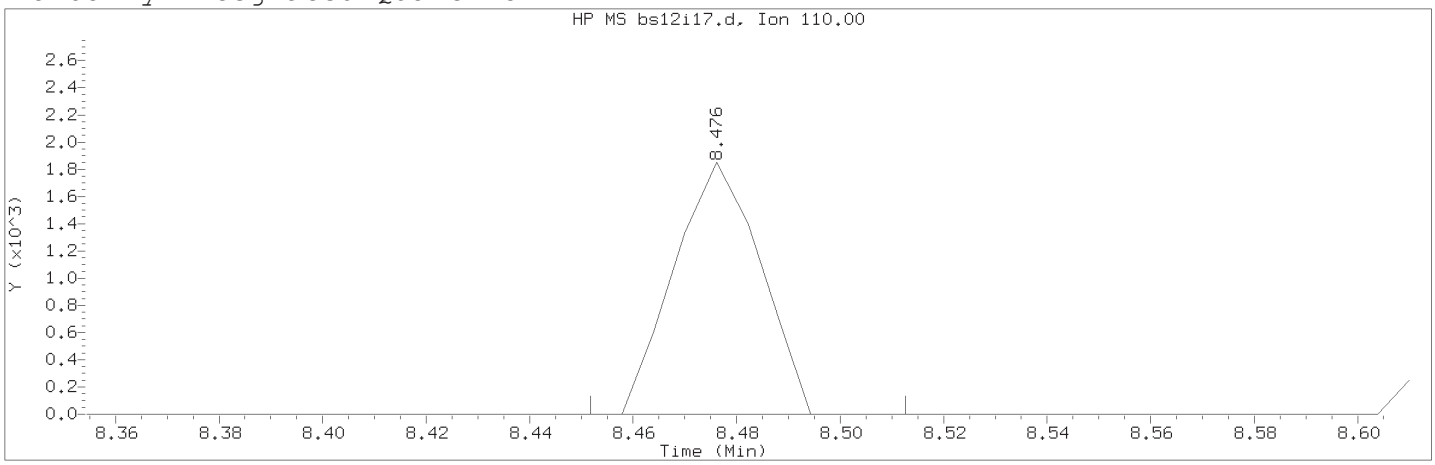
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1218
Retention Time (minutes): 8.239
Quant Ion : 55.00
Area : 12363
On-column Amount (ng) : 53.1566
Integration start scan : 1212 Integration stop scan: 1236
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

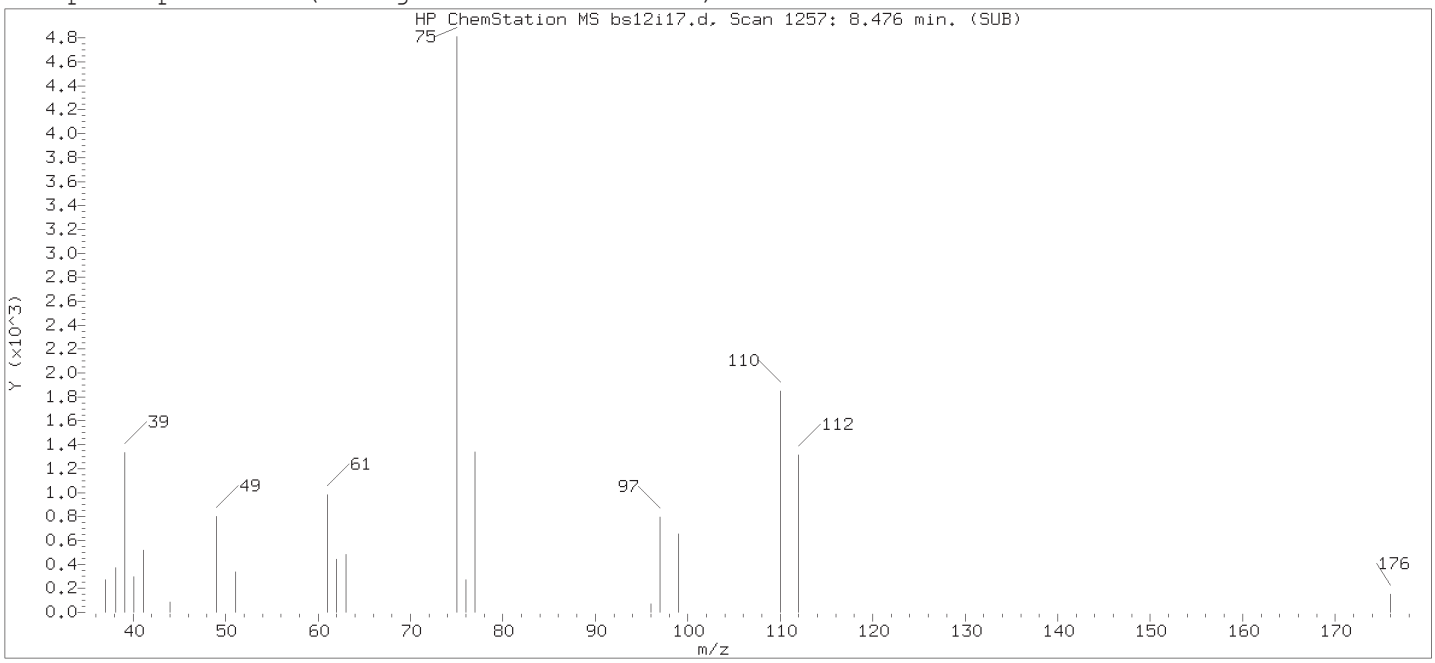
Compound Number : 123
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1257
Retention Time (minutes): 8.476
Quant Ion : 110.00
Area (flag) : 2143M
On-Column Amount (ng) : 1.0390
Integration start scan : 1252 Integration stop scan: 1262
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

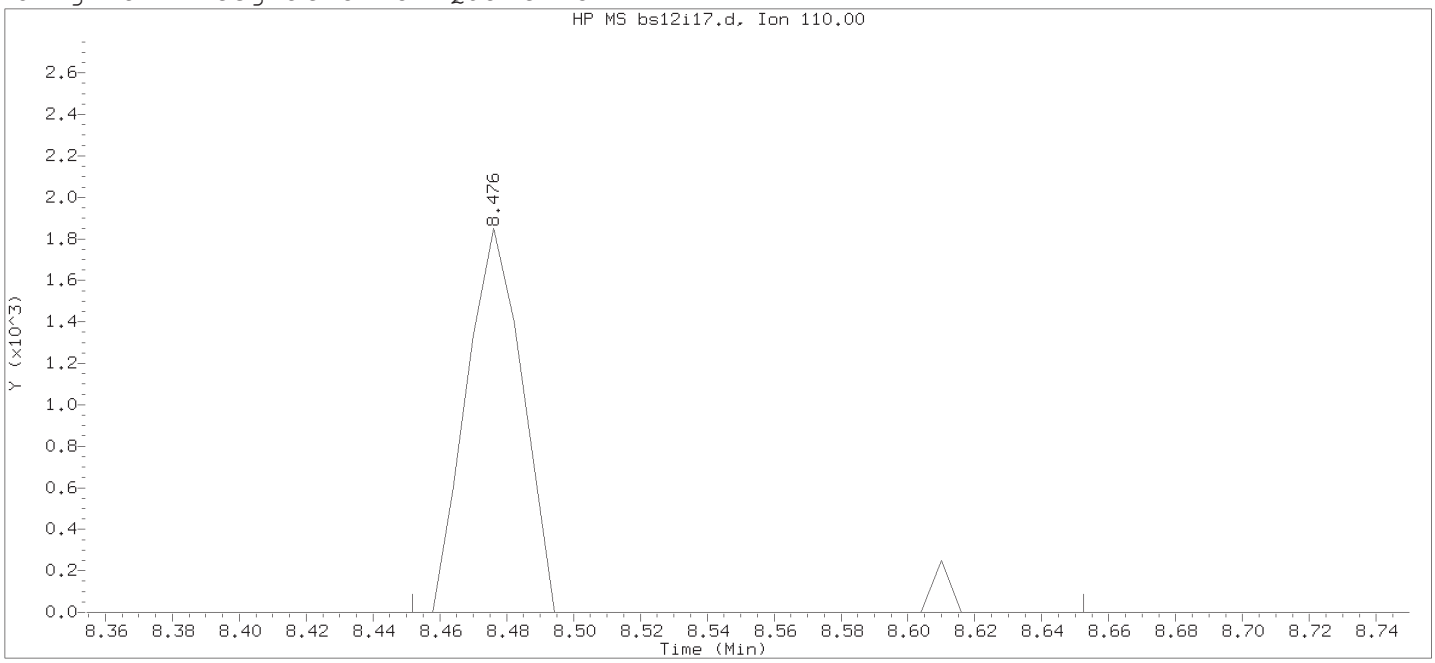
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

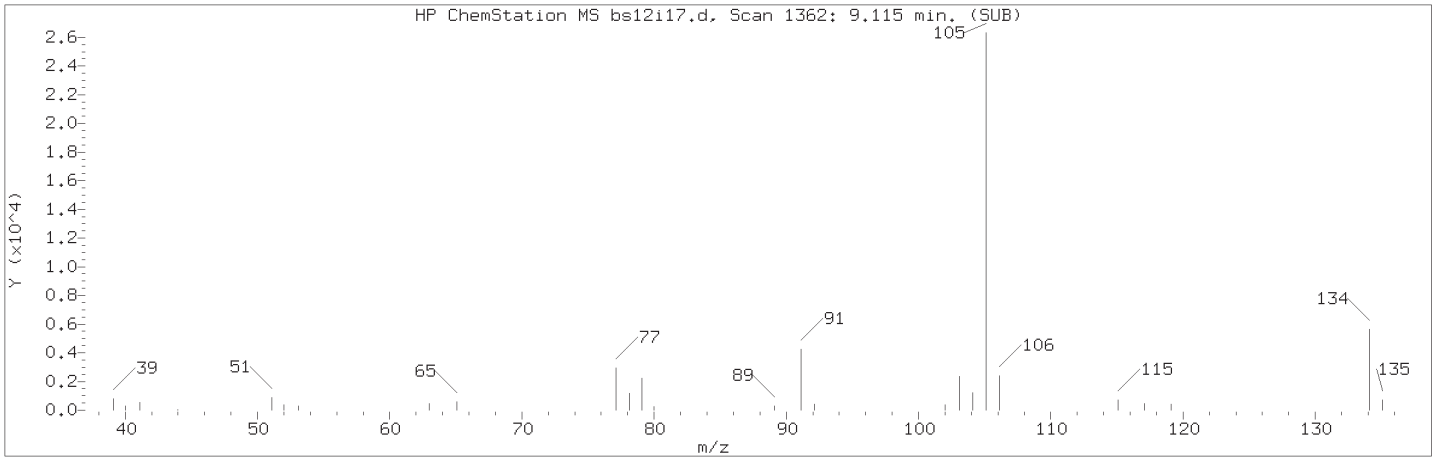
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 15:45 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

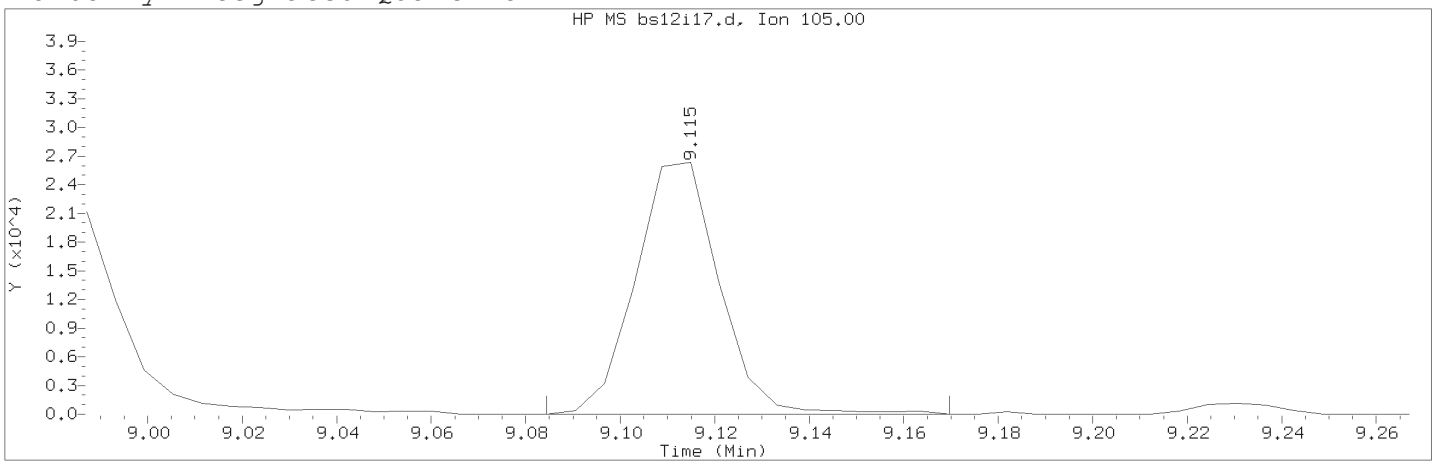
Compound Number : 123
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1257
Retention Time (minutes): 8.476
Quant Ion : 110.00
Area : 2234
On-column Amount (ng) : 1.0618
Integration start scan : 1252 Integration stop scan: 1285
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 09:57 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

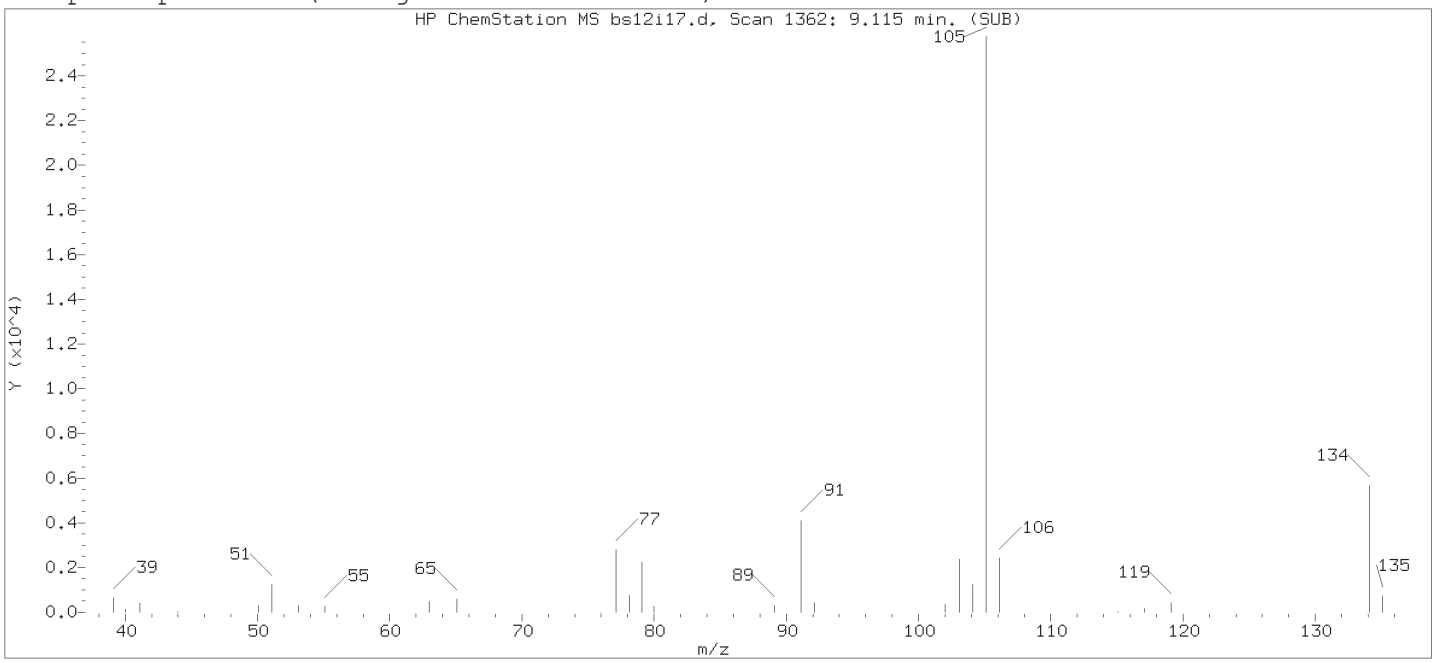
Compound Number : 136
Compound Name : sec-Butylbenzene
Scan Number : 1362
Retention Time (minutes): 9.115
Quant Ion : 105.00
Area (flag) : 32506M
On-Column Amount (ng) : 0.9163
Integration start scan : 1356 Integration stop scan: 1370
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

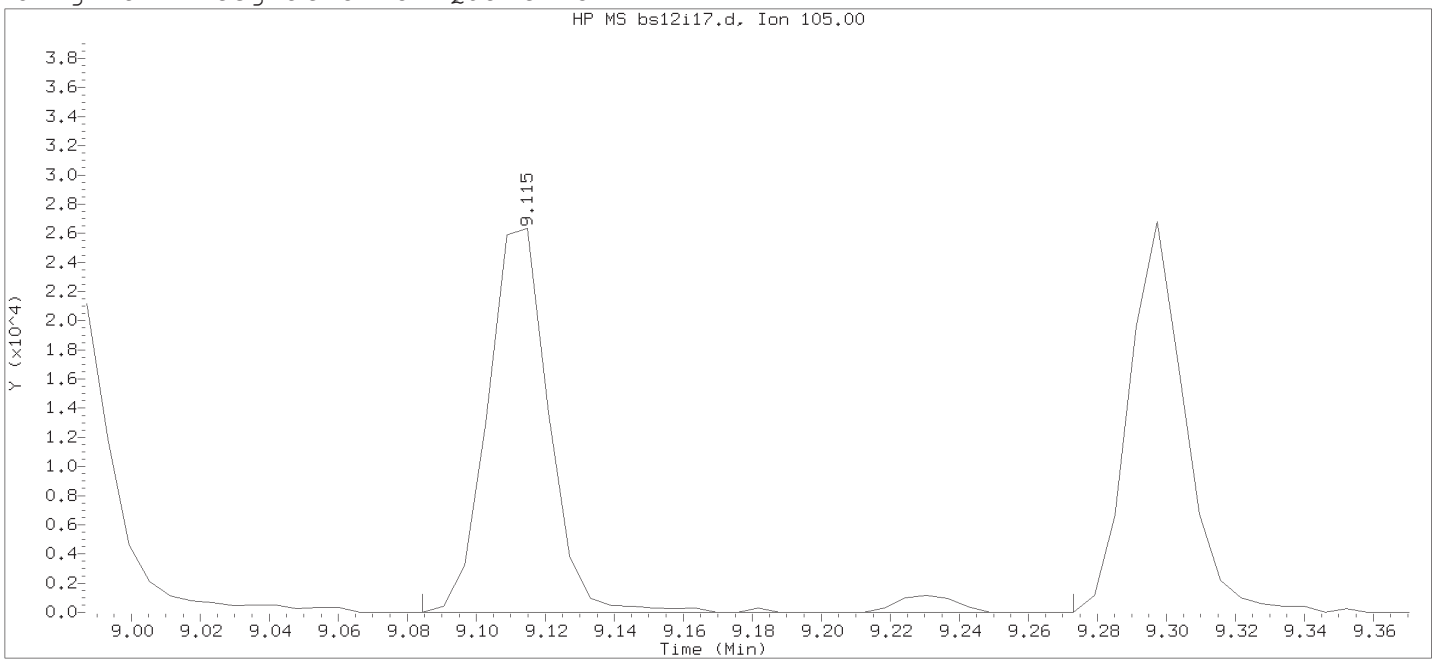
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



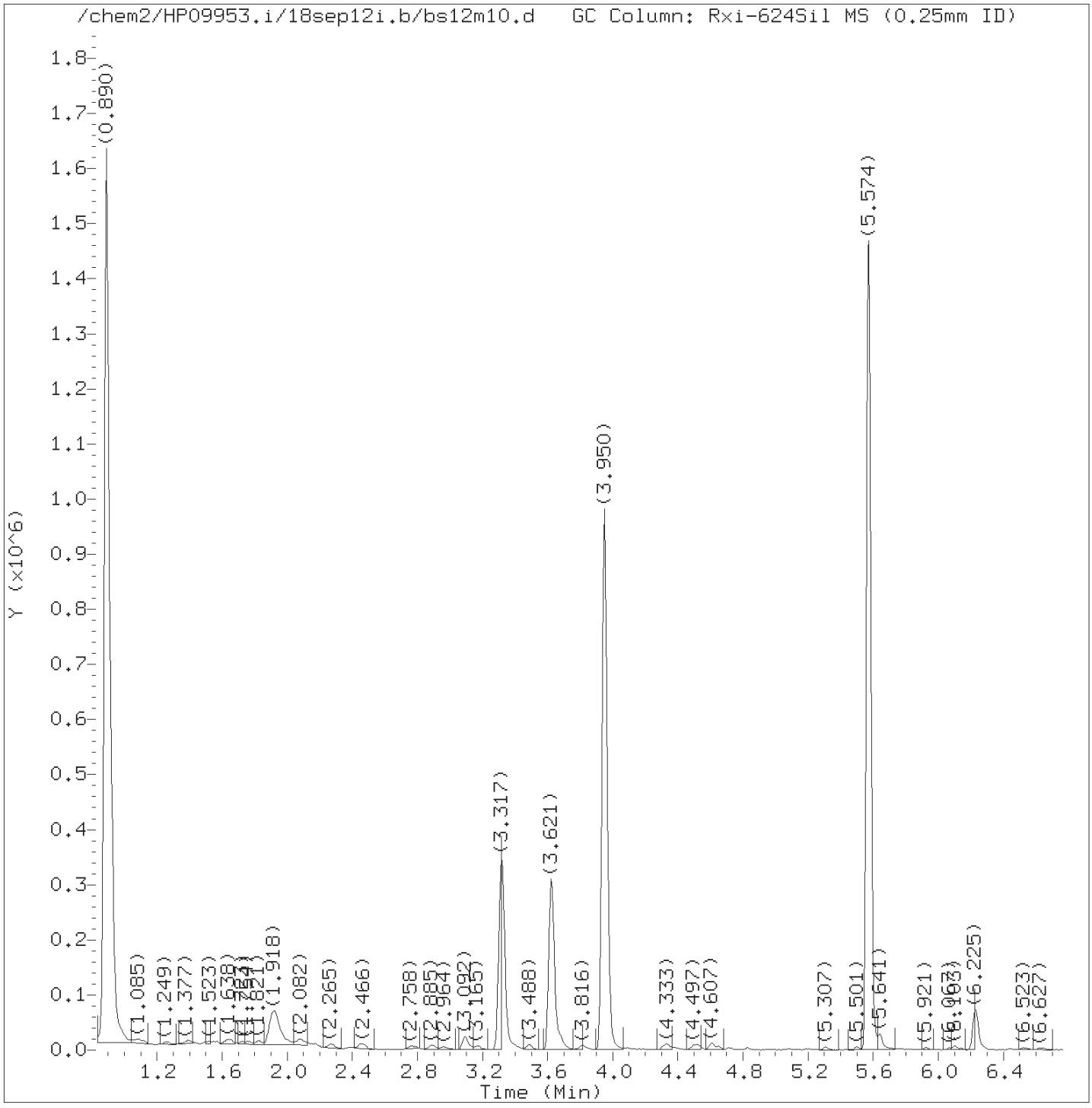
Data File: /chem2/HP09953.i/18sep12i.b/bs12i17.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:30 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 15:45 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 136
Compound Name : sec-Butylbenzene
Scan Number : 1362
Retention Time (minutes): 9.115
Quant Ion : 105.00
Area : 33984
On-column Amount (ng) : 0.9477
Integration start scan : 1356 Integration stop scan: 1387
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe



Total Ion Chromatogram (TIC)

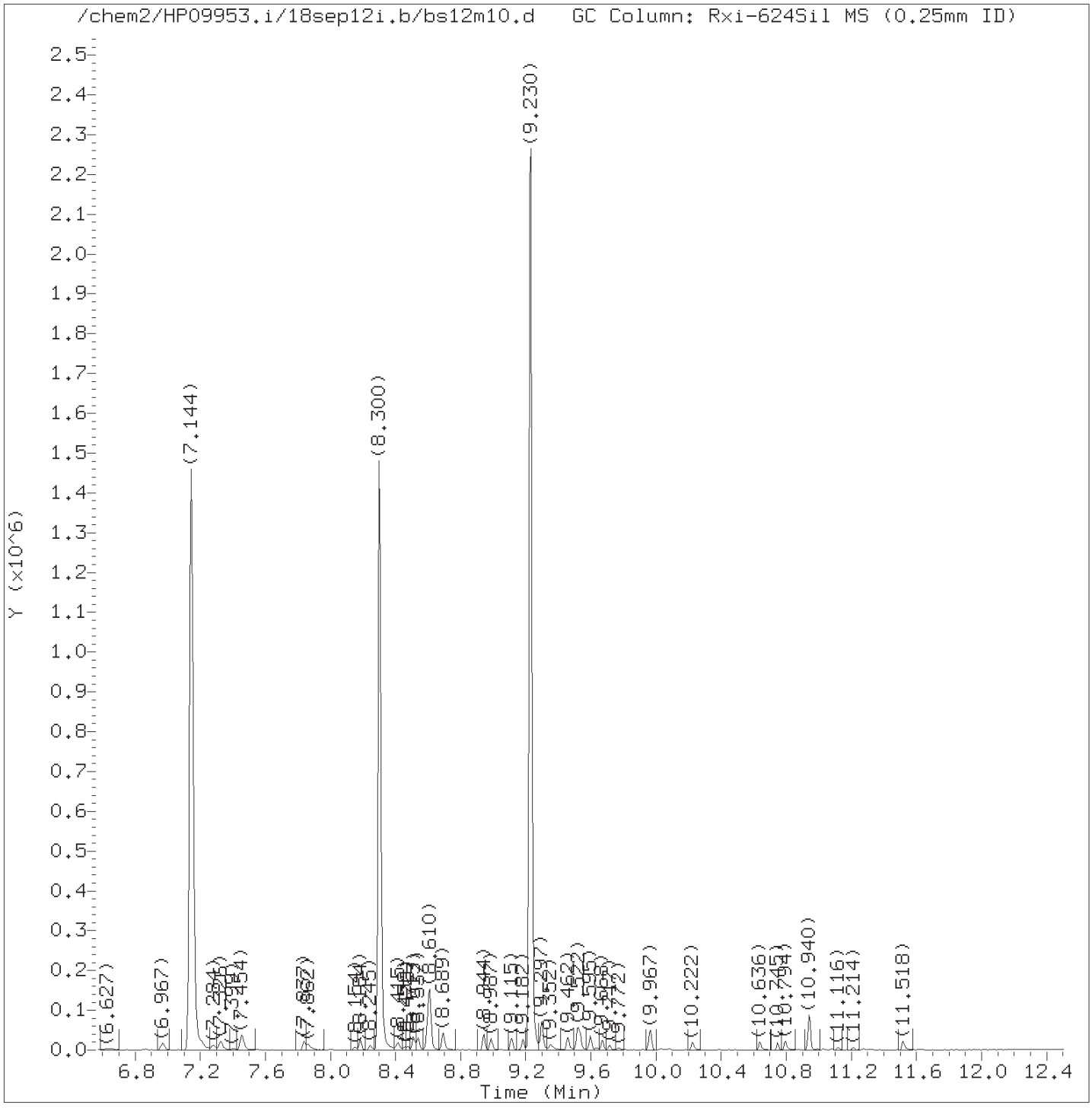
Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.981	85	8817	0.872
4) Chloromethane	(2)	1.078	50	6548	0.628
5) Vinyl Chloride	(2)	1.127	62	5503	0.677
9) Bromomethane	(2)	1.243	94	3926	0.543
10) Chloroethane	(2)	1.279	64	2311M	0.529
11) Dichlorofluoromethane	(2)	1.370	67	7093	0.671
13) Trichlorofluoromethane	(2)	1.413	101	5036M	0.450
15) Ethanol	(1)	1.456	45	5284	108.320
17) Freon 123a	(2)	1.510	67	6439	0.860
18) Acrolein	(1)	1.565	56	7469	8.269
19) 1,1-Dichloroethene	(2)	1.632	96	2960	0.527
20) Acetone	(1)	1.644	58	2875	0.288
22) Freon 113	(2)	1.656	101	2370	0.421
23) 2-Propanol	(1)	1.717	45	4926	13.637
24) Methyl Iodide	(2)	1.717	142	6774	0.501
25) Carbon Disulfide	(2)	1.772	76	11536	0.513
27) Methyl Acetate	(2)	1.827	43	3741A	1.298
29) Allyl Chloride	(2)	1.827	41	5258	0.699
31) Methylene Chloride	(2)	1.906	84	5341	0.804
30)*t-Butyl alcohol-d10	(1)	1.924	65	93494	250.000
32) t-Butyl alcohol	(1)	1.973	59	5038	10.258
33) Acrylonitrile	(2)	2.070	53	1392	0.714
34) Methyl Tertiary Butyl Ether	(2)	2.088	73	7612	0.476
35) trans-1,2-Dichloroethene	(2)	2.088	96	3702	0.566
38) n-Hexane	(2)	2.271	57	6940	0.930
40) 1,1-Dichloroethane	(2)	2.380	63	5078	0.479
41) di-Isopropyl ether	(2)	2.453	45	9903	0.501
42) 2-Chloro-1,3-butadiene	(2)	2.459	53	4506	0.483
43) Ethyl t-butyl ether	(2)	2.770	59	8917	0.479
45) cis-1,2-Dichloroethene	(2)	2.885	96	3155	0.445
47) 2,2-Dichloropropane	(2)	2.891	77	3670	0.475
44) 2-Butanone	(1)	2.922	43	4824	2.007
49) Propionitrile	(1)	2.964	54	6412	9.944
46) 1,2-Dichloroethene (Total)	(2)		96	6857	1.011
51) Methacrylonitrile	(2)	3.098	67	10103	4.635
52) Bromochloromethane	(2)	3.098	128	1495	0.397
53) Tetrahydrofuran	(1)	3.135	71	298	0.498
54) Chloroform	(2)	3.177	83	5344	0.497

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	3.317	113	276502	49.530
57) 1,1,1-Trichloroethane	(2)	3.342	97	5677	0.516
58) Cyclohexane	(2)	3.384	56	5095	0.492
60) 1,1-Dichloropropene	(2)	3.488	75	3837	0.479
61) Carbon Tetrachloride	(2)	3.500	117	3423	0.409
63)$1,2-Dichloroethane-d4	(2)	3.621	102	58655	48.816
62) Isobutyl Alcohol	(1)	3.658	41	5802	33.625
64) Benzene	(2)	3.676	78	14401	0.564
67) 1,2-Dichloroethane	(2)	3.700	62	4225	0.573
68) t-Amyl methyl ether	(2)	3.816	73	8276	0.481
70)*Fluorobenzene	(2)	3.950	96	1120125	50.000
72) n-Heptane	(2)	3.962	43	4135	0.608
75) Trichloroethene	(2)	4.315	95	3404	0.511
73) n-Butanol	(1)	4.333	56	6788	46.980
76) Methylcyclohexane	(2)	4.497	83	4664	0.450
77) 1,2-Dichloropropane	(2)	4.534	63	2908	0.479
81) Dibromomethane	(2)	4.649	93	1623	0.437
80) 1,4-Dioxane	(1)	4.704	88	849	14.179
79) Methyl Methacrylate	(2)	4.716	69	1656	0.423
84) Bromodichloromethane	(2)	4.826	83	3431	0.453
85) 2-Nitropropane	(1)	5.081	41	1945M	1.573
87) 2-Chloroethyl Vinyl Ether	(2)	5.191	63	1029	0.322
89) cis-1,3-Dichloropropene	(2)	5.307	75	3719	0.406
91)$Toluene-d8	(3)	5.574	98	1126189	49.881
92) Toluene	(3)	5.641	92	9115	0.544
93) trans-1,3-Dichloropropene	(3)	5.921	75	3175	0.396
94) 1,3-Dichloropropene (total)	(3)		100	6894	0.802
95) Ethyl Methacrylate	(3)	6.073	69	3571M	0.459
96) 1,1,2-Trichloroethane	(3)	6.097	97	2345M	0.432
98) Tetrachloroethene	(3)	6.231	166	3693	0.403
99) 1,3-Dichloropropane	(3)	6.274	76	4036	0.461
101) 2-Hexanone	(3)	6.444	43	2875M	1.371
103) Dibromochloromethane	(3)	6.517	129	2458	0.393
104) 1,2-Dibromoethane	(3)	6.621	107	2209	0.393
105)*Chlorobenzene-d5	(3)	7.144	117	874777	50.000
107) Chlorobenzene	(3)	7.174	112	10302	0.527
106) 1-Chlorohexane	(3)	7.211	91	4065	0.489
108) 1,1,1,2-Tetrachloroethane	(3)	7.284	131	2678	0.404

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
109) Ethylbenzene	(3)	7.326	91	15837	0.503
110) m+p-Xylene	(3)	7.454	106	12282	0.956
111) o-Xylene	(3)	7.837	106	5968	0.464
113) Styrene	(3)	7.868	104	9456	0.446
112) Xylene (Total)	(3)		106	18250	1.420
114) Bromoform	(3)	8.002	173	1322	0.339
115) Isopropylbenzene	(3)	8.184	105	15165M	0.468
118) Cyclohexanone	(1)	8.245	55	4243	19.582
119)$4-Bromofluorobenzene	(3)	8.300	95	405052	49.247
121) Bromobenzene	(4)	8.415	156	4786	0.541
120) 1,1,2,2-Tetrachloroethane	(4)	8.458	83	3273	0.485
123) 1,2,3-Trichloropropane	(4)	8.476	110	854M	0.426
122) trans-1,4-Dichloro-2-butene	(4)	8.513	53	6673	4.027
124) n-Propylbenzene	(4)	8.537	91	16866	0.482
126) 2-Chlorotoluene	(4)	8.592	126	4149M	0.506
130) 4-Chlorotoluene	(4)	8.689	126	4160	0.500
129) 1,3,5-Trimethylbenzene	(4)	8.695	105	13363M	0.494
133) tert-Butylbenzene	(4)	8.944	134	3181	0.501
134) Pentachloroethane	(4)	8.944	167	1774	0.467
135) 1,2,4-Trimethylbenzene	(4)	8.987	105	14278	0.506
136) sec-Butylbenzene	(4)	9.115	105	16802M	0.488
138) 1,3-Dichlorobenzene	(4)	9.182	146	8835	0.532
139) p-Isopropyltoluene	(4)	9.230	119	14810	0.480
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	482788	50.000
141) 1,4-Dichlorobenzene	(4)	9.243	146	10383	0.600
142) 1,2,3-Trimethylbenzene	(4)	9.297	105	15109M	0.497
143) Benzyl Chloride	(4)	9.370	126	570	0.253
144) 1,3-Diethylbenzene	(4)	9.456	119	8597	0.451
145) 1,4-Diethylbenzene	(4)	9.516	119	9197	0.464
147) 1,2-Dichlorobenzene	(4)	9.522	146	9470	0.583
146) n-Butylbenzene	(4)	9.535	92	7315	0.510
148) 1,2-Diethylbenzene	(4)	9.595	119	7710	0.462
149) Diethylbenzene (total)	(4)		100	25504	1.377
151) 1,2-Dibromo-3-chloropropane	(4)	10.076	75	385	0.328
152) 1,3,5-Trichlorobenzene	(4)	10.222	180	6276	0.494
153) 1,2,4-Trichlorobenzene	(4)	10.636	180	6662	0.557
154) Hexachlorobutadiene	(4)	10.745	225	2713	0.497
155) Naphthalene	(4)	10.794	128	17711M	0.623

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

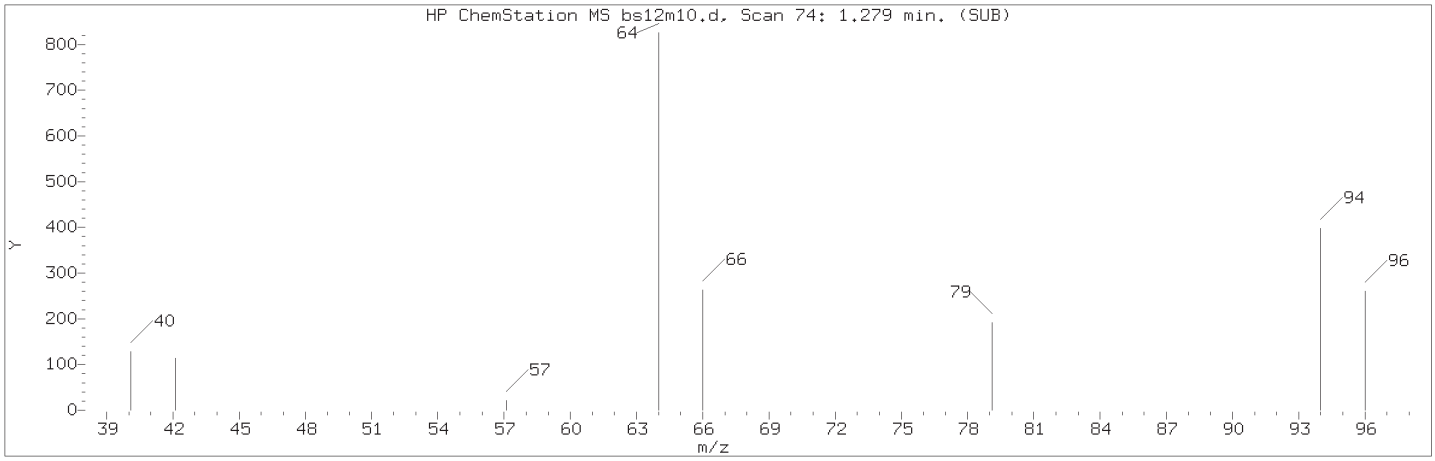
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

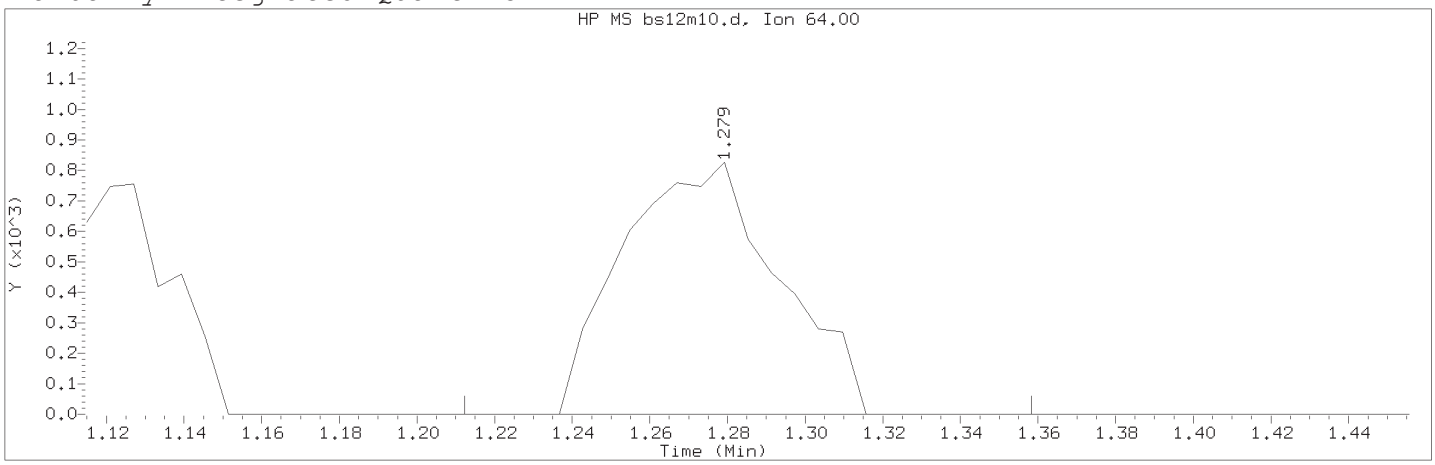
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
156) 1,2,3-Trichlorobenzene	(4)	10.946	180	6647	0.582
157) 2-Methylnaphthalene	(4)	11.518	142	11400	0.593

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

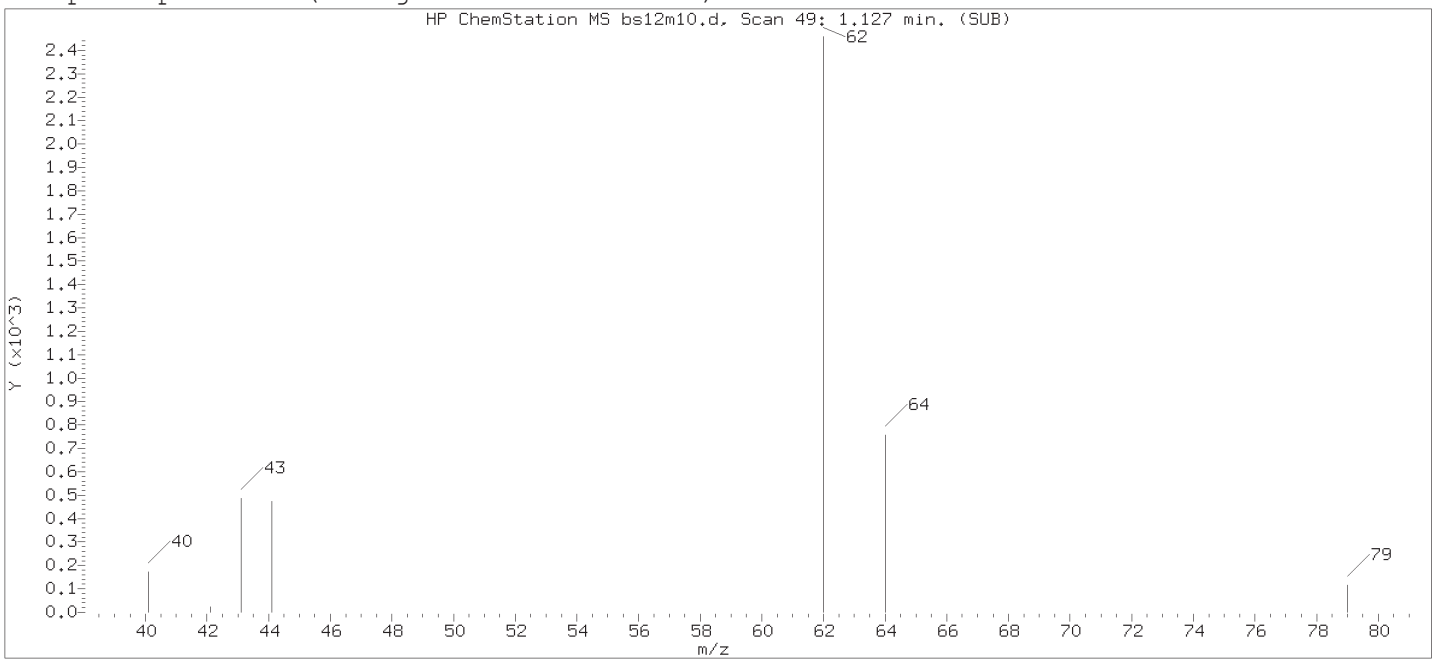
Compound Number : 10
Compound Name : Chloroethane
Scan Number : 74
Retention Time (minutes): 1.279
Quant Ion : 64.00
Area (flag) : 2311M
On-Column Amount (ng) : 0.5289
Integration start scan : 62 Integration stop scan: 86
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

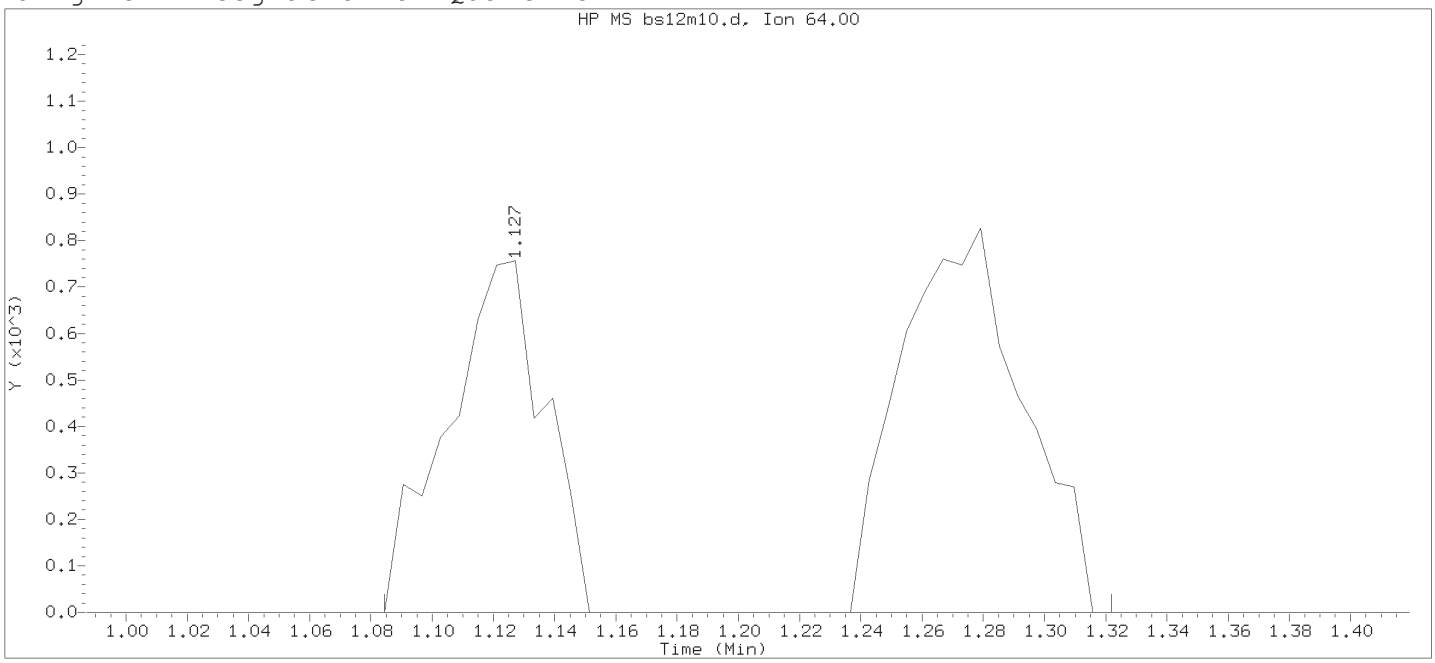
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

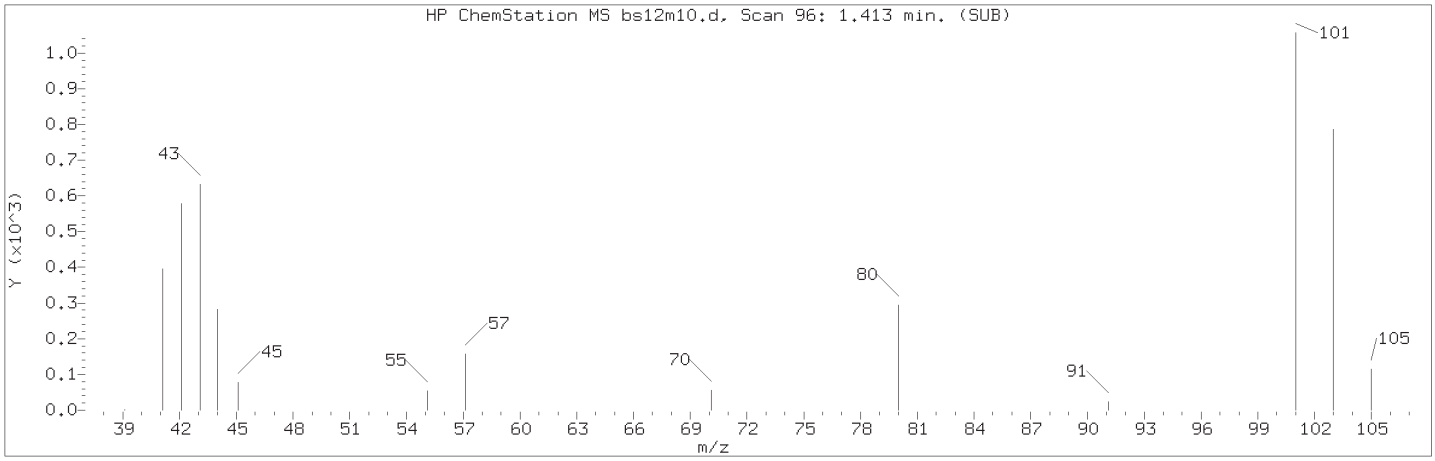
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:08 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

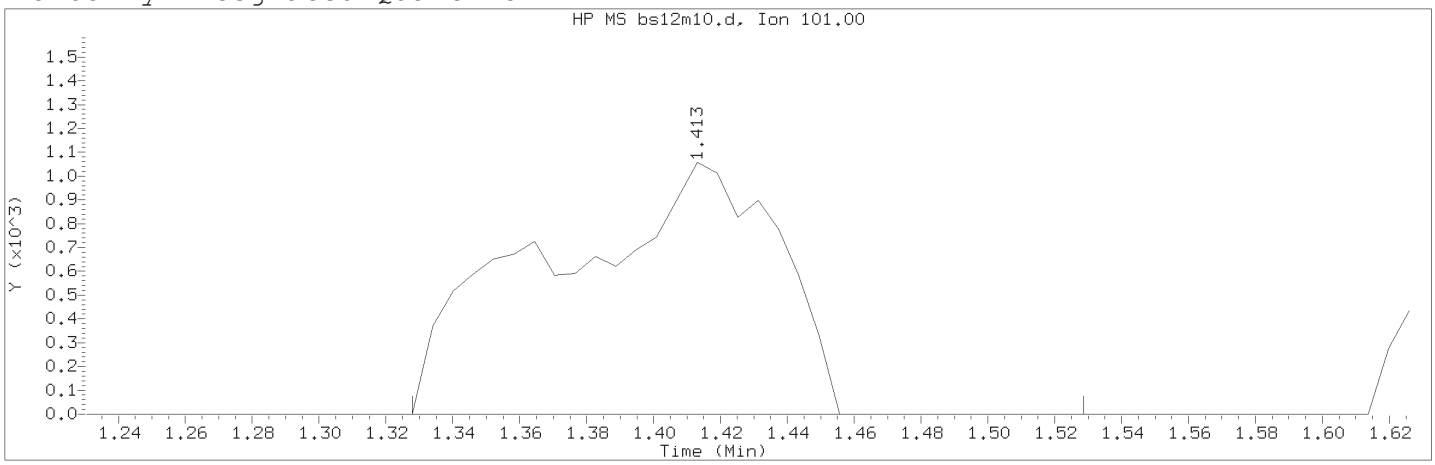
Compound Number : 10
Compound Name : Chloroethane
Scan Number : 49
Retention Time (minutes): 1.127
Quant Ion : 64.00
Area : 3987
On-column Amount (ng) : 0.8341
Integration start scan : 41 Integration stop scan: 80
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

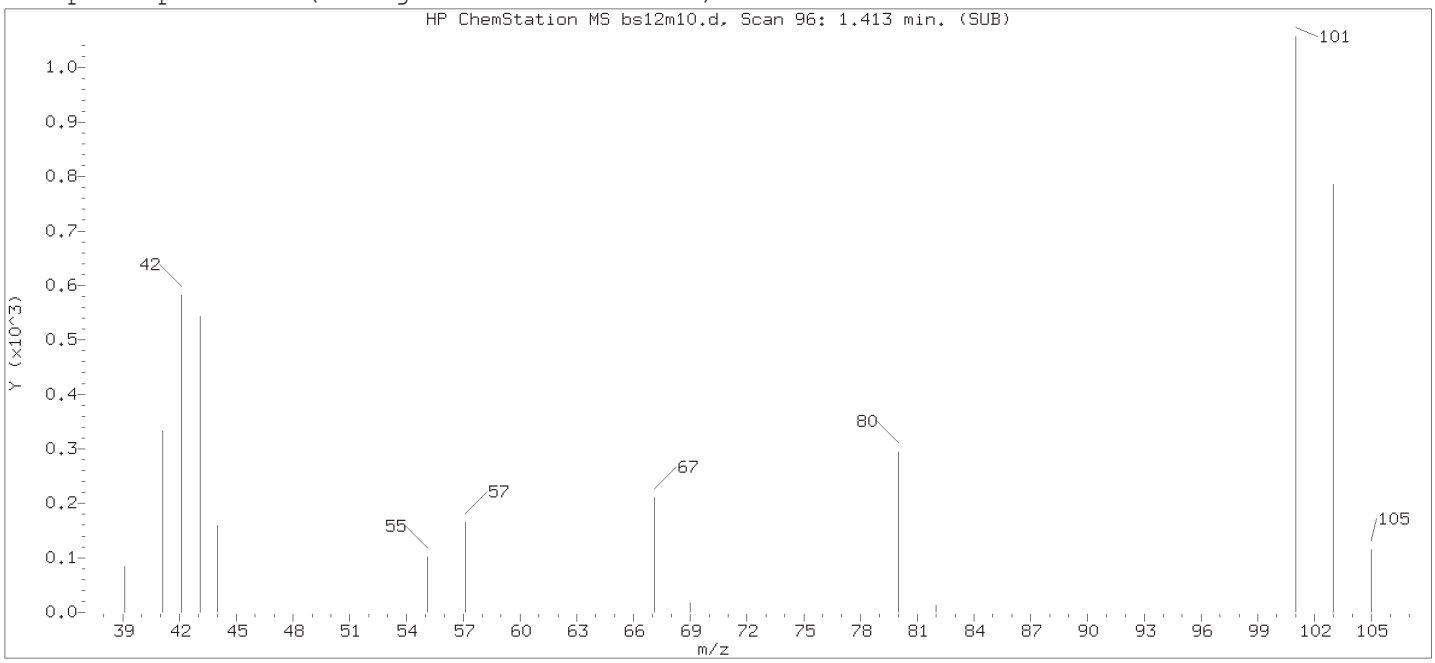
Compound Number : 13
Compound Name : Trichlorofluoromethane
Scan Number : 96
Retention Time (minutes): 1.413
Quant Ion : 101.00
Area (flag) : 5036M
On-Column Amount (ng) : 0.4503
Integration start scan : 81 Integration stop scan: 114
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

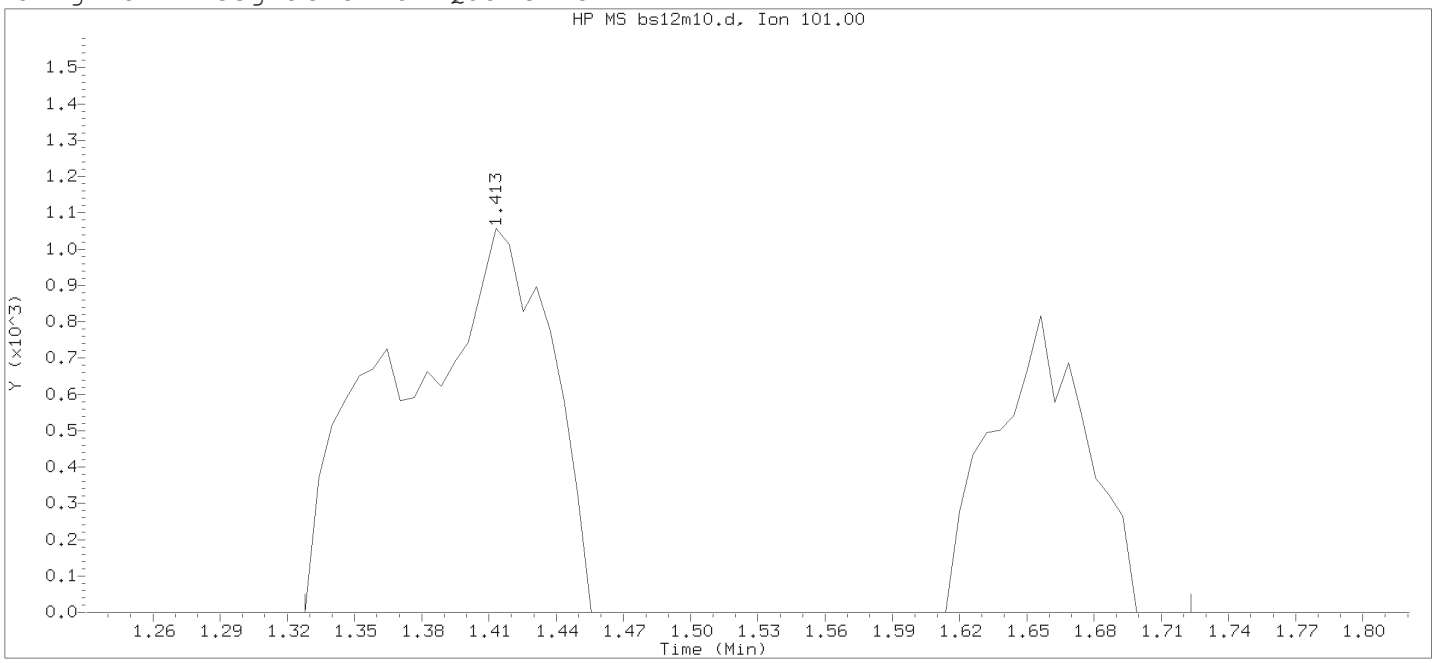
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

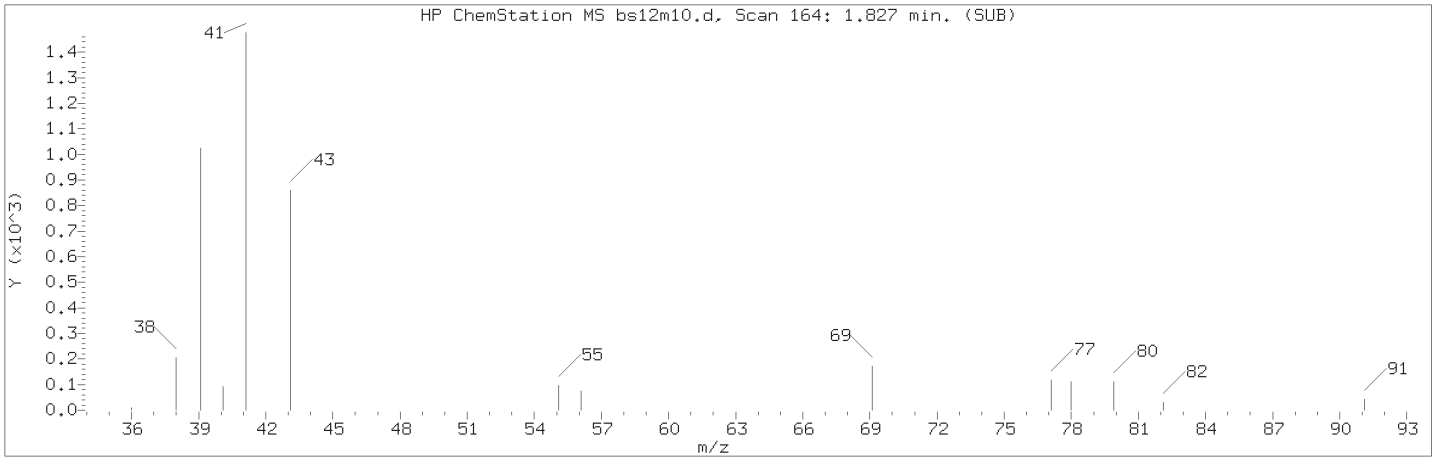
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:08 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

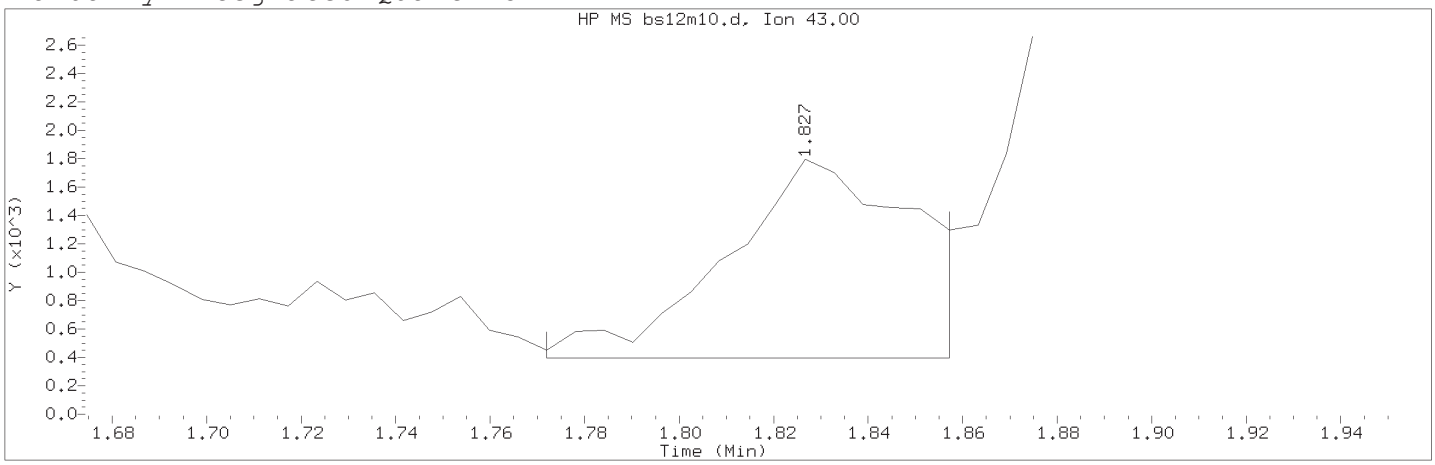
Compound Number : 13
Compound Name : Trichlorofluoromethane
Scan Number : 96
Retention Time (minutes): 1.413
Quant Ion : 101.00
Area : 7407
On-column Amount (ng) : 0.6232
Integration start scan : 81 Integration stop scan: 146
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe0252

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

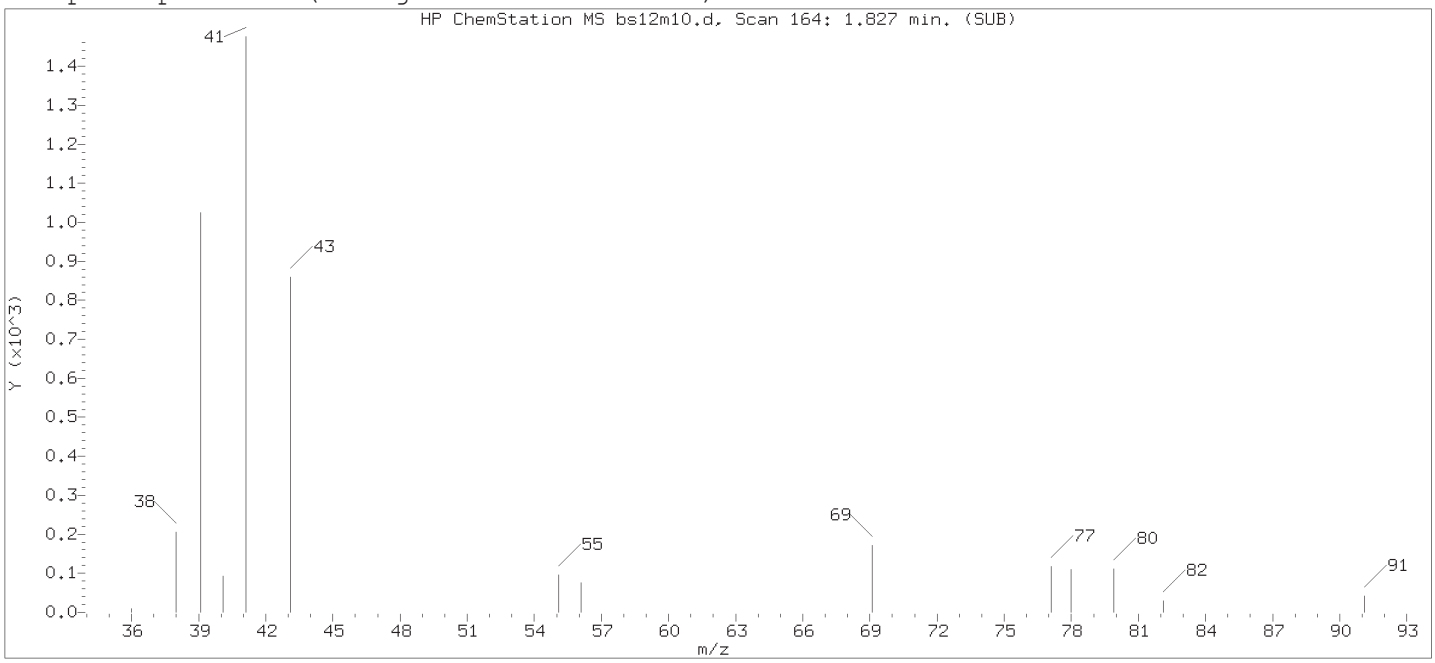
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 164
Retention Time (minutes): 1.827
Quant Ion : 43.00
Area (flag) : 3741A
On-Column Amount (ng) : 1.2982
Integration start scan : 154 Integration stop scan: 168
Y at integration start : 394 Y at integration end: 394

Reason for manual integration: improper integration

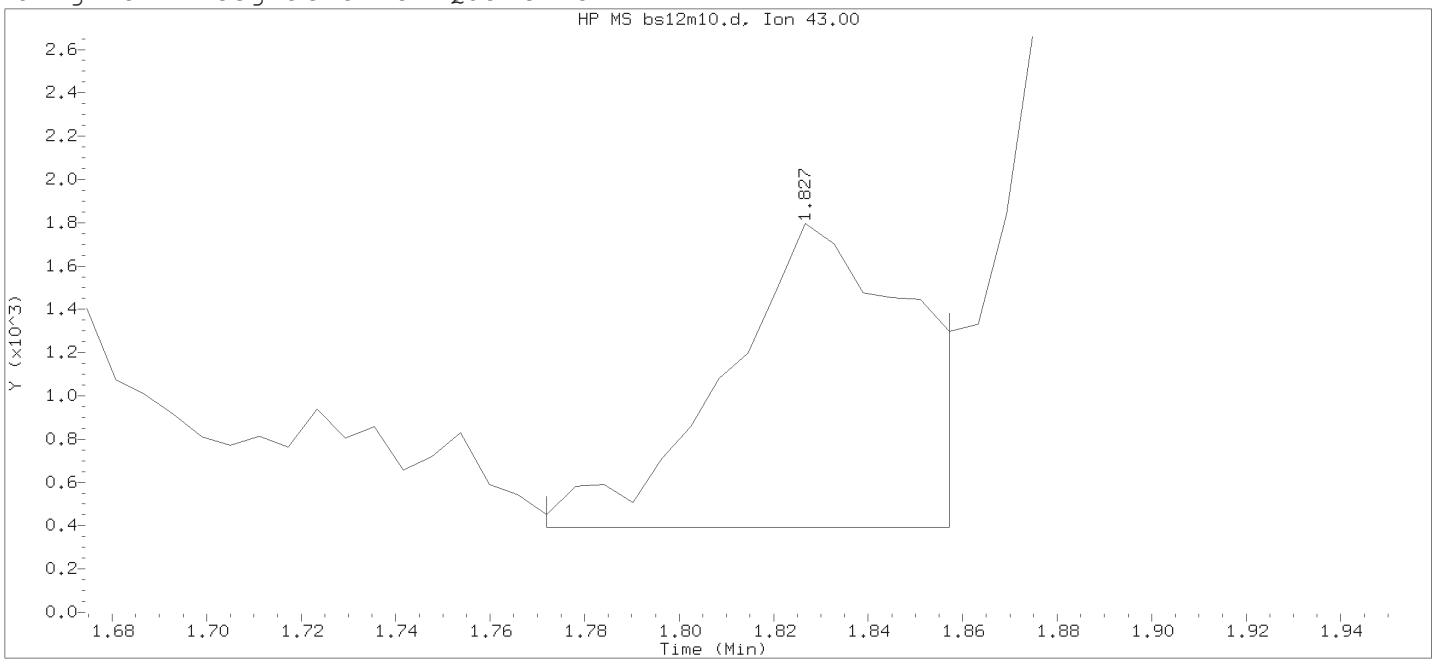
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

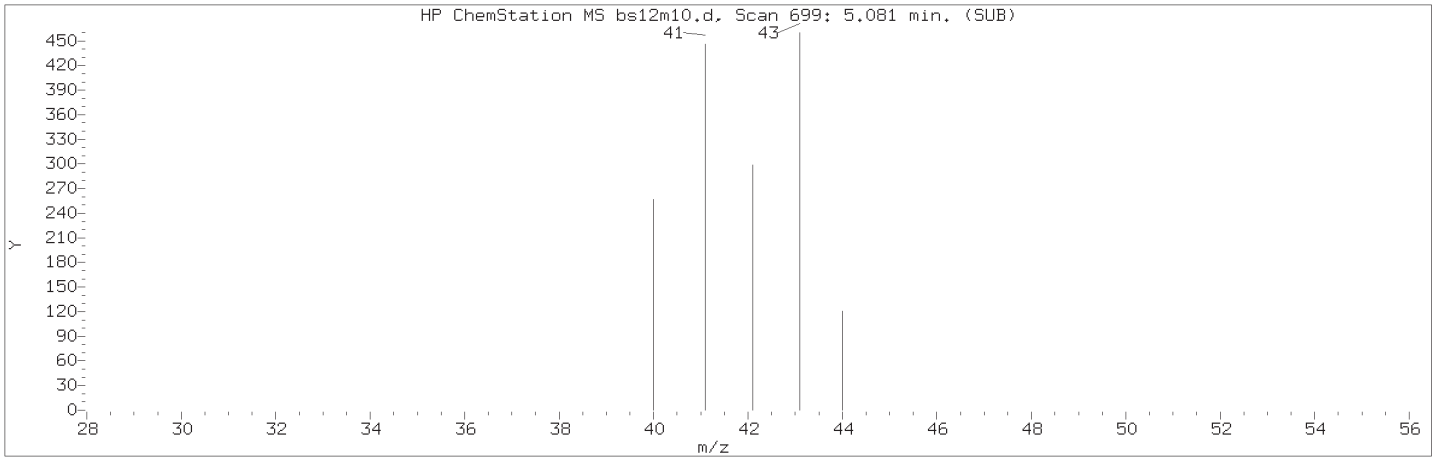
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:08 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

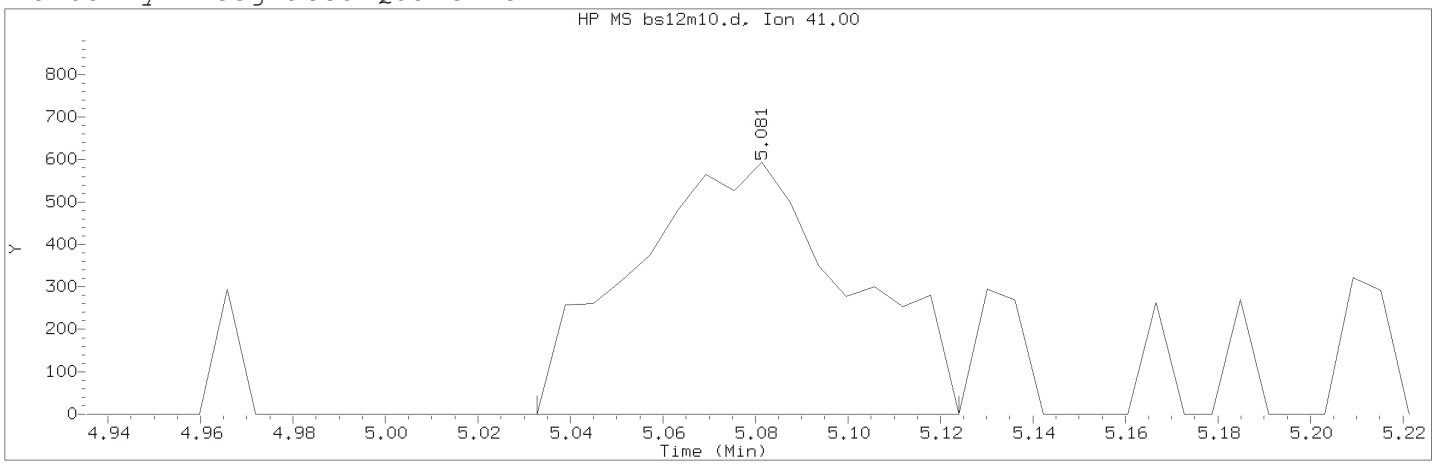
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 164
Retention Time (minutes): 1.827
Quant Ion : 43.00
Area : 3741
On-column Amount (ng) : 1.2673
Integration start scan : 154 Integration stop scan: 168
Y at integration start : 394 Y at integration end: 394

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09272

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

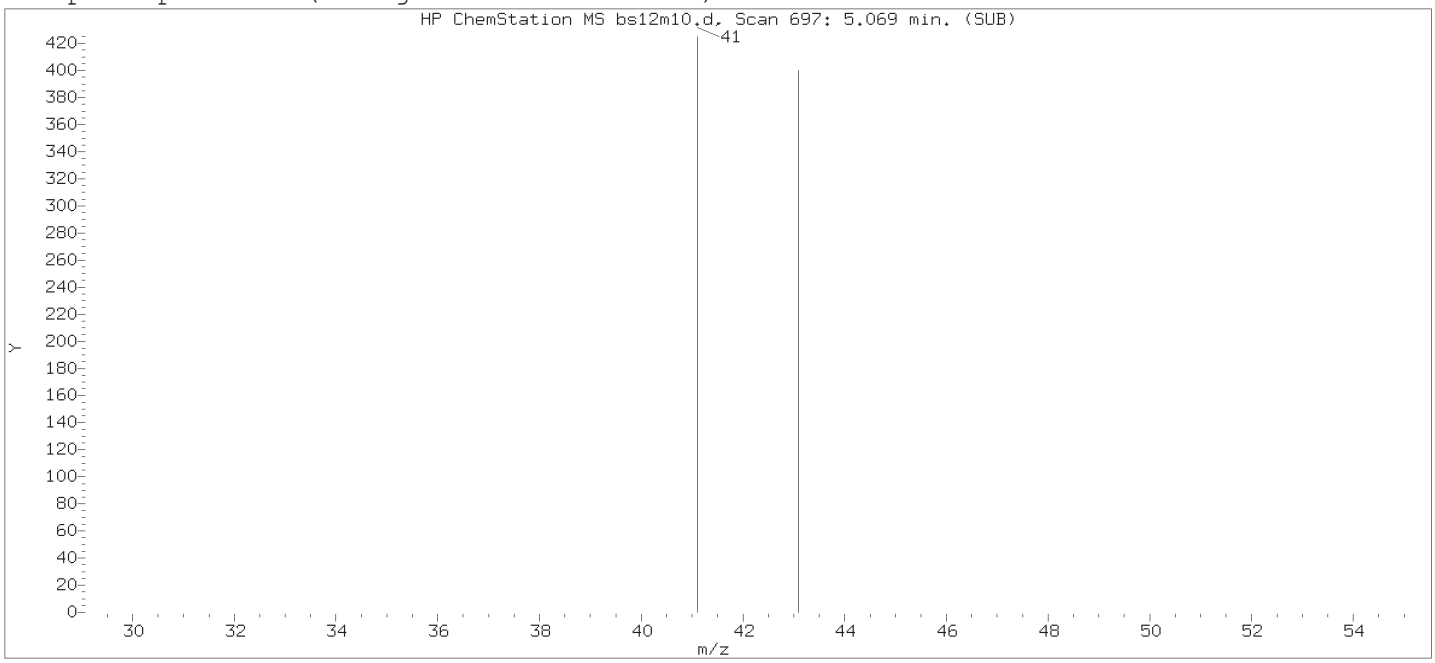
Compound Number : 85
Compound Name : 2-Nitropropane
Scan Number : 699
Retention Time (minutes): 5.081
Quant Ion : 41.00
Area (flag) : 1945M
On-Column Amount (ng) : 1.5728
Integration start scan : 690 Integration stop scan: 705
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

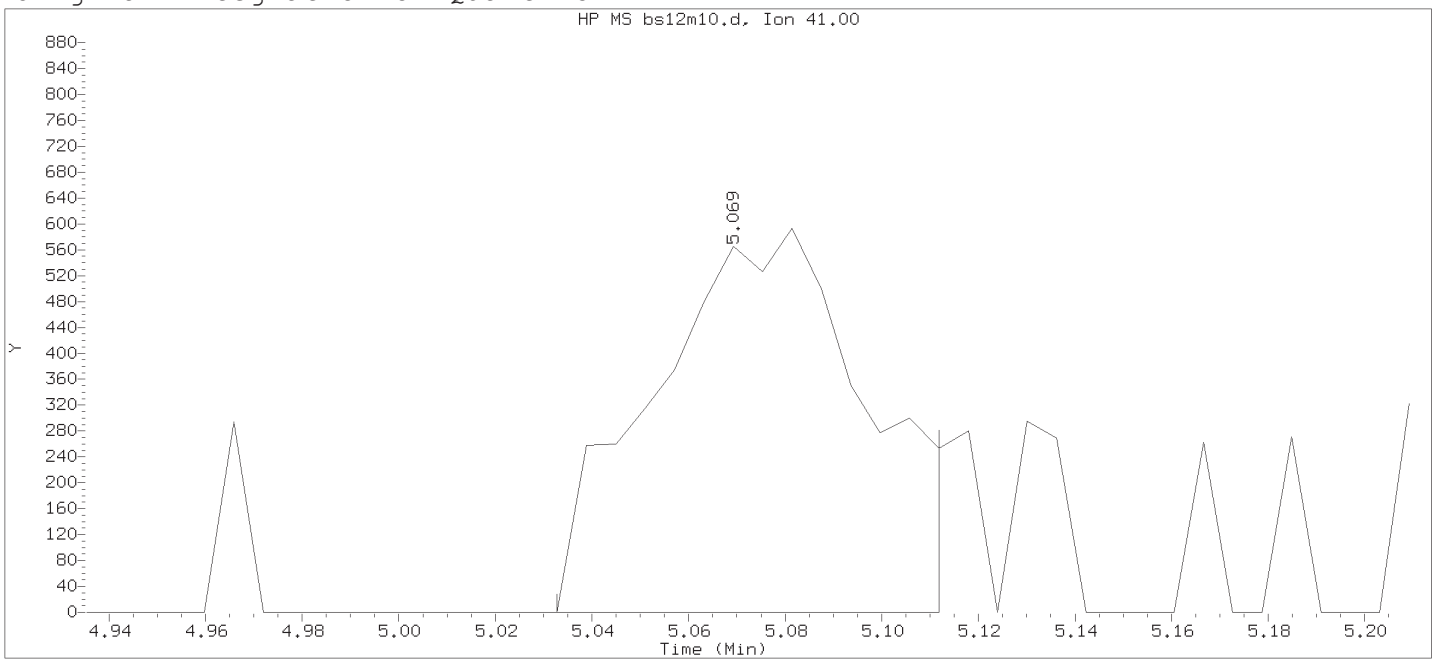
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

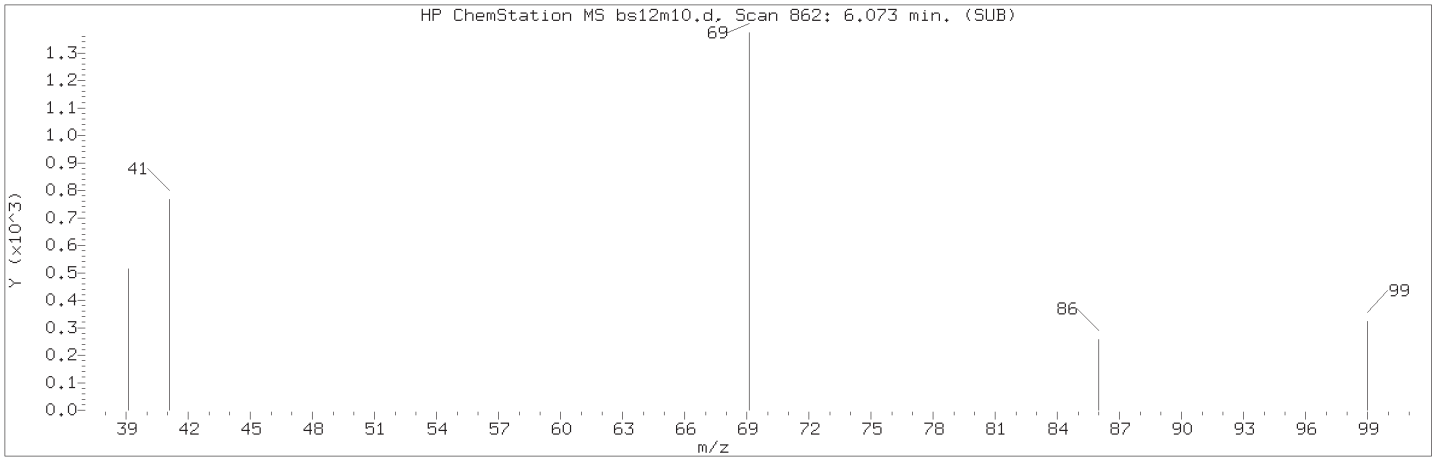
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:08 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

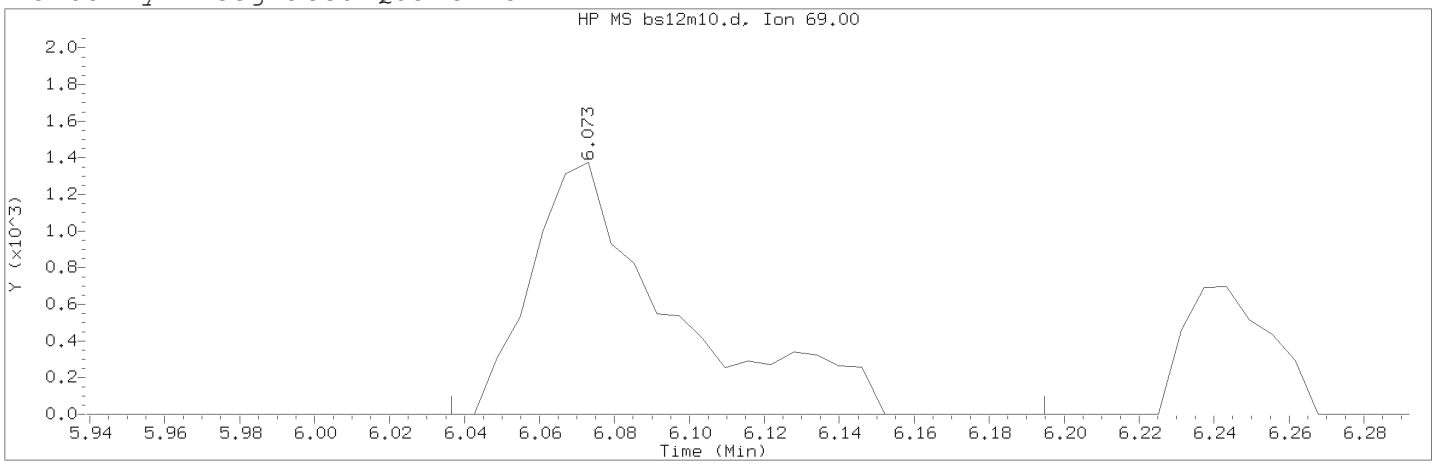
Compound Number : 85
Compound Name : 2-Nitropropane
Scan Number : 697
Retention Time (minutes): 5.069
Quant Ion : 41.00
Area : 1797
On-column Amount (ng) : 1.4535
Integration start scan : 690 Integration stop scan: 703
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

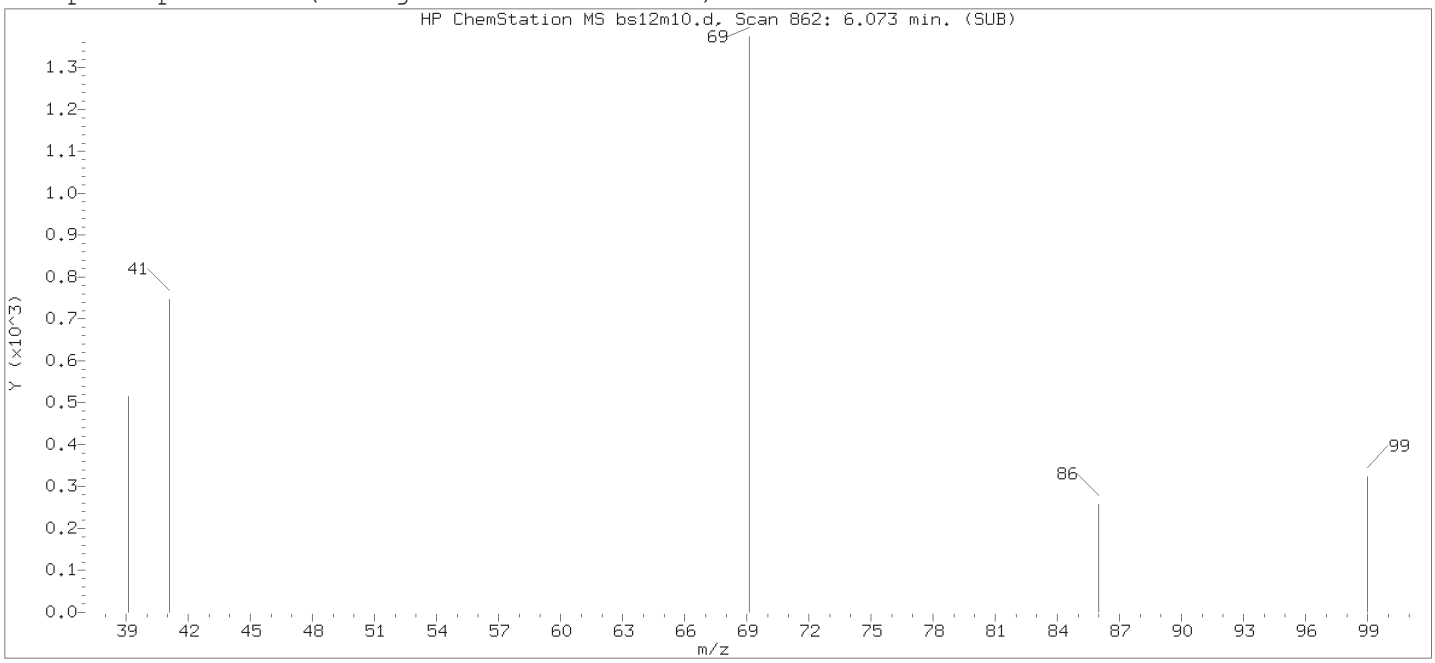
Compound Number : 95
Compound Name : Ethyl Methacrylate
Scan Number : 862
Retention Time (minutes): 6.073
Quant Ion : 69.00
Area (flag) : 3571M
On-Column Amount (ng) : 0.4586
Integration start scan : 855 Integration stop scan: 881
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

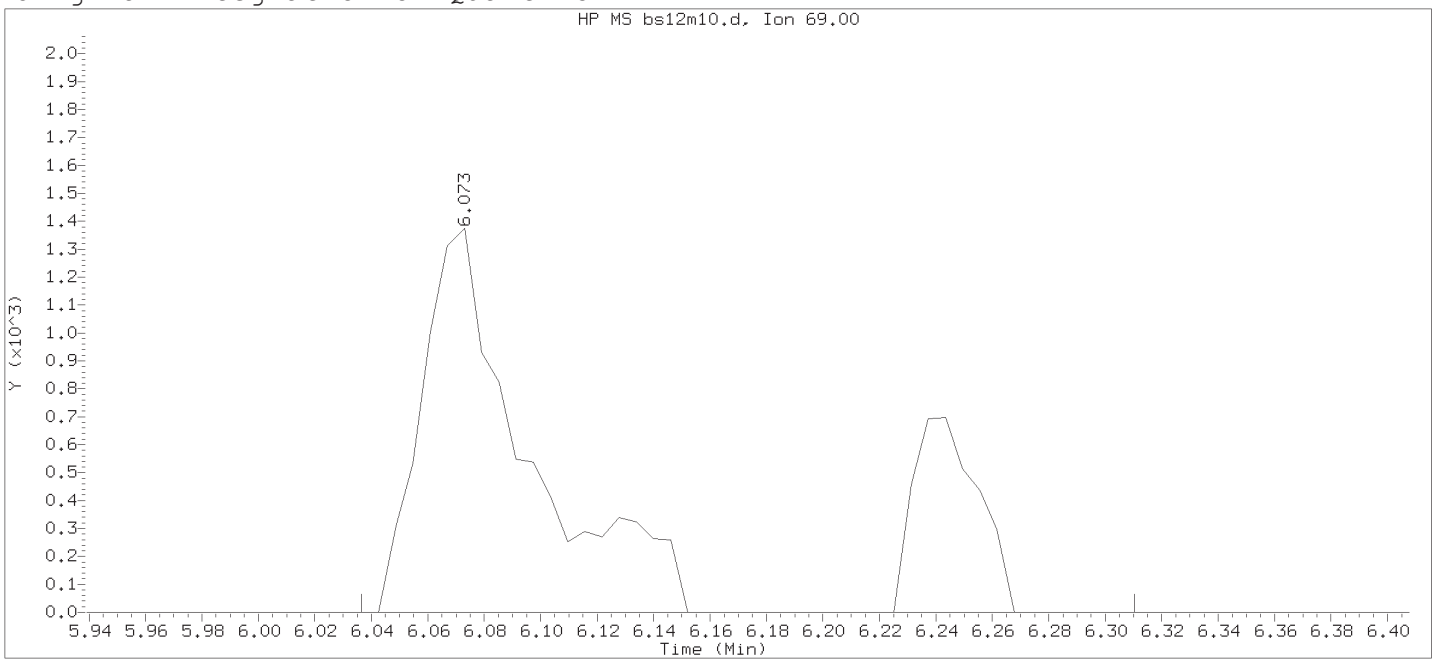
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

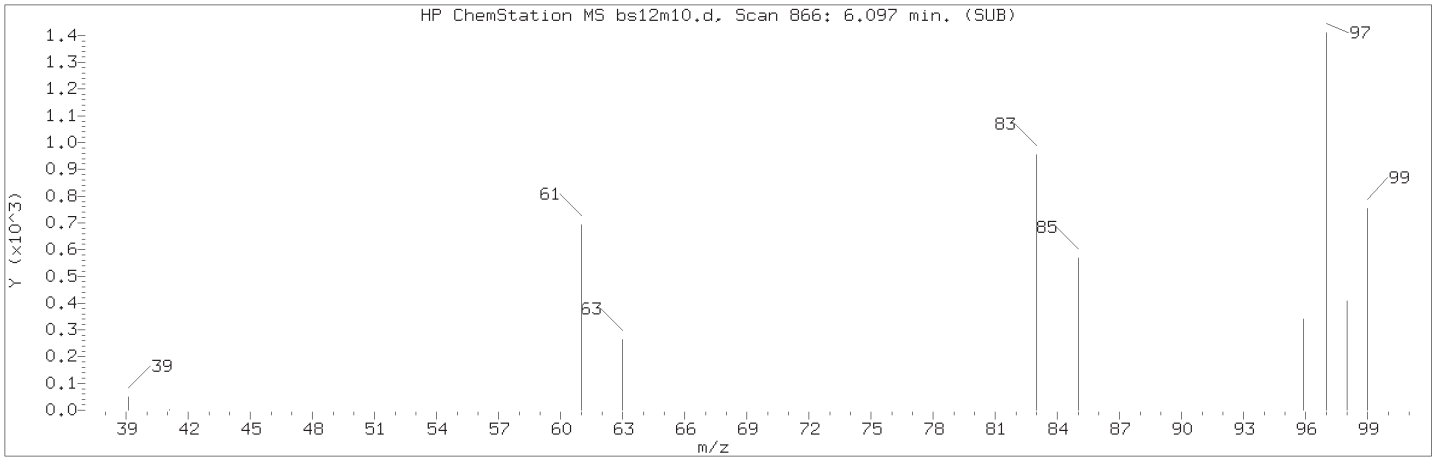
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:08 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

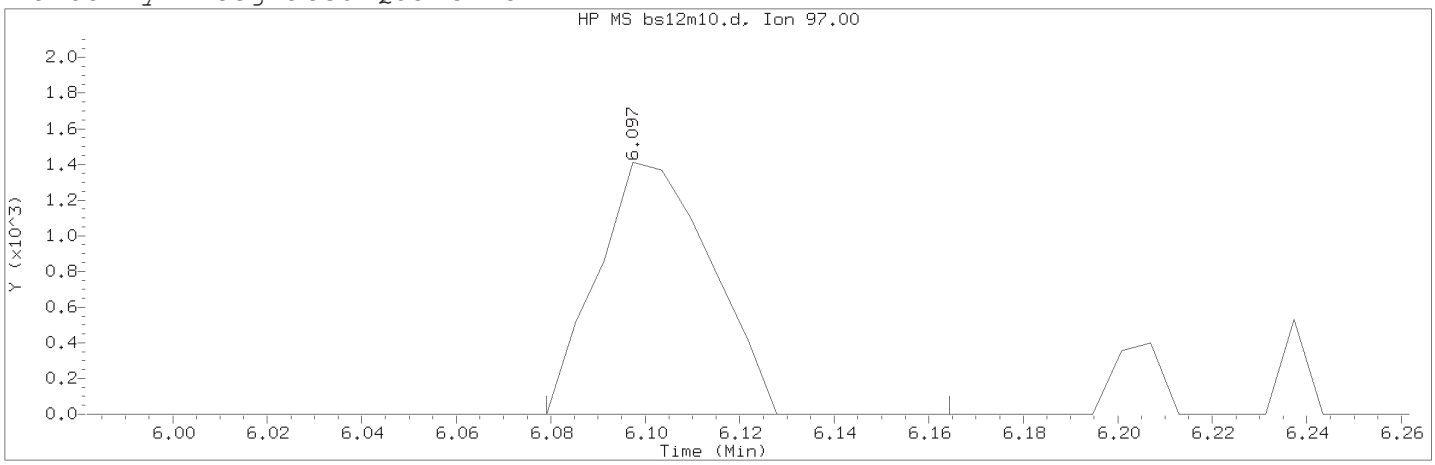
Compound Number : 95
Compound Name : Ethyl Methacrylate
Scan Number : 862
Retention Time (minutes): 6.073
Quant Ion : 69.00
Area : 4699
On-column Amount (ng) : 0.6035
Integration start scan : 855 Integration stop scan: 900
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

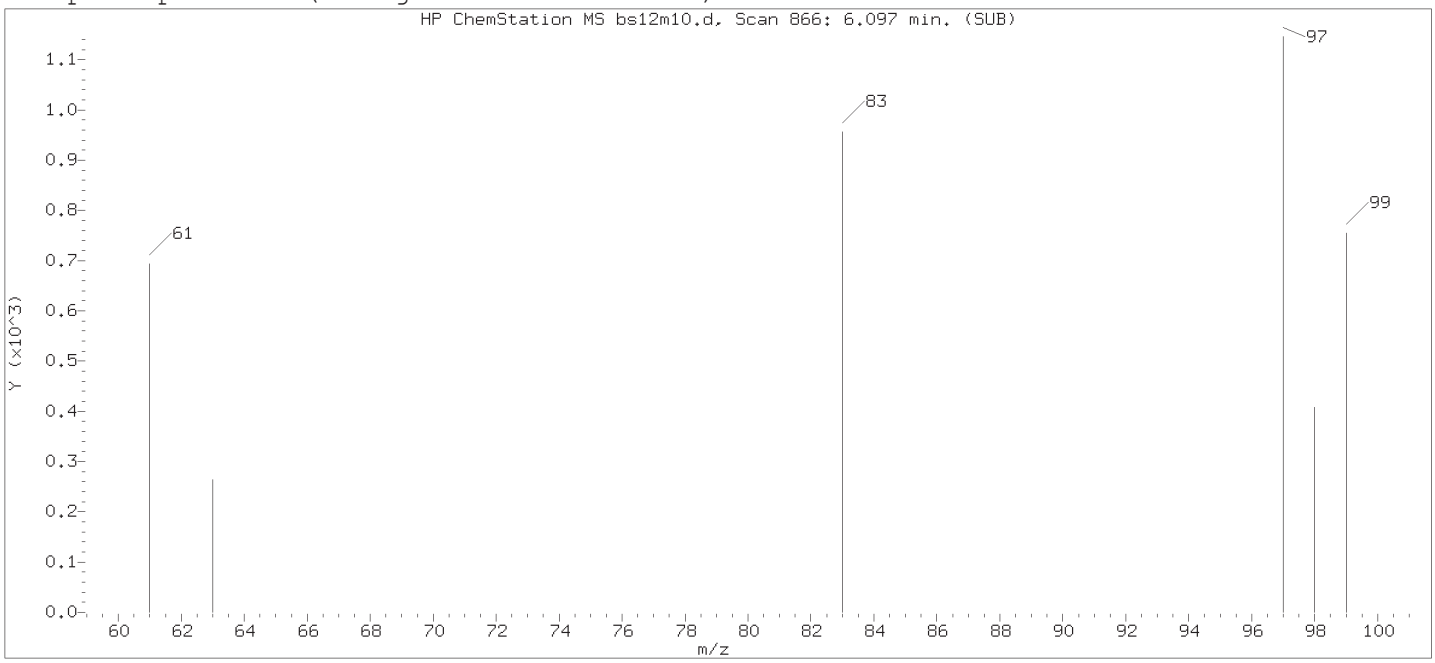
Compound Number : 96
Compound Name : 1,1,2-Trichloroethane
Scan Number : 866
Retention Time (minutes): 6.097
Quant Ion : 97.00
Area (flag) : 2345M
On-Column Amount (ng) : 0.4315
Integration start scan : 862 Integration stop scan: 876
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

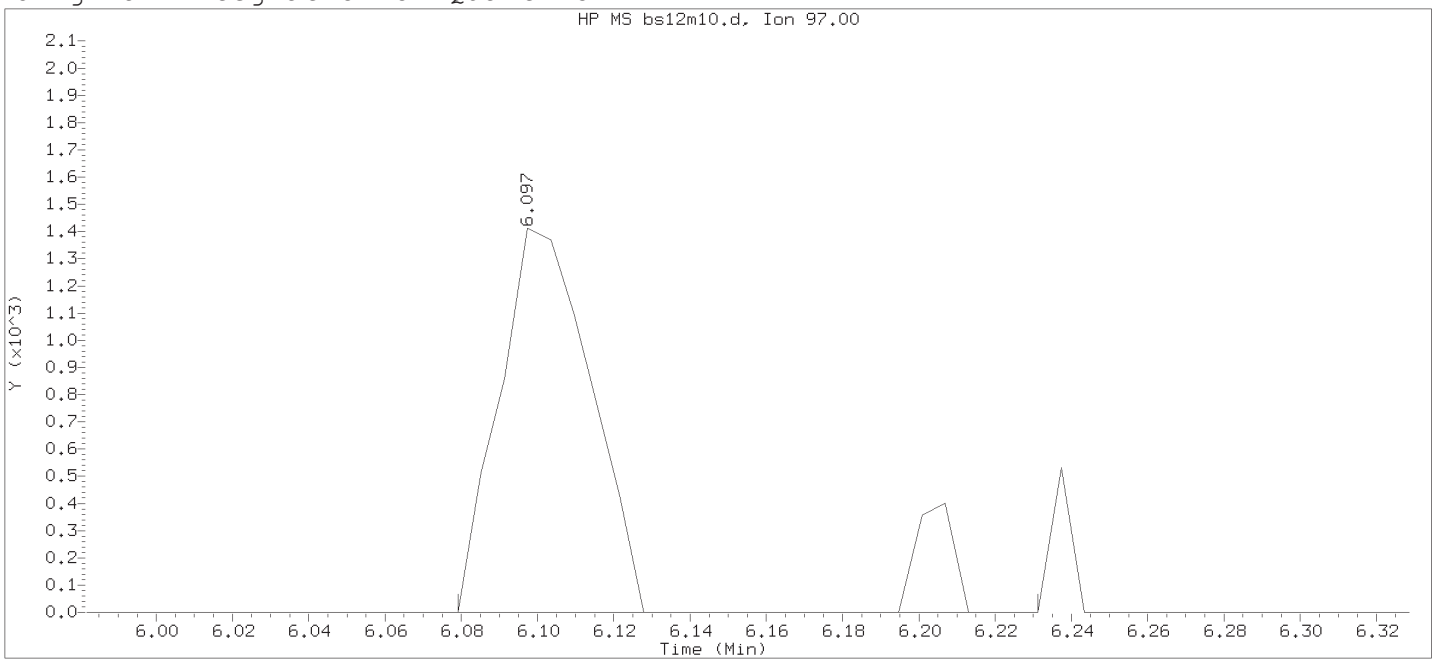
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

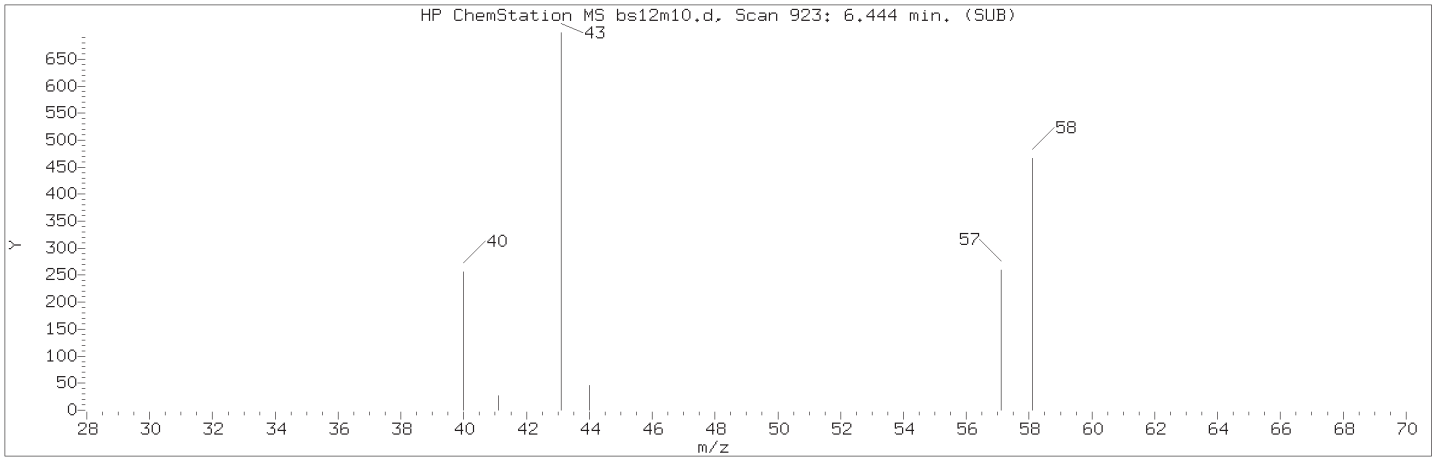
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:08 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

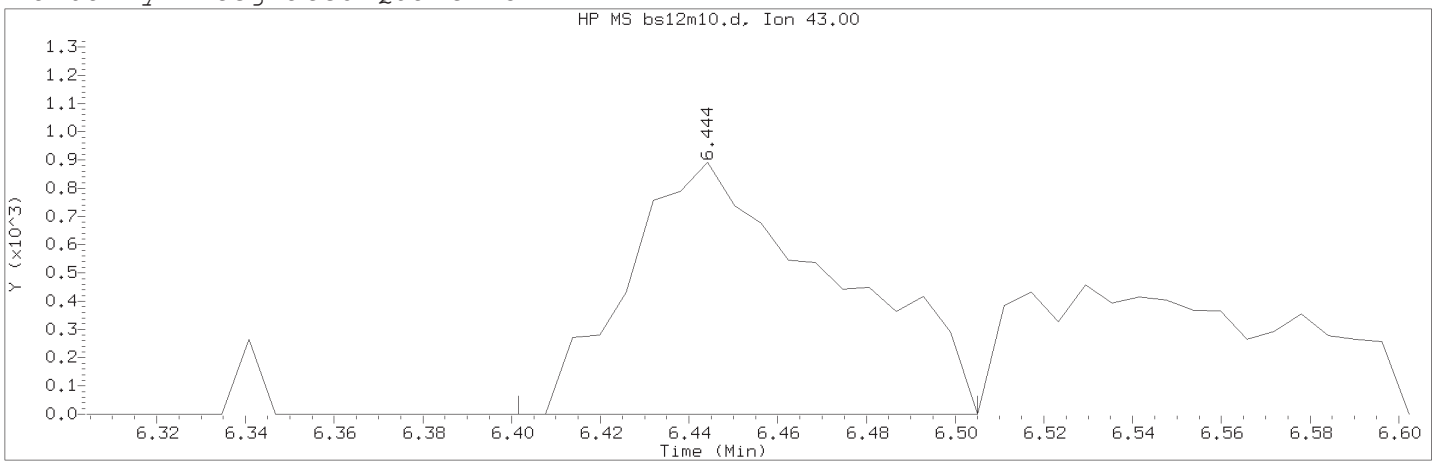
Compound Number : 96
Compound Name : 1,1,2-Trichloroethane
Scan Number : 866
Retention Time (minutes): 6.097
Quant Ion : 97.00
Area : 2622
On-column Amount (ng) : 0.4785
Integration start scan : 862 Integration stop scan: 887
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

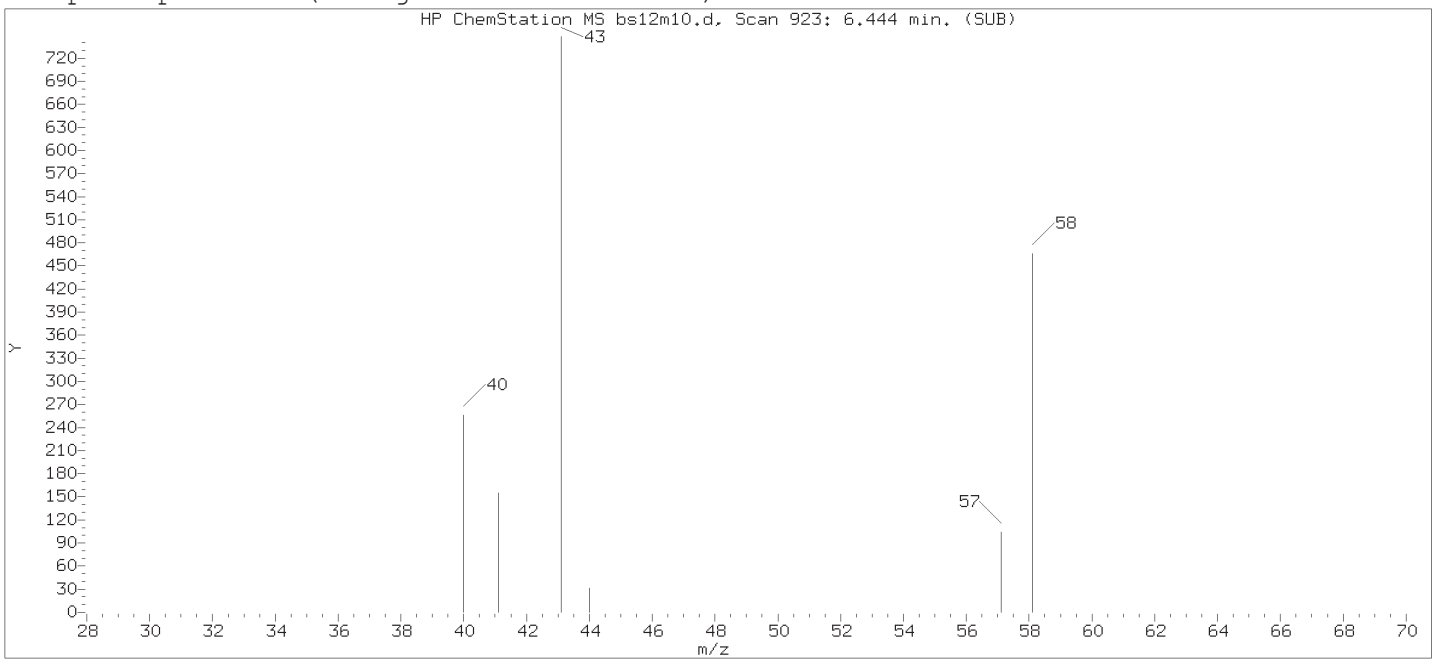
Compound Number : 101
Compound Name : 2-Hexanone
Scan Number : 923
Retention Time (minutes): 6.444
Quant Ion : 43.00
Area (flag) : 2875M
On-Column Amount (ng) : 1.3712
Integration start scan : 915 Integration stop scan: 932
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

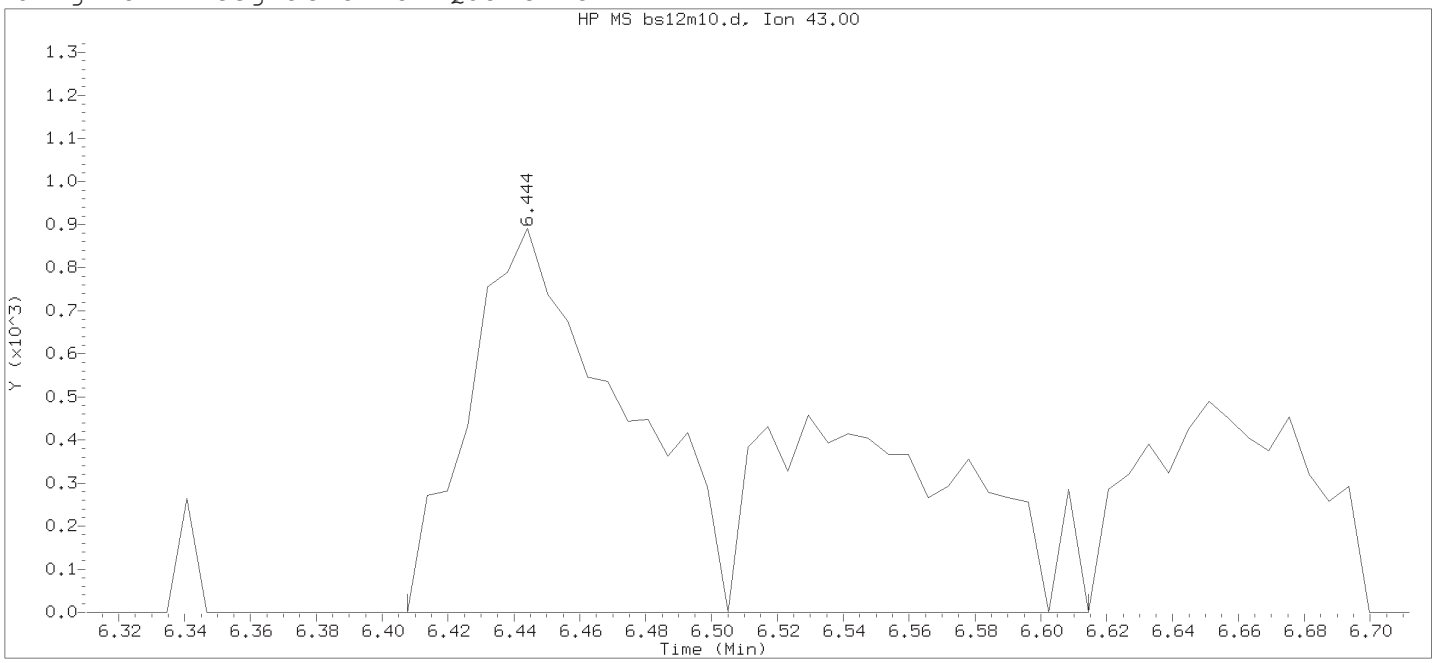
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

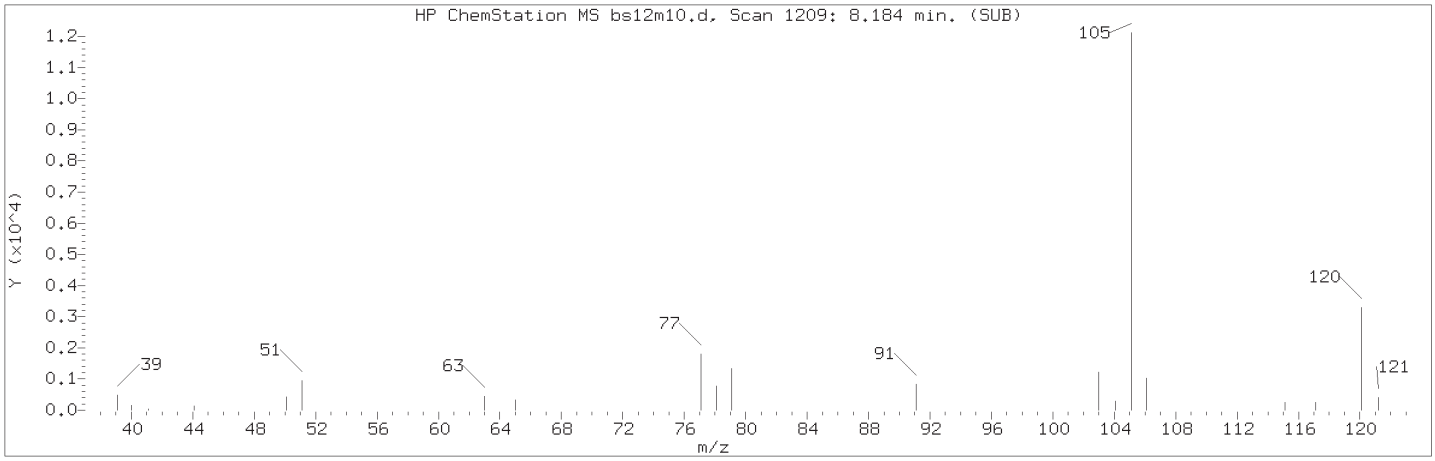
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:08 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

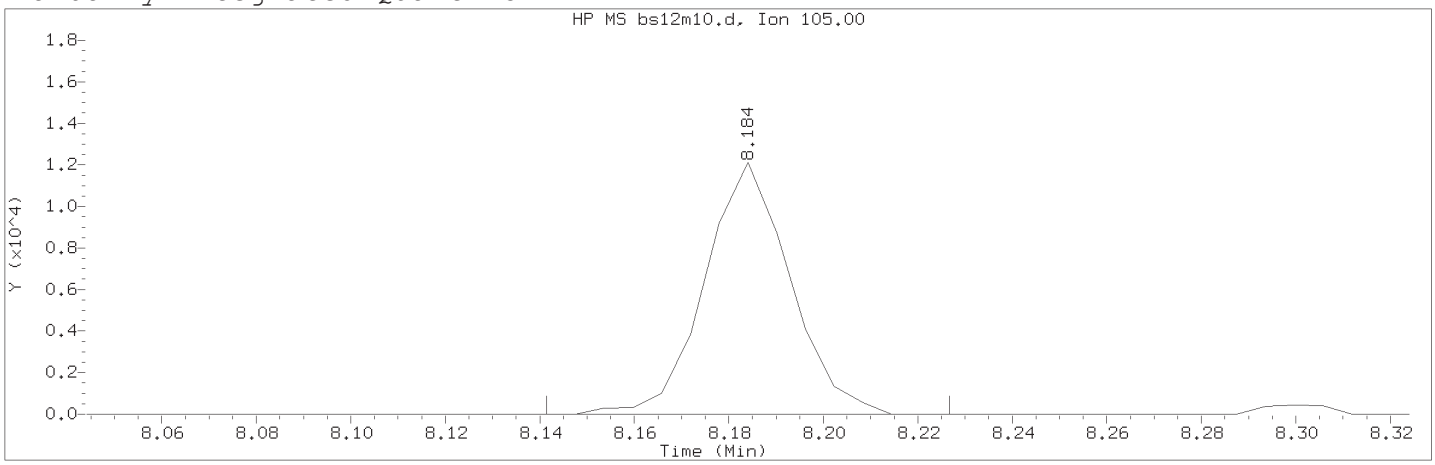
Compound Number	: 101		
Compound Name	: 2-Hexanone		
Scan Number	: 923		
Retention Time (minutes)	: 6.444		
Quant Ion	: 43.00		
Area	: 4900		
On-column Amount (ng)	: 1.2340		
Integration start scan	: 916	Integration stop scan:	950
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

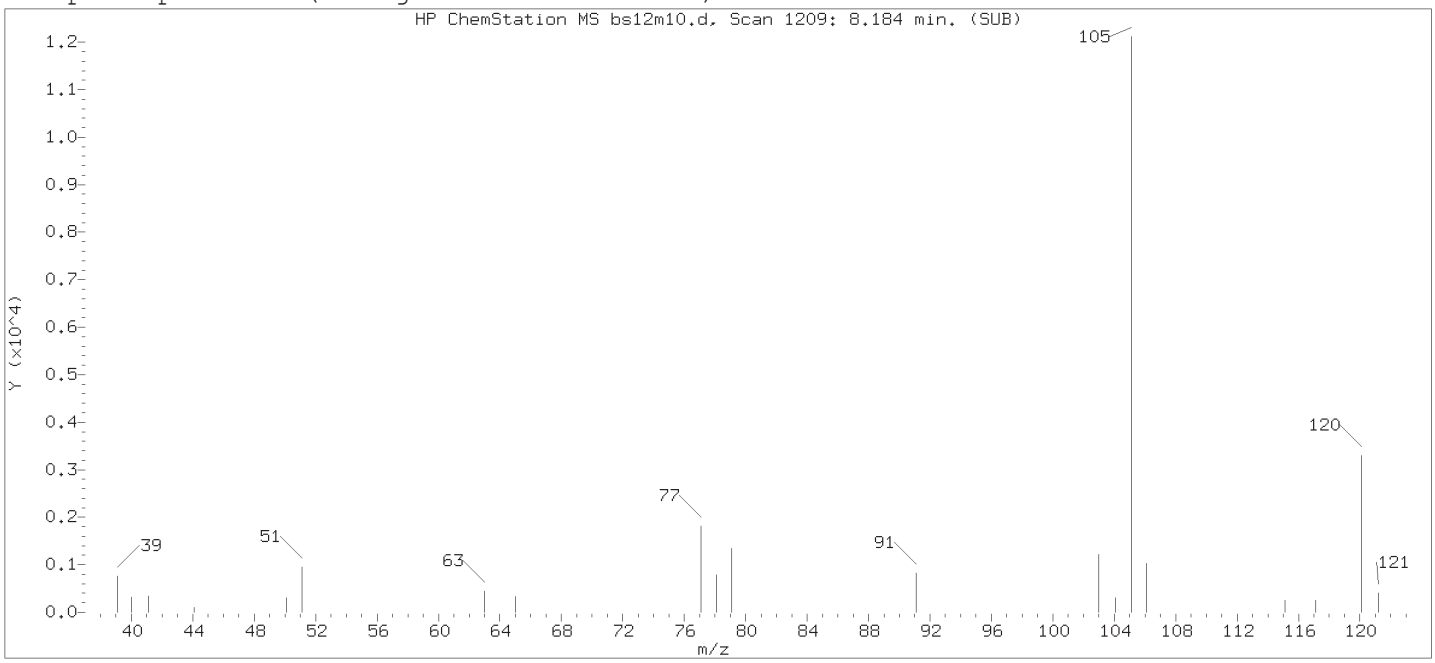
Compound Number : 115
Compound Name : Isopropylbenzene
Scan Number : 1209
Retention Time (minutes): 8.184
Quant Ion : 105.00
Area (flag) : 15165M
On-Column Amount (ng) : 0.4683
Integration start scan : 1201 Integration stop scan: 1215
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

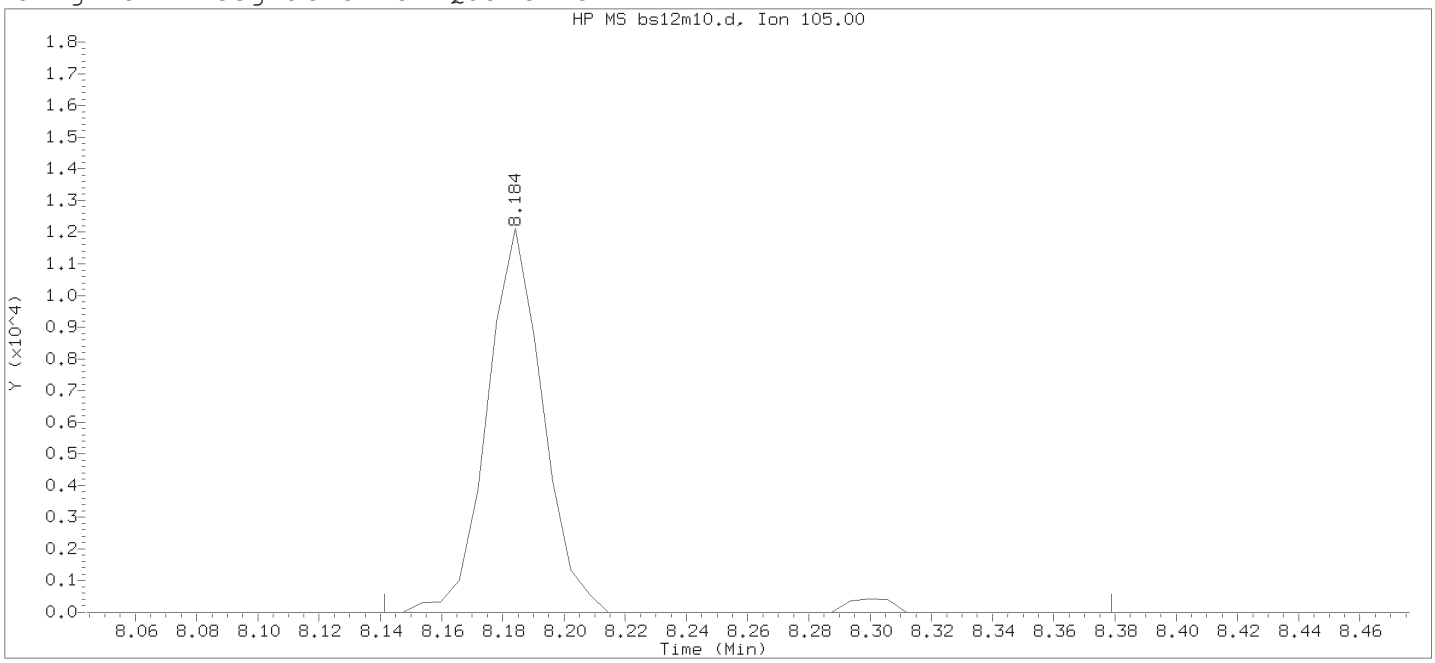
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

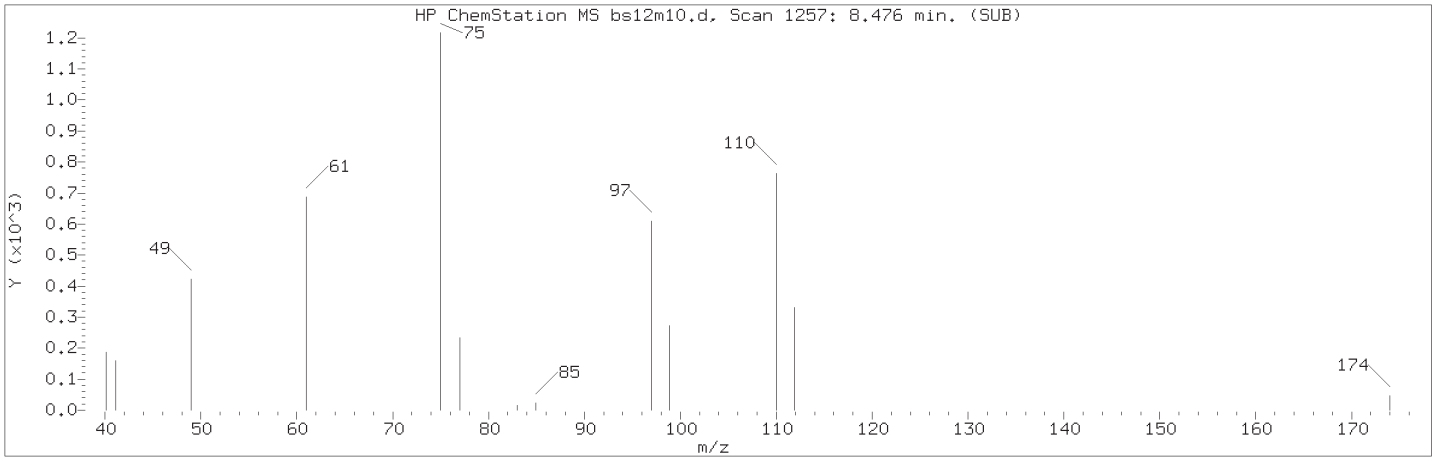
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:08 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

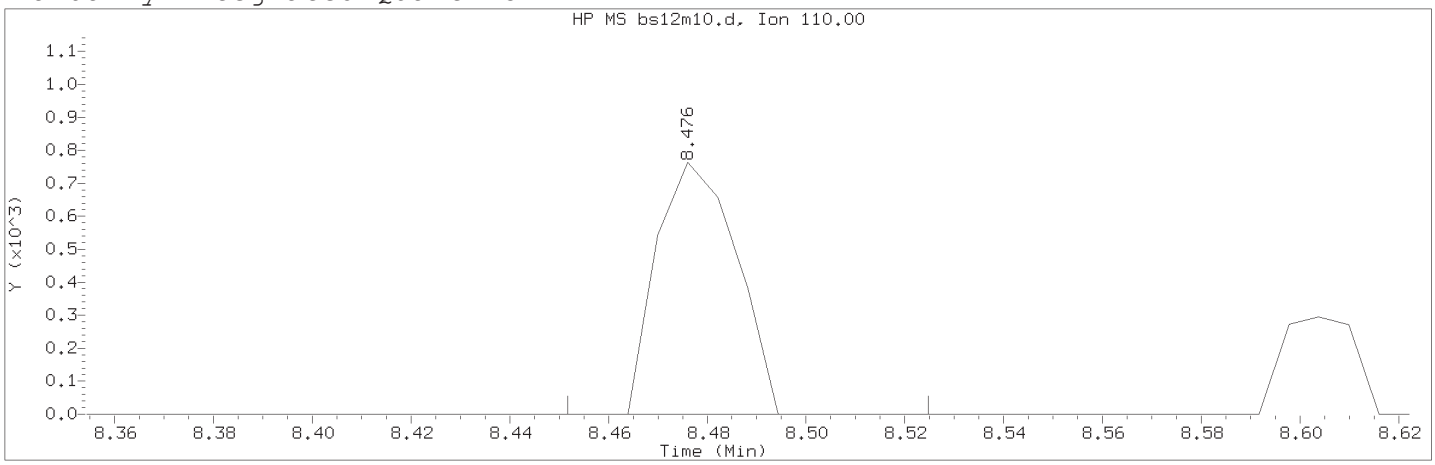
Compound Number : 115
Compound Name : Isopropylbenzene
Scan Number : 1209
Retention Time (minutes): 8.184
Quant Ion : 105.00
Area : 15600
On-column Amount (ng) : 0.4817
Integration start scan : 1201 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe0372

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

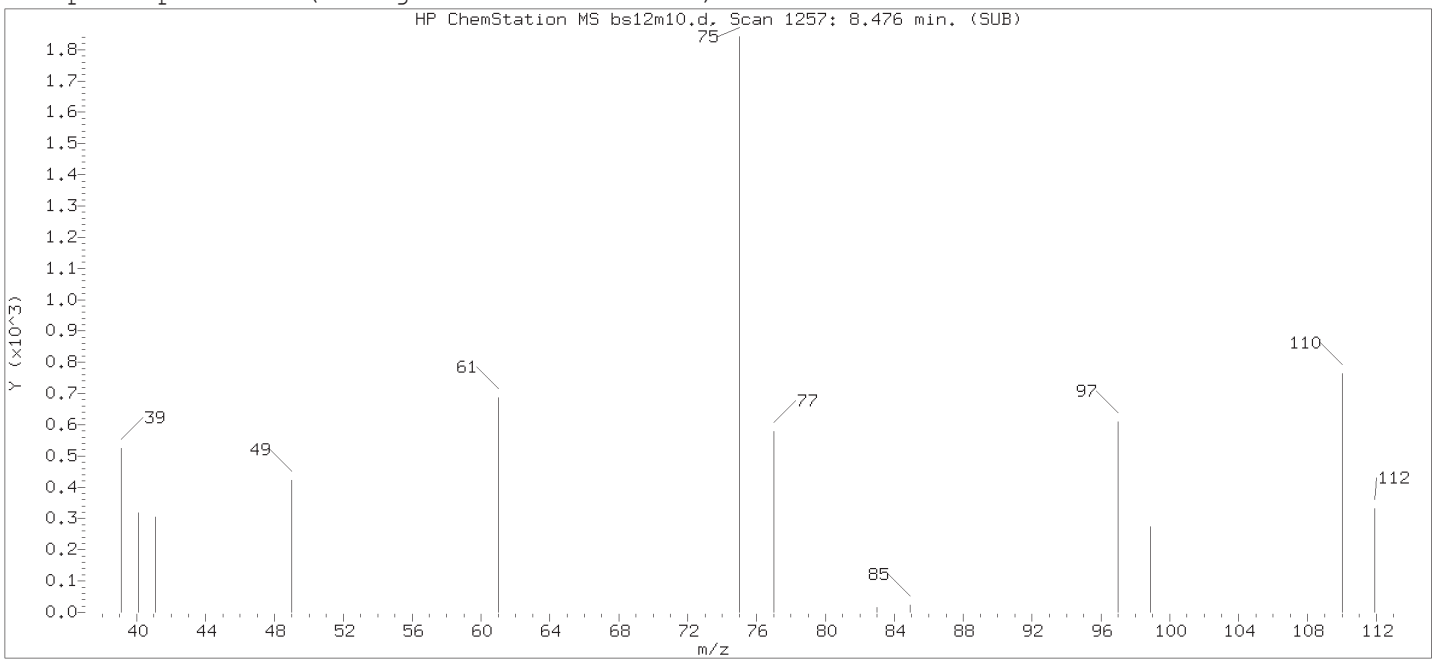
Compound Number : 123
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1257
Retention Time (minutes): 8.476
Quant Ion : 110.00
Area (flag) : 854M
On-Column Amount (ng) : 0.4265
Integration start scan : 1252 Integration stop scan: 1264
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

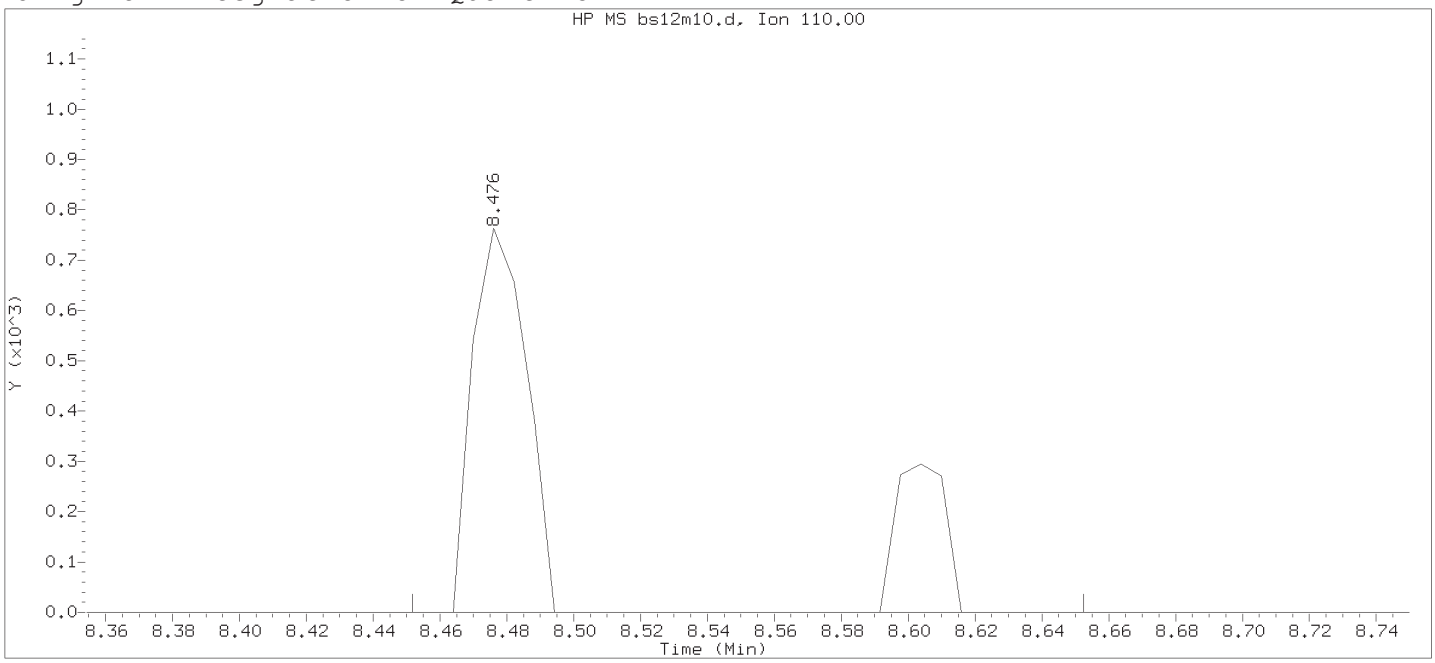
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

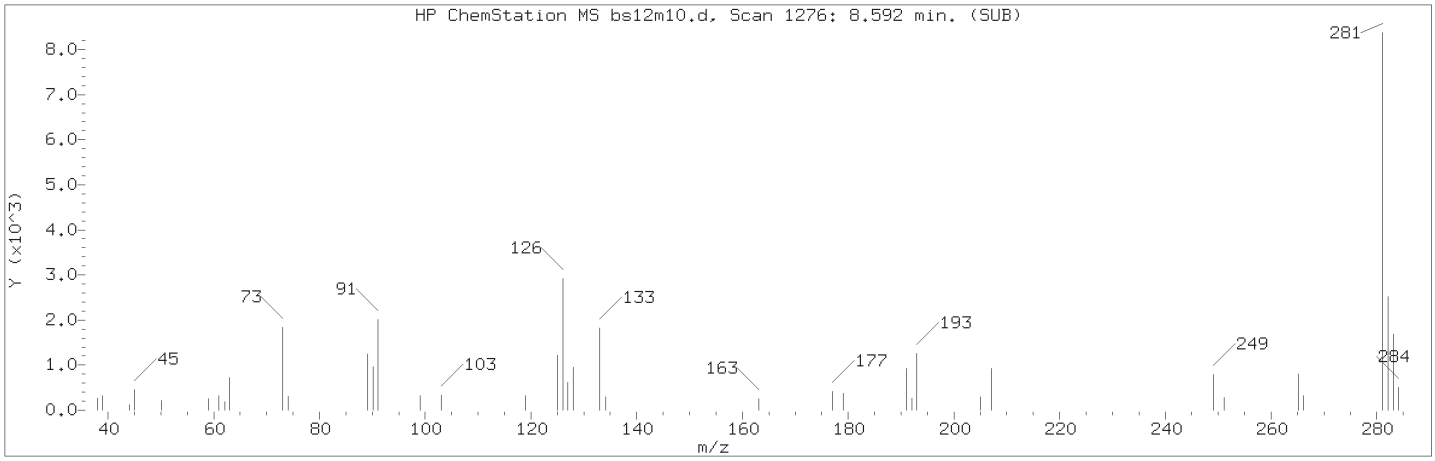
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:08 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

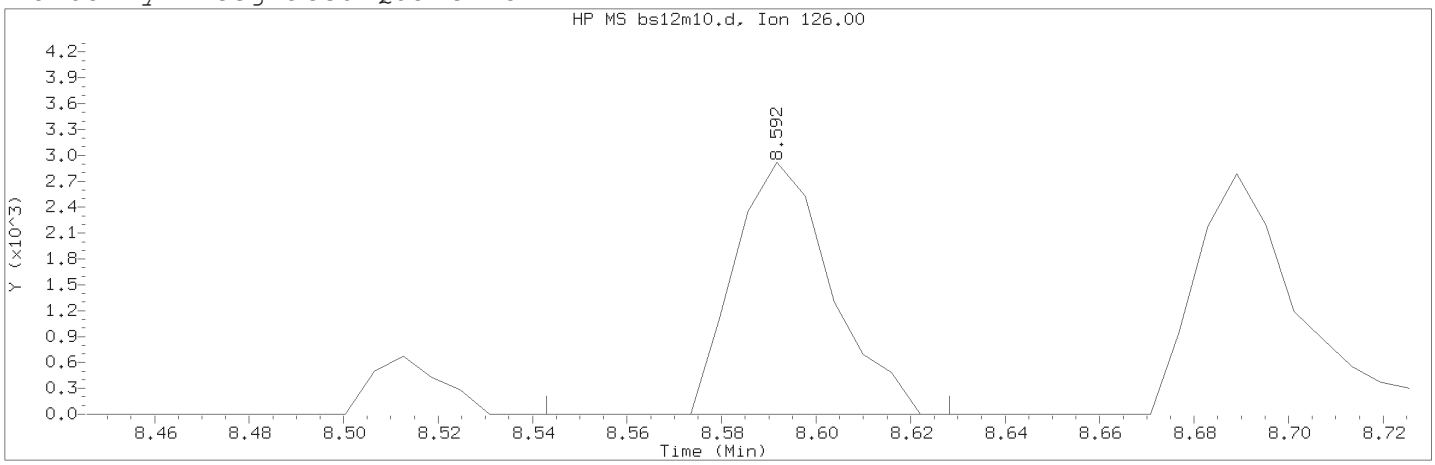
Compound Number : 123
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1257
Retention Time (minutes): 8.476
Quant Ion : 110.00
Area : 1161
On-column Amount (ng) : 0.5684
Integration start scan : 1252 Integration stop scan: 1285
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

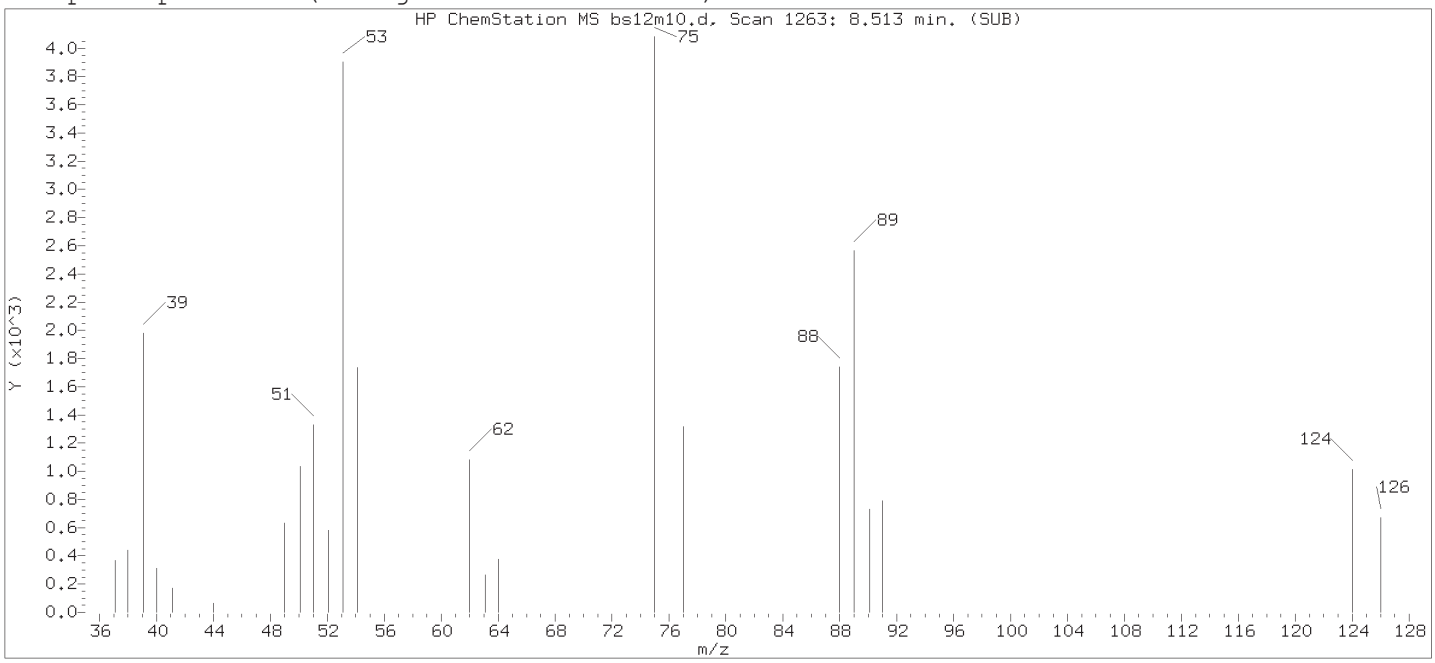
Compound Number : 126
Compound Name : 2-Chlorotoluene
Scan Number : 1276
Retention Time (minutes): 8.592
Quant Ion : 126.00
Area (flag) : 4149M
On-Column Amount (ng) : 0.5056
Integration start scan : 1267 Integration stop scan: 1281
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

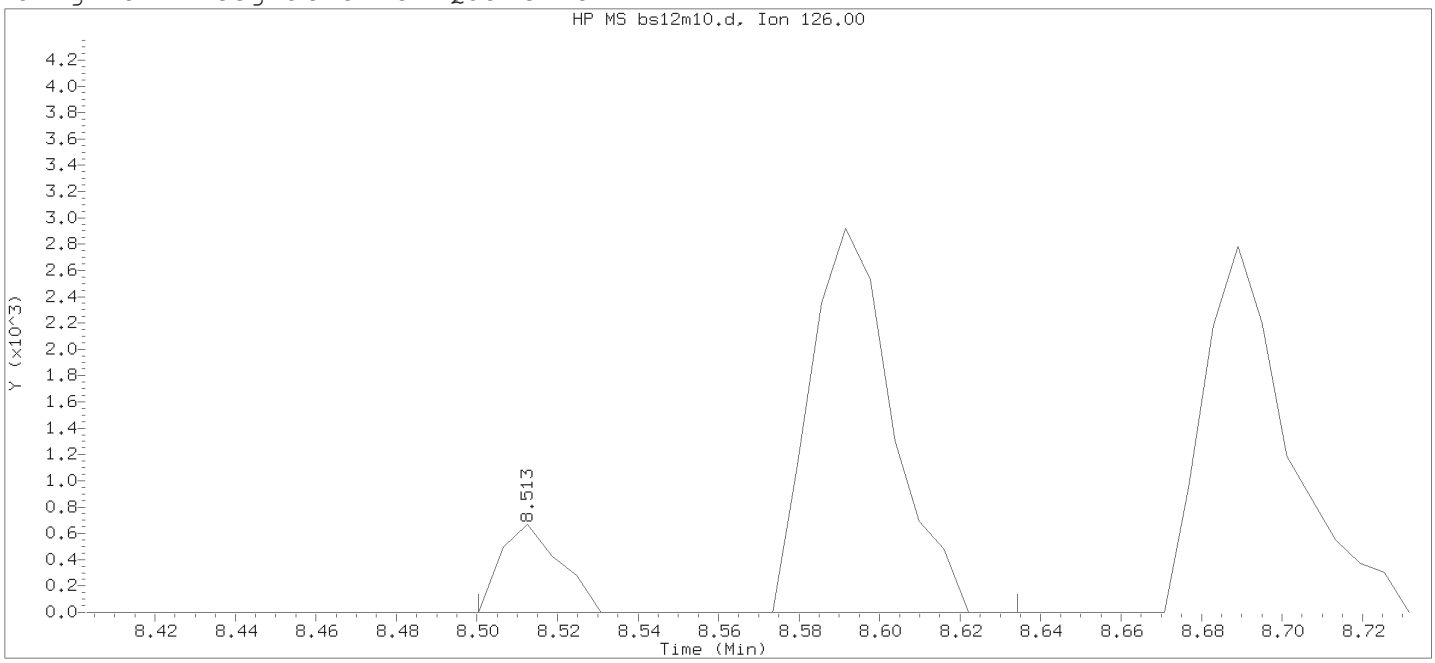
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

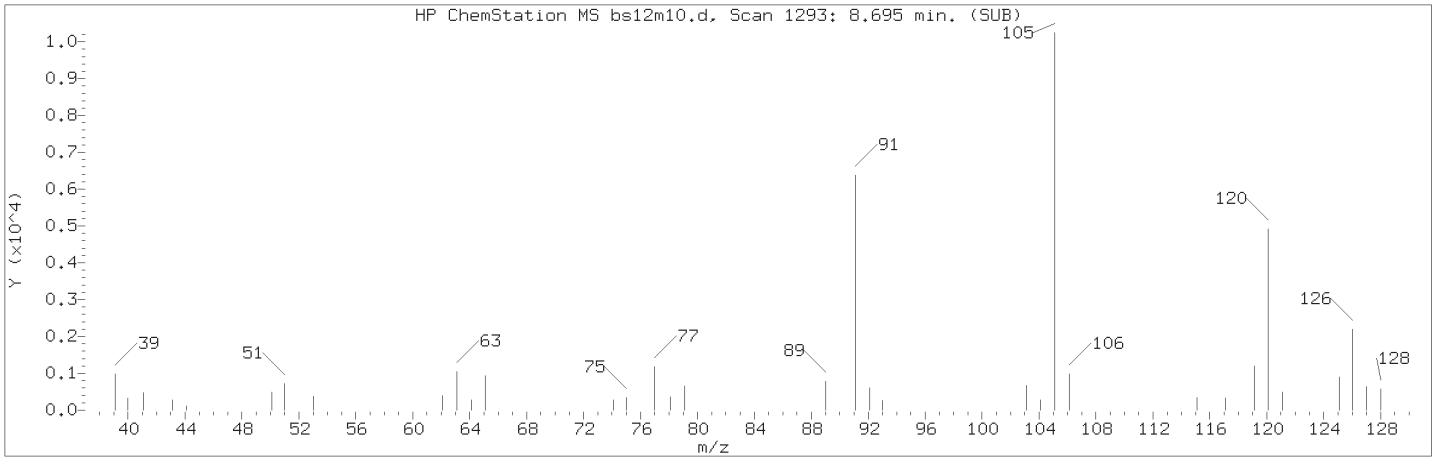
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:08 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

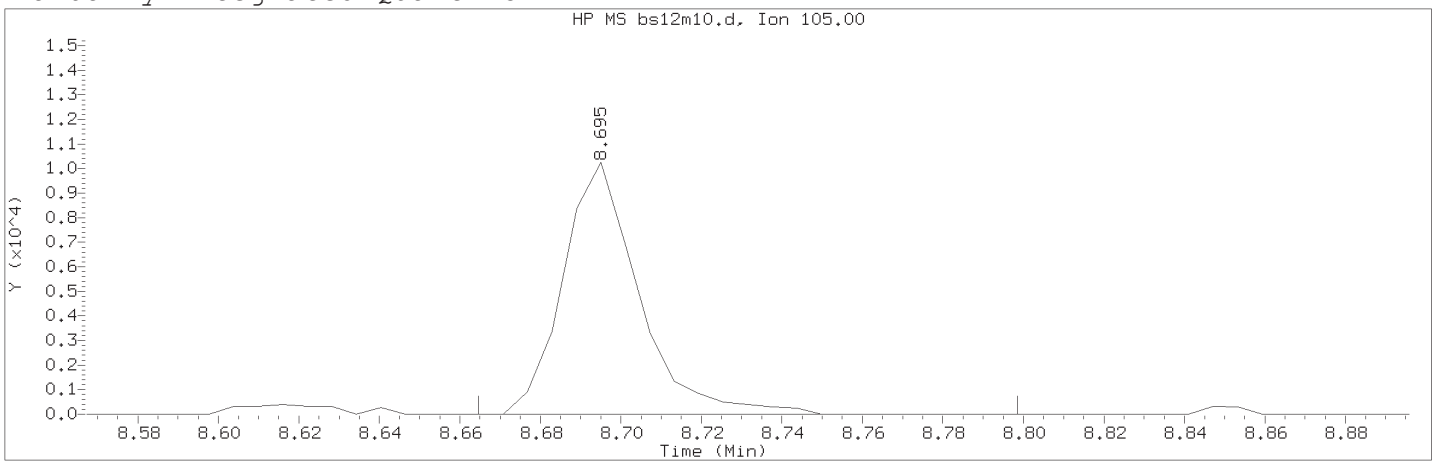
Compound Number : 126
Compound Name : 2-Chlorotoluene
Scan Number : 1263
Retention Time (minutes): 8.513
Quant Ion : 126.00
Area : 4833
On-column Amount (ng) : 0.5890
Integration start scan : 1260 Integration stop scan: 1282
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jhh09452

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

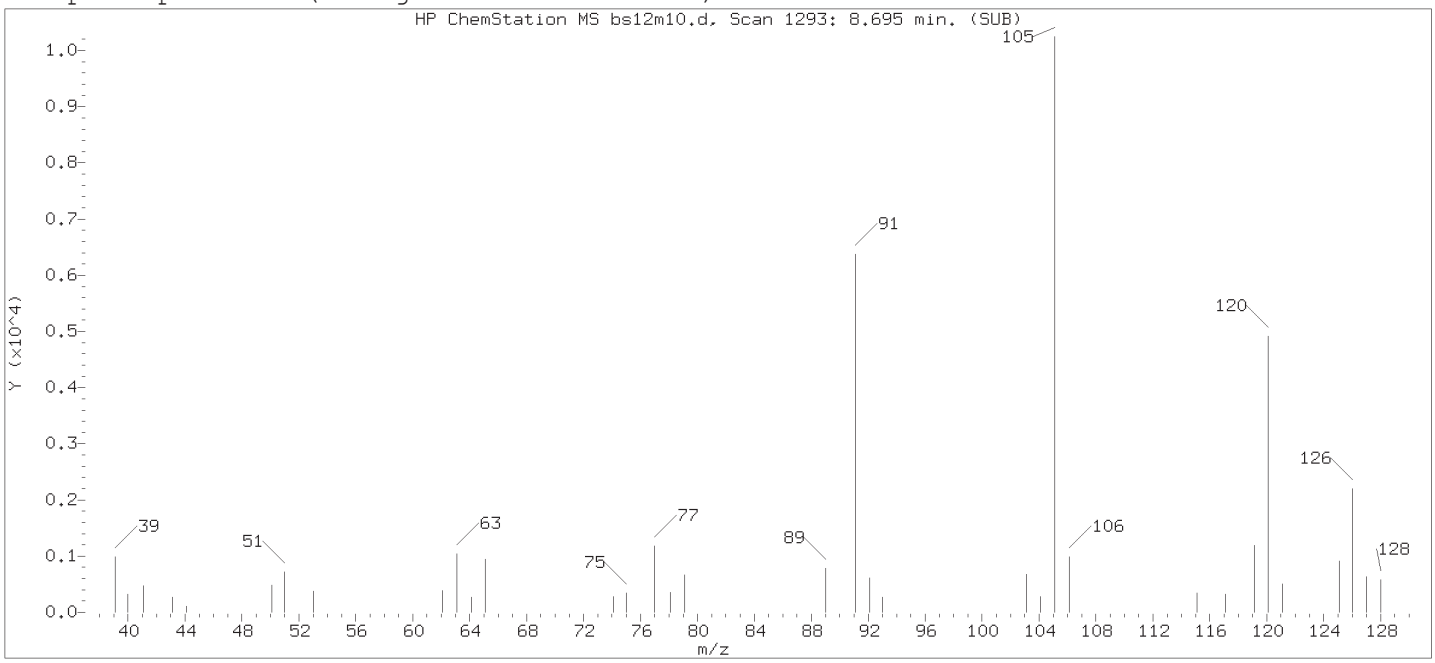
Compound Number : 129
Compound Name : 1,3,5-Trimethylbenzene
Scan Number : 1293
Retention Time (minutes): 8.695
Quant Ion : 105.00
Area (flag) : 13363M
On-Column Amount (ng) : 0.4940
Integration start scan : 1287 Integration stop scan: 1309
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

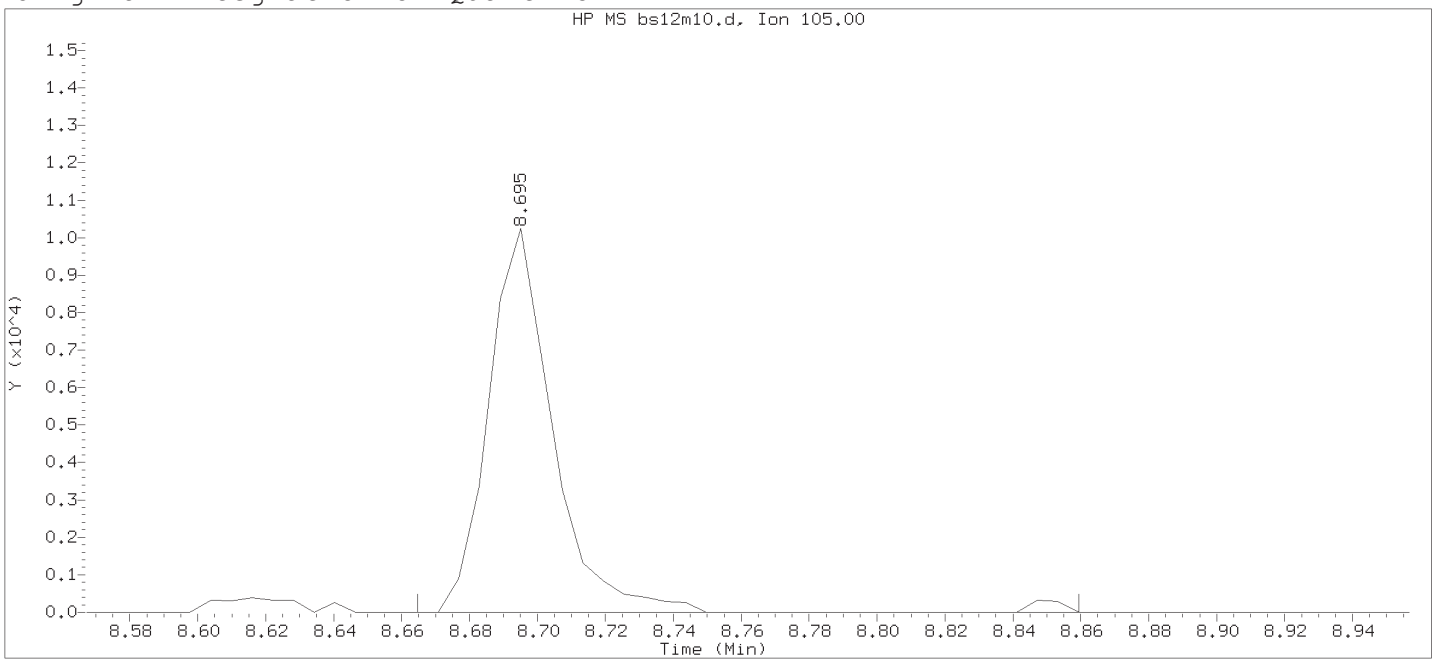
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

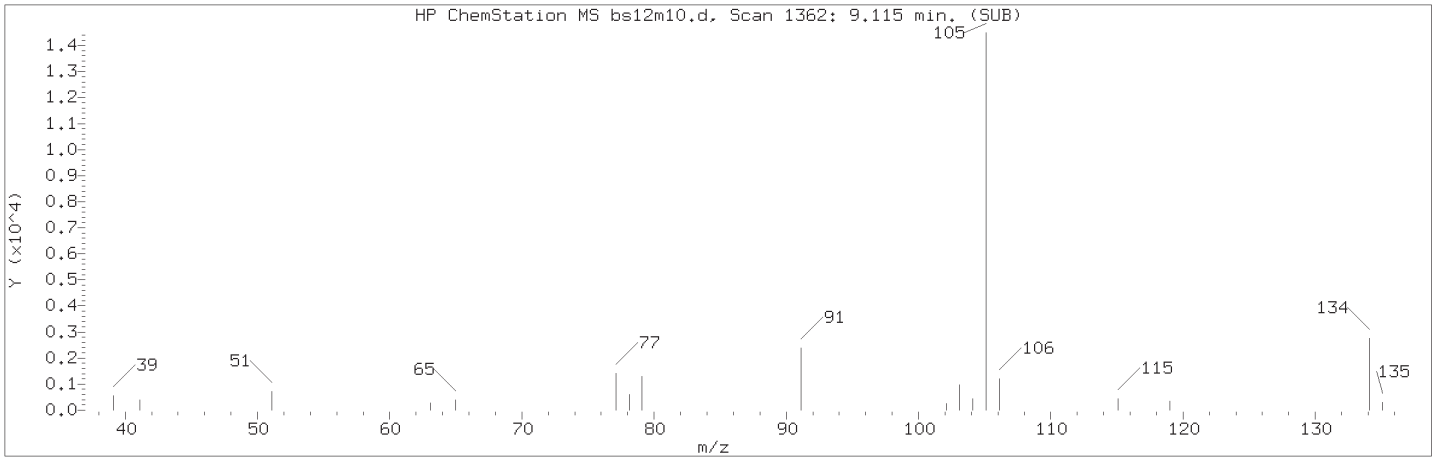
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:08 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

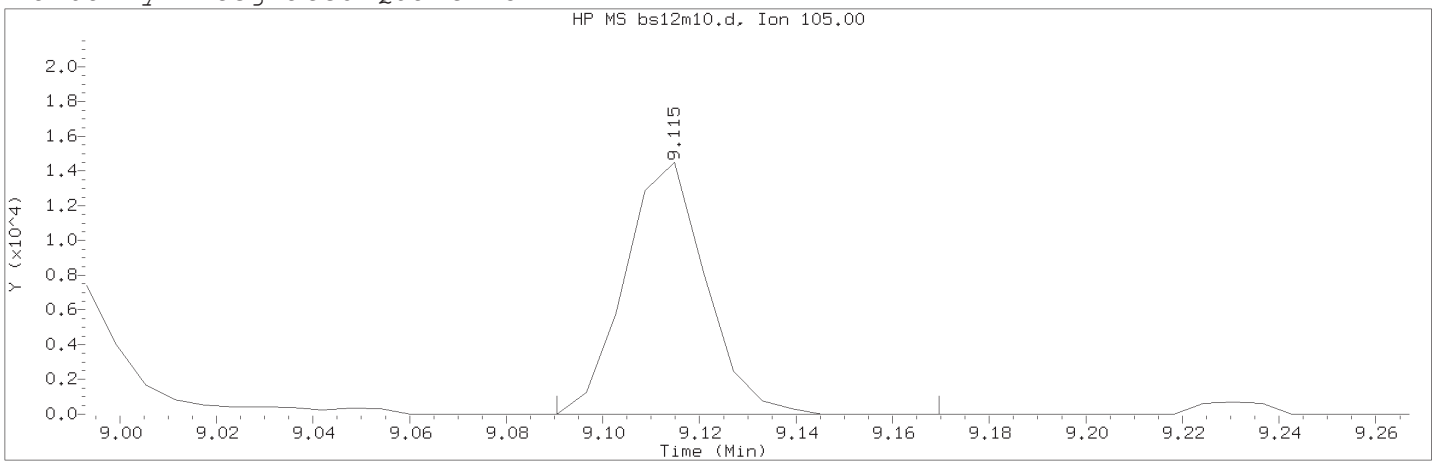
Compound Number : 129
Compound Name : 1,3,5-Trimethylbenzene
Scan Number : 1293
Retention Time (minutes): 8.695
Quant Ion : 105.00
Area : 13586
On-column Amount (ng) : 0.5022
Integration start scan : 1287 Integration stop scan: 1319
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09432

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

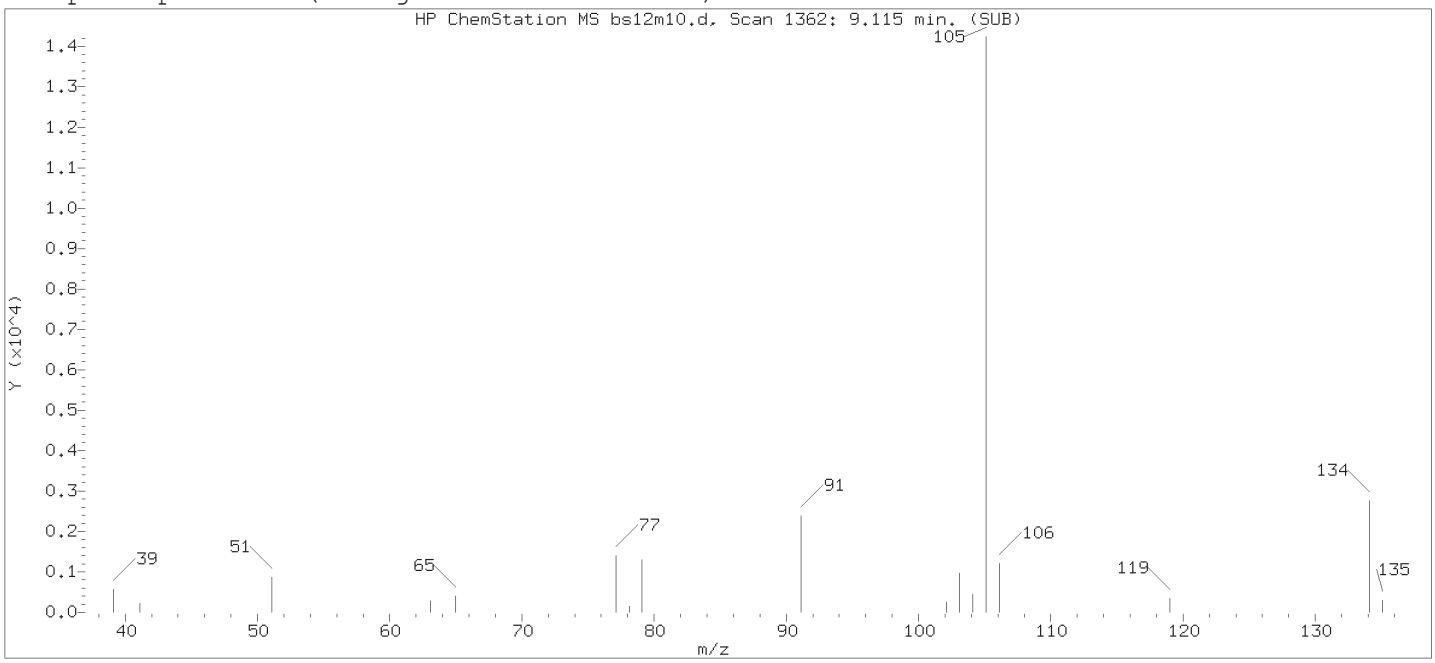
Compound Number : 136
Compound Name : sec-Butylbenzene
Scan Number : 1362
Retention Time (minutes): 9.115
Quant Ion : 105.00
Area (flag) : 16802M
On-Column Amount (ng) : 0.4879
Integration start scan : 1357 Integration stop scan: 1370
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

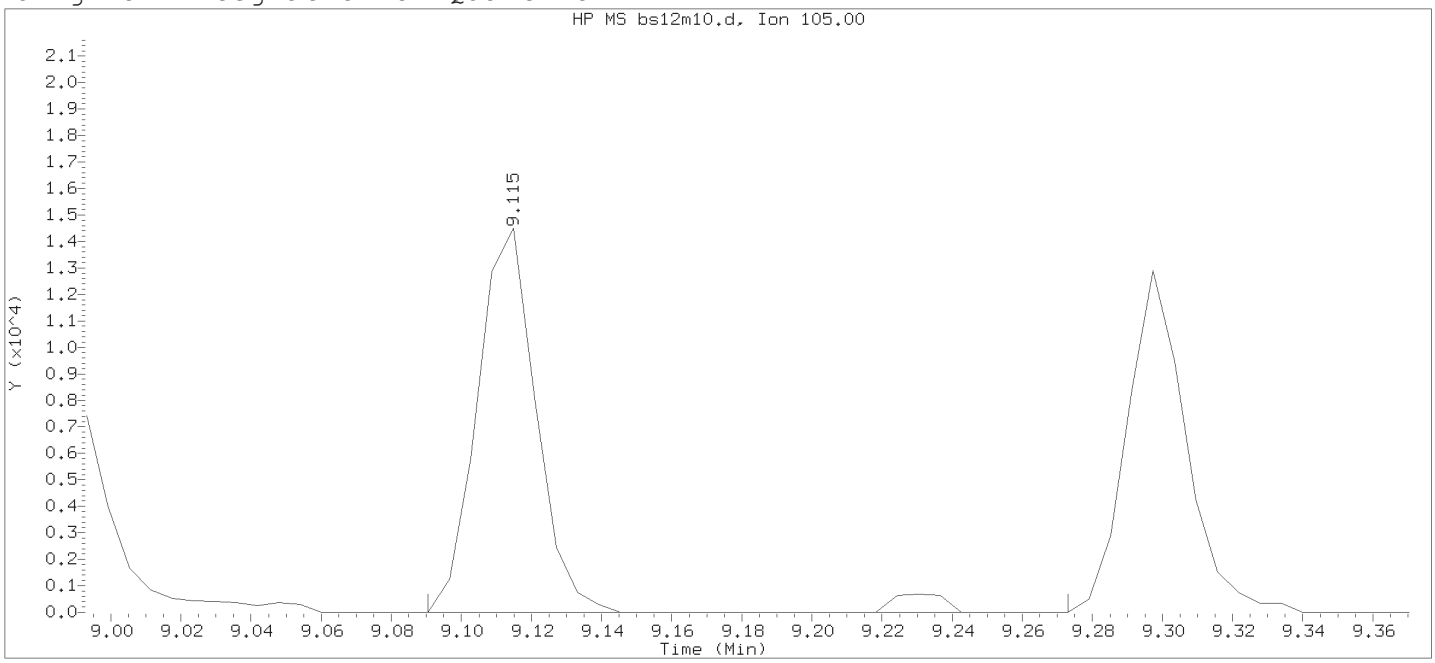
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

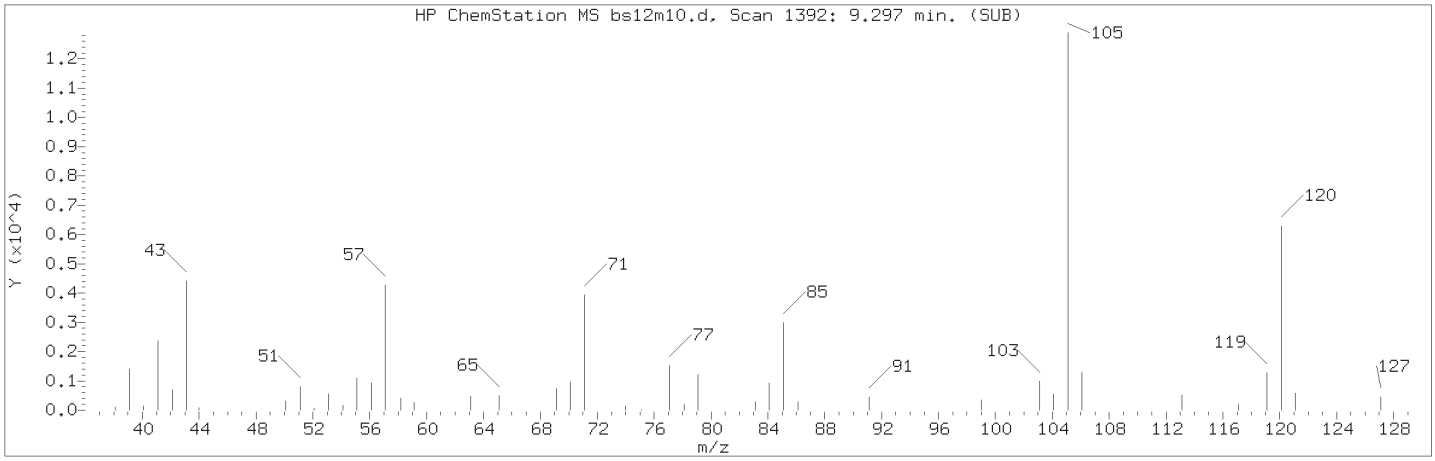
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:08 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

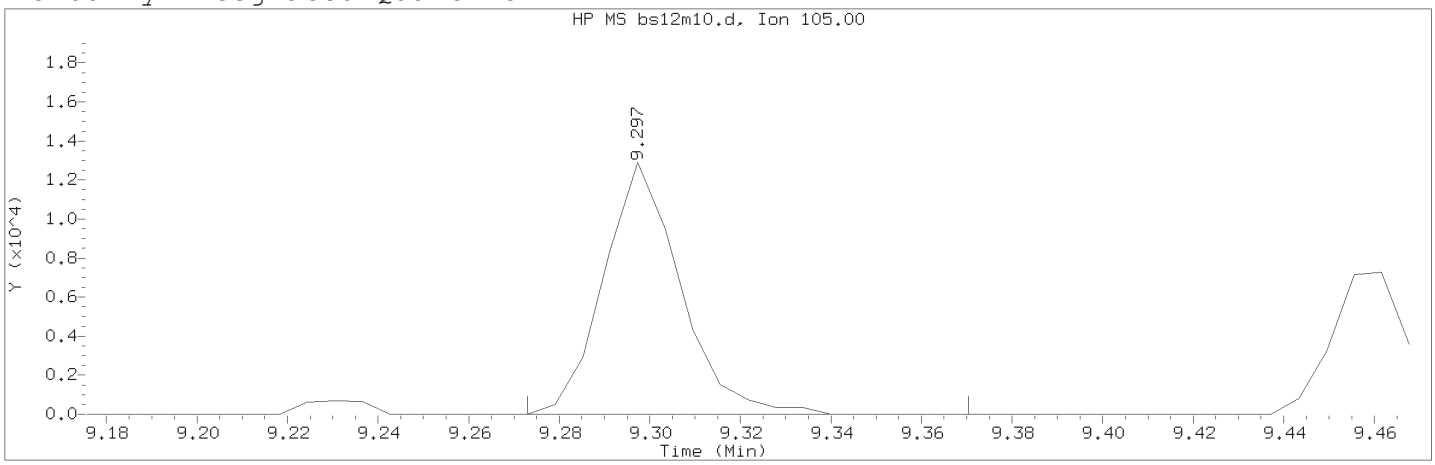
Compound Number : 136
Compound Name : sec-Butylbenzene
Scan Number : 1362
Retention Time (minutes): 9.115
Quant Ion : 105.00
Area : 17517
On-column Amount (ng) : 0.5032
Integration start scan : 1357 Integration stop scan: 1387
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

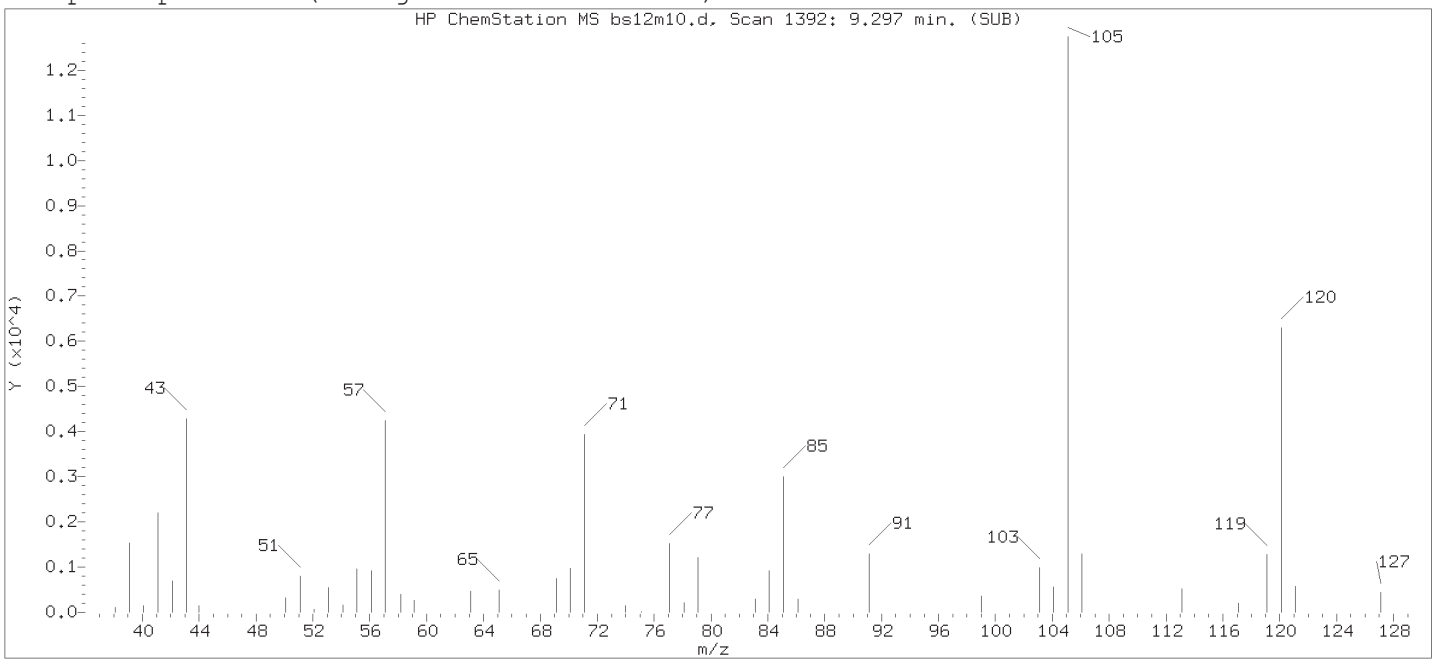
Compound Number : 142
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1392
Retention Time (minutes): 9.297
Quant Ion : 105.00
Area (flag) : 15109M
On-Column Amount (ng) : 0.4969
Integration start scan : 1387 Integration stop scan: 1403
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

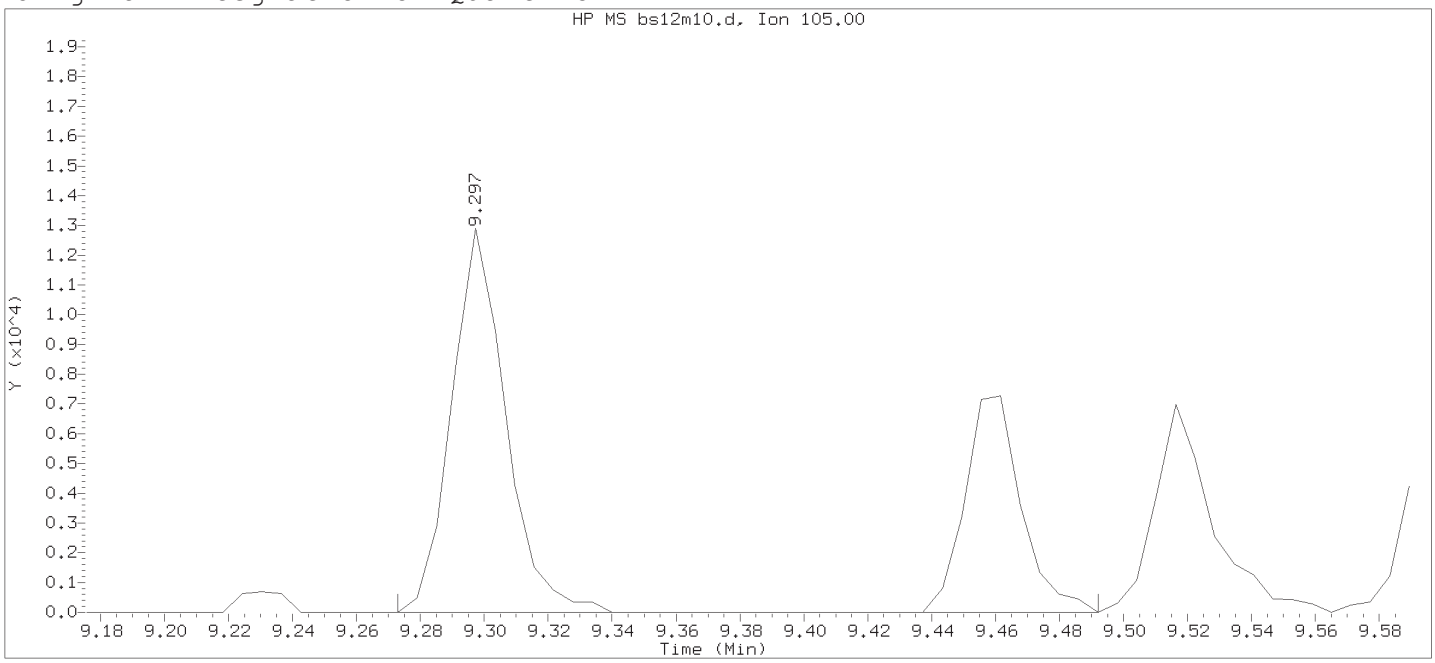
Analyst responsible for change: Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

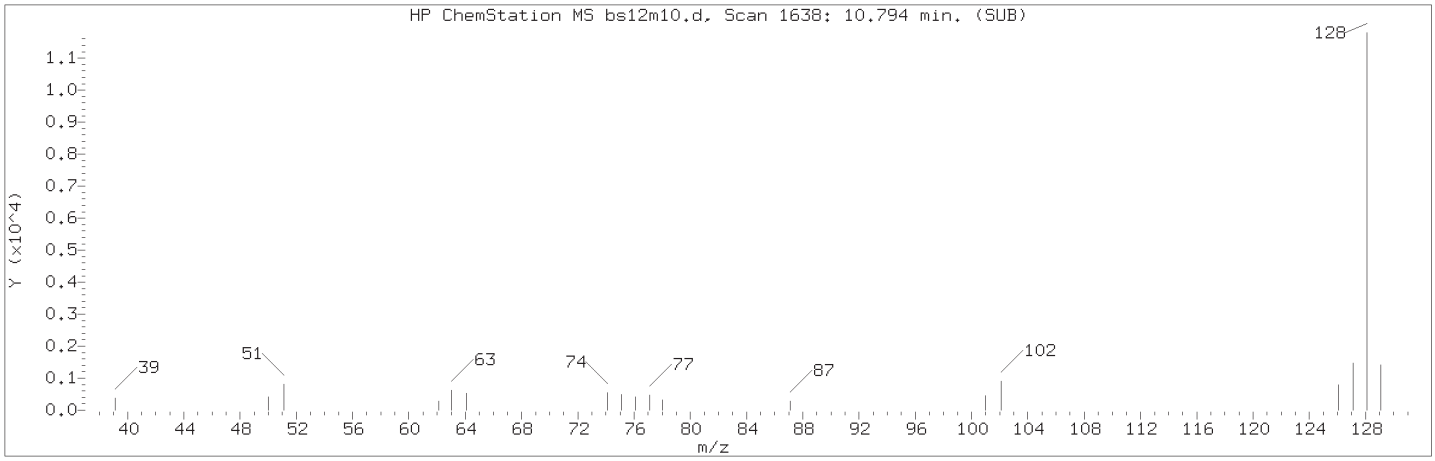
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:08 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

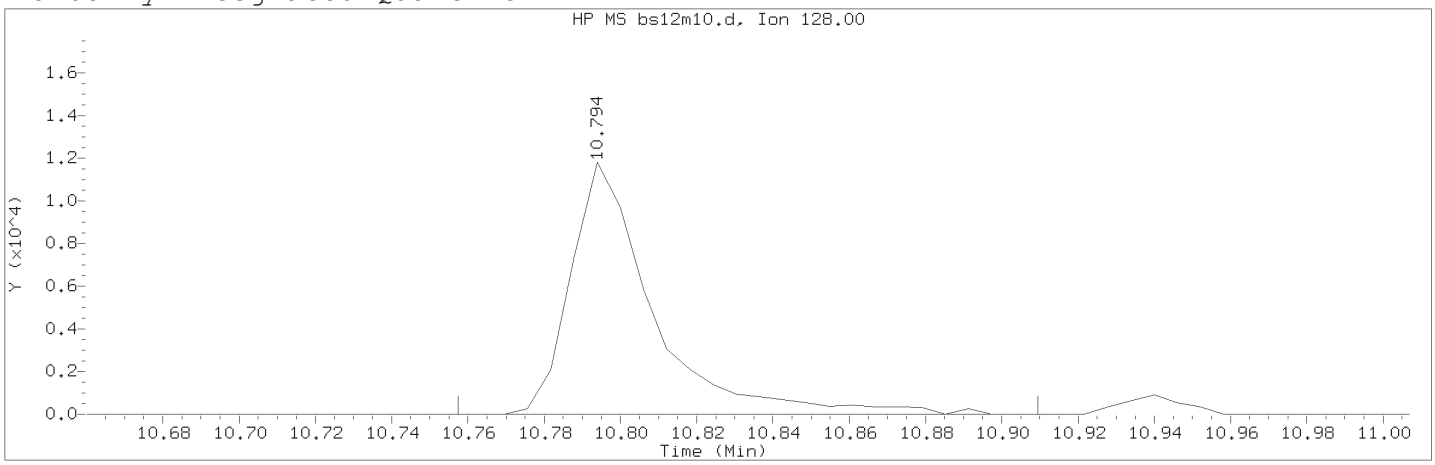
Compound Number : 142
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1392
Retention Time (minutes): 9.297
Quant Ion : 105.00
Area : 24026
On-column Amount (ng) : 0.7901
Integration start scan : 1387 Integration stop scan: 1423
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09172

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

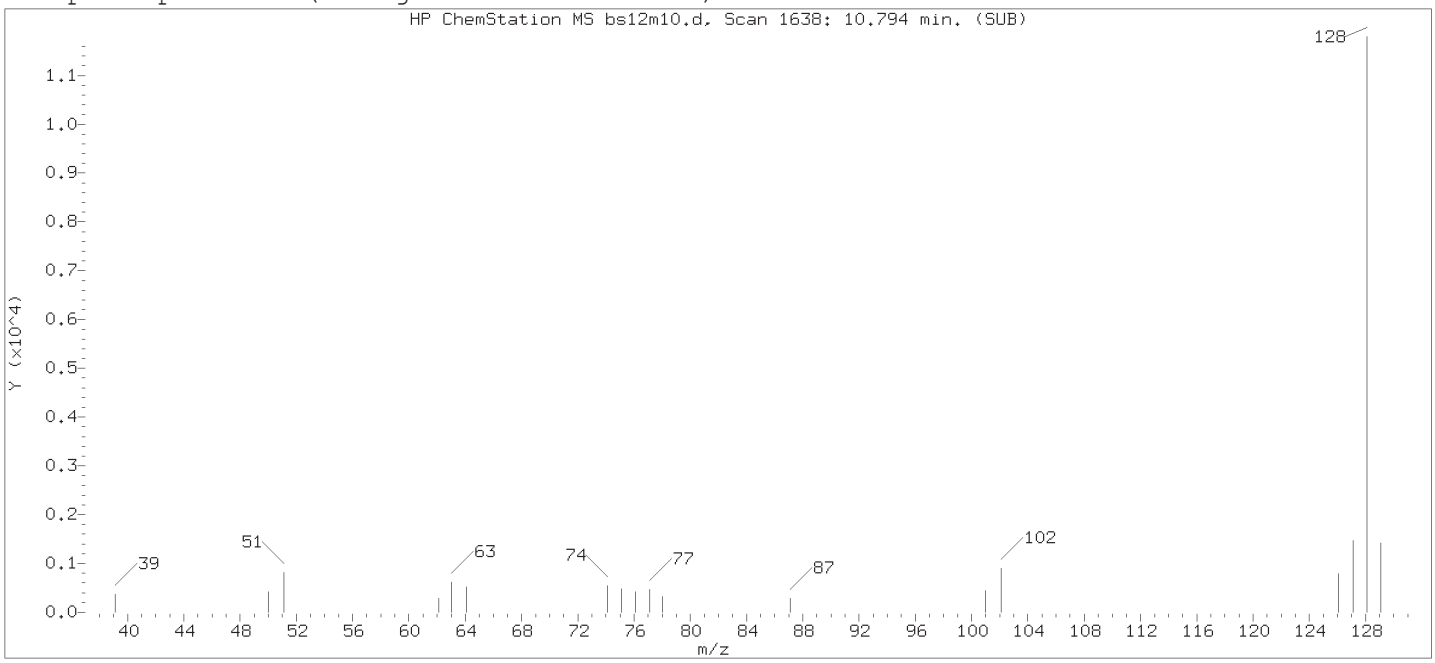
Compound Number : 155
Compound Name : Naphthalene
Scan Number : 1638
Retention Time (minutes): 10.794
Quant Ion : 128.00
Area (flag) : 17711M
On-Column Amount (ng) : 0.6229
Integration start scan : 1631 Integration stop scan: 1656
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

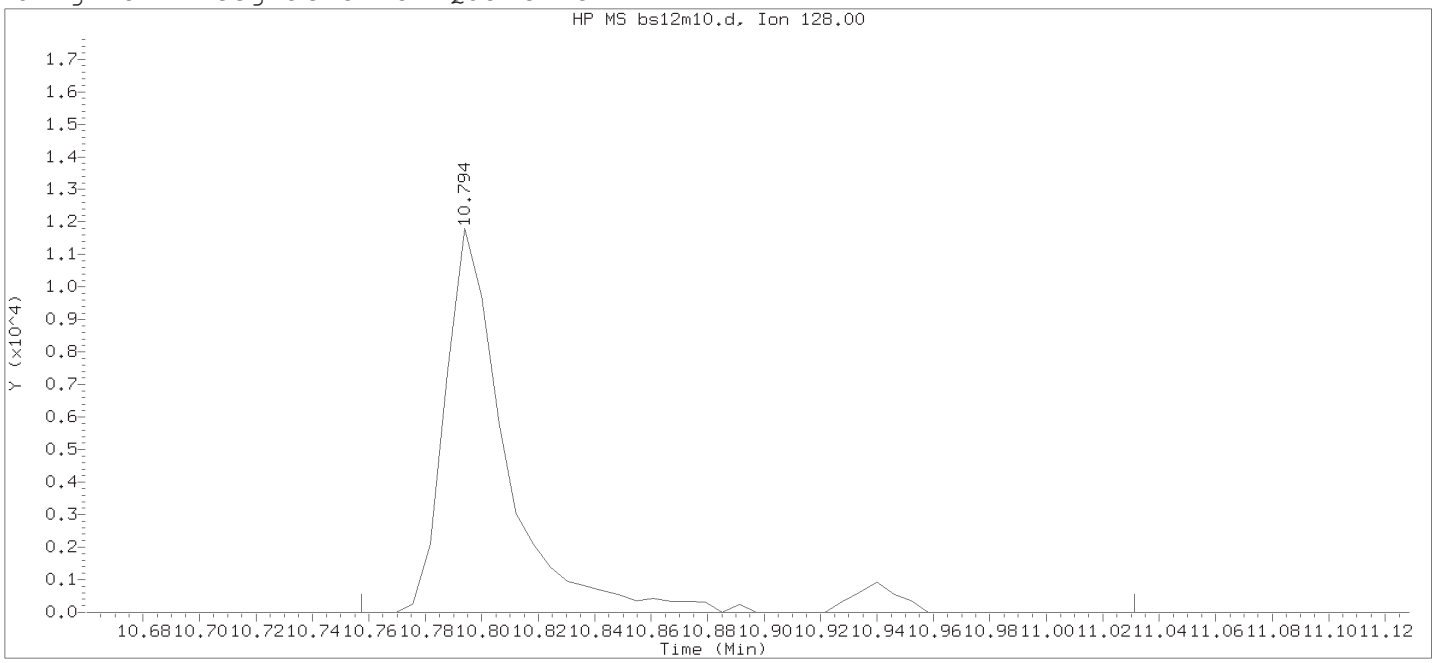
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 11:44.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



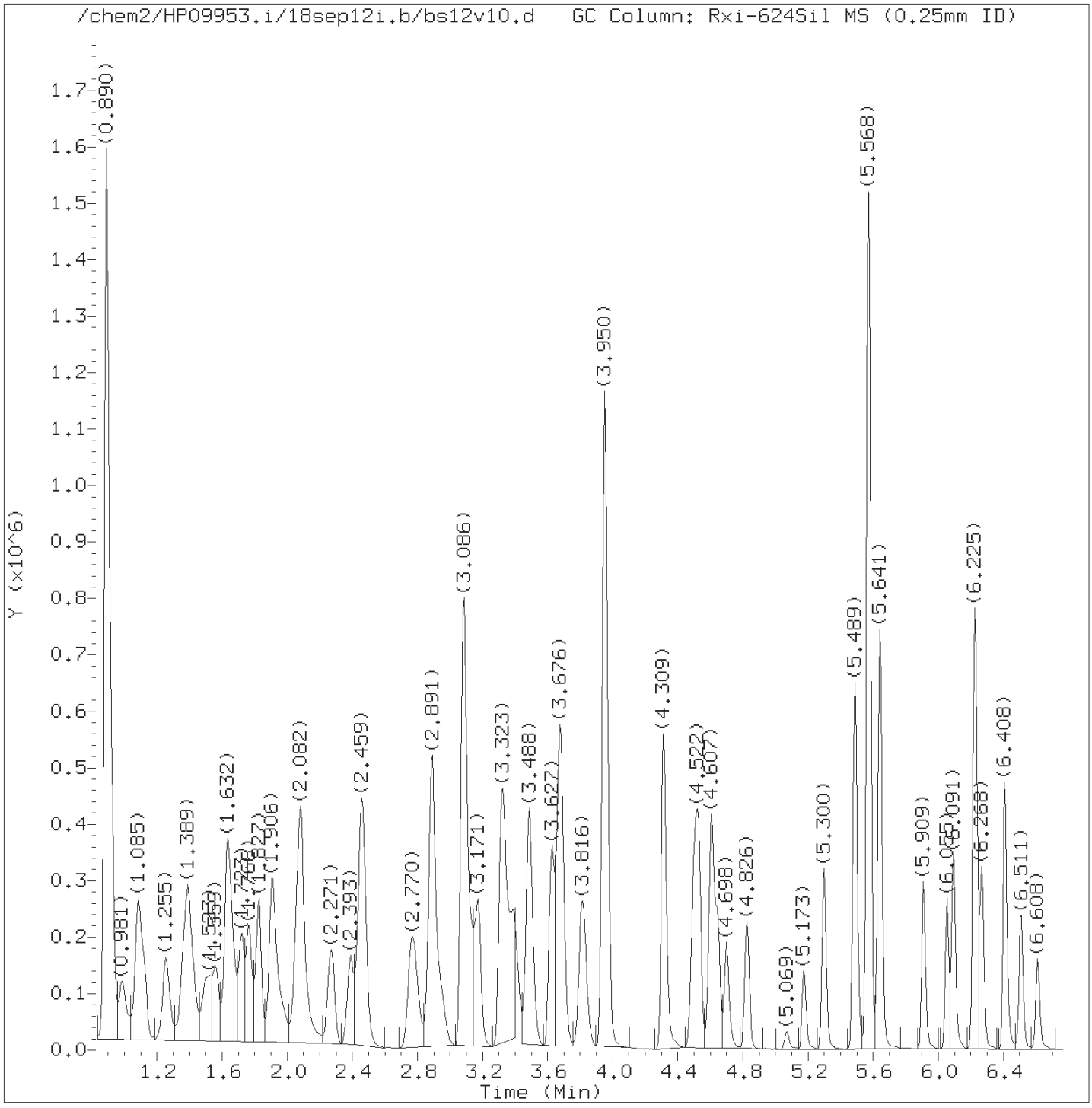
Data File: /chem2/HP09953.i/18sep12i.b/bs12m10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 15:53 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:08 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compound Number : 155
Compound Name : Naphthalene
Scan Number : 1638
Retention Time (minutes): 10.794
Quant Ion : 128.00
Area : 18719
On-column Amount (ng) : 0.6584
Integration start scan : 1631 Integration stop scan: 1676
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:01.
Target 3.5 esignature user ID: jkhowe



Total Ion Chromatogram (TIC)

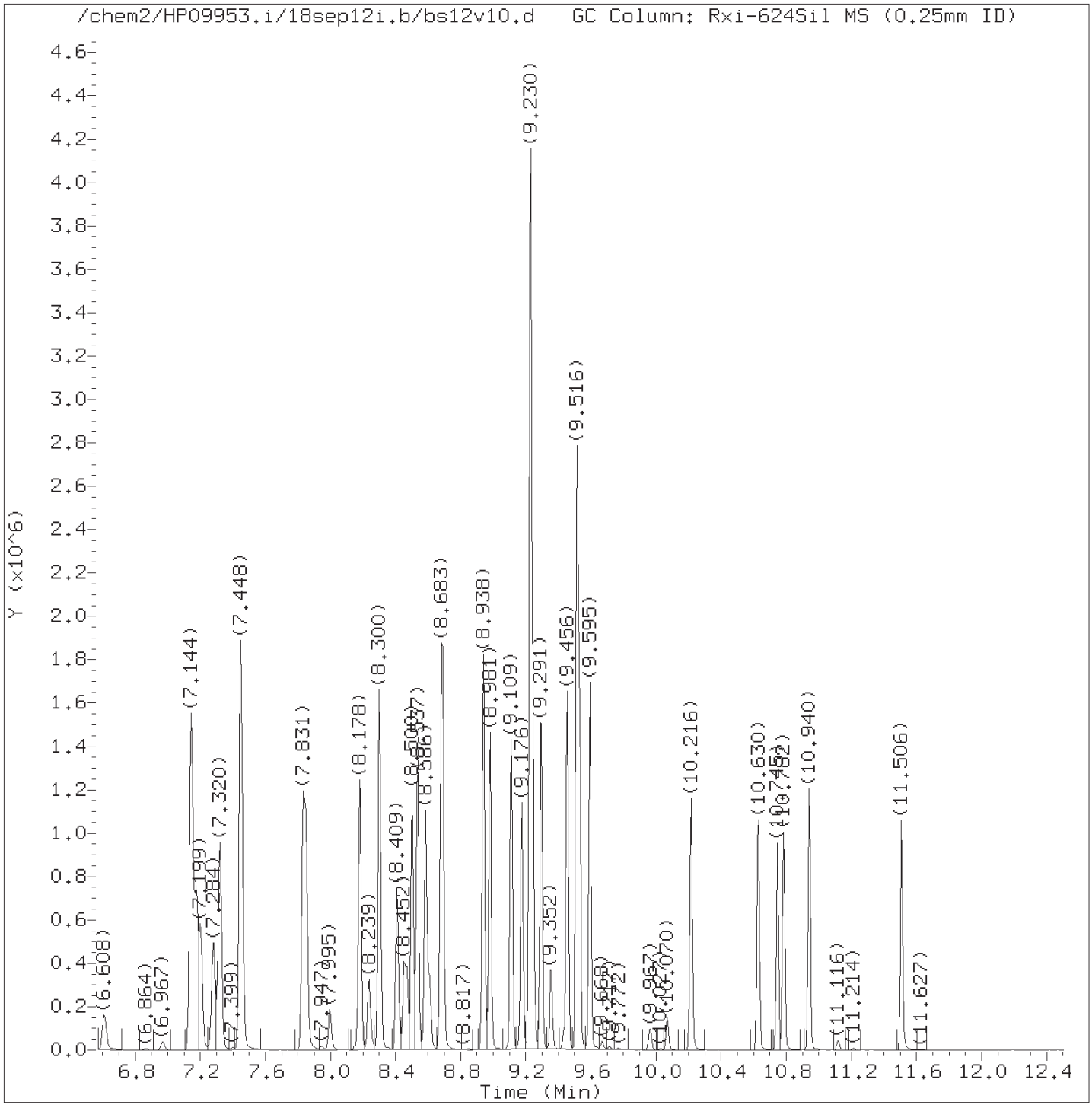
Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12v10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 16:16 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: ICVB01 Lab Sample ID: ICVB01

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12v10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 16:16 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: ICVB01 Lab Sample ID: ICVB01

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12v10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 16:16 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: ICVB01 Lab Sample ID: ICVB01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.987	85	156778	15.127
4) Chloromethane	(2)	1.078	50	202327	18.940
5) Vinyl Chloride	(2)	1.121	62	158219	19.007
9) Bromomethane	(2)	1.249	94	125900	16.994
10) Chloroethane	(2)	1.273	64	84389	18.846
11) Dichlorofluoromethane	(2)	1.370	67	219165	20.239
13) Trichlorofluoromethane	(2)	1.419	101	201214	17.559
15) Ethanol	(1)	1.437	45	49475	954.114
17) Freon 123a	(2)	1.516	67	142595	18.587
18) Acrolein	(1)	1.565	56	128795	134.136
19) 1,1-Dichloroethene	(2)	1.632	96	127162	22.083
20) Acetone	(1)	1.638	58	62023	140.523
22) Freon 113	(2)	1.656	101	110595	19.156
23) 2-Propanol	(1)	1.717	45	52658	137.139
24) Methyl Iodide	(2)	1.723	142	277981	20.076
25) Carbon Disulfide	(2)	1.766	76	460934	20.005
27) Methyl Acetate	(2)	1.827	43	60382	20.449
29) Allyl Chloride	(2)	1.827	41	158957	20.636
31) Methylene Chloride	(2)	1.906	84	145600	21.396
30)*t-Butyl alcohol-d10	(1)	1.924	65	99384	250.000
32) t-Butyl alcohol	(1)	1.973	59	96118M	184.114
33) Acrylonitrile	(2)	2.058	53	163550	81.817
35) trans-1,2-Dichloroethene	(2)	2.082	96	147067	21.962
34) Methyl Tertiary Butyl Ether	(2)	2.094	73	318870	19.468
38) n-Hexane	(2)	2.271	57	139605	18.264
40) 1,1-Dichloroethane	(2)	2.386	63	224348	20.661
41) di-Isopropyl ether	(2)	2.459	45	401168	19.794
42) 2-Chloro-1,3-butadiene	(2)	2.466	53	185640	19.401
43) Ethyl t-butyl ether	(2)	2.770	59	364071	19.075
45) cis-1,2-Dichloroethene	(2)	2.885	96	155258	21.359
47) 2,2-Dichloropropane	(2)	2.891	77	167027	21.100
44) 2-Butanone	(1)	2.891	43	316565	123.896
49) Propionitrile	(1)	2.952	54	100903	147.207
46) 1,2-Dichloroethene (Total)	(2)		96	302325	43.321
51) Methacrylonitrile	(2)	3.080	67	321231	143.810
52) Bromochloromethane	(2)	3.092	128	73942	19.147
53) Tetrahydrofuran	(1)	3.135	71	60613	95.237
54) Chloroform	(2)	3.177	83	231796	21.032

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12v10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 16:16 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: ICVB01 Lab Sample ID: ICVB01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	3.317	113	286803	50.136
57) 1,1,1-Trichloroethane	(2)	3.342	97	224844	19.925
58) Cyclohexane	(2)	3.396	56	192779	18.184
60) 1,1-Dichloropropene	(2)	3.488	75	169015	20.611
61) Carbon Tetrachloride	(2)	3.500	117	175571	20.486
63)$1,2-Dichloroethane-d4	(2)	3.621	102	63995	51.976
62) Isobutyl Alcohol	(1)	3.652	41	81112	442.222
64) Benzene	(2)	3.676	78	528454	20.185
67) 1,2-Dichloroethane	(2)	3.694	62	157467	20.842
68) t-Amyl methyl ether	(2)	3.816	73	338507	19.209
70)*Fluorobenzene	(2)	3.950	96	1147804	50.000
72) n-Heptane	(2)	3.962	43	126001	18.070
75) Trichloroethene	(2)	4.309	95	139958	20.500
73) n-Butanol	(1)	4.315	56	135940	885.088
76) Methylcyclohexane	(2)	4.503	83	196939	18.536
77) 1,2-Dichloropropane	(2)	4.528	63	131206	21.104
81) Dibromomethane	(2)	4.649	93	77276	20.325
80) 1,4-Dioxane	(1)	4.692	88	29562M	464.441
79) Methyl Methacrylate	(2)	4.698	69	73551	18.354
84) Bromodichloromethane	(2)	4.826	83	162965	20.990
85) 2-Nitropropane	(1)	5.069	41	21906	16.665
87) 2-Chloroethyl Vinyl Ether	(2)	5.173	63	64316	19.646
89) cis-1,3-Dichloropropene	(2)	5.300	75	195518	20.855
90) 4-Methyl-2-pentanone	(2)	5.489	43	469964	87.834
91)$Toluene-d8	(3)	5.568	98	1151842	49.592
92) Toluene	(3)	5.641	92	349283	20.275
93) trans-1,3-Dichloropropene	(3)	5.909	75	164063	19.882
94) 1,3-Dichloropropene (total)	(3)		100	359581	40.737
95) Ethyl Methacrylate	(3)	6.055	69	145544	18.170
96) 1,1,2-Trichloroethane	(3)	6.091	97	115062M	20.582
98) Tetrachloroethene	(3)	6.225	166	207661	22.007
99) 1,3-Dichloropropane	(3)	6.268	76	179156	19.903
101) 2-Hexanone	(3)	6.408	43	330800	82.469
103) Dibromochloromethane	(3)	6.511	129	131091	20.354
104) 1,2-Dibromoethane	(3)	6.608	107	116657	20.199
105)*Chlorobenzene-d5	(3)	7.144	117	899903	50.000
107) Chlorobenzene	(3)	7.174	112	406730	20.222
106) 1-Chlorohexane	(3)	7.205	91	169329	19.782

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12v10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 16:16 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: ICVB01 Lab Sample ID: ICVB01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
108) 1,1,1,2-Tetrachloroethane	(3)	7.284	131	138149	20.256
109) Ethylbenzene	(3)	7.320	91	656862	20.274
110) m+p-Xylene	(3)	7.448	106	544292	41.168
111) o-Xylene	(3)	7.831	106	269680	20.403
113) Styrene	(3)	7.849	104	445457	20.443
112) Xylene (Total)	(3)		106	813972	61.571
114) Bromoform	(3)	7.995	173	74162	18.478
115) Isopropylbenzene	(3)	8.178	105	691548	20.757
118) Cyclohexanone	(1)	8.239	55	117831	511.564
119)$4-Bromofluorobenzene	(3)	8.300	95	420158	49.658
121) Bromobenzene	(4)	8.409	156	184156	19.686
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	139536	19.537
123) 1,2,3-Trichloropropane	(4)	8.470	110	42452	20.046
122) trans-1,4-Dichloro-2-butene	(4)	8.500	53	173252	98.856
124) n-Propylbenzene	(4)	8.537	91	766292	20.719
126) 2-Chlorotoluene	(4)	8.586	126	173937	20.042
130) 4-Chlorotoluene	(4)	8.677	126	175100	19.914
129) 1,3,5-Trimethylbenzene	(4)	8.689	105	598664	20.926
133) tert-Butylbenzene	(4)	8.938	134	136578	20.322
134) Pentachloroethane	(4)	8.938	167	64585	16.071
135) 1,2,4-Trimethylbenzene	(4)	8.981	105	601896	20.175
136) sec-Butylbenzene	(4)	9.109	105	754743	20.723
138) 1,3-Dichlorobenzene	(4)	9.176	146	346175	19.718
139) p-Isopropyltoluene	(4)	9.230	119	682445	20.909
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	510576	50.000
141) 1,4-Dichlorobenzene	(4)	9.243	146	360998	19.722
142) 1,2,3-Trimethylbenzene	(4)	9.297	105	643253	20.002
143) Benzyl Chloride	(4)	9.358	126	42347	17.751
144) 1,3-Diethylbenzene	(4)	9.456	119	391531	19.405
145) 1,4-Diethylbenzene	(4)	9.516	119	403575	19.273
147) 1,2-Dichlorobenzene	(4)	9.516	146	350069	20.395
146) n-Butylbenzene	(4)	9.529	92	305420	20.142
148) 1,2-Diethylbenzene	(4)	9.595	119	347453	19.683
149) Diethylbenzene (total)	(4)		100	1142559	58.361
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	23305	18.781
152) 1,3,5-Trichlorobenzene	(4)	10.216	180	260666	19.410
153) 1,2,4-Trichlorobenzene	(4)	10.630	180	245801	19.419
154) Hexachlorobutadiene	(4)	10.745	225	118785	20.569

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18sep12i.b/bs12v10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 16:16 Analyst ID: scn10072

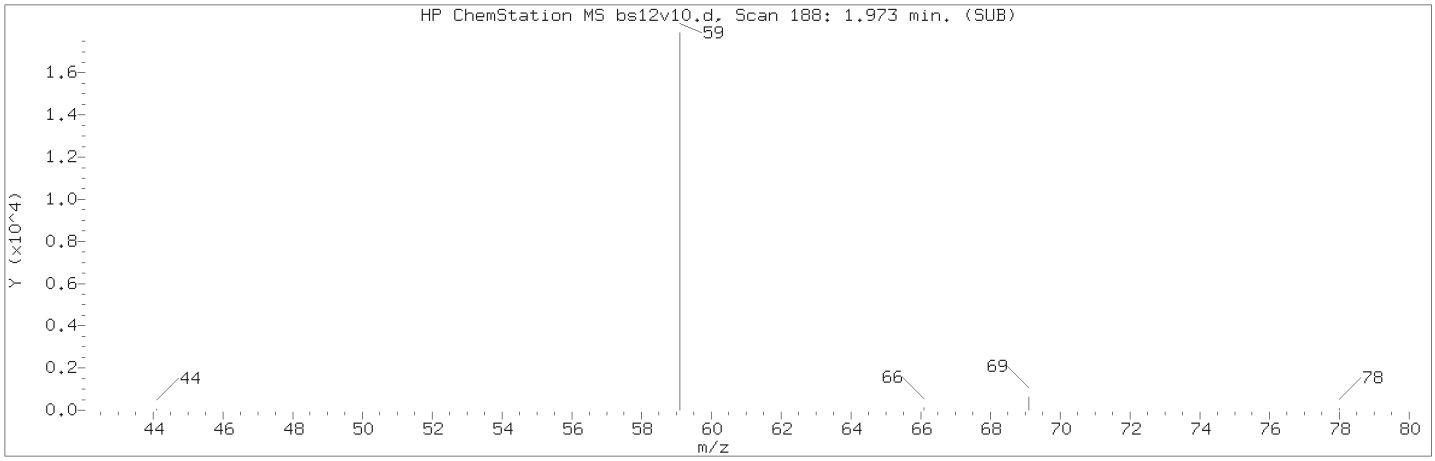
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: ICVB01 Lab Sample ID: ICVB01

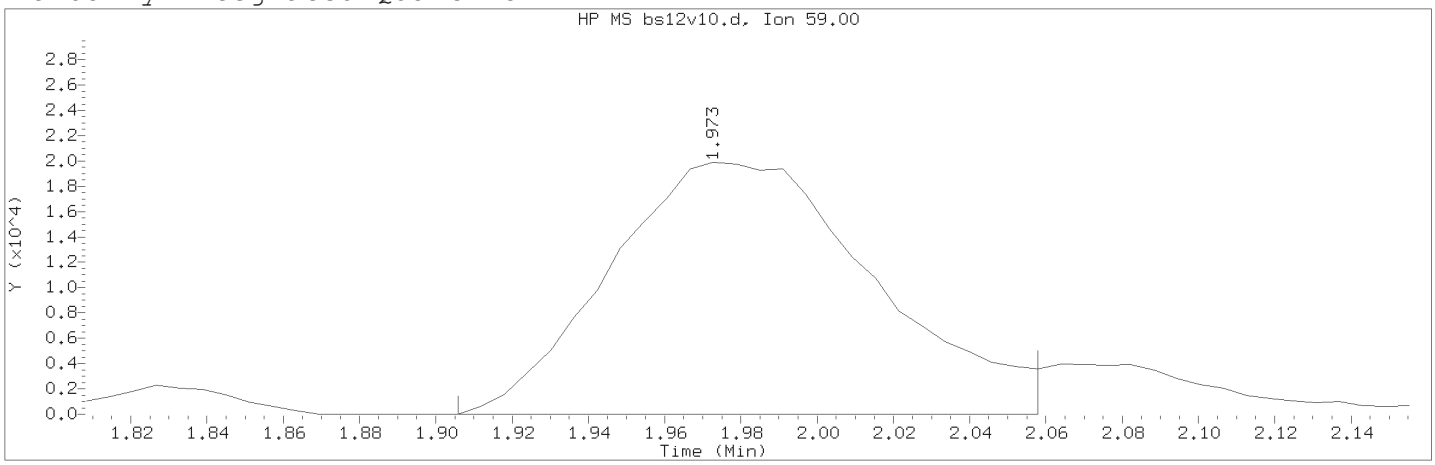
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
155) Naphthalene	(4)	10.782	128	574890	19.120
156) 1,2,3-Trichlorobenzene	(4)	10.940	180	239534	19.845
157) 2-Methylnaphthalene	(4)	11.506	142	361602	17.780

Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12v10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 16:16 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: ICVB01 Lab Sample ID: ICVB01

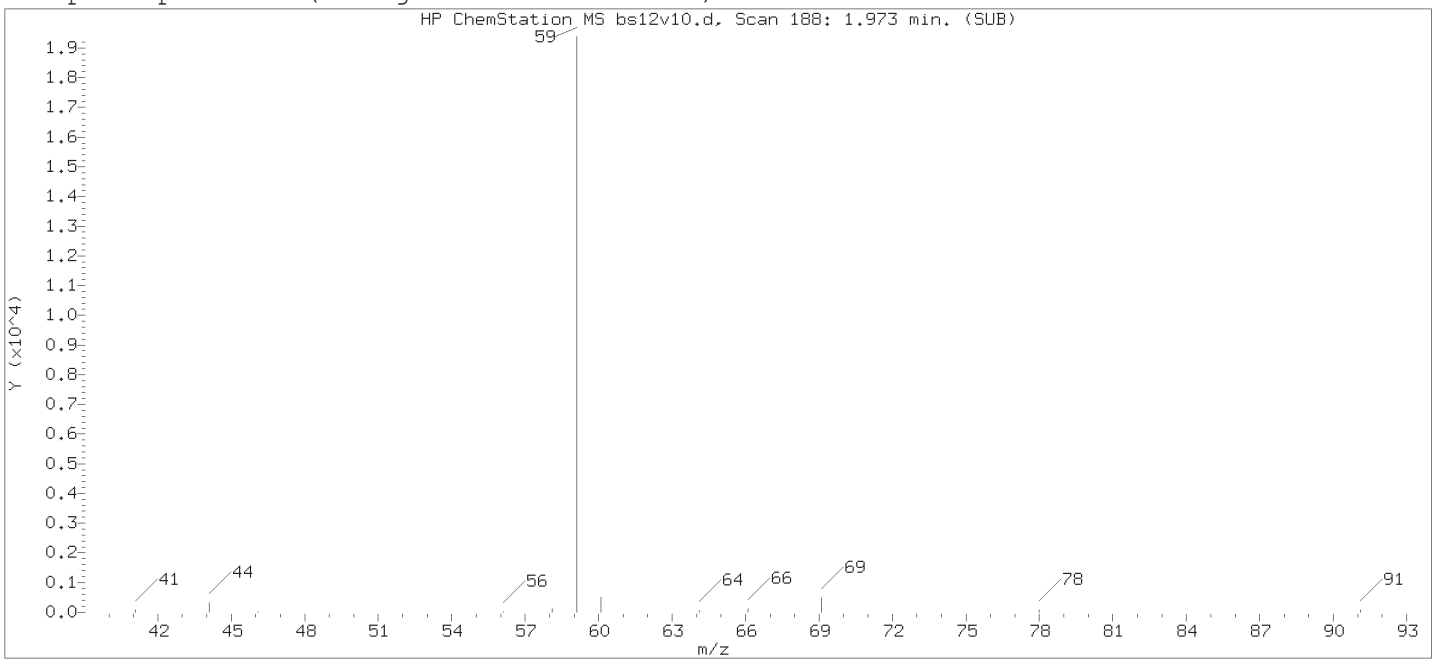
Compound Number : 32
Compound Name : t-Butyl alcohol
Scan Number : 188
Retention Time (minutes): 1.973
Quant Ion : 59.00
Area (flag) : 96118M
On-Column Amount (ng) : 184.1144
Integration start scan : 176 Integration stop scan: 201
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

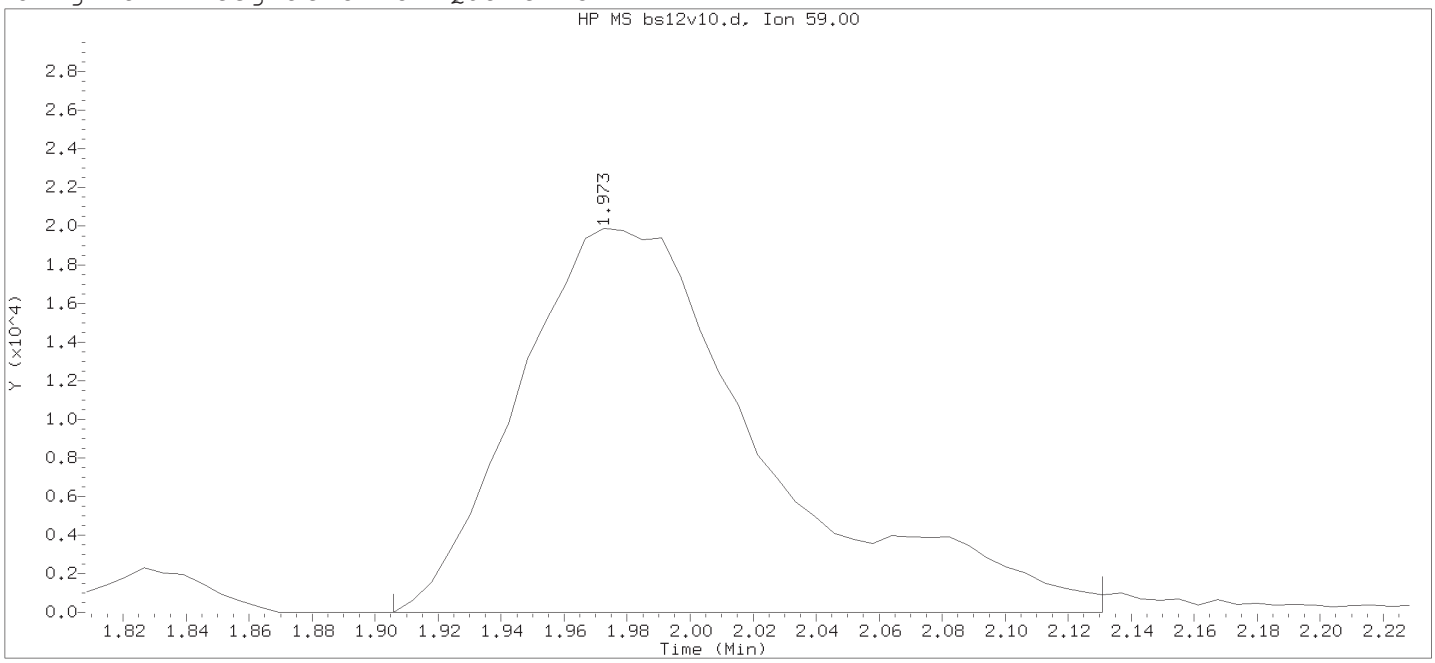
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 12:04.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12v10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 16:16 Analyst ID: scn10072

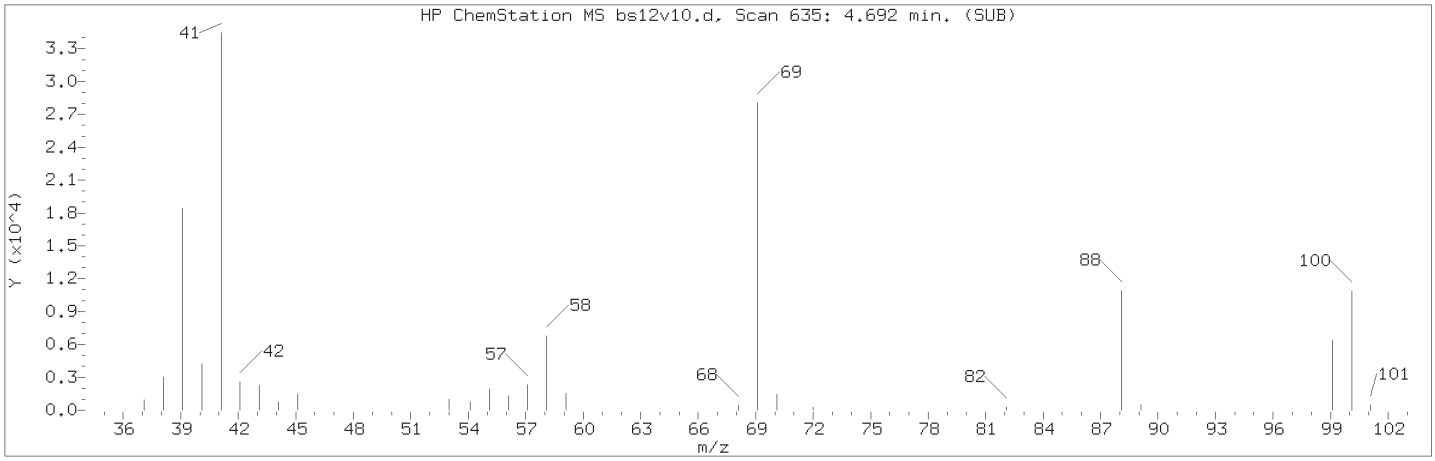
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:31 Automation

Sample Name: ICVB01 Lab Sample ID: ICVB01

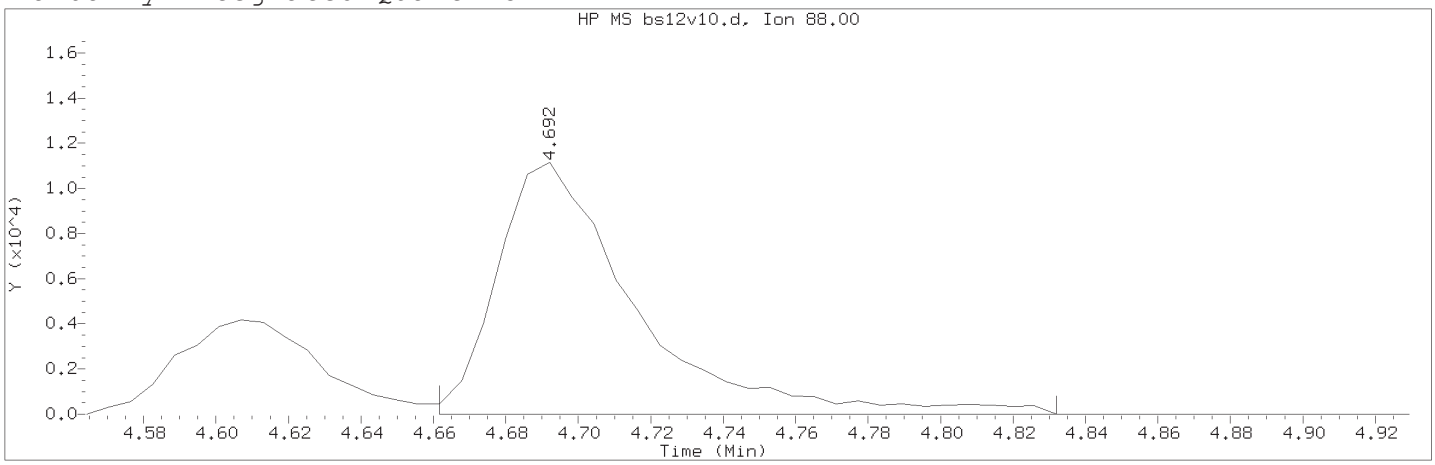
Compound Number : 32
Compound Name : t-Butyl alcohol
Scan Number : 188
Retention Time (minutes): 1.973
Quant Ion : 59.00
Area : 107261
On-column Amount (ng) : 202.7258
Integration start scan : 176 Integration stop scan: 213
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe0572

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12v10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 16:16 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: ICVB01 Lab Sample ID: ICVB01

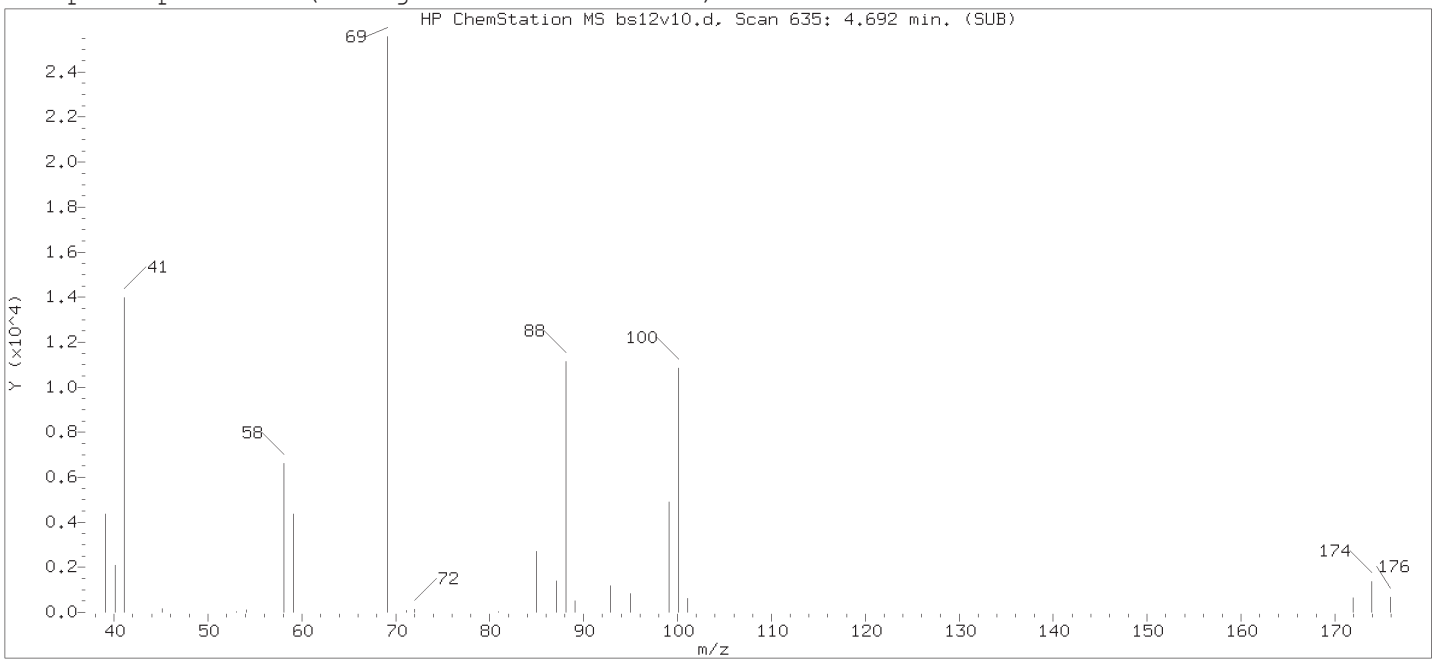
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area (flag) : 29562M
On-Column Amount (ng) : 464.4408
Integration start scan : 629 Integration stop scan: 657
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

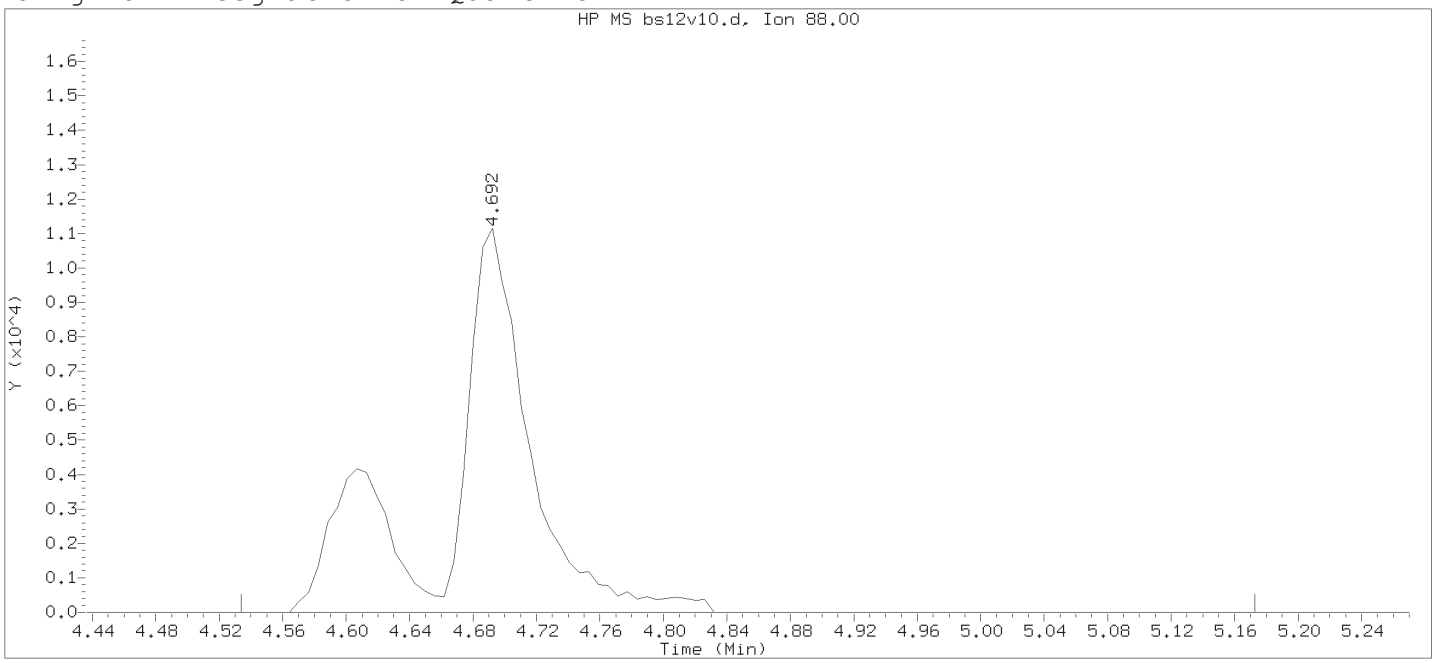
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 12:04.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12v10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 16:16 Analyst ID: scn10072

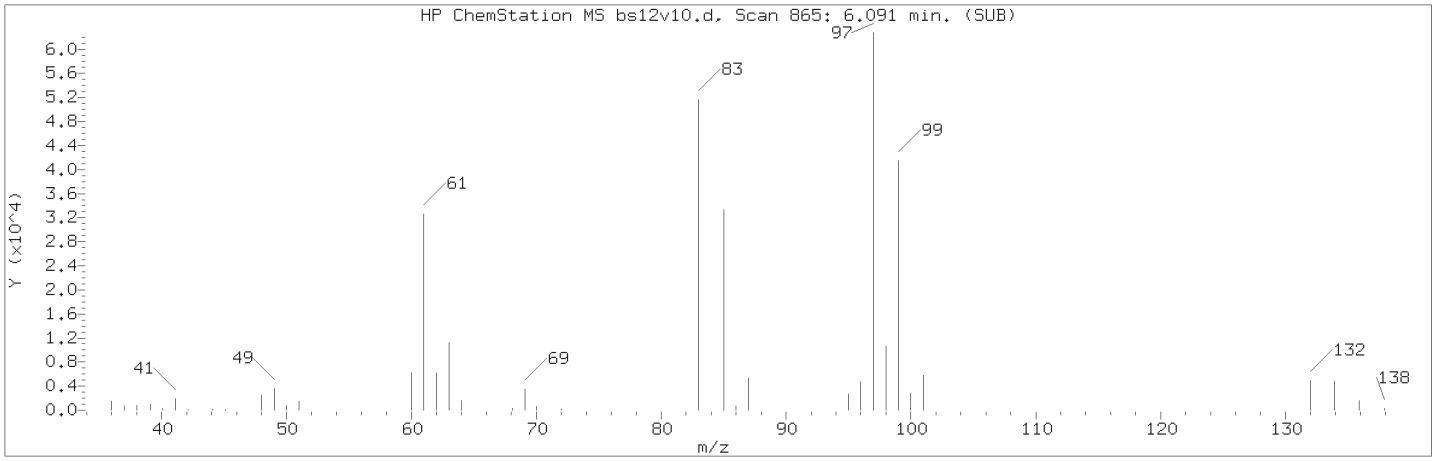
Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:31 Automation

Sample Name: ICVB01 Lab Sample ID: ICVB01

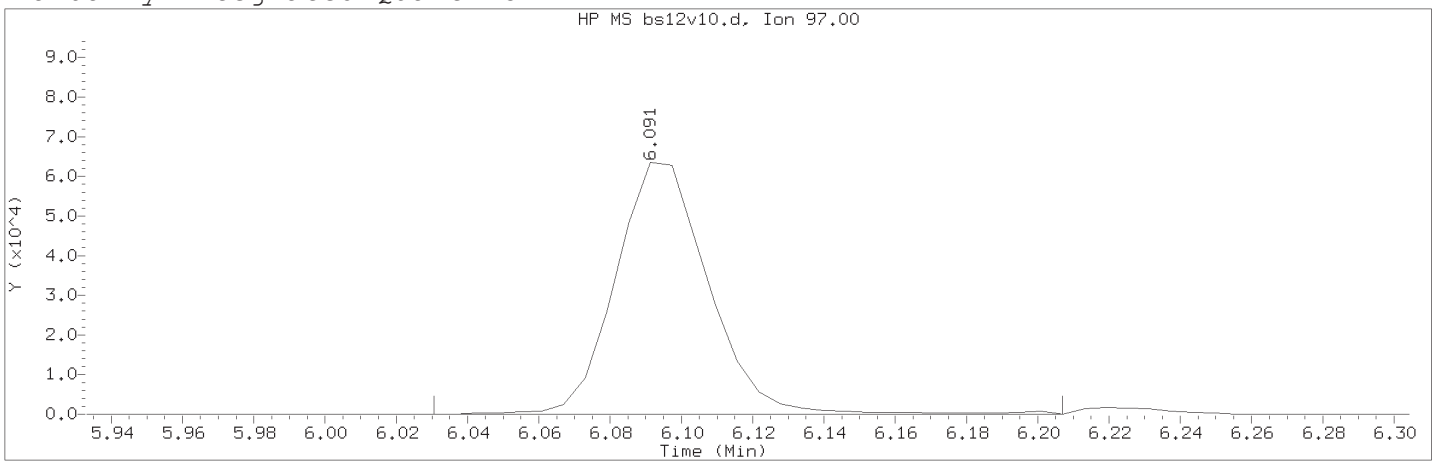
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area : 40957
On-column Amount (ng) : 409.5730
Integration start scan : 608 Integration stop scan: 713
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12v10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 16:16 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 13-SEP-2018 09:57
Date, time and analyst ID of latest file update: 13-Sep-2018 10:00 jkh09052

Sample Name: ICVB01 Lab Sample ID: ICVB01

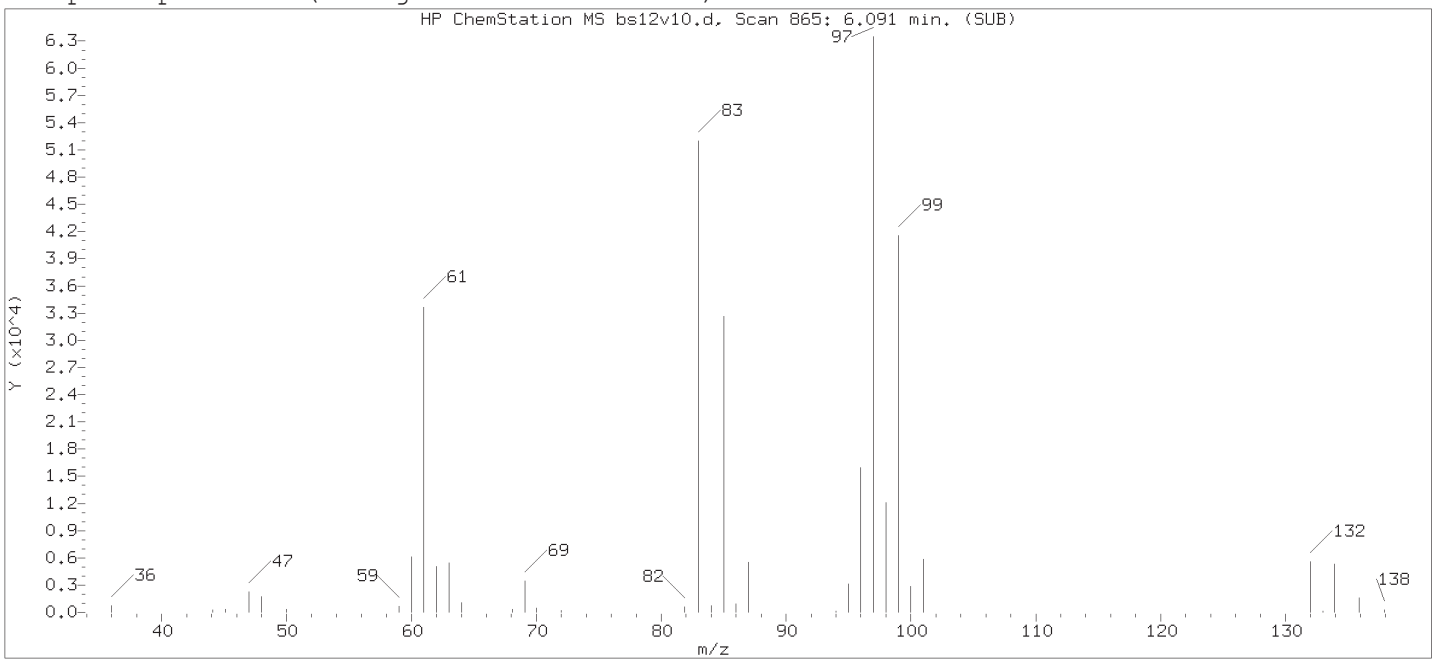
Compound Number : 96
Compound Name : 1,1,2-Trichloroethane
Scan Number : 865
Retention Time (minutes): 6.091
Quant Ion : 97.00
Area (flag) : 115062M
On-Column Amount (ng) : 20.5822
Integration start scan : 854 Integration stop scan: 883
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

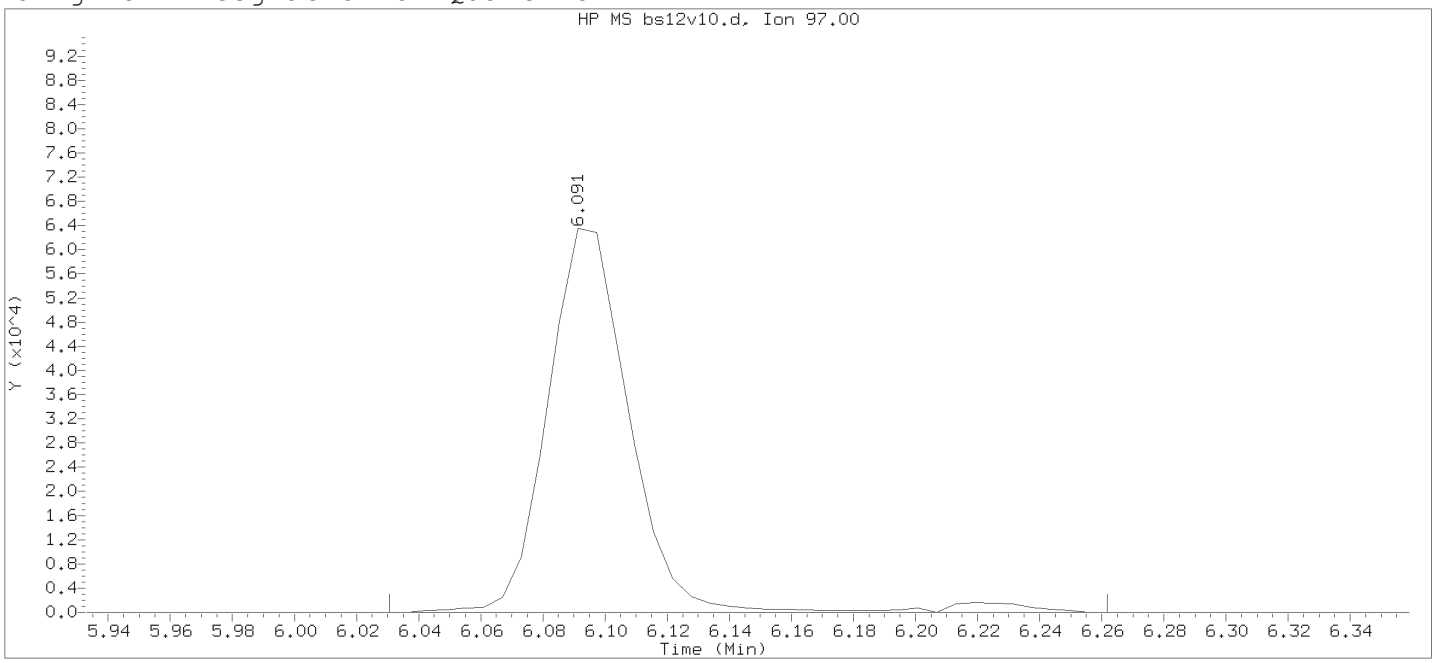
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 09/13/2018 at 12:04.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18sep12i.b/bs12v10.d Instrument ID: HP09953.i
Injection date and time: 12-SEP-2018 16:16 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18sep12i.b/di8260c.m Sublist used: 8260S
Calibration date and time: 12-SEP-2018 15:45
Date, time and analyst ID of latest file update: 12-Sep-2018 16:31 Automation

Sample Name: ICVB01 Lab Sample ID: ICVB01

Compound Number	: 96
Compound Name	: 1,1,2-Trichloroethane
Scan Number	: 865
Retention Time (minutes)	: 6.091
Quant Ion	: 97.00
Area	: 117803
On-column Amount (ng)	: 20.8955
Integration start scan	: 854 Integration stop scan: 892
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/13/2018 at 10:00.
Target 3.5 esignature user ID: jkhowe

Data File: /chem2/HP09953.i/18oct31a.b/bc31t10.d

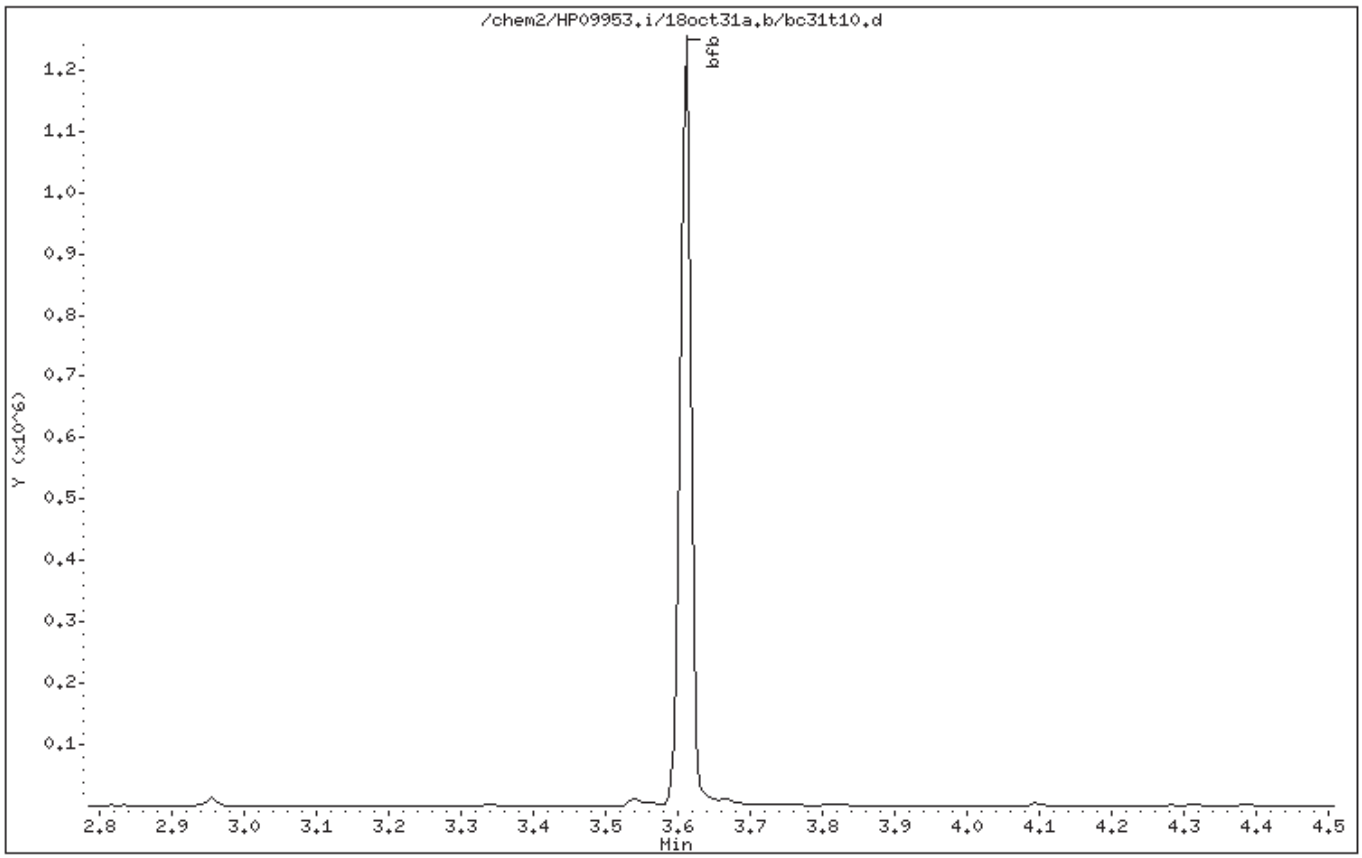
Date : 31-OCT-2018 08:14

Client ID: AUG0718 Instrument: HP09953.i

Sample Info: AUG0718;50NGBFB;2;3;;;;;;

Operator: scn10072

Column phase: DB-624 Column diameter: 0.18



Digitally signed by Stephen C. Nolte on 10/31/2018 at 08:21.
Target 3.5 esignature user ID: scn10072

Data File: /chem2/HP09953.i/18oct31a.b/bc31t10.d

Date : 31-OCT-2018 08:14

Client ID: AUG0718

Instrument: HP09953.i

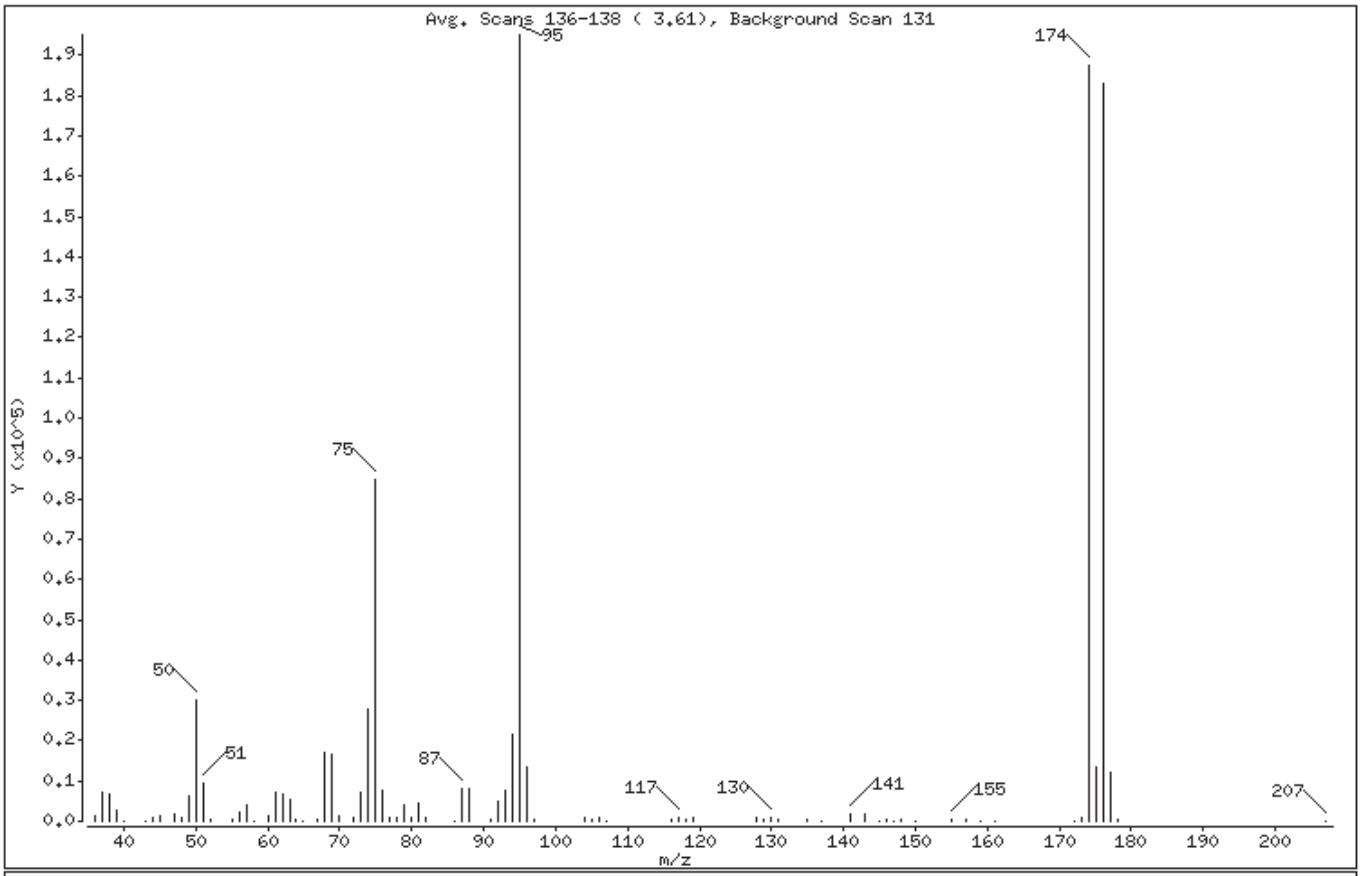
Sample Info: AUG0718;50NGBFB;2;3;;;;;;

Operator: scn10072

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.44
75	30.00 - 60.00% of mass 95	43.52
96	5.00 - 9.00% of mass 95	6.91
173	Less than 2.00% of mass 174	0.41 (0.43)
174	50.00 - 100.00% of mass 95	96.21
175	5.00 - 9.00% of mass 174	7.01 (7.28)
176	95.00 - 101.00% of mass 174	93.87 (97.57)
177	5.00 - 9.00% of mass 176	6.12 (6.52)

Digitally signed by Stephen C. Nolte on 10/31/2018 at 08:21.
Target 3.5 esignature user ID: scn10072

Date : 31-OCT-2018 08:14

Client ID: AUG0718 Instrument: HP09953.i

Sample Info: AUG0718;50NGBFB;2;3;;;;;;

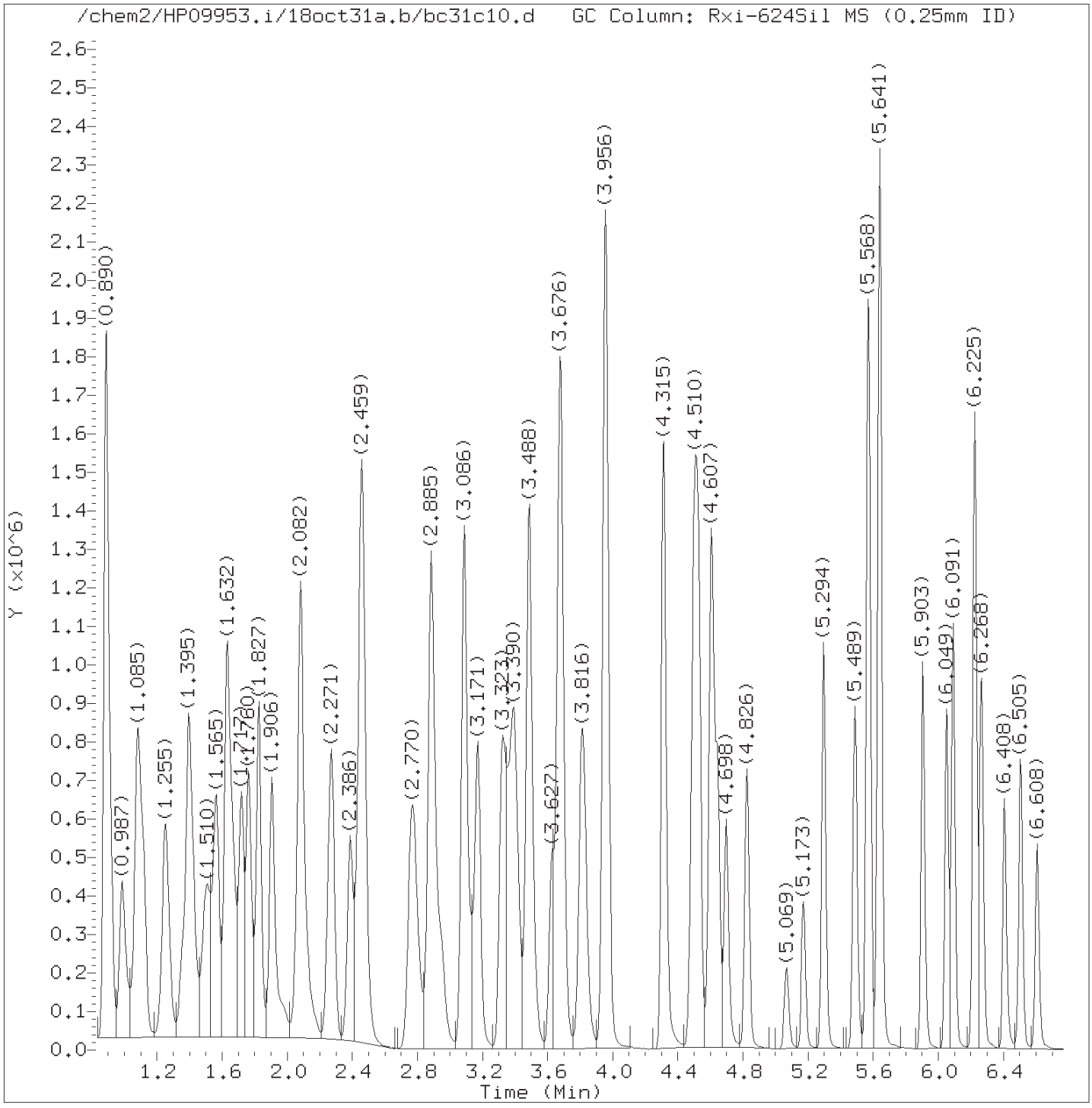
Operator: scn10072

Column phase: DB-624 Column diameter: 0.18

Data File: bc31t10.d
Spectrum: Avg. Scans 136-138 (3.61), Background Scan 131
Location of Maximum: 95.00
Number of points: 82

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1341	63.00	5547	91.00	609	141.00	1650
37.00	7247	64.00	446	92.00	4756	143.00	1590
38.00	6617	65.00	86	93.00	7534	145.00	106
39.00	2574	67.00	415	94.00	21312	146.00	271
40.00	145	68.00	16824	95.00	195072	147.00	87
43.00	103	69.00	16816	96.00	13489	148.00	459
44.00	915	70.00	1430	97.00	376	150.00	89
45.00	1345	72.00	868	104.00	849	155.00	529
47.00	1834	73.00	7006	105.00	266	157.00	438
48.00	828	74.00	28016	106.00	760	159.00	92
49.00	6441	75.00	84904	107.00	93	161.00	222
50.00	30128	76.00	7699	116.00	607	172.00	179
51.00	9602	77.00	968	117.00	1111	173.00	800
52.00	355	78.00	761	118.00	614	174.00	187648
55.00	530	79.00	3921	119.00	871	175.00	13667
56.00	2293	80.00	1106	128.00	685	176.00	183104
57.00	3840	81.00	4401	129.00	249	177.00	11943
58.00	205	82.00	955	130.00	730	178.00	267
60.00	1367	86.00	97	131.00	238	207.00	21
61.00	7107	87.00	8073	135.00	359		
62.00	6874	88.00	7893	137.00	212		

Digitally signed by Stephen C. Nolte on 10/31/2018 at 08:21.
Target 3.5 esignature user ID: scn10072



Total Ion Chromatogram (TIC)

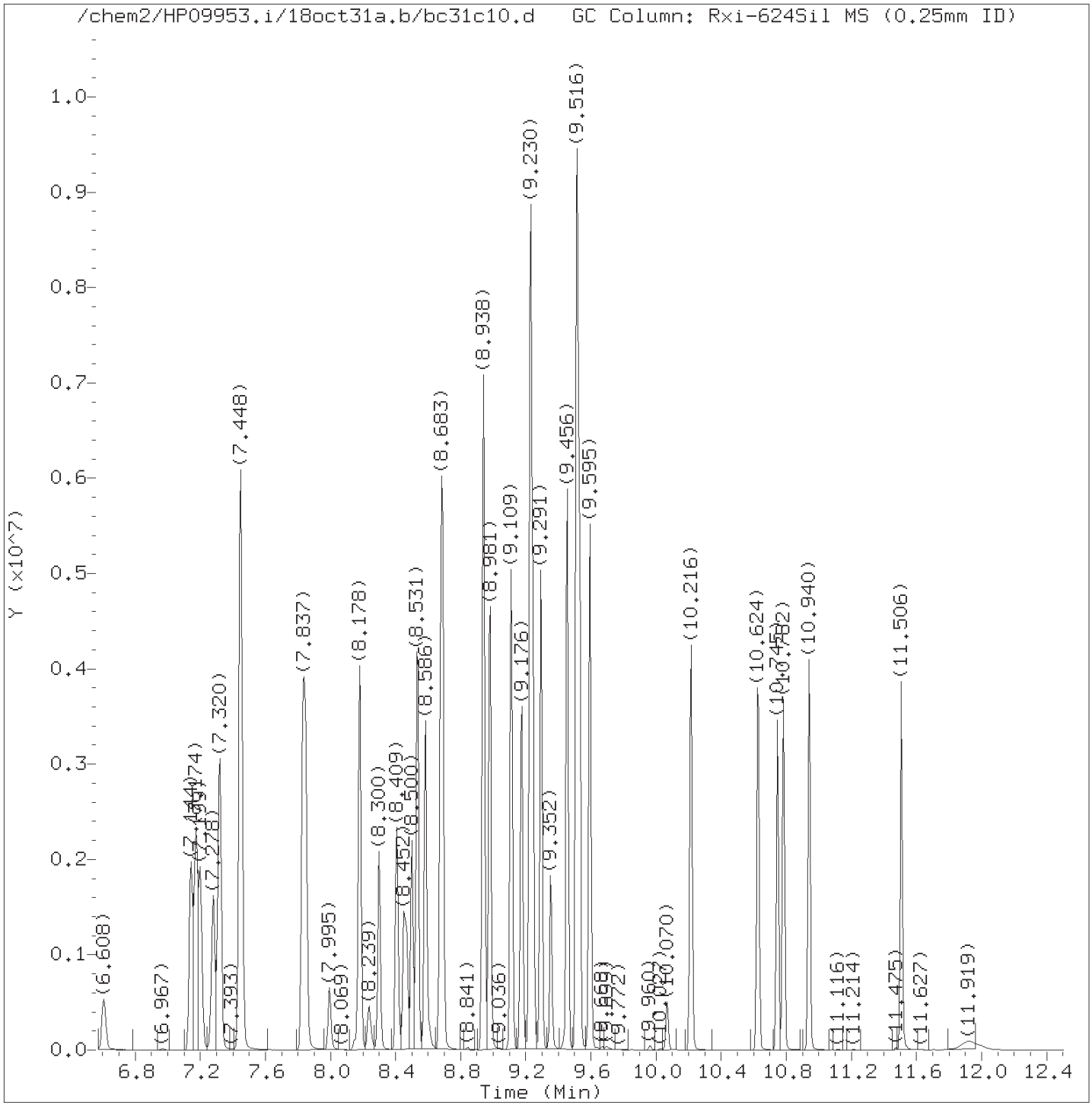
Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:21
Date, time and analyst ID of latest file update: 31-Oct-2018 09:24 scn10072

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Stephen C. Nolte
on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: scn10072



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:21
Date, time and analyst ID of latest file update: 31-Oct-2018 09:24 scn10072

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Stephen C. Nolte
on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: scn10072

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:21
Date, time and analyst ID of latest file update: 31-Oct-2018 09:24 scn10072

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.987	85	703544	53.566
4) Chloromethane	(2)	1.072	50	677598	50.052
5) Vinyl Chloride	(2)	1.121	62	531263	50.362
9) Bromomethane	(2)	1.249	94	495210M	52.745
10) Chloroethane	(2)	1.267	64	299765	52.826
13) Trichlorofluoromethane	(2)	1.413	101	787838	54.251
15) Ethanol	(1)	1.450	45	150446	2280.377
17) Freon 123a	(2)	1.510	67	444642	45.735
18) Acrolein	(1)	1.565	56	637487	521.830
19) 1,1-Dichloroethene	(2)	1.626	96	370220	50.732
20) Acetone	(1)	1.644	58	60605	105.859
22) Freon 113	(2)	1.656	101	416958	56.989
24) Methyl Iodide	(2)	1.717	142	869119	49.531
23) 2-Propanol	(1)	1.723	45	137925	282.326
25) Carbon Disulfide	(2)	1.766	76	1380873	47.291
29) Allyl Chloride	(2)	1.827	41	536315	54.942
27) Methyl Acetate	(2)	1.833	43	199389	53.283
31) Methylene Chloride	(2)	1.906	84	402598	46.684
30)*t-Butyl alcohol-d10	(1)	1.930	65	126446	250.000
32) t-Butyl alcohol	(1)	1.979	59	168710	254.001
33) Acrylonitrile	(2)	2.058	53	112384	44.364
35) trans-1,2-Dichloroethene	(2)	2.082	96	420774	49.582
34) Methyl Tertiary Butyl Ether	(2)	2.094	73	981520	47.285
38) n-Hexane	(2)	2.271	57	587974	60.699
40) 1,1-Dichloroethane	(2)	2.386	63	714289	51.908
41) di-Isopropyl ether	(2)	2.453	45	1271058	49.489
42) 2-Chloro-1,3-butadiene	(2)	2.459	53	621452	51.249
43) Ethyl t-butyl ether	(2)	2.770	59	1137584	47.032
45) cis-1,2-Dichloroethene	(2)	2.885	96	480179	52.127
47) 2,2-Dichloropropane	(2)	2.897	77	555041	55.328
44) 2-Butanone	(1)	2.897	43	306446	94.267
49) Propionitrile	(1)	2.952	54	241241	276.622
46) 1,2-Dichloroethene (Total)	(2)		96	900953	101.710
51) Methacrylonitrile	(2)	3.086	67	361880	127.839
52) Bromochloromethane	(2)	3.092	128	254460	51.995
53) Tetrahydrofuran	(1)	3.135	71	83516	103.138
54) Chloroform	(2)	3.171	83	713260	51.068
56)$Dibromofluoromethane	(2)	3.317	113	361442	49.858

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Stephen C. Nolte
on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: scn10072

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:21
Date, time and analyst ID of latest file update: 31-Oct-2018 09:24 scn10072

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	3.317	111	371900	50.605
57) 1,1,1-Trichloroethane	(2)	3.342	97	635261	44.422
58) Cyclohexane	(2)	3.396	56	715469	53.255
58) Cyclohexane	(2)	3.396	84	743237	59.197
58) Cyclohexane	(2)	3.396	69	223299	52.555
60) 1,1-Dichloropropene	(2)	3.481	75	554520	53.360
61) Carbon Tetrachloride	(2)	3.494	117	548147	50.469
63)$1,2-Dichloroethane-d4	(2)	3.621	102	80409M	51.533
63)$1,2-Dichloroethane-d4	(2)	3.621	65	342556	49.922
63)$1,2-Dichloroethane-d4	(2)	3.621	104	51063	51.081
62) Isobutyl Alcohol	(1)	3.652	41	161451	691.842
64) Benzene	(2)	3.676	78	1672550	50.413
67) 1,2-Dichloroethane	(2)	3.694	62	474573	49.566
67) 1,2-Dichloroethane	(2)	3.694	98	48210	50.687
68) t-Amyl methyl ether	(2)	3.816	73	1031716	46.199
70)*Fluorobenzene	(2)	3.950	96	1454583	50.000
72) n-Heptane	(2)	3.962	43	607385	68.737
75) Trichloroethene	(2)	4.309	95	447051	51.670
73) n-Butanol	(1)	4.315	56	266379	1363.172
76) Methylcyclohexane	(2)	4.504	83	796584	59.163
77) 1,2-Dichloropropane	(2)	4.528	63	407772	51.755
81) Dibromomethane	(2)	4.643	93	245776	51.009
80) 1,4-Dioxane	(1)	4.692	88	56384M	696.251
79) Methyl Methacrylate	(2)	4.698	69	248259	48.885
84) Bromodichloromethane	(2)	4.826	83	503237	51.146
85) 2-Nitropropane	(1)	5.069	41	132093	78.981
87) 2-Chloroethyl Vinyl Ether	(2)	5.173	63	179070	43.164
89) cis-1,3-Dichloropropene	(2)	5.294	75	624072	52.527
90) 4-Methyl-2-pentanone	(2)	5.489	43	651700	96.349
91)$Toluene-d8	(3)	5.568	98	1454505	50.292
91)$Toluene-d8	(3)	5.568	100	945067	50.356
92) Toluene	(3)	5.641	92	1087906	50.716
93) trans-1,3-Dichloropropene	(3)	5.903	75	533191	51.892
94) 1,3-Dichloropropene (total)	(3)		100	1157263	104.419
95) Ethyl Methacrylate	(3)	6.049	69	481134	48.238
96) 1,1,2-Trichloroethane	(3)	6.091	97	360910	51.847
98) Tetrachloroethene	(3)	6.225	166	521091	44.350
99) 1,3-Dichloropropane	(3)	6.268	76	575376	51.334

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Stephen C. Nolte
on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: scn10072

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:21
Date, time and analyst ID of latest file update: 31-Oct-2018 09:24 scn10072

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 2-Hexanone	(3)	6.408	43	449838	90.297
103) Dibromochloromethane	(3)	6.505	129	421770	52.590
104) 1,2-Dibromoethane	(3)	6.608	107	371170	51.612
105)*Chlorobenzene-d5	(3)	7.144	117	1120551	50.000
107) Chlorobenzene	(3)	7.174	112	1274574	50.892
106) 1-Chlorohexane	(3)	7.199	91	573648	53.821
108) 1,1,1,2-Tetrachloroethane	(3)	7.284	131	444199	52.305
109) Ethylbenzene	(3)	7.320	91	2090439	51.815
110) m+p-Xylene	(3)	7.448	106	1720248	104.492
111) o-Xylene	(3)	7.831	106	844600	51.318
113) Styrene	(3)	7.849	104	1375203	50.685
112) Xylene (Total)	(3)		106	2564848	155.809
114) Bromoform	(3)	7.995	173	256634	51.352
115) Isopropylbenzene	(3)	8.178	105	2203032	53.104
118) Cyclohexanone	(1)	8.233	55	161816	552.171
119)$4-Bromofluorobenzene	(3)	8.300	95	512093	48.606
119)$4-Bromofluorobenzene	(3)	8.300	174	488871	50.412
121) Bromobenzene	(4)	8.409	156	593552	49.360
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	494676	53.880
123) 1,2,3-Trichloropropane	(4)	8.470	110	143445M	52.695
122) trans-1,4-Dichloro-2-butene	(4)	8.500	53	299883M	133.114
124) n-Propylbenzene	(4)	8.531	91	2534797	53.316
126) 2-Chlorotoluene	(4)	8.586	126	556025	49.842
130) 4-Chlorotoluene	(4)	8.677	126	571618	50.575
129) 1,3,5-Trimethylbenzene	(4)	8.689	105	1912182	51.996
133) tert-Butylbenzene	(4)	8.938	134	472731	54.720
134) Pentachloroethane	(4)	8.938	167	360770	69.837
135) 1,2,4-Trimethylbenzene	(4)	8.981	105	1969865	51.366
136) sec-Butylbenzene	(4)	9.109	105	2493891	53.268
138) 1,3-Dichlorobenzene	(4)	9.176	146	1151457	51.021
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	656321	50.000
139) p-Isopropyltoluene	(4)	9.230	119	2257334	53.804
141) 1,4-Dichlorobenzene	(4)	9.243	146	1177965	50.064
142) 1,2,3-Trimethylbenzene	(4)	9.291	105	2036341	49.259
143) Benzyl Chloride	(4)	9.352	126	197506	64.407
144) 1,3-Diethylbenzene	(4)	9.456	119	1356321	52.294
145) 1,4-Diethylbenzene	(4)	9.516	119	1469002	54.574
147) 1,2-Dichlorobenzene	(4)	9.516	146	1144715	51.881

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Stephen C. Nolte
on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: scn10072

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

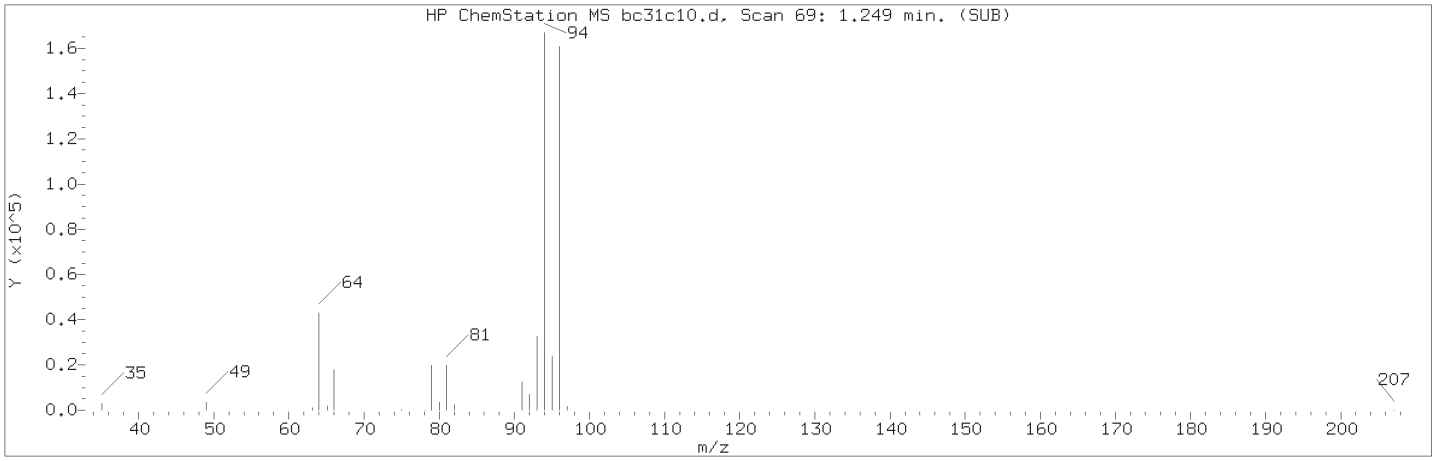
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:21
Date, time and analyst ID of latest file update: 31-Oct-2018 09:24 scn10072

Sample Name: VSTD050 Lab Sample ID: VSTD050

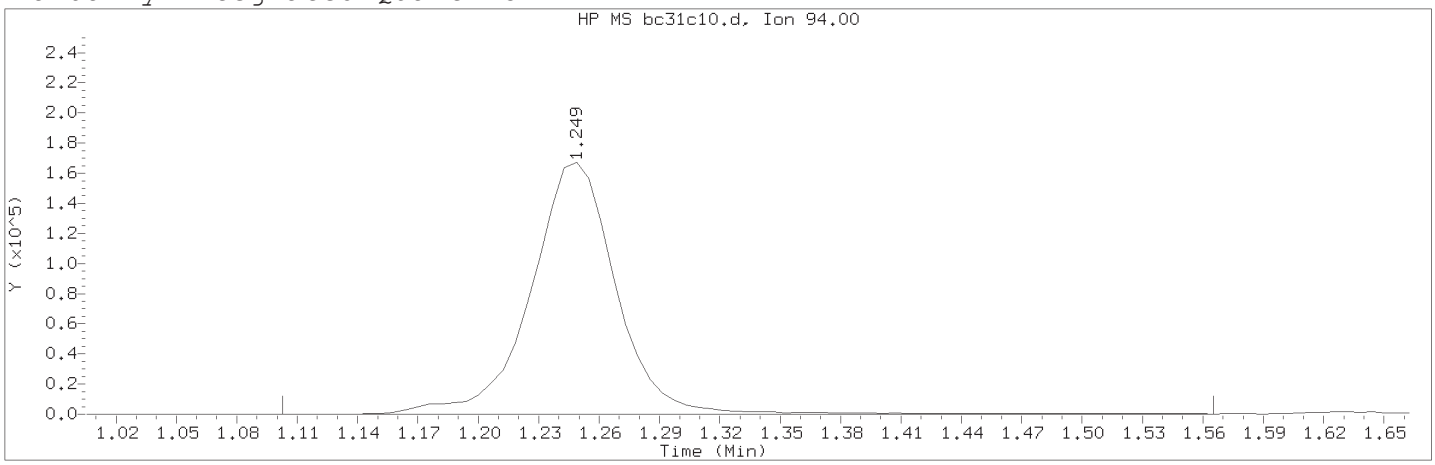
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146)	n-Butylbenzene	(4)	9.529	92	1077710	55.289
148)	1,2-Diethylbenzene	(4)	9.595	119	1136630	50.092
149)	Diethylbenzene (total)	(4)		100	3961953	156.960
151)	1,2-Dibromo-3-chloropropane	(4)	10.070	75	79980	50.140
152)	1,3,5-Trichlorobenzene	(4)	10.216	180	942668	54.605
153)	1,2,4-Trichlorobenzene	(4)	10.630	180	867662	53.327
154)	Hexachlorobutadiene	(4)	10.745	225	429639	57.875
155)	Naphthalene	(4)	10.782	128	1919237	49.656
156)	1,2,3-Trichlorobenzene	(4)	10.940	180	828677	53.408
157)	2-Methylnaphthalene	(4)	11.506	142	1200951	45.938

Digitally signed by Stephen C. Nolte
on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: scn10072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:21
Date, time and analyst ID of latest file update: 31-Oct-2018 09:24 scn10072

Sample Name: VSTD050 Lab Sample ID: VSTD050

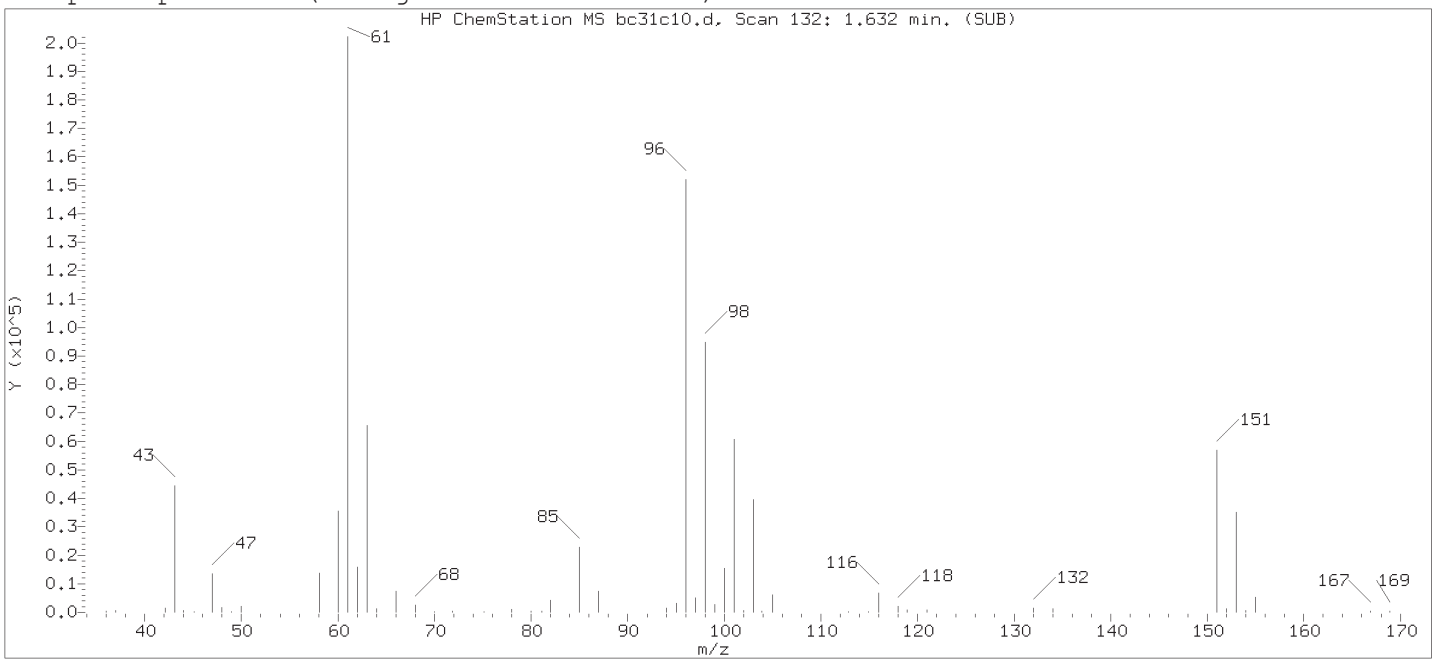
Compound Number : 9
Compound Name : Bromomethane
Scan Number : 69
Retention Time (minutes): 1.249
Quant Ion : 94.00
Area (flag) : 495210M
On-Column Amount (ng) : 52.7451
Integration start scan : 44 Integration stop scan: 120
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

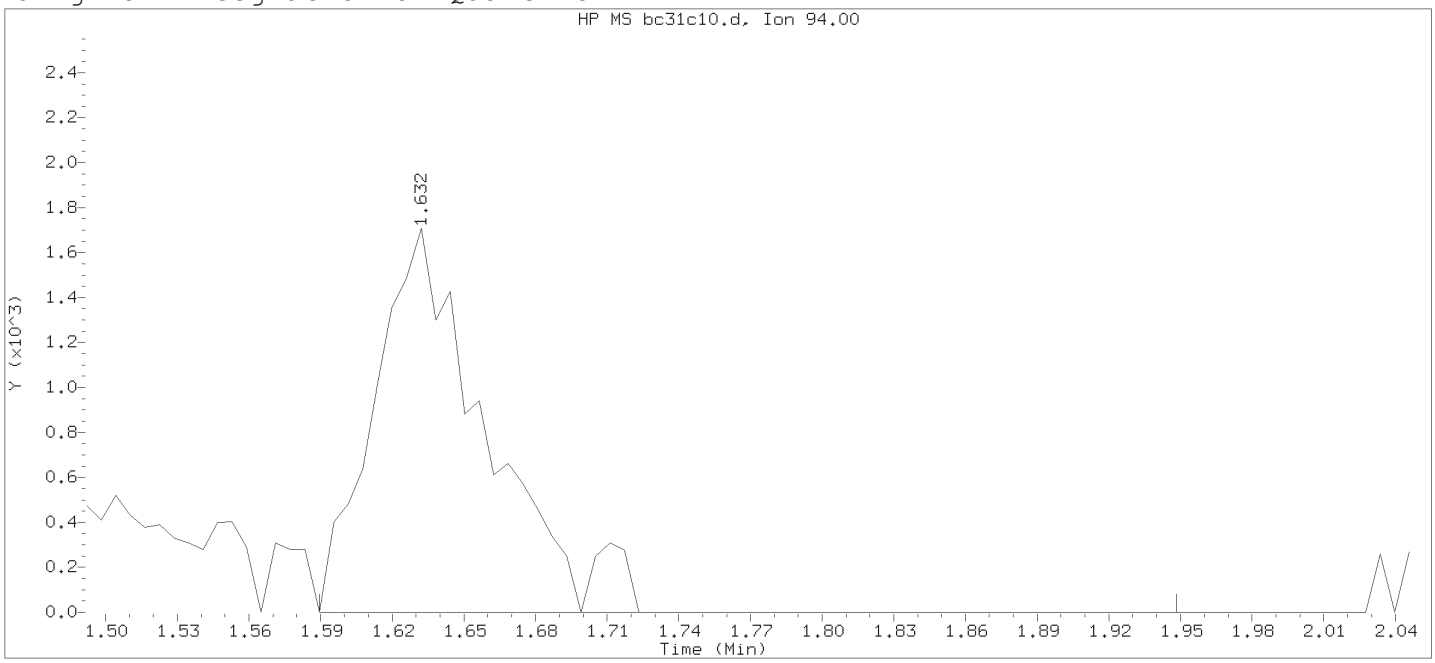
Analyst responsible for change: Digitally signed by Stephen C. Nolte
on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: scn10072

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/02/2018 at 10:08.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

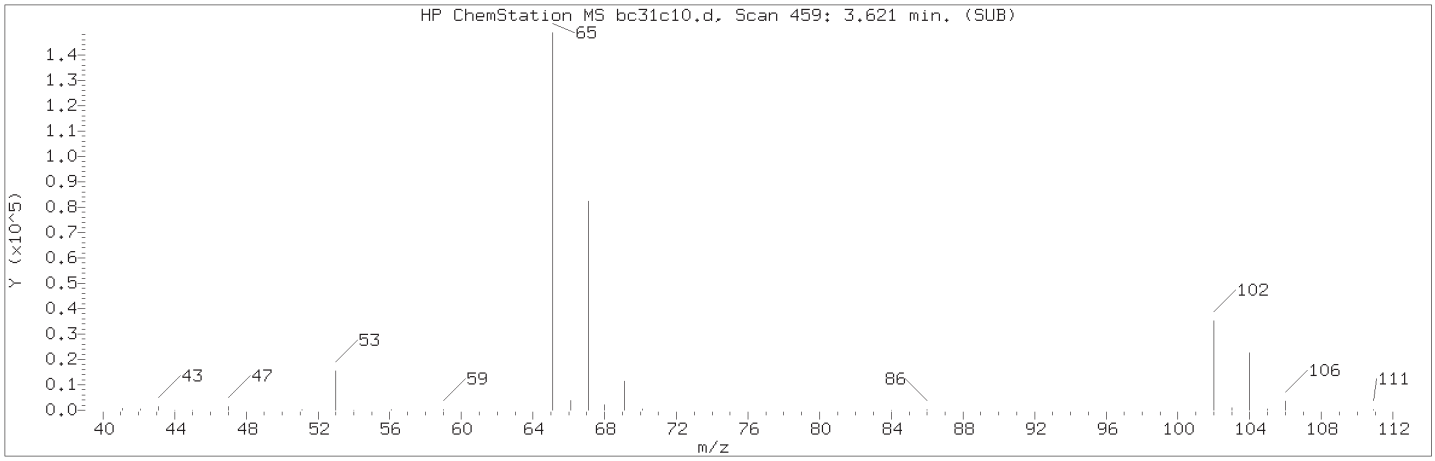
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:18
Date, time and analyst ID of latest file update: 31-Oct-2018 09:18 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

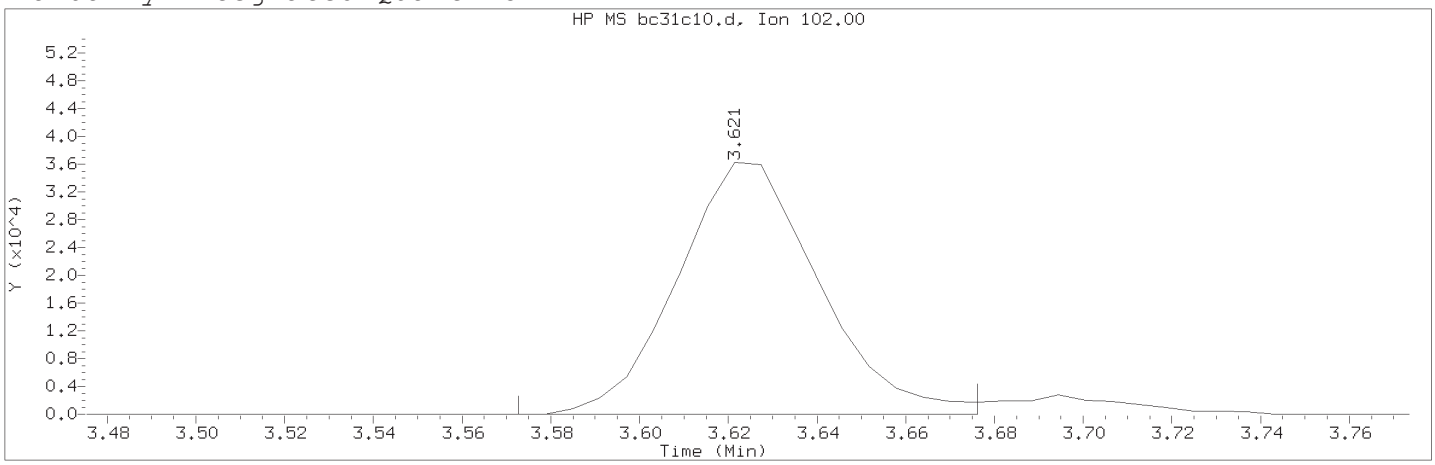
Compound Number : 9
Compound Name : Bromomethane
Scan Number : 132
Retention Time (minutes): 1.632
Quant Ion : 94.00
Area : 5606
On-column Amount (ng) : 0.5972
Integration start scan : 124 Integration stop scan: 183
Y at integration start : 0 Y at integration end: 0

Digitally signed by Stephen C. Nolte on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: SCN10072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:21
Date, time and analyst ID of latest file update: 31-Oct-2018 09:24 scn10072

Sample Name: VSTD050 Lab Sample ID: VSTD050

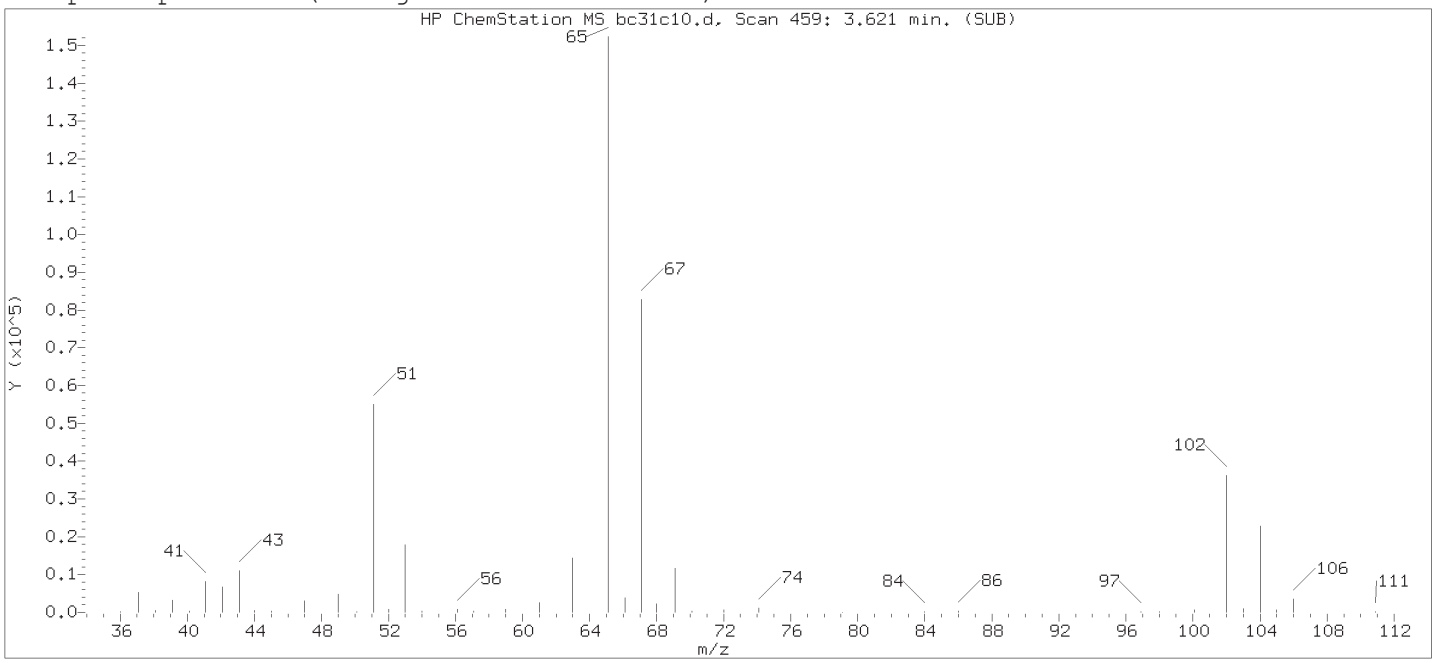
Compound Number : 63
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 459
Retention Time (minutes): 3.621
Quant Ion : 102.00
Area (flag) : 80409M
On-Column Amount (ng) : 51.5334
Integration start scan : 450 Integration stop scan: 467
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

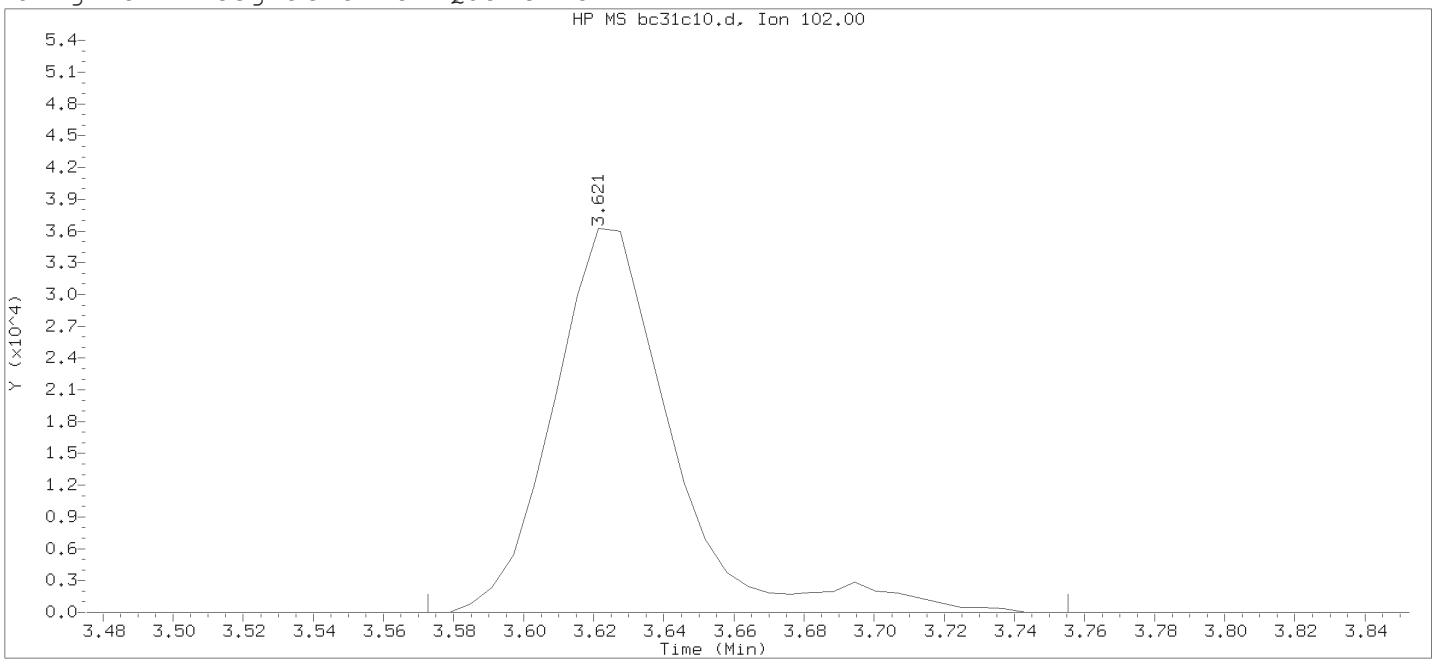
Analyst responsible for change: Digitally signed by Stephen C. Nolte
on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: scn10072

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/02/2018 at 10:08.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

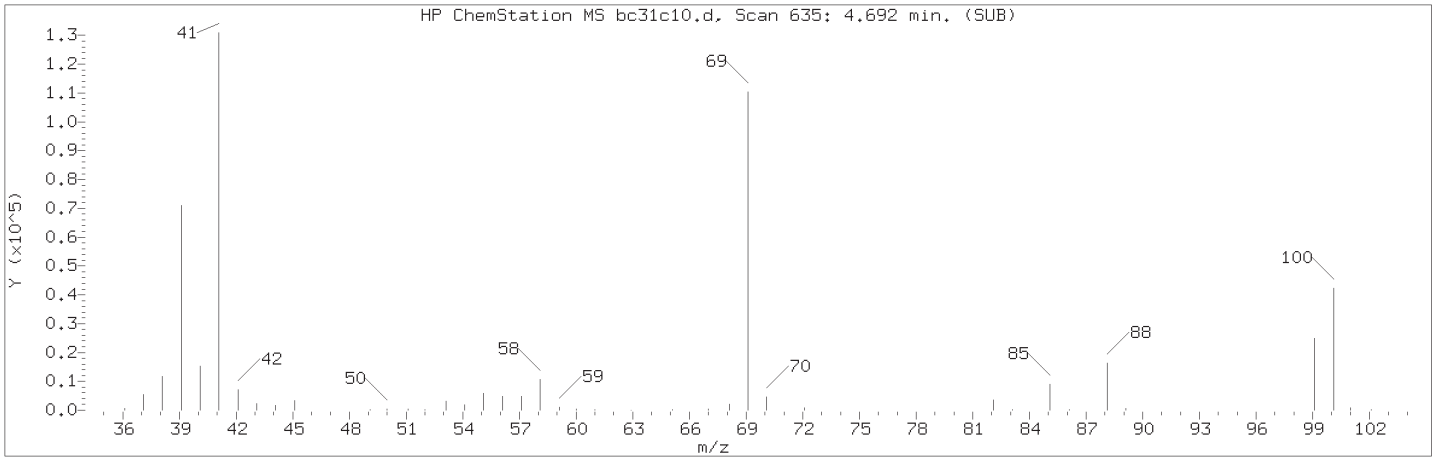
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:18
Date, time and analyst ID of latest file update: 31-Oct-2018 09:18 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

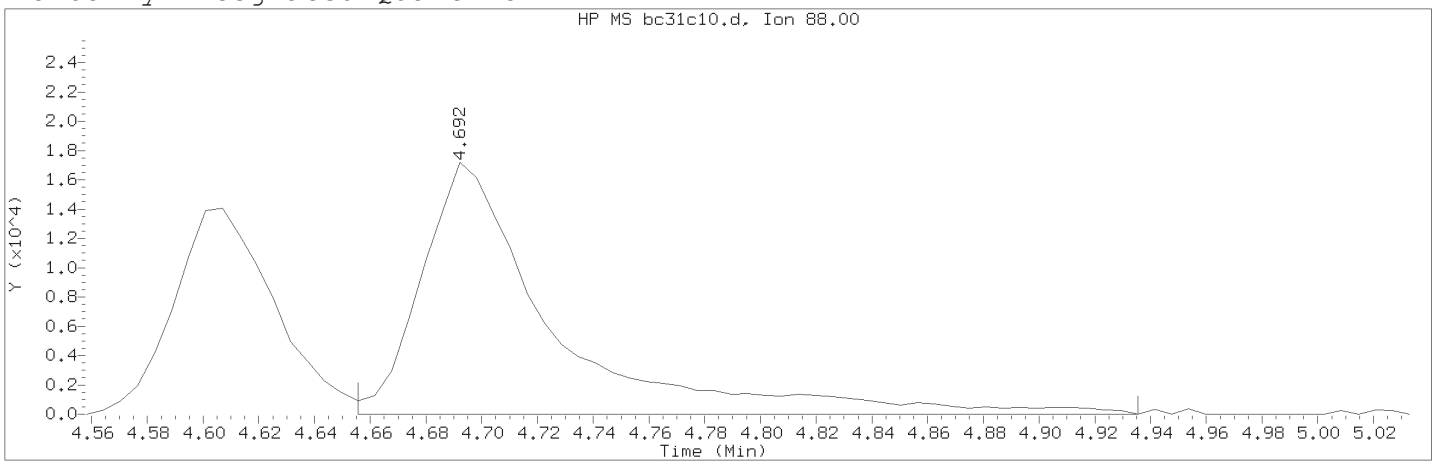
Compound Number	: 63		
Compound Name	: 1,2-Dichloroethane-d4		
Scan Number	: 459		
Retention Time (minutes)	: 3.621		
Quant Ion	: 102.00		
Area	: 85507		
On-column Amount (ng)	: 54.8010		
Integration start scan	: 450	Integration stop scan:	480
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Stephen C. Nolte on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: SCN10072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:21
Date, time and analyst ID of latest file update: 31-Oct-2018 09:24 scn10072

Sample Name: VSTD050 Lab Sample ID: VSTD050

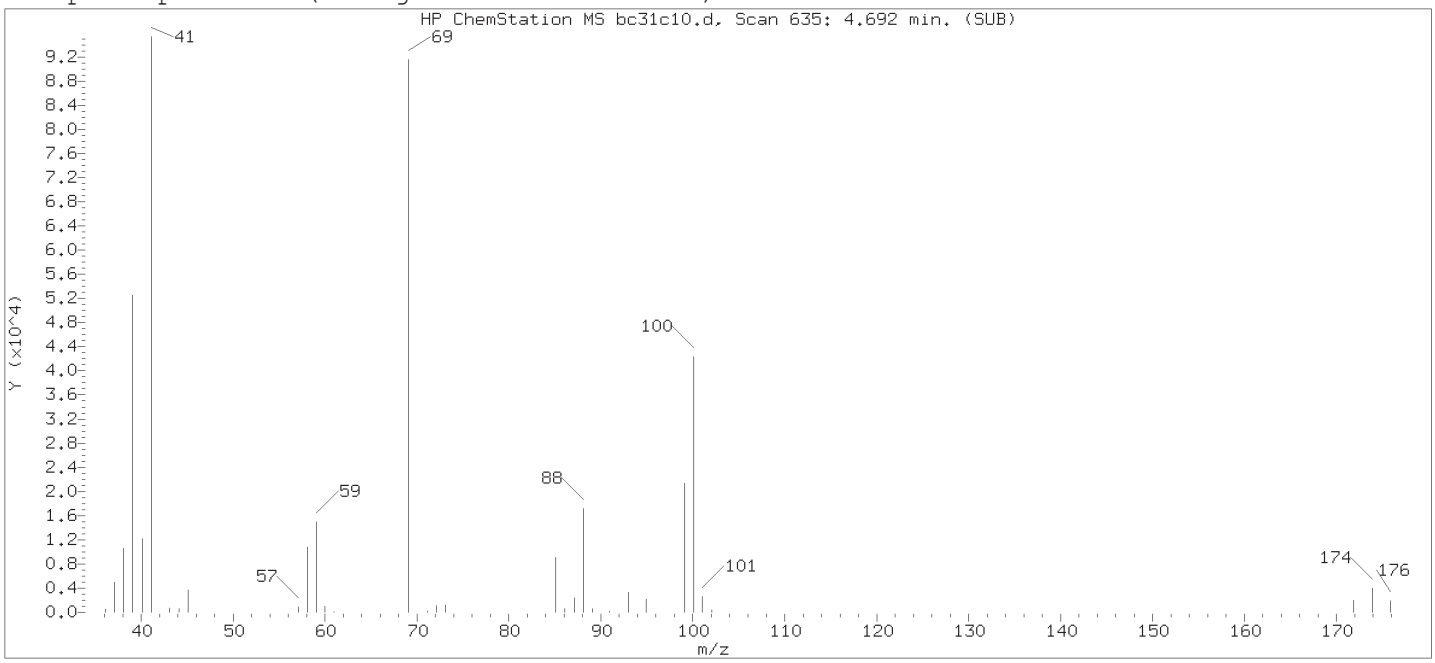
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area (flag) : 56384M
On-Column Amount (ng) : 696.2511
Integration start scan : 628 Integration stop scan: 674
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

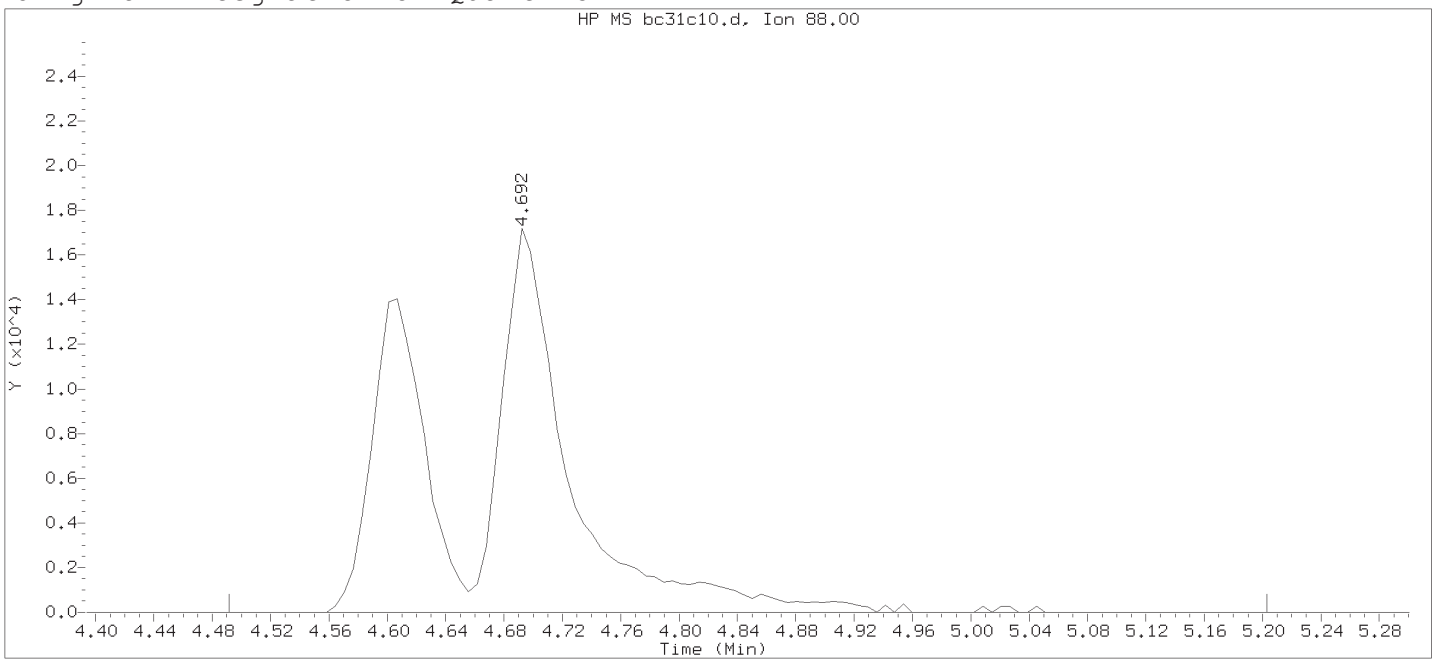
Analyst responsible for change: Digitally signed by Stephen C. Nolte
on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: scn10072

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/02/2018 at 10:08.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

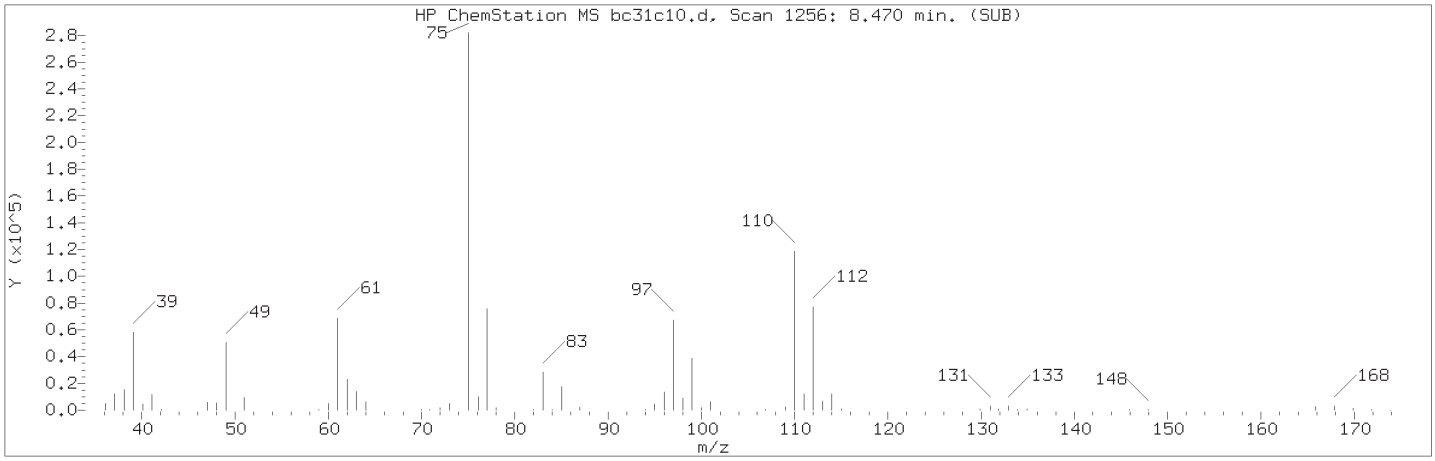
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:18
Date, time and analyst ID of latest file update: 31-Oct-2018 09:18 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

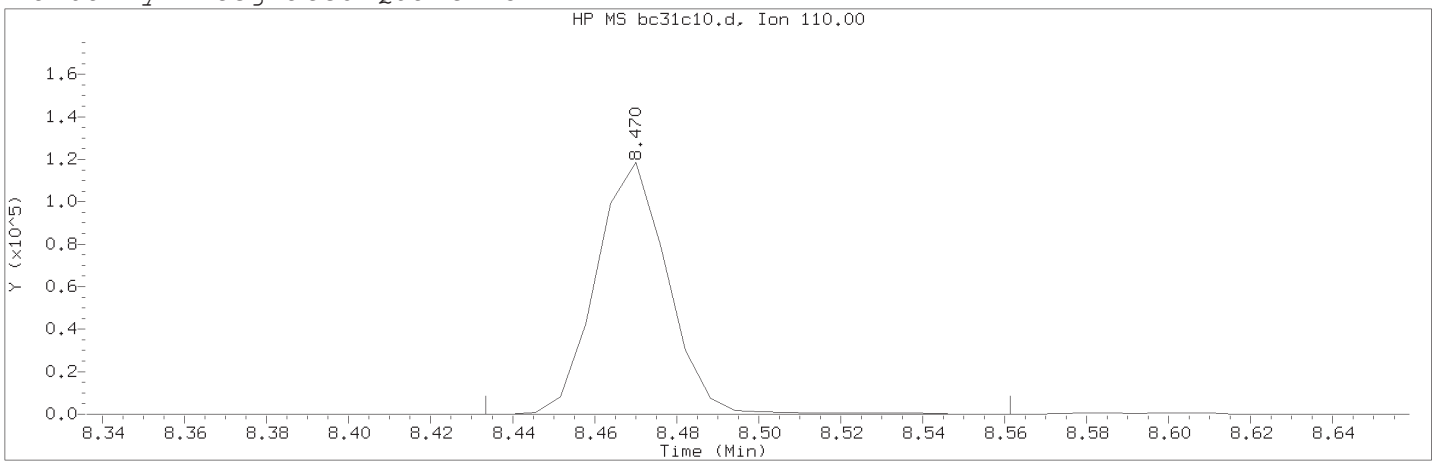
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area : 92030
On-column Amount (ng) : 1136.4221
Integration start scan : 601 Integration stop scan: 718
Y at integration start : 0 Y at integration end: 0

Digitally signed by Stephen C. Nolte on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: SCN10072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:21
Date, time and analyst ID of latest file update: 31-Oct-2018 09:24 scn10072

Sample Name: VSTD050 Lab Sample ID: VSTD050

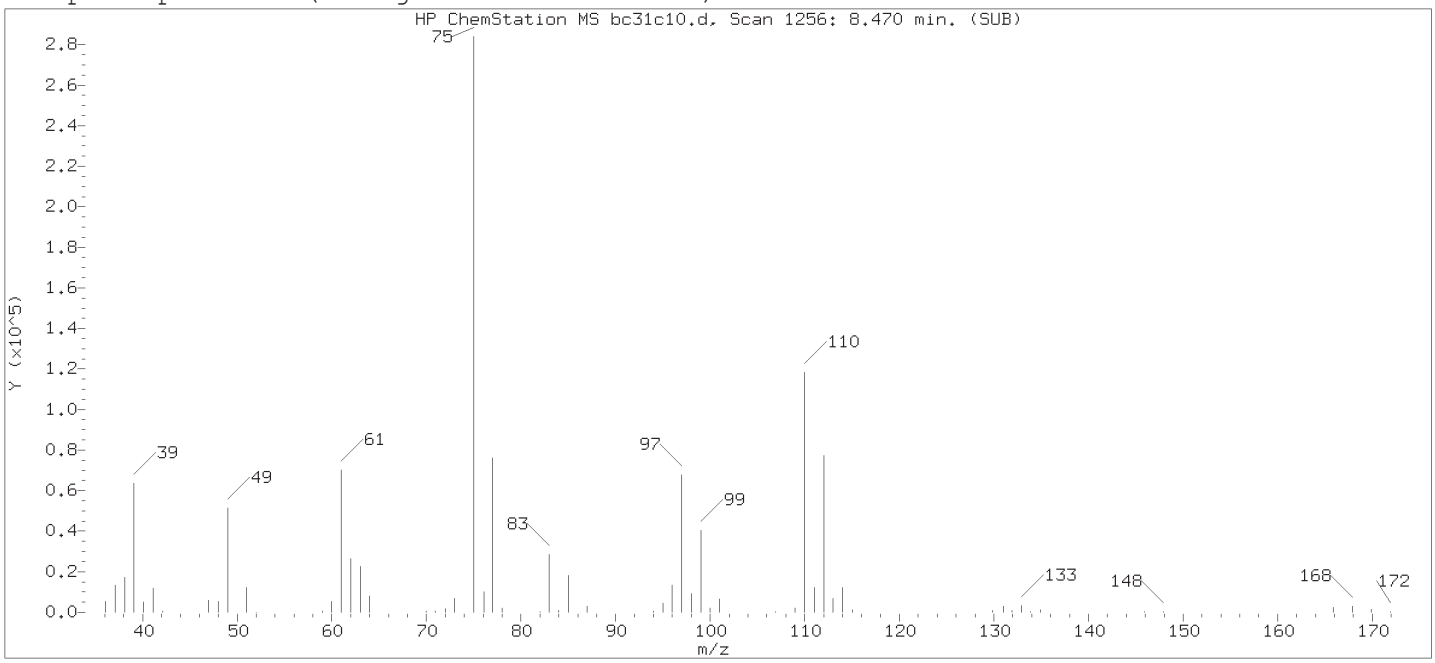
Compound Number : 123
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1256
Retention Time (minutes): 8.470
Quant Ion : 110.00
Area (flag) : 143445M
On-Column Amount (ng) : 52.6946
Integration start scan : 1249 Integration stop scan: 1270
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

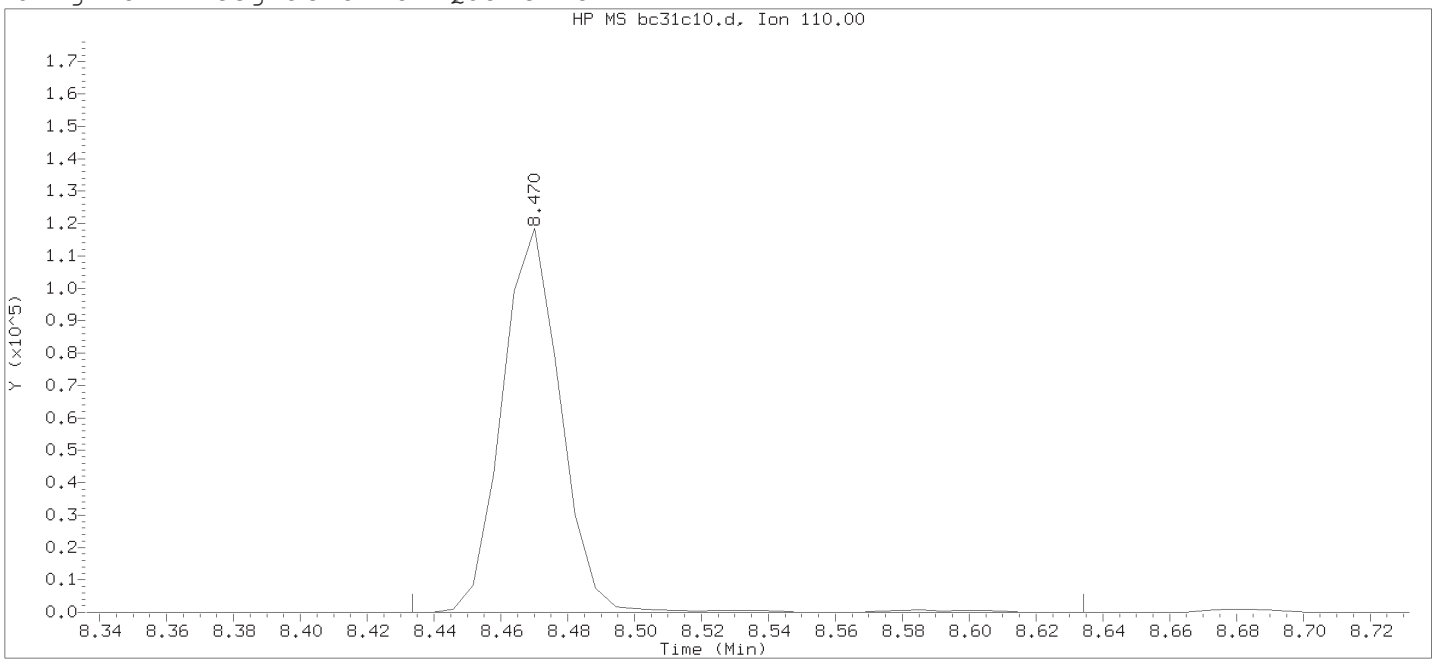
Analyst responsible for change: Digitally signed by Stephen C. Nolte
on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: scn10072

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/02/2018 at 10:08.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

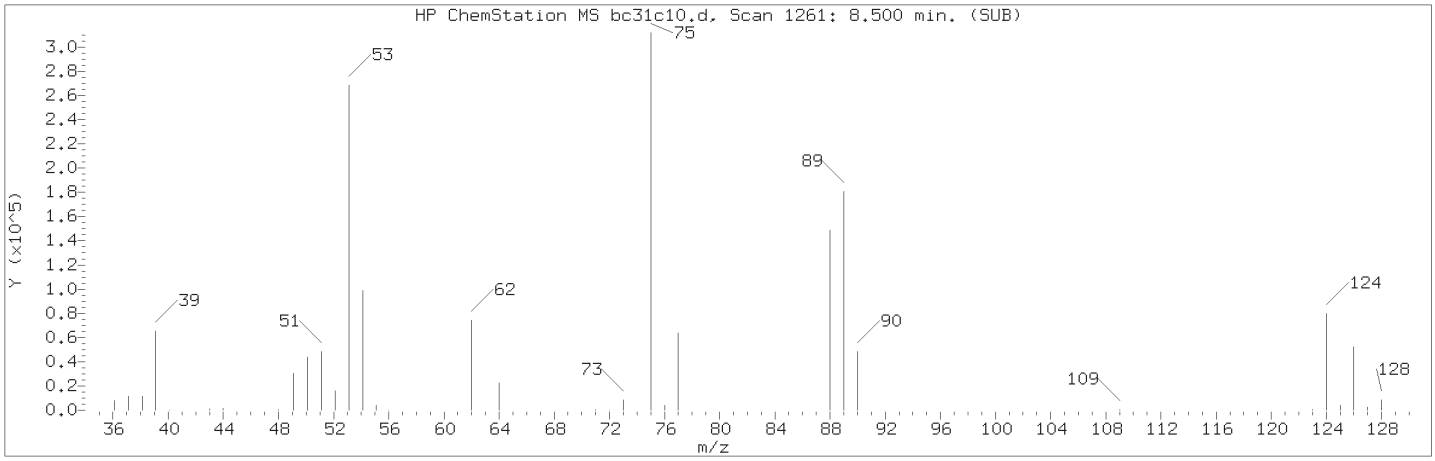
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:18
Date, time and analyst ID of latest file update: 31-Oct-2018 09:18 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

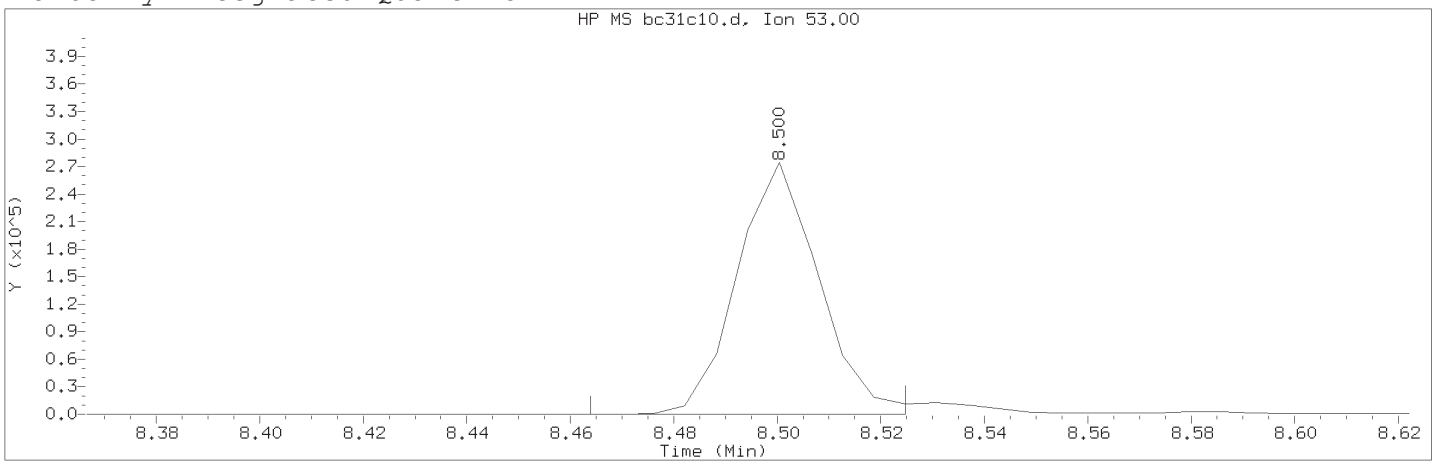
Compound Number : 123
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1256
Retention Time (minutes): 8.470
Quant Ion : 110.00
Area : 144774
On-column Amount (ng) : 53.1827
Integration start scan : 1249 Integration stop scan: 1282
Y at integration start : 0 Y at integration end: 0

Digitally signed by Stephen C. Nolte on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: SCN10072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:21
Date, time and analyst ID of latest file update: 31-Oct-2018 09:24 scn10072

Sample Name: VSTD050 Lab Sample ID: VSTD050

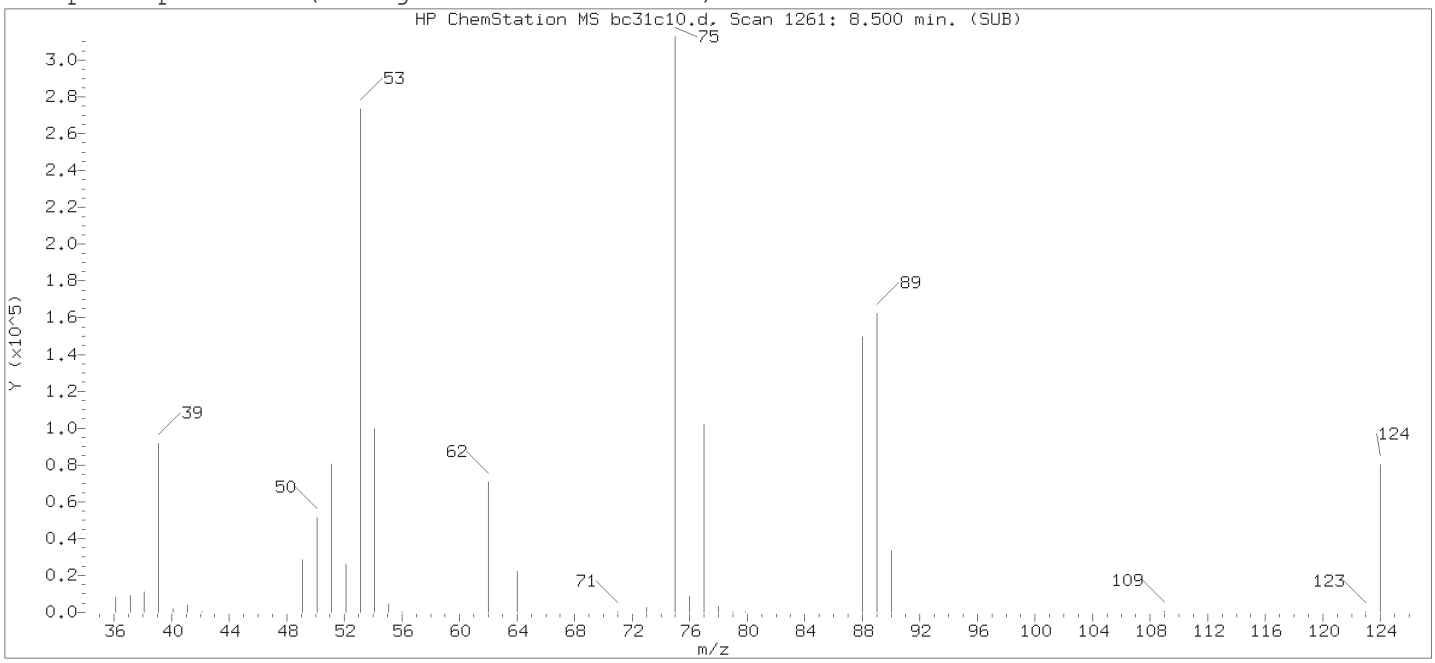
Compound Number : 122
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1261
Retention Time (minutes): 8.500
Quant Ion : 53.00
Area (flag) : 299883M
On-Column Amount (ng) : 133.1135
Integration start scan : 1254 Integration stop scan: 1264
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

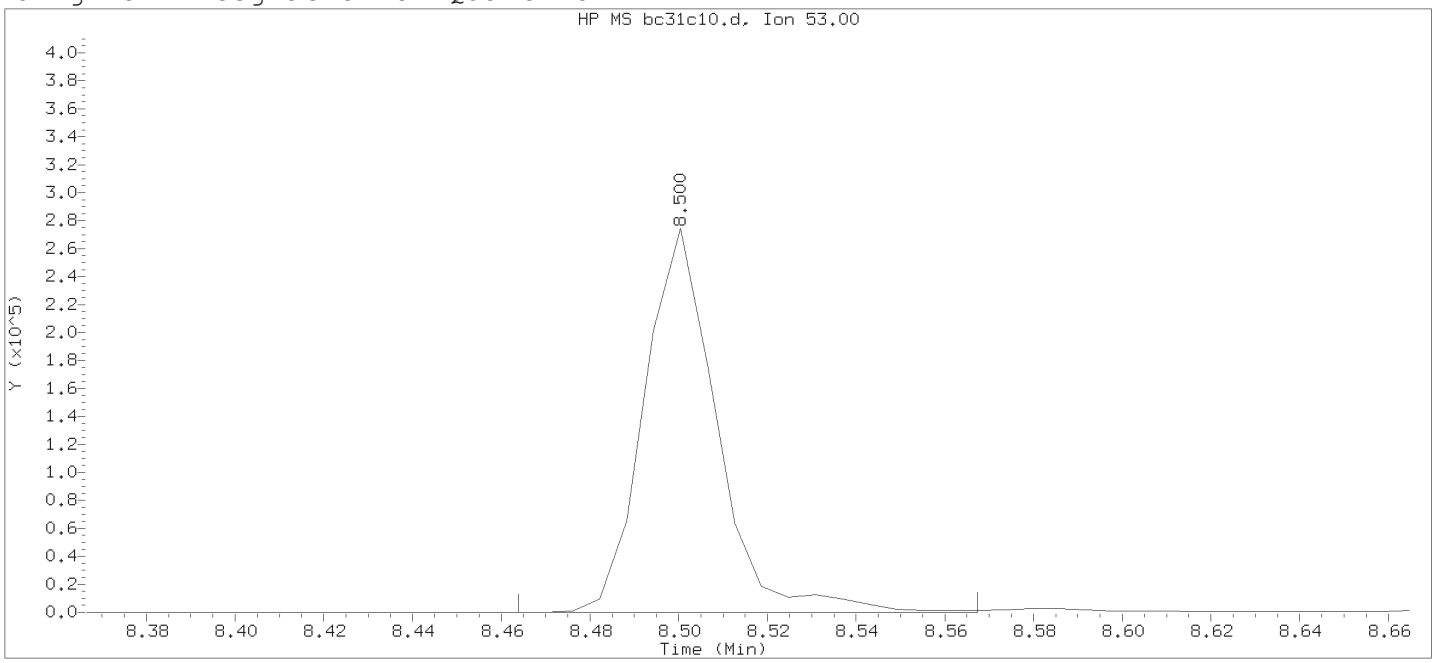
Analyst responsible for change: Digitally signed by Stephen C. Nolte
on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: scn10072

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/02/2018 at 10:08.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31c10.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 09:03 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 31-OCT-2018 09:18
Date, time and analyst ID of latest file update: 31-Oct-2018 09:18 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 122
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1261
Retention Time (minutes): 8.500
Quant Ion : 53.00
Area : 312100
On-column Amount (ng) : 138.5362
Integration start scan : 1254 Integration stop scan: 1271
Y at integration start : 0 Y at integration end: 0

Digitally signed by Stephen C. Nolte on 10/31/2018 at 09:24.
Target 3.5 esignature user ID: SCN10072

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Injection date and time: **31-OCT-2018 20:02**
Data file Sample Info. Line: SECC050;SECC050;2;3;LCS;;DODSW;;bc31b20; Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 14-Nov-2018 21:16 pth10165

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **B183042**
Calibration date and time (Last Method Edit): 14-NOV-2018 19:51
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.906	(0.024)	177	65	92974M	(-26)	250.00	
70) Fluorobenzene	3.944	(0.006)	512	96	1253351	(-14)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	967311	(-14)	50.00	
140) 1,4-Dichlorobenzene-d4	9.224	(0.000)	1380	152	585137	(-11)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.311	(0.000)	113	320243	51.268	103%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.615	(0.000)	102	66800	49.685	99%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1261619	50.534	101%		85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	450569M	49.541	99%		79 - 119

M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)	0.975	(0.002)	85	540070	47.722	47.72			0.6	5
4) Chloromethane	(2)	1.066	(0.001)	50	544500	46.678	46.68			0.6	5
5) Vinyl Chloride	(2)	1.115	(0.001)	62	410928	45.209	45.21			0.6	5
9) Bromomethane	(2)	1.242	(0.001)	94	411306	50.842	50.84			0.7	5
10) Chloroethane	(2)	1.261	(0.001)	64	245399	50.189	50.19			1	5
13) Trichlorofluoromethane	(2)	1.407	(0.001)	101	626017	50.029	50.03			0.7	5
19) 1,1-Dichloroethene	(2)	1.620	(0.000)	96	291273	46.322	46.32			0.5	5
20) Acetone	(1)	1.638	(-0.007)	58	45509	108.289	108.29			6	20
22) Freon 113	(2)	1.650	(0.000)	101	317976	50.438	50.44			0.6	10
25) Carbon Disulfide	(2)	1.754	(0.002)	76	1112121M	44.202	44.20			0.6	5
27) Methyl Acetate	(2)	1.820	(0.002)	43	163350M	50.661	50.66			1	5
31) Methylene Chloride	(2)	1.894	(0.002)	84	350648	47.188	47.19			2	5
34) Methyl Tertiary Butyl Ether	(2)	2.082	(0.002)	73	836017	46.742	46.74			0.5	5
35) trans-1,2-Dichloroethene	(2)	2.076	(0.000)	96	345043	47.186	47.19			0.5	5
40) 1,1-Dichloroethane	(2)	2.380	(0.000)	63	603668	50.912	50.91			0.5	5
44) 2-Butanone	(1)	2.885	(-0.012)	43	242538	101.468	101.47			1	10
45) cis-1,2-Dichloroethene	(2)	2.873	(0.001)	96	403873	50.883	50.88			0.5	5
52) Bromochloromethane	(2)	3.086	(0.000)	128	218170	51.738	51.74			0.6	5
54) Chloroform	(2)	3.165	(0.000)	83	614554	51.065	51.06			0.6	5
57) 1,1,1-Trichloroethane	(2)	3.335	(0.000)	97	512128	41.561	41.56			0.6	5
58) Cyclohexane	(2)	3.384	(0.001)	56	546844	47.239	47.24			0.5	5
61) Carbon Tetrachloride	(2)	3.487	(0.000)	117	438771	46.885	46.88			0.5	5
64) Benzene	(2)	3.664	(0.001)	78	1405429	49.163	49.16			0.5	5
67) 1,2-Dichloroethane	(2)	3.688	(0.000)	62	416803	50.522	50.52			0.6	5
75) Trichloroethene	(2)	4.303	(-0.000)	95	365350	49.007	49.01			0.5	5
76) Methylcyclohexane	(2)	4.497	(-0.000)	83	596575	51.422	51.42			0.6	5
77) 1,2-Dichloropropane	(2)	4.522	(-0.000)	63	351319	51.749	51.75			0.5	5
84) Bromodichloromethane	(2)	4.820	(-0.000)	83	427921	50.474	50.47			0.4	5

M = Compound was manually integrated.

Digitally signed by Patrick T. Herres on 11/14/2018 at 21:17. Target 3.5 esignature user ID: pth10165

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Injection date and time: **31-OCT-2018 20:02**
Data file Sample Info. Line: SECC050;SECC050;2;3;LCS;;DODSW;;bc31b20; Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 14-Nov-2018 21:16 pth10165

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **B183042**
Calibration date and time (Last Method Edit): 14-NOV-2018 19:51
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

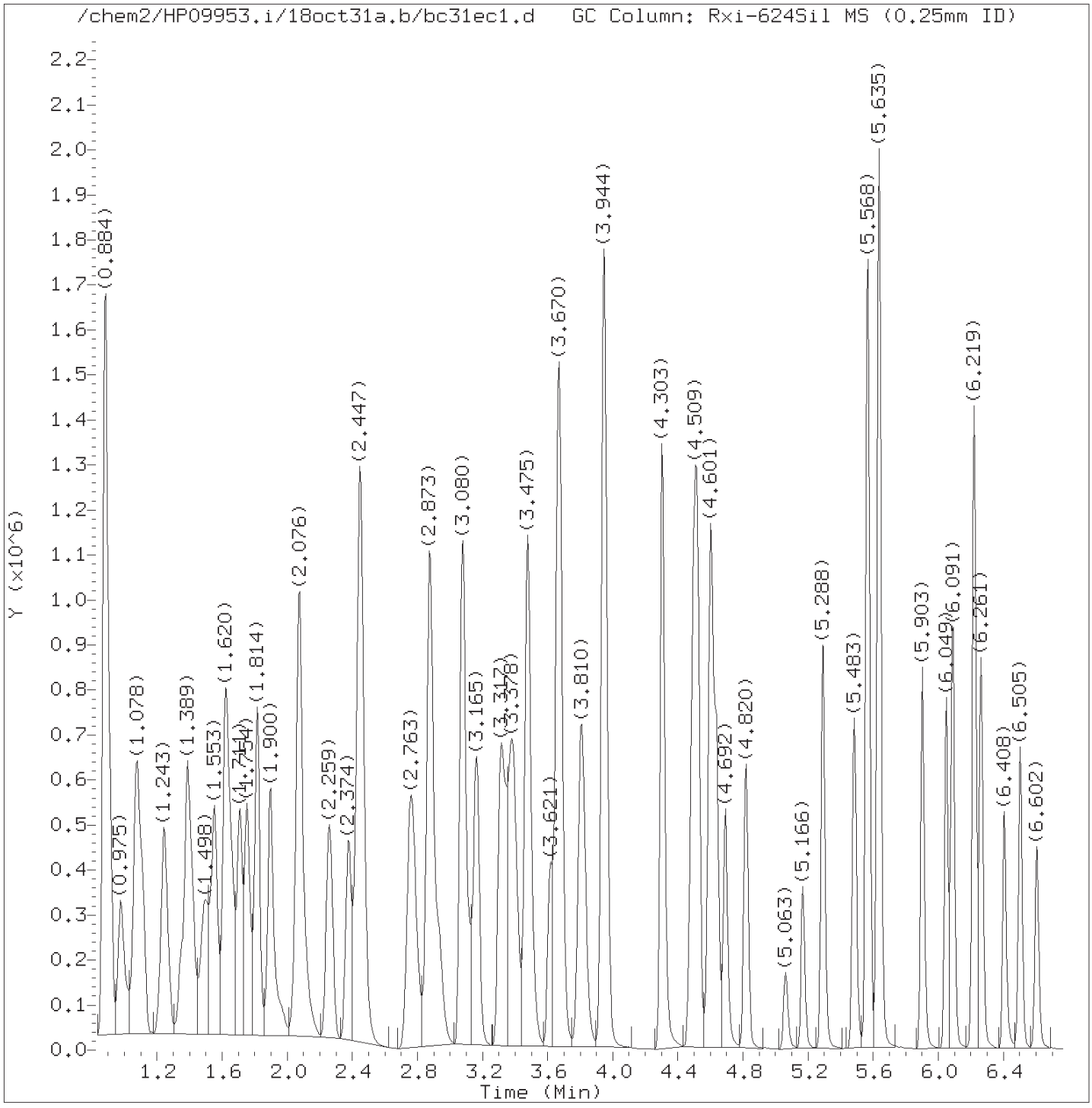
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
89) cis-1,3-Dichloropropene	(2)	5.294(-0.002)	75	525910	51.372	51.37			0.4	5
90) 4-Methyl-2-pentanone	(2)	5.483(-0.000)	43	508456	87.004	87.00			1	10
92) Toluene	(3)	5.635(0.000)	92	897919	48.491	48.49			0.6	5
93) trans-1,3-Dichloropropene	(3)	5.902(0.000)	75	447064	50.402	50.40			0.3	5
96) 1,1,2-Trichloroethane	(3)	6.091(0.000)	97	305249	50.798	50.80			0.5	5
98) Tetrachloroethene	(3)	6.219(0.000)	166	433277	42.718	42.72			0.5	5
101) 2-Hexanone	(3)	6.408(0.000)	43	359473	83.397	83.40			1	10
103) Dibromochloromethane	(3)	6.505(0.000)	129	353521	51.064	51.06			0.4	5
104) 1,2-Dibromoethane	(3)	6.602(0.000)	107	315235	50.778	50.78			0.4	5
107) Chlorobenzene	(3)	7.174(-0.000)	112	1085542	50.211	50.21			0.5	5
108) 1,1,1,2-Tetrachloroethane	(3)	7.277(0.000)	131	377315M	51.468	51.47			0.5	5
109) Ethylbenzene	(3)	7.314(0.000)	91	1749926	50.246	50.25			0.4	5
110) m+p-Xylene	(3)	7.448(0.000)	106	1423556	100.168	100.17			1	5
111) o-Xylene	(3)	7.831(0.000)	106	705355	49.647	49.65			0.4	5
112) Xylene (Total)	(3)		106	2128911	149.815	149.81			1	5
113) Styrene	(3)	7.849(0.000)	104	1180467	50.400	50.40			0.3	5
114) Bromoform	(3)	7.995(-0.000)	173	213695	49.534	49.53			5	10
115) Isopropylbenzene	(3)	8.178(-0.000)	105	1796112	50.154	50.15			0.4	5
118) Cyclohexanone	(1)	8.232(-0.054)	55	126015A	584.814	584.81			25	250
120) 1,1,2,2-Tetrachloroethane	(4)	8.452(-0.000)	83	410136	50.106	50.11			0.4	5
138) 1,3-Dichlorobenzene	(4)	9.176(0.000)	146	979095	48.662	48.66			0.5	5
141) 1,4-Dichlorobenzene	(4)	9.242(-0.000)	146	1002905	47.809	47.81			0.4	5
147) 1,2-Dichlorobenzene	(4)	9.516(-0.000)	146	990718	50.364	50.36			0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)	10.070(-0.000)	75	63805	44.866	44.87			0.4	5
153) 1,2,4-Trichlorobenzene	(4)	10.630(-0.000)	180	695761	47.964	47.96			5	10
156) 1,2,3-Trichlorobenzene	(4)	10.940(-0.000)	180	682132	49.312	49.31			5	10

M = Compound was manually integrated. A = User selected an alternate peak.

Total number of targets = 54

Digitally signed by Patrick T. Herres on 11/14/2018 at 21:17. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 21:24. PARALLAX ID: sej02002



Total Ion Chromatogram (TIC)

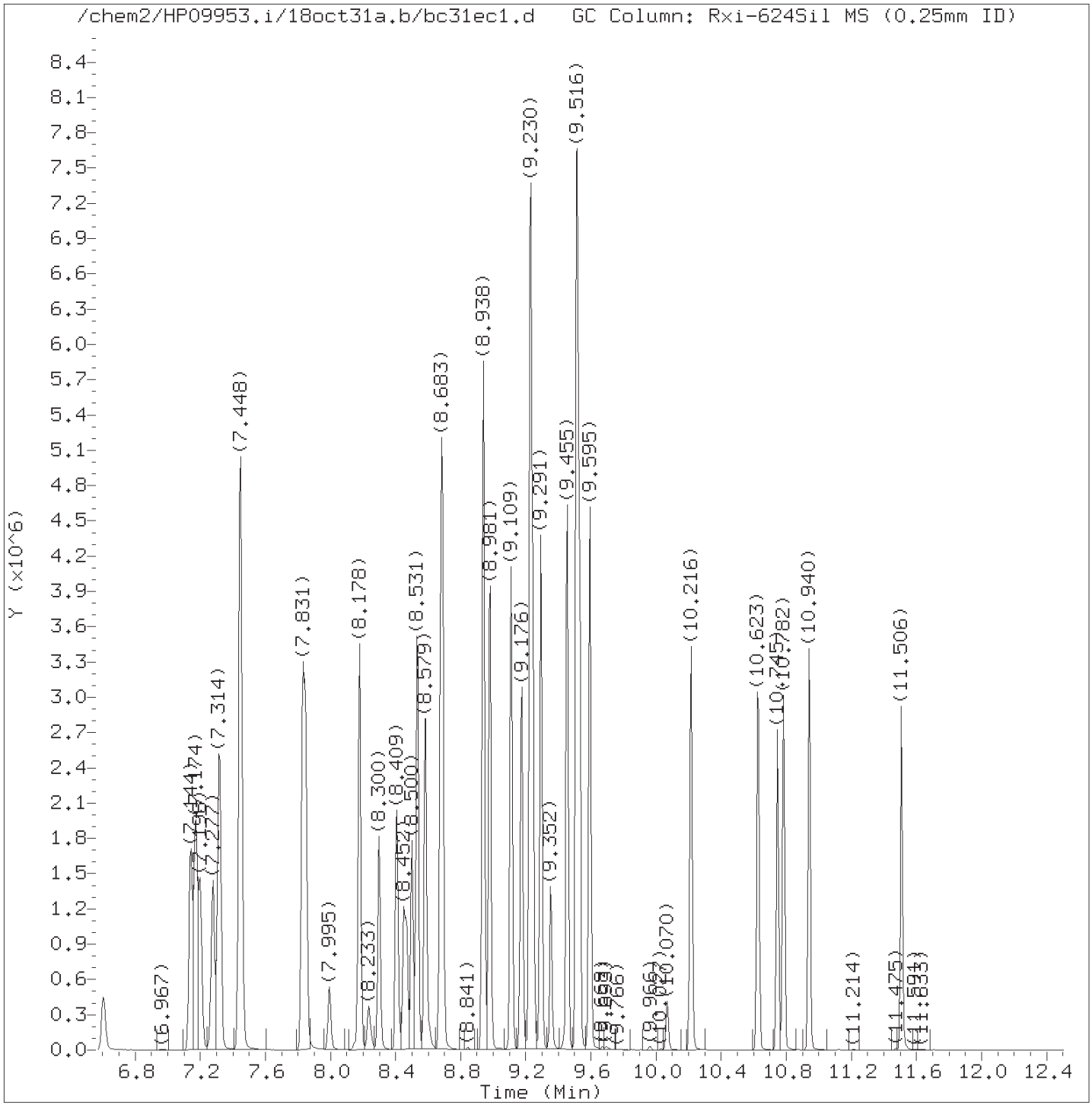
Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 21:16 pth10165

Sample Name: SECC050 Lab Sample ID: SECC050

Digitally signed by Patrick T. Herres
on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 21:16 pth10165

Sample Name: SECC050 Lab Sample ID: SECC050

Digitally signed by Patrick T. Herres
on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 21:16 pth10165

Sample Name: SECC050 Lab Sample ID: SECC050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.975	85	540070	47.722
4) Chloromethane	(2)	1.066	50	544500	46.678
5) Vinyl Chloride	(2)	1.115	62	410928	45.209
9) Bromomethane	(2)	1.243	94	411306	50.842
10) Chloroethane	(2)	1.261	64	245399	50.189
13) Trichlorofluoromethane	(2)	1.407	101	626017	50.029
19) 1,1-Dichloroethene	(2)	1.620	96	291273	46.322
20) Acetone	(1)	1.638	58	45509	108.289
22) Freon 113	(2)	1.650	101	317976	50.438
25) Carbon Disulfide	(2)	1.754	76	1112121M	44.202
27) Methyl Acetate	(2)	1.820	43	163350M	50.661
31) Methylene Chloride	(2)	1.894	84	350648	47.188
30)*t-Butyl alcohol-d10	(1)	1.906	65	92974M	250.000
35) trans-1,2-Dichloroethene	(2)	2.076	96	345043	47.186
34) Methyl Tertiary Butyl Ether	(2)	2.082	73	836017	46.742
40) 1,1-Dichloroethane	(2)	2.380	63	603668	50.912
45) cis-1,2-Dichloroethene	(2)	2.873	96	403873	50.883
44) 2-Butanone	(1)	2.885	43	242538	101.468
52) Bromochloromethane	(2)	3.086	128	218170	51.738
54) Chloroform	(2)	3.165	83	614554	51.065
56)$Dibromofluoromethane	(2)	3.311	113	320243	51.268
57) 1,1,1-Trichloroethane	(2)	3.335	97	512128	41.561
58) Cyclohexane	(2)	3.384	56	546844	47.239
61) Carbon Tetrachloride	(2)	3.487	117	438771	46.885
63)$1,2-Dichloroethane-d4	(2)	3.615	102	66800	49.685
64) Benzene	(2)	3.664	78	1405429	49.163
67) 1,2-Dichloroethane	(2)	3.688	62	416803	50.522
70)*Fluorobenzene	(2)	3.944	96	1253351	50.000
75) Trichloroethene	(2)	4.303	95	365350	49.007
76) Methylcyclohexane	(2)	4.497	83	596575	51.422
77) 1,2-Dichloropropane	(2)	4.522	63	351319	51.749
84) Bromodichloromethane	(2)	4.820	83	427921	50.474
89) cis-1,3-Dichloropropene	(2)	5.294	75	525910	51.372
90) 4-Methyl-2-pentanone	(2)	5.483	43	508456	87.004
91)$Toluene-d8	(3)	5.568	98	1261619	50.534
92) Toluene	(3)	5.635	92	897919	48.491
93) trans-1,3-Dichloropropene	(3)	5.903	75	447064	50.402
96) 1,1,2-Trichloroethane	(3)	6.091	97	305249	50.798

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 21:16 pth10165

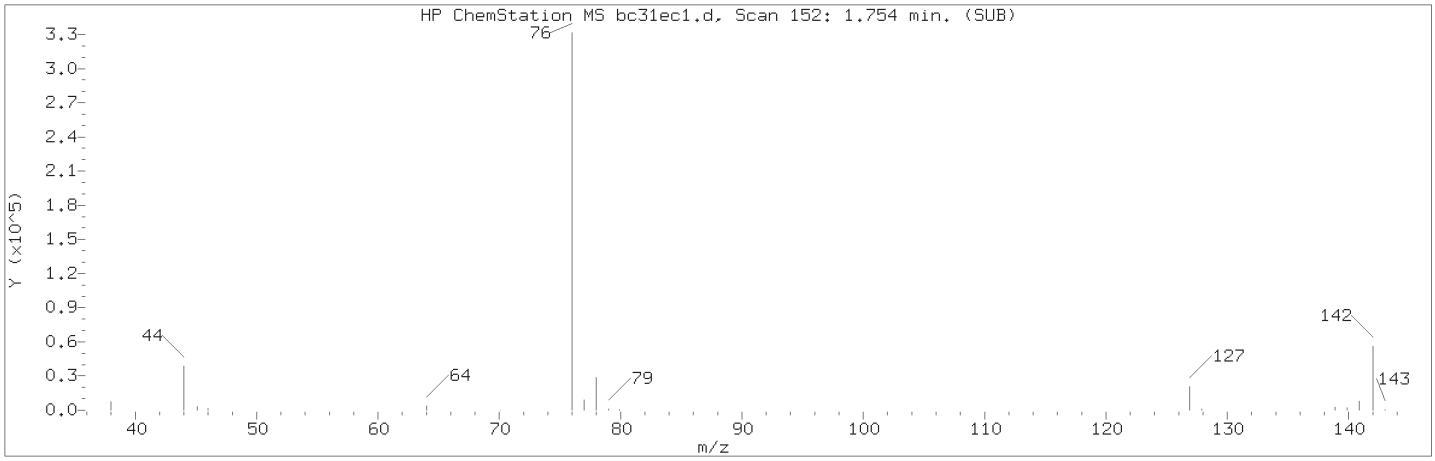
Sample Name: SECC050 Lab Sample ID: SECC050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
98) Tetrachloroethene	(3)	6.219	166	433277	42.718
101) 2-Hexanone	(3)	6.408	43	359473	83.397
103) Dibromochloromethane	(3)	6.505	129	353521	51.064
104) 1,2-Dibromoethane	(3)	6.602	107	315235	50.778
105)*Chlorobenzene-d5	(3)	7.144	117	967311	50.000
107) Chlorobenzene	(3)	7.174	112	1085542	50.211
108) 1,1,1,2-Tetrachloroethane	(3)	7.277	131	377315M	51.468
109) Ethylbenzene	(3)	7.314	91	1749926	50.246
110) m+p-Xylene	(3)	7.448	106	1423556	100.168
111) o-Xylene	(3)	7.831	106	705355	49.647
113) Styrene	(3)	7.849	104	1180467	50.400
112) Xylene (Total)	(3)		106	2128911	149.815
114) Bromoform	(3)	7.995	173	213695	49.534
115) Isopropylbenzene	(3)	8.178	105	1796112	50.154
118) Cyclohexanone	(1)	8.233	55	126015A	584.814
119)$4-Bromofluorobenzene	(3)	8.300	95	450569M	49.541
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	410136	50.106
138) 1,3-Dichlorobenzene	(4)	9.176	146	979095	48.662
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	585137	50.000
141) 1,4-Dichlorobenzene	(4)	9.242	146	1002905	47.809
147) 1,2-Dichlorobenzene	(4)	9.516	146	990718	50.364
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	63805	44.866
153) 1,2,4-Trichlorobenzene	(4)	10.630	180	695761	47.964
156) 1,2,3-Trichlorobenzene	(4)	10.940	180	682132	49.312

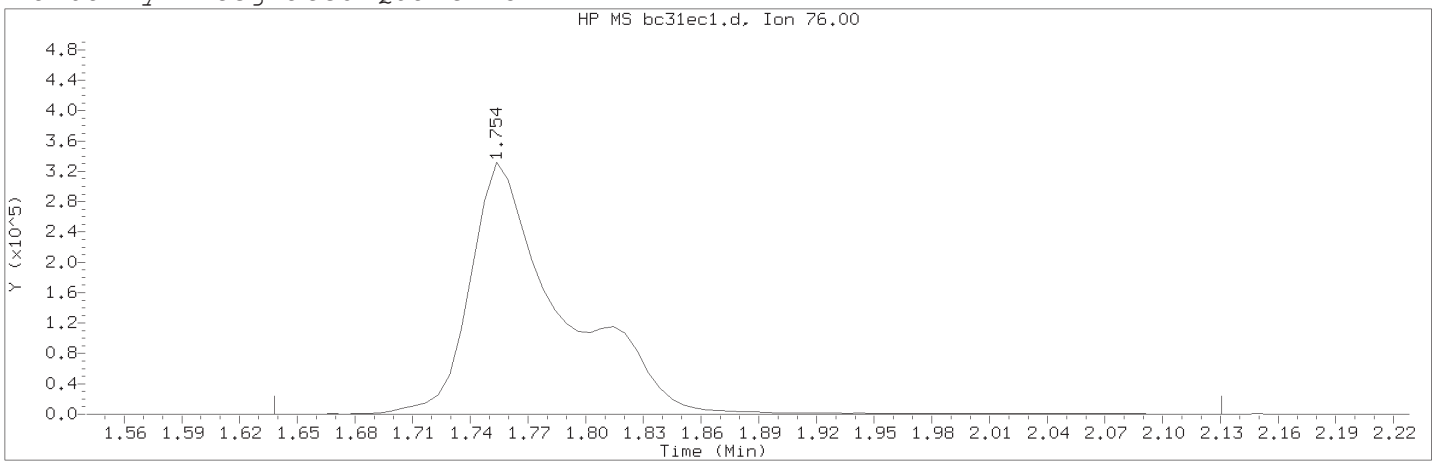
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 21:16 pth10165

Sample Name: SECC050 Lab Sample ID: SECC050

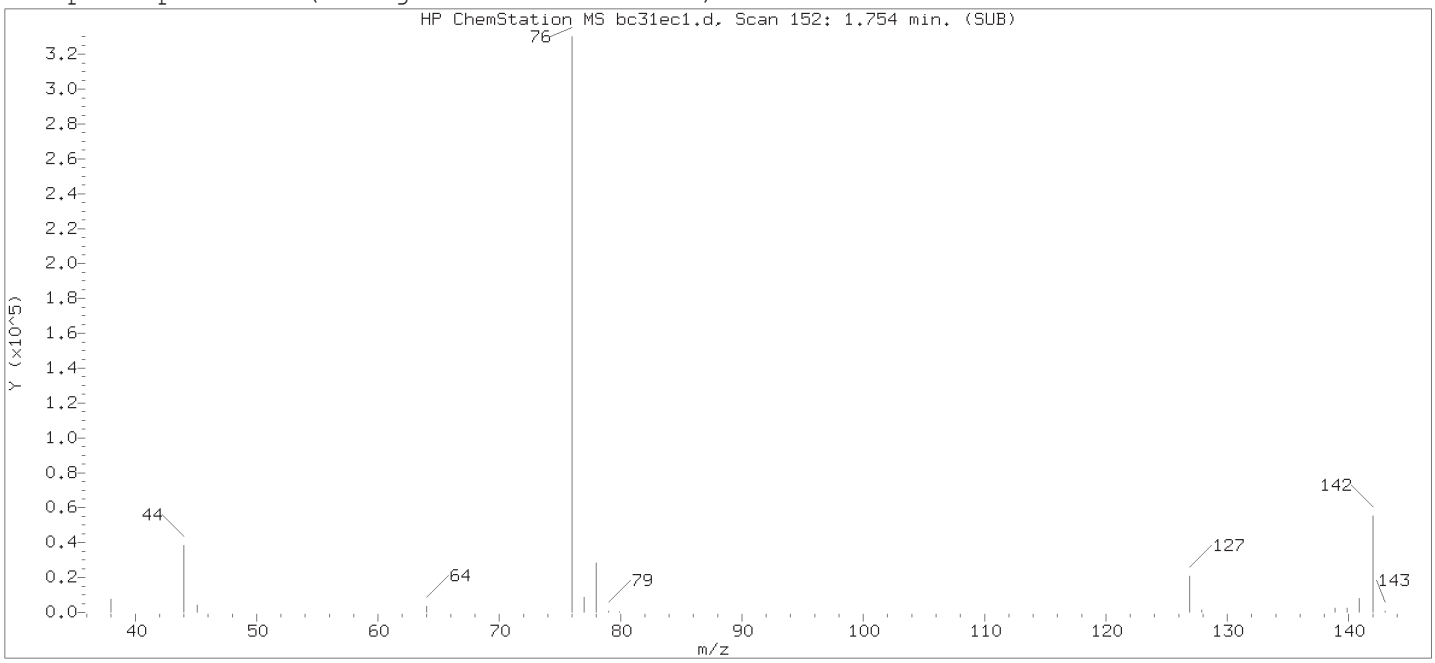
Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 152
Retention Time (minutes): 1.754
Quant Ion : 76.00
Area (flag) : 1112121M
On-Column Amount (ng) : 44.2023
Integration start scan : 132 Integration stop scan: 213
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

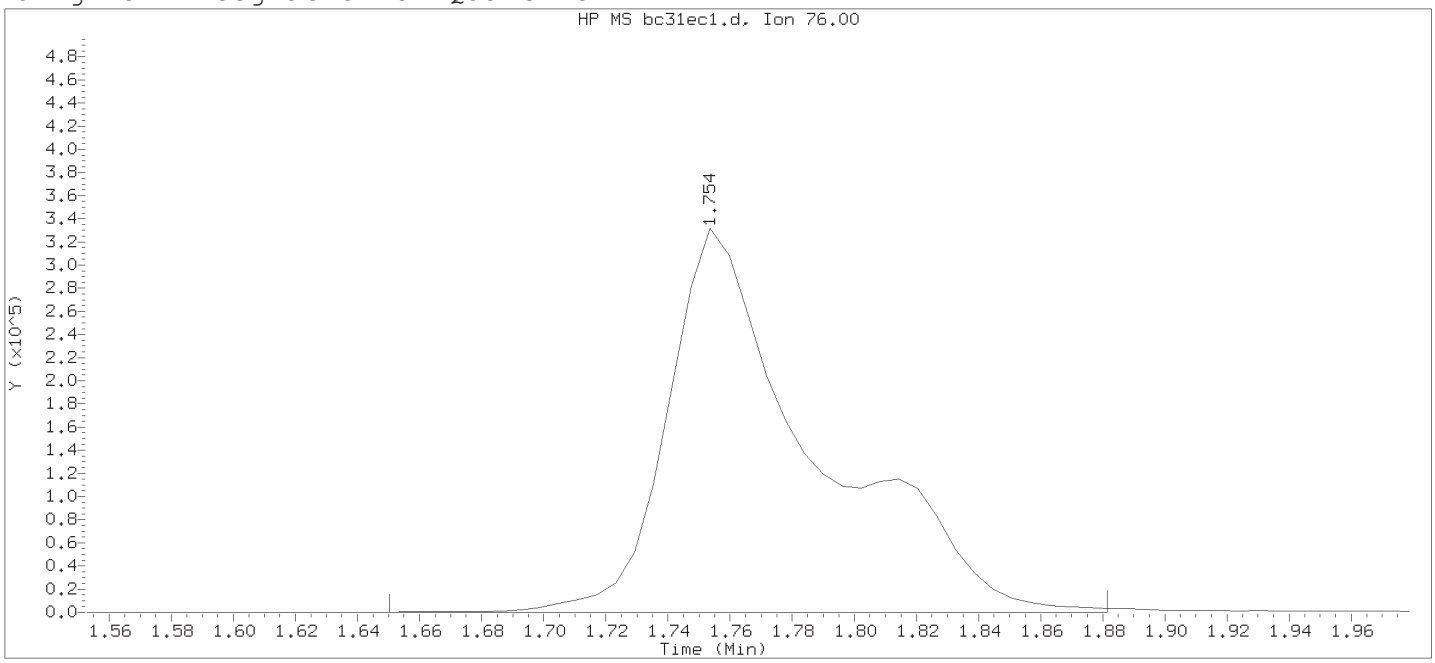
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 21:24.
PARALLAX ID: sej02002

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

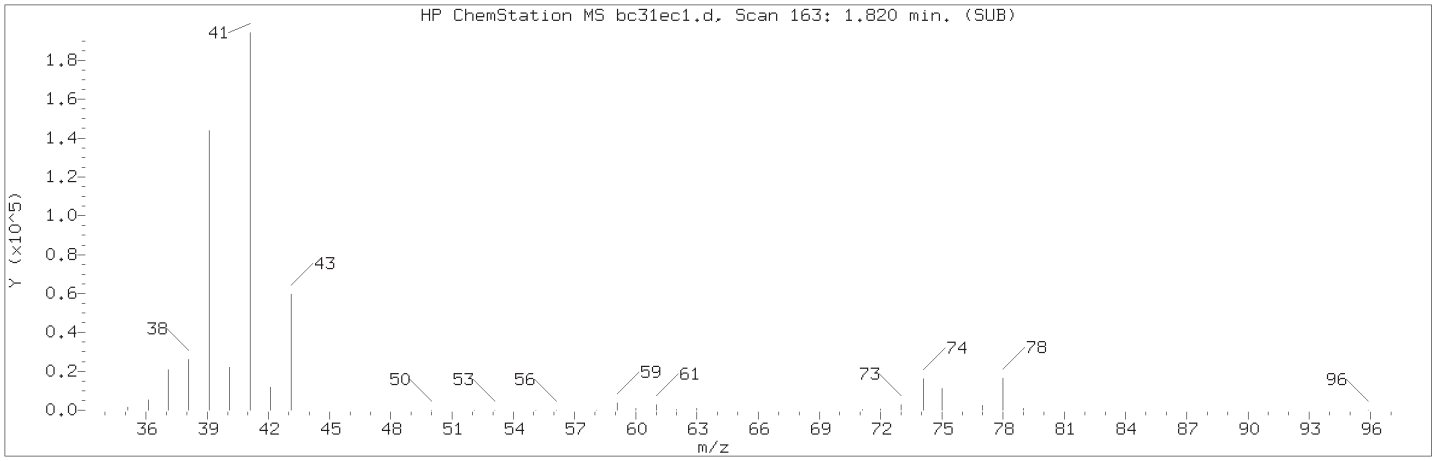
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 20:17 Automation

Sample Name: SECC050 Lab Sample ID: SECC050

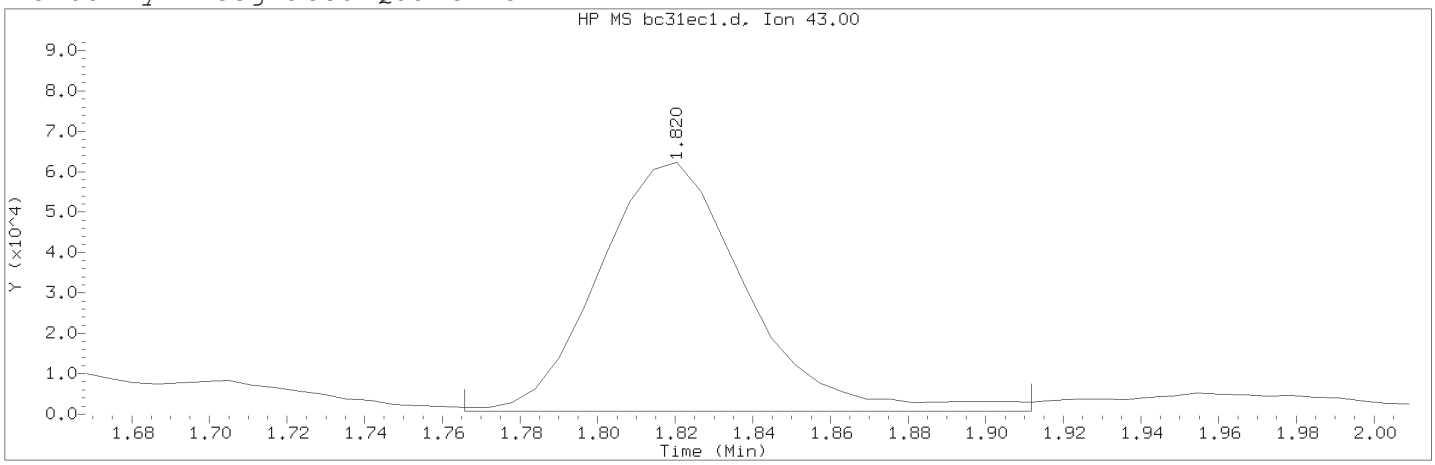
Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 152
Retention Time (minutes): 1.754
Quant Ion : 76.00
Area : 1098870
On-column Amount (ng) : 43.6756
Integration start scan : 134 Integration stop scan: 172
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 21:16 pth10165

Sample Name: SECC050 Lab Sample ID: SECC050

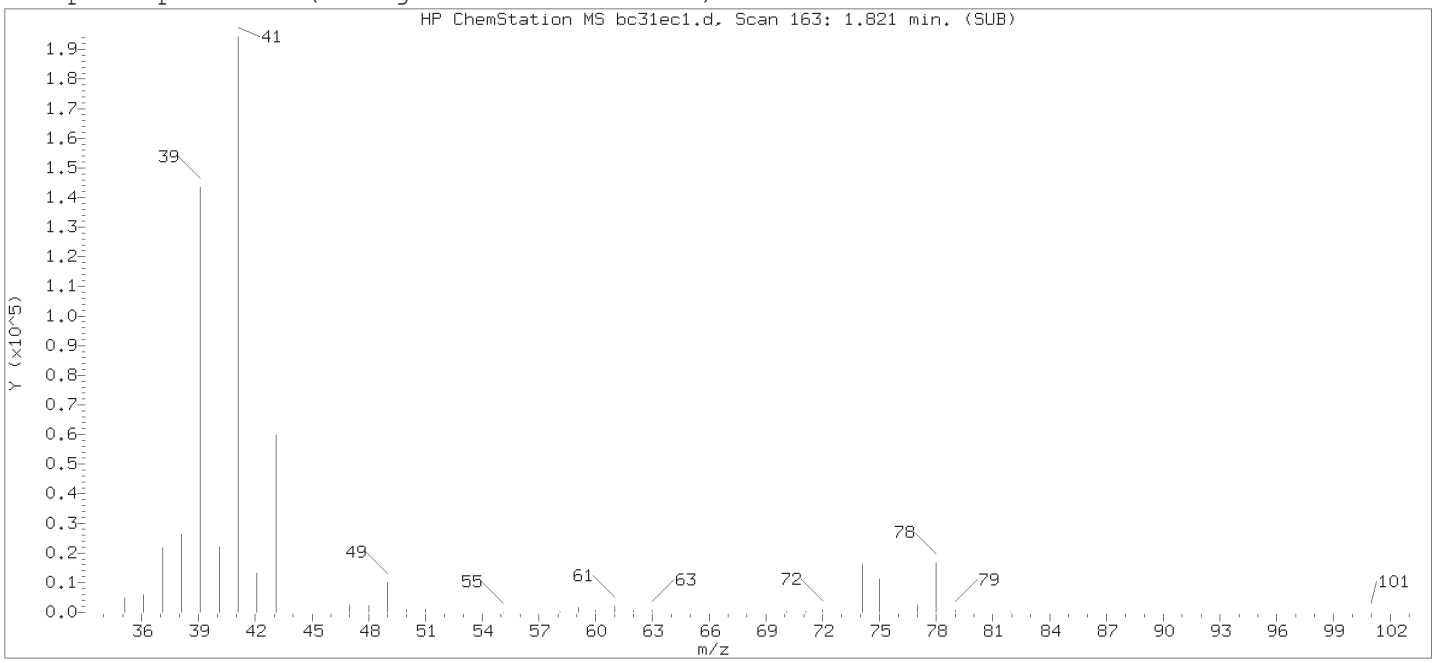
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 163
Retention Time (minutes): 1.820
Quant Ion : 43.00
Area (flag) : 163350M
On-Column Amount (ng) : 50.6608
Integration start scan : 153 Integration stop scan: 177
Y at integration start : 709 Y at integration end: 709

Reason for manual integration: improper integration

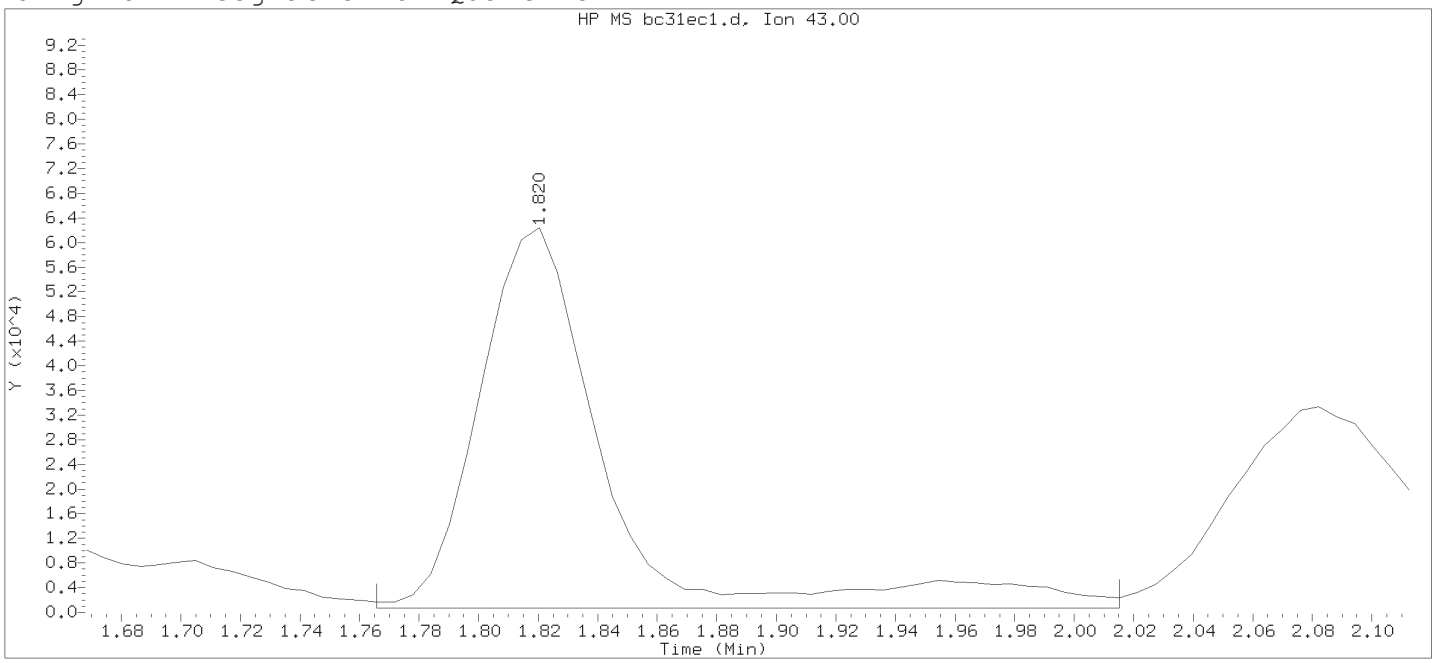
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 21:24.
PARALLAX ID: sej02002

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

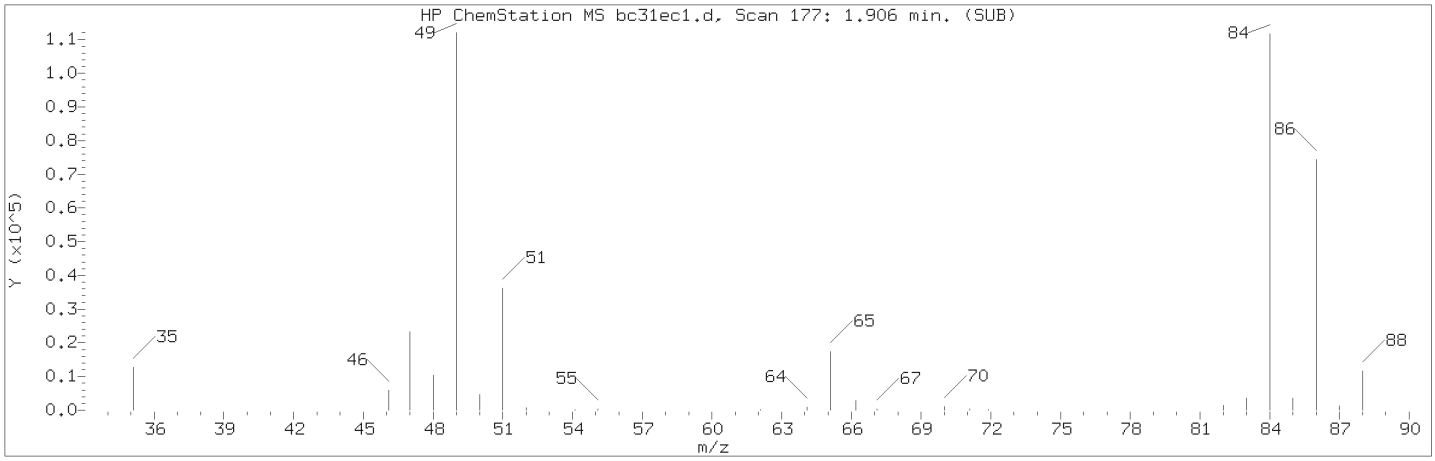
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 20:17 Automation

Sample Name: SECC050 Lab Sample ID: SECC050

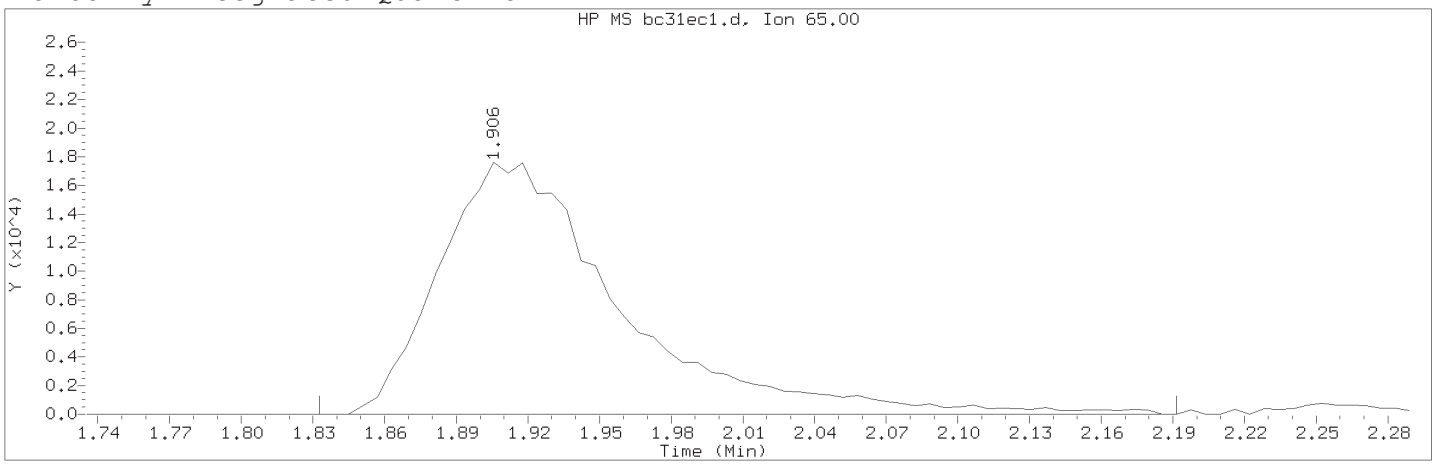
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 163
Retention Time (minutes): 1.820
Quant Ion : 43.00
Area : 182737
On-column Amount (ng) : 56.6735
Integration start scan : 153 Integration stop scan: 194
Y at integration start : 709 Y at integration end: 709

Digitally signed by Patrick T. Herres on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: PTHERRES

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 21:16 pth10165

Sample Name: SECC050 Lab Sample ID: SECC050

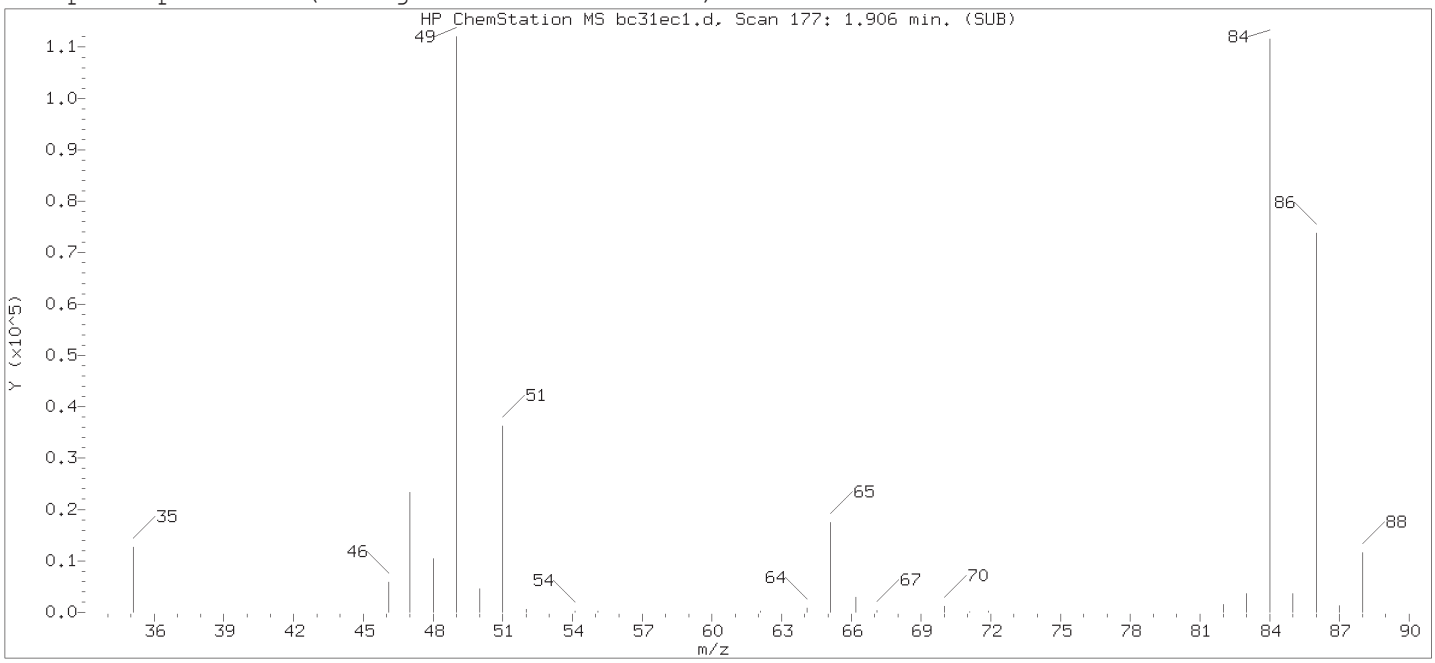
Compound Number : 30
Compound Name : t-Butyl alcohol-d10
Scan Number : 177
Retention Time (minutes): 1.906
Quant Ion : 65.00
Area (flag) : 92974M
On-Column Amount (ng) : 250.0000
Integration start scan : 164 Integration stop scan: 223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

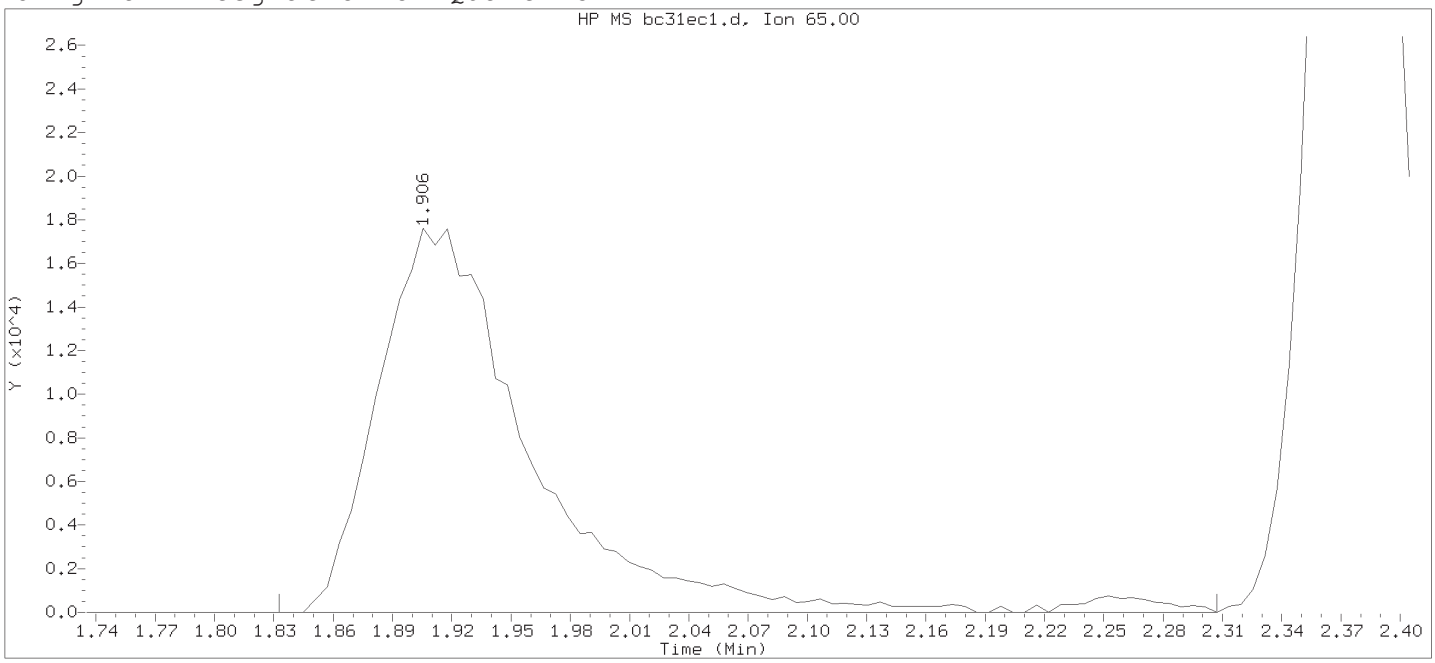
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 21:24.
PARALLAX ID: sej02002

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

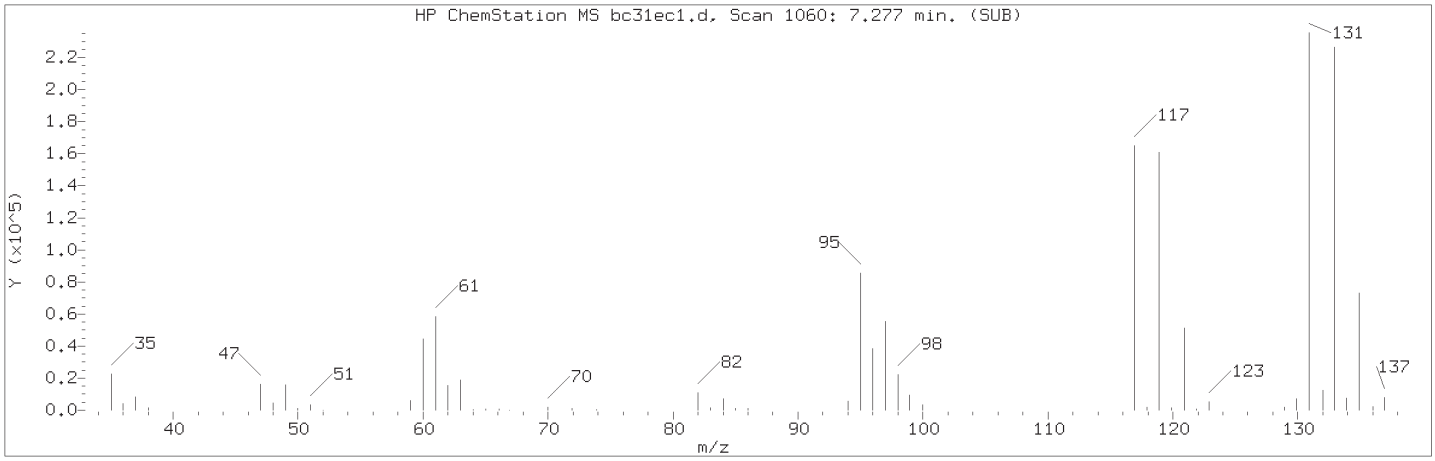
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 20:17 Automation

Sample Name: SECC050 Lab Sample ID: SECC050

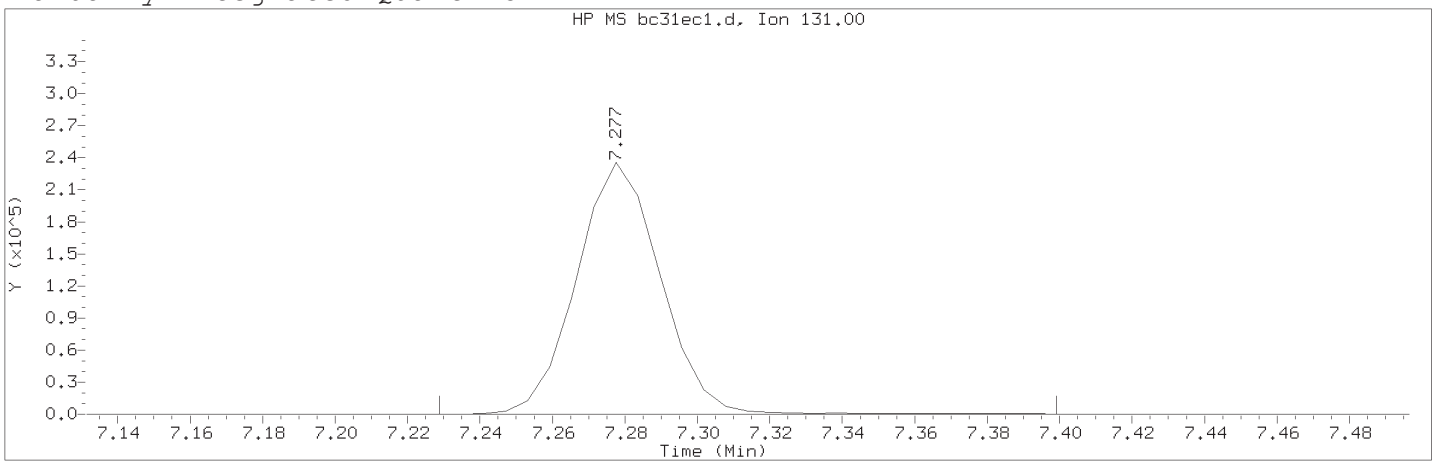
Compound Number : 30
Compound Name : t-Butyl alcohol-d10
Scan Number : 177
Retention Time (minutes): 1.906
Quant Ion : 65.00
Area : 95413
On-column Amount (ng) : 250.0000
Integration start scan : 164 Integration stop scan: 242
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 21:16 pth10165

Sample Name: SECC050 Lab Sample ID: SECC050

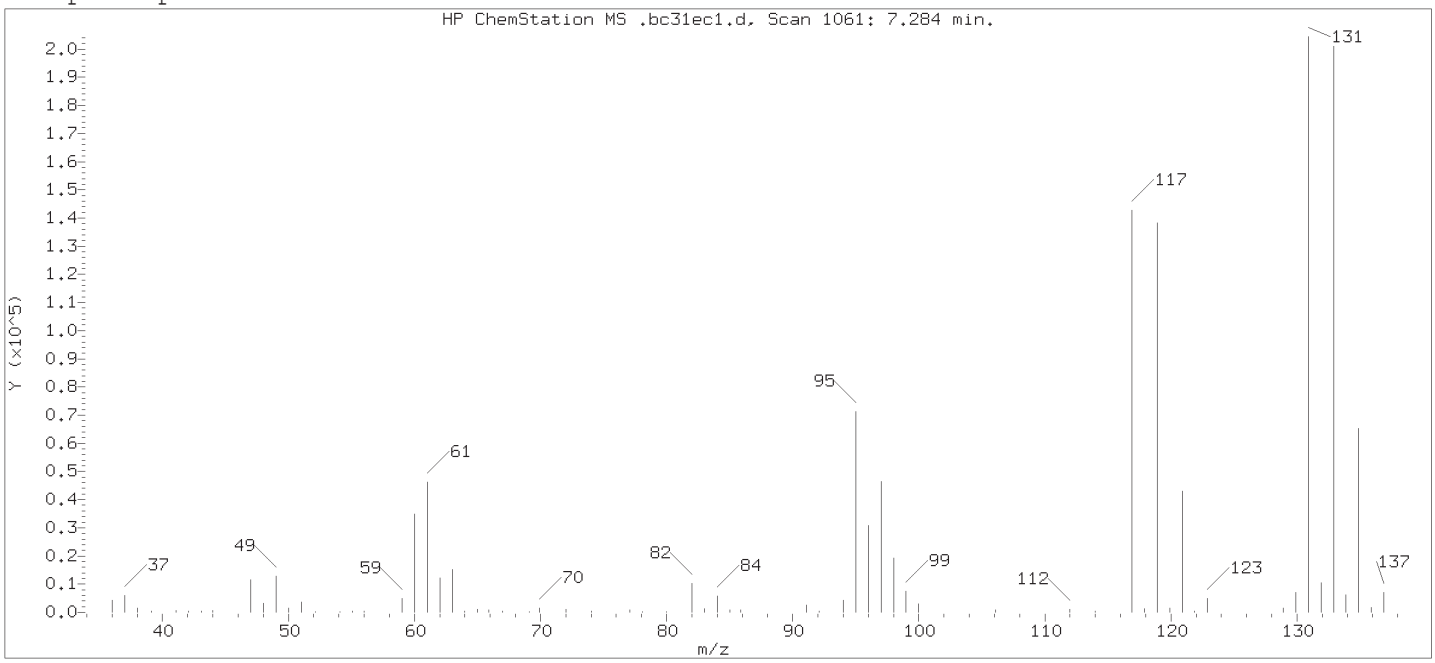
Compound Number : 108
Compound Name : 1,1,1,2-Tetrachloroethane
Scan Number : 1060
Retention Time (minutes): 7.277
Quant Ion : 131.00
Area (flag) : 377315M
On-Column Amount (ng) : 51.4680
Integration start scan : 1051 Integration stop scan: 1079
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

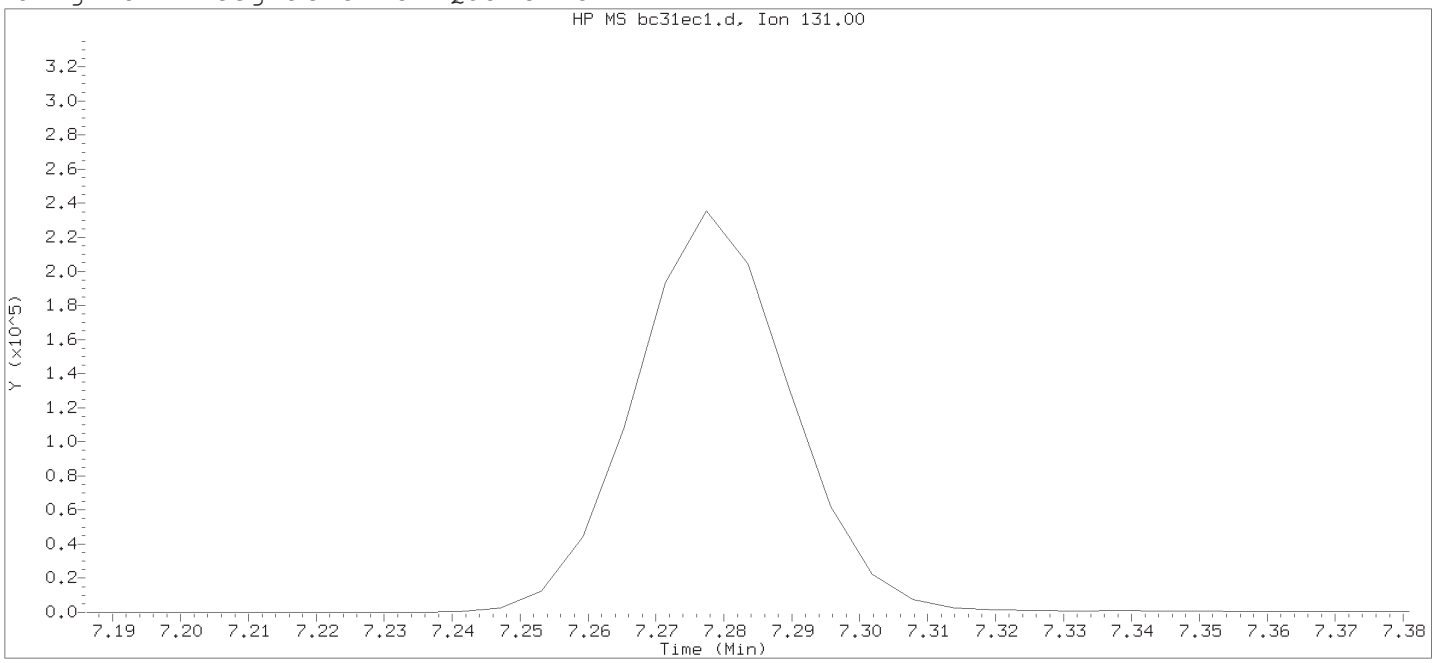
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 21:24.
PARALLAX ID: sej02002

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

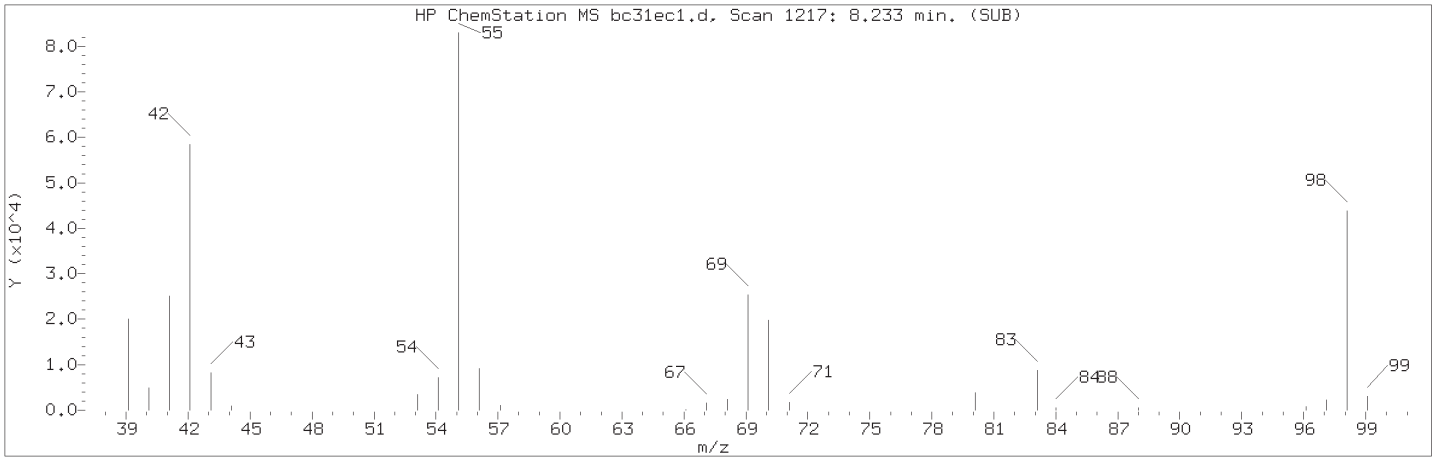
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 20:17 Automation

Sample Name: SECC050 Lab Sample ID: SECC050

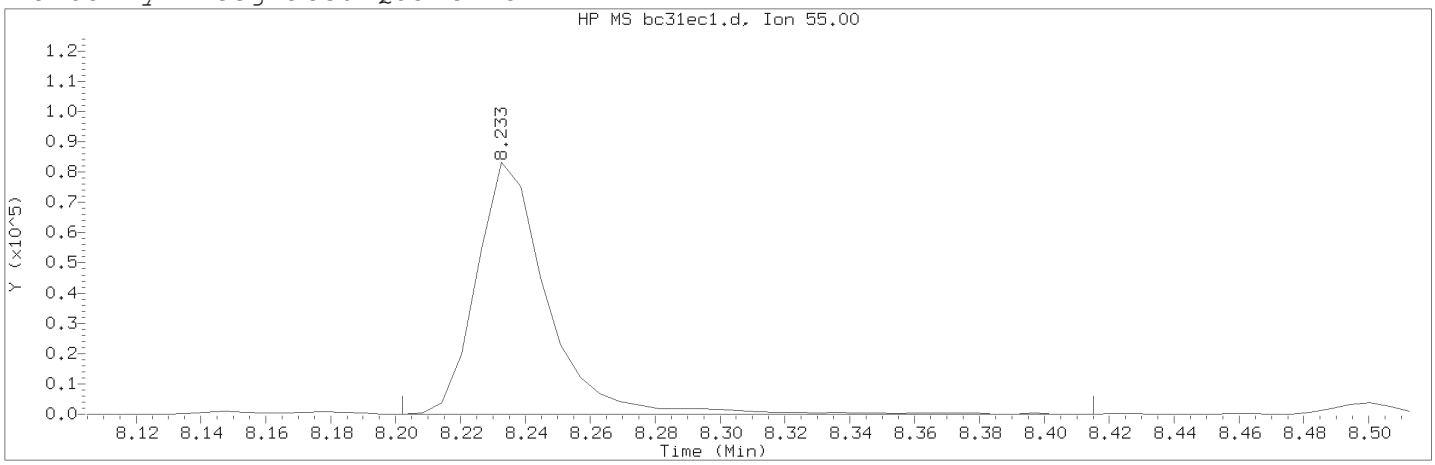
Compound Number : 108
Compound Name : 1,1,1,2-Tetrachloroethane
Expected RT (minutes) : 7.284
Quant Ion : 131.00

Digitally signed by Patrick T. Herres on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 21:16 pth10165

Sample Name: SECC050 Lab Sample ID: SECC050

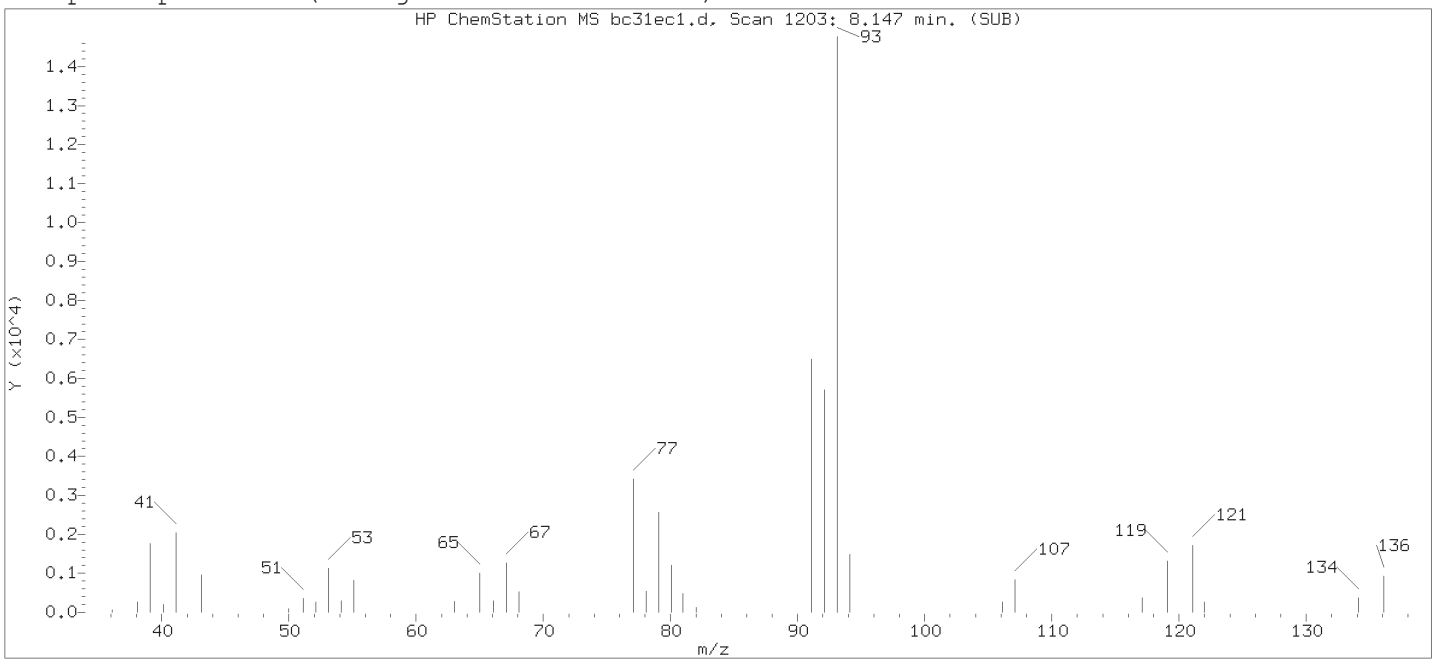
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1217
Retention Time (minutes): 8.233
Quant Ion : 55.00
Area (flag) : 126015A
On-Column Amount (ng) : 584.8142
Integration start scan : 1211 Integration stop scan: 1246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

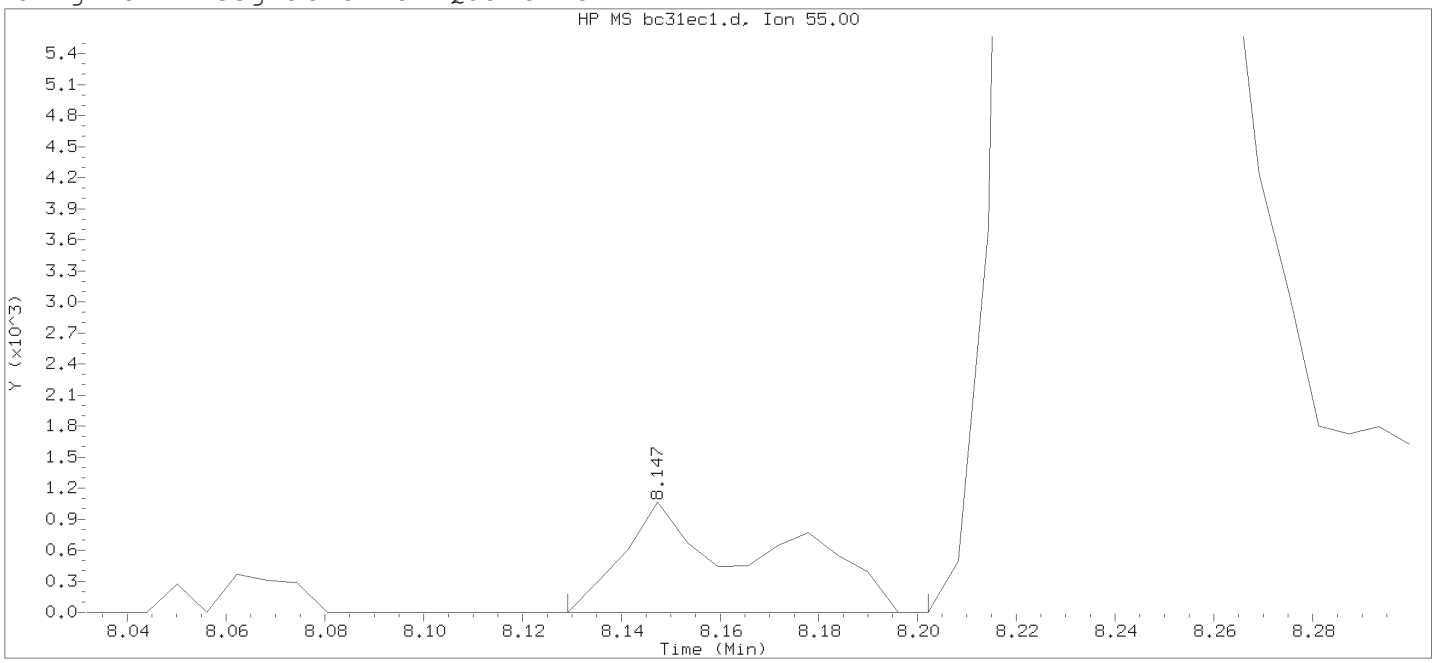
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 21:24.
PARALLAX ID: sej02002

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

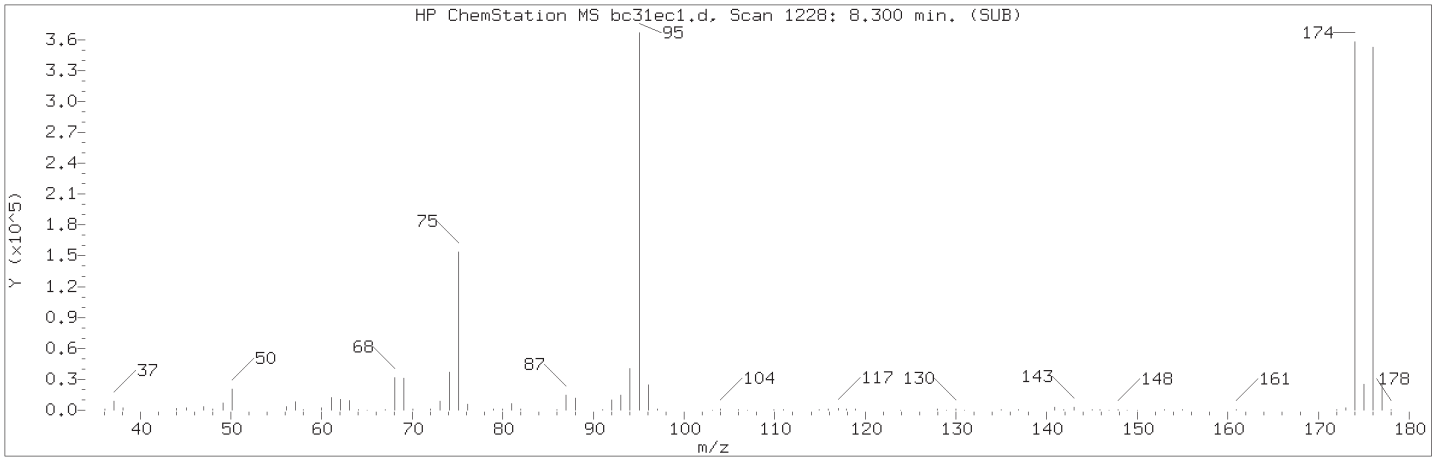
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 20:17 Automation

Sample Name: SECC050 Lab Sample ID: SECC050

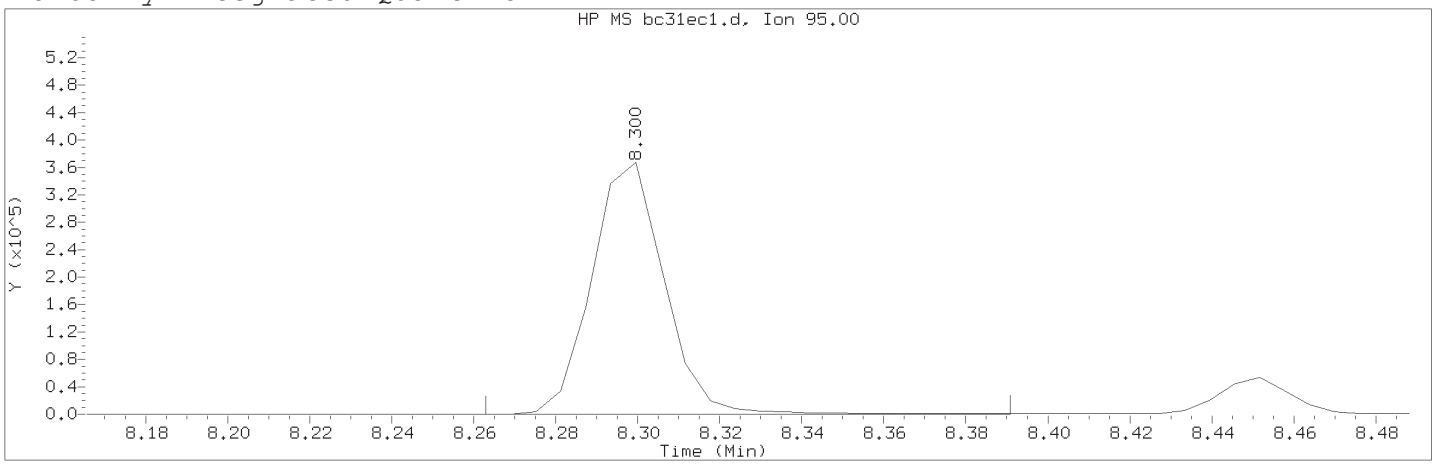
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1203
Retention Time (minutes): 8.147
Quant Ion : 55.00
Area : 2147
On-column Amount (ng) : 9.7108
Integration start scan : 1199 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 21:16 pth10165

Sample Name: SECC050 Lab Sample ID: SECC050

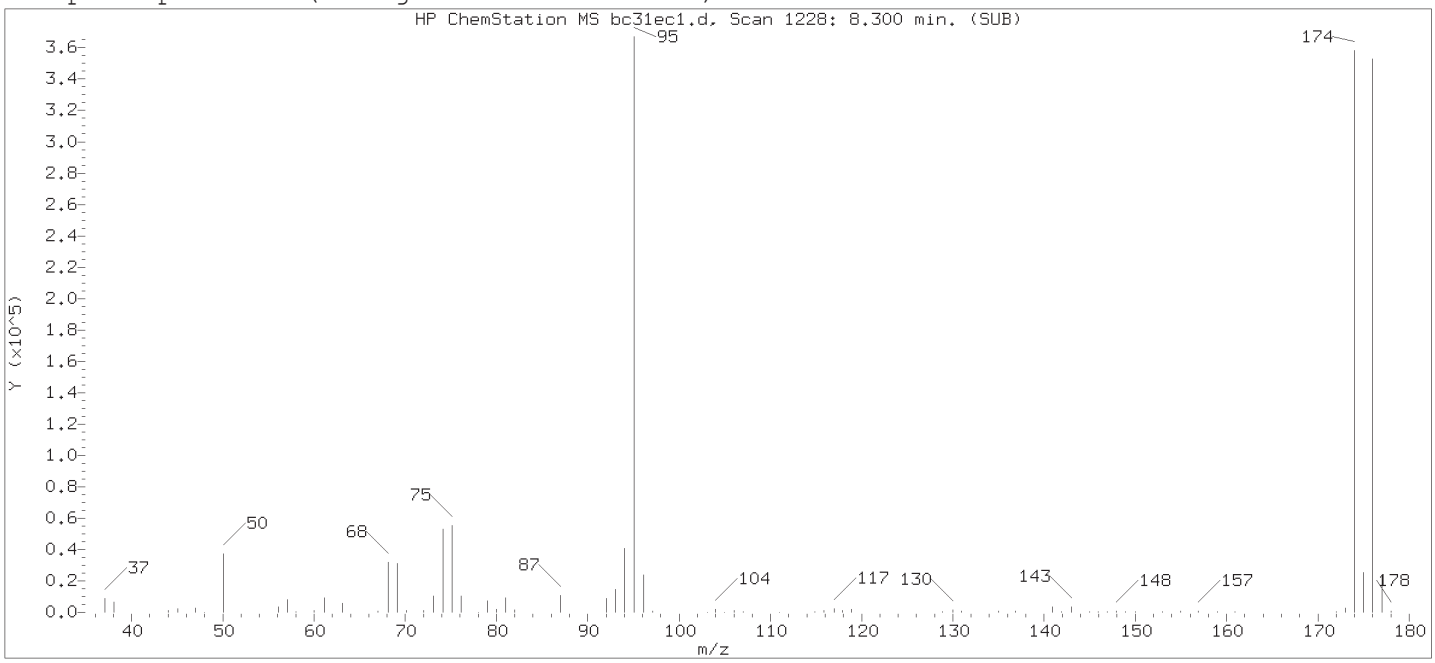
Compound Number : 119
Compound Name : 4-Bromofluorobenzene
Scan Number : 1228
Retention Time (minutes): 8.300
Quant Ion : 95.00
Area (flag) : 450569M
On-Column Amount (ng) : 49.5410
Integration start scan : 1221 Integration stop scan: 1242
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

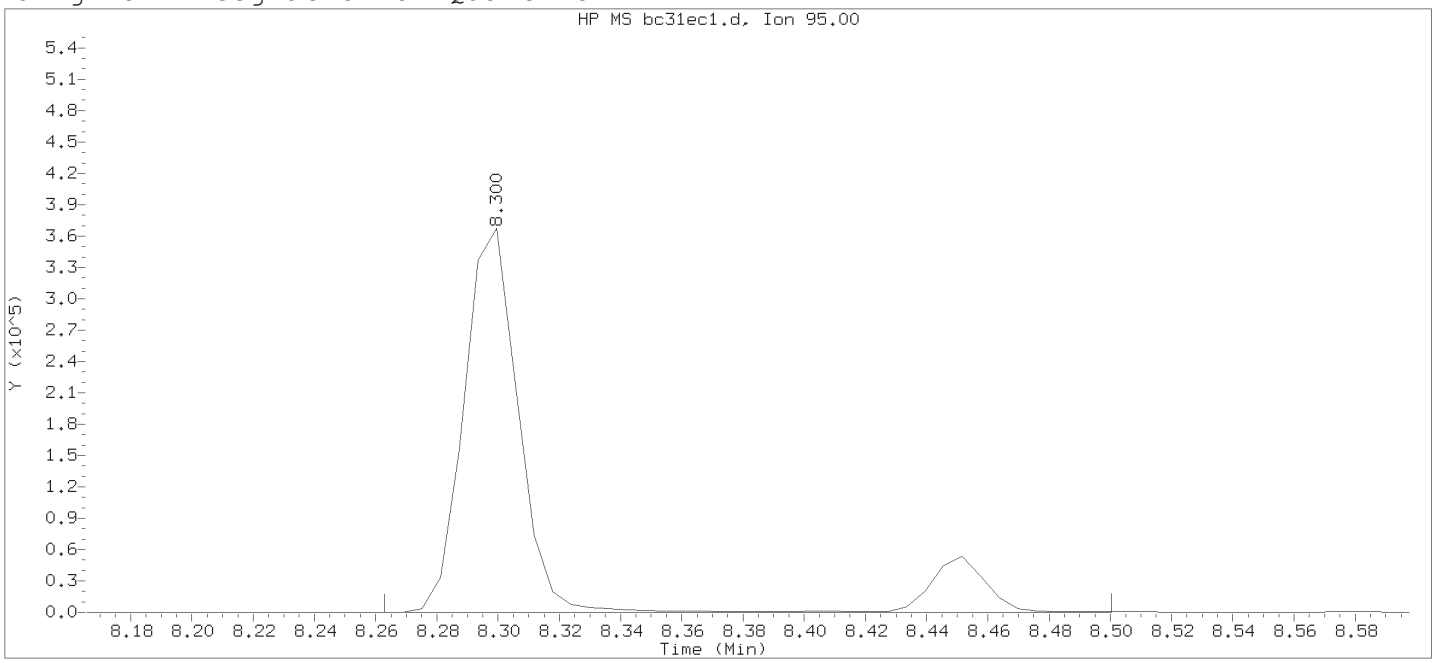
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 21:24.
PARALLAX ID: sej02002

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31ec1.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 20:02 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 20:17 Automation

Sample Name: SECC050 Lab Sample ID: SECC050

Compound Number : 119
Compound Name : 4-Bromofluorobenzene
Scan Number : 1228
Retention Time (minutes): 8.300
Quant Ion : 95.00
Area : 517594
On-column Amount (ng) : 56.9106
Integration start scan : 1221 Integration stop scan: 1260
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/14/2018 at 21:17.
Target 3.5 esignature user ID: [illegible]

Data File: /chem2/HP09953.i/18nov06a.b/bn06t01.d

Date : 06-NOV-2018 19:12

Client ID: BFB Aug07-18

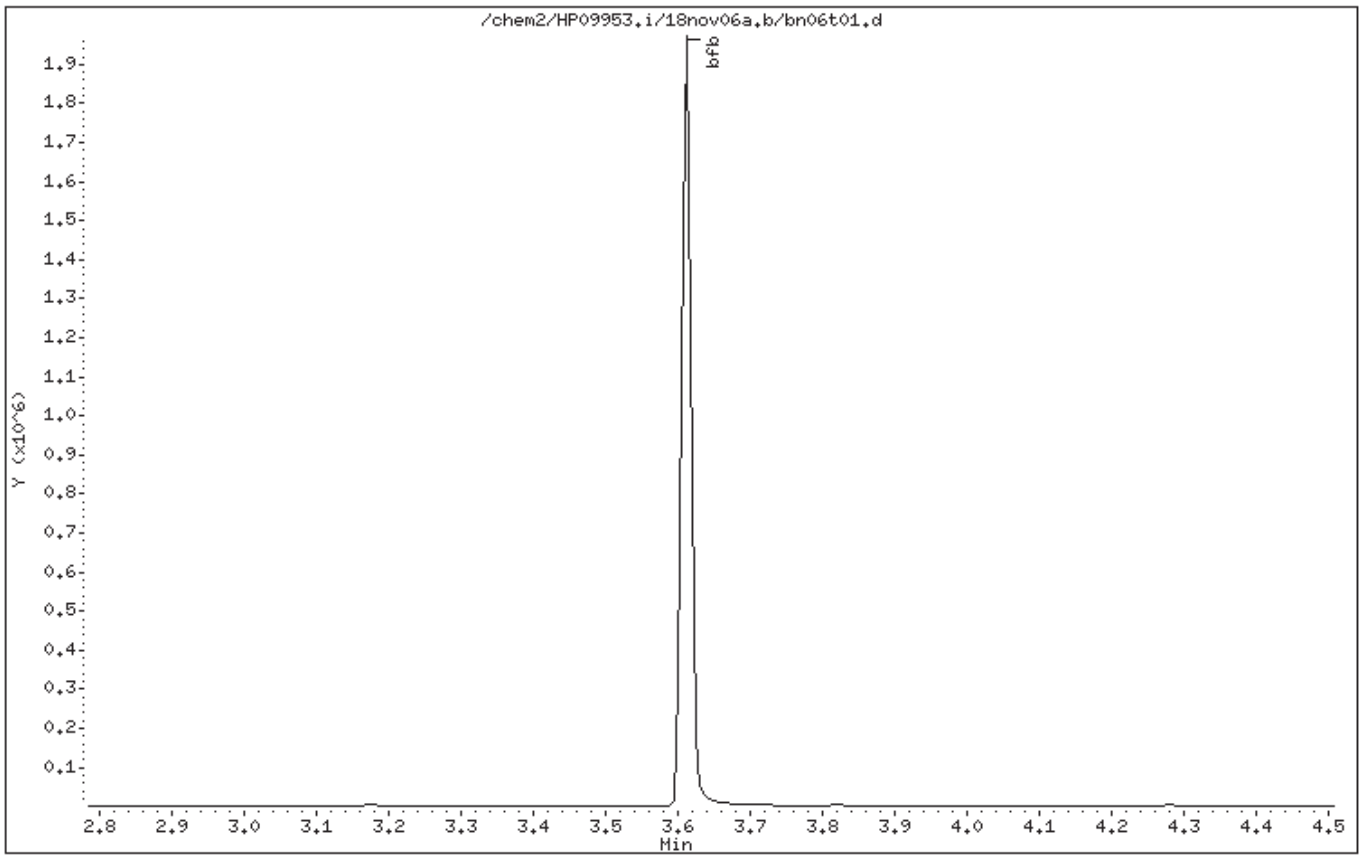
Instrument: HP09953.i

Sample Info: BFB Aug07-18;NG50 BFB;2;3;;;;;;

Operator: PTH10165

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Patrick T. Herres on 11/06/2018 at 20:25.
Target 3.5 esignature user ID: pth10165

Data File: /chem2/HP09953.i/18nov06a.b/bn06t01.d

Date : 06-NOV-2018 19:12

Client ID: BFB Aug07-18

Instrument: HP09953.i

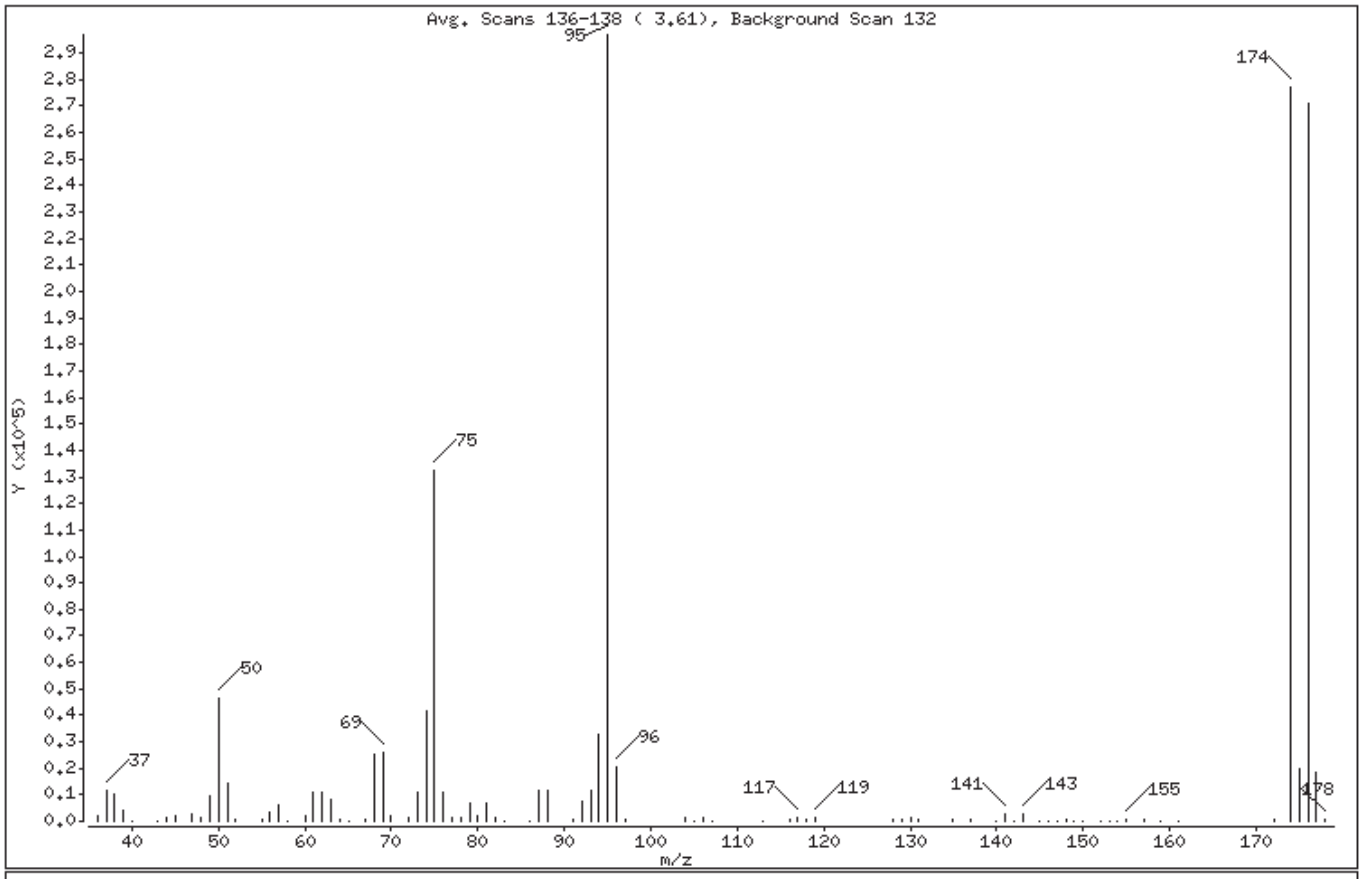
Sample Info: BFB Aug07-18;NG50 BFB;2;3;;;;;;

Operator: PTH10165

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.70
75	30.00 - 60.00% of mass 95	44.52
96	5.00 - 9.00% of mass 95	6.88
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	93.46
175	5.00 - 9.00% of mass 174	6.67 (7.14)
176	95.00 - 101.00% of mass 174	91.23 (97.62)
177	5.00 - 9.00% of mass 176	6.14 (6.73)

Digitally signed by Patrick T. Herres on 11/06/2018 at 20:25.
Target 3.5 esignature user ID: pth10165

Data File: /chem2/HP09953.i/18nov06a.b/bn06t01.d

Date : 06-NOV-2018 19:12

Client ID: BFB Aug07-18 Instrument: HP09953.i

Sample Info: BFB Aug07-18;NG50 BFB;2;3;;;;;;

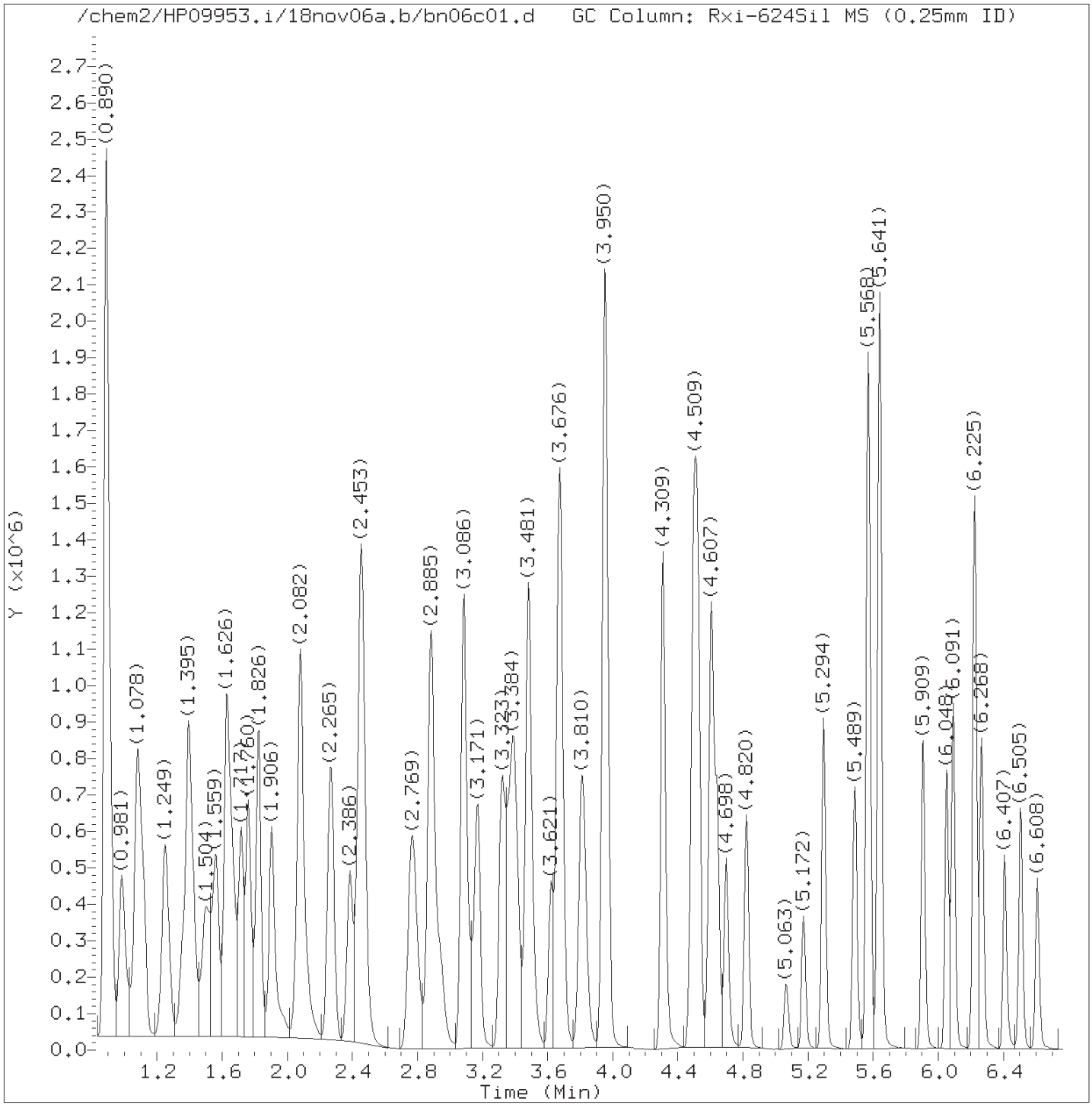
Operator: PTH10165

Column phase: DB-624 Column diameter: 0.18

Data File: bn06t01.d
Spectrum: Avg. Scans 136-138 (3.61), Background Scan 132
Location of Maximum: 95.00
Number of points: 88

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2184	65.00	216	94.00	32448	145.00	213
37.00	11381	67.00	642	95.00	296960	146.00	336
38.00	9946	68.00	25328	96.00	20432	147.00	127
39.00	4140	69.00	25688	97.00	621	148.00	760
40.00	80	70.00	2074	104.00	1038	149.00	105
43.00	96	72.00	1484	105.00	287	150.00	227
44.00	1128	73.00	10726	106.00	1072	152.00	90
45.00	2060	74.00	41744	107.00	282	153.00	86
47.00	2981	75.00	132160	113.00	97	154.00	89
48.00	1322	76.00	11052	116.00	901	155.00	802
49.00	9505	77.00	1614	117.00	1584	157.00	627
50.00	46624	78.00	1301	118.00	995	159.00	221
51.00	14458	79.00	6651	119.00	1416	161.00	276
52.00	572	80.00	1767	128.00	991	172.00	416
55.00	650	81.00	6673	129.00	529	174.00	277504
56.00	3707	82.00	1348	130.00	1045	175.00	19816
57.00	6152	83.00	83	131.00	435	176.00	270912
58.00	258	86.00	284	135.00	502	177.00	18232
60.00	2303	87.00	11903	137.00	433	178.00	456
61.00	11014	88.00	11502	140.00	187		
62.00	10918	91.00	954	141.00	2685		
63.00	8289	92.00	7316	142.00	292		
64.00	745	93.00	11328	143.00	2703		

Digitally signed by Patrick T. Herres on 11/06/2018 at 20:25.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

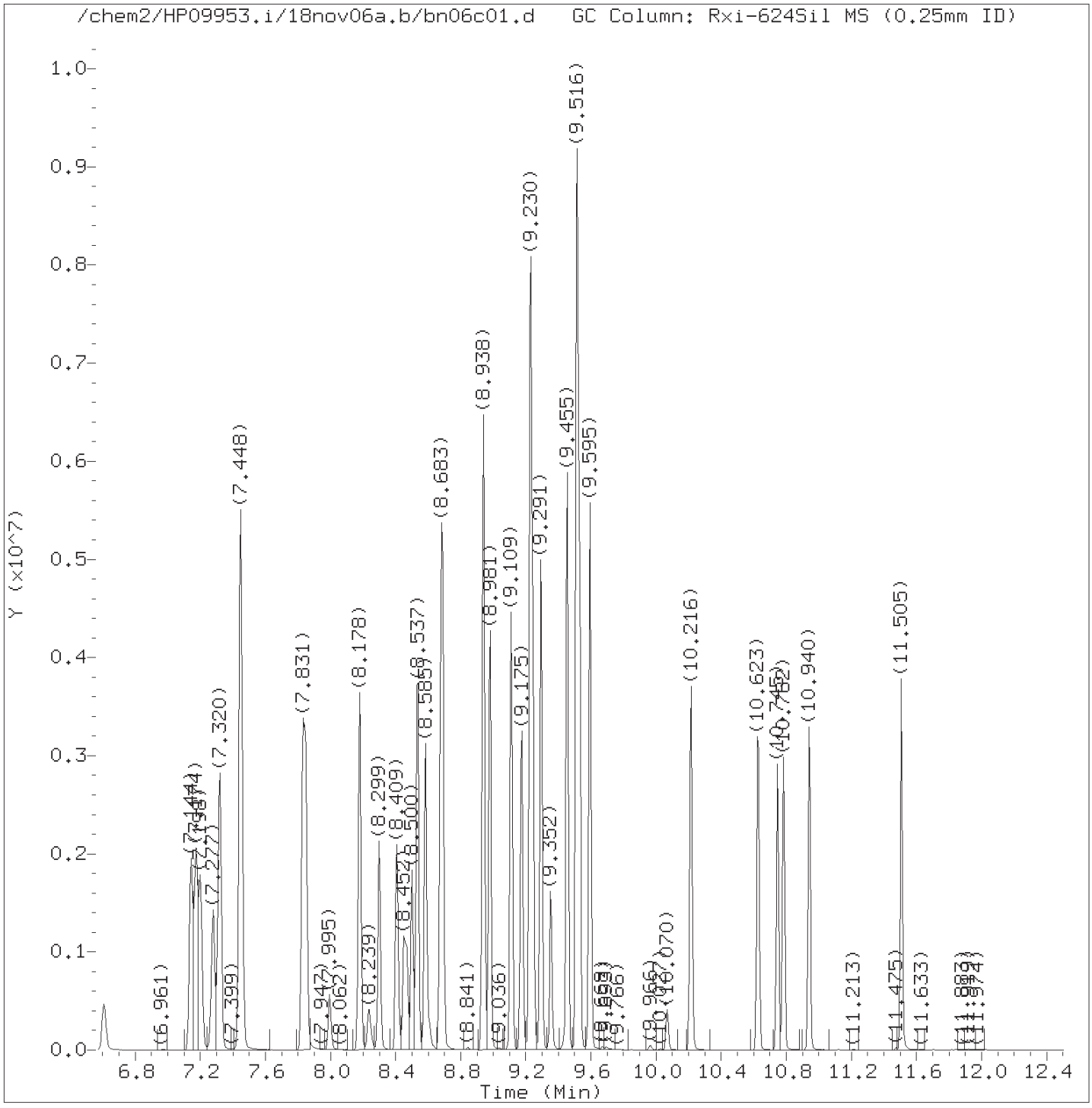
Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:24 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Patrick T. Herres
on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:24 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Patrick T. Herres
on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:24 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.987	85	785105	63.594
4) Chloromethane	(2)	1.072	50	668056	52.499
5) Vinyl Chloride	(2)	1.121	62	529267	53.377
9) Bromomethane	(2)	1.242	94	473695A	53.676
10) Chloroethane	(2)	1.267	64	288566	54.101
13) Trichlorofluoromethane	(2)	1.413	101	829306	60.754
15) Ethanol	(1)	1.449	45	143212	2262.511
17) Freon 123a	(2)	1.510	67	417896	45.729
18) Acrolein	(1)	1.565	56	491569	419.399
19) 1,1-Dichloroethene	(2)	1.626	96	331986	48.398
20) Acetone	(1)	1.644	58	49339	88.585
22) Freon 113	(2)	1.656	101	410919	59.750
23) 2-Propanol	(1)	1.717	45	109950	234.579
24) Methyl Iodide	(2)	1.717	142	786678	47.696
25) Carbon Disulfide	(2)	1.760	76	1043092M	38.005
27) Methyl Acetate	(2)	1.826	43	193801	55.097
29) Allyl Chloride	(2)	1.826	41	532362	58.020
31) Methylene Chloride	(2)	1.906	84	357917	44.153
30)*t-Butyl alcohol-d10	(1)	1.924	65	121316M	250.000
32) t-Butyl alcohol	(1)	1.979	59	127968	200.808
33) Acrylonitrile	(2)	2.058	53	95774	40.221
35) trans-1,2-Dichloroethene	(2)	2.082	96	377615	47.338
34) Methyl Tertiary Butyl Ether	(2)	2.094	73	881091	45.158
38) n-Hexane	(2)	2.265	57	576323	63.296
40) 1,1-Dichloroethane	(2)	2.386	63	640306	49.503
41) di-Isopropyl ether	(2)	2.453	45	1159636	48.034
42) 2-Chloro-1,3-butadiene	(2)	2.459	53	569158	49.934
43) Ethyl t-butyl ether	(2)	2.769	59	1025747	45.117
45) cis-1,2-Dichloroethene	(2)	2.879	96	422140	48.753
44) 2-Butanone	(1)	2.891	43	250049	80.171
47) 2,2-Dichloropropane	(2)	2.897	77	498763	52.893
49) Propionitrile	(1)	2.946	54	201592	240.932
46) 1,2-Dichloroethene (Total)	(2)		96	799755	96.092
51) Methacrylonitrile	(2)	3.080	67	310850	116.825
52) Bromochloromethane	(2)	3.092	128	251742	54.725
53) Tetrahydrofuran	(1)	3.128	71	68740	88.480
54) Chloroform	(2)	3.171	83	632676	48.191
56)$Dibromofluoromethane	(2)	3.317	113	350460	51.431

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:24 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	3.311	111	357472	51.748
57) 1,1,1-Trichloroethane	(2)	3.341	97	574101	42.709
58) Cyclohexane	(2)	3.396	56	698867	55.341
58) Cyclohexane	(2)	3.390	84	721286	61.117
58) Cyclohexane	(2)	3.390	69	217973	54.578
60) 1,1-Dichloropropene	(2)	3.481	75	499194	51.104
61) Carbon Tetrachloride	(2)	3.493	117	509679	49.924
63)$1,2-Dichloroethane-d4	(2)	3.621	102	74271	50.639
63)$1,2-Dichloroethane-d4	(2)	3.621	65	322687	50.030
63)$1,2-Dichloroethane-d4	(2)	3.621	104	48684	51.812
62) Isobutyl Alcohol	(1)	3.652	41	117862	526.411
64) Benzene	(2)	3.670	78	1476817	47.356
67) 1,2-Dichloroethane	(2)	3.688	62	416776	46.310
67) 1,2-Dichloroethane	(2)	3.694	98	41849	46.809
68) t-Amyl methyl ether	(2)	3.810	73	946094	45.070
70)*Fluorobenzene	(2)	3.944	96	1367264	50.000
72) n-Heptane	(2)	3.962	43	608808	73.298
75) Trichloroethene	(2)	4.309	95	396580	48.764
73) n-Butanol	(1)	4.315	56	187271	998.865
76) Methylcyclohexane	(2)	4.503	83	870059	68.747
77) 1,2-Dichloropropane	(2)	4.528	63	363257	49.049
81) Dibromomethane	(2)	4.643	93	213600	47.162
80) 1,4-Dioxane	(1)	4.692	88	44930M	578.279
79) Methyl Methacrylate	(2)	4.698	69	215680	45.182
84) Bromodichloromethane	(2)	4.820	83	437936	47.352
85) 2-Nitropropane	(1)	5.063	41	111652	69.582
87) 2-Chloroethyl Vinyl Ether	(2)	5.172	63	168104	43.108
89) cis-1,3-Dichloropropene	(2)	5.294	75	546002	48.891
90) 4-Methyl-2-pentanone	(2)	5.489	43	514954	80.613
91)$Toluene-d8	(3)	5.568	98	1397553	49.141
91)$Toluene-d8	(3)	5.568	100	906061	49.096
92) Toluene	(3)	5.641	92	964533	45.727
93) trans-1,3-Dichloropropene	(3)	5.909	75	472554	46.769
94) 1,3-Dichloropropene (total)	(3)		100	1018556	95.661
95) Ethyl Methacrylate	(3)	6.048	69	419086	42.729
96) 1,1,2-Trichloroethane	(3)	6.091	97	310915	45.421
98) Tetrachloroethene	(3)	6.225	166	478701	41.432
99) 1,3-Dichloropropane	(3)	6.268	76	507352	46.032

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:24 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 2-Hexanone	(3)	6.407	43	362450	73.589
103) Dibromochloromethane	(3)	6.505	129	362711	45.992
104) 1,2-Dibromoethane	(3)	6.608	107	325294	45.999
105)*Chlorobenzene-d5	(3)	7.144	117	1101888	50.000
107) Chlorobenzene	(3)	7.174	112	1140034	46.291
106) 1-Chlorohexane	(3)	7.204	91	532894	50.844
108) 1,1,1,2-Tetrachloroethane	(3)	7.277	131	384954	46.097
109) Ethylbenzene	(3)	7.320	91	1887762	47.584
110) m+p-Xylene	(3)	7.448	106	1540650	95.168
111) o-Xylene	(3)	7.831	106	741280	45.803
113) Styrene	(3)	7.849	104	1220438	45.743
112) Xylene (Total)	(3)		106	2281930	140.970
114) Bromoform	(3)	7.995	173	219242	44.613
115) Isopropylbenzene	(3)	8.178	105	1937992	47.506
118) Cyclohexanone	(1)	8.232	55	151108	537.434
119)$4-Bromofluorobenzene	(3)	8.299	95	517605M	49.961
119)$4-Bromofluorobenzene	(3)	8.299	174	487604	51.133
121) Bromobenzene	(4)	8.409	156	519623	42.857
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	398940	43.096
123) 1,2,3-Trichloropropane	(4)	8.470	110	122441	44.610
122) trans-1,4-Dichloro-2-butene	(4)	8.500	53	265088	116.703
124) n-Propylbenzene	(4)	8.537	91	2277931	47.521
126) 2-Chlorotoluene	(4)	8.585	126	492843	43.816
130) 4-Chlorotoluene	(4)	8.677	126	519151	45.556
129) 1,3,5-Trimethylbenzene	(4)	8.689	105	1686993	45.497
133) tert-Butylbenzene	(4)	8.938	134	409760	47.042
134) Pentachloroethane	(4)	8.938	167	351892	67.560
135) 1,2,4-Trimethylbenzene	(4)	8.981	105	1747264	45.188
136) sec-Butylbenzene	(4)	9.109	105	2200584	46.618
138) 1,3-Dichlorobenzene	(4)	9.175	146	1033868	45.435
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	661749	50.000
139) p-Isopropyltoluene	(4)	9.230	119	2020745	47.769
141) 1,4-Dichlorobenzene	(4)	9.242	146	1052213	44.353
142) 1,2,3-Trimethylbenzene	(4)	9.291	105	2025797	48.602
143) Benzyl Chloride	(4)	9.352	126	175797	56.858
144) 1,3-Diethylbenzene	(4)	9.455	119	1369421	52.366
145) 1,4-Diethylbenzene	(4)	9.516	119	1490247	54.909
147) 1,2-Dichlorobenzene	(4)	9.516	146	1006429	45.240

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

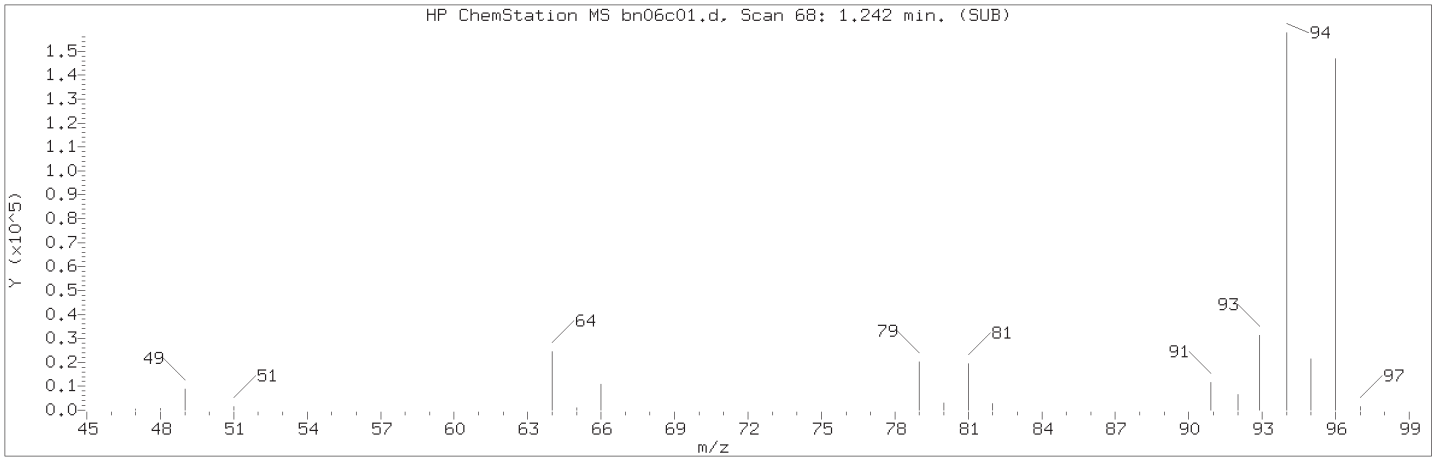
Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:24 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

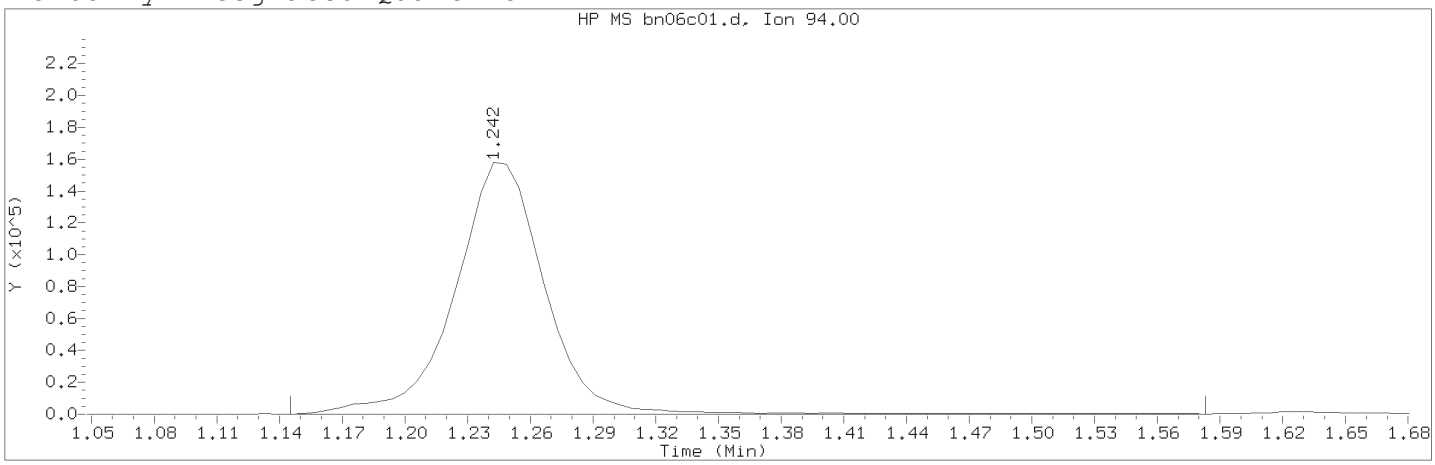
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146)	n-Butylbenzene	(4)	9.528	92	978303	49.778
148)	1,2-Diethylbenzene	(4)	9.595	119	1138840	49.778
149)	Diethylbenzene (total)	(4)		100	3998508	157.053
151)	1,2-Dibromo-3-chloropropane	(4)	10.070	75	64787	40.282
152)	1,3,5-Trichlorobenzene	(4)	10.216	180	824215	47.352
153)	1,2,4-Trichlorobenzene	(4)	10.629	180	738156	44.995
154)	Hexachlorobutadiene	(4)	10.745	225	368069	49.175
155)	Naphthalene	(4)	10.782	128	1579765	40.537
156)	1,2,3-Trichlorobenzene	(4)	10.940	180	685408	43.812
157)	2-Methylnaphthalene	(4)	11.505	142	1138900	43.207

Digitally signed by Patrick T. Herres
on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:24 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

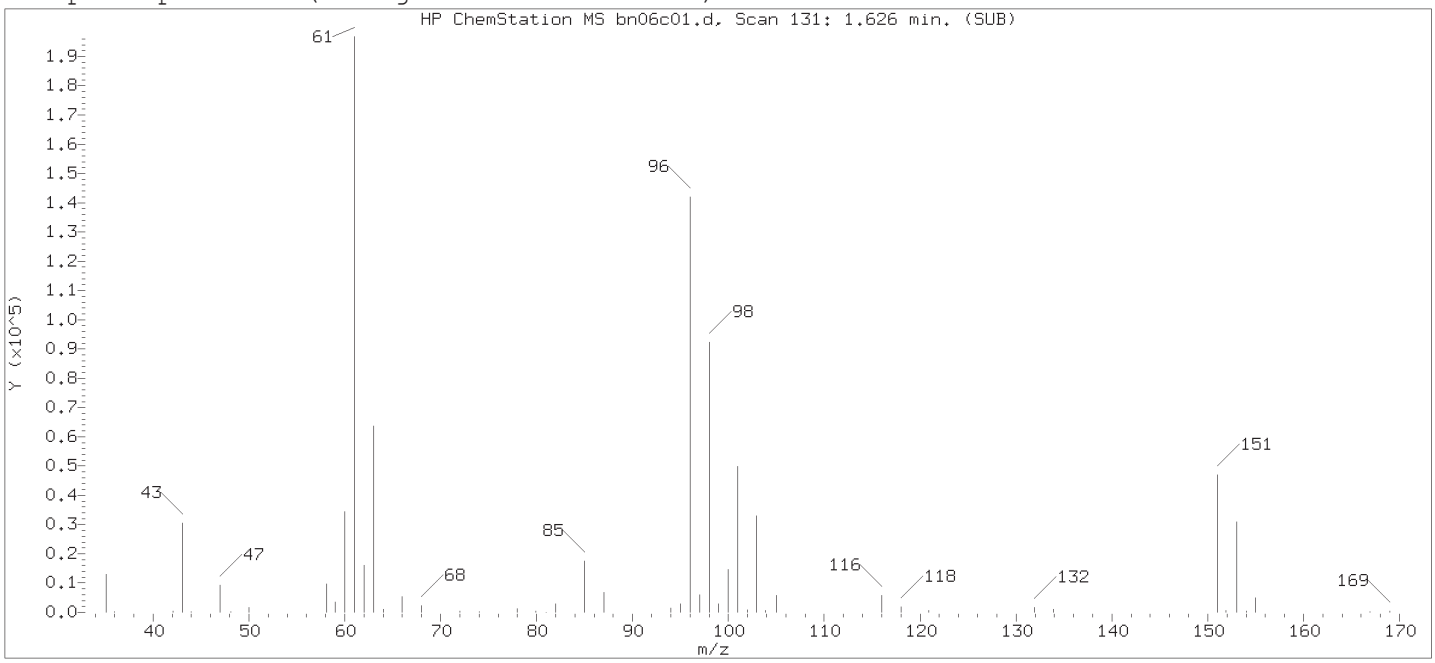
Compound Number : 9
Compound Name : Bromomethane
Scan Number : 68
Retention Time (minutes): 1.242
Quant Ion : 94.00
Area (flag) : 473695A
On-Column Amount (ng) : 53.6756
Integration start scan : 51 Integration stop scan: 123
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

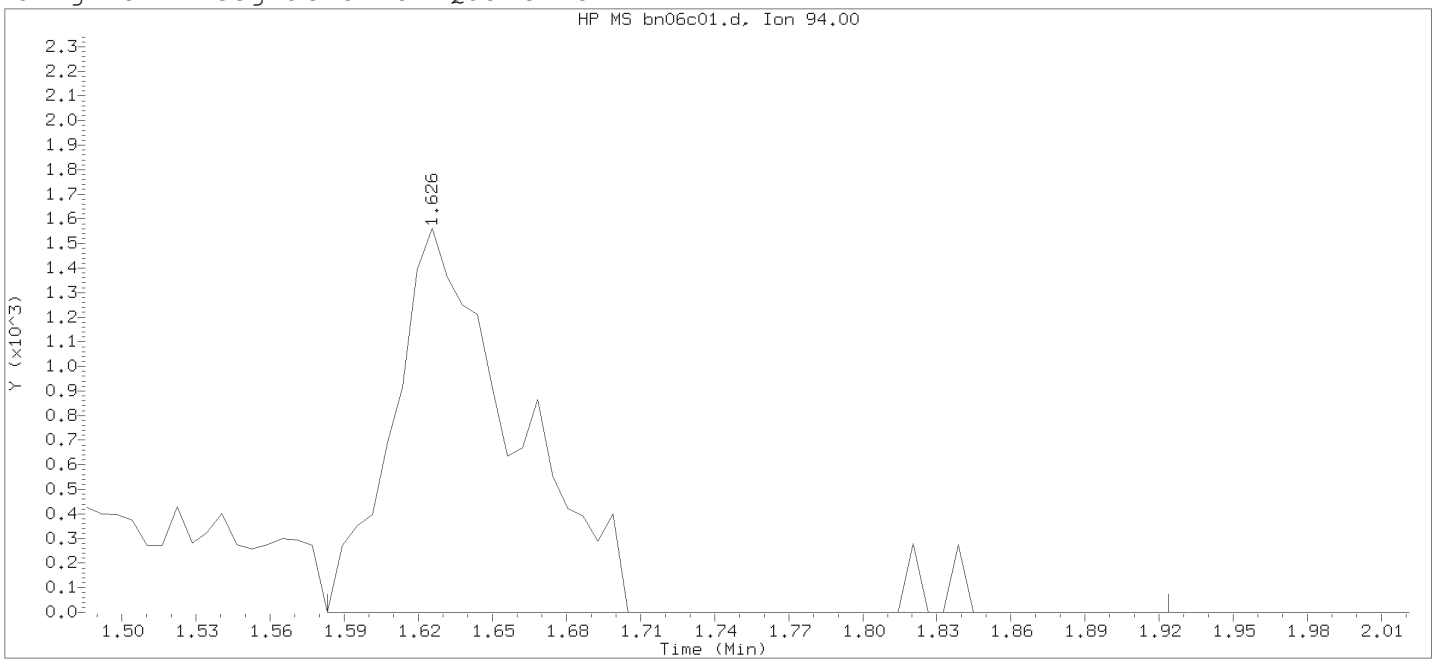
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Joshua E. Berrios on 11/09/2018 at 22:46.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

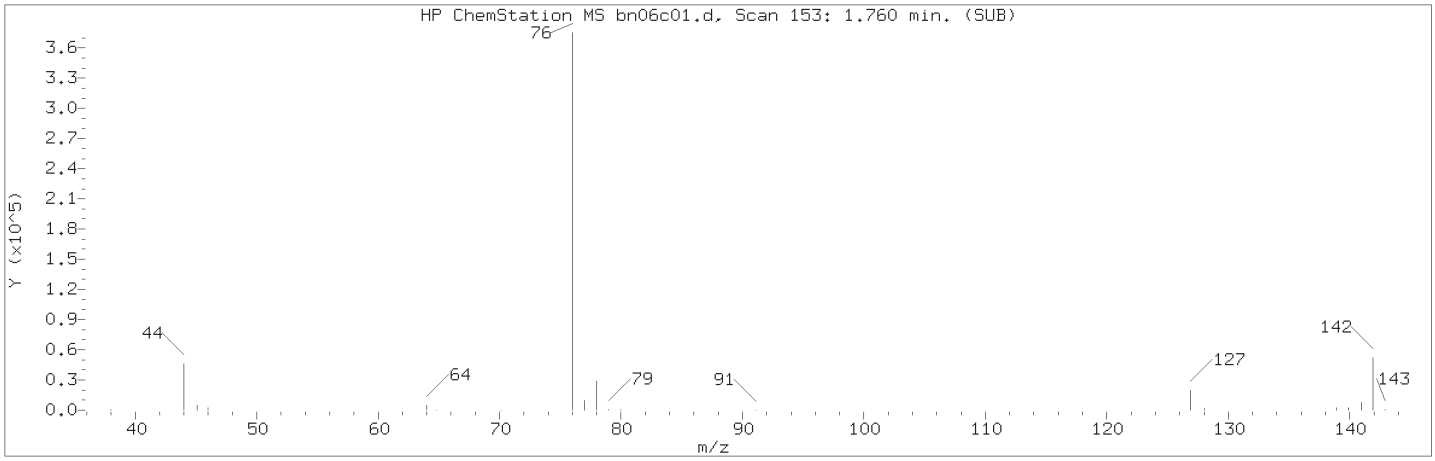
Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:23 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

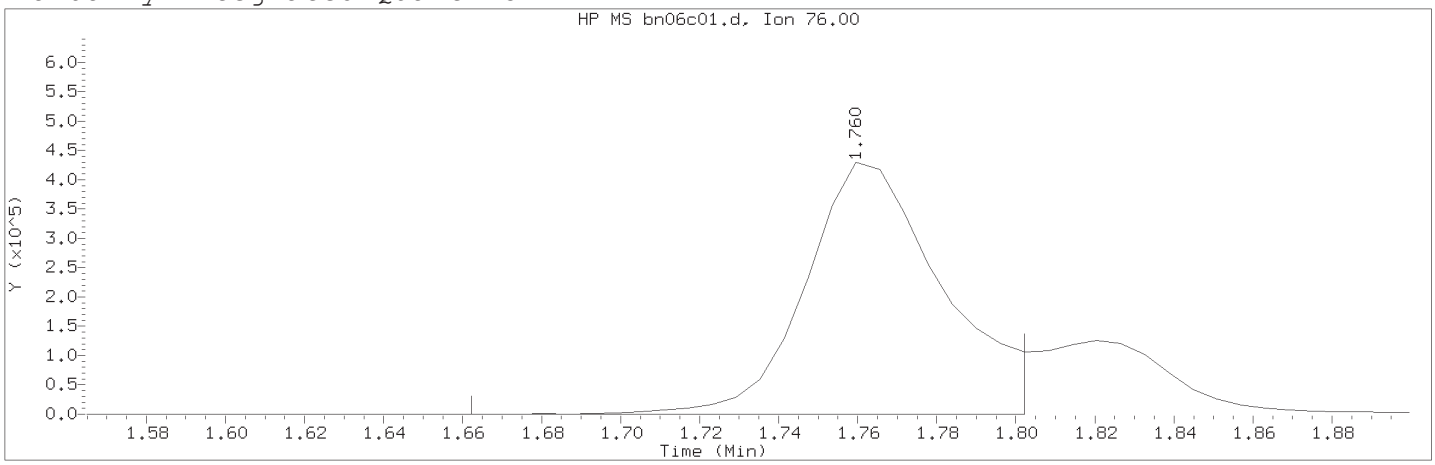
Compound Number : 9
Compound Name : Bromomethane
Scan Number : 131
Retention Time (minutes): 1.626
Quant Ion : 94.00
Area : 5509
On-column Amount (ng) : 0.6243
Integration start scan : 123 Integration stop scan: 179
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: PTH10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:24 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

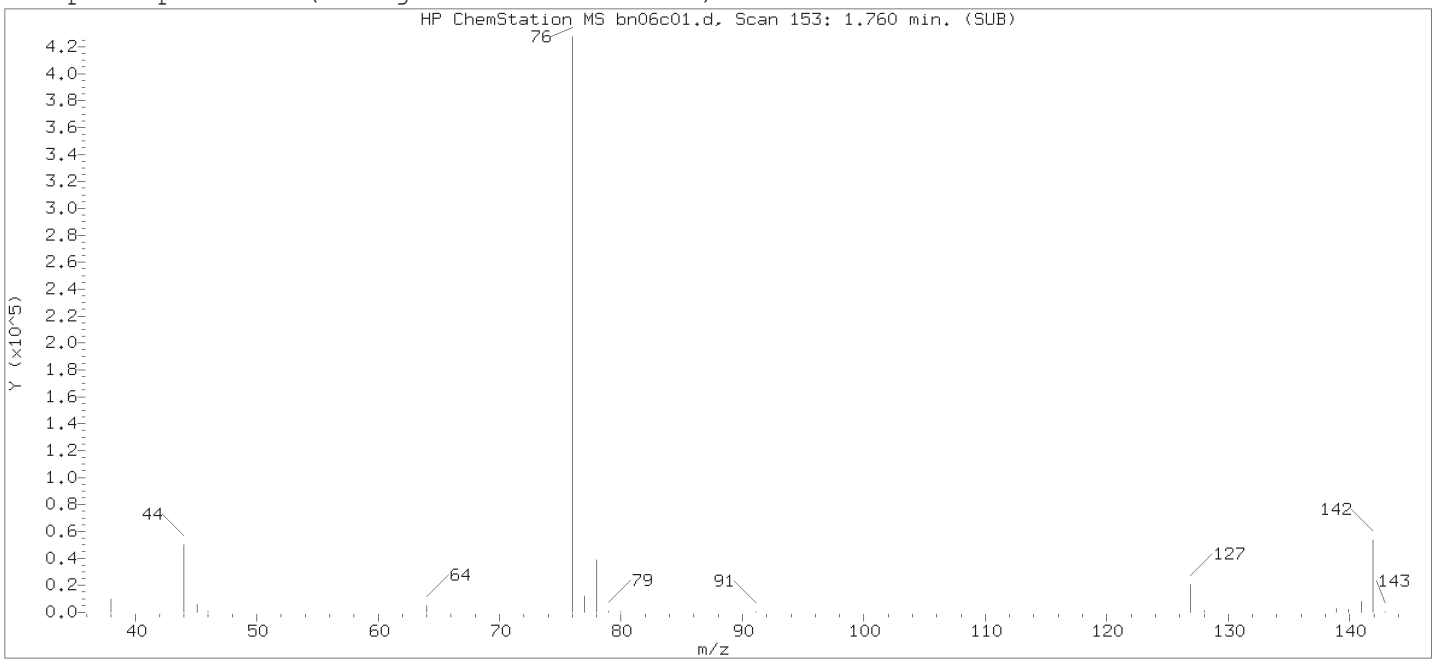
Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 153
Retention Time (minutes): 1.760
Quant Ion : 76.00
Area (flag) : 1043092M
On-Column Amount (ng) : 38.0045
Integration start scan : 136 Integration stop scan: 159
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

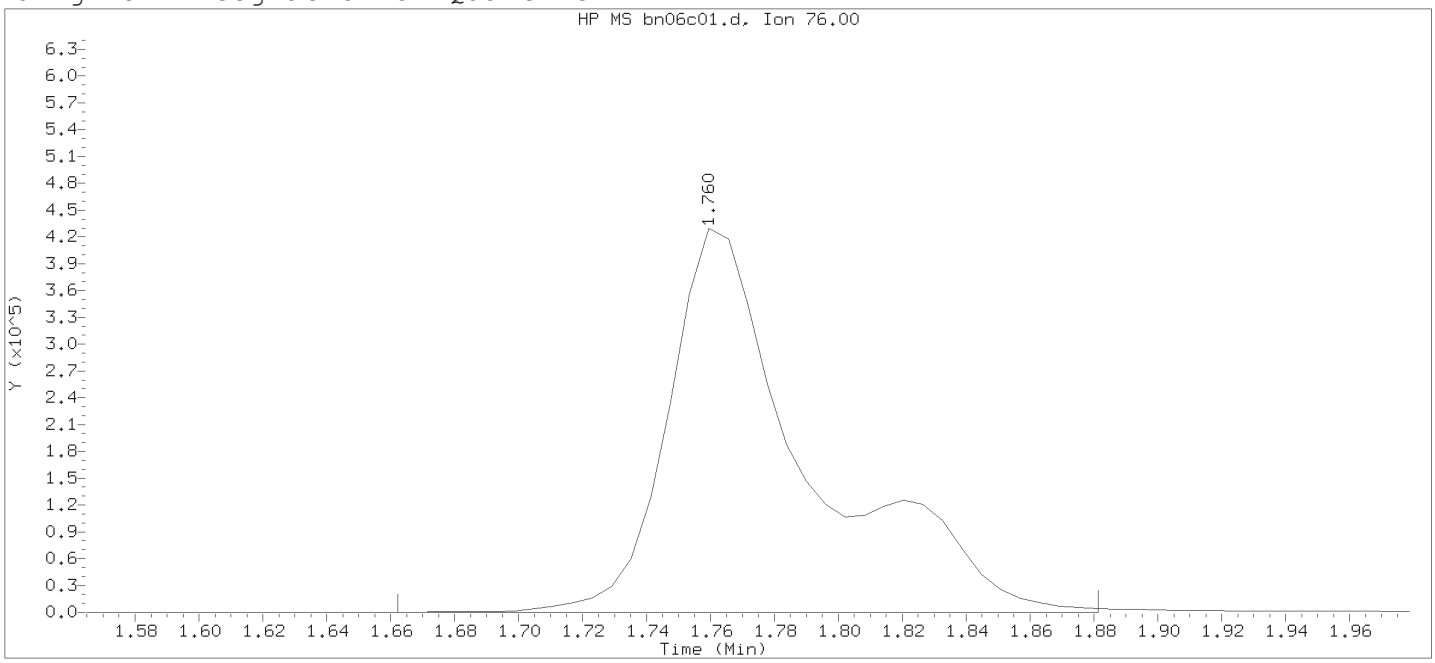
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Joshua E. Berrios on 11/09/2018 at 22:46.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

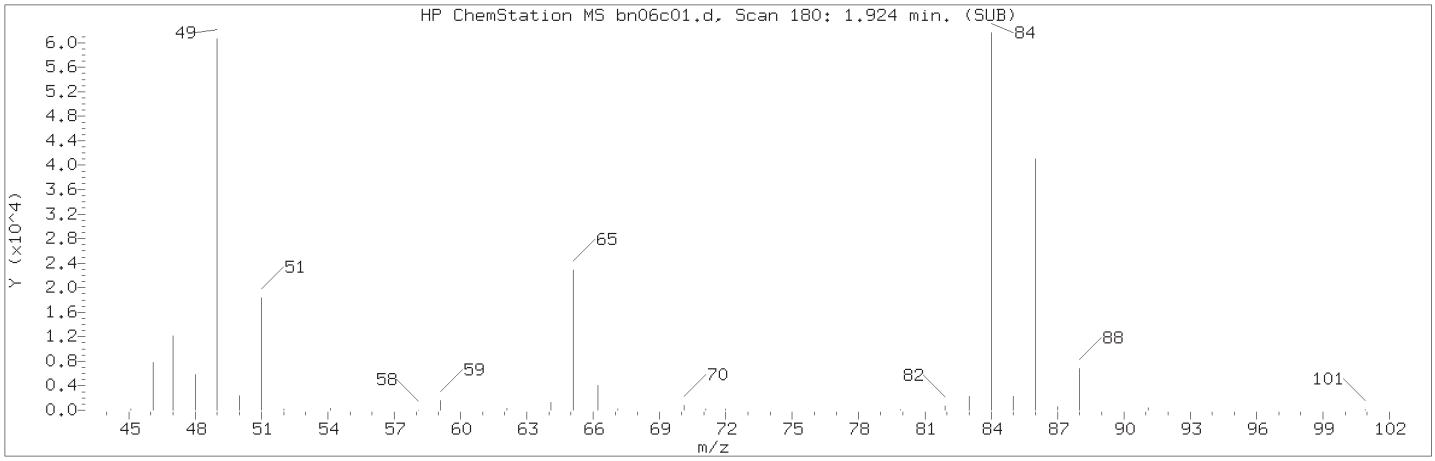
Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:23 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

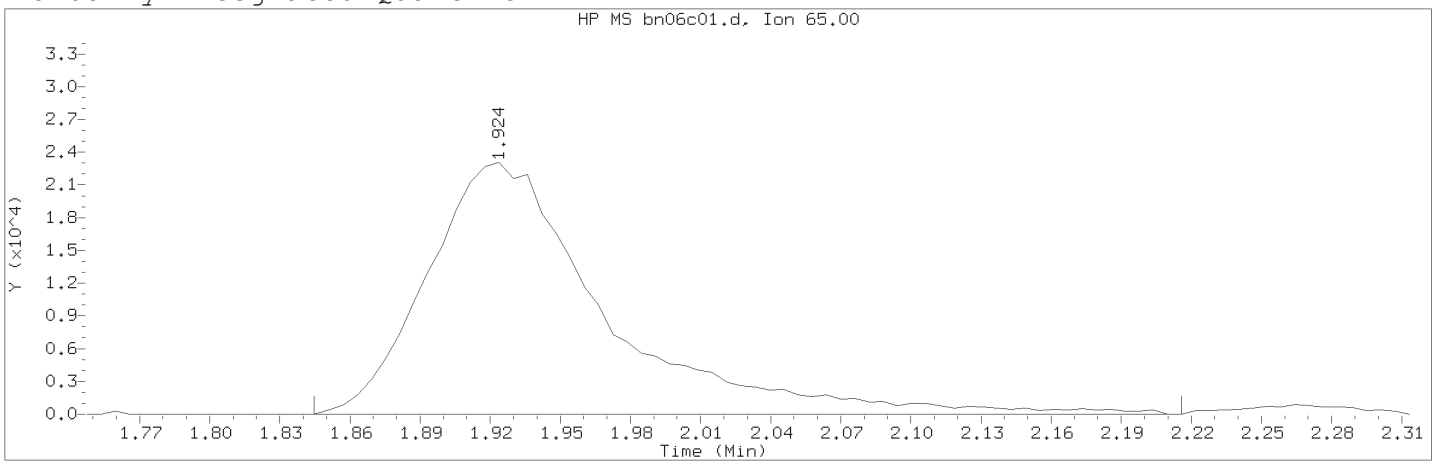
Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 153
Retention Time (minutes): 1.760
Quant Ion : 76.00
Area : 1318957
On-column Amount (ng) : 48.0555
Integration start scan : 136 Integration stop scan: 172
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:24 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

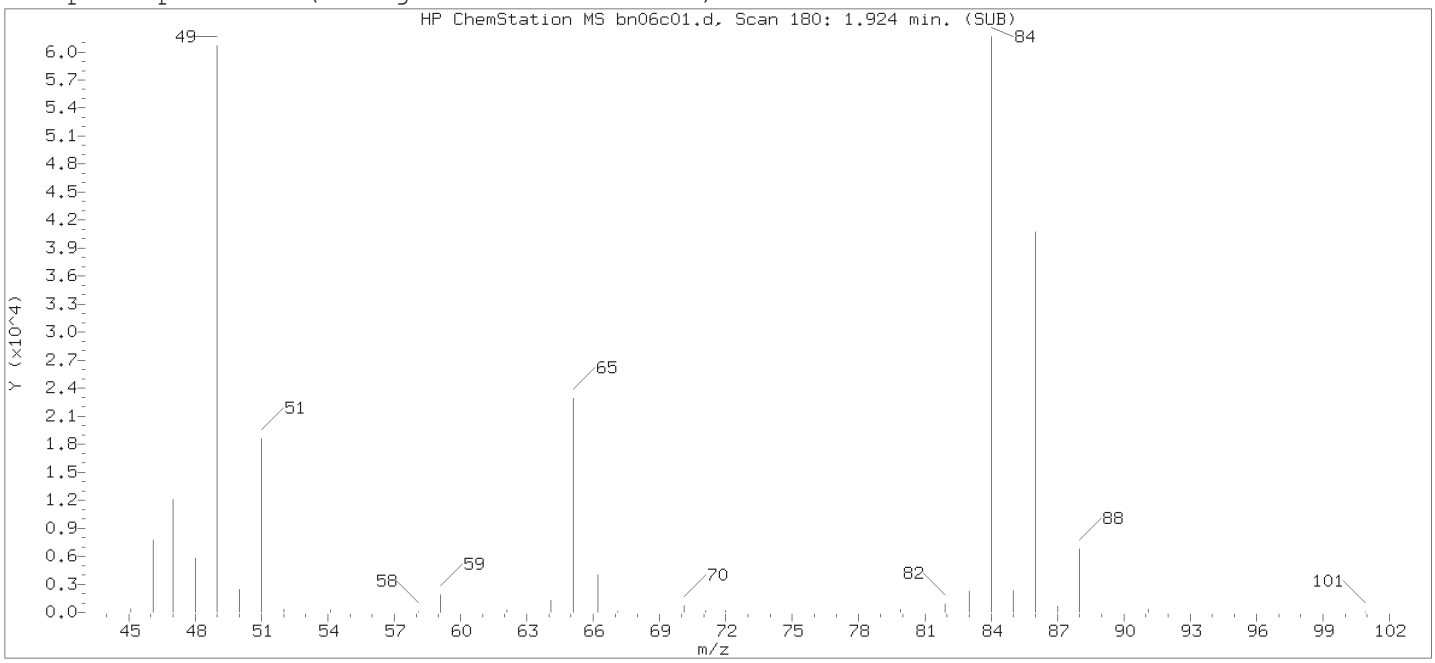
Compound Number : 30
Compound Name : t-Butyl alcohol-d10
Scan Number : 180
Retention Time (minutes): 1.924
Quant Ion : 65.00
Area (flag) : 121316M
On-Column Amount (ng) : 250.0000
Integration start scan : 166 Integration stop scan: 227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

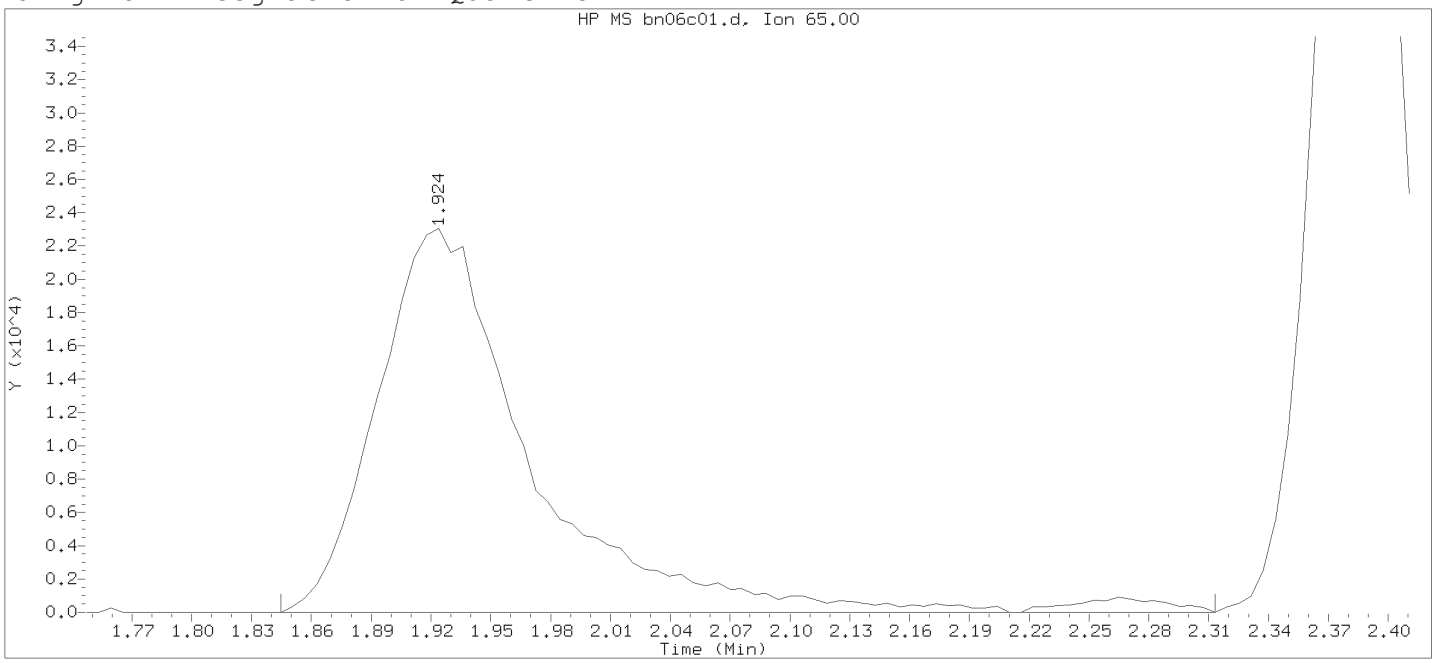
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Joshua E. Berrios on 11/09/2018 at 22:46.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

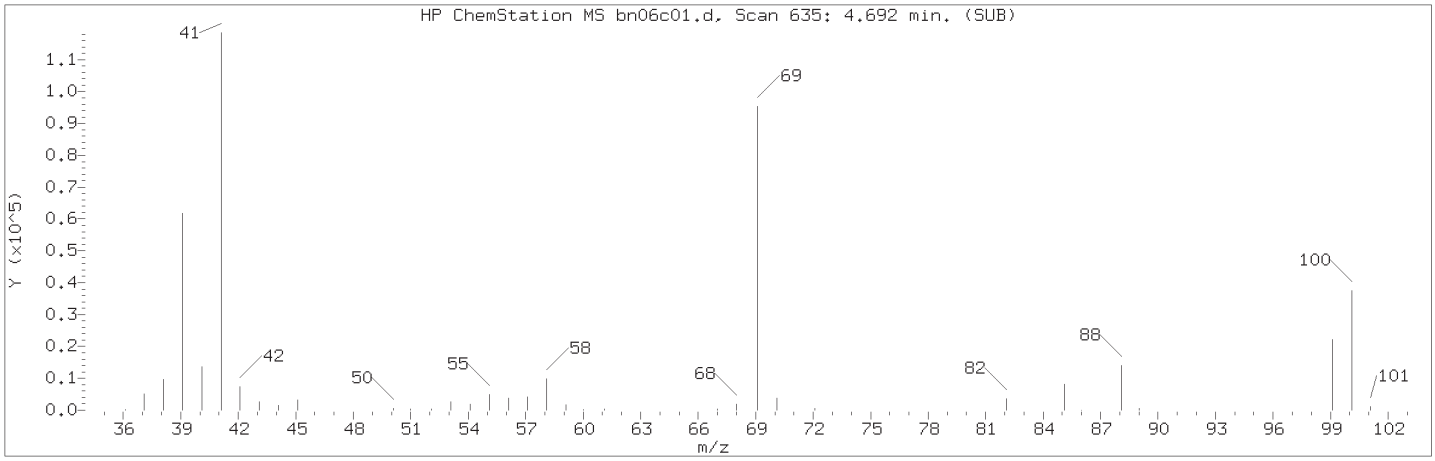
Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:23 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

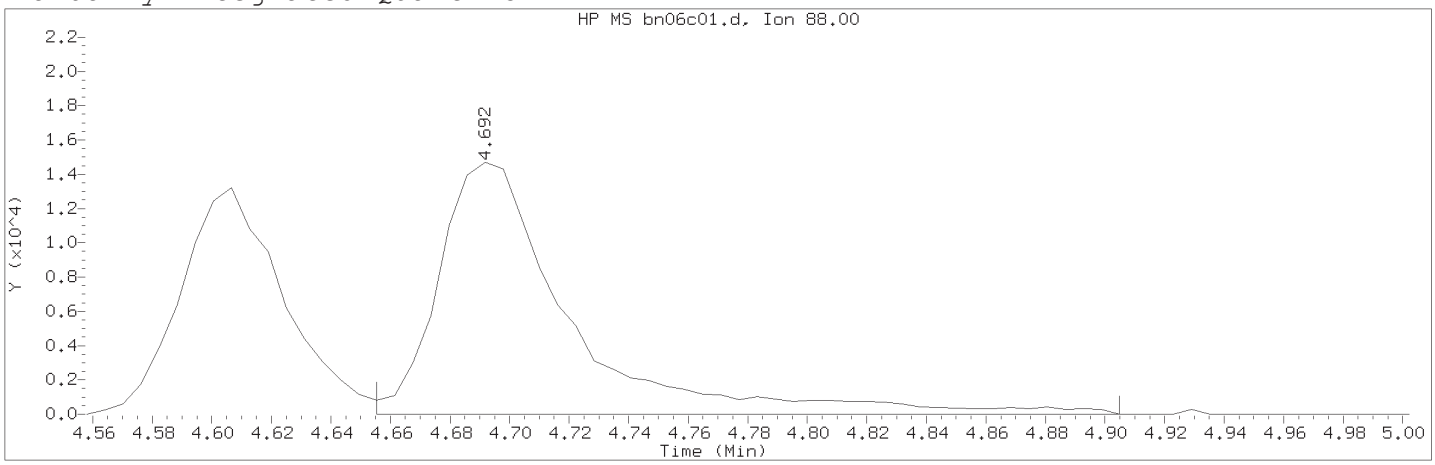
Compound Number : 30
Compound Name : t-Butyl alcohol-d10
Scan Number : 180
Retention Time (minutes): 1.924
Quant Ion : 65.00
Area : 124252
On-column Amount (ng) : 250.0000
Integration start scan : 166 Integration stop scan: 243
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:24 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

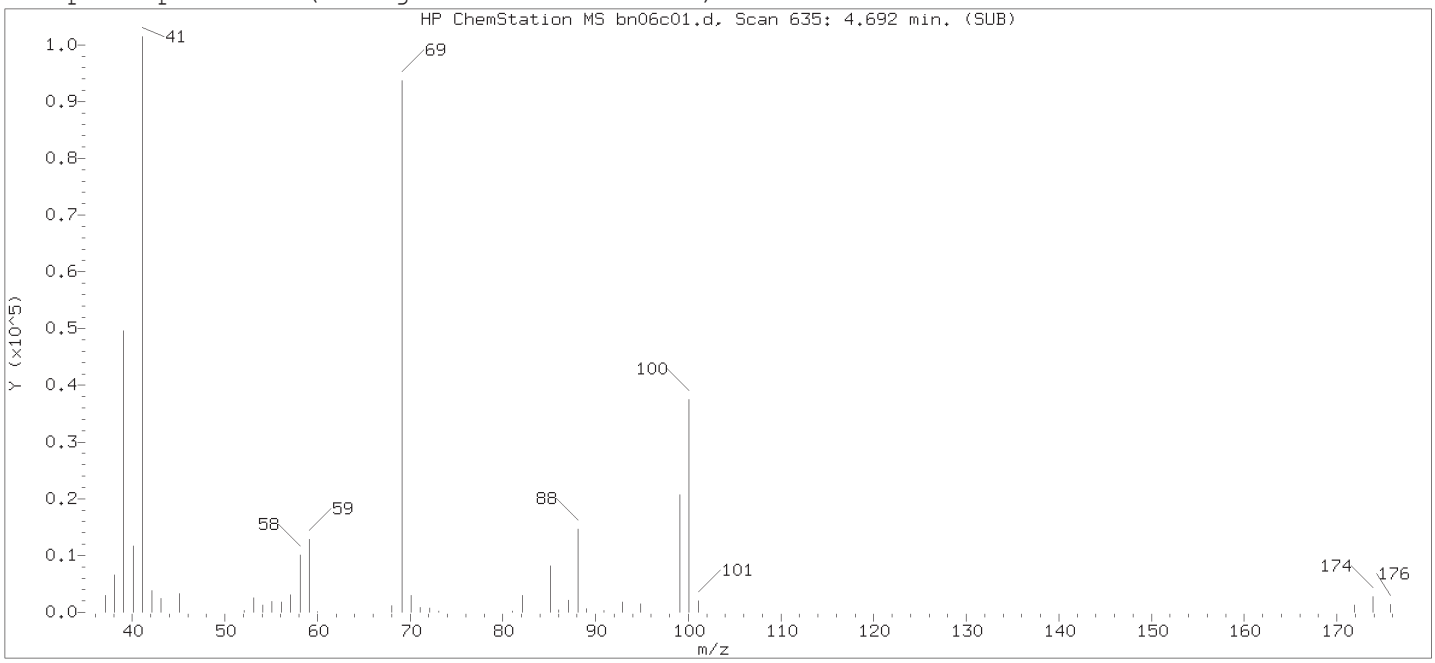
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area (flag) : 44930M
On-Column Amount (ng) : 578.2793
Integration start scan : 628 Integration stop scan: 669
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

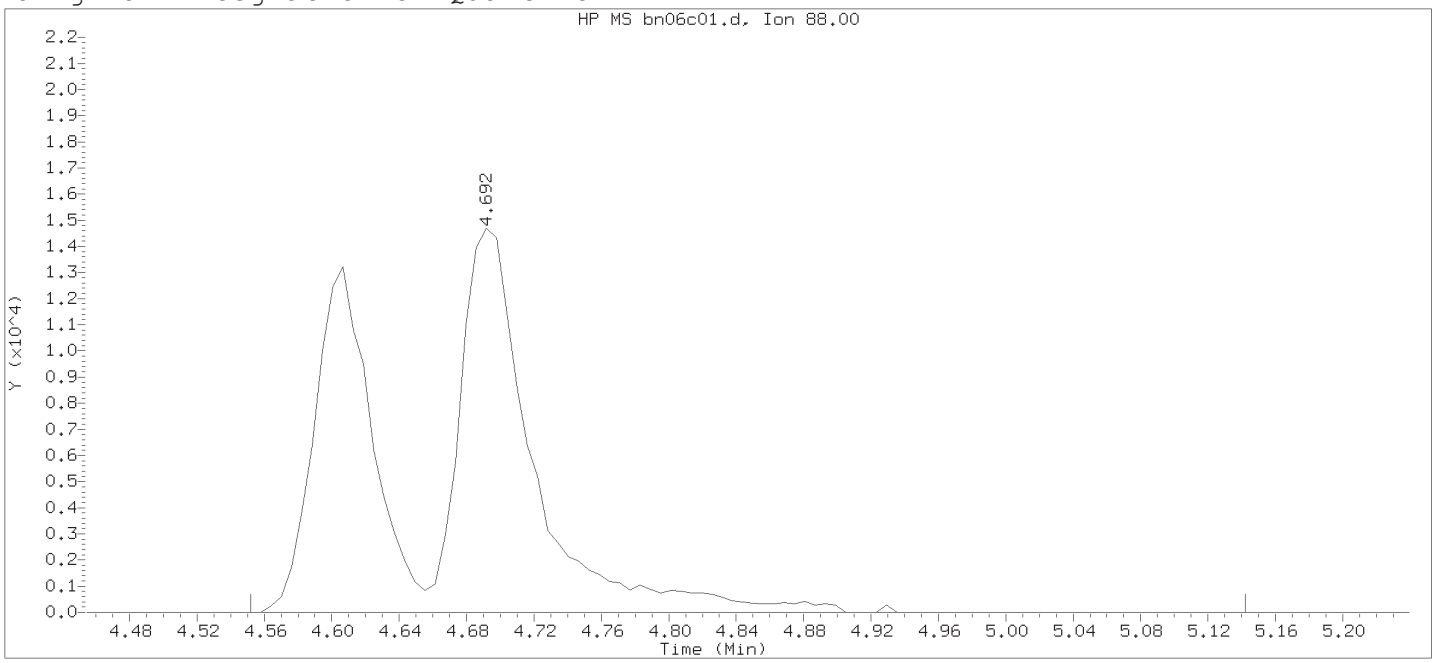
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Joshua E. Berrios on 11/09/2018 at 22:46.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

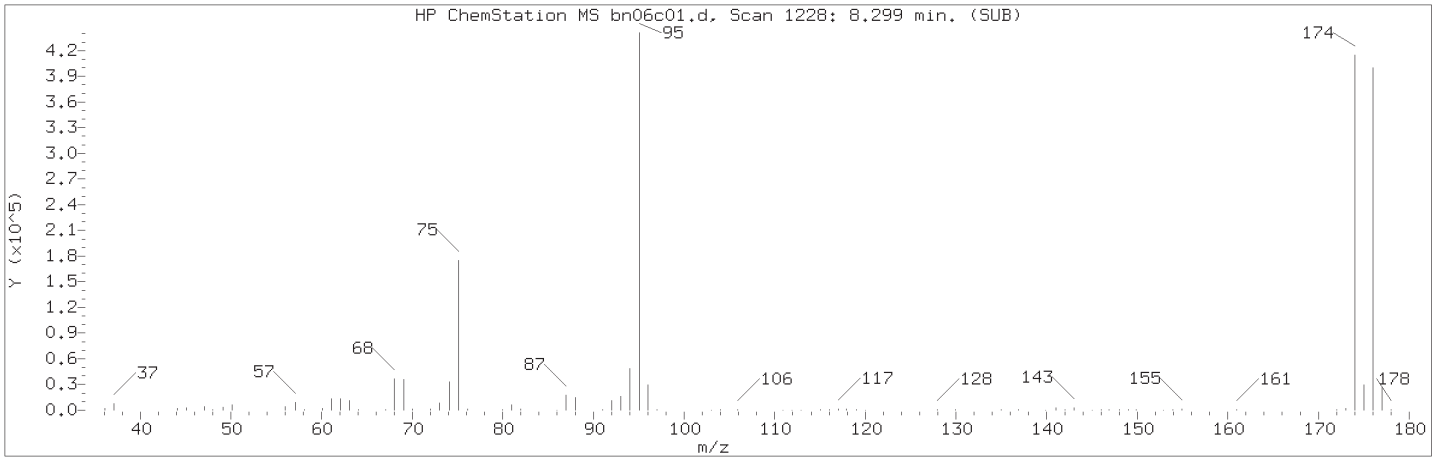
Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:23 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

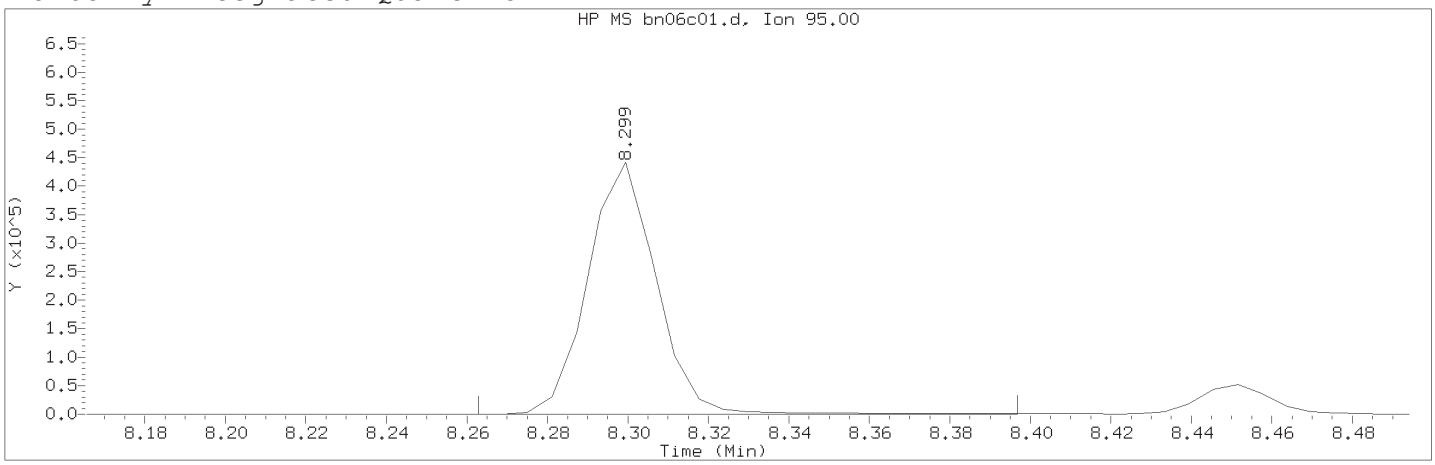
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area : 76319
On-column Amount (ng) : 959.0512
Integration start scan : 611 Integration stop scan: 708
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: PTH10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:24 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

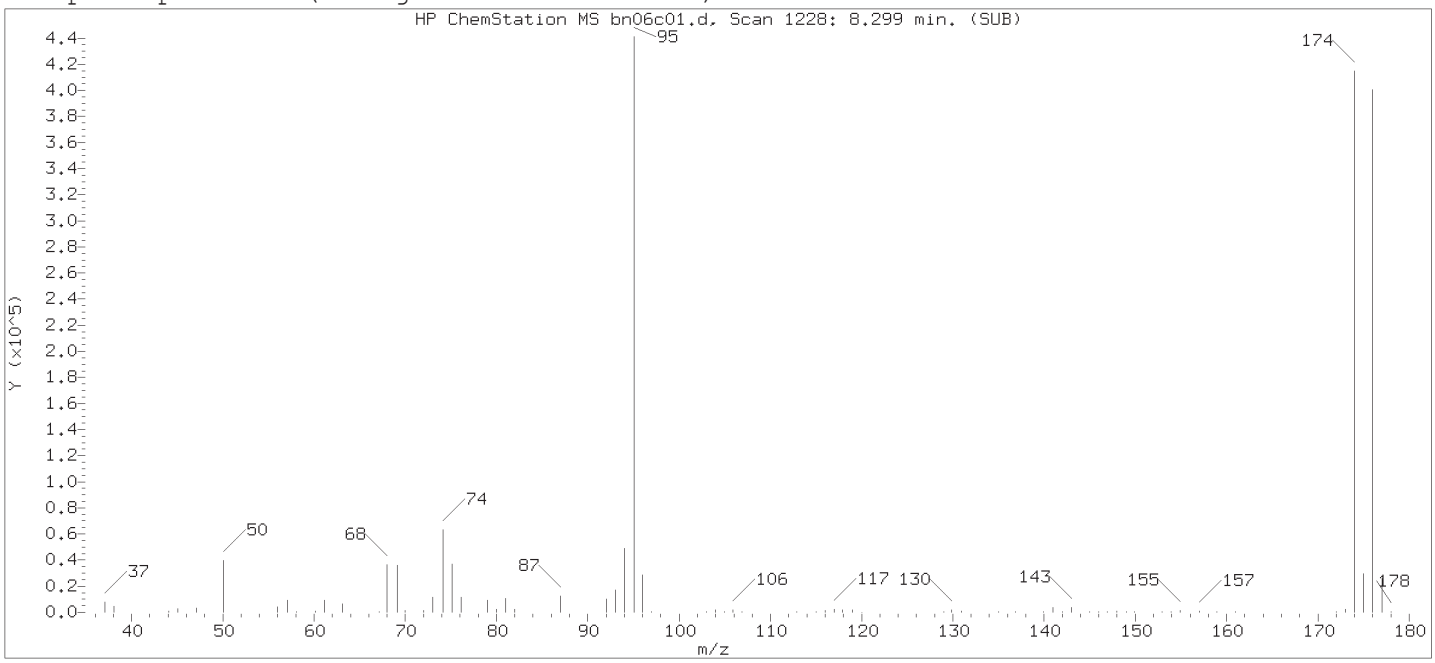
Compound Number : 119
Compound Name : 4-Bromofluorobenzene
Scan Number : 1228
Retention Time (minutes): 8.299
Quant Ion : 95.00
Area (flag) : 517605M
On-Column Amount (ng) : 49.9610
Integration start scan : 1221 Integration stop scan: 1243
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

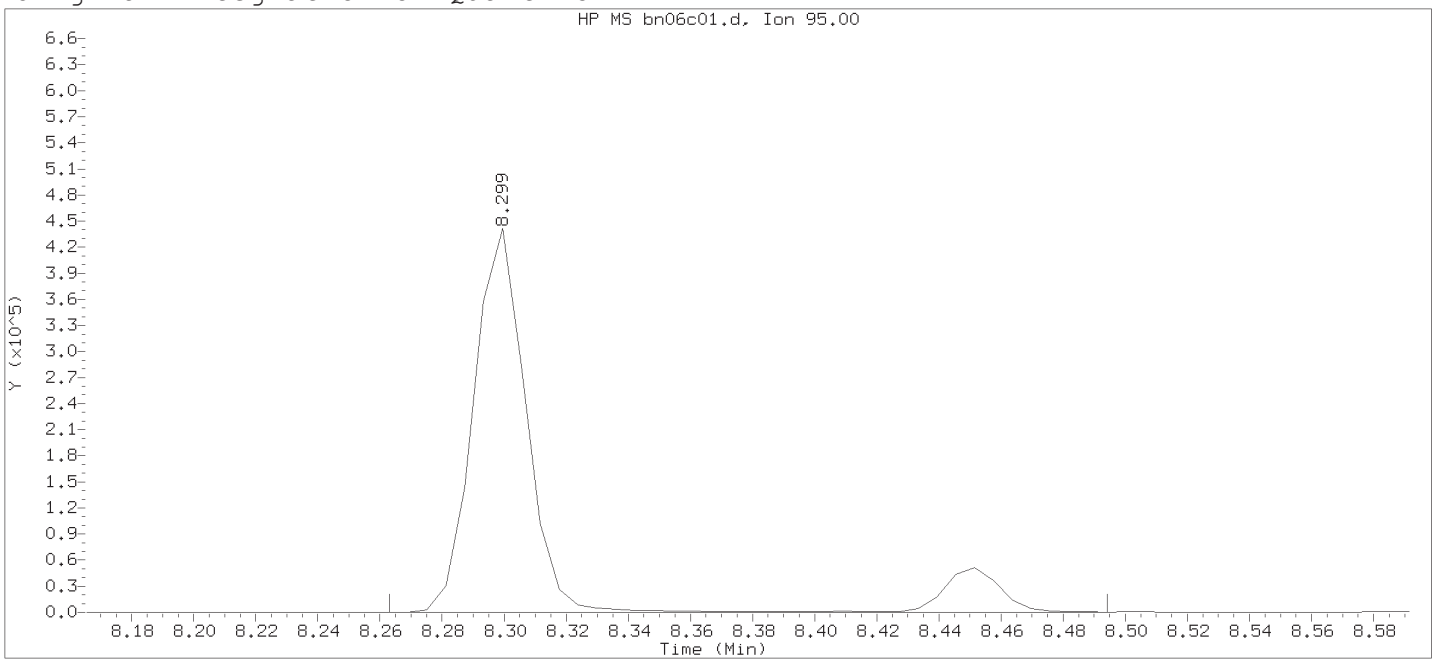
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Joshua E. Berrios on 11/09/2018 at 22:46.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06c01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 19:51 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 06-NOV-2018 20:23
Date, time and analyst ID of latest file update: 06-Nov-2018 20:23 pth10165

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 119
Compound Name : 4-Bromofluorobenzene
Scan Number : 1228
Retention Time (minutes): 8.299
Quant Ion : 95.00
Area : 582776
On-column Amount (ng) : 56.2515
Integration start scan : 1221 Integration stop scan: 1259
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/06/2018 at 20:24.
Target 3.5 esignature user ID: PTH10165

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov06a.b/bn06ec5.d Injection date and time: **07-NOV-2018 01:16**
Data file Sample Info. Line: SECC050;SECC050;2;3;LCS;;DODSW;;bn06b01; Instrument ID: **HP09953.i** Batch: **B183101AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 04:28 amd00492

Blank Data file reference: **/chem2/HP09953.i/18nov06a.b/bn06b01.d**

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 06-NOV-2018 21:35
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov06a.b/bn06c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.918	(0.006)	179	65	119430M	(-2)	250.00	
70) Fluorobenzene	3.944	(0.000)	512	96	1389195	(2)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	1099731	(0)	50.00	
140) 1,4-Dichlorobenzene-d4	9.224	(0.000)	1380	152	668359	(1)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.311	(0.002)	113	355913	51.407	103%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.615	(0.002)	102	76806M	51.541	103%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1406910	49.568	99%		85 - 116
119) 4-Bromofluorobenzene	(3)	8.299	(0.000)	95	511698M	49.488	99%		79 - 119

M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)	0.975	(0.003)	85	736704	58.731	58.73			0.6	5
4) Chloromethane	(2)	1.066	(0.001)	50	642077	49.661	49.66			0.6	5
5) Vinyl Chloride	(2)	1.109	(0.003)	62	504558	50.081	50.08			0.6	5
9) Bromomethane	(2)	1.236	(0.001)	94	464551	51.808	51.81			0.7	5
10) Chloroethane	(2)	1.261	(0.001)	64	280967	51.844	51.84			1	5
13) Trichlorofluoromethane	(2)	1.407	(0.001)	101	795156	57.332	57.33			0.7	5
19) 1,1-Dichloroethene	(2)	1.620	(0.001)	96	324041	46.494	46.49			0.5	5
20) Acetone	(1)	1.638	(0.000)	58	48935	89.307	89.31			6	20
22) Freon 113	(2)	1.644	(0.003)	101	392313	56.144	56.14			0.6	10
25) Carbon Disulfide	(2)	1.754	(0.001)	76	1023325	36.696	36.70			0.6	5
27) Methyl Acetate	(2)	1.820	(0.001)	43	191298M	53.527	53.53			1	5
31) Methylene Chloride	(2)	1.900	(0.001)	84	353104	42.872	42.87			2	5
34) Methyl Tertiary Butyl Ether	(2)	2.082	(0.003)	73	872543	44.014	44.01			0.5	5
35) trans-1,2-Dichloroethene	(2)	2.076	(0.001)	96	367388	45.329	45.33			0.5	5
40) 1,1-Dichloroethane	(2)	2.380	(0.001)	63	621122	47.262	47.26			0.5	5
44) 2-Butanone	(1)	2.885	(-0.001)	43	254297	82.820	82.82			1	10
45) cis-1,2-Dichloroethene	(2)	2.873	(0.001)	96	412903	46.934	46.93			0.5	5
54) Chloroform	(2)	3.165	(0.001)	83	616541	46.220	46.22			0.6	5
57) 1,1,1-Trichloroethane	(2)	3.335	(0.001)	97	554463	40.597	40.60			0.6	5
58) Cyclohexane	(2)	3.384	(0.003)	56	671087	52.302	52.30			0.5	5
61) Carbon Tetrachloride	(2)	3.487	(0.001)	117	487638	47.011	47.01			0.5	5
64) Benzene	(2)	3.664	(0.001)	78	1447308	45.677	45.68			0.5	5
67) 1,2-Dichloroethane	(2)	3.688	(0.000)	62	406698	44.477	44.48			0.6	5
75) Trichloroethene	(2)	4.302	(0.001)	95	385813	46.691	46.69			0.5	5
76) Methylcyclohexane	(2)	4.497	(0.001)	83	815621	63.428	63.43			0.6	5
77) 1,2-Dichloropropane	(2)	4.522	(0.001)	63	353210	46.940	46.94			0.5	5
84) Bromodichloromethane	(2)	4.820	(0.000)	83	427597	45.504	45.50			0.4	5
89) cis-1,3-Dichloropropene	(2)	5.294	(0.000)	75	532157	46.899	46.90			0.4	5

M = Compound was manually integrated.

Digitally signed by Jennifer K. Howe on 11/07/2018 at 10:20. Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov06a.b/bn06ec5.d Injection date and time: **07-NOV-2018 01:16**
Data file Sample Info. Line: SECC050;SECC050;2;3;LCS;;DODSW;;bn06b01; Instrument ID: **HP09953.i** Batch: **B183101AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 04:28 amd00492

Blank Data file reference: **/chem2/HP09953.i/18nov06a.b/bn06b01.d**

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 06-NOV-2018 21:35
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov06a.b/bn06c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

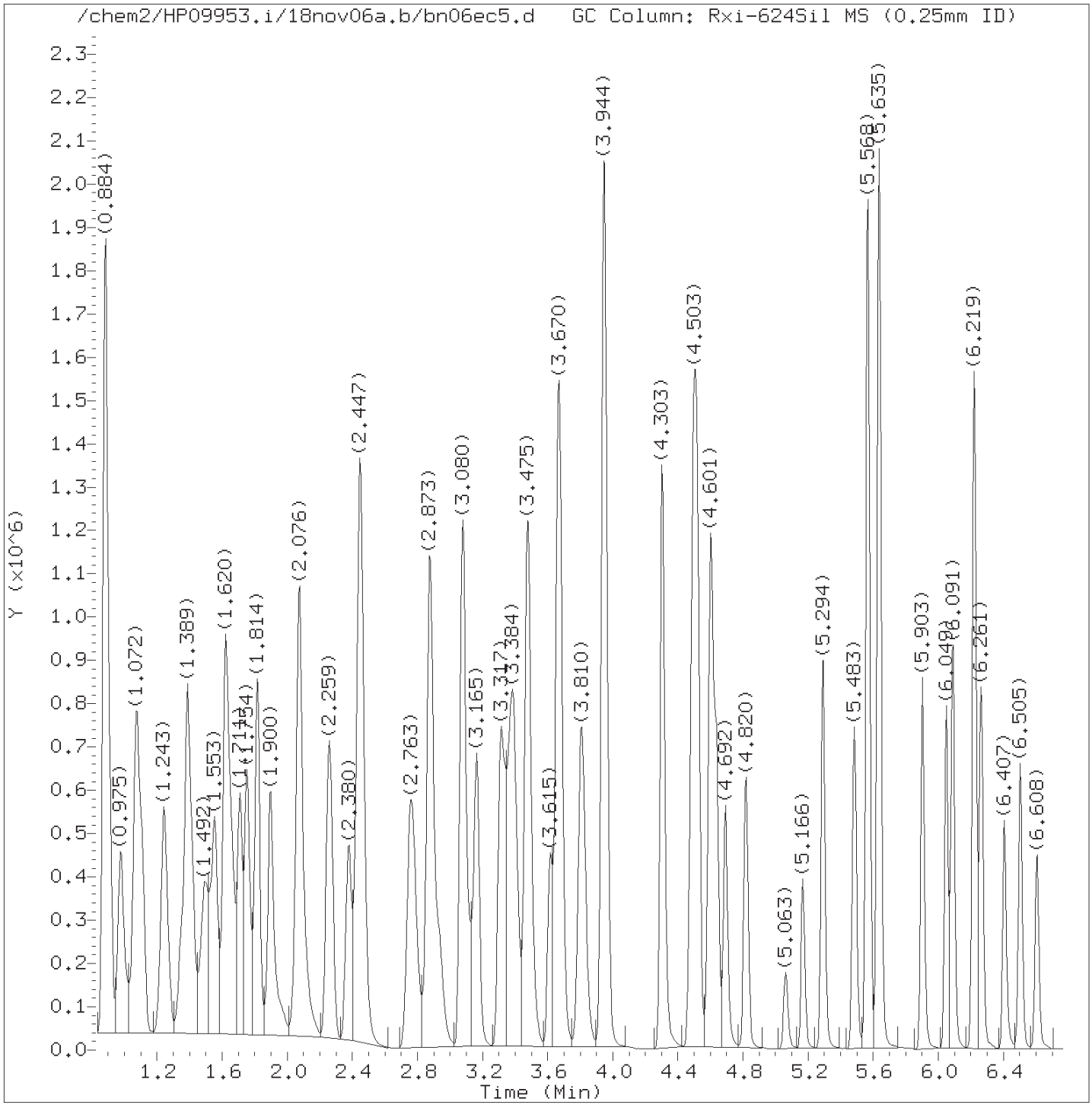
Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
90) 4-Methyl-2-pentanone	(2)	5.483(0.001)	43	514019	79.158	79.16			1	10
92) Toluene	(3)	5.635(0.000)	92	933922	44.362	44.36			0.6	5
93) trans-1,3-Dichloropropene	(3)	5.902(0.000)	75	448989	44.524	44.52			0.3	5
96) 1,1,2-Trichloroethane	(3)	6.091(-0.000)	97	303623	44.443	44.44			0.5	5
98) Tetrachloroethene	(3)	6.219(0.000)	166	481010	41.714	41.71			0.5	5
101) 2-Hexanone	(3)	6.408(-0.000)	43	357246	72.654	72.65			1	10
103) Dibromochloromethane	(3)	6.505(-0.000)	129	354636	45.057	45.06			0.4	5
104) 1,2-Dibromoethane	(3)	6.608(-0.000)	107	318220	45.087	45.09			0.4	5
107) Chlorobenzene	(3)	7.174(0.000)	112	1101508	44.814	44.81			0.5	5
109) Ethylbenzene	(3)	7.320(-0.000)	91	1810665	45.730	45.73			0.4	5
110) m+p-Xylene	(3)	7.448(0.000)	106	1489874	92.212	92.21			1	5
111) o-Xylene	(3)	7.831(-0.000)	106	730070	45.199	45.20			0.4	5
112) Xylene (Total)	(3)		106	2219944	137.410	137.41			1	5
113) Styrene	(3)	7.849(0.000)	104	1191860	44.759	44.76			0.3	5
114) Bromoform	(3)	7.995(0.000)	173	214331	43.699	43.70			5	10
115) Isopropylbenzene	(3)	8.178(-0.000)	105	1877750	46.120	46.12			0.4	5
118) Cyclohexanone	(1)	8.232(-0.013)	55	150561	543.943	543.94			25	250
120) 1,1,2,2-Tetrachloroethane	(4)	8.452(-0.000)	83	395424	42.294	42.29			0.4	5
138) 1,3-Dichlorobenzene	(4)	9.176(-0.000)	146	987626	42.974	42.97			0.5	5
141) 1,4-Dichlorobenzene	(4)	9.242(0.000)	146	1015862	42.397	42.40			0.4	5
147) 1,2-Dichlorobenzene	(4)	9.516(-0.000)	146	975000	43.394	43.39			0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)	10.070(0.000)	75	64991	40.010	40.01			0.4	5
153) 1,2,4-Trichlorobenzene	(4)	10.629(0.000)	180	720654	43.494	43.49			5	10

Total number of targets = 51

Digitally signed by Jennifer K. Howe on 11/07/2018 at 10:20. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 11/12/2018 at 11:31. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

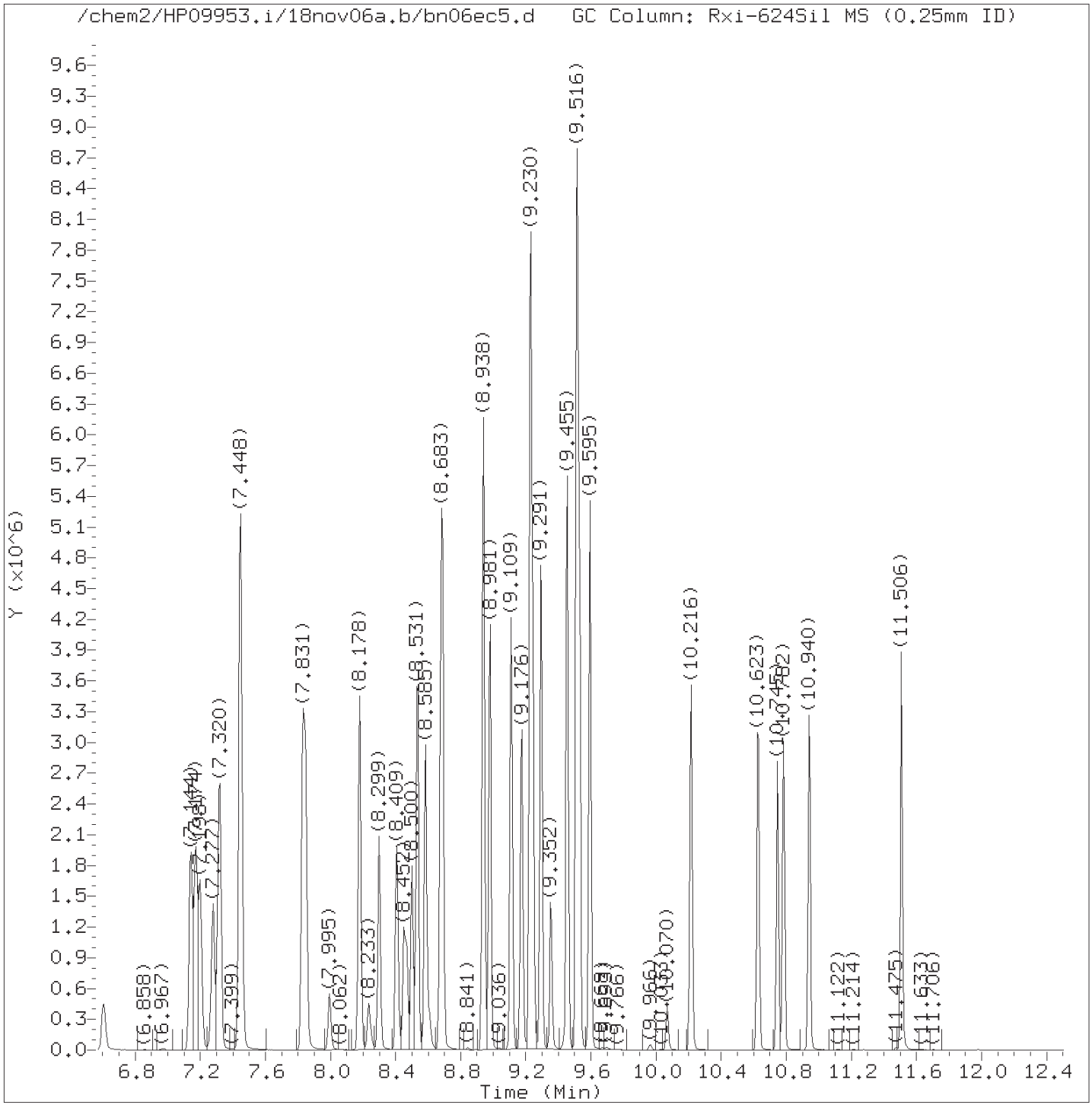
Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06ec5.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 01:16 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 04:28 amd00492

Sample Name: SECC050 Lab Sample ID: SECC050

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 10:20.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06ec5.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 01:16 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 04:28 amd00492

Sample Name: SECC050 Lab Sample ID: SECC050

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 10:20.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06ec5.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 01:16 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 04:28 amd00492

Sample Name: SECC050 Lab Sample ID: SECC050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.975	85	736704	58.731
4) Chloromethane	(2)	1.066	50	642077	49.661
5) Vinyl Chloride	(2)	1.109	62	504558	50.081
9) Bromomethane	(2)	1.236	94	464551	51.808
10) Chloroethane	(2)	1.261	64	280967	51.844
13) Trichlorofluoromethane	(2)	1.407	101	795156	57.332
19) 1,1-Dichloroethene	(2)	1.620	96	324041	46.494
20) Acetone	(1)	1.638	58	48935	89.307
22) Freon 113	(2)	1.644	101	392313	56.144
25) Carbon Disulfide	(2)	1.754	76	1023325	36.696
27) Methyl Acetate	(2)	1.820	43	191298M	53.527
31) Methylene Chloride	(2)	1.900	84	353104	42.872
30)*t-Butyl alcohol-d10	(1)	1.918	65	119430M	250.000
35) trans-1,2-Dichloroethene	(2)	2.076	96	367388	45.329
34) Methyl Tertiary Butyl Ether	(2)	2.082	73	872543	44.014
40) 1,1-Dichloroethane	(2)	2.380	63	621122	47.262
45) cis-1,2-Dichloroethene	(2)	2.873	96	412903	46.934
44) 2-Butanone	(1)	2.885	43	254297	82.820
54) Chloroform	(2)	3.165	83	616541	46.220
56)$Dibromofluoromethane	(2)	3.311	113	355913	51.407
57) 1,1,1-Trichloroethane	(2)	3.335	97	554463	40.597
58) Cyclohexane	(2)	3.384	56	671087	52.302
61) Carbon Tetrachloride	(2)	3.487	117	487638	47.011
63)$1,2-Dichloroethane-d4	(2)	3.615	102	76806M	51.541
64) Benzene	(2)	3.664	78	1447308	45.677
67) 1,2-Dichloroethane	(2)	3.688	62	406698	44.477
70)*Fluorobenzene	(2)	3.944	96	1389195	50.000
75) Trichloroethene	(2)	4.303	95	385813	46.691
76) Methylcyclohexane	(2)	4.497	83	815621	63.428
77) 1,2-Dichloropropane	(2)	4.522	63	353210	46.940
84) Bromodichloromethane	(2)	4.820	83	427597	45.504
89) cis-1,3-Dichloropropene	(2)	5.294	75	532157	46.899
90) 4-Methyl-2-pentanone	(2)	5.483	43	514019	79.158
91)$Toluene-d8	(3)	5.568	98	1406910	49.568
92) Toluene	(3)	5.635	92	933922	44.362
93) trans-1,3-Dichloropropene	(3)	5.903	75	448989	44.524
96) 1,1,2-Trichloroethane	(3)	6.091	97	303623	44.443
98) Tetrachloroethene	(3)	6.219	166	481010	41.714

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 10:20.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06ec5.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 01:16 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 04:28 amd00492

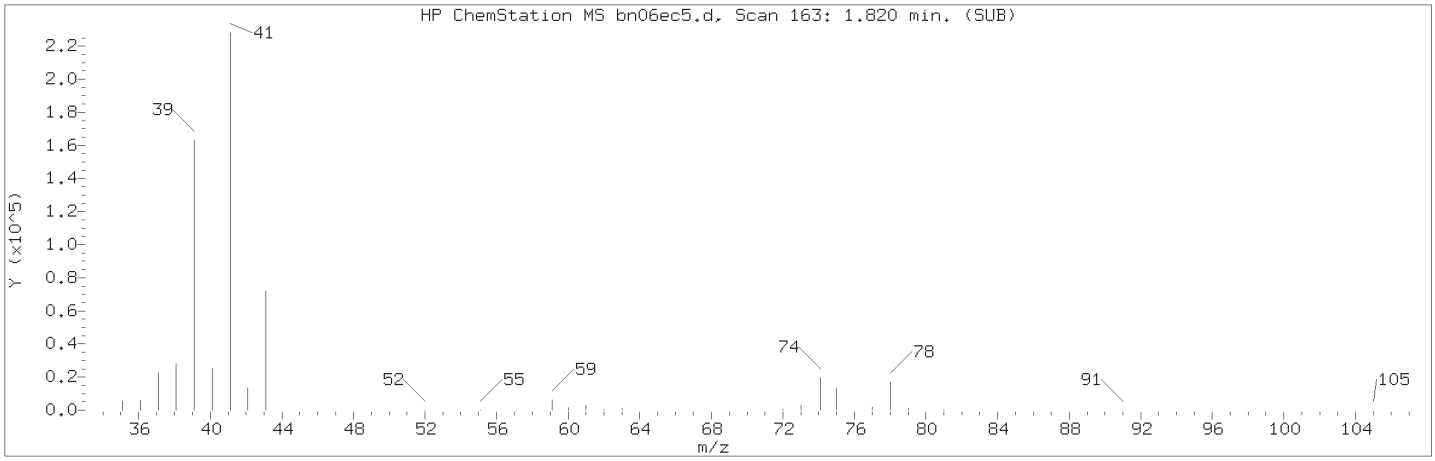
Sample Name: SECC050 Lab Sample ID: SECC050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 2-Hexanone	(3)	6.407	43	357246	72.654
103) Dibromochloromethane	(3)	6.505	129	354636	45.057
104) 1,2-Dibromoethane	(3)	6.608	107	318220	45.087
105)*Chlorobenzene-d5	(3)	7.144	117	1099731	50.000
107) Chlorobenzene	(3)	7.174	112	1101508	44.814
109) Ethylbenzene	(3)	7.320	91	1810665	45.730
110) m+p-Xylene	(3)	7.448	106	1489874	92.212
111) o-Xylene	(3)	7.831	106	730070	45.199
113) Styrene	(3)	7.849	104	1191860	44.759
112) Xylene (Total)	(3)		106	2219944	137.410
114) Bromoform	(3)	7.995	173	214331	43.699
115) Isopropylbenzene	(3)	8.178	105	1877750	46.120
118) Cyclohexanone	(1)	8.233	55	150561	543.943
119)$4-Bromofluorobenzene	(3)	8.299	95	511698M	49.488
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	395424	42.294
138) 1,3-Dichlorobenzene	(4)	9.176	146	987626	42.974
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	668359	50.000
141) 1,4-Dichlorobenzene	(4)	9.242	146	1015862	42.397
147) 1,2-Dichlorobenzene	(4)	9.516	146	975000	43.394
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	64991	40.010
153) 1,2,4-Trichlorobenzene	(4)	10.629	180	720654	43.494

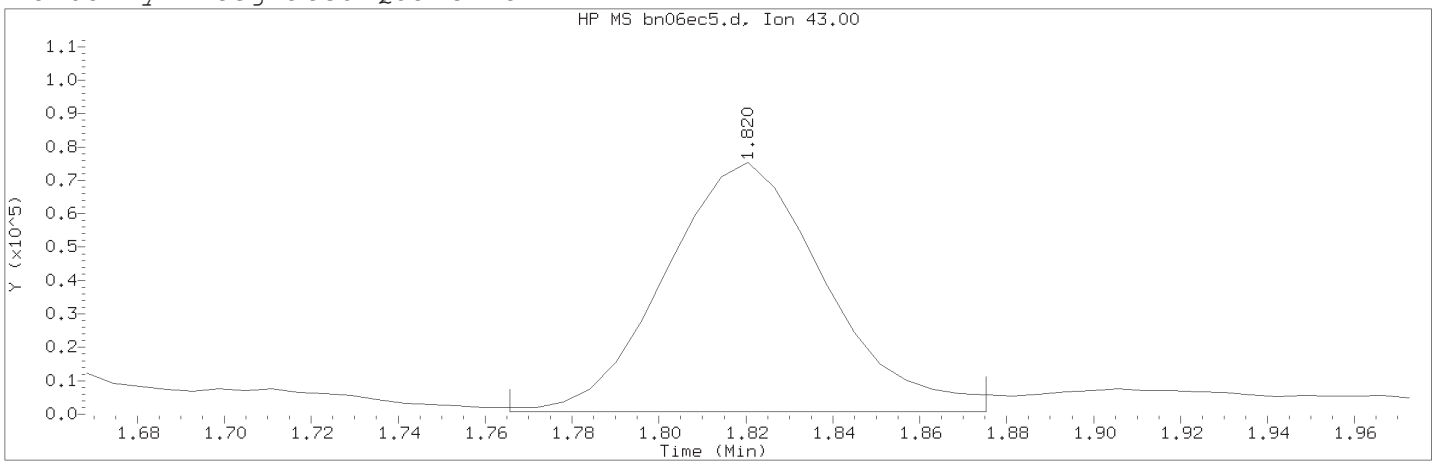
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 10:20.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06ec5.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 01:16 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 04:28 amd00492

Sample Name: SECC050 Lab Sample ID: SECC050

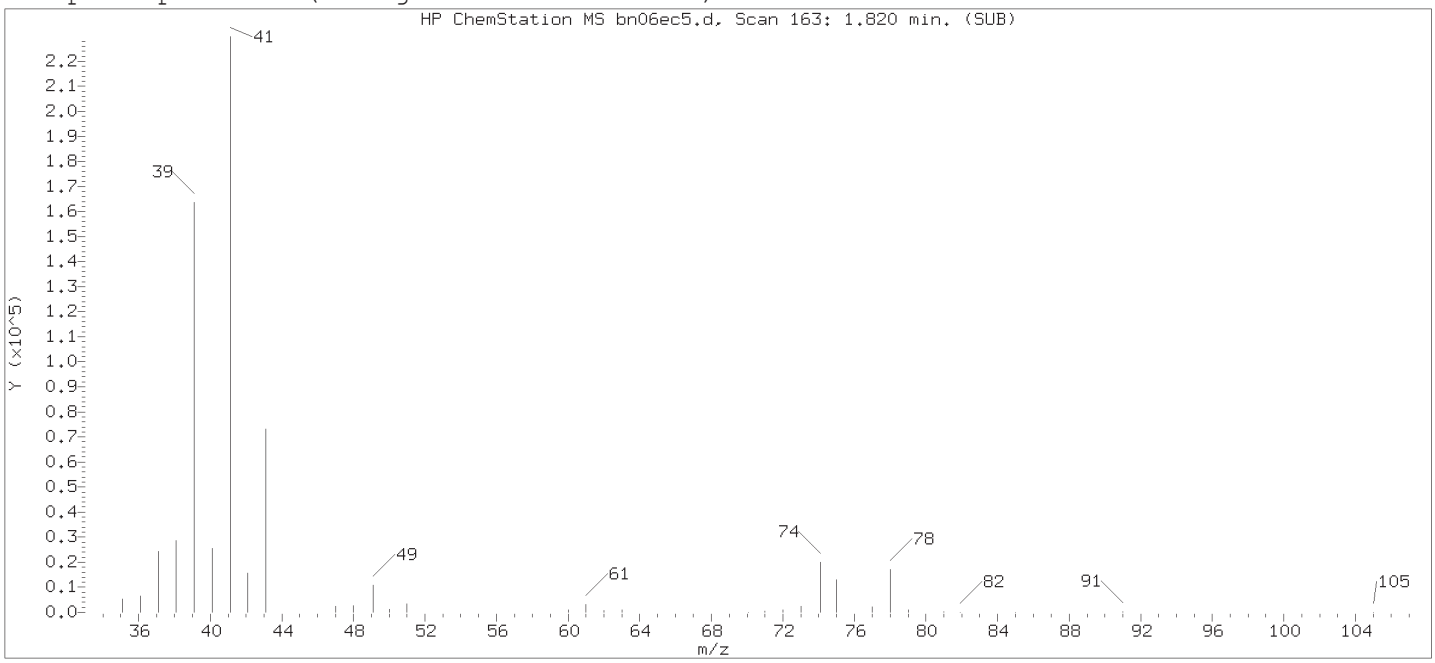
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 163
Retention Time (minutes): 1.820
Quant Ion : 43.00
Area (flag) : 191298M
On-Column Amount (ng) : 53.5271
Integration start scan : 153 Integration stop scan: 171
Y at integration start : 750 Y at integration end: 750

Reason for manual integration: improper integration

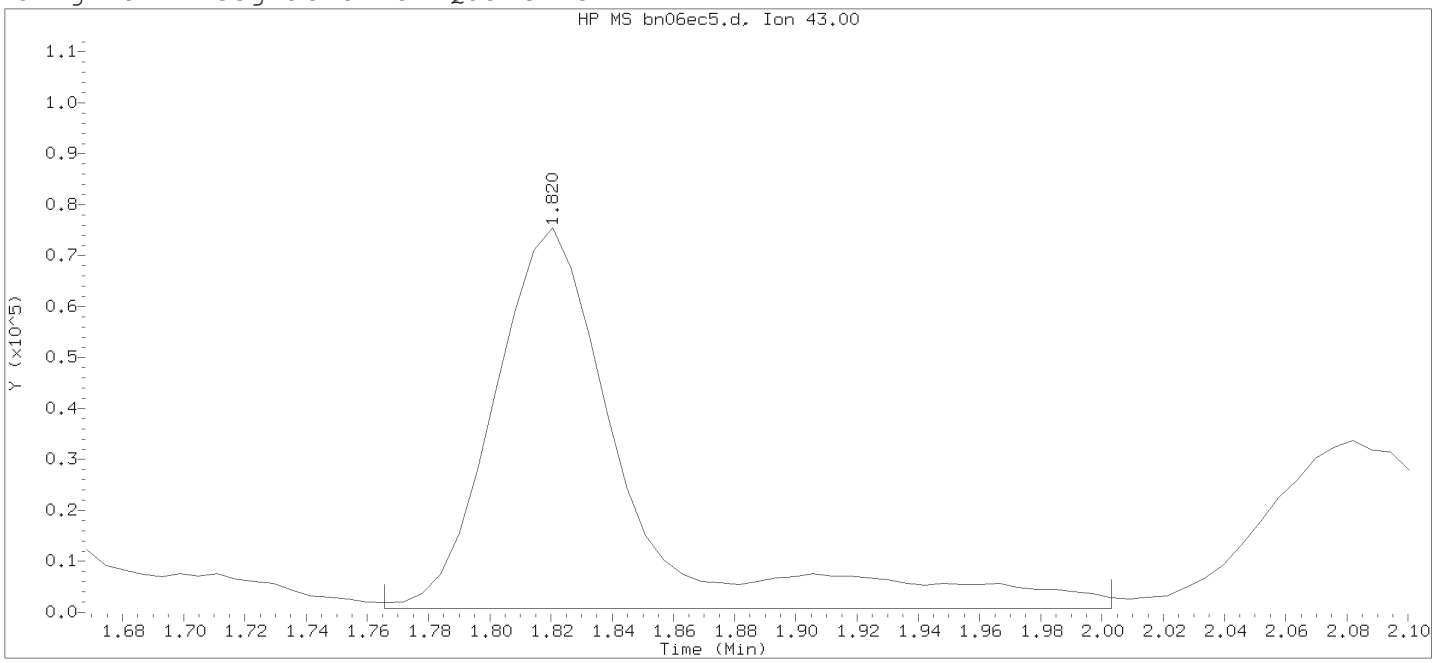
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 10:20.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 11/12/2018 at 11:31.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06ec5.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 01:16 Analyst ID: PTH10165

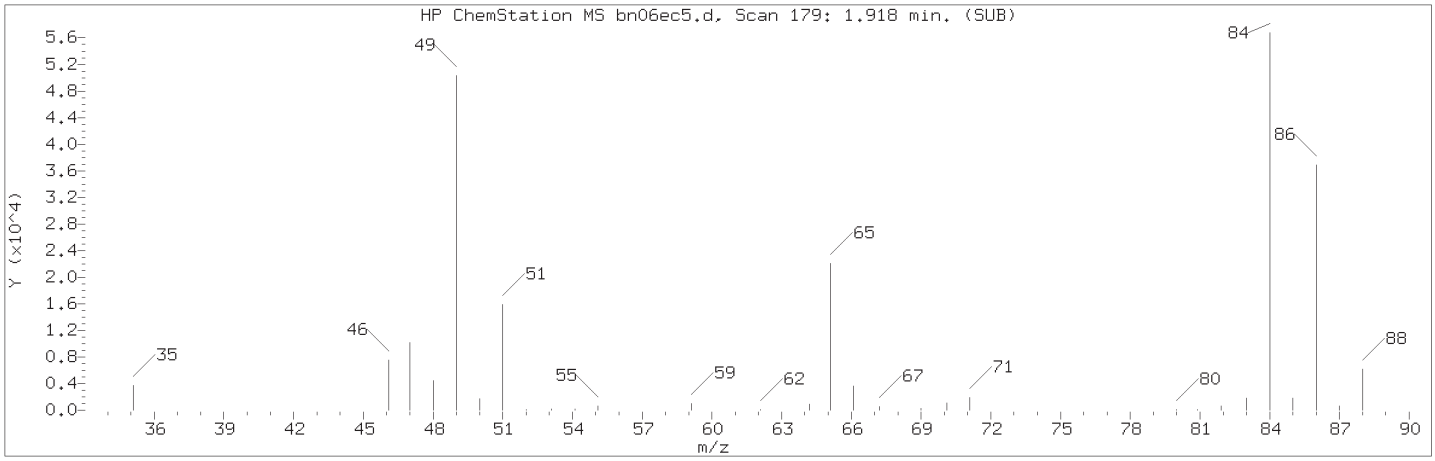
Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 01:31 Automation

Sample Name: SECC050 Lab Sample ID: SECC050

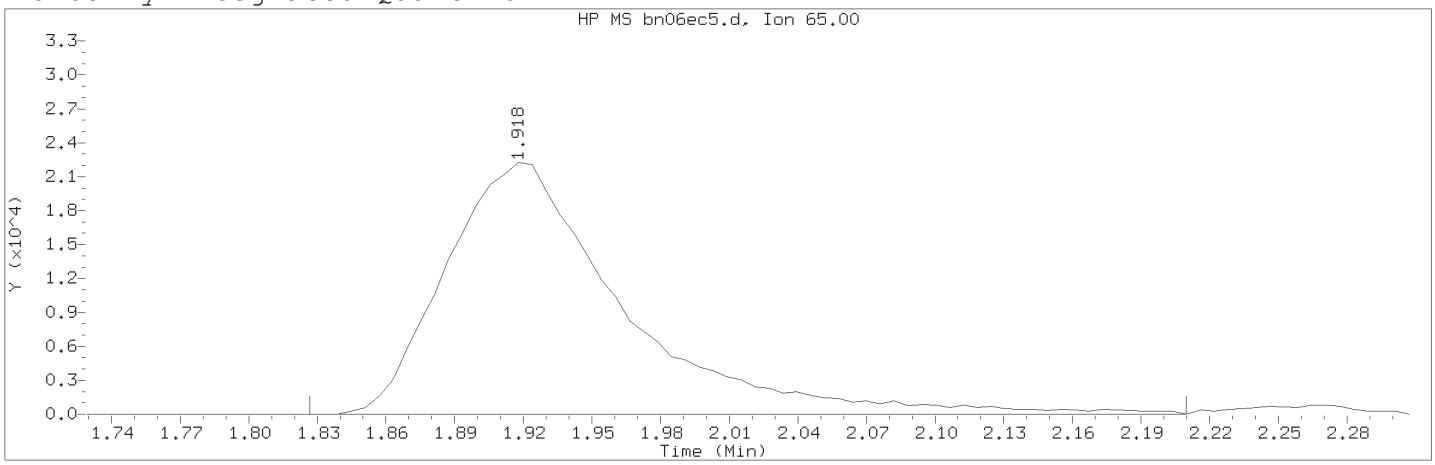
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 163
Retention Time (minutes): 1.820
Quant Ion : 43.00
Area : 227889
On-column Amount (ng) : 63.7655
Integration start scan : 153 Integration stop scan: 192
Y at integration start : 750 Y at integration end: 750

Digitally signed by Jennifer K. Howe on 11/07/2018 at 10:20.
Target 3.5 esignature user ID: jhowe0252

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06ec5.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 01:16 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 04:28 amd00492

Sample Name: SECC050 Lab Sample ID: SECC050

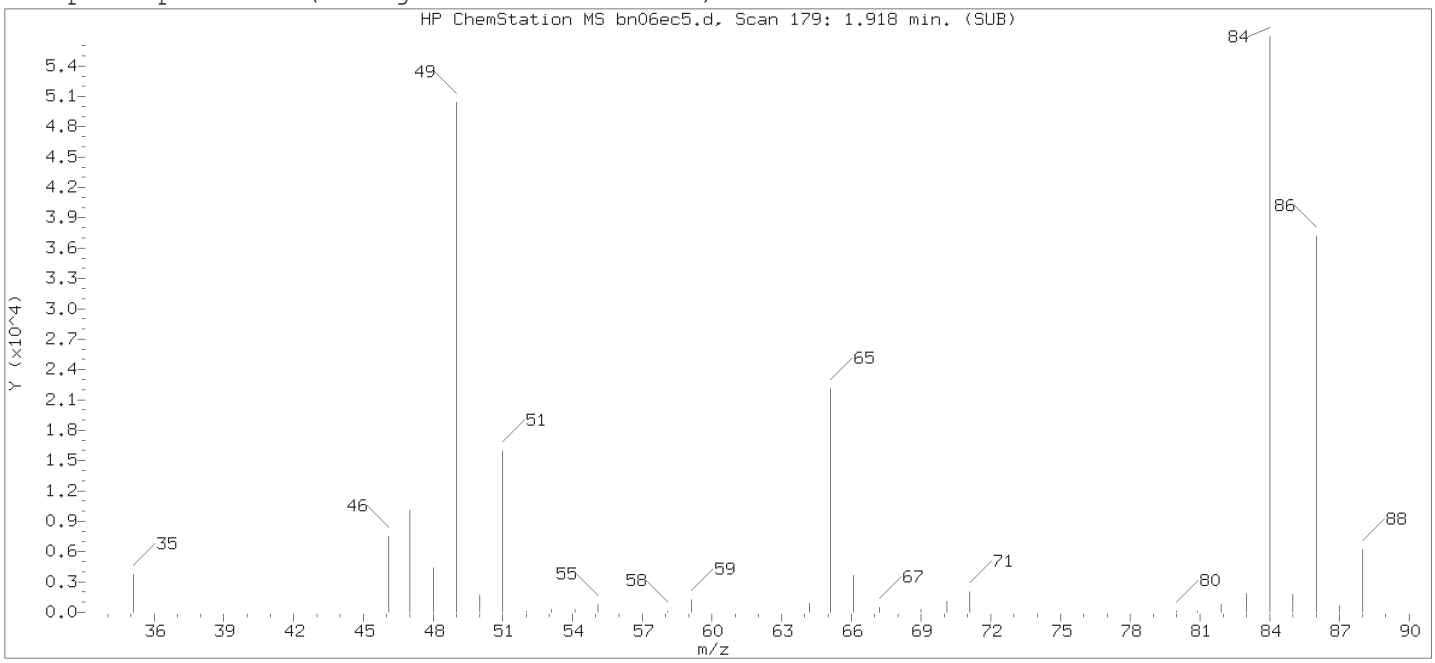
Compound Number : 30
Compound Name : t-Butyl alcohol-d10
Scan Number : 179
Retention Time (minutes): 1.918
Quant Ion : 65.00
Area (flag) : 119430M
On-Column Amount (ng) : 250.0000
Integration start scan : 163 Integration stop scan: 226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

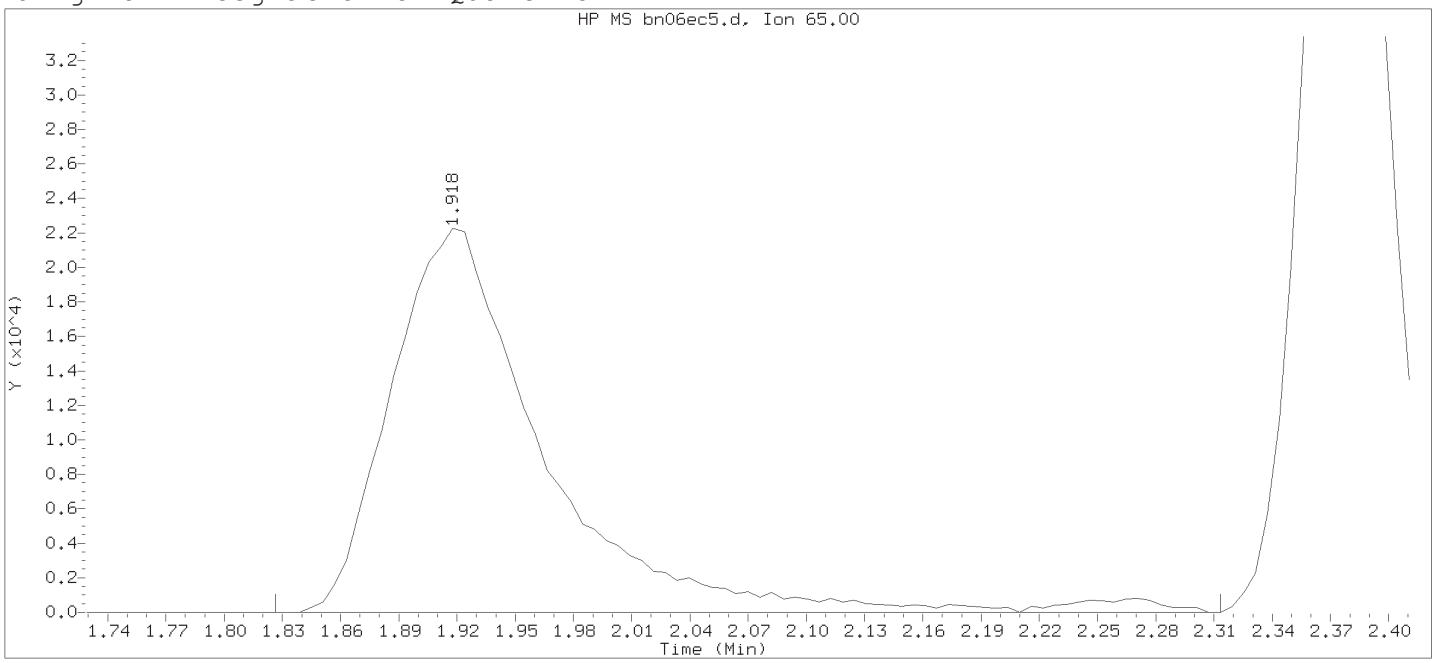
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 10:20.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 11/12/2018 at 11:31.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06ec5.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 01:16 Analyst ID: PTH10165

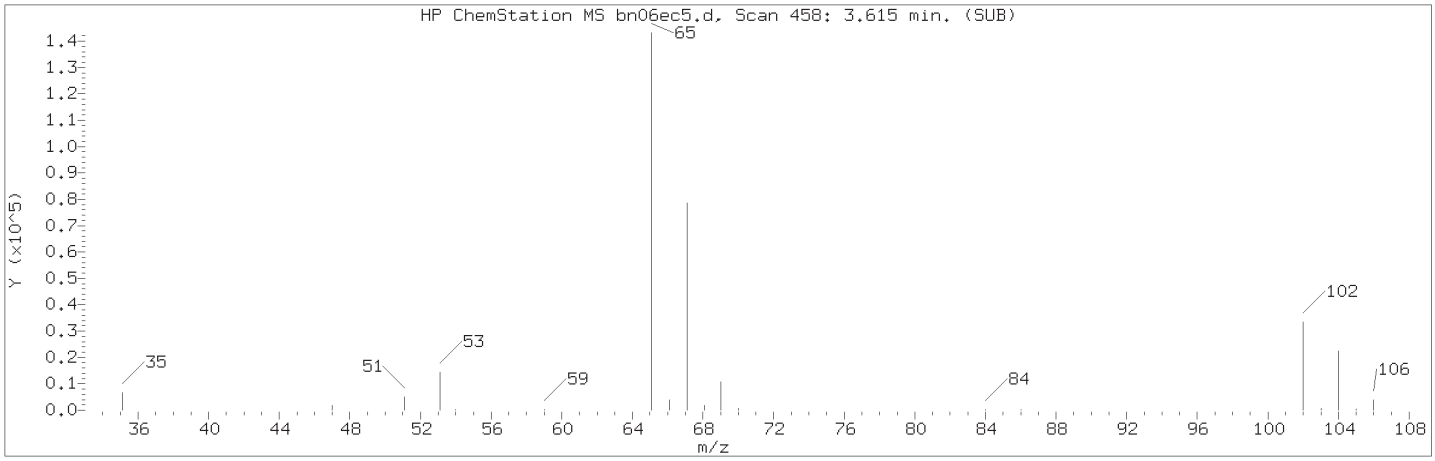
Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 01:31 Automation

Sample Name: SECC050 Lab Sample ID: SECC050

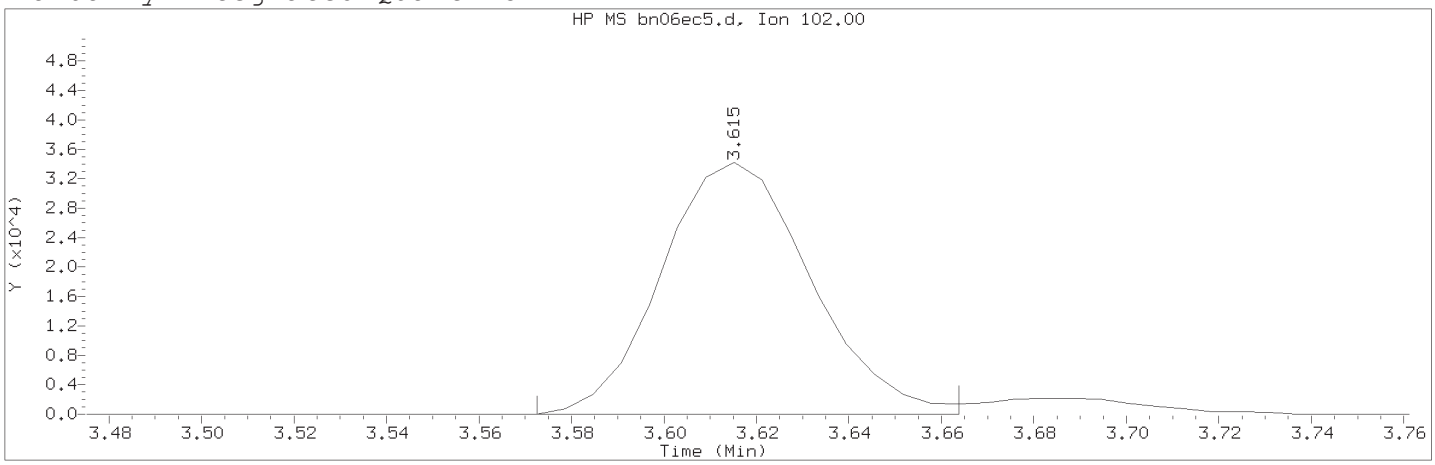
Compound Number : 30
Compound Name : t-Butyl alcohol-d10
Scan Number : 179
Retention Time (minutes): 1.918
Quant Ion : 65.00
Area : 122196
On-column Amount (ng) : 250.0000
Integration start scan : 163 Integration stop scan: 243
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 10:20.
Target 3.5 esignature user ID: jhowe9572

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06ec5.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 01:16 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 04:28 amd00492

Sample Name: SECC050 Lab Sample ID: SECC050

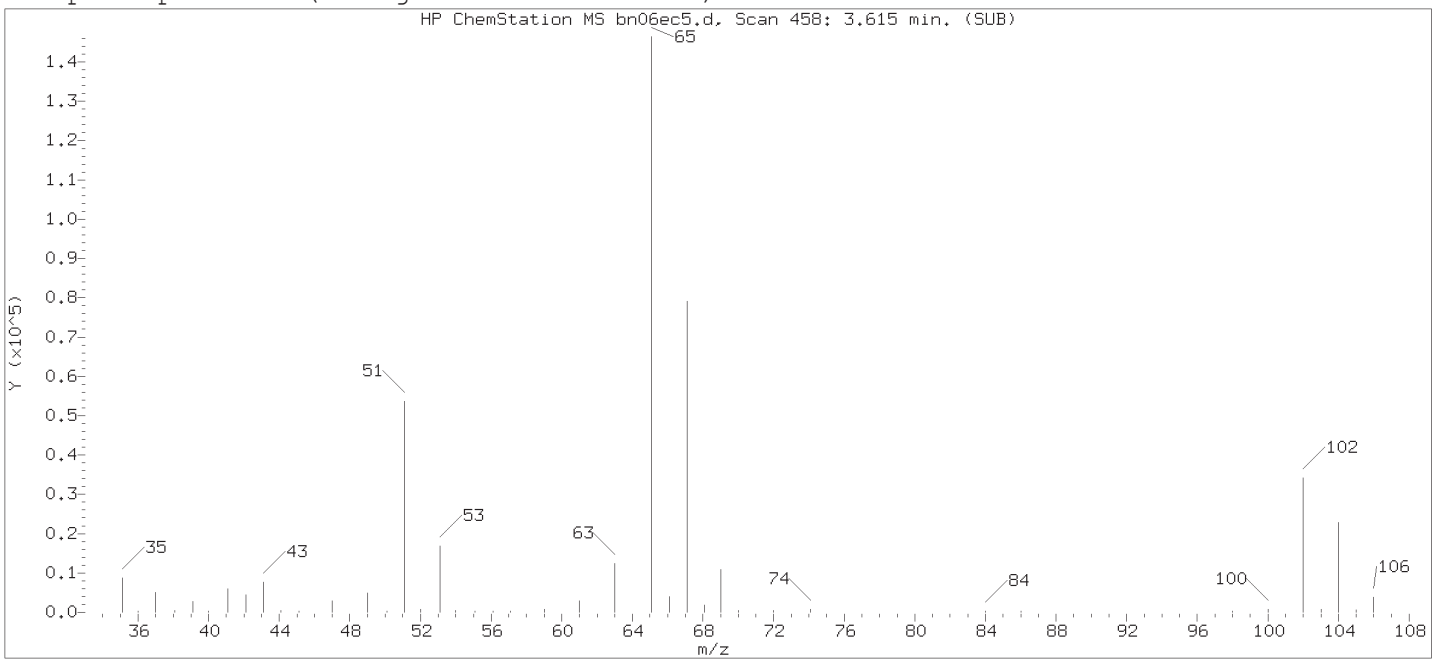
Compound Number : 63
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 458
Retention Time (minutes): 3.615
Quant Ion : 102.00
Area (flag) : 76806M
On-Column Amount (ng) : 51.5412
Integration start scan : 450 Integration stop scan: 465
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

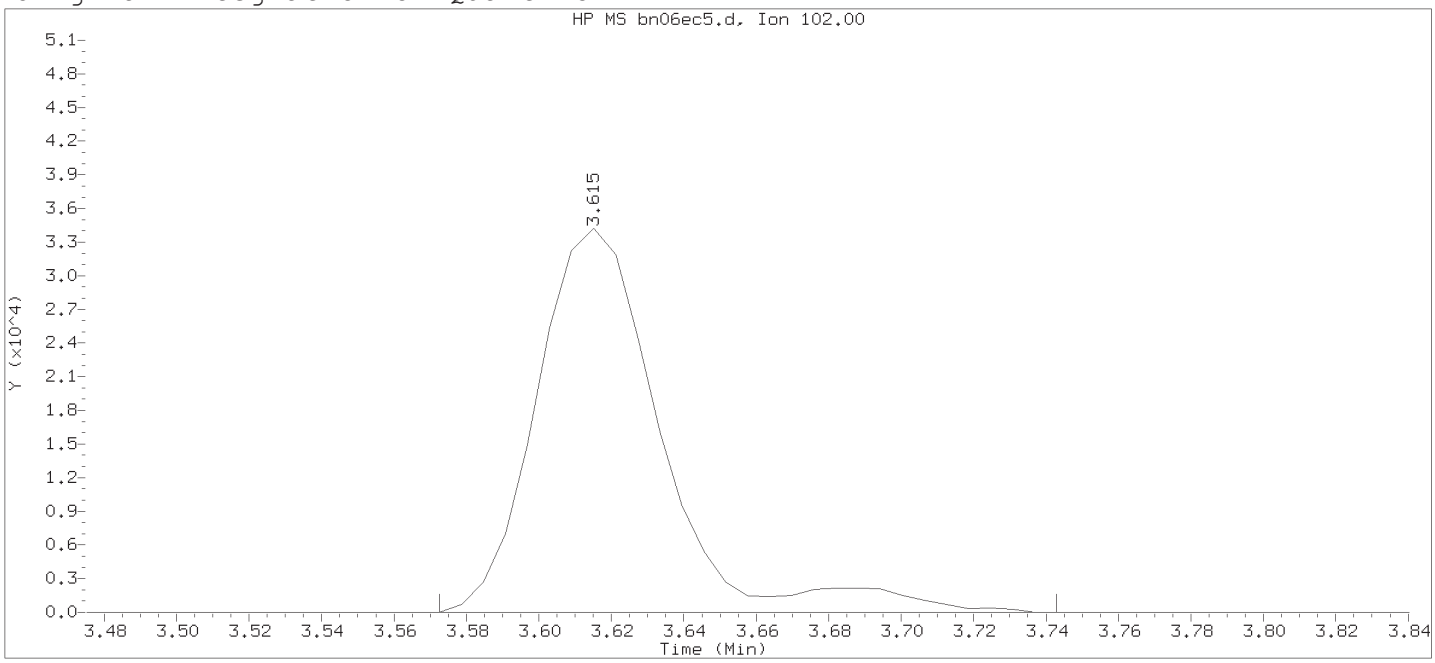
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 10:20.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 11/12/2018 at 11:31.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06ec5.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 01:16 Analyst ID: PTH10165

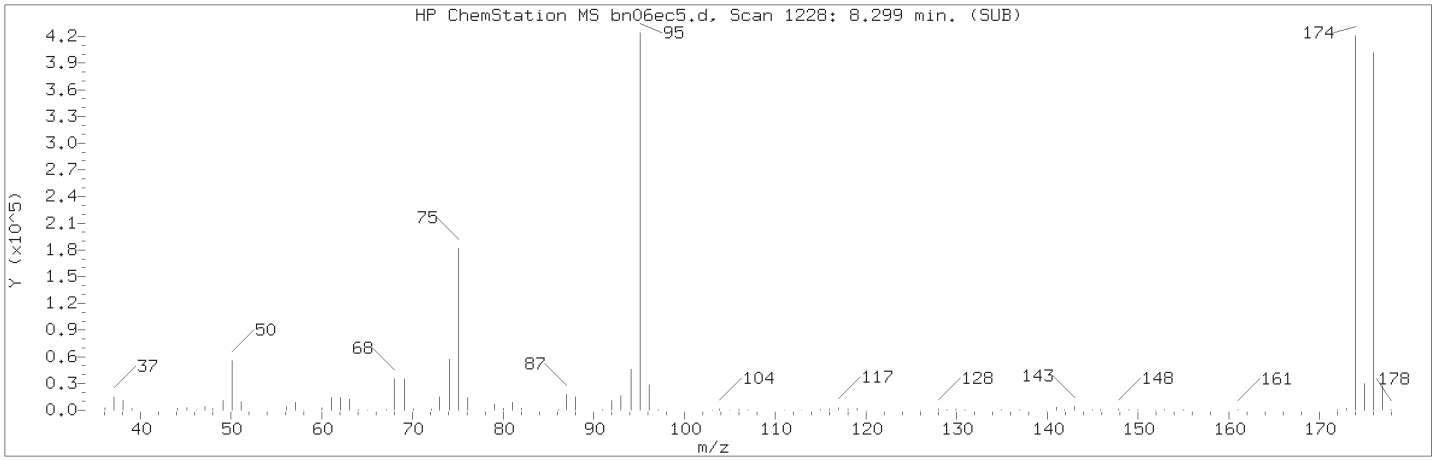
Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 01:31 Automation

Sample Name: SECC050 Lab Sample ID: SECC050

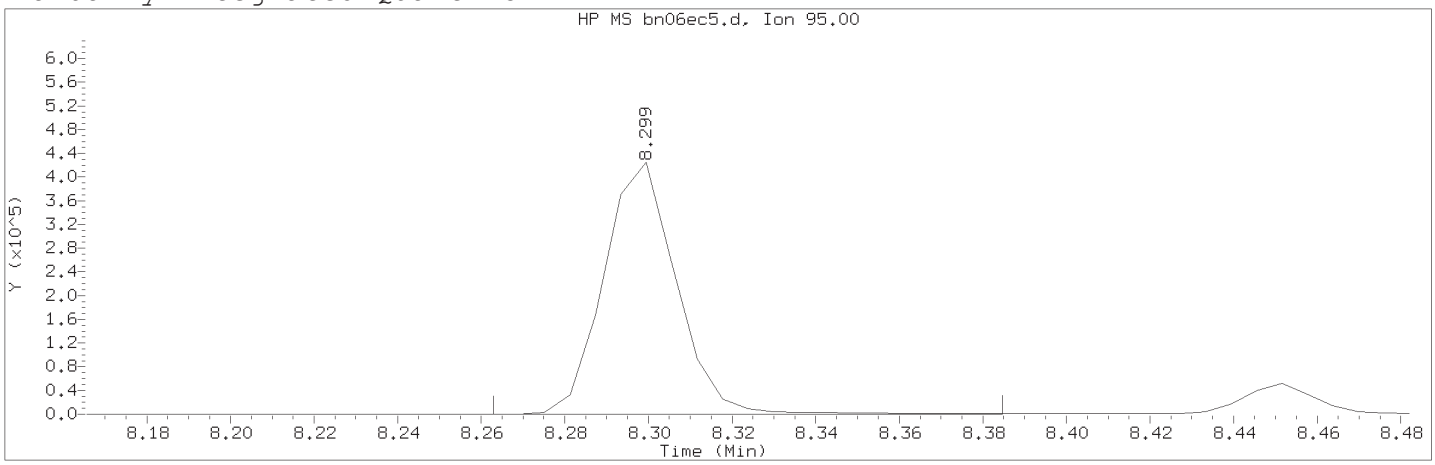
Compound Number : 63
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 458
Retention Time (minutes): 3.615
Quant Ion : 102.00
Area : 81951
On-column Amount (ng) : 54.9937
Integration start scan : 450 Integration stop scan: 478
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 10:20.
Target 3.5 esignature user ID: jhowe9292

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06ec5.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 01:16 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 04:28 amd00492

Sample Name: SECC050 Lab Sample ID: SECC050

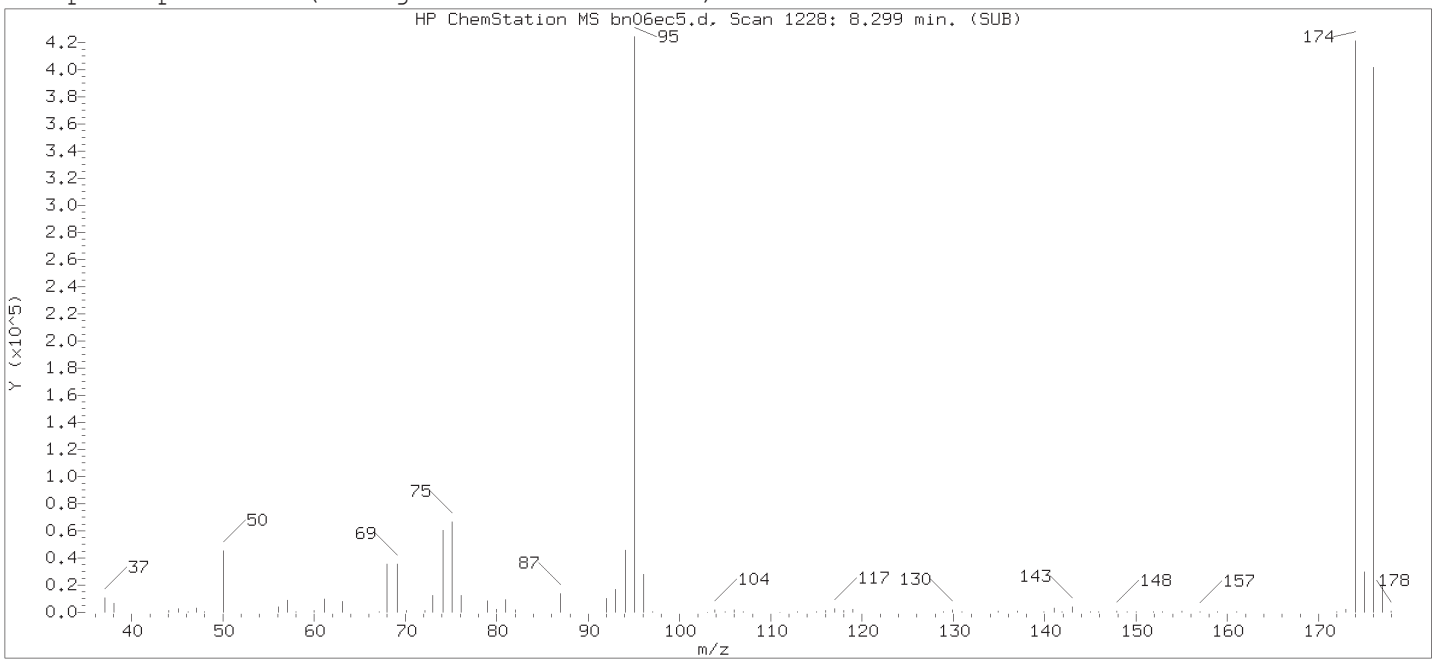
Compound Number : 119
Compound Name : 4-Bromofluorobenzene
Scan Number : 1228
Retention Time (minutes): 8.299
Quant Ion : 95.00
Area (flag) : 511698M
On-Column Amount (ng) : 49.4878
Integration start scan : 1221 Integration stop scan: 1241
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

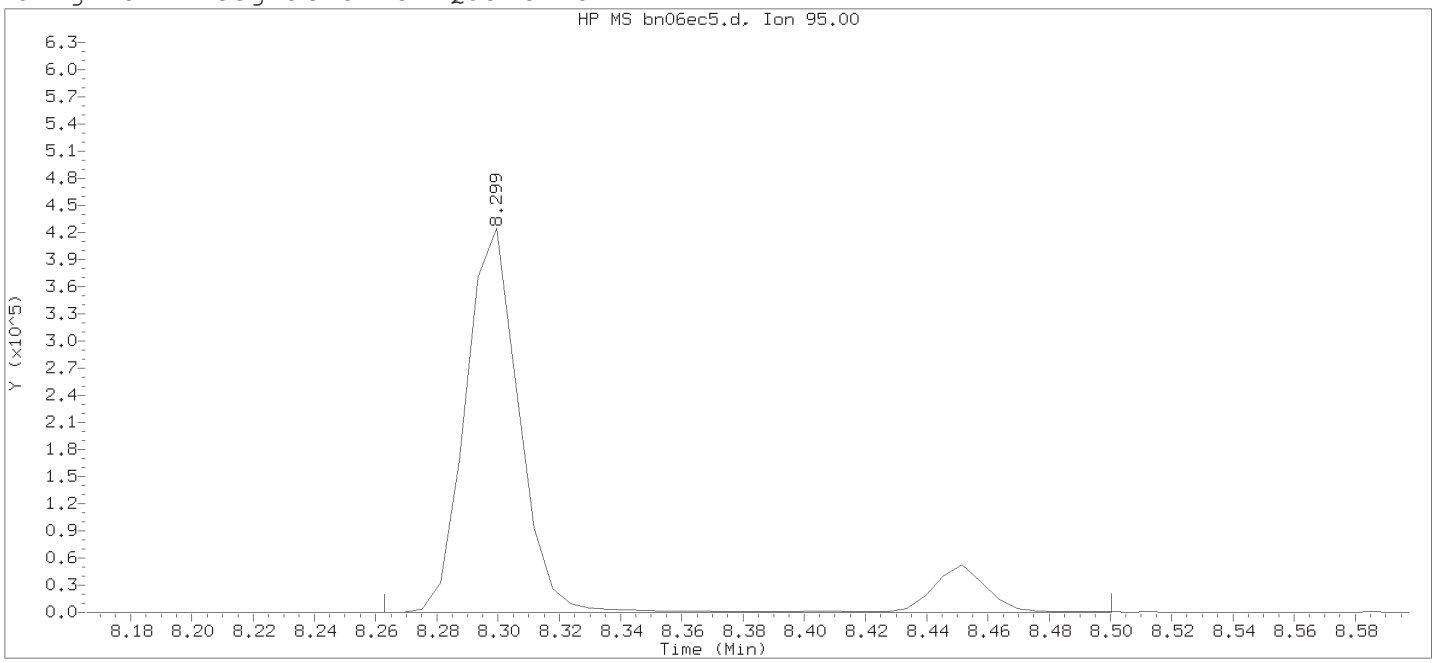
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 10:20.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 11/12/2018 at 11:31.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06ec5.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 01:16 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 07-Nov-2018 01:31 Automation

Sample Name: SECC050 Lab Sample ID: SECC050

Compound Number : 119
Compound Name : 4-Bromofluorobenzene
Scan Number : 1228
Retention Time (minutes): 8.299
Quant Ion : 95.00
Area : 575784
On-column Amount (ng) : 55.6856
Integration start scan : 1221 Integration stop scan: 1260
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 10:20.
Target 3.5 esignature user ID: jhowe0532

Data File: /chem2/HP09953.i/18nov07a.b/bn07t01.d

Date : 07-NOV-2018 07:35

Client ID: BFB Aug07-18

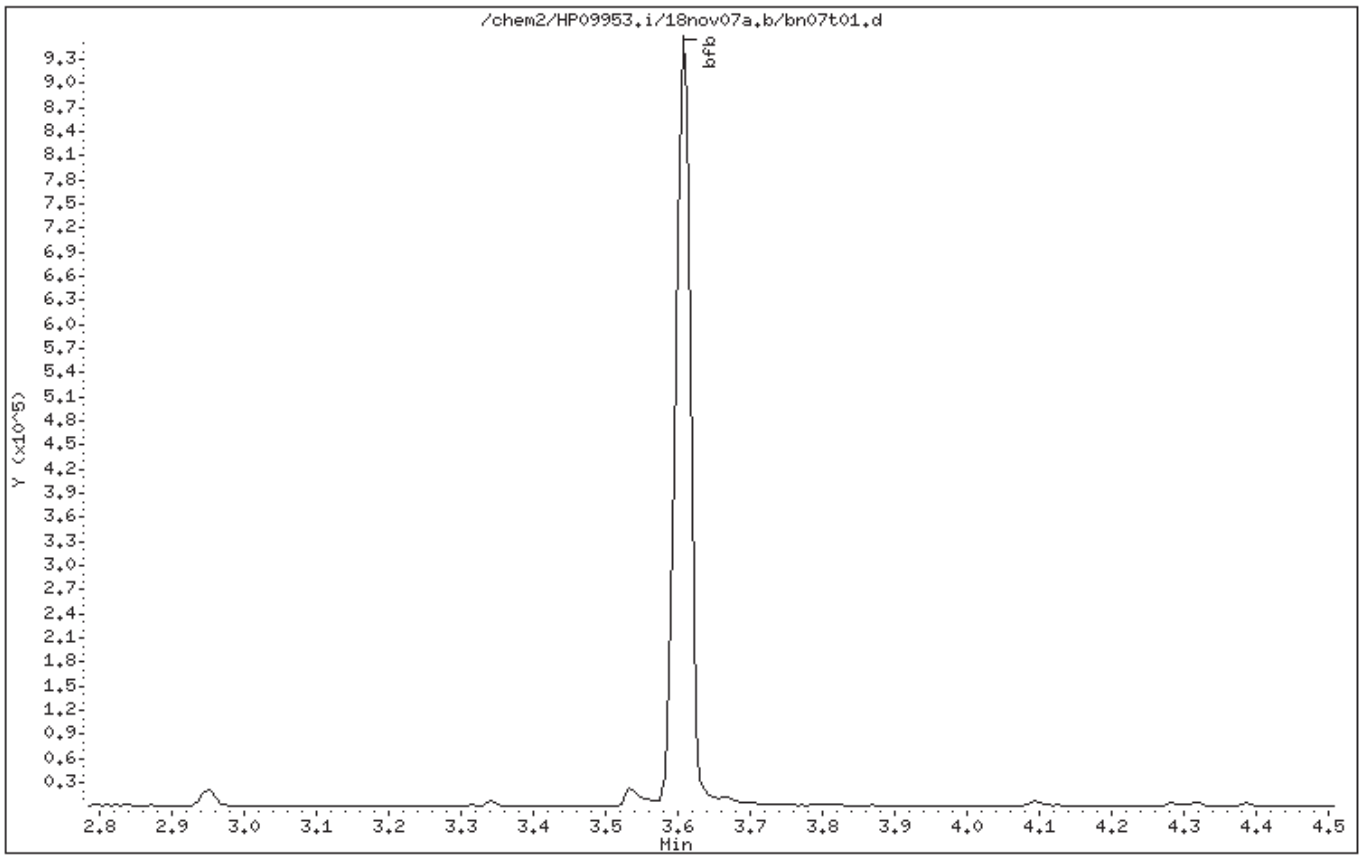
Instrument: HP09953.i

Sample Info: BFB Aug07-18;NG50 BFB;2;3;;;;;;

Operator: jkh09052

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Jennifer K. Howe on 11/07/2018 at 07:40.
Target 3.5 esignature user ID: jkh09052

Data File: /chem2/HP09953.i/18nov07a.b/bn07t01.d

Date : 07-NOV-2018 07:35

Client ID: BFB Aug07-18

Instrument: HP09953.i

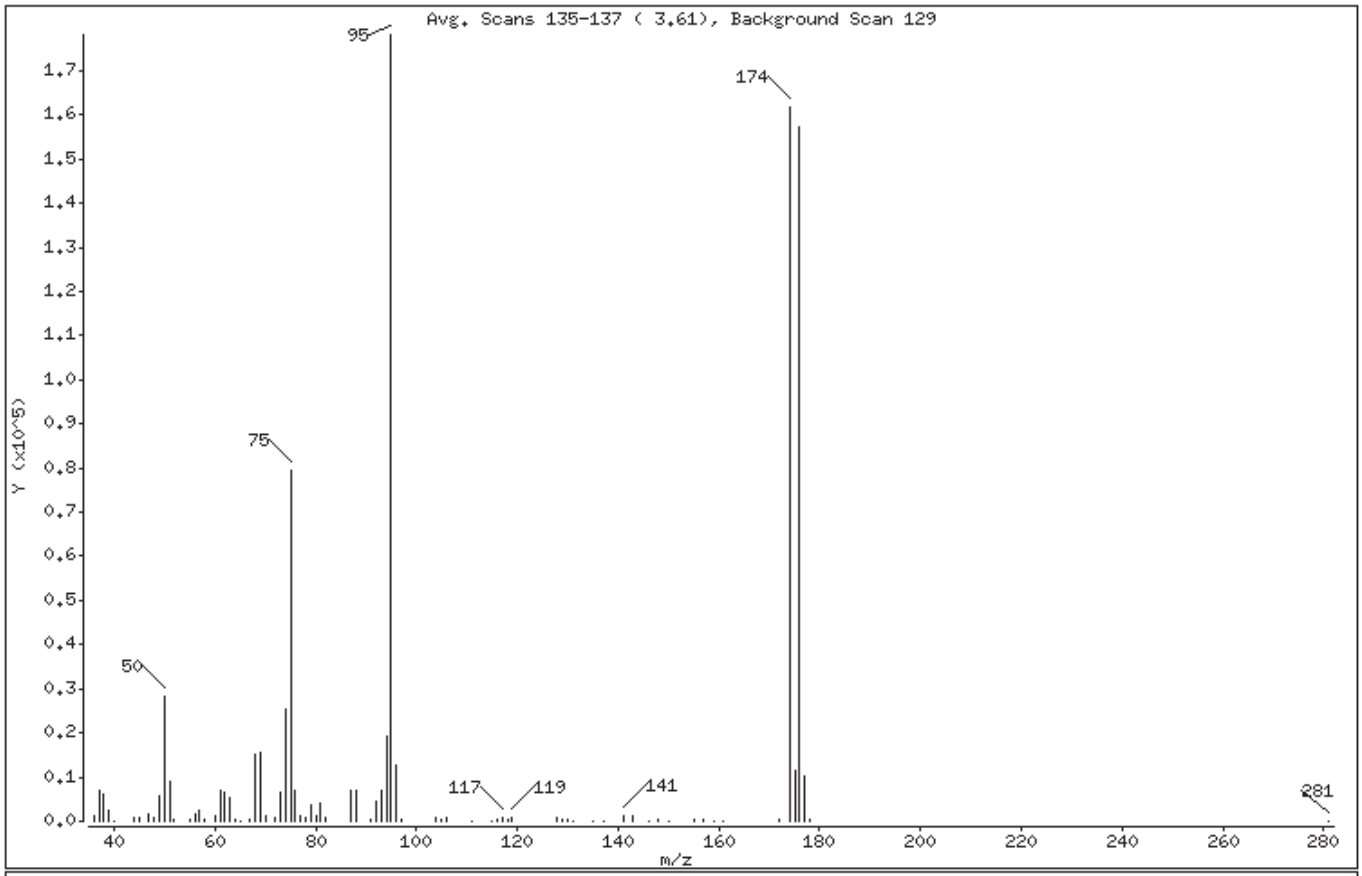
Sample Info: BFB Aug07-18;NG50 BFB;2;3;;;;;;

Operator: jkh09052

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.97
75	30.00 - 60.00% of mass 95	44.55
96	5.00 - 9.00% of mass 95	7.08
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	90.87
175	5.00 - 9.00% of mass 174	6.51 (7.17)
176	95.00 - 101.00% of mass 174	88.34 (97.22)
177	5.00 - 9.00% of mass 176	5.85 (6.62)

Digitally signed by Jennifer K. Howe on 11/07/2018 at 07:40.
Target 3.5 esignature user ID: jkh09052

Date : 07-NOV-2018 07:35

Client ID: BFB Aug07-18 Instrument: HP09953.i

Sample Info: BFB Aug07-18;NG50 BFB;2;3;;;;;;

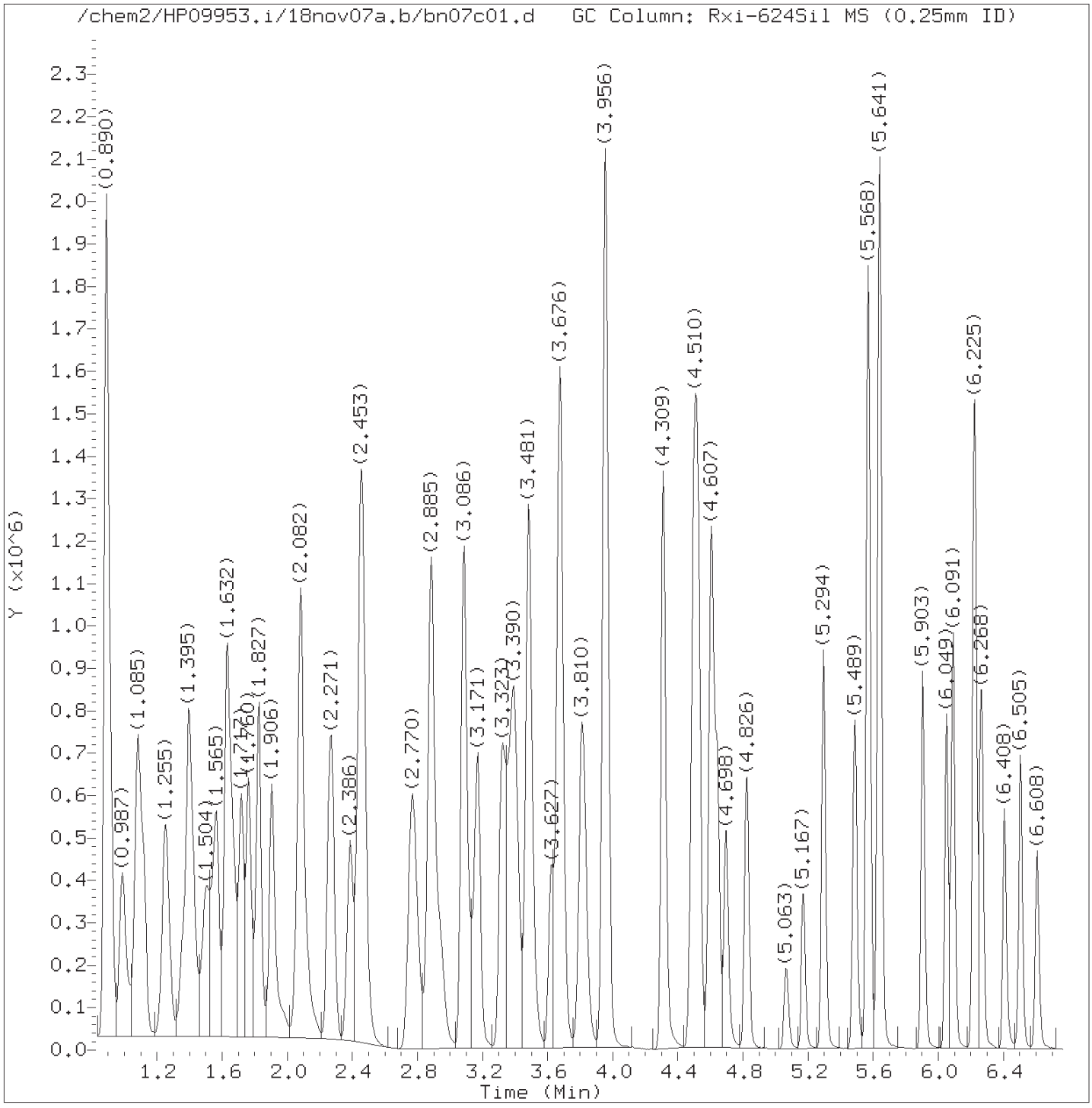
Operator: jkh09052

Column phase: DB-624 Column diameter: 0.18

Data File: bn07t01.d
Spectrum: Avg. Scans 135-137 (3.61), Background Scan 129
Location of Maximum: 95.00
Number of points: 78

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1309	63.00	5328	91.00	541	135.00	202
37.00	7129	64.00	557	92.00	4540	137.00	118
38.00	5983	65.00	91	93.00	6978	141.00	1416
39.00	2410	67.00	423	94.00	19320	143.00	1368
40.00	1	68.00	15233	95.00	178112	146.00	114
44.00	732	69.00	15597	96.00	12608	148.00	427
45.00	622	70.00	1362	97.00	422	150.00	174
47.00	1790	72.00	847	104.00	680	155.00	454
48.00	921	73.00	6630	105.00	270	157.00	347
49.00	5767	74.00	25360	106.00	685	159.00	94
50.00	28448	75.00	79344	111.00	86	161.00	87
51.00	8872	76.00	6923	115.00	95	172.00	319
52.00	456	77.00	1036	116.00	517	174.00	161792
55.00	480	78.00	656	117.00	972	175.00	11602
56.00	1837	79.00	3797	118.00	549	176.00	157312
57.00	2655	80.00	1129	119.00	805	177.00	10421
58.00	214	81.00	4053	128.00	616	178.00	264
60.00	1303	82.00	911	129.00	304	281.00	111
61.00	6843	87.00	6822	130.00	540		
62.00	6704	88.00	7032	131.00	95		

Digitally signed by Jennifer K. Howe on 11/07/2018 at 07:40.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

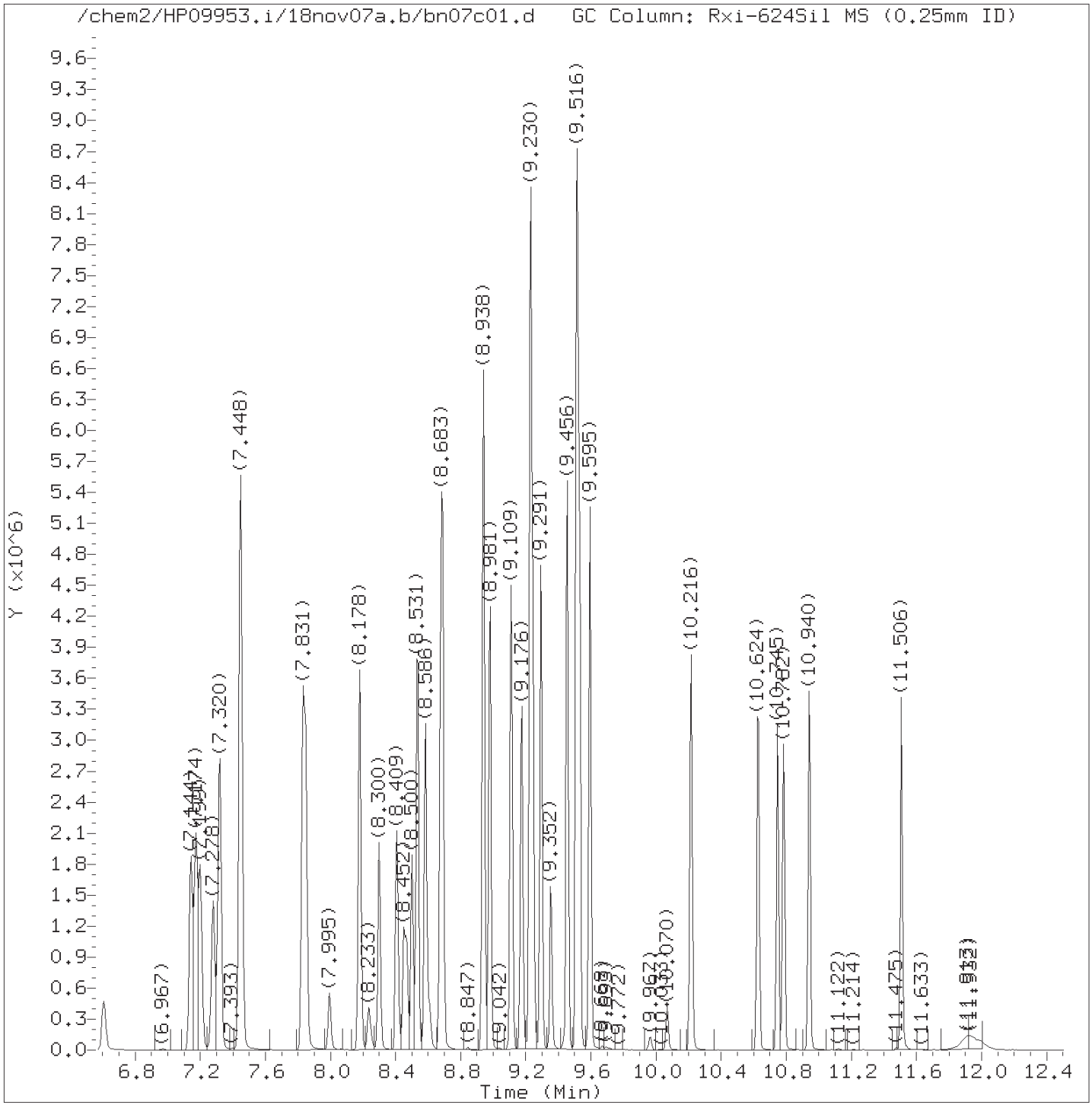
Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:53
Date, time and analyst ID of latest file update: 07-Nov-2018 09:47 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:53
Date, time and analyst ID of latest file update: 07-Nov-2018 09:47 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:53
Date, time and analyst ID of latest file update: 07-Nov-2018 09:47 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.987	85	684761	57.537
4) Chloromethane	(2)	1.072	50	610707	49.784
5) Vinyl Chloride	(2)	1.121	62	486999	50.948
9) Bromomethane	(2)	1.249	94	450945A	53.006
10) Chloroethane	(2)	1.267	64	270272	52.563
13) Trichlorofluoromethane	(2)	1.413	101	745682	56.668
15) Ethanol	(1)	1.450	45	138596	2350.879
17) Freon 123a	(2)	1.510	67	414381	47.037
18) Acrolein	(1)	1.565	56	524337	480.310
19) 1,1-Dichloroethene	(2)	1.626	96	321427	48.609
20) Acetone	(1)	1.644	58	49118	95.240
22) Freon 113	(2)	1.656	101	396760	59.846
23) 2-Propanol	(1)	1.717	45	111742	255.964
24) Methyl Iodide	(2)	1.717	142	764894	48.107
25) Carbon Disulfide	(2)	1.766	76	1246147M	47.098
27) Methyl Acetate	(2)	1.827	43	174408	51.435
29) Allyl Chloride	(2)	1.827	41	484648M	54.792
31) Methylene Chloride	(2)	1.906	84	354507	45.366
30)*t-Butyl alcohol-d10	(1)	1.930	65	112993	250.000
32) t-Butyl alcohol	(1)	1.973	59	124190	209.235
33) Acrylonitrile	(2)	2.058	53	98633	42.969
35) trans-1,2-Dichloroethene	(2)	2.082	96	375732	48.861
34) Methyl Tertiary Butyl Ether	(2)	2.094	73	890981	47.370
38) n-Hexane	(2)	2.265	57	567509	64.656
40) 1,1-Dichloroethane	(2)	2.386	63	645366	51.758
41) di-Isopropyl ether	(2)	2.453	45	1168000	50.187
42) 2-Chloro-1,3-butadiene	(2)	2.453	53	563163	51.253
43) Ethyl t-butyl ether	(2)	2.770	59	1050055	47.911
45) cis-1,2-Dichloroethene	(2)	2.879	96	427112	51.170
44) 2-Butanone	(1)	2.891	43	264175	90.939
47) 2,2-Dichloropropane	(2)	2.897	77	507737	55.856
49) Propionitrile	(1)	2.946	54	201859	259.023
46) 1,2-Dichloroethene (Total)	(2)		96	802844	100.031
51) Methacrylonitrile	(2)	3.080	67	316251	123.294
52) Bromochloromethane	(2)	3.092	128	236015	53.222
53) Tetrahydrofuran	(1)	3.135	71	73116	101.045
54) Chloroform	(2)	3.171	83	647702	51.178
56)$Dibromofluoromethane	(2)	3.317	113	333914	50.833

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:53
Date, time and analyst ID of latest file update: 07-Nov-2018 09:47 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	3.317	111	340788	51.175
57) 1,1,1-Trichloroethane	(2)	3.342	97	583707	45.045
58) Cyclohexane	(2)	3.396	56	698171	57.351
58) Cyclohexane	(2)	3.390	84	624919	54.929
58) Cyclohexane	(2)	3.390	69	218477	56.747
60) 1,1-Dichloropropene	(2)	3.481	75	504007	53.524
61) Carbon Tetrachloride	(2)	3.494	117	516841	52.516
63)$1,2-Dichloroethane-d4	(2)	3.621	102	73456M	51.954
63)$1,2-Dichloroethane-d4	(2)	3.621	65	313190	50.371
63)$1,2-Dichloroethane-d4	(2)	3.621	104	46558	51.399
62) Isobutyl Alcohol	(1)	3.646	41	114629	549.685
64) Benzene	(2)	3.676	78	1509321	50.205
67) 1,2-Dichloroethane	(2)	3.694	62	427201	49.241
67) 1,2-Dichloroethane	(2)	3.694	98	43197	50.121
68) t-Amyl methyl ether	(2)	3.810	73	944762	46.688
70)*Fluorobenzene	(2)	3.950	96	1318042	50.000
72) n-Heptane	(2)	3.962	43	615365	76.854
75) Trichloroethene	(2)	4.309	95	402605	51.354
73) n-Butanol	(1)	4.315	56	176474	1010.613
76) Methylcyclohexane	(2)	4.503	83	790206	64.769
77) 1,2-Dichloropropane	(2)	4.528	63	371612	52.051
81) Dibromomethane	(2)	4.643	93	218507	50.048
80) 1,4-Dioxane	(1)	4.692	88	42905M	592.884
79) Methyl Methacrylate	(2)	4.698	69	212387	46.154
84) Bromodichloromethane	(2)	4.820	83	448048	50.254
85) 2-Nitropropane	(1)	5.063	41	120955	80.932
87) 2-Chloroethyl Vinyl Ether	(2)	5.173	63	166116	44.189
89) cis-1,3-Dichloropropene	(2)	5.294	75	559546	51.975
90) 4-Methyl-2-pentanone	(2)	5.489	43	551361	89.790
91)$Toluene-d8	(3)	5.568	98	1337256	49.295
91)$Toluene-d8	(3)	5.568	100	871715	49.519
92) Toluene	(3)	5.641	92	983653	48.888
93) trans-1,3-Dichloropropene	(3)	5.903	75	468127	48.572
94) 1,3-Dichloropropene (total)	(3)		100	1027673	100.547
95) Ethyl Methacrylate	(3)	6.049	69	417805	44.658
96) 1,1,2-Trichloroethane	(3)	6.091	97	314658	48.191
98) Tetrachloroethene	(3)	6.225	166	475978	43.189
99) 1,3-Dichloropropane	(3)	6.268	76	507779	48.298

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:53
Date, time and analyst ID of latest file update: 07-Nov-2018 09:47 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 2-Hexanone	(3)	6.408	43	376182	80.238
103) Dibromochloromethane	(3)	6.505	129	366583	48.731
104) 1,2-Dibromoethane	(3)	6.608	107	327595	48.565
105)*Chlorobenzene-d5	(3)	7.144	117	1051055	50.000
107) Chlorobenzene	(3)	7.174	112	1145334	48.755
106) 1-Chlorohexane	(3)	7.199	91	533061	53.320
108) 1,1,1,2-Tetrachloroethane	(3)	7.278	131	393320	49.376
109) Ethylbenzene	(3)	7.320	91	1915035	50.606
110) m+p-Xylene	(3)	7.448	106	1572373	101.825
111) o-Xylene	(3)	7.831	106	759793	49.217
113) Styrene	(3)	7.849	104	1238849	48.678
112) Xylene (Total)	(3)		106	2332166	151.042
114) Bromoform	(3)	7.995	173	215923	46.063
115) Isopropylbenzene	(3)	8.178	105	1985260	51.018
118) Cyclohexanone	(1)	8.233	55	133747M	510.728
119)$4-Bromofluorobenzene	(3)	8.300	95	492441M	49.831
119)$4-Bromofluorobenzene	(3)	8.300	174	463608	50.968
121) Bromobenzene	(4)	8.409	156	526240	45.587
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	401542	45.560
123) 1,2,3-Trichloropropane	(4)	8.470	110	118530	45.358
122) trans-1,4-Dichloro-2-butene	(4)	8.500	53	256934M	118.806
124) n-Propylbenzene	(4)	8.531	91	2302932	50.460
126) 2-Chlorotoluene	(4)	8.586	126	500263	46.714
130) 4-Chlorotoluene	(4)	8.677	126	520494	47.972
129) 1,3,5-Trimethylbenzene	(4)	8.689	105	1736861	49.199
133) tert-Butylbenzene	(4)	8.938	134	424543	51.192
134) Pentachloroethane	(4)	8.938	167	334497	67.453
135) 1,2,4-Trimethylbenzene	(4)	8.981	105	1773738	48.181
136) sec-Butylbenzene	(4)	9.109	105	2284173	50.824
138) 1,3-Dichlorobenzene	(4)	9.176	146	1037601	47.894
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	630040	50.000
139) p-Isopropyltoluene	(4)	9.230	119	2071054	51.423
141) 1,4-Dichlorobenzene	(4)	9.243	146	1063254	47.074
142) 1,2,3-Trimethylbenzene	(4)	9.291	105	1898585	47.843
143) Benzyl Chloride	(4)	9.352	126	172535	58.611
144) 1,3-Diethylbenzene	(4)	9.456	119	1274851	51.203
145) 1,4-Diethylbenzene	(4)	9.516	119	1378853	53.362
147) 1,2-Dichlorobenzene	(4)	9.516	146	1008037	47.593

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

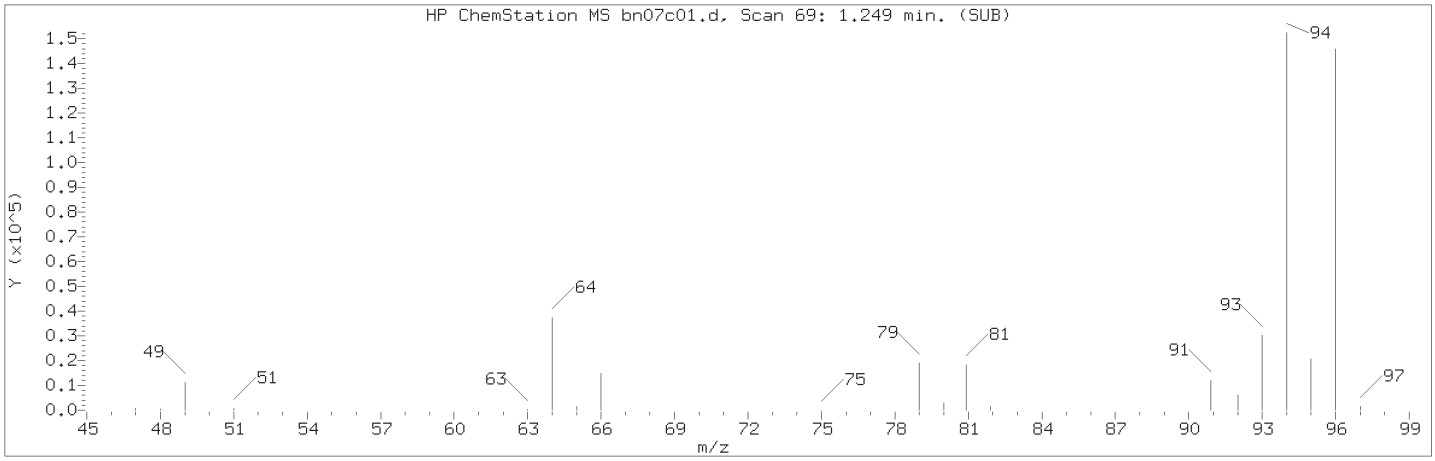
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:53
Date, time and analyst ID of latest file update: 07-Nov-2018 09:47 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

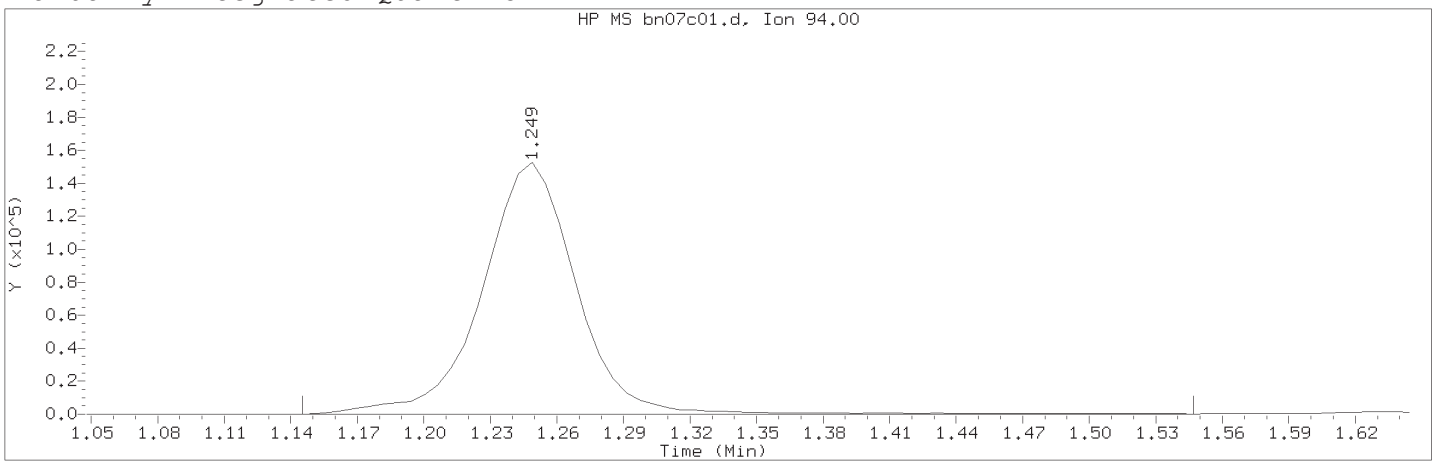
	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146)	n-Butylbenzene	(4)	9.529	92	996331	53.247
148)	1,2-Diethylbenzene	(4)	9.595	119	1058915	48.614
149)	Diethylbenzene (total)	(4)		100	3712619	153.178
151)	1,2-Dibromo-3-chloropropane	(4)	10.070	75	63978	41.781
152)	1,3,5-Trichlorobenzene	(4)	10.216	180	844451	50.956
153)	1,2,4-Trichlorobenzene	(4)	10.630	180	758572	48.567
154)	Hexachlorobutadiene	(4)	10.745	225	387150	54.327
155)	Naphthalene	(4)	10.782	128	1615383	43.538
156)	1,2,3-Trichlorobenzene	(4)	10.940	180	713245	47.886
157)	2-Methylnaphthalene	(4)	11.506	142	1084950	43.232

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:53
Date, time and analyst ID of latest file update: 07-Nov-2018 09:47 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

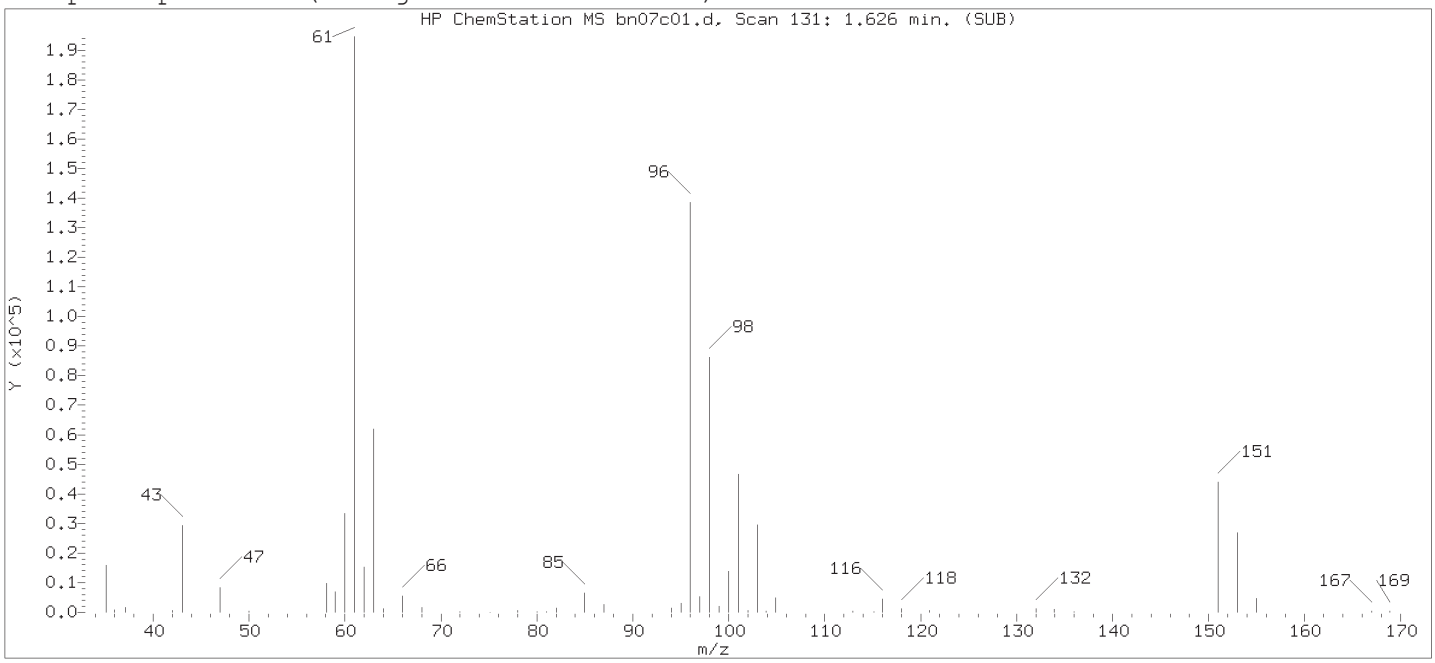
Compound Number : 9
Compound Name : Bromomethane
Scan Number : 69
Retention Time (minutes): 1.249
Quant Ion : 94.00
Area (flag) : 450945A
On-Column Amount (ng) : 53.0060
Integration start scan : 51 Integration stop scan: 117
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

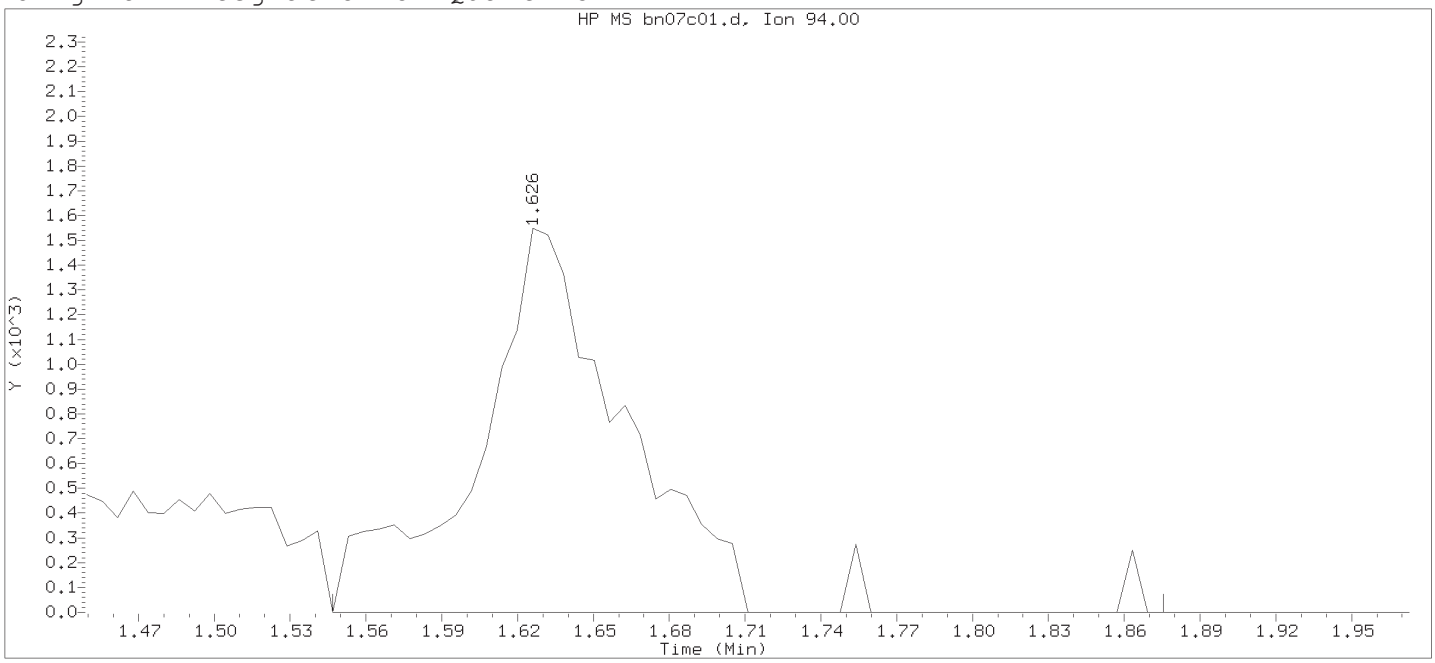
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/08/2018 at 10:37.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

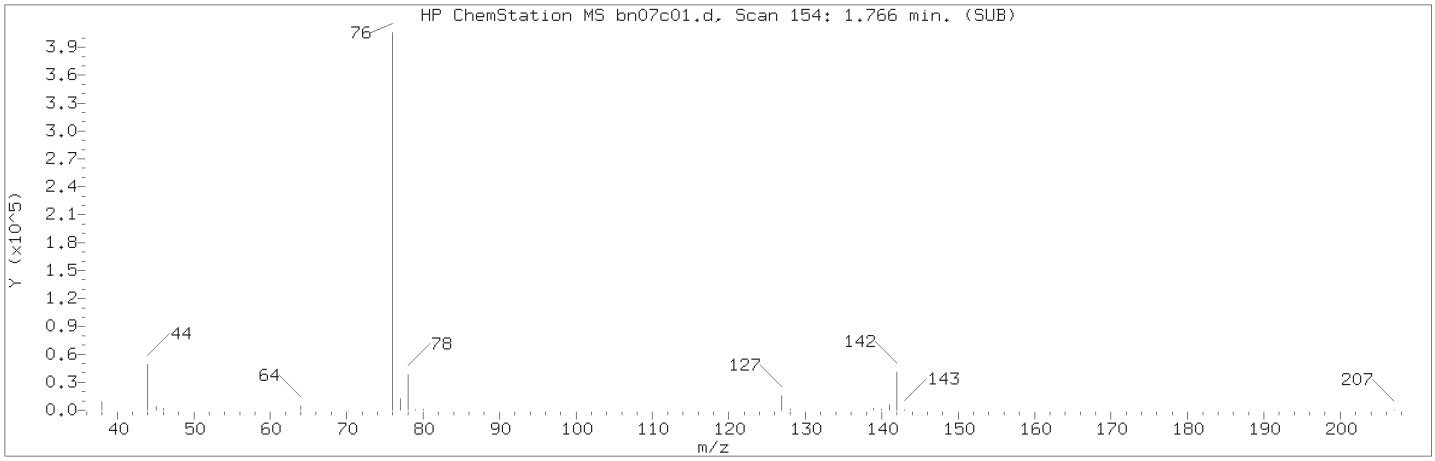
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:45
Date, time and analyst ID of latest file update: 07-Nov-2018 08:45 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

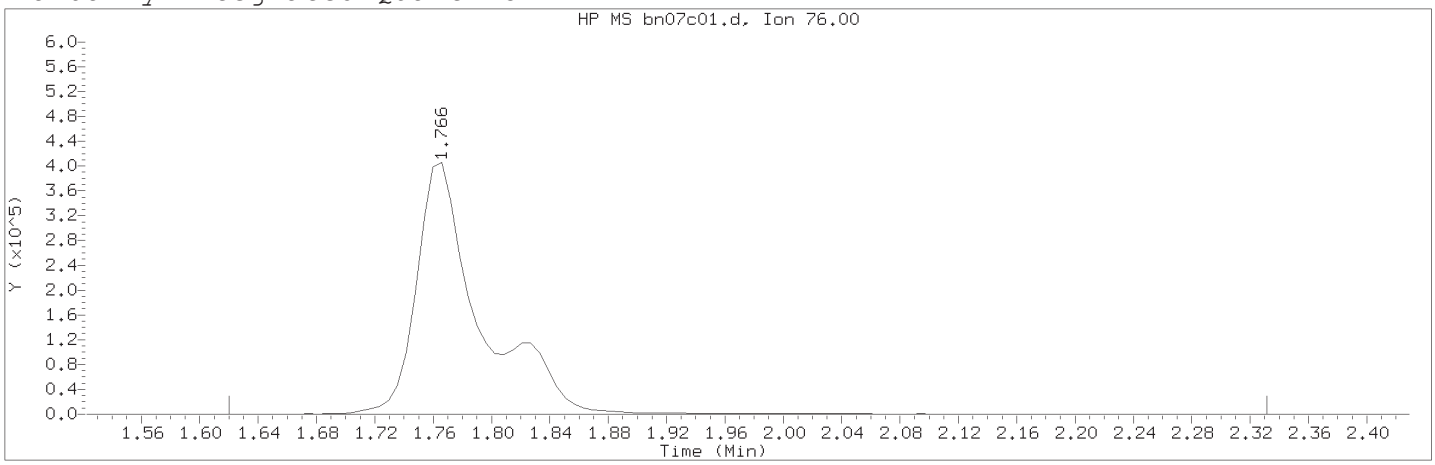
Compound Number : 9
Compound Name : Bromomethane
Scan Number : 131
Retention Time (minutes): 1.626
Quant Ion : 94.00
Area : 6436
On-column Amount (ng) : 0.7565
Integration start scan : 117 Integration stop scan: 171
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:53
Date, time and analyst ID of latest file update: 07-Nov-2018 09:47 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

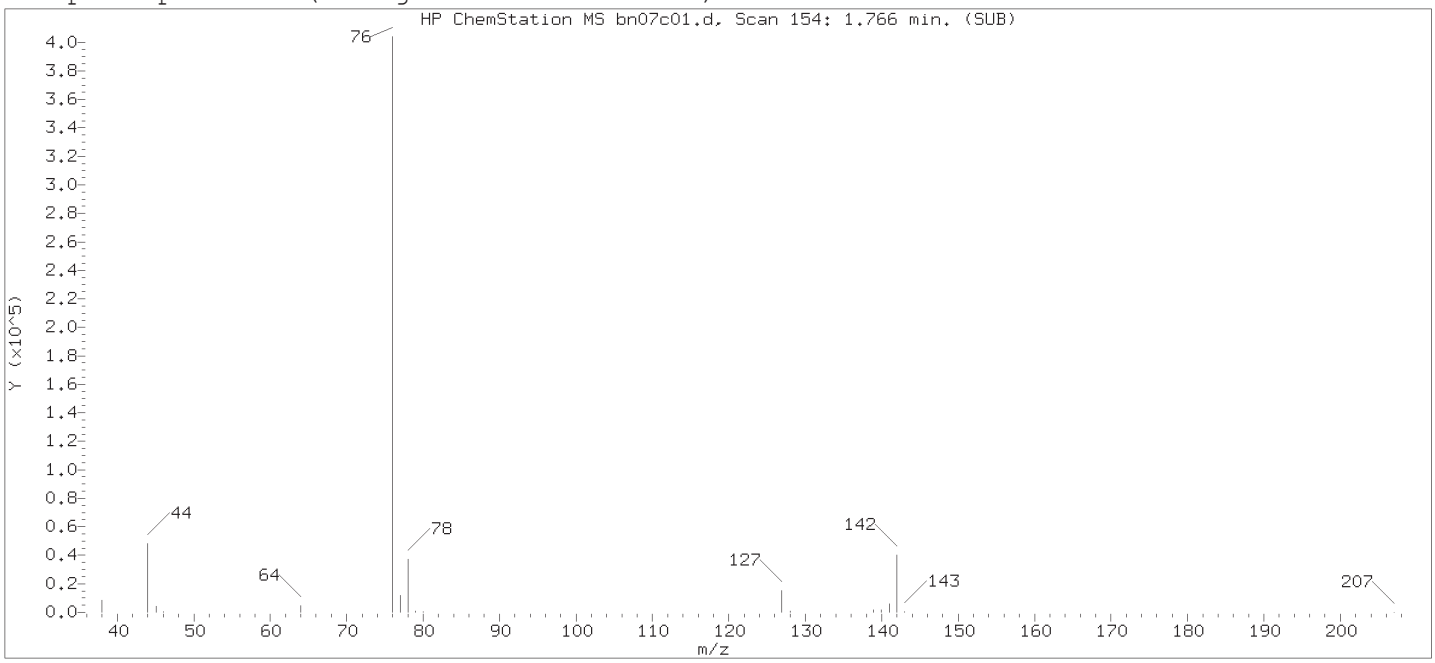
Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 154
Retention Time (minutes): 1.766
Quant Ion : 76.00
Area (flag) : 1246147M
On-Column Amount (ng) : 47.0983
Integration start scan : 129 Integration stop scan: 246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

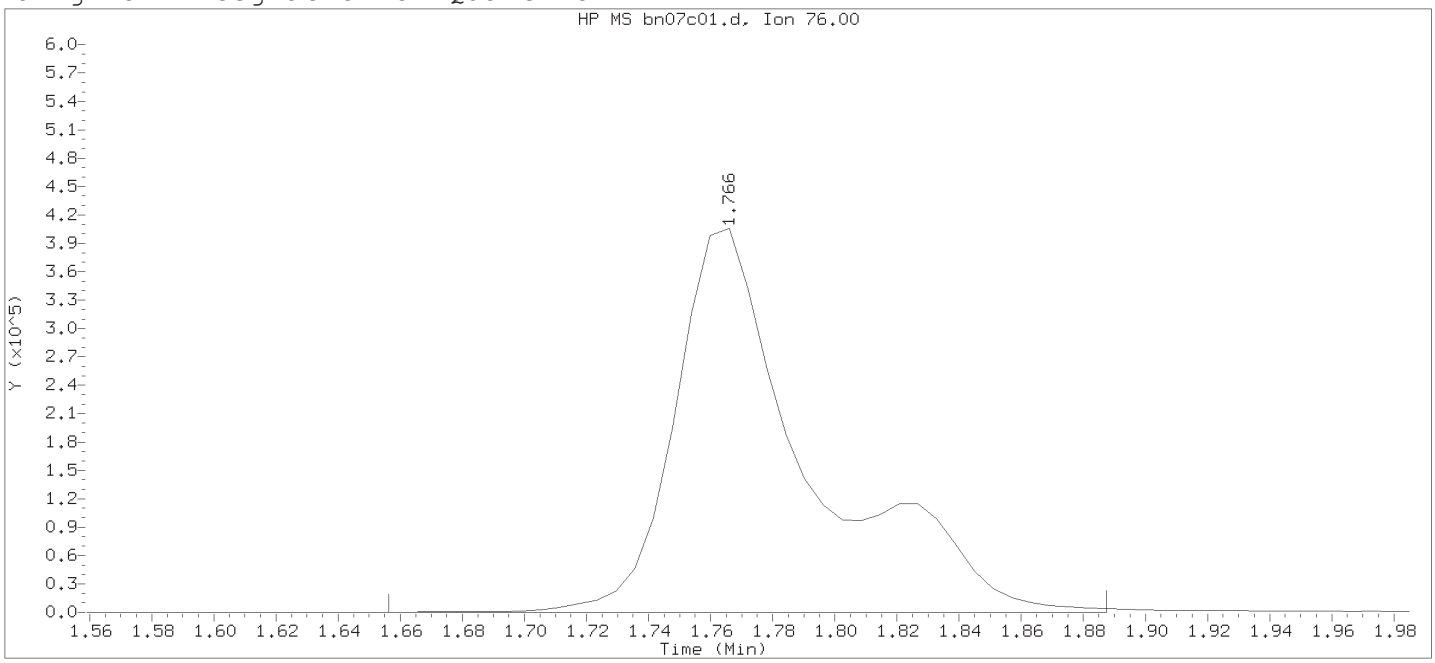
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/08/2018 at 10:37.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

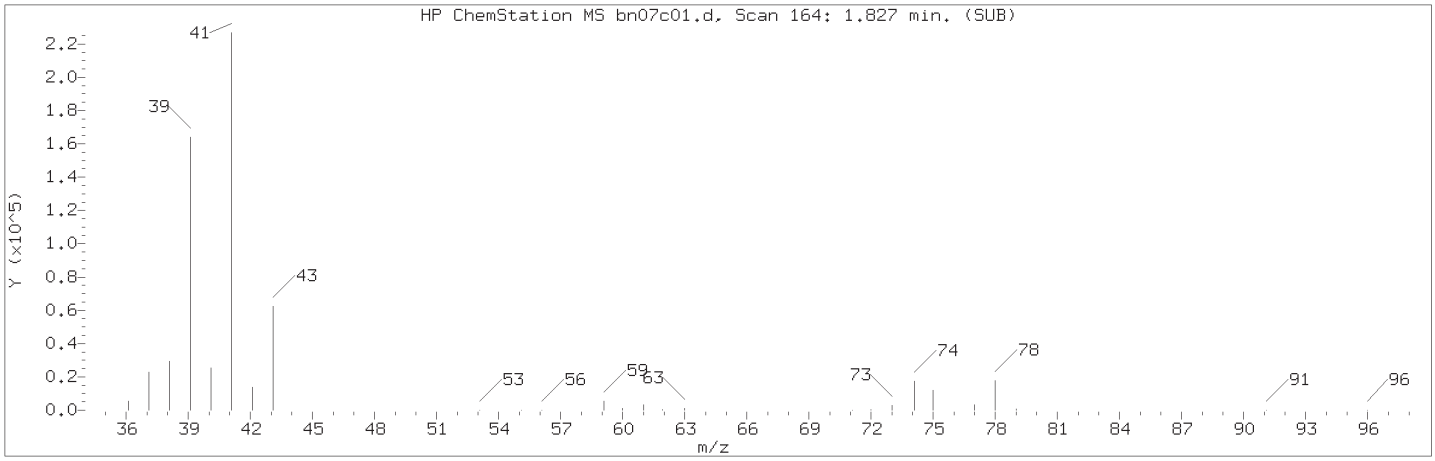
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:45
Date, time and analyst ID of latest file update: 07-Nov-2018 08:45 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

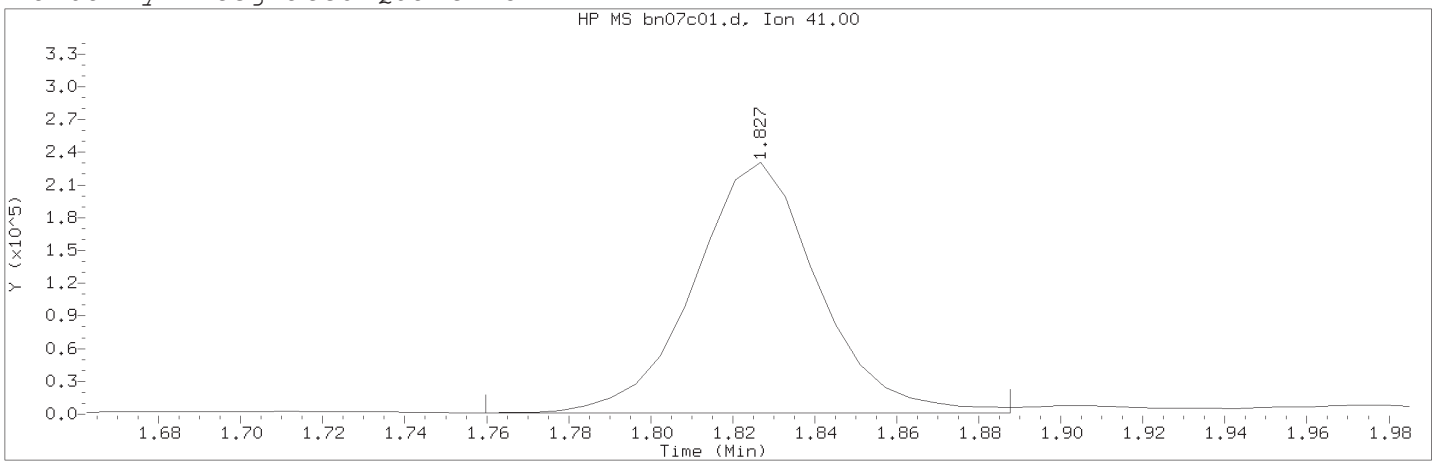
Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 154
Retention Time (minutes): 1.766
Quant Ion : 76.00
Area : 1229811
On-column Amount (ng) : 46.4809
Integration start scan : 135 Integration stop scan: 173
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:53
Date, time and analyst ID of latest file update: 07-Nov-2018 09:47 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

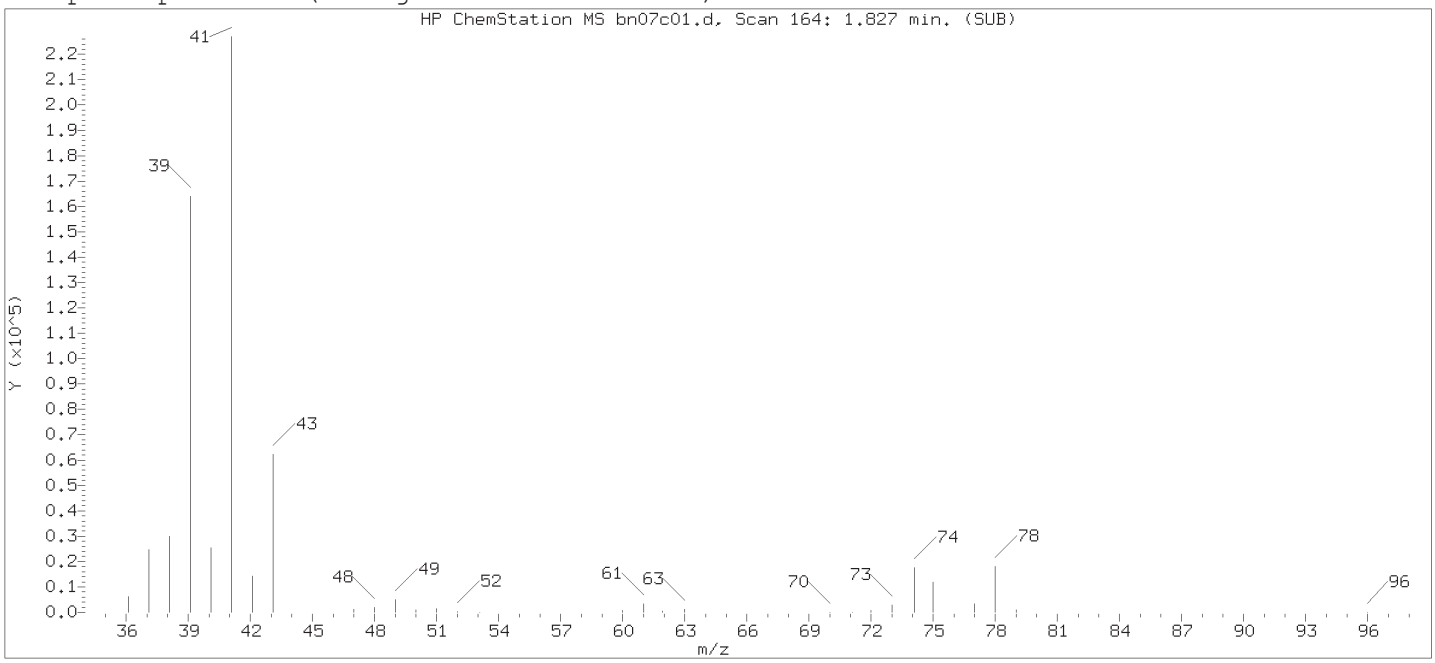
Compound Number : 29
Compound Name : Allyl Chloride
Scan Number : 164
Retention Time (minutes): 1.827
Quant Ion : 41.00
Area (flag) : 484648M
On-Column Amount (ng) : 54.7925
Integration start scan : 152 Integration stop scan: 173
Y at integration start : 1097 Y at integration end: 1097

Reason for manual integration: improper integration

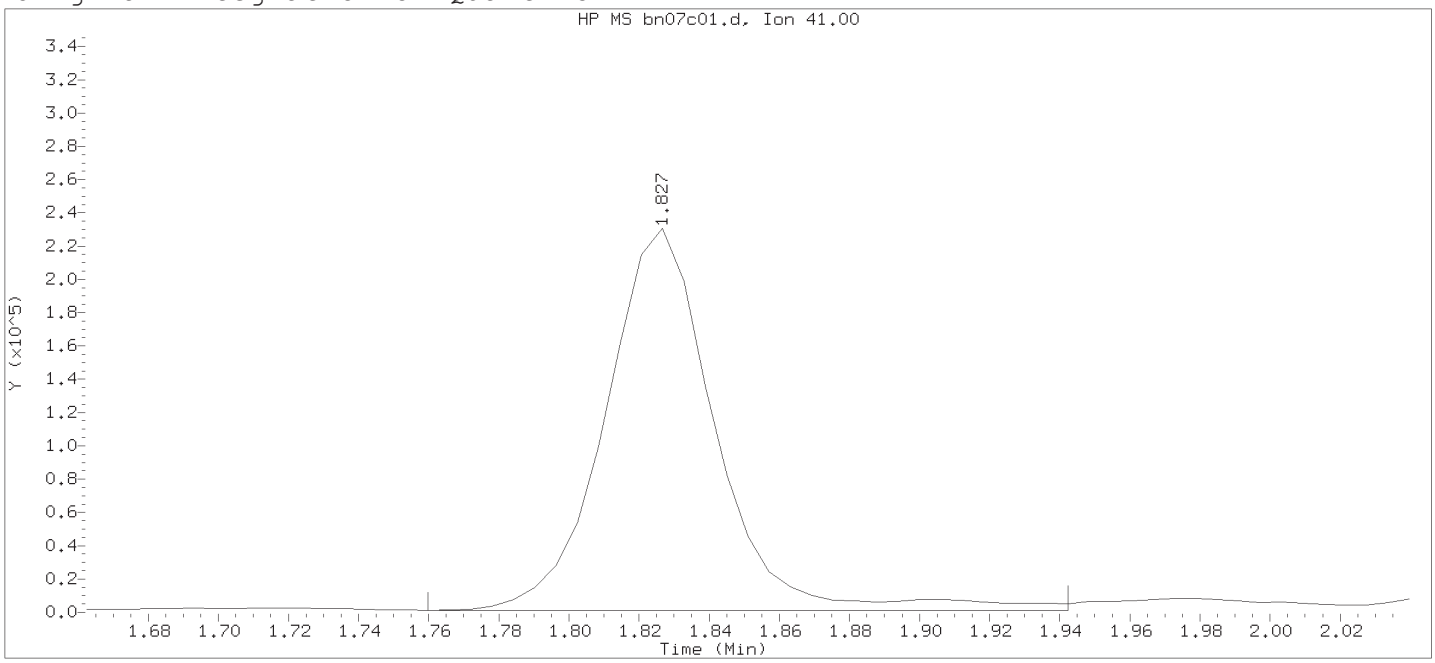
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/08/2018 at 10:37.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

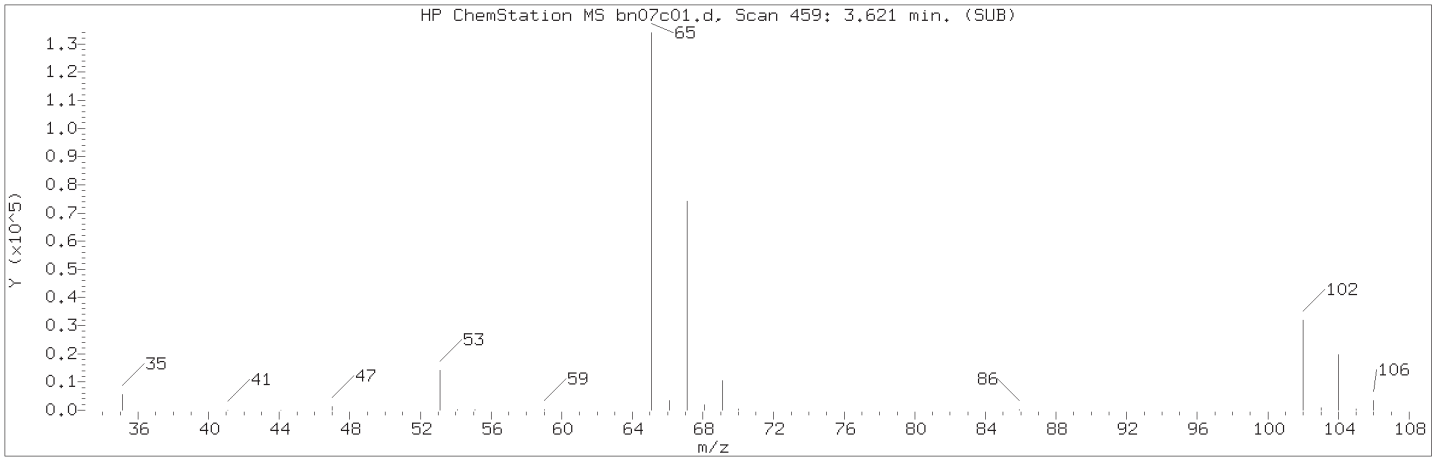
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:45
Date, time and analyst ID of latest file update: 07-Nov-2018 08:45 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

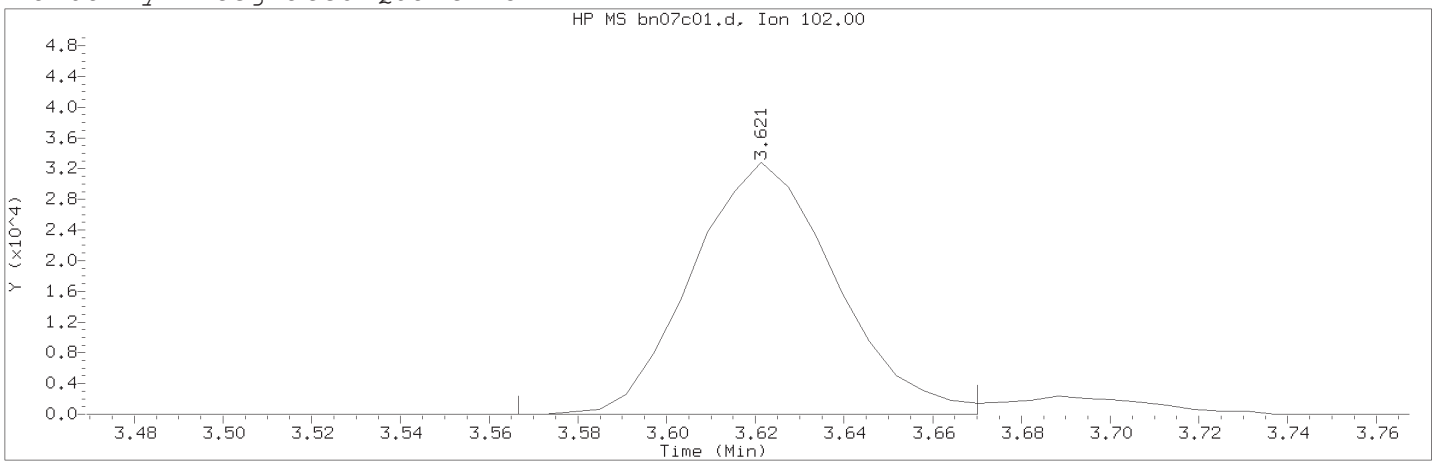
Compound Number : 29
Compound Name : Allyl Chloride
Scan Number : 164
Retention Time (minutes): 1.827
Quant Ion : 41.00
Area : 500986
On-column Amount (ng) : 56.6396
Integration start scan : 152 Integration stop scan: 182
Y at integration start : 1097 Y at integration end: 1097

Digitally signed by Jennifer K. Howe on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:53
Date, time and analyst ID of latest file update: 07-Nov-2018 09:47 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

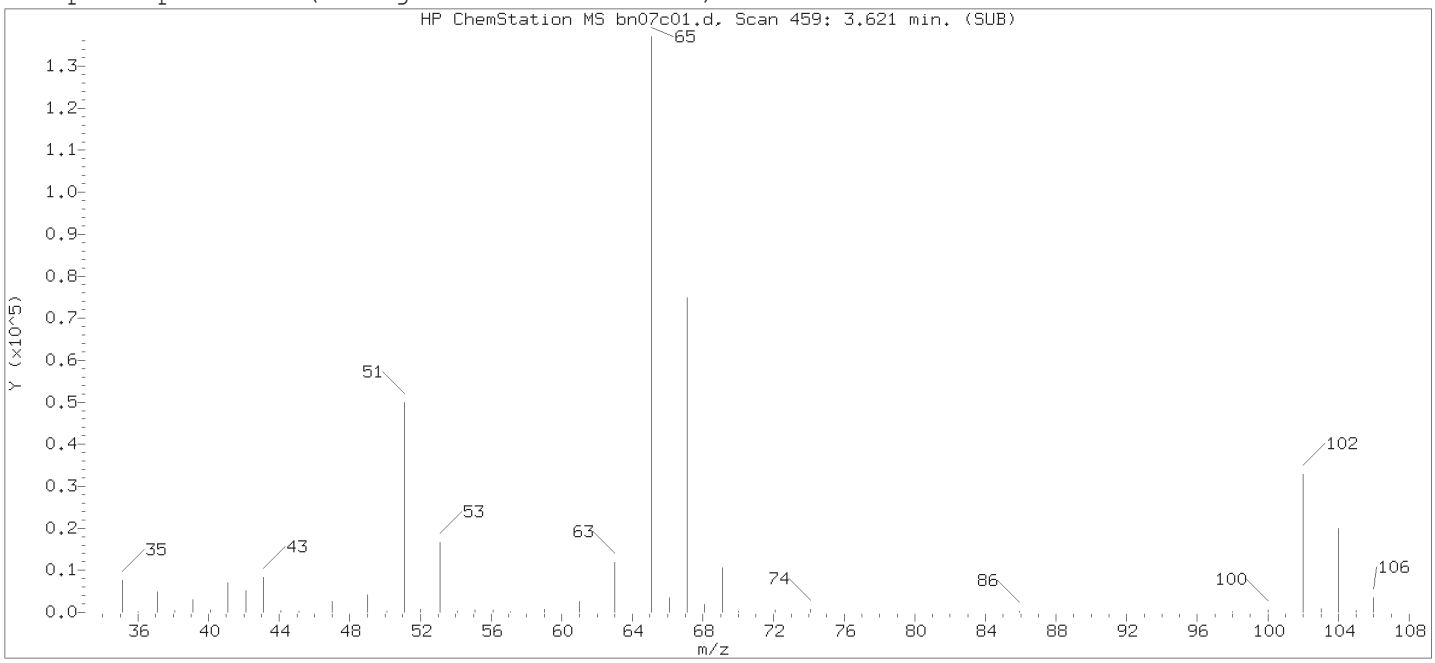
Compound Number : 63
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 459
Retention Time (minutes): 3.621
Quant Ion : 102.00
Area (flag) : 73456M
On-Column Amount (ng) : 51.9541
Integration start scan : 449 Integration stop scan: 466
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

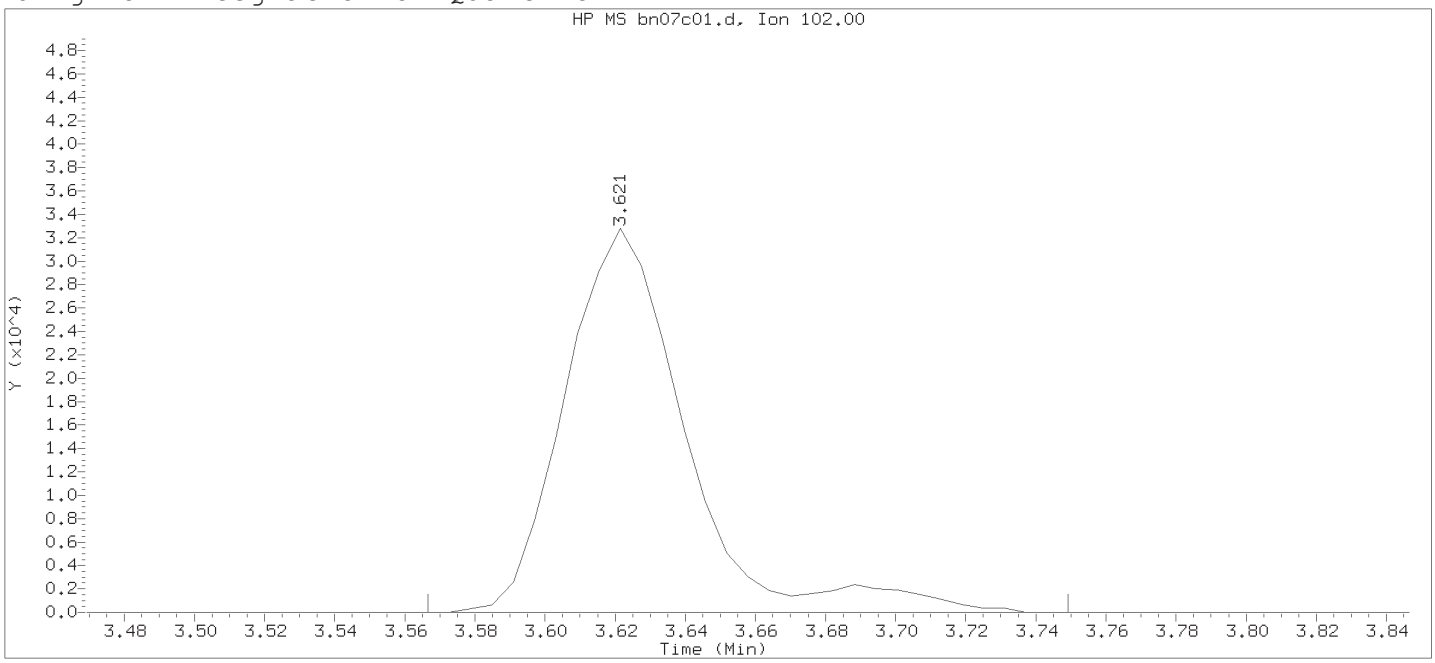
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/08/2018 at 10:37.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

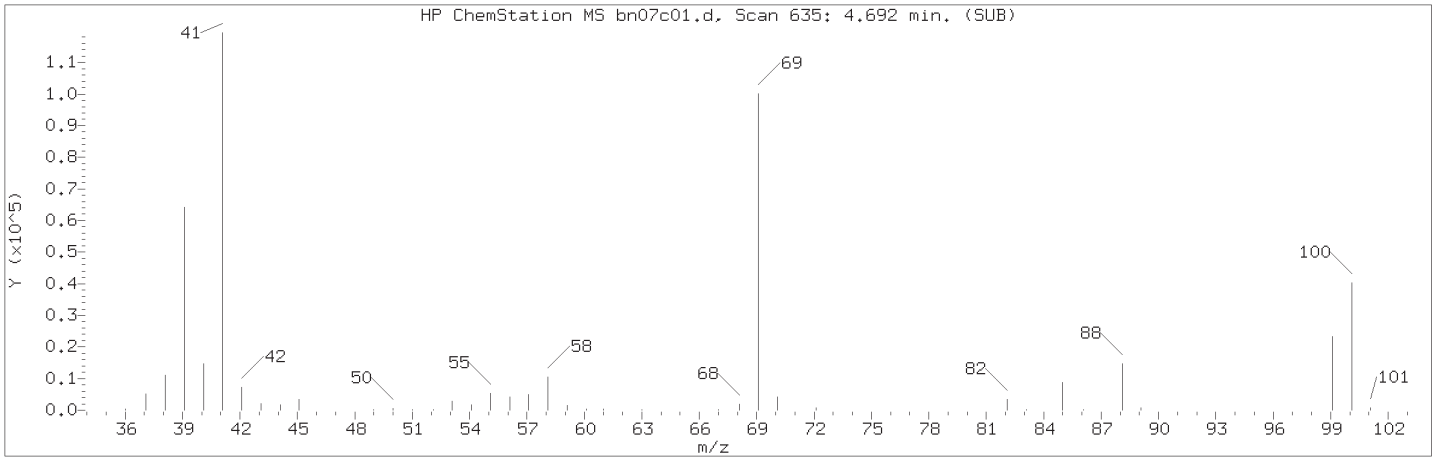
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:45
Date, time and analyst ID of latest file update: 07-Nov-2018 08:45 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

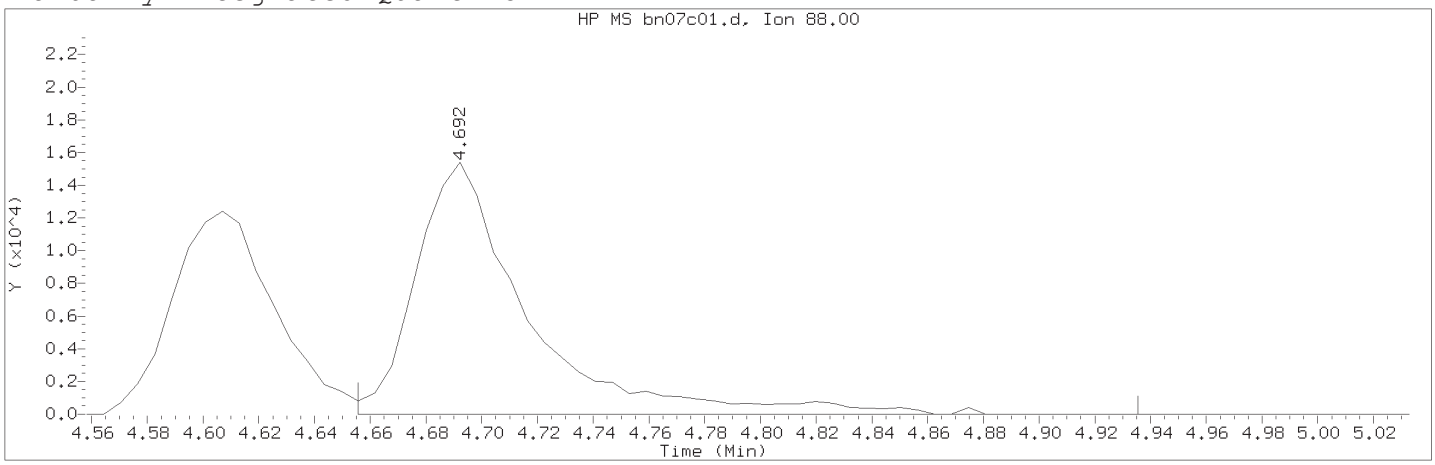
Compound Number : 63
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 459
Retention Time (minutes): 3.621
Quant Ion : 102.00
Area : 78507
On-column Amount (ng) : 55.5271
Integration start scan : 449 Integration stop scan: 479
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:53
Date, time and analyst ID of latest file update: 07-Nov-2018 09:47 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

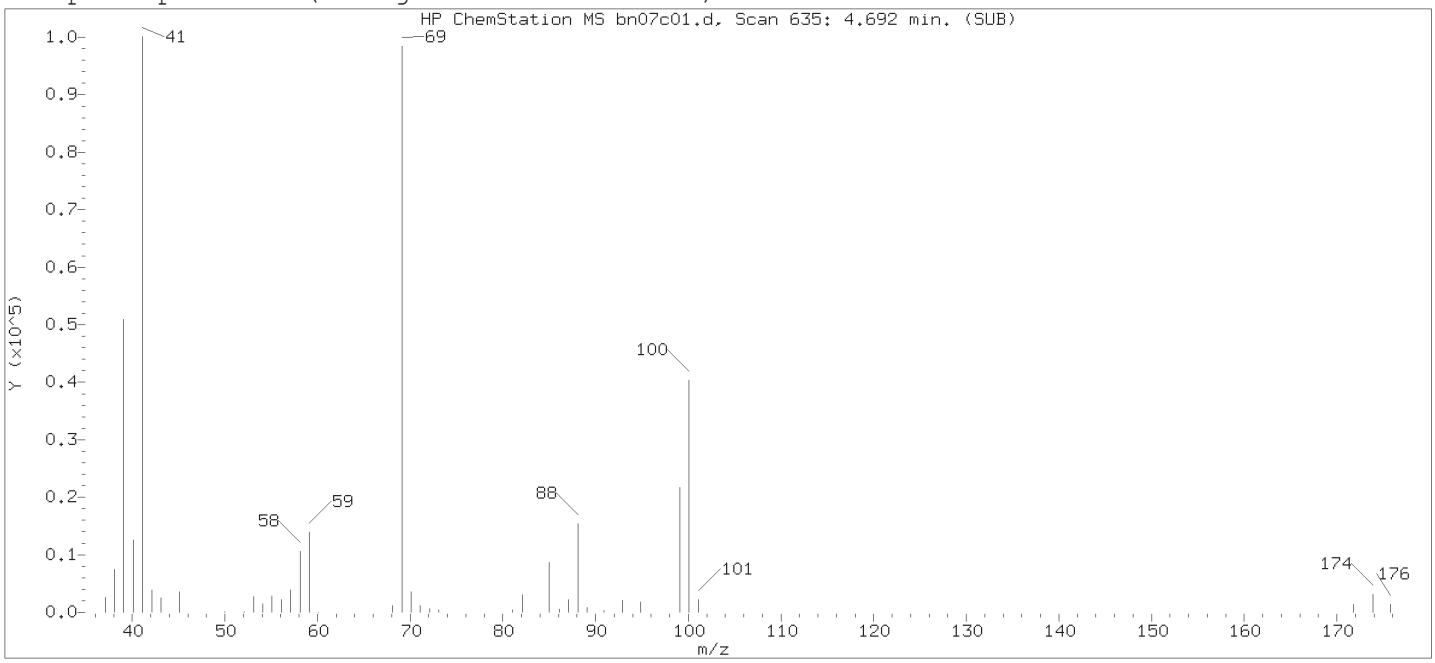
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area (flag) : 42905M
On-Column Amount (ng) : 592.8835
Integration start scan : 628 Integration stop scan: 674
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

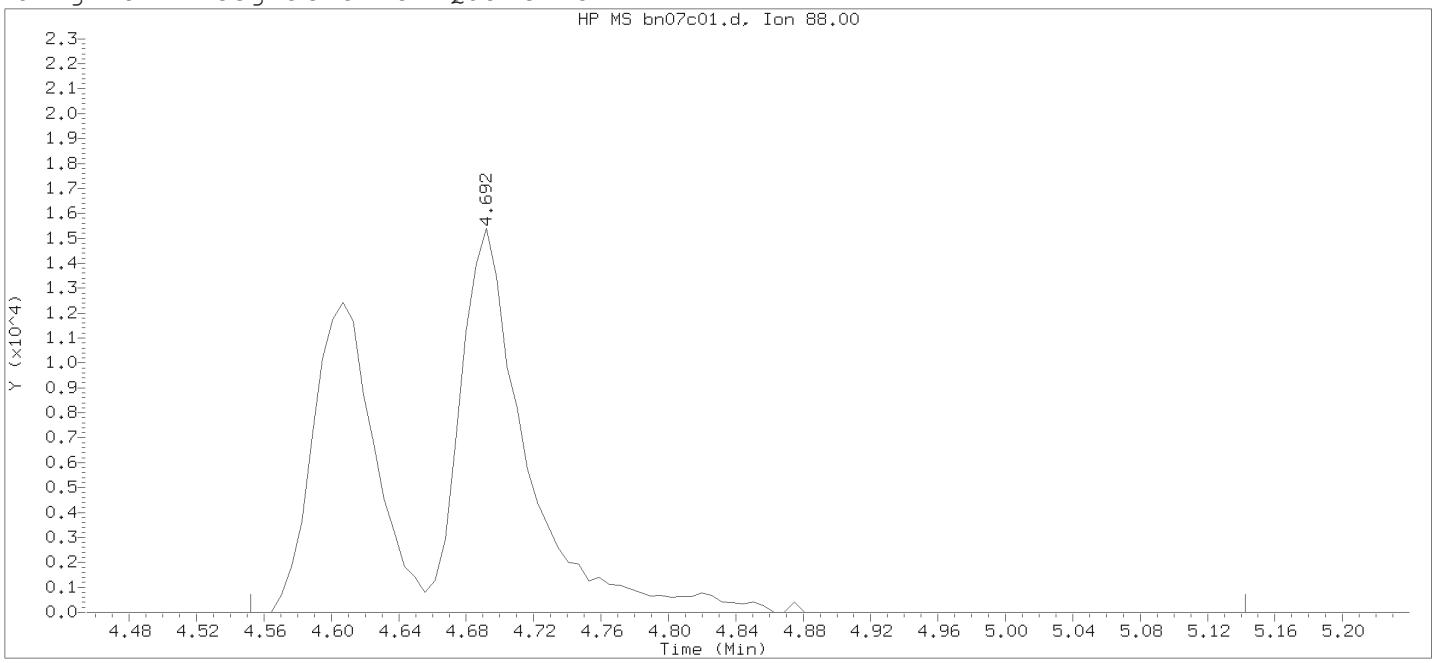
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/08/2018 at 10:37.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

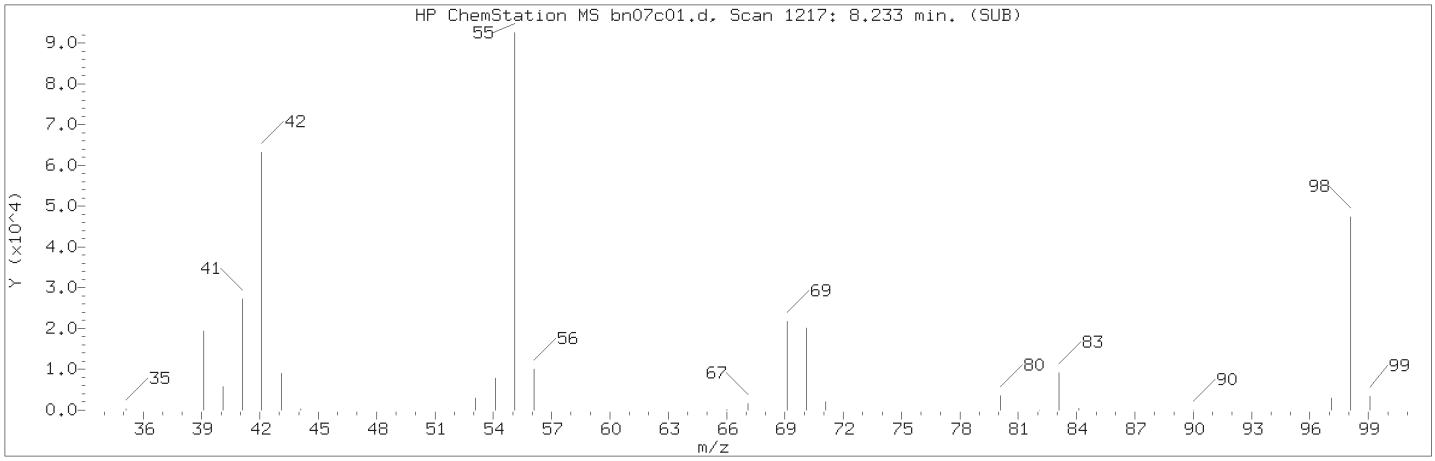
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:45
Date, time and analyst ID of latest file update: 07-Nov-2018 08:45 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

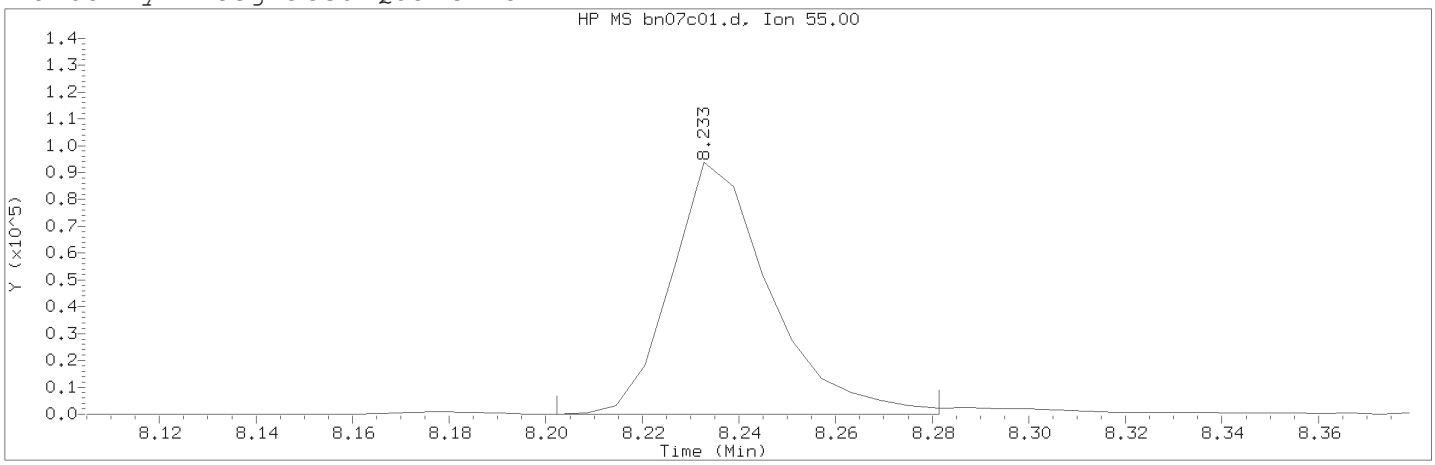
Compound Number : 80
Compound Name : 1,4-Dioxane
Scan Number : 635
Retention Time (minutes): 4.692
Quant Ion : 88.00
Area : 74227
On-column Amount (ng) : 1025.7044
Integration start scan : 611 Integration stop scan: 708
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:53
Date, time and analyst ID of latest file update: 07-Nov-2018 09:47 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

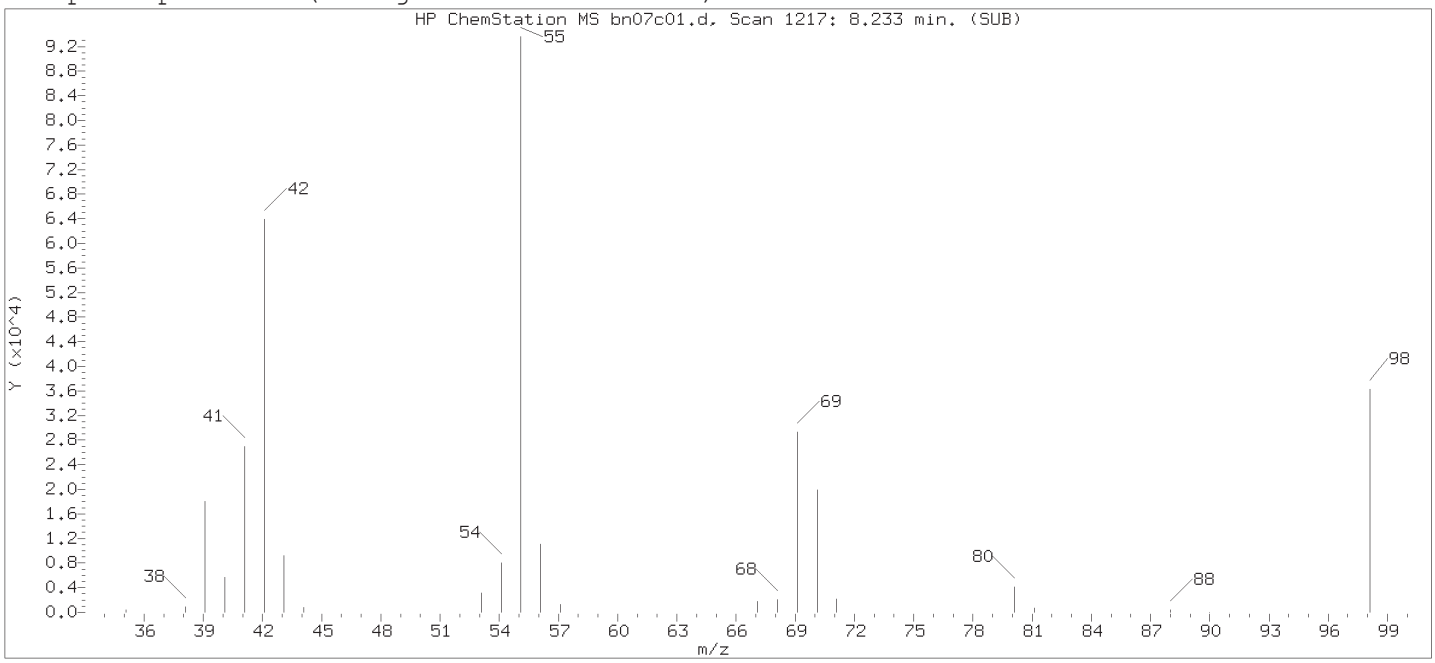
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1217
Retention Time (minutes): 8.233
Quant Ion : 55.00
Area (flag) : 133747M
On-Column Amount (ng) : 510.7280
Integration start scan : 1211 Integration stop scan: 1224
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

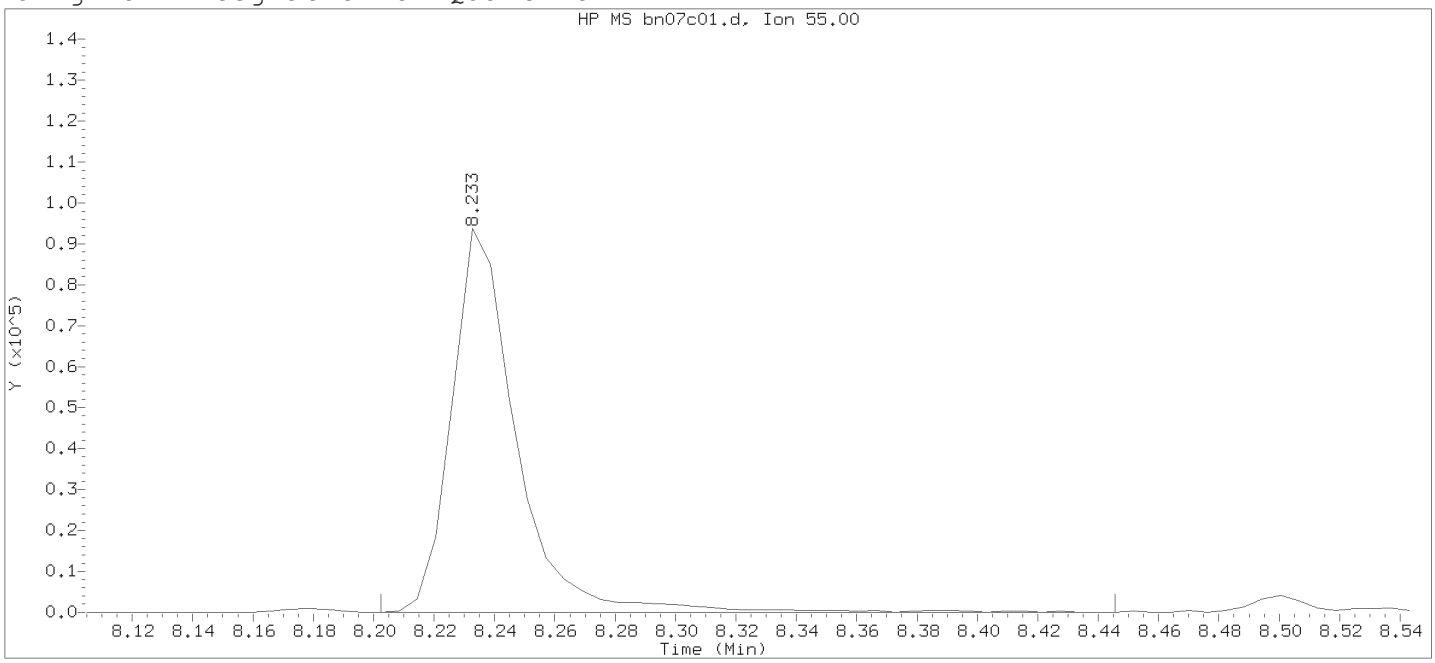
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/08/2018 at 10:37.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

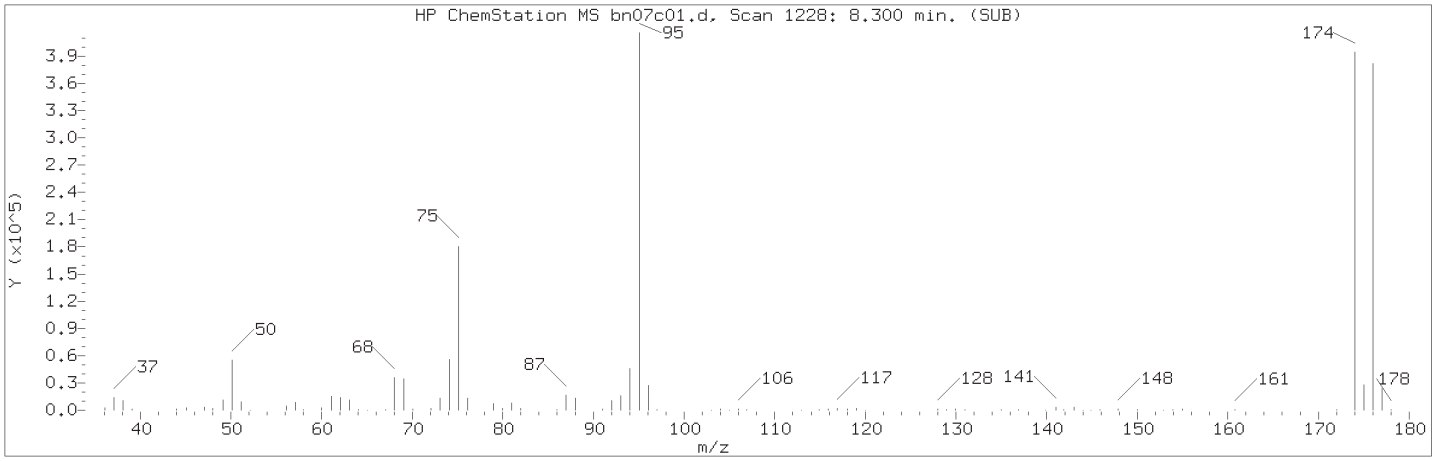
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:45
Date, time and analyst ID of latest file update: 07-Nov-2018 08:45 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

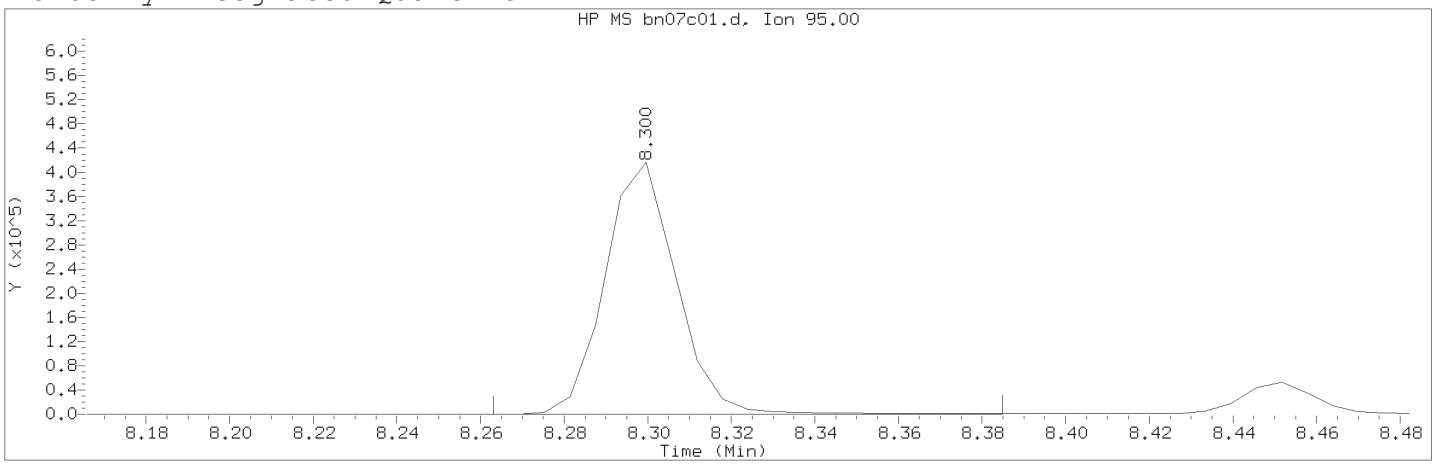
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1217
Retention Time (minutes): 8.233
Quant Ion : 55.00
Area : 139512
On-column Amount (ng) : 532.7434
Integration start scan : 1211 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:53
Date, time and analyst ID of latest file update: 07-Nov-2018 09:47 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

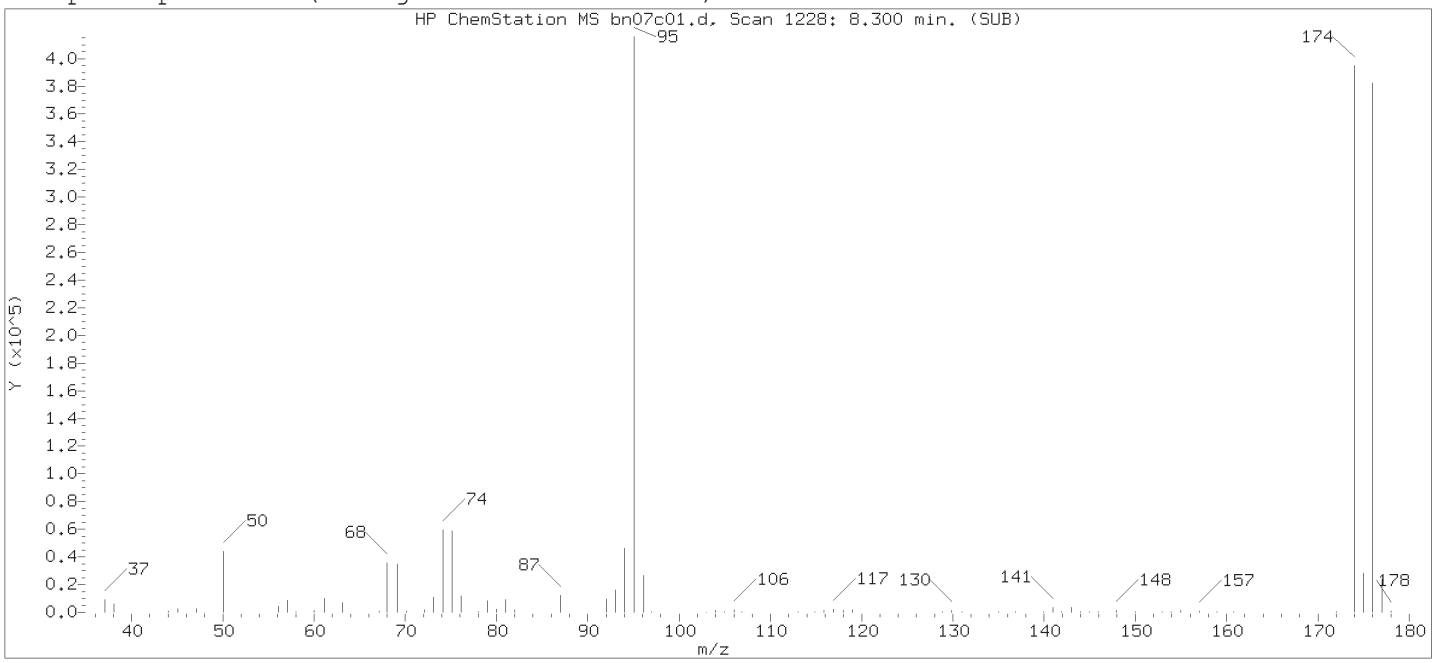
Compound Number : 119
Compound Name : 4-Bromofluorobenzene
Scan Number : 1228
Retention Time (minutes): 8.300
Quant Ion : 95.00
Area (flag) : 492441M
On-Column Amount (ng) : 49.8309
Integration start scan : 1221 Integration stop scan: 1241
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

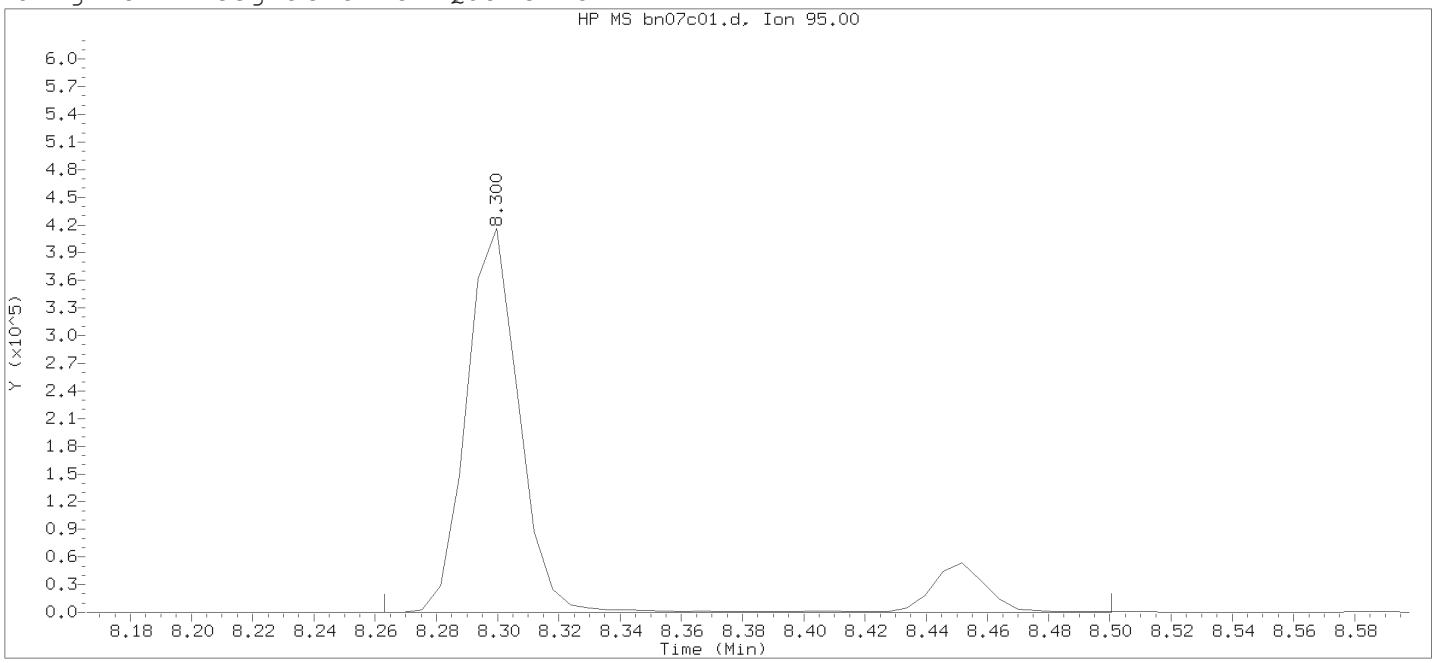
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/08/2018 at 10:37.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

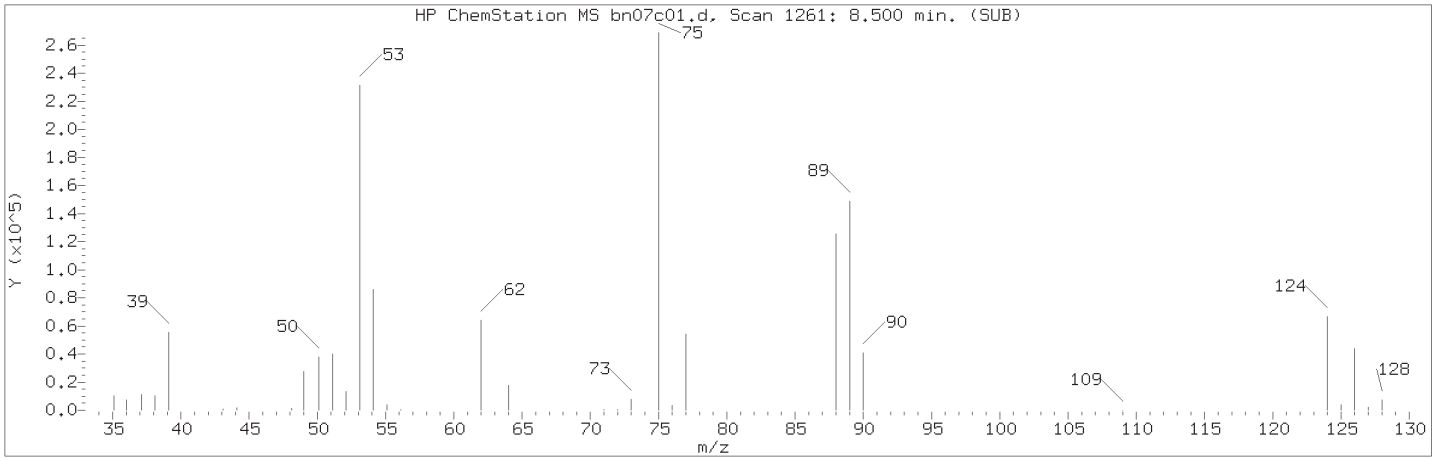
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:45
Date, time and analyst ID of latest file update: 07-Nov-2018 08:45 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

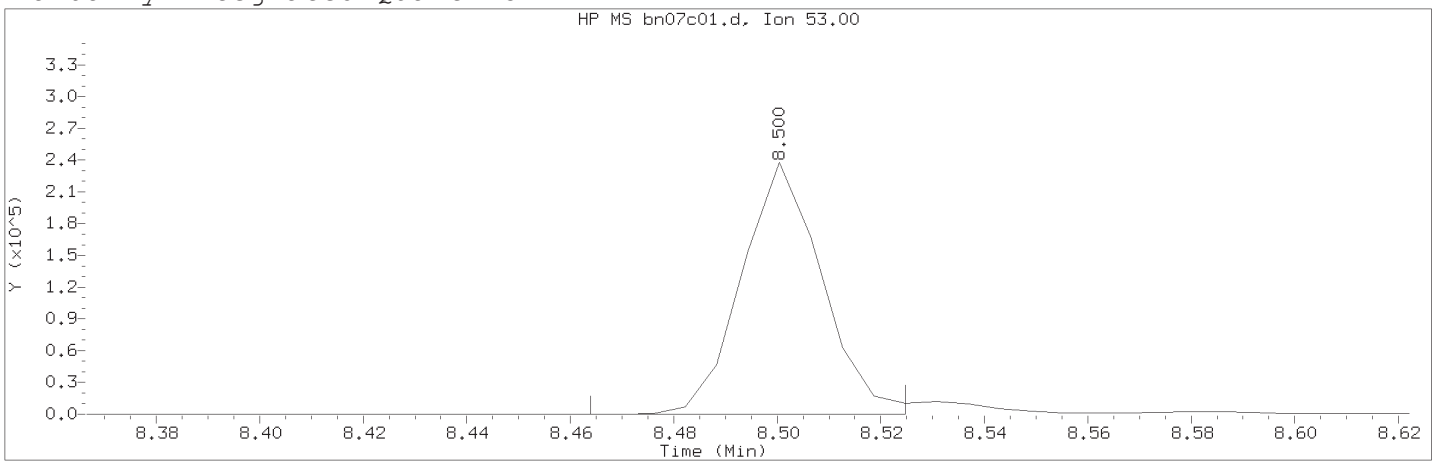
Compound Number	: 119		
Compound Name	: 4-Bromofluorobenzene		
Scan Number	: 1228		
Retention Time (minutes)	: 8.300		
Quant Ion	: 95.00		
Area	: 559125		
On-column Amount (ng)	: 56.5788		
Integration start scan	: 1221	Integration stop scan:	1260
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:53
Date, time and analyst ID of latest file update: 07-Nov-2018 09:47 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

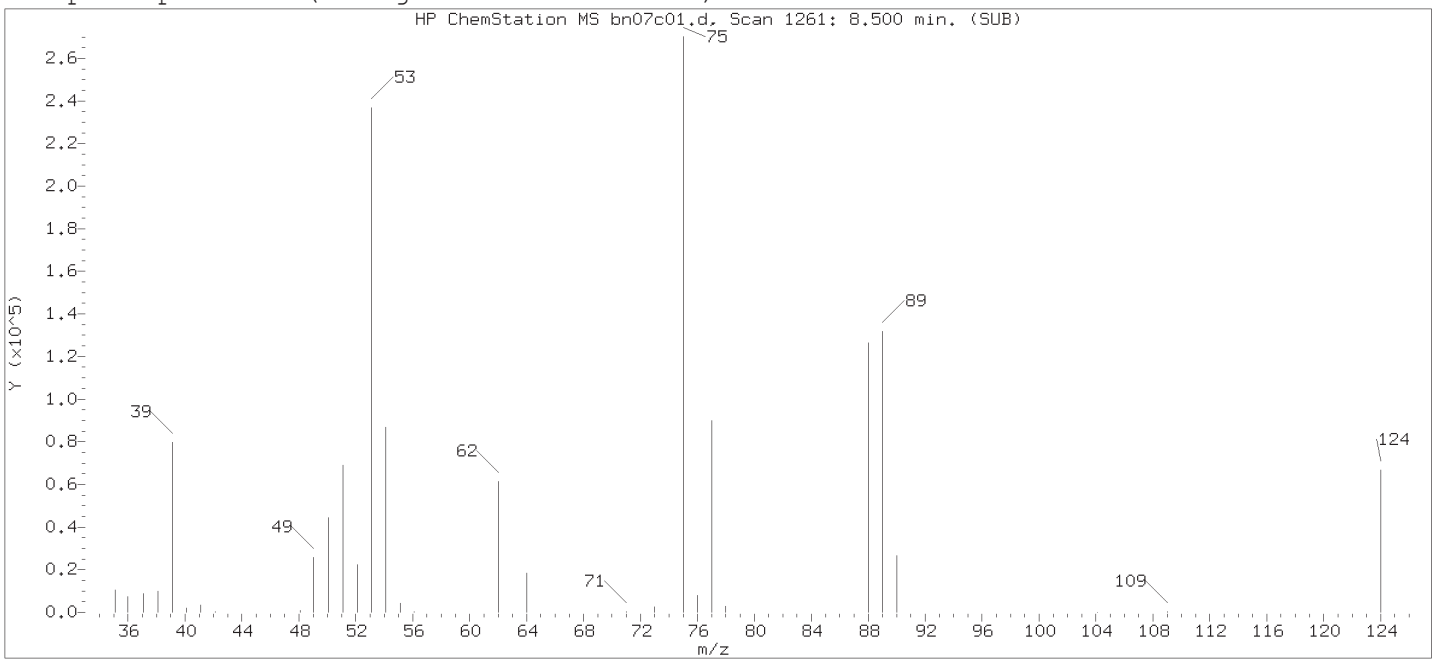
Compound Number : 122
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1261
Retention Time (minutes): 8.500
Quant Ion : 53.00
Area (flag) : 256934M
On-Column Amount (ng) : 118.8062
Integration start scan : 1254 Integration stop scan: 1264
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

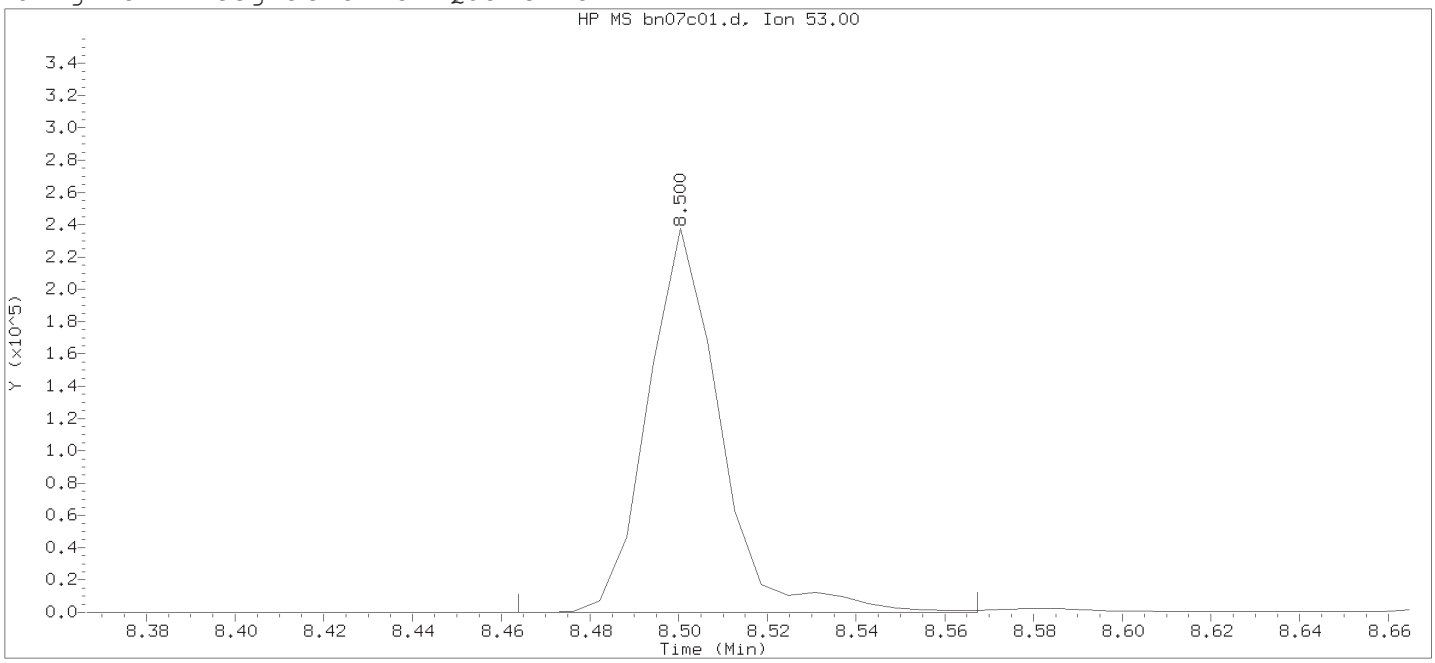
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/08/2018 at 10:37.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c01.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 08:13 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: 8260S
Calibration date and time: 07-NOV-2018 08:45
Date, time and analyst ID of latest file update: 07-Nov-2018 08:45 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 122
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1261
Retention Time (minutes): 8.500
Quant Ion : 53.00
Area : 268938
On-column Amount (ng) : 124.3570
Integration start scan : 1254 Integration stop scan: 1271
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 09:47.
Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov07a.b/bn07c03.d Injection date and time: **07-NOV-2018 18:47**
Data file Sample Info. Line: SECC050;SECC050;2;3;LCS;;DODSW;;BN07B30; Instrument ID: **HP09953.i** Batch: **B183112AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 22:59 kas02648

Blank Data file reference: **/chem2/HP09953.i/18nov07a.b/bn07b30.d**

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: **B183112**
Calibration date and time (Last Method Edit): 07-NOV-2018 14:43
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov07a.b/bn07c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.912	(0.018)	178	65	103899	(-8)	250.00	
70) Fluorobenzene	3.944	(0.006)	512	96	1259287	(-4)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	1010657	(-4)	50.00	
140) 1,4-Dichlorobenzene-d4	9.224	(0.000)	1380	152	613454	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.305	(0.002)	113	320912	51.133	102%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.615	(0.000)	102	68361	50.606	101%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1282178	49.154	98%		85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	533701	56.165	112%		79 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)	0.981	(0.001)	85	521325	45.848	45.85			0.6	5
4) Chloromethane	(2)	1.066	(0.001)	50	517827	44.182	44.18			0.6	5
5) Vinyl Chloride	(2)	1.115	(0.001)	62	418422	45.816	45.82			0.6	5
9) Bromomethane	(2)	1.243	(0.001)	94	405327	49.867	49.87			0.7	5
10) Chloroethane	(2)	1.261	(0.001)	64	246697	50.217	50.22			1	5
13) Trichlorofluoromethane	(2)	1.407	(0.000)	101	678740	53.987	53.99			0.7	5
19) 1,1-Dichloroethene	(2)	1.620	(0.000)	96	298539	47.254	47.25			0.5	5
20) Acetone	(1)	1.632	(-0.001)	58	46874	99.154	99.15			6	20
22) Freon 113	(2)	1.644	(0.002)	101	358443	56.589	56.59			0.6	10
25) Carbon Disulfide	(2)	1.754	(0.002)	76	1120019	44.306	44.31			0.6	5
27) Methyl Acetate	(2)	1.821	(0.000)	43	168527	52.020	52.02			1	5
31) Methylene Chloride	(2)	1.900	(0.000)	84	335356	44.917	44.92			2	5
34) Methyl Tertiary Butyl Ether	(2)	2.082	(0.002)	73	814334	45.315	45.32			0.5	5
35) trans-1,2-Dichloroethene	(2)	2.070	(0.002)	96	343737	46.786	46.79			0.5	5
40) 1,1-Dichloroethane	(2)	2.374	(0.002)	63	598435	50.233	50.23			0.5	5
44) 2-Butanone	(1)	2.885	(-0.011)	43	246770	92.383	92.38			1	10
45) cis-1,2-Dichloroethene	(2)	2.873	(0.000)	96	398791	50.006	50.01			0.5	5
54) Chloroform	(2)	3.165	(0.000)	83	598008	49.456	49.46			0.6	5
57) 1,1,1-Trichloroethane	(2)	3.335	(0.000)	97	531811	42.955	42.96			0.6	5
58) Cyclohexane	(2)	3.384	(0.001)	56	630039	54.169	54.17			0.5	5
61) Carbon Tetrachloride	(2)	3.488	(0.000)	117	466896	49.655	49.65			0.5	5
64) Benzene	(2)	3.670	(0.000)	78	1388208	48.331	48.33			0.5	5
67) 1,2-Dichloroethane	(2)	3.688	(0.000)	62	397609	47.968	47.97			0.6	5
75) Trichloroethene	(2)	4.303	(-0.000)	95	364590	48.675	48.67			0.5	5
76) Methylcyclohexane	(2)	4.497	(-0.000)	83	712617	61.135	61.13			0.6	5
77) 1,2-Dichloropropane	(2)	4.522	(-0.000)	63	340765	49.958	49.96			0.5	5
84) Bromodichloromethane	(2)	4.820	(-0.001)	83	411971	48.364	48.36			0.4	5
89) cis-1,3-Dichloropropene	(2)	5.288	(-0.000)	75	506731	49.265	49.27			0.4	5
90) 4-Methyl-2-pentanone	(2)	5.483	(-0.000)	43	517751	88.209	88.21			1	10
92) Toluene	(3)	5.635	(0.000)	92	899992	46.518	46.52			0.6	5

Digitally signed by Stephen C. Nolte on 11/08/2018 at 14:03. Target 3.5 esignature user ID: scn10072

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov07a.b/bn07c03.d Injection date and time: **07-NOV-2018 18:47**
Data file Sample Info. Line: SECC050;SECC050;2;3;LCS;;DODSW;;BN07B30; Instrument ID: **HP09953.i** Batch: **B183112AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 22:59 kas02648

Blank Data file reference: **/chem2/HP09953.i/18nov07a.b/bn07b30.d**

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: **B183112**
Calibration date and time (Last Method Edit): 07-NOV-2018 14:43
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov07a.b/bn07c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

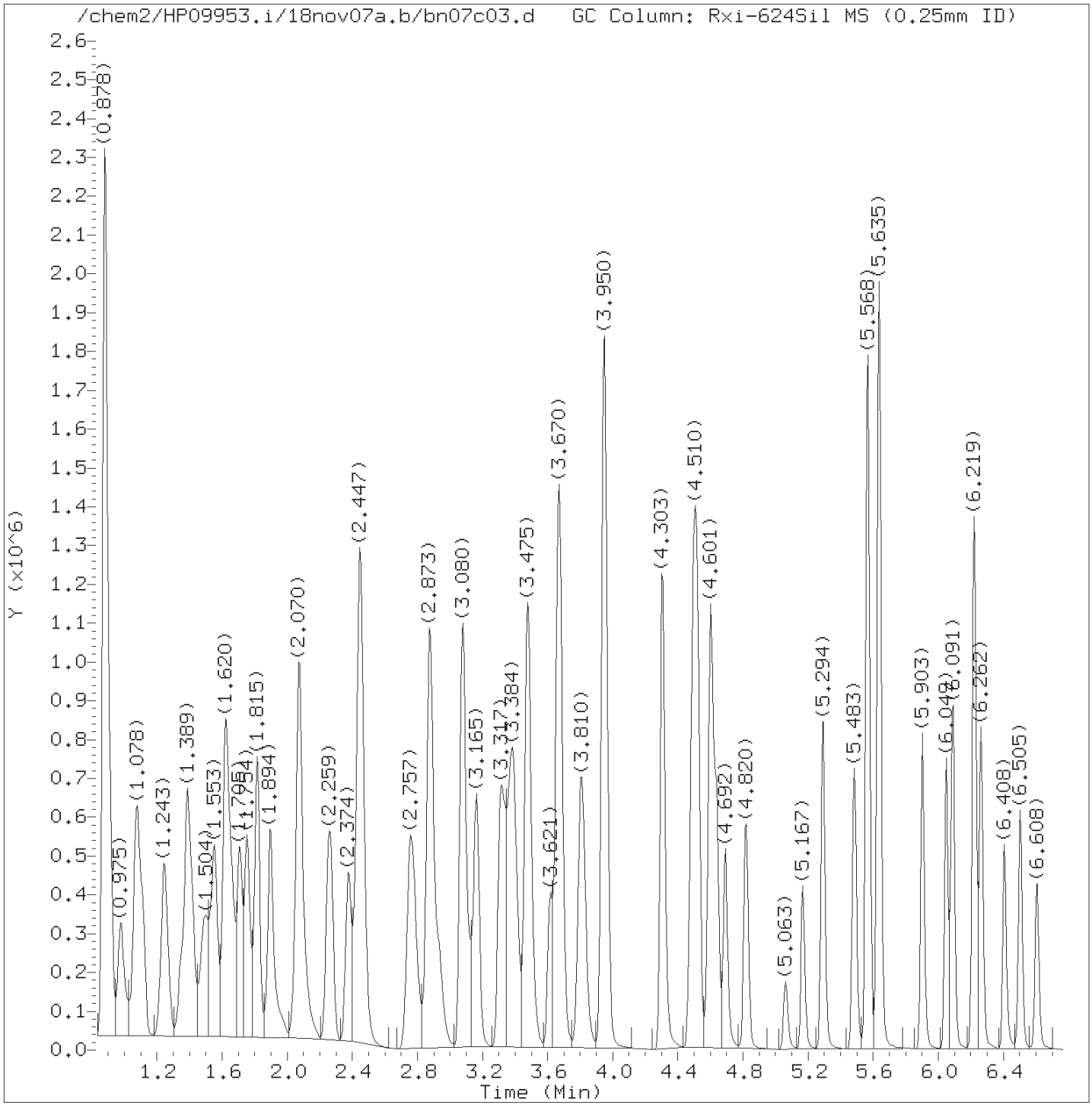
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
93) trans-1,3-Dichloropropene	(3)	5.903(0.000)	75	425390	45.902	45.90			0.3	5
96) 1,1,2-Trichloroethane	(3)	6.091(-0.000)	97	292602	46.605	46.60			0.5	5
98) Tetrachloroethene	(3)	6.219(0.000)	166	432997	40.859	40.86			0.5	5
101) 2-Hexanone	(3)	6.408(0.000)	43	354181	78.522	78.52			1	10
103) Dibromochloromethane	(3)	6.505(-0.000)	129	337308	46.632	46.63			0.4	5
104) 1,2-Dibromoethane	(3)	6.602(0.000)	107	305721	47.133	47.13			0.4	5
107) Chlorobenzene	(3)	7.174(-0.000)	112	1061773	47.005	47.01			0.5	5
109) Ethylbenzene	(3)	7.320(-0.000)	91	1745446	47.968	47.97			0.4	5
110) m+p-Xylene	(3)	7.448(-0.000)	106	1429186	96.251	96.25			1	5
111) o-Xylene	(3)	7.831(-0.000)	106	697044	46.957	46.96			0.4	5
112) Xylene (Total)	(3)		106	2126230	143.209	143.21			1	5
113) Styrene	(3)	7.849(-0.000)	104	1140681	46.612	46.61			0.3	5
114) Bromoform	(3)	7.995(-0.000)	173	200778	44.544	44.54			5	10
115) Isopropylbenzene	(3)	8.178(-0.000)	105	1793320	47.928	47.93			0.4	5
118) Cyclohexanone	(1)	8.233(-0.040)	55	130734A	542.918	542.92			25	250
120) 1,1,2,2-Tetrachloroethane	(4)	8.452(0.000)	83	374097	43.594	43.59			0.4	5
138) 1,3-Dichlorobenzene	(4)	9.176(-0.000)	146	950096	45.041	45.04			0.5	5
141) 1,4-Dichlorobenzene	(4)	9.242(-0.000)	146	975752	44.368	44.37			0.4	5
147) 1,2-Dichlorobenzene	(4)	9.516(-0.000)	146	945705	45.857	45.86			0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)	10.070(-0.000)	75	61383	41.171	41.17			0.4	5
153) 1,2,4-Trichlorobenzene	(4)	10.630(-0.000)	180	670234	44.072	44.07			5	10

A = User selected an alternate peak.

Total number of targets = 51

Digitally signed by Stephen C. Nolte on 11/08/2018 at 14:03. Target 3.5 esignature user ID: scn10072

Secondary review performed and digitally signed by Kerri E. Legerlotz on 11/12/2018 at 15:07. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

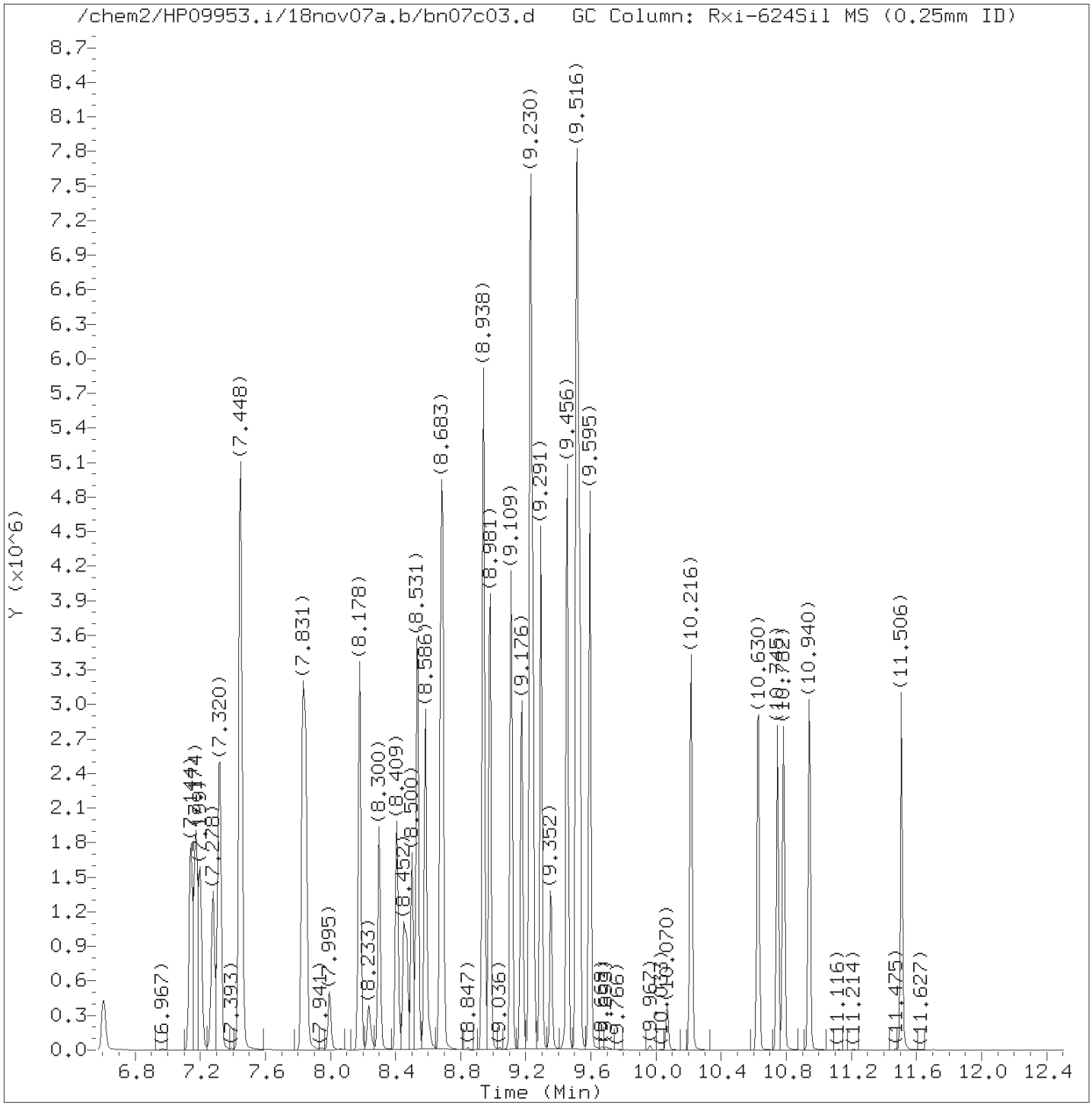
Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07c03.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 18:47 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 14:43
Date, time and analyst ID of latest file update: 07-Nov-2018 22:59 kas02648

Sample Name: SECC050 Lab Sample ID: SECC050

Digitally signed by Stephen C. Nolte
on 11/08/2018 at 14:03.
Target 3.5 esignature user ID: scn10072



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07c03.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 18:47 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 14:43
Date, time and analyst ID of latest file update: 07-Nov-2018 22:59 kas02648

Sample Name: SECC050 Lab Sample ID: SECC050

Digitally signed by Stephen C. Nolte
on 11/08/2018 at 14:03.
Target 3.5 esignature user ID: scn10072

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07c03.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 18:47 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 14:43
Date, time and analyst ID of latest file update: 07-Nov-2018 22:59 kas02648

Sample Name: SECC050 Lab Sample ID: SECC050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.981	85	521325	45.848
4) Chloromethane	(2)	1.066	50	517827	44.182
5) Vinyl Chloride	(2)	1.115	62	418422	45.816
9) Bromomethane	(2)	1.243	94	405327	49.867
10) Chloroethane	(2)	1.261	64	246697	50.217
13) Trichlorofluoromethane	(2)	1.407	101	678740	53.987
19) 1,1-Dichloroethene	(2)	1.620	96	298539	47.254
20) Acetone	(1)	1.632	58	46874	99.154
22) Freon 113	(2)	1.644	101	358443	56.589
25) Carbon Disulfide	(2)	1.754	76	1120019	44.306
27) Methyl Acetate	(2)	1.821	43	168527	52.020
31) Methylene Chloride	(2)	1.900	84	335356	44.917
30)*t-Butyl alcohol-d10	(1)	1.912	65	103899	250.000
35) trans-1,2-Dichloroethene	(2)	2.070	96	343737	46.786
34) Methyl Tertiary Butyl Ether	(2)	2.082	73	814334	45.315
40) 1,1-Dichloroethane	(2)	2.374	63	598435	50.233
45) cis-1,2-Dichloroethene	(2)	2.873	96	398791	50.006
44) 2-Butanone	(1)	2.885	43	246770	92.383
54) Chloroform	(2)	3.165	83	598008	49.456
56)$Dibromofluoromethane	(2)	3.305	113	320912	51.133
57) 1,1,1-Trichloroethane	(2)	3.335	97	531811	42.955
58) Cyclohexane	(2)	3.384	56	630039	54.169
61) Carbon Tetrachloride	(2)	3.488	117	466896	49.655
63)$1,2-Dichloroethane-d4	(2)	3.615	102	68361	50.606
64) Benzene	(2)	3.670	78	1388208	48.331
67) 1,2-Dichloroethane	(2)	3.688	62	397609	47.968
70)*Fluorobenzene	(2)	3.944	96	1259287	50.000
75) Trichloroethene	(2)	4.303	95	364590	48.675
76) Methylcyclohexane	(2)	4.497	83	712617	61.135
77) 1,2-Dichloropropane	(2)	4.522	63	340765	49.958
84) Bromodichloromethane	(2)	4.820	83	411971	48.364
89) cis-1,3-Dichloropropene	(2)	5.288	75	506731	49.265
90) 4-Methyl-2-pentanone	(2)	5.483	43	517751	88.209
91)$Toluene-d8	(3)	5.568	98	1282178	49.154
92) Toluene	(3)	5.635	92	899992	46.518
93) trans-1,3-Dichloropropene	(3)	5.903	75	425390	45.902
96) 1,1,2-Trichloroethane	(3)	6.091	97	292602	46.605
98) Tetrachloroethene	(3)	6.219	166	432997	40.859

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Stephen C. Nolte
on 11/08/2018 at 14:03.
Target 3.5 esignature user ID: scn10072

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07c03.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 18:47 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 14:43
Date, time and analyst ID of latest file update: 07-Nov-2018 22:59 kas02648

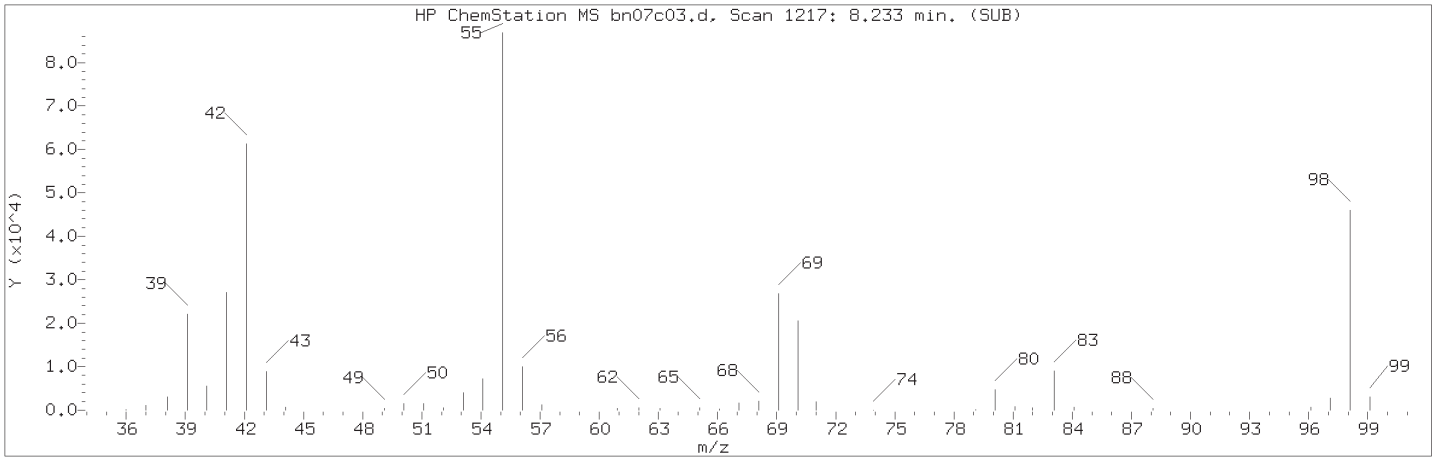
Sample Name: SECC050 Lab Sample ID: SECC050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 2-Hexanone	(3)	6.408	43	354181	78.522
103) Dibromochloromethane	(3)	6.505	129	337308	46.632
104) 1,2-Dibromoethane	(3)	6.602	107	305721	47.133
105)*Chlorobenzene-d5	(3)	7.144	117	1010657	50.000
107) Chlorobenzene	(3)	7.174	112	1061773	47.005
109) Ethylbenzene	(3)	7.320	91	1745446	47.968
110) m+p-Xylene	(3)	7.448	106	1429186	96.251
111) o-Xylene	(3)	7.831	106	697044	46.957
113) Styrene	(3)	7.849	104	1140681	46.612
112) Xylene (Total)	(3)		106	2126230	143.209
114) Bromoform	(3)	7.995	173	200778	44.544
115) Isopropylbenzene	(3)	8.178	105	1793320	47.928
118) Cyclohexanone	(1)	8.233	55	130734A	542.918
119)$4-Bromofluorobenzene	(3)	8.300	95	533701	56.165
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	374097	43.594
138) 1,3-Dichlorobenzene	(4)	9.176	146	950096	45.041
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	613454	50.000
141) 1,4-Dichlorobenzene	(4)	9.243	146	975752	44.368
147) 1,2-Dichlorobenzene	(4)	9.516	146	945705	45.857
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	61383	41.171
153) 1,2,4-Trichlorobenzene	(4)	10.630	180	670234	44.072

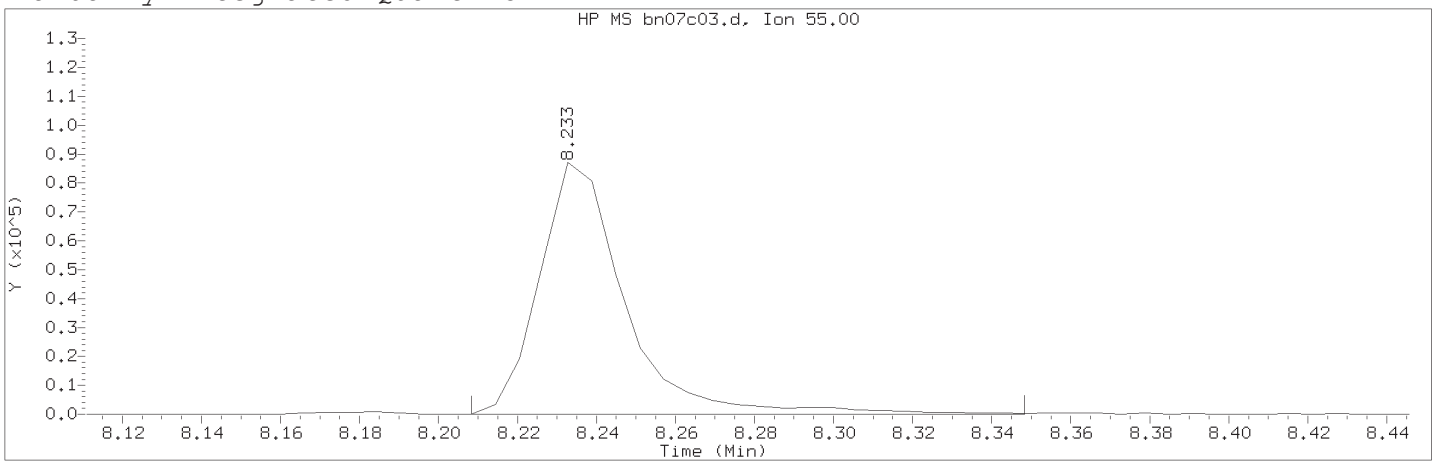
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Stephen C. Nolte
on 11/08/2018 at 14:03.
Target 3.5 esignature user ID: scn10072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c03.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 18:47 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 14:43
Date, time and analyst ID of latest file update: 07-Nov-2018 22:59 kas02648

Sample Name: SECC050 Lab Sample ID: SECC050

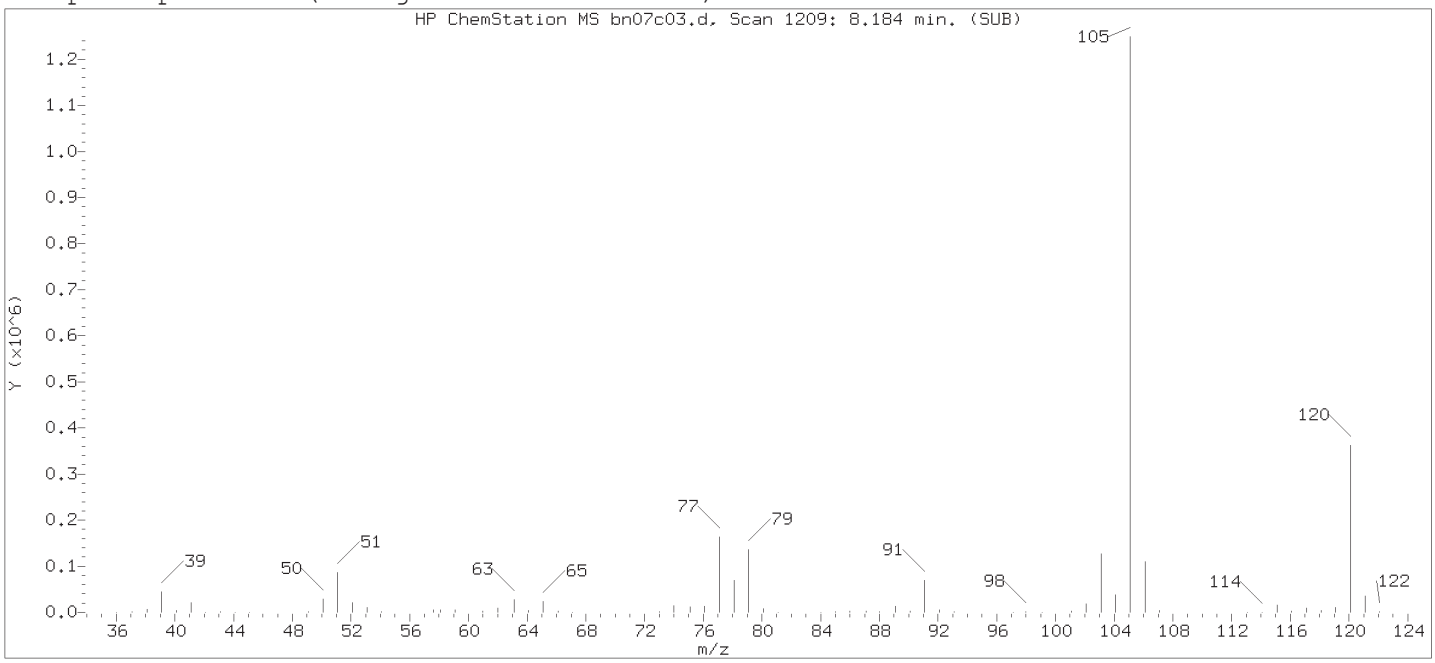
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1217
Retention Time (minutes): 8.233
Quant Ion : 55.00
Area (flag) : 130734A
On-Column Amount (ng) : 542.9181
Integration start scan : 1212 Integration stop scan: 1235
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

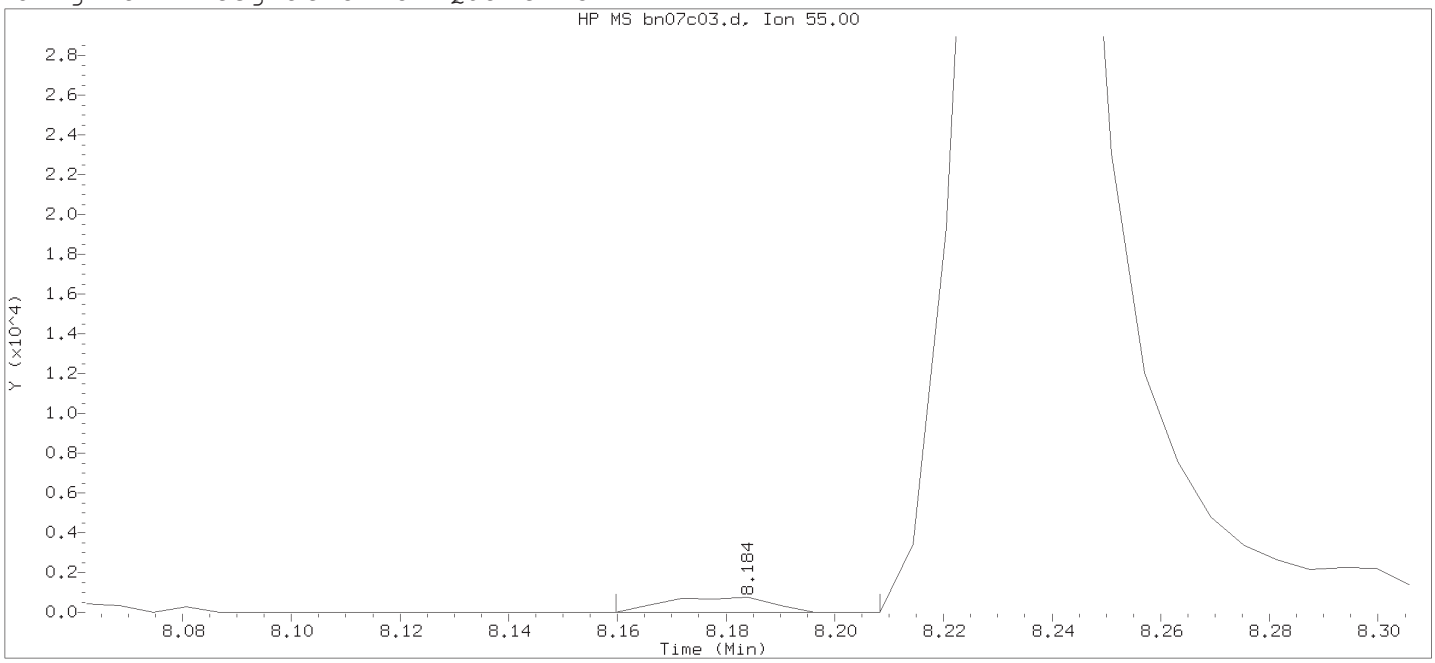
Analyst responsible for change: Digitally signed by Stephen C. Nolte
on 11/08/2018 at 14:03.
Target 3.5 esignature user ID: scn10072

Secondary review performed and digitally signed by Kerri E. Legerlotz on 11/12/2018 at 15:07.
PARALLAX ID: kel01973

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07c03.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 18:47 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 14:43
Date, time and analyst ID of latest file update: 07-Nov-2018 19:02 Automation

Sample Name: SECC050 Lab Sample ID: SECC050

Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1209
Retention Time (minutes): 8.184
Quant Ion : 55.00
Area : 1028
On-column Amount (ng) : 4.2732
Integration start scan : 1204 Integration stop scan: 1212
Y at integration start : 0 Y at integration end: 0

Digitally signed by Stephen C. Nolte on 11/08/2018 at 14:03.
Target 3.5 esignature user ID: SCNolte

Data File: /chem2/HP19094.i/18sep24i.b/hs24t05.d

Page 1

Date : 24-SEP-2018 17:53

Client ID: BFB 50ng

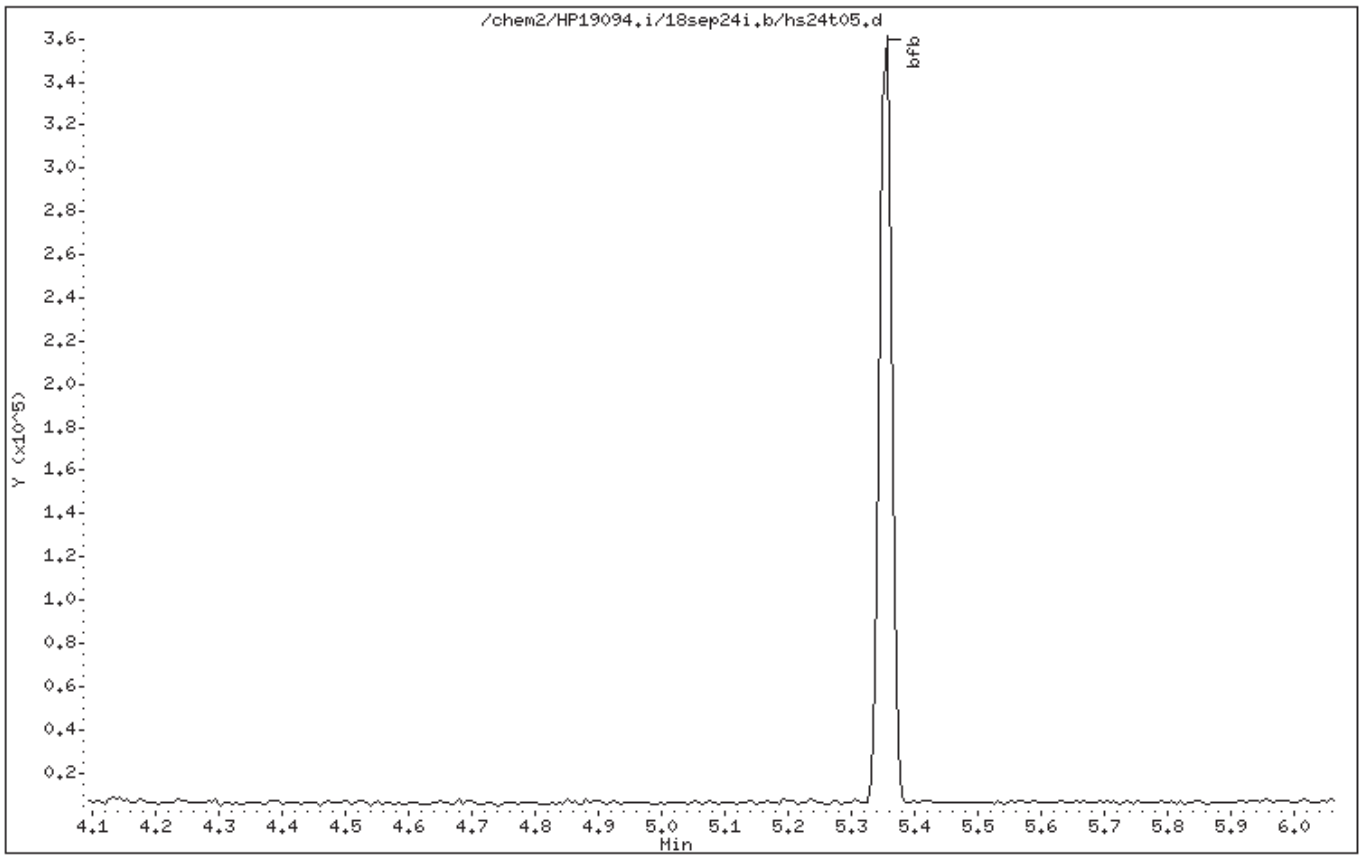
Instrument: HP19094.i

Sample Info: BFB 50ng;BFB AUG07-18;1;3;;;;;

Operator: jkh09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:31.
Target 3.5 esignature user ID: jkh09052

Data File: /chem2/HP19094.i/18sep24i.b/hs24t05.d

Date : 24-SEP-2018 17:53

Client ID: BFB 50ng

Instrument: HP19094.i

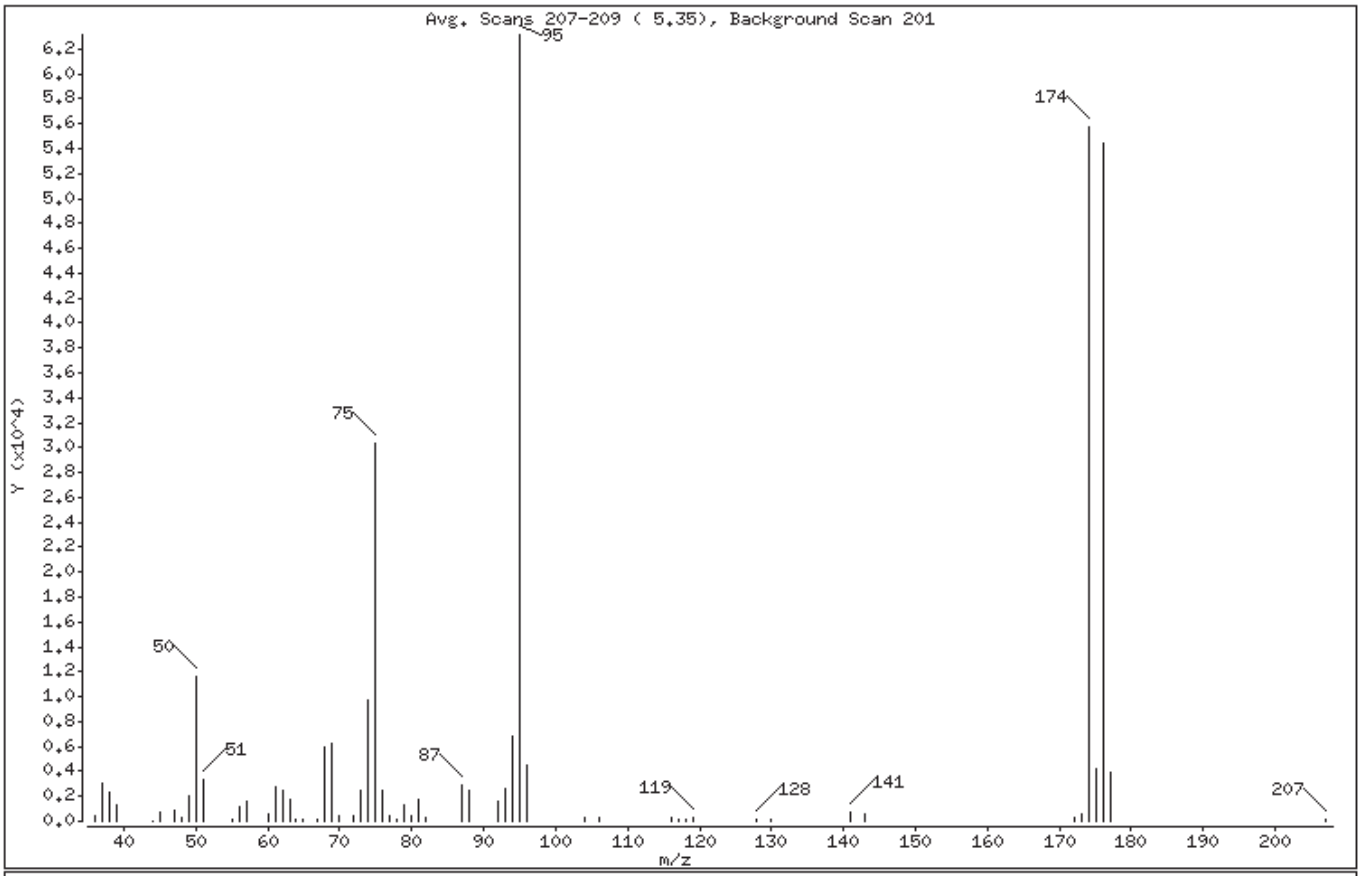
Sample Info: BFB 50ng;BFB AUG07-18;1;3;;;;;

Operator: jkh09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.30
75	30.00 - 60.00% of mass 95	48.01
96	5.00 - 9.00% of mass 95	7.23
173	Less than 2.00% of mass 174	0.88 (0.99)
174	50.00 - 100.00% of mass 95	88.37
175	5.00 - 9.00% of mass 174	6.59 (7.45)
176	95.00 - 101.00% of mass 174	86.23 (97.58)
177	5.00 - 9.00% of mass 176	6.27 (7.28)

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:31.
Target 3.5 esignature user ID: jkh09052

Date : 24-SEP-2018 17:53

Client ID: BFB 50ng Instrument: HP19094.i

Sample Info: BFB 50ng;BFB AUG07-18;1;3;;;;;

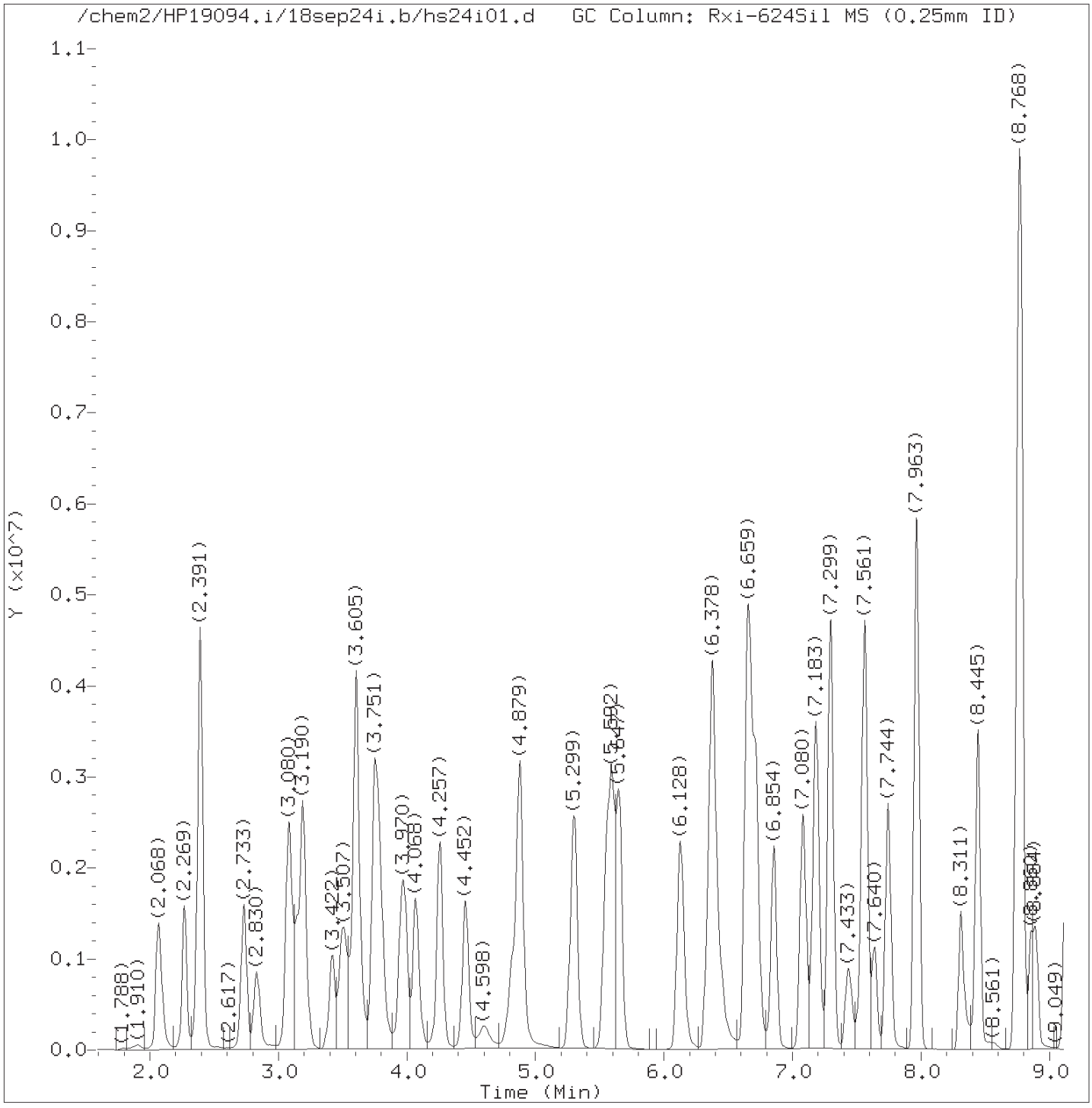
Operator: jkh09052

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hs24t05.d
Spectrum: Avg. Scans 207-209 (5.35), Background Scan 201
Location of Maximum: 95.00
Number of points: 59

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	380	61.00	2761	78.00	85	117.00	165
37.00	3109	62.00	2478	79.00	1339	118.00	125
38.00	2327	63.00	1778	80.00	478	119.00	271
39.00	1285	64.00	95	81.00	1678	128.00	207
44.00	4	65.00	114	82.00	305	130.00	104
45.00	778	67.00	89	87.00	2896	141.00	746
47.00	856	68.00	6016	88.00	2501	143.00	552
48.00	257	69.00	6278	92.00	1547	172.00	224
49.00	2059	70.00	428	93.00	2614	173.00	555
50.00	11554	72.00	423	94.00	6758	174.00	55792
51.00	3390	73.00	2434	95.00	63136	175.00	4158
55.00	180	74.00	9779	96.00	4567	176.00	54440
56.00	1094	75.00	30304	104.00	228	177.00	3961
57.00	1606	76.00	2509	106.00	307	207.00	187
60.00	530	77.00	454	116.00	237		

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:31.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

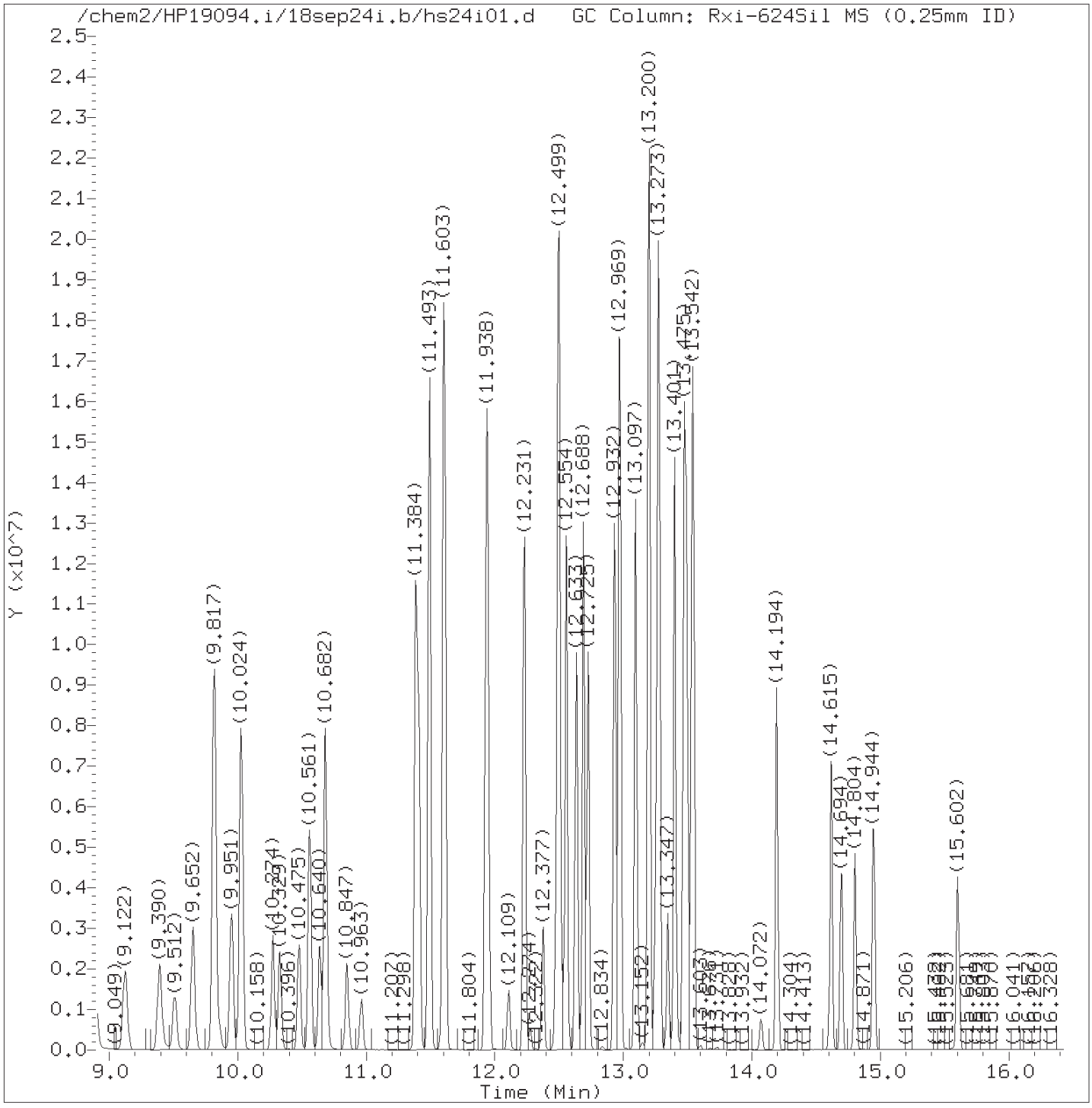
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.068	85	2667477	26.155
2) Chloromethane	(2)	2.269	50	2539335	25.424
5) Vinyl Chloride	(2)	2.391	62	2410925	25.776
6) 1,3-Butadiene	(2)	2.391	39	2594646	24.489
7) Bromomethane	(2)	2.733	94	1851509	25.463
8) Chloroethane	(2)	2.830	64	1410558	24.864
9) Dichlorofluoromethane	(2)	3.080	67	3474207	25.746
10) Trichlorofluoromethane	(2)	3.141	101	3065694	25.945
11) Ethyl ether	(2)	3.416	59	1019569	25.448
12) Freon 123a	(2)	3.501	67	1934522	25.841
13) Acrolein	(1)	3.605	56	7172863	1305.987
15) 1,1-Dichloroethene	(2)	3.745	96	1360935	26.597
16) Freon 113	(2)	3.775	101	1627334	26.985
14) Acetone	(1)	3.787	43	1847599M	250.454
17) Methyl Iodide	(2)	3.958	142	2764121	25.916
18) Carbon Disulfide	(2)	4.068	76	4201344	25.805
21) Methyl Acetate	(1)	4.233	43	504865	24.378
22) Allyl Chloride	(2)	4.257	41	2524824	25.958
23) Methylene Chloride	(2)	4.458	84	1406291	24.362
26)*t-Butyl Alcohol-d10	(1)	4.470	65	123769M	50.000
28) t-Butyl Alcohol	(1)	4.604	59	982548	465.083
29) Acrylonitrile	(1)	4.812	53	1235214M	129.656
30) Methyl Tertiary Butyl Ether	(2)	4.867	73	2663697	25.312
31) trans-1,2-Dichloroethene	(2)	4.879	96	1493749	25.866
32) n-Hexane	(2)	5.299	57	2559536	27.873
33) 1,1-Dichloroethane	(2)	5.543	63	2842374M	25.851
34) di-Isopropyl Ether	(2)	5.592	45	5070137	25.966
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	2671346	27.000
40) 1,2-Dichloroethene (Total)	(2)		96	3155804	51.914
37) Ethyl t-butyl ether	(2)	6.128	59	3878205	25.041
38) 2-Butanone	(1)	6.348	43	3061047	253.491
39) cis-1,2-Dichloroethene	(2)	6.372	96	1662055	26.048
41) 2,2-Dichloropropane	(2)	6.391	77	2084281	26.541
42) Propionitrile	(1)	6.446	54	1568878	478.649
45) Methacrylonitrile	(1)	6.653	67	3149545	266.488
47) Bromochloromethane	(2)	6.714	128	688648	25.549
48) Tetrahydrofuran	(1)	6.720	71	820759	255.663
49) Chloroform	(2)	6.854	83	2651699	25.940

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	655219	9.962
50)$Dibromofluoromethane	(2)	7.073	111	673113	9.943
51) 1,1,1-Trichloroethane	(2)	7.086	97	2299905	26.303
52) Cyclohexane	(2)	7.183	56	3091541	27.084
52) Cyclohexane	(2)	7.183	84	2539041	26.980
52) Cyclohexane	(2)	7.183	69	918069	27.291
54) Carbon Tetrachloride	(2)	7.293	117	2024542	26.959
55) 1,1-Dichloropropene	(2)	7.299	75	2199442	26.527
56) Isobutyl Alcohol	(1)	7.433	41	1045544	1279.099
57)$1,2-Dichloroethane-d4	(2)	7.531	102	112838	9.841
57)$1,2-Dichloroethane-d4	(2)	7.537	65	549372	9.906
57)$1,2-Dichloroethane-d4	(2)	7.537	104	71973	9.801
58) Benzene	(2)	7.561	78	6318666	25.796
59) 1,2-Dichloroethane	(2)	7.640	62	1386008M	24.587
60) t-Amyl methyl ether	(2)	7.744	73	3227765	25.138
62) n-Heptane	(2)	7.963	43	2650704	27.997
63)*Fluorobenzene	(2)	7.970	96	2609636	10.000
65) n-Butanol	(1)	8.311	56	1867070	2703.605
67) Trichloroethene	(2)	8.445	95	1649864	26.306
69) Methylcyclohexane	(2)	8.750	83	3203740	27.048
70) 1,2-Dichloropropane	(2)	8.787	63	1552299	26.120
71) Methyl Methacrylate	(1)	8.854	69	623886	28.519
72) 1,4-Dioxane	(1)	8.872	88	216251M	1300.575
73) Dibromomethane	(2)	8.890	93	640944	25.985
74) Bromodichloromethane	(2)	9.122	83	1808486	27.068
76) 2-Nitropropane	(1)	9.390	41	1826609	294.768
80) cis-1,3-Dichloropropene	(2)	9.652	75	2141489	27.530
81) 4-Methyl-2-Pentanone	(1)	9.817	43	8439729	280.977
82)$Toluene-d8	(3)	9.951	98	2620387	9.785
82)$Toluene-d8	(3)	9.951	100	1692208	9.791
83) Toluene	(3)	10.024	92	3966390	25.689
85) 1,3-Dichloropropene (total)	(3)		75	3792374	55.280
84) trans-1,3-Dichloropropene	(3)	10.274	75	1650885	27.750
86) Ethyl Methacrylate	(3)	10.329	69	1388174	27.235
88) 1,1,2-Trichloroethane	(3)	10.475	97	904681	25.463
89) Tetrachloroethene	(3)	10.561	166	1799885	25.801
90) 1,3-Dichloropropane	(3)	10.640	76	1618164	25.698
91) 2-Hexanone	(1)	10.682	43	5656981	276.677

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	1148646	26.975
95) 1,2-Dibromoethane	(3)	10.963	107	873629	26.234
96) 1-Chlorohexane	(3)	11.384	91	2376499	25.807
97)*Chlorobenzene-d5	(3)	11.384	117	2080614	10.000
98) Chlorobenzene	(3)	11.408	112	4267356	26.051
100) Ethylbenzene	(3)	11.493	91	8033395	26.621
99) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	1477189	27.325
101) m+p-Xylene	(3)	11.603	106	5930803	52.987
105) Xylene (Total)	(3)		106	8810207	79.883
104) o-Xylene	(3)	11.932	106	2879404	26.908
106) Styrene	(3)	11.944	104	4681599	27.345
107) Bromoform	(3)	12.109	173	650012	27.775
108) Isopropylbenzene	(3)	12.231	105	7914371	27.092
111)$4-Bromofluorobenzene	(3)	12.377	95	947875	9.722
111)$4-Bromofluorobenzene	(3)	12.377	174	827331	9.773
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	1100327M	26.627
114) Bromobenzene	(4)	12.493	156	1705745	27.152
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	2718489	288.965
116) 1,2,3-Trichloropropane	(4)	12.524	110	269907	25.264
117) n-Propylbenzene	(4)	12.554	91	9362269	27.408
119) 2-Chlorotoluene	(4)	12.633	126	1758732	26.546
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	6440866	27.834
122) 4-Chlorotoluene	(4)	12.725	126	1781873	26.840
125) tert-Butylbenzene	(4)	12.932	134	1366112	27.146
126) Pentachloroethane	(4)	12.969	167	1131984	28.820
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	6639441	28.118
128) sec-Butylbenzene	(4)	13.097	105	8523009	28.424
131) 1,3-Dichlorobenzene	(4)	13.194	146	3395836	27.206
132) p-Isopropyltoluene	(4)	13.200	119	7173555	28.882
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	1041754	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	3283435	26.798
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	2886733	26.647
136) Benzyl Chloride	(4)	13.347	126	450358	30.147
138) n-Butylbenzene	(4)	13.493	92	3496269	28.360
139) 1,2-Dichlorobenzene	(4)	13.529	146	2896879	26.305
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	150859	29.629
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	2585997	27.849
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	2125128	28.097

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

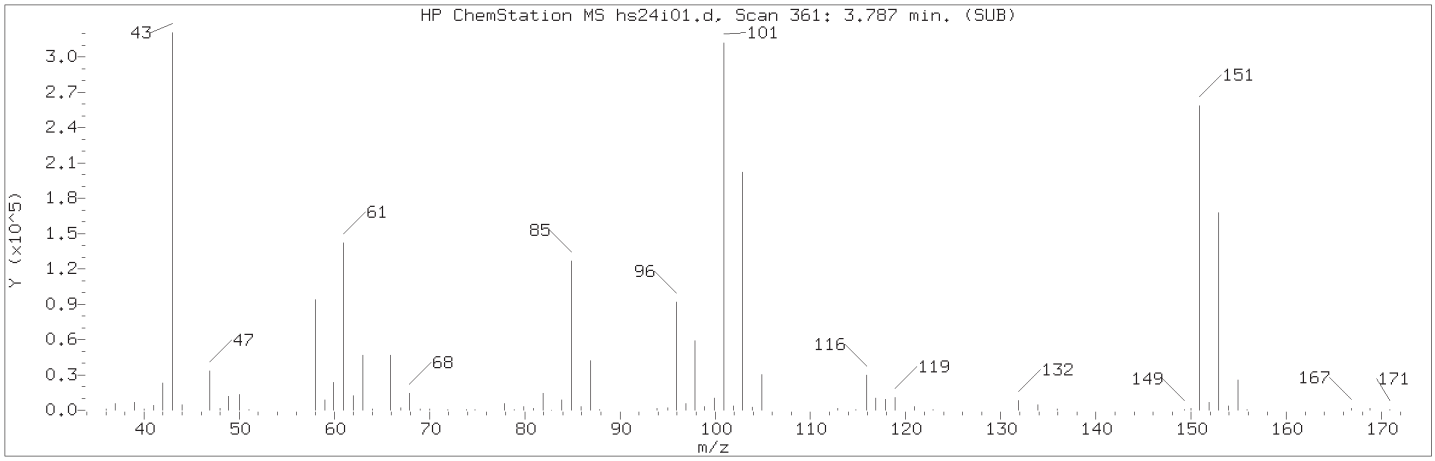
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

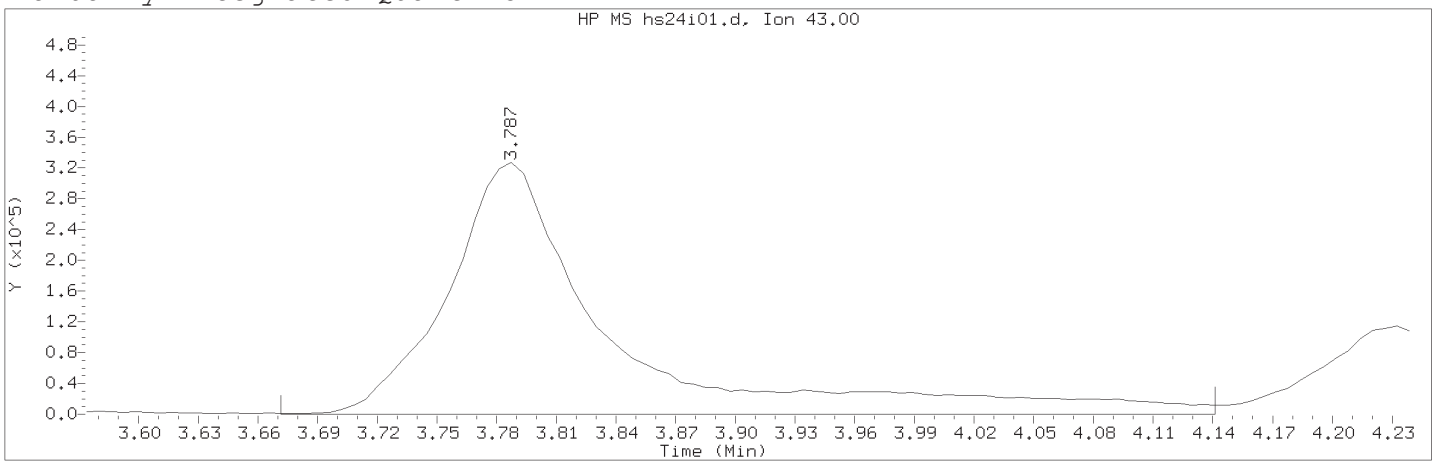
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	789734	27.625
147) Naphthalene	(4)	14.804	128	3453963	28.858
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	1719365	27.647

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

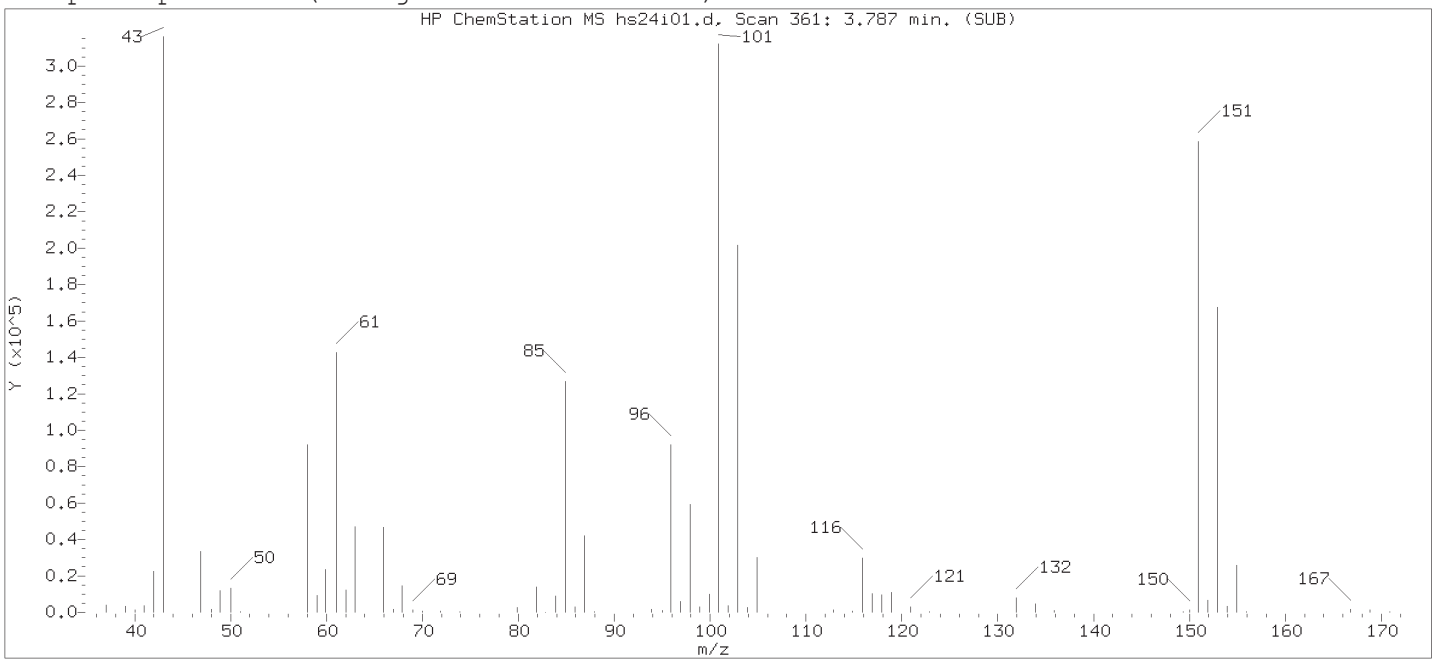
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area (flag) : 1847599M
On-Column Amount (ng) : 250.4543
Integration start scan : 341 Integration stop scan: 418
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

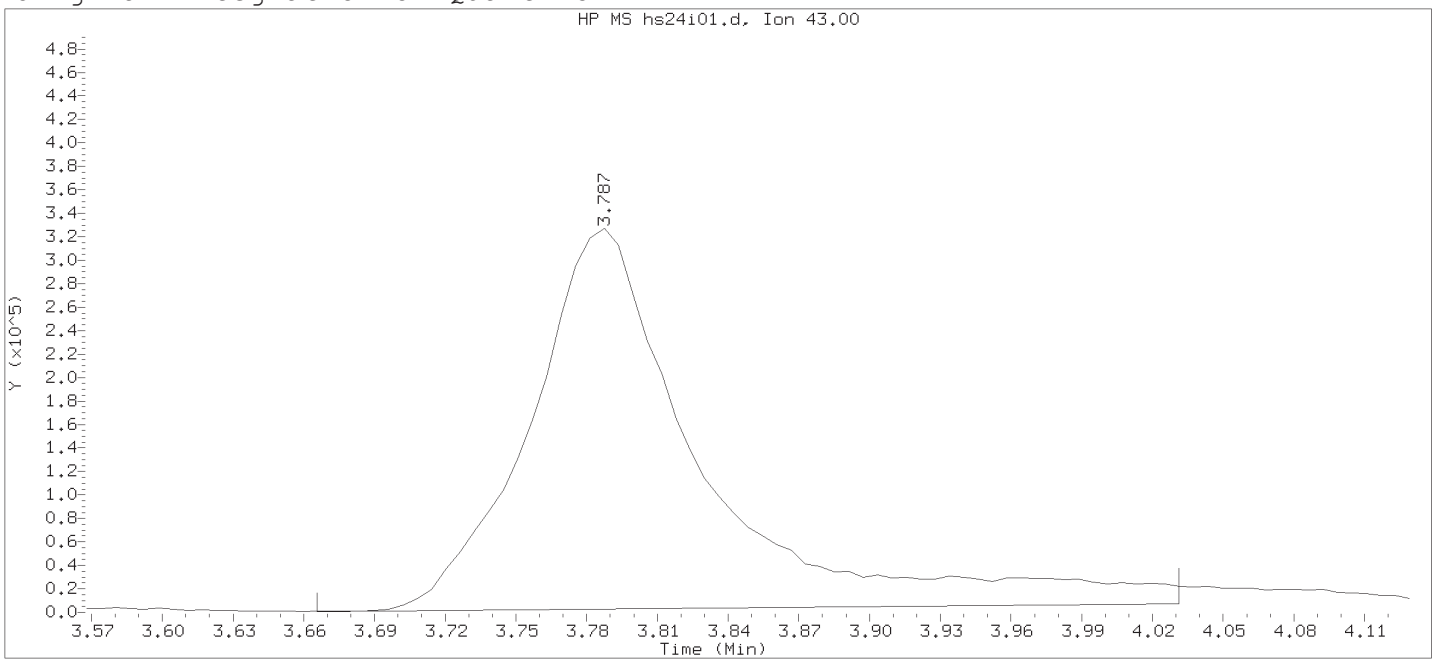
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

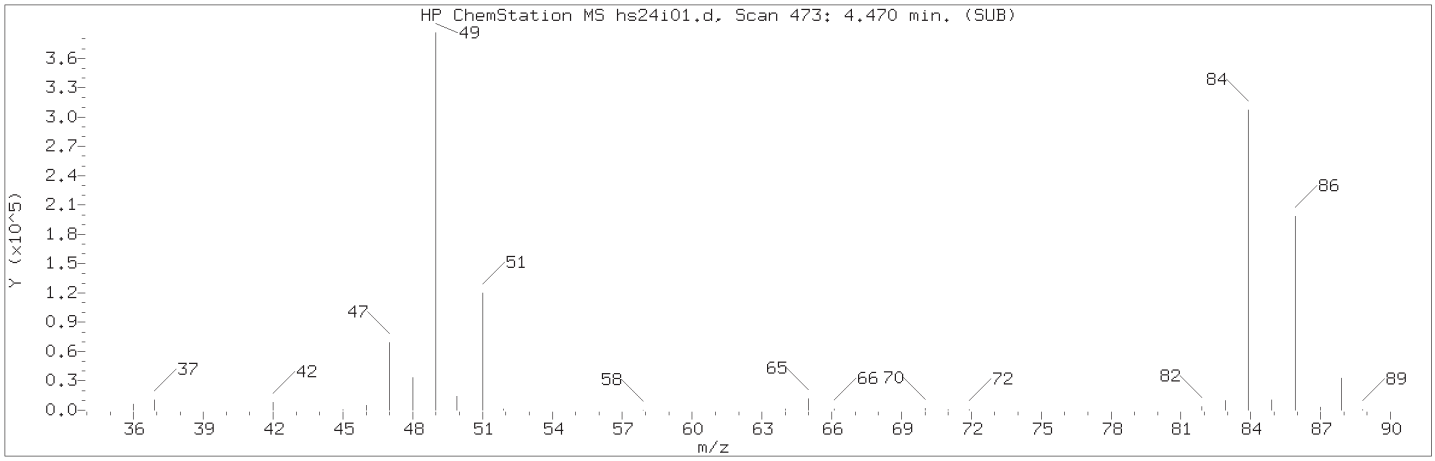
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

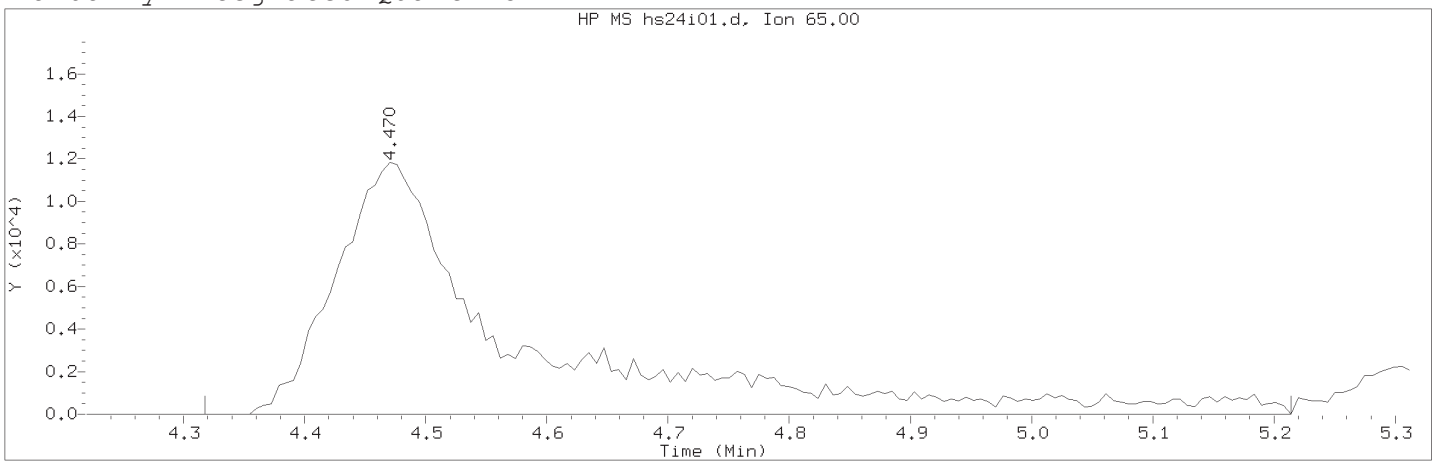
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 361		
Retention Time (minutes)	: 3.787		
Quant Ion	: 43.00		
Area	: 1639725		
On-column Amount (ng)	: 243.3952		
Integration start scan	: 340	Integration stop scan:	400
Y at integration start	: 625	Y at integration end:	7448

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

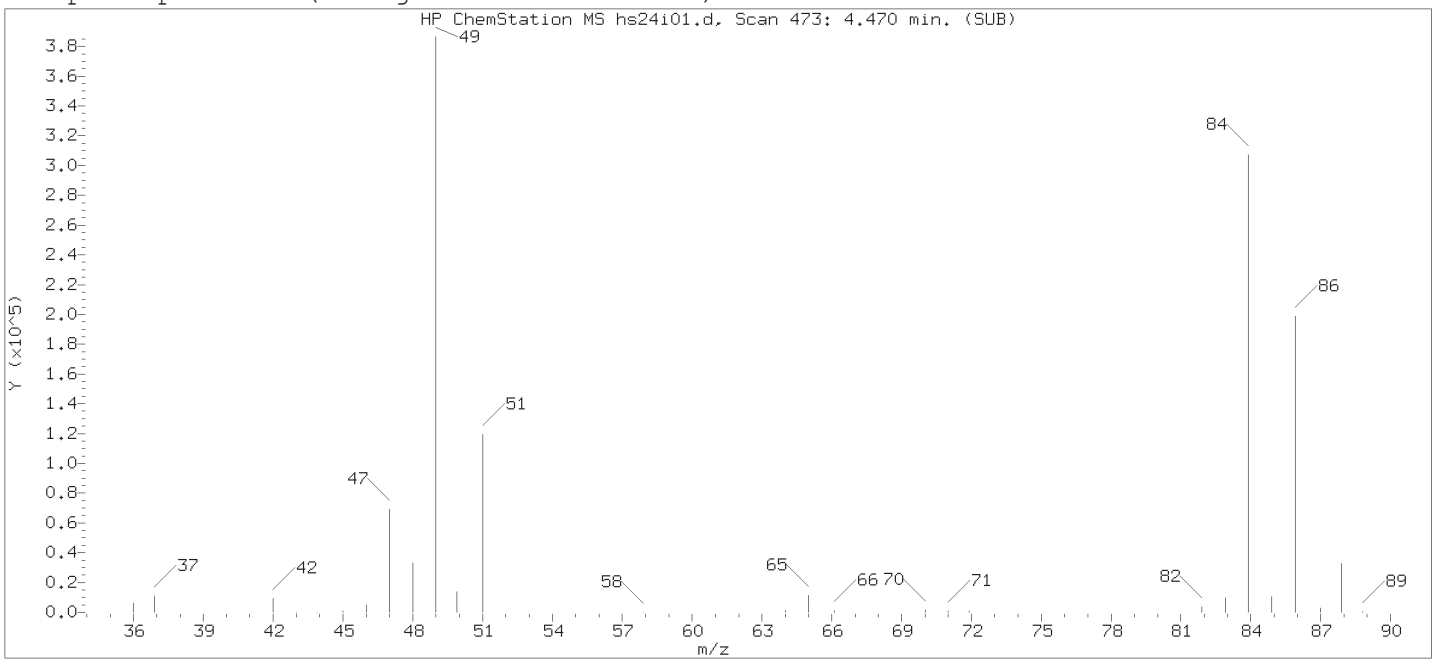
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 123769M
On-Column Amount (ng) : 50.0000
Integration start scan : 447 Integration stop scan: 594
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

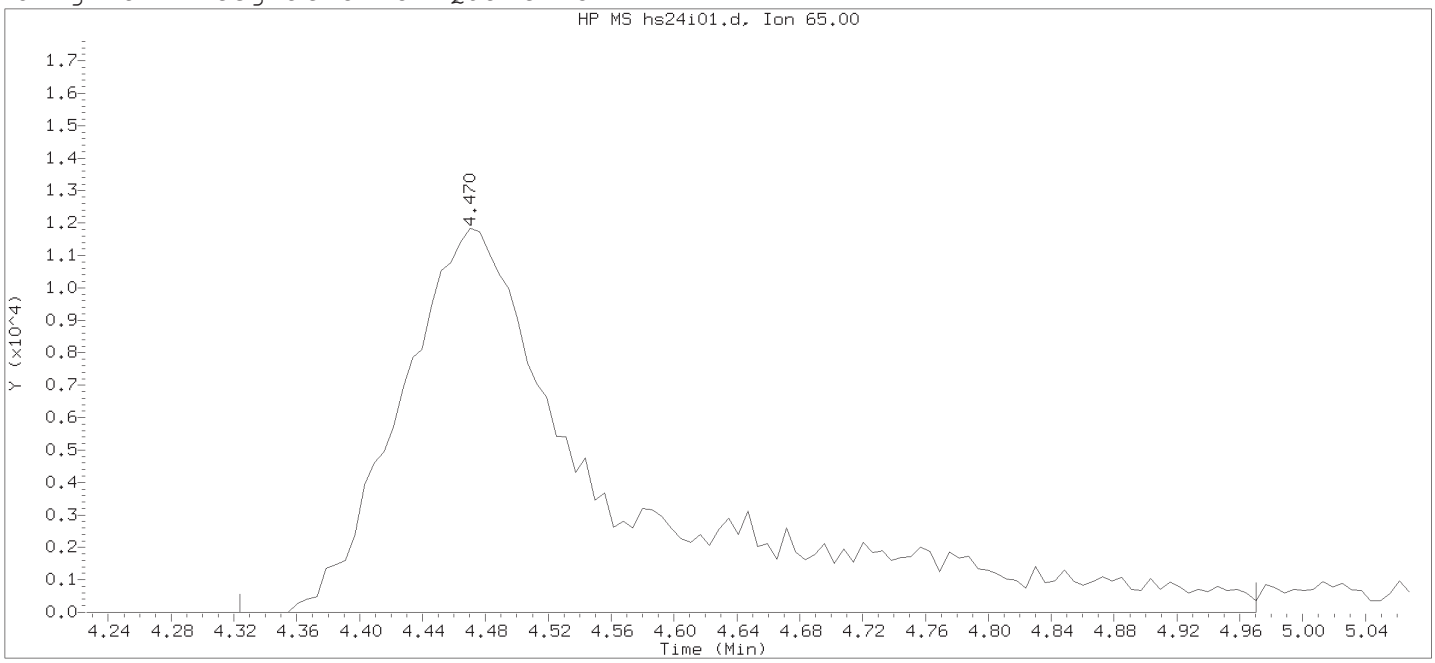
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

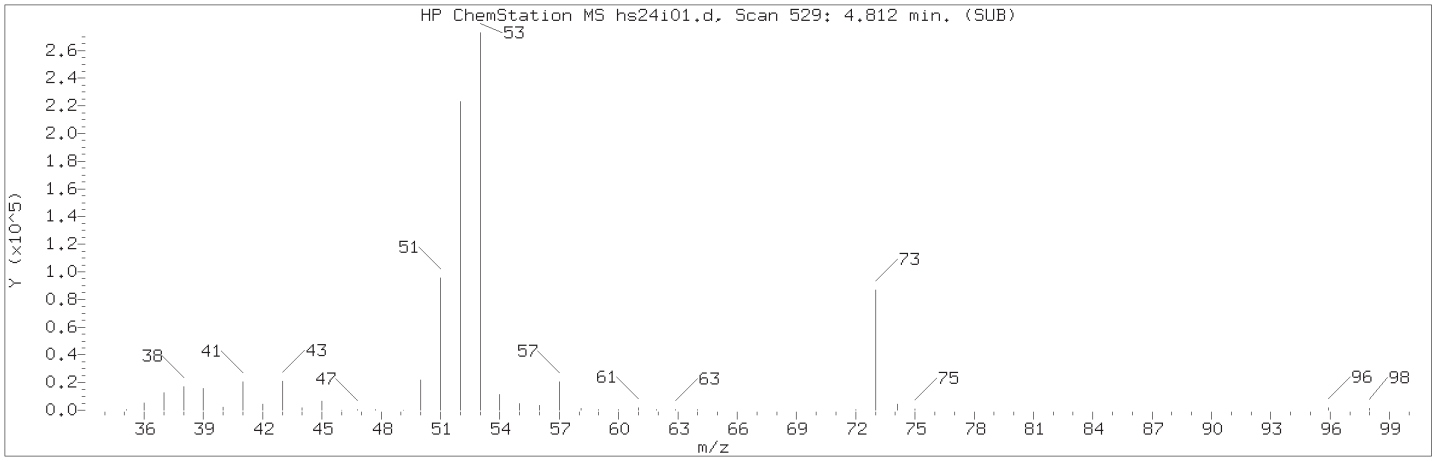
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

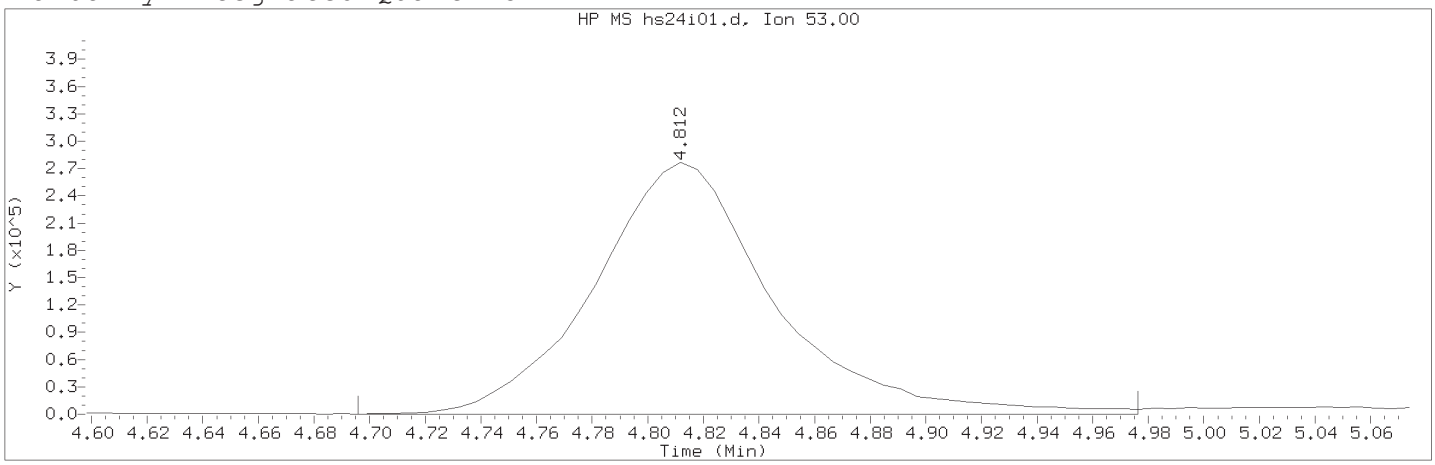
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area : 114590
On-column Amount (ng) : 50.0000
Integration start scan : 448 Integration stop scan: 554
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

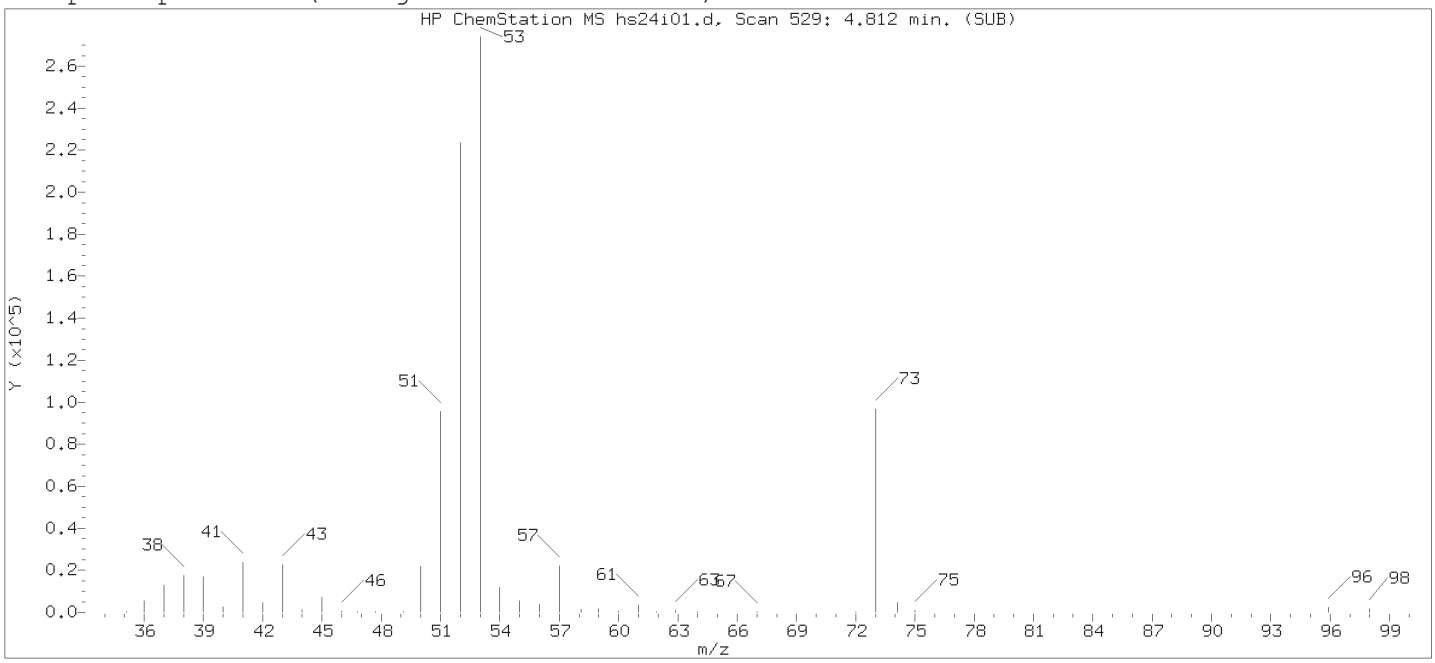
Compound Number : 29
Compound Name : Acrylonitrile
Scan Number : 529
Retention Time (minutes): 4.812
Quant Ion : 53.00
Area (flag) : 1235214M
On-Column Amount (ng) : 129.6558
Integration start scan : 509 Integration stop scan: 555
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

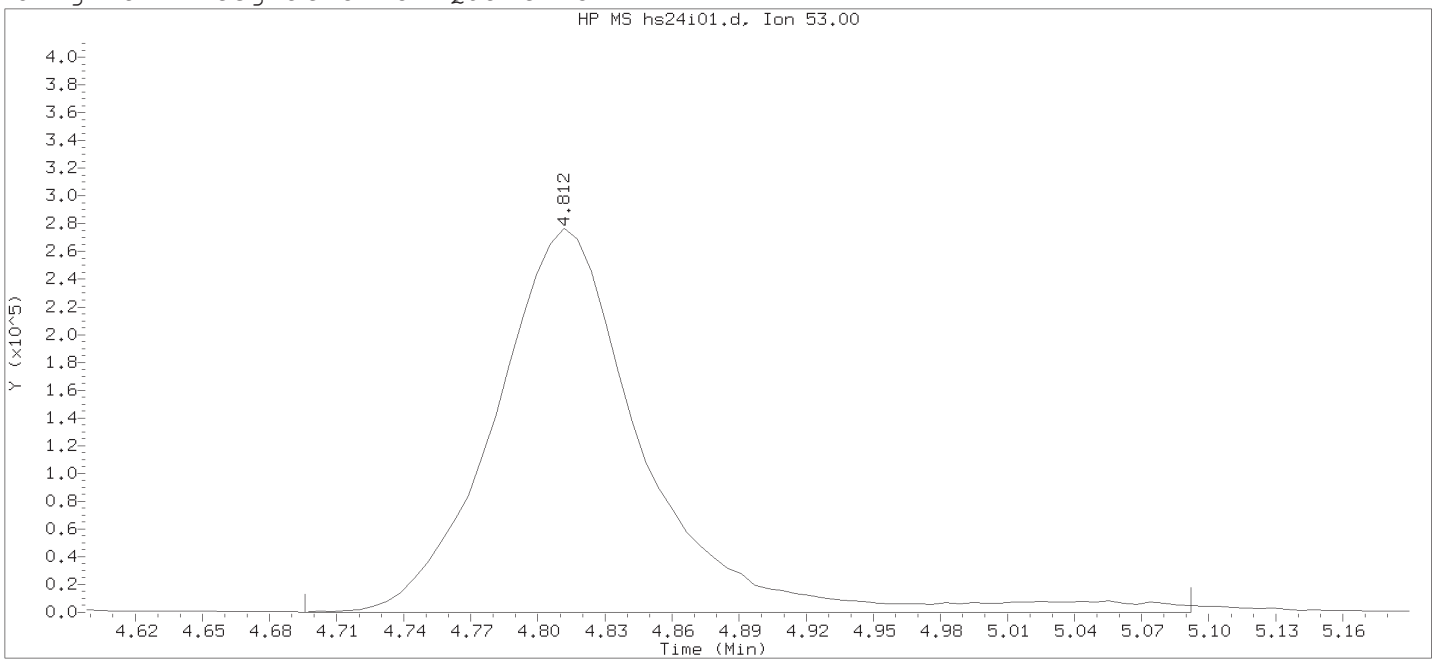
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

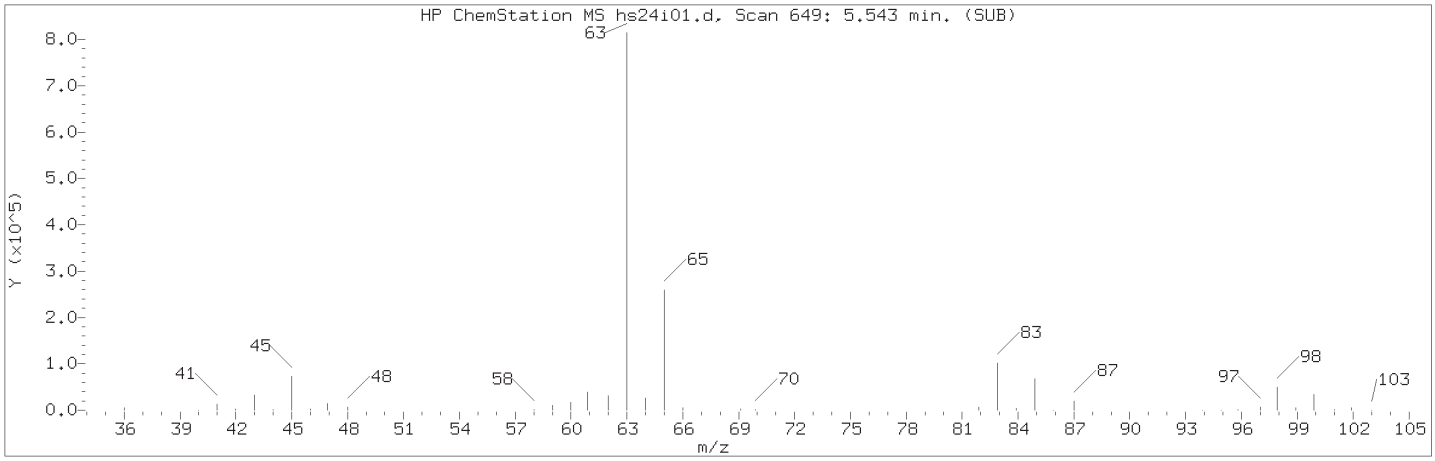
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

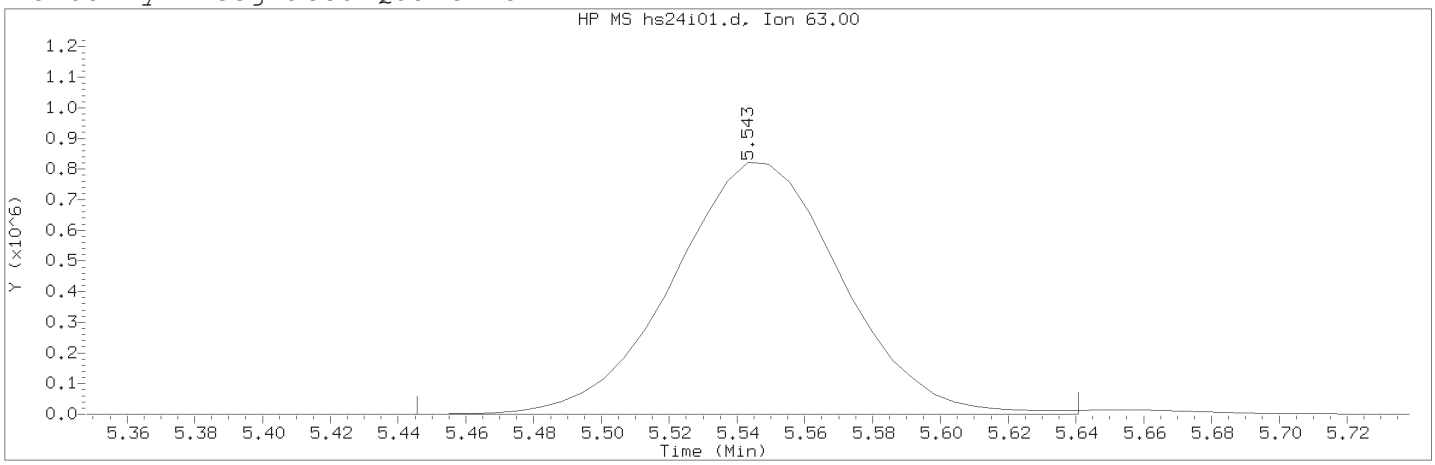
Compound Number : 29
Compound Name : Acrylonitrile
Scan Number : 529
Retention Time (minutes): 4.812
Quant Ion : 53.00
Area : 1282020
On-column Amount (ng) : 129.1888
Integration start scan : 509 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

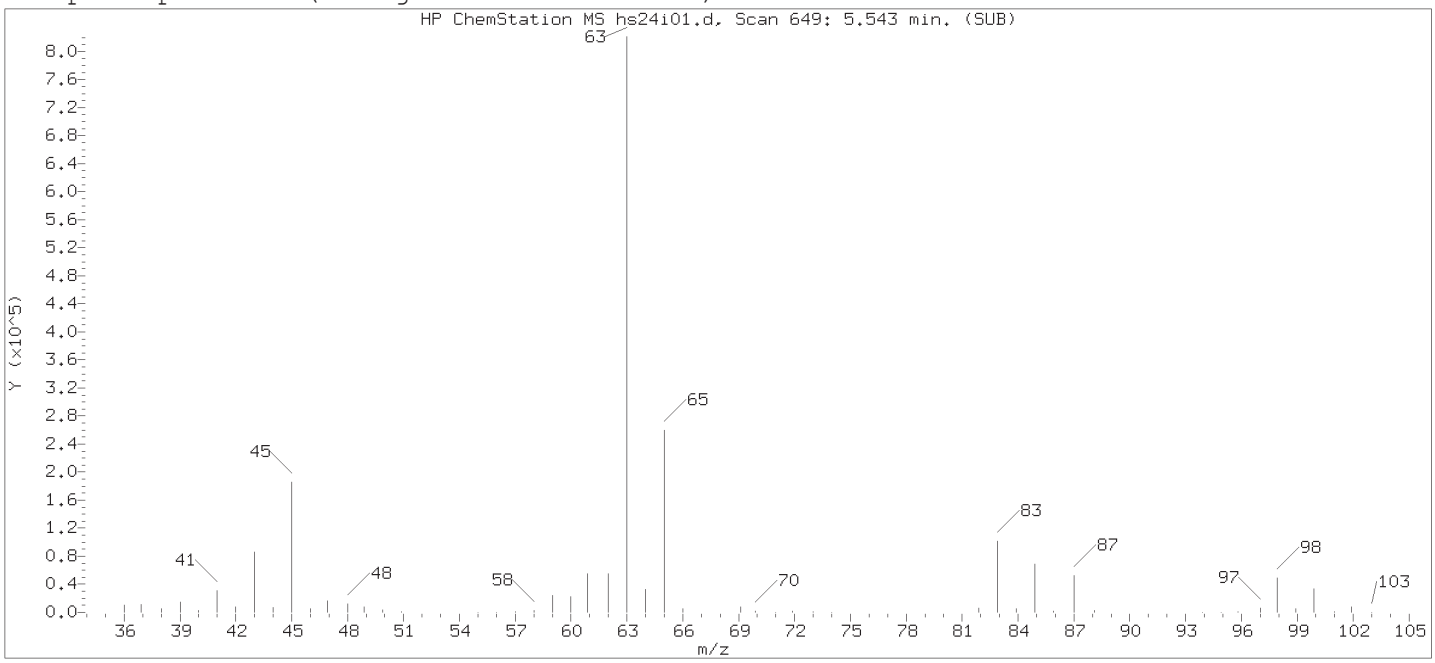
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 649
Retention Time (minutes): 5.543
Quant Ion : 63.00
Area (flag) : 2842374M
On-Column Amount (ng) : 25.8511
Integration start scan : 632 Integration stop scan: 664
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

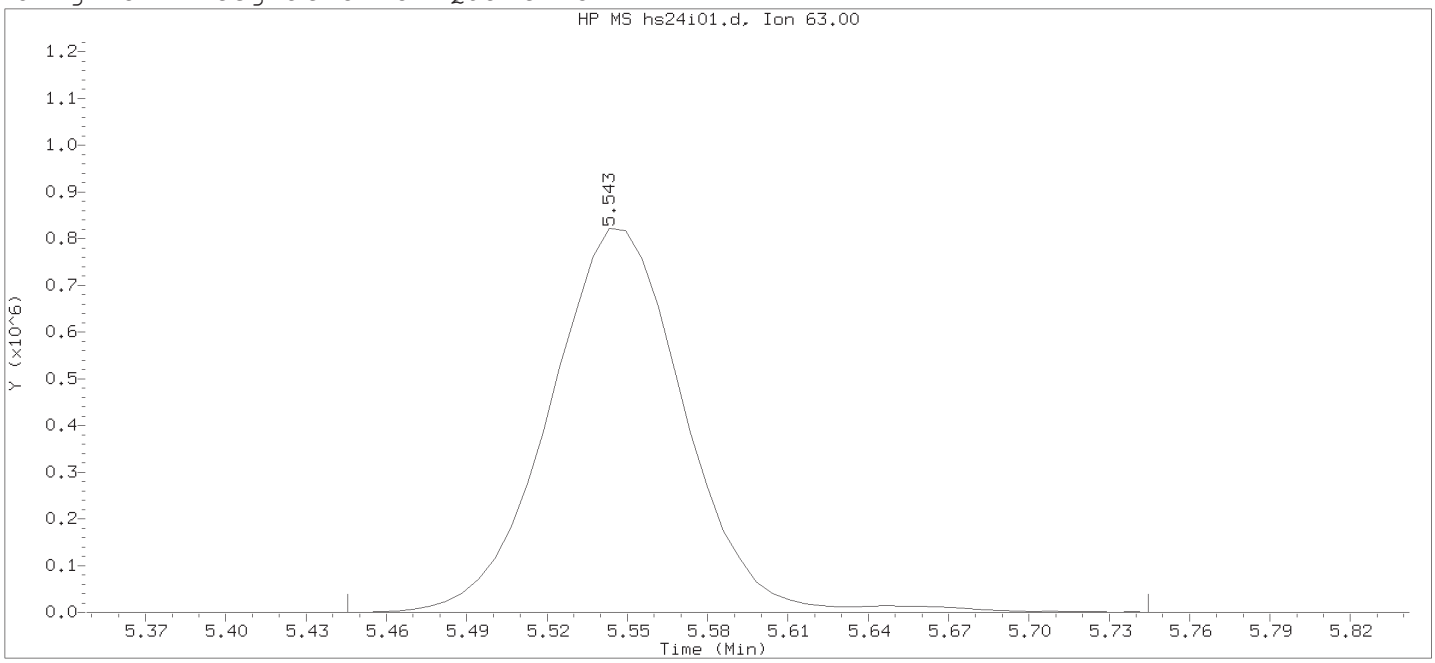
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

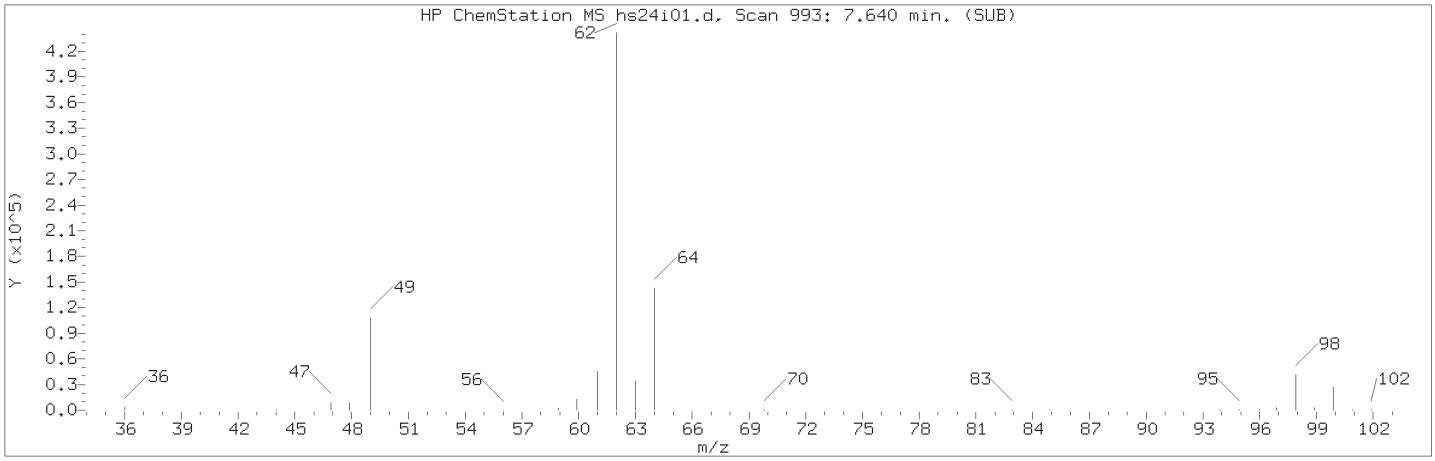
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

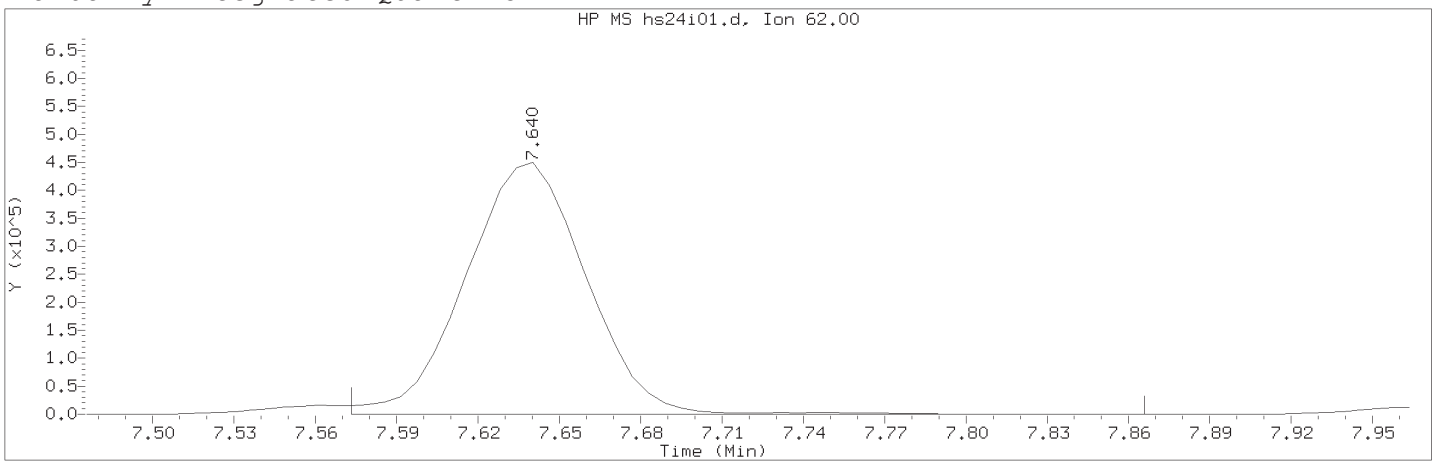
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 649
Retention Time (minutes): 5.543
Quant Ion : 63.00
Area : 2874978
On-column Amount (ng) : 24.9330
Integration start scan : 632 Integration stop scan: 681
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

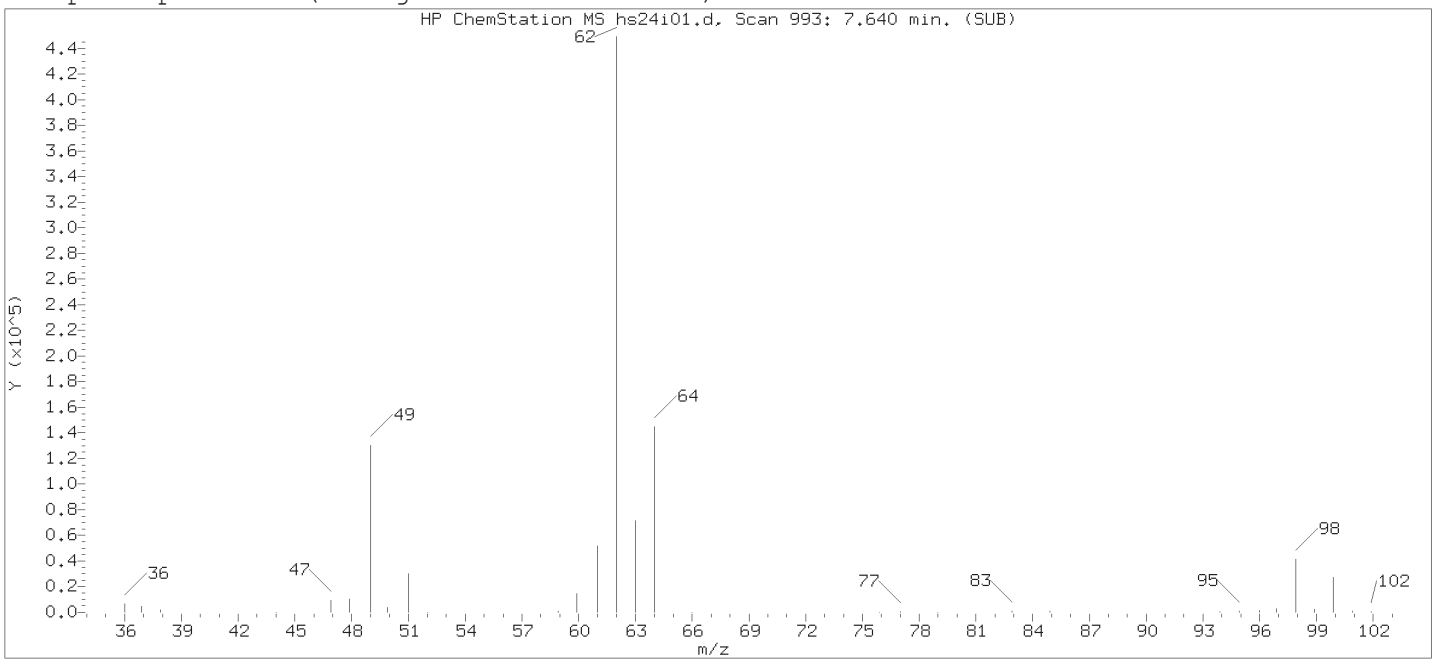
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.640
Quant Ion : 62.00
Area (flag) : 1386008M
On-Column Amount (ng) : 24.5870
Integration start scan : 981 Integration stop scan: 1029
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

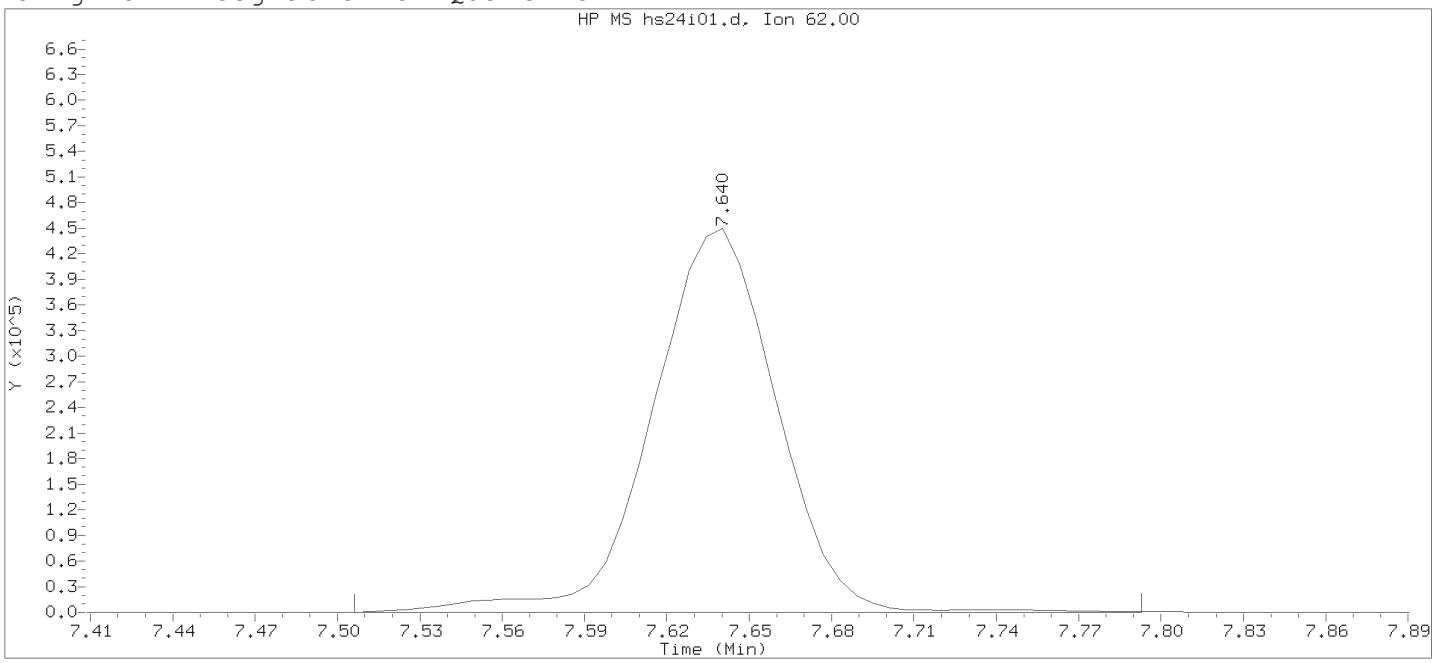
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

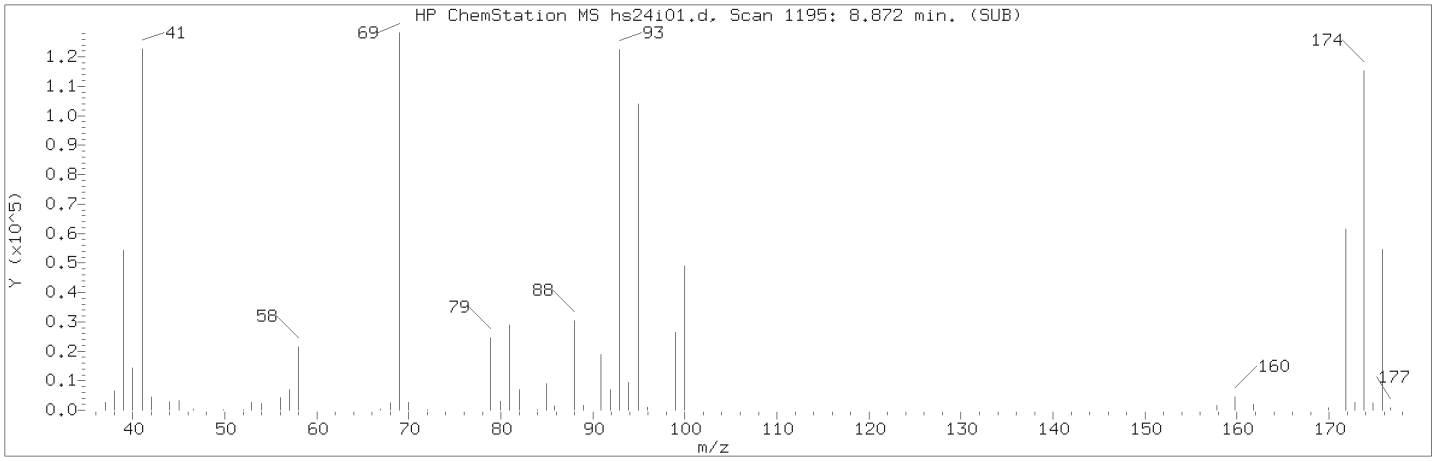
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

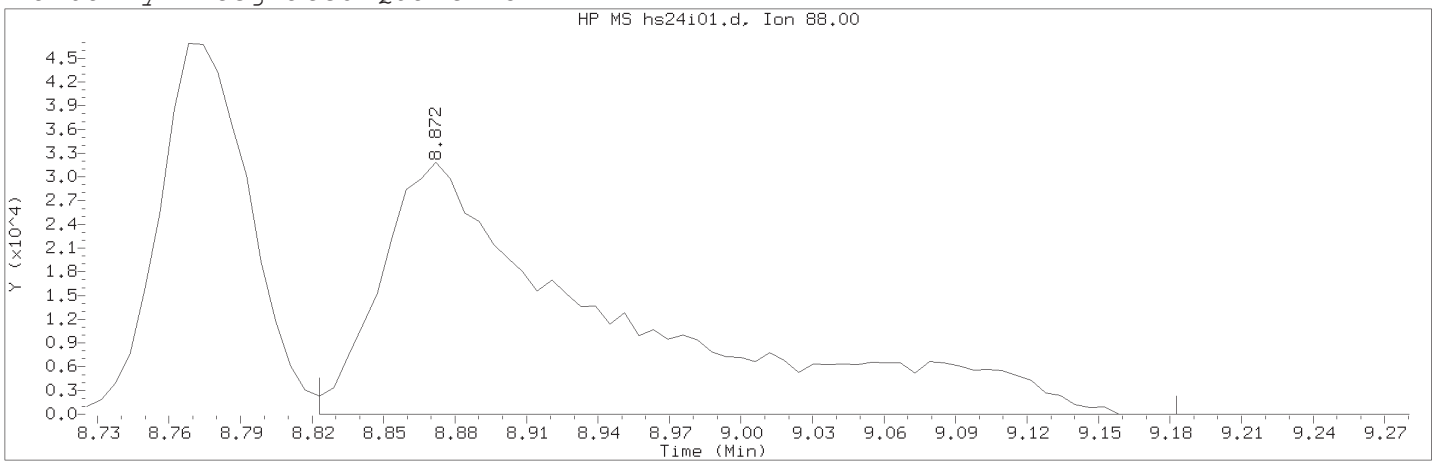
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.640
Quant Ion : 62.00
Area : 1414553
On-column Amount (ng) : 25.1444
Integration start scan : 970 Integration stop scan: 1017
Y at integration start : 0 Y at integration end: 260

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

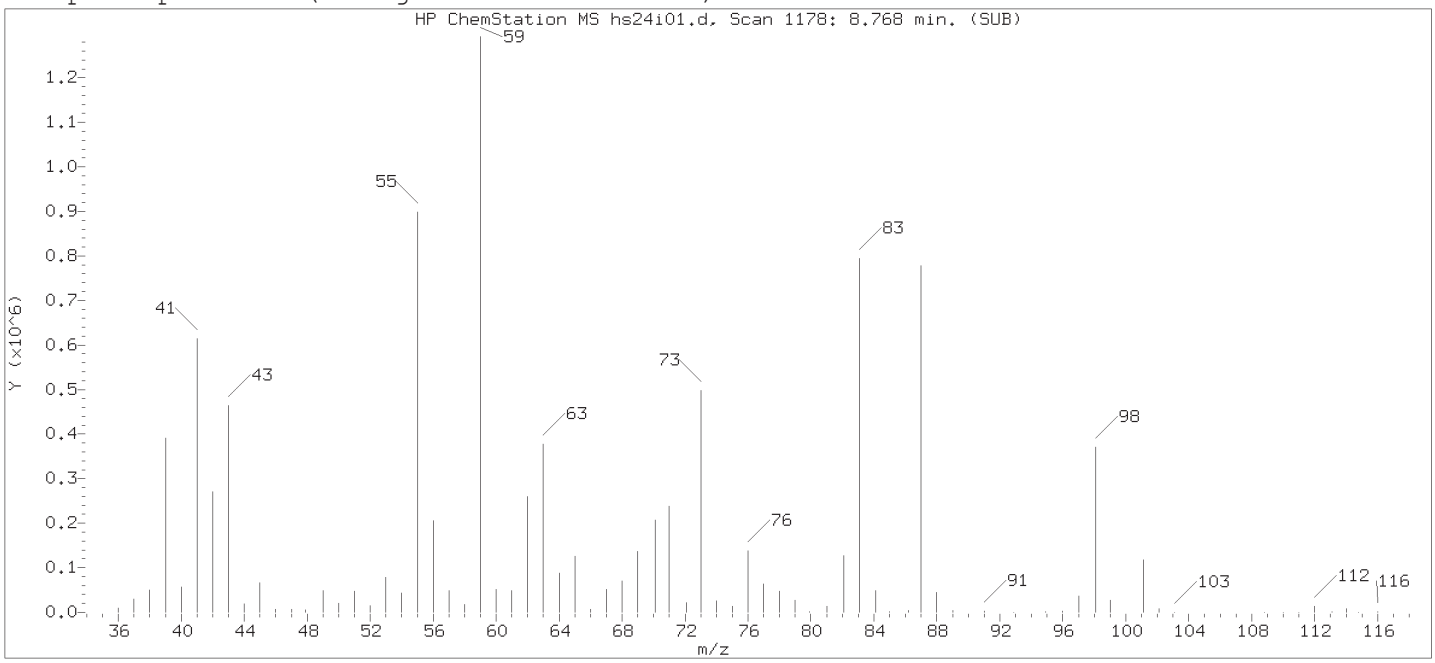
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1195
Retention Time (minutes): 8.872
Quant Ion : 88.00
Area (flag) : 216251M
On-Column Amount (ng) : 1300.5754
Integration start scan : 1186 Integration stop scan: 1245
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

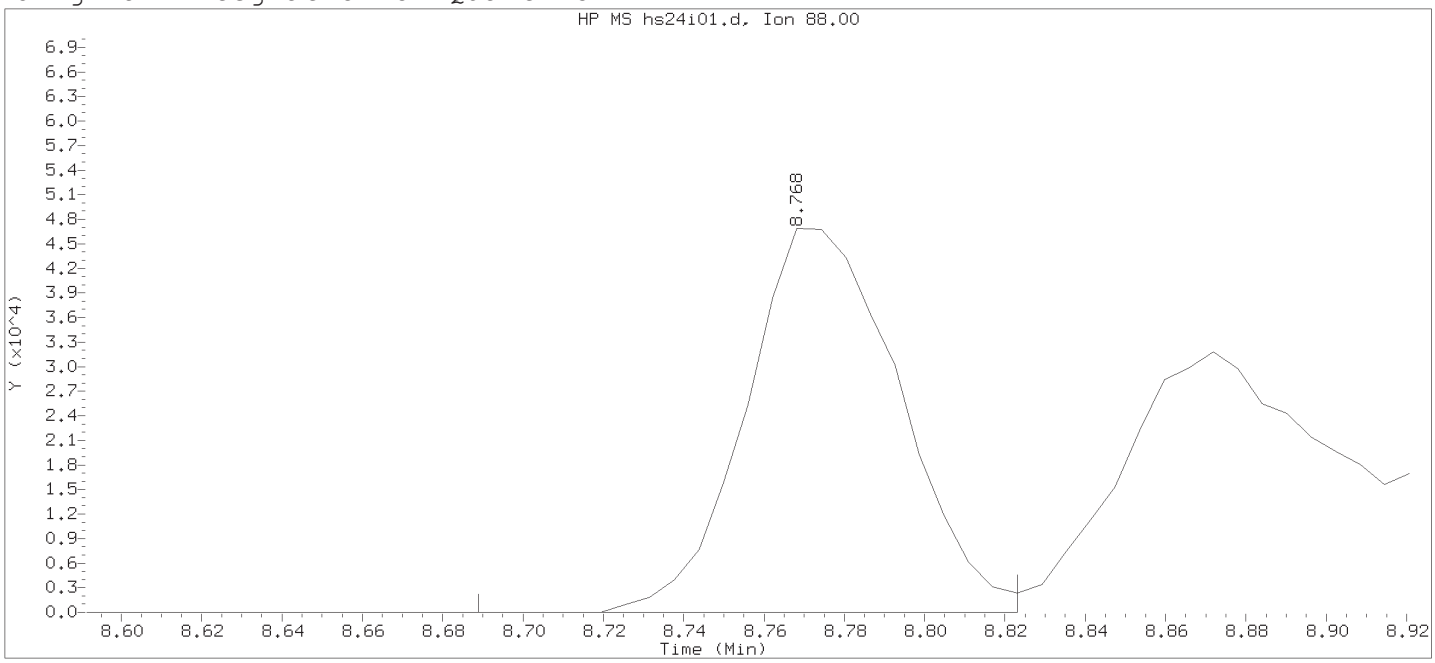
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

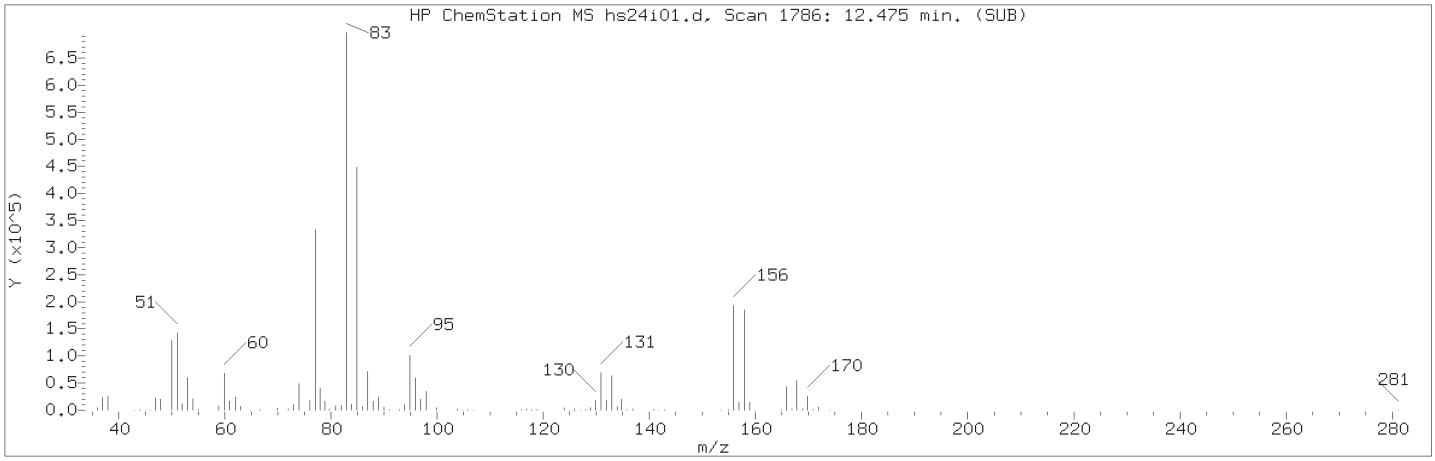
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

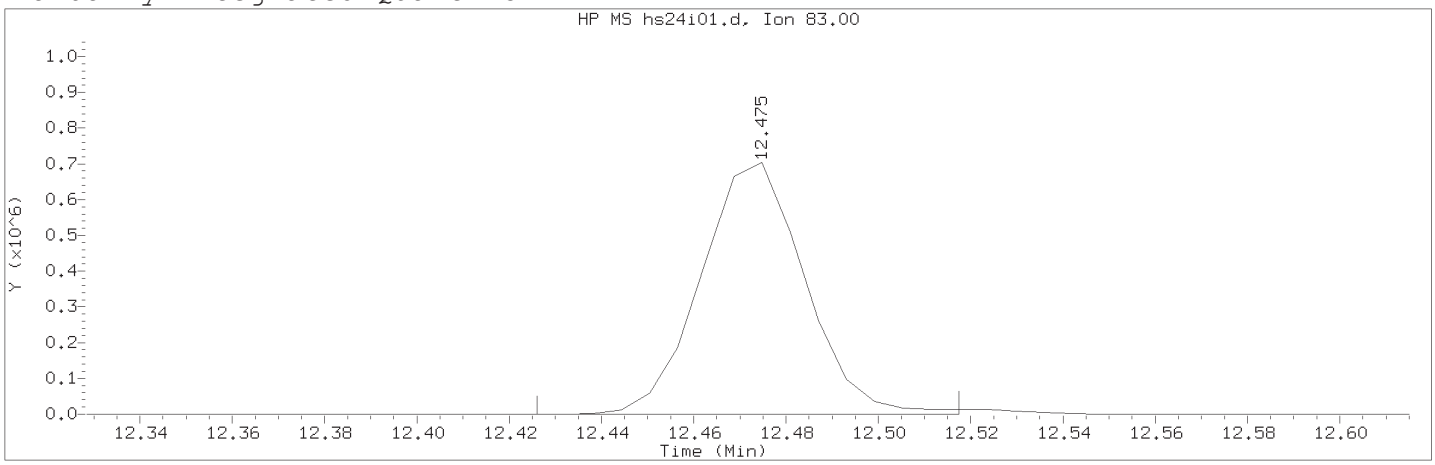
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1178
Retention Time (minutes): 8.768
Quant Ion : 88.00
Area : 124030
On-column Amount (ng) : 962.4201
Integration start scan : 1164 Integration stop scan: 1186
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

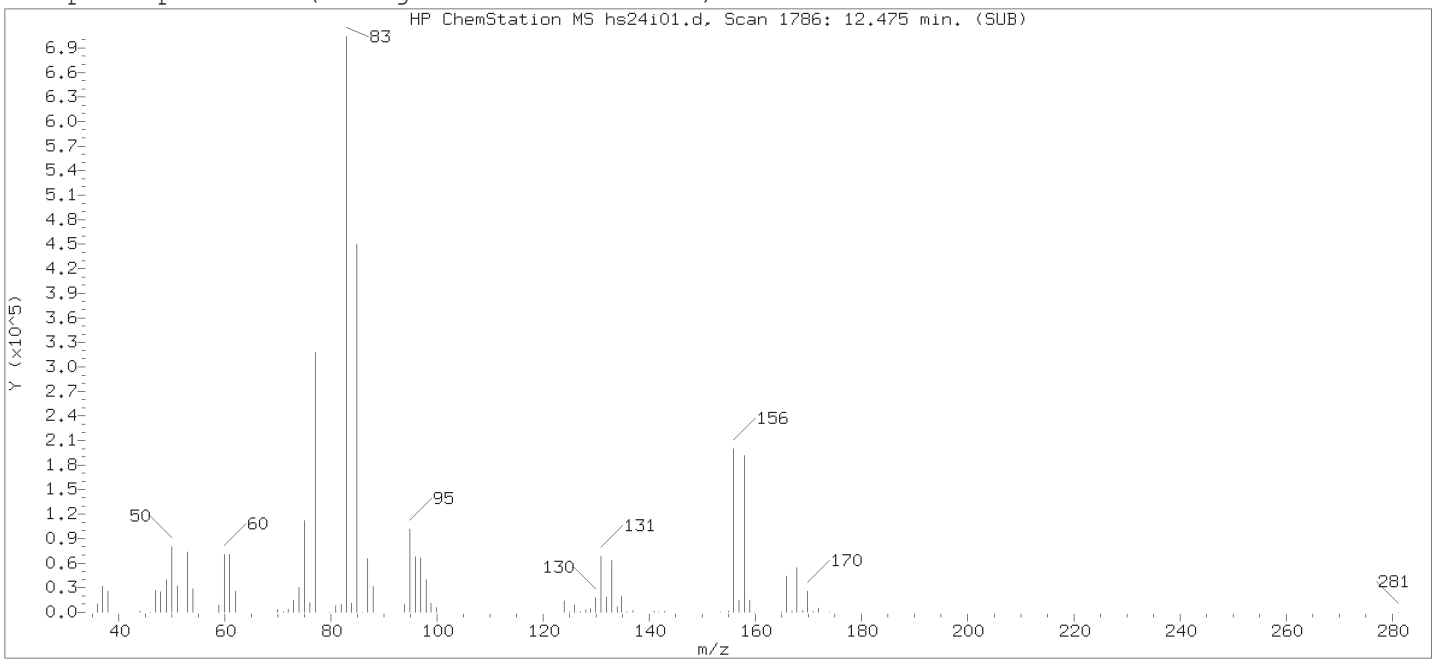
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 1100327M
On-Column Amount (ng) : 26.6273
Integration start scan : 1777 Integration stop scan: 1792
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

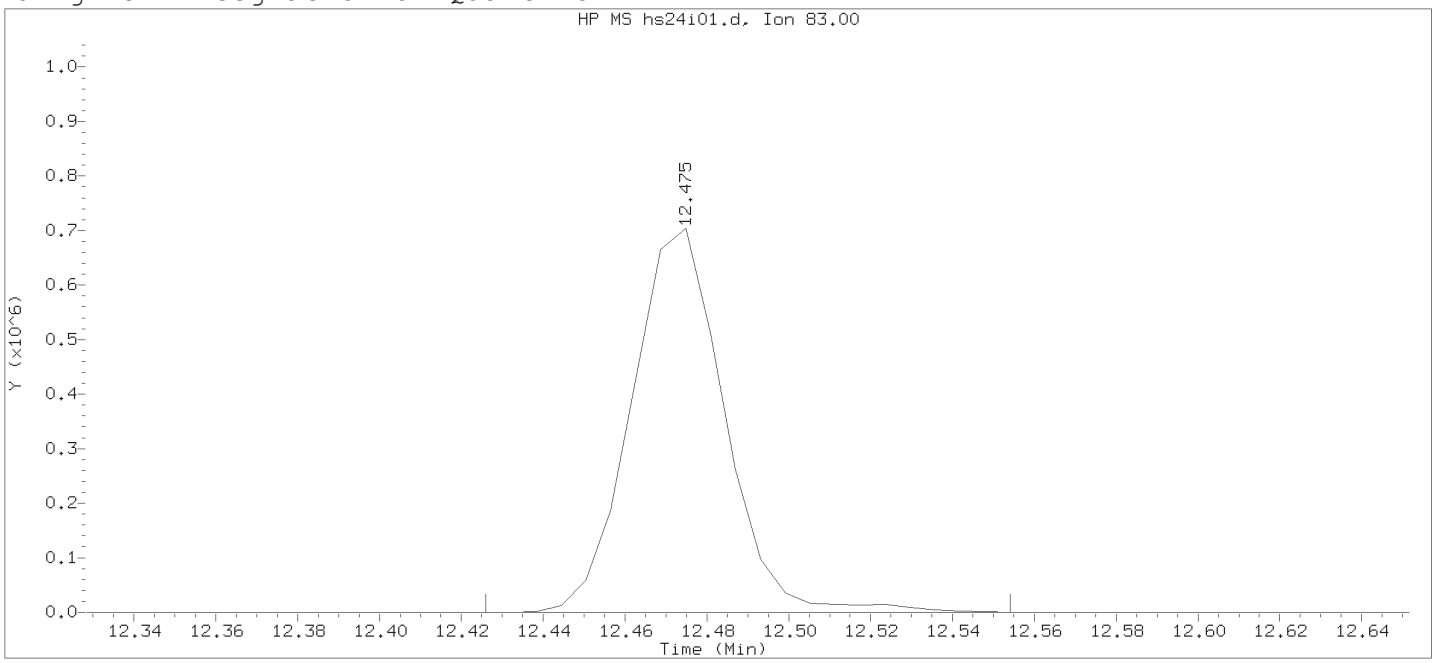
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



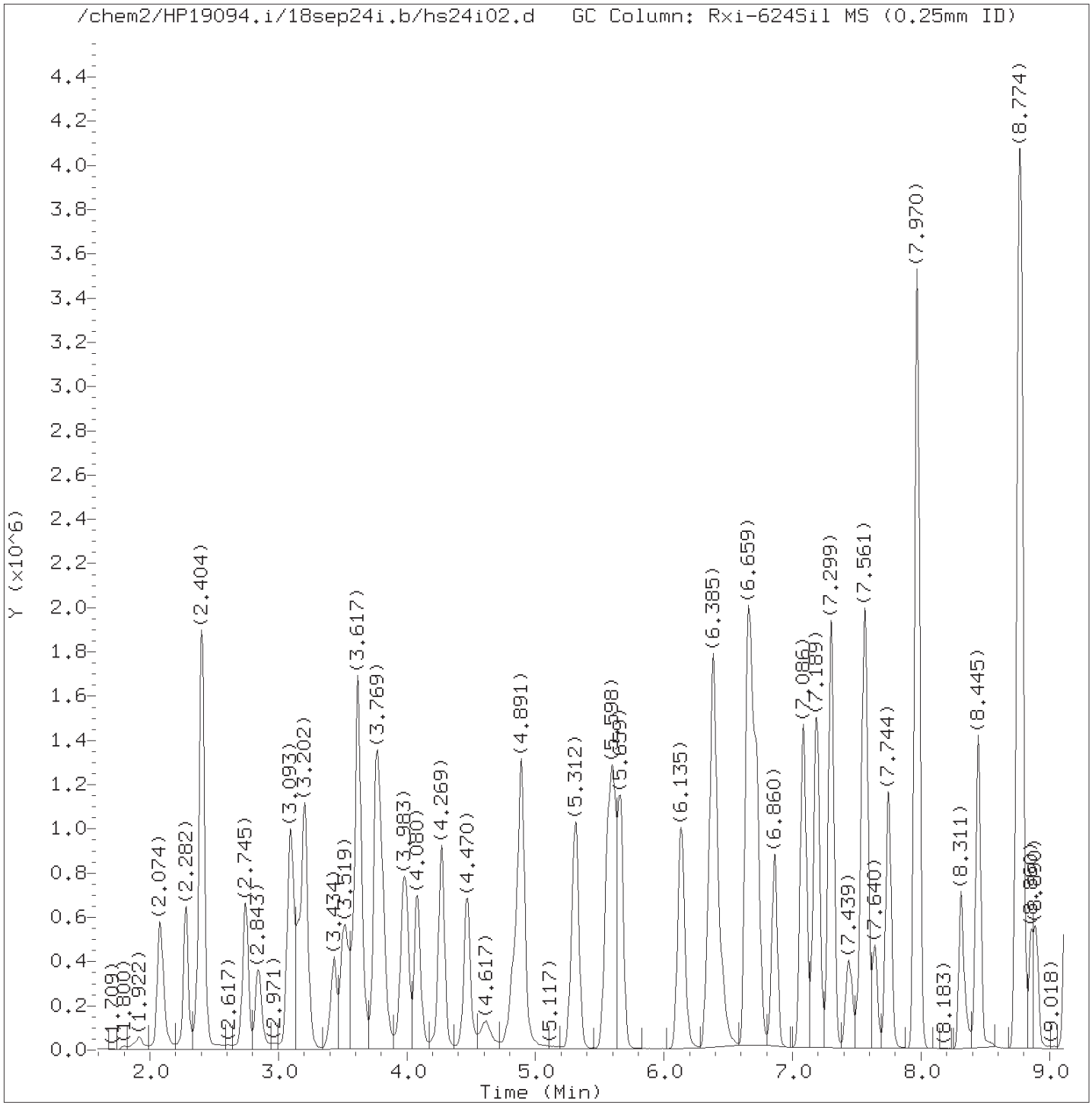
Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 1111309
On-column Amount (ng) : 25.3663
Integration start scan : 1777 Integration stop scan: 1798
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

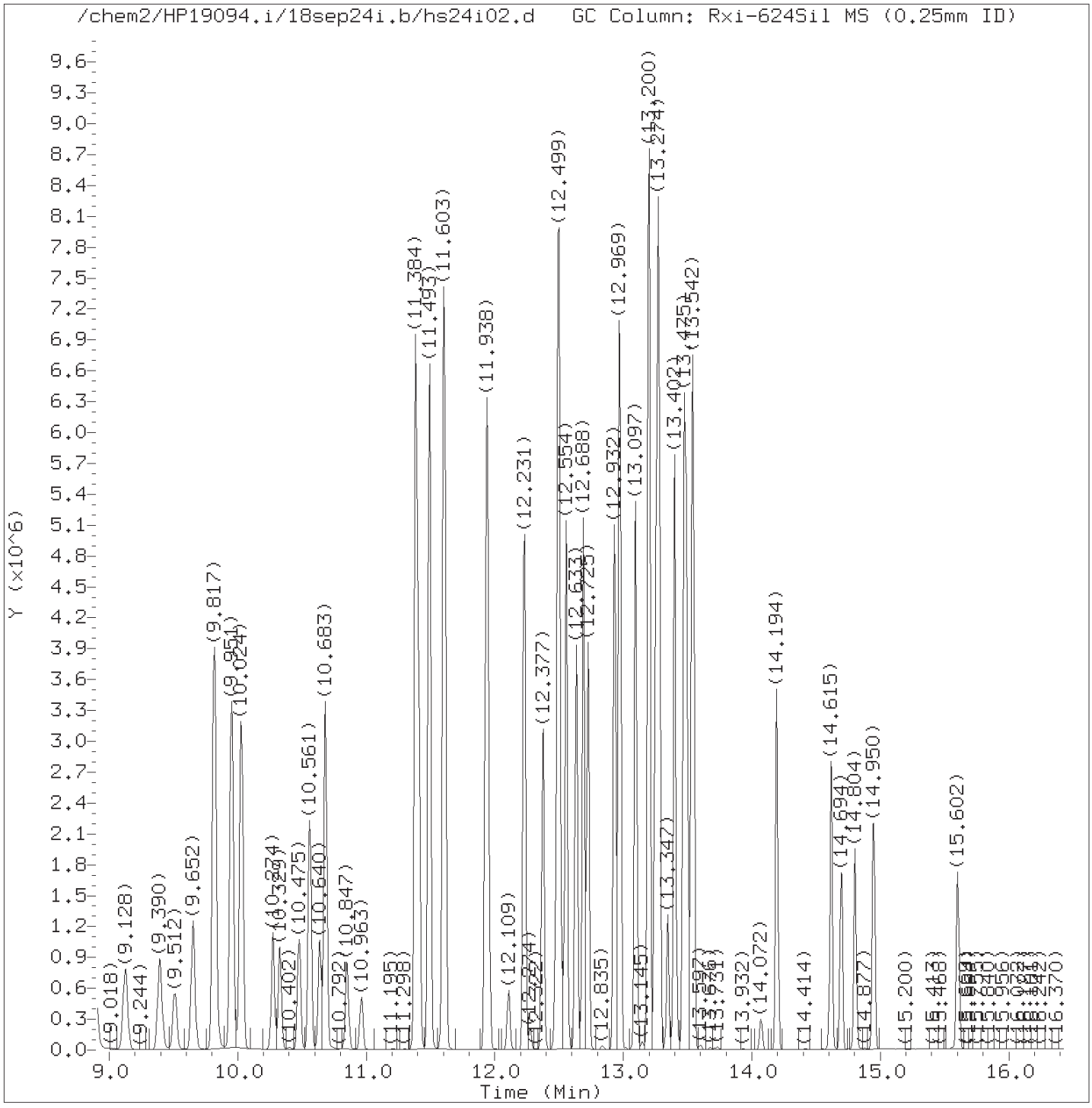
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.074	85	1111195	10.627
2) Chloromethane	(2)	2.282	50	1053821	10.291
5) Vinyl Chloride	(2)	2.404	62	994450	10.370
6) 1,3-Butadiene	(2)	2.404	39	1079138	9.934
7) Bromomethane	(2)	2.739	94	765899	10.273
8) Chloroethane	(2)	2.843	64	589896	10.142
9) Dichlorofluoromethane	(2)	3.093	67	1404728	10.153
10) Trichlorofluoromethane	(2)	3.154	101	1259997	10.400
11) Ethyl ether	(2)	3.434	59	423587	10.312
12) Freon 123a	(2)	3.513	67	807807	10.524
13) Acrolein	(1)	3.617	56	3074728	548.130
15) 1,1-Dichloroethene	(2)	3.757	96	555090	10.581
16) Freon 113	(2)	3.794	101	677125	10.951
14) Acetone	(1)	3.806	43	762811	101.244
17) Methyl Iodide	(2)	3.970	142	1138408	10.410
18) Carbon Disulfide	(2)	4.080	76	1731295	10.372
21) Methyl Acetate	(1)	4.251	43	211729	10.010
22) Allyl Chloride	(2)	4.269	41	1040687	10.436
23) Methylene Chloride	(2)	4.464	84	584981	9.884
26)*t-Butyl Alcohol-d10	(1)	4.483	65	126410	50.000
28) t-Butyl Alcohol	(1)	4.617	59	455794M	211.240
29) Acrylonitrile	(1)	4.824	53	529018	54.369
30) Methyl Tertiary Butyl Ether	(2)	4.873	73	1148303	10.643
31) trans-1,2-Dichloroethene	(2)	4.891	96	621983	10.505
32) n-Hexane	(2)	5.318	57	1052293	11.177
33) 1,1-Dichloroethane	(2)	5.556	63	1185400	10.515
34) di-Isopropyl Ether	(2)	5.604	45	2092042	10.450
35) 2-Chloro-1,3-Butadiene	(2)	5.665	53	1107150	10.914
40) 1,2-Dichloroethene (Total)	(2)		96	1310379	21.027
37) Ethyl t-butyl ether	(2)	6.135	59	1675402	10.551
38) 2-Butanone	(1)	6.342	43	1355942	109.942
39) cis-1,2-Dichloroethene	(2)	6.385	96	688396	10.523
41) 2,2-Dichloropropane	(2)	6.397	77	877144	10.894
42) Propionitrile	(1)	6.446	54	722828	215.920
45) Methacrylonitrile	(1)	6.659	67	1335578	110.644
47) Bromochloromethane	(2)	6.720	128	285662	10.337
48) Tetrahydrofuran	(1)	6.720	71	364027	111.024
49) Chloroform	(2)	6.866	83	1097143	10.468

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.080	113	673469	9.987
50)$Dibromofluoromethane	(2)	7.074	111	700447	10.091
51) 1,1,1-Trichloroethane	(2)	7.092	97	954892M	10.651
52) Cyclohexane	(2)	7.189	56	1283297	10.965
52) Cyclohexane	(2)	7.189	84	1055029	10.934
52) Cyclohexane	(2)	7.189	69	379671	11.008
54) Carbon Tetrachloride	(2)	7.299	117	841170	10.925
55) 1,1-Dichloropropene	(2)	7.305	75	906209	10.660
56) Isobutyl Alcohol	(1)	7.439	41	441325	528.629
57)$1,2-Dichloroethane-d4	(2)	7.531	102	119504	10.165
57)$1,2-Dichloroethane-d4	(2)	7.537	65	571691	10.054
57)$1,2-Dichloroethane-d4	(2)	7.537	104	76384	10.145
58) Benzene	(2)	7.567	78	2595708	10.336
59) 1,2-Dichloroethane	(2)	7.647	62	573462M	9.922
60) t-Amyl methyl ether	(2)	7.744	73	1396741	10.610
62) n-Heptane	(2)	7.970	43	1080061	11.126
63)*Fluorobenzene	(2)	7.970	96	2675616	10.000
65) n-Butanol	(1)	8.311	56	773741	1097.005
67) Trichloroethene	(2)	8.445	95	677458	10.535
69) Methylcyclohexane	(2)	8.756	83	1312618	10.809
70) 1,2-Dichloropropane	(2)	8.787	63	638119	10.473
71) Methyl Methacrylate	(1)	8.854	69	256545	11.482
72) 1,4-Dioxane	(1)	8.878	88	87437M	514.877
73) Dibromomethane	(2)	8.896	93	260508	10.301
74) Bromodichloromethane	(2)	9.122	83	729114	10.644
76) 2-Nitropropane	(1)	9.390	41	734933	116.122
80) cis-1,3-Dichloropropene	(2)	9.652	75	870258	10.912
81) 4-Methyl-2-Pentanone	(1)	9.817	43	3459344	112.763
82)$Toluene-d8	(3)	9.951	98	2697002	10.021
82)$Toluene-d8	(3)	9.951	100	1740056	10.017
83) Toluene	(3)	10.024	92	1612018	10.388
85) 1,3-Dichloropropene (total)	(3)		75	1532900	21.995
84) trans-1,3-Dichloropropene	(3)	10.274	75	662642	11.083
86) Ethyl Methacrylate	(3)	10.329	69	561170	10.955
88) 1,1,2-Trichloroethane	(3)	10.475	97	373327	10.455
89) Tetrachloroethene	(3)	10.561	166	735072	10.485
90) 1,3-Dichloropropane	(3)	10.640	76	658558	10.406
91) 2-Hexanone	(1)	10.683	43	2350012	112.535

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.853	129	455725	10.649
95) 1,2-Dibromoethane	(3)	10.963	107	359375	10.738
96) 1-Chlorohexane	(3)	11.384	91	958778	10.360
97)*Chlorobenzene-d5	(3)	11.384	117	2091043	10.000
98) Chlorobenzene	(3)	11.408	112	1704436	10.353
100) Ethylbenzene	(3)	11.493	91	3218789	10.613
99) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	593286	10.920
101) m+p-Xylene	(3)	11.603	106	2379515	21.153
105) Xylene (Total)	(3)		106	3524795	31.800
104) o-Xylene	(3)	11.932	106	1145280	10.649
106) Styrene	(3)	11.951	104	1866075	10.845
107) Bromoform	(3)	12.109	173	256472	10.904
108) Isopropylbenzene	(3)	12.231	105	3134574	10.677
111)$4-Bromofluorobenzene	(3)	12.377	95	977708	9.978
111)$4-Bromofluorobenzene	(3)	12.377	174	853274	10.029
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	446396M	10.447
114) Bromobenzene	(4)	12.493	156	679412	10.458
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	1100680	114.554
116) 1,2,3-Trichloropropane	(4)	12.524	110	111265M	10.072
117) n-Propylbenzene	(4)	12.554	91	3758147	10.639
119) 2-Chlorotoluene	(4)	12.633	126	715824	10.449
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	2552095	10.665
122) 4-Chlorotoluene	(4)	12.725	126	714849	10.413
125) tert-Butylbenzene	(4)	12.932	134	550044	10.570
126) Pentachloroethane	(4)	12.969	167	449742	11.073
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	2603683	10.663
128) sec-Butylbenzene	(4)	13.097	105	3375632	10.887
131) 1,3-Dichlorobenzene	(4)	13.194	146	1344989	10.421
132) p-Isopropyltoluene	(4)	13.200	119	2814592	10.959
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1077251	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	1311510	10.351
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	1158798	10.344
136) Benzyl Chloride	(4)	13.347	126	179783	11.638
138) n-Butylbenzene	(4)	13.493	92	1387276	10.882
139) 1,2-Dichlorobenzene	(4)	13.530	146	1165776	10.237
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	58902	11.327
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	1022554	10.649
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	834904	10.675

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

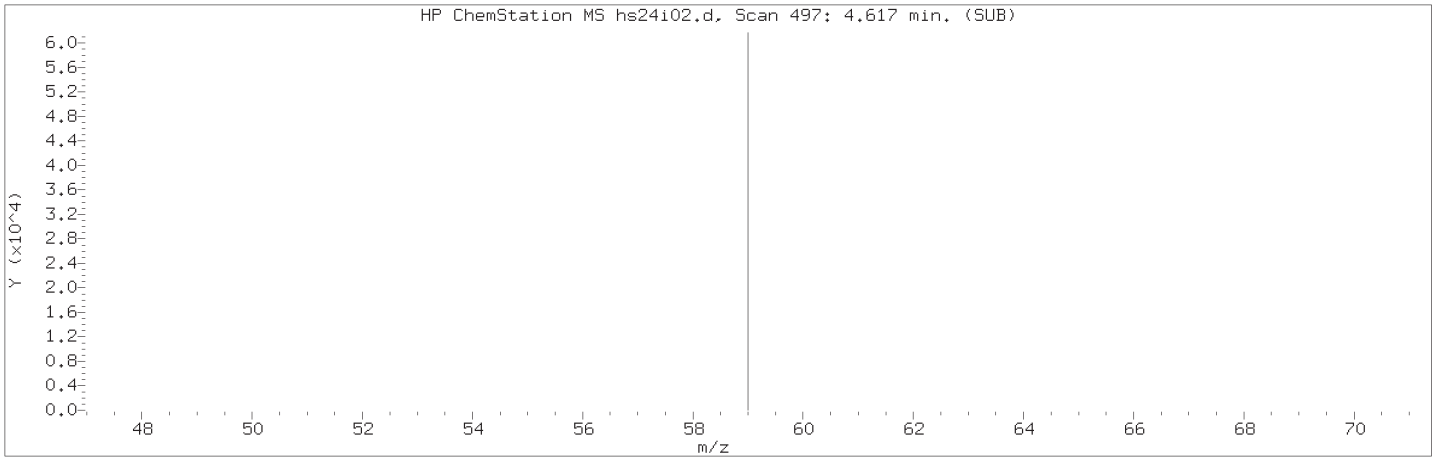
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

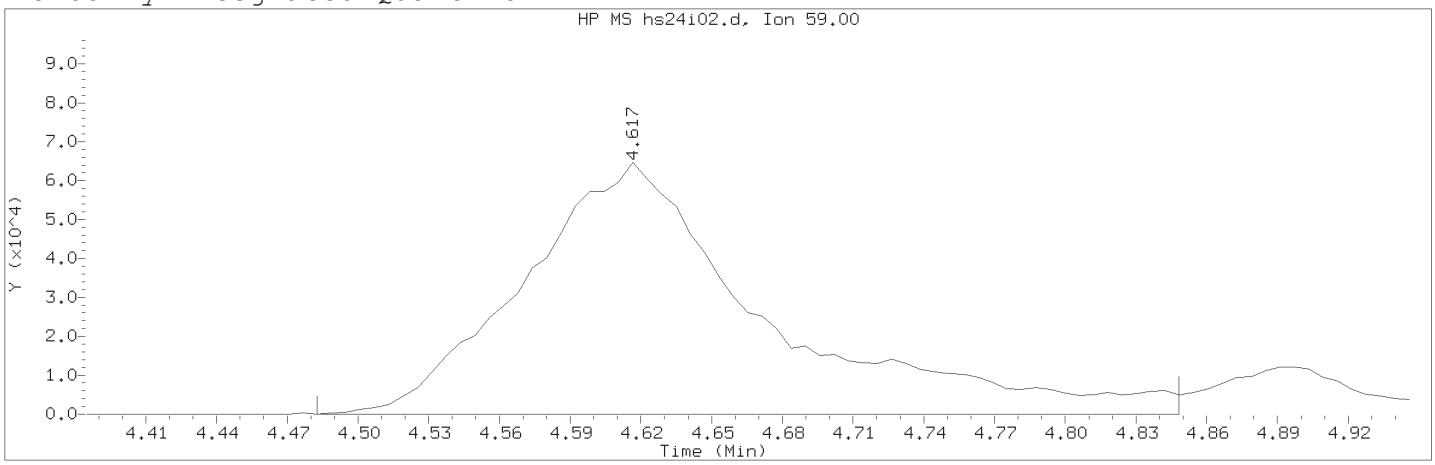
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	311460	10.536
147) Naphthalene	(4)	14.804	128	1382804	11.173
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	699158	10.872

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

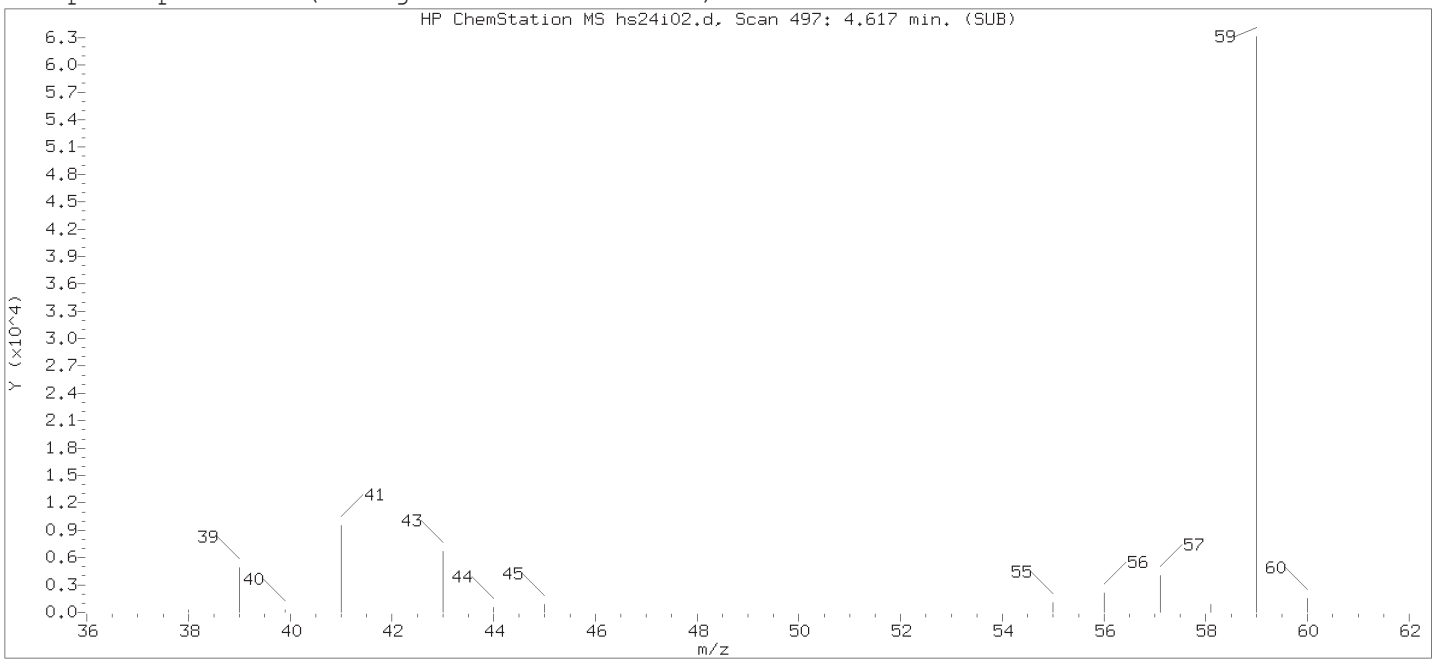
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 497
Retention Time (minutes): 4.617
Quant Ion : 59.00
Area (flag) : 455794M
On-Column Amount (ng) : 211.2399
Integration start scan : 474 Integration stop scan: 534
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

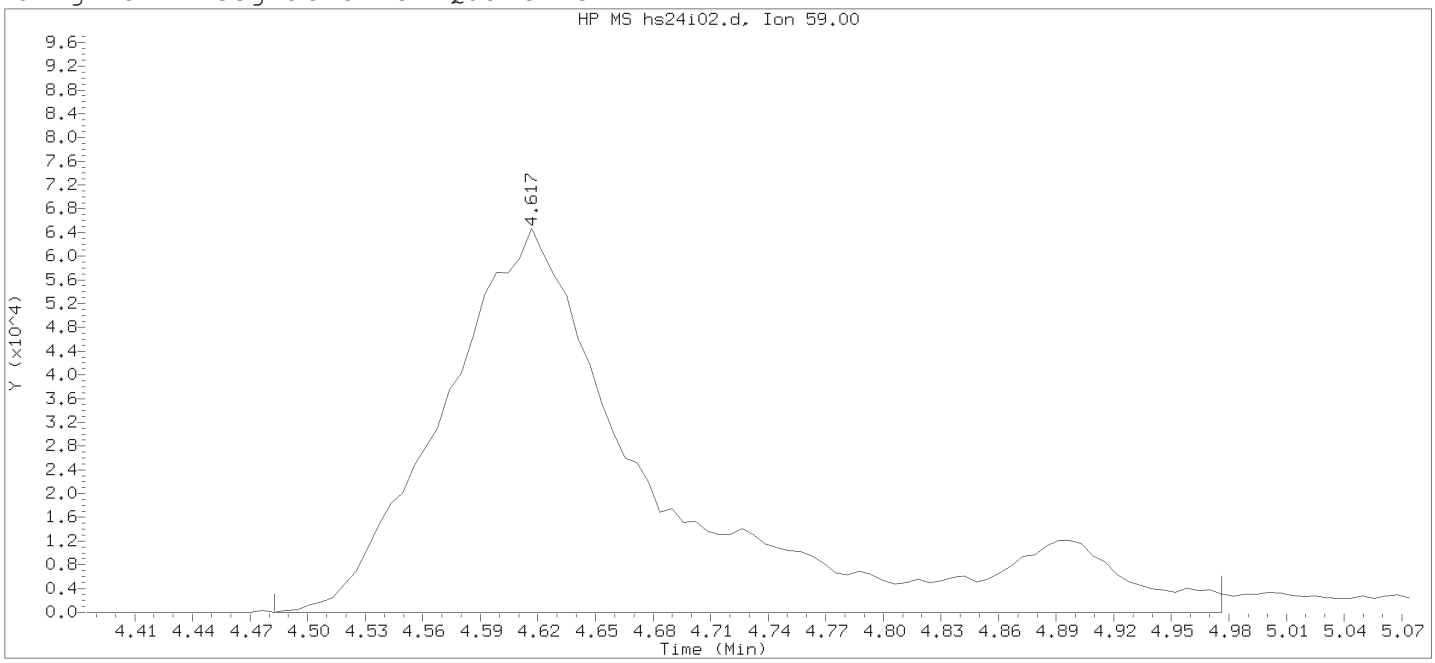
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

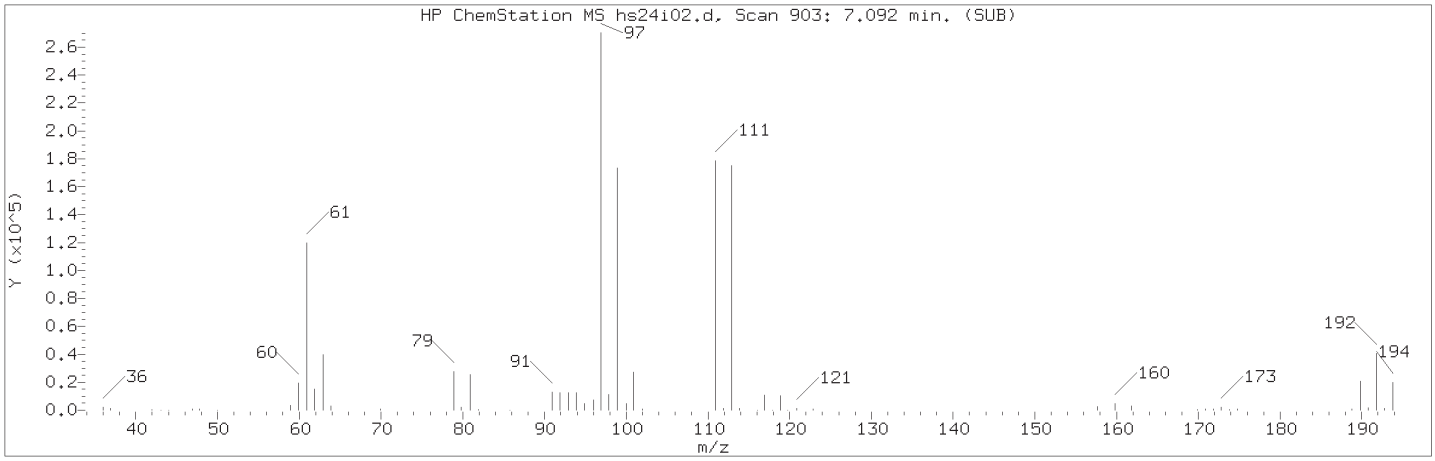
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

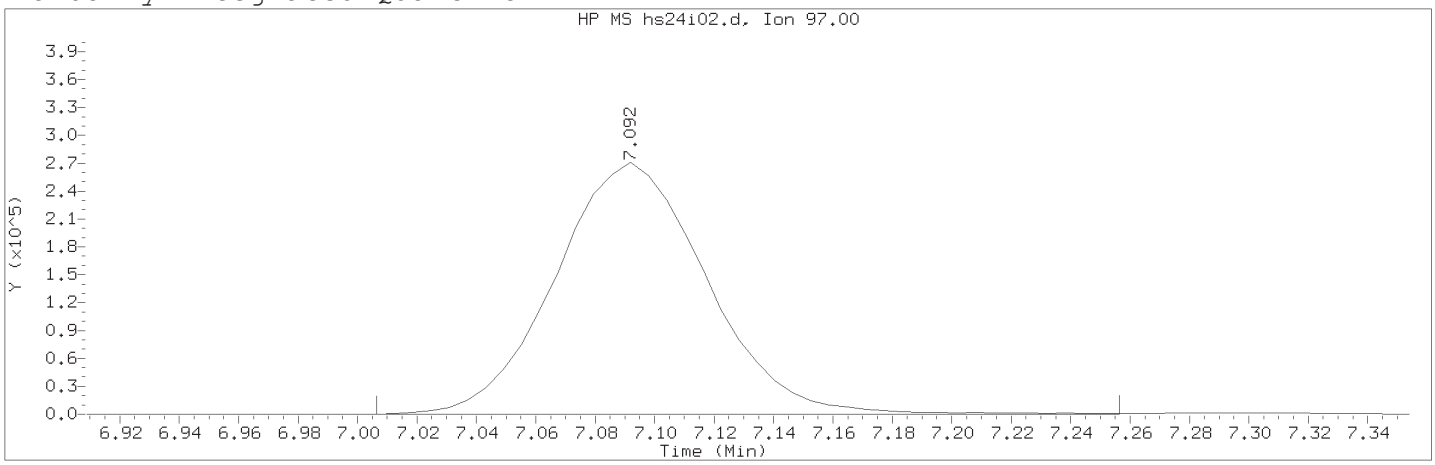
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 497
Retention Time (minutes): 4.617
Quant Ion : 59.00
Area : 508509
On-column Amount (ng) : 200.0000
Integration start scan : 474 Integration stop scan: 555
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

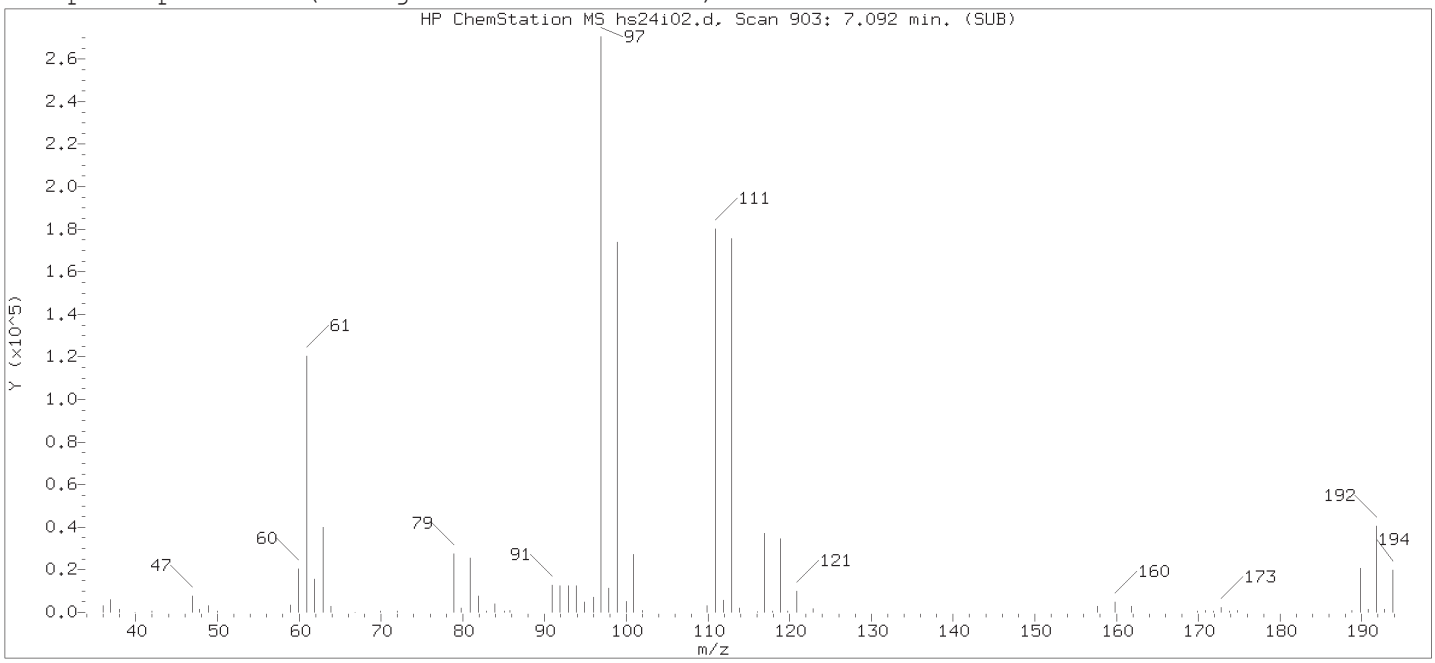
Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 903
Retention Time (minutes): 7.092
Quant Ion : 97.00
Area (flag) : 954892M
On-Column Amount (ng) : 10.6514
Integration start scan : 888 Integration stop scan: 929
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

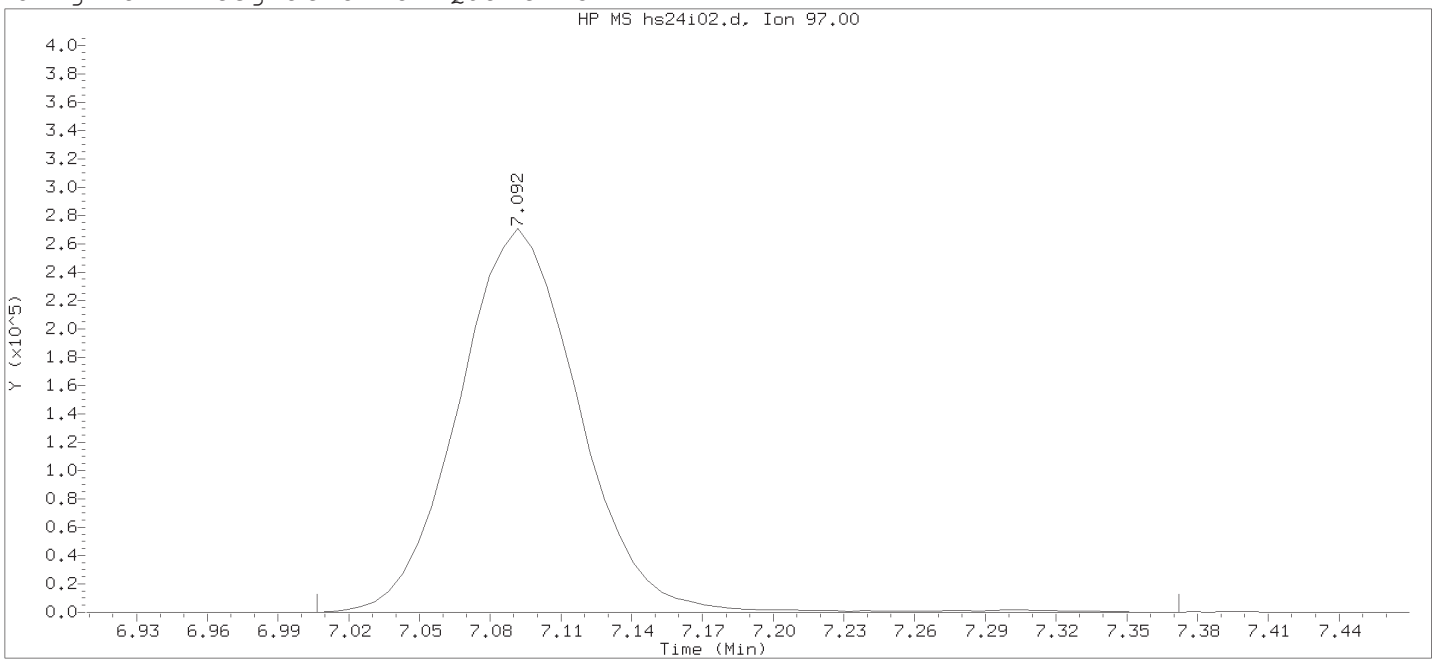
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

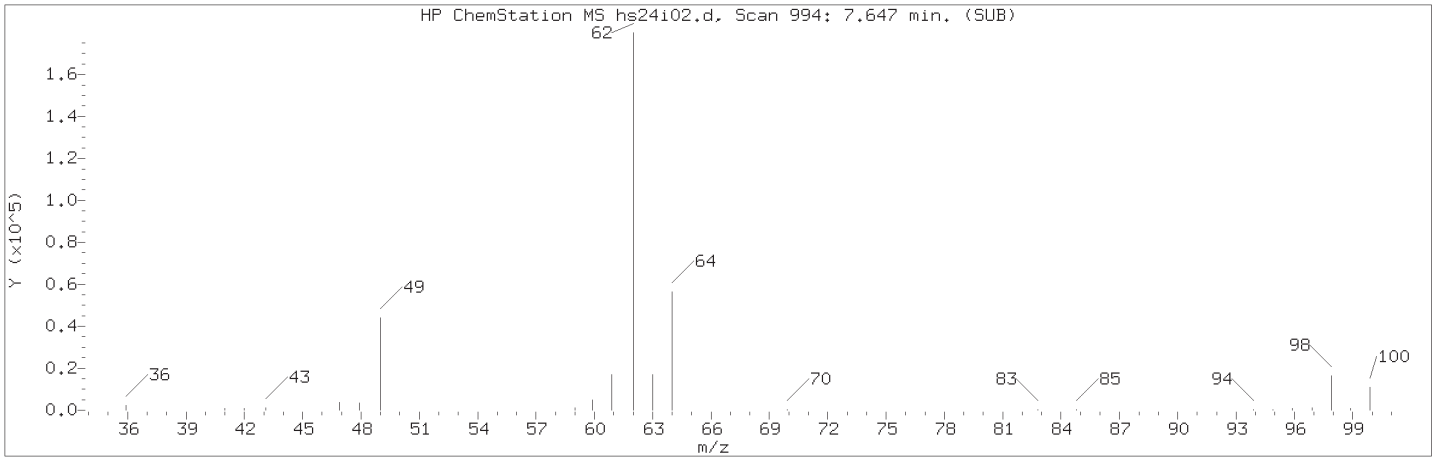
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

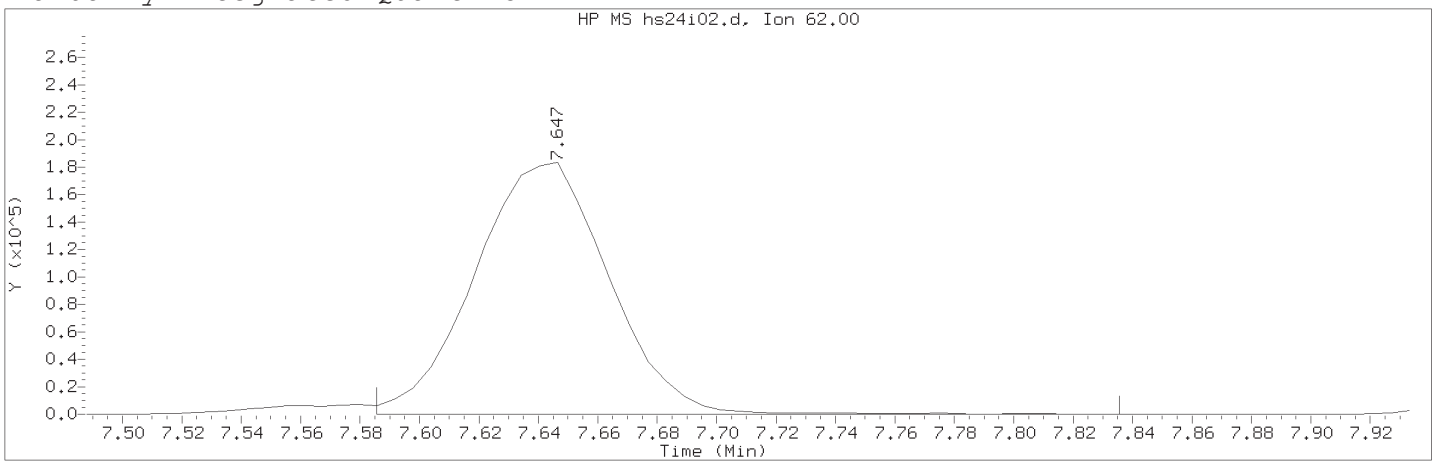
Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 903
Retention Time (minutes): 7.092
Quant Ion : 97.00
Area : 960539
On-column Amount (ng) : 10.0000
Integration start scan : 888 Integration stop scan: 948
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

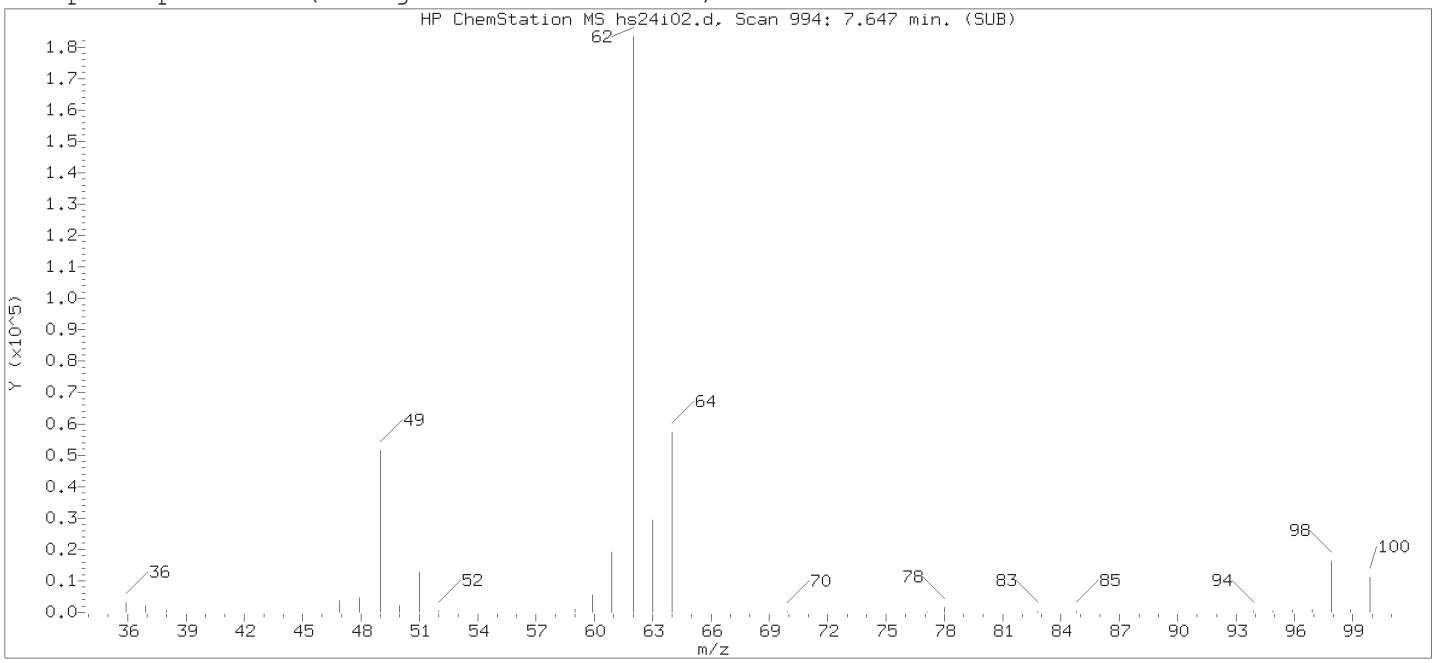
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 994
Retention Time (minutes): 7.647
Quant Ion : 62.00
Area (flag) : 573462M
On-Column Amount (ng) : 9.9220
Integration start scan : 983 Integration stop scan: 1024
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

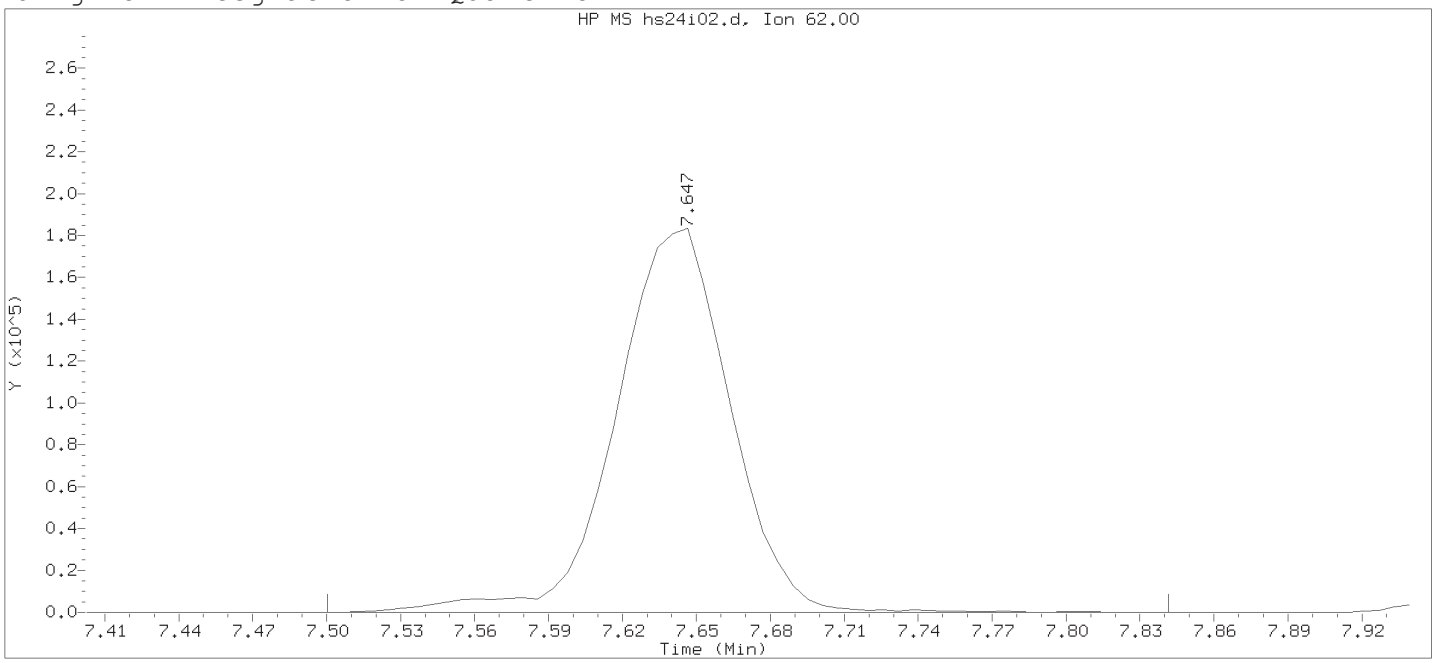
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

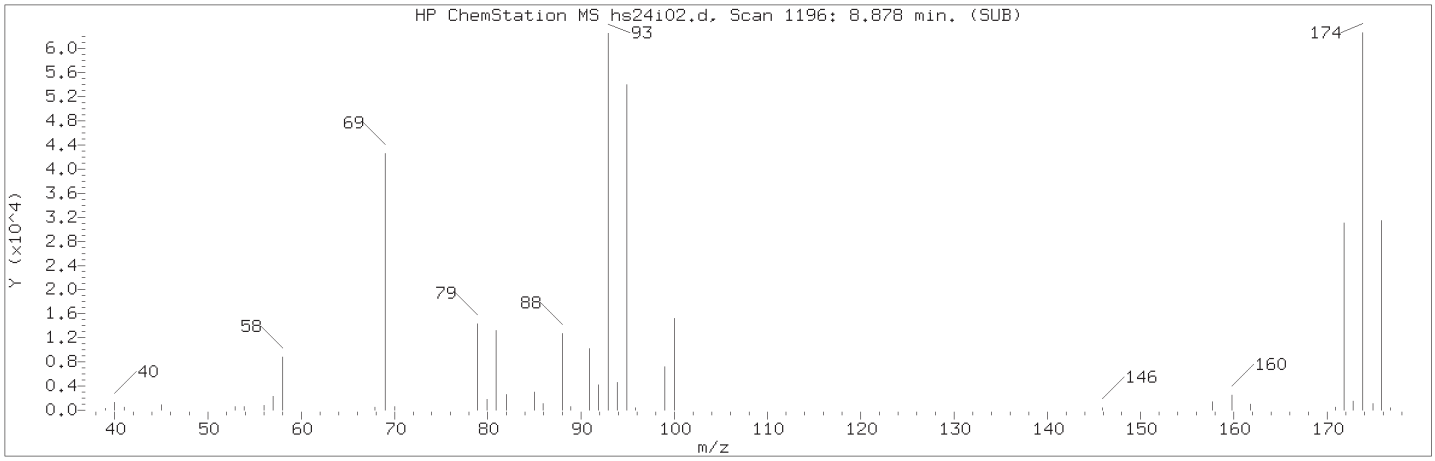
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

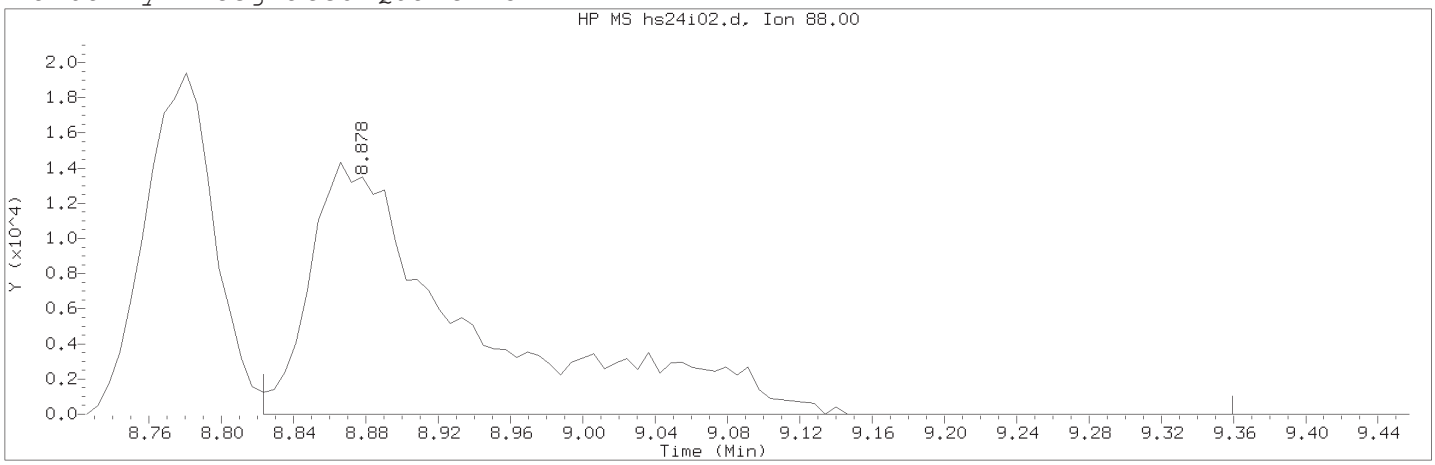
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 994
Retention Time (minutes): 7.647
Quant Ion : 62.00
Area : 590569
On-column Amount (ng) : 10.0000
Integration start scan : 969 Integration stop scan: 1025
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

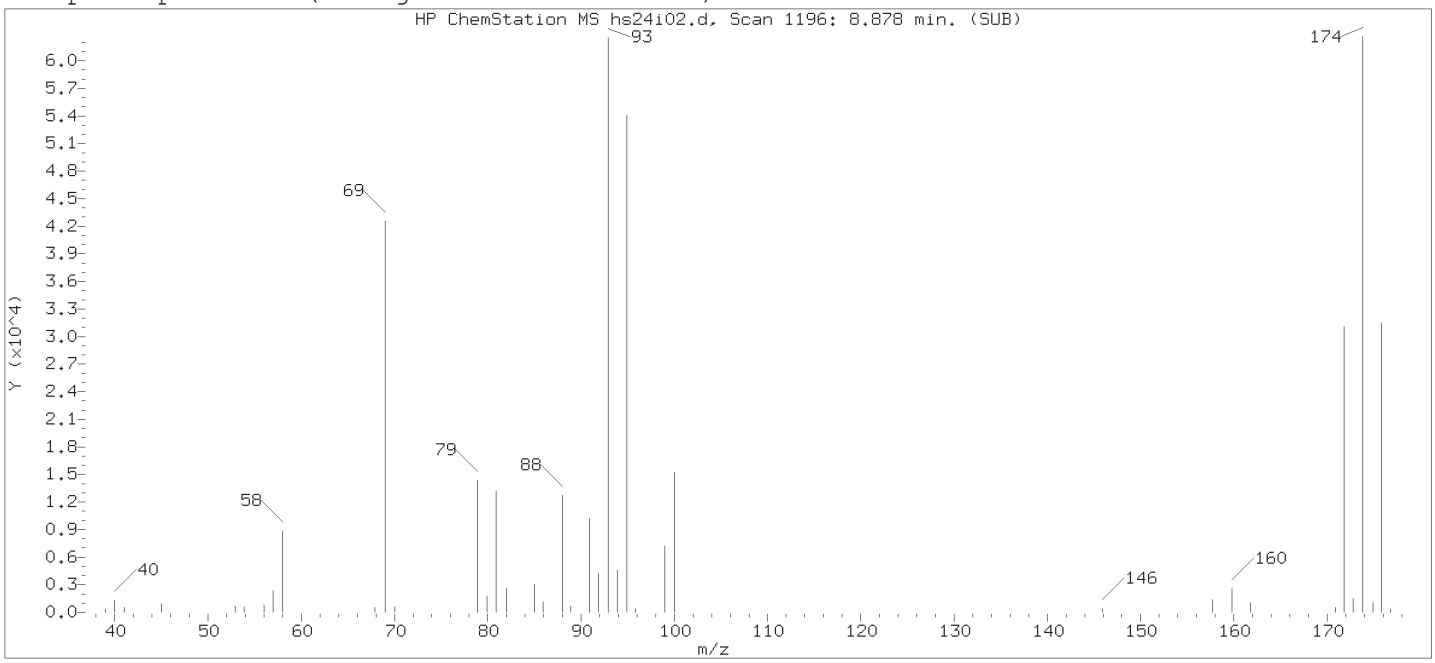
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1196
Retention Time (minutes): 8.878
Quant Ion : 88.00
Area (flag) : 87437M
On-Column Amount (ng) : 514.8766
Integration start scan : 1186 Integration stop scan: 1274
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

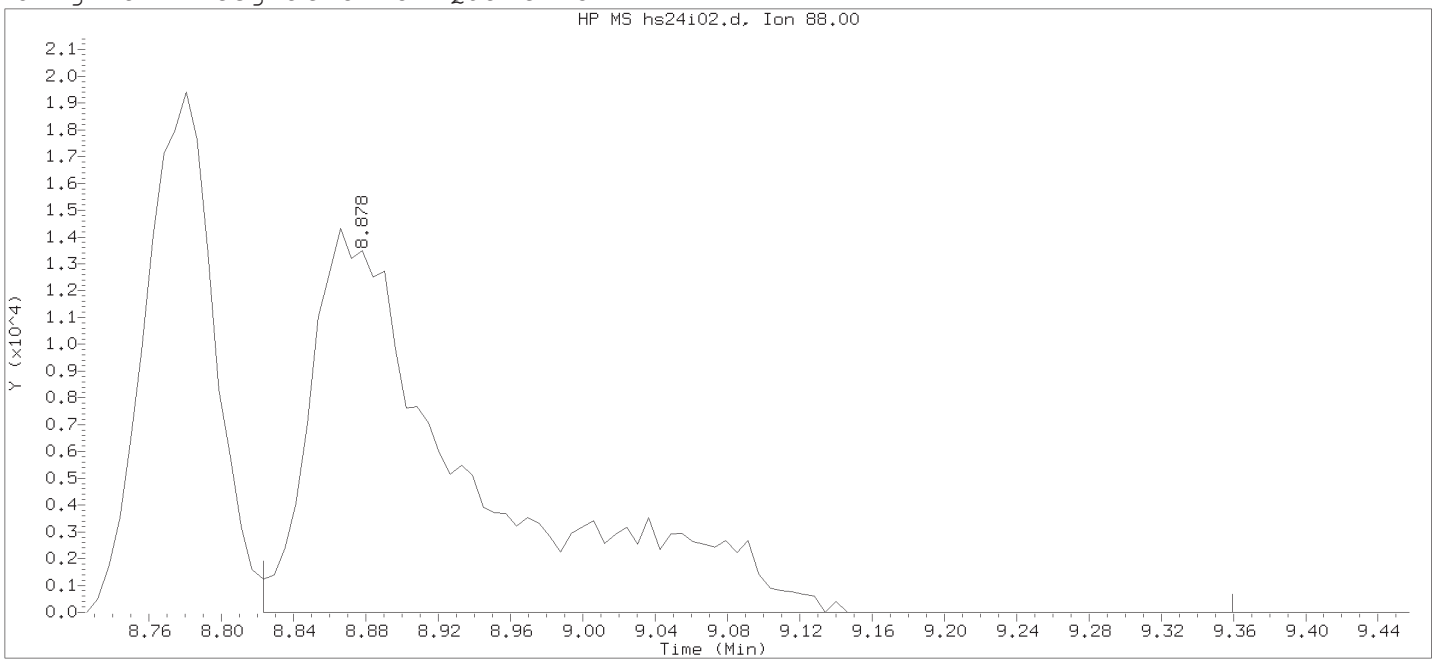
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

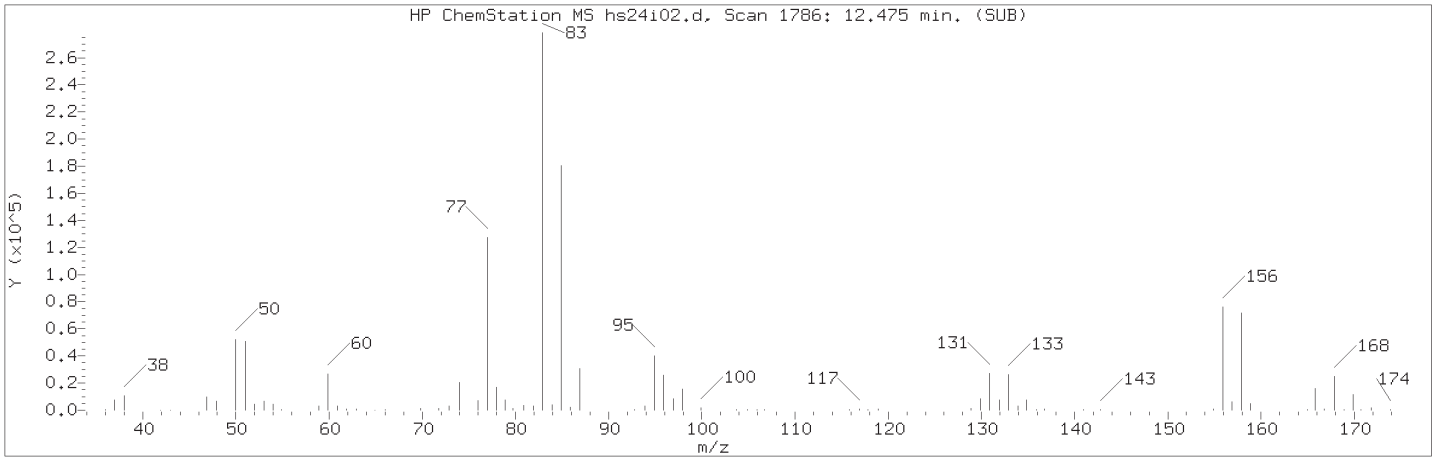
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

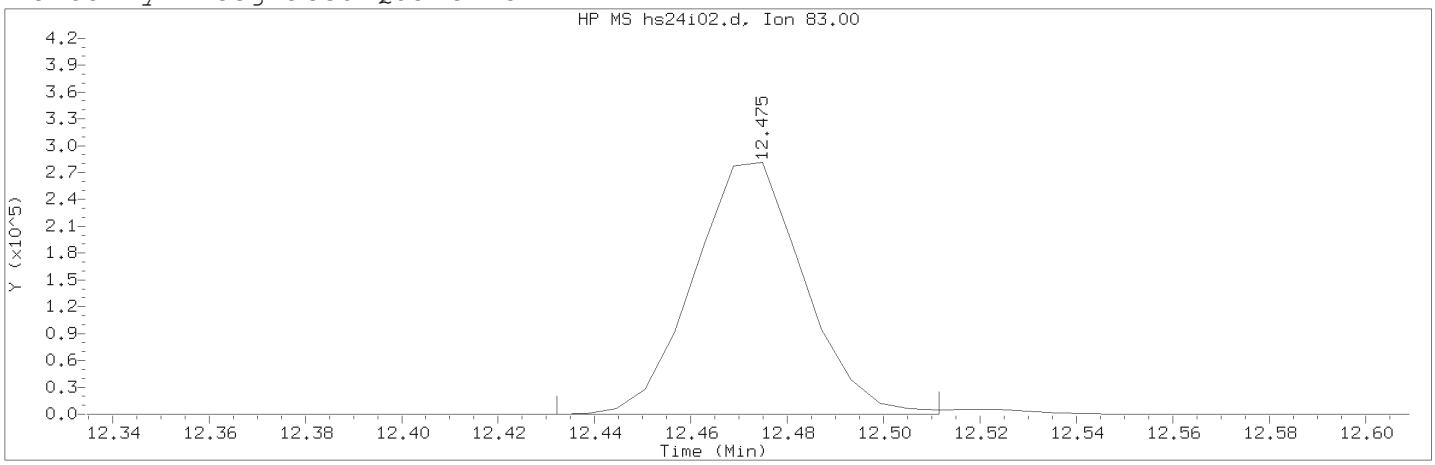
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1196
Retention Time (minutes): 8.878
Quant Ion : 88.00
Area : 87437
On-column Amount (ng) : 500.0000
Integration start scan : 1186 Integration stop scan: 1274
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

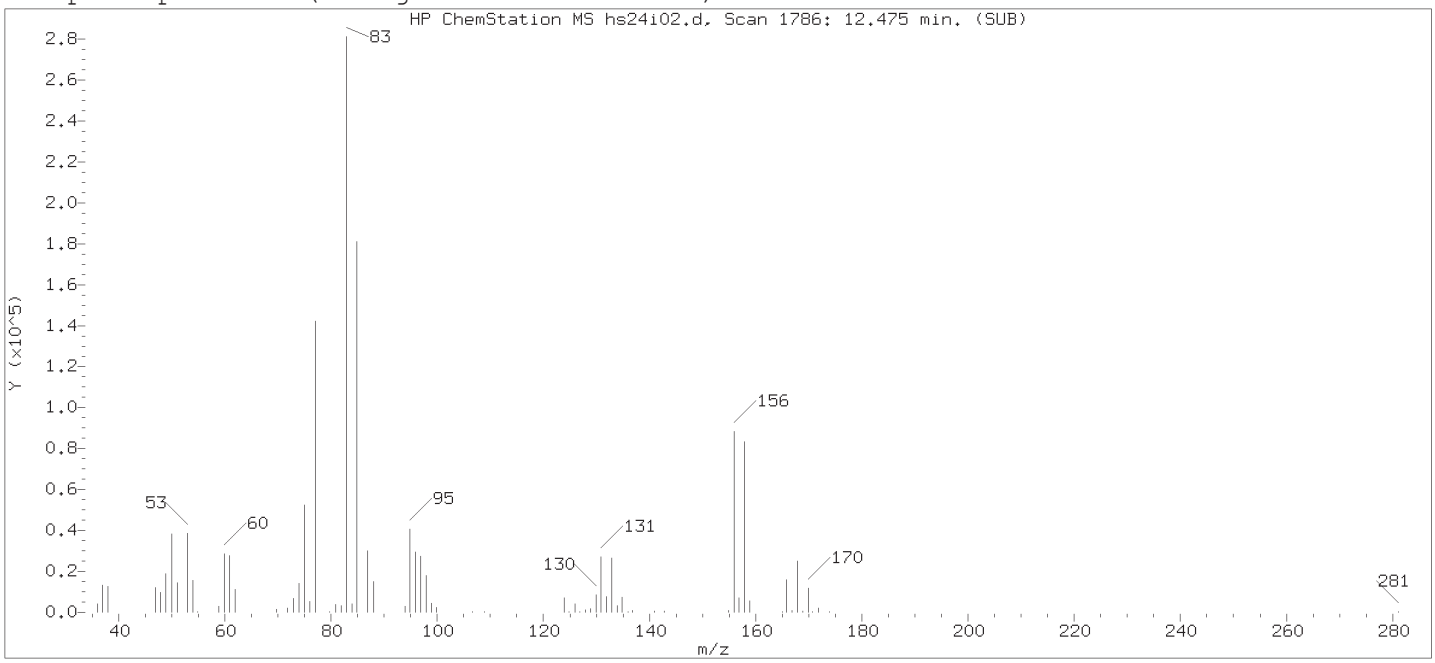
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 446396M
On-Column Amount (ng) : 10.4466
Integration start scan : 1778 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

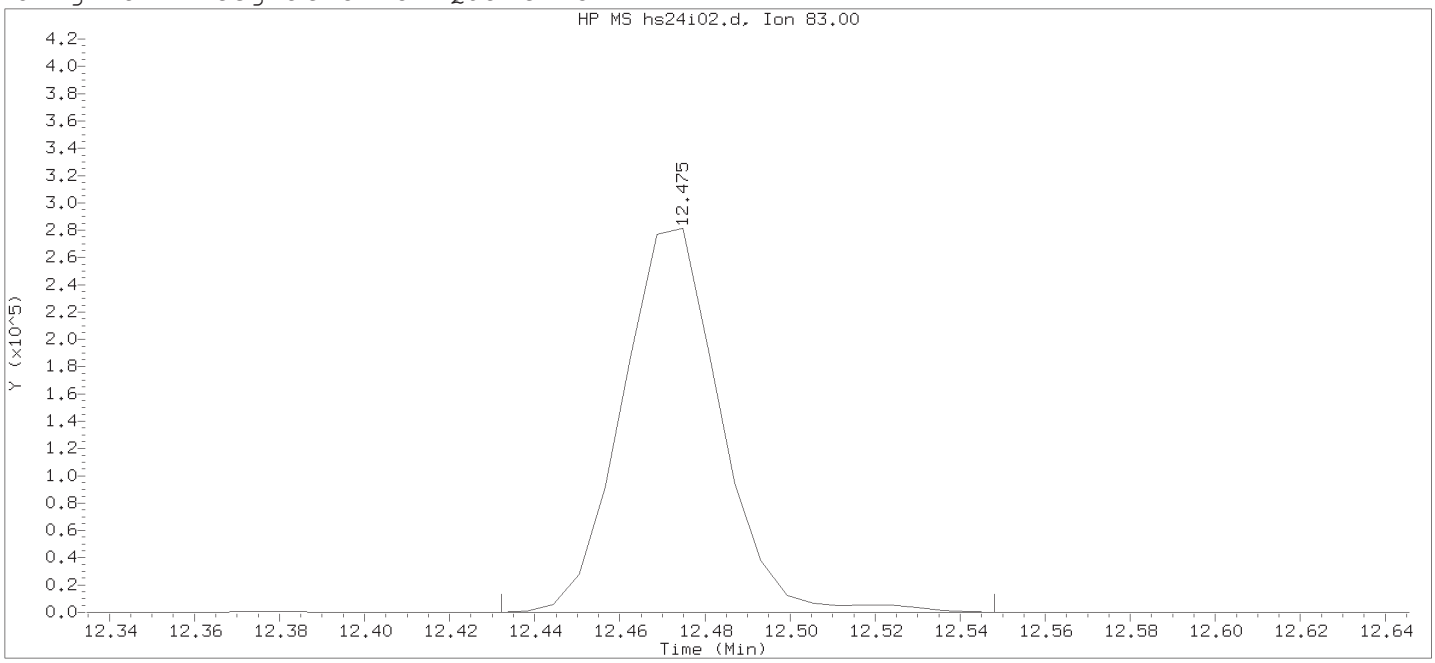
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

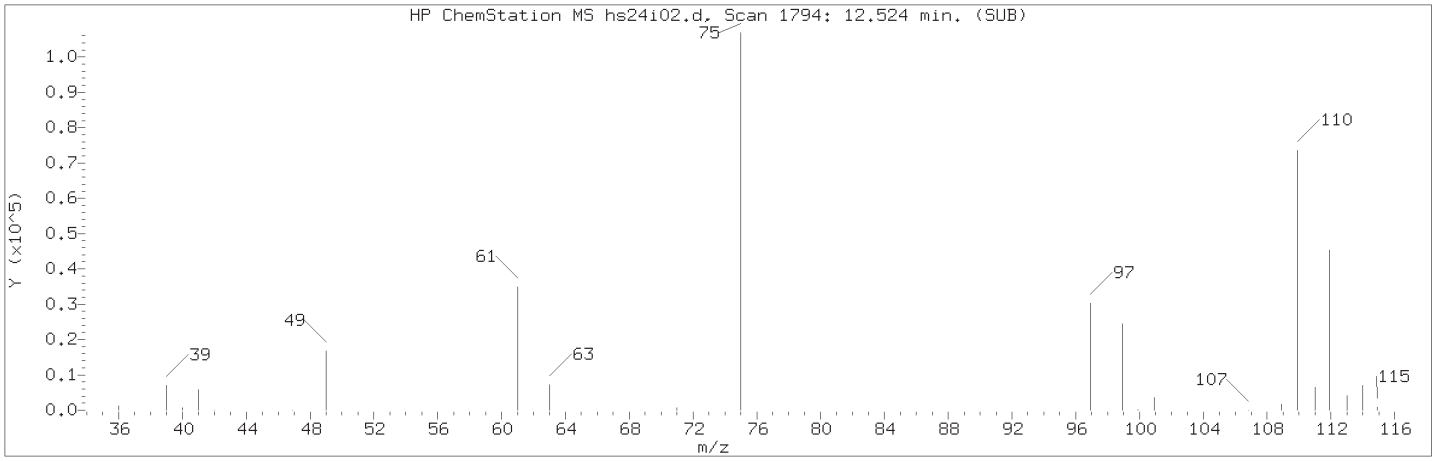
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

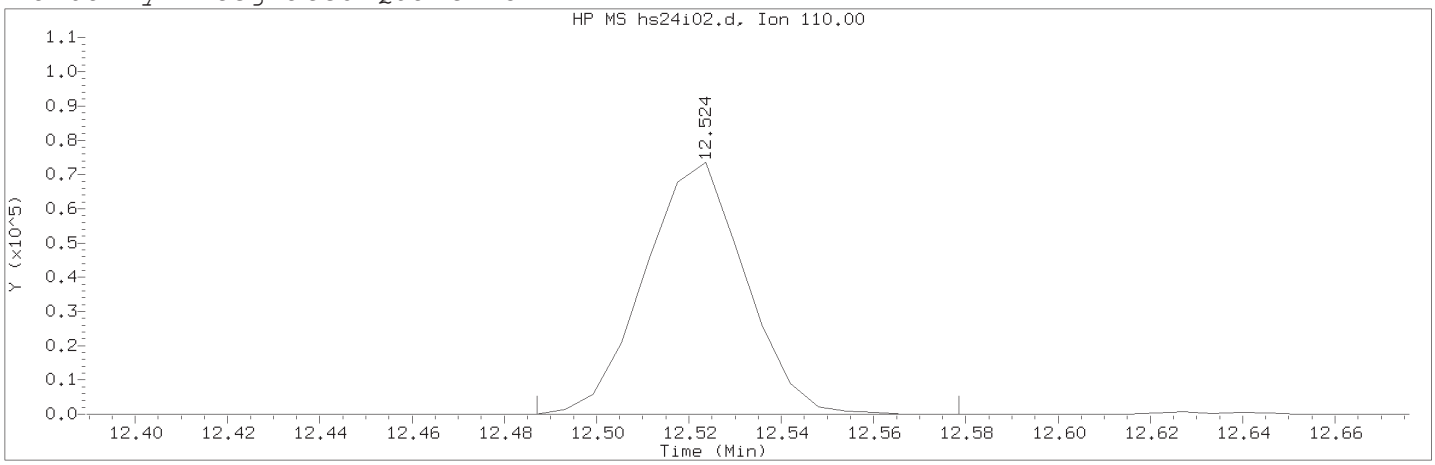
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 452299
On-column Amount (ng) : 10.0000
Integration start scan : 1778 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

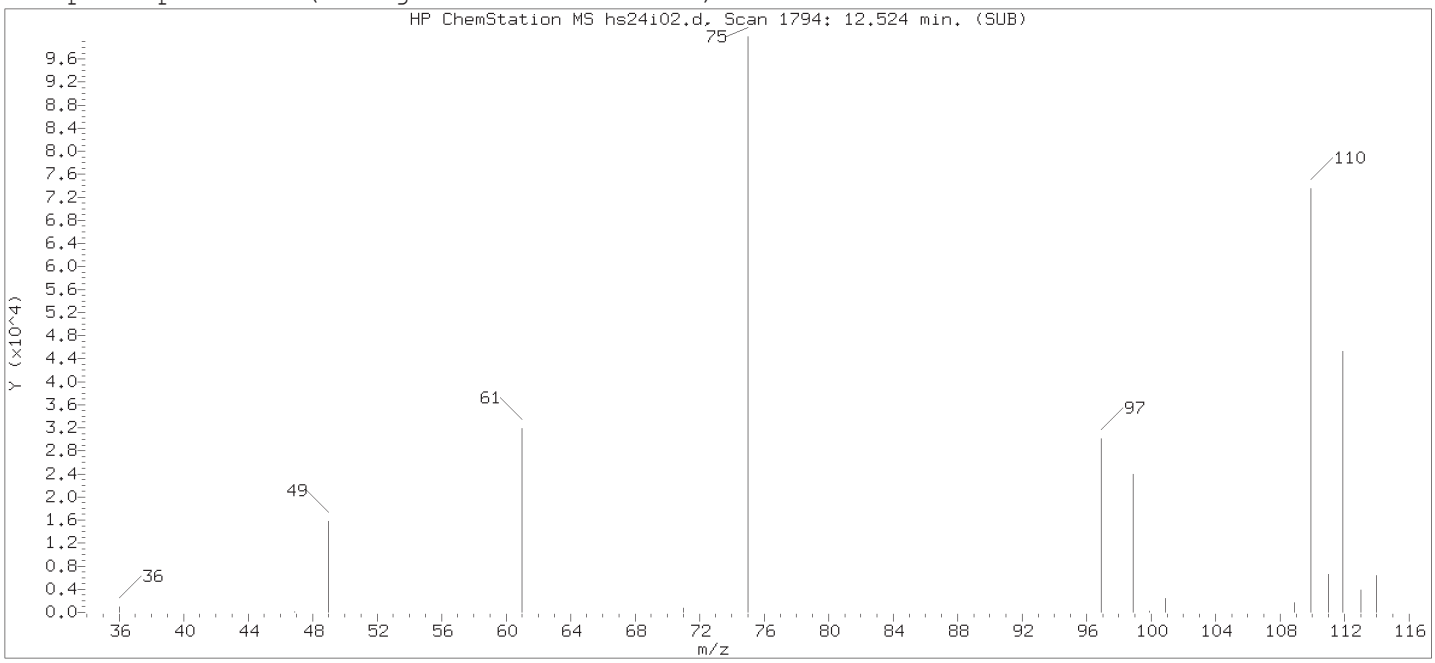
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 111265M
On-Column Amount (ng) : 10.0716
Integration start scan : 1787 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

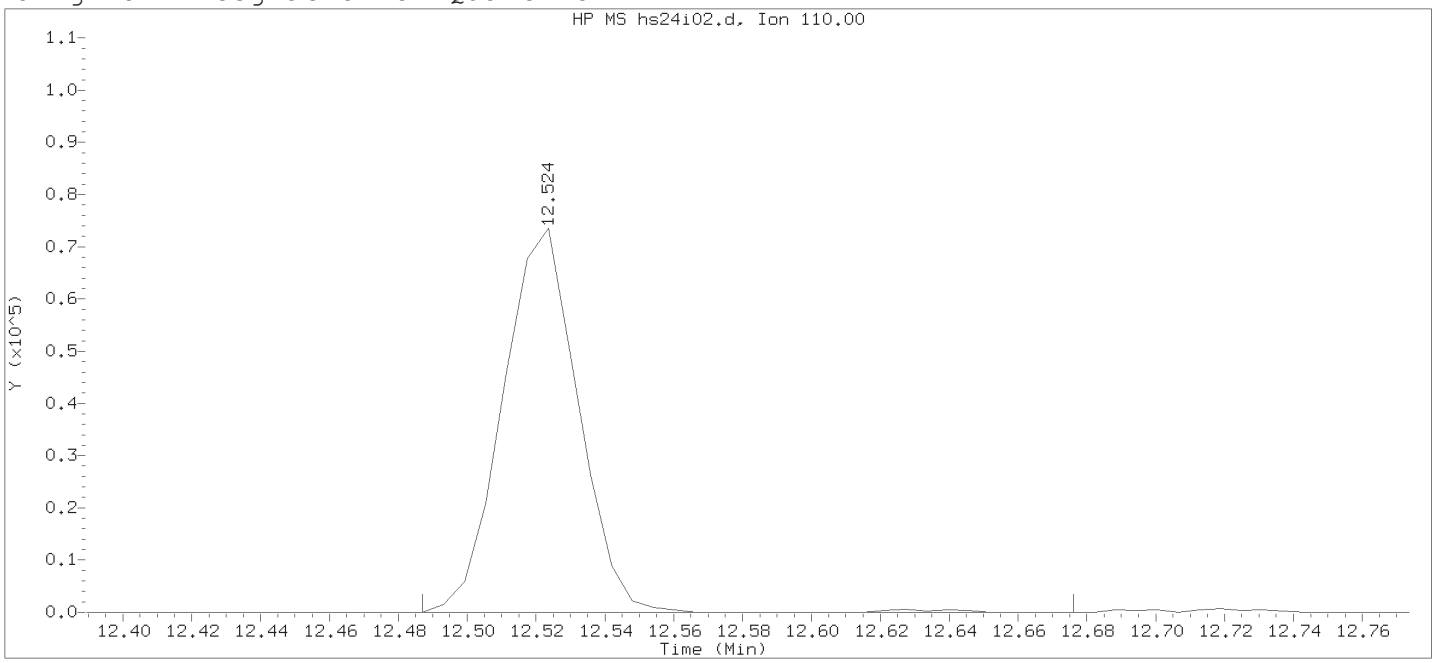
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



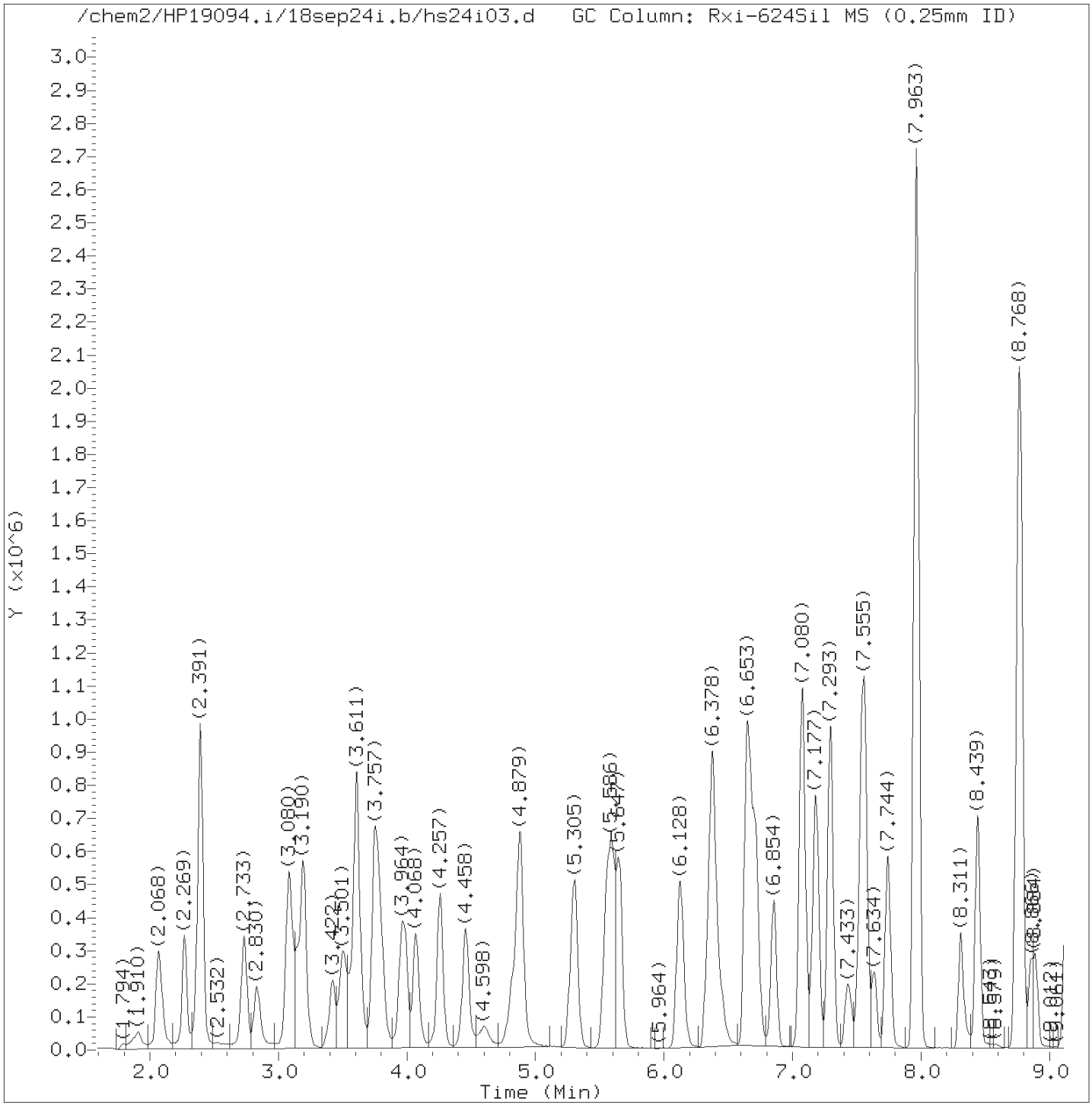
Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area : 112033
On-column Amount (ng) : 10.0000
Integration start scan : 1787 Integration stop scan: 1818
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

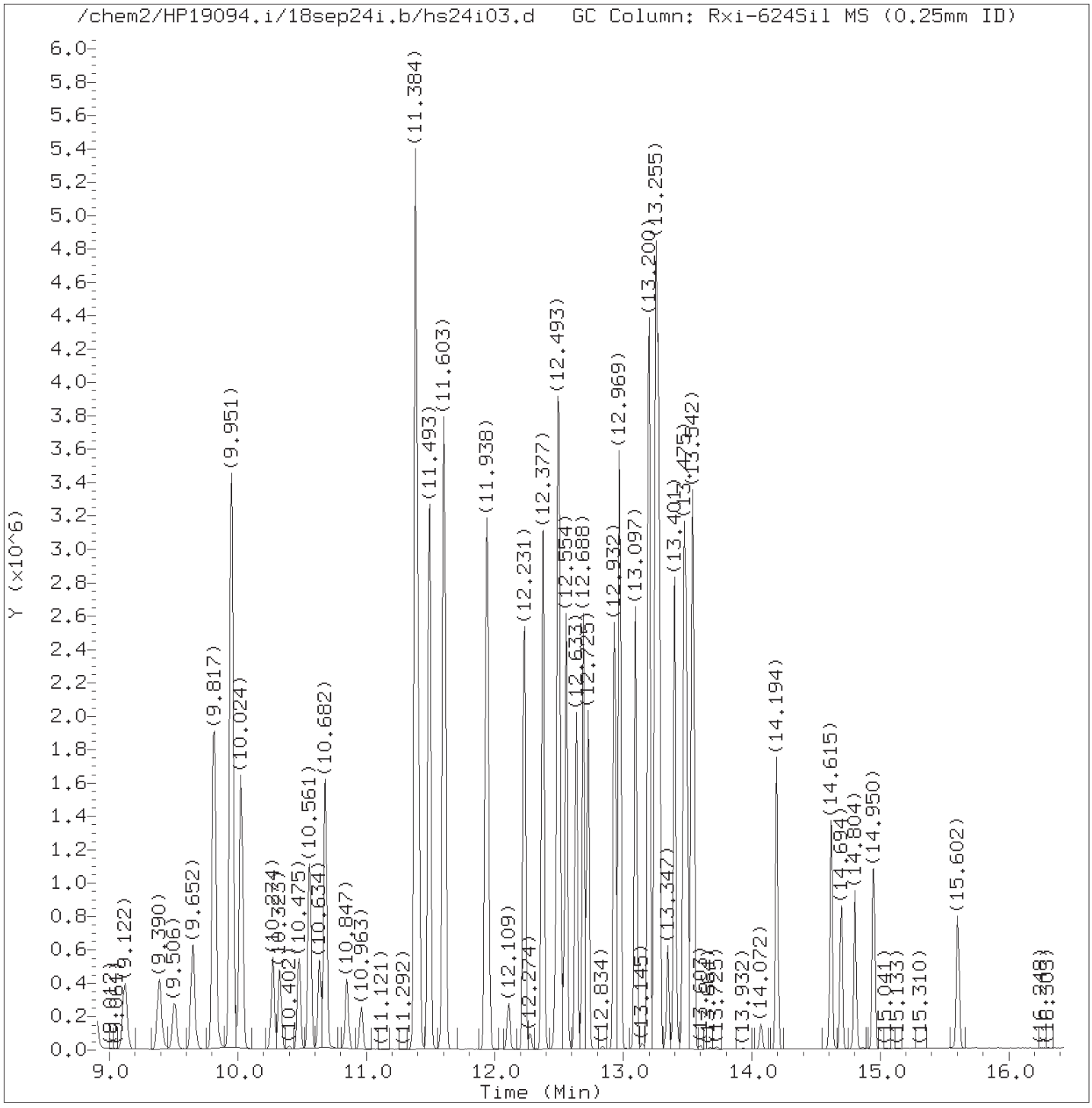
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.068	85	562282	5.241
2) Chloromethane	(2)	2.269	50	535240	5.095
5) Vinyl Chloride	(2)	2.391	62	501670	5.099
6) 1,3-Butadiene	(2)	2.391	39	552344M	4.956
7) Bromomethane	(2)	2.733	94	384528	5.027
8) Chloroethane	(2)	2.830	64	298270	4.998
9) Dichlorofluoromethane	(2)	3.080	67	732855	5.163
10) Trichlorofluoromethane	(2)	3.141	101	647481	5.209
11) Ethyl ether	(2)	3.422	59	212003	5.030
12) Freon 123a	(2)	3.507	67	413759	5.254
13) Acrolein	(1)	3.611	56	1489451	263.916
15) 1,1-Dichloroethene	(2)	3.745	96	285012	5.295
16) Freon 113	(2)	3.775	101	339708	5.355
14) Acetone	(1)	3.787	43	378399M	49.919
17) Methyl Iodide	(2)	3.958	142	580104	5.171
18) Carbon Disulfide	(2)	4.068	76	875498	5.112
21) Methyl Acetate	(1)	4.239	43	107057	5.031
22) Allyl Chloride	(2)	4.257	41	525571	5.137
23) Methylene Chloride	(2)	4.452	84	294254	4.846
26)*t-Butyl Alcohol-d10	(1)	4.482	65	127180M	50.000
28) t-Butyl Alcohol	(1)	4.598	59	218266	100.544
29) Acrylonitrile	(1)	4.812	53	260426	26.603
30) Methyl Tertiary Butyl Ether	(2)	4.860	73	578958	5.230
31) trans-1,2-Dichloroethene	(2)	4.885	96	312820	5.150
32) n-Hexane	(2)	5.305	57	526068	5.446
33) 1,1-Dichloroethane	(2)	5.543	63	603578	5.219
34) di-Isopropyl Ether	(2)	5.592	45	1044288	5.084
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	558039	5.362
40) 1,2-Dichloroethene (Total)	(2)		96	662378	10.358
37) Ethyl t-butyl ether	(2)	6.128	59	843514	5.178
38) 2-Butanone	(1)	6.342	43	671705	54.133
39) cis-1,2-Dichloroethene	(2)	6.372	96	349558	5.208
41) 2,2-Dichloropropane	(2)	6.391	77	439160	5.316
42) Propionitrile	(1)	6.445	54	368280	109.345
45) Methacrylonitrile	(1)	6.653	67	661065	54.434
47) Bromochloromethane	(2)	6.708	128	145716	5.139
48) Tetrahydrofuran	(1)	6.714	71	177366	53.767
49) Chloroform	(2)	6.854	83	551731	5.131

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	693943	10.030
50)$Dibromofluoromethane	(2)	7.067	111	707652	9.937
51) 1,1,1-Trichloroethane	(2)	7.086	97	487870	5.304
52) Cyclohexane	(2)	7.183	56	645692	5.378
52) Cyclohexane	(2)	7.183	84	534268	5.397
52) Cyclohexane	(2)	7.177	69	190372	5.380
54) Carbon Tetrachloride	(2)	7.293	117	416126	5.268
55) 1,1-Dichloropropene	(2)	7.299	75	459178	5.265
56) Isobutyl Alcohol	(1)	7.427	41	212923	253.500
57)$1,2-Dichloroethane-d4	(2)	7.537	102	119553M	9.912
57)$1,2-Dichloroethane-d4	(2)	7.531	65	572526	9.814
57)$1,2-Dichloroethane-d4	(2)	7.531	104	76935	9.960
58) Benzene	(2)	7.561	78	1327137	5.151
59) 1,2-Dichloroethane	(2)	7.634	62	288210	4.861
60) t-Amyl methyl ether	(2)	7.744	73	696807	5.159
62) n-Heptane	(2)	7.963	43	544674	5.469
63)*Fluorobenzene	(2)	7.963	96	2745022	10.000
65) n-Butanol	(1)	8.305	56	371428M	523.420
67) Trichloroethene	(2)	8.445	95	342245	5.188
69) Methylcyclohexane	(2)	8.750	83	652245	5.235
70) 1,2-Dichloropropane	(2)	8.780	63	324215	5.186
71) Methyl Methacrylate	(1)	8.854	69	124559	5.541
72) 1,4-Dioxane	(1)	8.872	88	45616M	266.986
73) Dibromomethane	(2)	8.890	93	132300	5.099
74) Bromodichloromethane	(2)	9.122	83	364823	5.191
76) 2-Nitropropane	(1)	9.390	41	351207	55.156
80) cis-1,3-Dichloropropene	(2)	9.646	75	430070	5.256
81) 4-Methyl-2-Pentanone	(1)	9.817	43	1690753	54.779
82)$Toluene-d8	(3)	9.951	98	2759111	10.005
82)$Toluene-d8	(3)	9.951	100	1778973	9.995
83) Toluene	(3)	10.024	92	810475	5.097
85) 1,3-Dichloropropene (total)	(3)		75	750377	10.484
84) trans-1,3-Dichloropropene	(3)	10.274	75	320307	5.228
86) Ethyl Methacrylate	(3)	10.323	69	271825	5.179
88) 1,1,2-Trichloroethane	(3)	10.475	97	183350	5.011
89) Tetrachloroethene	(3)	10.561	166	370654	5.159
90) 1,3-Dichloropropane	(3)	10.640	76	332490	5.127
91) 2-Hexanone	(1)	10.682	43	1145783	54.536

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	226639	5.168
95) 1,2-Dibromoethane	(3)	10.963	107	175991	5.132
96) 1-Chlorohexane	(3)	11.384	91	479490	5.056
97)*Chlorobenzene-d5	(3)	11.384	117	2142668	10.000
98) Chlorobenzene	(3)	11.408	112	858660	5.090
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	291506	5.236
100) Ethylbenzene	(3)	11.493	91	1605334	5.166
101) m+p-Xylene	(3)	11.603	106	1200436	10.414
105) Xylene (Total)	(3)		106	1775566	15.633
104) o-Xylene	(3)	11.932	106	575130	5.219
106) Styrene	(3)	11.944	104	938150	5.321
107) Bromoform	(3)	12.109	173	125482	5.207
108) Isopropylbenzene	(3)	12.231	105	1586197	5.273
111)$4-Bromofluorobenzene	(3)	12.371	95	995484	9.915
111)$4-Bromofluorobenzene	(3)	12.377	174	860774	9.873
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	224515M	5.196
114) Bromobenzene	(4)	12.493	156	342709	5.218
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	534181	55.258
116) 1,2,3-Trichloropropane	(4)	12.524	110	56735M	5.079
117) n-Propylbenzene	(4)	12.554	91	1883753	5.275
119) 2-Chlorotoluene	(4)	12.633	126	361184	5.214
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	1294691	5.351
122) 4-Chlorotoluene	(4)	12.725	126	365201	5.261
125) tert-Butylbenzene	(4)	12.932	134	275287	5.232
126) Pentachloroethane	(4)	12.969	167	220484	5.369
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	1314436	5.324
128) sec-Butylbenzene	(4)	13.097	105	1675573	5.345
131) 1,3-Dichlorobenzene	(4)	13.194	146	679711	5.208
132) p-Isopropyltoluene	(4)	13.200	119	1399618	5.390
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1089195	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	661942	5.167
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	569393	5.027
136) Benzyl Chloride	(4)	13.347	126	81818	5.238
138) n-Butylbenzene	(4)	13.493	92	687040	5.330
139) 1,2-Dichlorobenzene	(4)	13.529	146	594602	5.164
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	29297	5.600
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	502164	5.172
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	407904	5.158

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

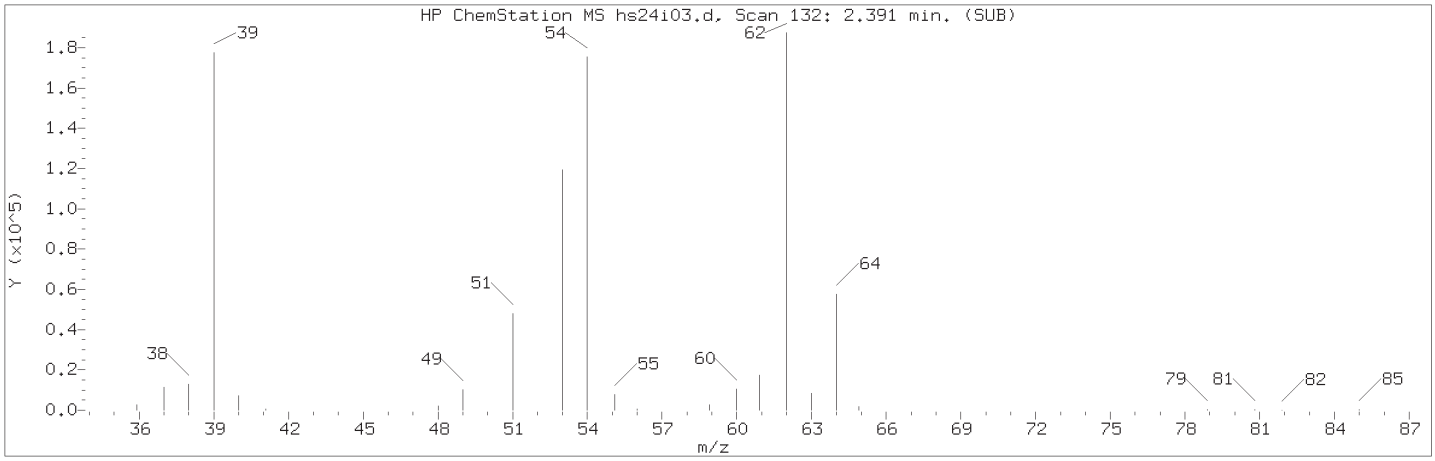
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

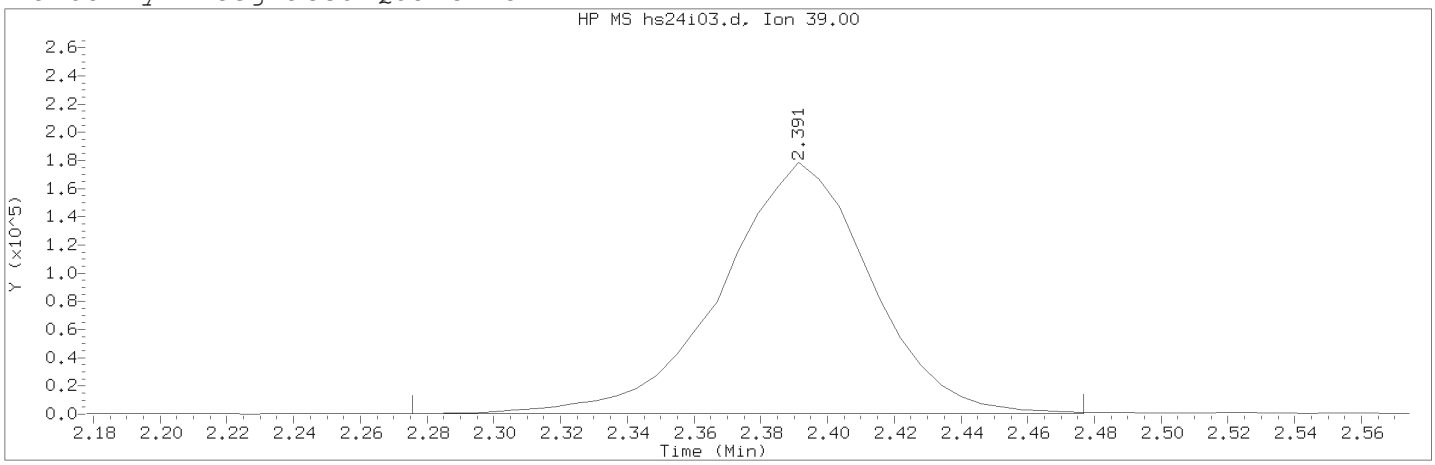
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	154730	5.177
147) Naphthalene	(4)	14.804	128	665320	5.317
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	336232	5.171

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

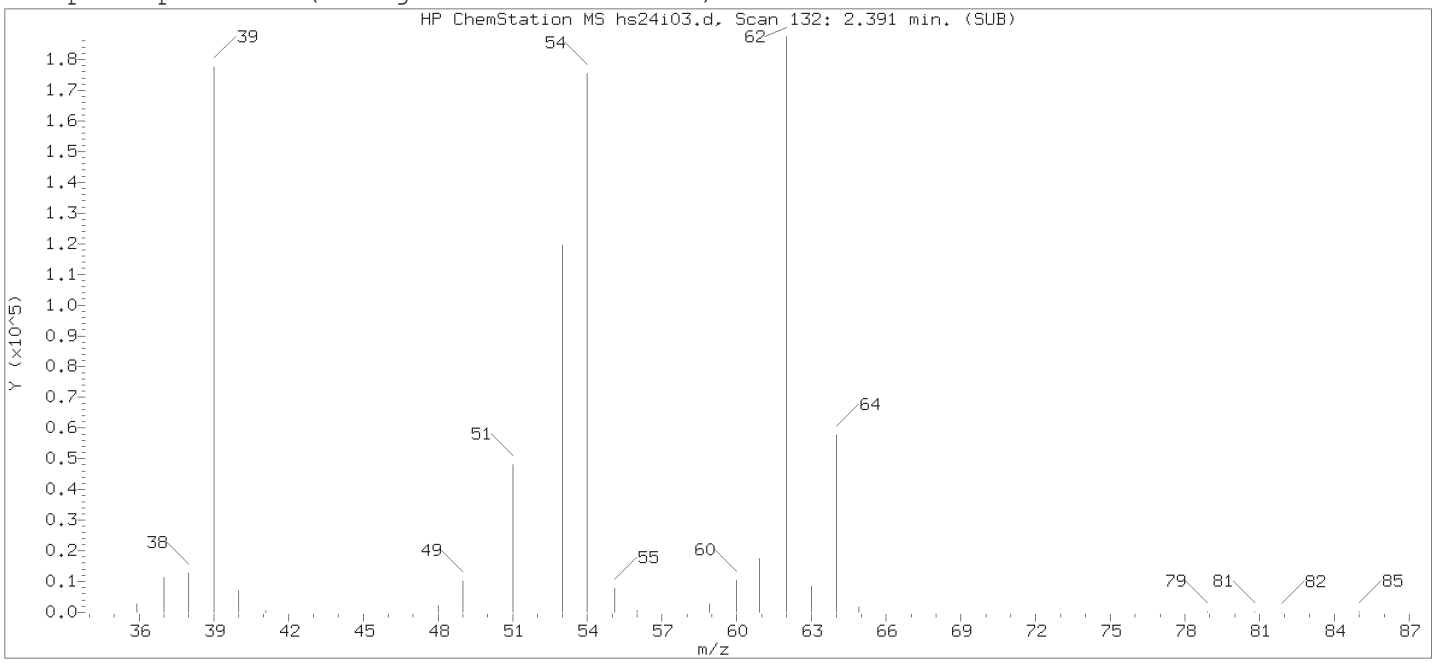
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area (flag) : 552344M
On-Column Amount (ng) : 4.9561
Integration start scan : 112 Integration stop scan: 145
Y at integration start : 458 Y at integration end: 458

Reason for manual integration: improper integration

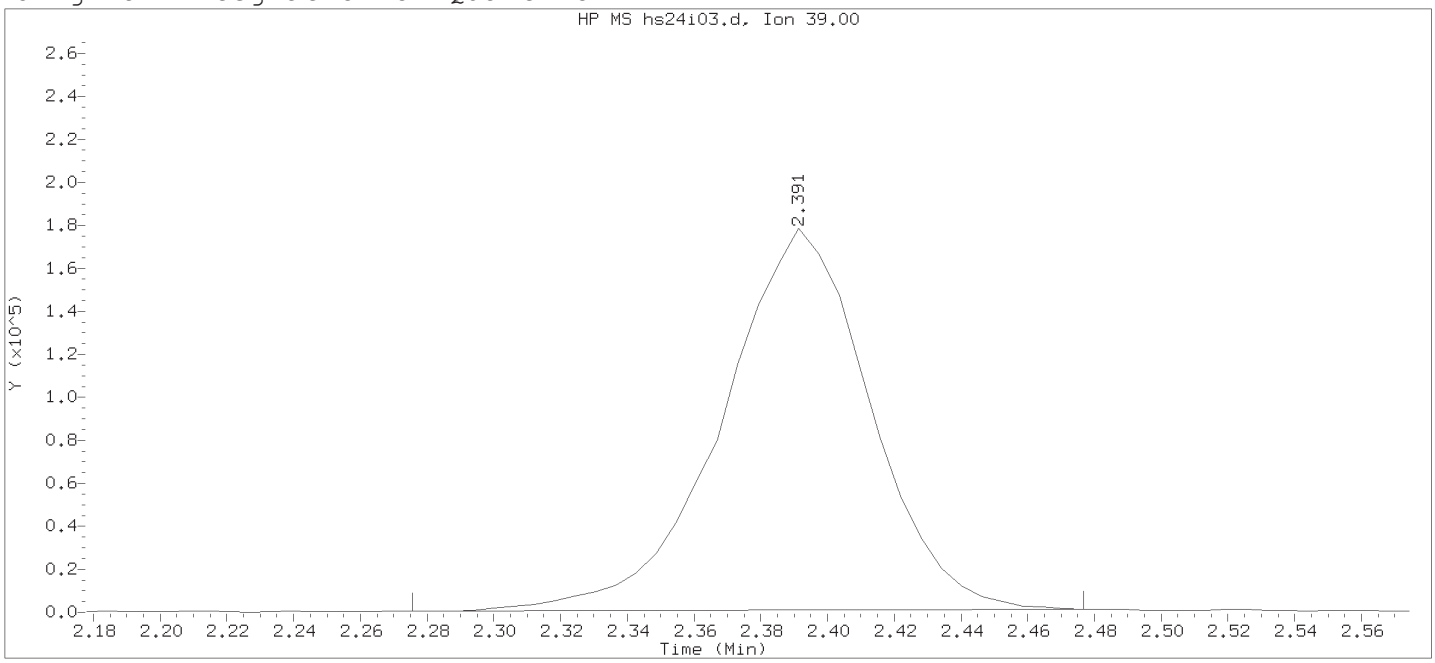
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

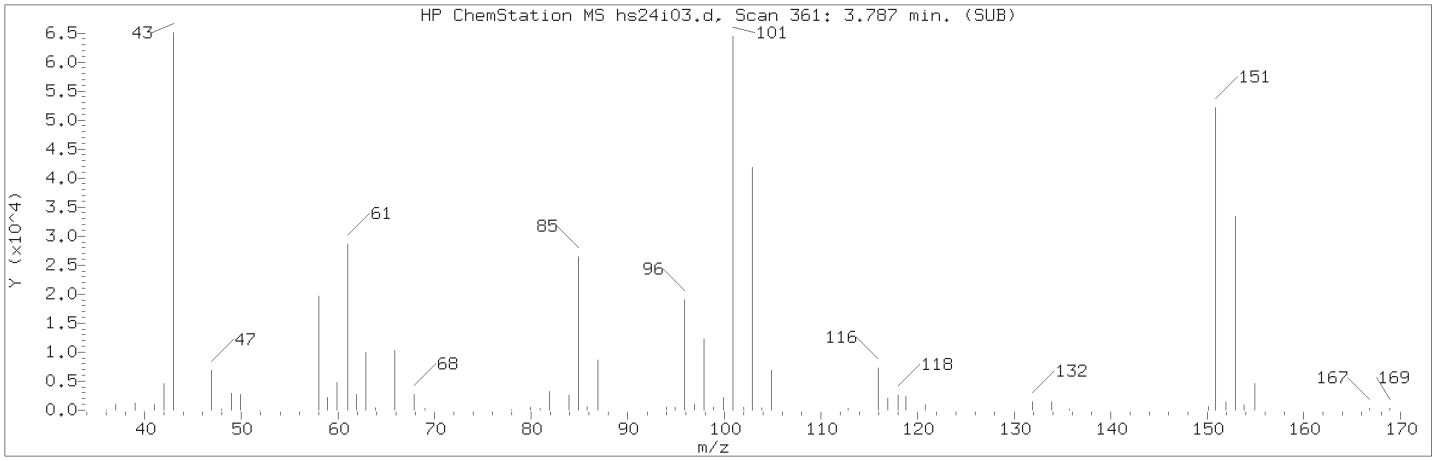
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

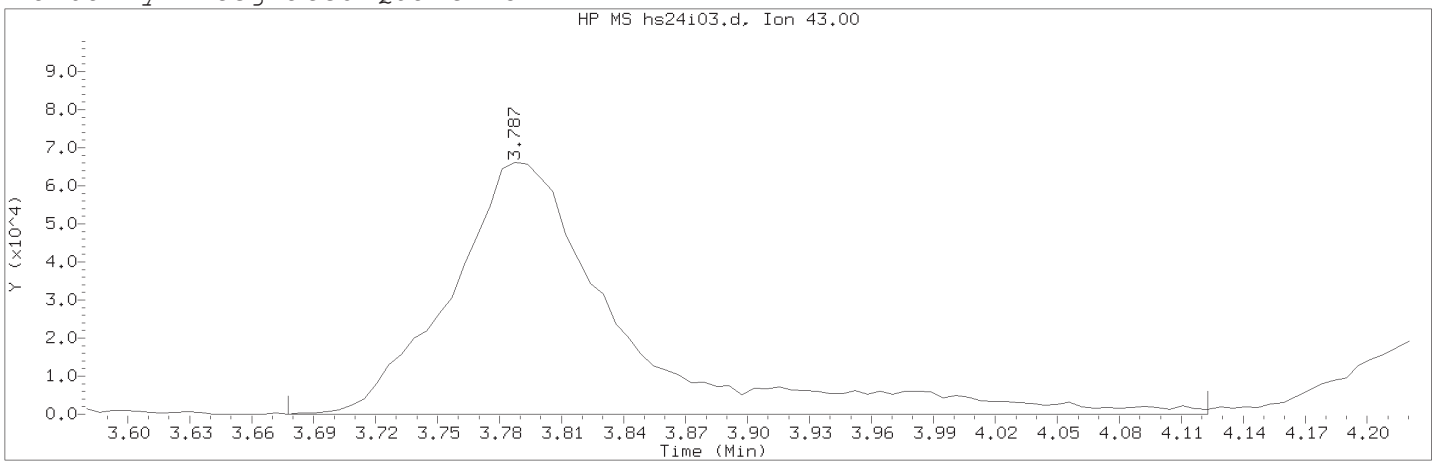
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area : 547218
On-column Amount (ng) : 4.9849
Integration start scan : 112 Integration stop scan: 145
Y at integration start : 437 Y at integration end: 1303

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

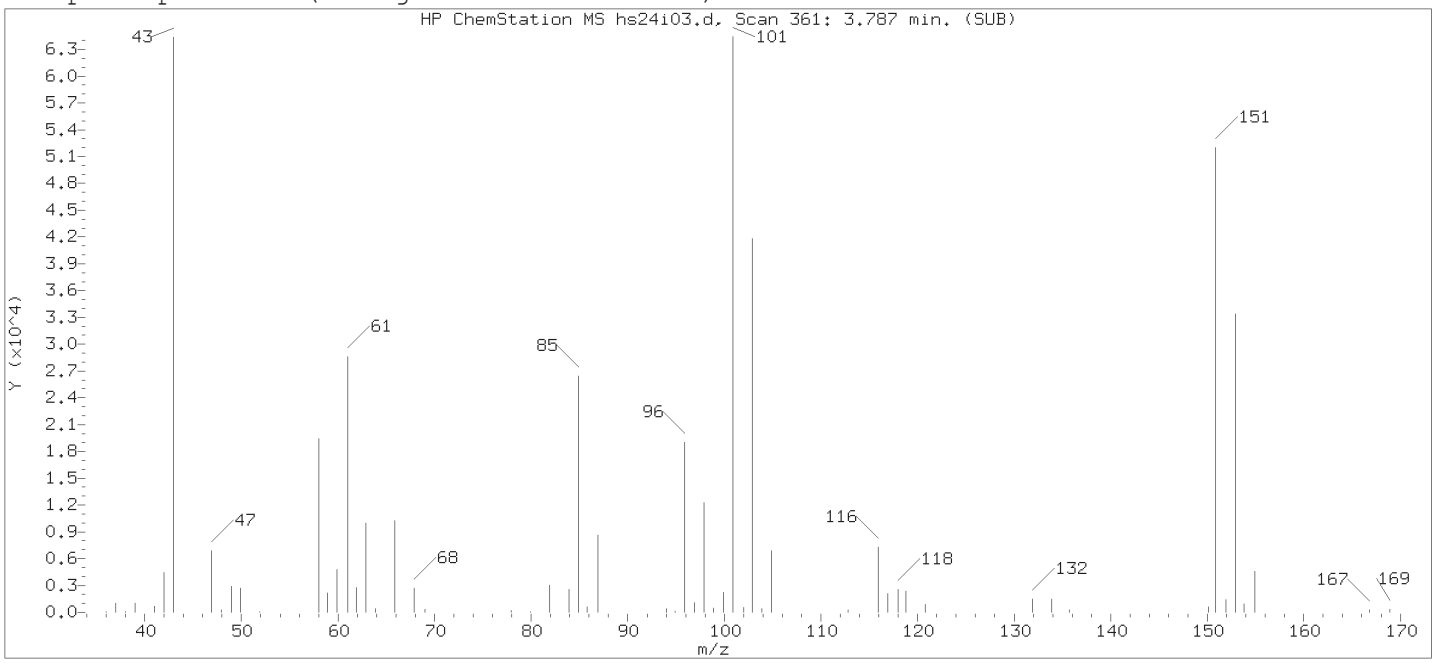
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area (flag) : 378399M
On-Column Amount (ng) : 49.9188
Integration start scan : 342 Integration stop scan: 415
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

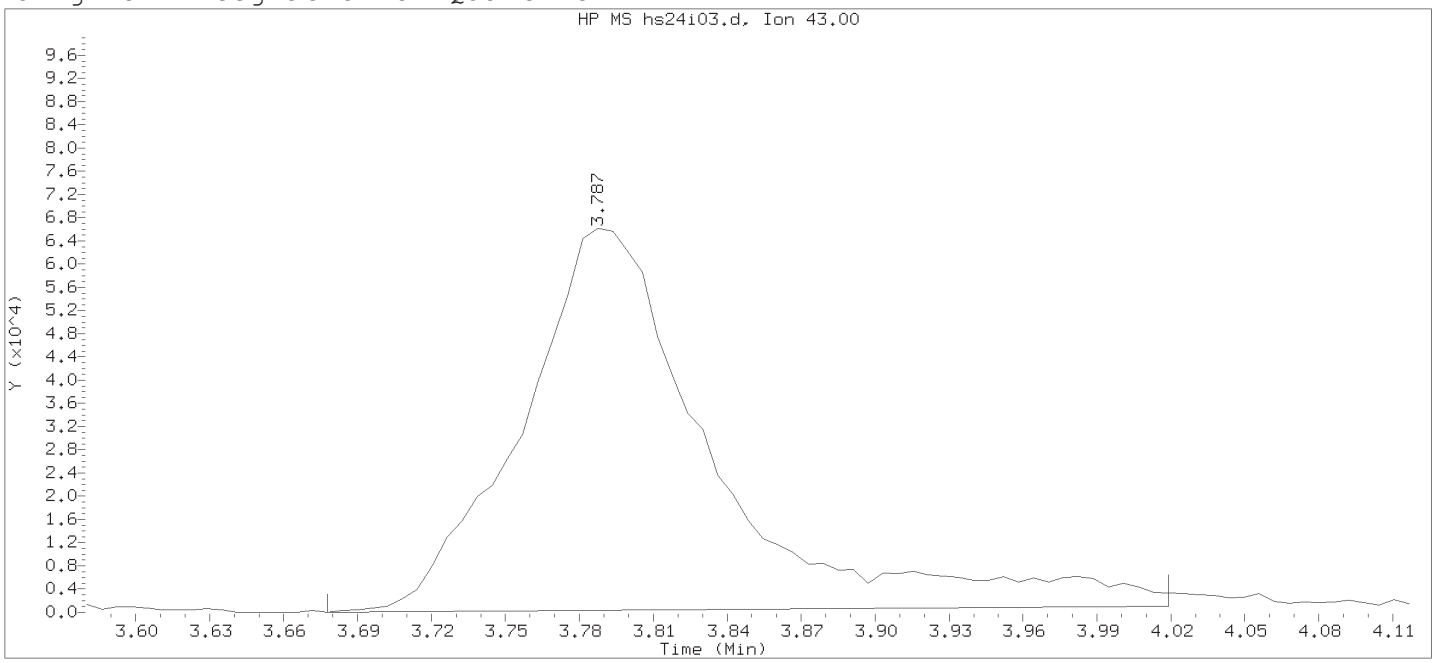
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

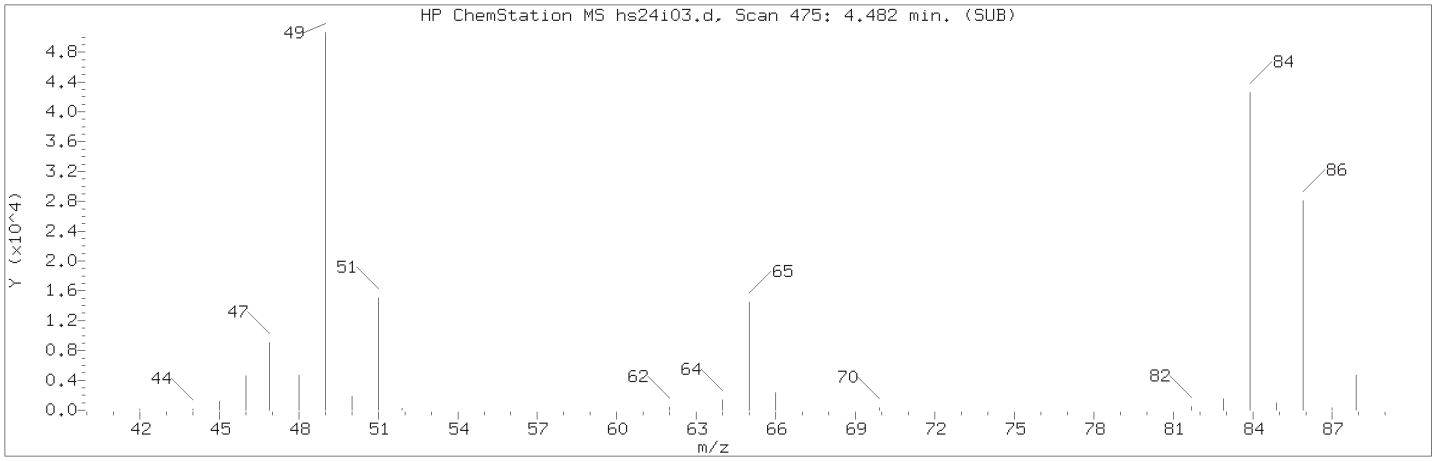
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

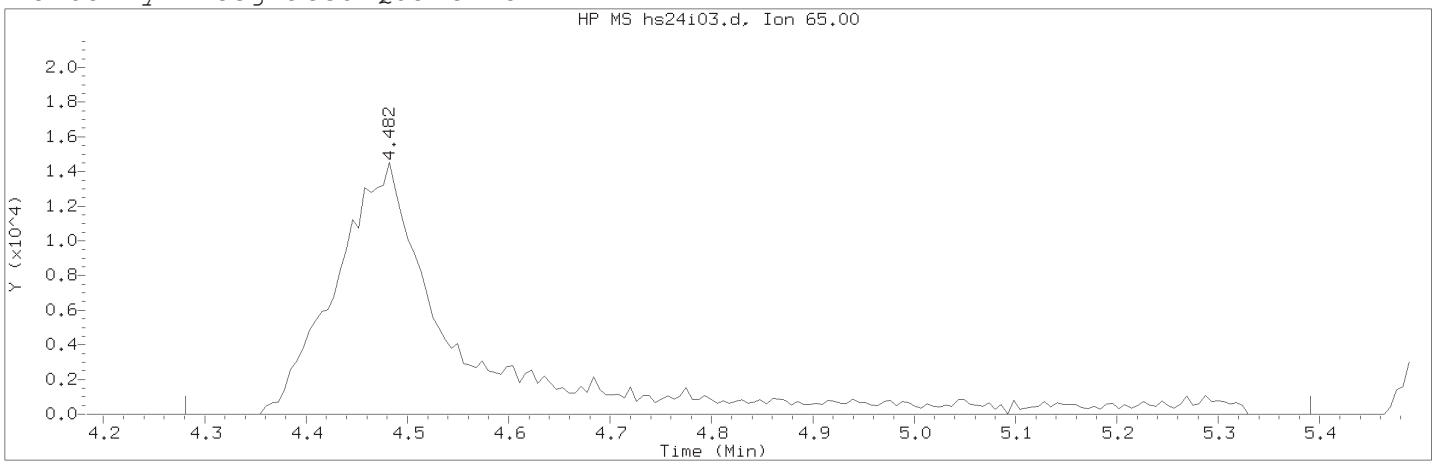
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 361		
Retention Time (minutes)	: 3.787		
Quant Ion	: 43.00		
Area	: 353758		
On-column Amount (ng)	: 50.2605		
Integration start scan	: 342	Integration stop scan:	398
Y at integration start	: 0	Y at integration end:	1061

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

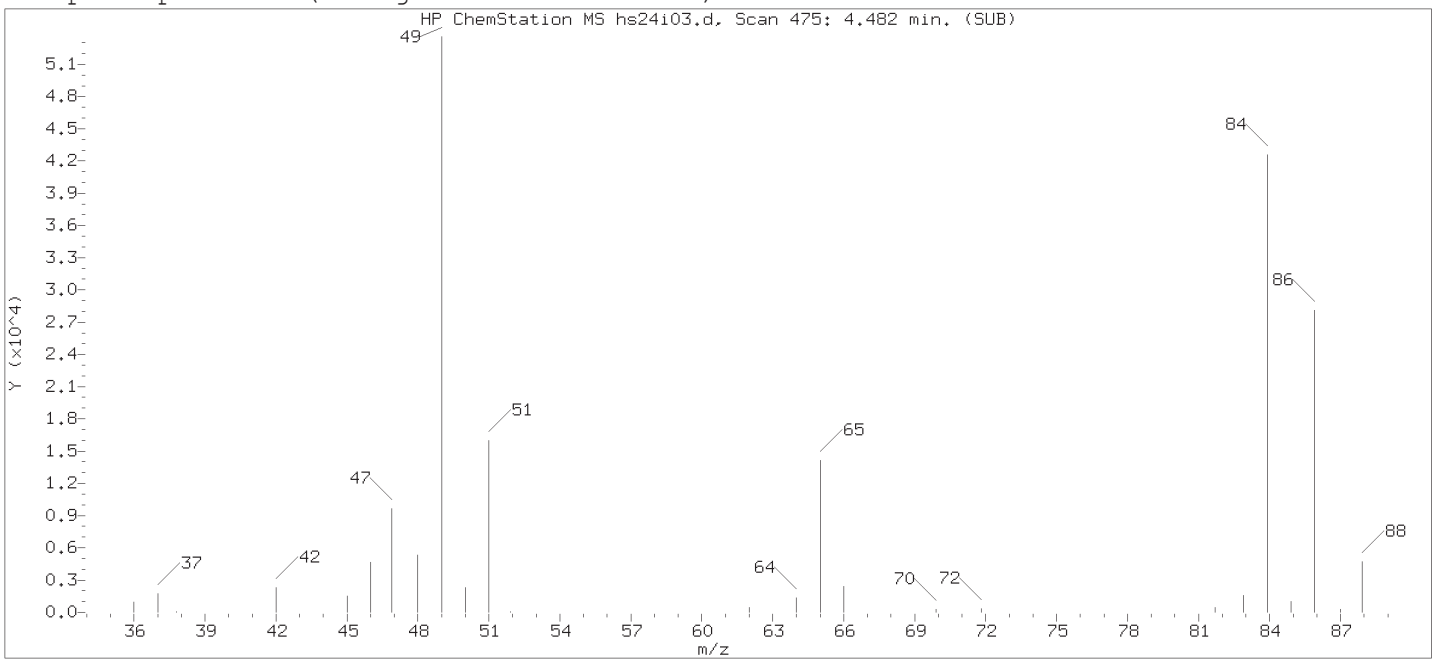
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.482
Quant Ion : 65.00
Area (flag) : 127180M
On-Column Amount (ng) : 50.0000
Integration start scan : 441 Integration stop scan: 623
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

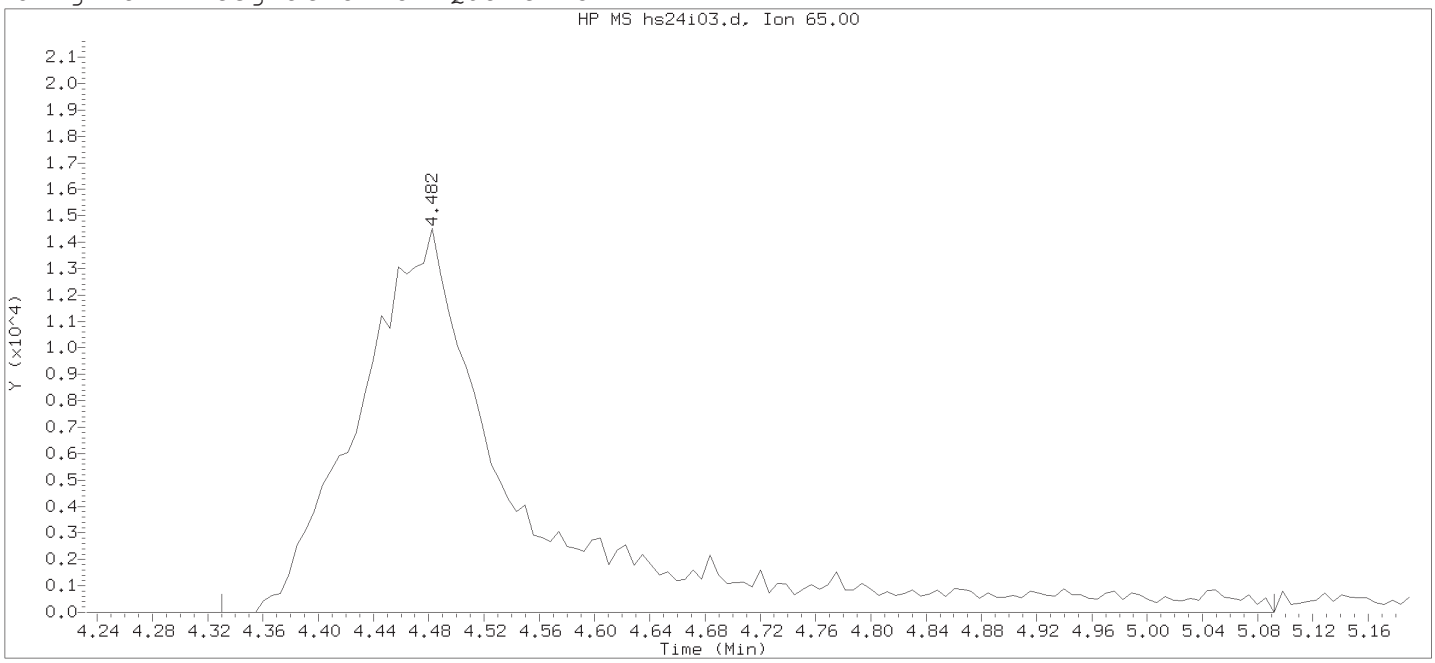
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

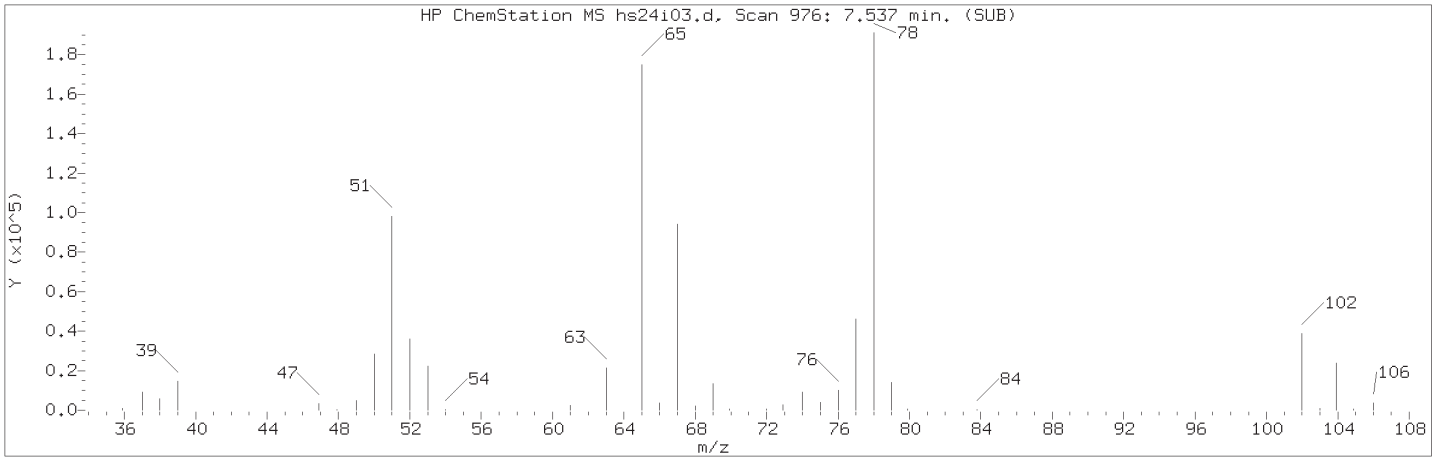
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

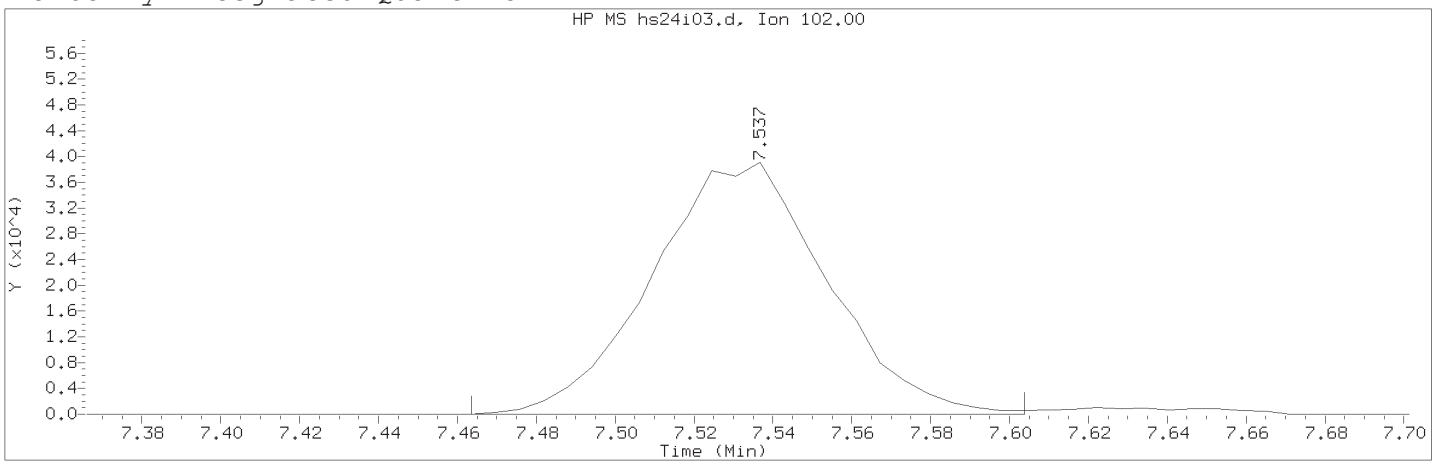
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.482
Quant Ion : 65.00
Area : 119408
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

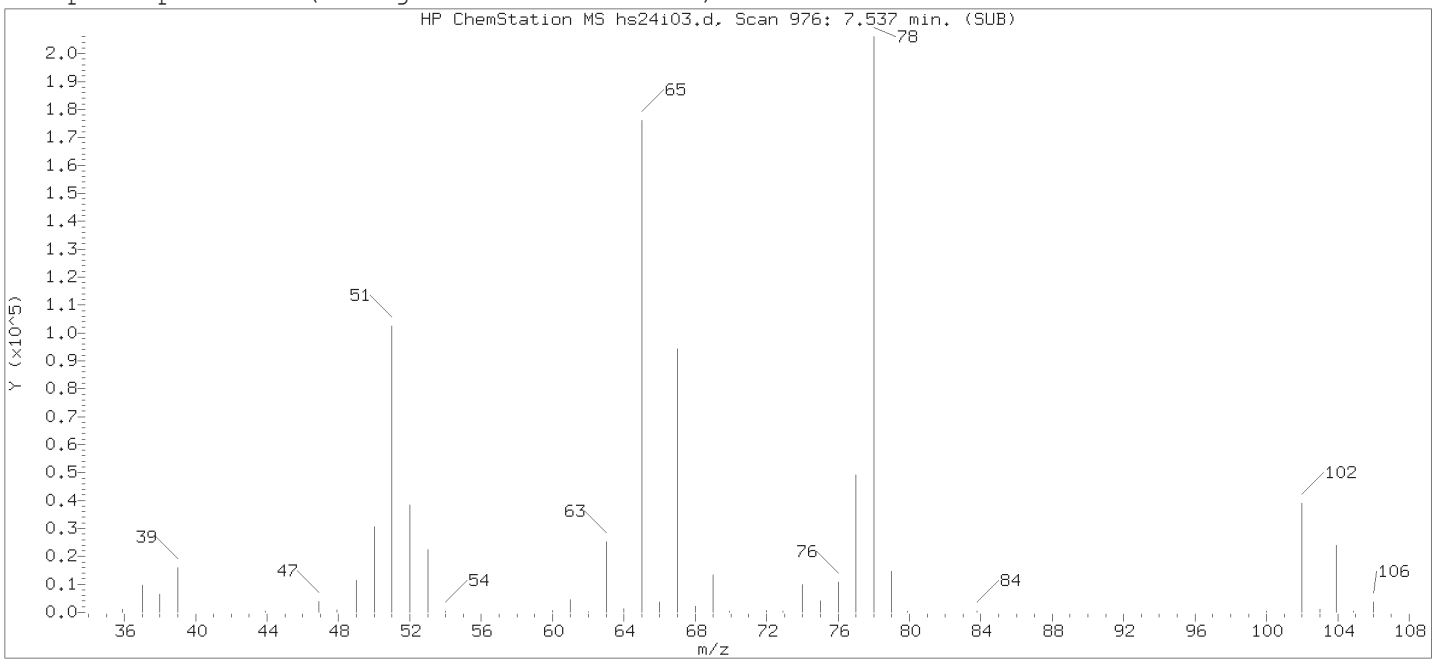
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area (flag) : 119553M
On-Column Amount (ng) : 9.9122
Integration start scan : 963 Integration stop scan: 986
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

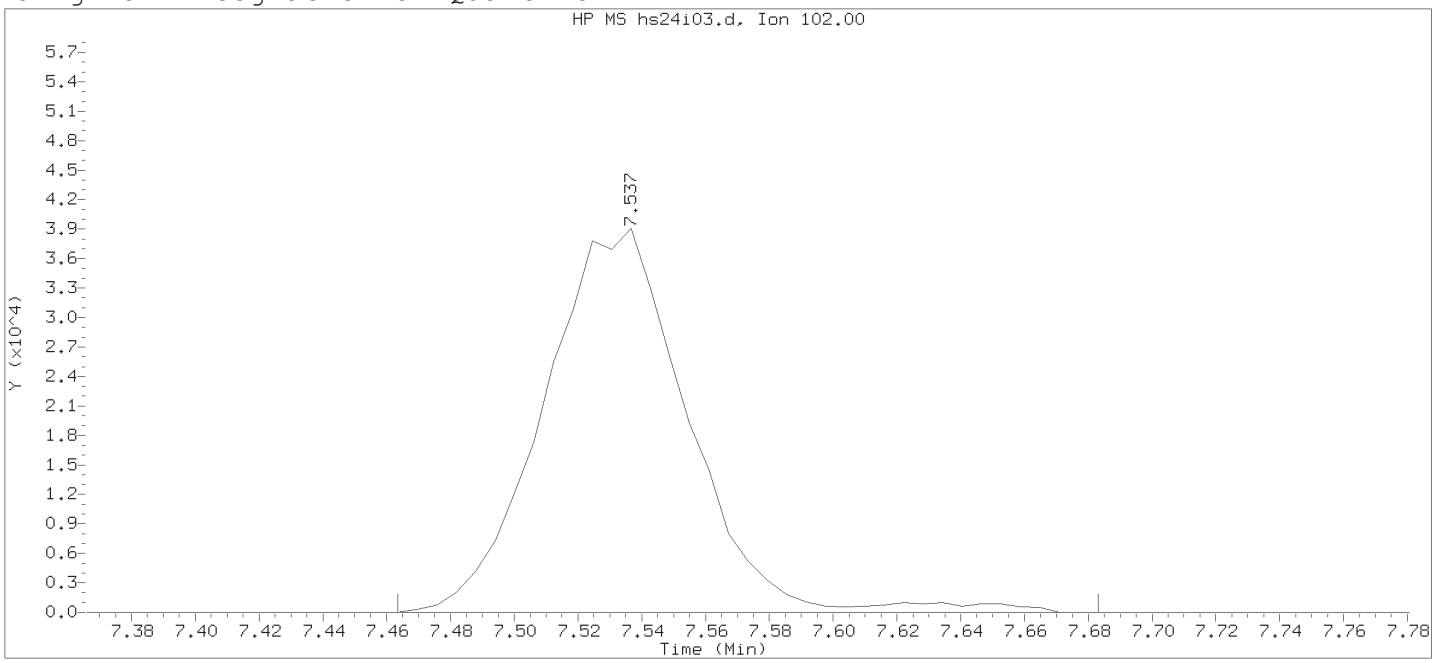
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

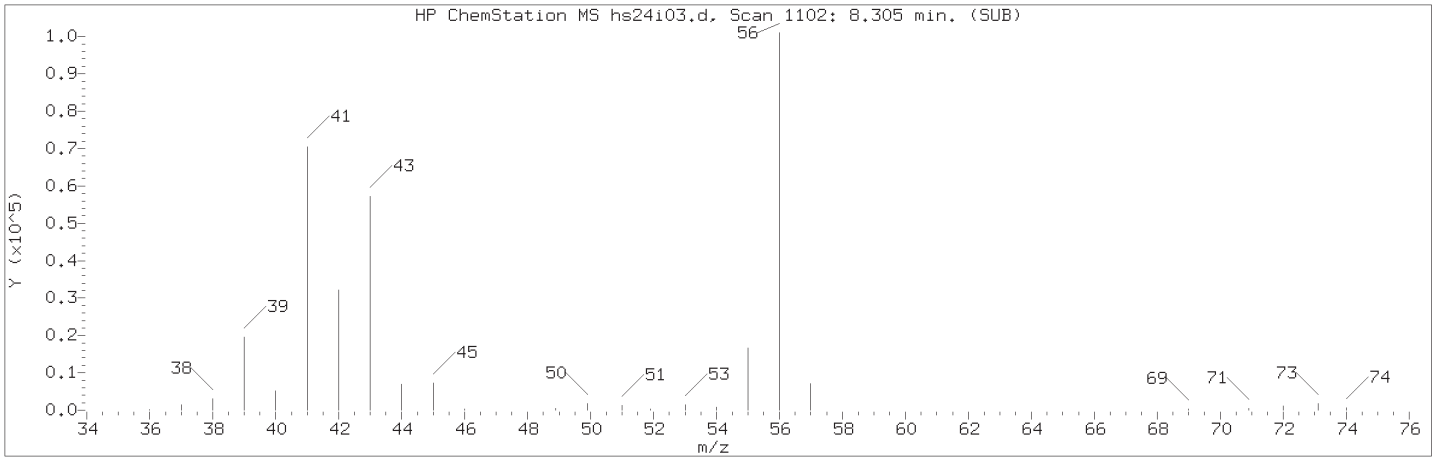
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

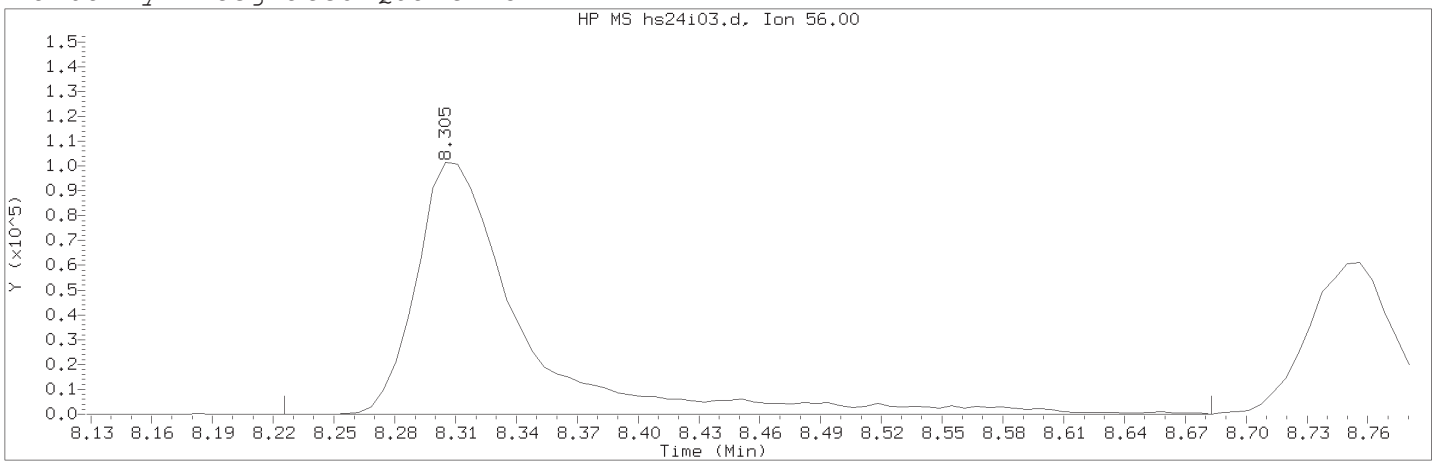
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area : 122323
On-column Amount (ng) : 10.0921
Integration start scan : 963 Integration stop scan: 999
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

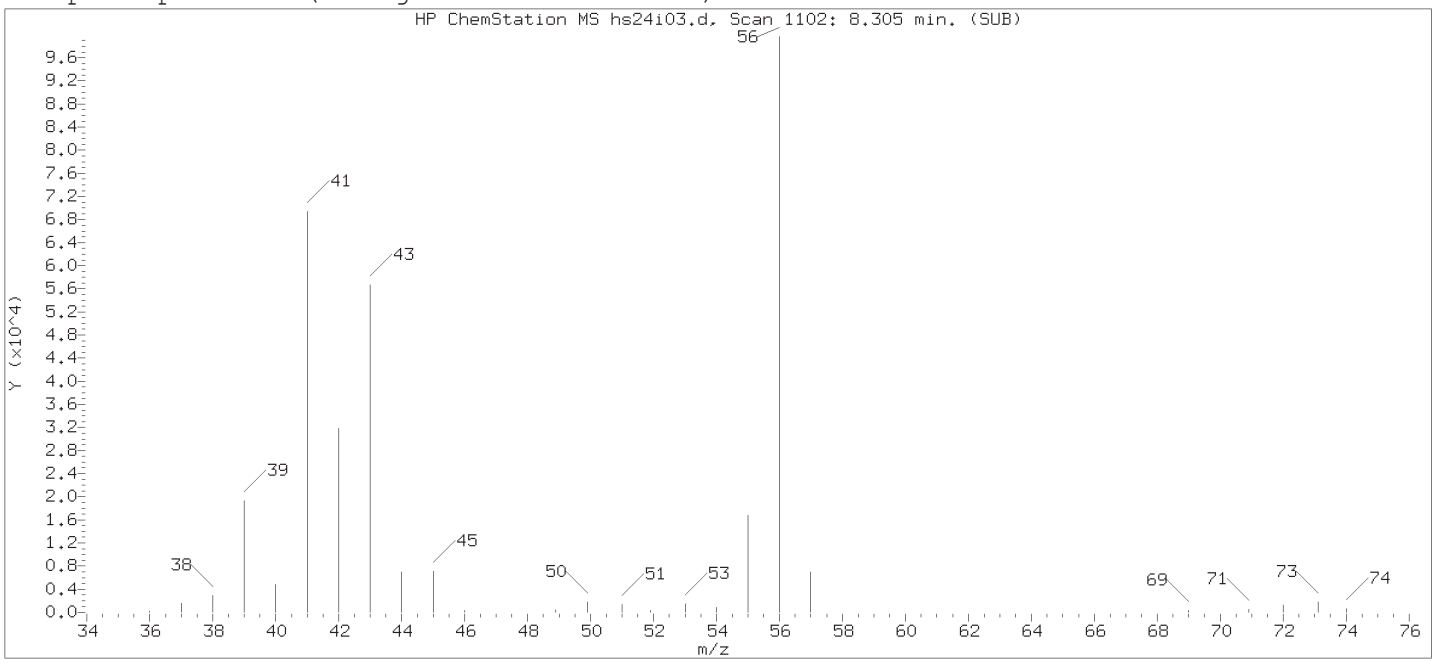
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area (flag) : 371428M
On-Column Amount (ng) : 523.4201
Integration start scan : 1088 Integration stop scan: 1163
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

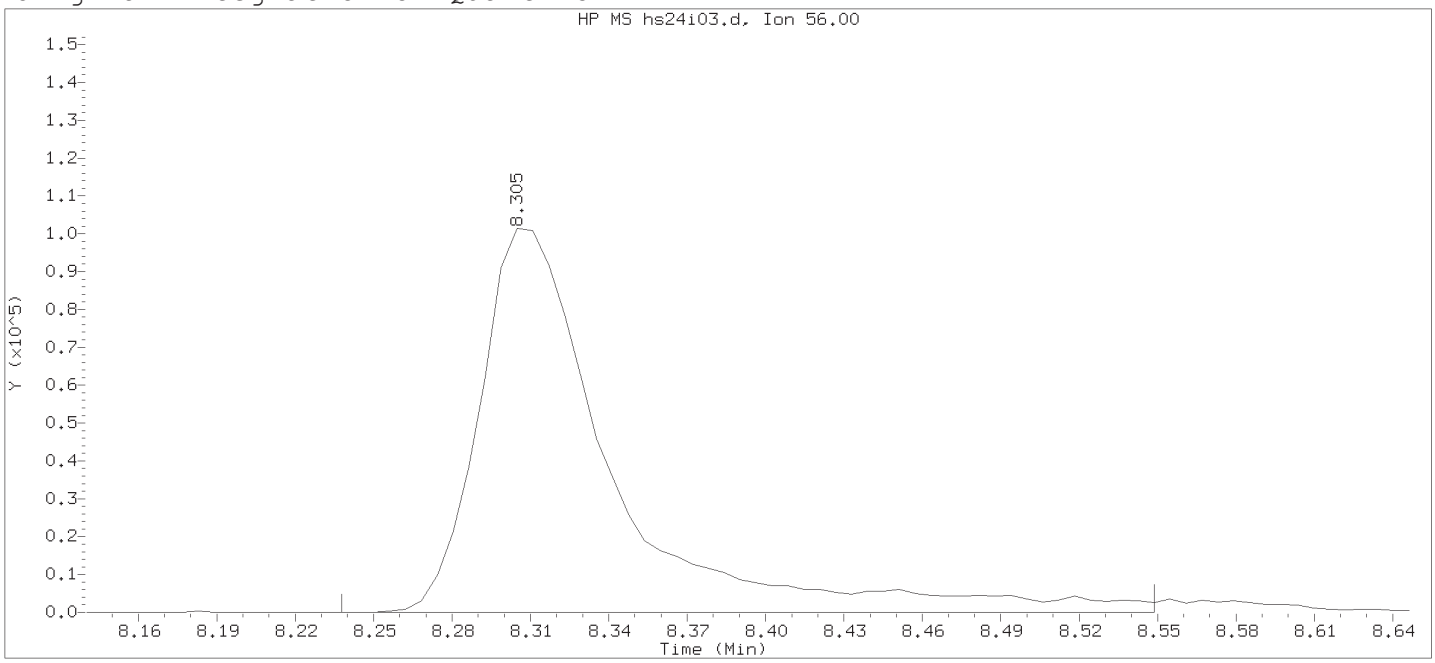
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

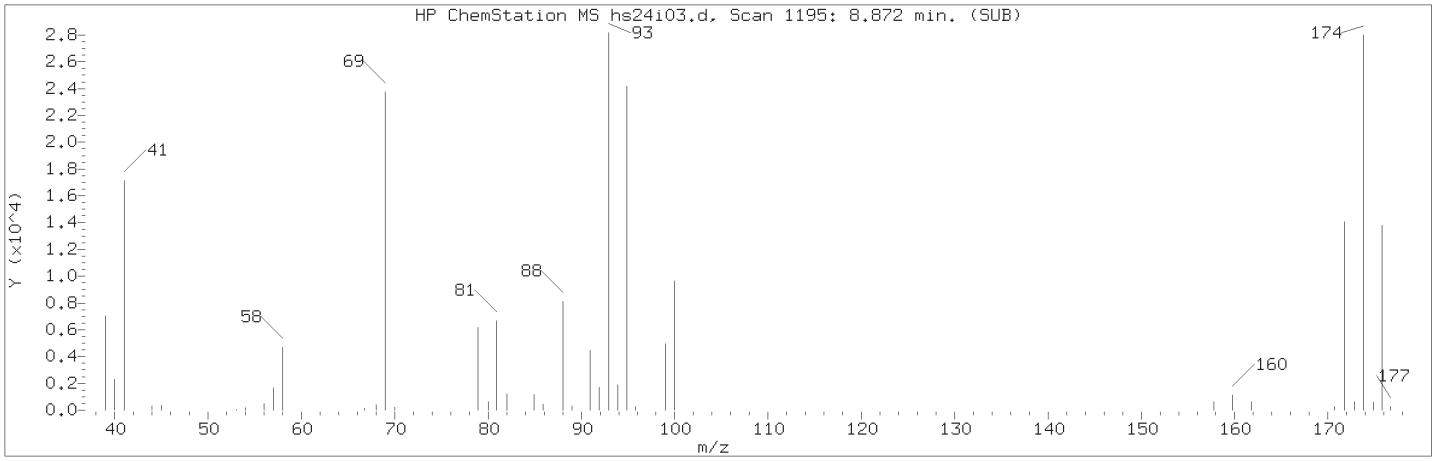
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

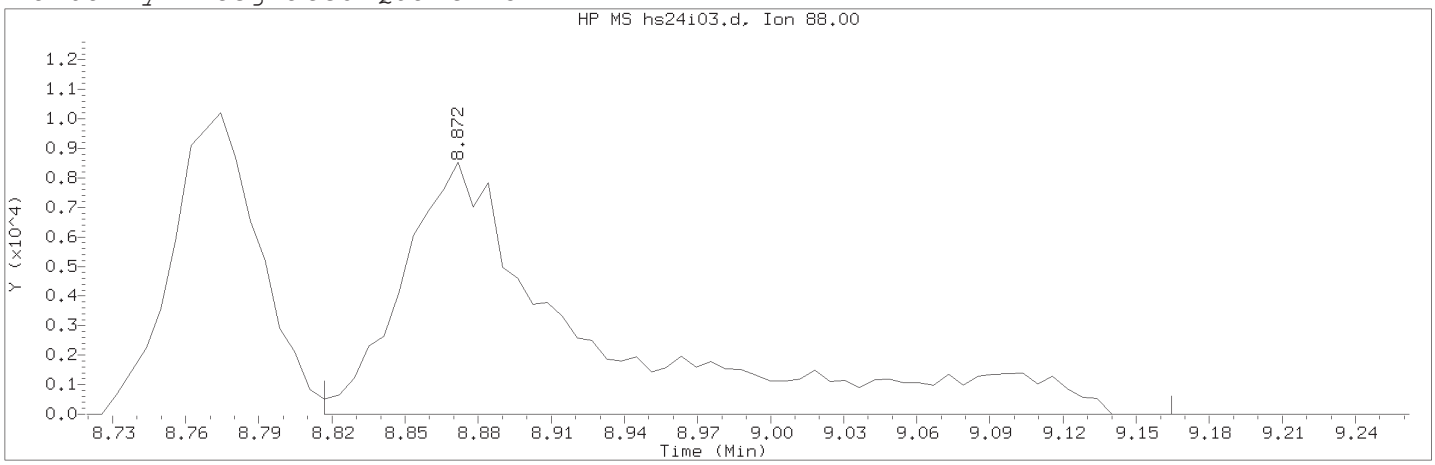
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1102		
Retention Time (minutes)	: 8.305		
Quant Ion	: 56.00		
Area	: 359413		
On-column Amount (ng)	: 483.9616		
Integration start scan	: 1090	Integration stop scan:	1141
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

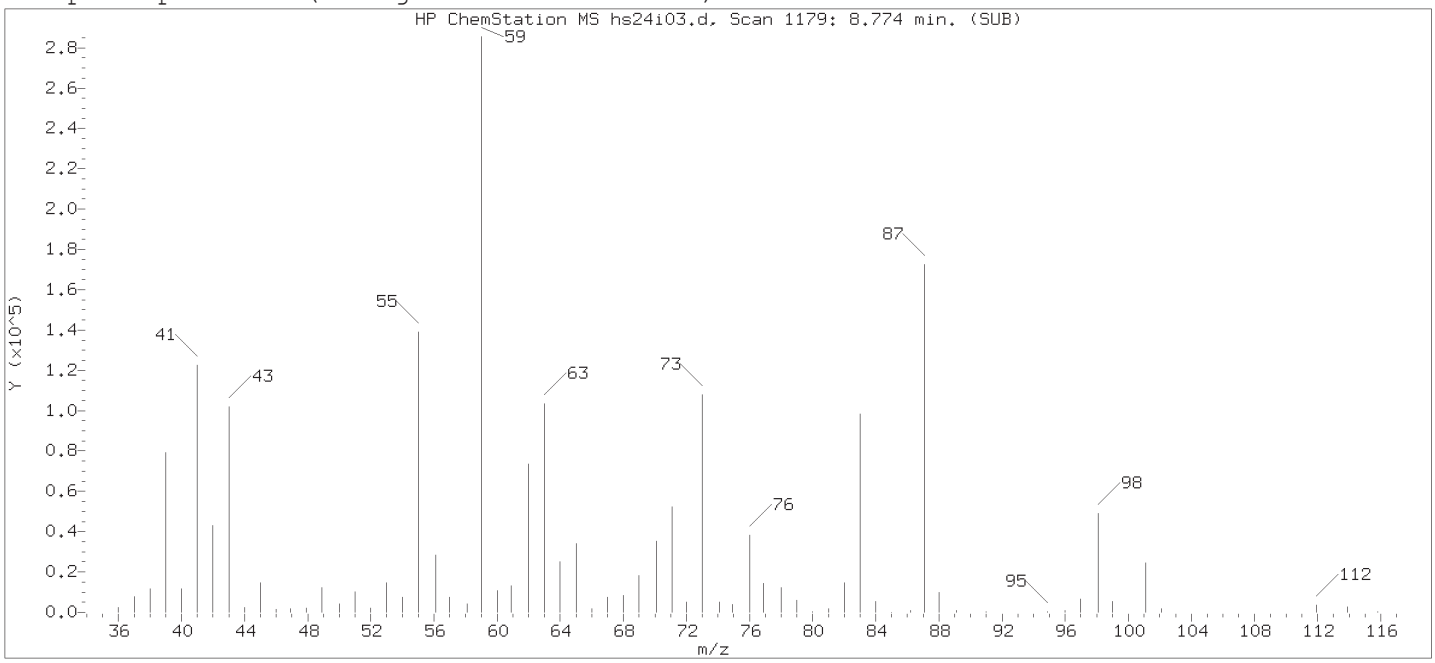
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1195
Retention Time (minutes): 8.872
Quant Ion : 88.00
Area (flag) : 45616M
On-Column Amount (ng) : 266.9855
Integration start scan : 1185 Integration stop scan: 1242
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

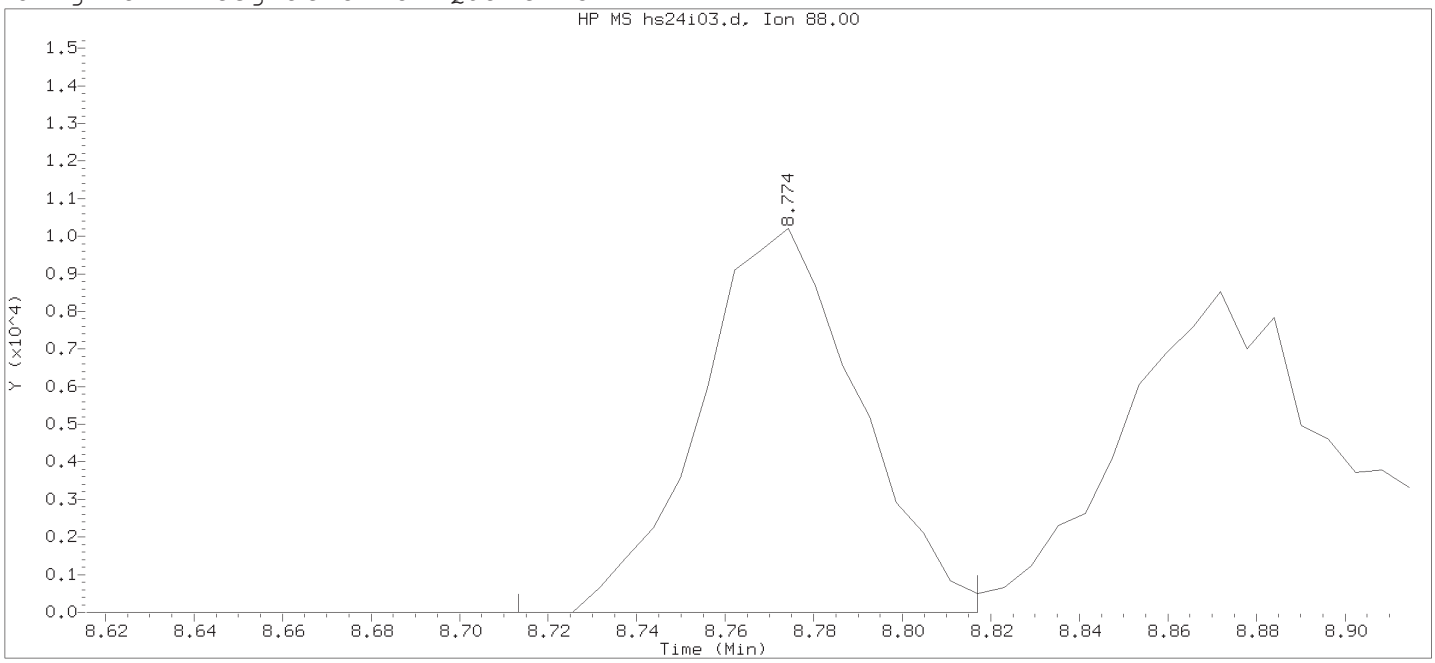
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

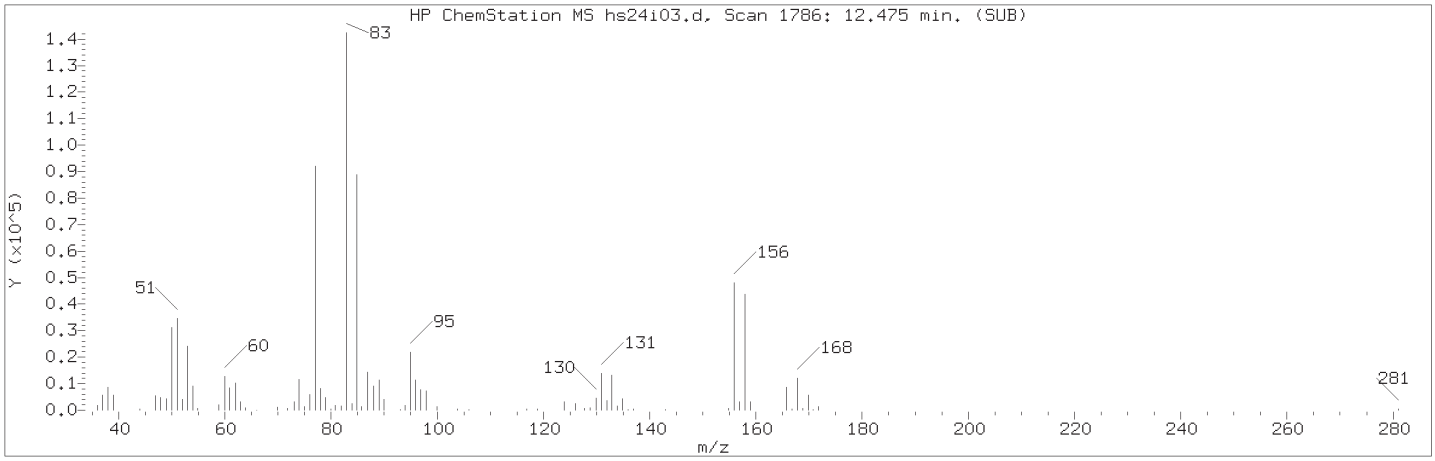
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

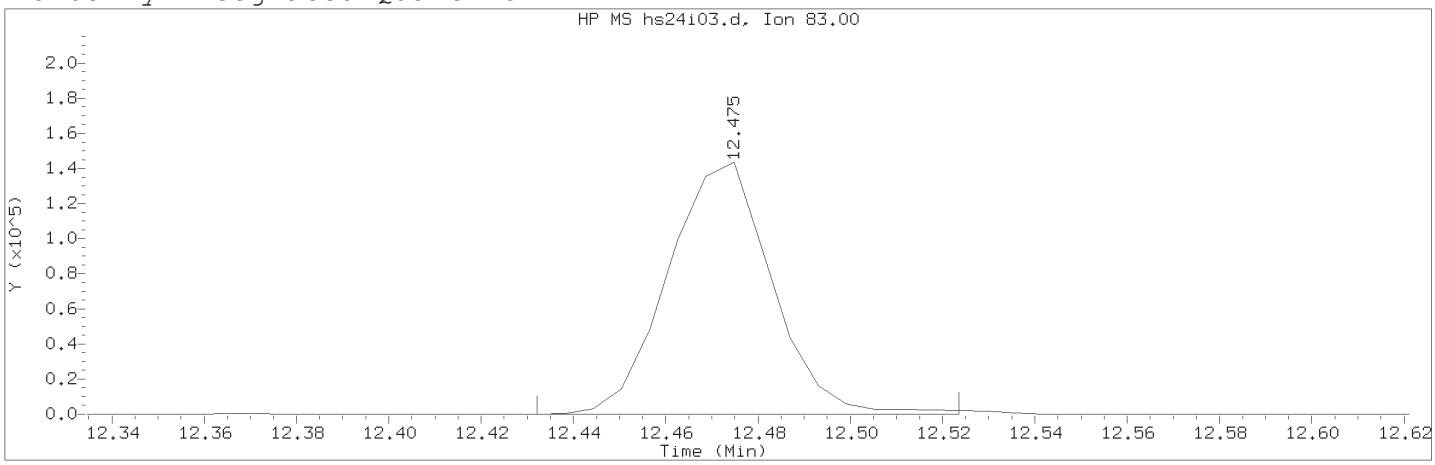
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1179
Retention Time (minutes): 8.774
Quant Ion : 88.00
Area : 25388
On-column Amount (ng) : 205.7756
Integration start scan : 1168 Integration stop scan: 1185
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

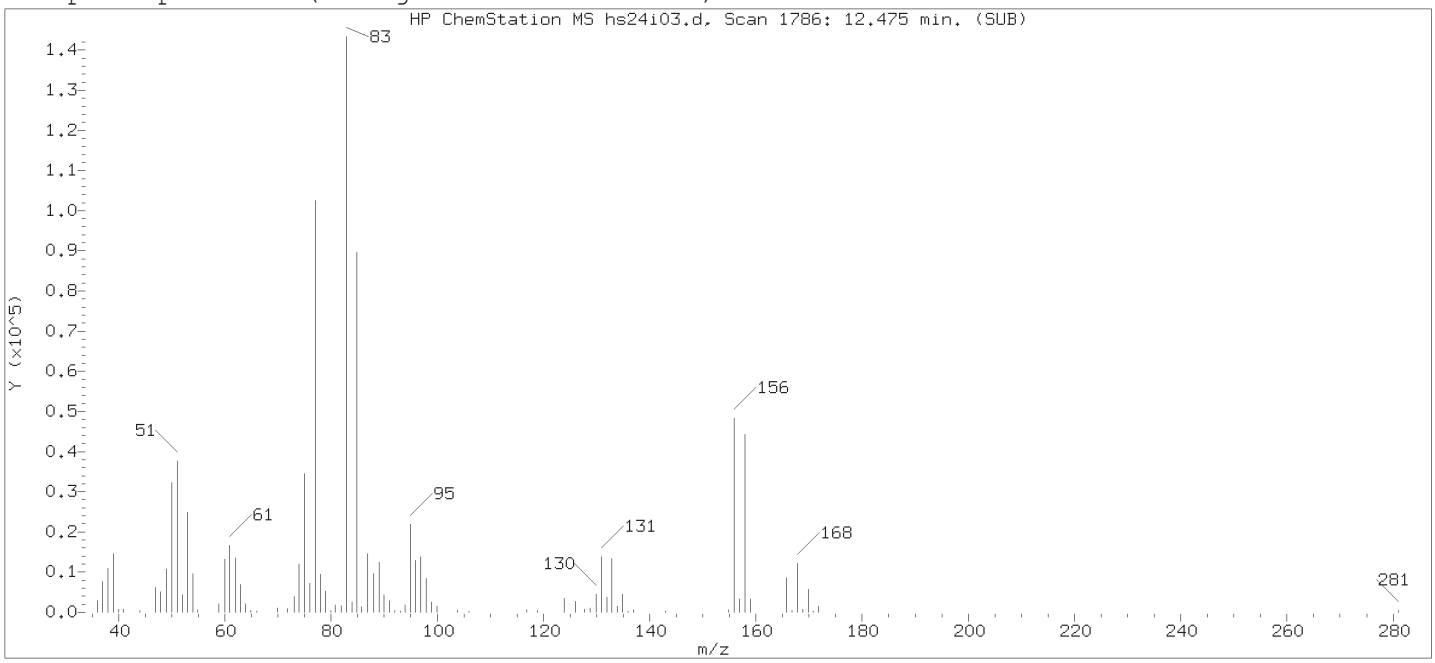
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 224515M
On-Column Amount (ng) : 5.1965
Integration start scan : 1778 Integration stop scan: 1793
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

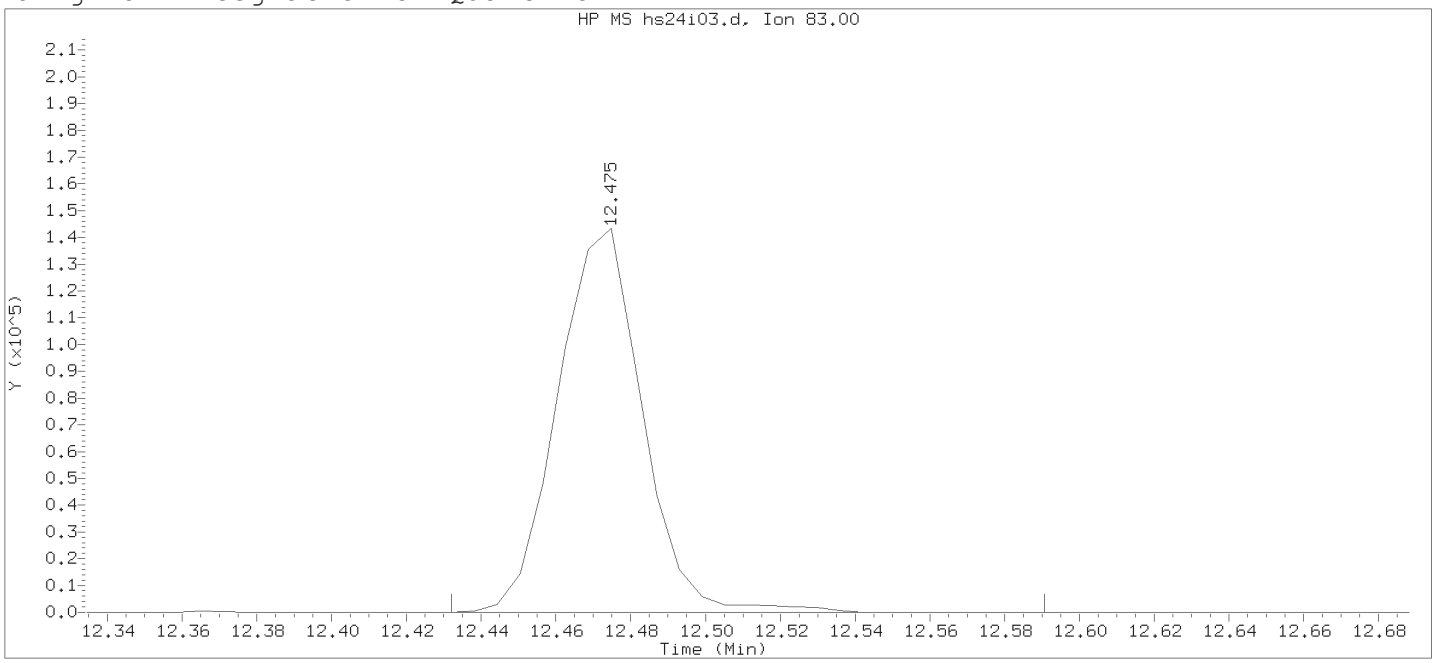
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

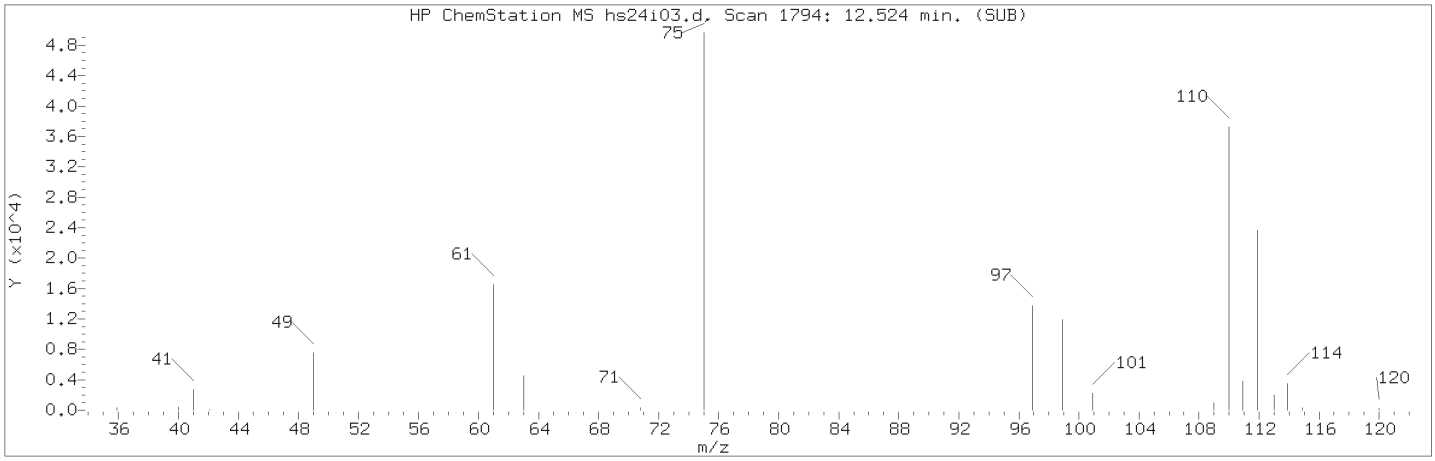
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

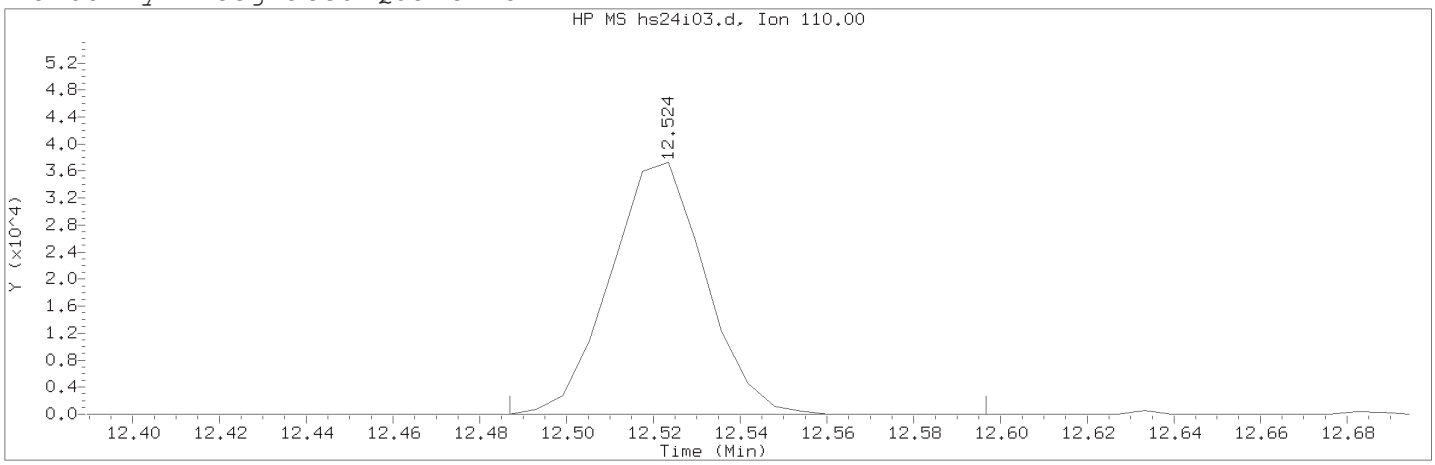
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 225435
On-column Amount (ng) : 4.9474
Integration start scan : 1778 Integration stop scan: 1804
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

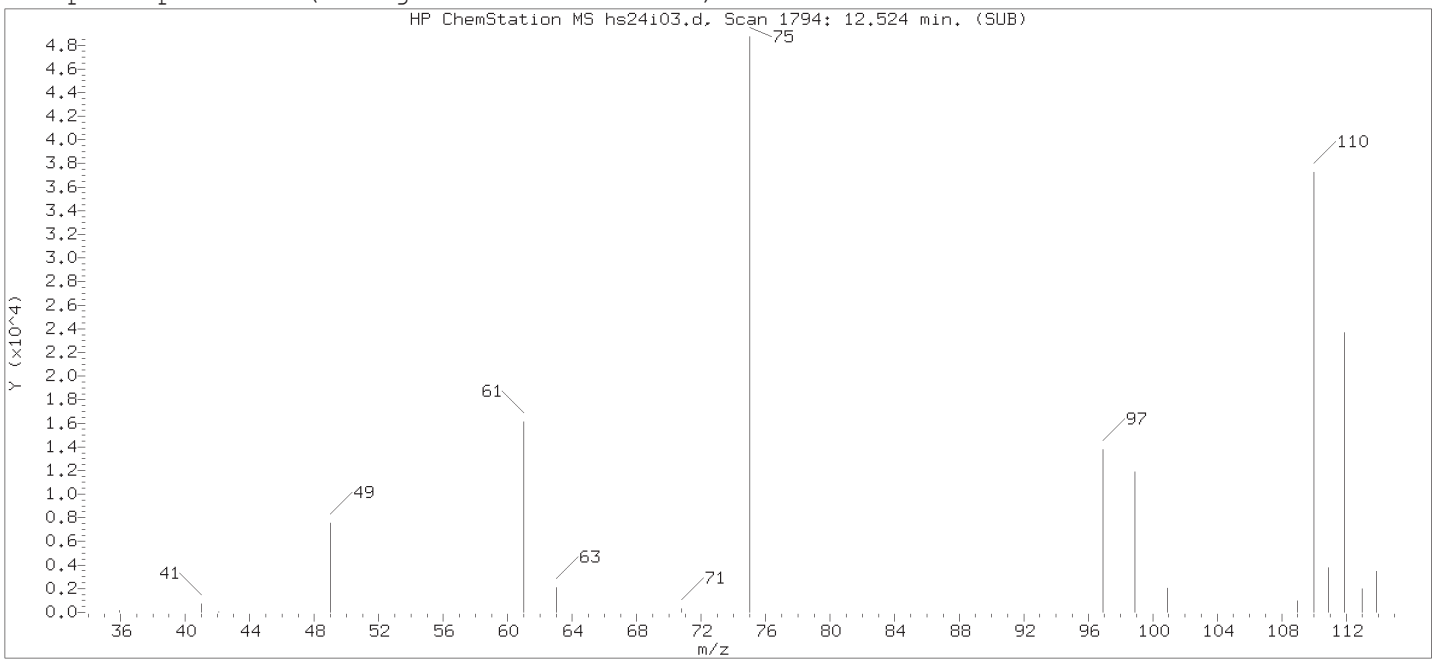
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 56735M
On-Column Amount (ng) : 5.0793
Integration start scan : 1787 Integration stop scan: 1805
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

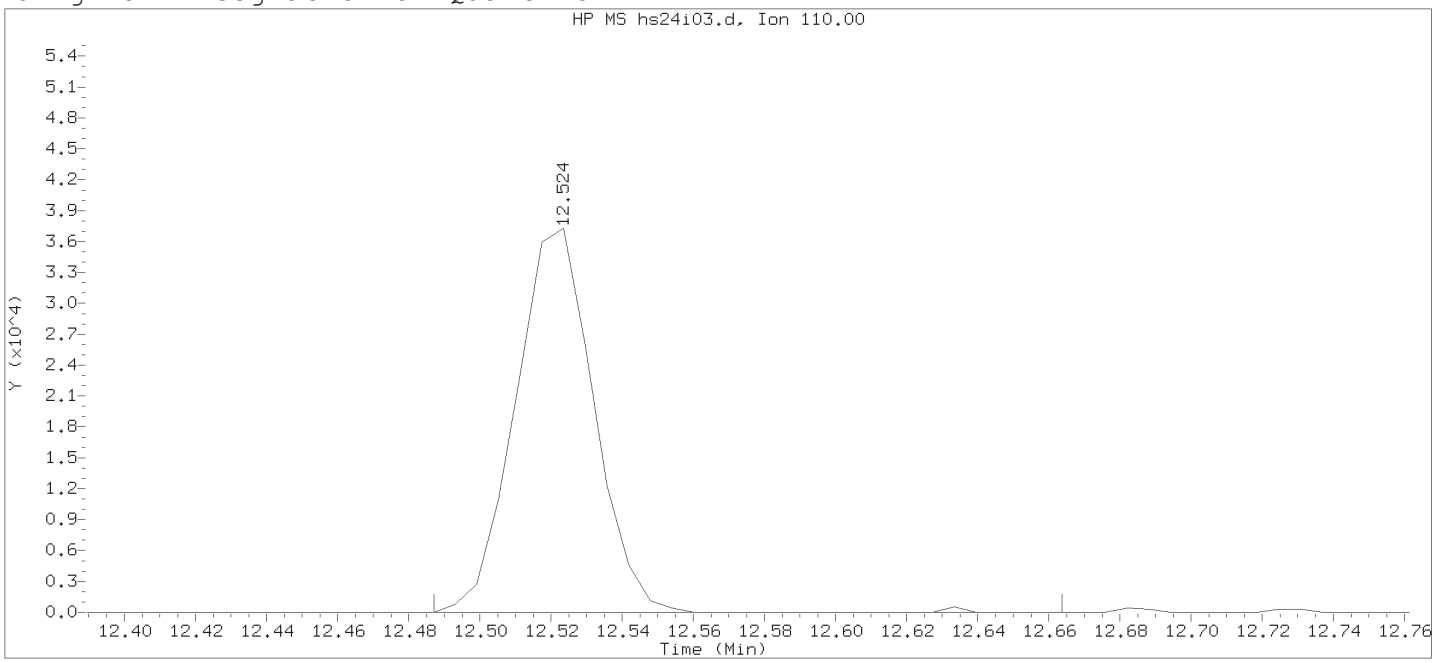
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



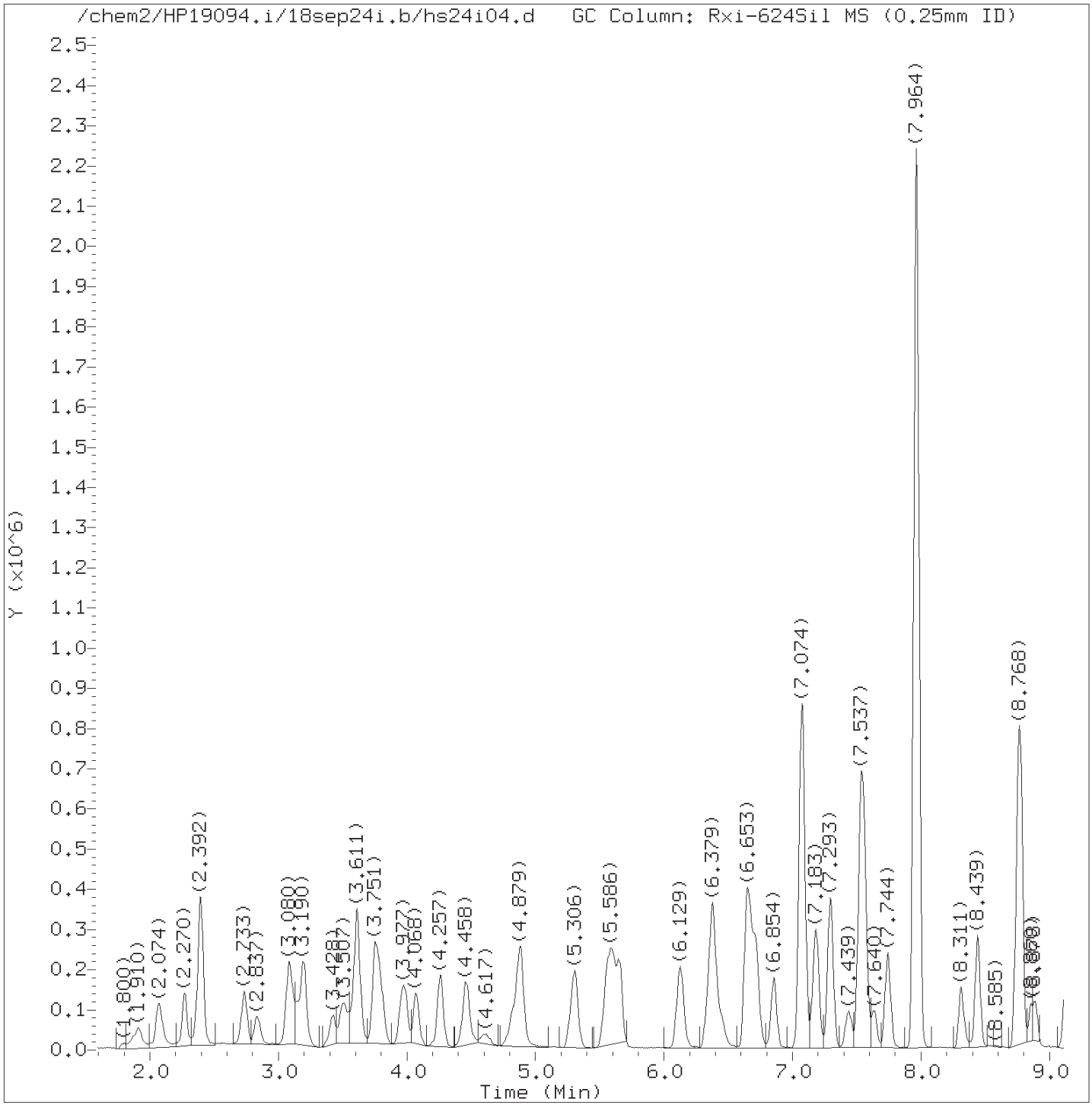
Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area : 56920
On-column Amount (ng) : 5.0340
Integration start scan : 1787 Integration stop scan: 1816
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

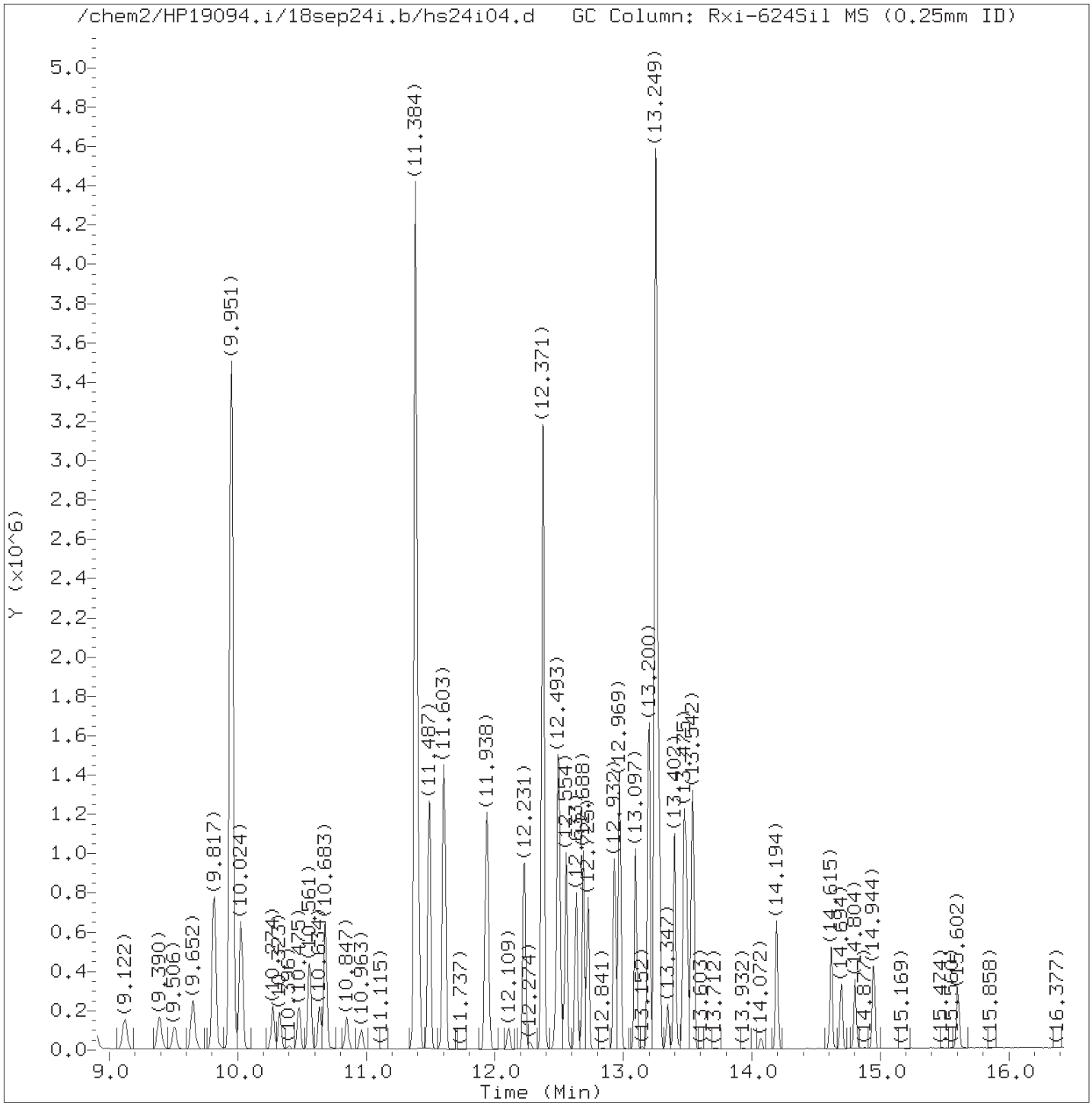
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.068	85	212842	1.965
2) Chloromethane	(2)	2.270	50	206767	1.949
5) Vinyl Chloride	(2)	2.392	62	192690	1.940
6) 1,3-Butadiene	(2)	2.392	39	223122M	1.983
7) Bromomethane	(2)	2.733	94	152532	1.975
8) Chloroethane	(2)	2.830	64	118265	1.963
9) Dichlorofluoromethane	(2)	3.080	67	286031	1.996
10) Trichlorofluoromethane	(2)	3.141	101	245427M	1.956
11) Ethyl ether	(2)	3.416	59	85465M	2.009
12) Freon 123a	(2)	3.507	67	159597	2.007
13) Acrolein	(1)	3.611	56	610220	93.000
15) 1,1-Dichloroethene	(2)	3.751	96	110543	2.034
16) Freon 113	(2)	3.781	101	129533	2.023
14) Acetone	(1)	3.800	43	167715M	19.030
17) Methyl Iodide	(2)	3.958	142	223559	1.974
18) Carbon Disulfide	(2)	4.074	76	335903	1.943
21) Methyl Acetate	(1)	4.233	43	48985	1.980
22) Allyl Chloride	(2)	4.257	41	207468	2.009
23) Methylene Chloride	(2)	4.452	84	117905	1.923
26)*t-Butyl Alcohol-d10	(1)	4.476	65	147863M	50.000
28) t-Butyl Alcohol	(1)	4.604	59	104728M	41.495
29) Acrylonitrile	(1)	4.812	53	105857	9.301
30) Methyl Tertiary Butyl Ether	(2)	4.861	73	226282	2.025
31) trans-1,2-Dichloroethene	(2)	4.885	96	119713	1.952
32) n-Hexane	(2)	5.306	57	193515	1.984
33) 1,1-Dichloroethane	(2)	5.543	63	231472	1.982
34) di-Isopropyl Ether	(2)	5.592	45	415509	2.004
35) 2-Chloro-1,3-Butadiene	(2)	5.659	53	211615	2.014
40) 1,2-Dichloroethene (Total)	(2)		96	253223	3.922
37) Ethyl t-butyl ether	(2)	6.129	59	334132M	2.032
38) 2-Butanone	(1)	6.348	43	265202	18.383
39) cis-1,2-Dichloroethene	(2)	6.379	96	133510	1.970
41) 2,2-Dichloropropane	(2)	6.385	77	170897	2.049
42) Propionitrile	(1)	6.446	54	150231	38.365
45) Methacrylonitrile	(1)	6.647	67	260058	18.418
47) Bromochloromethane	(2)	6.708	128	58062	2.028
48) Tetrahydrofuran	(1)	6.720	71	72155	18.814
49) Chloroform	(2)	6.854	83	215747	1.987

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.074	113	701118	10.038
50)$Dibromofluoromethane	(2)	7.074	111	720366	10.019
51) 1,1,1-Trichloroethane	(2)	7.086	97	186862	2.012
52) Cyclohexane	(2)	7.189	56	243250	2.007
52) Cyclohexane	(2)	7.183	84	203326	2.034
52) Cyclohexane	(2)	7.183	69	71385	1.998
54) Carbon Tetrachloride	(2)	7.293	117	159920	2.005
55) 1,1-Dichloropropene	(2)	7.293	75	176849	2.008
56) Isobutyl Alcohol	(1)	7.439	41	94332	96.599
57)$1,2-Dichloroethane-d4	(2)	7.537	102	125039M	10.268
57)$1,2-Dichloroethane-d4	(2)	7.531	65	589363	10.006
57)$1,2-Dichloroethane-d4	(2)	7.531	104	76732	9.839
58) Benzene	(2)	7.561	78	506487	1.947
59) 1,2-Dichloroethane	(2)	7.634	62	114381	1.911
60) t-Amyl methyl ether	(2)	7.744	73	274629	2.014
62) n-Heptane	(2)	7.964	43	198879M	1.978
63)*Fluorobenzene	(2)	7.964	96	2771401	10.000
65) n-Butanol	(1)	8.311	56	160778M	194.877
67) Trichloroethene	(2)	8.439	95	134309	2.016
69) Methylcyclohexane	(2)	8.750	83	251052	1.996
70) 1,2-Dichloropropane	(2)	8.787	63	125013	1.981
71) Methyl Methacrylate	(1)	8.854	69	48112	1.841
72) 1,4-Dioxane	(1)	8.866	88	21749M	109.489
73) Dibromomethane	(2)	8.890	93	53023	2.024
74) Bromodichloromethane	(2)	9.122	83	137803	1.942
76) 2-Nitropropane	(1)	9.390	41	134032	18.105
80) cis-1,3-Dichloropropene	(2)	9.652	75	163843	1.983
81) 4-Methyl-2-Pentanone	(1)	9.817	43	659459	18.377
82)$Toluene-d8	(3)	9.951	98	2784763	10.112
82)$Toluene-d8	(3)	9.951	100	1806074	10.161
83) Toluene	(3)	10.024	92	317158	1.997
85) 1,3-Dichloropropene (total)	(3)		75	285594	3.973
84) trans-1,3-Dichloropropene	(3)	10.274	75	121751	1.990
86) Ethyl Methacrylate	(3)	10.323	69	106995	2.041
88) 1,1,2-Trichloroethane	(3)	10.475	97	73815	2.020
89) Tetrachloroethene	(3)	10.561	166	144328	2.012
90) 1,3-Dichloropropane	(3)	10.634	76	132513	2.046
91) 2-Hexanone	(1)	10.683	43	448236	18.350

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	88599	2.023
95) 1,2-Dibromoethane	(3)	10.963	107	66850	1.952
96) 1-Chlorohexane	(3)	11.384	91	182251	1.924
97)*Chlorobenzene-d5	(3)	11.384	117	2139668	10.000
98) Chlorobenzene	(3)	11.408	112	334112	1.983
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	111074	1.998
100) Ethylbenzene	(3)	11.493	91	618859	1.994
101) m+p-Xylene	(3)	11.603	106	460102	3.997
105) Xylene (Total)	(3)		106	680646	6.001
104) o-Xylene	(3)	11.932	106	220544	2.004
106) Styrene	(3)	11.945	104	354610	2.014
107) Bromoform	(3)	12.109	173	47440	1.971
108) Isopropylbenzene	(3)	12.231	105	599350	1.995
111)$4-Bromofluorobenzene	(3)	12.371	95	1020043	10.174
111)$4-Bromofluorobenzene	(3)	12.377	174	880214	10.110
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	85286M	1.938
114) Bromobenzene	(4)	12.493	156	133526	1.995
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	203595	18.115
116) 1,2,3-Trichloropropane	(4)	12.518	110	22957M	2.017
117) n-Propylbenzene	(4)	12.554	91	721086	1.982
119) 2-Chlorotoluene	(4)	12.633	126	140344	1.989
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	490251	1.989
122) 4-Chlorotoluene	(4)	12.725	126	141279	1.998
125) tert-Butylbenzene	(4)	12.932	134	110083M	2.054
126) Pentachloroethane	(4)	12.969	167	83251	1.990
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	503413	2.001
128) sec-Butylbenzene	(4)	13.097	105	633366	1.983
131) 1,3-Dichlorobenzene	(4)	13.194	146	265730	1.999
132) p-Isopropyltoluene	(4)	13.200	119	529167	2.000
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1109693	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	257515	1.973
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	229342	1.987
136) Benzyl Chloride	(4)	13.347	126	30686M	1.928
138) n-Butylbenzene	(4)	13.493	92	259241	1.974
139) 1,2-Dichlorobenzene	(4)	13.530	146	234578	2.000
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	11053	1.817
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	191417	1.935
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	157858	1.959

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

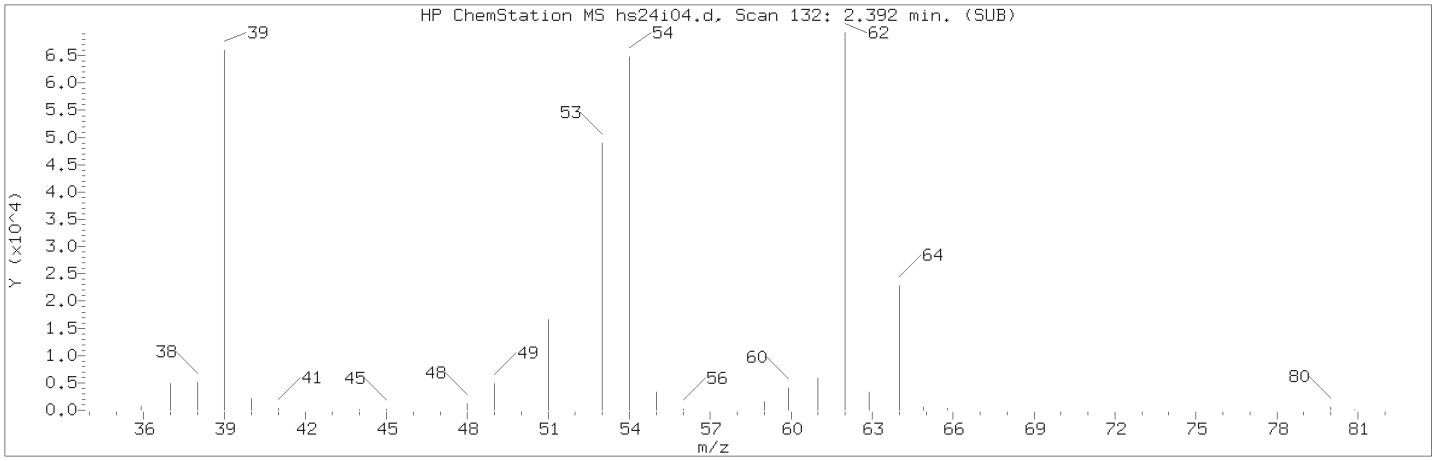
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

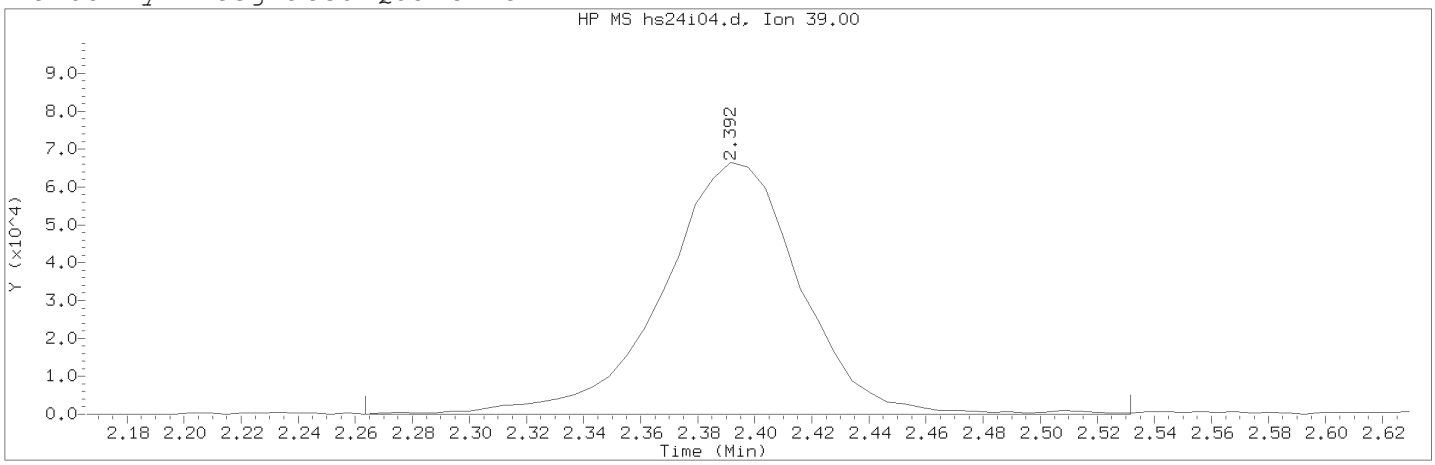
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	59215	1.945
147) Naphthalene	(4)	14.804	128	252080	1.977
148) 1,2,3-Trichlorobenzene	(4)	14.944	180	128555	1.941

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

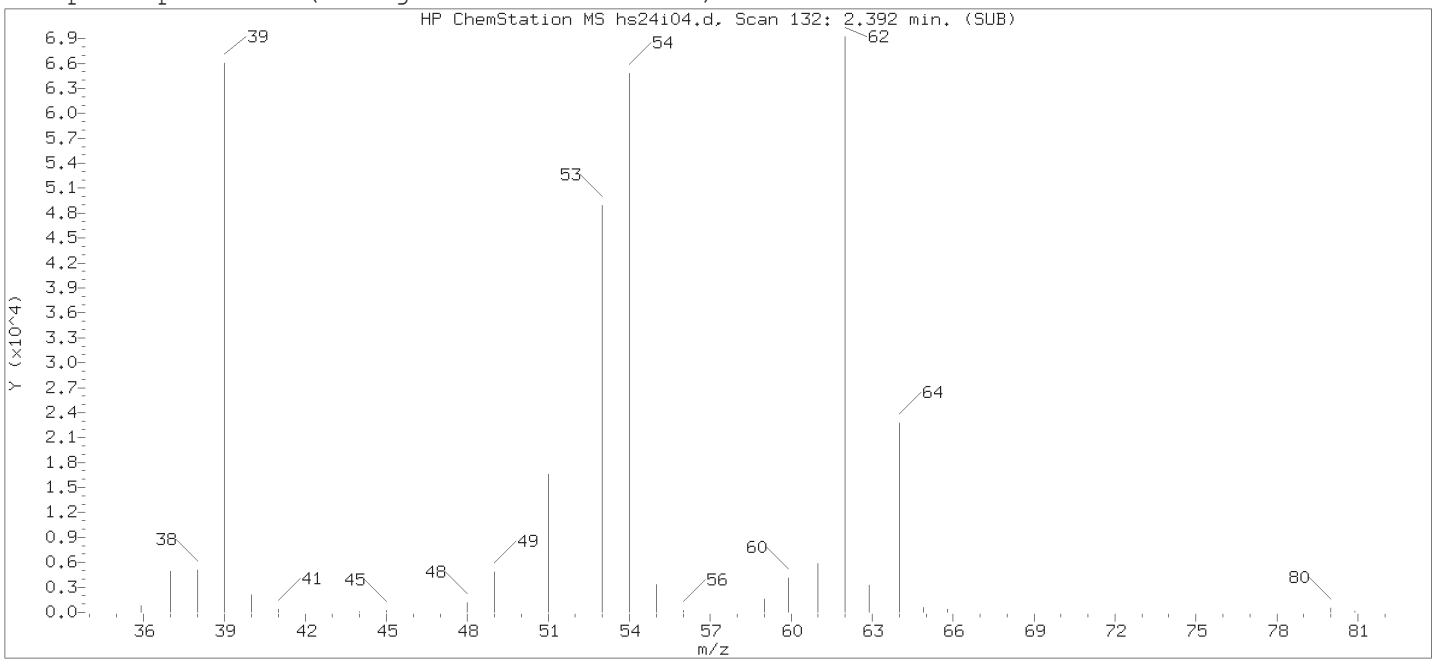
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.392
Quant Ion : 39.00
Area (flag) : 223122M
On-Column Amount (ng) : 1.9830
Integration start scan : 110 Integration stop scan: 154
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

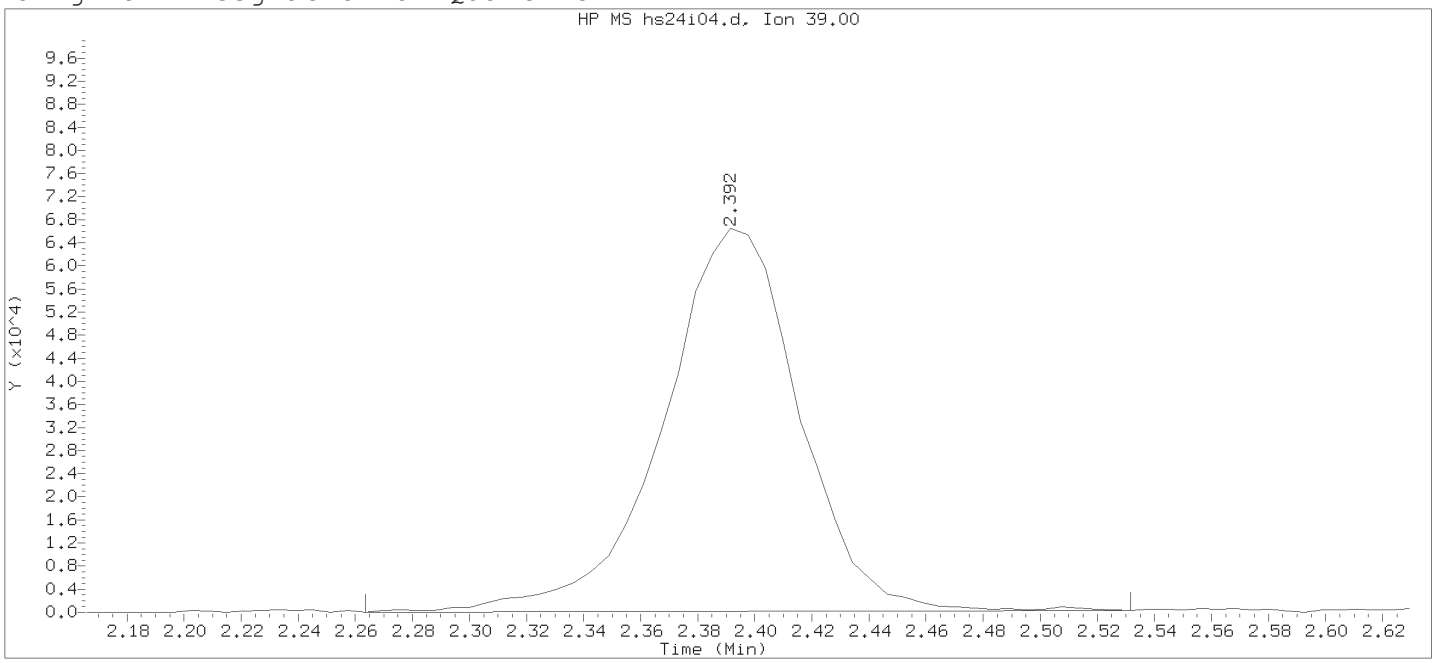
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

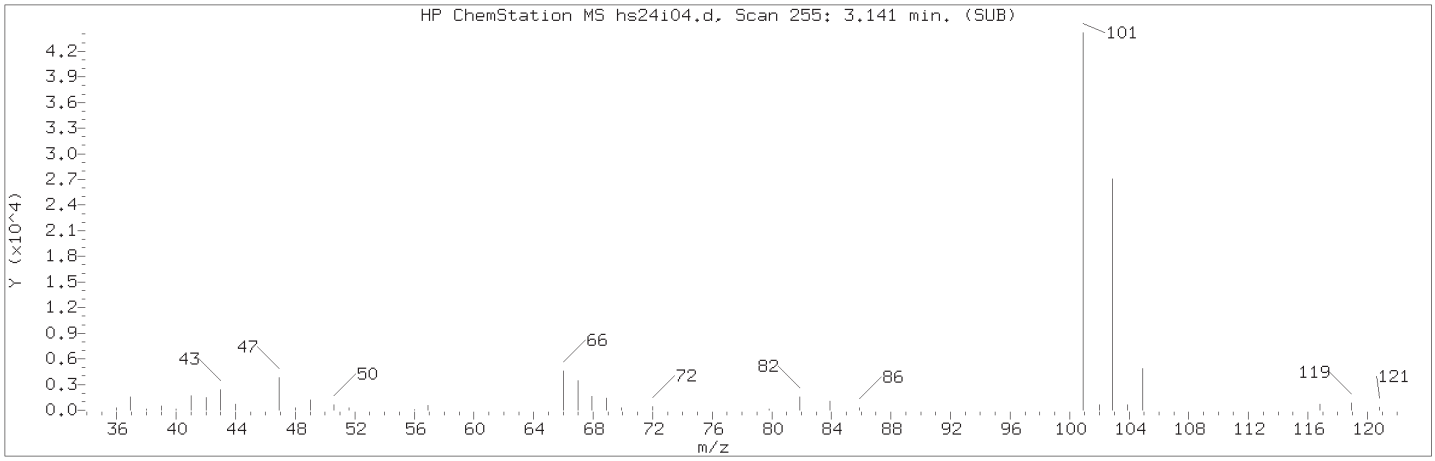
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

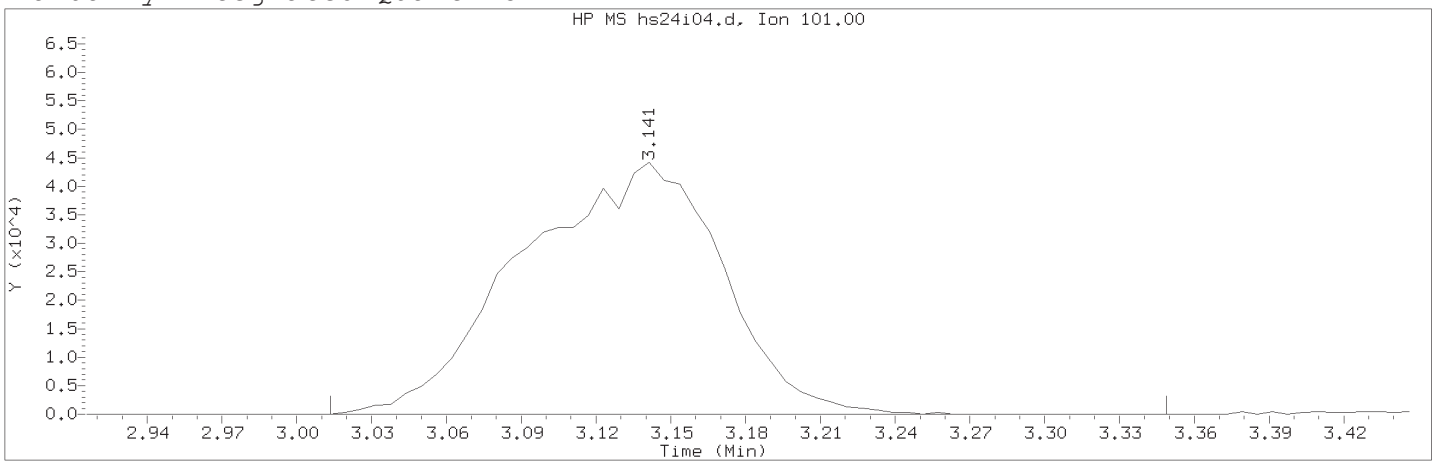
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.392
Quant Ion : 39.00
Area : 220168
On-column Amount (ng) : 1.9899
Integration start scan : 110 Integration stop scan: 154
Y at integration start : 0 Y at integration end: 359

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

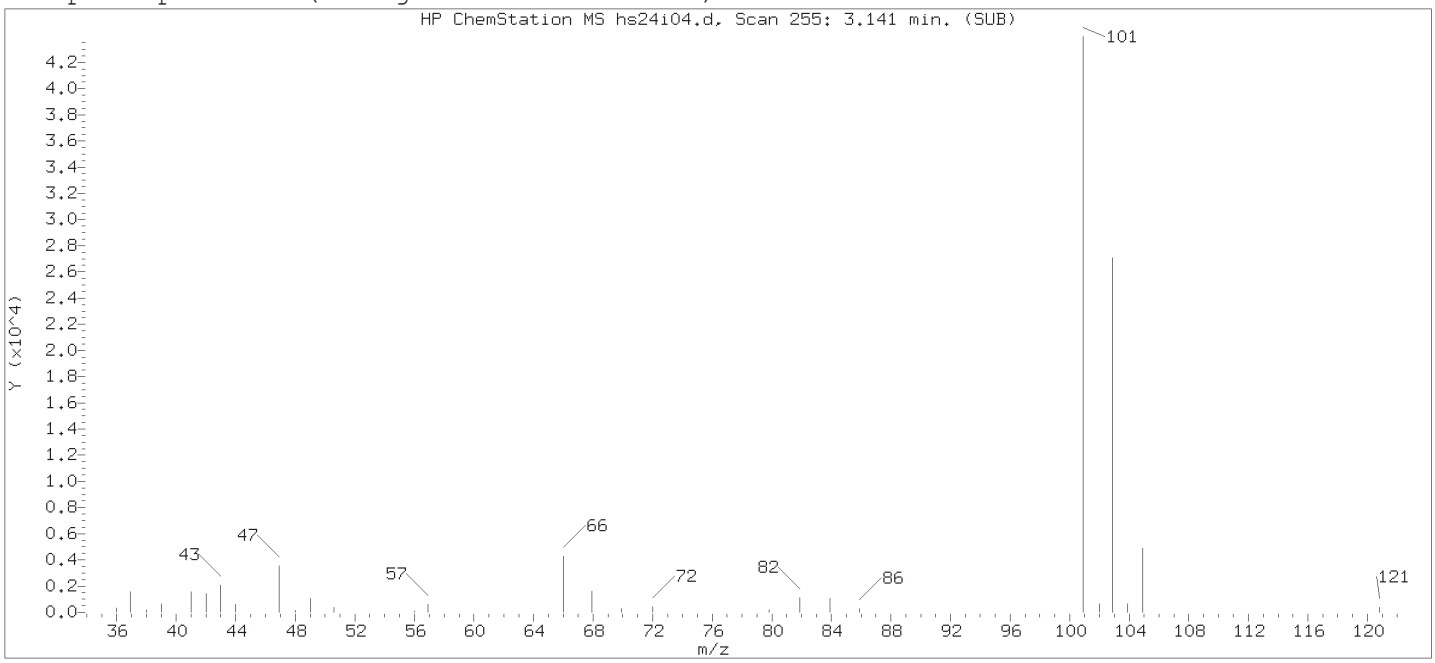
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 255
Retention Time (minutes): 3.141
Quant Ion : 101.00
Area (flag) : 245427M
On-Column Amount (ng) : 1.9558
Integration start scan : 233 Integration stop scan: 288
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

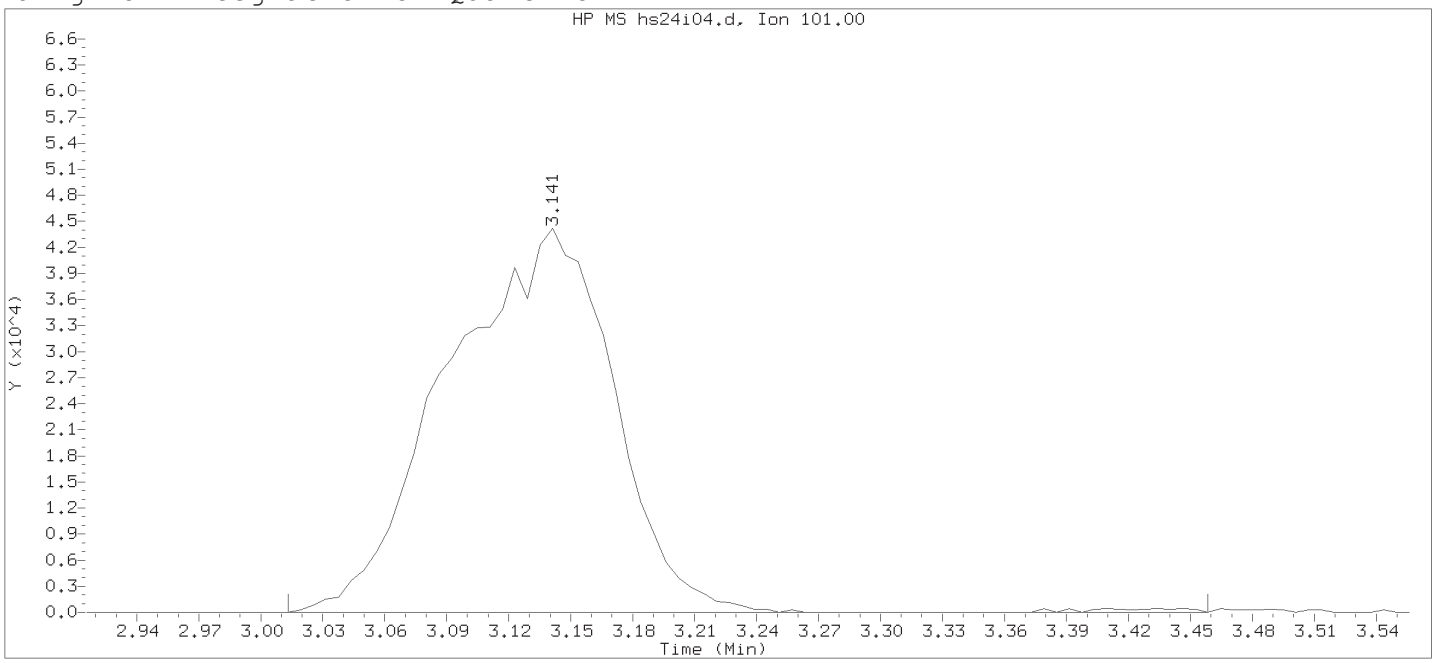
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

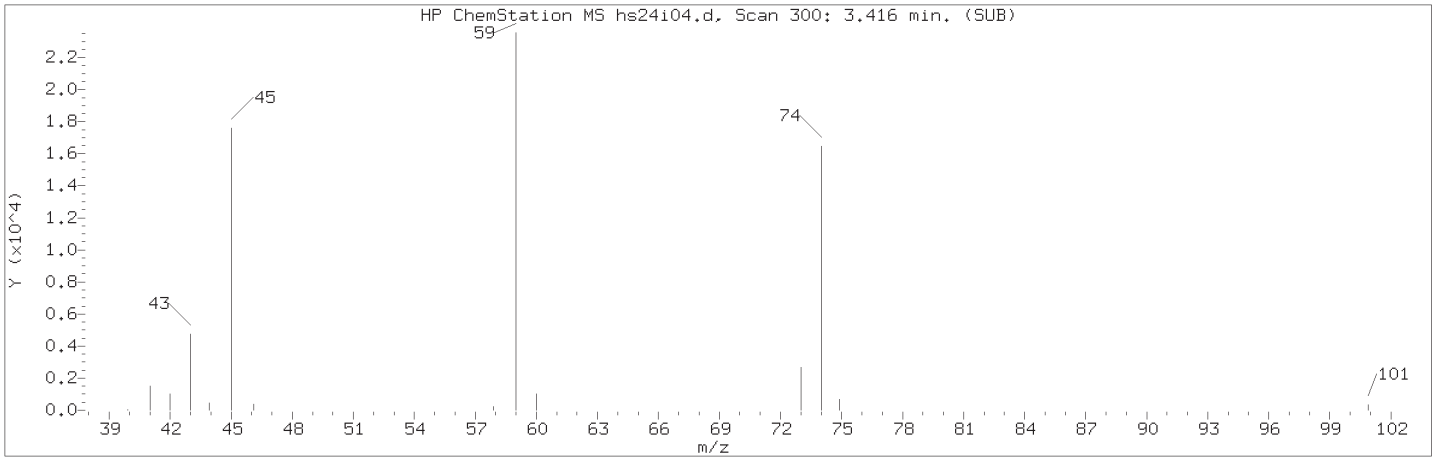
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

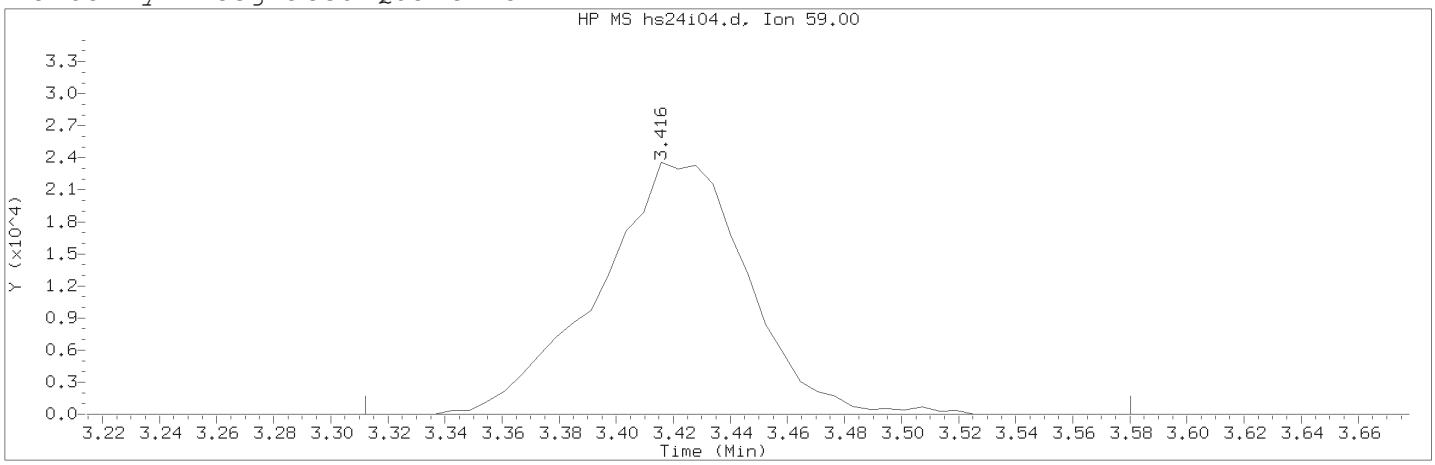
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 255
Retention Time (minutes): 3.141
Quant Ion : 101.00
Area : 246940
On-column Amount (ng) : 1.9182
Integration start scan : 233 Integration stop scan: 306
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

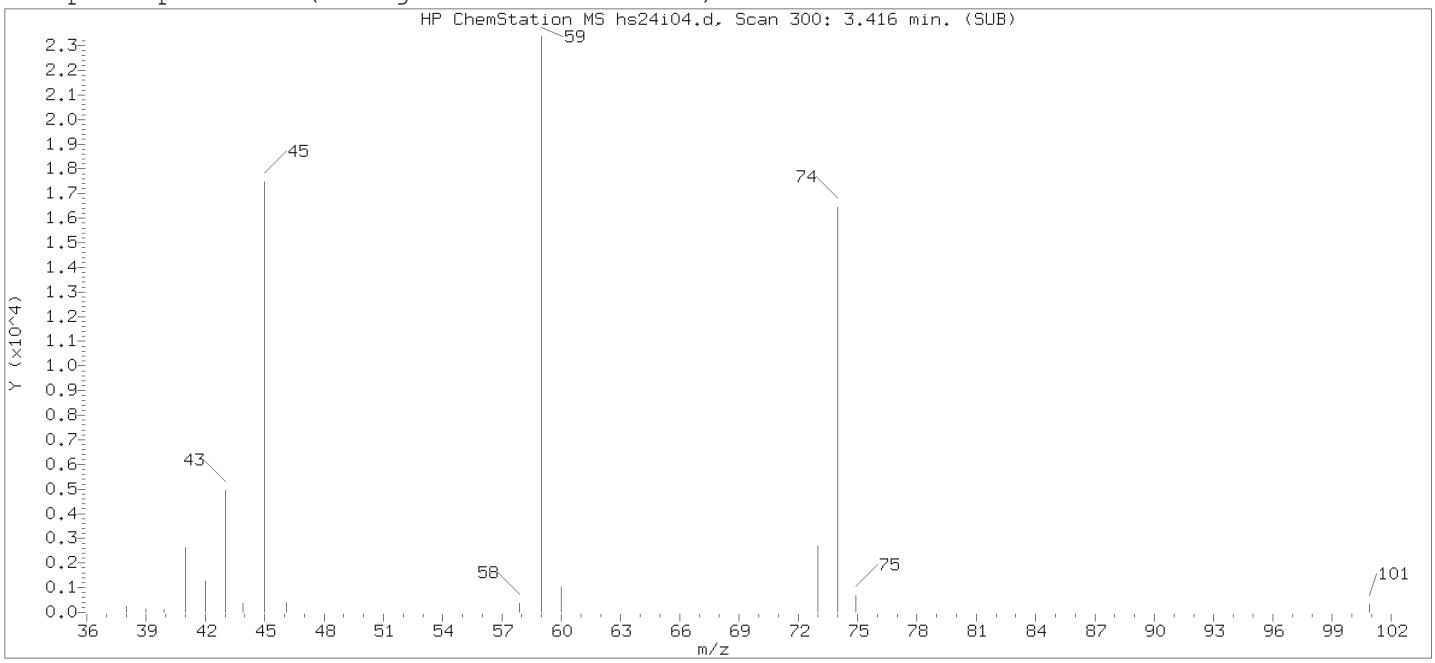
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 300
Retention Time (minutes): 3.416
Quant Ion : 59.00
Area (flag) : 85465M
On-Column Amount (ng) : 2.0086
Integration start scan : 282 Integration stop scan: 326
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

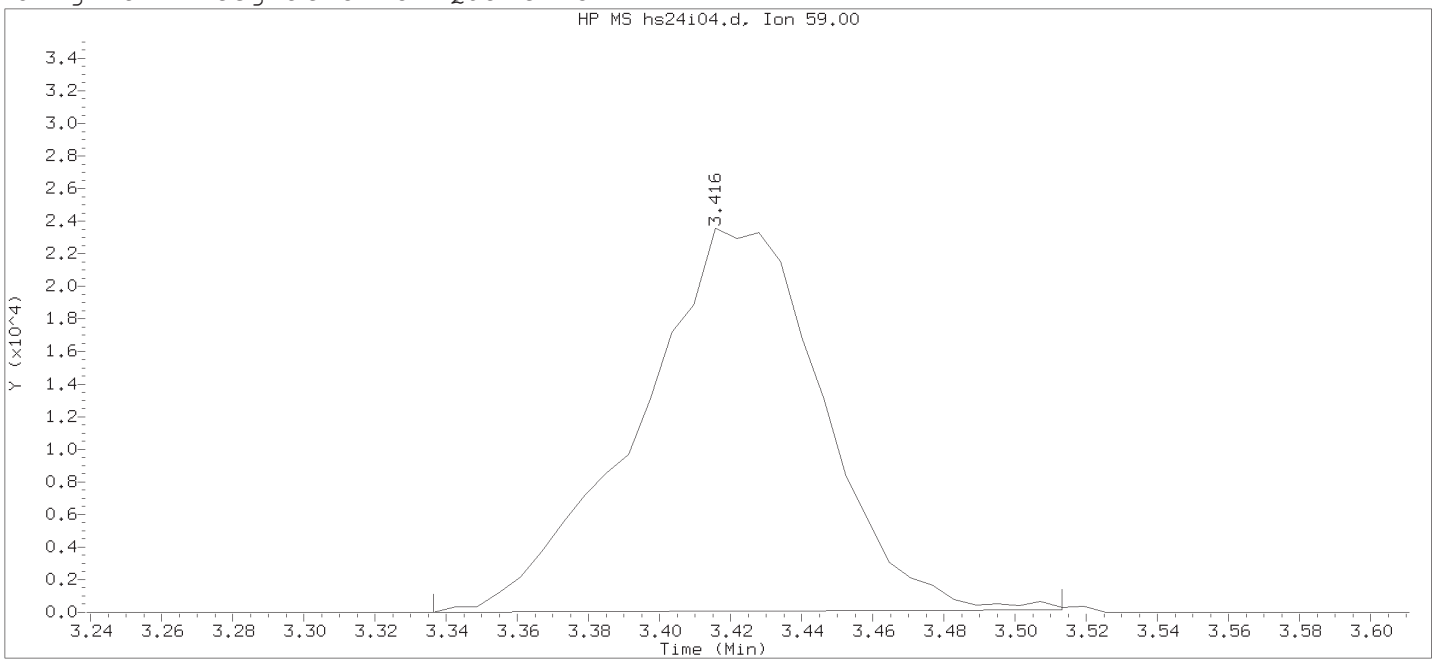
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

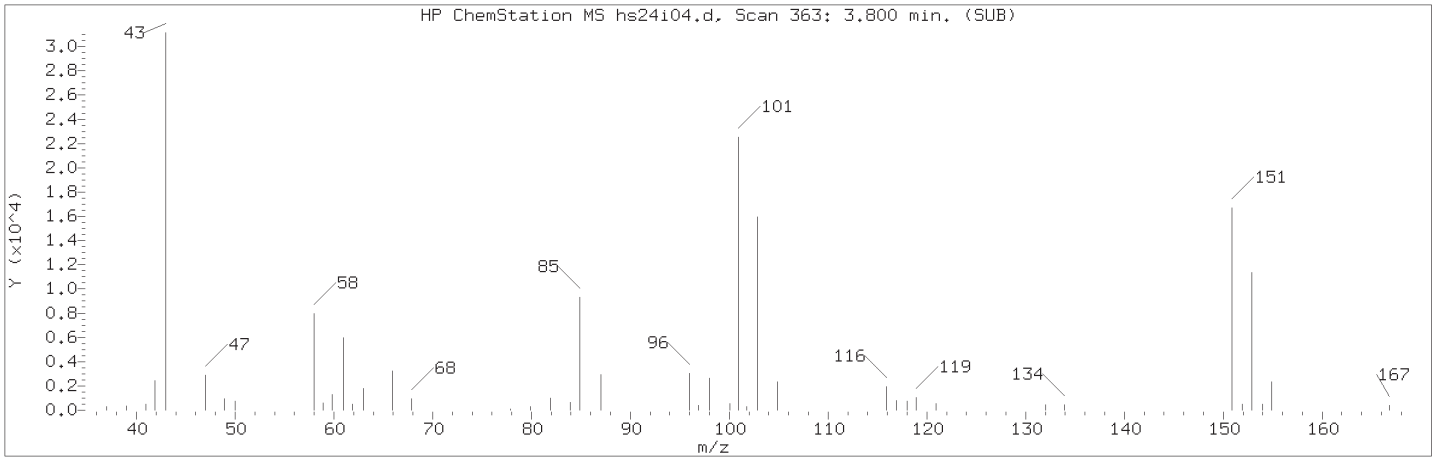
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

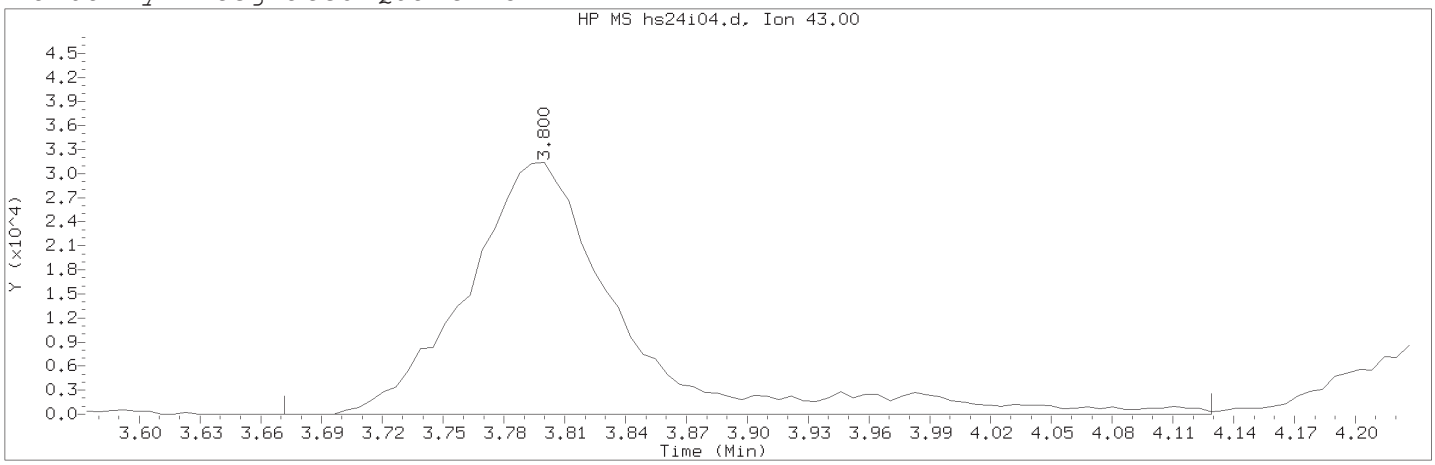
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 300
Retention Time (minutes): 3.416
Quant Ion : 59.00
Area : 84538
On-column Amount (ng) : 1.9630
Integration start scan : 286 Integration stop scan: 315
Y at integration start : 0 Y at integration end: 140

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

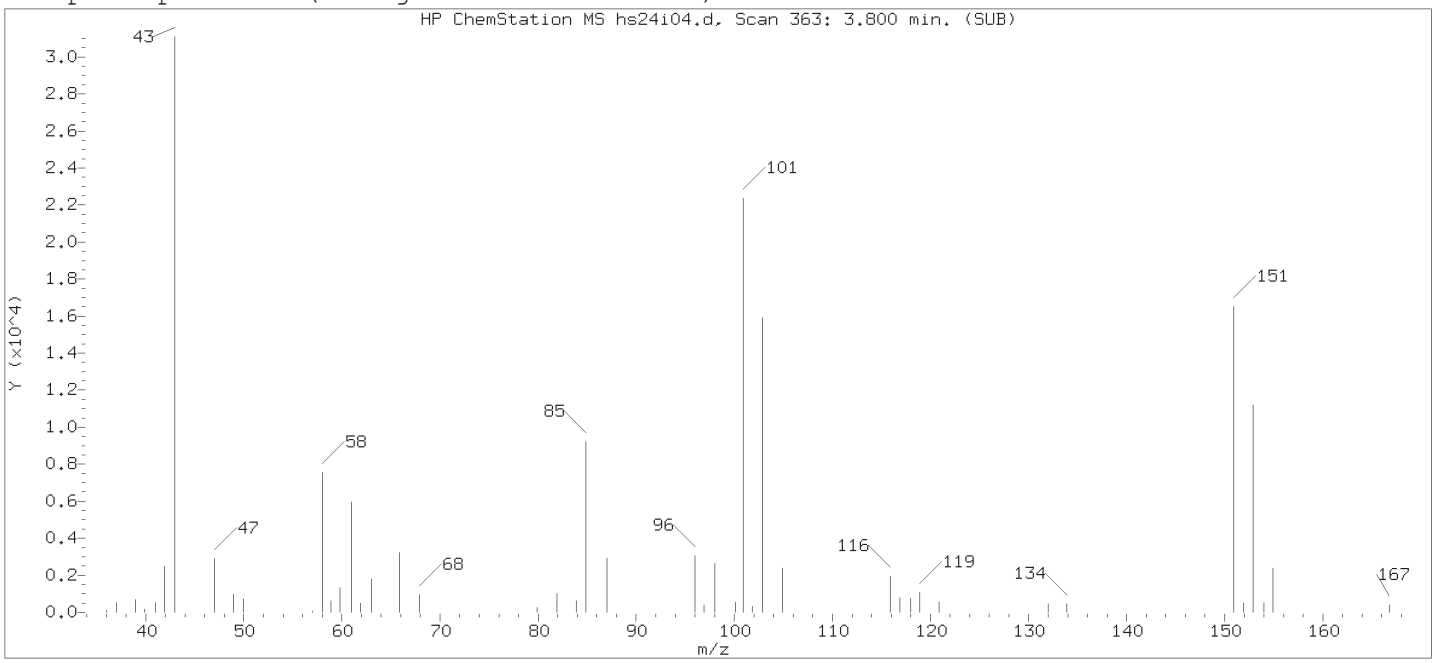
Compound Number : 14
Compound Name : Acetone
Scan Number : 363
Retention Time (minutes): 3.800
Quant Ion : 43.00
Area (flag) : 167715M
On-Column Amount (ng) : 19.0303
Integration start scan : 341 Integration stop scan: 416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

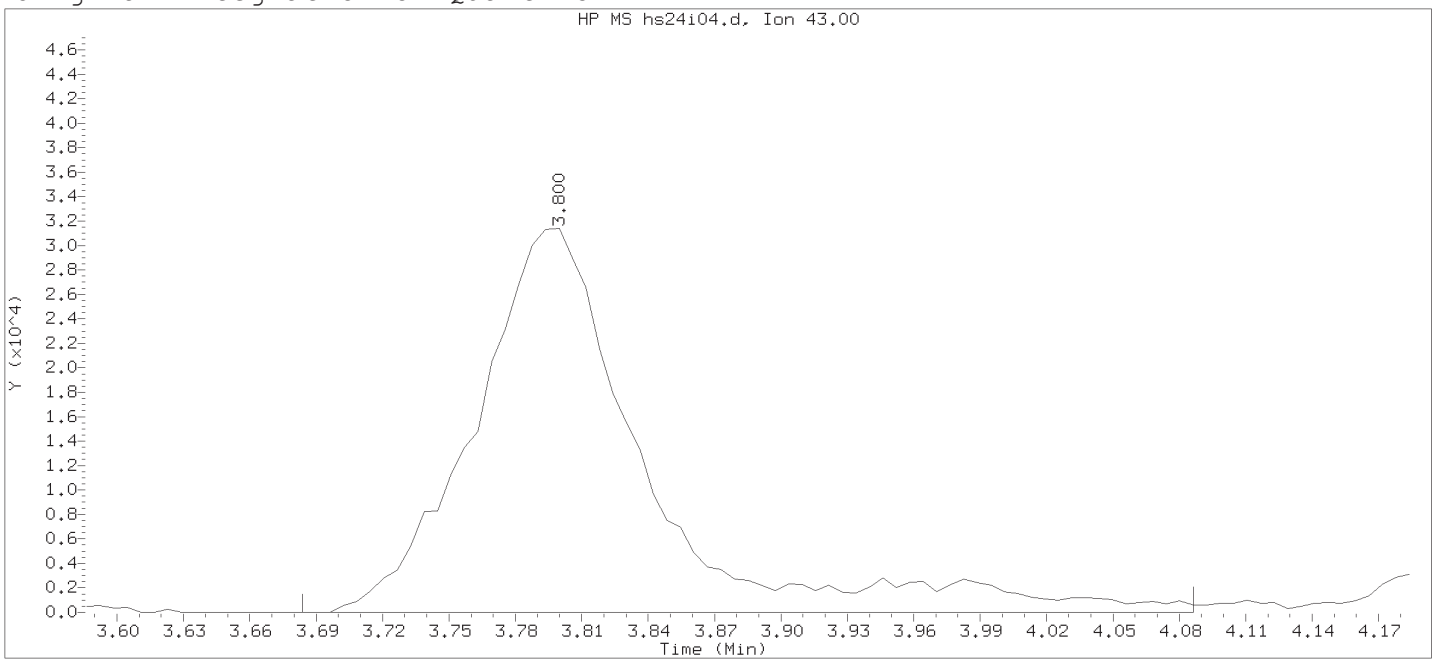
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

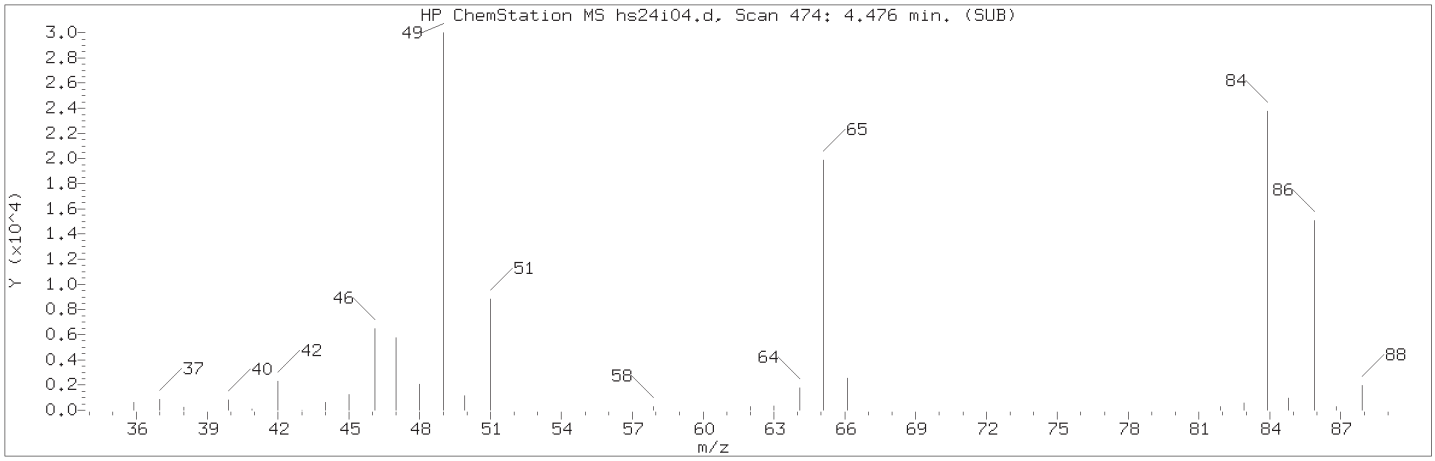
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

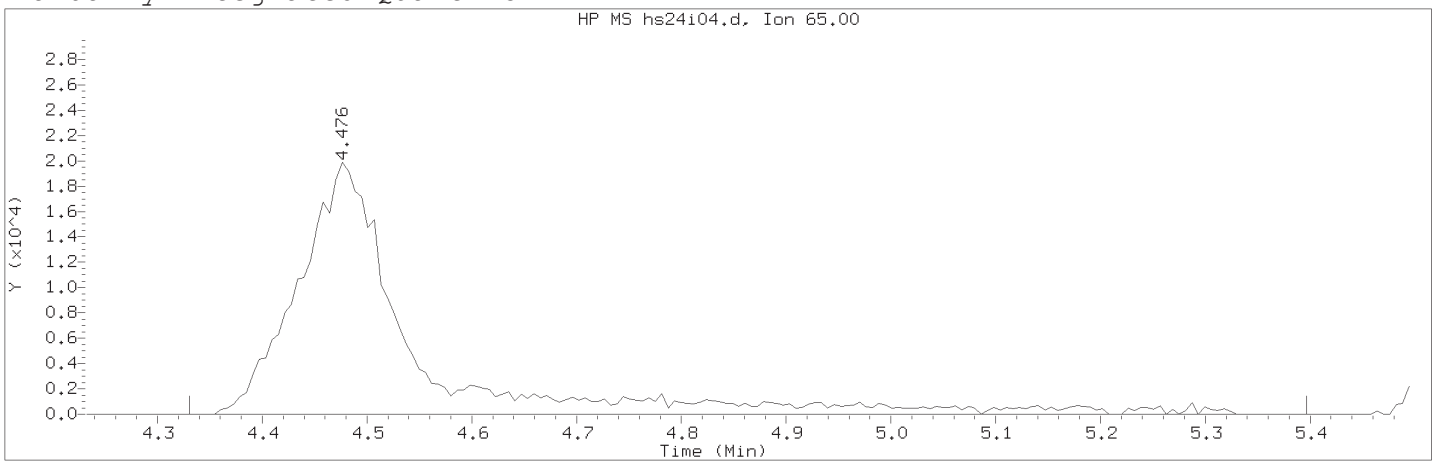
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 363		
Retention Time (minutes)	: 3.800		
Quant Ion	: 43.00		
Area	: 165832		
On-column Amount (ng)	: 19.2516		
Integration start scan	: 343	Integration stop scan:	409
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

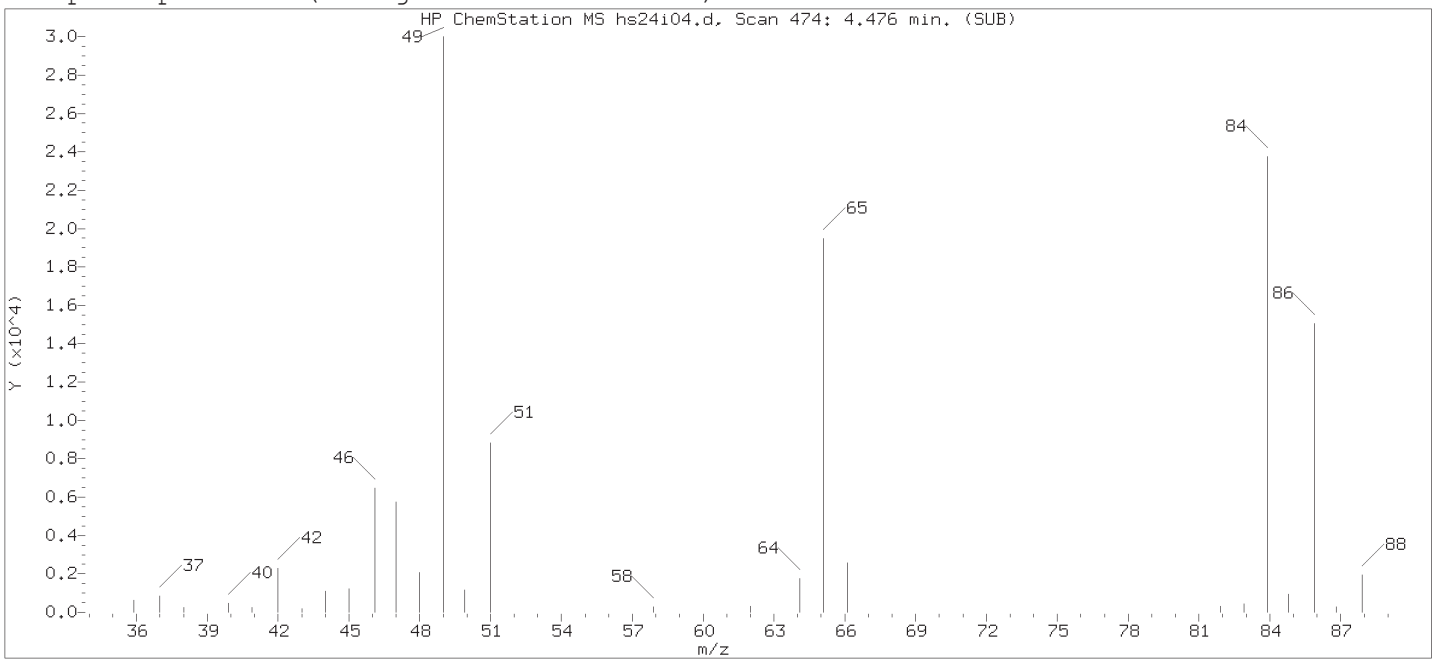
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.476
Quant Ion : 65.00
Area (flag) : 147863M
On-Column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

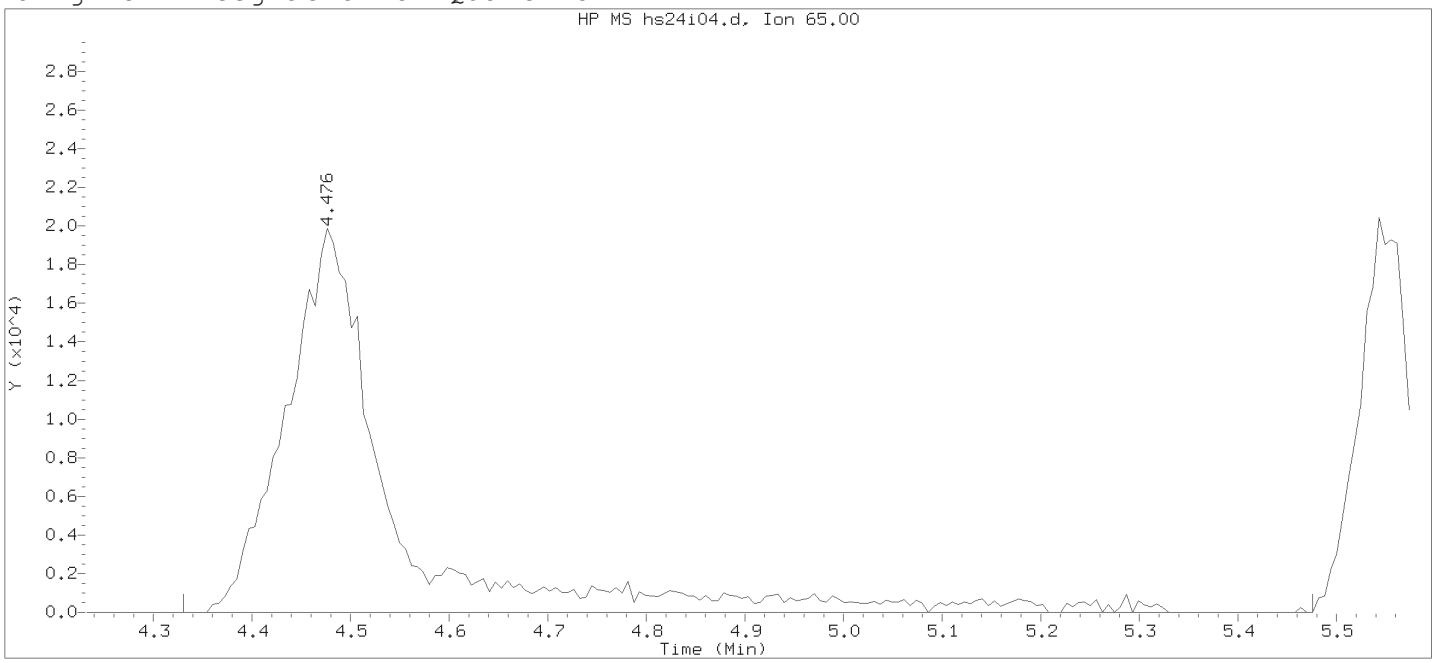
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

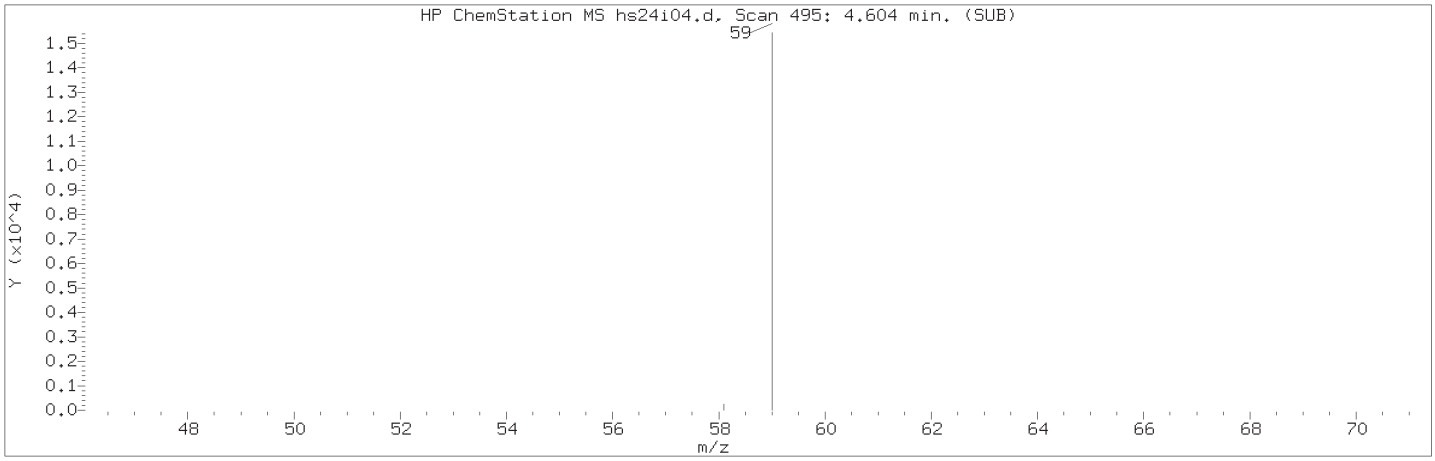
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

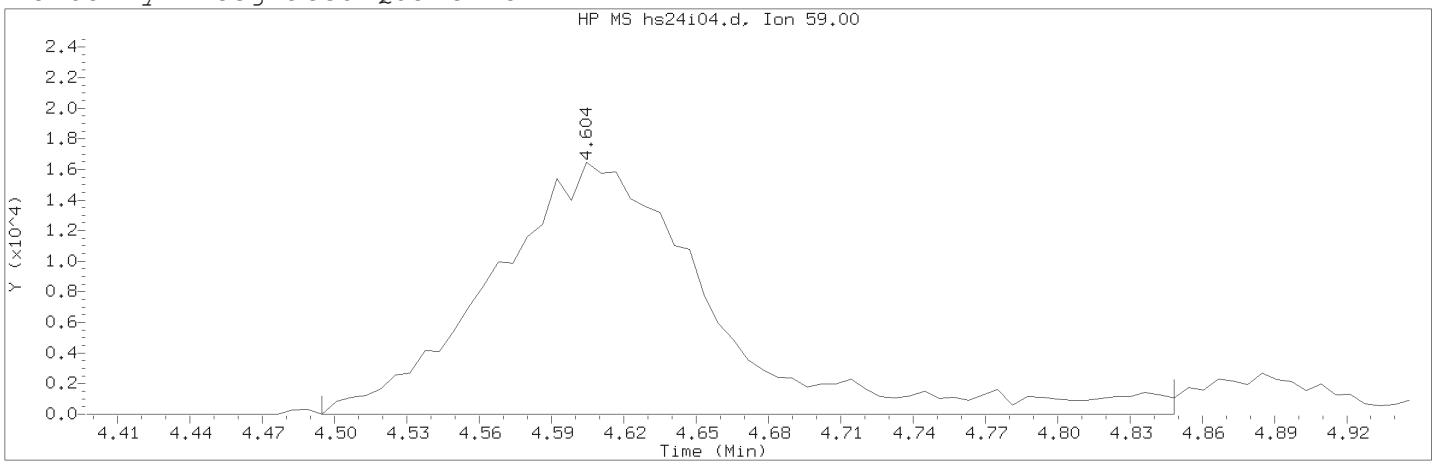
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.476
Quant Ion : 65.00
Area : 147958
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 637
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

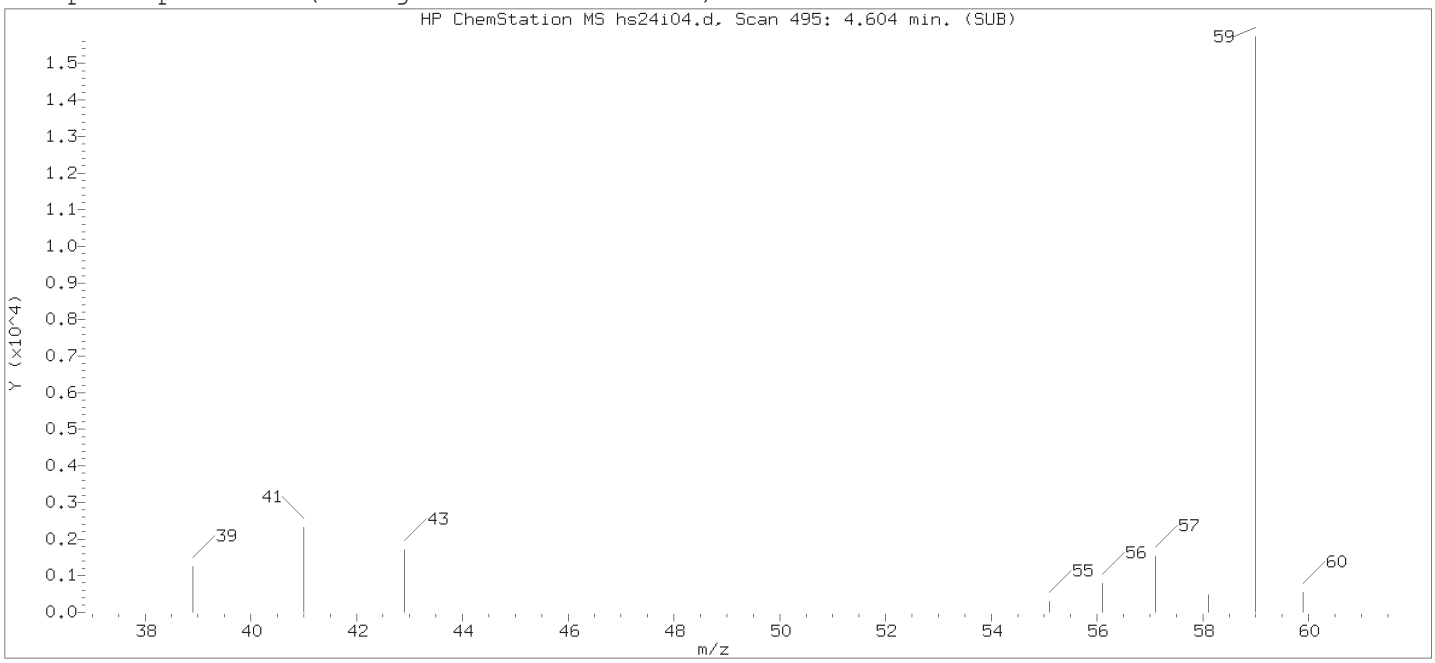
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 495
Retention Time (minutes): 4.604
Quant Ion : 59.00
Area (flag) : 104728M
On-Column Amount (ng) : 41.4946
Integration start scan : 476 Integration stop scan: 534
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

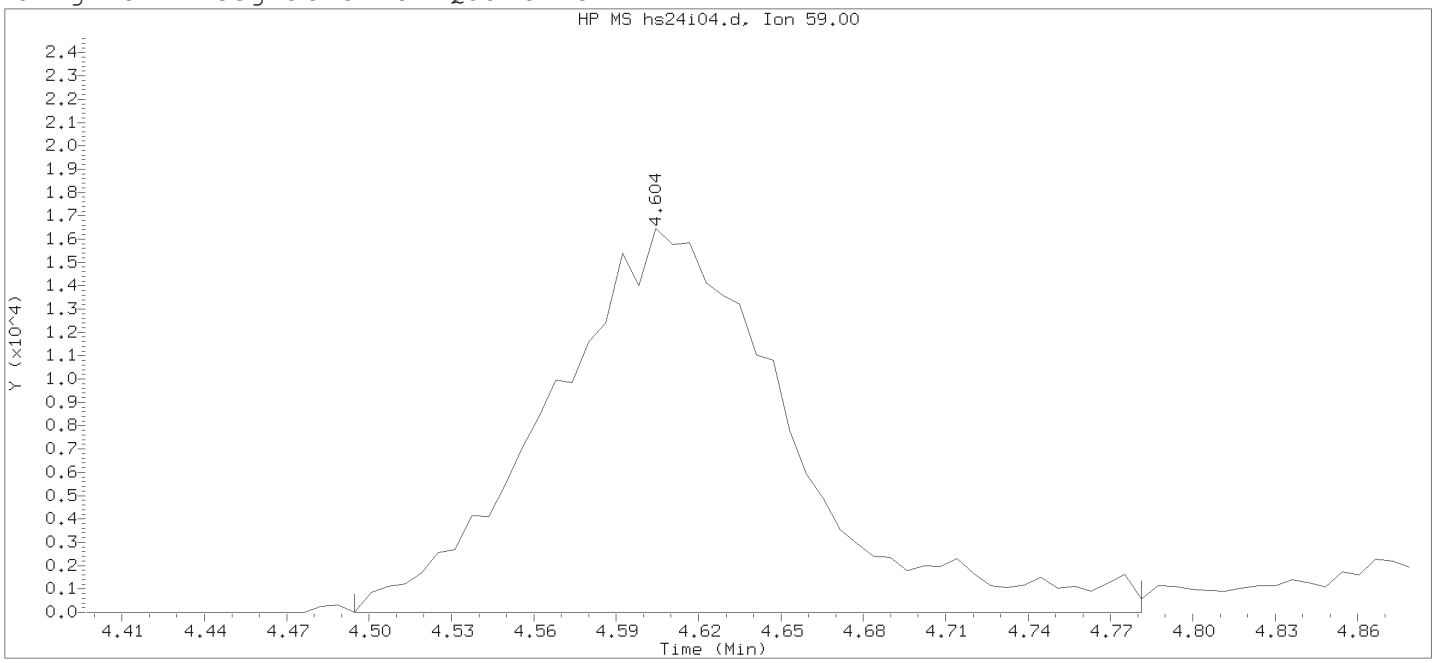
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

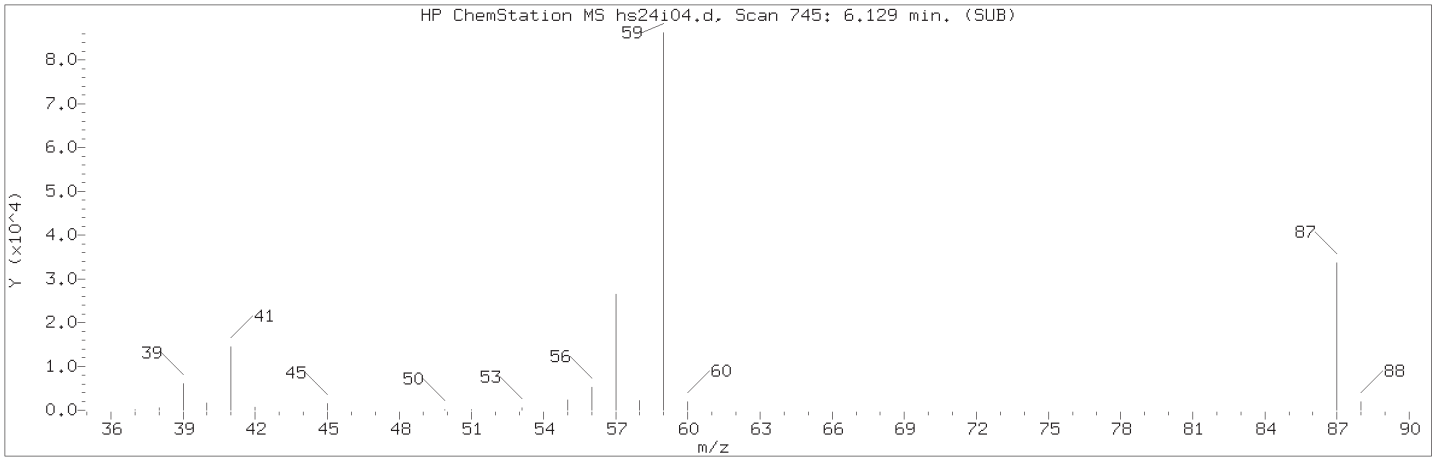
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

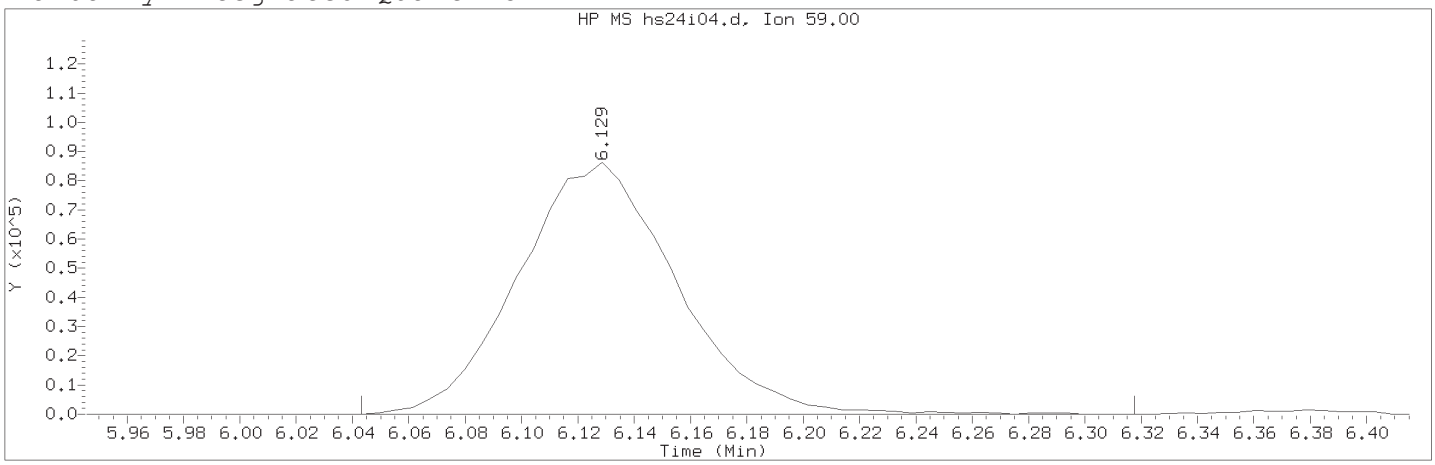
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 495
Retention Time (minutes): 4.604
Quant Ion : 59.00
Area : 100186
On-column Amount (ng) : 38.4816
Integration start scan : 476 Integration stop scan: 523
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

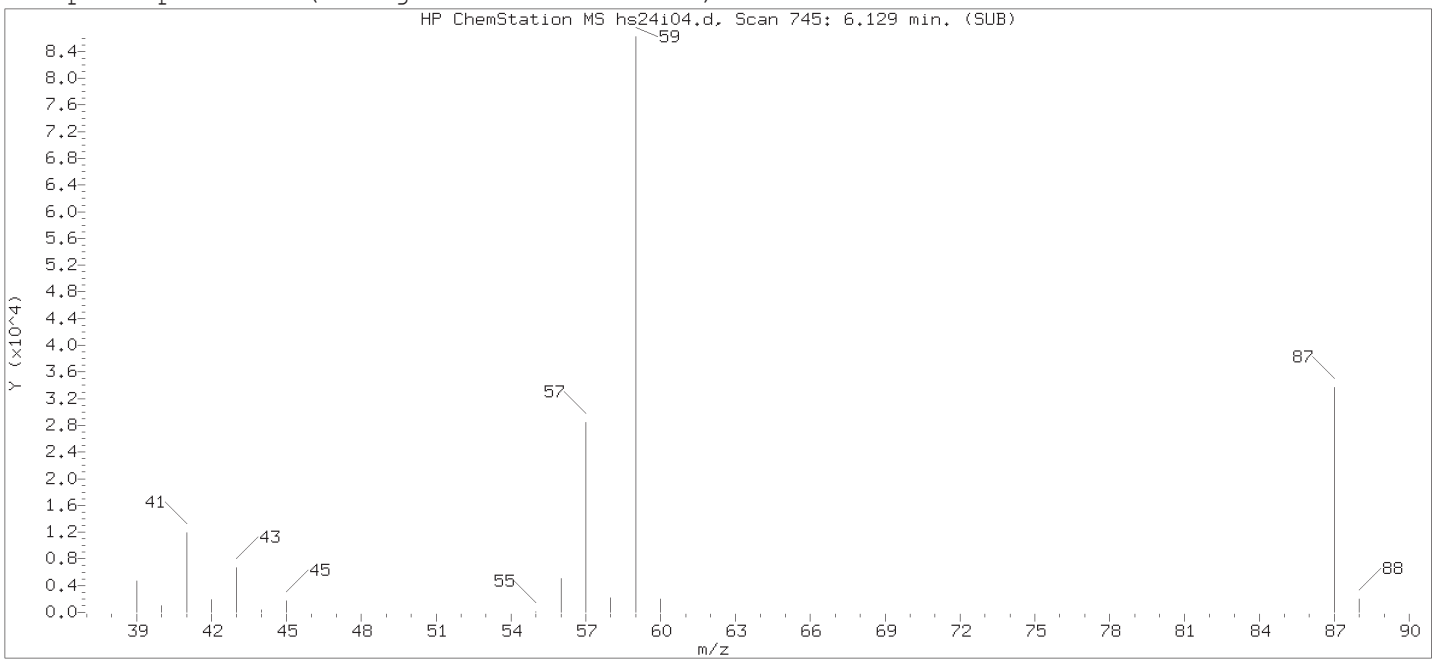
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.129
Quant Ion : 59.00
Area (flag) : 334132M
On-Column Amount (ng) : 2.0315
Integration start scan : 730 Integration stop scan: 775
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

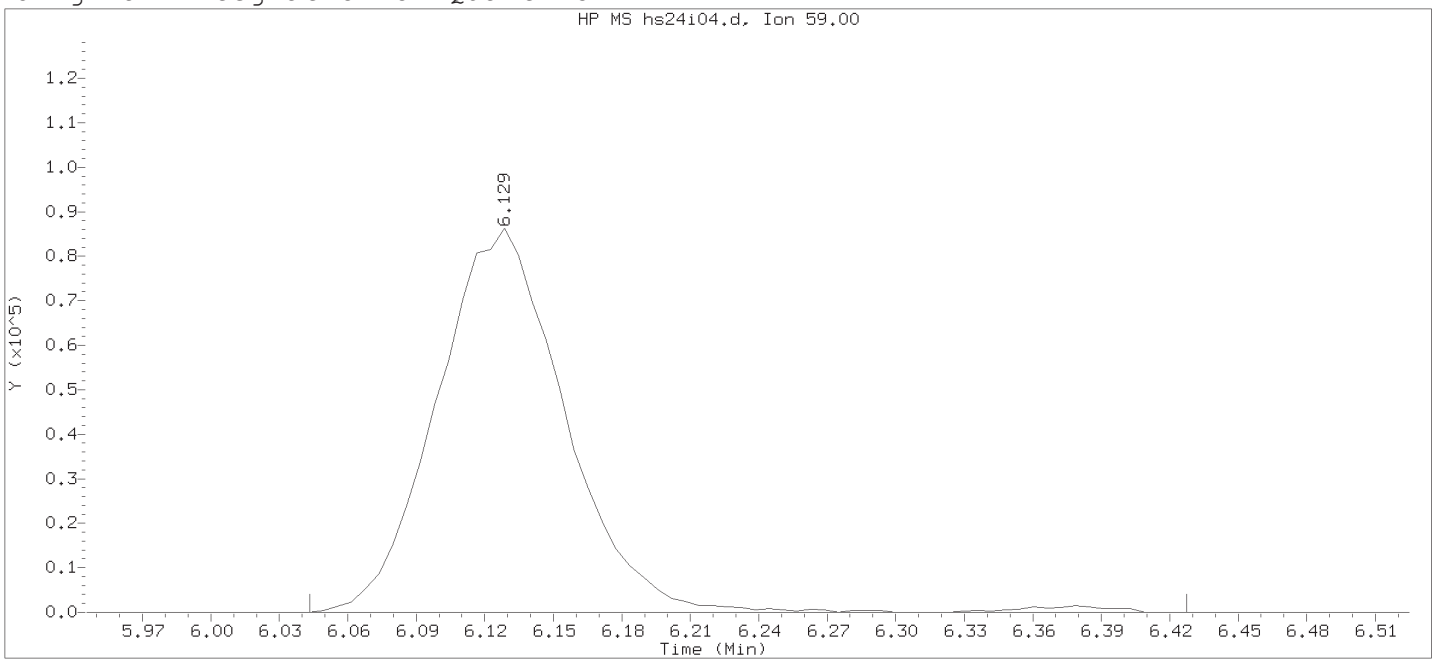
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

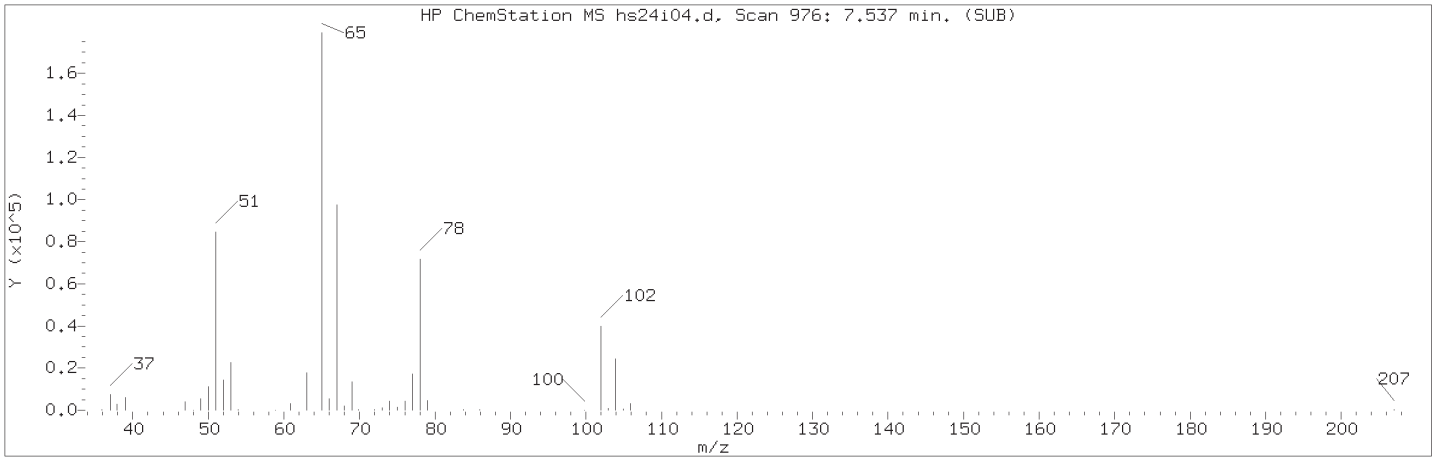
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

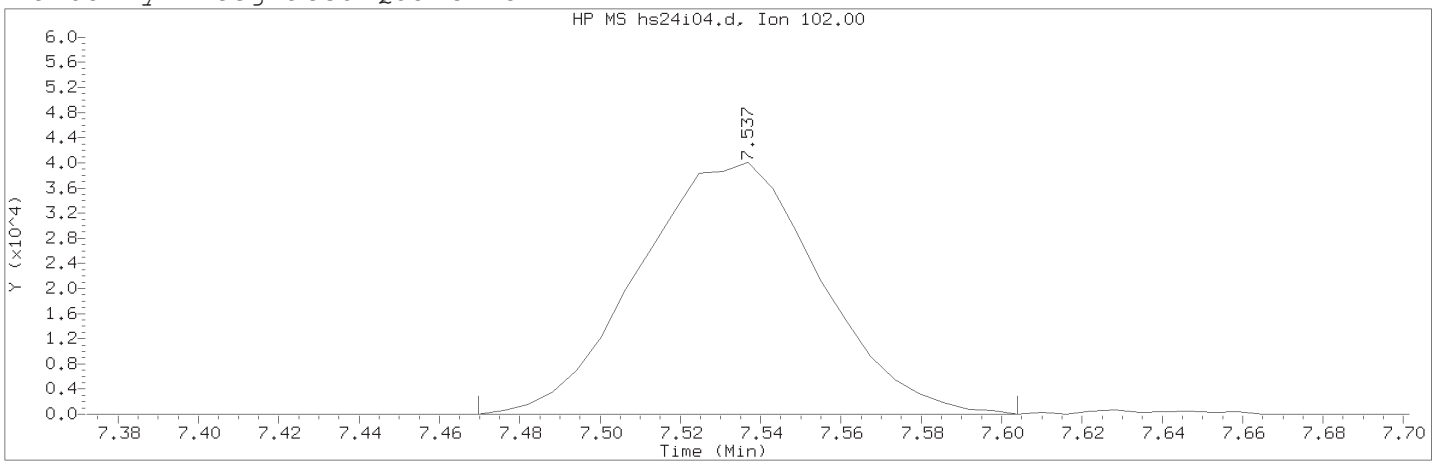
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.129
Quant Ion : 59.00
Area : 338010
On-column Amount (ng) : 1.9953
Integration start scan : 730 Integration stop scan: 793
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

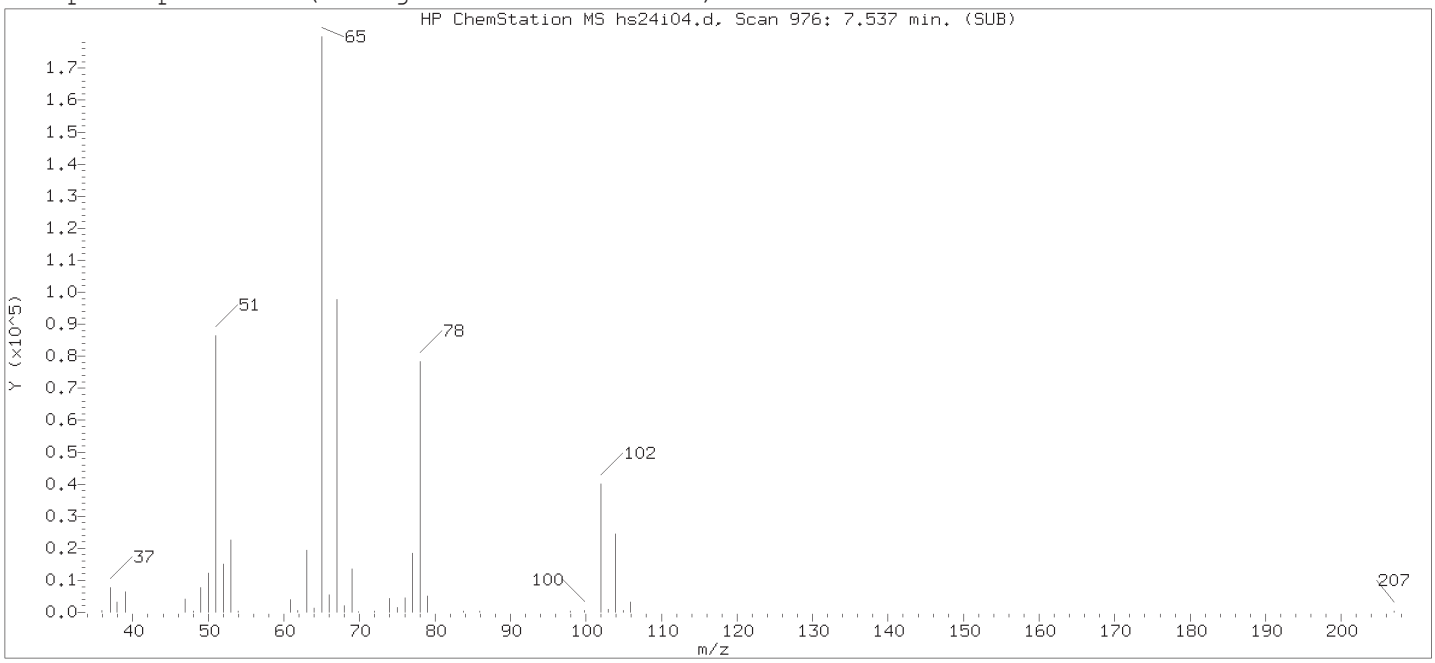
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area (flag) : 125039M
On-Column Amount (ng) : 10.2684
Integration start scan : 964 Integration stop scan: 986
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

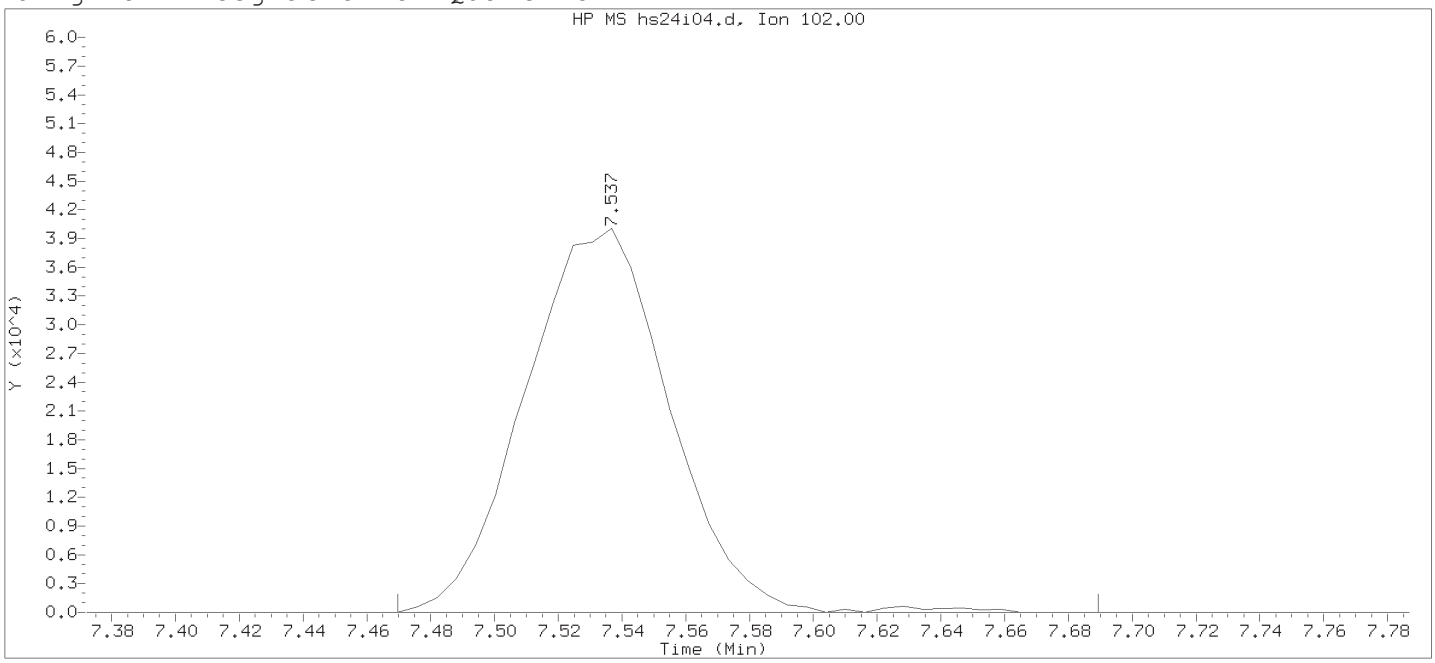
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

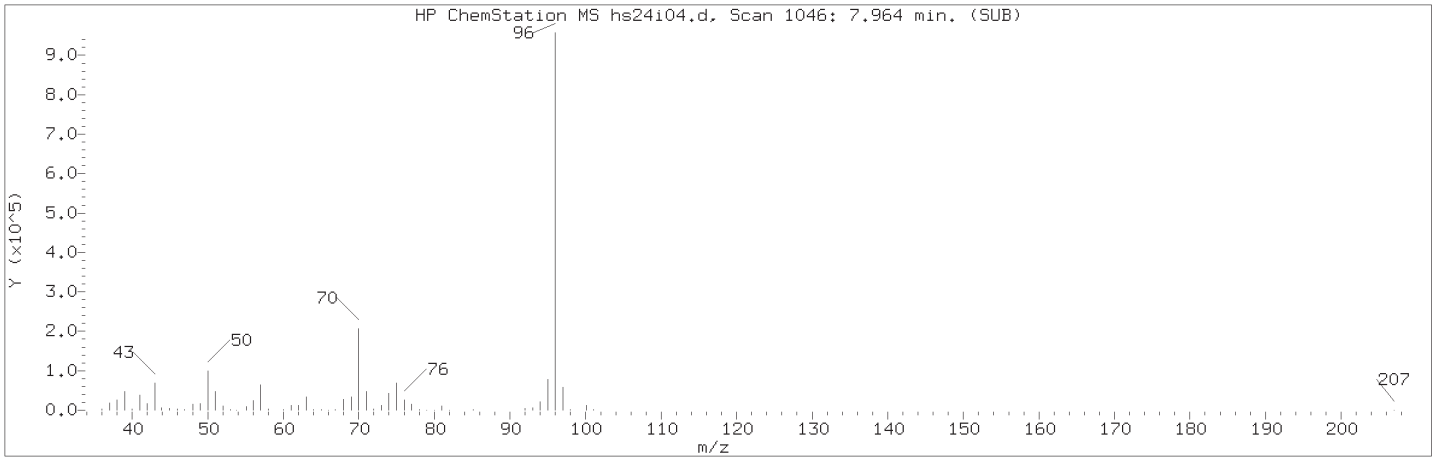
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

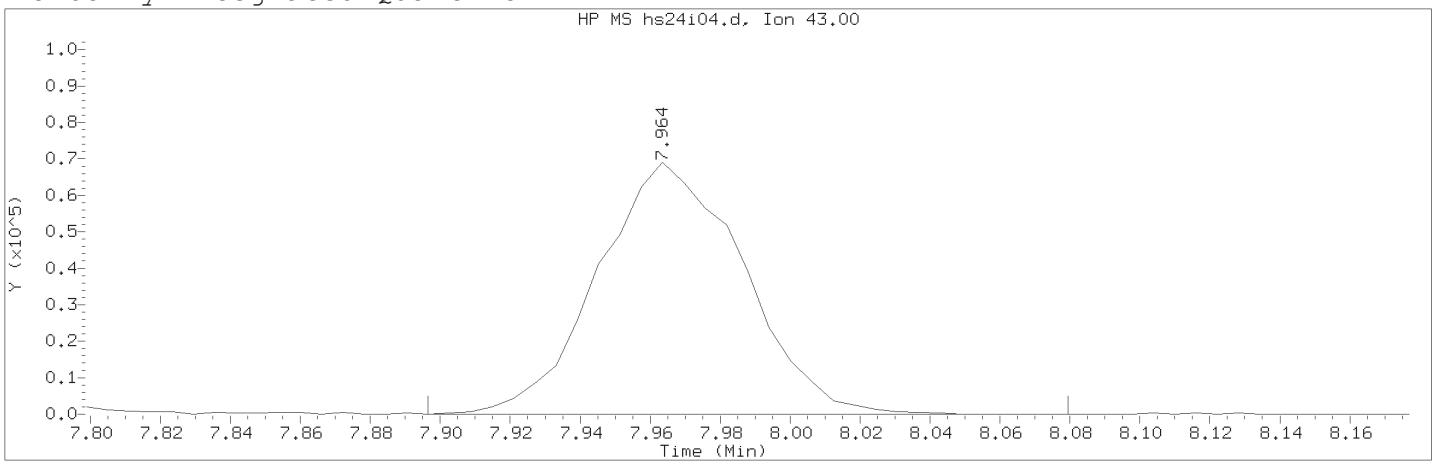
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area : 126184
On-column Amount (ng) : 10.2319
Integration start scan : 964 Integration stop scan: 1000
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

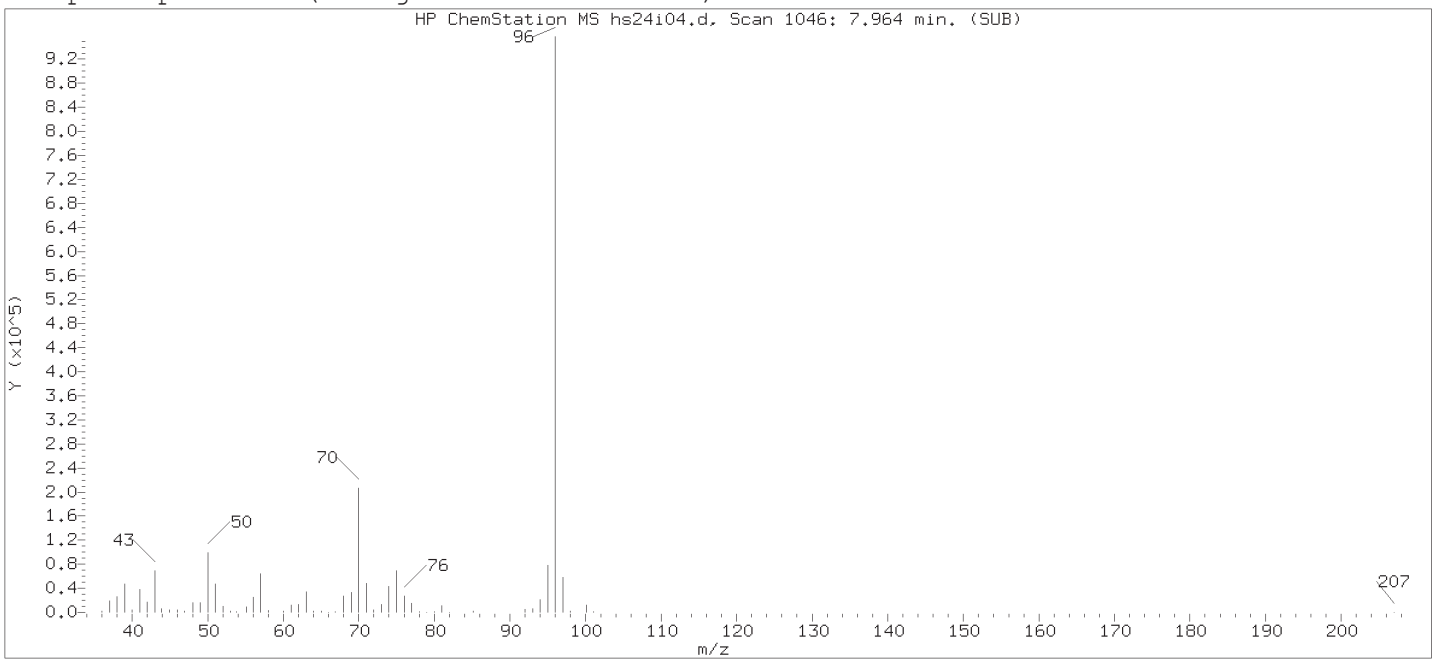
Compound Number : 62
Compound Name : n-Heptane
Scan Number : 1046
Retention Time (minutes): 7.964
Quant Ion : 43.00
Area (flag) : 198879M
On-Column Amount (ng) : 1.9780
Integration start scan : 1034 Integration stop scan: 1064
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

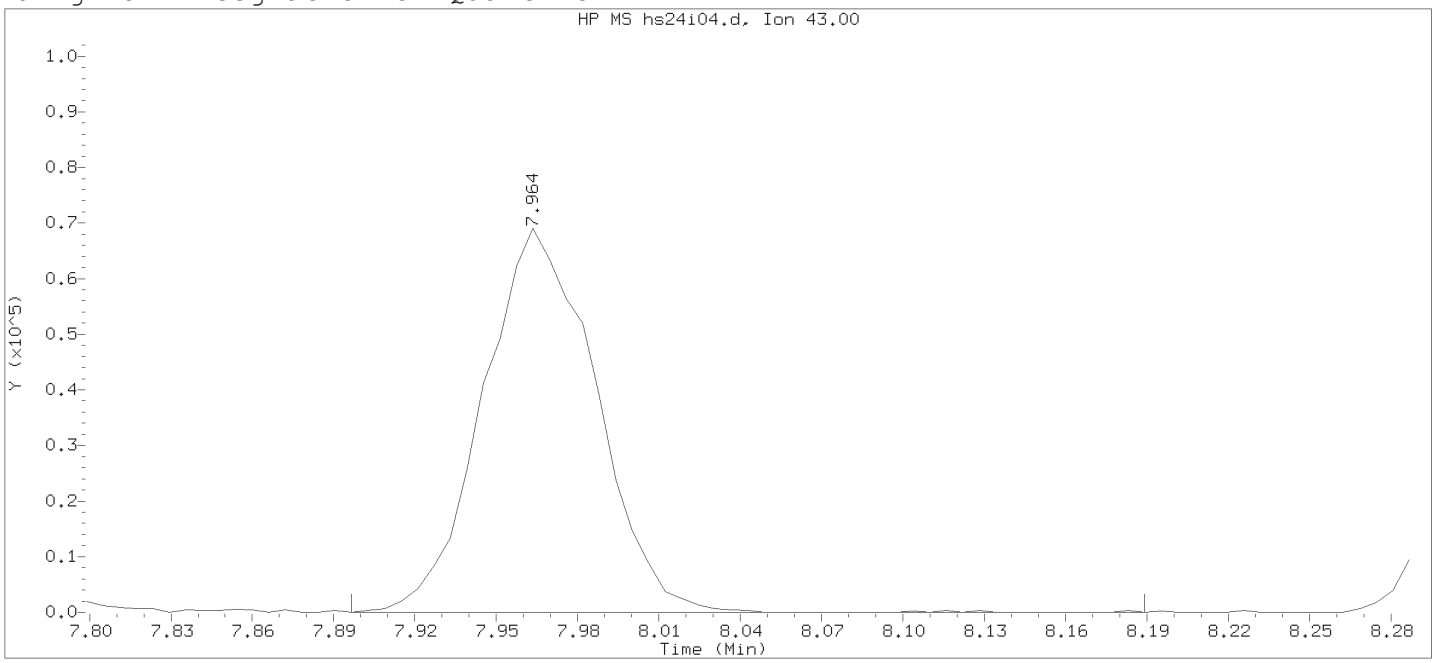
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

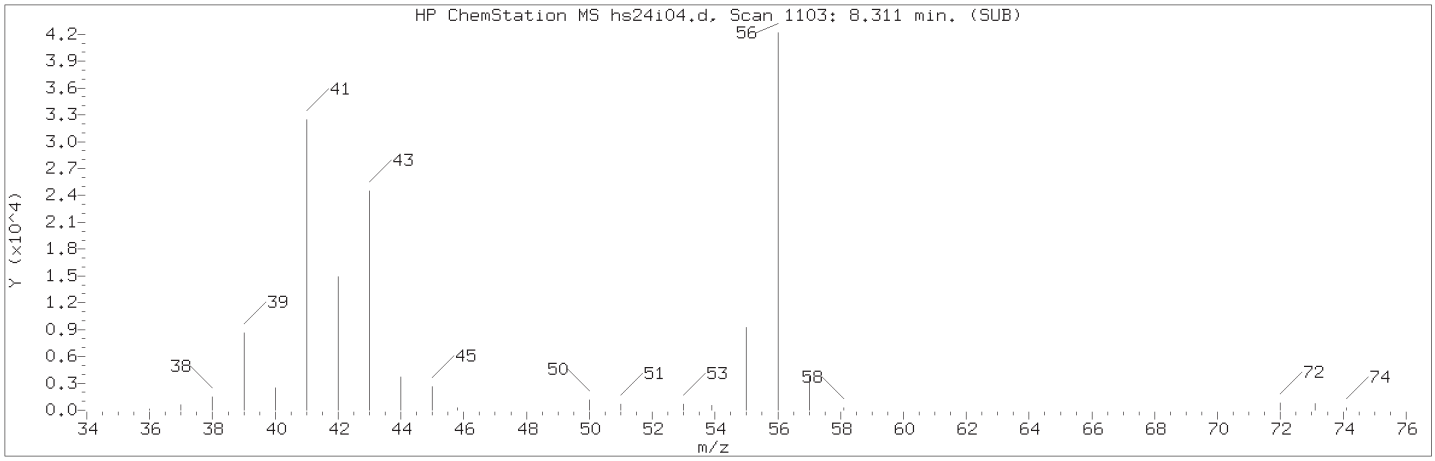
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

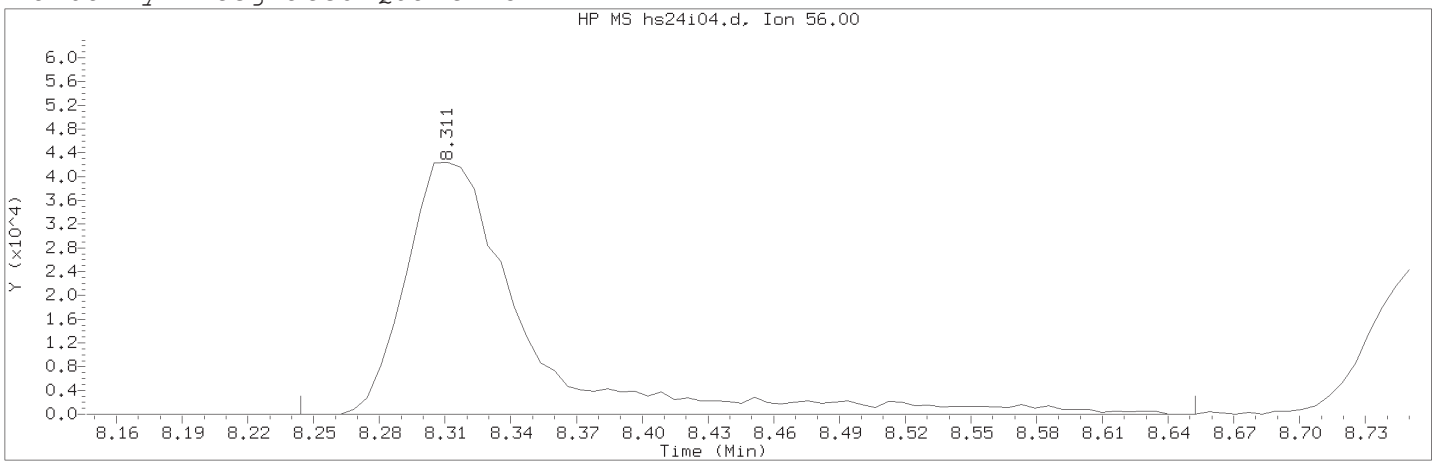
Compound Number : 62
Compound Name : n-Heptane
Scan Number : 1046
Retention Time (minutes): 7.964
Quant Ion : 43.00
Area : 199330
On-column Amount (ng) : 1.8366
Integration start scan : 1034 Integration stop scan: 1082
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

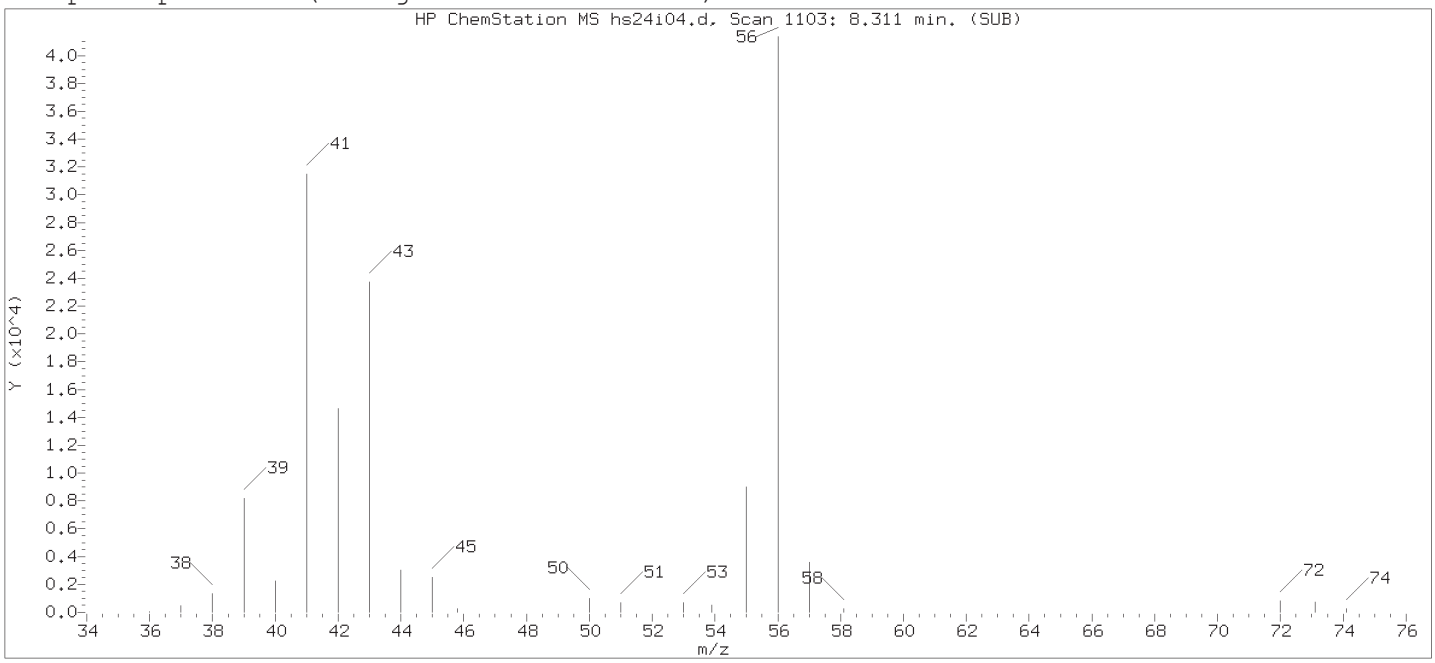
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1103
Retention Time (minutes): 8.311
Quant Ion : 56.00
Area (flag) : 160778M
On-Column Amount (ng) : 194.8775
Integration start scan : 1091 Integration stop scan: 1158
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

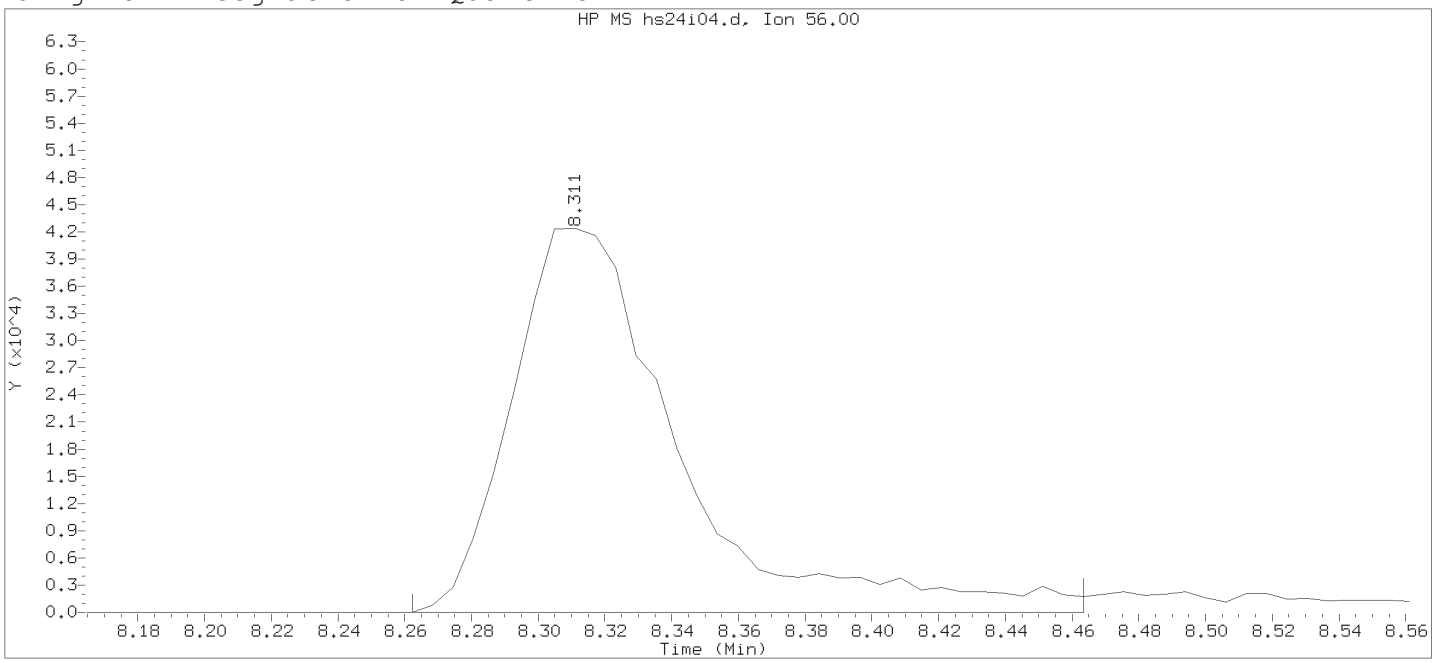
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

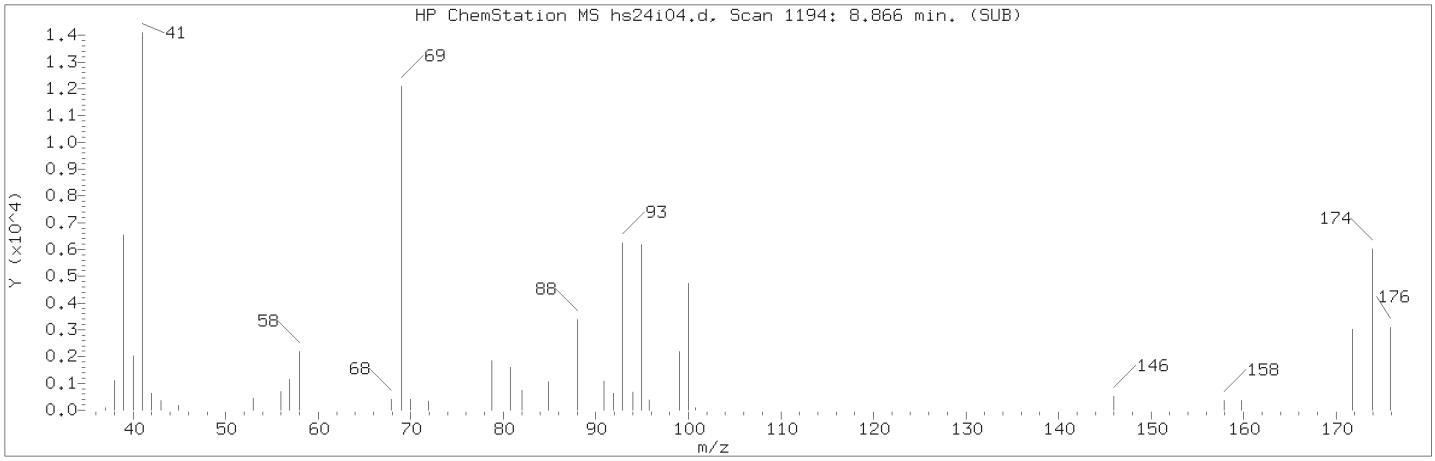
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

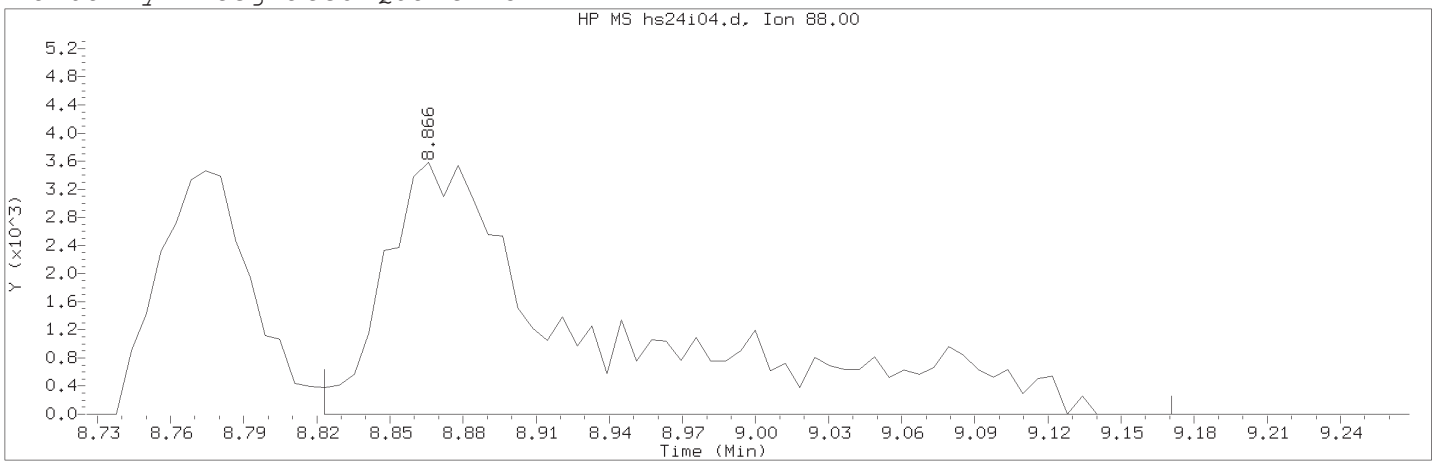
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1103
Retention Time (minutes): 8.311
Quant Ion : 56.00
Area : 147095
On-column Amount (ng) : 168.2954
Integration start scan : 1094 Integration stop scan: 1127
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

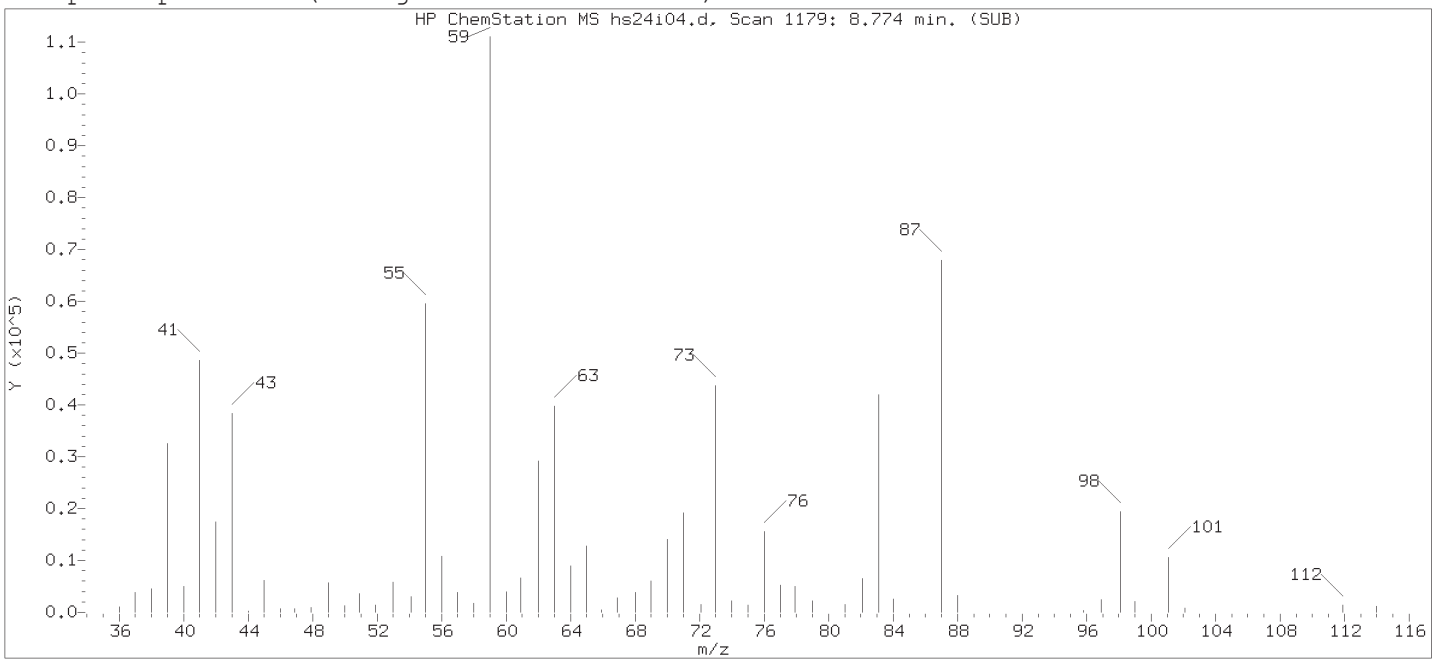
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1194
Retention Time (minutes): 8.866
Quant Ion : 88.00
Area (flag) : 21749M
On-Column Amount (ng) : 109.4886
Integration start scan : 1186 Integration stop scan: 1243
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

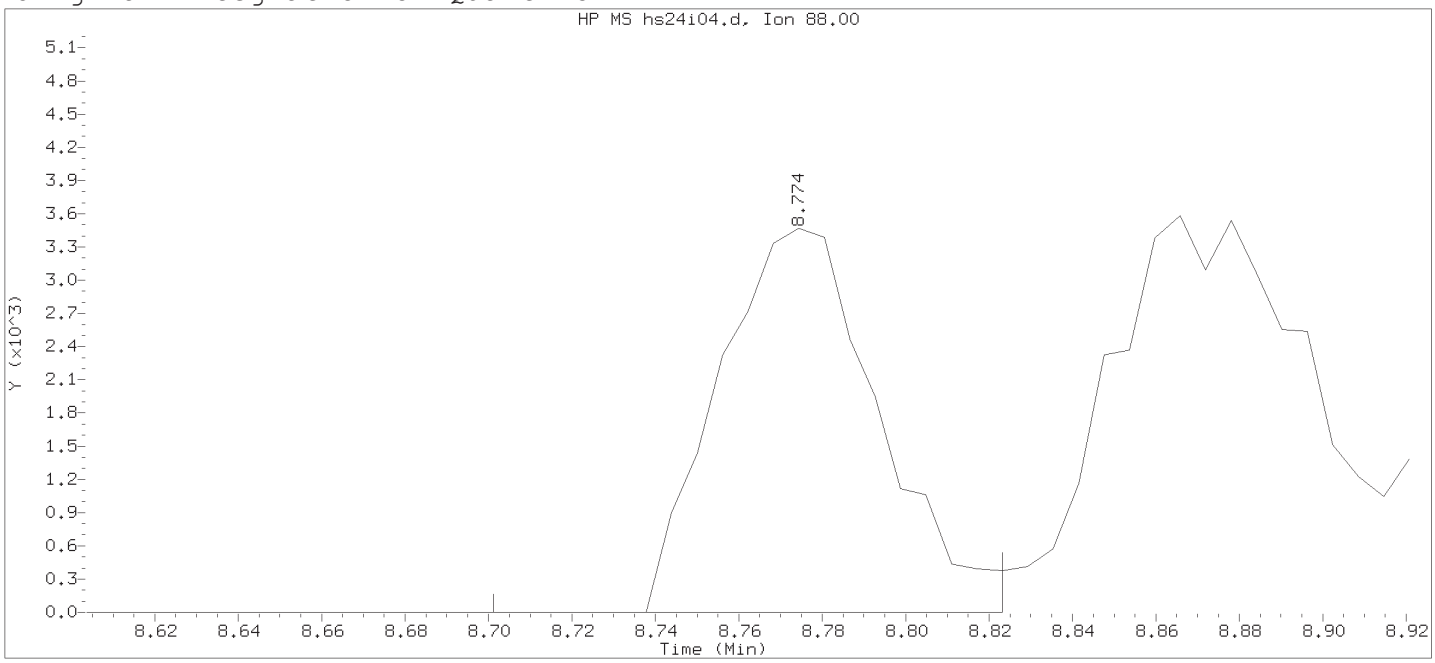
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

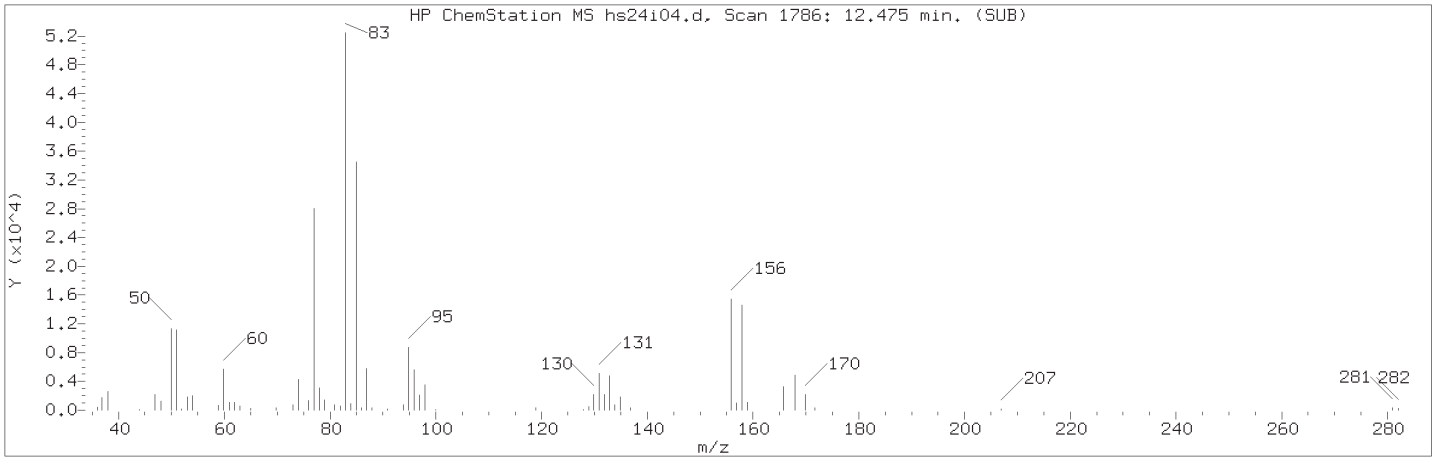
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

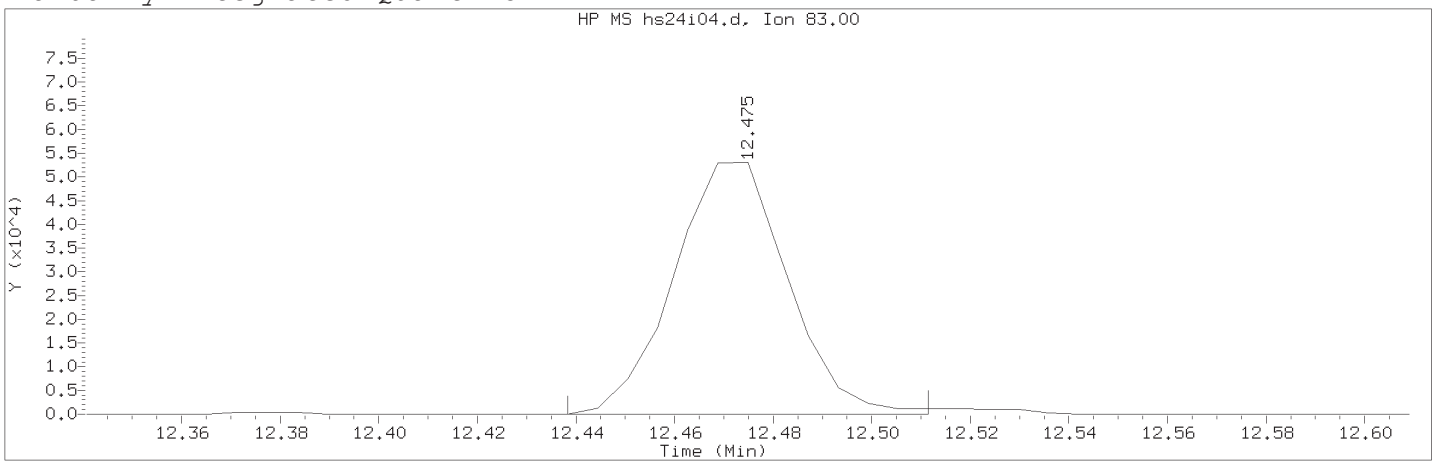
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1179		
Retention Time (minutes)	: 8.774		
Quant Ion	: 88.00		
Area	: 9210		
On-column Amount (ng)	: 66.8956		
Integration start scan	: 1166	Integration stop scan:	1186
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

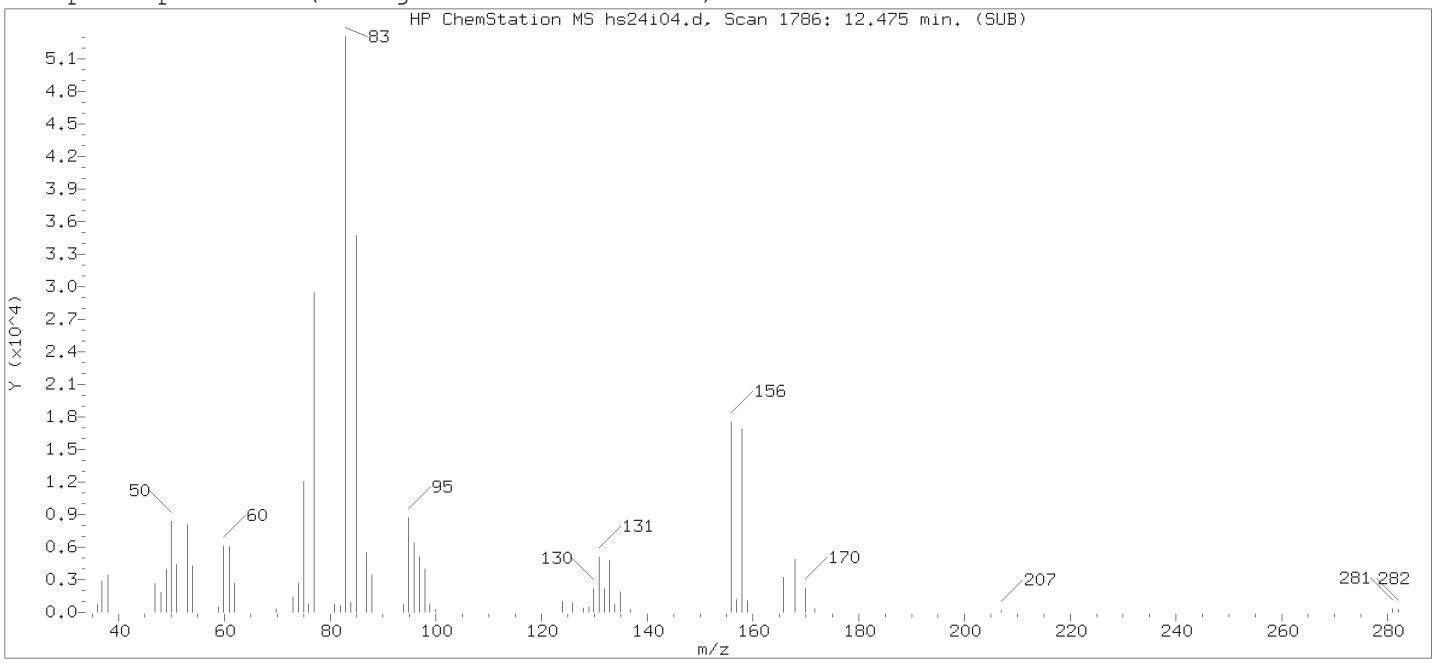
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 85286M
On-Column Amount (ng) : 1.9375
Integration start scan : 1779 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

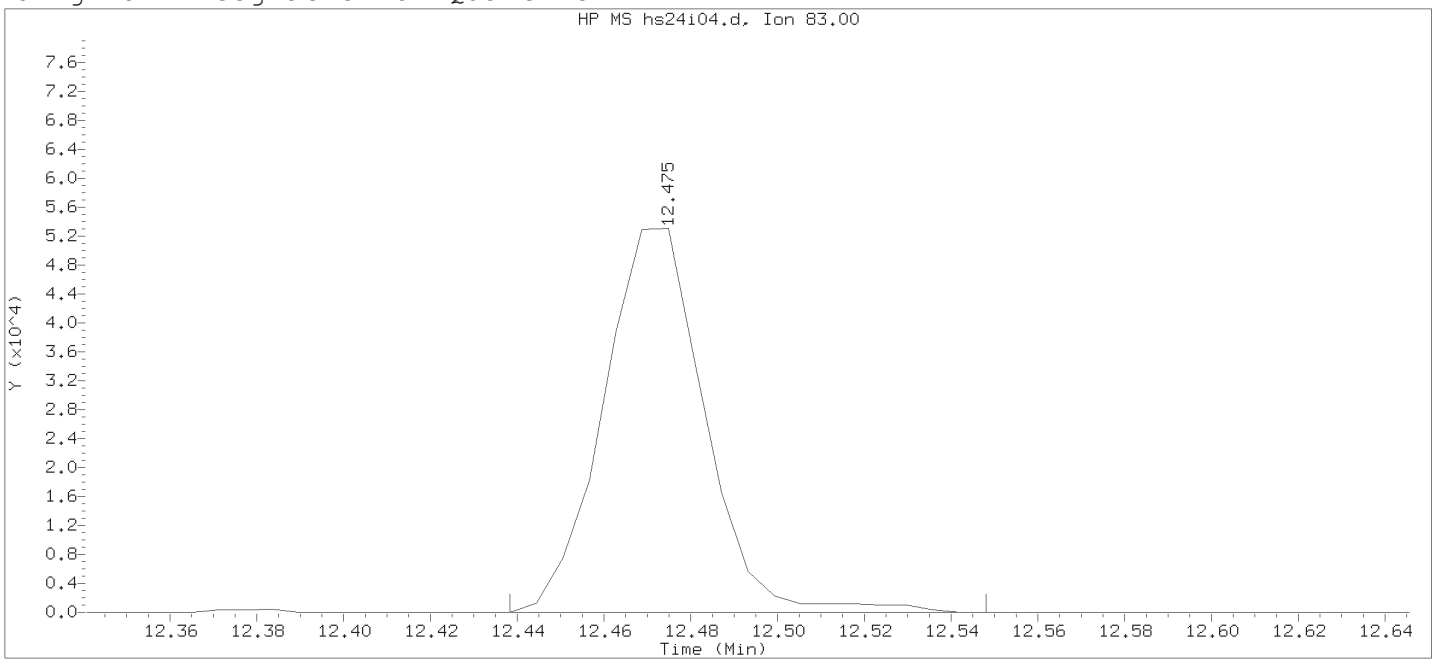
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

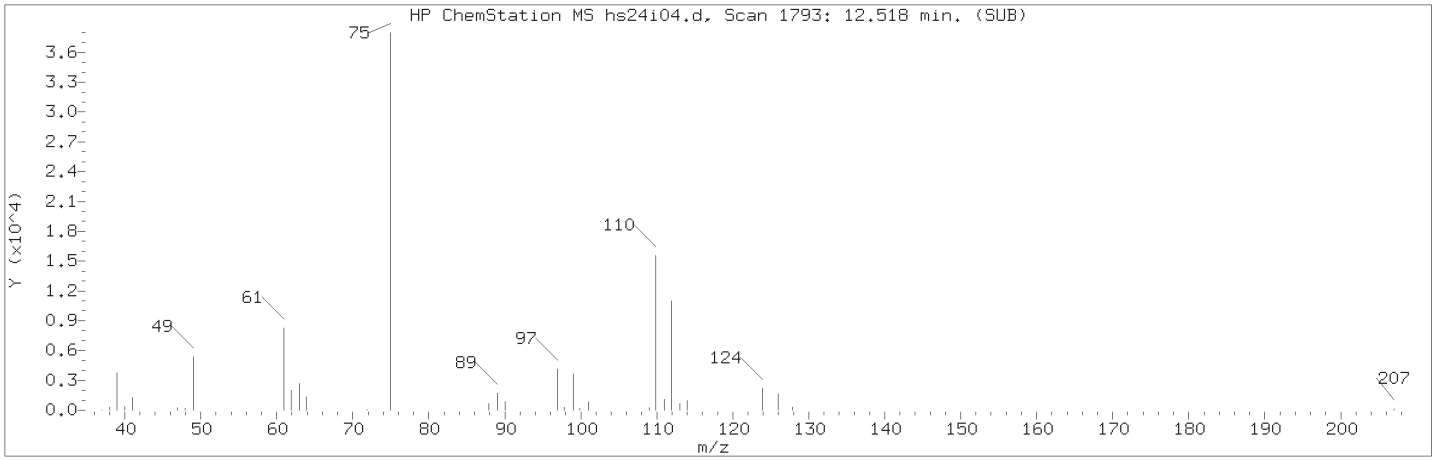
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

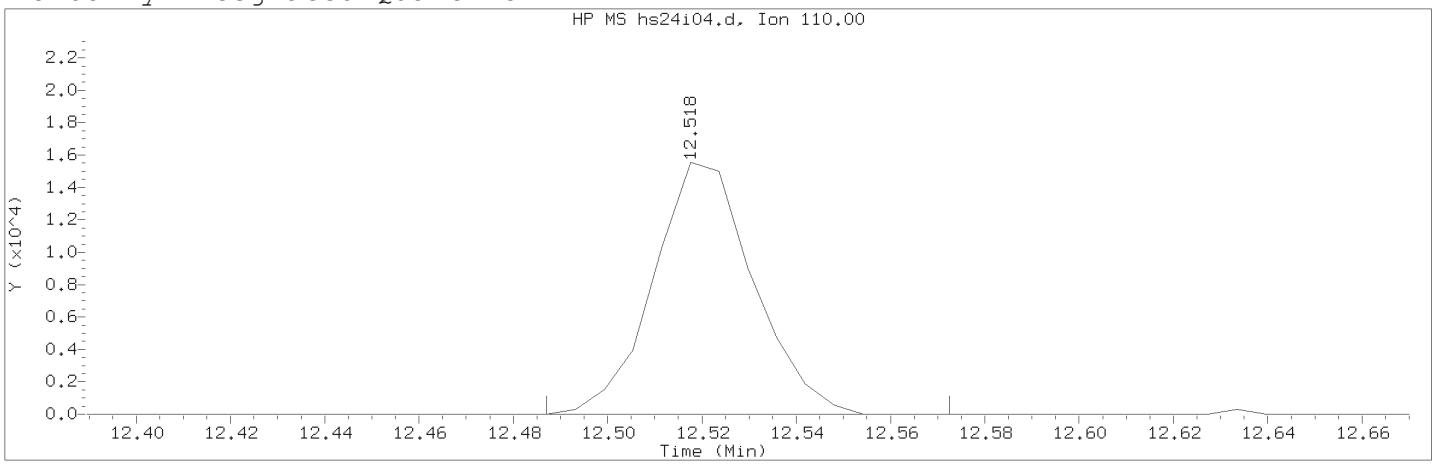
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 86557
On-column Amount (ng) : 1.8966
Integration start scan : 1779 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

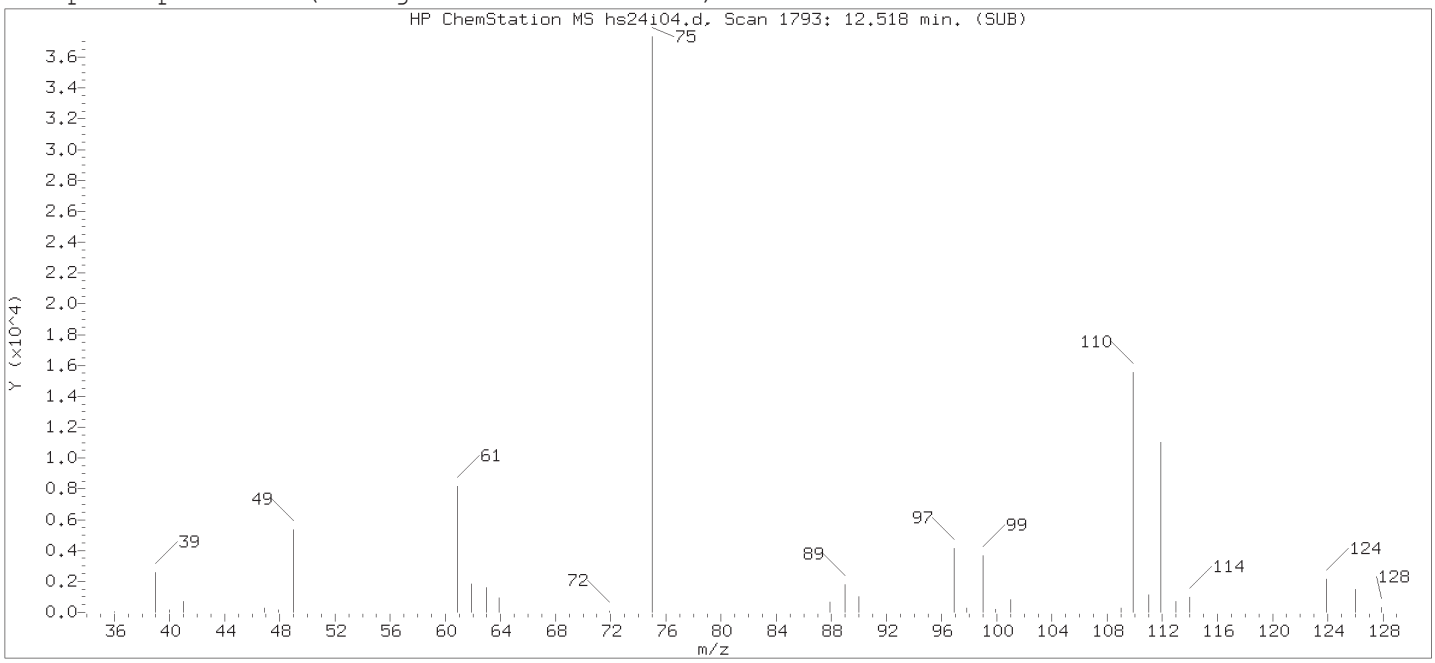
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 110.00
Area (flag) : 22957M
On-Column Amount (ng) : 2.0173
Integration start scan : 1787 Integration stop scan: 1801
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

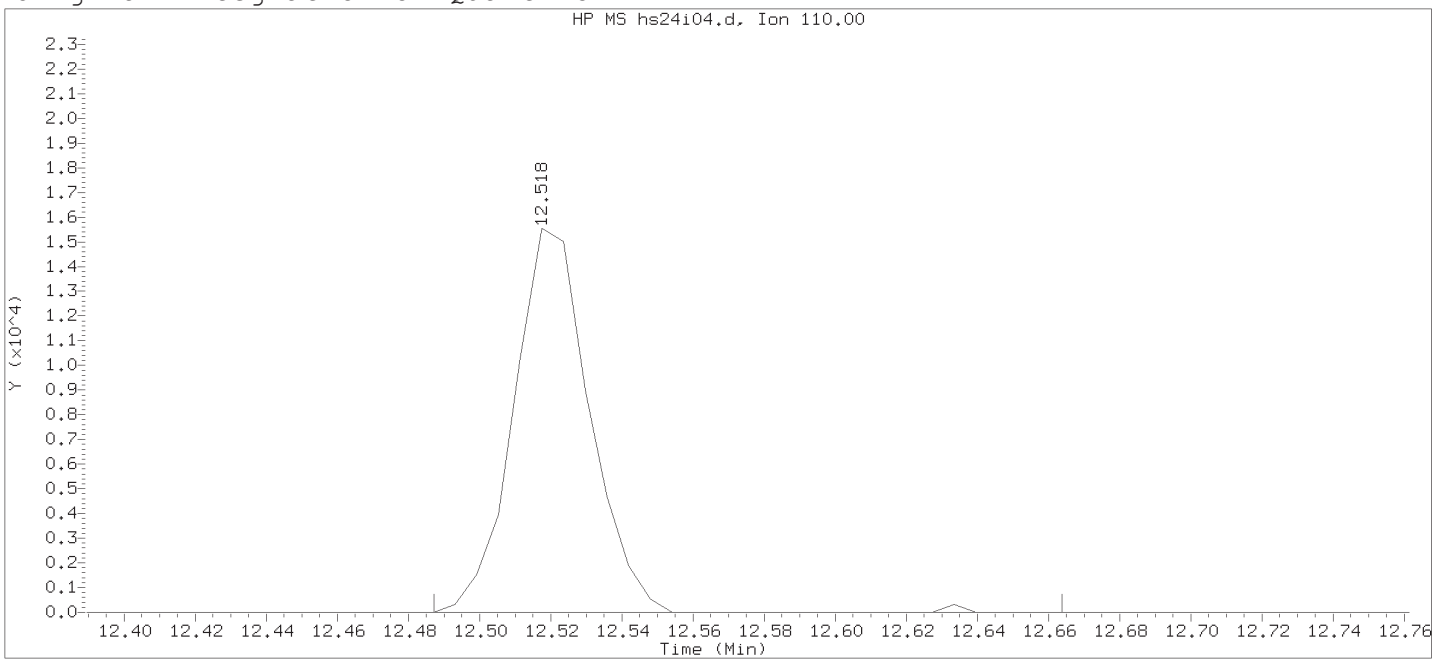
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

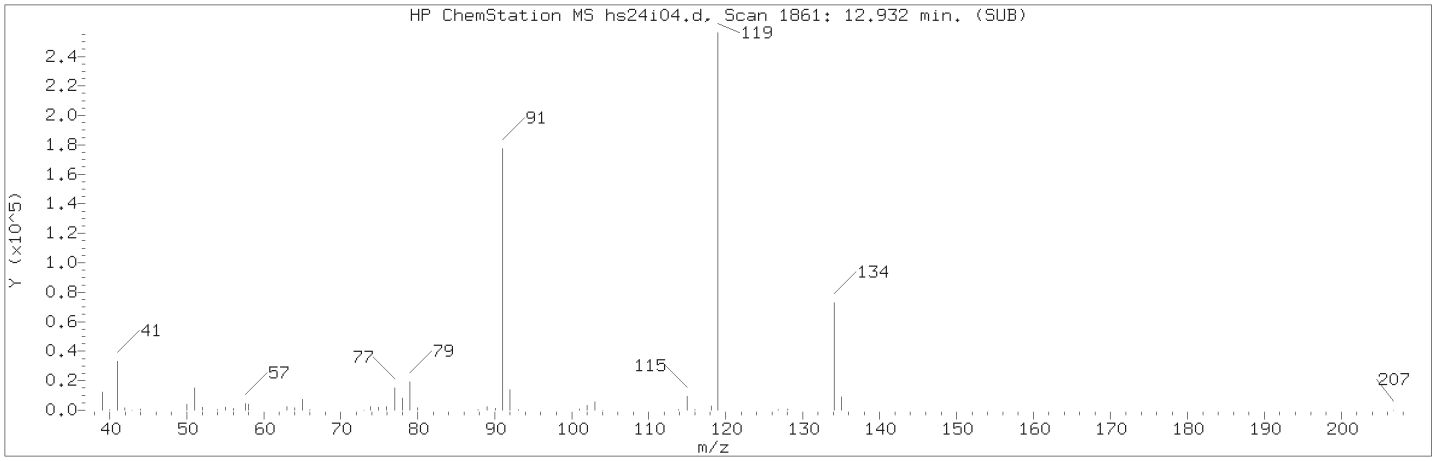
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

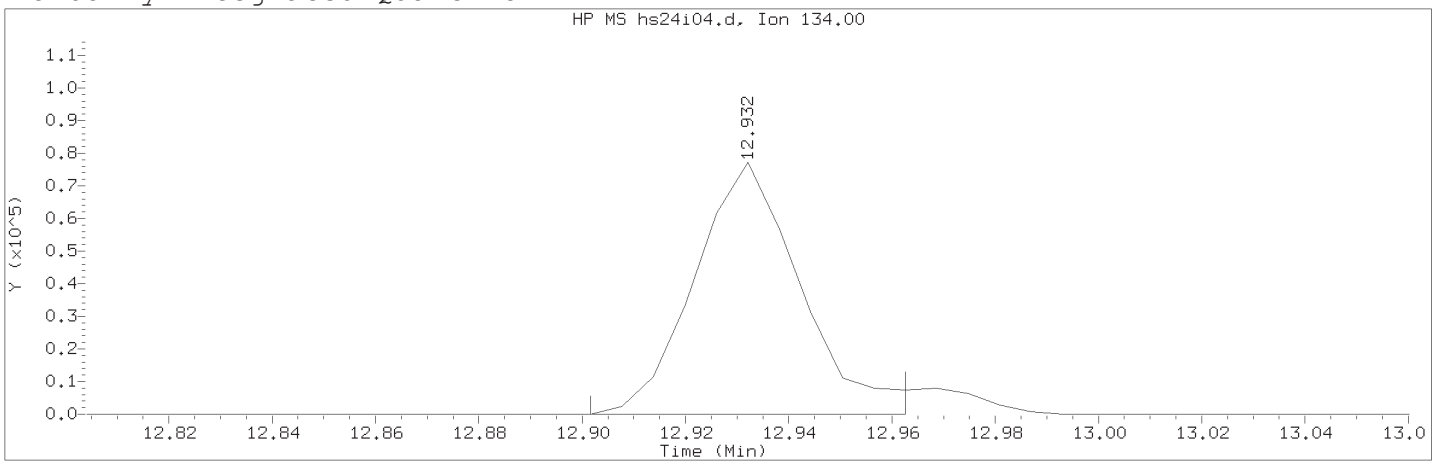
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 110.00
Area : 23069
On-column Amount (ng) : 2.0019
Integration start scan : 1787 Integration stop scan: 1816
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

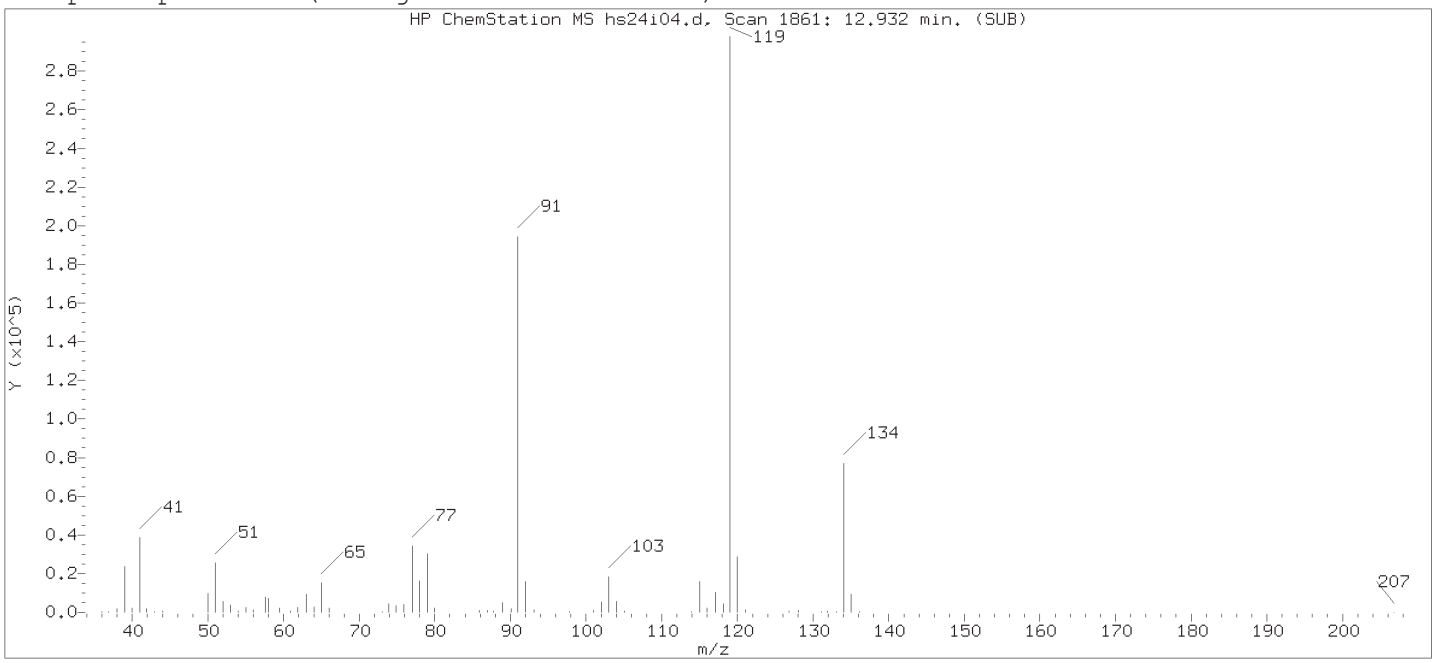
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 110083M
On-Column Amount (ng) : 2.0535
Integration start scan : 1855 Integration stop scan: 1865
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

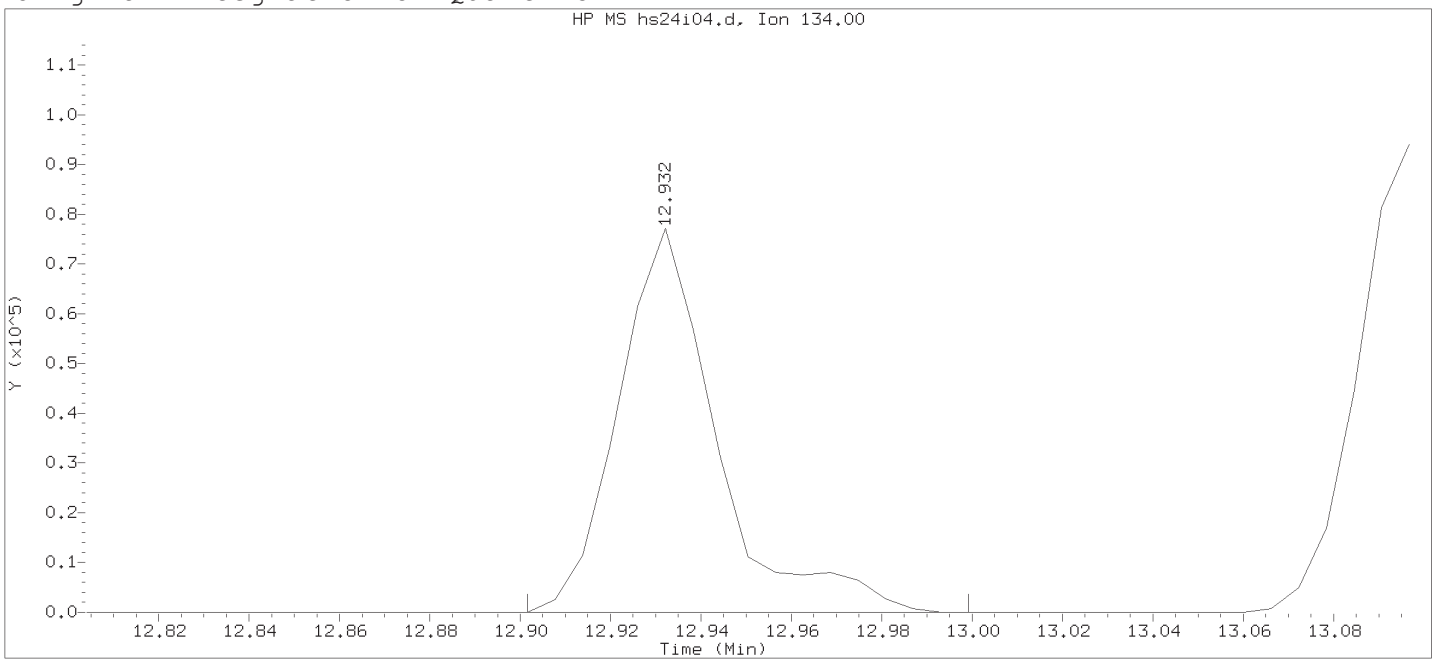
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

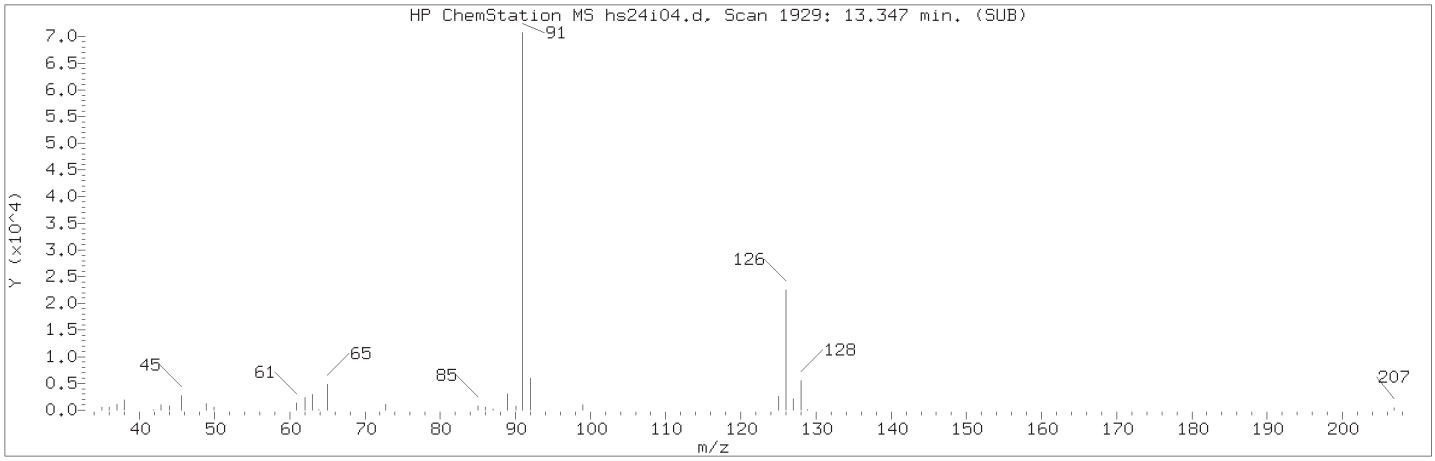
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

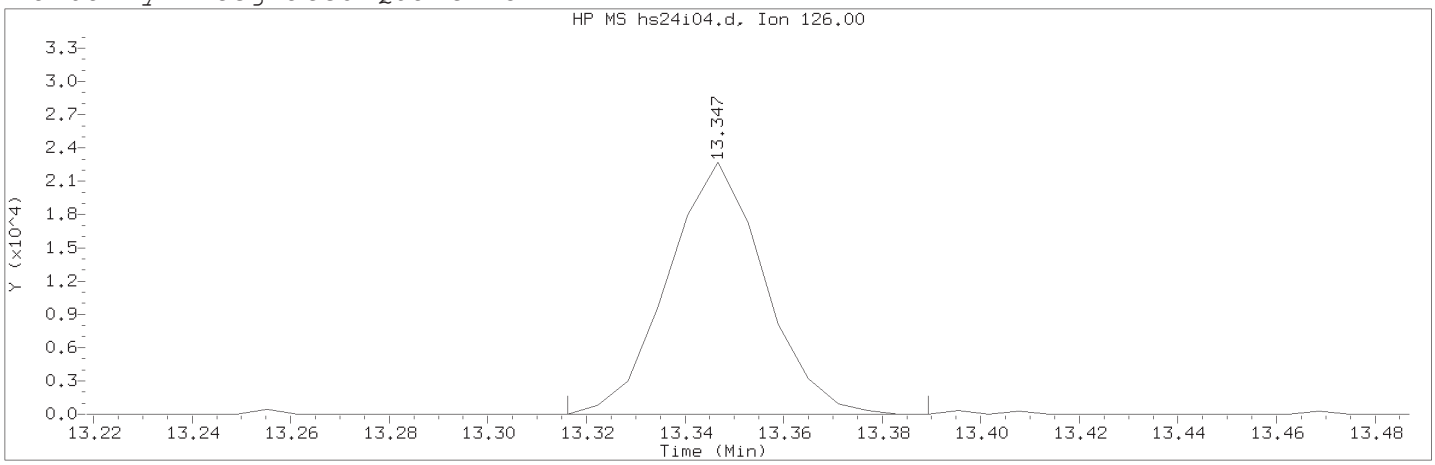
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 116606
On-column Amount (ng) : 2.0344
Integration start scan : 1855 Integration stop scan: 1871
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

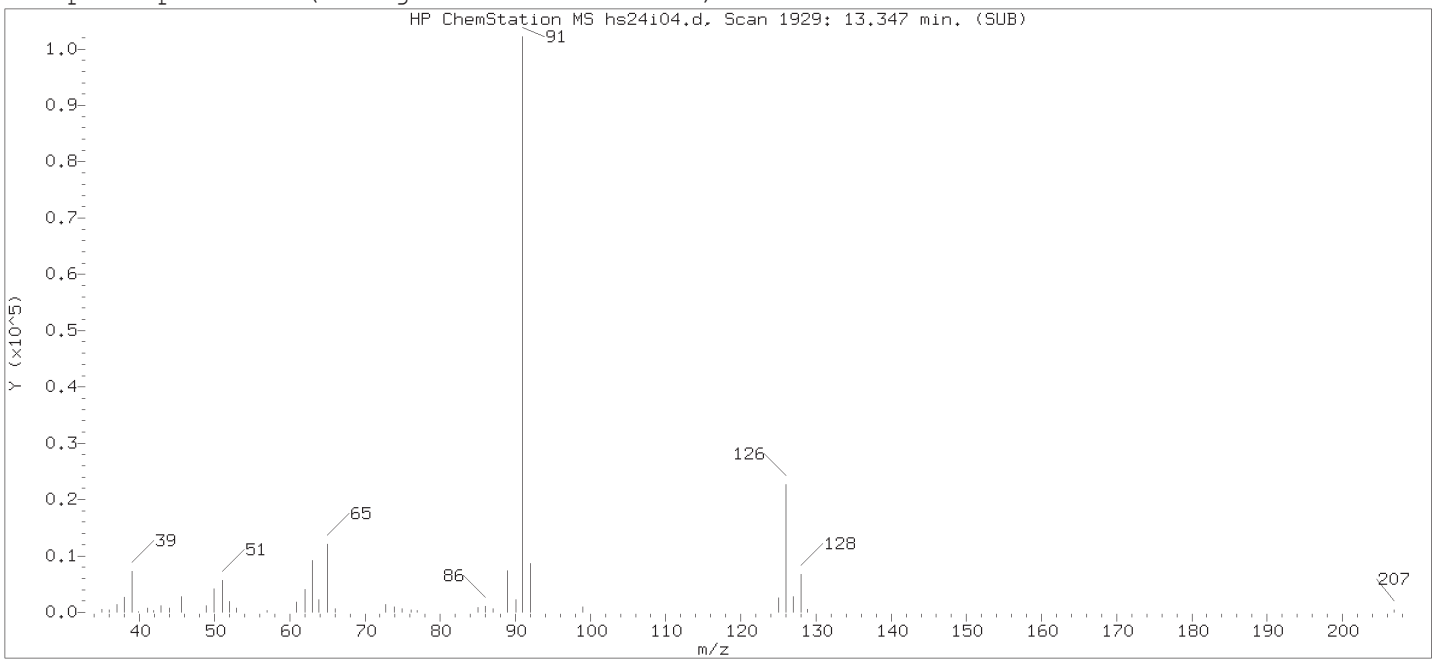
Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area (flag) : 30686M
On-Column Amount (ng) : 1.9284
Integration start scan : 1923 Integration stop scan: 1935
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

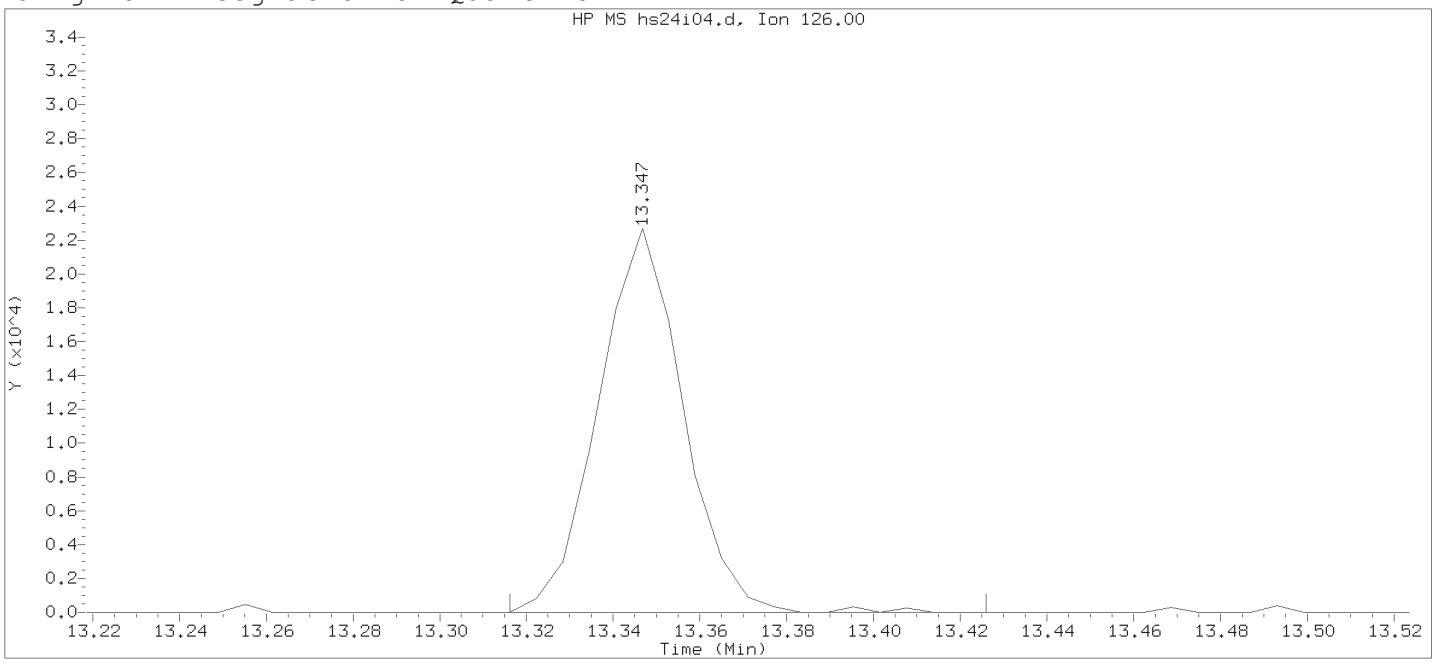
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



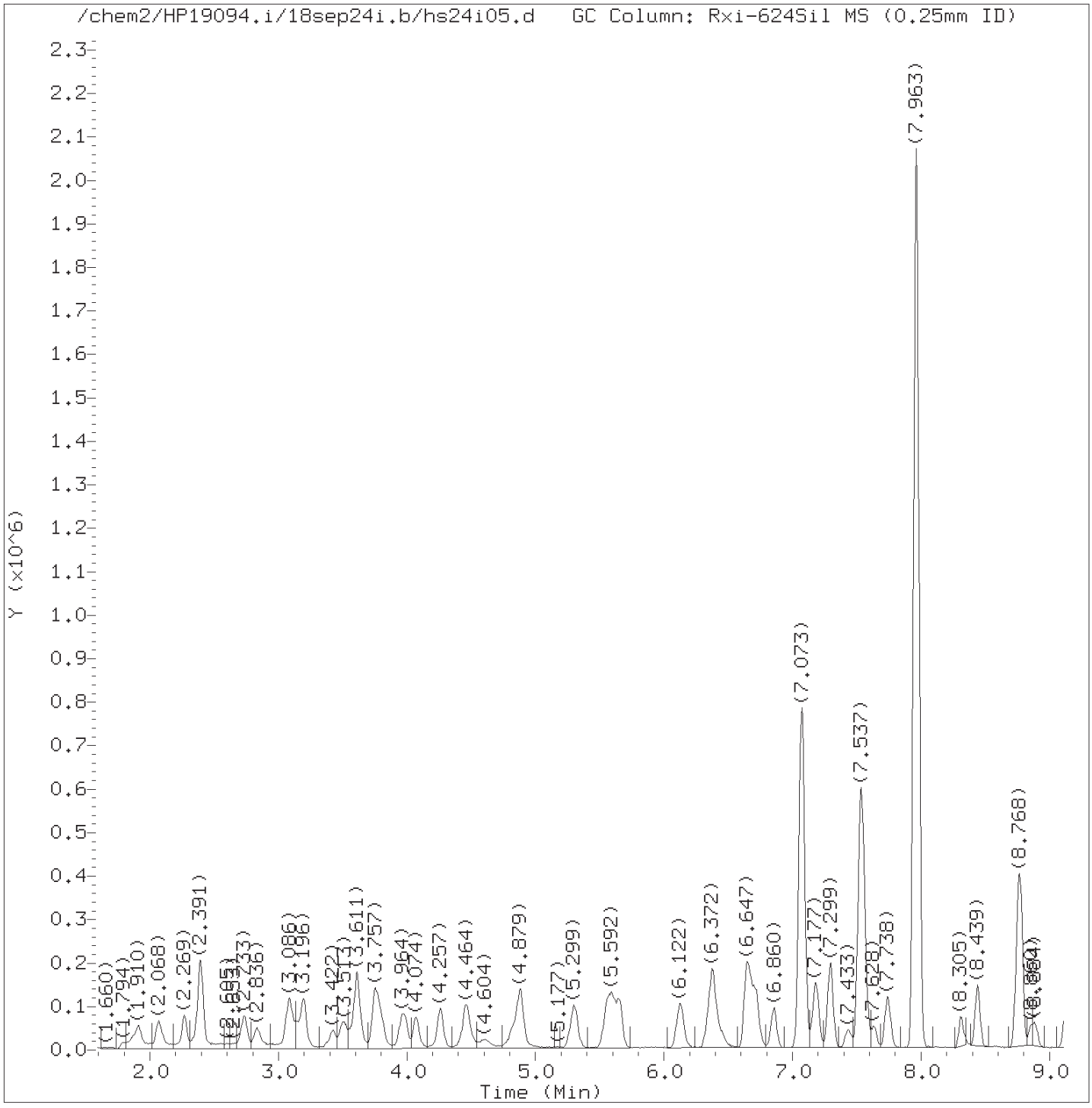
Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area : 30896
On-column Amount (ng) : 1.7699
Integration start scan : 1923 Integration stop scan: 1941
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

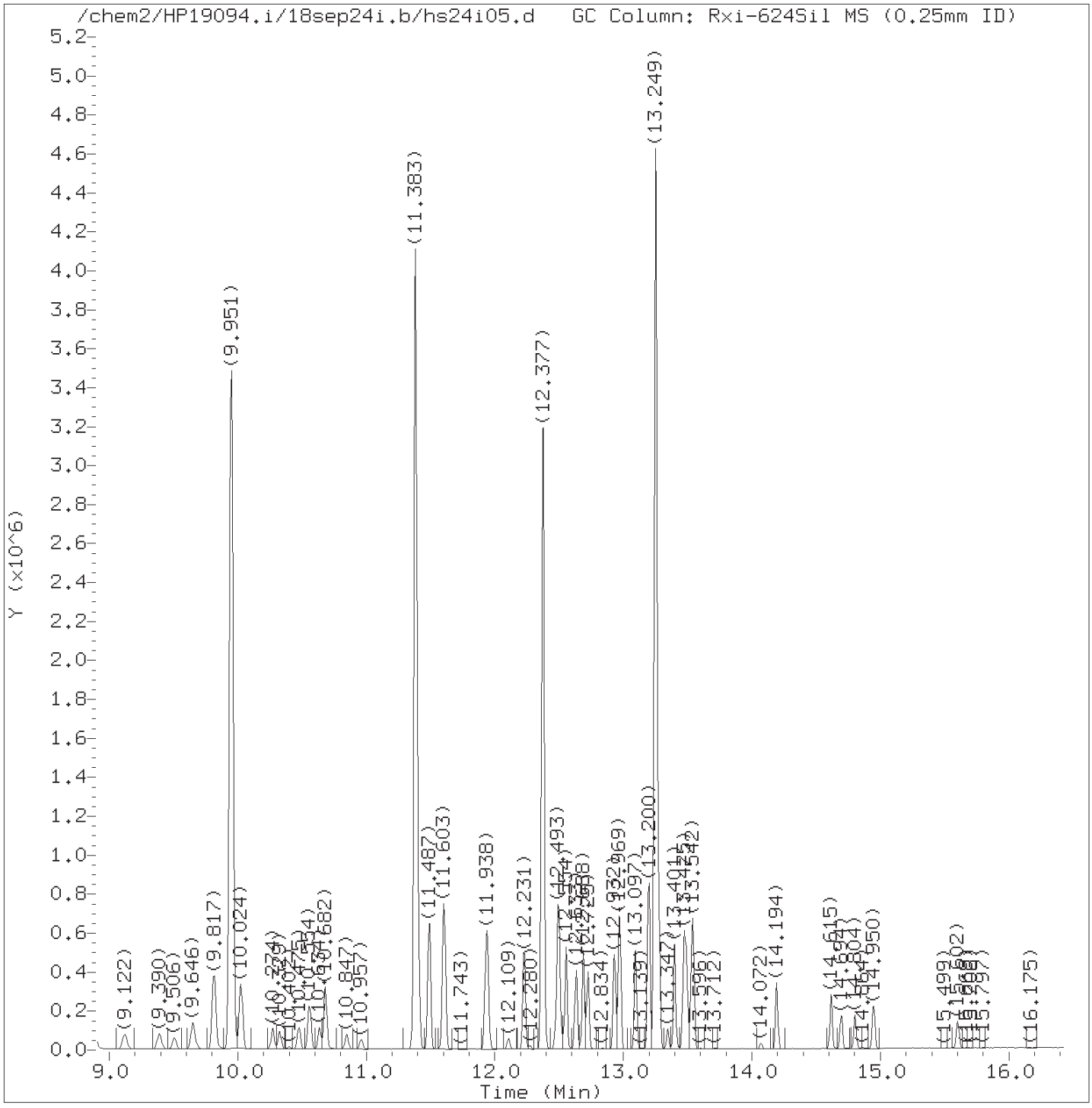
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.068	85	109107	1.012
2) Chloromethane	(2)	2.269	50	106297	1.007
6) 1,3-Butadiene	(2)	2.385	39	118482M	1.058
5) Vinyl Chloride	(2)	2.397	62	100865	1.020
7) Bromomethane	(2)	2.739	94	77295	1.005
8) Chloroethane	(2)	2.836	64	61896	1.032
9) Dichlorofluoromethane	(2)	3.080	67	145968	1.023
10) Trichlorofluoromethane	(2)	3.141	101	127294	1.019
11) Ethyl ether	(2)	3.428	59	41485	0.979
12) Freon 123a	(2)	3.513	67	80944	1.023
13) Acrolein	(1)	3.611	56	300932	49.491
15) 1,1-Dichloroethene	(2)	3.751	96	56220	1.039
16) Freon 113	(2)	3.775	101	65967	1.035
14) Acetone	(1)	3.787	43	80897M	9.905
17) Methyl Iodide	(2)	3.952	142	114085	1.012
18) Carbon Disulfide	(2)	4.074	76	173907	1.010
21) Methyl Acetate	(1)	4.232	43	24438	1.066
22) Allyl Chloride	(2)	4.257	41	102466	0.996
23) Methylene Chloride	(2)	4.452	84	61955	1.015
26)*t-Butyl Alcohol-d10	(1)	4.470	65	137024M	50.000
28) t-Butyl Alcohol	(1)	4.604	59	49275M	21.068
29) Acrylonitrile	(1)	4.824	53	53013	5.026
30) Methyl Tertiary Butyl Ether	(2)	4.854	73	114458	1.029
31) trans-1,2-Dichloroethene	(2)	4.891	96	63184	1.035
32) n-Hexane	(2)	5.299	57	100196	1.032
33) 1,1-Dichloroethane	(2)	5.555	63	119955	1.032
34) di-Isopropyl Ether	(2)	5.592	45	208438	1.010
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	105930	1.013
40) 1,2-Dichloroethene (Total)	(2)		96	132499	2.062
37) Ethyl t-butyl ether	(2)	6.128	59	168973M	1.032
38) 2-Butanone	(1)	6.336	43	133197	9.963
39) cis-1,2-Dichloroethene	(2)	6.372	96	69315	1.028
41) 2,2-Dichloropropane	(2)	6.391	77	83581	1.007
42) Propionitrile	(1)	6.445	54	75366	20.769
45) Methacrylonitrile	(1)	6.647	67	129937	9.931
47) Bromochloromethane	(2)	6.701	128	28262	0.992
48) Tetrahydrofuran	(1)	6.720	71	35178	9.898
49) Chloroform	(2)	6.860	83	114336	1.058

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	696307	10.014
50)$Dibromofluoromethane	(2)	7.073	111	721346	10.079
51) 1,1,1-Trichloroethane	(2)	7.086	97	94711	1.025
52) Cyclohexane	(2)	7.177	56	123949	1.027
52) Cyclohexane	(2)	7.183	84	104356	1.049
52) Cyclohexane	(2)	7.183	69	36367	1.023
55) 1,1-Dichloropropene	(2)	7.293	75	90431	1.032
54) Carbon Tetrachloride	(2)	7.299	117	81897	1.032
56) Isobutyl Alcohol	(1)	7.427	41	47053	51.995
57)$1,2-Dichloroethane-d4	(2)	7.524	102	119829	9.885
57)$1,2-Dichloroethane-d4	(2)	7.531	65	593178	10.117
57)$1,2-Dichloroethane-d4	(2)	7.531	104	79680	10.263
58) Benzene	(2)	7.561	78	264658	1.022
59) 1,2-Dichloroethane	(2)	7.628	62	59426M	0.997
60) t-Amyl methyl ether	(2)	7.738	73	139571	1.028
62) n-Heptane	(2)	7.963	43	102958	1.029
63)*Fluorobenzene	(2)	7.963	96	2758903	10.000
65) n-Butanol	(1)	8.305	56	74668M	97.664
67) Trichloroethene	(2)	8.445	95	68161	1.028
69) Methylcyclohexane	(2)	8.750	83	122857	0.981
70) 1,2-Dichloropropane	(2)	8.780	63	63132	1.005
71) Methyl Methacrylate	(1)	8.847	69	23722	0.979
72) 1,4-Dioxane	(1)	8.878	88	9241M	50.201
73) Dibromomethane	(2)	8.884	93	26560	1.019
74) Bromodichloromethane	(2)	9.122	83	69831	0.989
76) 2-Nitropropane	(1)	9.390	41	63314	9.229
80) cis-1,3-Dichloropropene	(2)	9.646	75	80509	0.979
81) 4-Methyl-2-Pentanone	(1)	9.811	43	330202	9.930
82)$Toluene-d8	(3)	9.951	98	2776980	9.936
82)$Toluene-d8	(3)	9.951	100	1802725	9.993
83) Toluene	(3)	10.024	92	162279	1.007
85) 1,3-Dichloropropene (total)	(3)		75	141132	1.955
84) trans-1,3-Dichloropropene	(3)	10.274	75	60623	0.976
86) Ethyl Methacrylate	(3)	10.329	69	51127	0.961
88) 1,1,2-Trichloroethane	(3)	10.475	97	37494	1.011
89) Tetrachloroethene	(3)	10.560	166	73862	1.014
90) 1,3-Dichloropropane	(3)	10.634	76	66150	1.007
91) 2-Hexanone	(1)	10.682	43	223568	9.877

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	42278	0.951
95) 1,2-Dibromoethane	(3)	10.963	107	34504	0.993
96) 1-Chlorohexane	(3)	11.383	91	96260	1.002
97)*Chlorobenzene-d5	(3)	11.383	117	2171615	10.000
98) Chlorobenzene	(3)	11.408	112	177295	1.037
100) Ethylbenzene	(3)	11.493	91	320107	1.016
99) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	56567	1.003
101) m+p-Xylene	(3)	11.603	106	234132	2.004
105) Xylene (Total)	(3)		106	347952	3.023
104) o-Xylene	(3)	11.932	106	113820	1.019
106) Styrene	(3)	11.944	104	180005	1.007
107) Bromoform	(3)	12.109	173	24175	0.990
108) Isopropylbenzene	(3)	12.231	105	309640	1.016
111)$4-Bromofluorobenzene	(3)	12.371	95	1017139	9.995
111)$4-Bromofluorobenzene	(3)	12.377	174	881427	9.975
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	42904M	0.963
114) Bromobenzene	(4)	12.493	156	68106	1.005
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	101534	9.749
116) 1,2,3-Trichloropropane	(4)	12.524	110	11546	1.002
117) n-Propylbenzene	(4)	12.554	91	369750	1.004
119) 2-Chlorotoluene	(4)	12.633	126	72571	1.016
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	249772	1.001
122) 4-Chlorotoluene	(4)	12.725	126	73614	1.028
125) tert-Butylbenzene	(4)	12.932	134	55631M	1.025
126) Pentachloroethane	(4)	12.969	167	39799	0.940
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	253402	0.995
128) sec-Butylbenzene	(4)	13.097	105	327784	1.014
131) 1,3-Dichlorobenzene	(4)	13.194	146	137902	1.025
132) p-Isopropyltoluene	(4)	13.200	119	264718	0.988
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1123390	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	134240	1.016
135) 1,2,3-Trimethylbenzene	(4)	13.279	120	114395M	0.979
136) Benzyl Chloride	(4)	13.347	126	13809	0.857
138) n-Butylbenzene	(4)	13.493	92	135142	1.017
139) 1,2-Dichlorobenzene	(4)	13.529	146	119809	1.009
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	5939	1.054
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	100961	1.008
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	80077	0.982

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

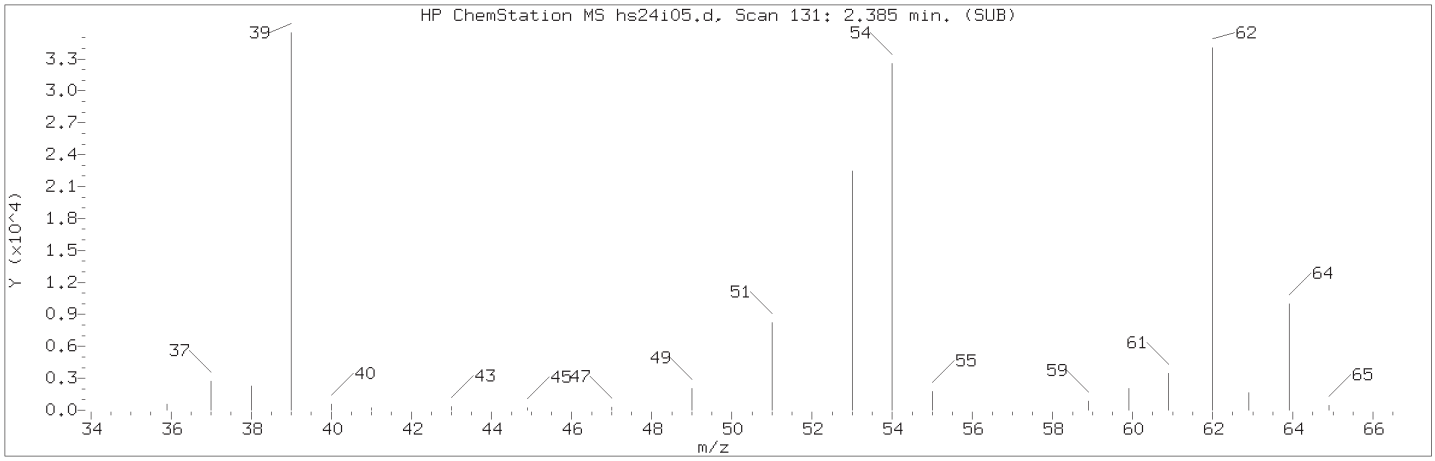
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

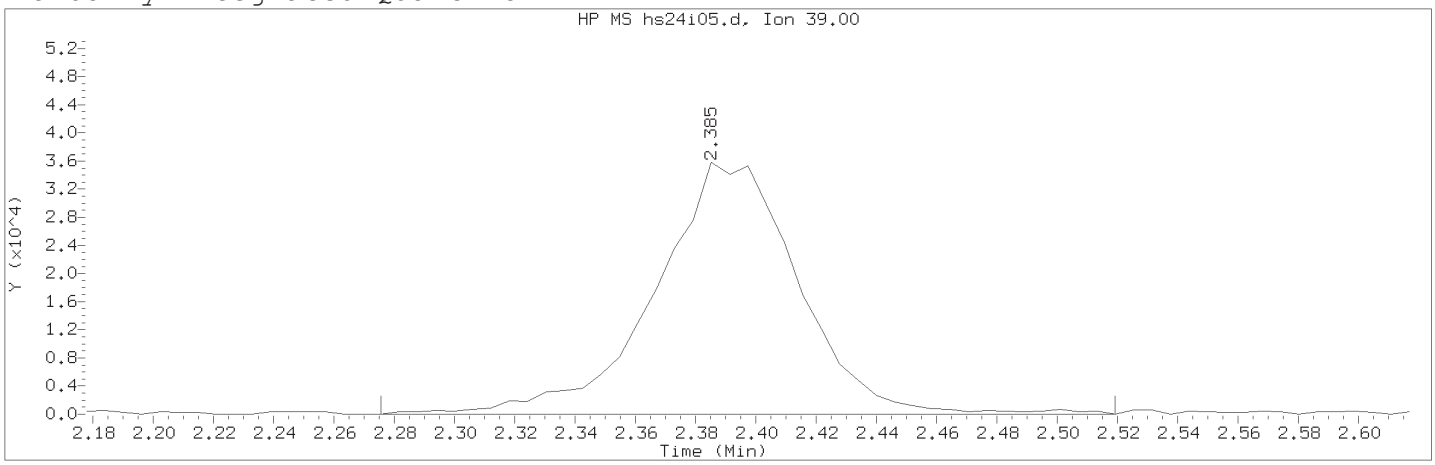
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	30050	0.975
147) Naphthalene	(4)	14.804	128	125068	0.969
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	66944	0.998

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

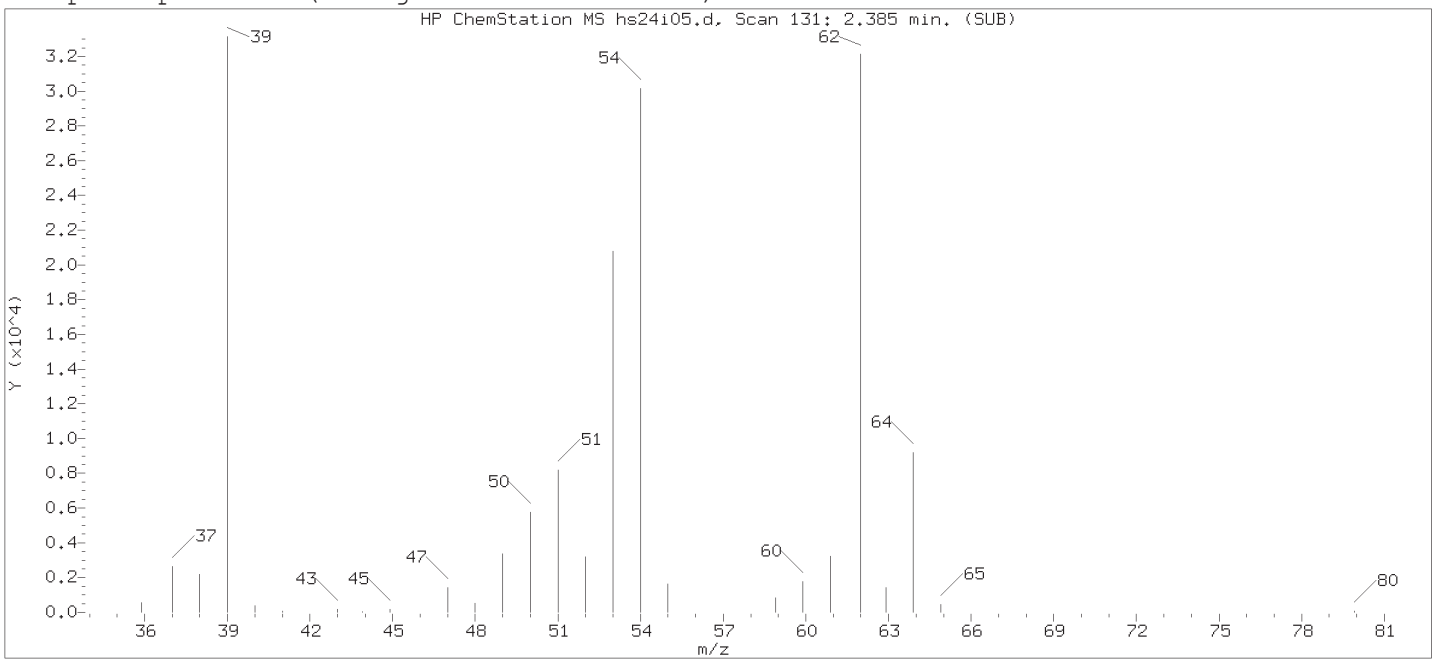
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.385
Quant Ion : 39.00
Area (flag) : 118482M
On-Column Amount (ng) : 1.0578
Integration start scan : 112 Integration stop scan: 152
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

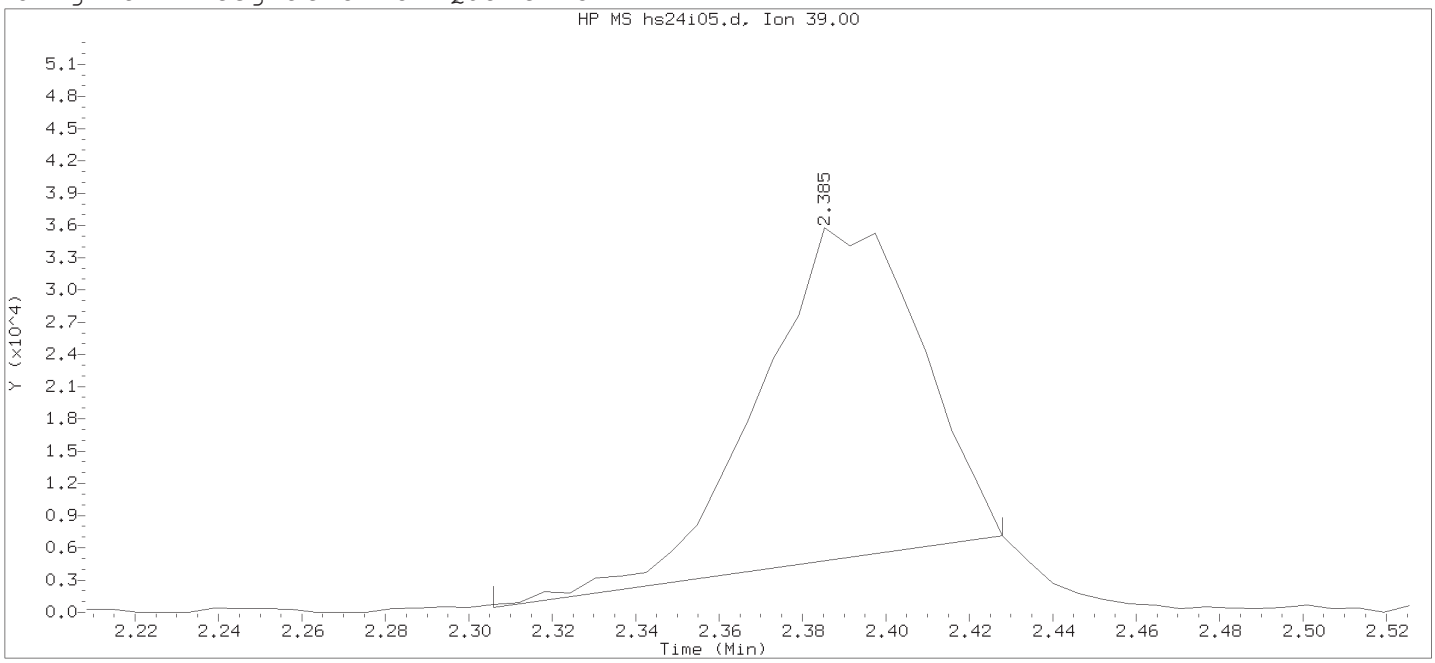
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

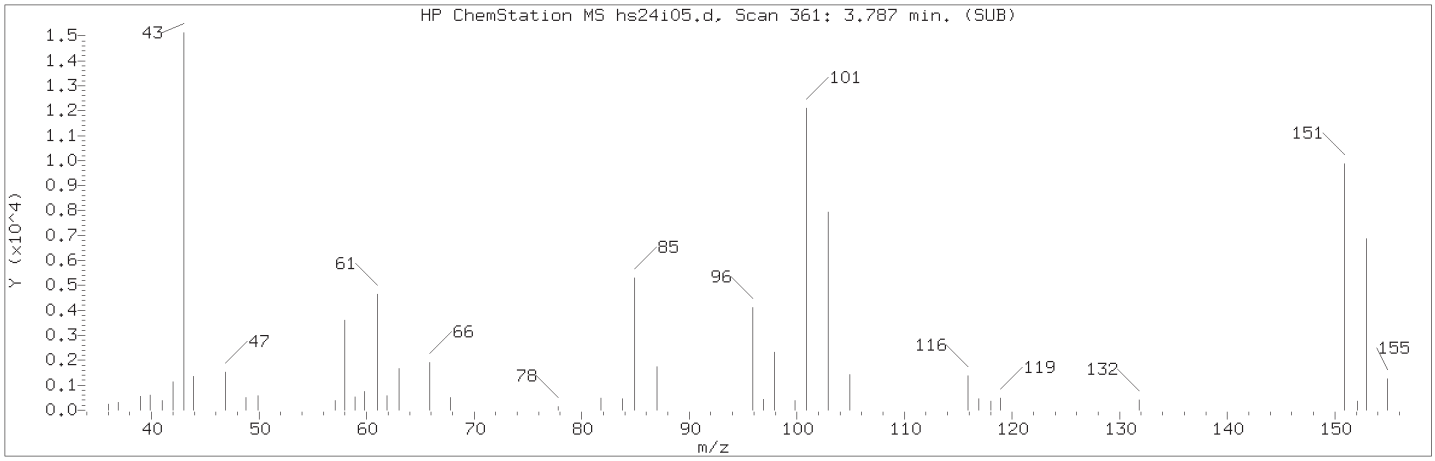
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

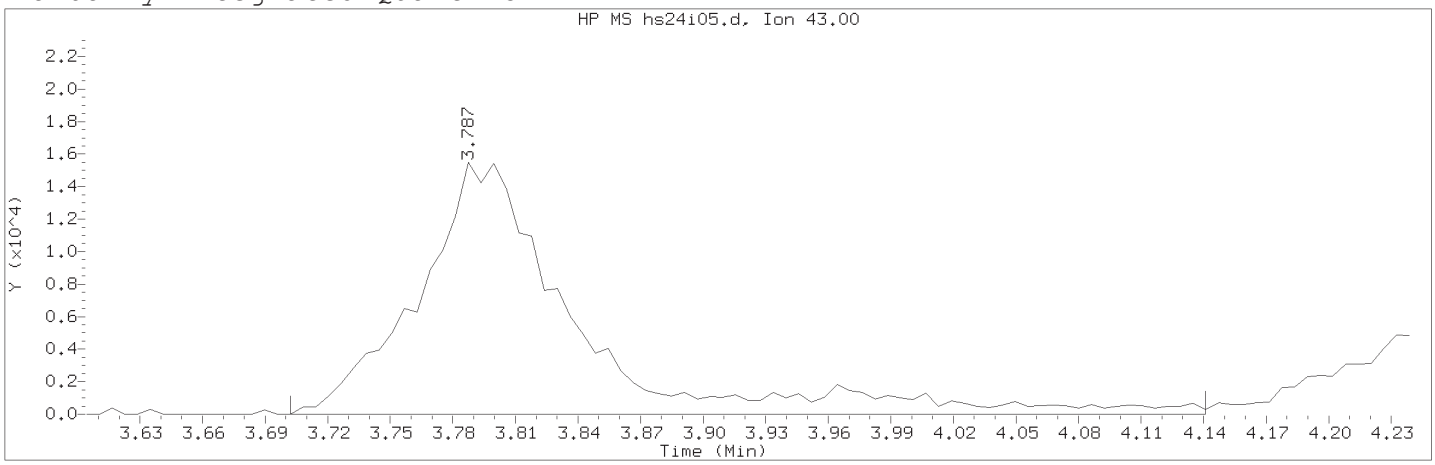
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.385
Quant Ion : 39.00
Area : 83022
On-column Amount (ng) : 0.7928
Integration start scan : 117 Integration stop scan: 137
Y at integration start : 469 Y at integration end: 7133

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

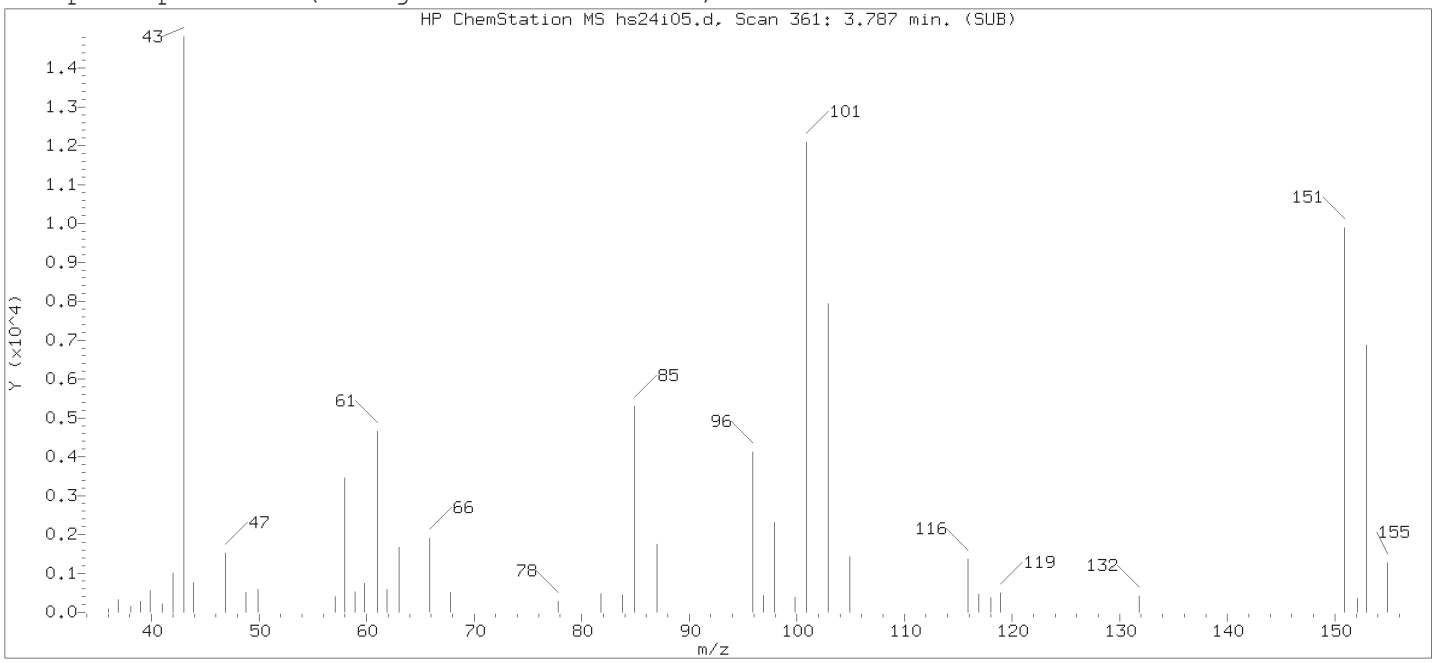
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area (flag) : 80897M
On-Column Amount (ng) : 9.9053
Integration start scan : 346 Integration stop scan: 418
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

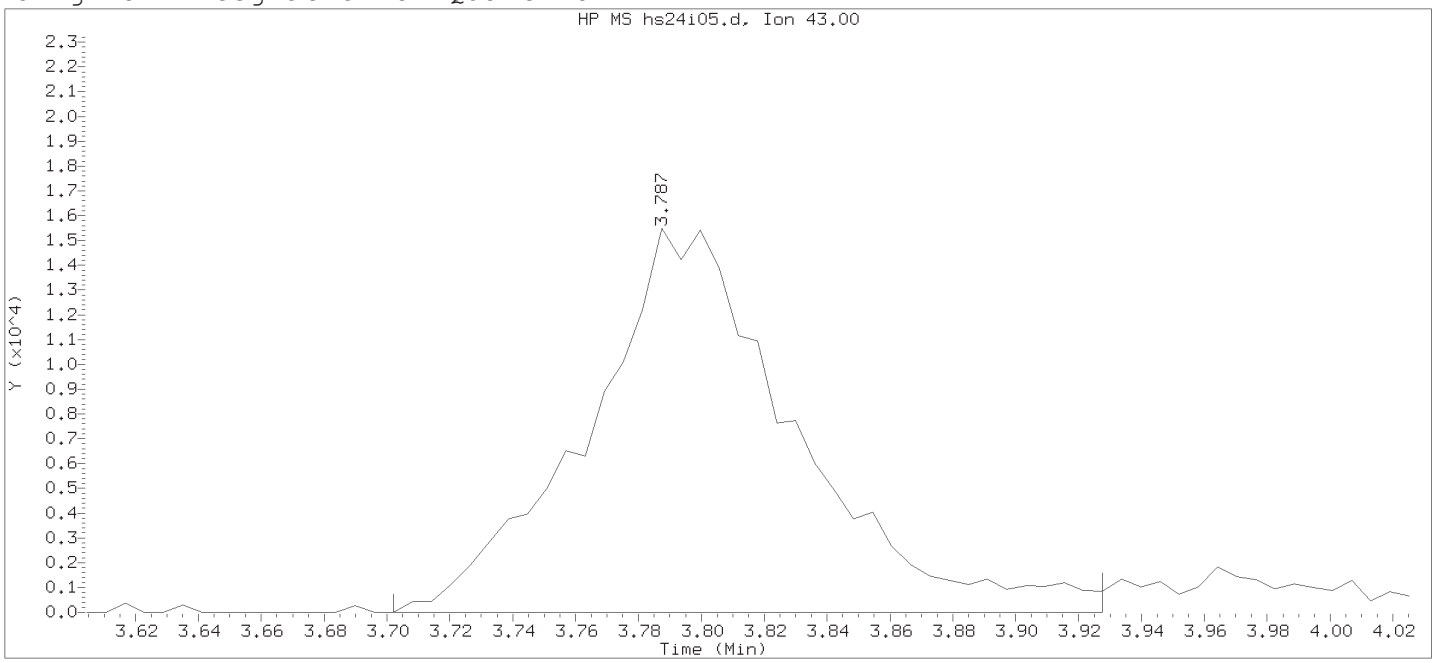
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

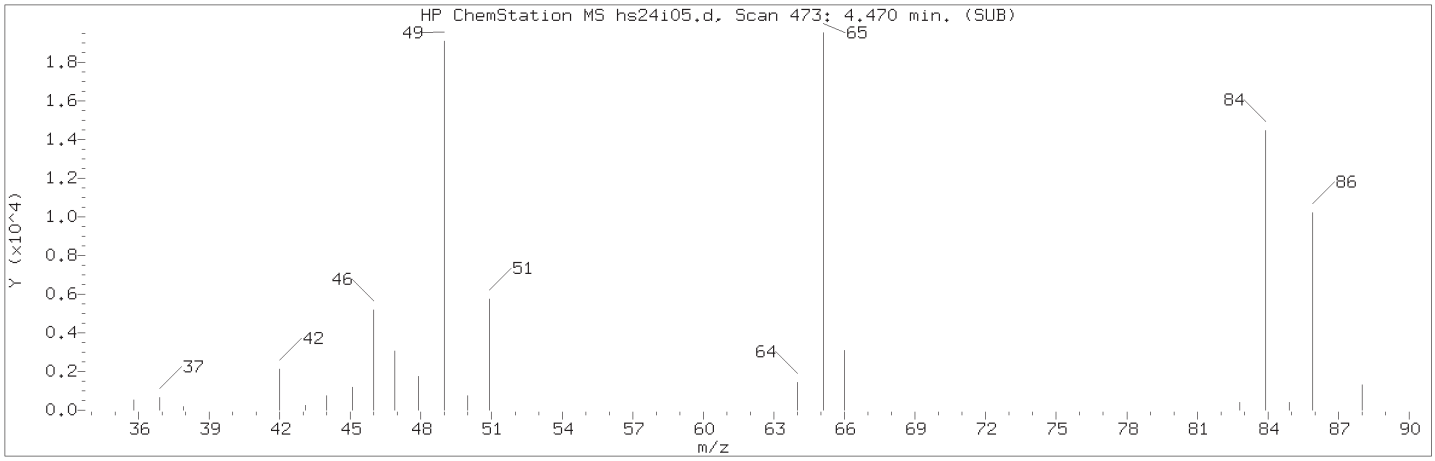
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

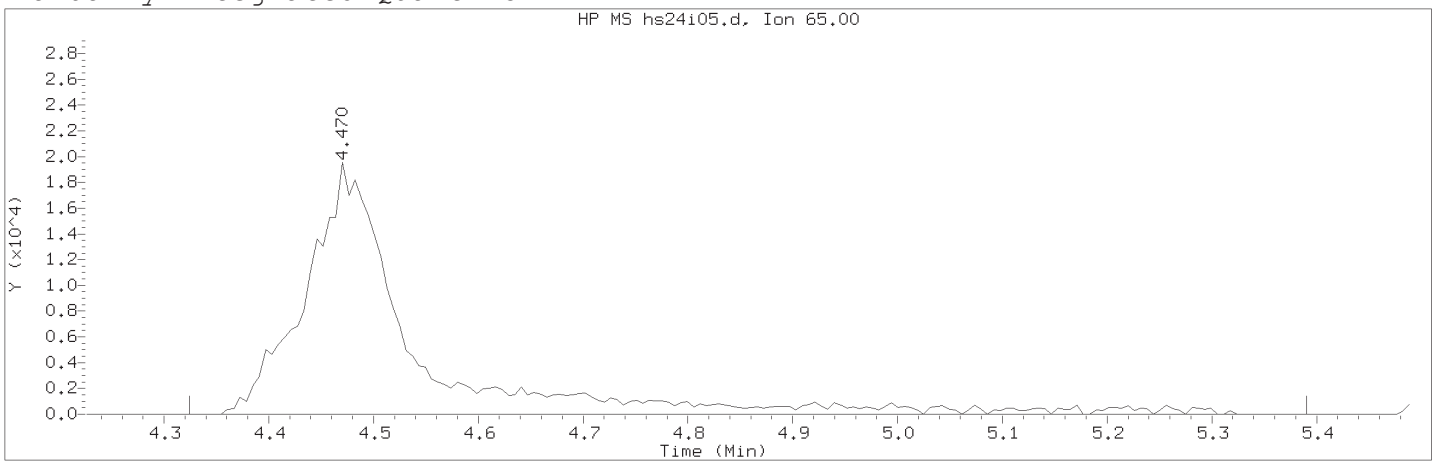
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 361		
Retention Time (minutes)	: 3.787		
Quant Ion	: 43.00		
Area	: 70990		
On-column Amount (ng)	: 9.1768		
Integration start scan	: 346	Integration stop scan:	383
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

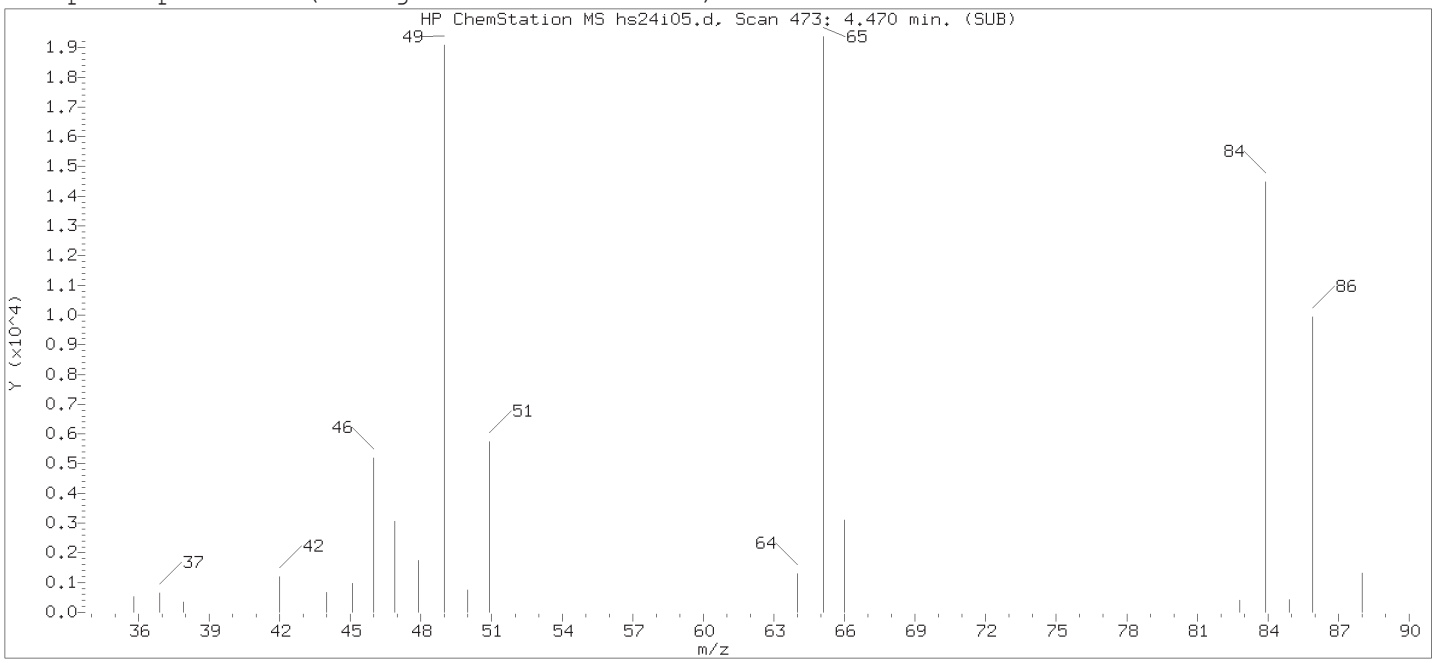
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 137024M
On-Column Amount (ng) : 50.0000
Integration start scan : 448 Integration stop scan: 623
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

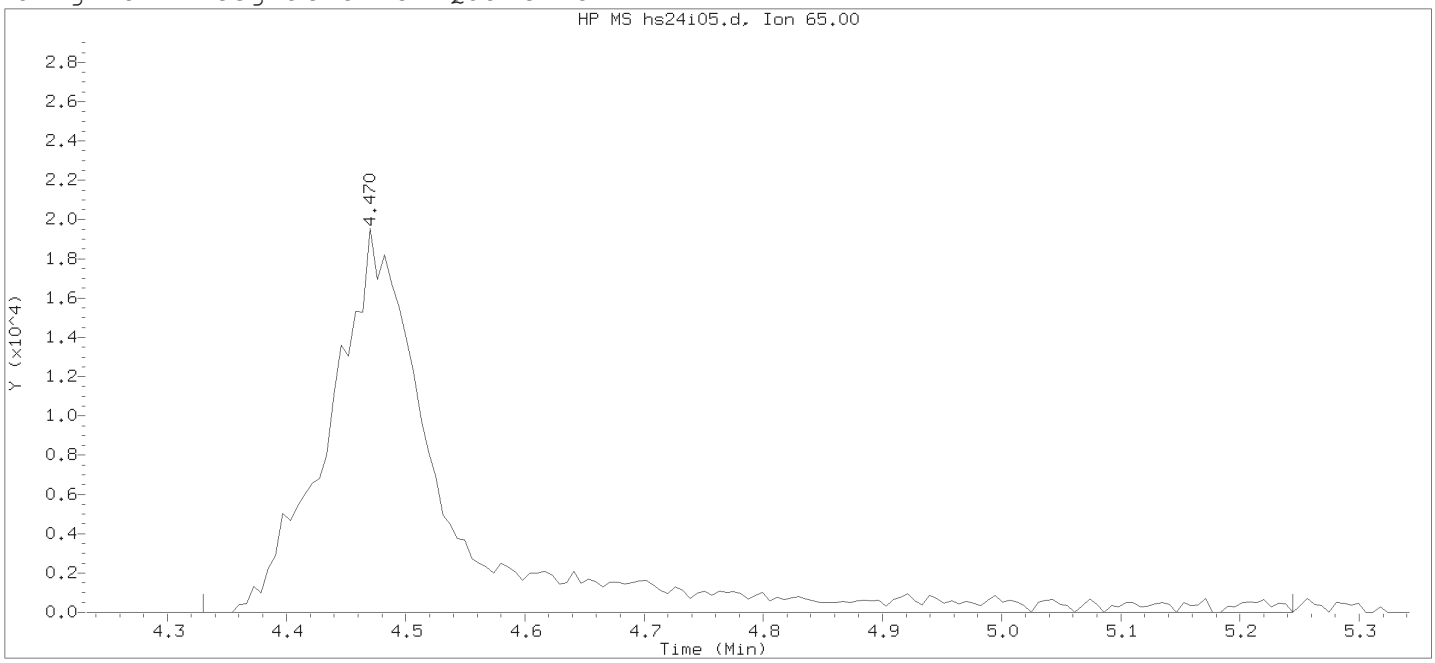
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

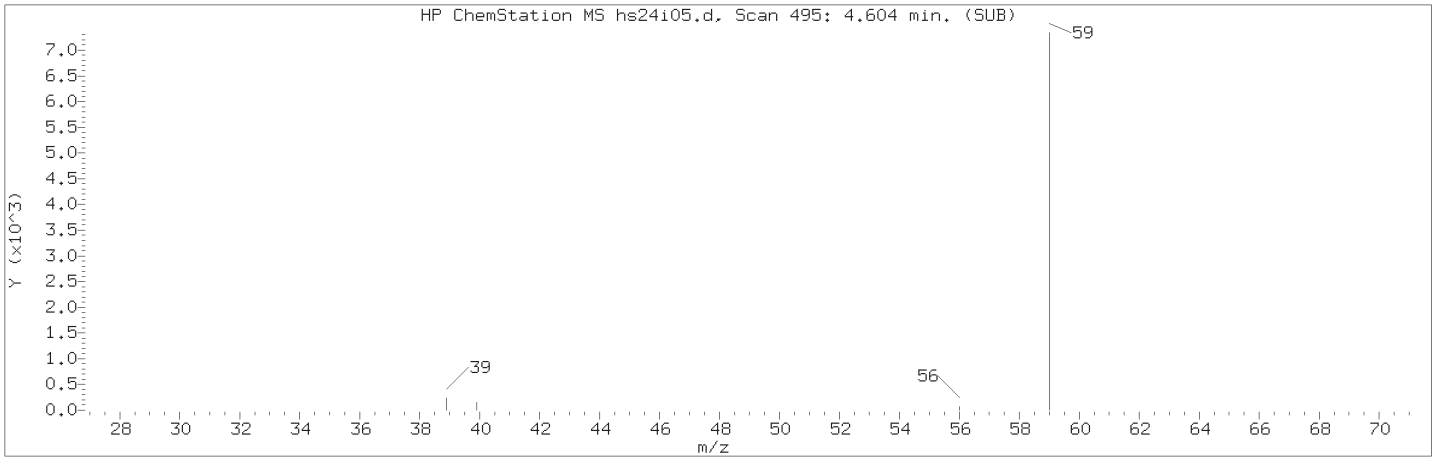
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

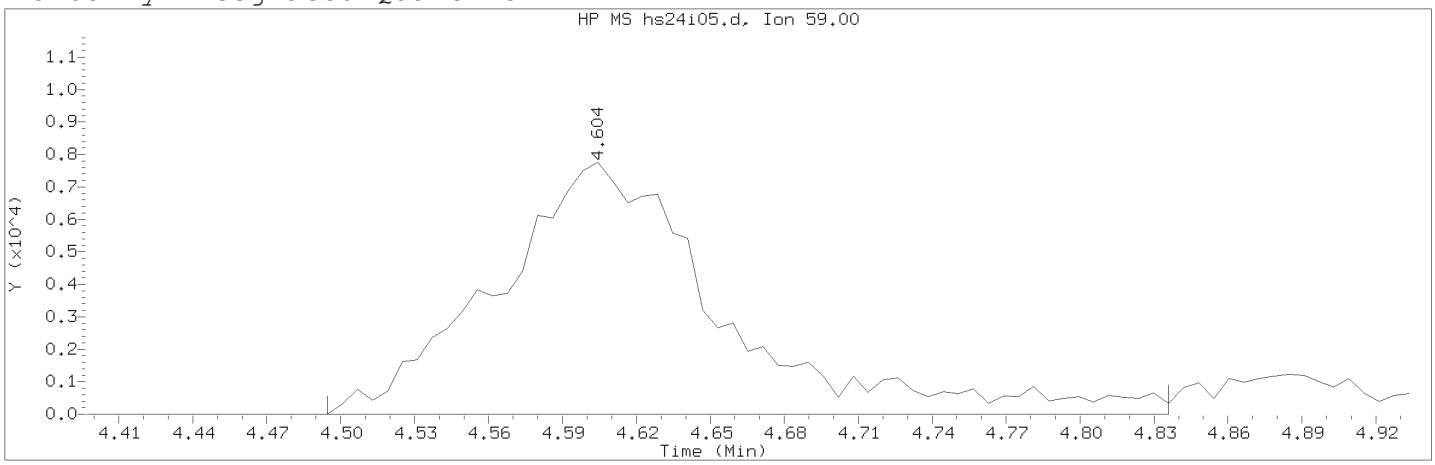
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area : 135610
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 599
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

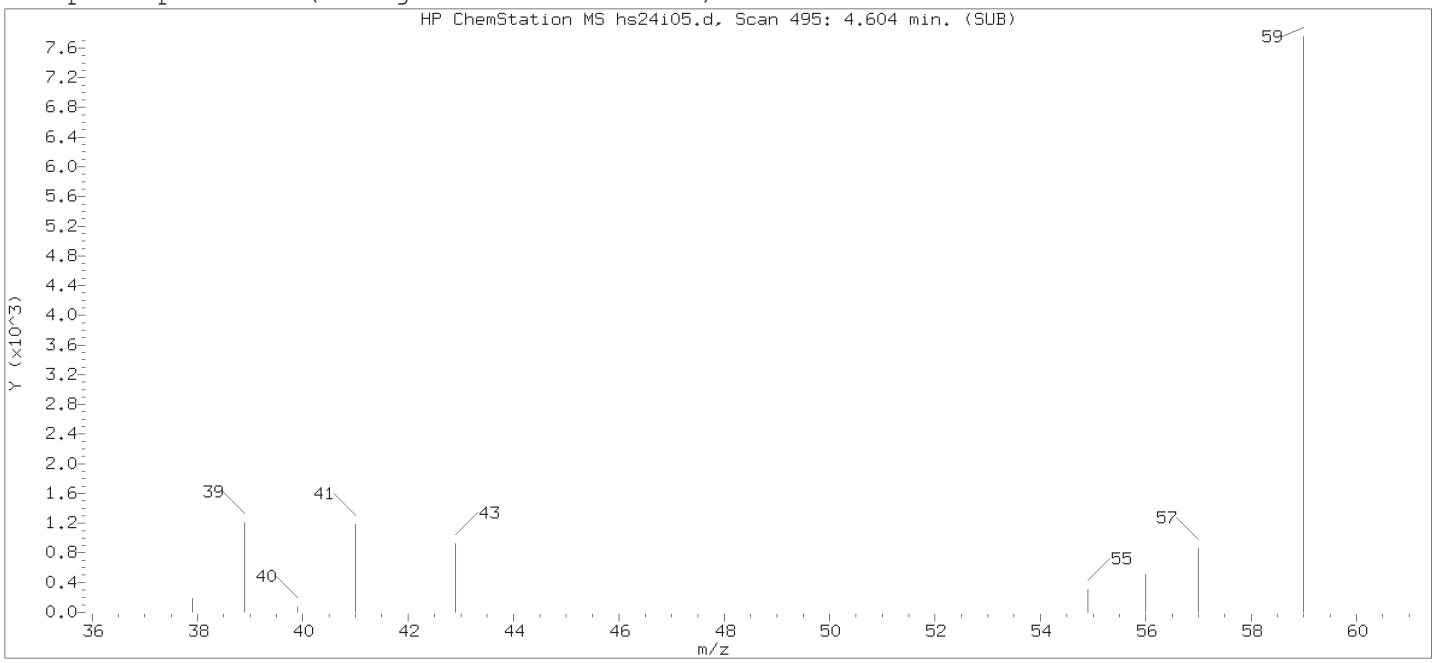
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 495
Retention Time (minutes): 4.604
Quant Ion : 59.00
Area (flag) : 49275M
On-Column Amount (ng) : 21.0678
Integration start scan : 476 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

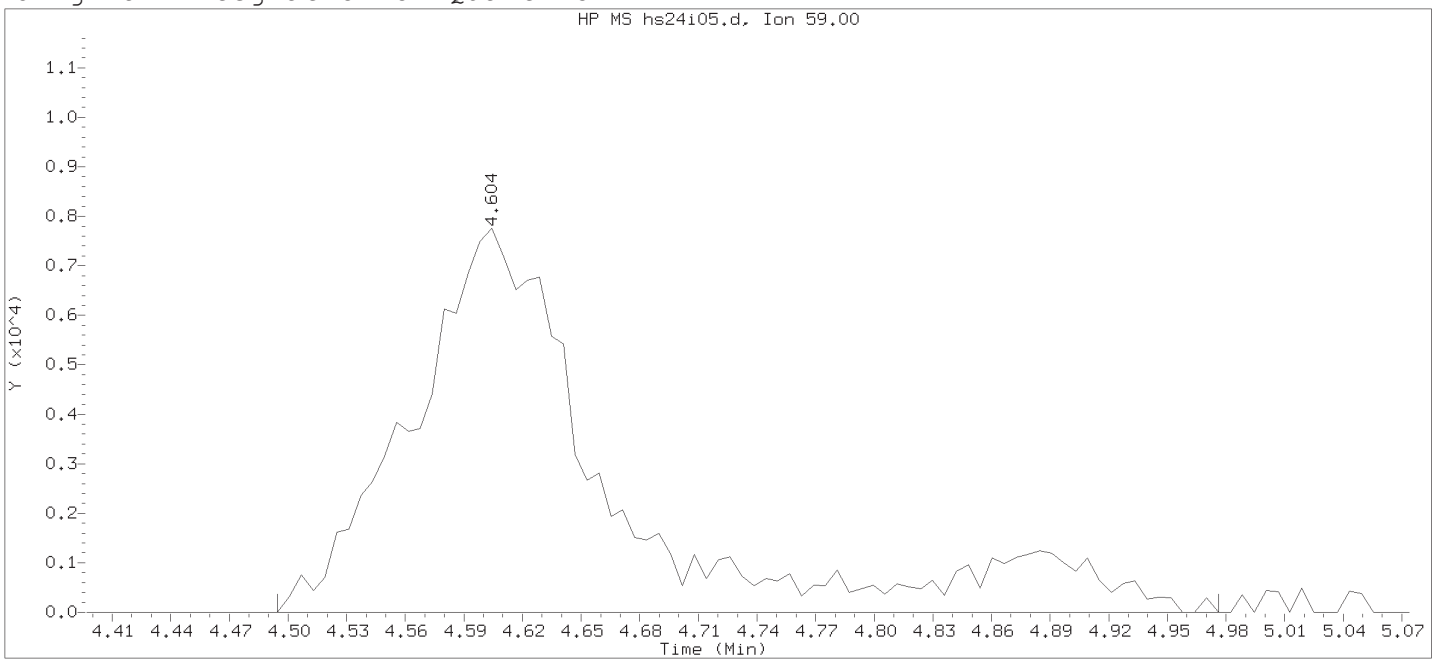
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

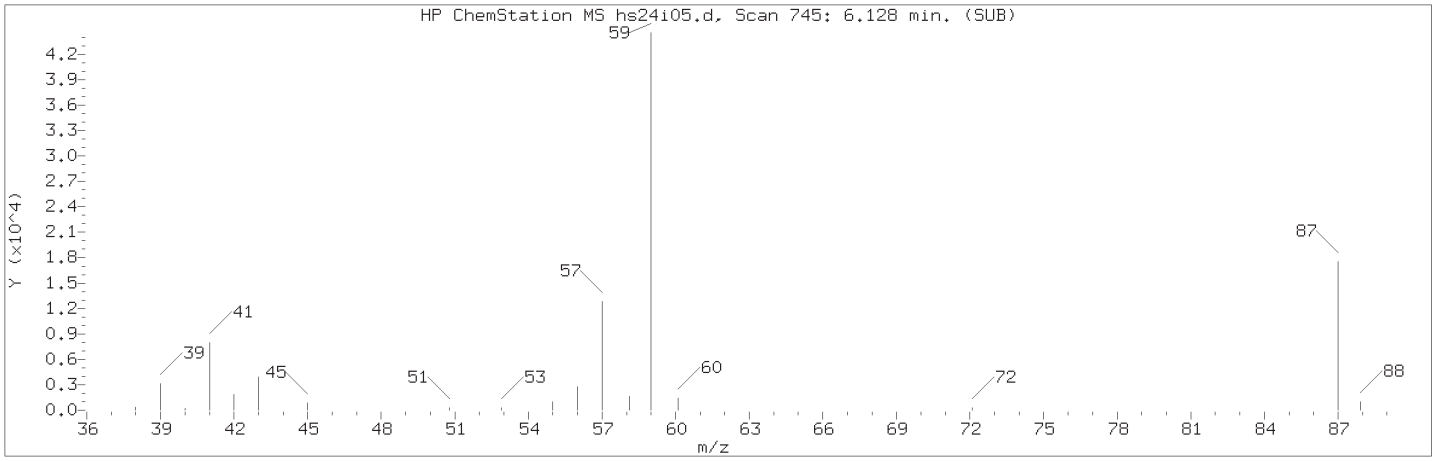
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

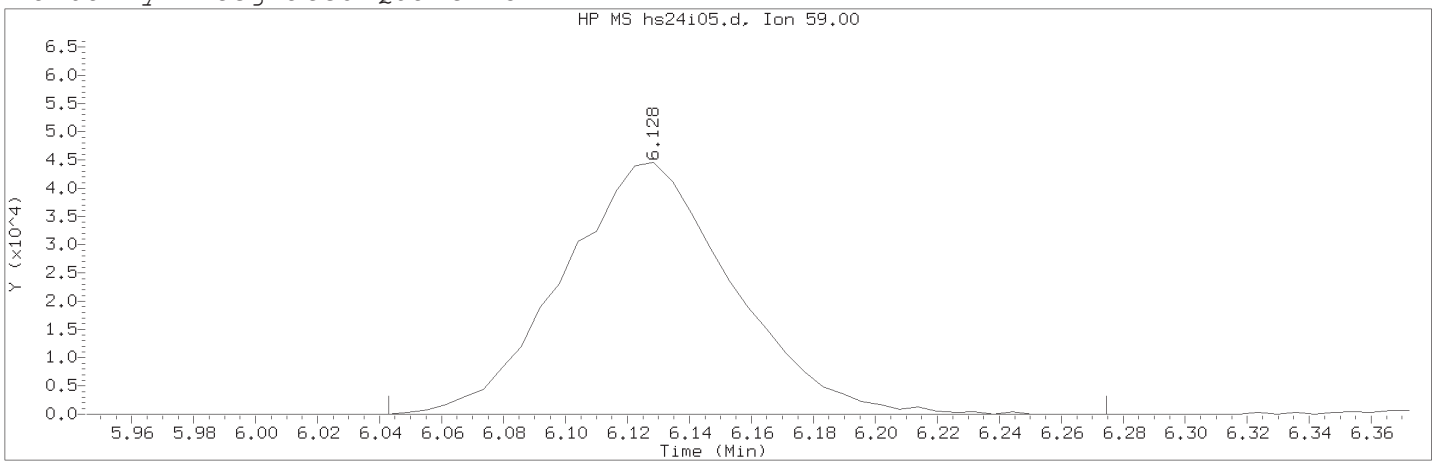
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 495
Retention Time (minutes): 4.604
Quant Ion : 59.00
Area : 54917
On-column Amount (ng) : 22.3410
Integration start scan : 476 Integration stop scan: 555
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

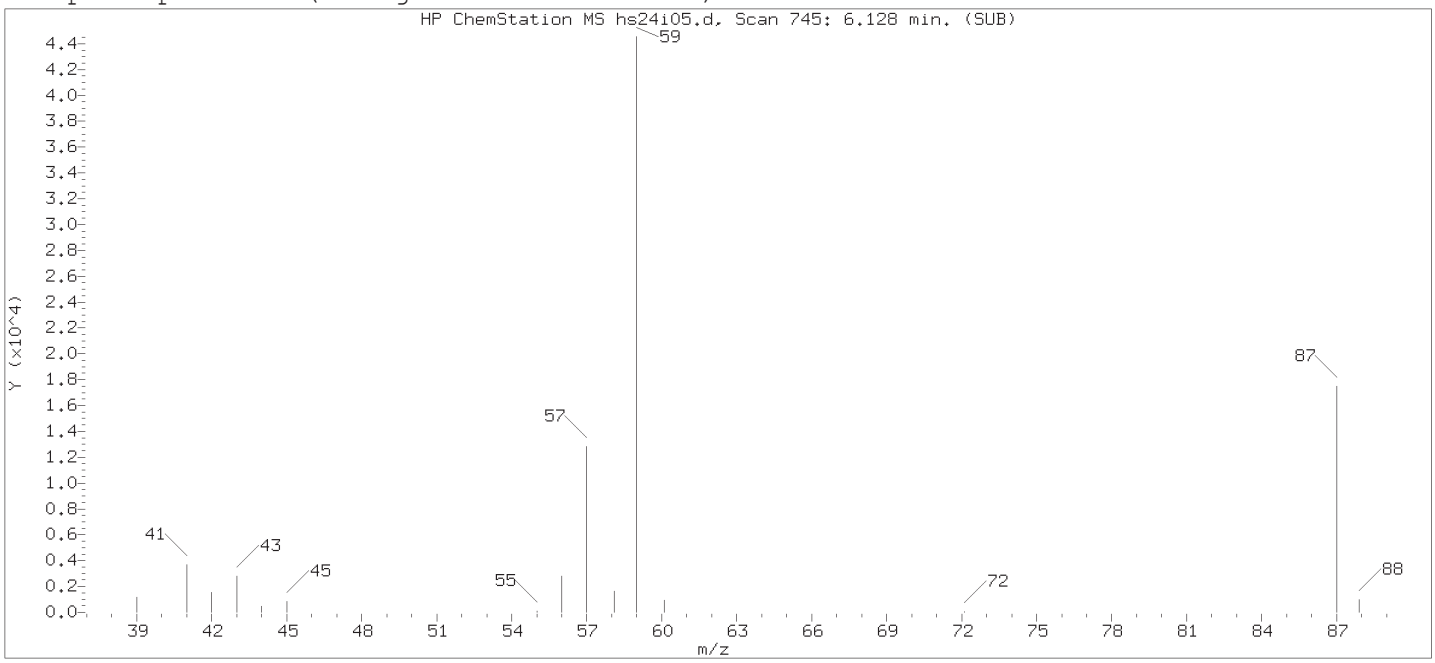
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.128
Quant Ion : 59.00
Area (flag) : 168973M
On-Column Amount (ng) : 1.0320
Integration start scan : 730 Integration stop scan: 768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

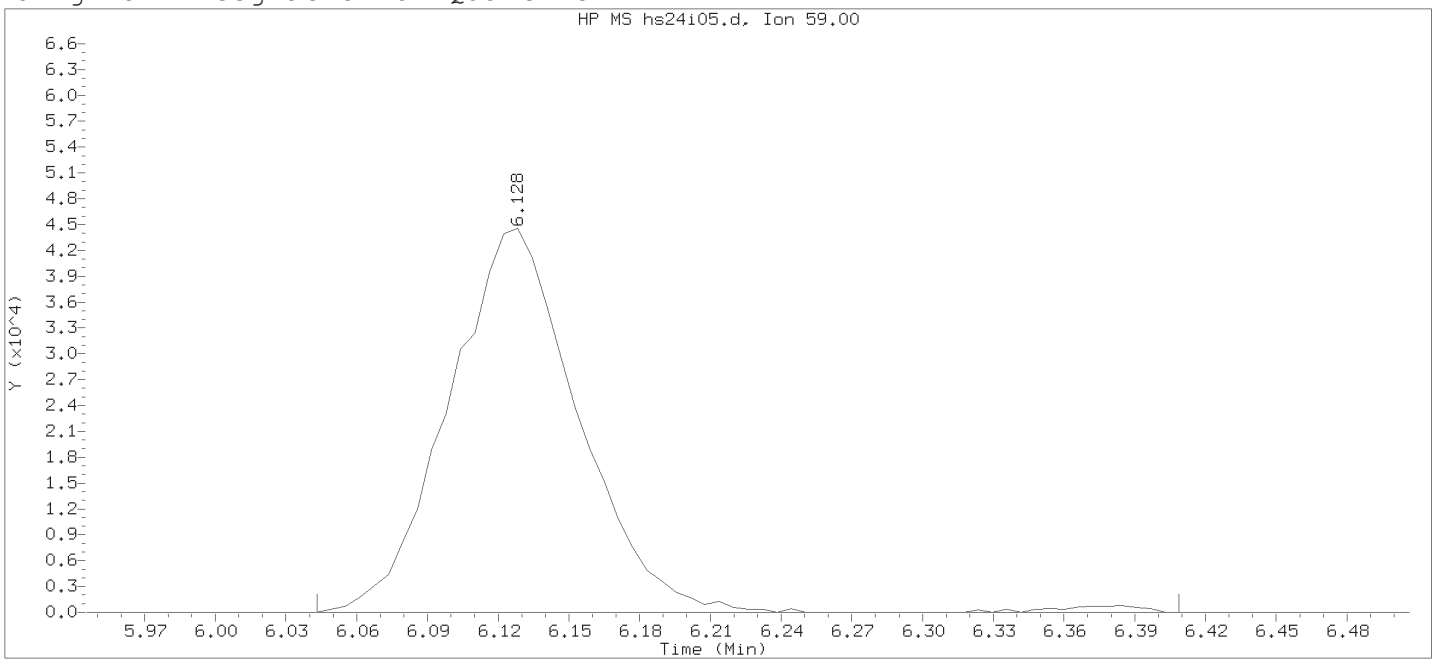
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

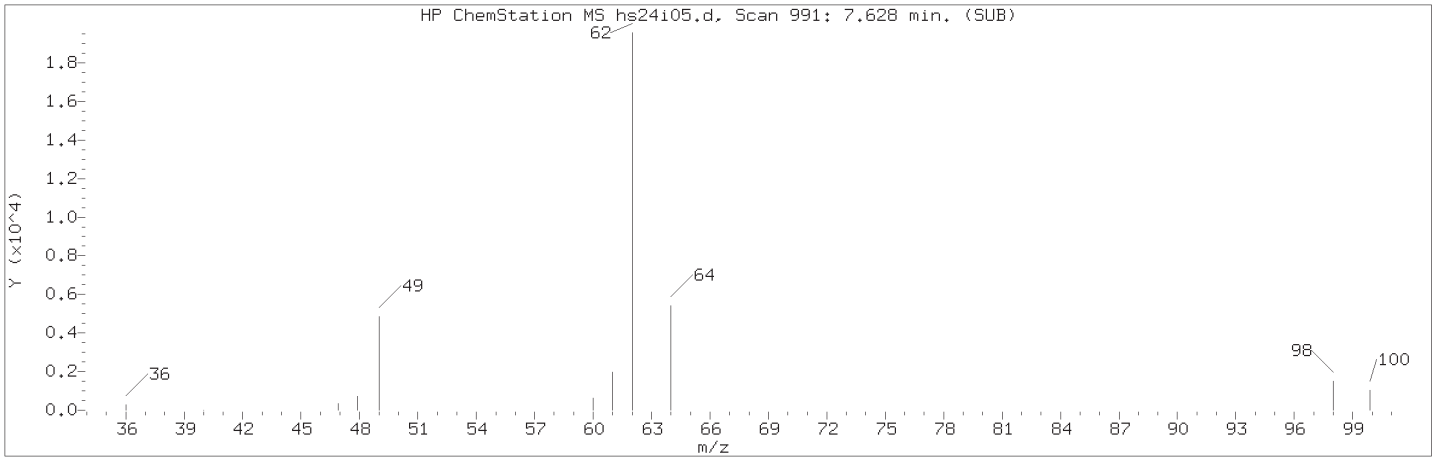
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

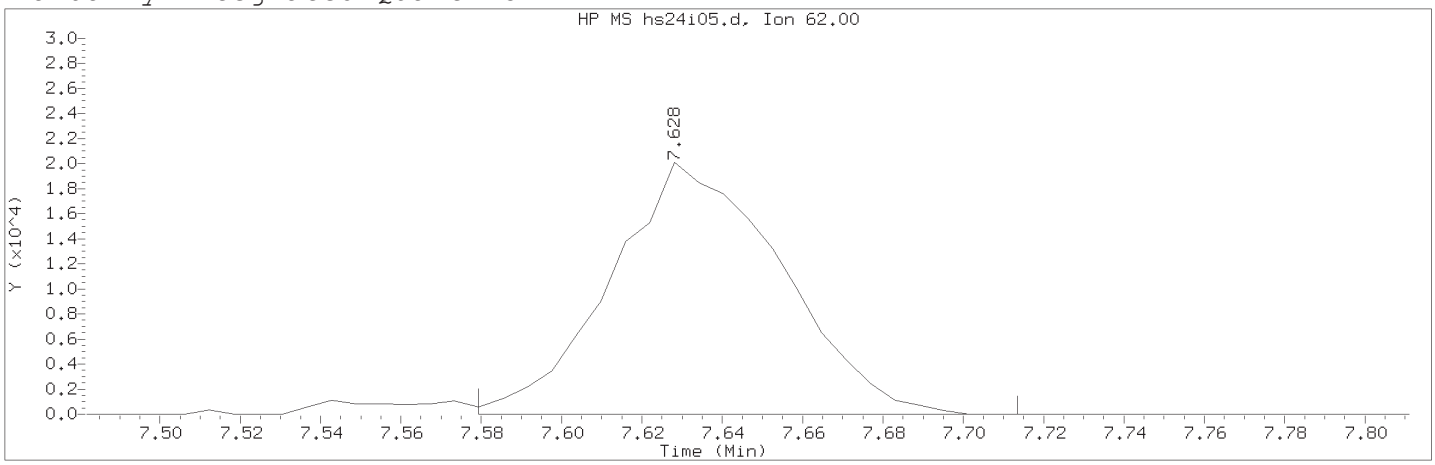
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.128
Quant Ion : 59.00
Area : 170974
On-column Amount (ng) : 1.0111
Integration start scan : 730 Integration stop scan: 790
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

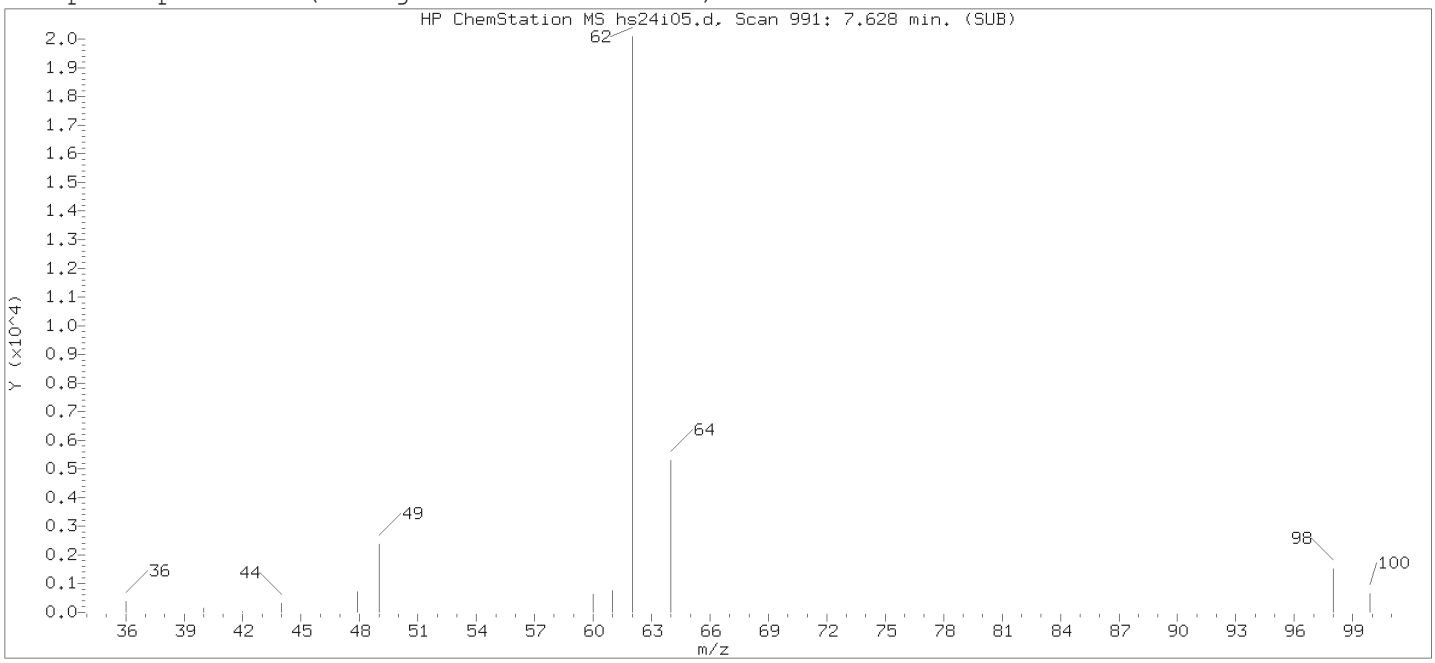
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area (flag) : 59426M
On-Column Amount (ng) : 0.9971
Integration start scan : 982 Integration stop scan: 1004
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

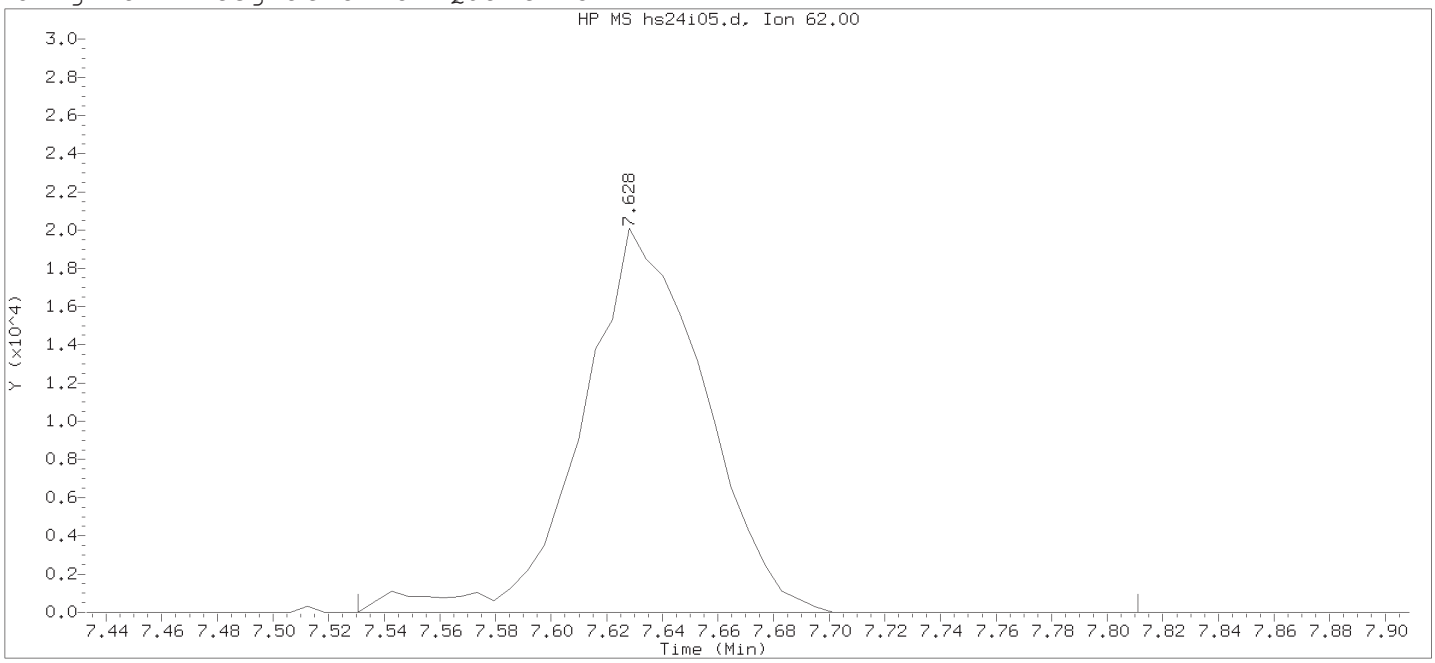
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

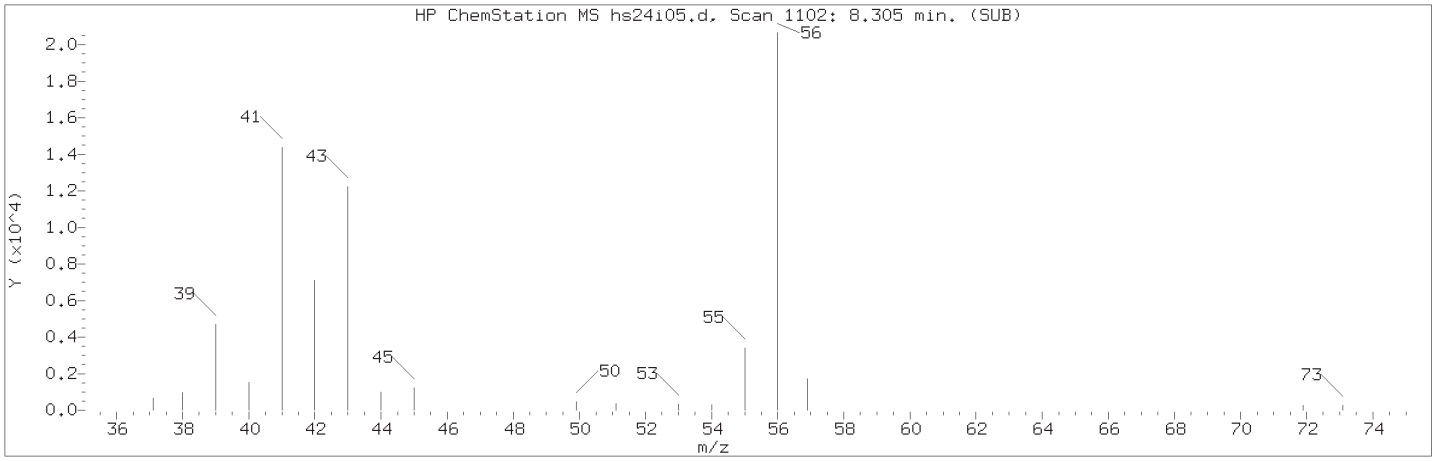
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

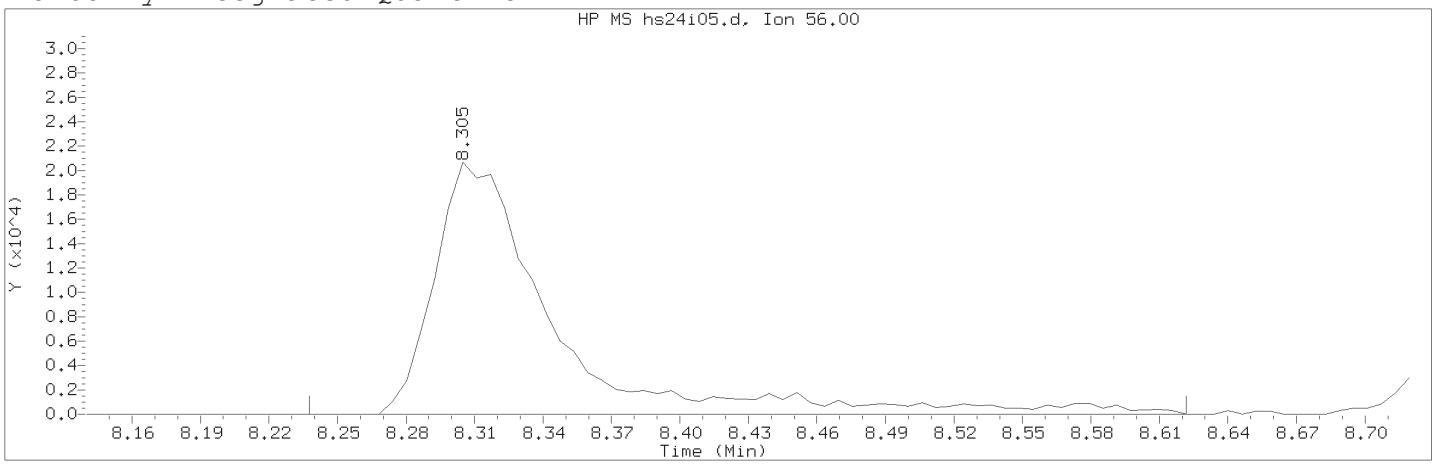
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area : 61591
On-column Amount (ng) : 1.0425
Integration start scan : 974 Integration stop scan: 1020
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

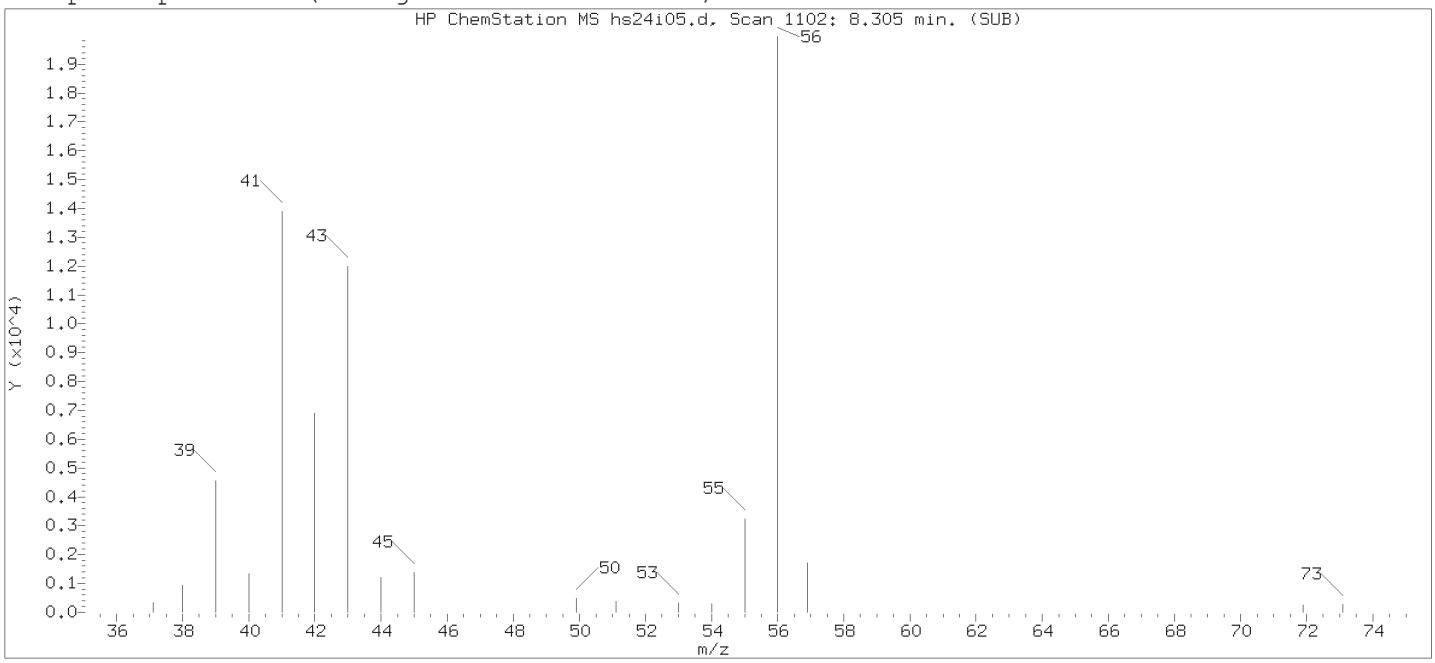
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area (flag) : 74668M
On-Column Amount (ng) : 97.6635
Integration start scan : 1090 Integration stop scan: 1153
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

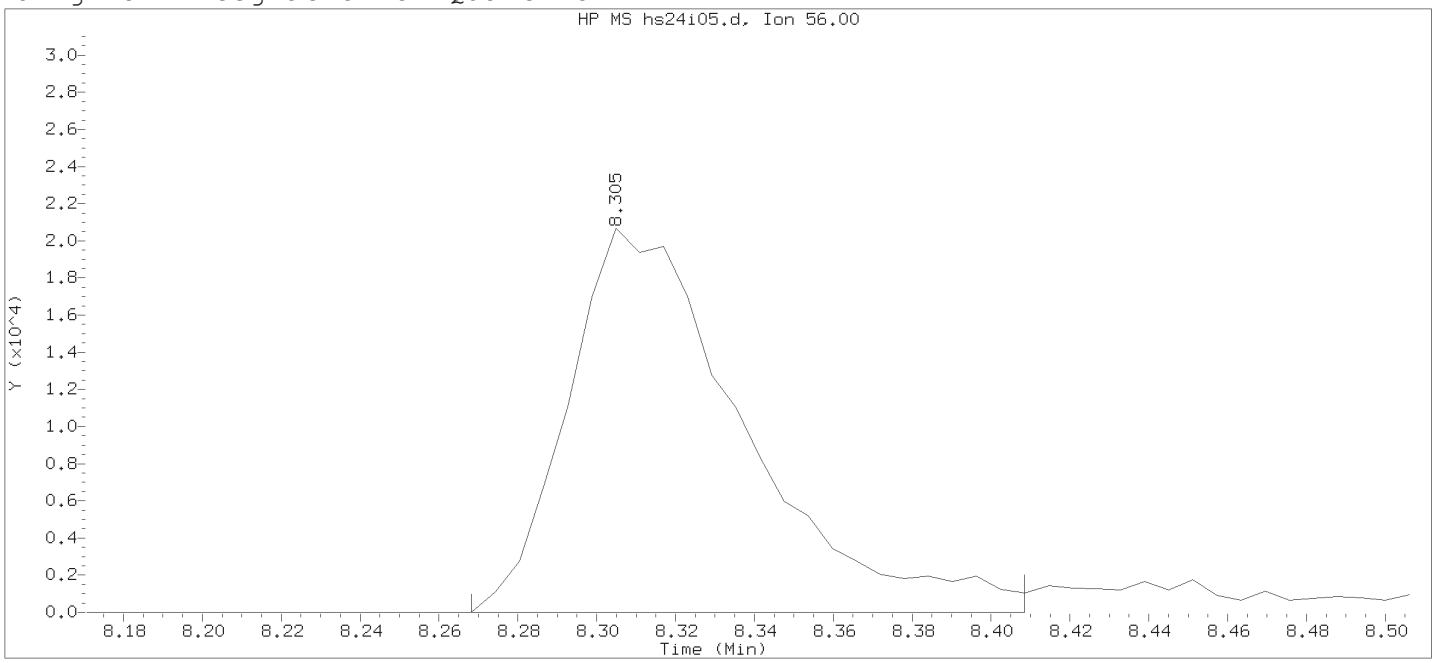
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

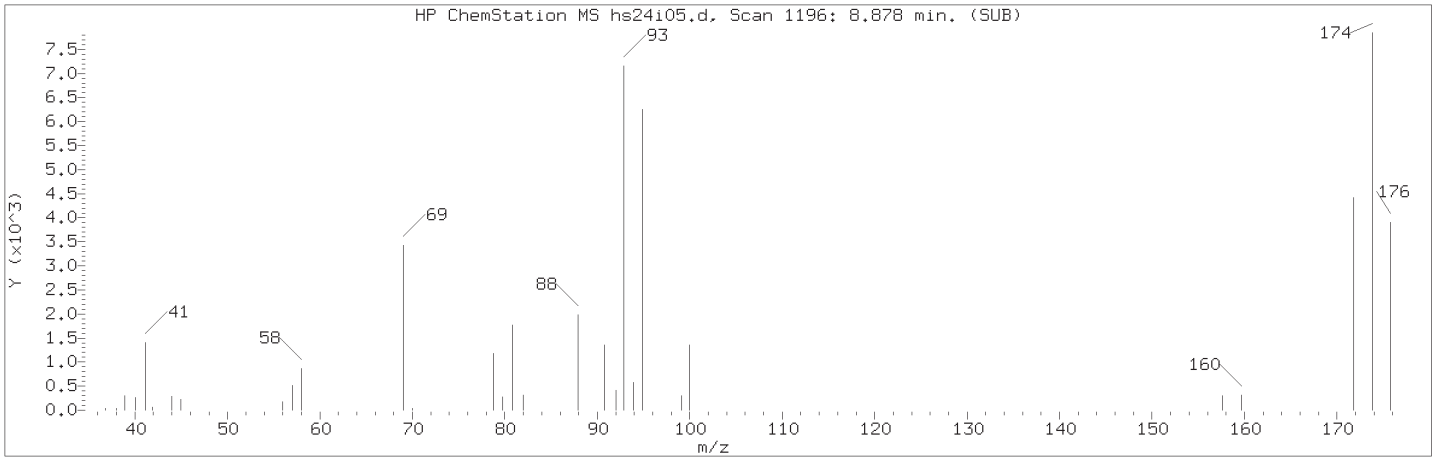
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

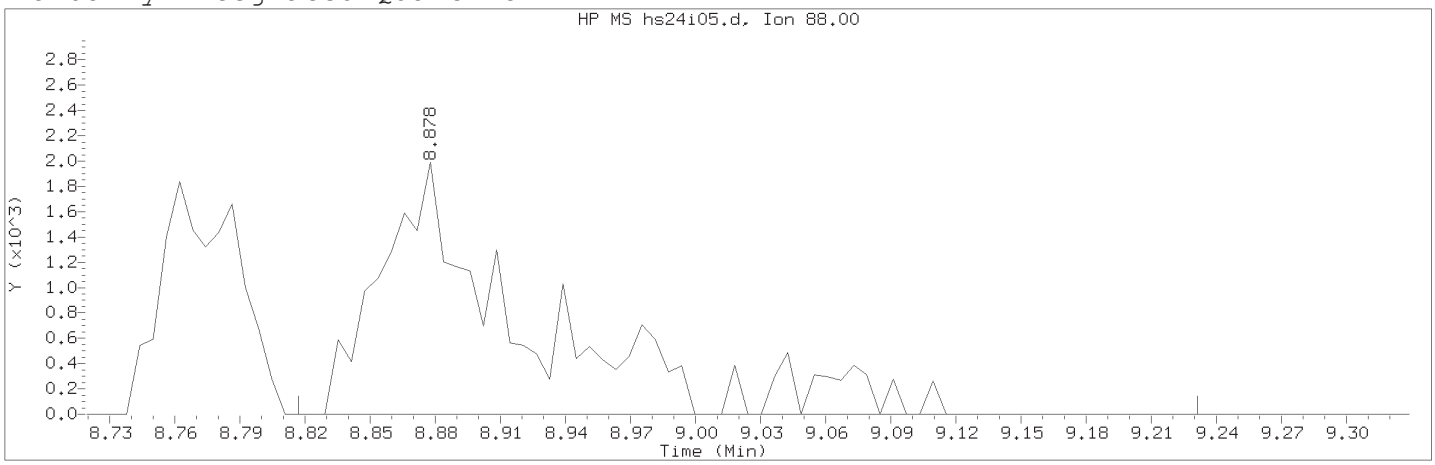
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1102		
Retention Time (minutes)	: 8.305		
Quant Ion	: 56.00		
Area	: 64395		
On-column Amount (ng)	: 83.6678		
Integration start scan	: 1095	Integration stop scan:	1118
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

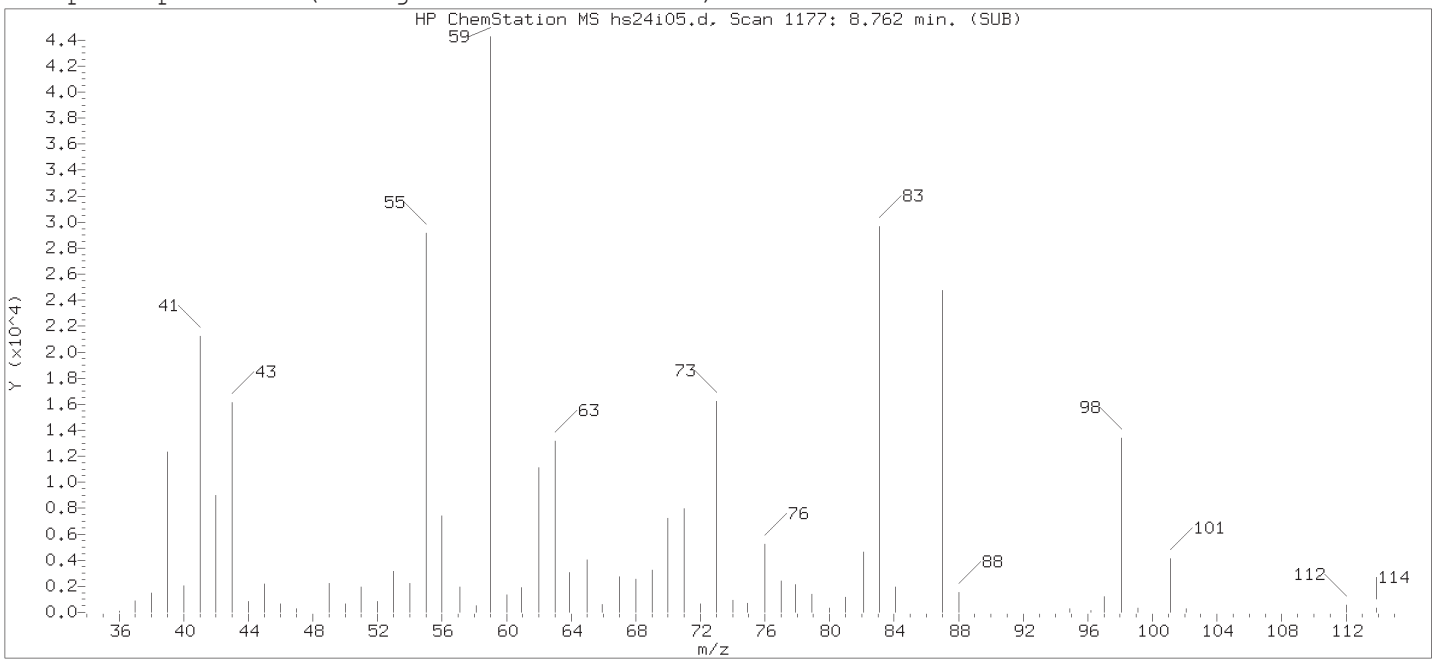
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1196
Retention Time (minutes): 8.878
Quant Ion : 88.00
Area (flag) : 9241M
On-Column Amount (ng) : 50.2009
Integration start scan : 1185 Integration stop scan: 1253
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

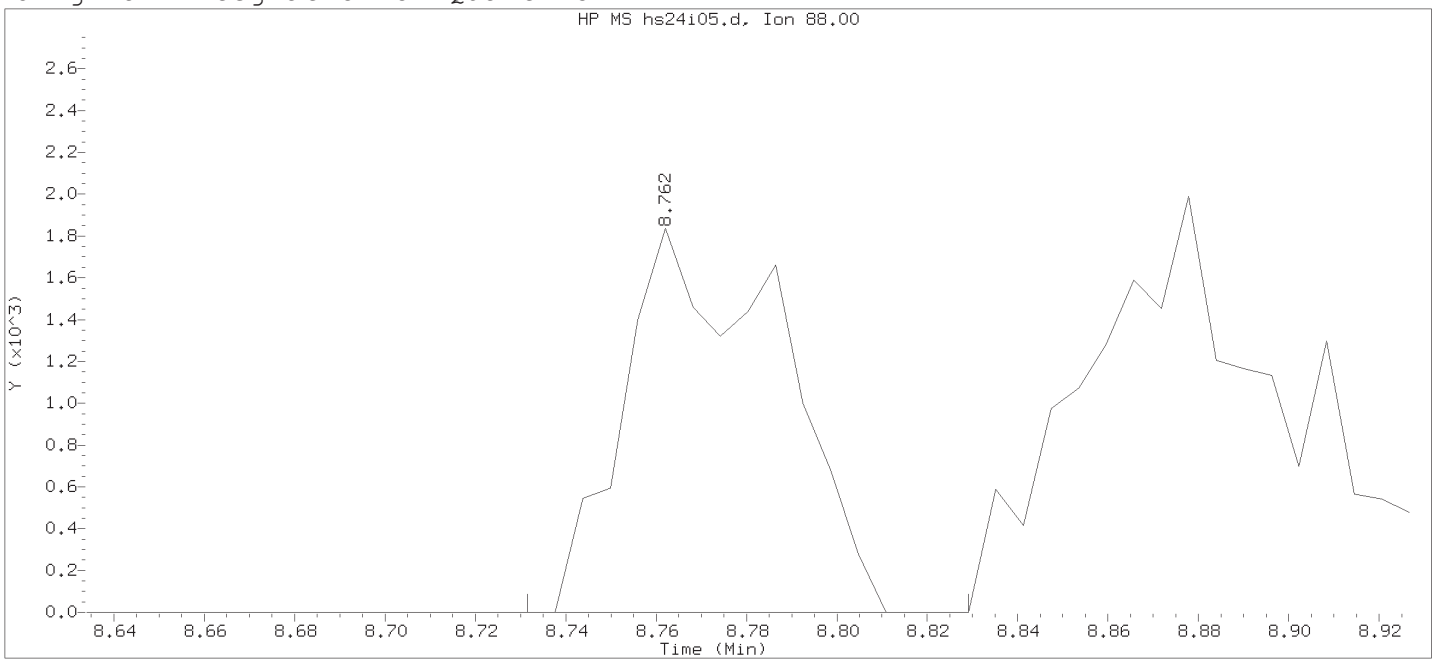
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

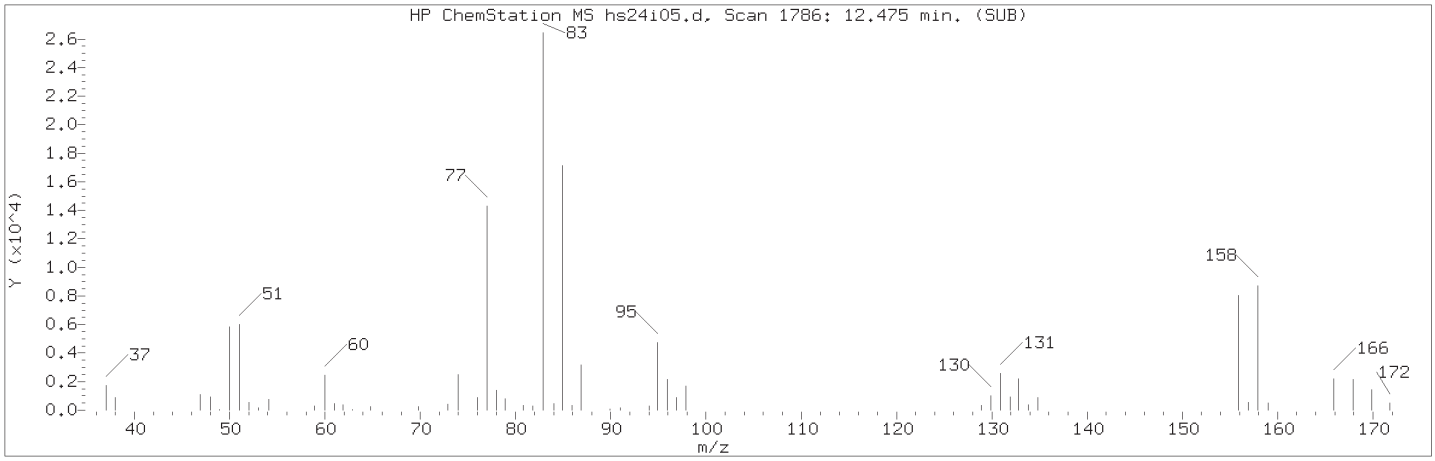
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

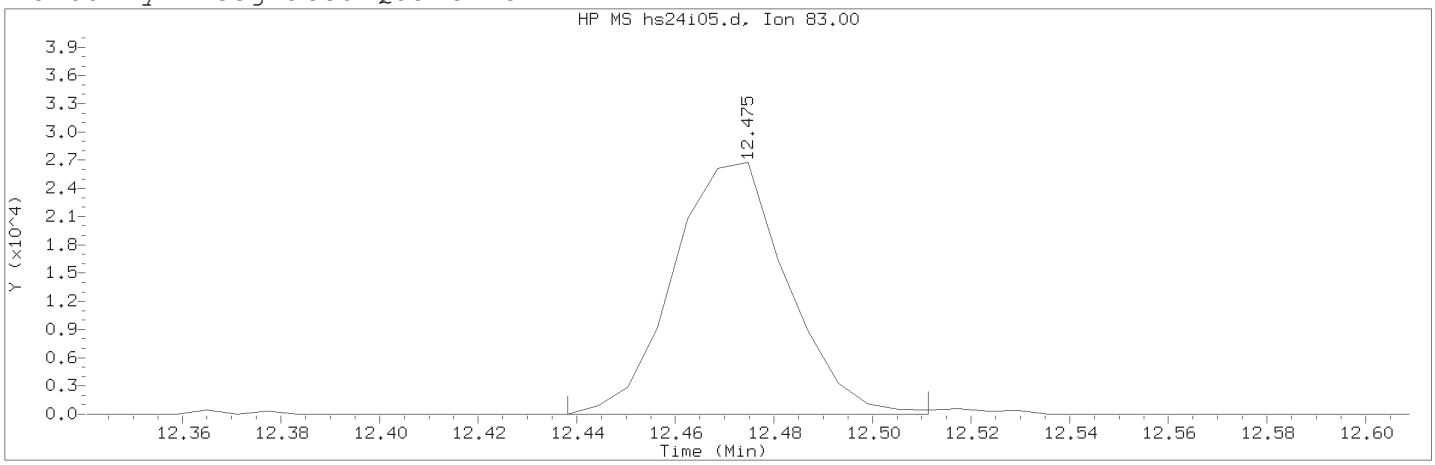
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1177		
Retention Time (minutes)	: 8.762		
Quant Ion	: 88.00		
Area	: 4467		
On-column Amount (ng)	: 37.5984		
Integration start scan	: 1171	Integration stop scan:	1187
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

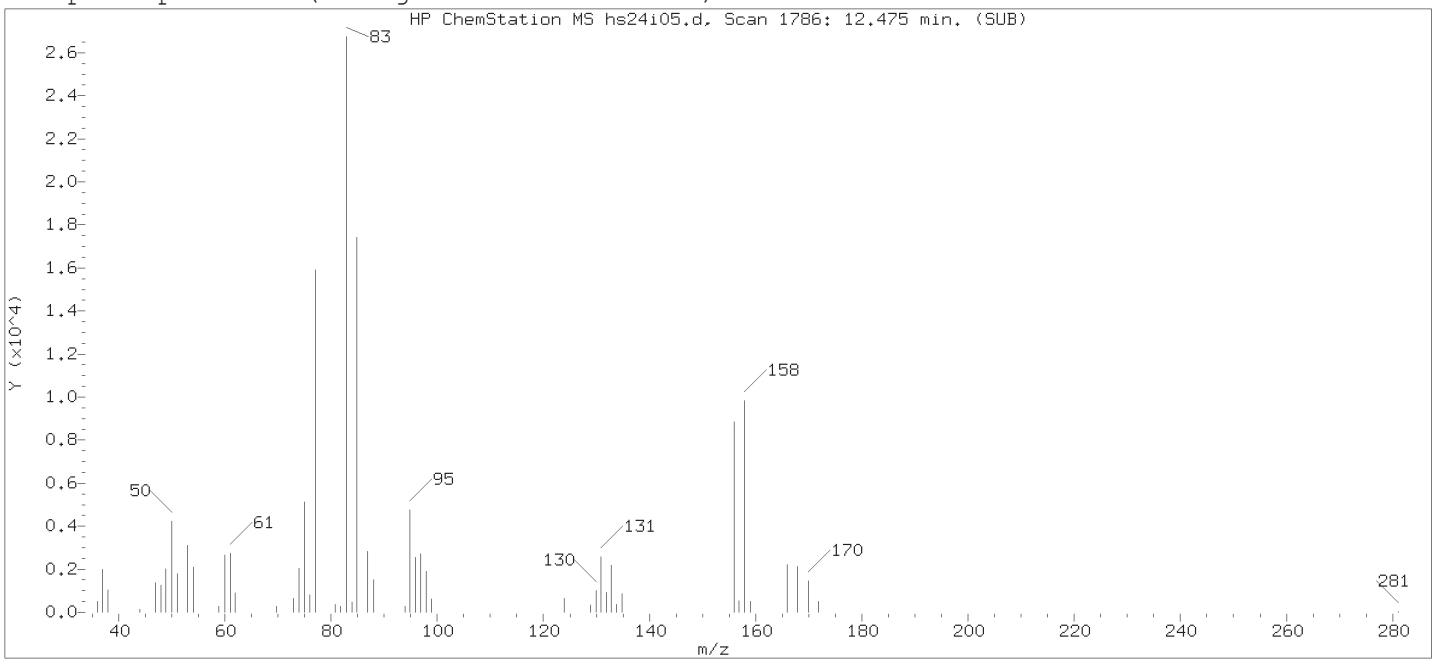
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 42904M
On-Column Amount (ng) : 0.9628
Integration start scan : 1779 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

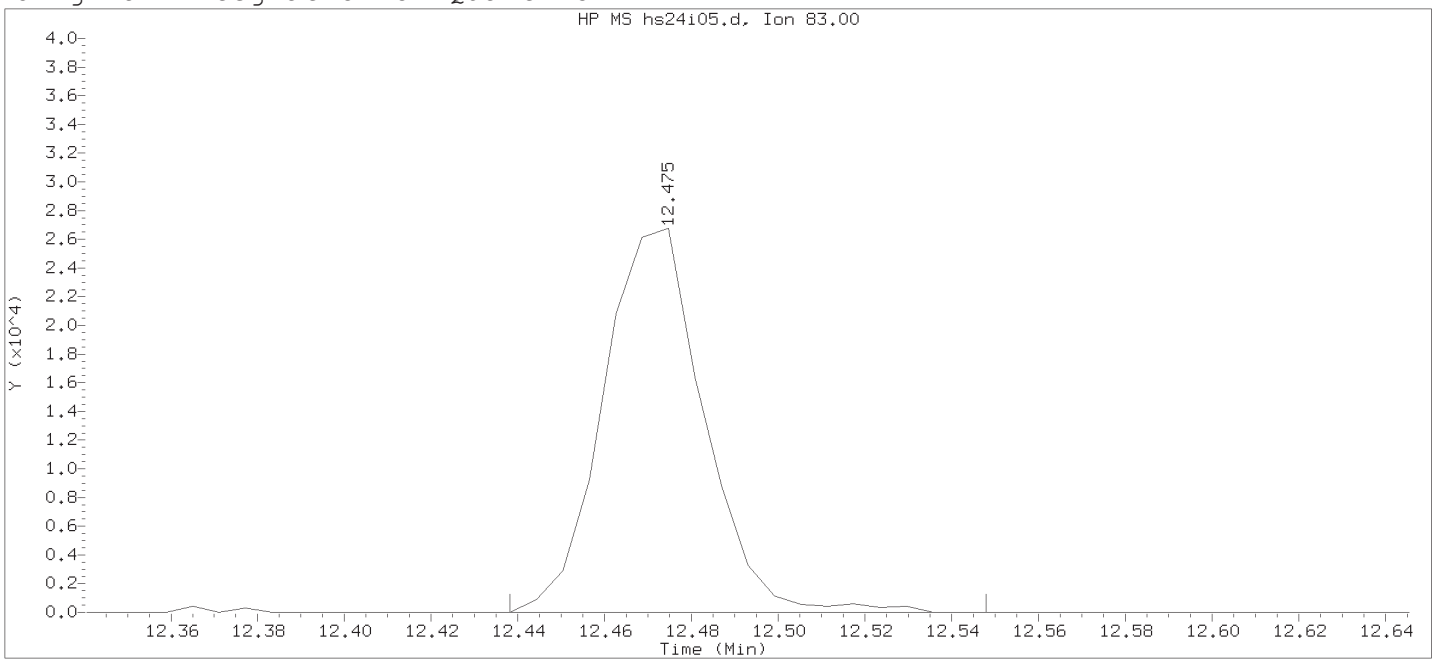
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

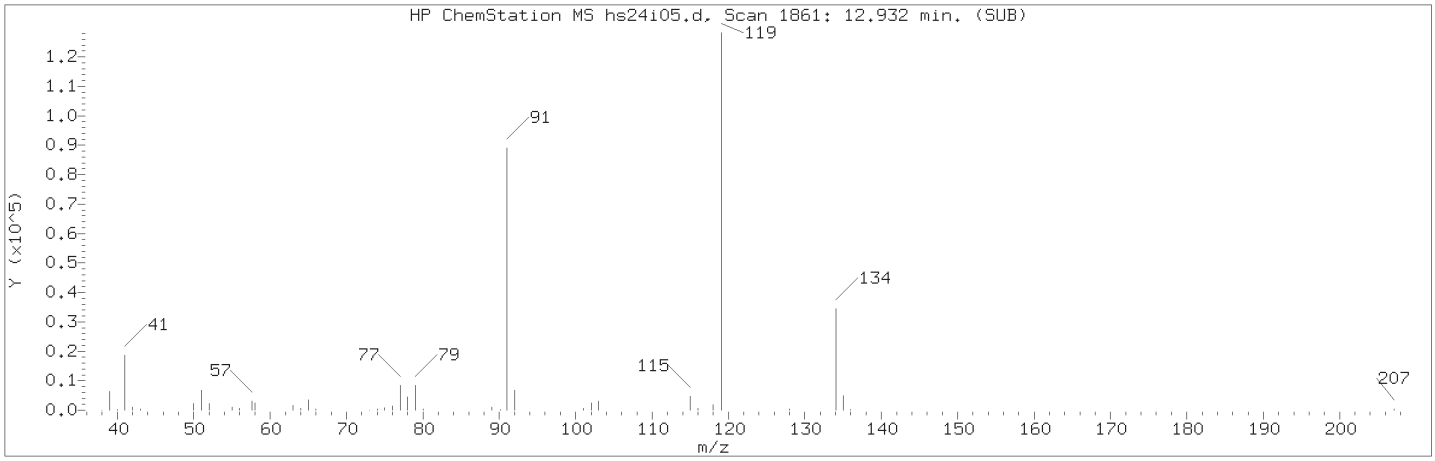
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

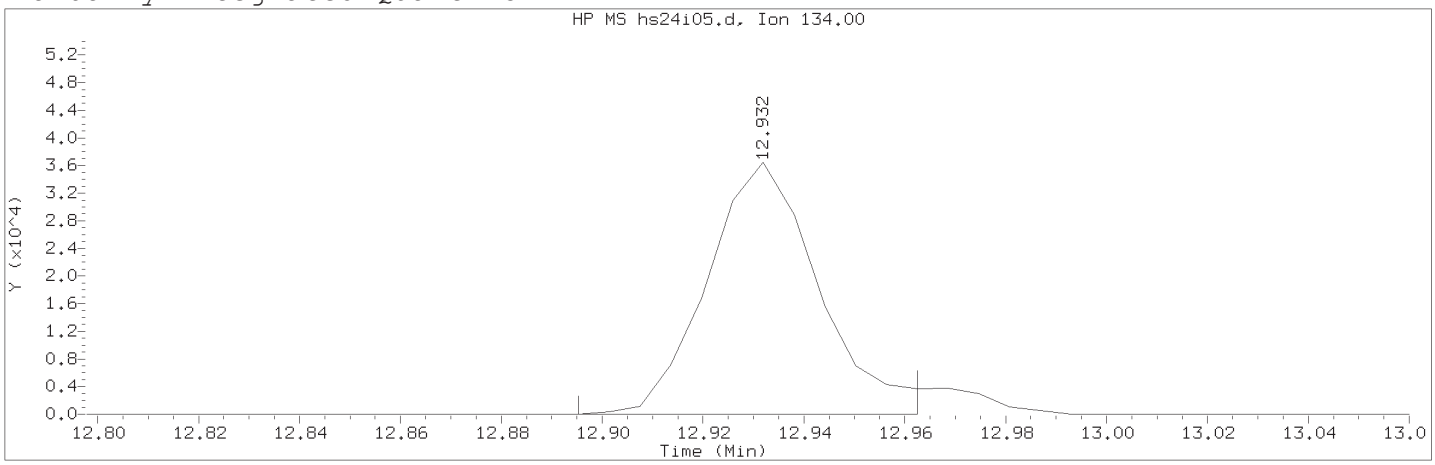
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 43396
On-column Amount (ng) : 0.9508
Integration start scan : 1779 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

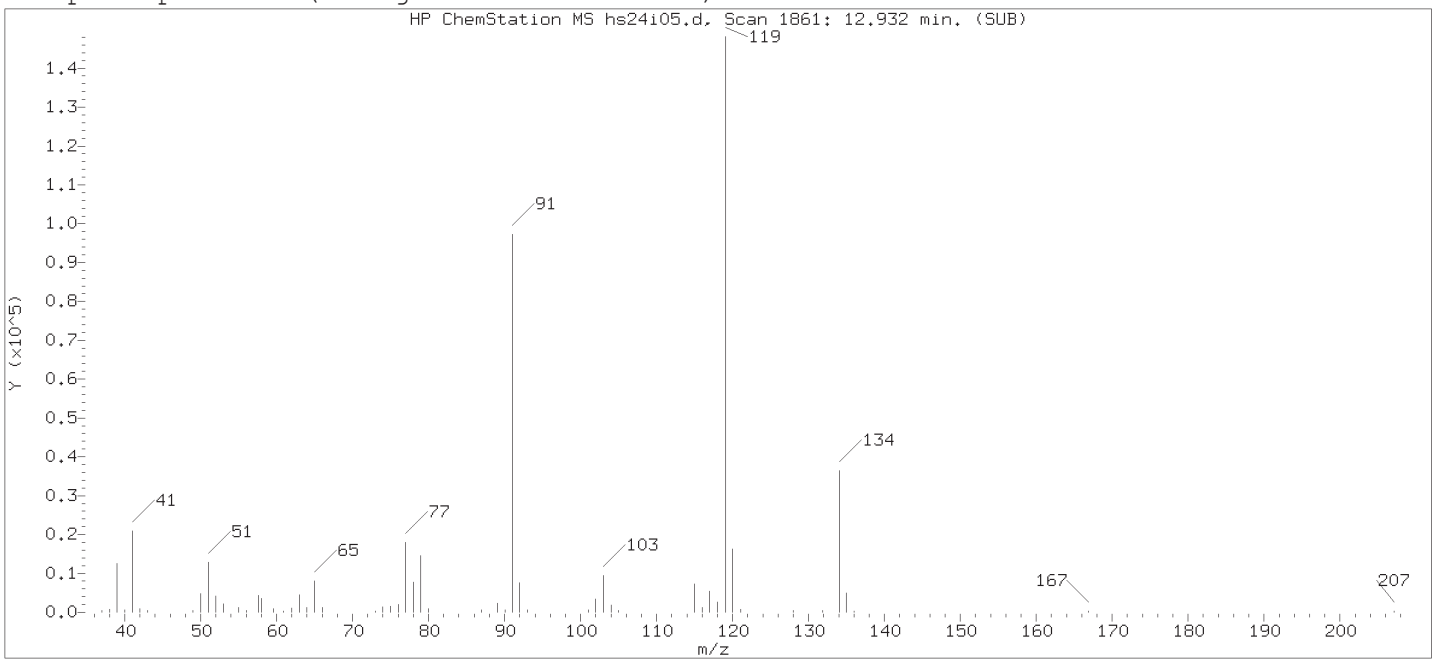
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 55631M
On-Column Amount (ng) : 1.0251
Integration start scan : 1854 Integration stop scan: 1865
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

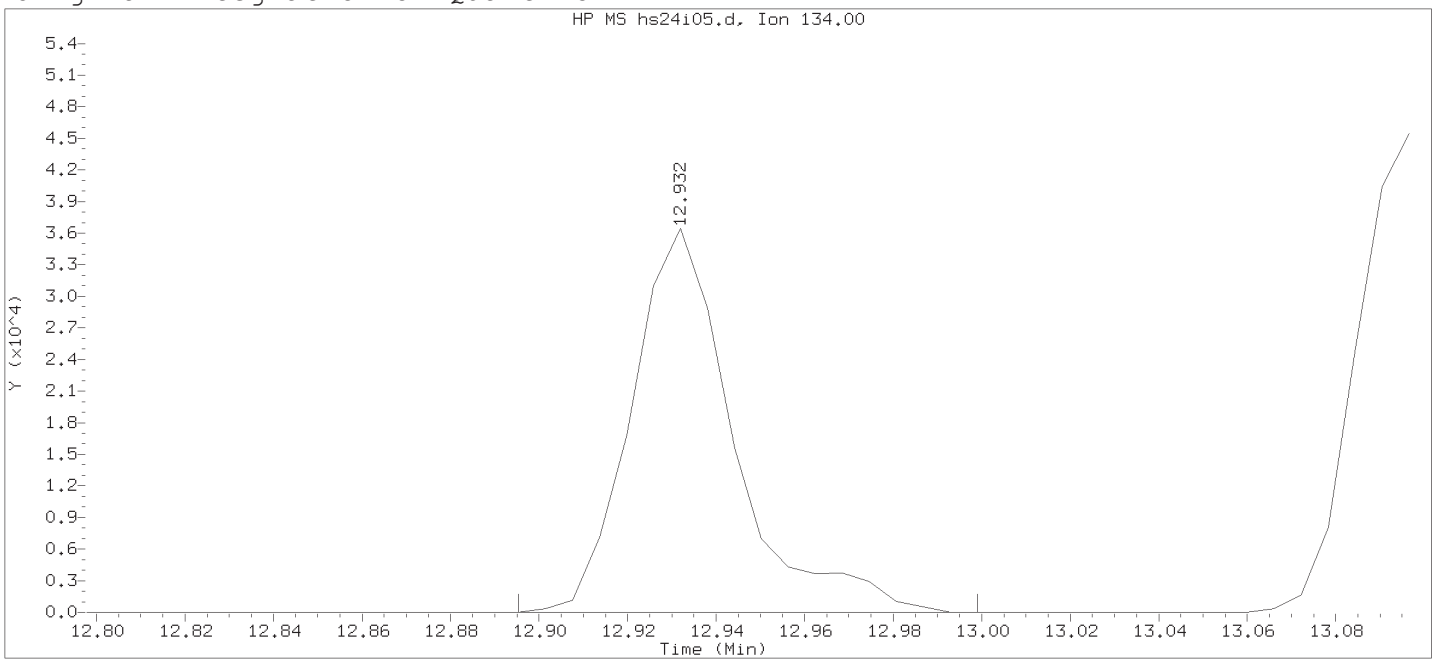
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

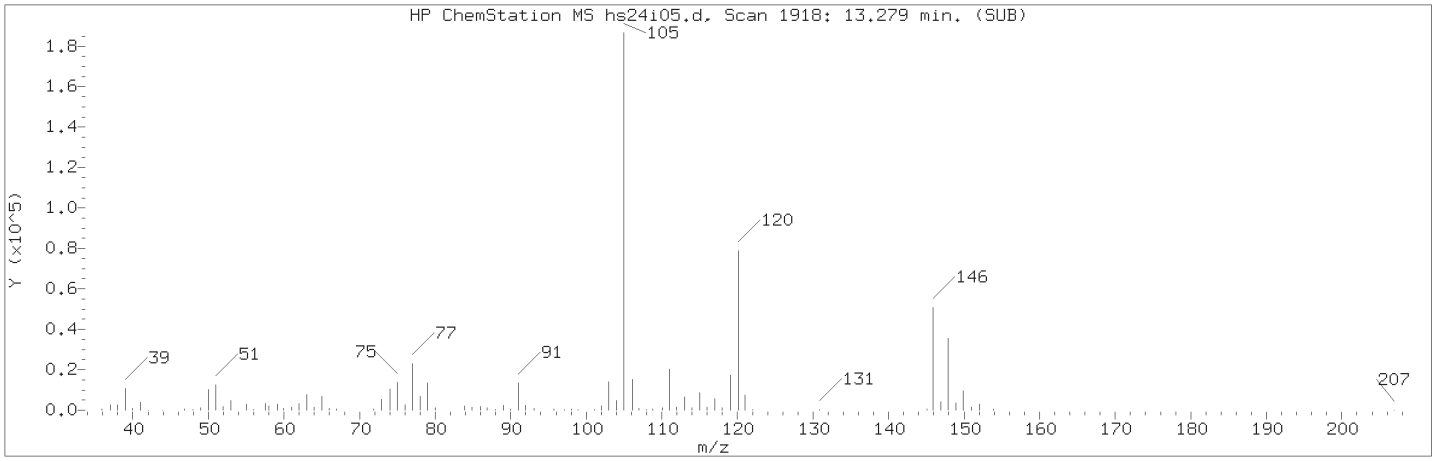
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

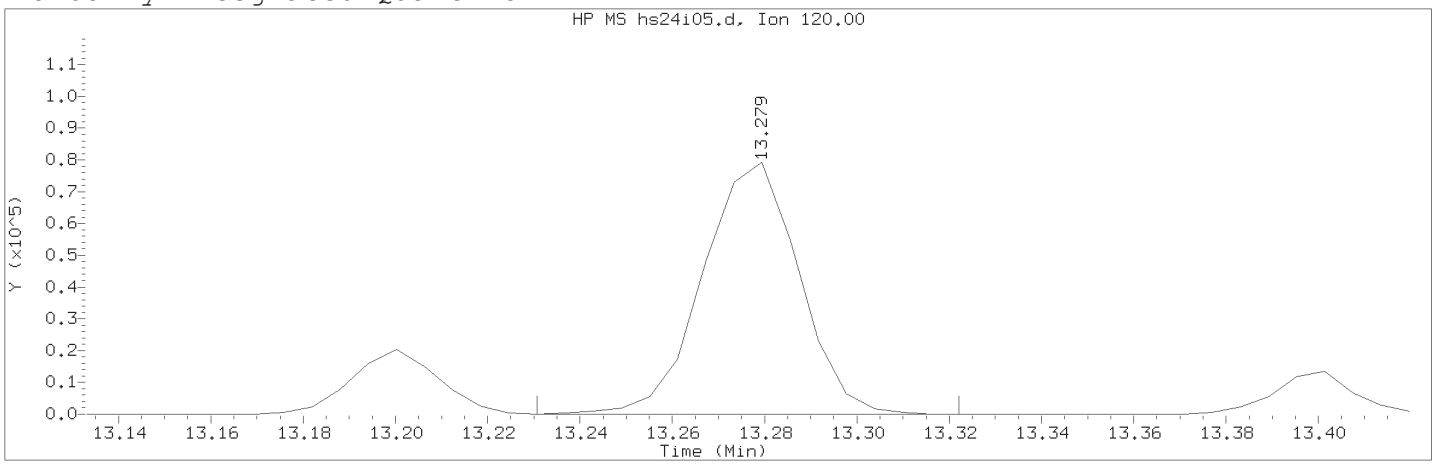
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 58647
On-column Amount (ng) : 1.0086
Integration start scan : 1854 Integration stop scan: 1871
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

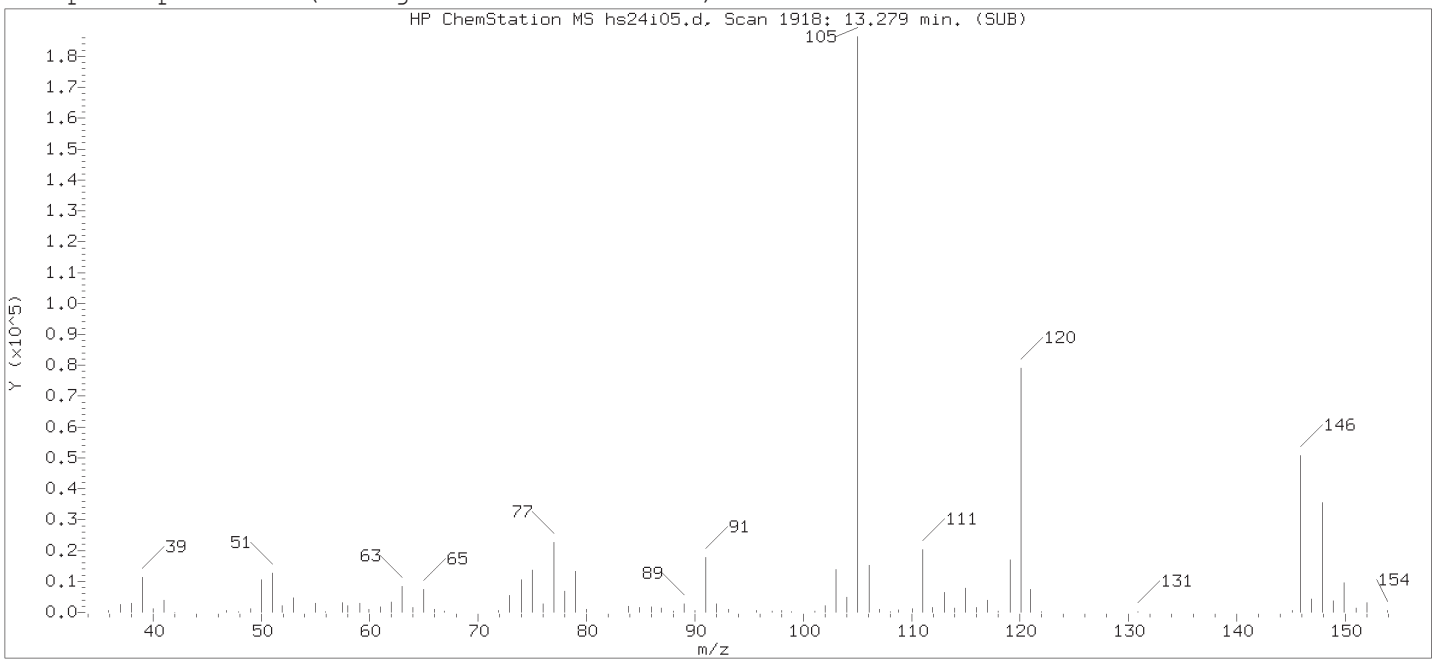
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.279
Quant Ion : 120.00
Area (flag) : 114395M
On-Column Amount (ng) : 0.9792
Integration start scan : 1909 Integration stop scan: 1924
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

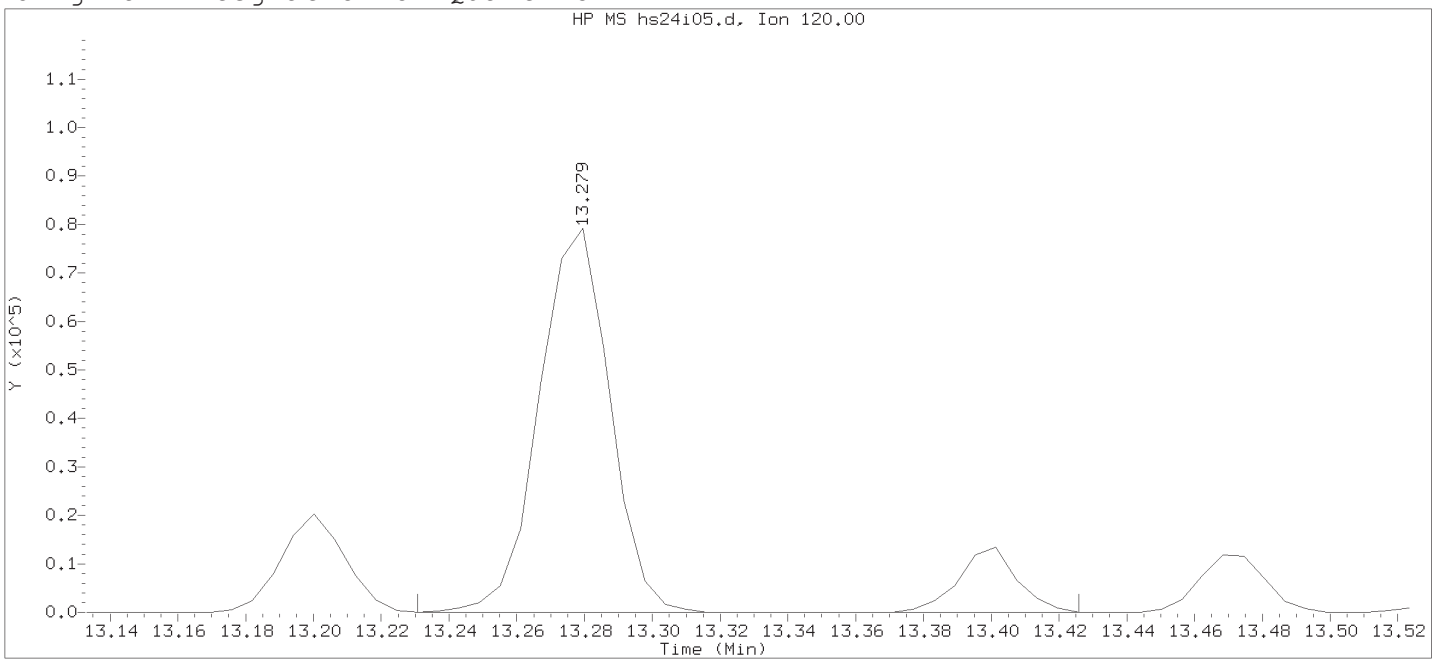
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



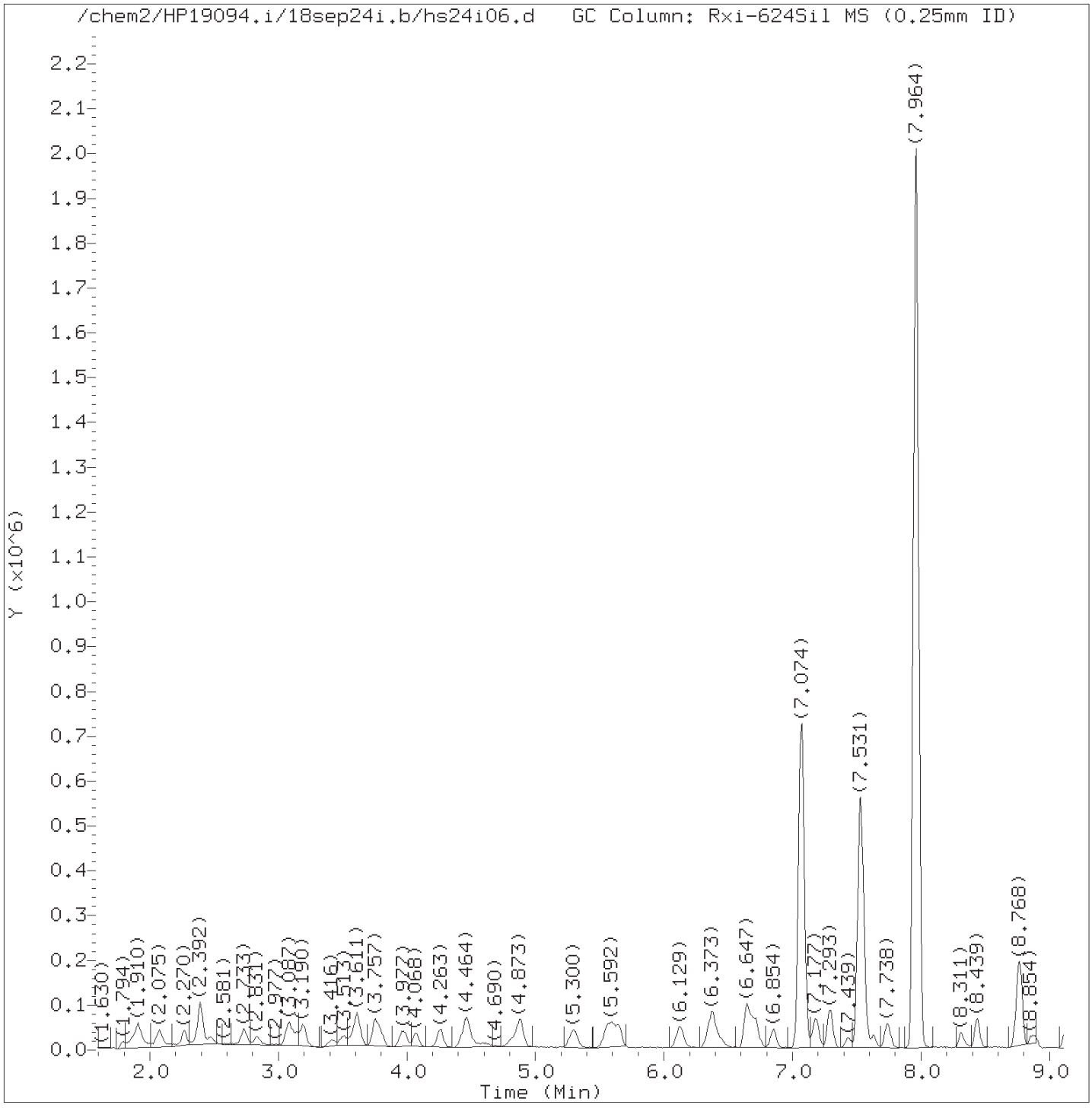
Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.279
Quant Ion : 120.00
Area : 130549
On-column Amount (ng) : 1.0710
Integration start scan : 1909 Integration stop scan: 1941
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

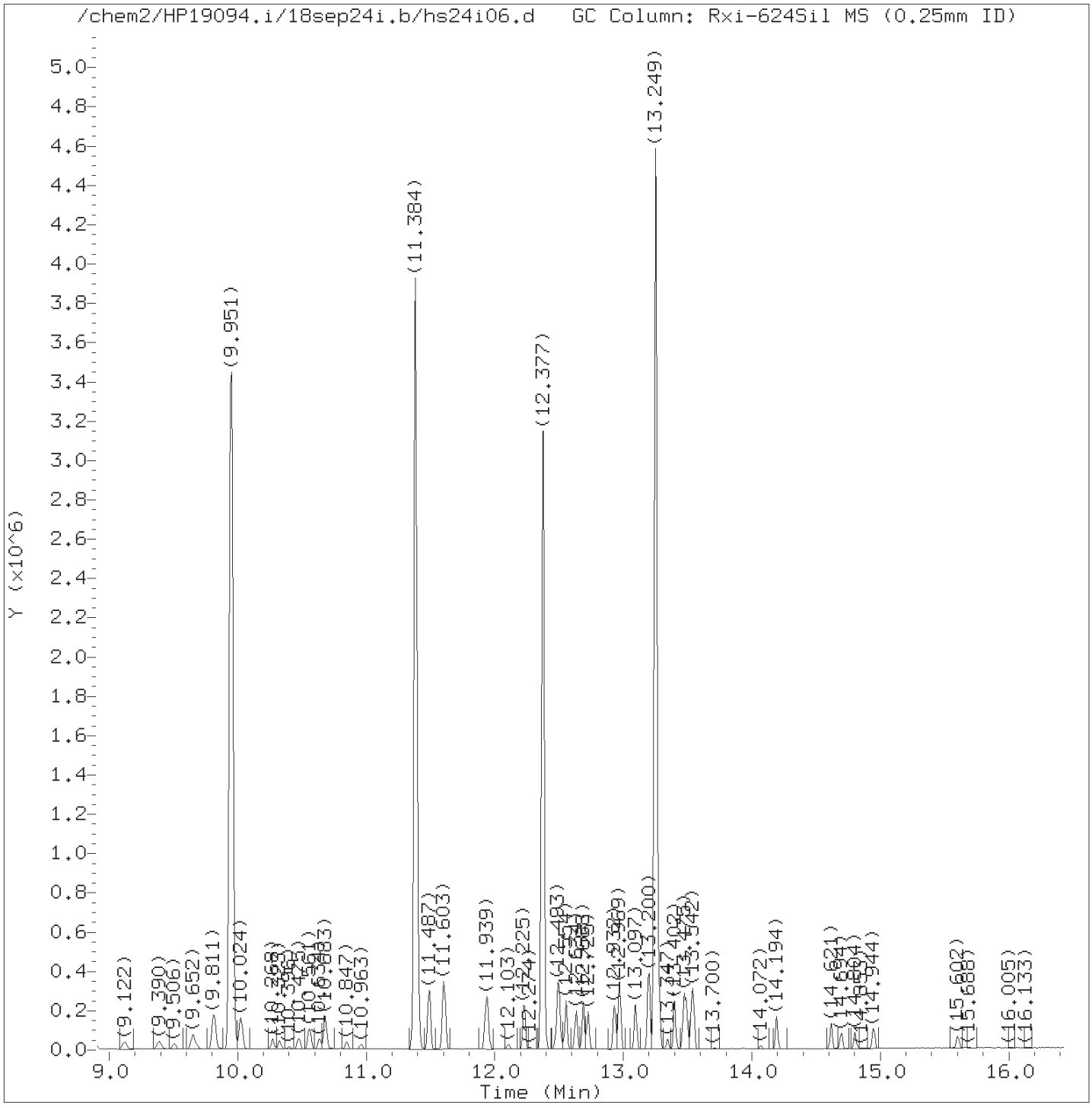
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.062	85	52718	0.492
2) Chloromethane	(2)	2.270	50	52280	0.498
6) 1,3-Butadiene	(2)	2.386	39	54776M	0.492
5) Vinyl Chloride	(2)	2.398	62	47346	0.482
7) Bromomethane	(2)	2.733	94	38272	0.501
8) Chloroethane	(2)	2.831	64	29455	0.494
9) Dichlorofluoromethane	(2)	3.080	67	68125	0.480
10) Trichlorofluoromethane	(2)	3.141	101	61550	0.496
11) Ethyl ether	(2)	3.422	59	20421	0.485
12) Freon 123a	(2)	3.501	67	38697	0.492
13) Acrolein	(1)	3.611	56	144331	23.202
15) 1,1-Dichloroethene	(2)	3.751	96	25447	0.473
16) Freon 113	(2)	3.794	101	29825	0.471
14) Acetone	(1)	3.800	43	39805M	4.764
17) Methyl Iodide	(2)	3.958	142	54798	0.489
18) Carbon Disulfide	(2)	4.068	76	82997	0.485
21) Methyl Acetate	(1)	4.214	43	11281	0.481
22) Allyl Chloride	(2)	4.257	41	48017	0.470
23) Methylene Chloride	(2)	4.452	84	28557	0.471
26)*t-Butyl Alcohol-d10	(1)	4.477	65	140183M	50.000
28) t-Butyl Alcohol	(1)	4.605	59	23242	9.713
29) Acrylonitrile	(1)	4.800	53	25339	2.348
30) Methyl Tertiary Butyl Ether	(2)	4.861	73	53197	0.481
31) trans-1,2-Dichloroethene	(2)	4.891	96	28696	0.473
32) n-Hexane	(2)	5.300	57	44645	0.463
33) 1,1-Dichloroethane	(2)	5.556	63	55167	0.477
34) di-Isopropyl Ether	(2)	5.592	45	97579	0.475
35) 2-Chloro-1,3-Butadiene	(2)	5.647	53	47649	0.458
40) 1,2-Dichloroethene (Total)	(2)		96	60740	0.951
37) Ethyl t-butyl ether	(2)	6.117	59	79009M	0.485
38) 2-Butanone	(1)	6.336	43	62685	4.583
39) cis-1,2-Dichloroethene	(2)	6.366	96	32044	0.478
41) 2,2-Dichloropropane	(2)	6.391	77	37720	0.457
42) Propionitrile	(1)	6.446	54	36555	9.847
45) Methacrylonitrile	(1)	6.647	67	61003	4.557
47) Bromochloromethane	(2)	6.702	128	13020	0.460
48) Tetrahydrofuran	(1)	6.714	71	16511	4.541
49) Chloroform	(2)	6.854	83	51878	0.483

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.068	113	691568	10.003
50)$Dibromofluoromethane	(2)	7.068	111	705727	9.917
51) 1,1,1-Trichloroethane	(2)	7.086	97	43339	0.472
52) Cyclohexane	(2)	7.183	56	55245	0.460
52) Cyclohexane	(2)	7.177	84	43224	0.437
52) Cyclohexane	(2)	7.177	69	16219	0.459
54) Carbon Tetrachloride	(2)	7.293	117	36936	0.468
55) 1,1-Dichloropropene	(2)	7.299	75	39906	0.458
56) Isobutyl Alcohol	(1)	7.433	41	23659	25.555
57)$1,2-Dichloroethane-d4	(2)	7.531	102	118986	9.872
57)$1,2-Dichloroethane-d4	(2)	7.525	65	583630	10.011
57)$1,2-Dichloroethane-d4	(2)	7.531	104	76978	9.972
58) Benzene	(2)	7.555	78	124386	0.483
59) 1,2-Dichloroethane	(2)	7.628	62	29519M	0.498
60) t-Amyl methyl ether	(2)	7.738	73	64107	0.475
63)*Fluorobenzene	(2)	7.964	96	2743076	10.000
62) n-Heptane	(2)	7.976	43	45673	0.459
65) n-Butanol	(1)	8.305	56	35795M	45.764
67) Trichloroethene	(2)	8.439	95	30507	0.463
69) Methylcyclohexane	(2)	8.756	83	57016	0.458
70) 1,2-Dichloropropane	(2)	8.781	63	28744	0.460
71) Methyl Methacrylate	(1)	8.854	69	10601	0.428
72) 1,4-Dioxane	(1)	8.866	88	3592M	19.073
73) Dibromomethane	(2)	8.890	93	12594	0.486
74) Bromodichloromethane	(2)	9.122	83	32561	0.464
76) 2-Nitropropane	(1)	9.390	41	29896	4.260
80) cis-1,3-Dichloropropene	(2)	9.652	75	36712	0.449
81) 4-Methyl-2-Pentanone	(1)	9.811	43	150042	4.410
82)$Toluene-d8	(3)	9.951	98	2759998	9.999
82)$Toluene-d8	(3)	9.951	100	1781368	9.999
83) Toluene	(3)	10.024	92	77148	0.485
85) 1,3-Dichloropropene (total)	(3)		75	65838	0.924
84) trans-1,3-Dichloropropene	(3)	10.274	75	29126	0.475
86) Ethyl Methacrylate	(3)	10.323	69	24760	0.471
88) 1,1,2-Trichloroethane	(3)	10.475	97	16887	0.461
89) Tetrachloroethene	(3)	10.555	166	35437	0.493
90) 1,3-Dichloropropane	(3)	10.634	76	30460	0.469
91) 2-Hexanone	(1)	10.683	43	102566	4.429

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	19914	0.454
95) 1,2-Dibromoethane	(3)	10.963	107	16520	0.481
96) 1-Chlorohexane	(3)	11.384	91	45289	0.477
97)*Chlorobenzene-d5	(3)	11.384	117	2144655	10.000
98) Chlorobenzene	(3)	11.408	112	80357	0.476
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	26174	0.470
100) Ethylbenzene	(3)	11.493	91	148120	0.476
101) m+p-Xylene	(3)	11.603	106	110361	0.957
105) Xylene (Total)	(3)		106	162876	1.433
104) o-Xylene	(3)	11.932	106	52515	0.476
106) Styrene	(3)	11.945	104	80057M	0.454
107) Bromoform	(3)	12.103	173	11176	0.463
108) Isopropylbenzene	(3)	12.231	105	139927	0.465
111)$4-Bromofluorobenzene	(3)	12.371	95	1008561	10.036
111)$4-Bromofluorobenzene	(3)	12.377	174	881794	10.105
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	20751	0.467
114) Bromobenzene	(4)	12.493	156	31936	0.473
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	45404	4.261
116) 1,2,3-Trichloropropane	(4)	12.524	110	5721	0.499
117) n-Propylbenzene	(4)	12.554	91	170760	0.465
119) 2-Chlorotoluene	(4)	12.634	126	34609	0.486
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	114586	0.461
122) 4-Chlorotoluene	(4)	12.725	126	33813	0.474
125) tert-Butylbenzene	(4)	12.932	134	25726M	0.476
126) Pentachloroethane	(4)	12.969	167	18317	0.434
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	117785	0.464
128) sec-Butylbenzene	(4)	13.097	105	144734	0.449
131) 1,3-Dichlorobenzene	(4)	13.194	146	63877	0.476
132) p-Isopropyltoluene	(4)	13.200	119	119452	0.448
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1119082	10.000
134) 1,4-Dichlorobenzene	(4)	13.268	146	61222	0.465
135) 1,2,3-Trimethylbenzene	(4)	13.274	120	54691	0.470
136) Benzyl Chloride	(4)	13.347	126	6108	0.381
138) n-Butylbenzene	(4)	13.493	92	60346	0.456
139) 1,2-Dichlorobenzene	(4)	13.530	146	57190	0.483
143) 1,2-Dibromo-3-chloropropane	(1)	14.078	155	2354	0.408
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	47093	0.472
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	38351	0.472

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

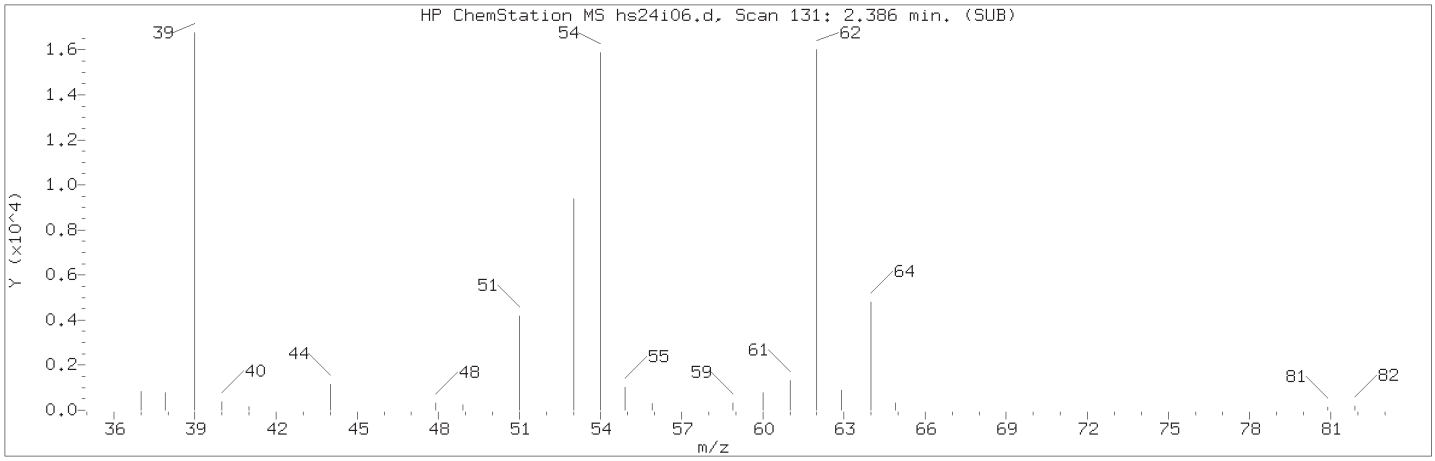
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

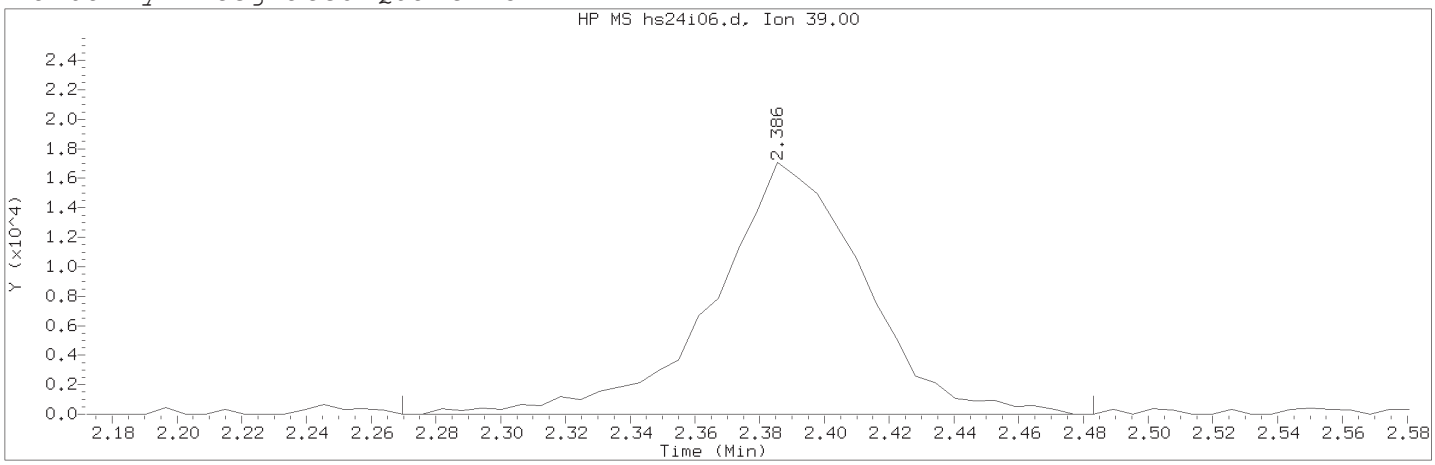
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	14287	0.465
147) Naphthalene	(4)	14.804	128	57089	0.444
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	31271	0.468

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

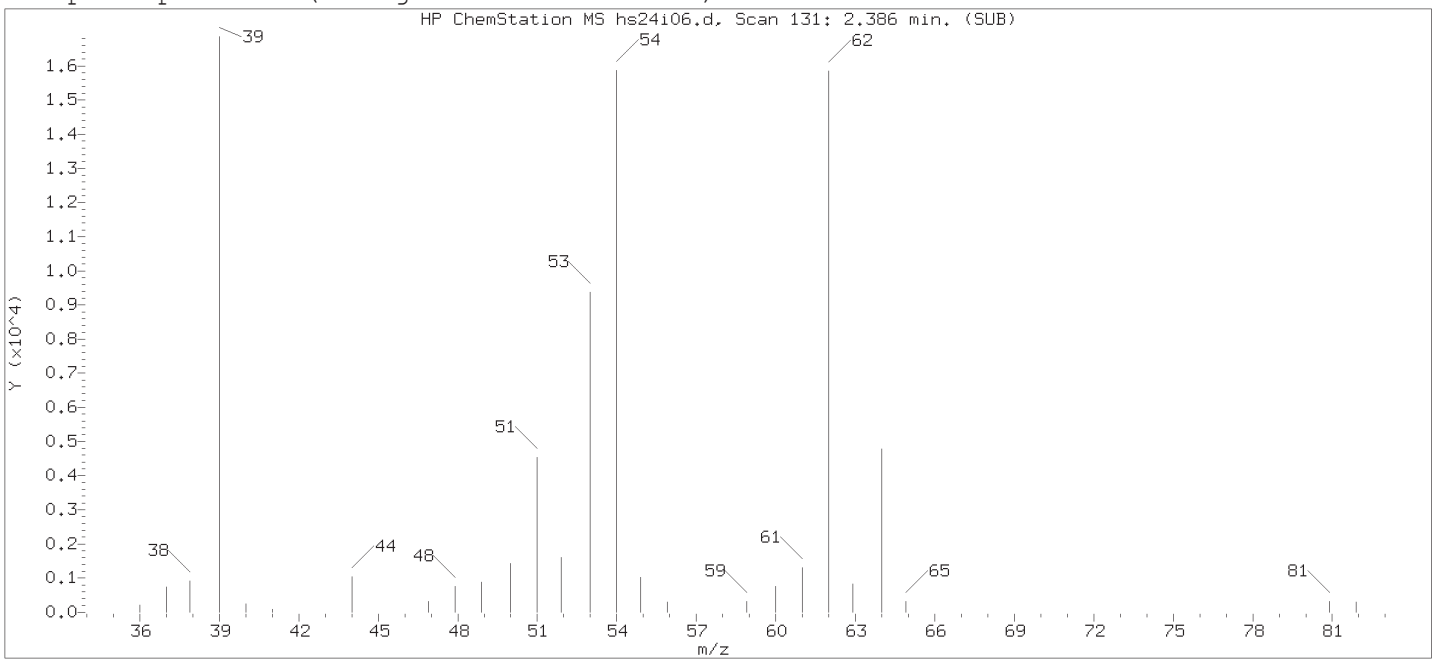
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.386
Quant Ion : 39.00
Area (flag) : 54776M
On-Column Amount (ng) : 0.4918
Integration start scan : 111 Integration stop scan: 146
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

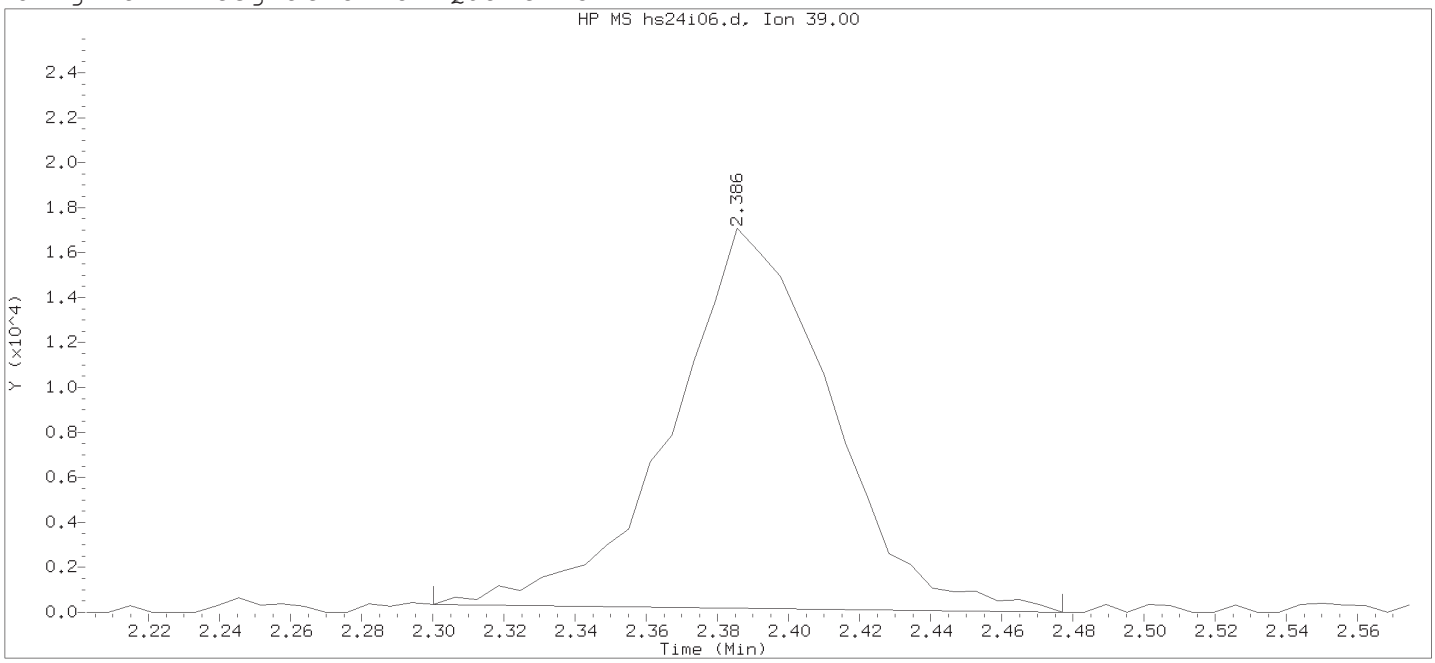
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

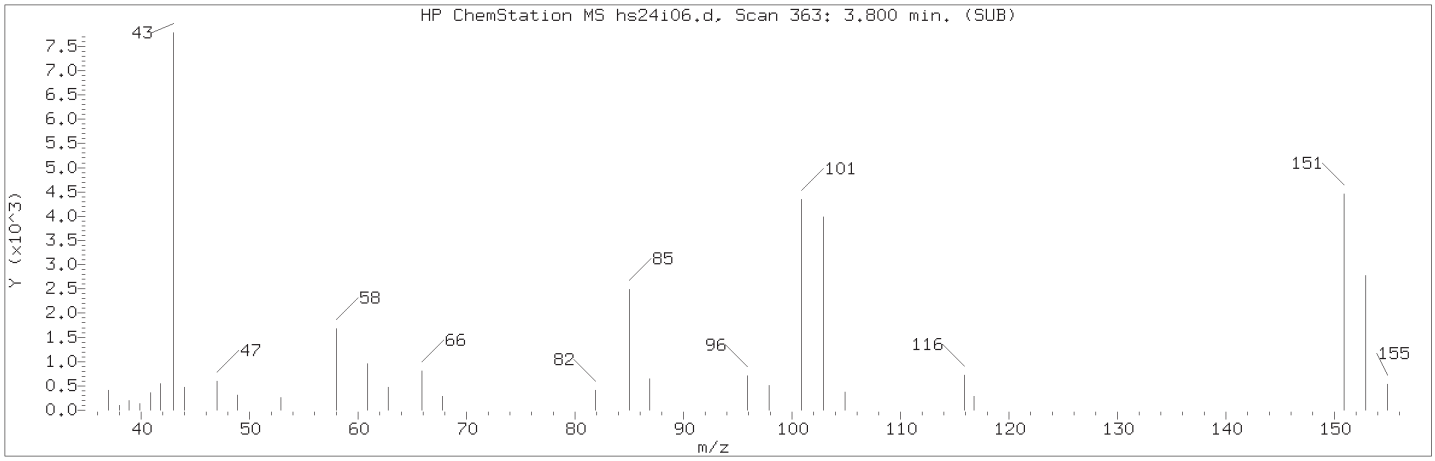
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

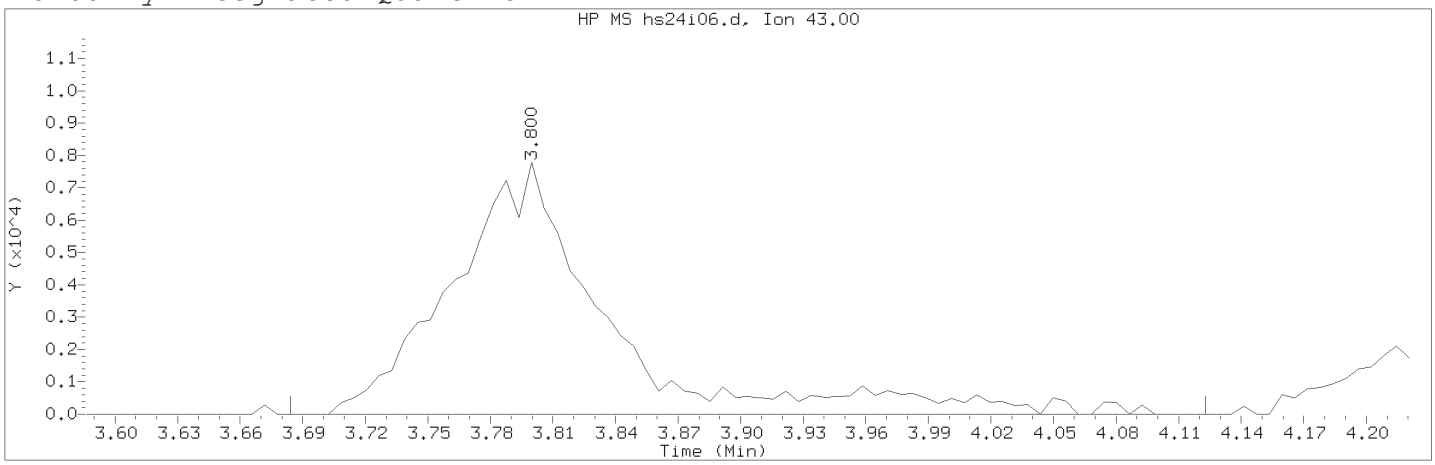
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.386
Quant Ion : 39.00
Area : 52477
On-column Amount (ng) : 0.5033
Integration start scan : 116 Integration stop scan: 145
Y at integration start : 348 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

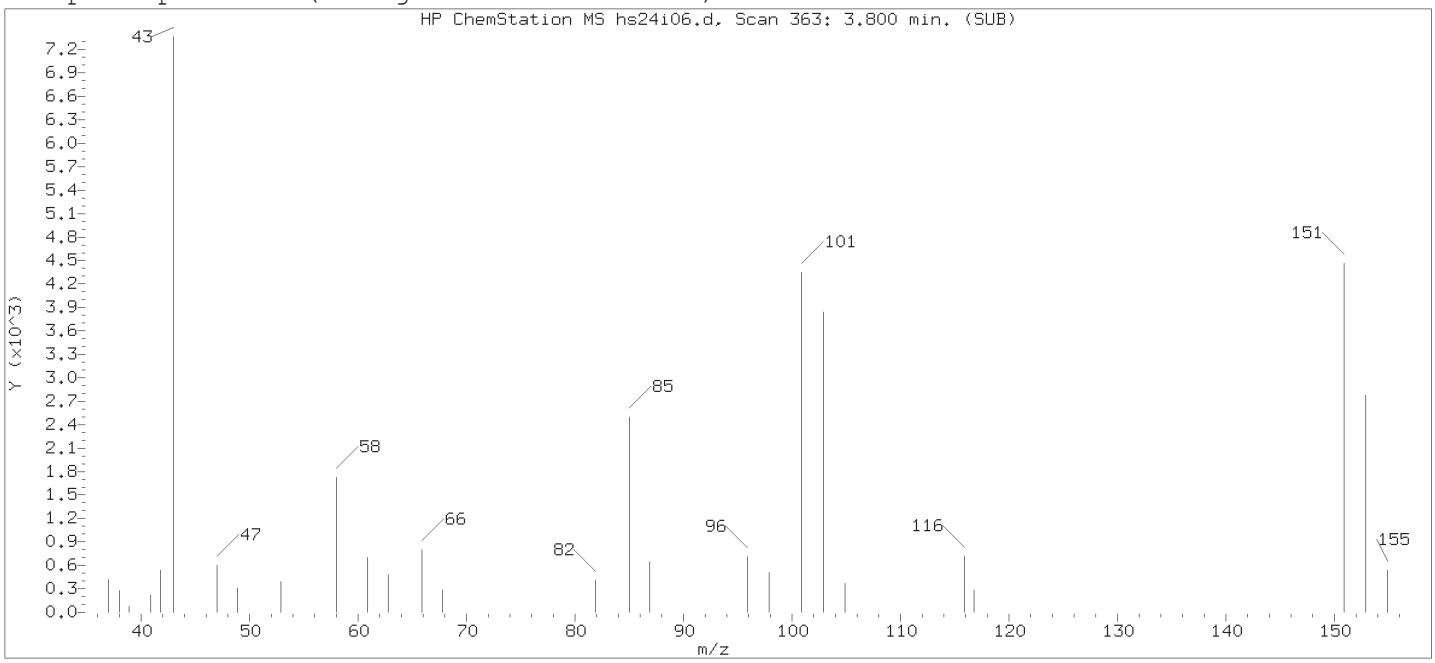
Compound Number : 14
Compound Name : Acetone
Scan Number : 363
Retention Time (minutes): 3.800
Quant Ion : 43.00
Area (flag) : 39805M
On-Column Amount (ng) : 4.7640
Integration start scan : 343 Integration stop scan: 415
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

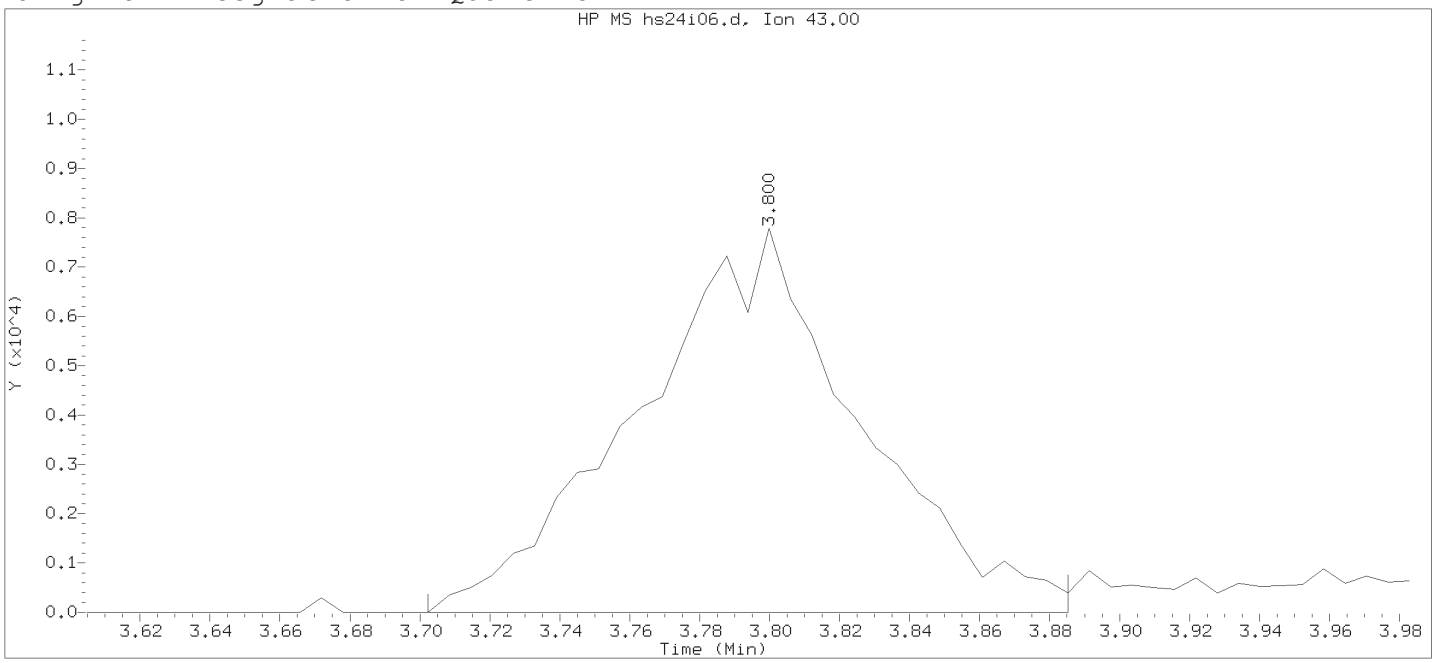
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

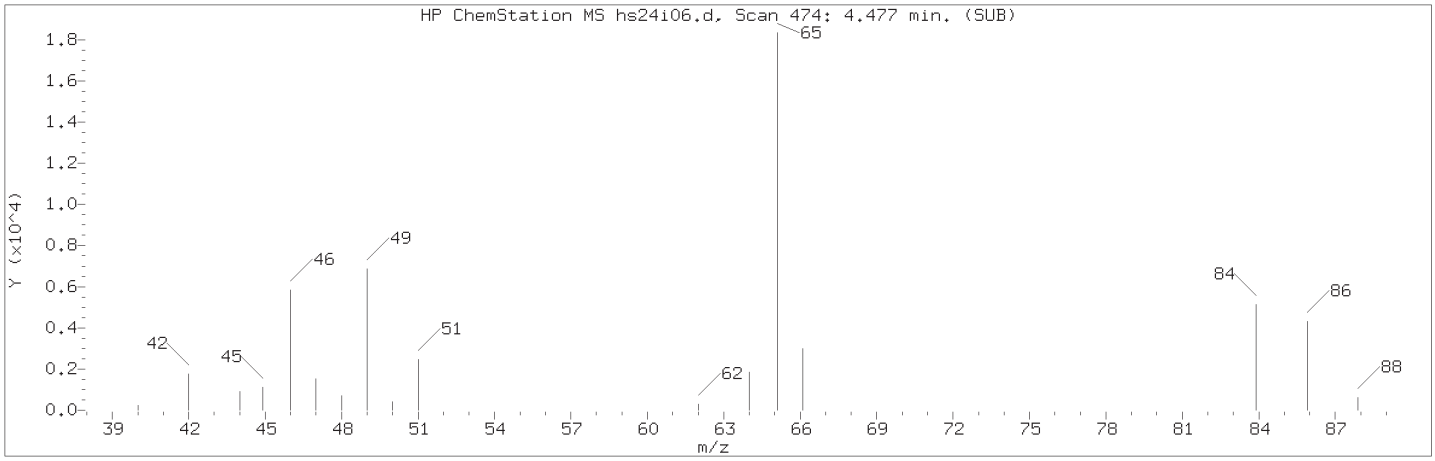
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

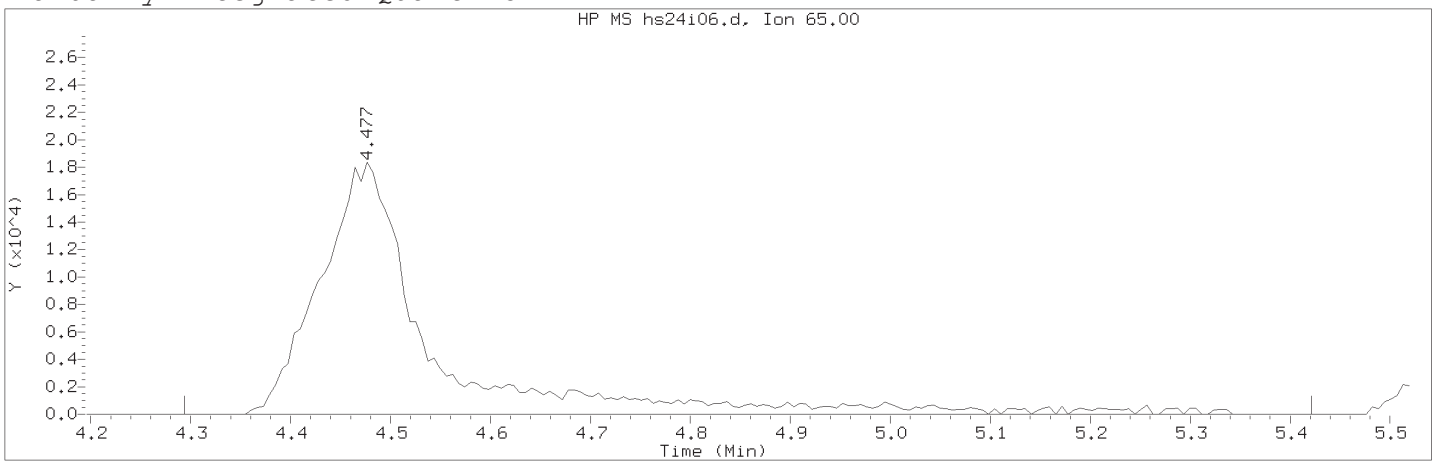
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 363		
Retention Time (minutes)	: 3.800		
Quant Ion	: 43.00		
Area	: 34206		
On-column Amount (ng)	: 4.4016		
Integration start scan	: 346	Integration stop scan:	376
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

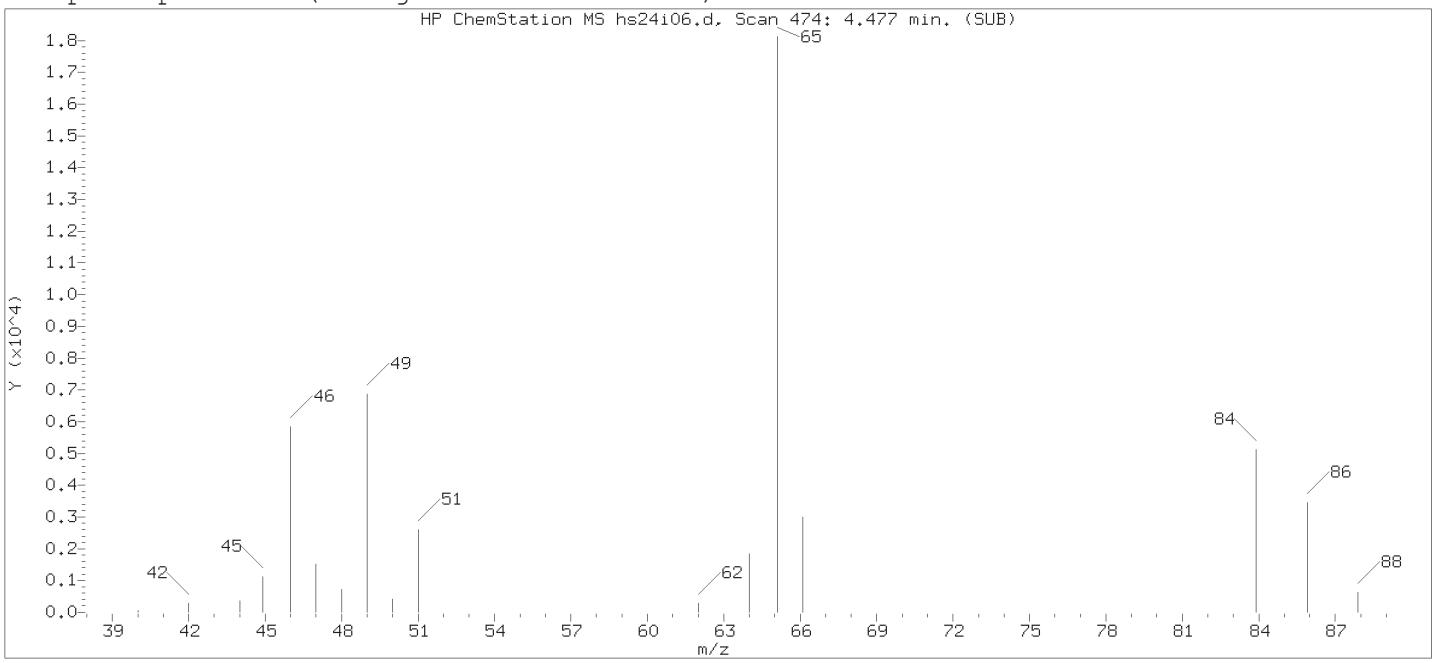
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.477
Quant Ion : 65.00
Area (flag) : 140183M
On-Column Amount (ng) : 50.0000
Integration start scan : 443 Integration stop scan: 628
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

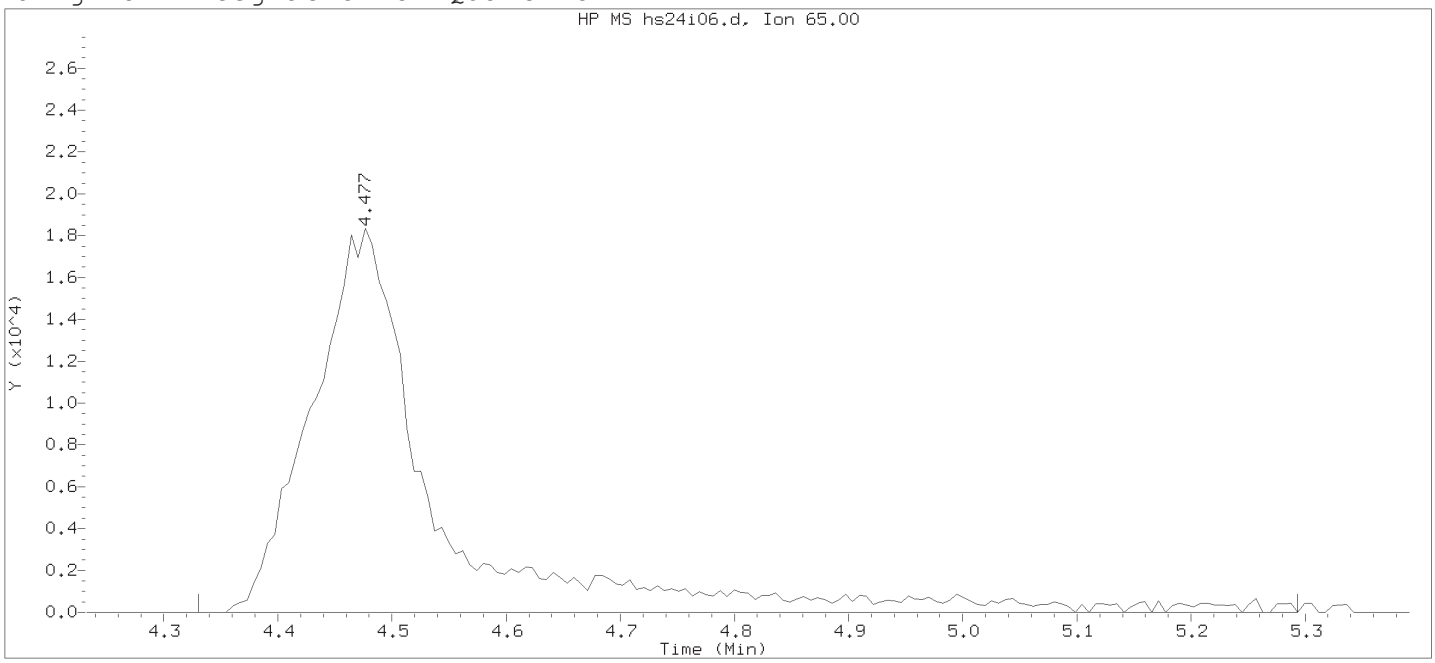
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

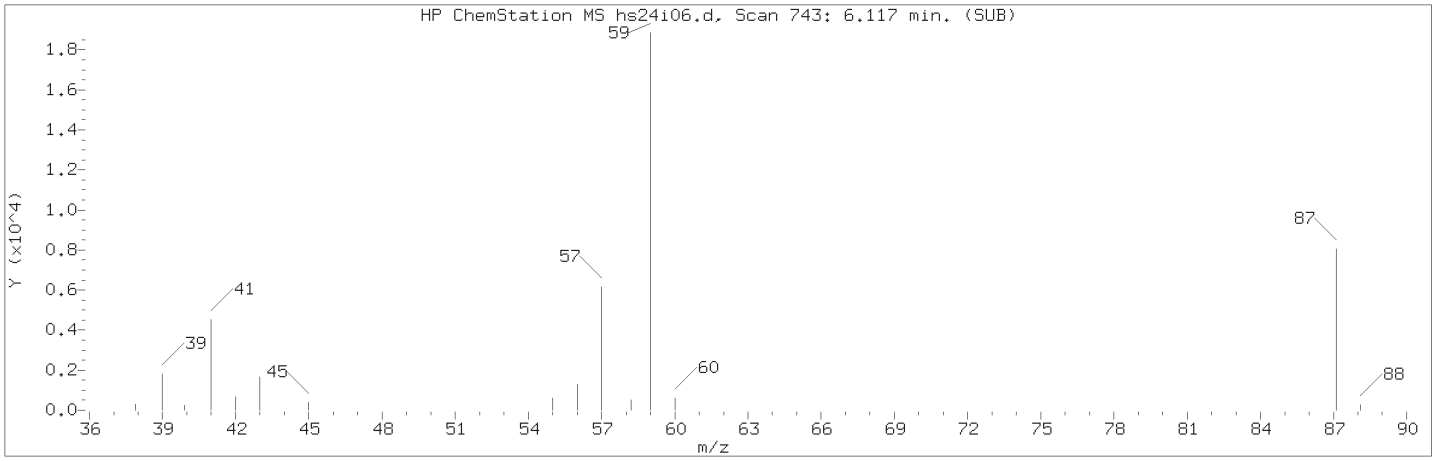
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

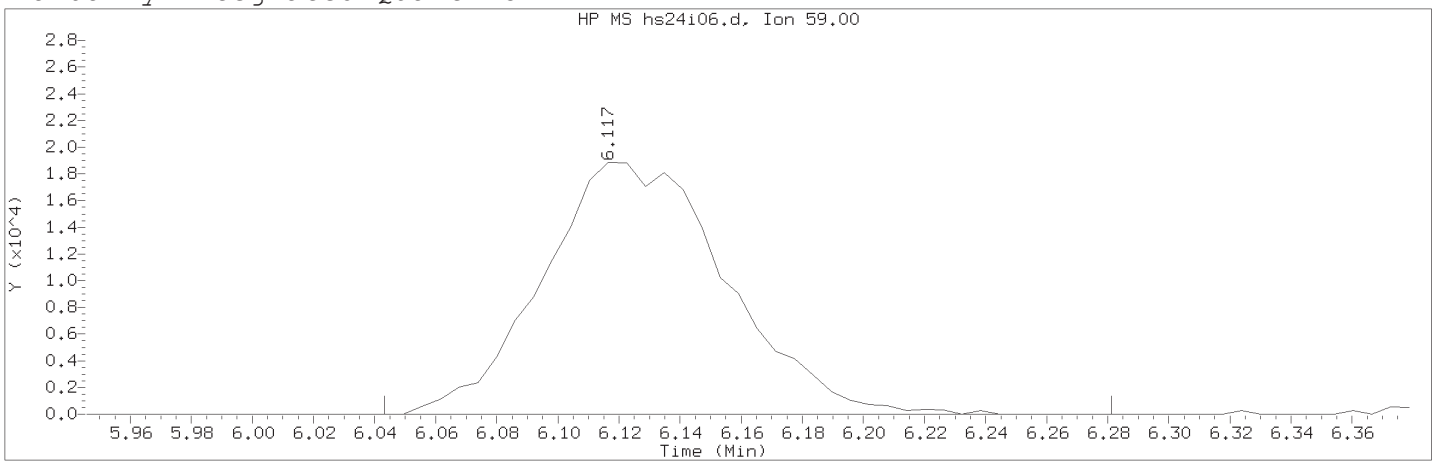
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.477
Quant Ion : 65.00
Area : 139492
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 607
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

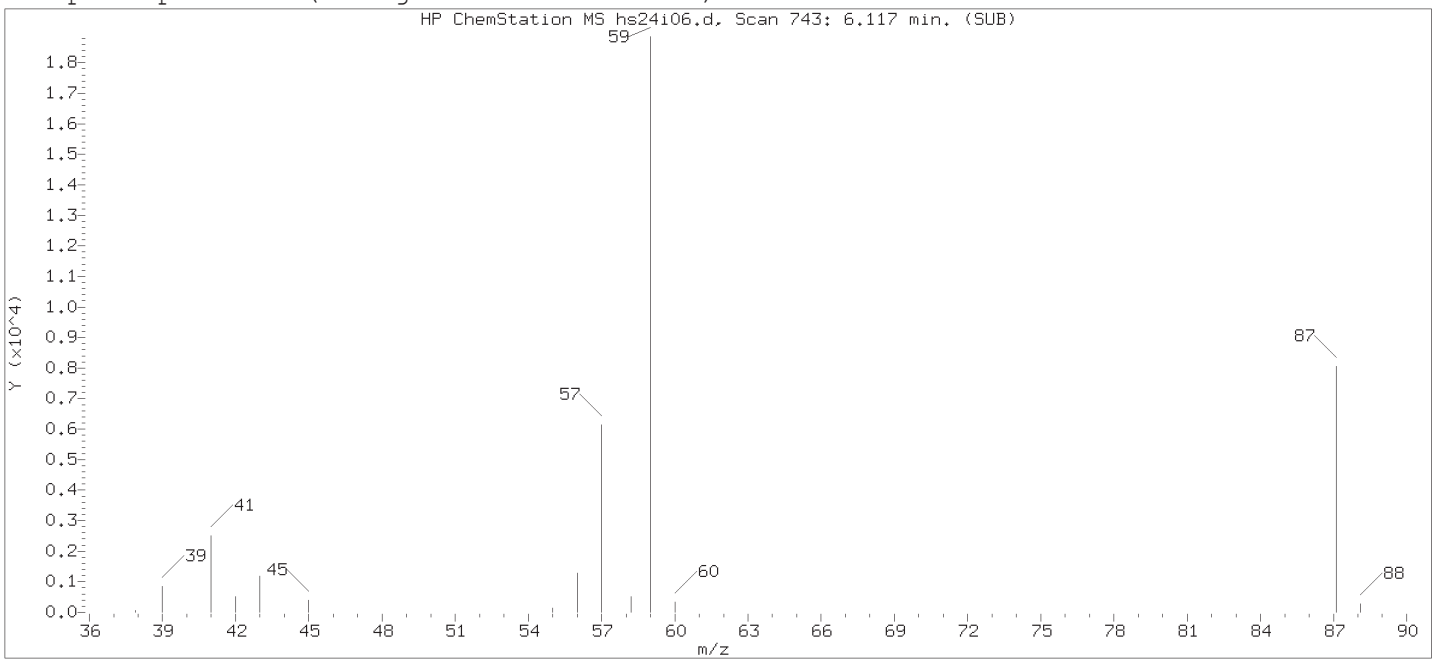
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 743
Retention Time (minutes): 6.117
Quant Ion : 59.00
Area (flag) : 79009M
On-Column Amount (ng) : 0.4853
Integration start scan : 730 Integration stop scan: 769
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

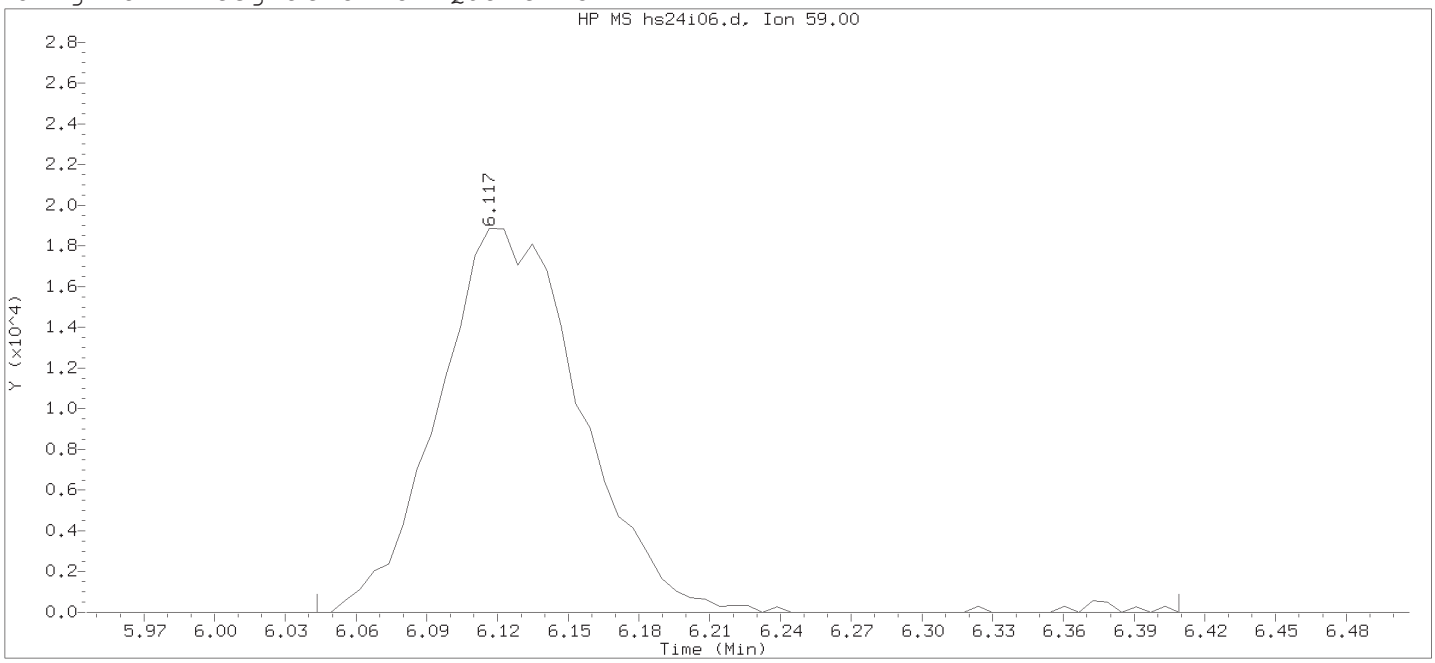
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

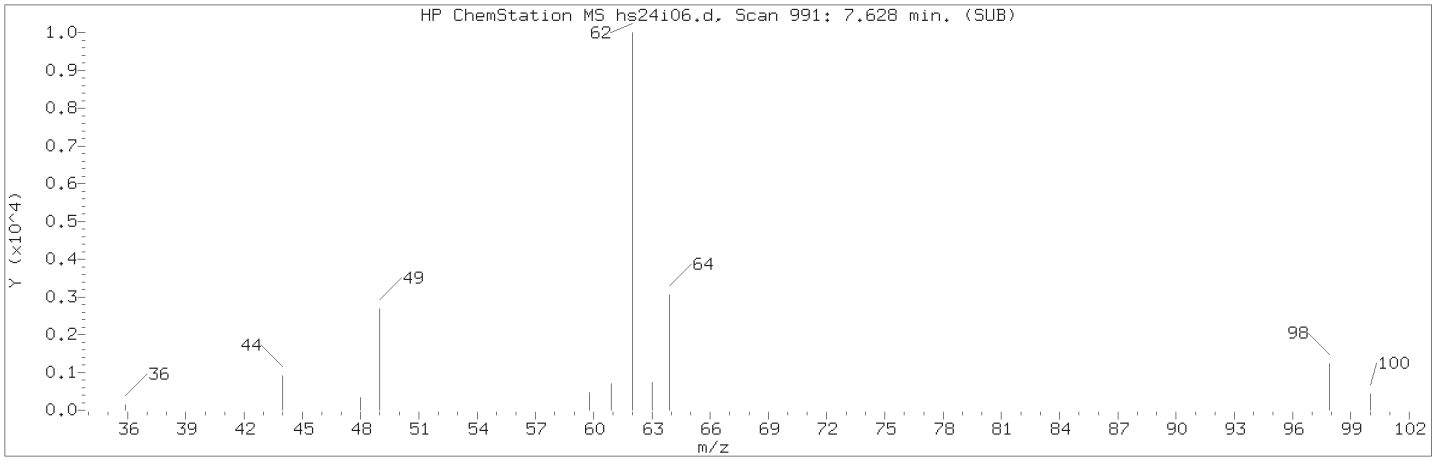
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

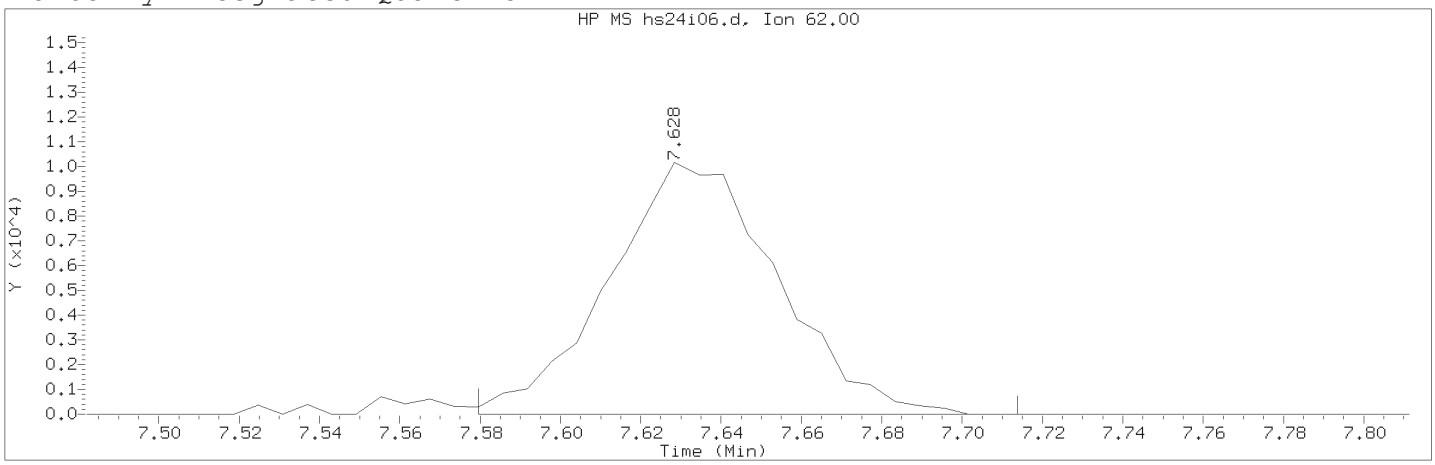
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 743
Retention Time (minutes): 6.117
Quant Ion : 59.00
Area : 79805
On-column Amount (ng) : 0.4787
Integration start scan : 730 Integration stop scan: 790
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

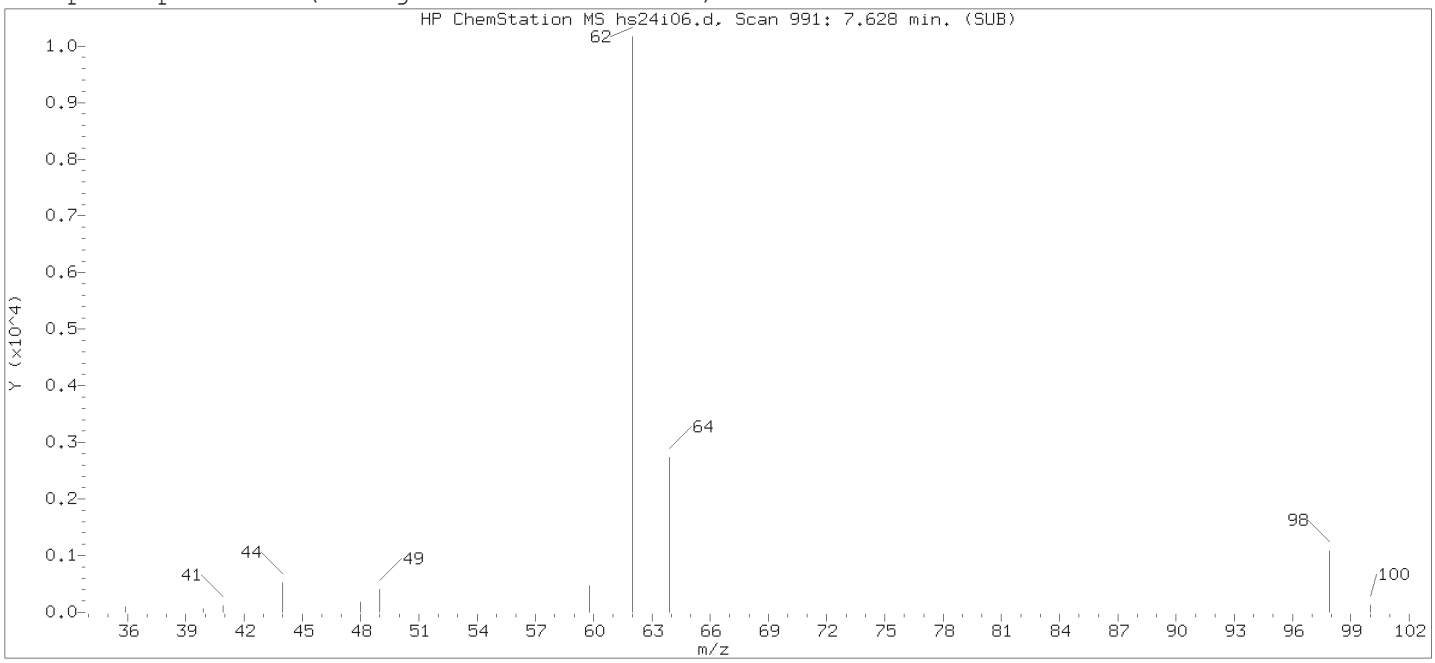
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area (flag) : 29519M
On-Column Amount (ng) : 0.4982
Integration start scan : 982 Integration stop scan: 1004
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

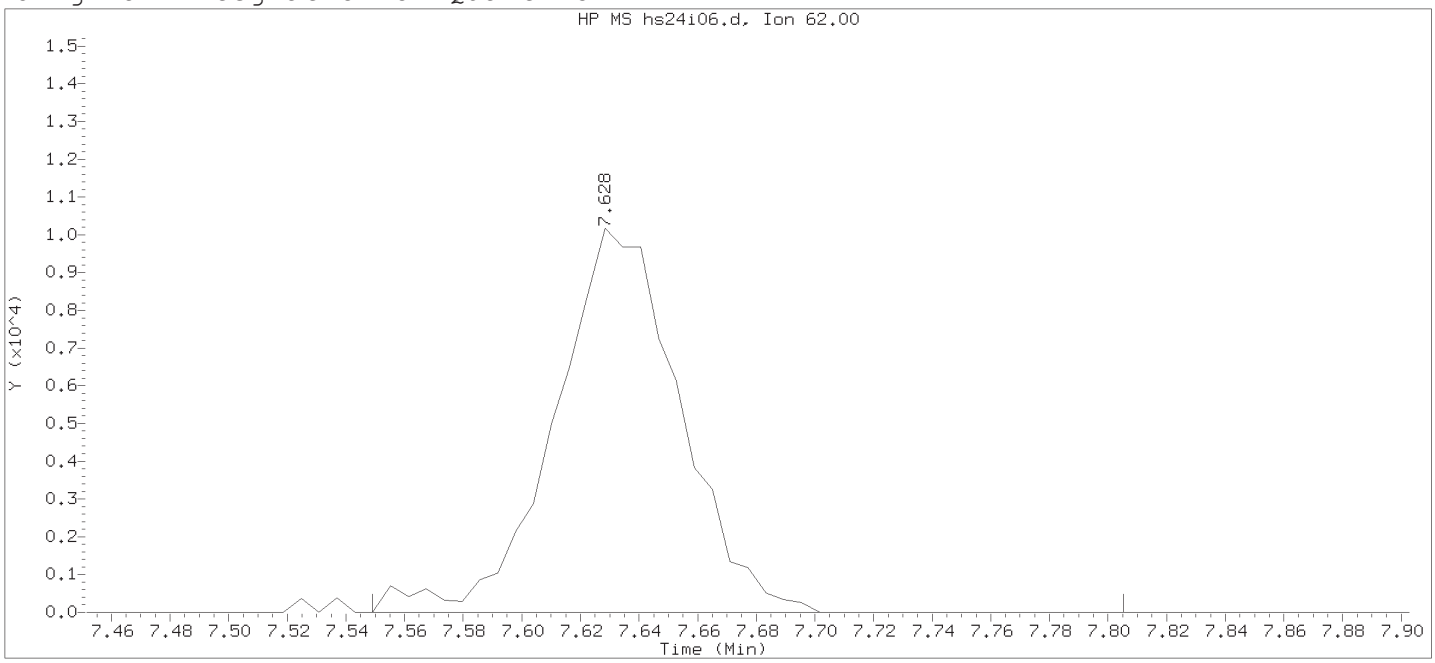
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

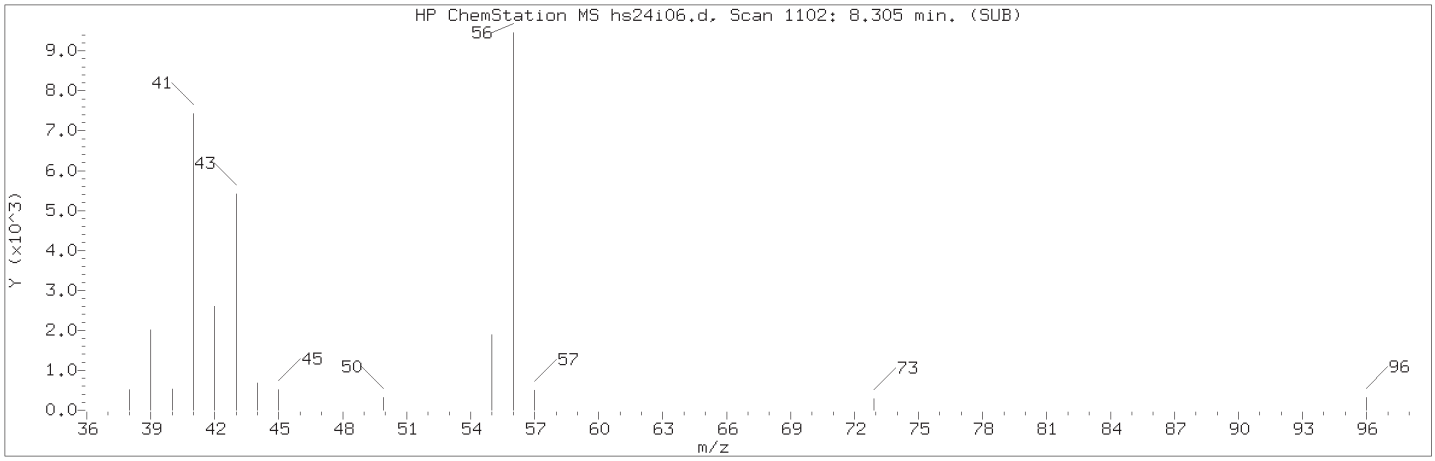
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

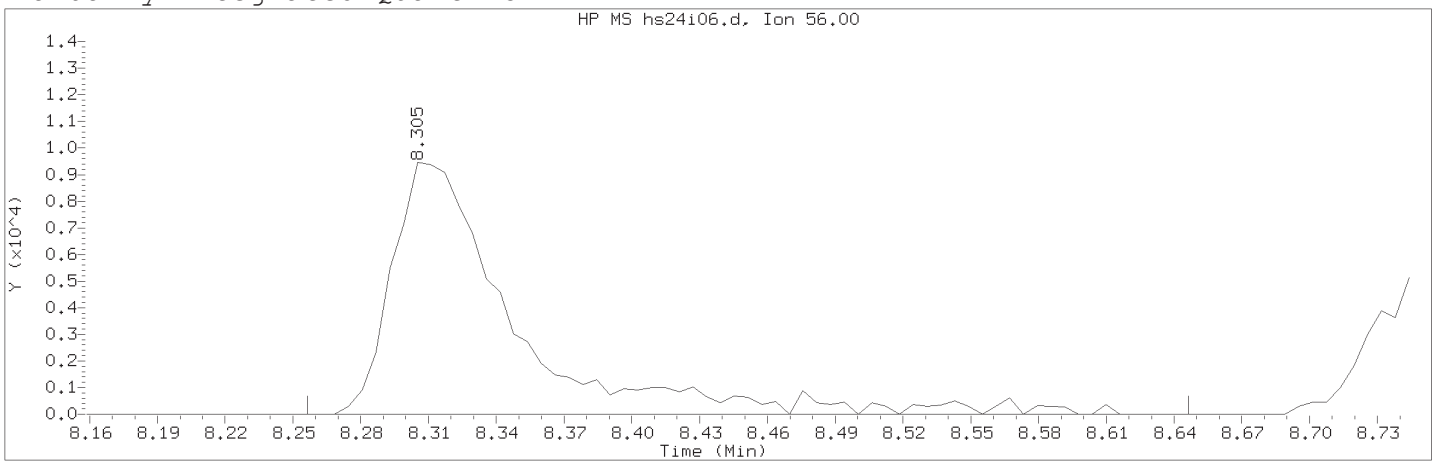
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area : 30276
On-column Amount (ng) : 0.5128
Integration start scan : 977 Integration stop scan: 1019
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

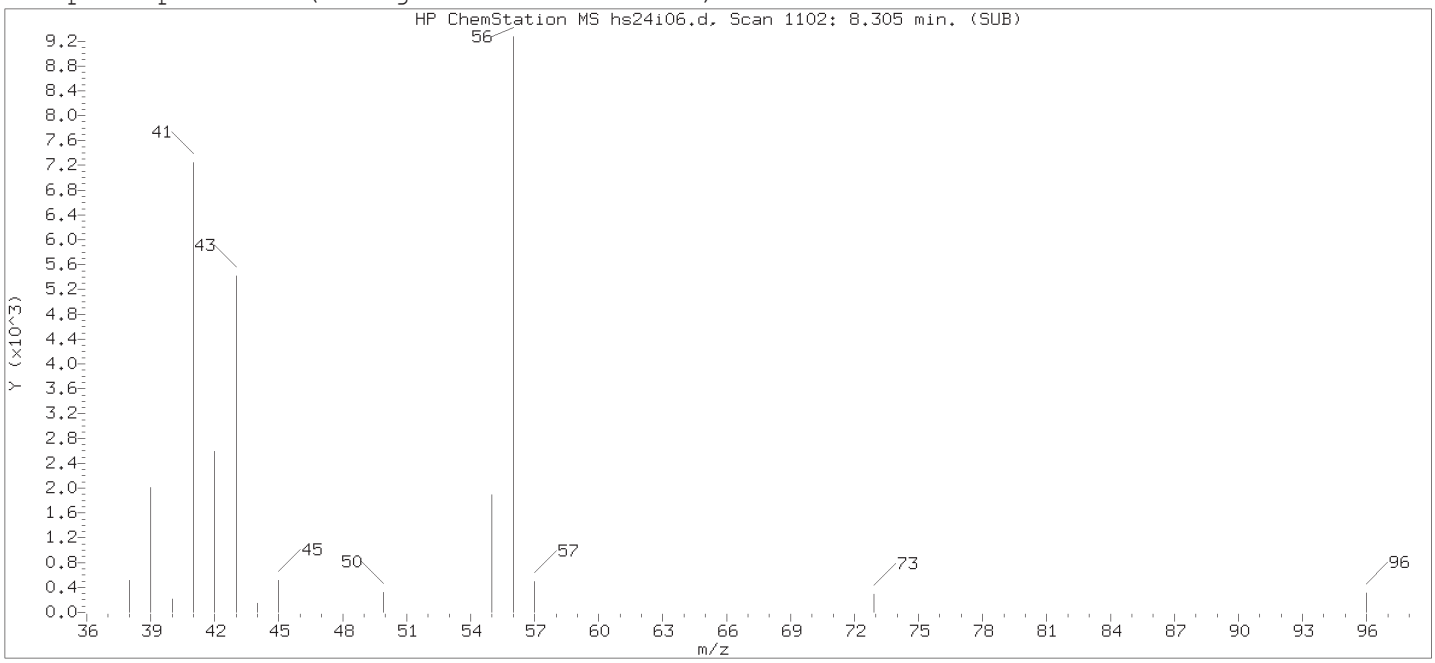
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area (flag) : 35795M
On-Column Amount (ng) : 45.7637
Integration start scan : 1093 Integration stop scan: 1157
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

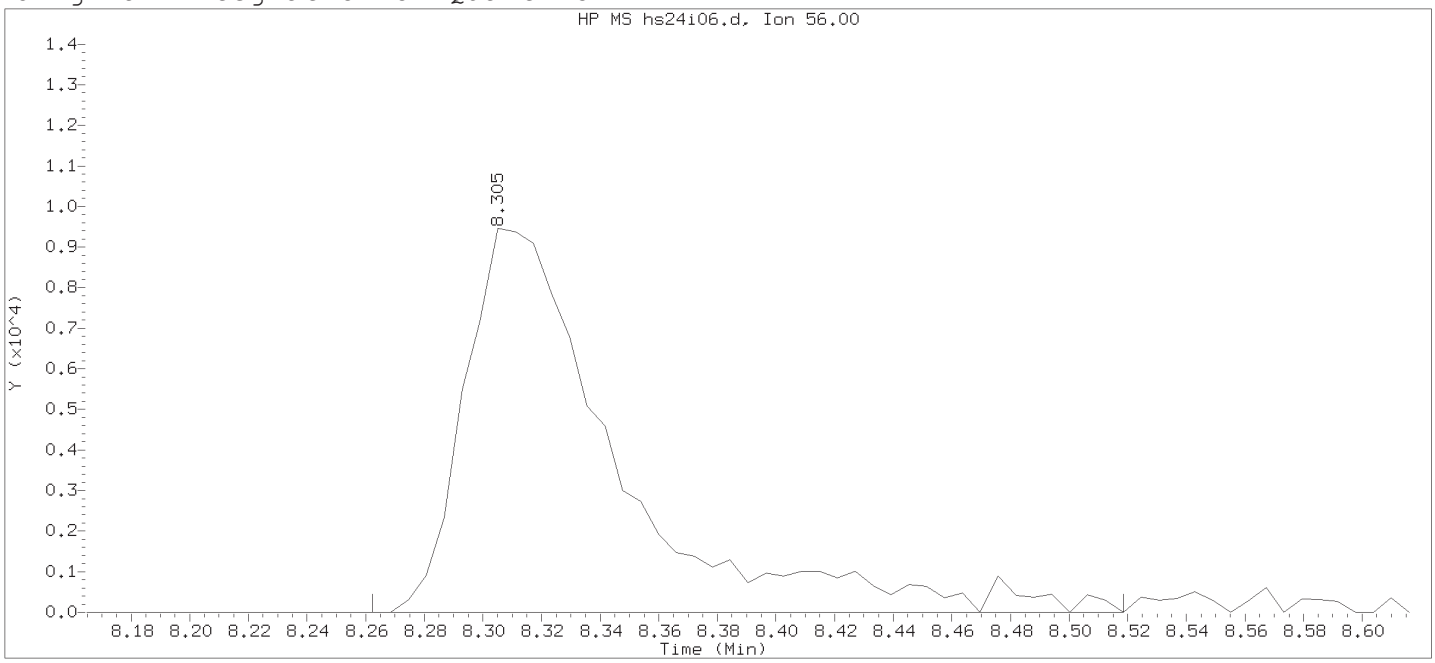
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

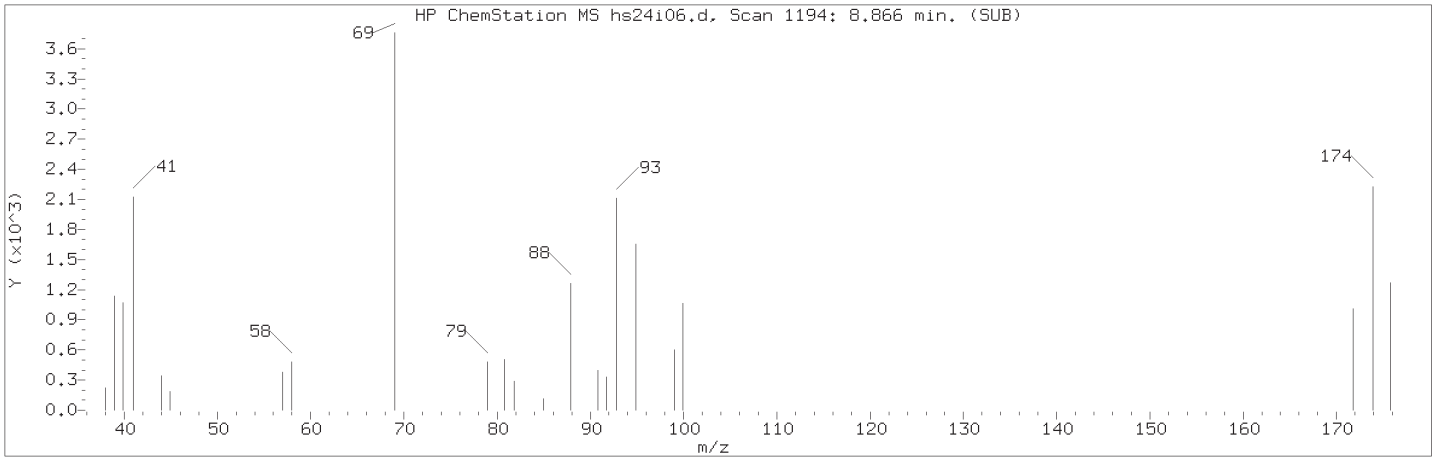
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

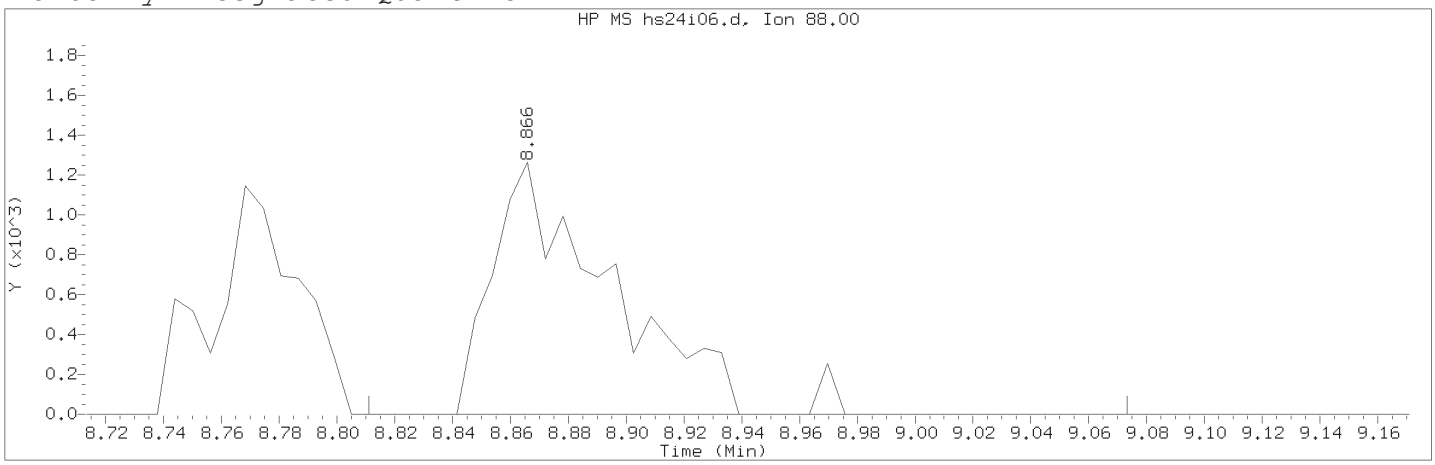
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area : 34344
On-column Amount (ng) : 44.3600
Integration start scan : 1094 Integration stop scan: 1136
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

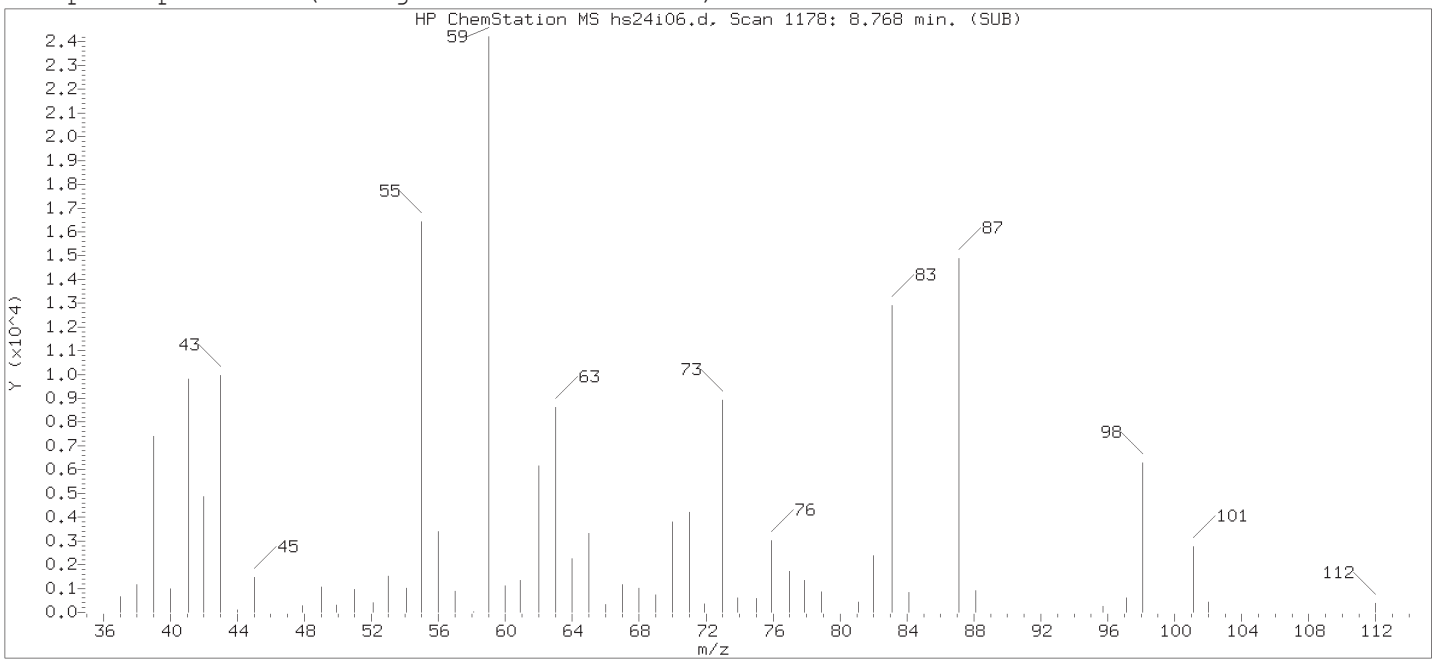
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1194
Retention Time (minutes): 8.866
Quant Ion : 88.00
Area (flag) : 3592M
On-Column Amount (ng) : 19.0735
Integration start scan : 1184 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

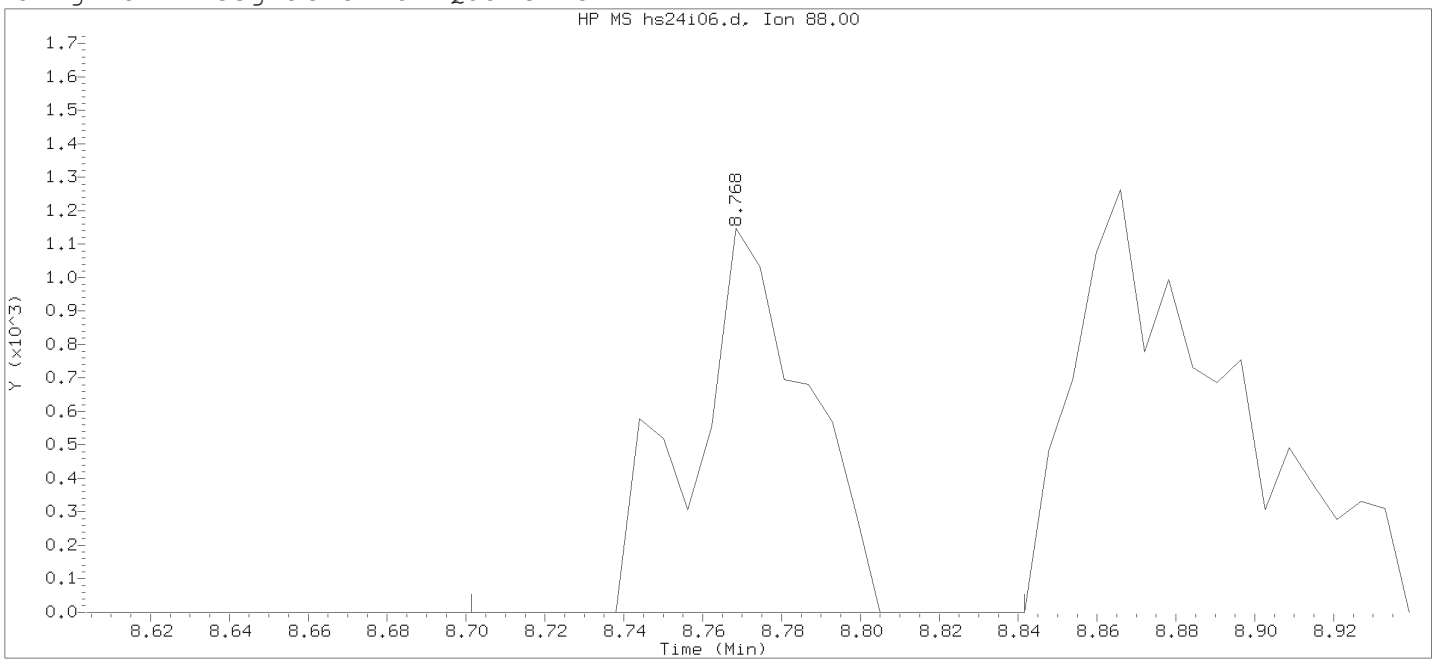
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

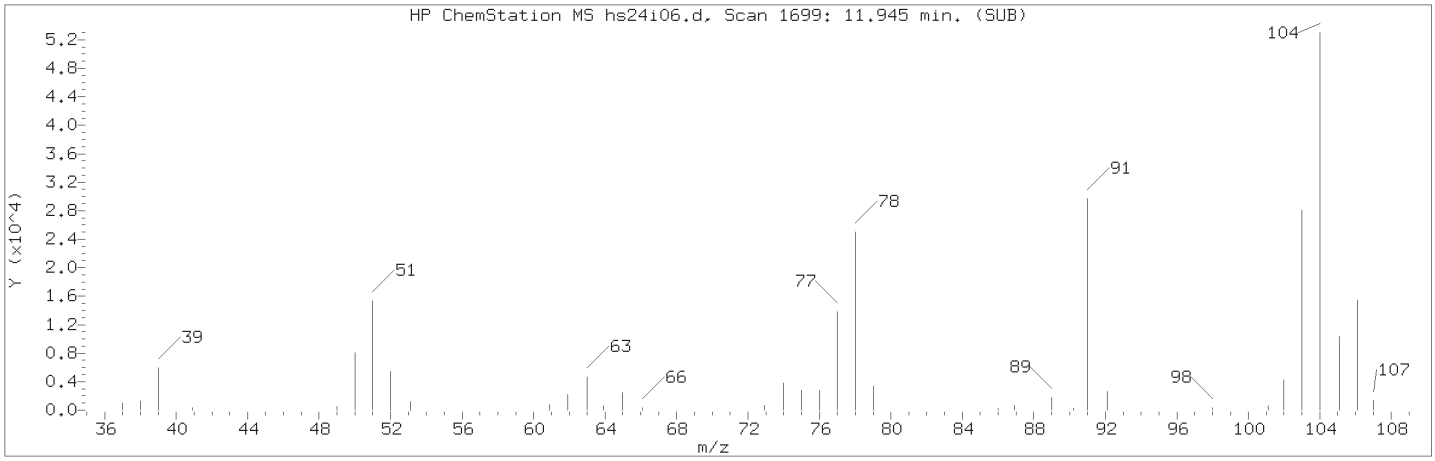
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

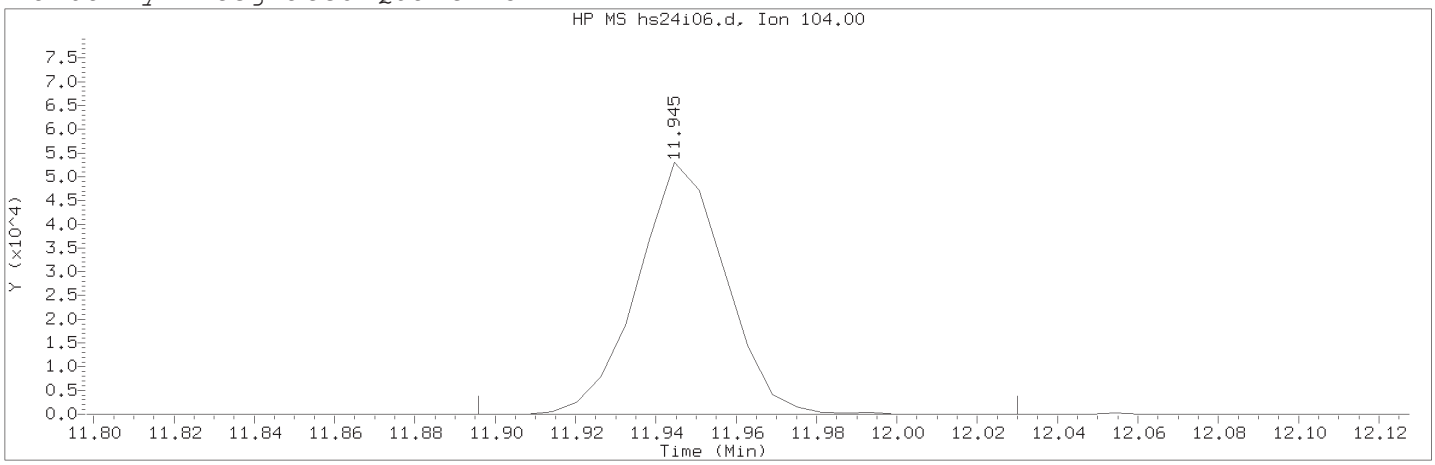
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1178		
Retention Time (minutes)	: 8.768		
Quant Ion	: 88.00		
Area	: 2332		
On-column Amount (ng)	: 19.8680		
Integration start scan	: 1166	Integration stop scan:	1189
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

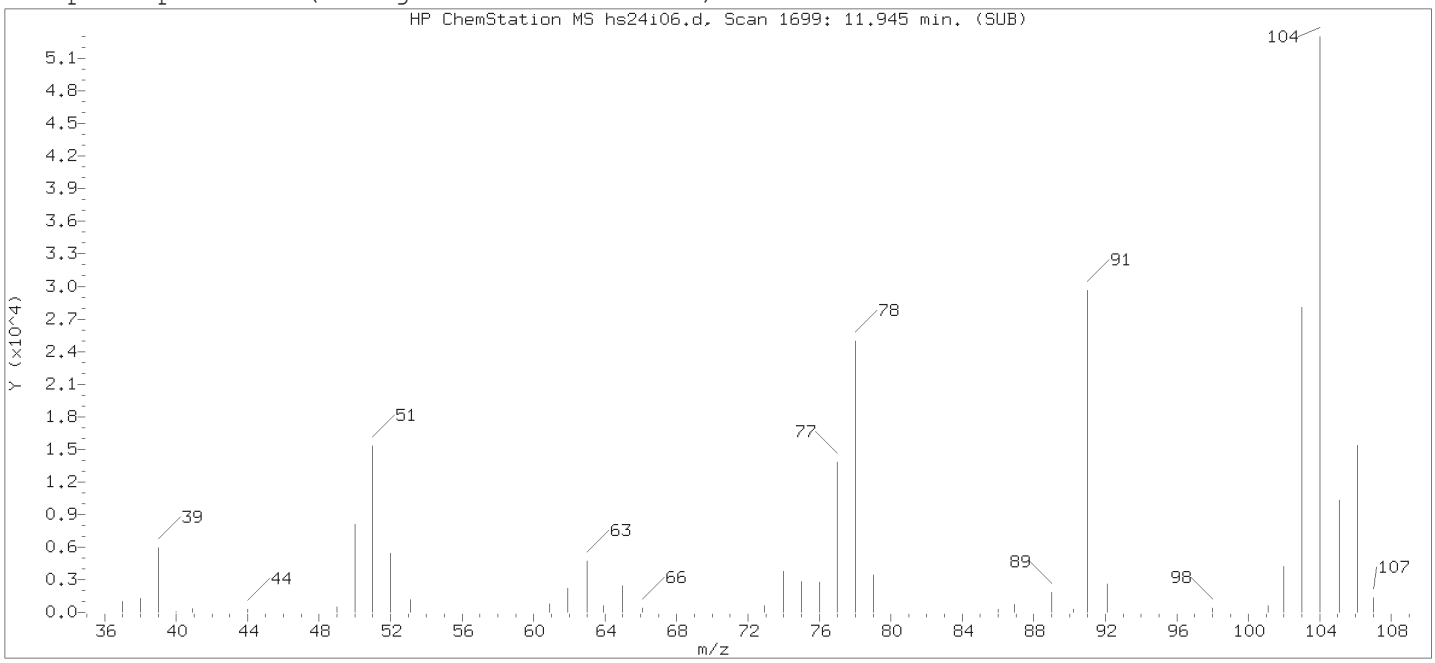
Compound Number : 106
Compound Name : Styrene
Scan Number : 1699
Retention Time (minutes): 11.945
Quant Ion : 104.00
Area (flag) : 80057M
On-Column Amount (ng) : 0.4536
Integration start scan : 1690 Integration stop scan: 1712
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

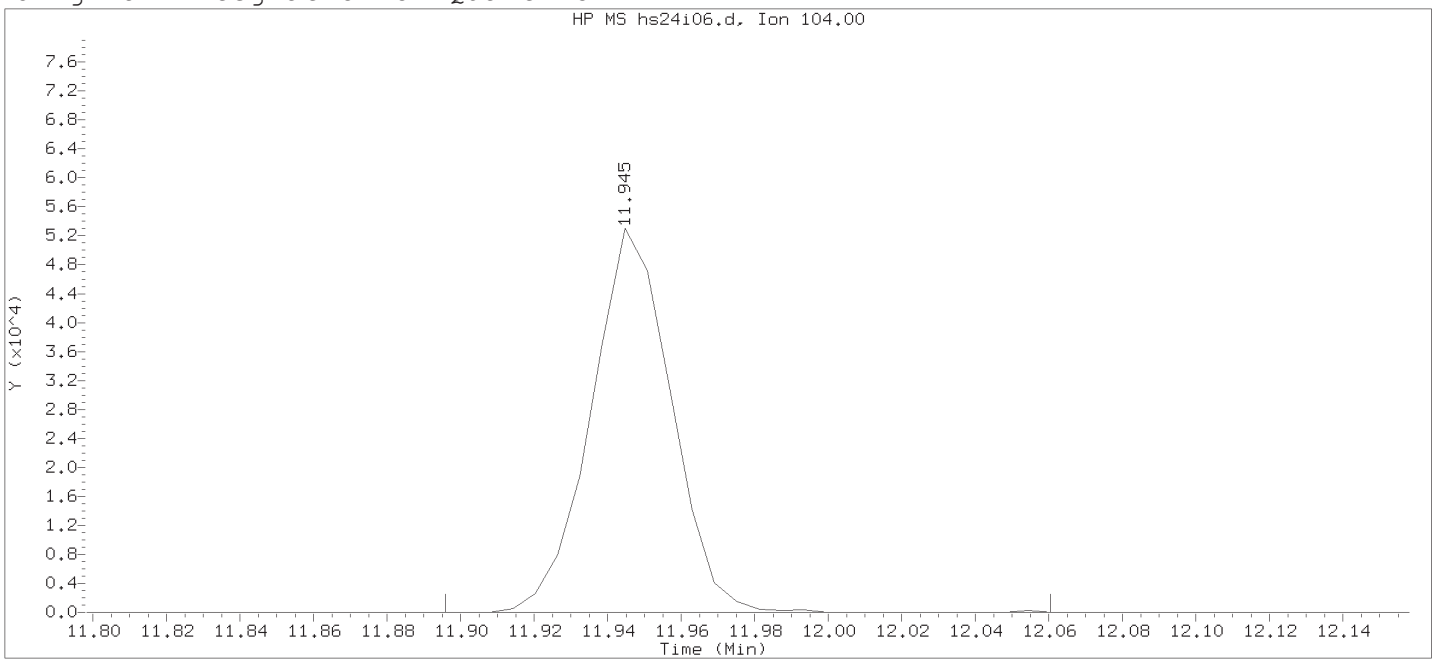
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

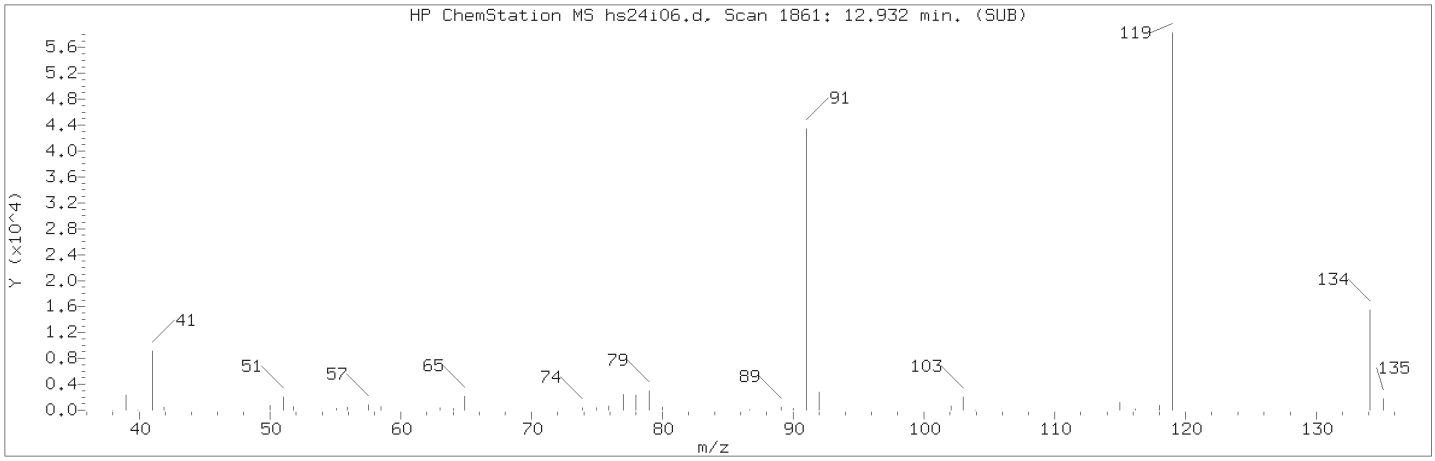
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

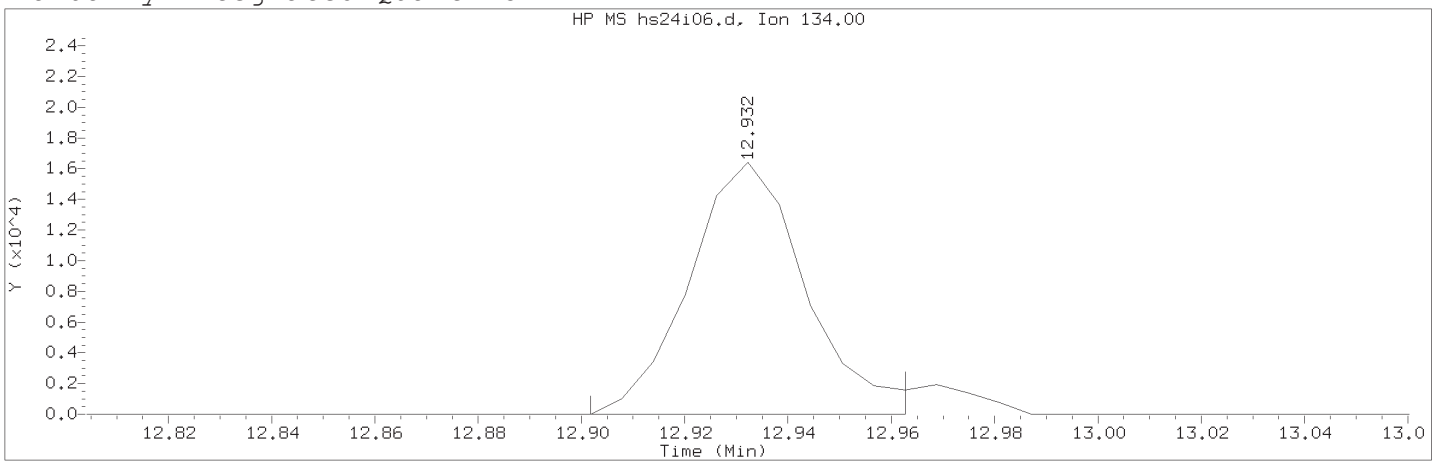
Compound Number : 106
Compound Name : Styrene
Scan Number : 1699
Retention Time (minutes): 11.945
Quant Ion : 104.00
Area : 80151
On-column Amount (ng) : 0.4420
Integration start scan : 1690 Integration stop scan: 1717
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

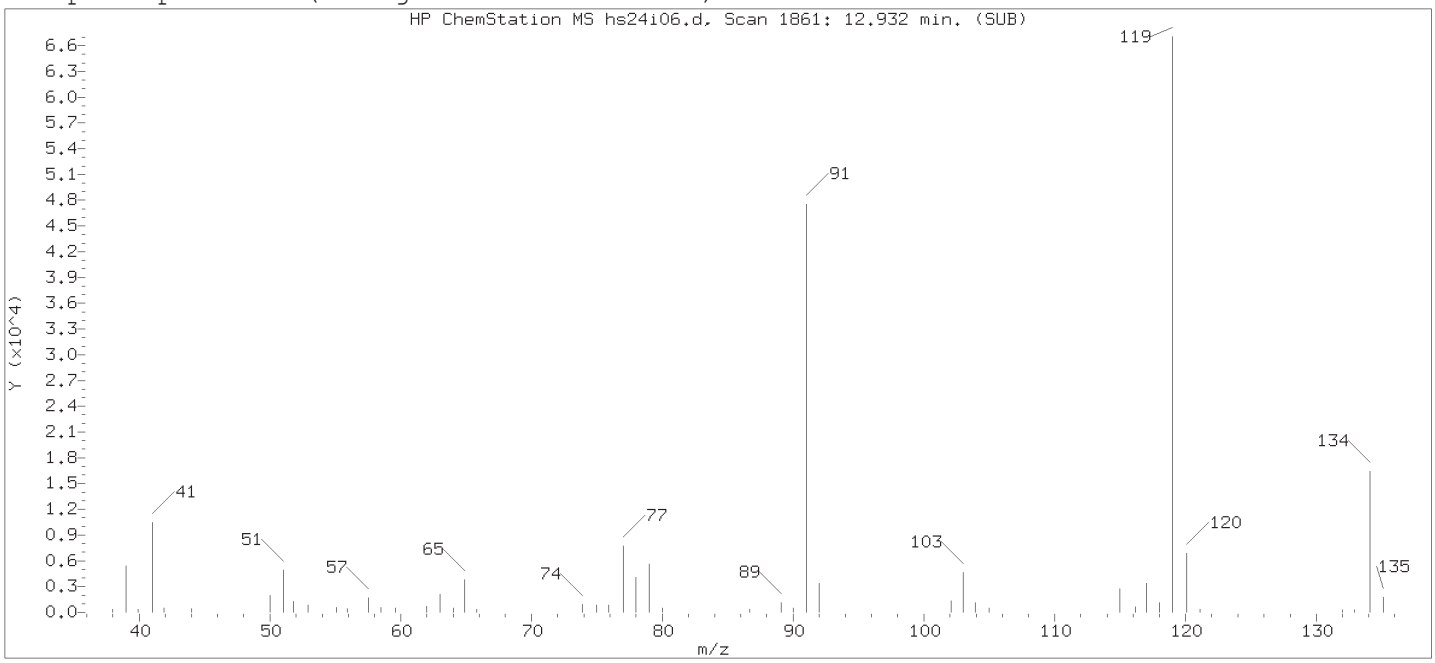
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 25726M
On-Column Amount (ng) : 0.4759
Integration start scan : 1855 Integration stop scan: 1865
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

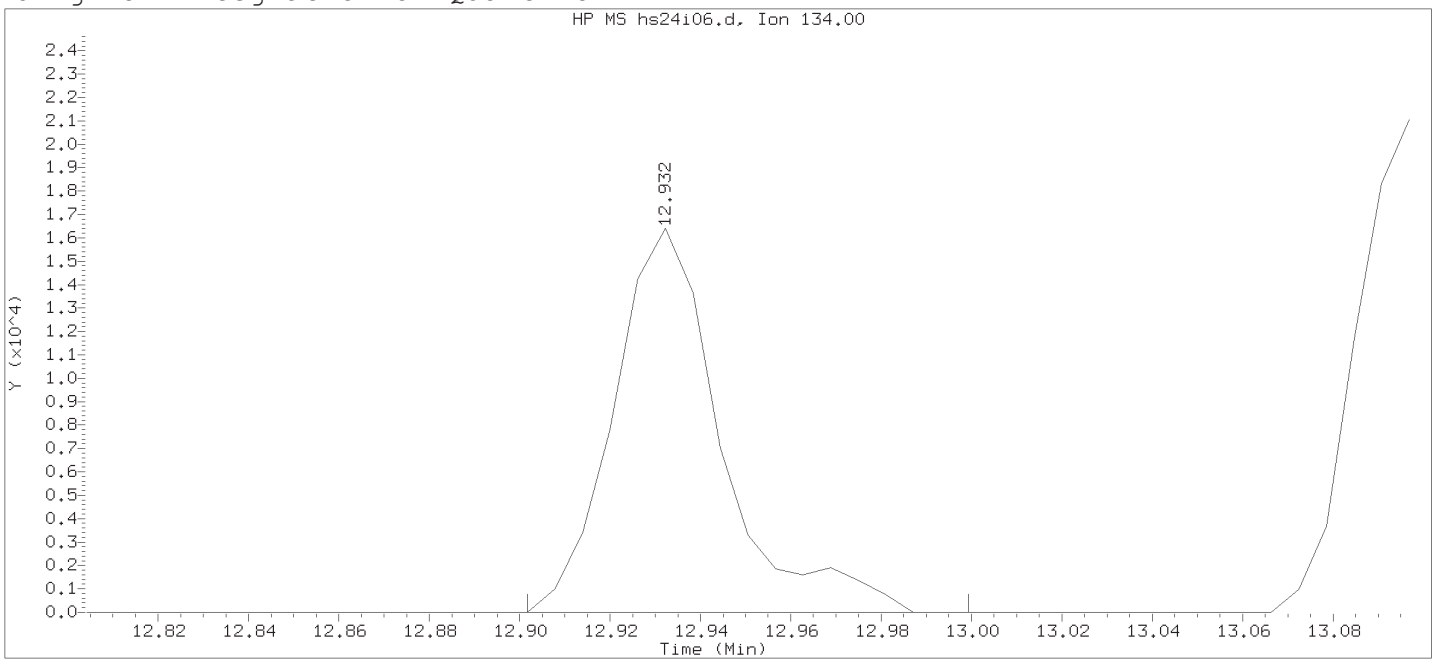
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



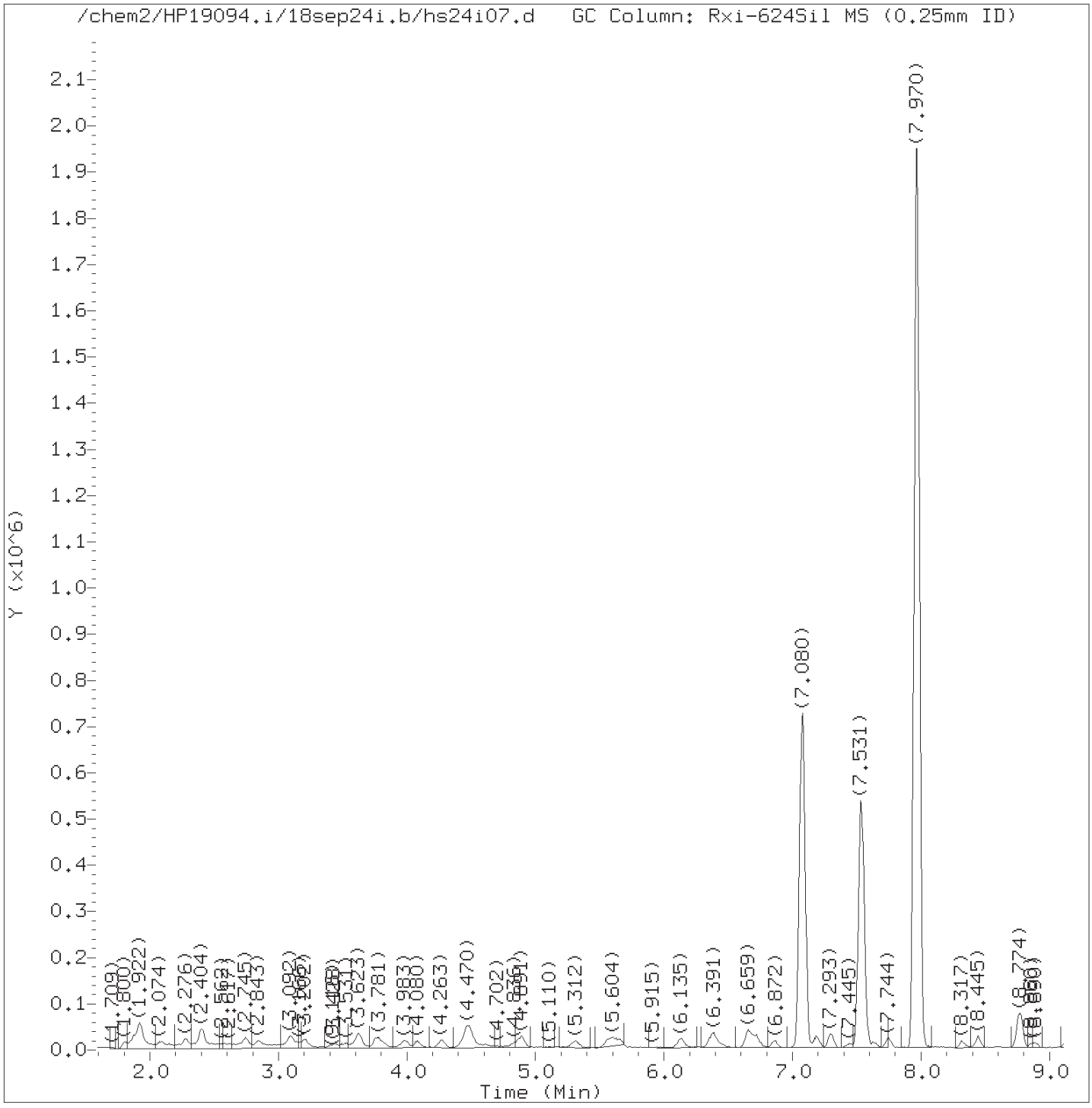
Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 27202
On-column Amount (ng) : 0.4744
Integration start scan : 1855 Integration stop scan: 1871
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

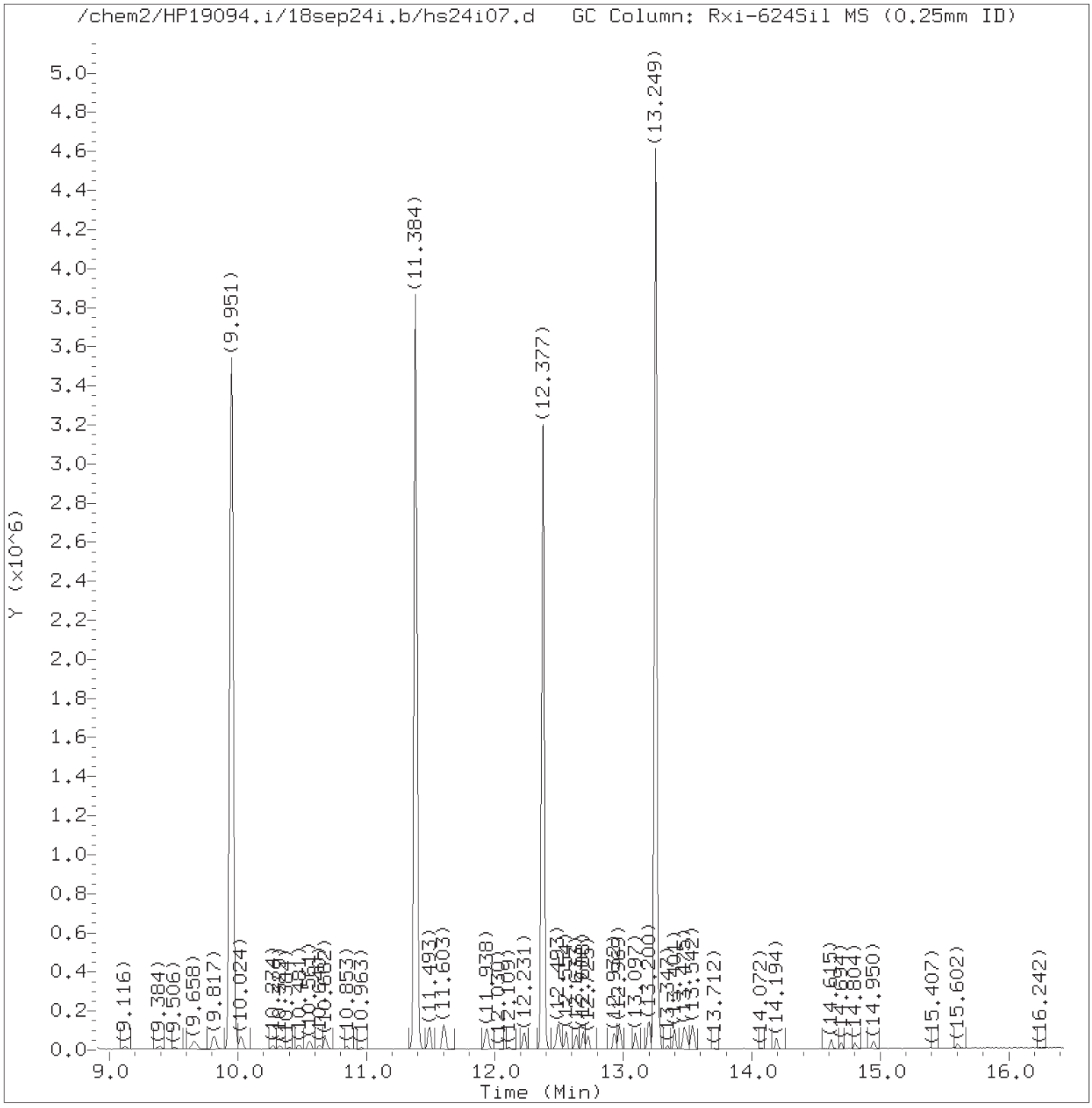
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.074	85	18684	0.173
2) Chloromethane	(2)	2.276	50	20265	0.192
6) 1,3-Butadiene	(2)	2.391	39	22506M	0.201
5) Vinyl Chloride	(2)	2.404	62	19000	0.192
7) Bromomethane	(2)	2.745	94	14696	0.191
8) Chloroethane	(2)	2.855	64	11899	0.198
9) Dichlorofluoromethane	(2)	3.092	67	26880	0.188
10) Trichlorofluoromethane	(2)	3.166	101	22332	0.178
11) Ethyl ether	(2)	3.434	59	8413	0.198
12) Freon 123a	(2)	3.513	67	13528	0.171
13) Acrolein	(1)	3.629	56	57860	9.554
15) 1,1-Dichloroethene	(2)	3.769	96	8847	0.163
16) Freon 113	(2)	3.787	101	9804	0.153
14) Acetone	(1)	3.806	43	17774M	2.185
17) Methyl Iodide	(2)	3.970	142	20605	0.182
18) Carbon Disulfide	(2)	4.080	76	32988	0.191
21) Methyl Acetate	(1)	4.251	43	3885	0.170
22) Allyl Chloride	(2)	4.269	41	19586	0.190
23) Methylene Chloride	(2)	4.464	84	14058	0.230
26)*t-Butyl Alcohol-d10	(1)	4.482	65	136477	50.000
28) t-Butyl Alcohol	(1)	4.604	59	8816	3.784
29) Acrylonitrile	(1)	4.836	53	9839	0.937
30) Methyl Tertiary Butyl Ether	(2)	4.885	73	19485	0.175
31) trans-1,2-Dichloroethene	(2)	4.891	96	11360	0.186
32) n-Hexane	(2)	5.305	57	14177	0.146
33) 1,1-Dichloroethane	(2)	5.549	63	20797	0.179
34) di-Isopropyl Ether	(2)	5.604	45	38755	0.187
35) 2-Chloro-1,3-Butadiene	(2)	5.659	53	17187	0.164
40) 1,2-Dichloroethene (Total)	(2)		96	23470	0.365
37) Ethyl t-butyl ether	(2)	6.122	59	29171	0.178
38) 2-Butanone	(1)	6.354	43	25880	1.944
41) 2,2-Dichloropropane	(2)	6.385	77	13983	0.168
39) cis-1,2-Dichloroethene	(2)	6.391	96	12110	0.179
42) Propionitrile	(1)	6.452	54	12829	3.550
45) Methacrylonitrile	(1)	6.659	67	23810	1.827
47) Bromochloromethane	(2)	6.702	128	5661	0.198
48) Tetrahydrofuran	(1)	6.726	71	6748	1.906
49) Chloroform	(2)	6.860	83	18885	0.174

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	694305	9.967
50)$Dibromofluoromethane	(2)	7.080	111	718039	10.014
51) 1,1,1-Trichloroethane	(2)	7.080	97	15708	0.170
52) Cyclohexane	(2)	7.183	56	19182	0.159
52) Cyclohexane	(2)	7.183	84	16106	0.162
52) Cyclohexane	(2)	7.201	69	5648	0.159
55) 1,1-Dichloropropene	(2)	7.299	75	15252	0.174
54) Carbon Tetrachloride	(2)	7.305	117	12817	0.161
56) Isobutyl Alcohol	(1)	7.439	41	7908	8.774
57)$1,2-Dichloroethane-d4	(2)	7.537	102	122128	10.056
57)$1,2-Dichloroethane-d4	(2)	7.531	65	592808	10.092
57)$1,2-Dichloroethane-d4	(2)	7.531	104	77943	10.021
58) Benzene	(2)	7.573	78	48910	0.189
59) 1,2-Dichloroethane	(2)	7.640	62	13176	0.221
60) t-Amyl methyl ether	(2)	7.750	73	24932	0.183
62) n-Heptane	(2)	7.963	43	14806	0.148
63)*Fluorobenzene	(2)	7.970	96	2763999	10.000
65) n-Butanol	(1)	8.317	56	13835M	18.168
67) Trichloroethene	(2)	8.451	95	11889	0.179
69) Methylcyclohexane	(2)	8.750	83	22461	0.179
70) 1,2-Dichloropropane	(2)	8.787	63	12025	0.191
71) Methyl Methacrylate	(1)	8.847	69	4087	0.169
72) 1,4-Dioxane	(1)	8.872	88	1041M	5.678
73) Dibromomethane	(2)	8.884	93	4747	0.182
74) Bromodichloromethane	(2)	9.128	83	13129	0.186
76) 2-Nitropropane	(1)	9.396	41	11979	1.753
80) cis-1,3-Dichloropropene	(2)	9.652	75	14627	0.178
81) 4-Methyl-2-Pentanone	(1)	9.811	43	56901M	1.718
82)$Toluene-d8	(3)	9.951	98	2792286	10.141
82)$Toluene-d8	(3)	9.951	100	1785080	10.044
83) Toluene	(3)	10.024	92	29814	0.188
85) 1,3-Dichloropropene (total)	(3)		75	24597	0.341
84) trans-1,3-Dichloropropene	(3)	10.274	75	9970	0.163
86) Ethyl Methacrylate	(3)	10.329	69	8963	0.171
91) 2-Hexanone	(1)	10.335	43	39960	1.772
88) 1,1,2-Trichloroethane	(3)	10.487	97	7236M	0.198
89) Tetrachloroethene	(3)	10.561	166	12649	0.176
90) 1,3-Dichloropropane	(3)	10.640	76	12143	0.188

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.853	129	8337	0.190
95) 1,2-Dibromoethane	(3)	10.963	107	6295	0.184
96) 1-Chlorohexane	(3)	11.384	91	18987	0.201
97)*Chlorobenzene-d5	(3)	11.384	117	2139400	10.000
98) Chlorobenzene	(3)	11.408	112	31130	0.185
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	9192	0.165
100) Ethylbenzene	(3)	11.493	91	54290	0.175
101) m+p-Xylene	(3)	11.603	106	40662	0.353
105) Xylene (Total)	(3)		106	59182	0.522
104) o-Xylene	(3)	11.932	106	18520	0.168
106) Styrene	(3)	11.944	104	29429	0.167
107) Bromoform	(3)	12.109	173	4117	0.171
108) Isopropylbenzene	(3)	12.231	105	51166	0.170
111)$4-Bromofluorobenzene	(3)	12.377	95	1020584	10.180
111)$4-Bromofluorobenzene	(3)	12.377	174	882233	10.135
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	8843	0.197
114) Bromobenzene	(4)	12.493	156	11951	0.175
115) trans-1,4-Dichloro-2-butene	(1)	12.493	53	17855M	1.721
116) 1,2,3-Trichloropropane	(4)	12.524	110	2226	0.192
117) n-Propylbenzene	(4)	12.554	91	63816	0.172
119) 2-Chlorotoluene	(4)	12.633	126	12496	0.174
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	41880	0.167
122) 4-Chlorotoluene	(4)	12.725	126	12375	0.172
125) tert-Butylbenzene	(4)	12.932	134	8830M	0.161
126) Pentachloroethane	(4)	12.963	167	7371	0.173
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	42070	0.164
128) sec-Butylbenzene	(4)	13.097	105	52250M	0.160
131) 1,3-Dichlorobenzene	(4)	13.200	146	23099	0.170
132) p-Isopropyltoluene	(4)	13.200	119	42501	0.157
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1132249	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	24681	0.185
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	23113	0.196
136) Benzyl Chloride	(4)	13.341	126	2121	0.131
138) n-Butylbenzene	(4)	13.493	92	21345	0.159
139) 1,2-Dichlorobenzene	(4)	13.529	146	21920	0.183
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	880	0.157
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	17490	0.173
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	14330	0.174

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

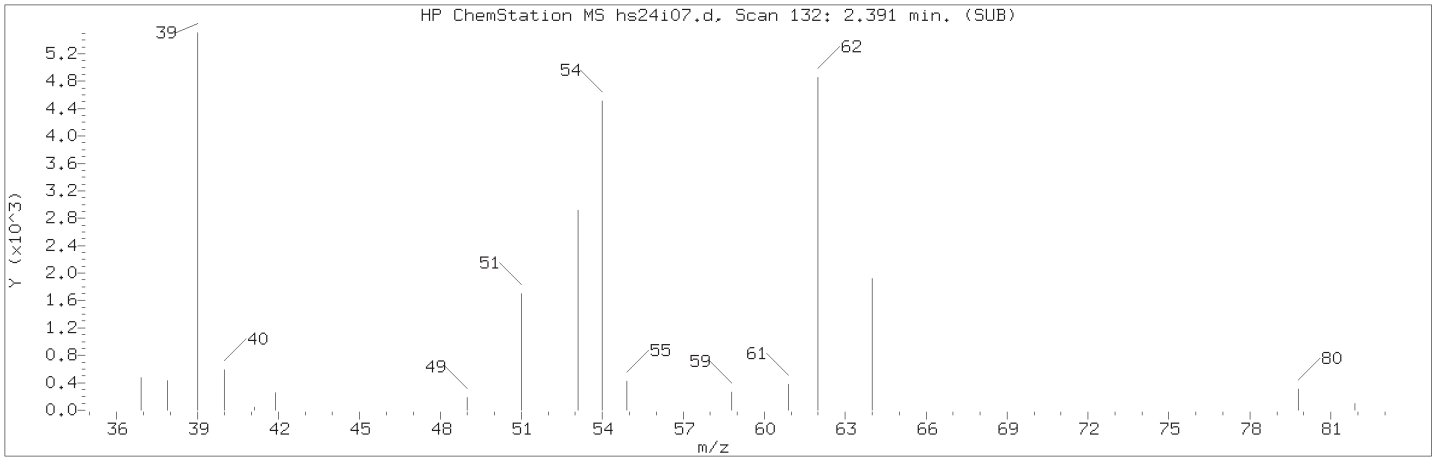
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

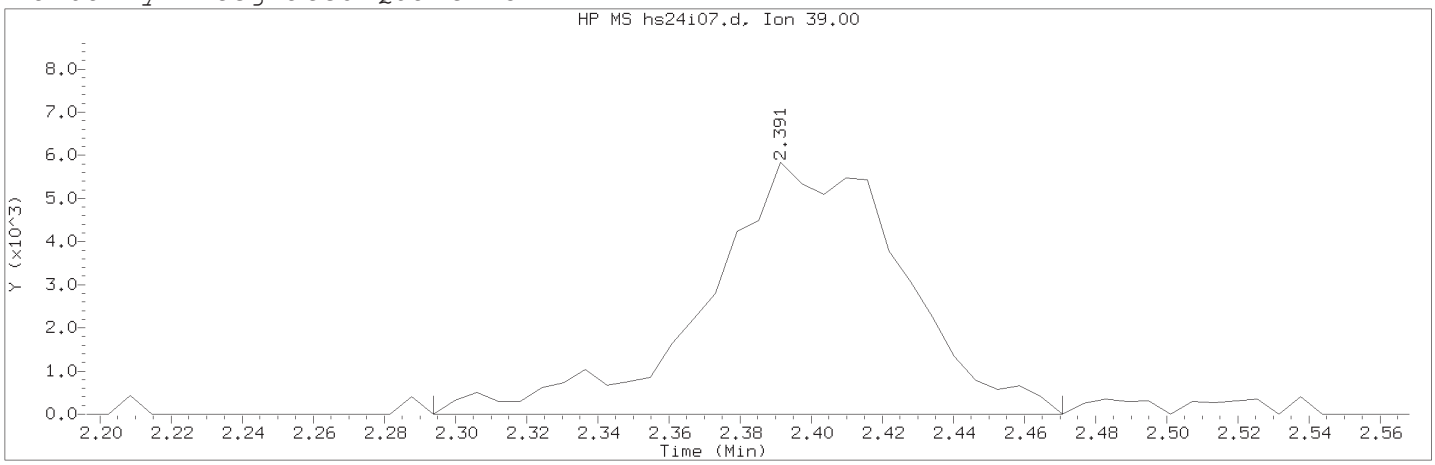
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.694	225	5770	0.186
147) Naphthalene	(4)	14.804	128	21320	0.164
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	11734	0.174

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

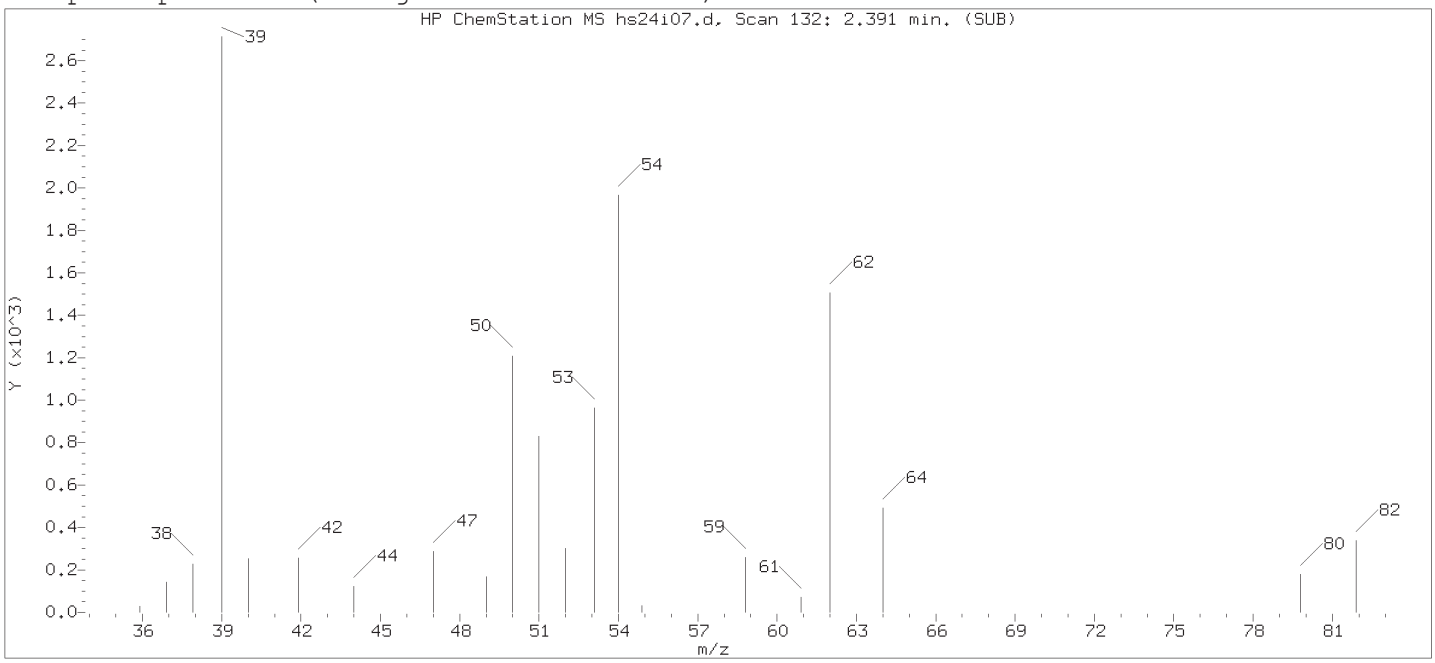
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area (flag) : 22506M
On-Column Amount (ng) : 0.2006
Integration start scan : 115 Integration stop scan: 144
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

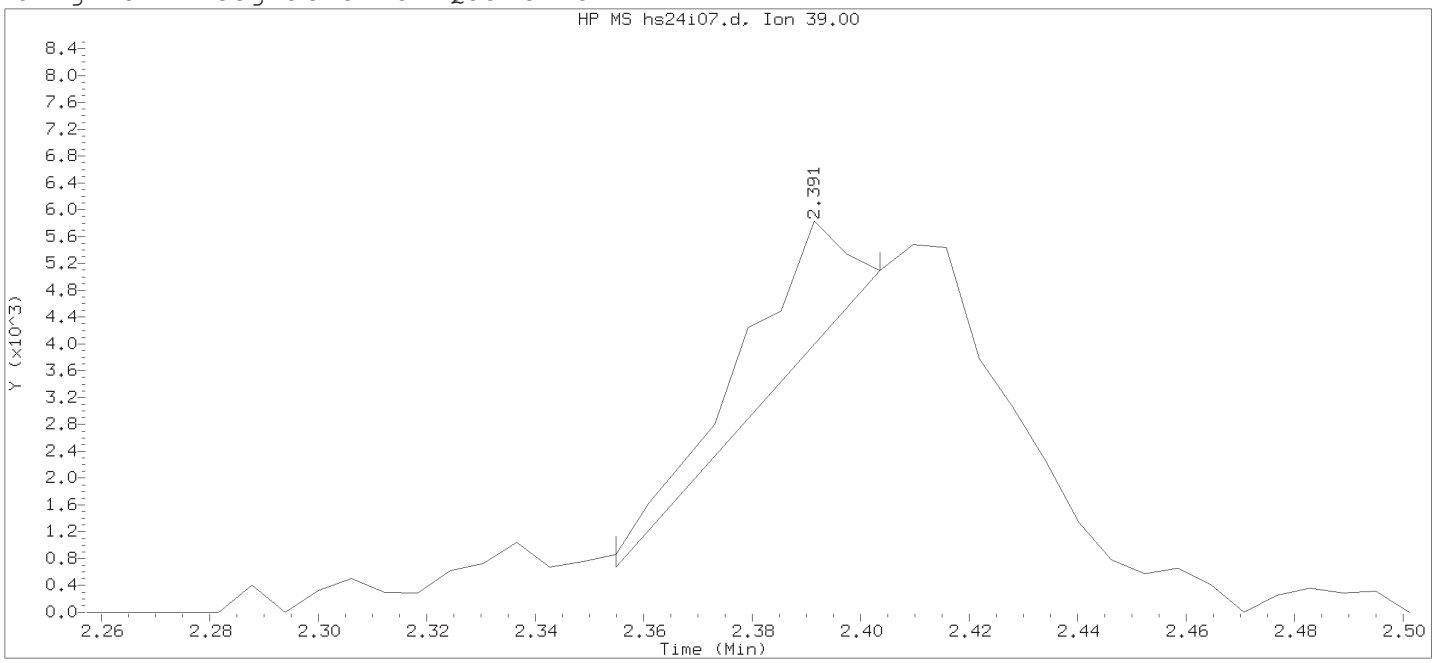
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

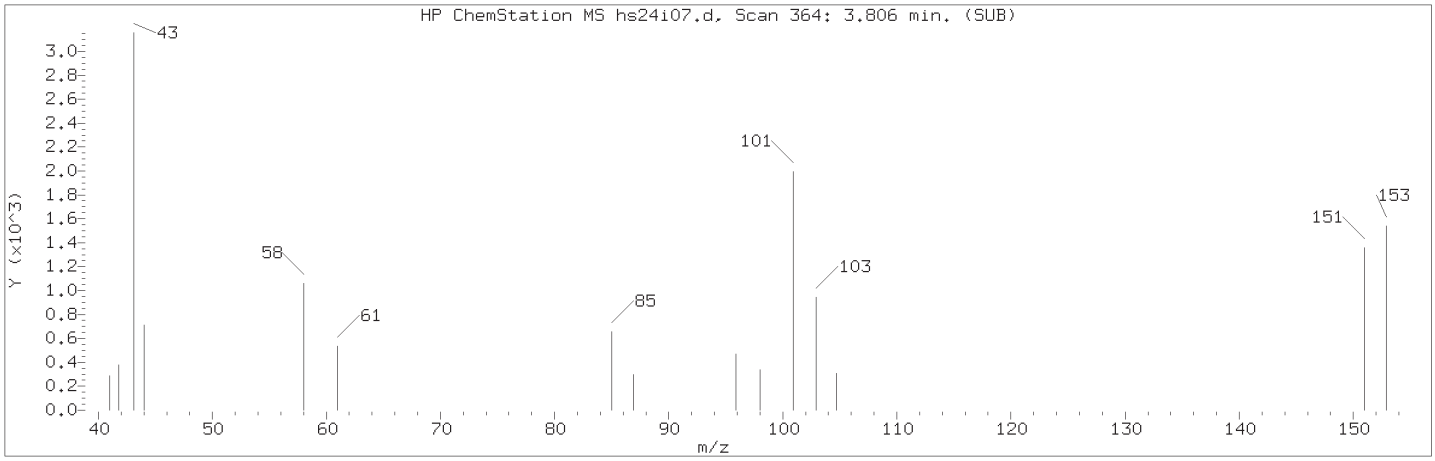
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

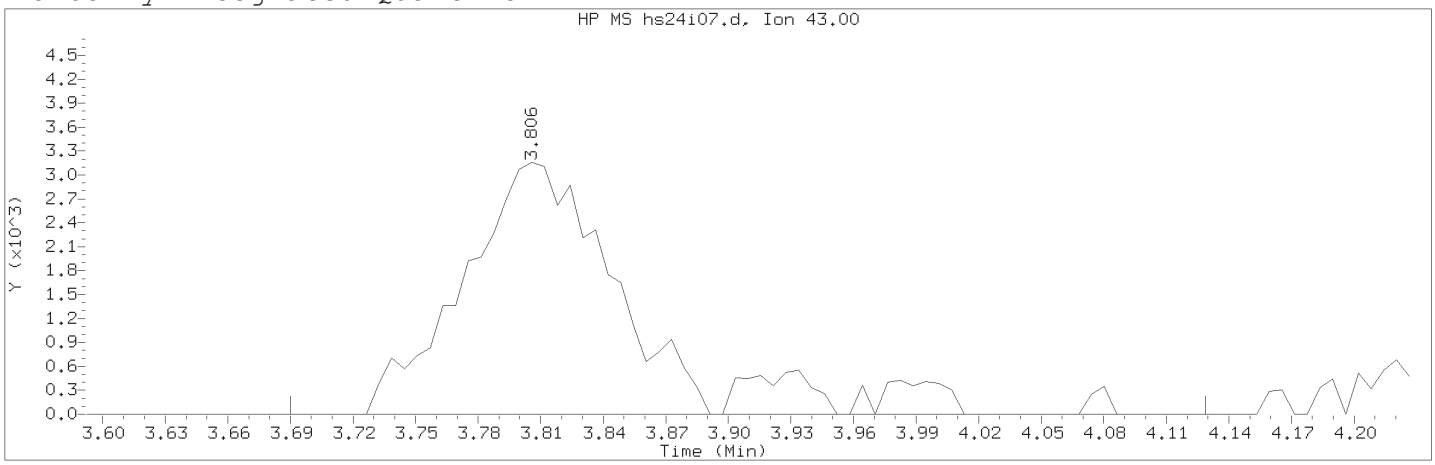
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area : 2354
On-column Amount (ng) : 0.0257
Integration start scan : 125 Integration stop scan: 133
Y at integration start : 678 Y at integration end: 5096

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

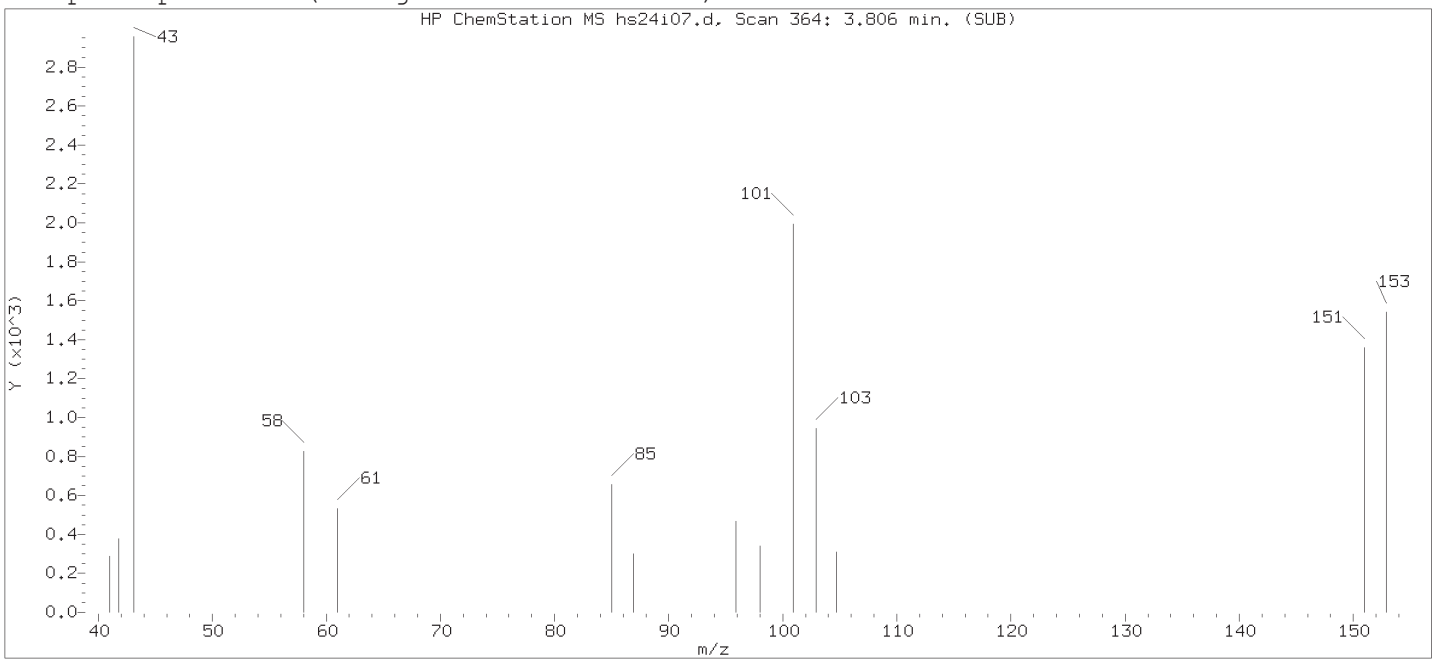
Compound Number : 14
Compound Name : Acetone
Scan Number : 364
Retention Time (minutes): 3.806
Quant Ion : 43.00
Area (flag) : 17774M
On-Column Amount (ng) : 2.1850
Integration start scan : 344 Integration stop scan: 416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

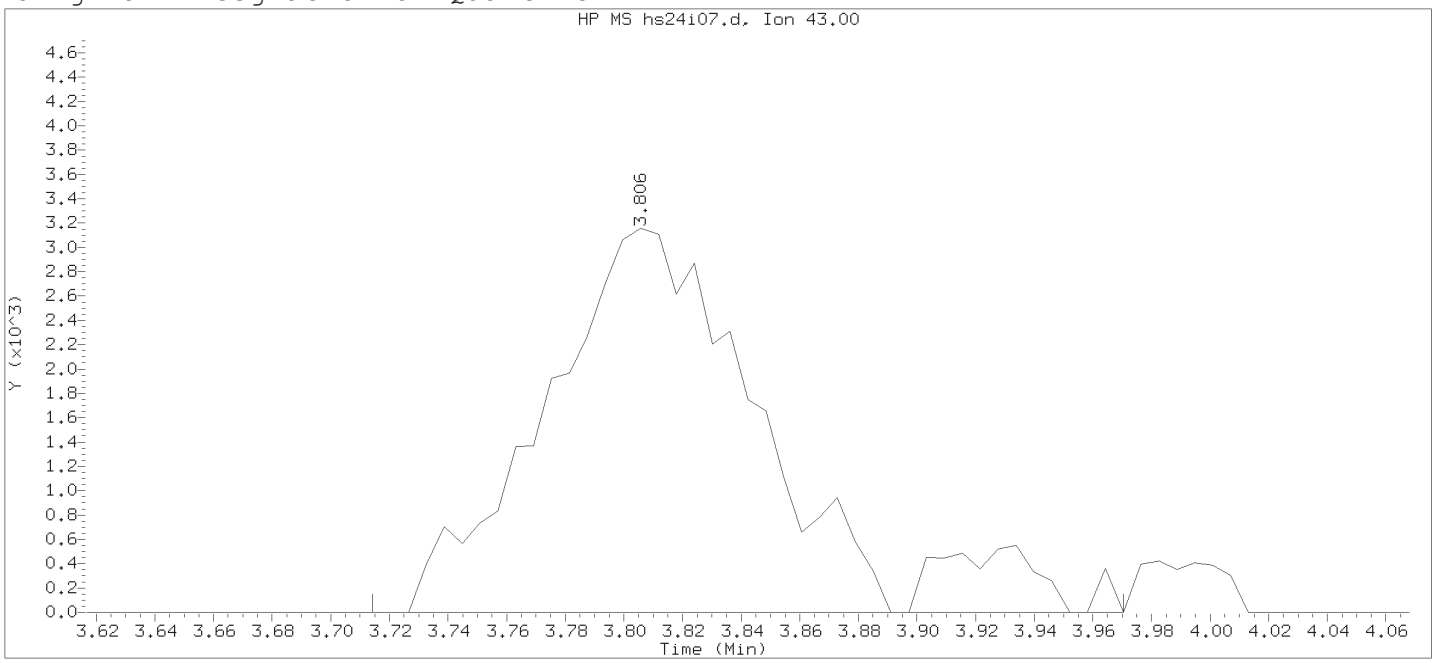
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

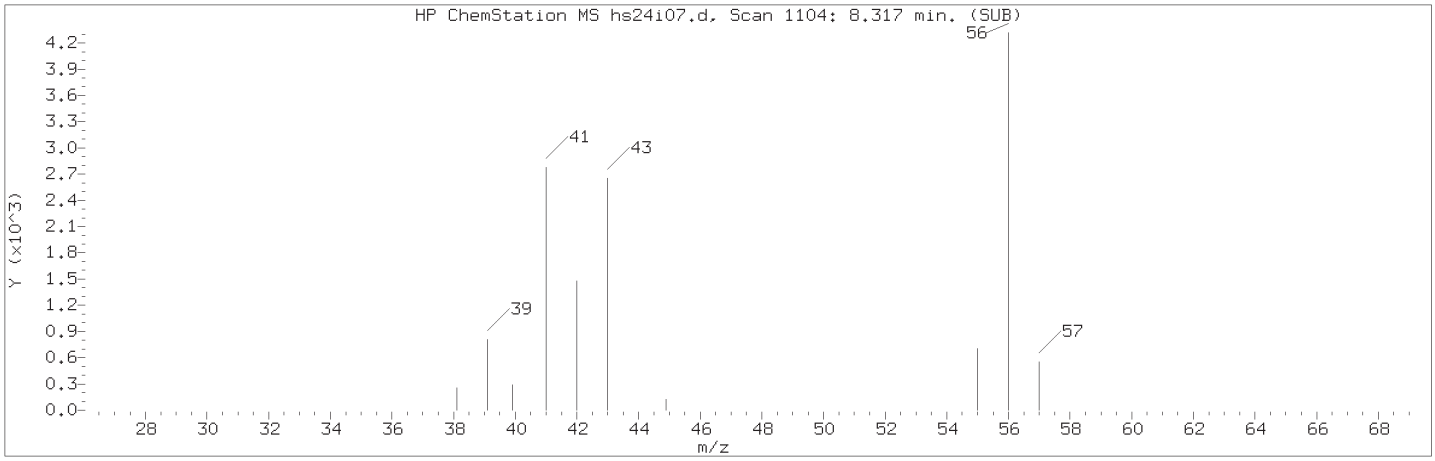
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

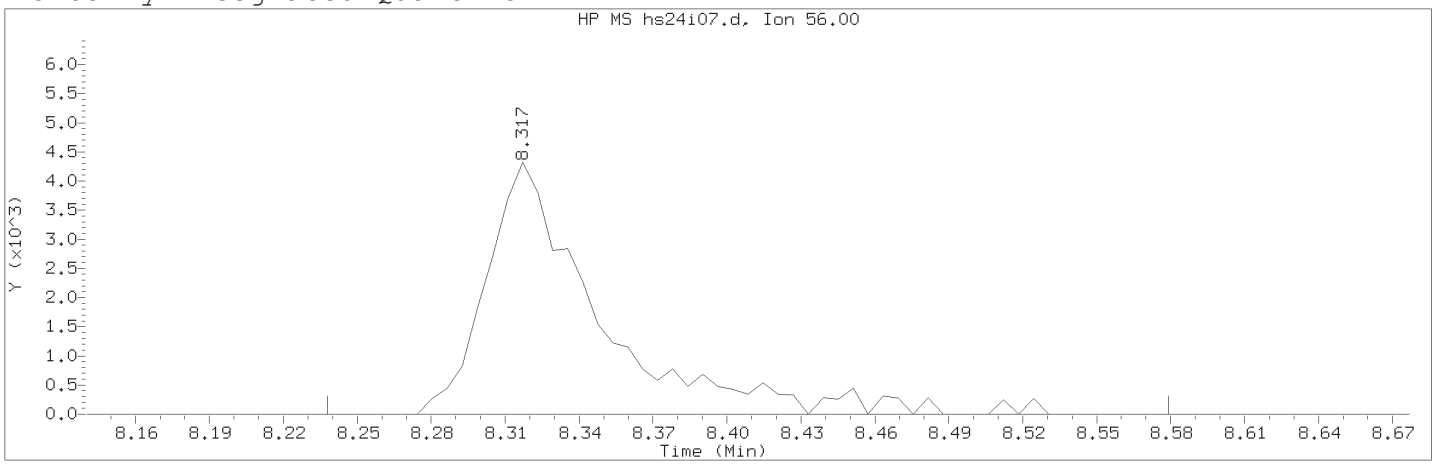
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 364		
Retention Time (minutes)	: 3.806		
Quant Ion	: 43.00		
Area	: 16725		
On-column Amount (ng)	: 2.1688		
Integration start scan	: 348	Integration stop scan:	390
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

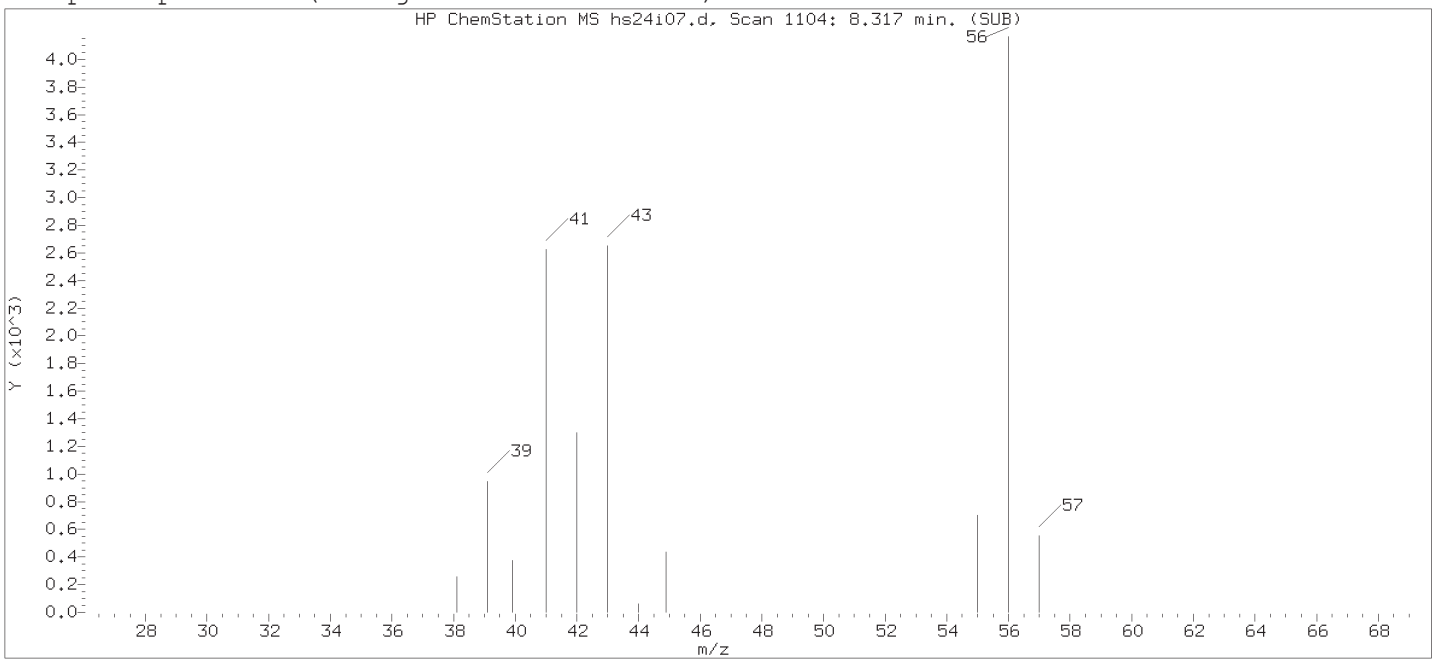
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1104
Retention Time (minutes): 8.317
Quant Ion : 56.00
Area (flag) : 13835M
On-Column Amount (ng) : 18.1683
Integration start scan : 1090 Integration stop scan: 1146
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

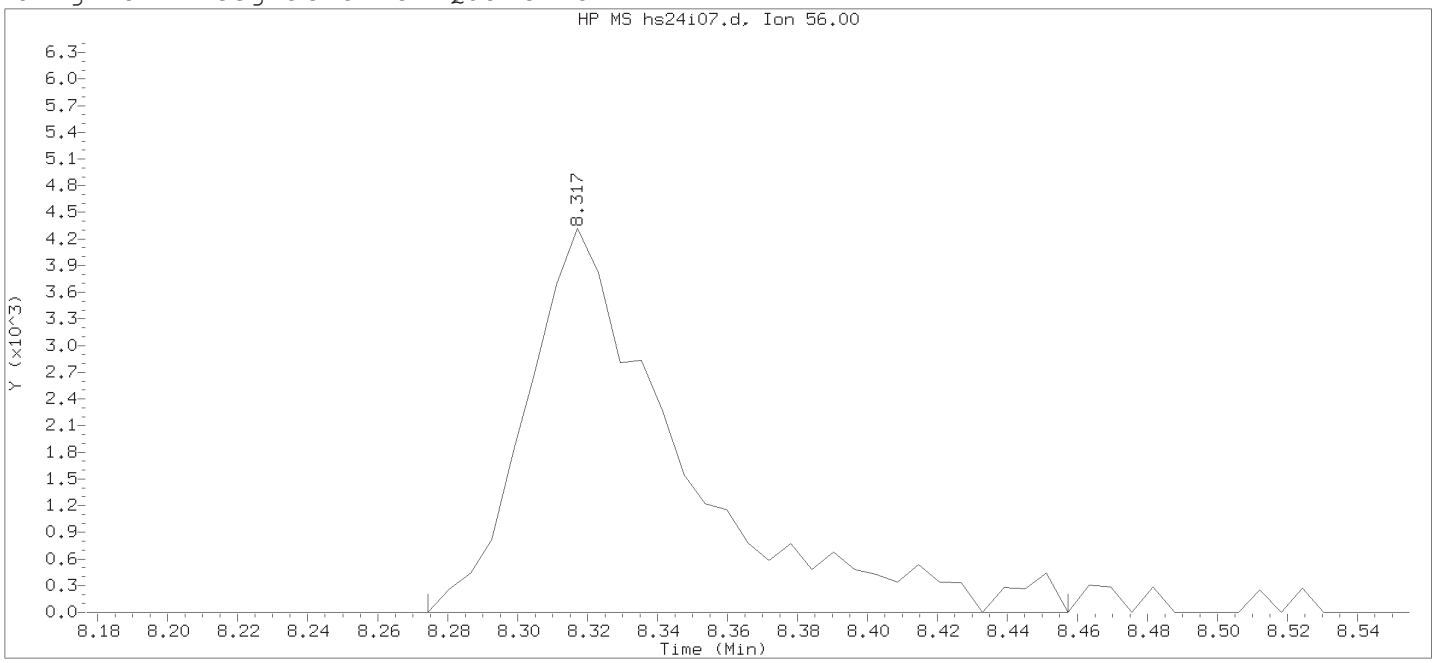
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

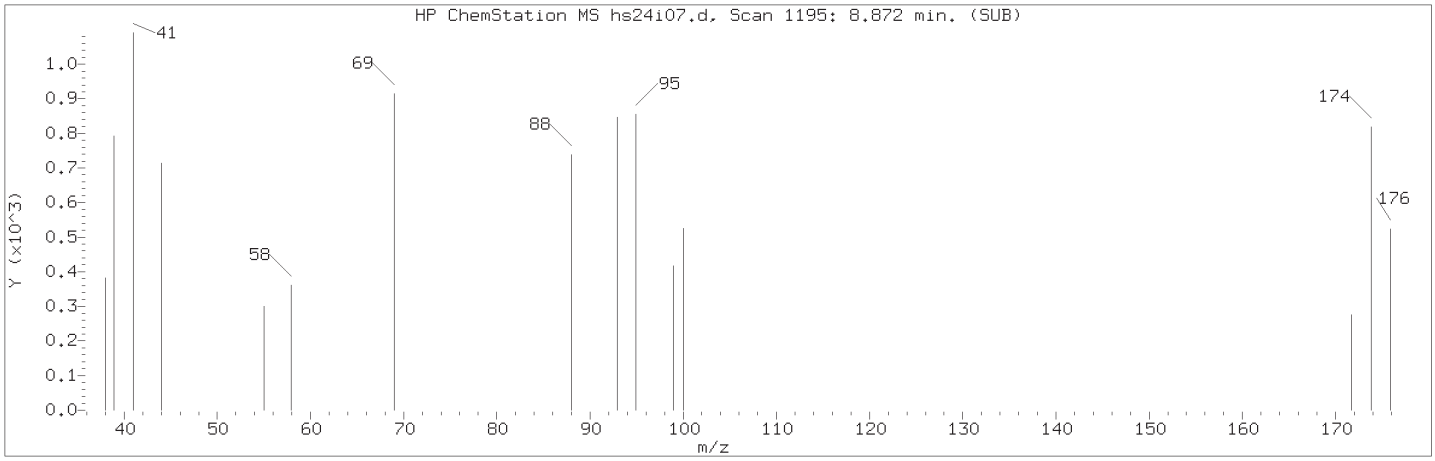
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

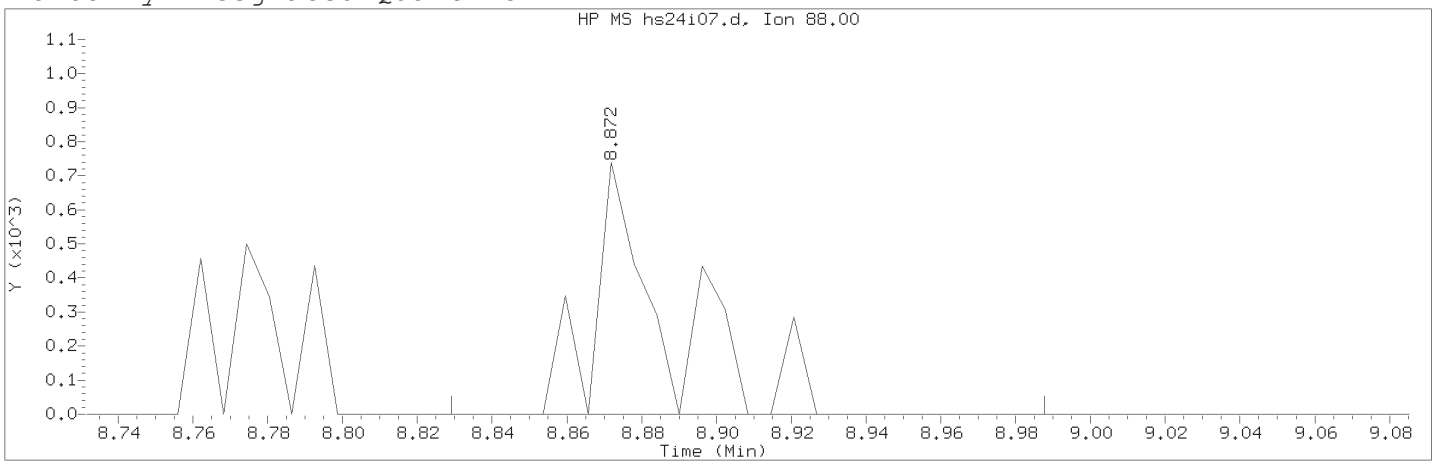
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1104		
Retention Time (minutes)	: 8.317		
Quant Ion	: 56.00		
Area	: 13324		
On-column Amount (ng)	: 17.8982		
Integration start scan	: 1096	Integration stop scan:	1126
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

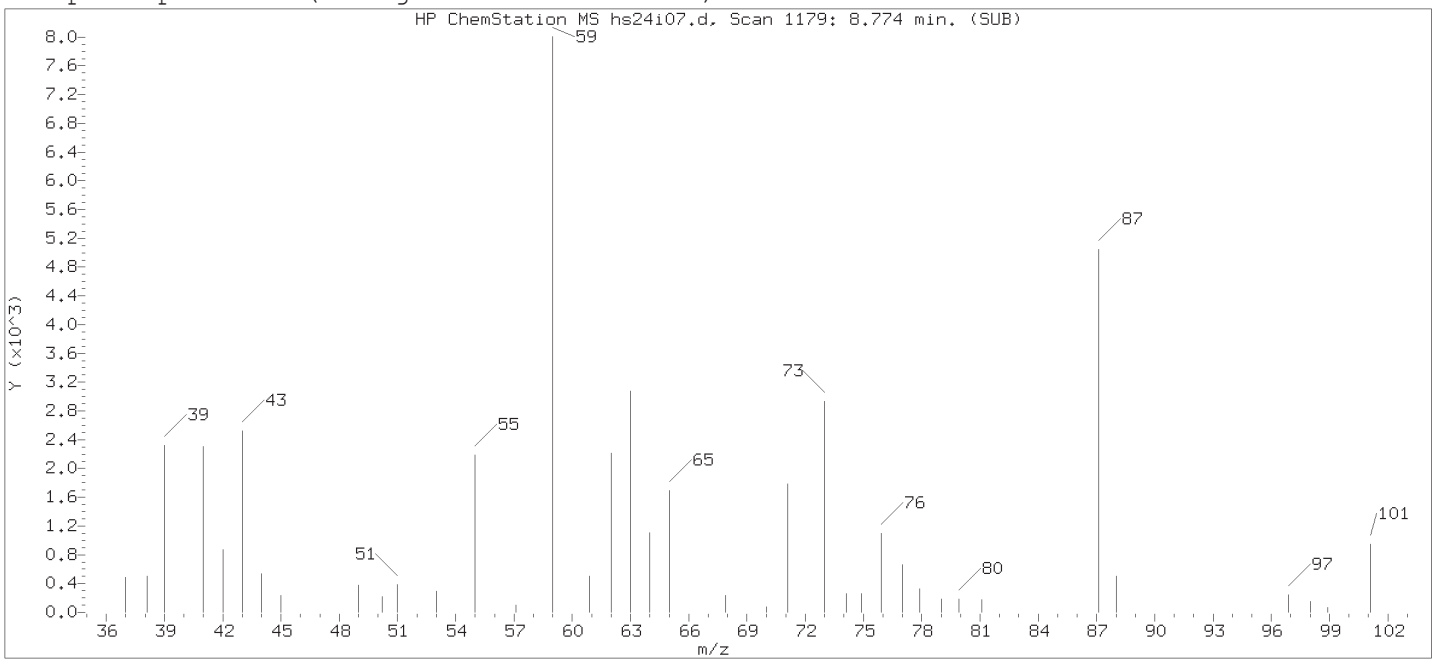
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1195
Retention Time (minutes): 8.872
Quant Ion : 88.00
Area (flag) : 1041M
On-Column Amount (ng) : 5.6778
Integration start scan : 1187 Integration stop scan: 1213
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

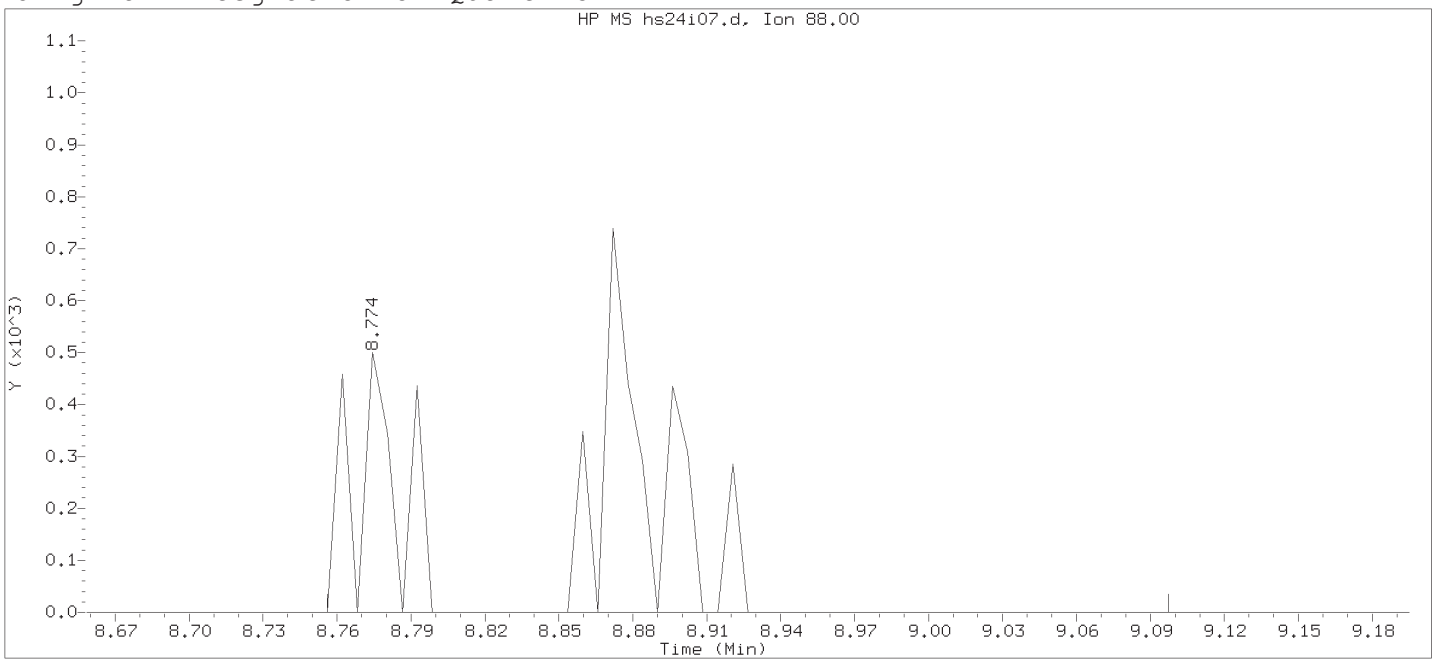
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

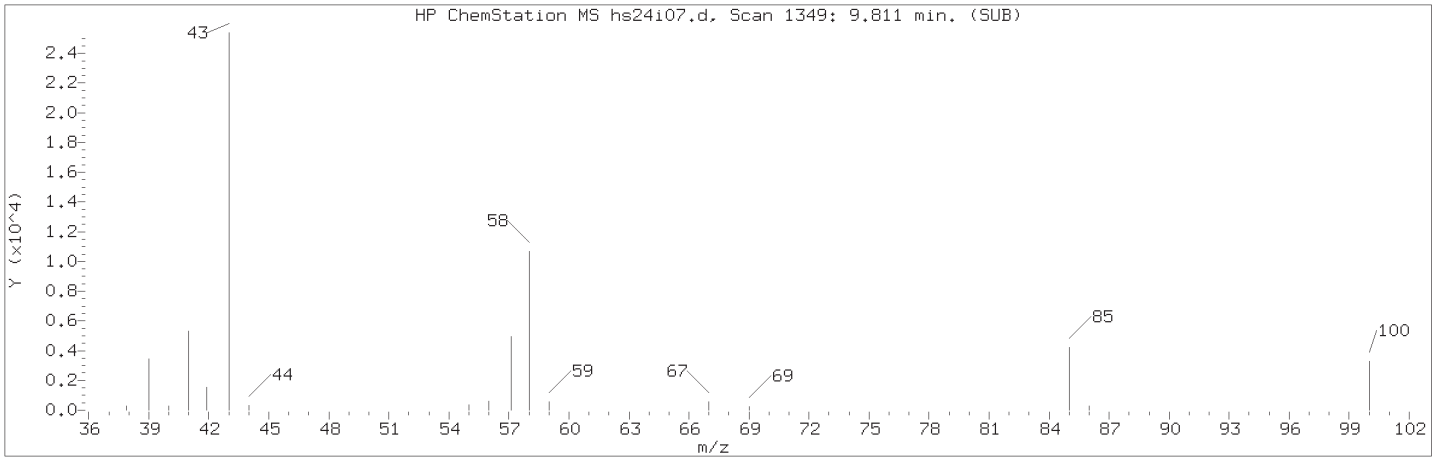
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

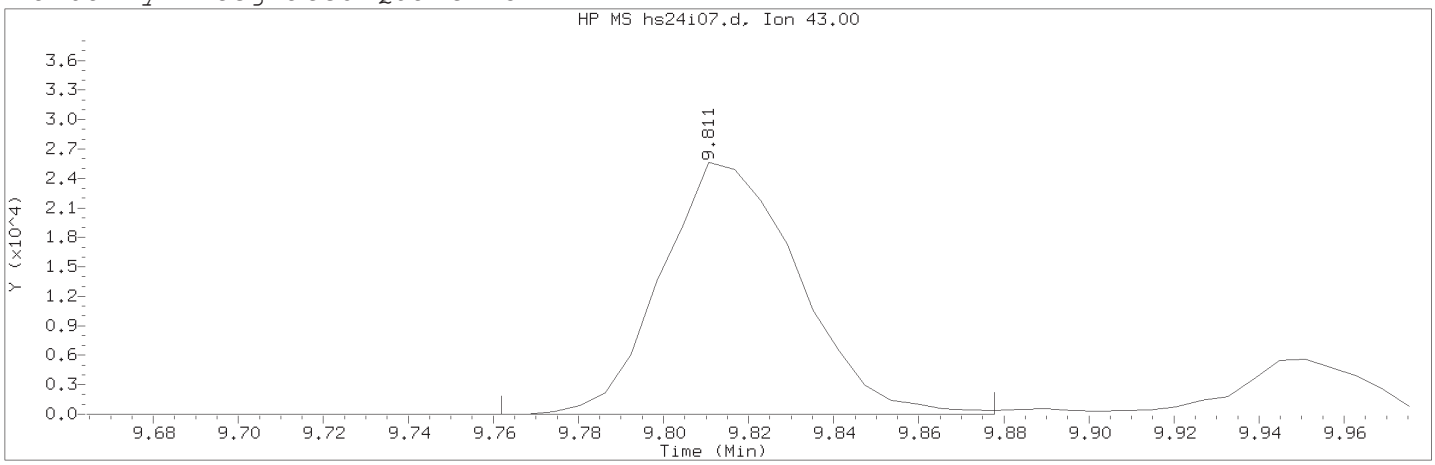
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1179		
Retention Time (minutes)	: 8.774		
Quant Ion	: 88.00		
Area	: 1677		
On-column Amount (ng)	: 13.7029		
Integration start scan	: 1175	Integration stop scan:	1231
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

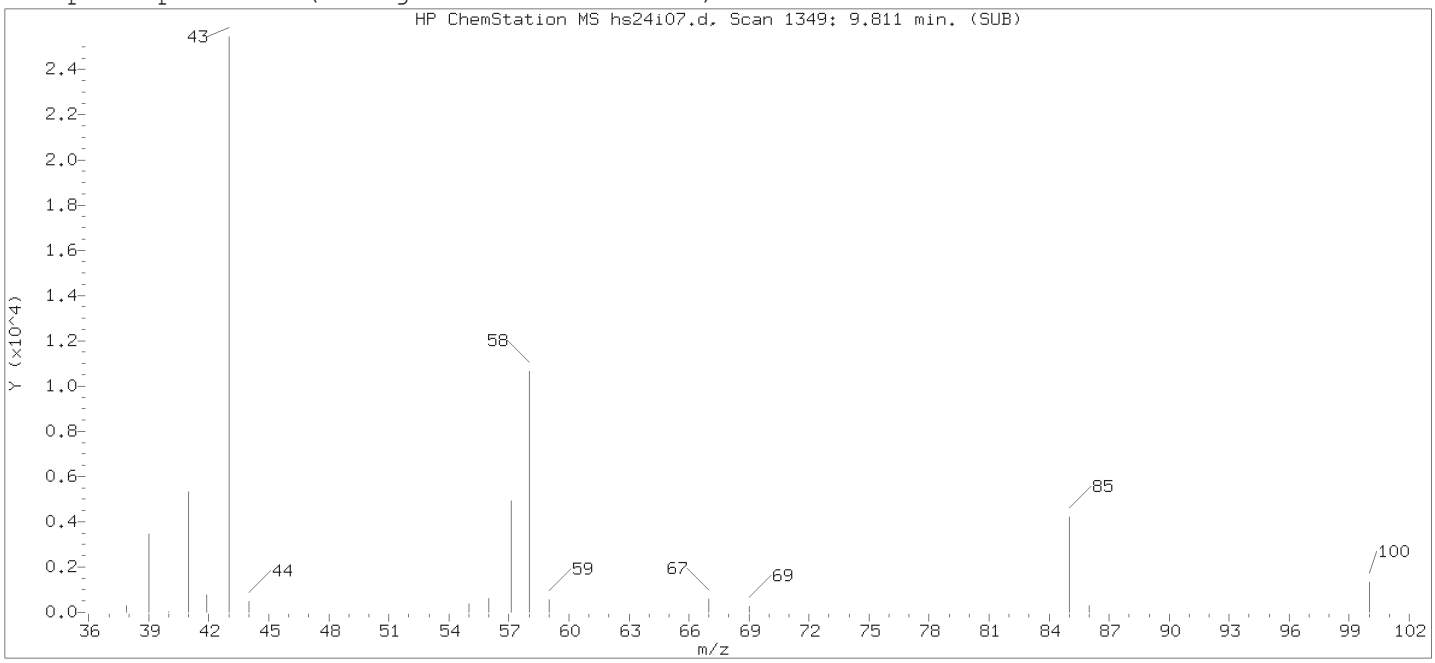
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1349
Retention Time (minutes): 9.811
Quant Ion : 43.00
Area (flag) : 56901M
On-Column Amount (ng) : 1.7180
Integration start scan : 1340 Integration stop scan: 1359
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

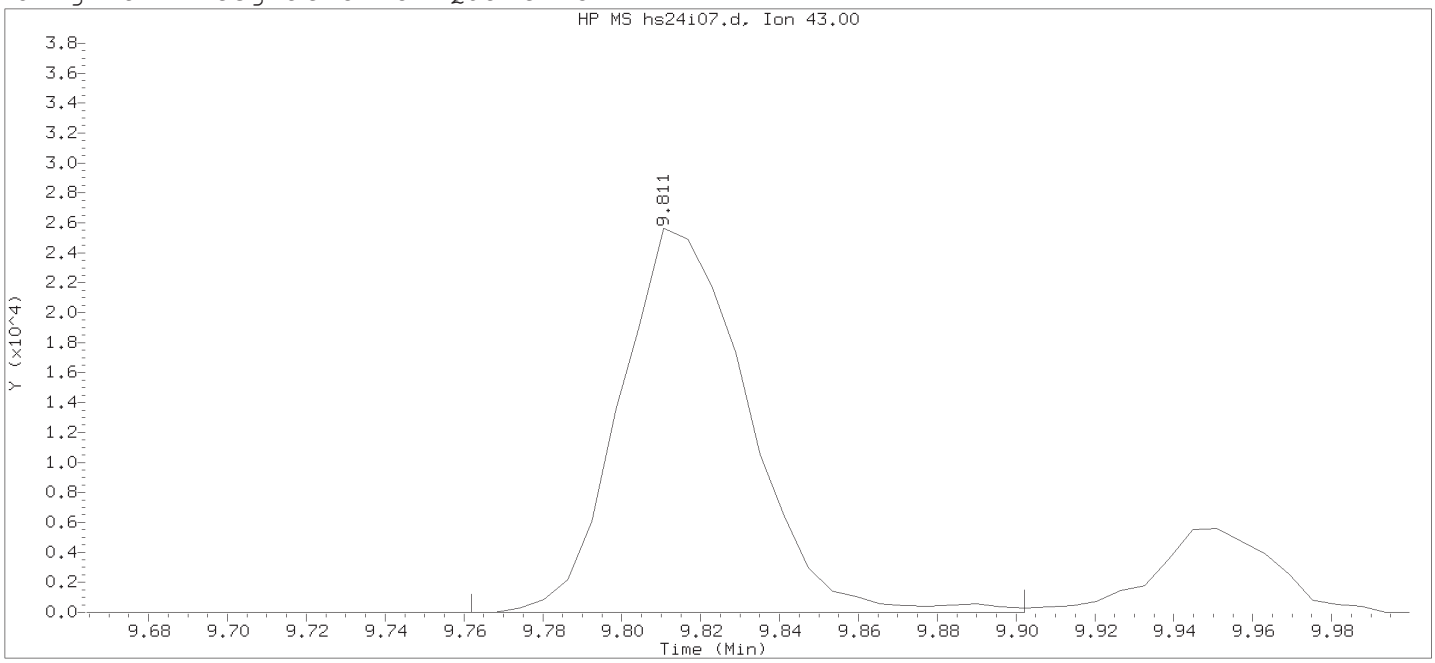
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

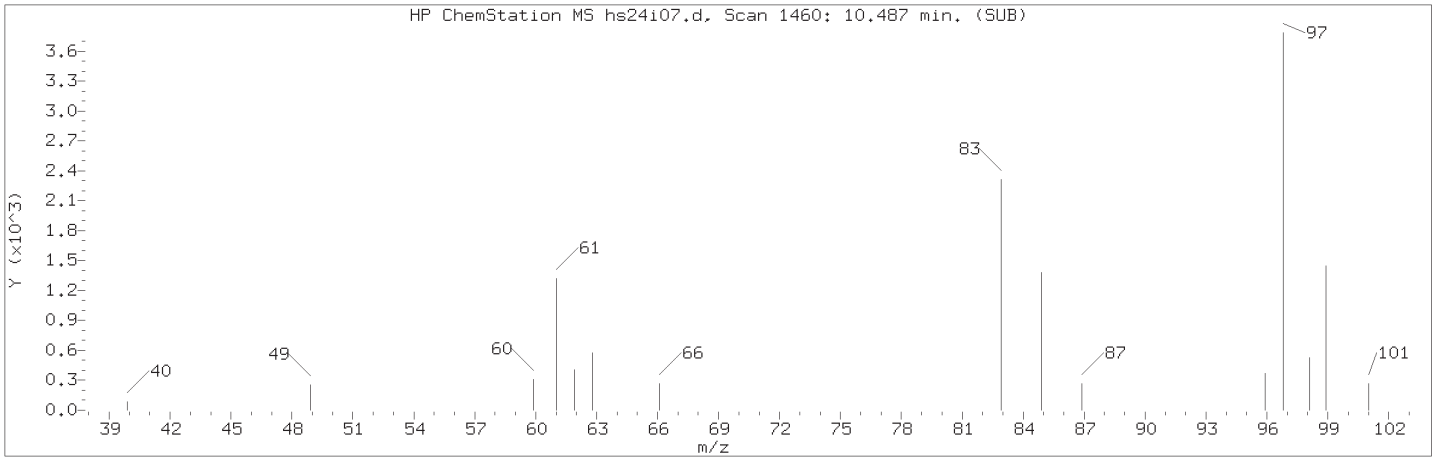
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

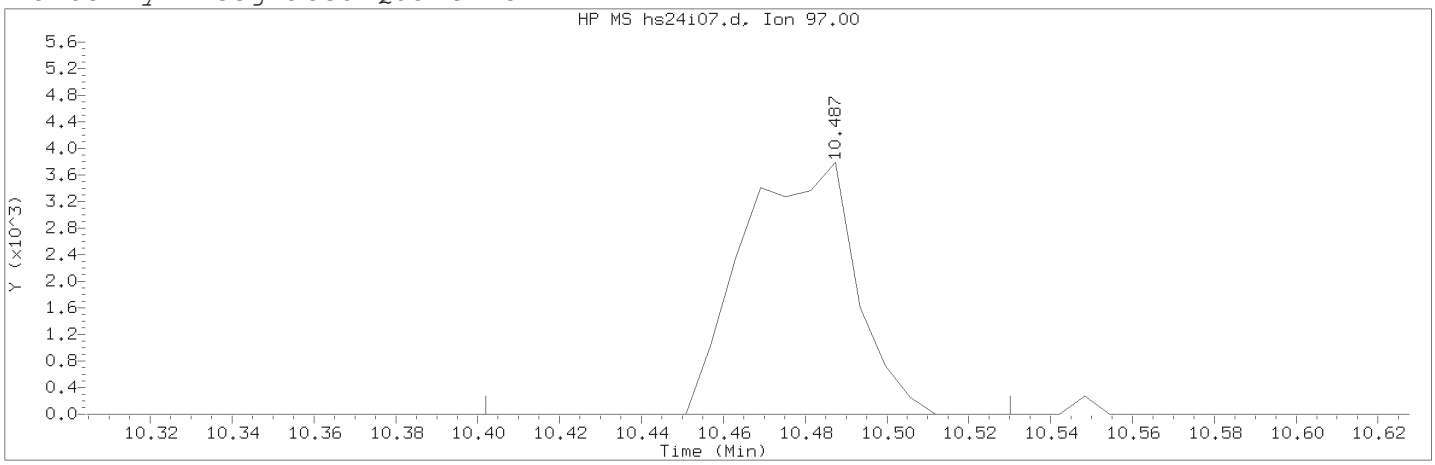
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1349
Retention Time (minutes): 9.811
Quant Ion : 43.00
Area : 57465
On-column Amount (ng) : 1.6906
Integration start scan : 1340 Integration stop scan: 1363
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

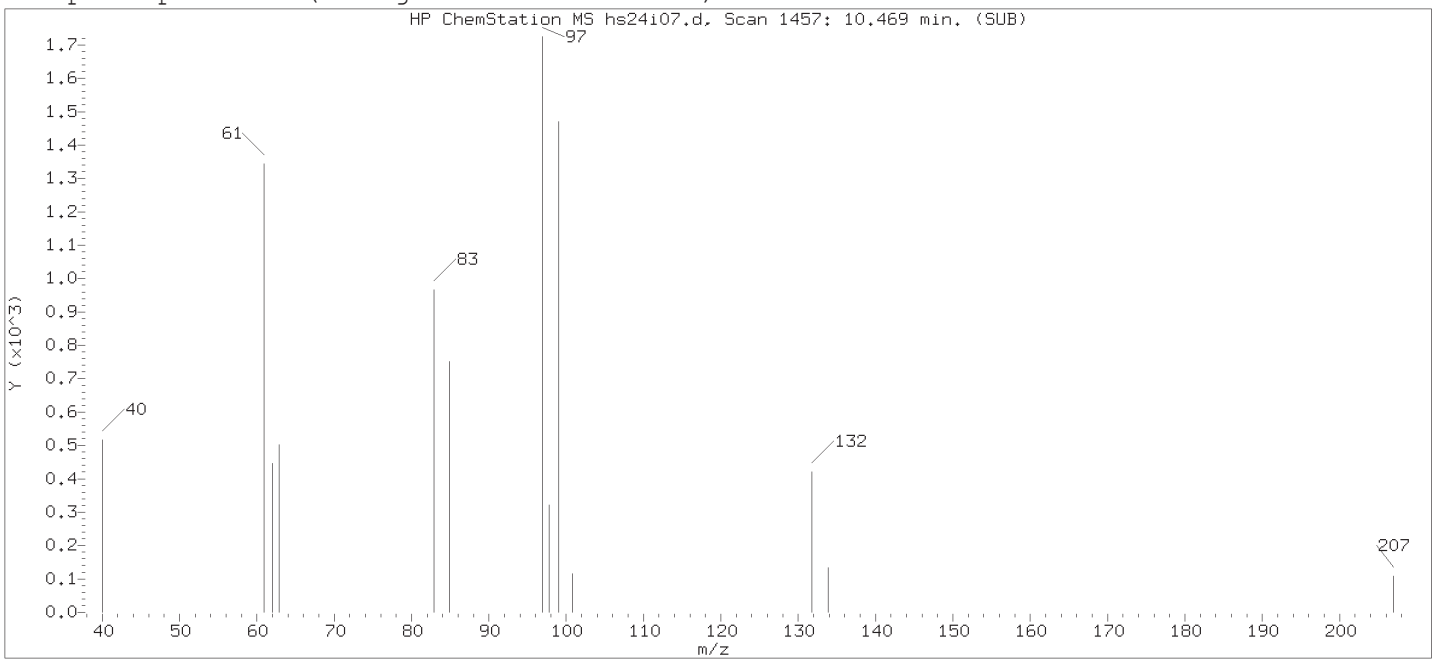
Compound Number : 88
Compound Name : 1,1,2-Trichloroethane
Scan Number : 1460
Retention Time (minutes): 10.487
Quant Ion : 97.00
Area (flag) : 7236M
On-Column Amount (ng) : 0.1981
Integration start scan : 1445 Integration stop scan: 1466
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

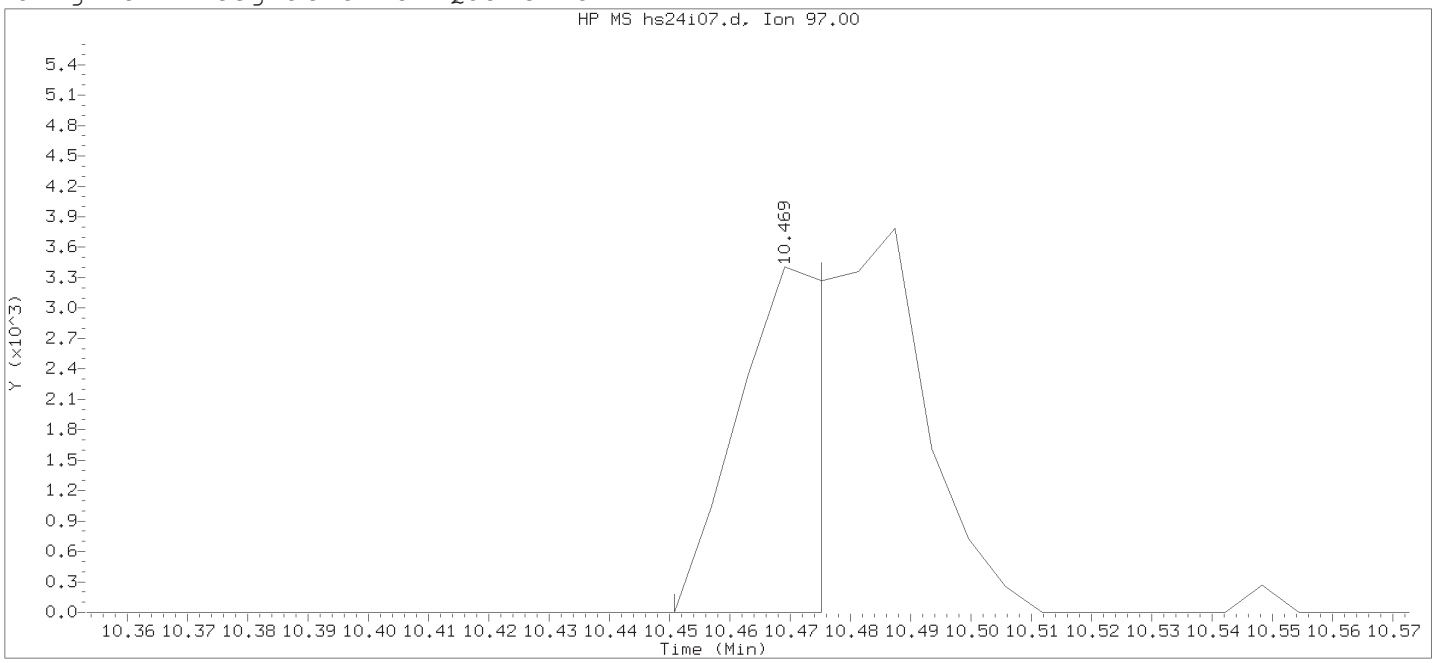
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

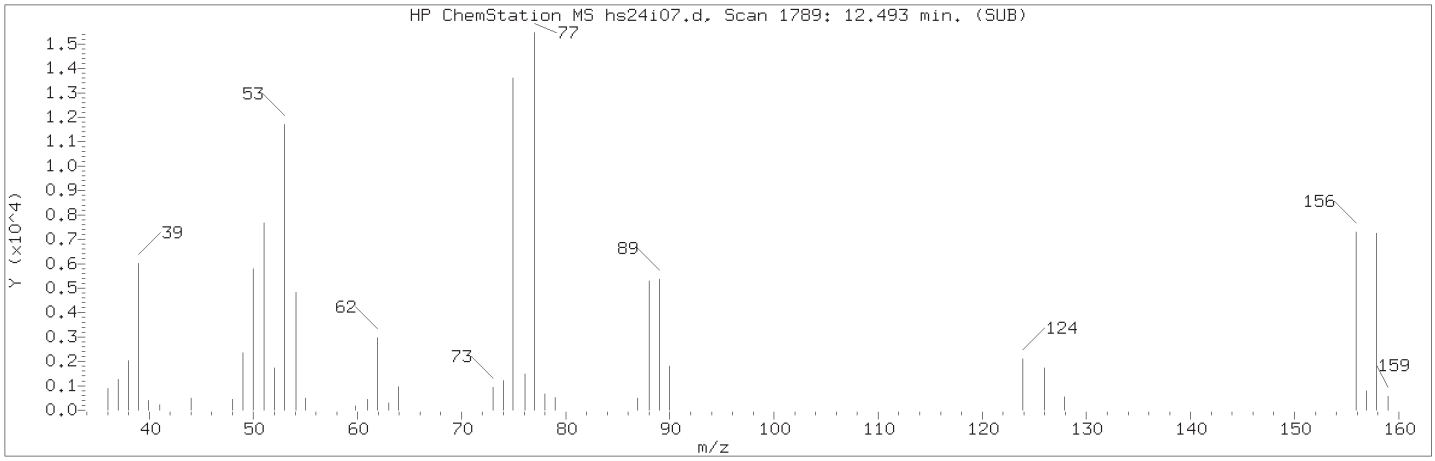
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

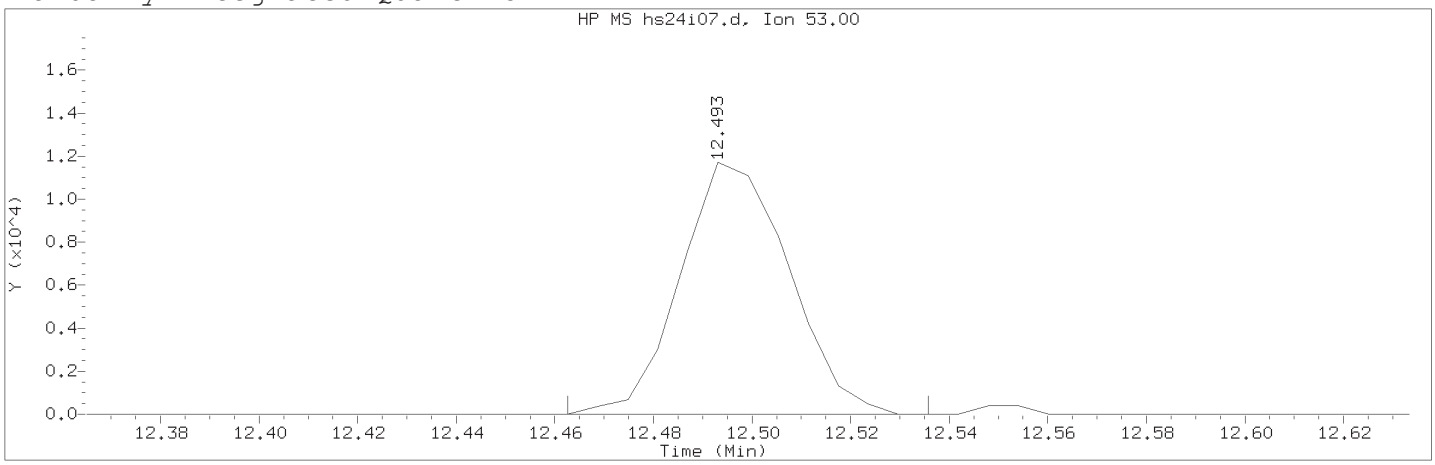
Compound Number : 88
Compound Name : 1,1,2-Trichloroethane
Scan Number : 1457
Retention Time (minutes): 10.469
Quant Ion : 97.00
Area : 3077
On-column Amount (ng) : 0.0917
Integration start scan : 1453 Integration stop scan: 1457
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

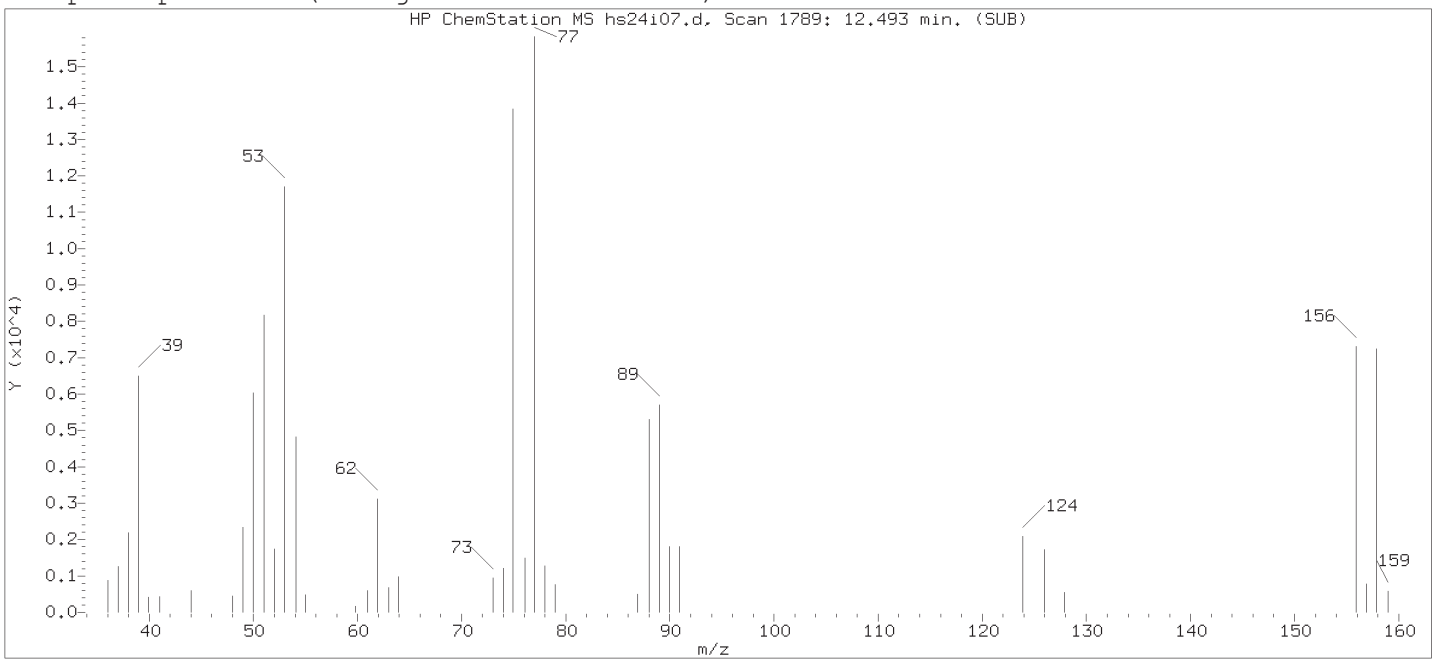
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area (flag) : 17855M
On-Column Amount (ng) : 1.7212
Integration start scan : 1783 Integration stop scan: 1795
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

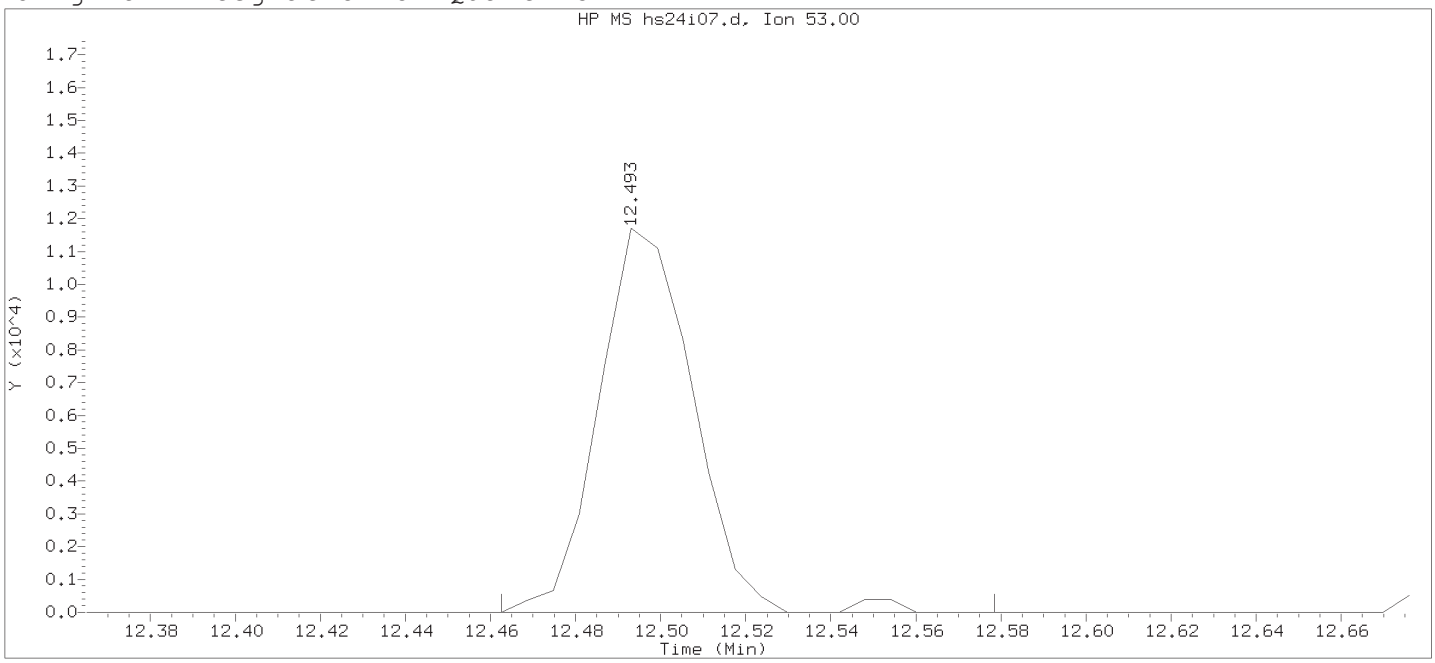
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

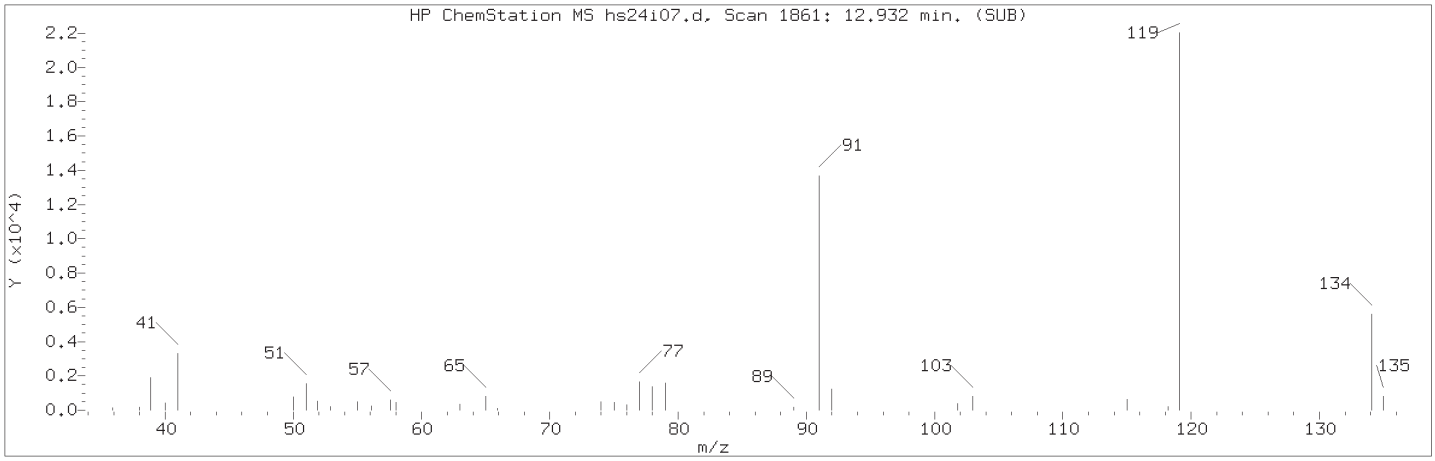
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

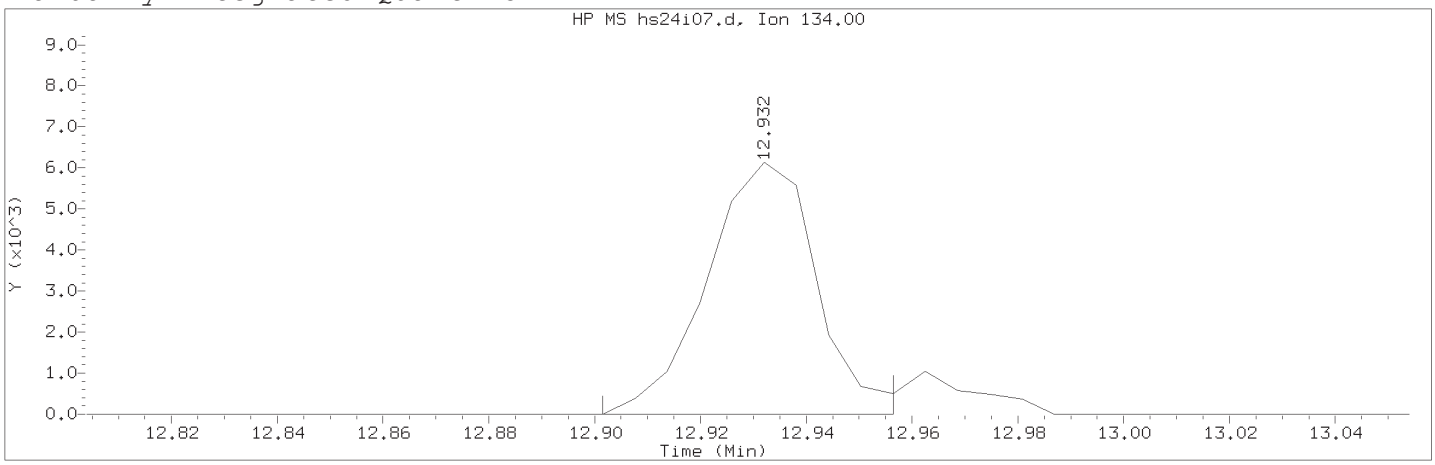
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area : 18137
On-column Amount (ng) : 1.7018
Integration start scan : 1783 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

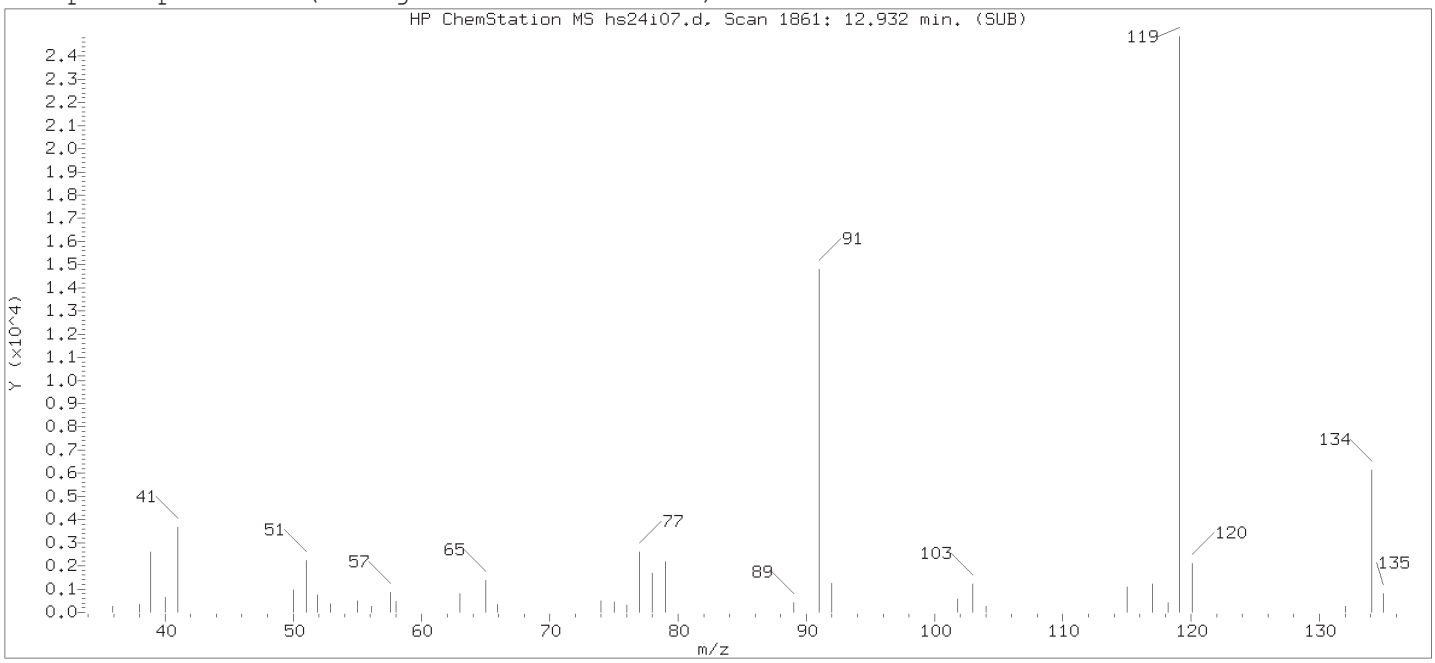
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 8830M
On-Column Amount (ng) : 0.1614
Integration start scan : 1855 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

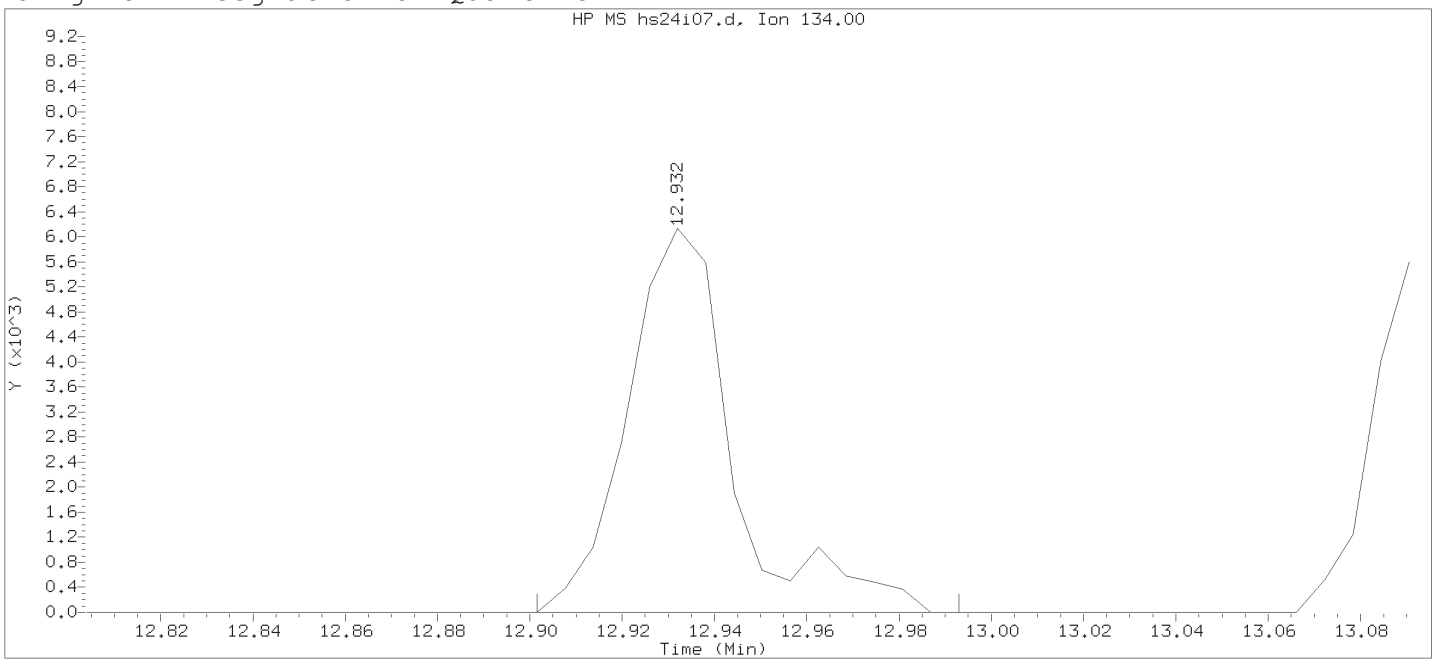
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

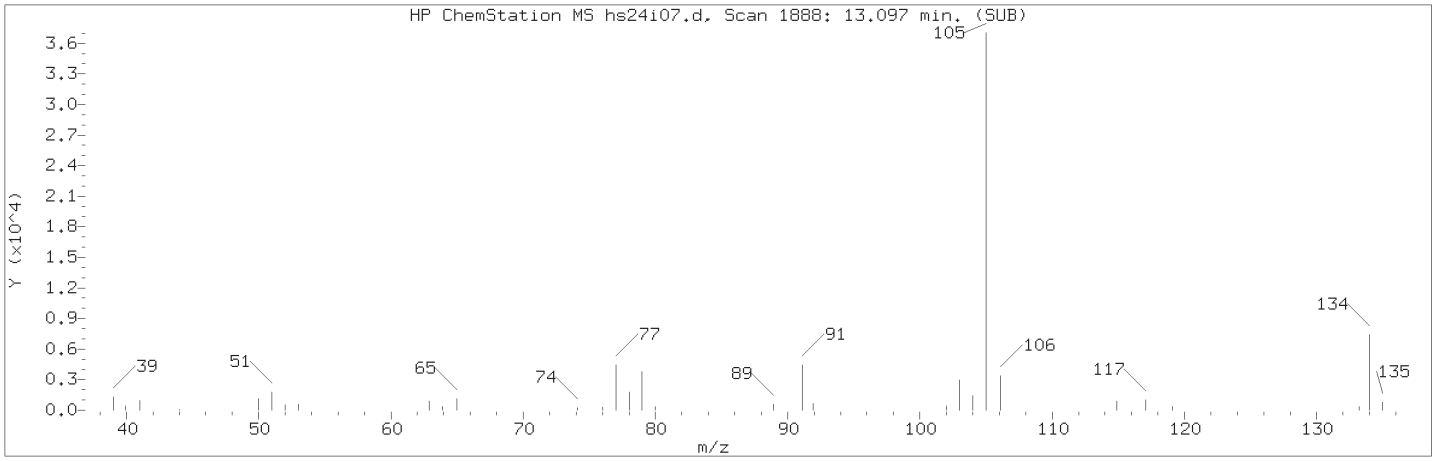
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

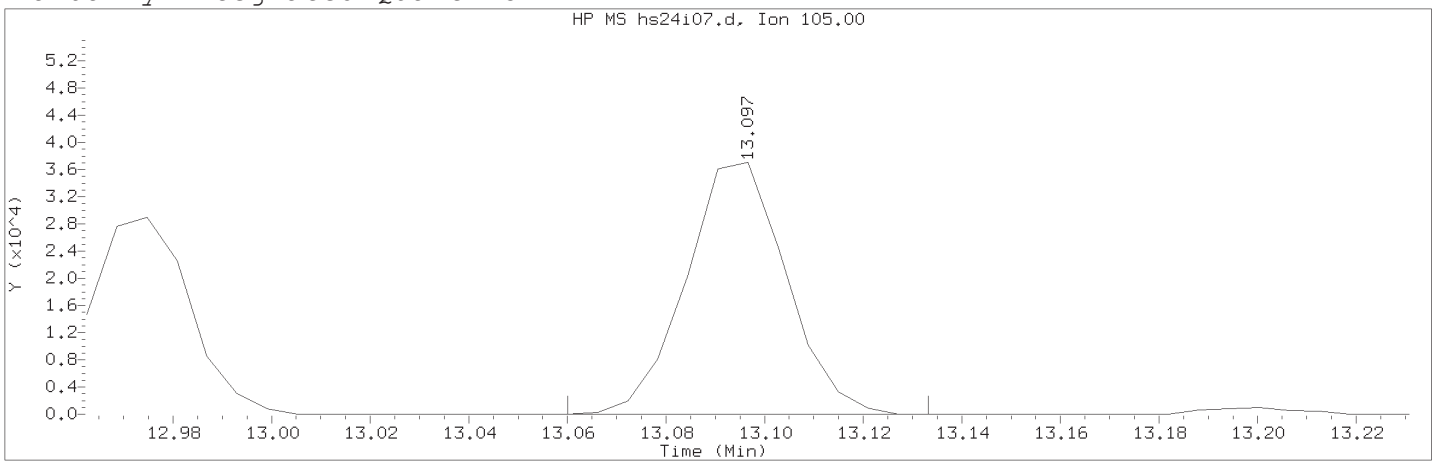
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 9731
On-column Amount (ng) : 0.1717
Integration start scan : 1855 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

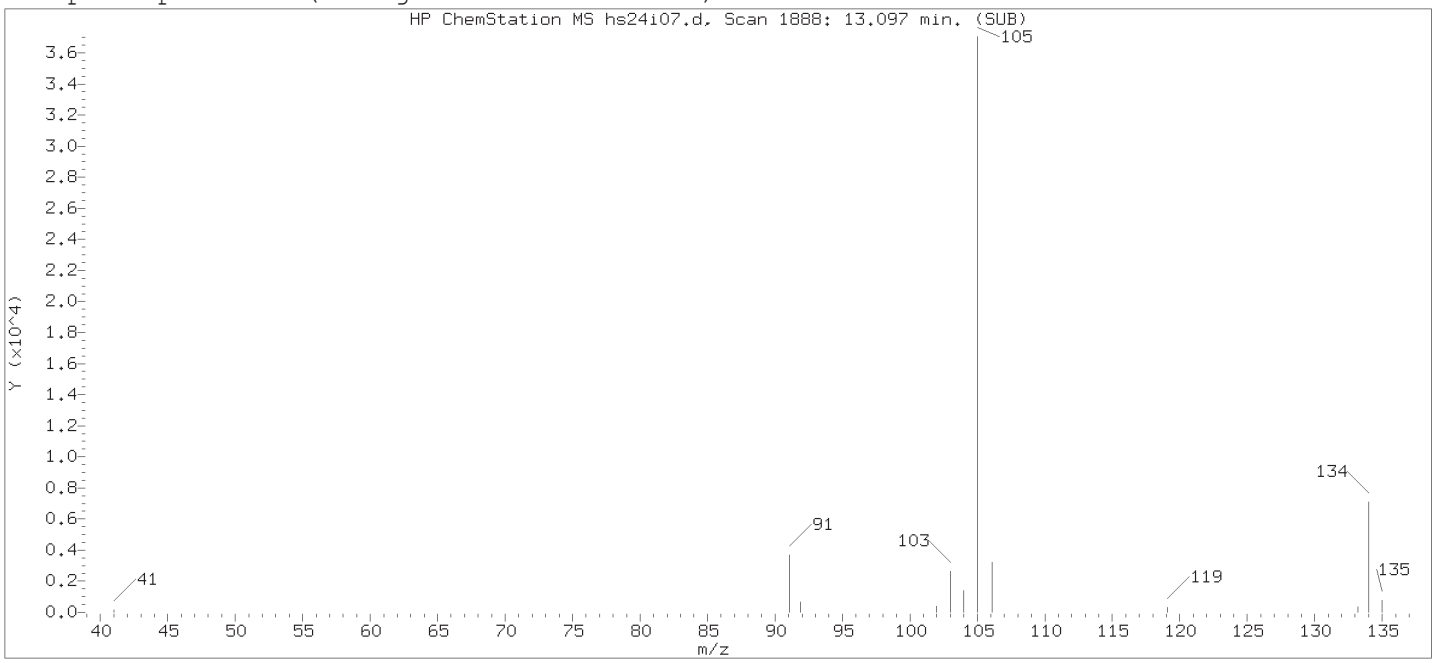
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1888
Retention Time (minutes): 13.097
Quant Ion : 105.00
Area (flag) : 52250M
On-Column Amount (ng) : 0.1603
Integration start scan : 1881 Integration stop scan: 1893
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

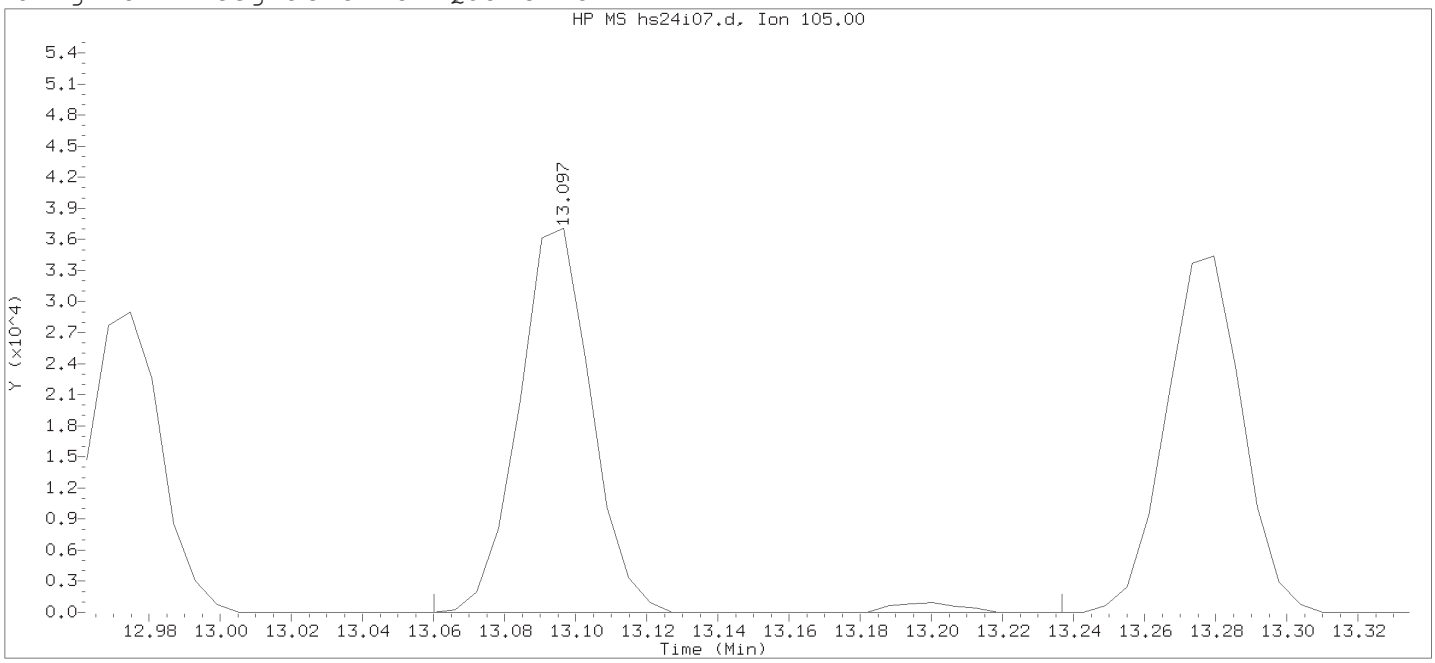
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



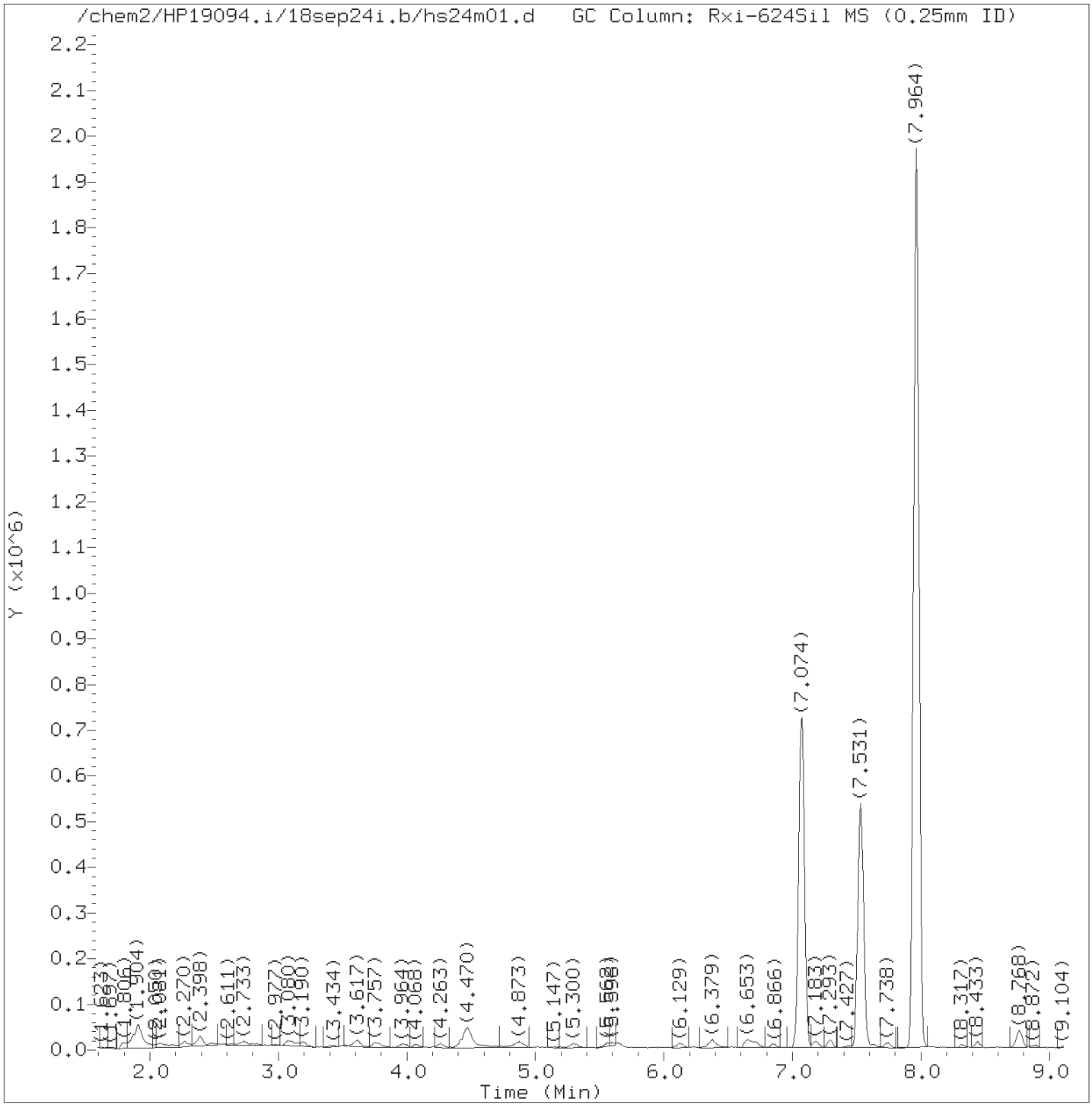
Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1888
Retention Time (minutes): 13.097
Quant Ion : 105.00
Area : 53494
On-column Amount (ng) : 0.1637
Integration start scan : 1881 Integration stop scan: 1910
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

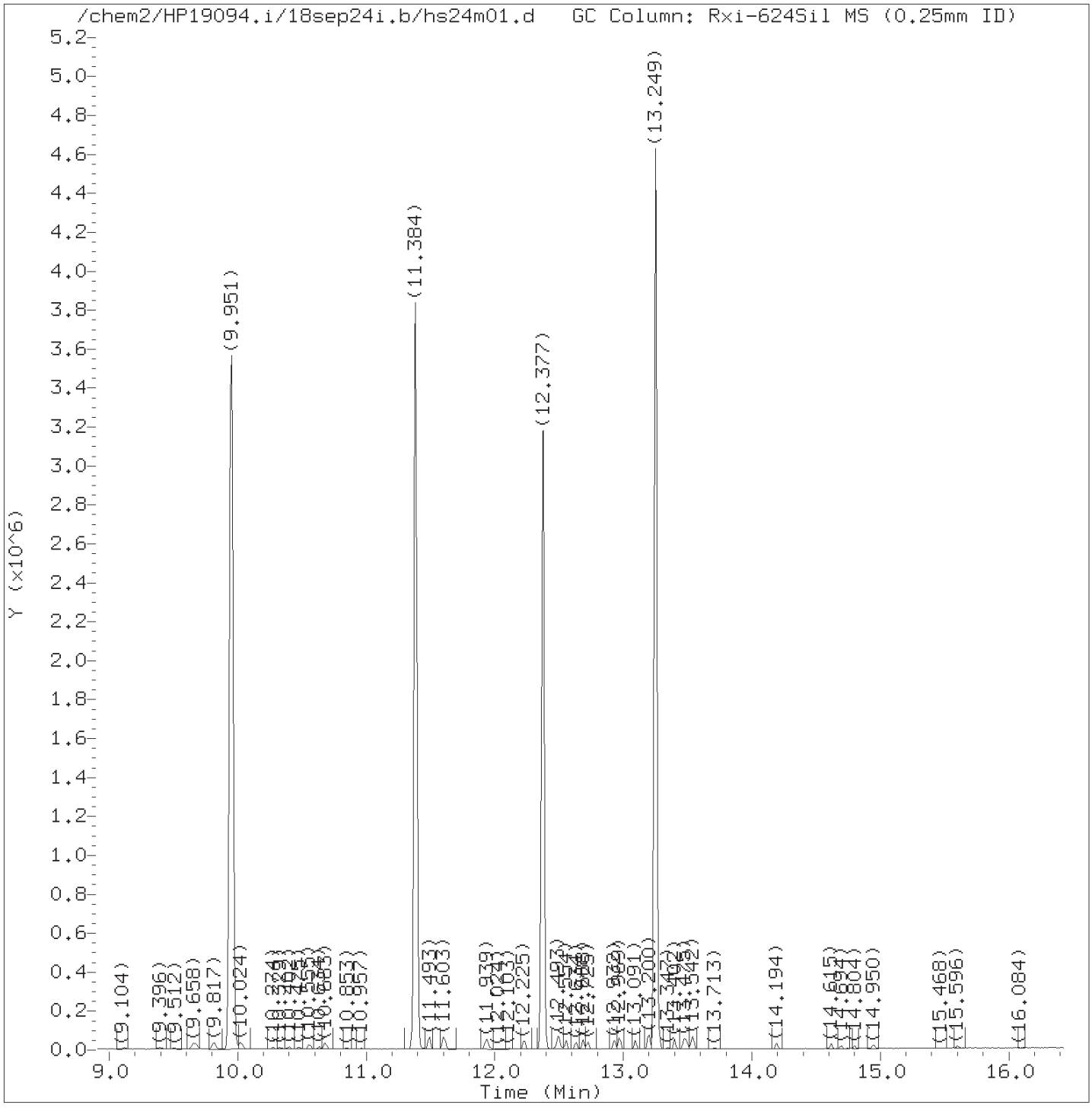
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.062	85	9887	0.091
2) Chloromethane	(2)	2.264	50	11027	0.104
5) Vinyl Chloride	(2)	2.392	62	9705	0.097
6) 1,3-Butadiene	(2)	2.392	39	12302M	0.109
7) Bromomethane	(2)	2.727	94	7190	0.093
8) Chloroethane	(2)	2.837	64	6058	0.100
9) Dichlorofluoromethane	(2)	3.080	67	14390	0.100
10) Trichlorofluoromethane	(2)	3.129	101	12048	0.096
11) Ethyl ether	(2)	3.422	59	3966	0.093
12) Freon 123a	(2)	3.513	67	7745	0.097
13) Acrolein	(1)	3.611	56	30281	4.838
15) 1,1-Dichloroethene	(2)	3.745	96	4892	0.090
16) Freon 113	(2)	3.769	101	5407	0.084
14) Acetone	(1)	3.775	43	9288	1.105
17) Methyl Iodide	(2)	3.964	142	10653	0.094
18) Carbon Disulfide	(2)	4.068	76	16735M	0.096
21) Methyl Acetate	(1)	4.227	43	2044	0.087
22) Allyl Chloride	(2)	4.263	41	9829	0.095
23) Methylene Chloride	(2)	4.452	84	6908	0.112
26)*t-Butyl Alcohol-d10	(1)	4.470	65	141036	50.000
28) t-Butyl Alcohol	(1)	4.605	59	4176	1.735
29) Acrylonitrile	(1)	4.824	53	4124	0.380
30) Methyl Tertiary Butyl Ether	(2)	4.855	73	10117	0.090
31) trans-1,2-Dichloroethene	(2)	4.879	96	5521	0.090
32) n-Hexane	(2)	5.293	57	8152	0.083
33) 1,1-Dichloroethane	(2)	5.556	63	11186	0.095
34) di-Isopropyl Ether	(2)	5.598	45	19224	0.092
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	9694	0.092
40) 1,2-Dichloroethene (Total)	(2)		96	11674	0.180
37) Ethyl t-butyl ether	(2)	6.123	59	14814	0.090
38) 2-Butanone	(1)	6.342	43	12103	0.880
41) 2,2-Dichloropropane	(2)	6.379	77	6559	0.078
39) cis-1,2-Dichloroethene	(2)	6.379	96	6153	0.090
42) Propionitrile	(1)	6.434	54	6324	1.693
45) Methacrylonitrile	(1)	6.659	67	10750	0.798
47) Bromochloromethane	(2)	6.708	128	2451	0.085
48) Tetrahydrofuran	(1)	6.714	71	2784	0.761
49) Chloroform	(2)	6.866	83	10073	0.092

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.068	113	702027	10.009
51) 1,1,1-Trichloroethane	(2)	7.092	97	7736	0.083
52) Cyclohexane	(2)	7.177	56	9614	0.079
54) Carbon Tetrachloride	(2)	7.293	117	6960	0.087
55) 1,1-Dichloropropene	(2)	7.299	75	8159	0.092
56) Isobutyl Alcohol	(1)	7.452	41	3763	4.040
57)$1,2-Dichloroethane-d4	(2)	7.531	102	123366	10.089
58) Benzene	(2)	7.555	78	24986	0.096
59) 1,2-Dichloroethane	(2)	7.628	62	8132	0.135
60) t-Amyl methyl ether	(2)	7.750	73	12517	0.091
63)*Fluorobenzene	(2)	7.964	96	2783023	10.000
62) n-Heptane	(2)	7.976	43	9564	0.095
65) n-Butanol	(1)	8.323	56	6085	7.733
67) Trichloroethene	(2)	8.439	95	6307	0.094
69) Methylcyclohexane	(2)	8.756	83	11396	0.090
70) 1,2-Dichloropropane	(2)	8.775	63	5902	0.093
71) Methyl Methacrylate	(1)	8.848	69	1661M	0.067
72) 1,4-Dioxane	(1)	8.872	88	538	2.839
73) Dibromomethane	(2)	8.890	93	2312	0.088
74) Bromodichloromethane	(2)	9.128	83	6593	0.093
76) 2-Nitropropane	(1)	9.396	41	5792	0.820
80) cis-1,3-Dichloropropene	(2)	9.652	75	7111	0.086
81) 4-Methyl-2-Pentanone	(1)	9.817	43	27891	0.815
82)$Toluene-d8	(3)	9.951	98	2808841	10.086
83) Toluene	(3)	10.024	92	14540	0.091
85) 1,3-Dichloropropene (total)	(3)		75	11931	0.164
84) trans-1,3-Dichloropropene	(3)	10.268	75	4820	0.078
86) Ethyl Methacrylate	(3)	10.323	69	4465	0.084
91) 2-Hexanone	(1)	10.329	43	19024A	0.817
88) 1,1,2-Trichloroethane	(3)	10.482	97	4082	0.110
89) Tetrachloroethene	(3)	10.555	166	7159	0.099
90) 1,3-Dichloropropane	(3)	10.640	76	6776	0.103
93) Dibromochloromethane	(3)	10.841	129	3771	0.085
95) 1,2-Dibromoethane	(3)	10.957	107	2957	0.085
96) 1-Chlorohexane	(3)	11.384	91	11869M	0.124
97)*Chlorobenzene-d5	(3)	11.384	117	2163745	10.000
98) Chlorobenzene	(3)	11.408	112	17130	0.101
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	5306	0.094

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

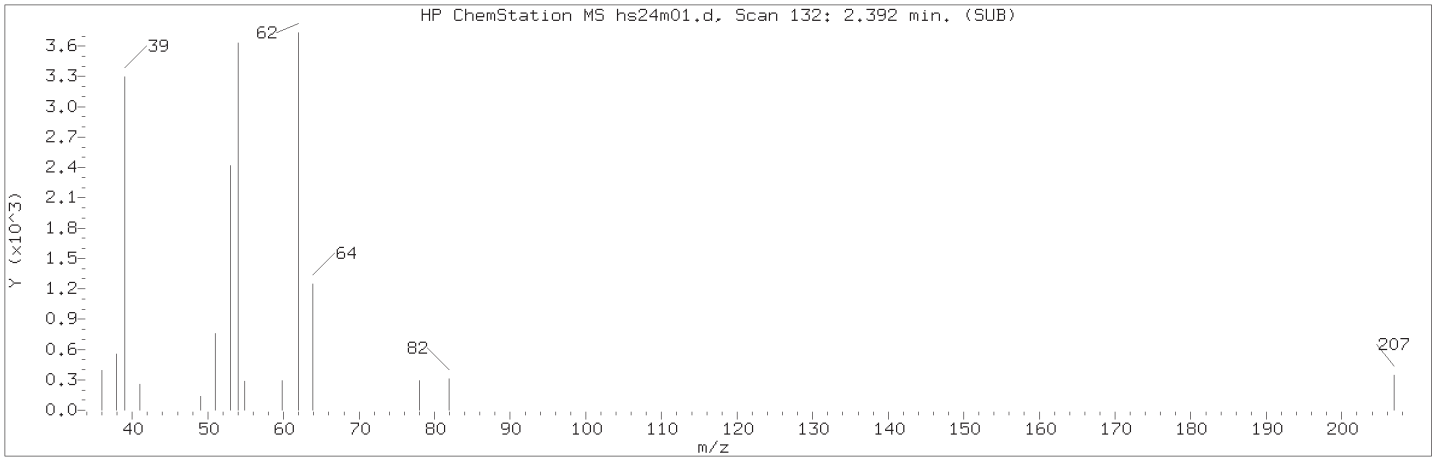
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
100) Ethylbenzene	(3)	11.493	91	27666	0.088
101) m+p-Xylene	(3)	11.603	106	19688	0.169
105) Xylene (Total)	(3)		106	29552	0.258
104) o-Xylene	(3)	11.926	106	9864	0.089
106) Styrene	(3)	11.945	104	14567	0.082
107) Bromoform	(3)	12.103	173	1566	0.064
108) Isopropylbenzene	(3)	12.231	105	26026	0.086
111)$4-Bromofluorobenzene	(3)	12.371	95	1017301	10.033
113) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	3878	0.086
114) Bromobenzene	(4)	12.487	156	6201	0.091
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	8928	0.833
116) 1,2,3-Trichloropropane	(4)	12.524	110	1112	0.095
117) n-Propylbenzene	(4)	12.554	91	32379	0.087
119) 2-Chlorotoluene	(4)	12.634	126	6163	0.085
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	20930	0.083
122) 4-Chlorotoluene	(4)	12.725	126	6027	0.083
125) tert-Butylbenzene	(4)	12.932	134	4681M	0.085
126) Pentachloroethane	(4)	12.963	167	3547	0.083
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	22024	0.086
128) sec-Butylbenzene	(4)	13.091	105	27687M	0.085
131) 1,3-Dichlorobenzene	(4)	13.200	146	12534	0.092
132) p-Isopropyltoluene	(4)	13.200	119	22266	0.082
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1136004	10.000
134) 1,4-Dichlorobenzene	(4)	13.268	146	13175	0.099
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	11819M	0.100
136) Benzyl Chloride	(4)	13.341	126	866	0.053
138) n-Butylbenzene	(4)	13.493	92	11478	0.085
139) 1,2-Dichlorobenzene	(4)	13.530	146	10954	0.091
143) 1,2-Dibromo-3-chloropropane	(1)	14.066	155	310M	0.053
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	9149	0.090
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	7379	0.089
146) Hexachlorobutadiene	(4)	14.694	225	2902	0.093
147) Naphthalene	(4)	14.804	128	10099	0.077
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	6064	0.089

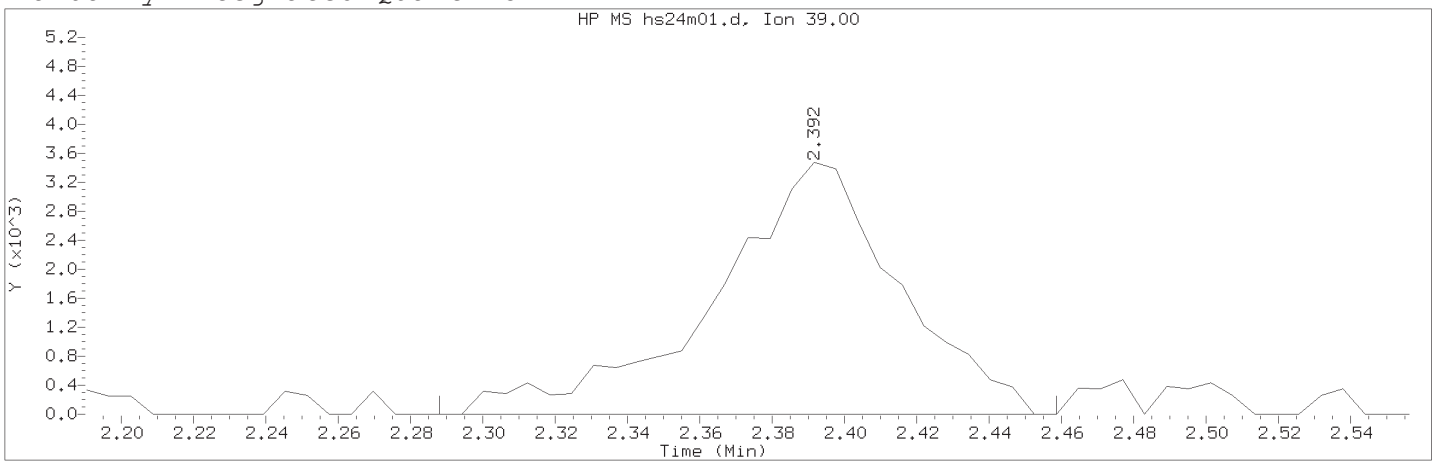
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

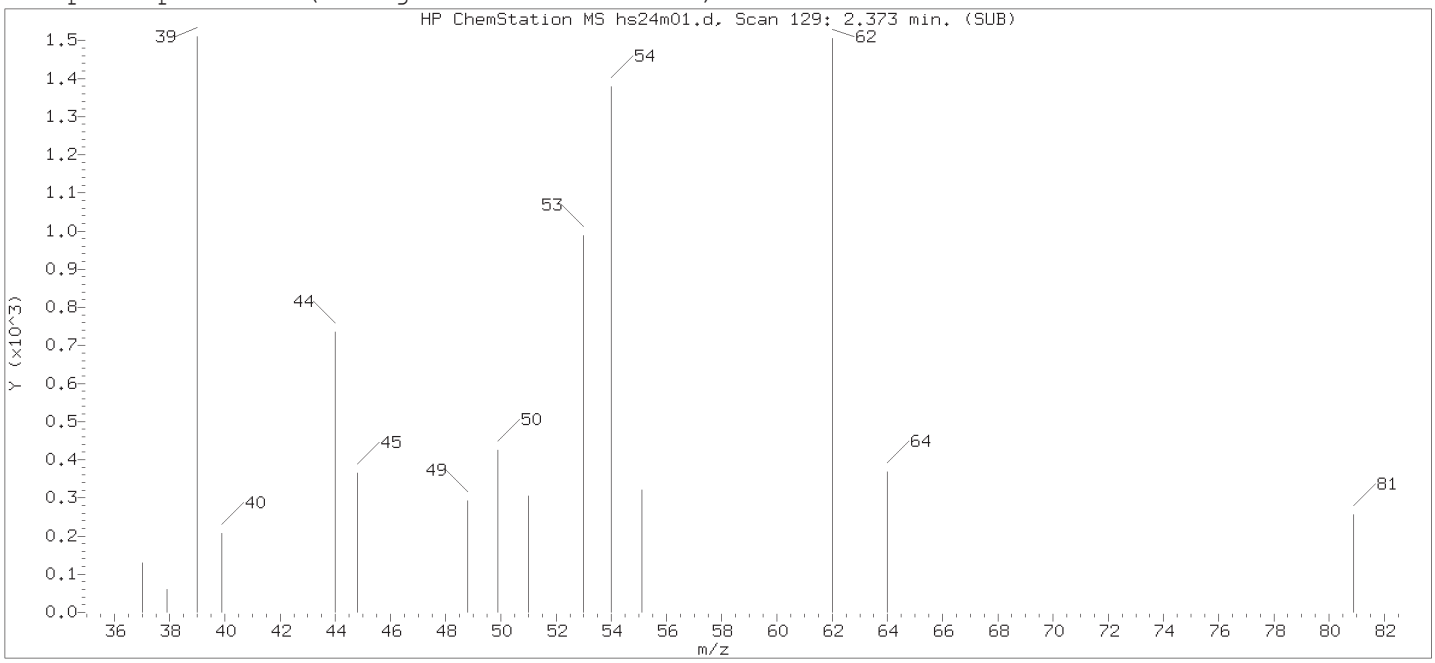
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.392
Quant Ion : 39.00
Area (flag) : 12302M
On-Column Amount (ng) : 0.1089
Integration start scan : 114 Integration stop scan: 142
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

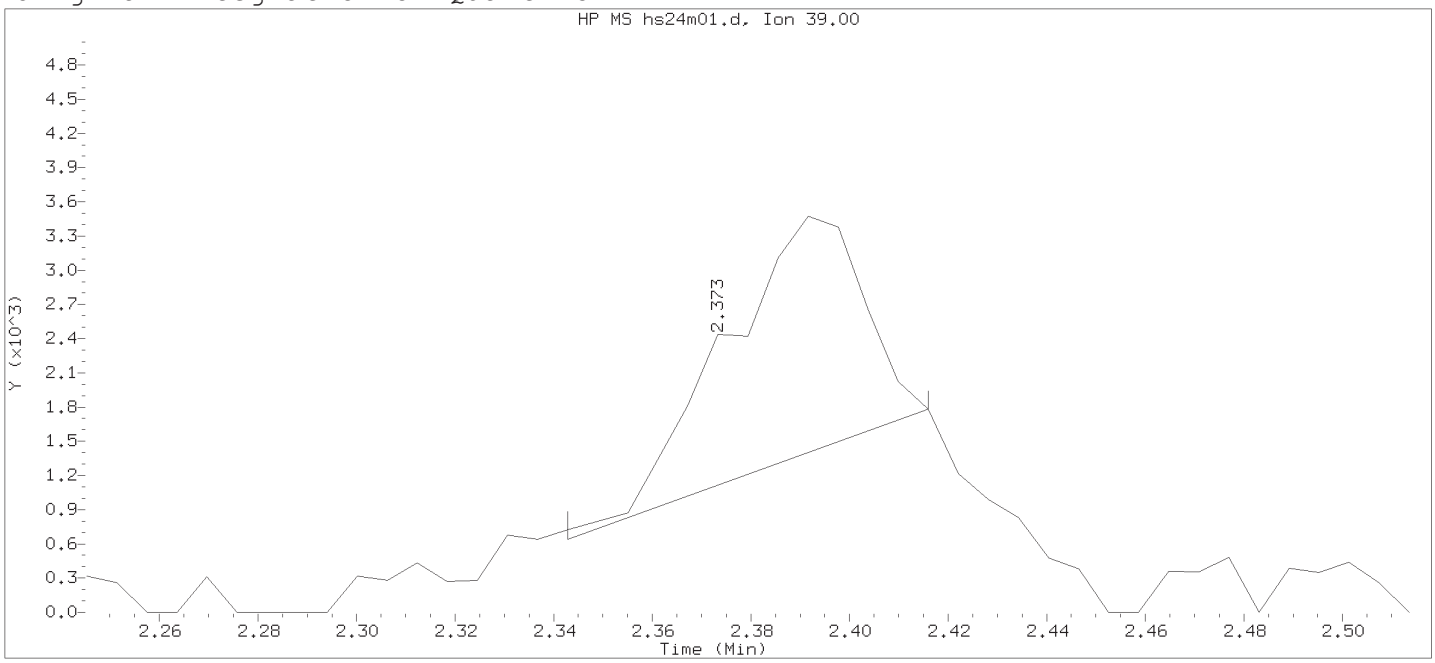
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

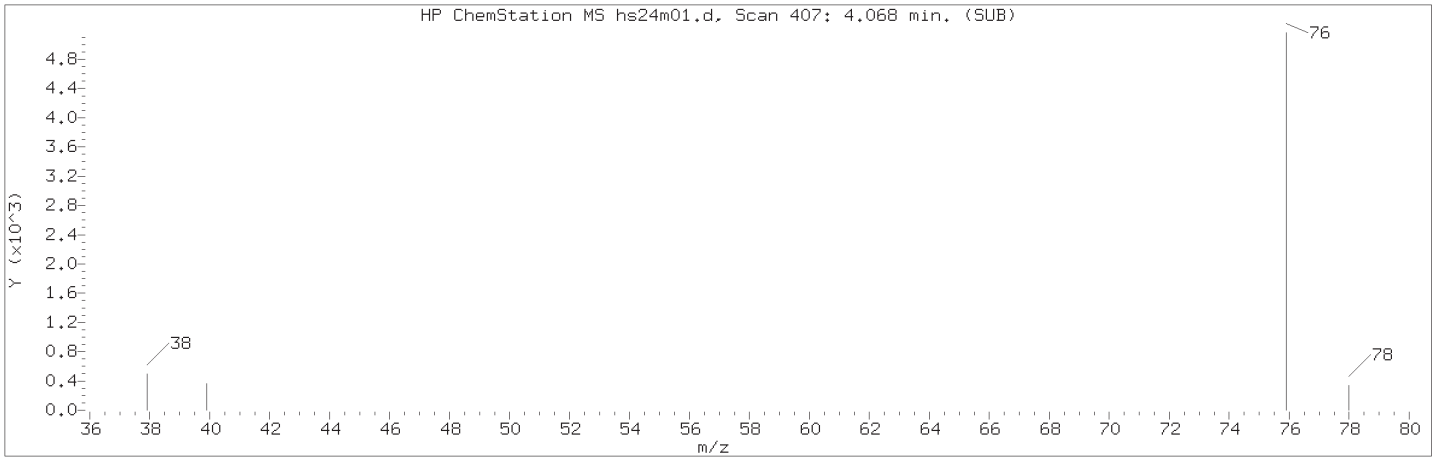
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

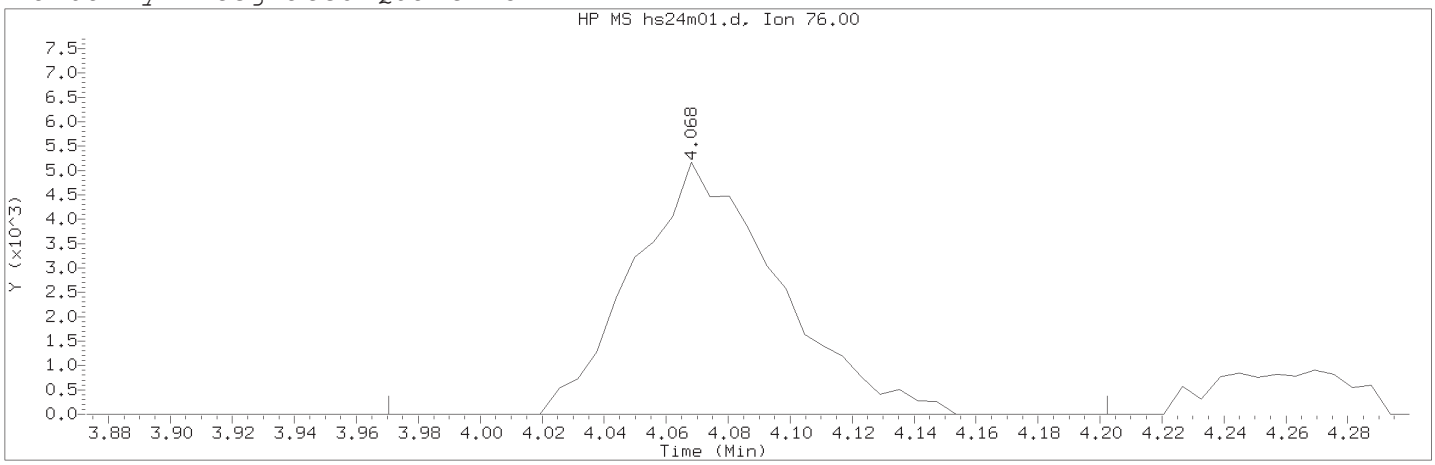
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 129
Retention Time (minutes): 2.373
Quant Ion : 39.00
Area : 4048
On-column Amount (ng) : 0.0438
Integration start scan : 123 Integration stop scan: 135
Y at integration start : 640 Y at integration end: 1780

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

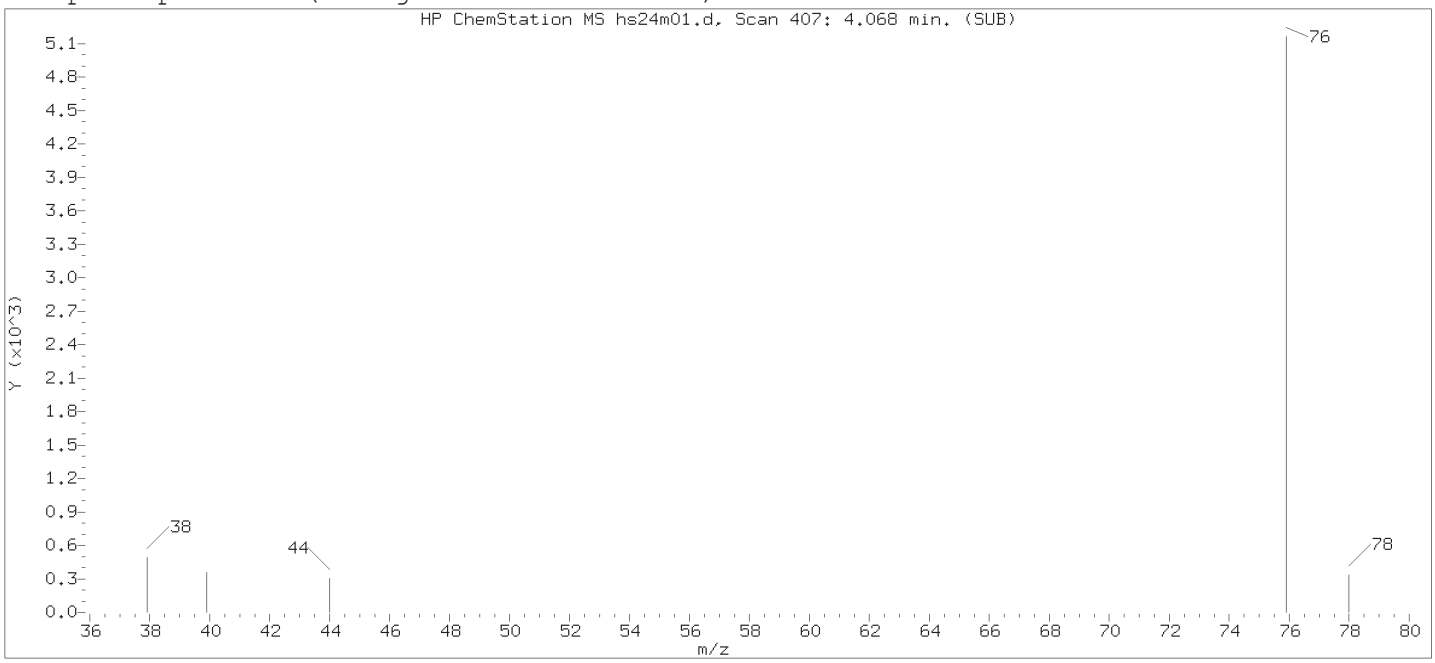
Compound Number : 18
Compound Name : Carbon Disulfide
Scan Number : 407
Retention Time (minutes): 4.068
Quant Ion : 76.00
Area (flag) : 16735M
On-Column Amount (ng) : 0.0964
Integration start scan : 390 Integration stop scan: 428
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

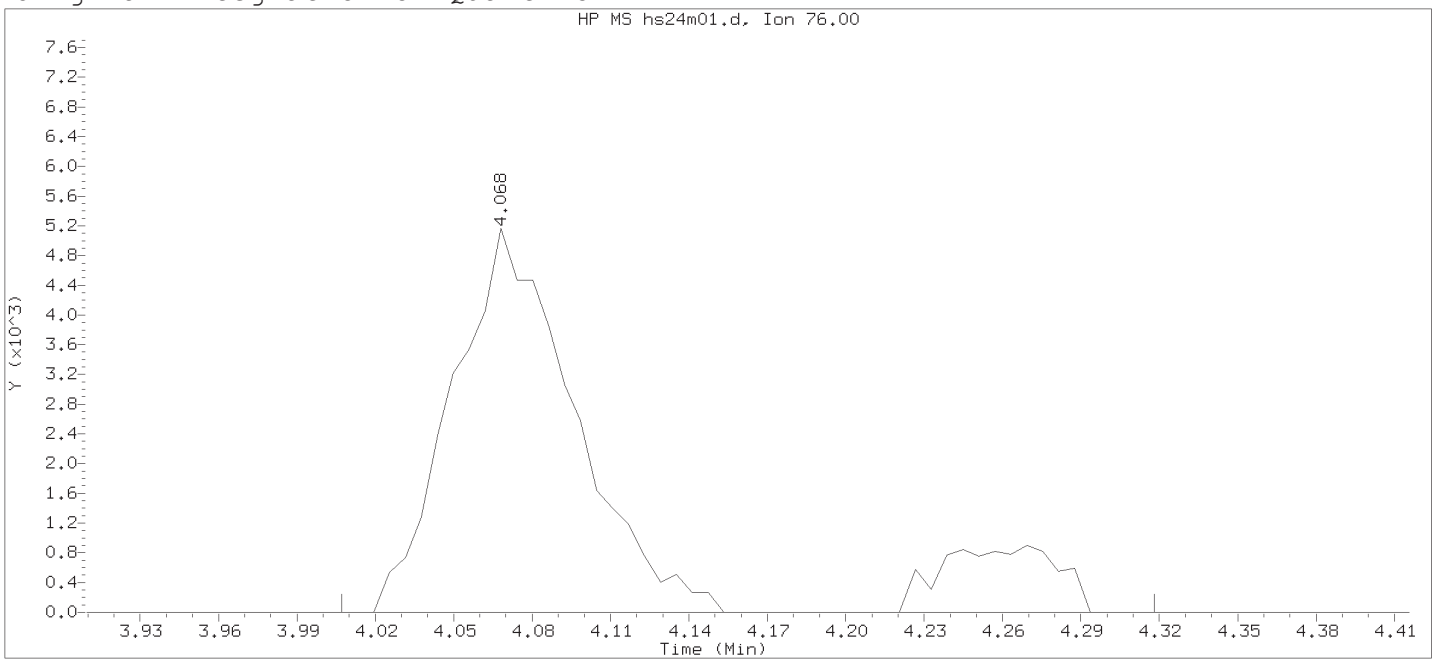
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

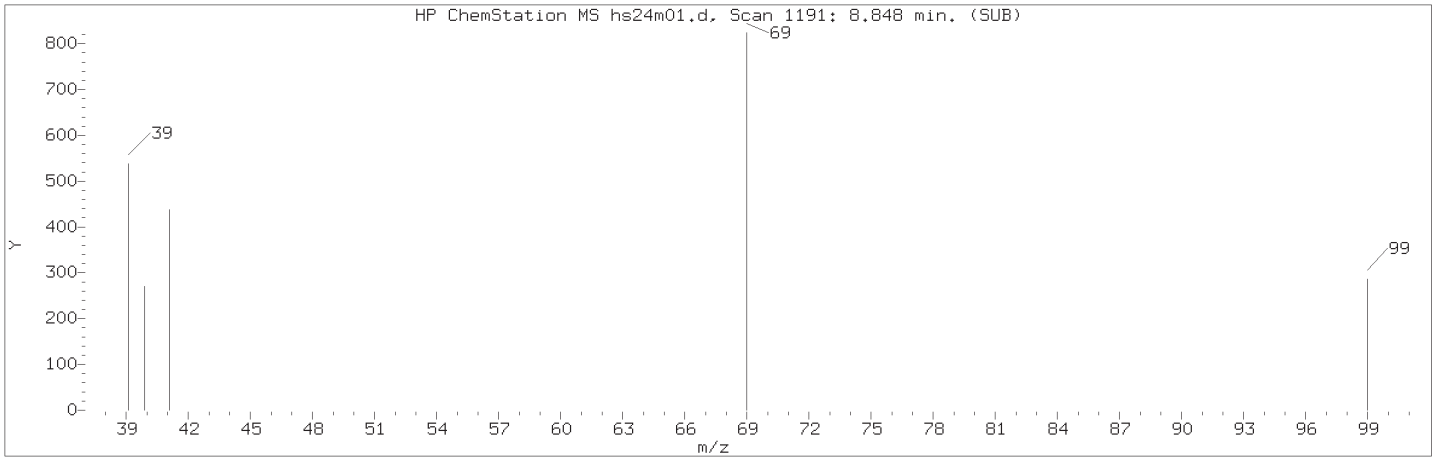
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

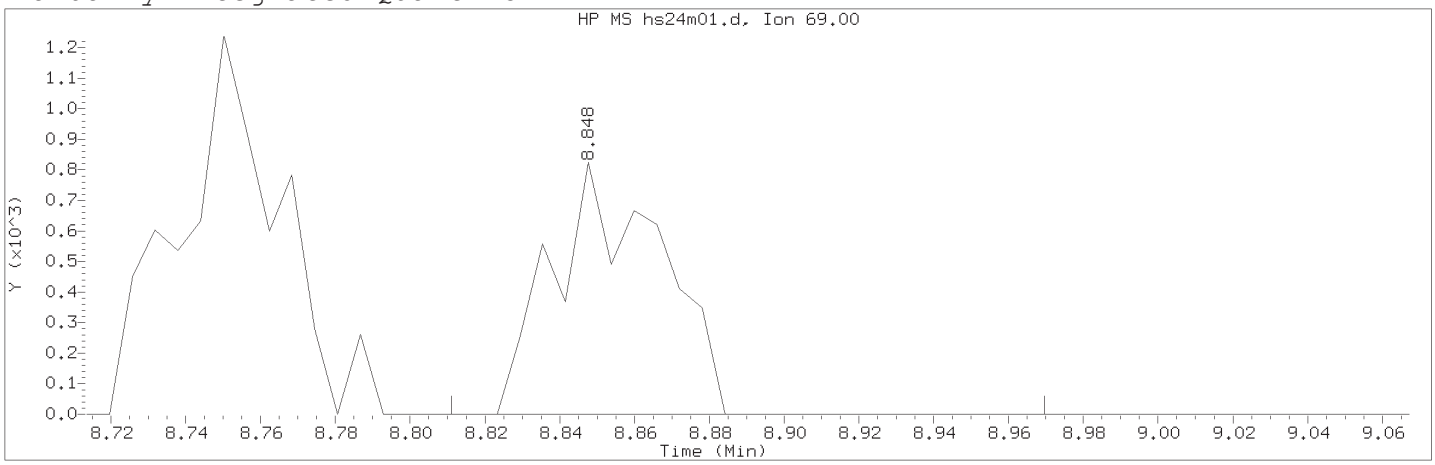
Compound Number : 18
Compound Name : Carbon Disulfide
Scan Number : 407
Retention Time (minutes): 4.068
Quant Ion : 76.00
Area : 19554
On-column Amount (ng) : 0.1126
Integration start scan : 396 Integration stop scan: 447
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

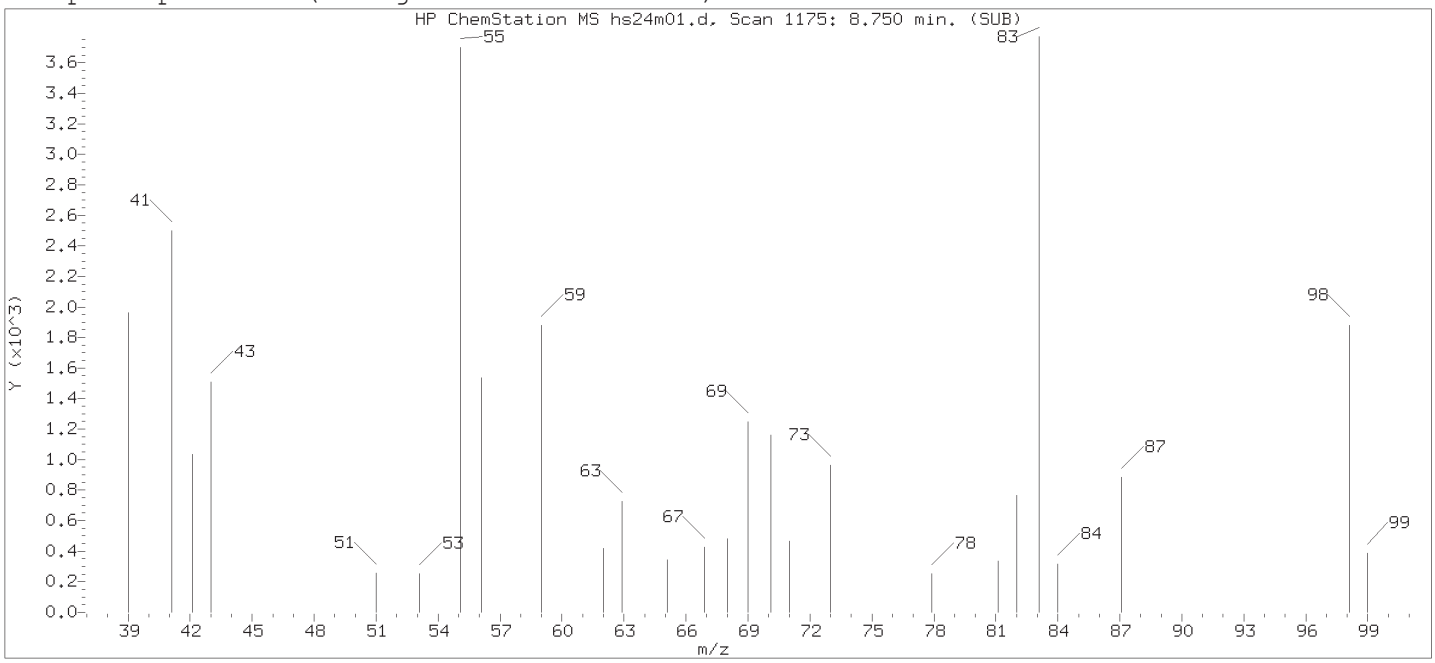
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1191
Retention Time (minutes): 8.848
Quant Ion : 69.00
Area (flag) : 1661M
On-Column Amount (ng) : 0.0666
Integration start scan : 1184 Integration stop scan: 1210
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

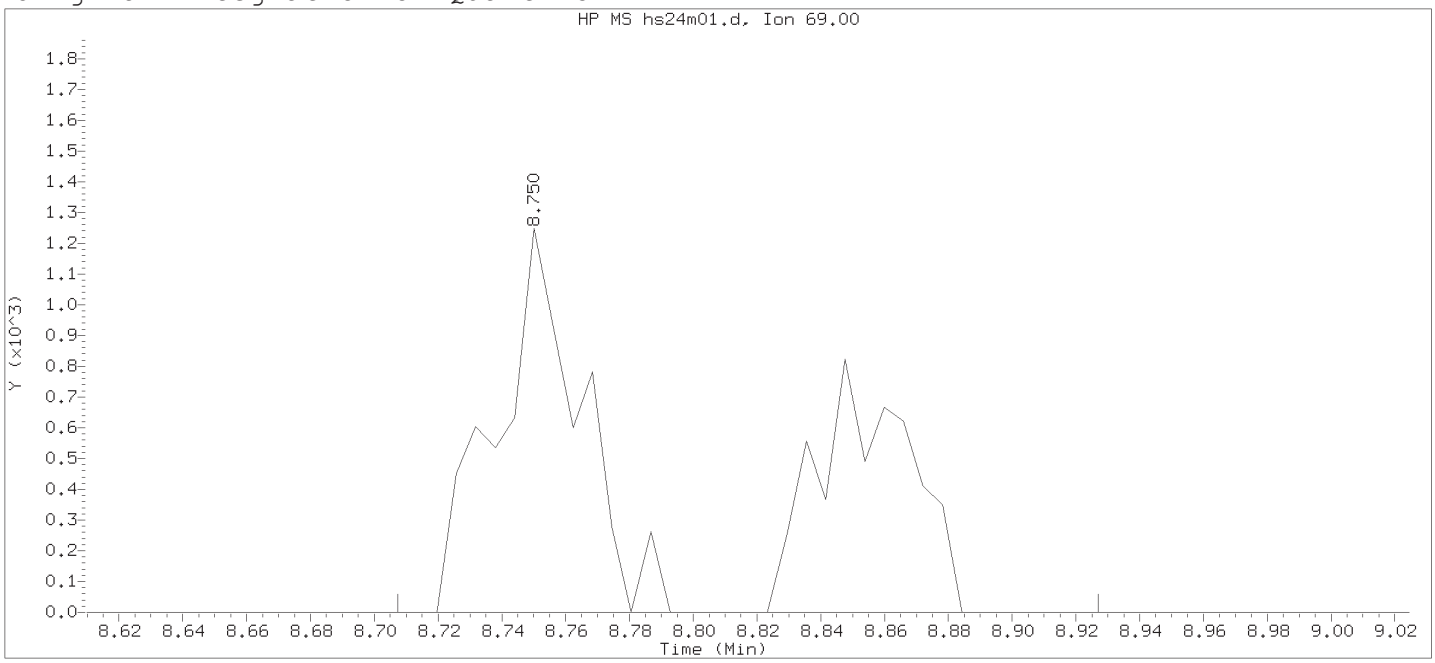
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

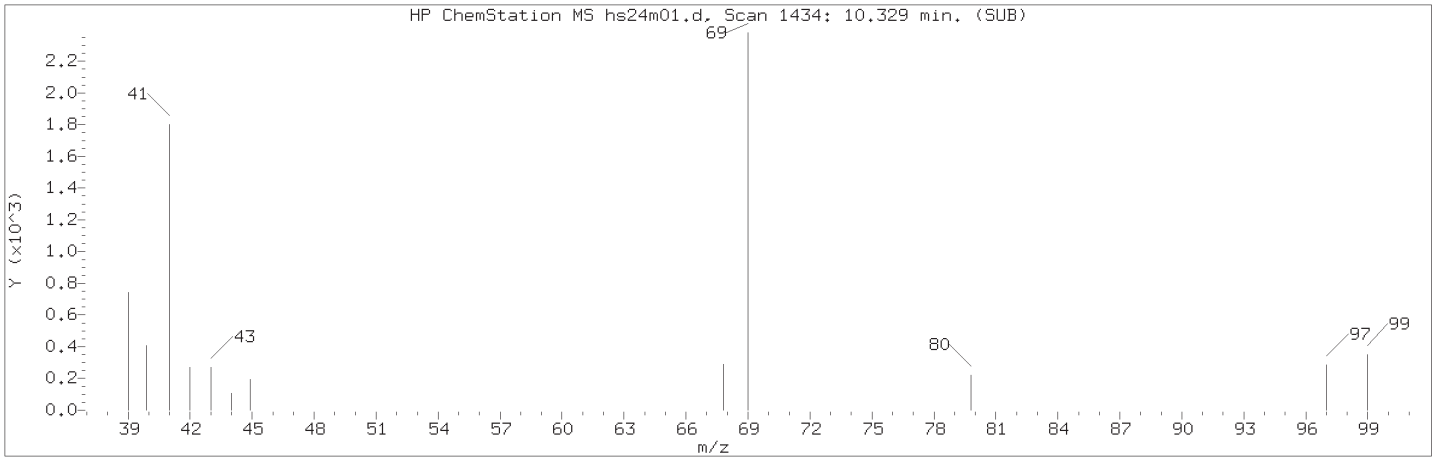
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

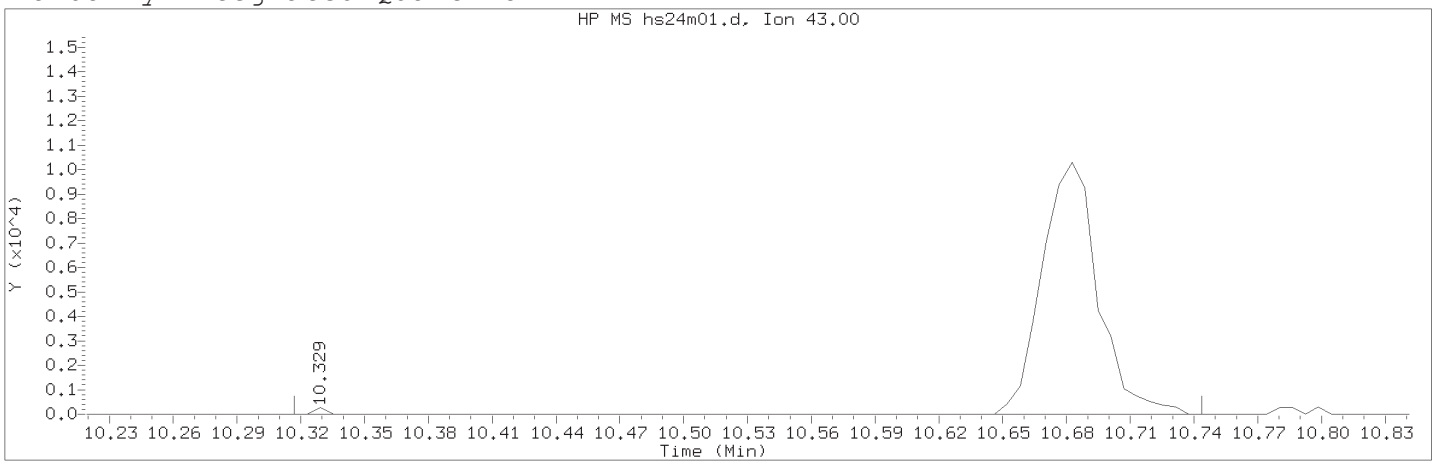
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1175
Retention Time (minutes): 8.750
Quant Ion : 69.00
Area : 3973
On-column Amount (ng) : 0.1576
Integration start scan : 1167 Integration stop scan: 1203
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

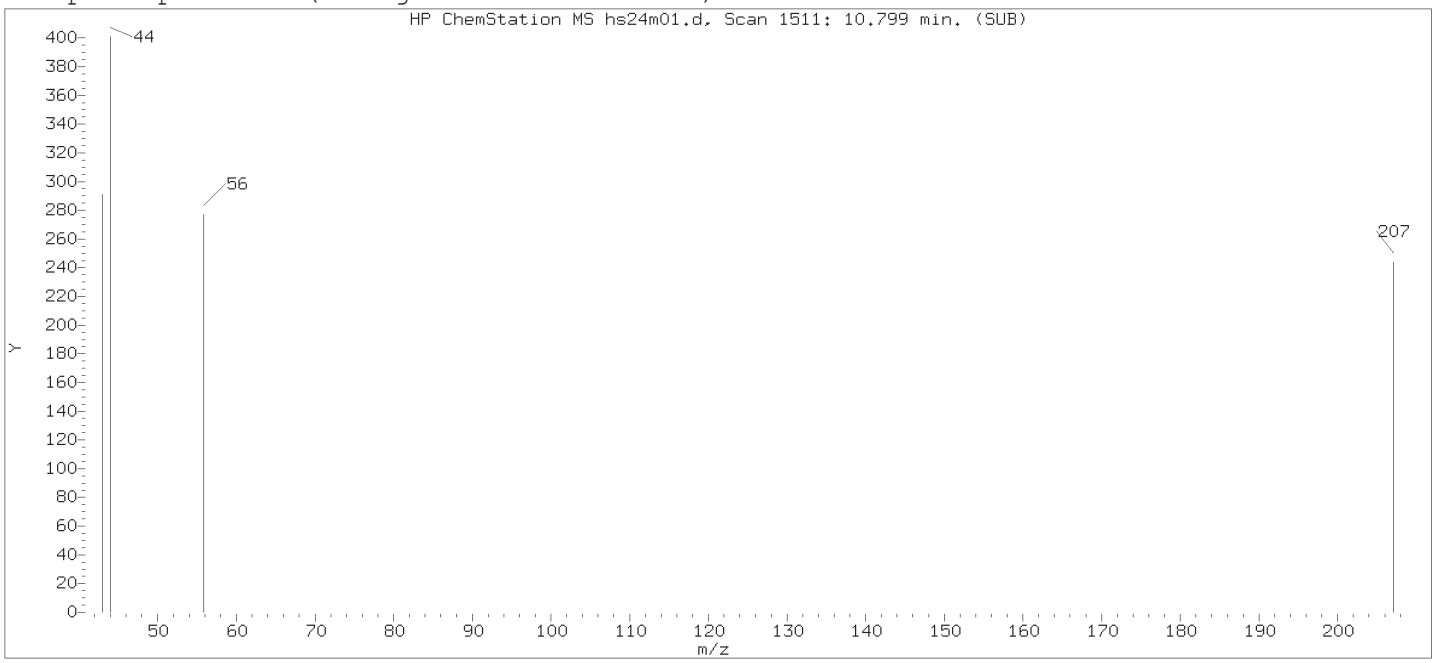
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1434
Retention Time (minutes): 10.329
Quant Ion : 43.00
Area (flag) : 19024A
On-Column Amount (ng) : 0.8165
Integration start scan : 1431 Integration stop scan: 1501
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

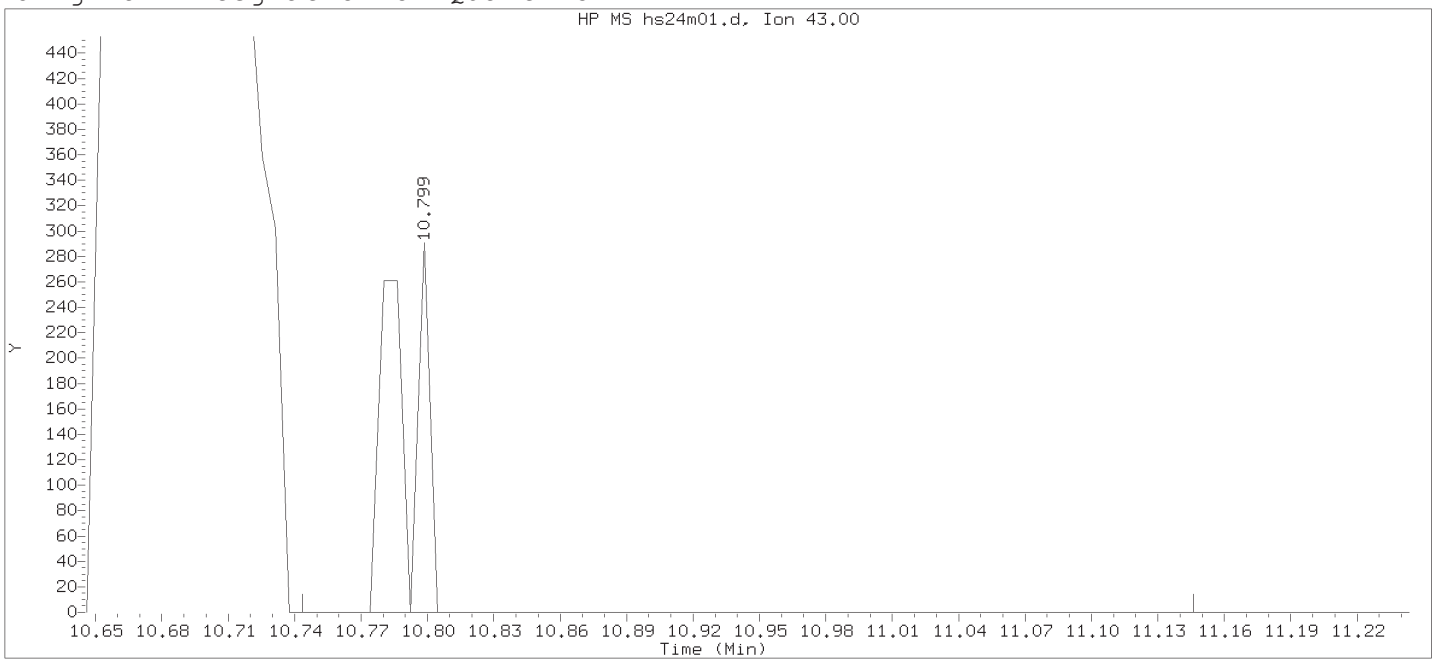
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

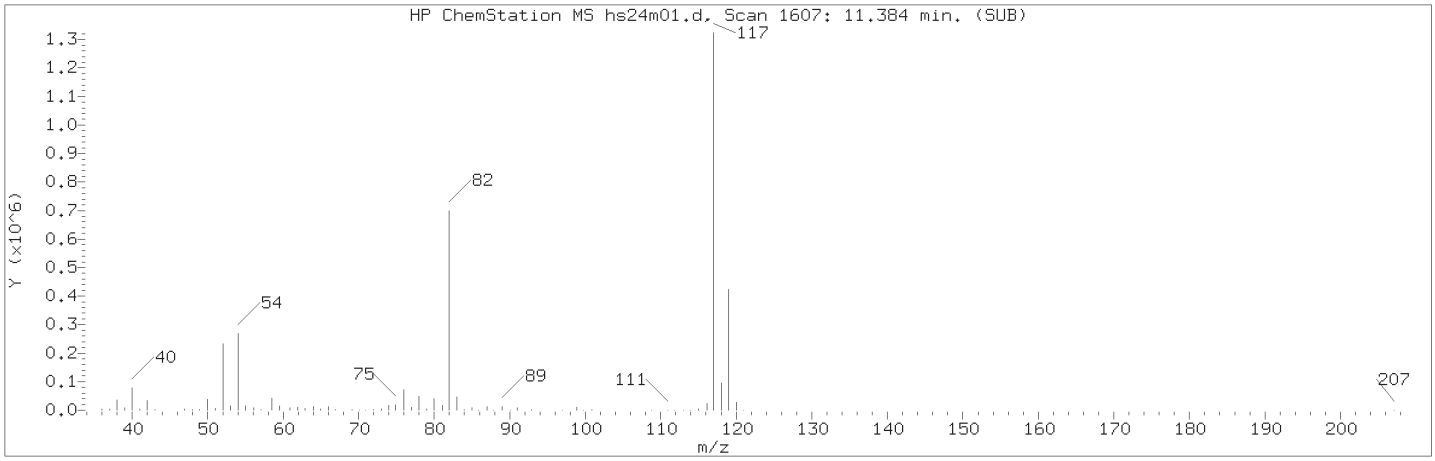
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

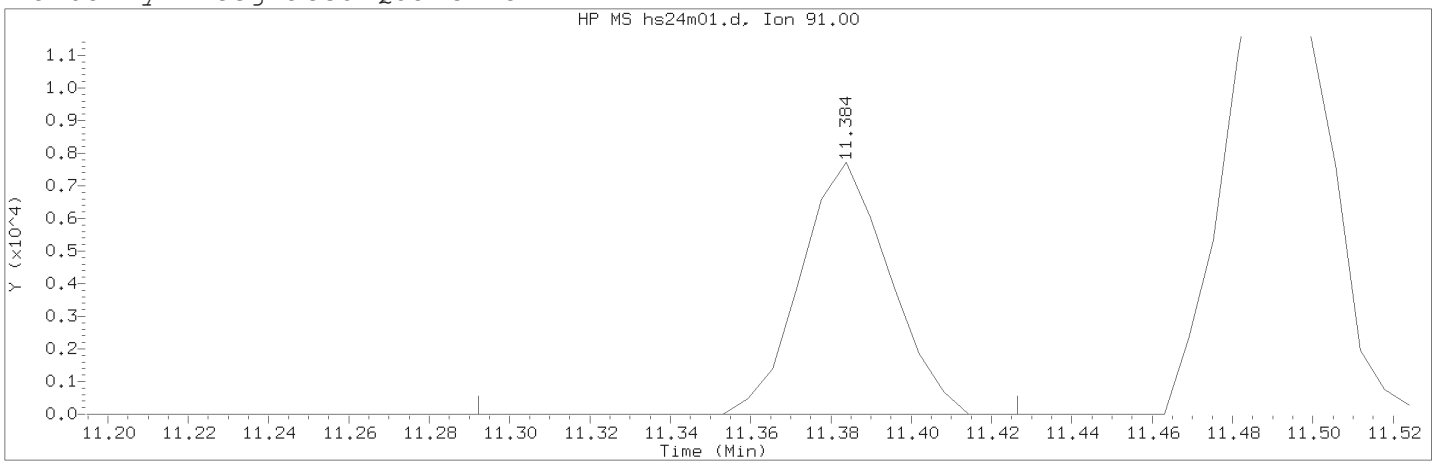
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1511
Retention Time (minutes): 10.799
Quant Ion : 43.00
Area : 297
On-column Amount (ng) : 0.0128
Integration start scan : 1501 Integration stop scan: 1567
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

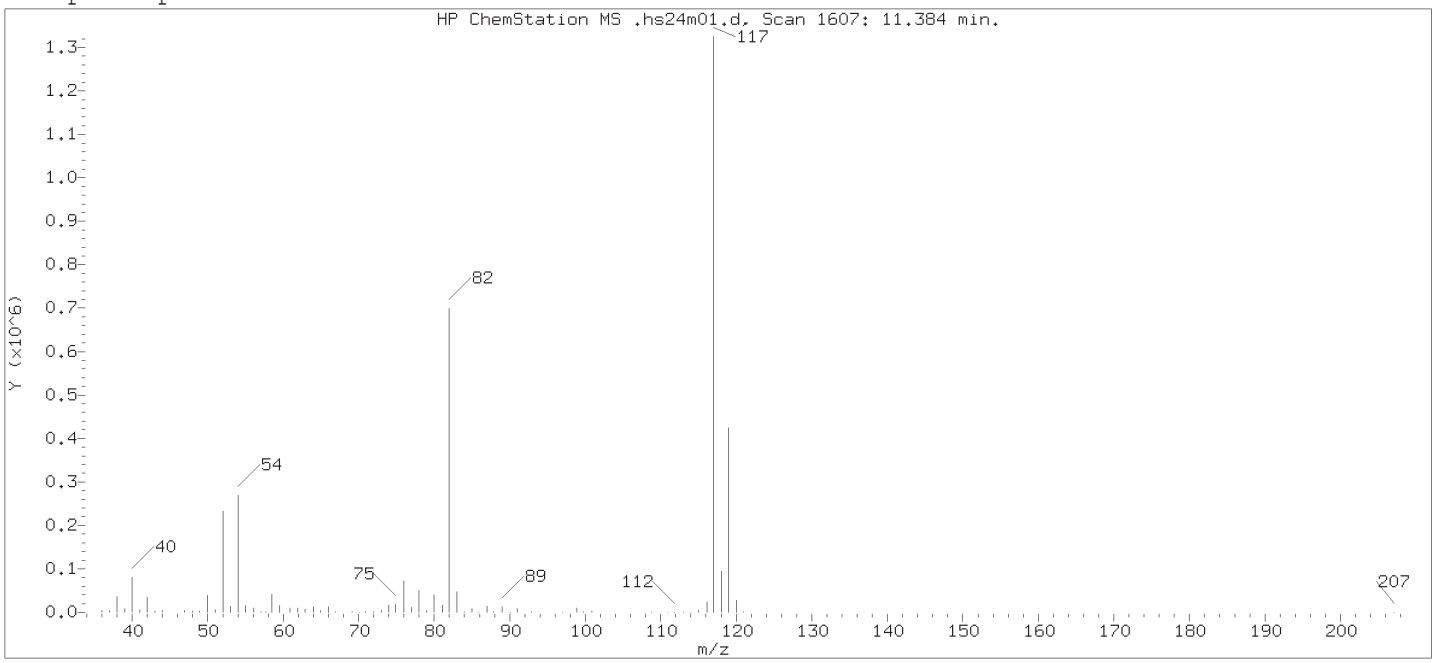
Compound Number : 96
Compound Name : 1-Chlorohexane
Scan Number : 1607
Retention Time (minutes): 11.384
Quant Ion : 91.00
Area (flag) : 11869M
On-Column Amount (ng) : 0.1239
Integration start scan : 1591 Integration stop scan: 1613
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

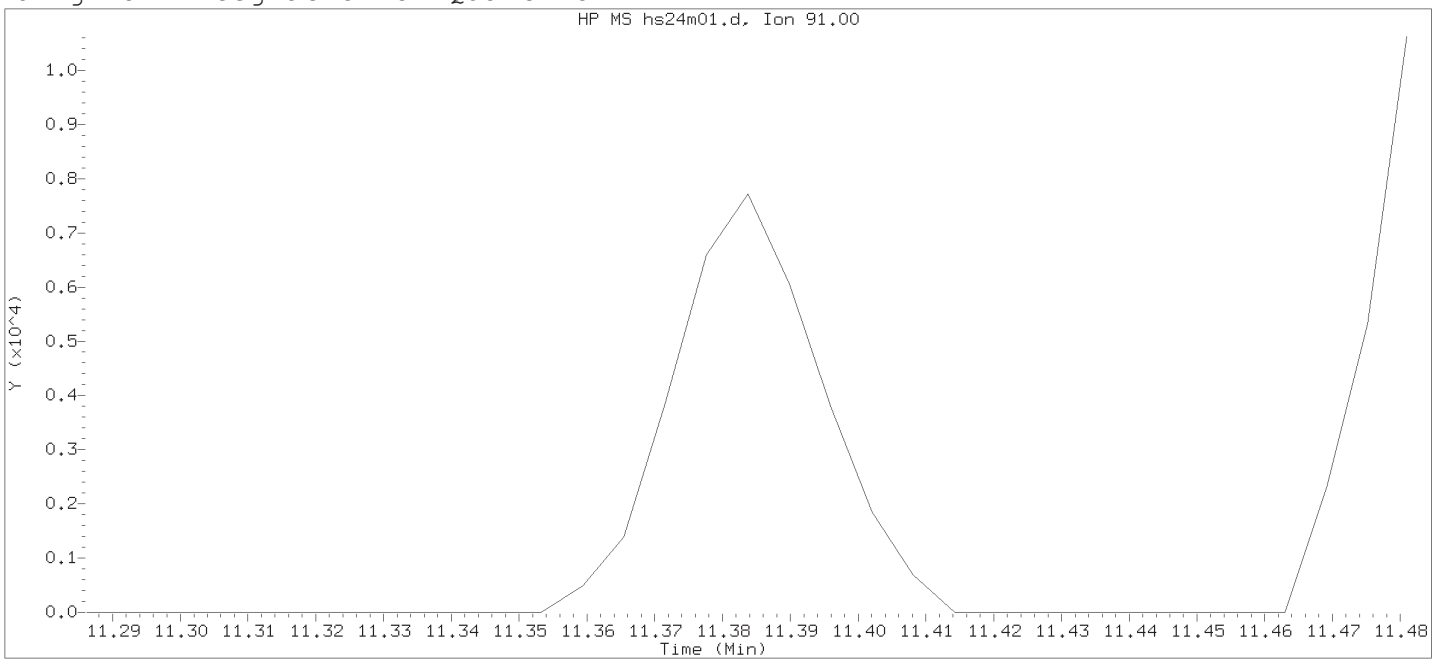
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

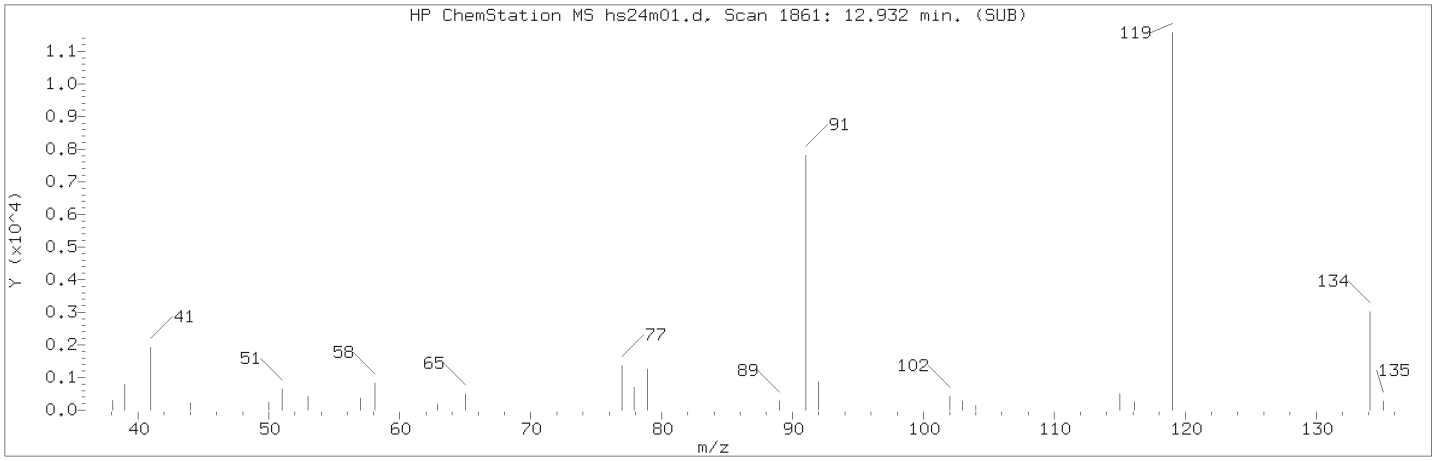
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

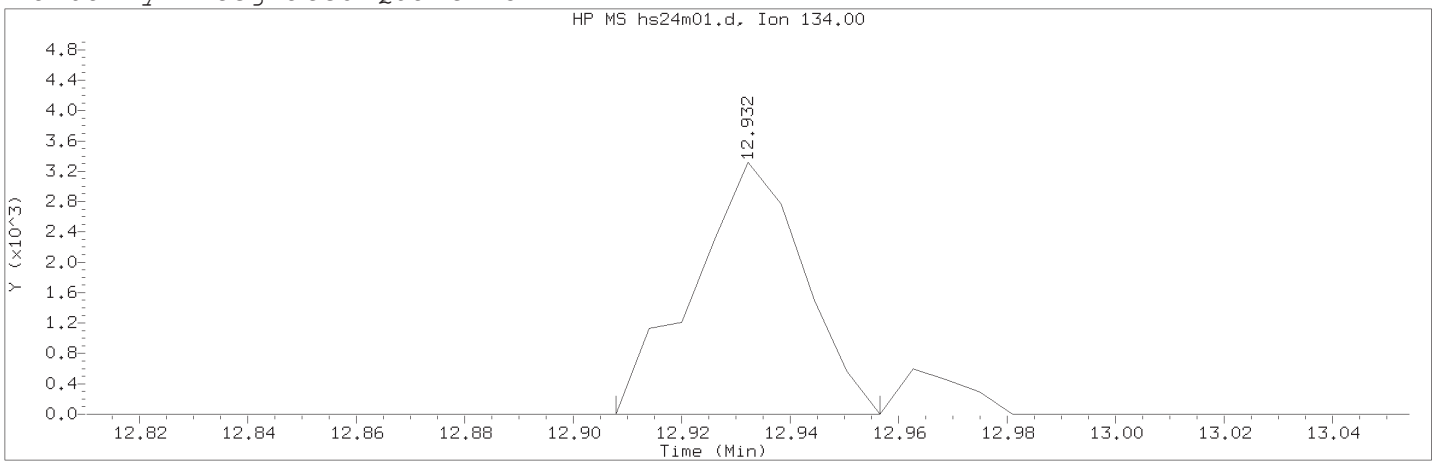
Compound Number : 96
Compound Name : 1-Chlorohexane
Expected RT (minutes) : 11.384
Quant Ion : 91.00

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

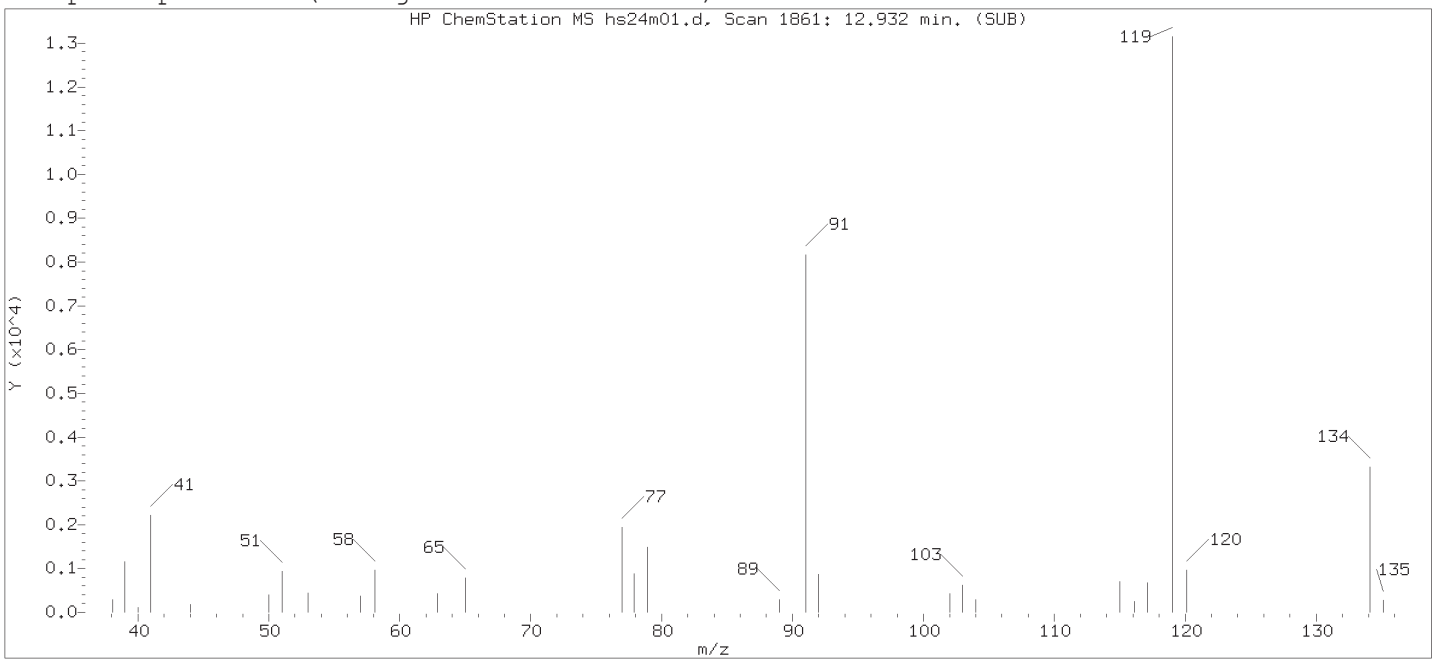
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 4681M
On-Column Amount (ng) : 0.0853
Integration start scan : 1856 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

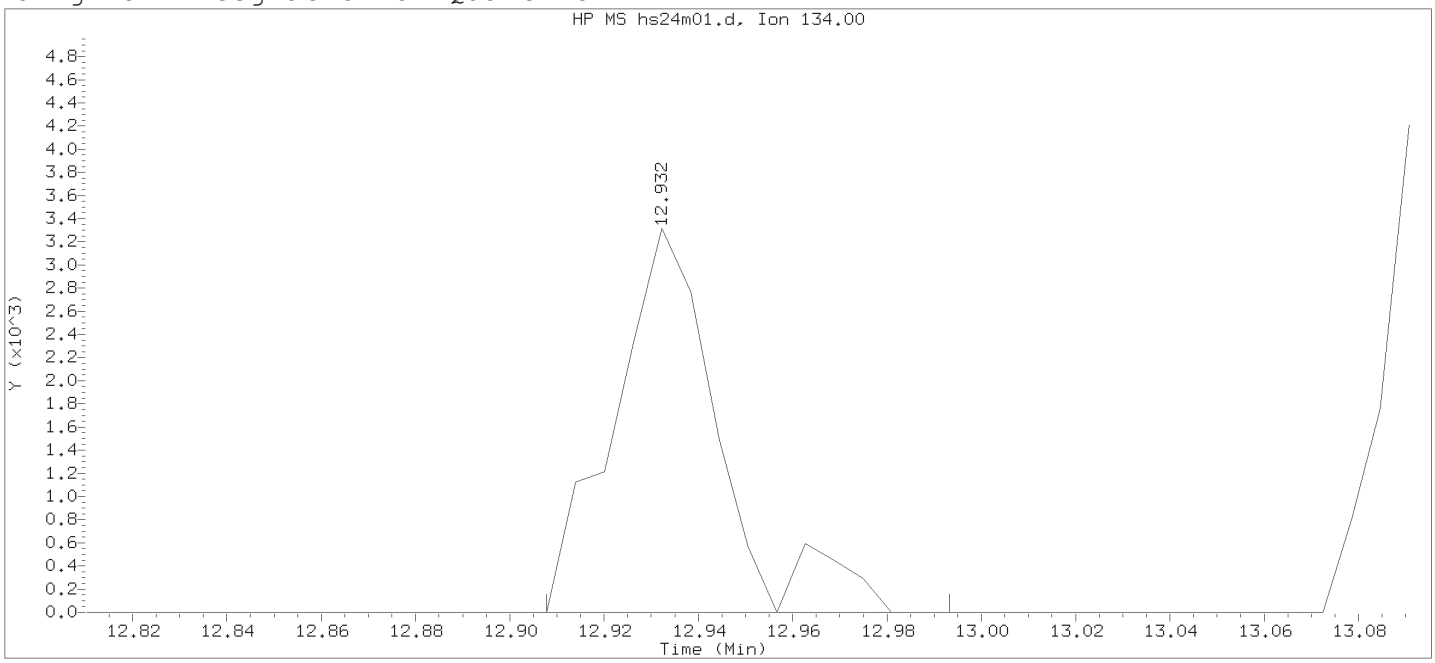
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

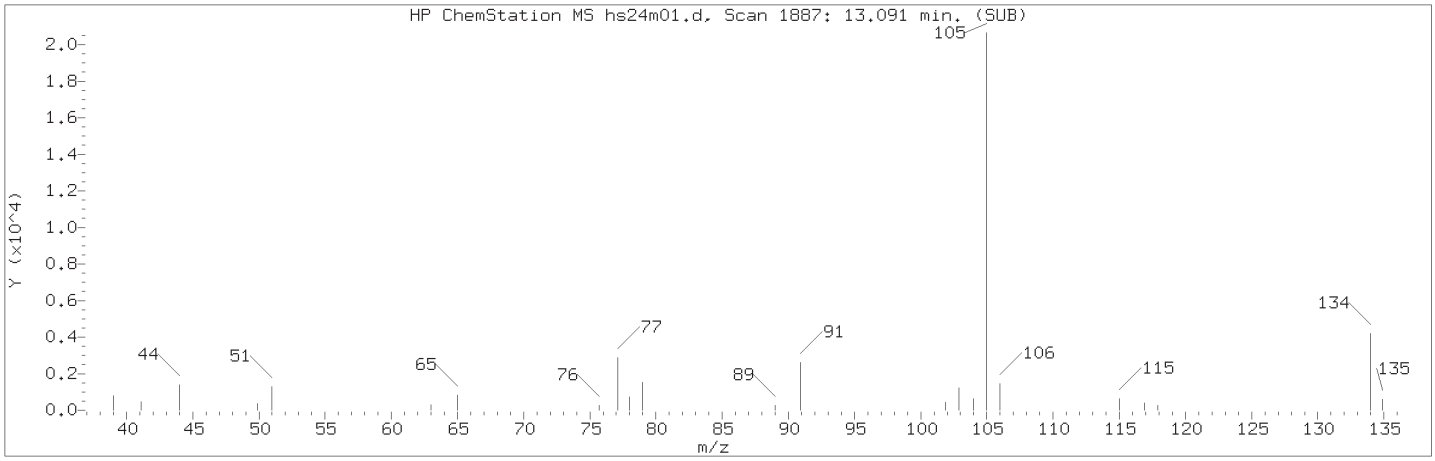
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

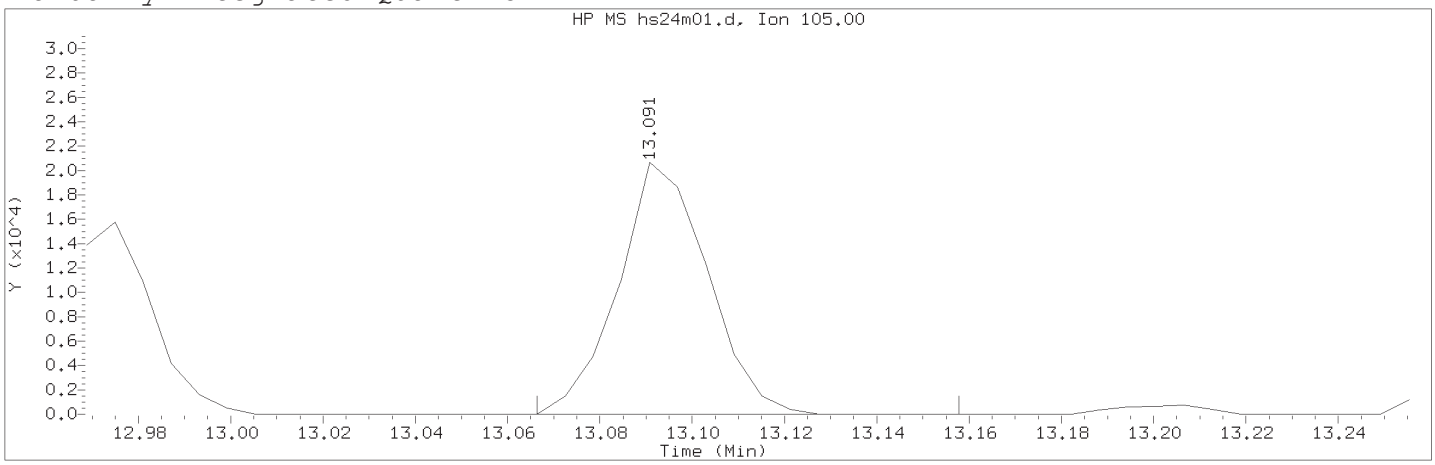
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 5170
On-column Amount (ng) : 0.0909
Integration start scan : 1856 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

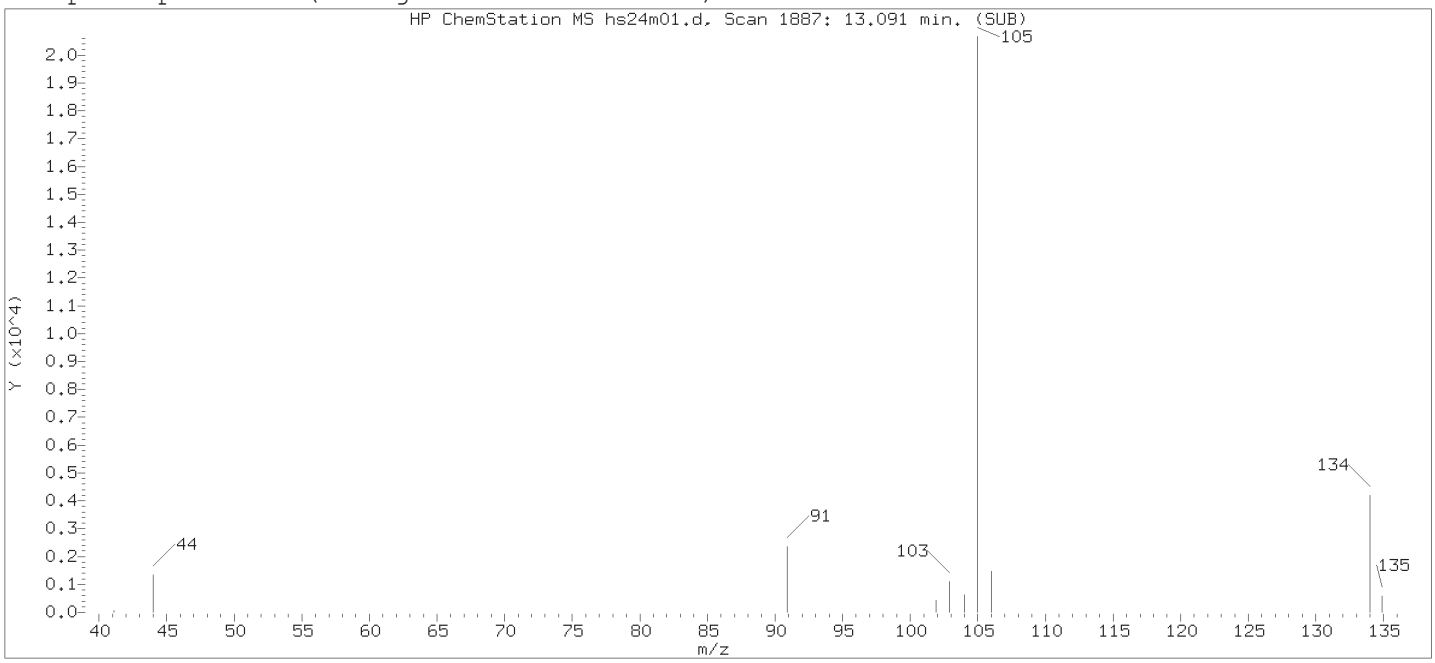
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1887
Retention Time (minutes): 13.091
Quant Ion : 105.00
Area (flag) : 27687M
On-Column Amount (ng) : 0.0847
Integration start scan : 1882 Integration stop scan: 1897
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

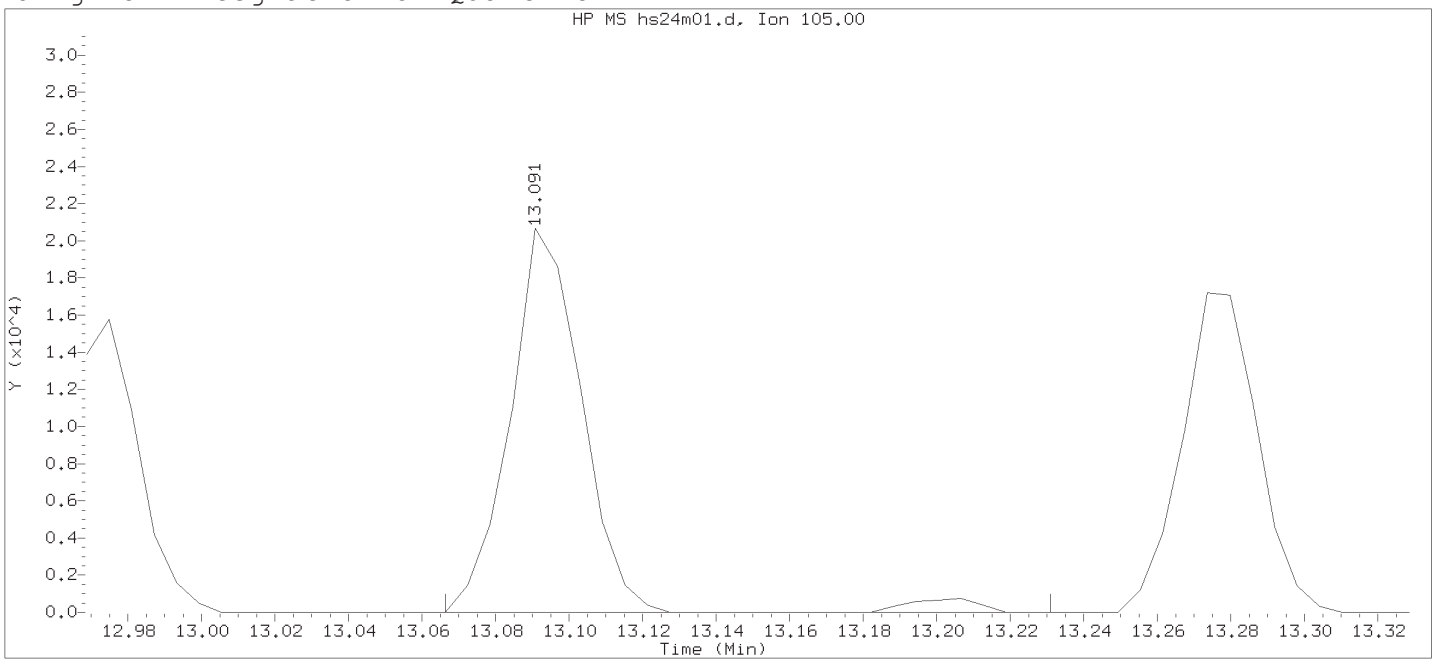
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

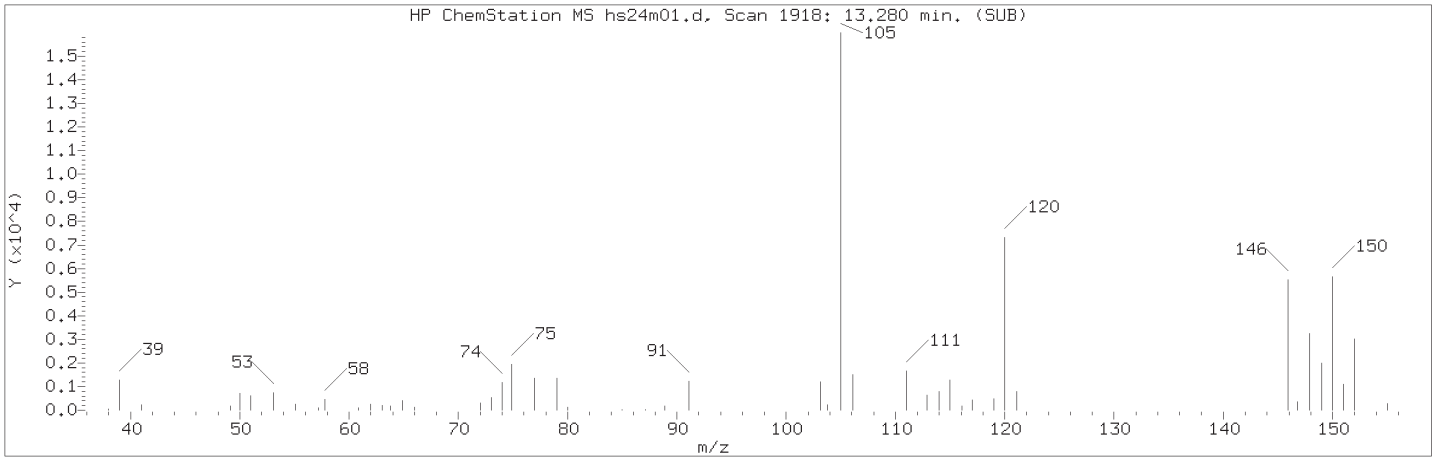
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

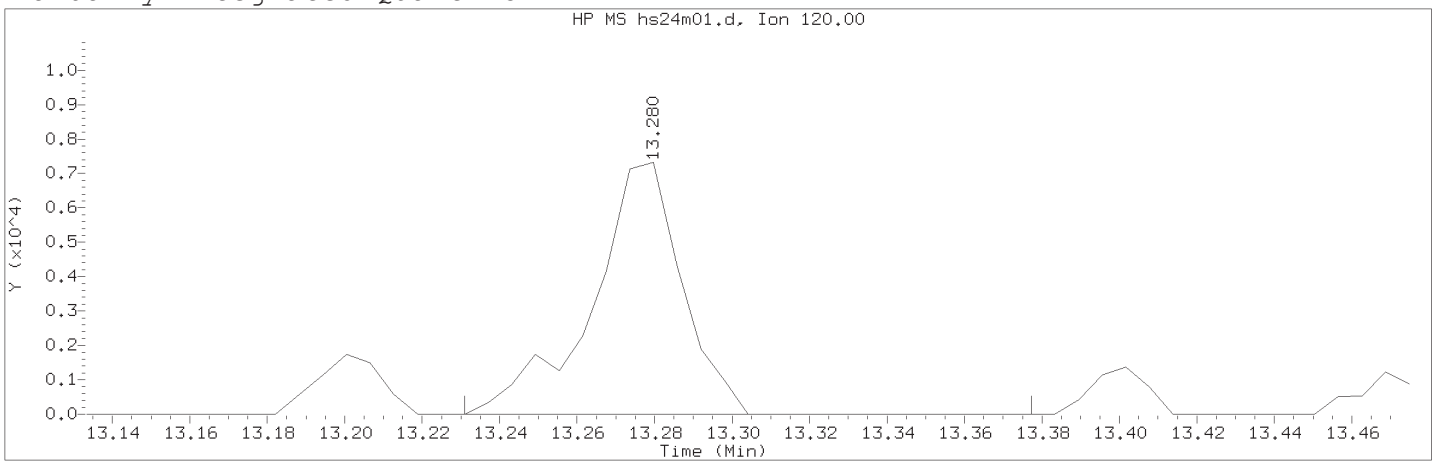
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1887
Retention Time (minutes): 13.091
Quant Ion : 105.00
Area : 28686
On-column Amount (ng) : 0.0875
Integration start scan : 1882 Integration stop scan: 1909
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

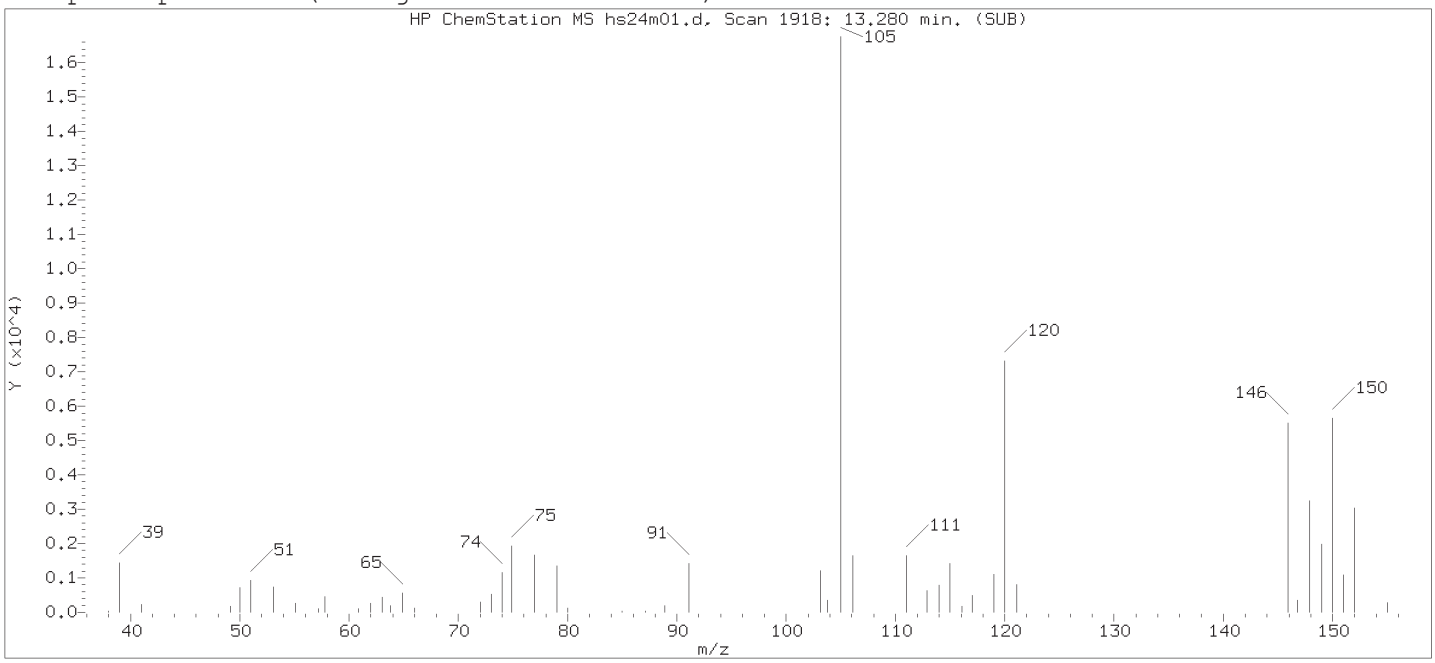
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.280
Quant Ion : 120.00
Area (flag) : 11819M
On-Column Amount (ng) : 0.1001
Integration start scan : 1909 Integration stop scan: 1933
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

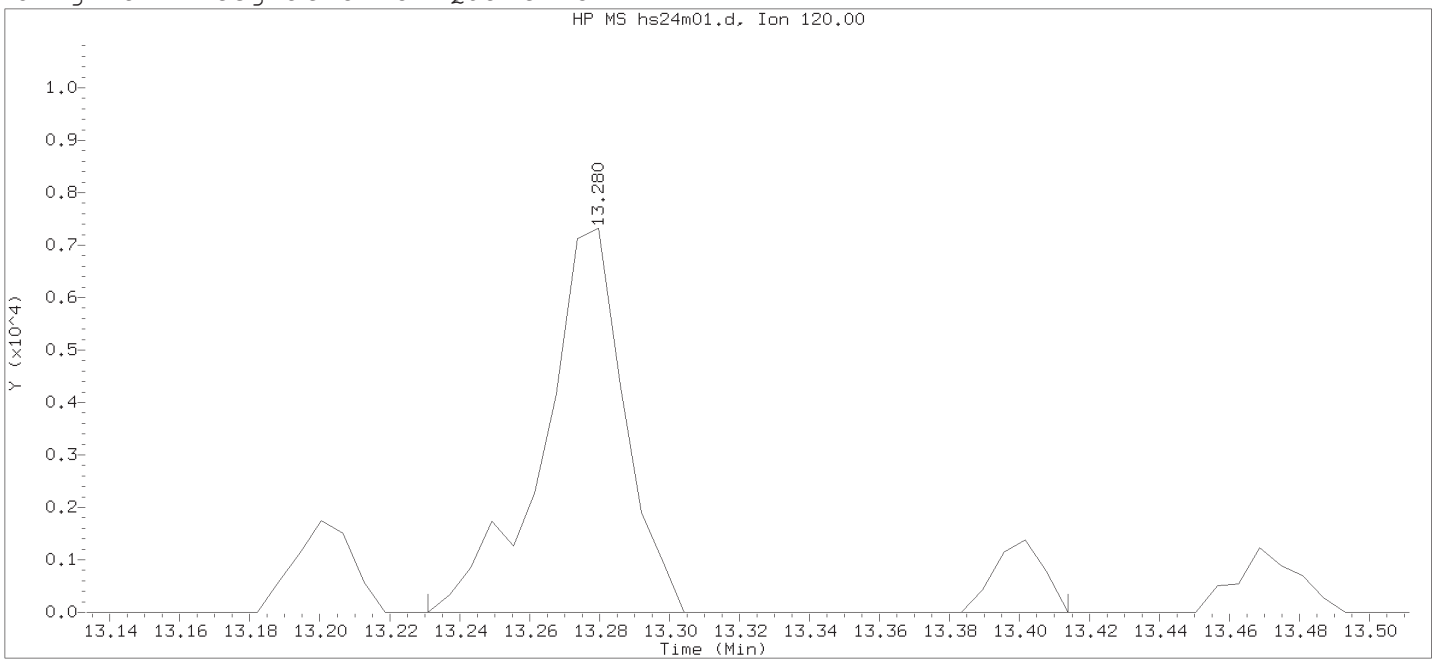
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

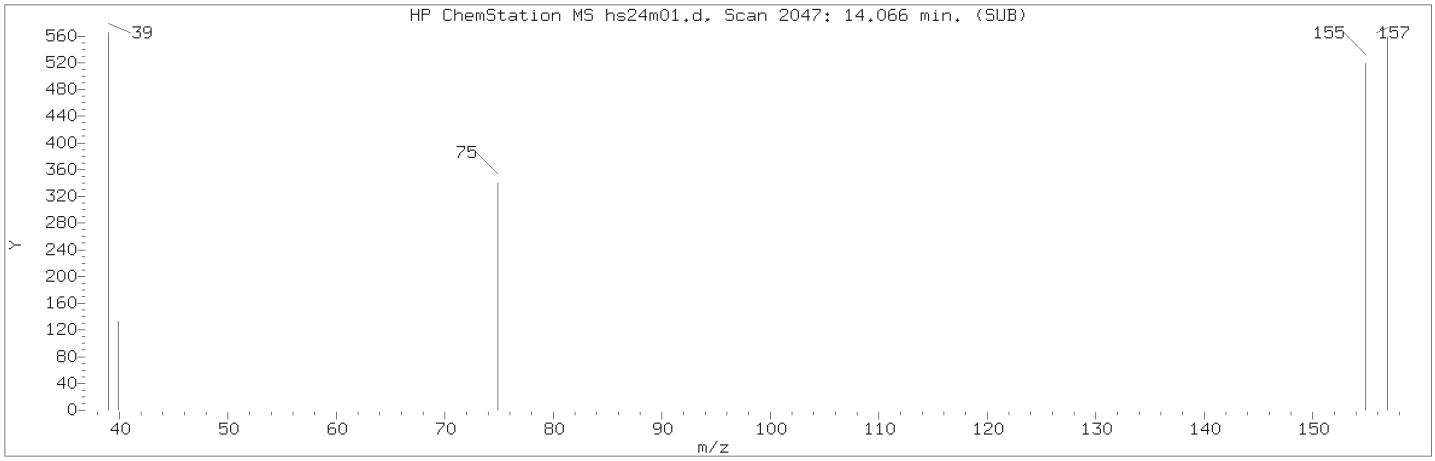
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

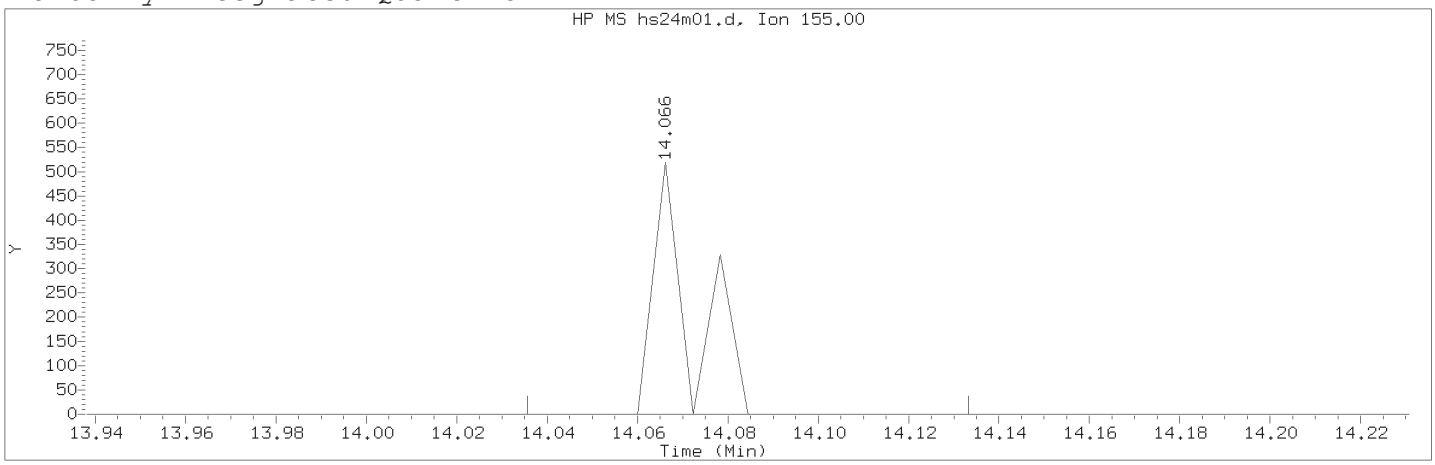
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.280
Quant Ion : 120.00
Area : 13186
On-column Amount (ng) : 0.1095
Integration start scan : 1909 Integration stop scan: 1939
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

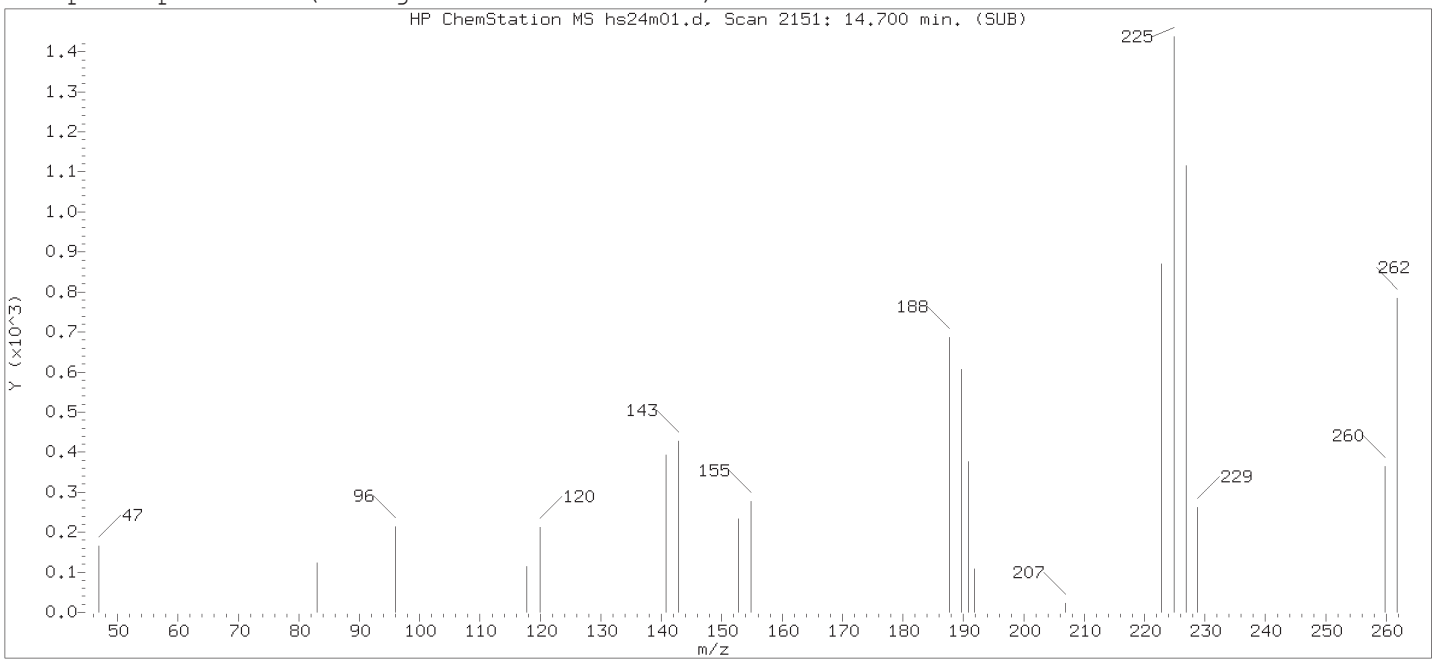
Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2047
Retention Time (minutes): 14.066
Quant Ion : 155.00
Area (flag) : 310M
On-Column Amount (ng) : 0.0535
Integration start scan : 2041 Integration stop scan: 2057
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

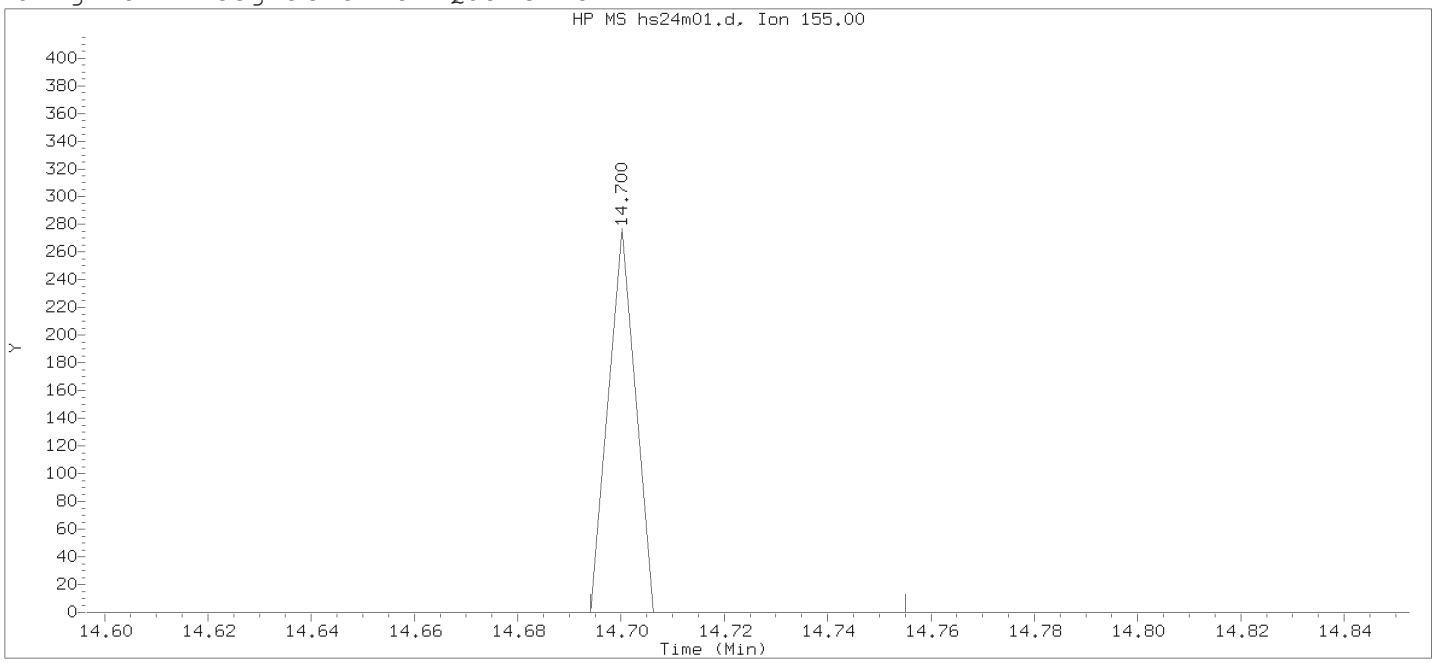
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



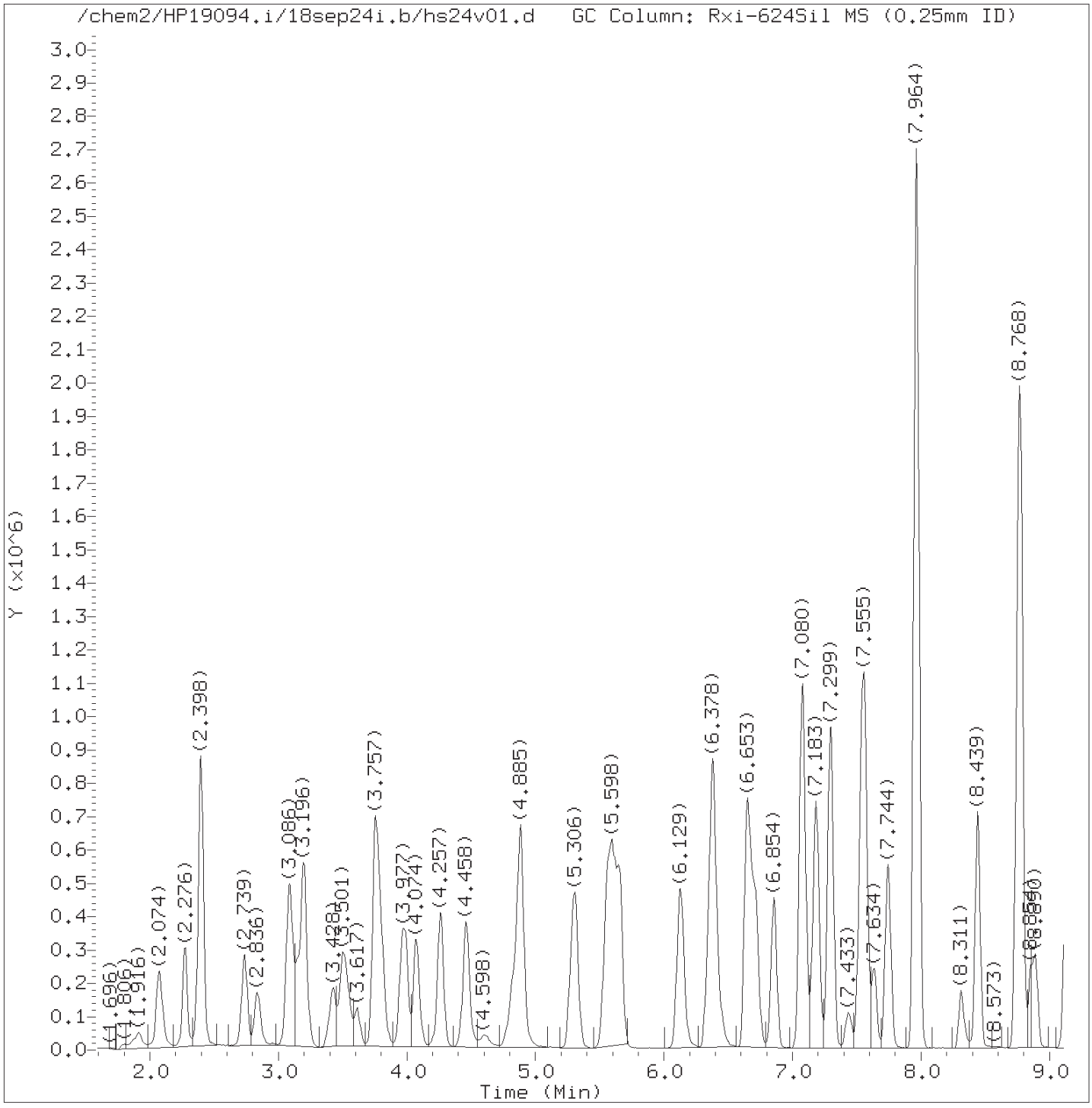
Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2151
Retention Time (minutes): 14.700
Quant Ion : 155.00
Area : 101
On-column Amount (ng) : 0.0343
Integration start scan : 2149 Integration stop scan: 2159
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

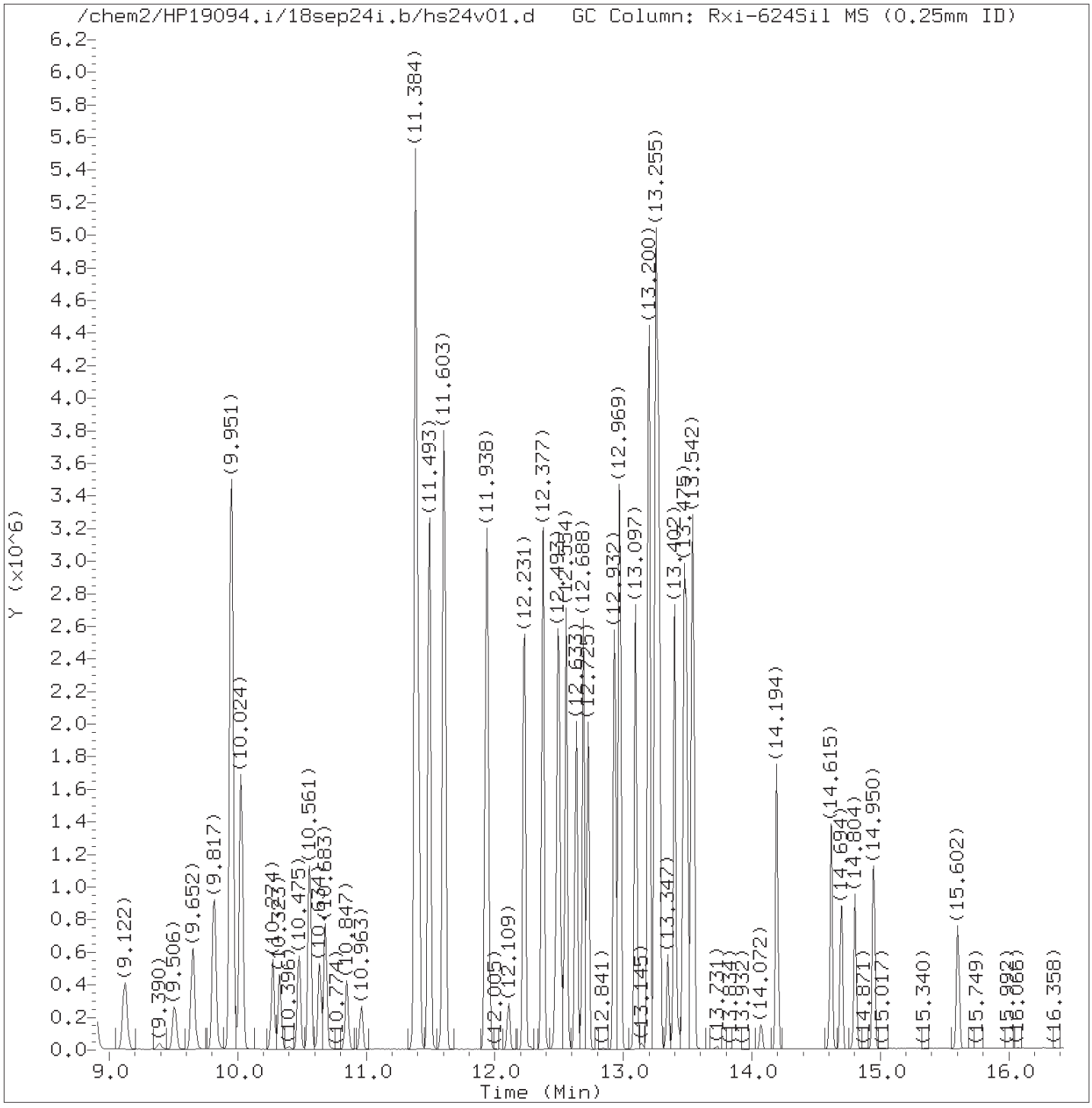
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.074	85	440976	4.058
2) Chloromethane	(2)	2.270	50	486139	4.568
6) 1,3-Butadiene	(2)	2.391	39	470828M	4.171
5) Vinyl Chloride	(2)	2.398	62	471500	4.731
7) Bromomethane	(2)	2.739	94	321337	4.148
8) Chloroethane	(2)	2.836	64	272329	4.506
9) Dichlorofluoromethane	(2)	3.080	67	691996	4.813
10) Trichlorofluoromethane	(2)	3.147	101	560449	4.452
11) Ethyl ether	(2)	3.422	59	196604	4.606
12) Freon 123a	(2)	3.513	67	411851	5.164
13) Acrolein	(1)	3.617	56	199575	31.768
15) 1,1-Dichloroethene	(2)	3.751	96	307467	5.640
16) Freon 113	(2)	3.781	101	338841	5.274
14) Acetone	(1)	3.794	43	273073M	32.363
17) Methyl Iodide	(2)	3.958	142	551496	4.853
18) Carbon Disulfide	(2)	4.068	76	828724	4.777
21) Methyl Acetate	(1)	4.239	43	101587	4.289
22) Allyl Chloride	(2)	4.263	41	468004	4.516
23) Methylene Chloride	(2)	4.458	84	304627	4.953
26)*t-Butyl Alcohol-d10	(1)	4.489	65	141569	50.000
28) t-Butyl Alcohol	(1)	4.598	59	116690	48.290
29) Acrylonitrile	(1)	4.824	53	251882	23.115
30) Methyl Tertiary Butyl Ether	(2)	4.867	73	551498	4.919
31) trans-1,2-Dichloroethene	(2)	4.885	96	329189	5.350
32) n-Hexane	(2)	5.306	57	503625	5.148
33) 1,1-Dichloroethane	(2)	5.549	63	610622	5.212
34) di-Isopropyl Ether	(2)	5.598	45	1043824	5.017
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	529192	5.020
40) 1,2-Dichloroethene (Total)	(2)		96	691269	10.676
37) Ethyl t-butyl ether	(2)	6.129	59	800829	4.853
38) 2-Butanone	(1)	6.342	43	487401	35.288
39) cis-1,2-Dichloroethene	(2)	6.378	96	362080	5.326
41) 2,2-Dichloropropane	(2)	6.391	77	445489	5.324
42) Propionitrile	(1)	6.446	54	141875	37.842
45) Methacrylonitrile	(1)	6.653	67	482254	35.674
47) Bromochloromethane	(2)	6.708	128	130394	4.540
48) Tetrahydrofuran	(1)	6.714	71	86737	23.621
49) Chloroform	(2)	6.854	83	582593	5.349

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	703609	10.041
51) 1,1,1-Trichloroethane	(2)	7.086	97	494400	5.307
52) Cyclohexane	(2)	7.183	56	614255	5.051
55) 1,1-Dichloropropene	(2)	7.293	75	459498	5.201
54) Carbon Tetrachloride	(2)	7.299	117	423304	5.290
56) Isobutyl Alcohol	(1)	7.439	41	113054	120.918
57)$1,2-Dichloroethane-d4	(2)	7.531	102	123305	10.093
58) Benzene	(2)	7.561	78	1335484	5.117
59) 1,2-Dichloroethane	(2)	7.634	62	300394	5.002
60) t-Amyl methyl ether	(2)	7.744	73	666761	4.874
62) n-Heptane	(2)	7.964	43	519392	5.149
63)*Fluorobenzene	(2)	7.964	96	2780415	10.000
65) n-Butanol	(1)	8.311	56	183017	231.696
67) Trichloroethene	(2)	8.439	95	348659	5.218
69) Methylcyclohexane	(2)	8.756	83	590929	4.683
70) 1,2-Dichloropropane	(2)	8.780	63	327981	5.180
71) Methyl Methacrylate	(1)	8.854	69	118997	4.756
72) 1,4-Dioxane	(1)	8.878	88	23983M	126.103
73) Dibromomethane	(2)	8.890	93	135470	5.155
74) Bromodichloromethane	(2)	9.122	83	375174	5.270
76) 2-Nitropropane	(1)	9.390	41	29112	4.107
80) cis-1,3-Dichloropropene	(2)	9.652	75	421726	5.089
81) 4-Methyl-2-Pentanone	(1)	9.817	43	797497	23.212
82)$Toluene-d8	(3)	9.951	98	2812308	10.016
83) Toluene	(3)	10.024	92	831326	5.135
85) 1,3-Dichloropropene (total)	(3)		75	738103	10.160
84) trans-1,3-Dichloropropene	(3)	10.274	75	316377	5.072
86) Ethyl Methacrylate	(3)	10.329	69	258646	4.840
88) 1,1,2-Trichloroethane	(3)	10.475	97	194331	5.216
89) Tetrachloroethene	(3)	10.561	166	376715	5.150
90) 1,3-Dichloropropane	(3)	10.634	76	329045	4.984
91) 2-Hexanone	(1)	10.683	43	532351	22.763
93) Dibromochloromethane	(3)	10.847	129	230894	5.171
95) 1,2-Dibromoethane	(3)	10.963	107	179555	5.142
96) 1-Chlorohexane	(3)	11.384	91	476940M	4.939
97)*Chlorobenzene-d5	(3)	11.384	117	2181583	10.000
98) Chlorobenzene	(3)	11.408	112	870508	5.068
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	291823	5.148

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

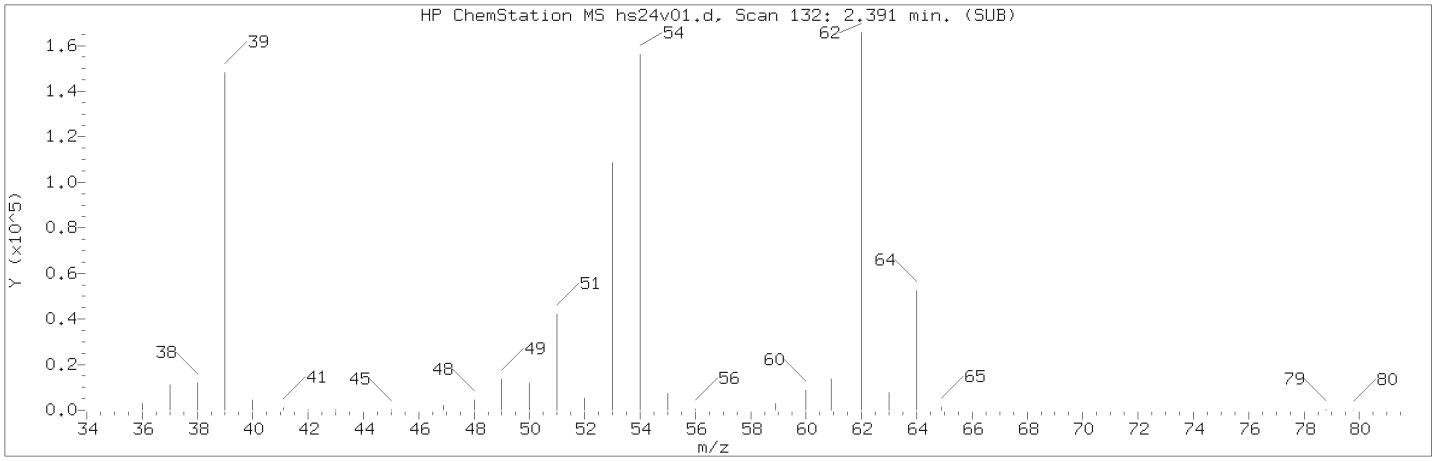
Sample Name: ICVHLG Lab Sample ID: ICVHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
100) Ethylbenzene	(3)	11.493	91	1615822	5.107
101) m+p-Xylene	(3)	11.603	106	1211106	10.320
105) Xylene (Total)	(3)		106	1782147	15.409
104) o-Xylene	(3)	11.932	106	571041	5.089
106) Styrene	(3)	11.944	104	940841	5.241
107) Bromoform	(3)	12.109	173	123890	5.049
108) Isopropylbenzene	(3)	12.231	105	1599849	5.223
111)$4-Bromofluorobenzene	(3)	12.371	95	1014976	9.929
113) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	224147	4.994
114) Bromobenzene	(4)	12.493	156	351229	5.148
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	259900	24.153
116) 1,2,3-Trichloropropane	(4)	12.524	110	57126M	4.923
117) n-Propylbenzene	(4)	12.554	91	1935469	5.217
119) 2-Chlorotoluene	(4)	12.633	126	367412	5.106
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	1293562	5.147
122) 4-Chlorotoluene	(4)	12.725	126	368733	5.114
125) tert-Butylbenzene	(4)	12.932	134	278567M	5.097
126) Pentachloroethane	(4)	12.969	167	207735	4.870
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	1301652	5.076
128) sec-Butylbenzene	(4)	13.097	105	1707856	5.244
131) 1,3-Dichlorobenzene	(4)	13.194	146	680593	5.021
132) p-Isopropyltoluene	(4)	13.200	119	1416458	5.251
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	1131416	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	676511	5.084
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	562245	4.779
136) Benzyl Chloride	(4)	13.347	126	76709M	4.728
138) n-Butylbenzene	(4)	13.493	92	700126	5.229
139) 1,2-Dichlorobenzene	(4)	13.530	146	599568	5.013
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	30890M	5.304
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	509846	5.056
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	415513	5.058
146) Hexachlorobutadiene	(4)	14.700	225	160319	5.164
147) Naphthalene	(4)	14.804	128	675168	5.194
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	346080	5.124

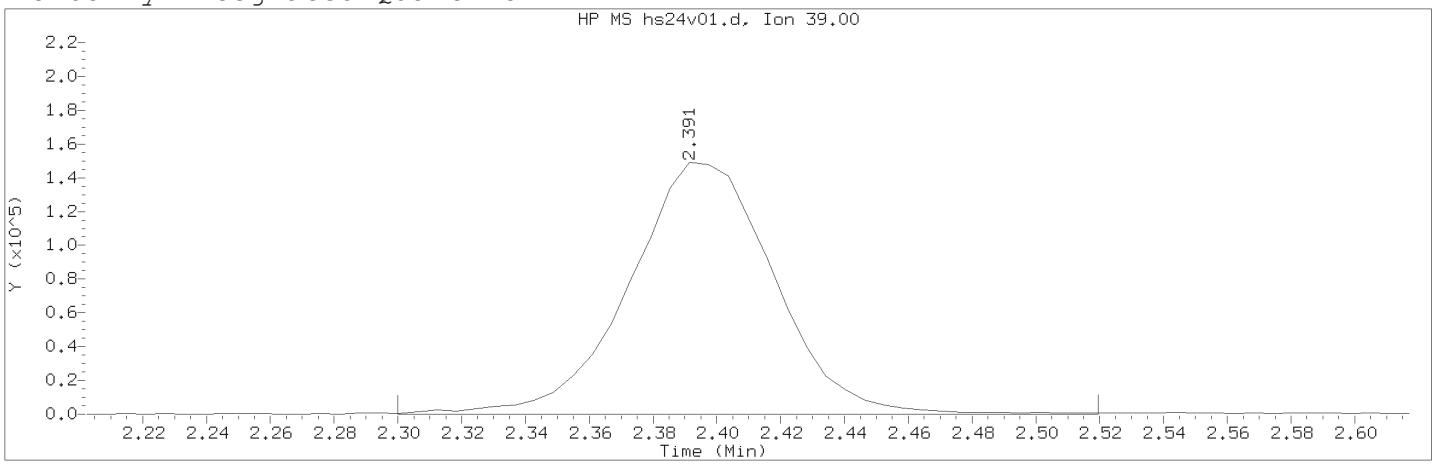
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

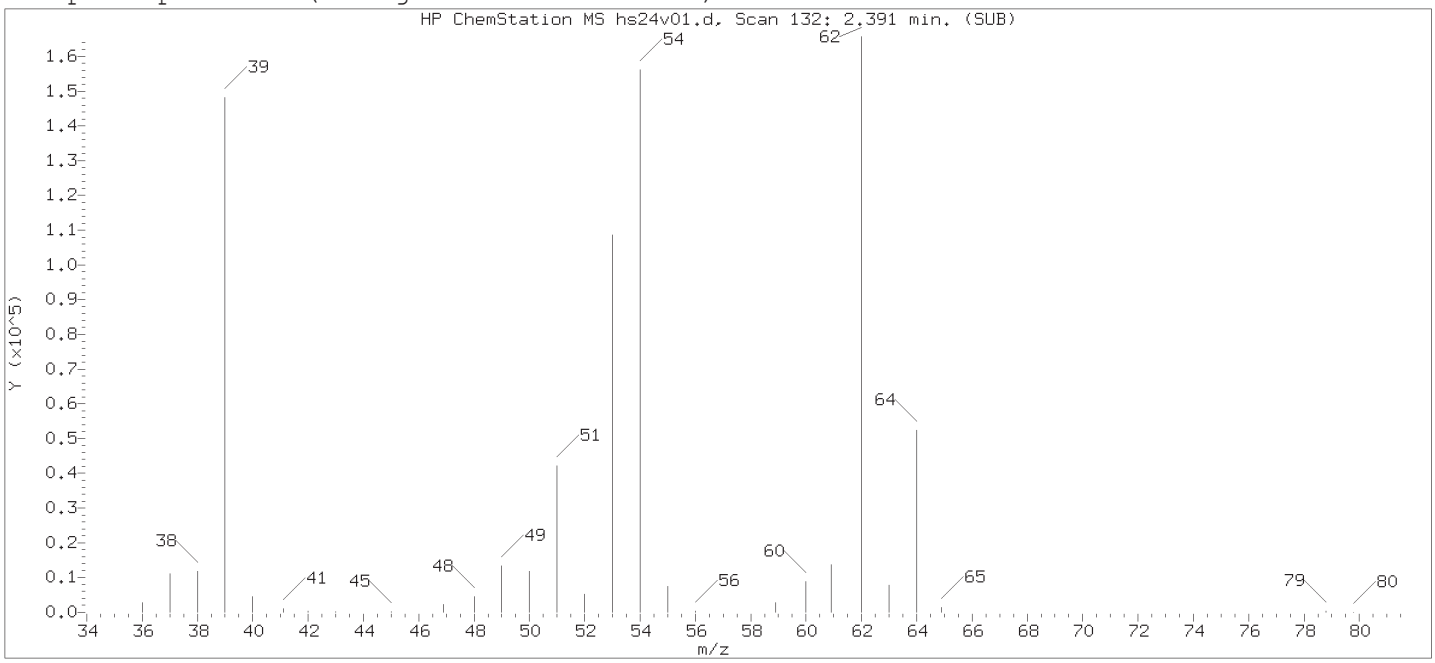
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area (flag) : 470828M
On-Column Amount (ng) : 4.1709
Integration start scan : 116 Integration stop scan: 152
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

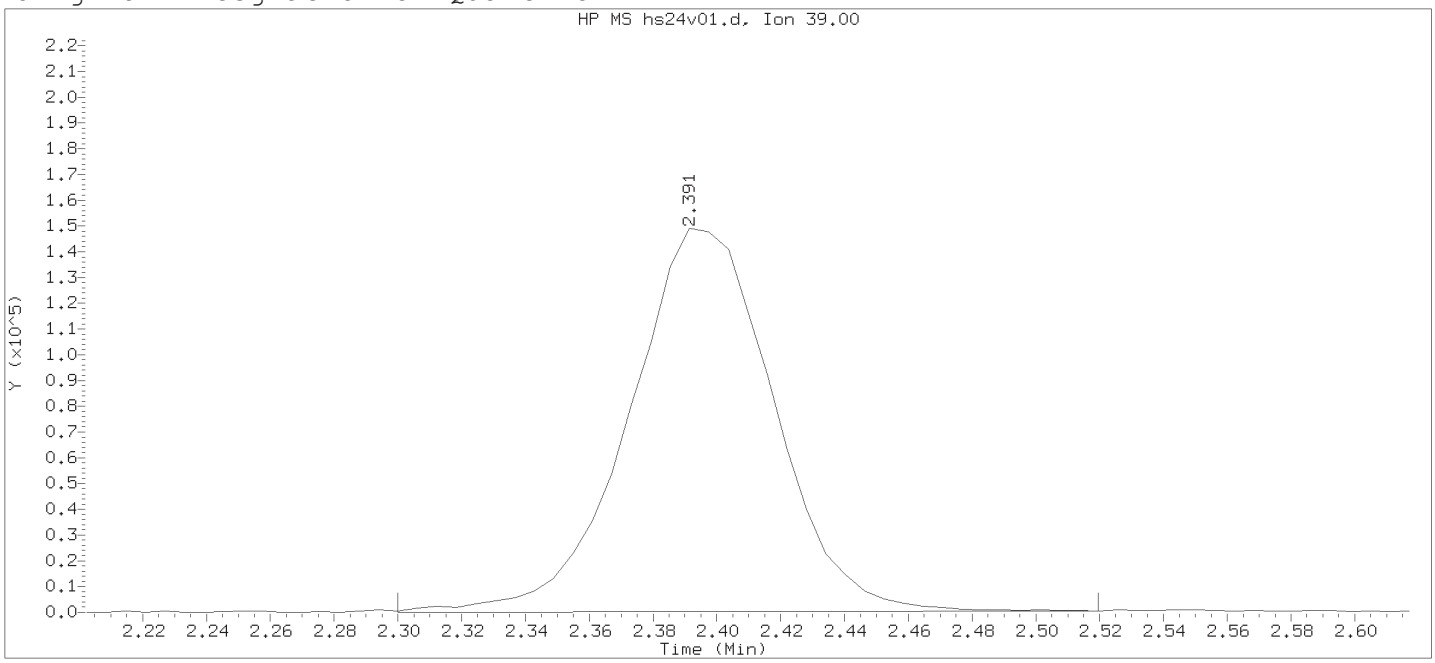
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

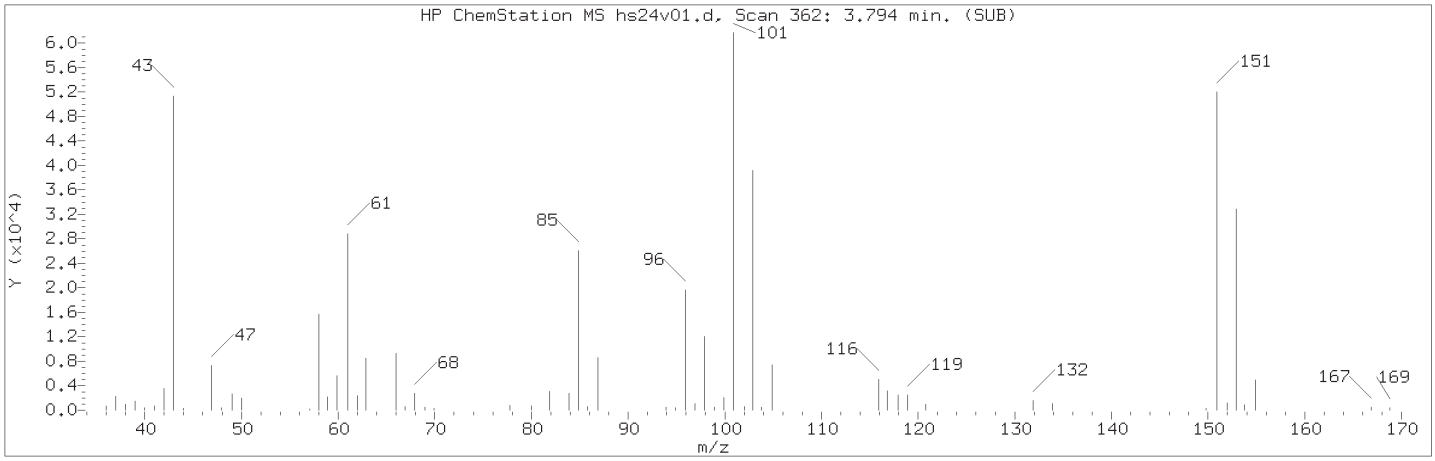
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

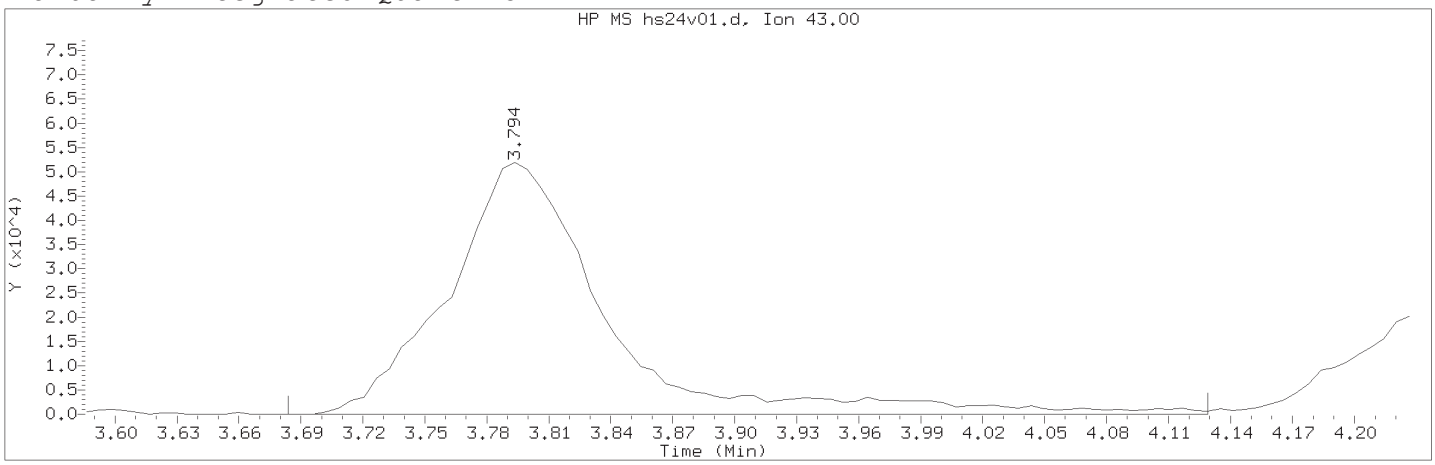
Compound Number	: 6		
Compound Name	: 1,3-Butadiene		
Scan Number	: 132		
Retention Time (minutes)	: 2.391		
Quant Ion	: 39.00		
Area	: 466594		
On-column Amount (ng)	: 5.0567		
Integration start scan	: 116	Integration stop scan:	152
Y at integration start	: 43	Y at integration end:	572

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

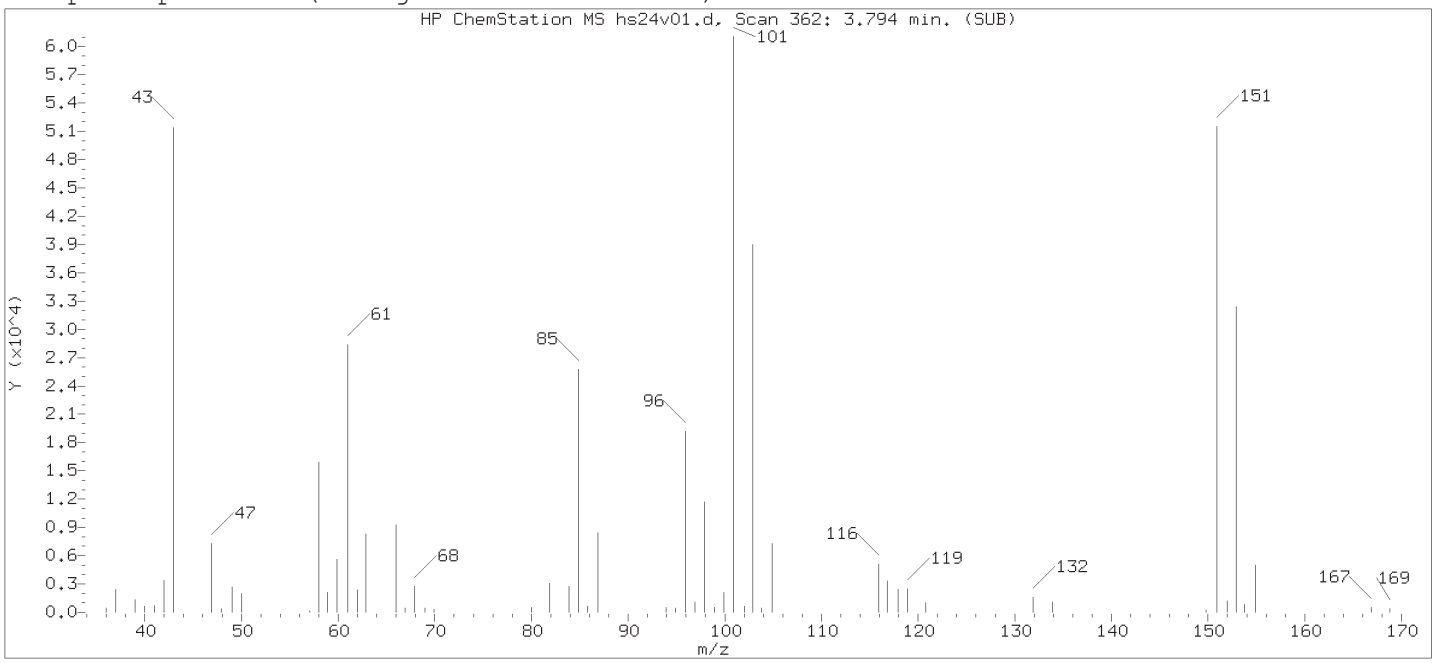
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area (flag) : 273073M
On-Column Amount (ng) : 32.3626
Integration start scan : 343 Integration stop scan: 416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

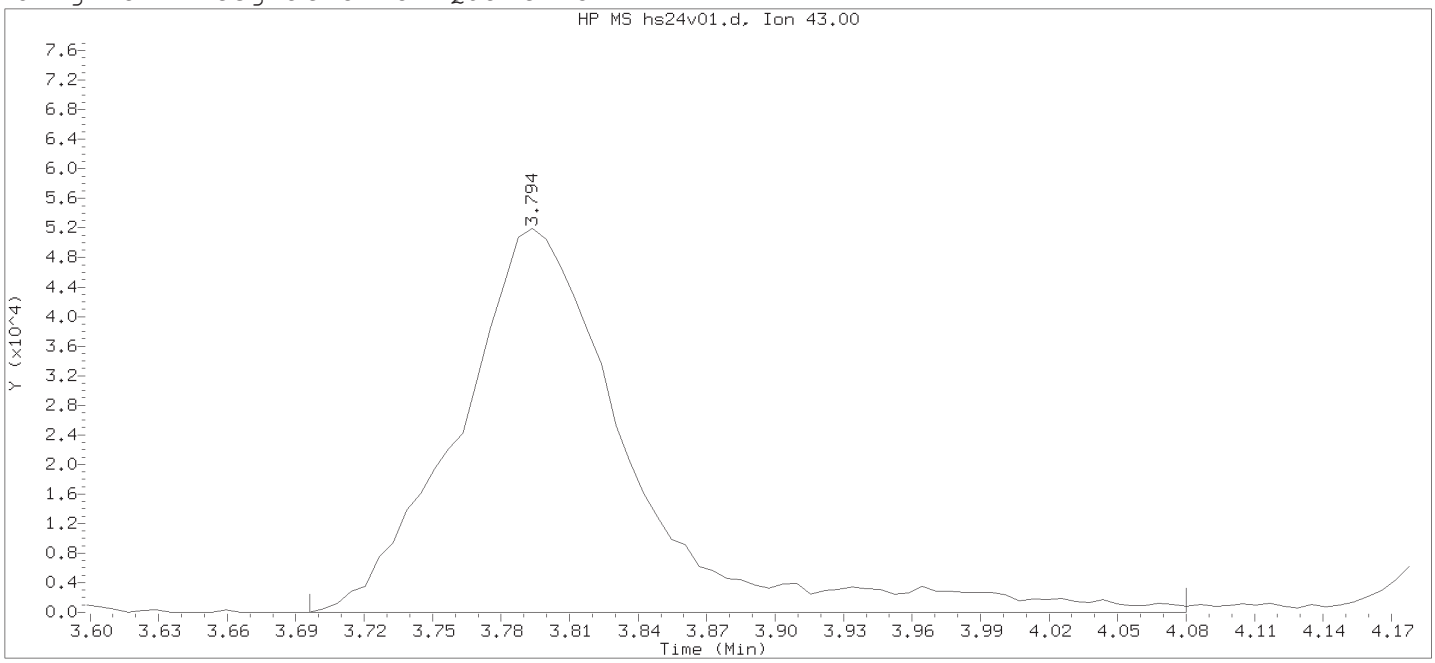
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

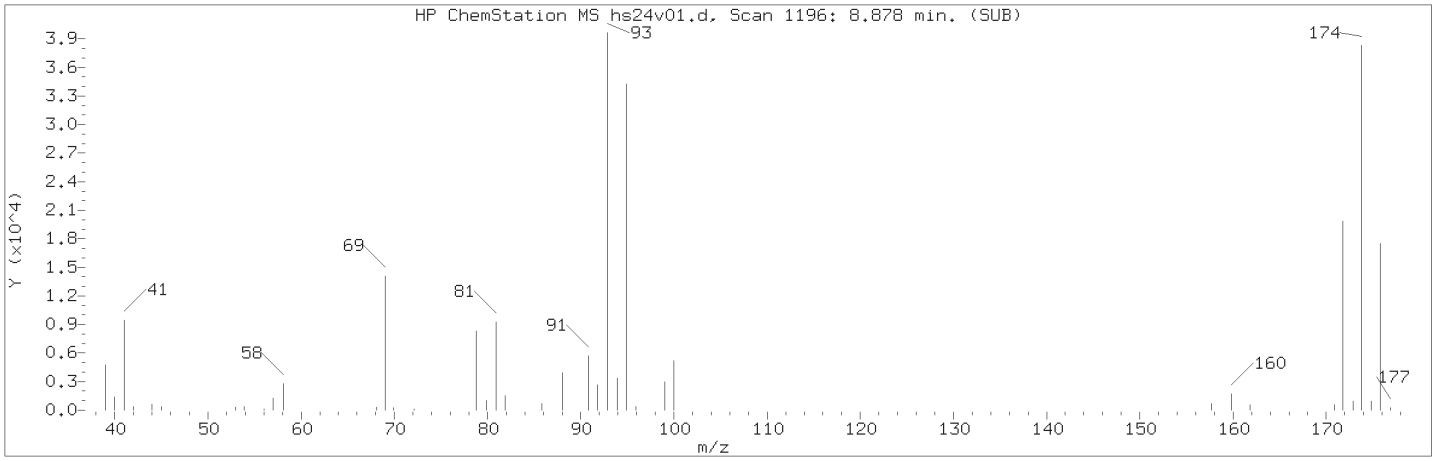
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

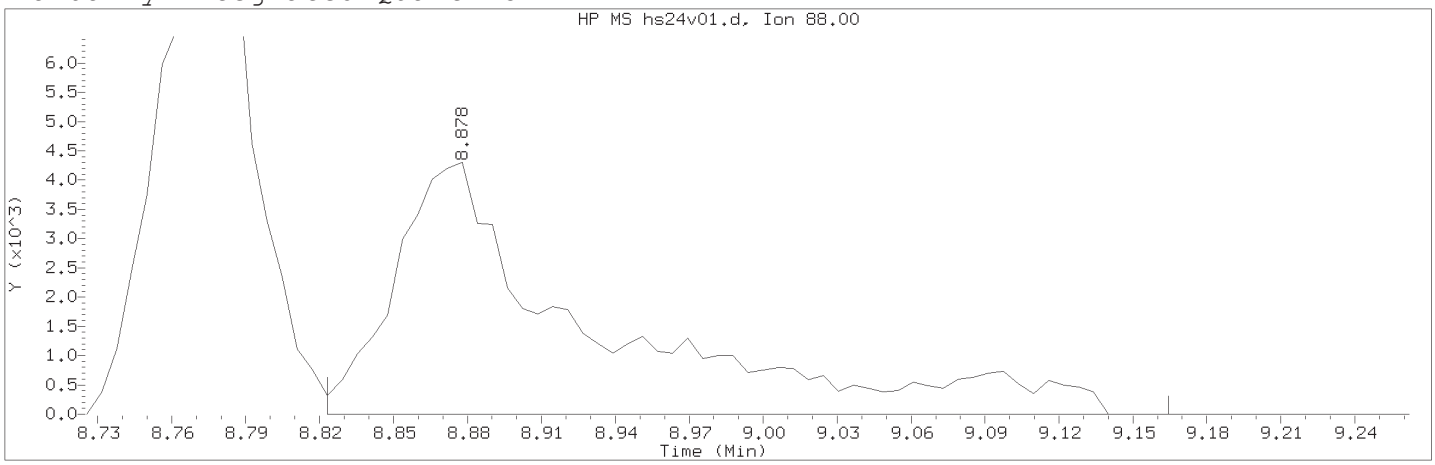
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 362		
Retention Time (minutes)	: 3.794		
Quant Ion	: 43.00		
Area	: 270202		
On-column Amount (ng)	: 34.6600		
Integration start scan	: 345	Integration stop scan:	408
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

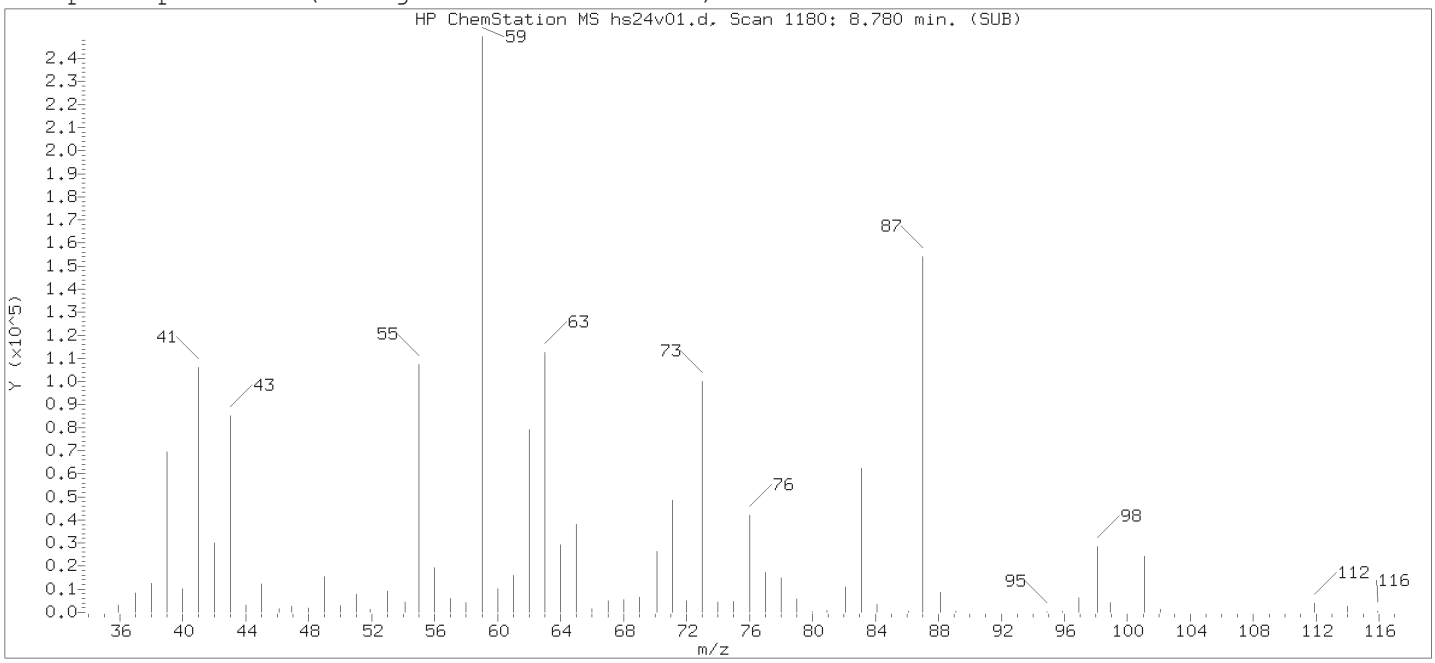
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1196
Retention Time (minutes): 8.878
Quant Ion : 88.00
Area (flag) : 23983M
On-Column Amount (ng) : 126.1028
Integration start scan : 1186 Integration stop scan: 1242
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

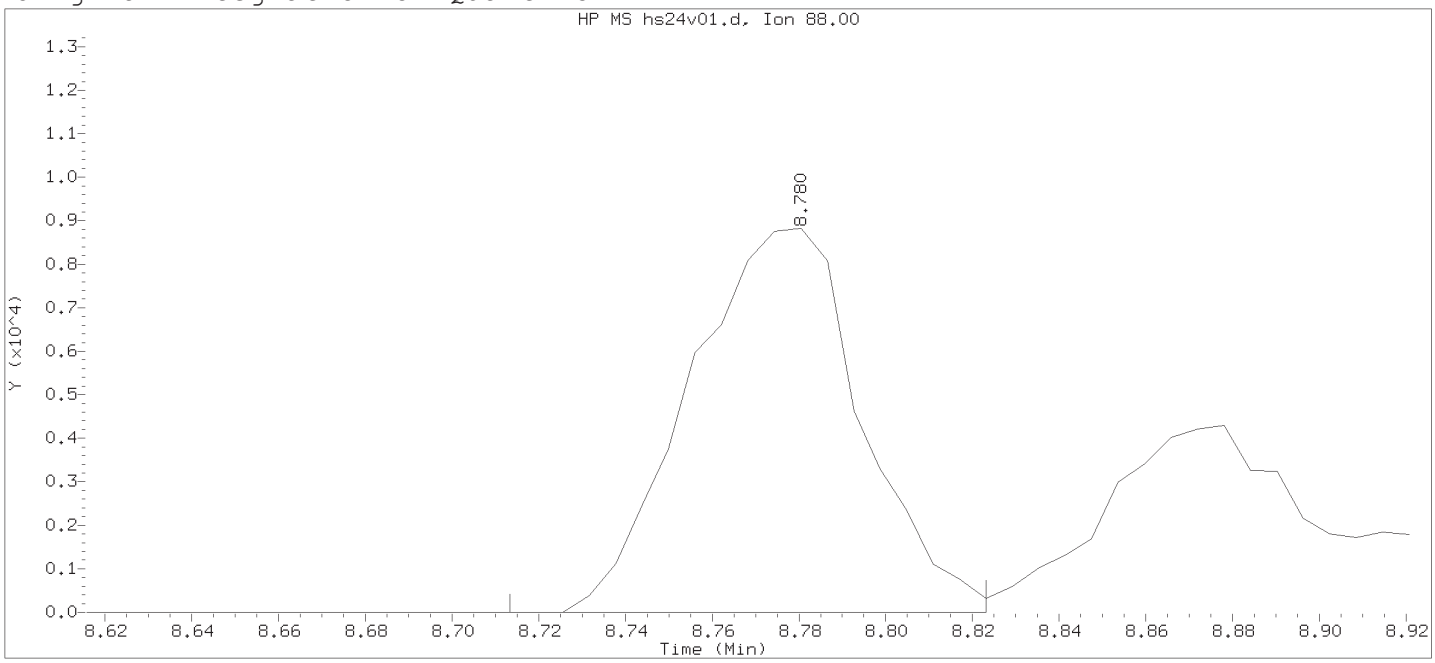
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

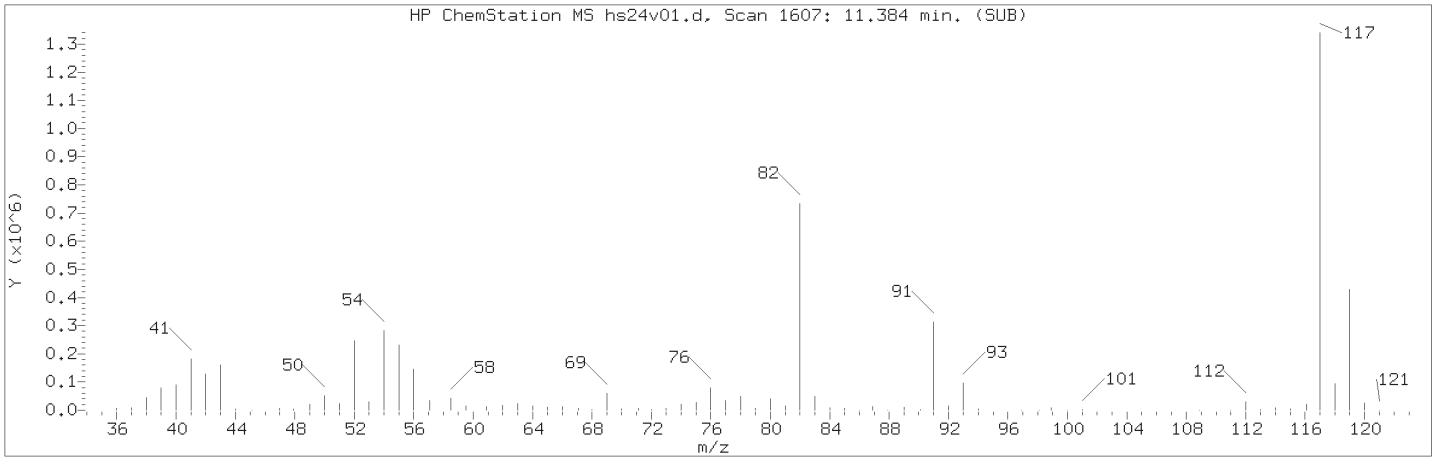
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

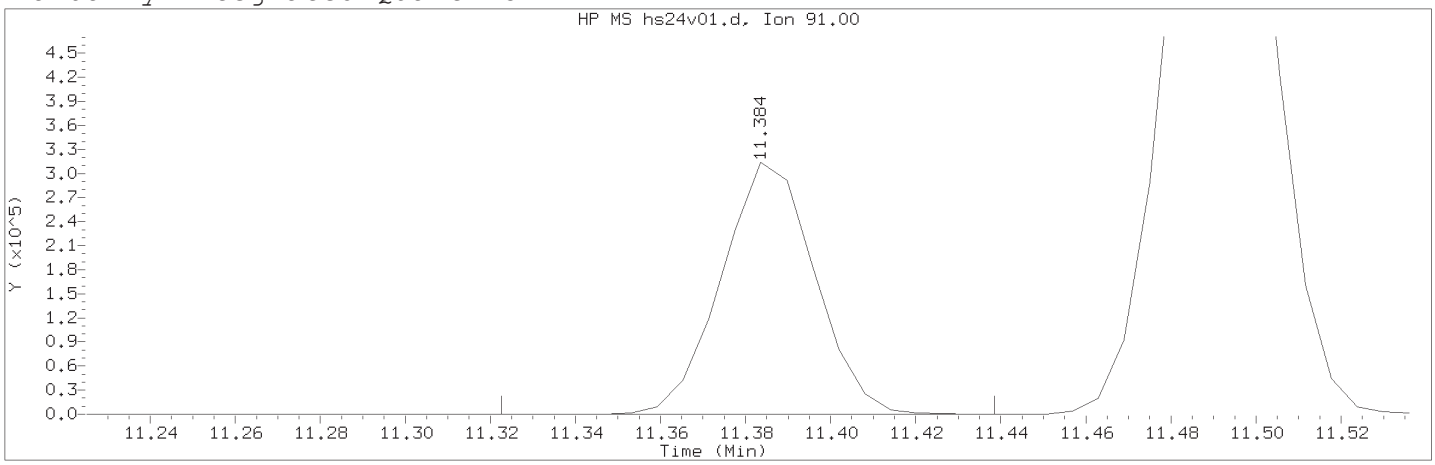
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1180		
Retention Time (minutes)	: 8.780		
Quant Ion	: 88.00		
Area	: 24295		
On-column Amount (ng)	: 144.0216		
Integration start scan	: 1168	Integration stop scan:	1186
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

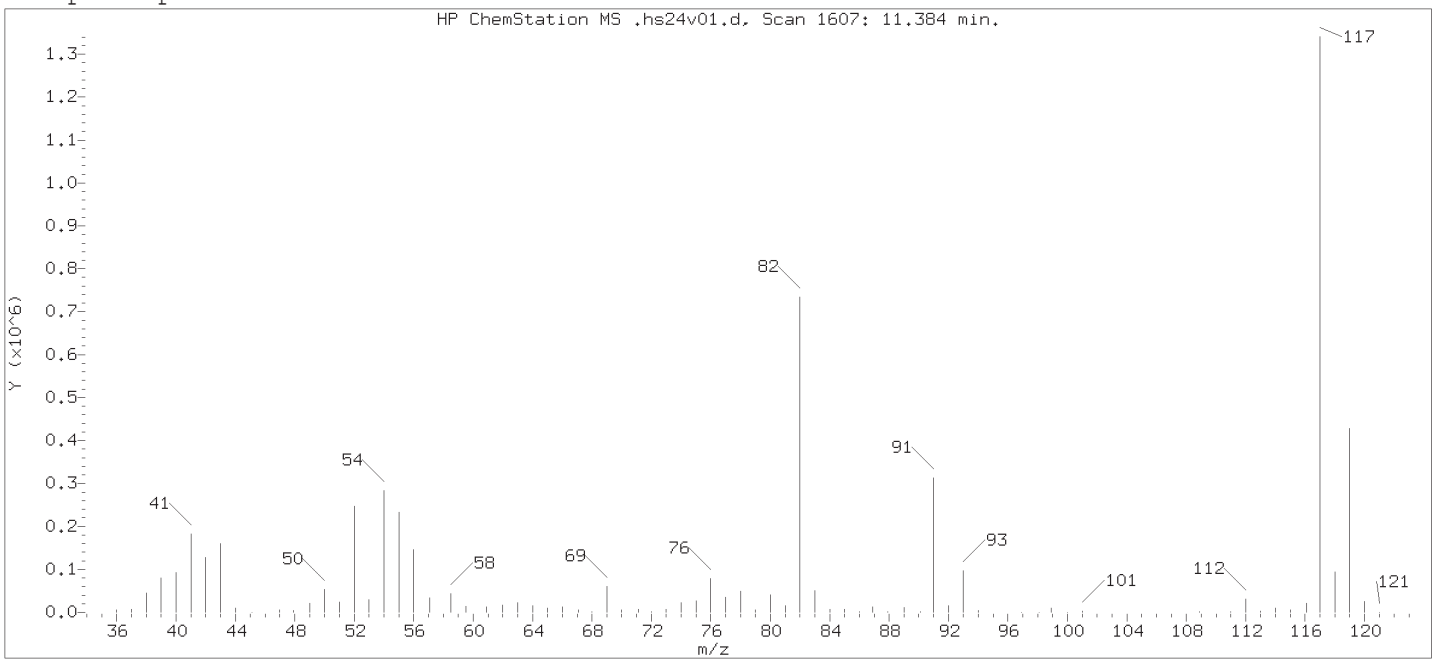
Compound Number : 96
Compound Name : 1-Chlorohexane
Scan Number : 1607
Retention Time (minutes): 11.384
Quant Ion : 91.00
Area (flag) : 476940M
On-Column Amount (ng) : 4.9395
Integration start scan : 1596 Integration stop scan: 1615
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

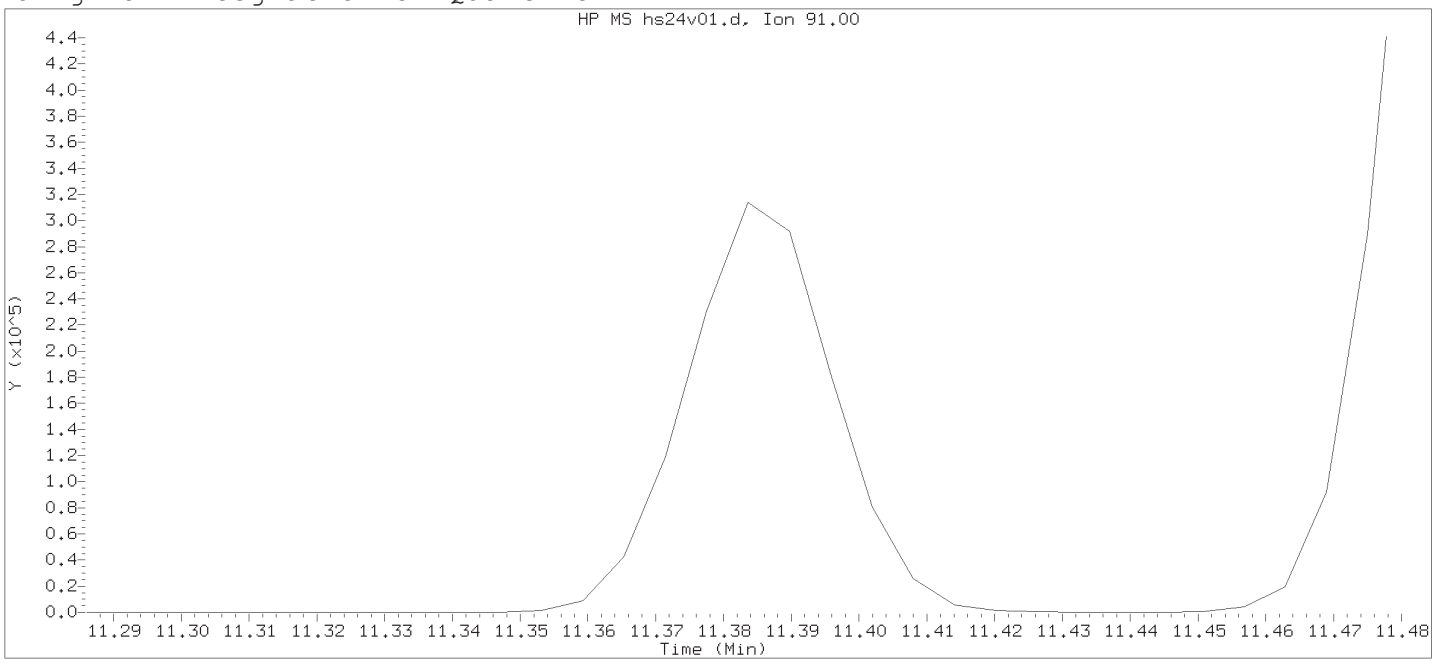
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

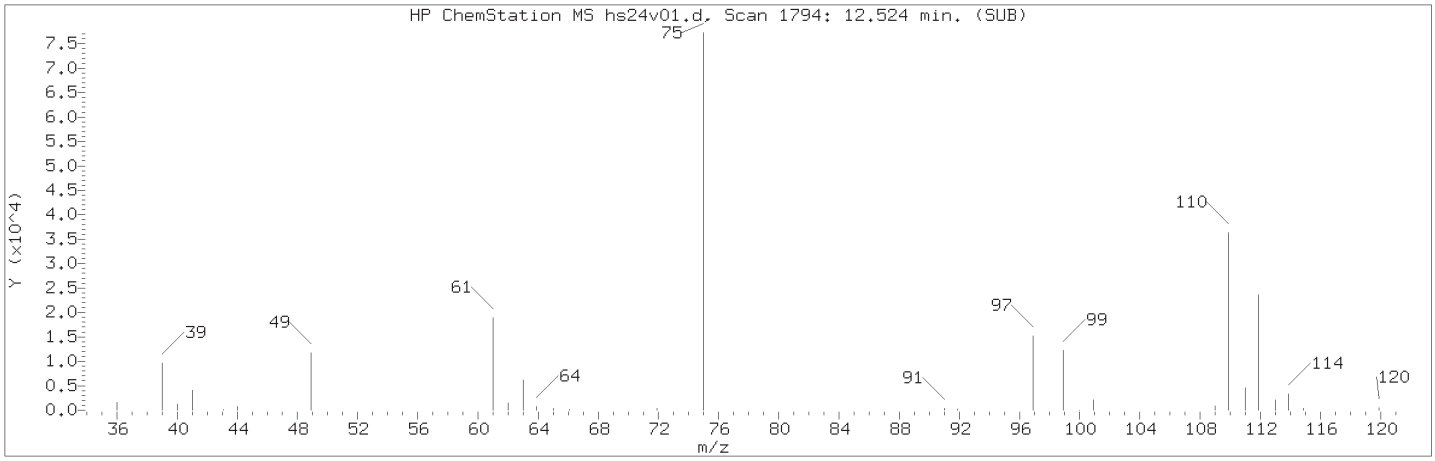
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

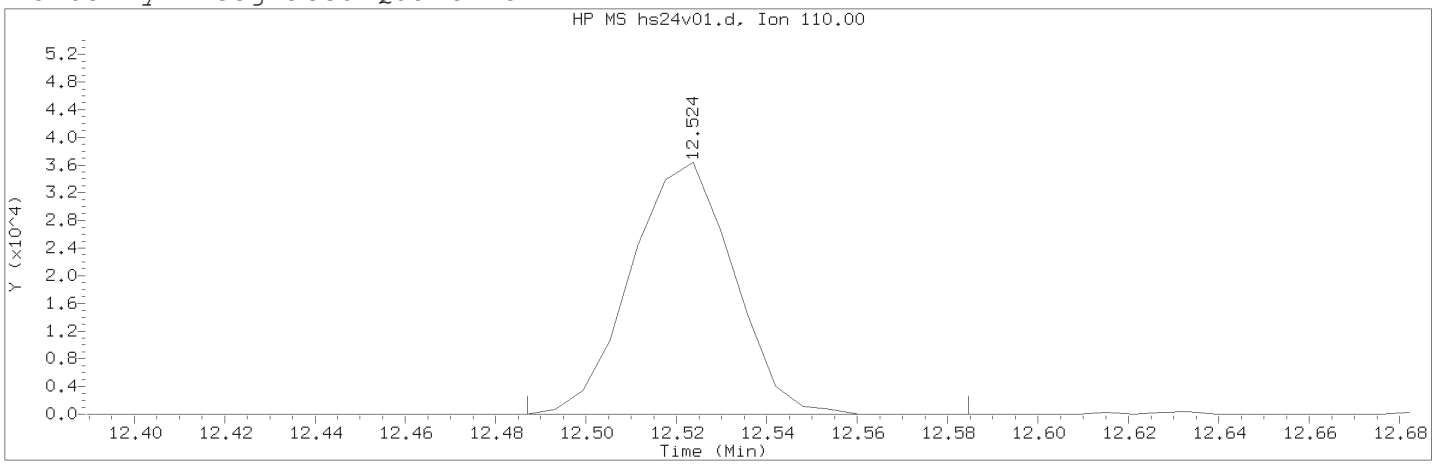
Compound Number : 96
Compound Name : 1-Chlorohexane
Expected RT (minutes) : 11.384
Quant Ion : 91.00

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

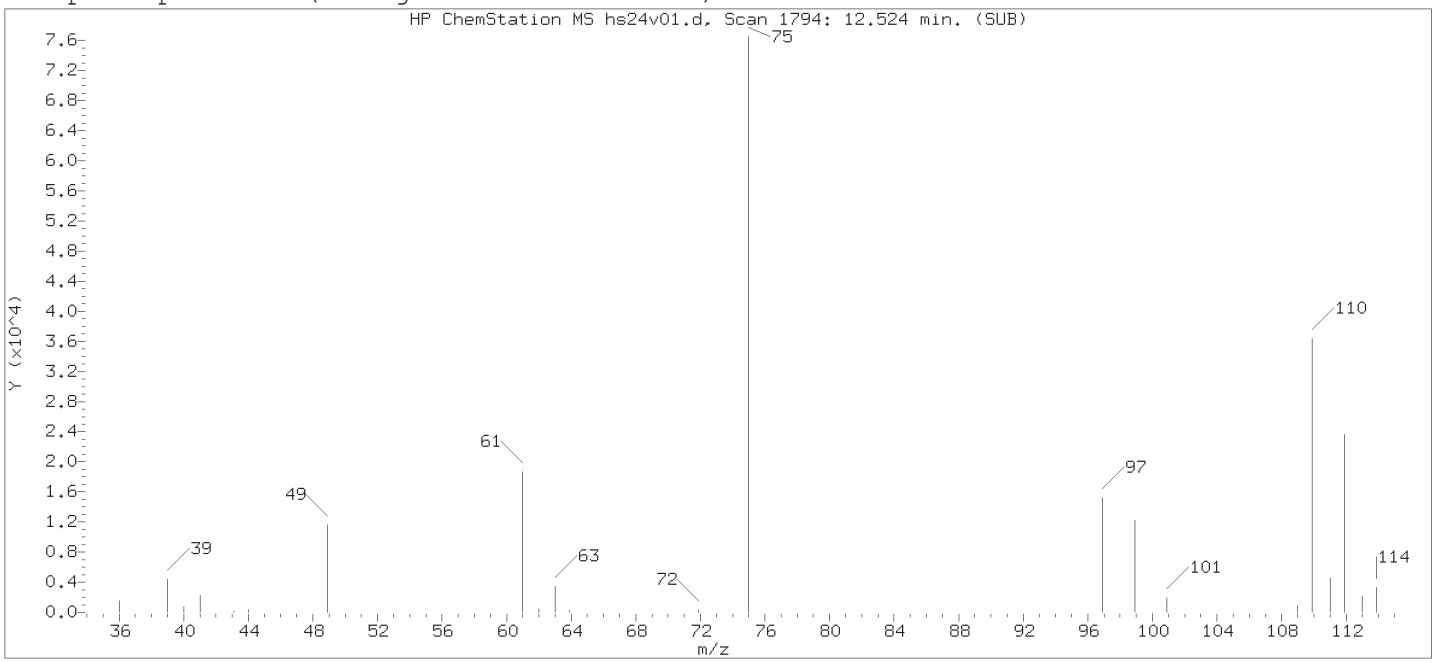
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 57126M
On-Column Amount (ng) : 4.9234
Integration start scan : 1787 Integration stop scan: 1803
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

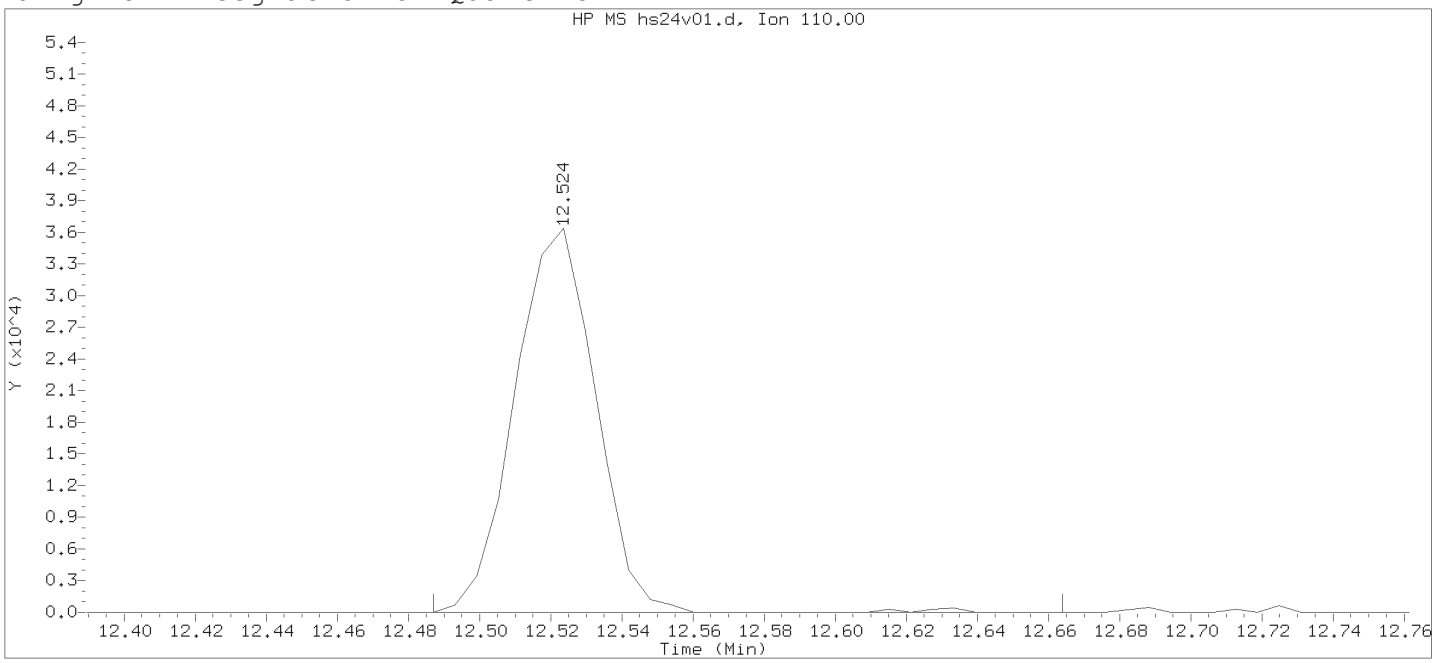
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

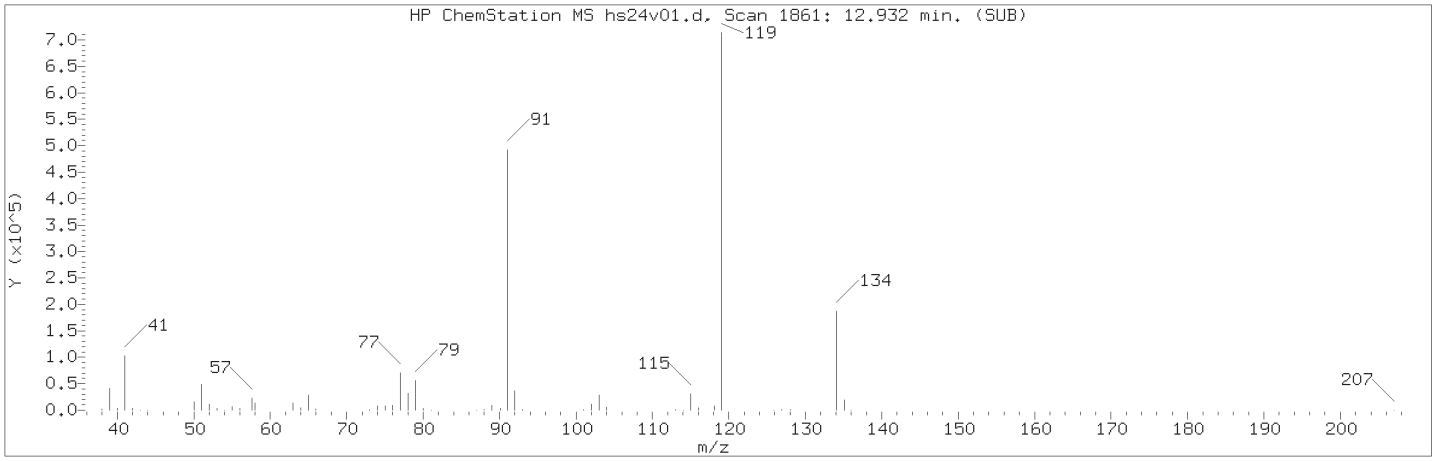
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

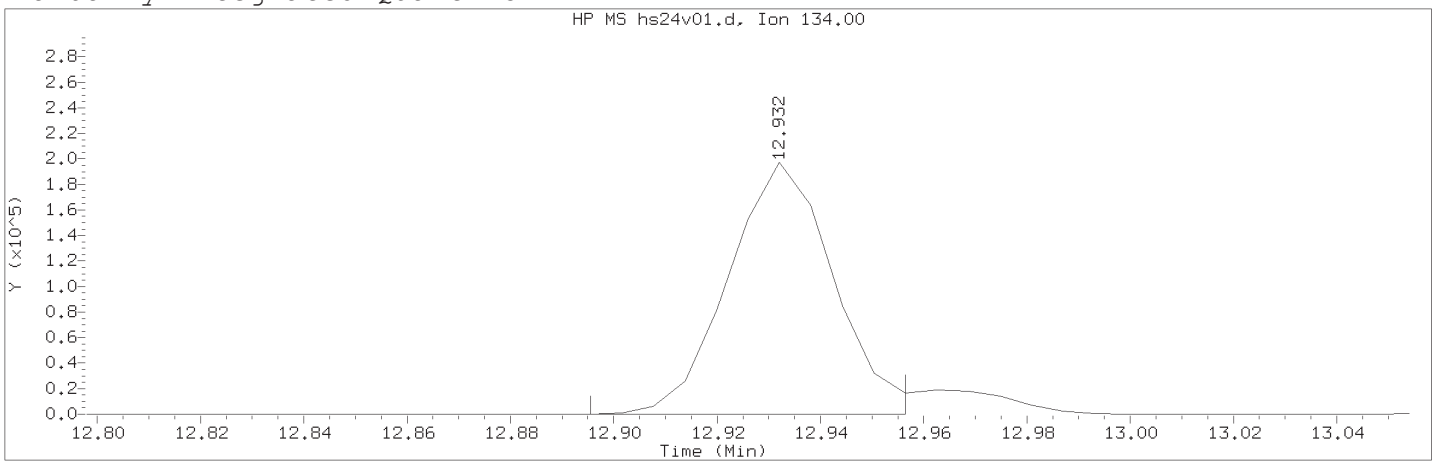
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area : 57467
On-column Amount (ng) : 4.9421
Integration start scan : 1787 Integration stop scan: 1816
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

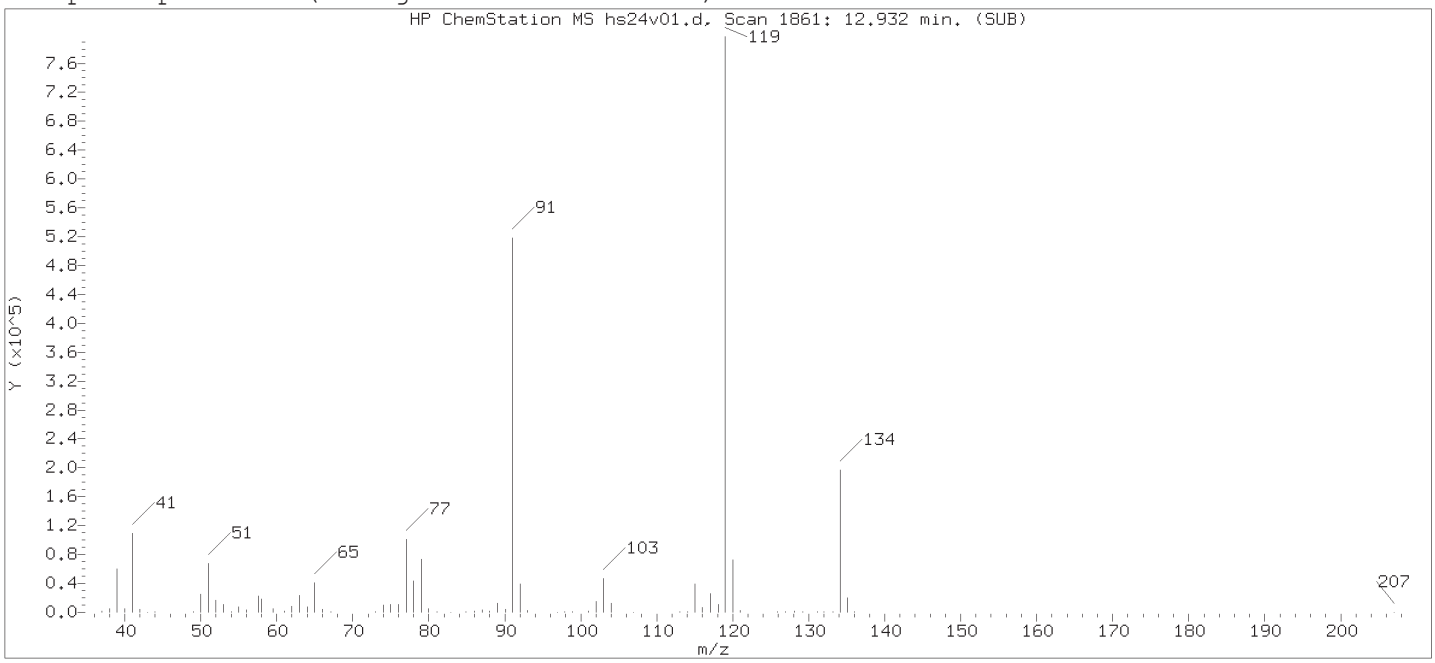
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 278567M
On-Column Amount (ng) : 5.0967
Integration start scan : 1854 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

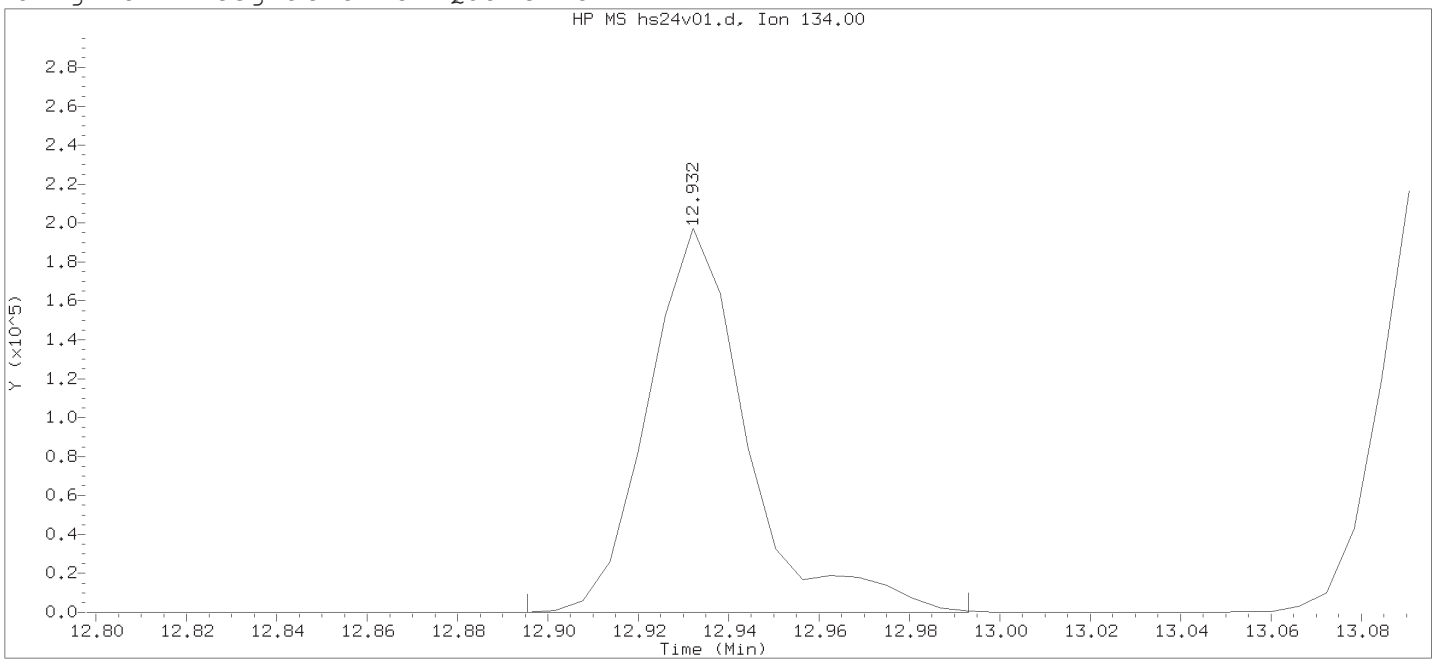
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

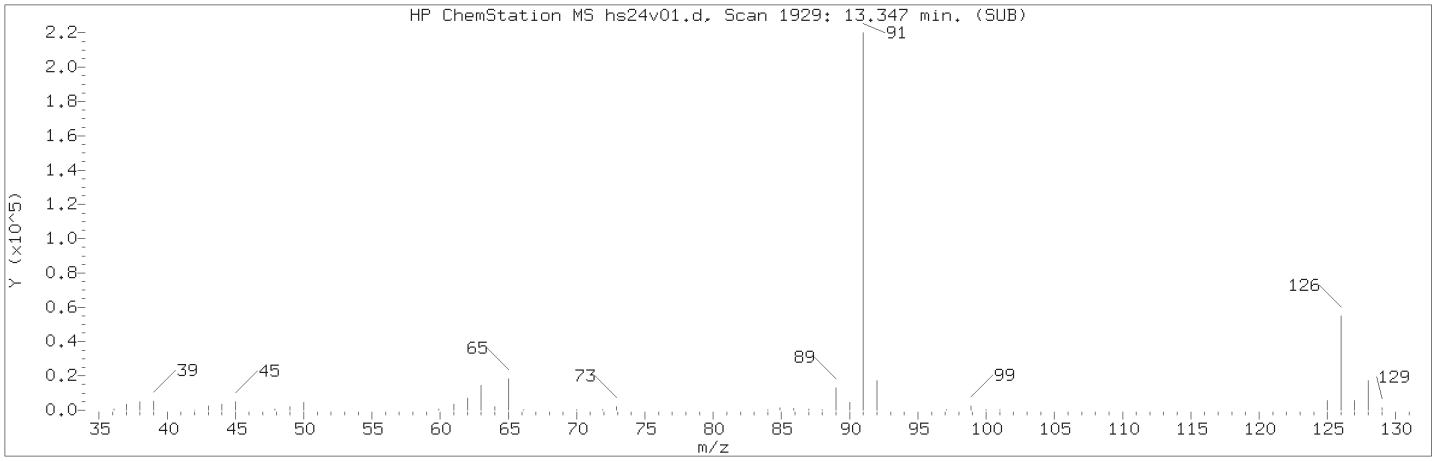
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

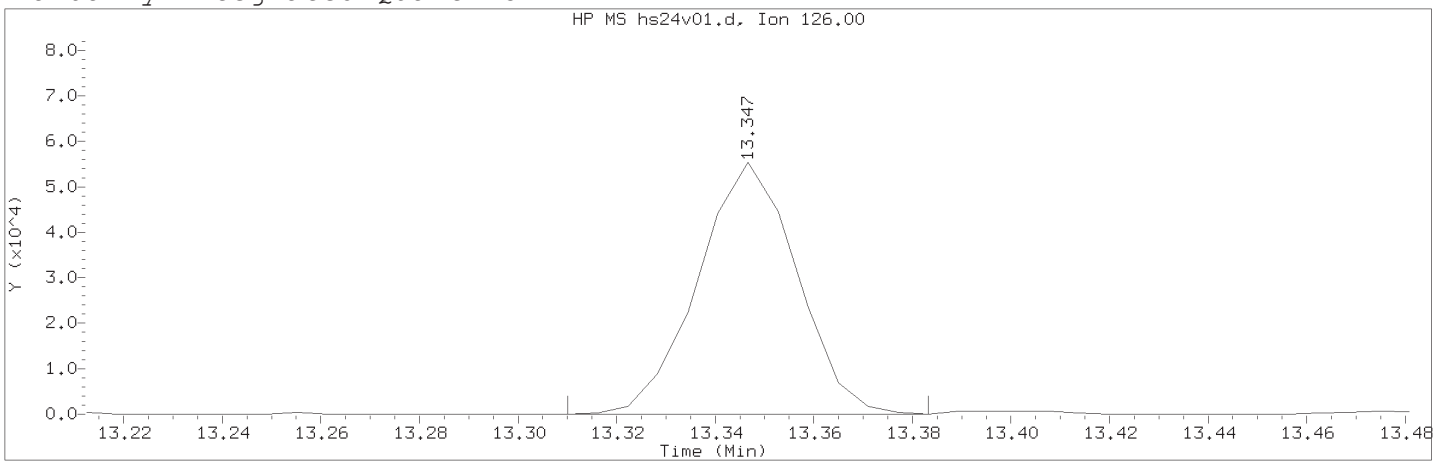
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 300676
On-column Amount (ng) : 5.3090
Integration start scan : 1854 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

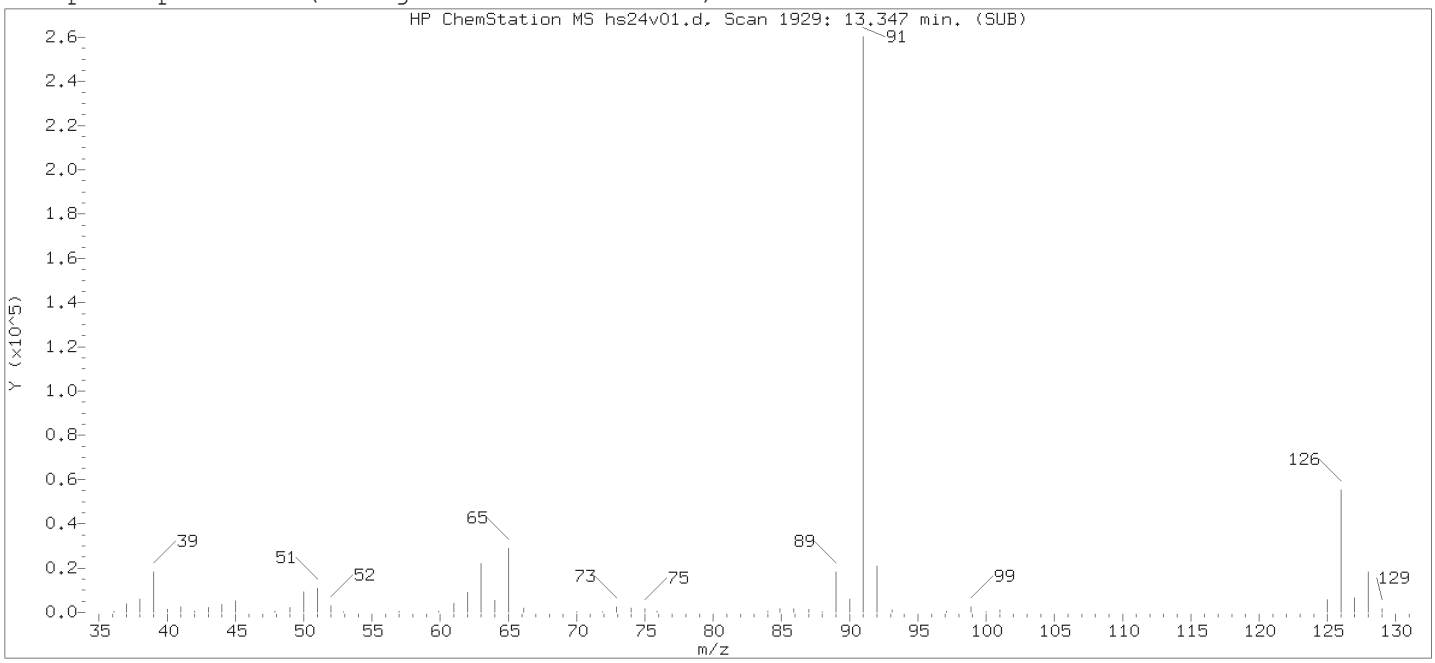
Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area (flag) : 76709M
On-Column Amount (ng) : 4.7280
Integration start scan : 1922 Integration stop scan: 1934
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

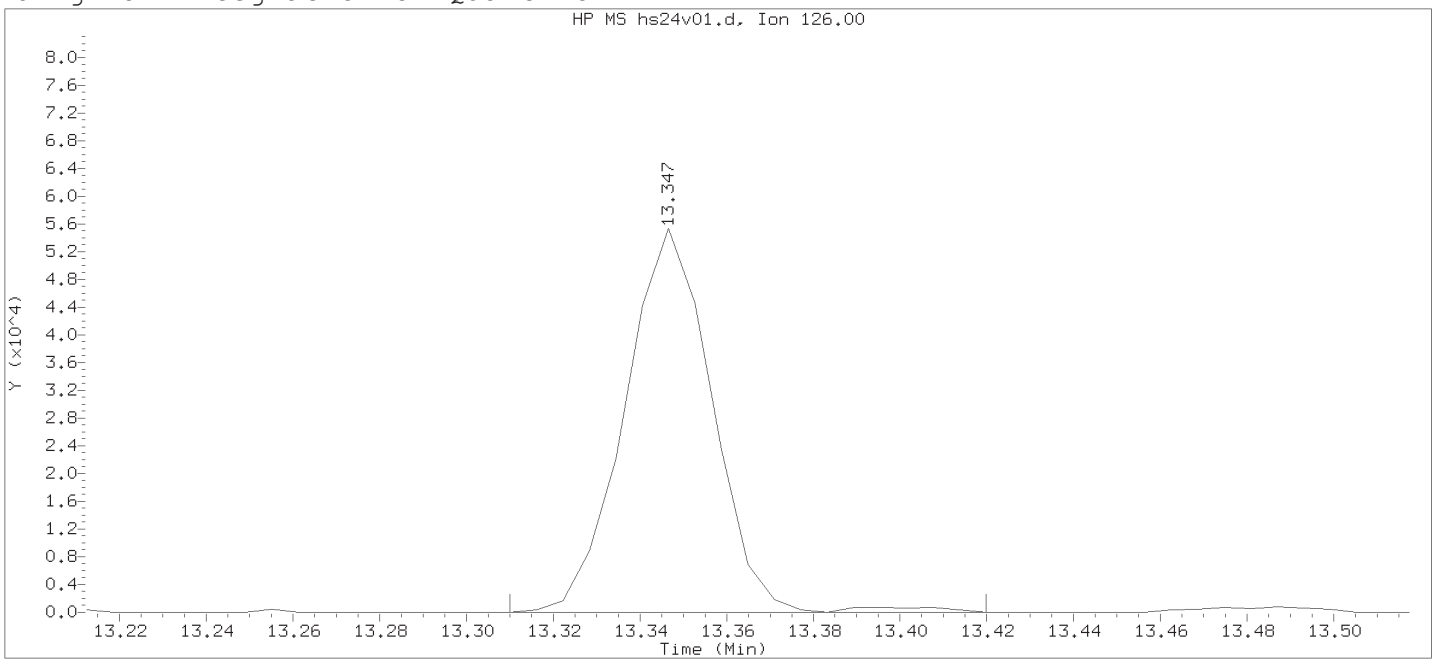
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

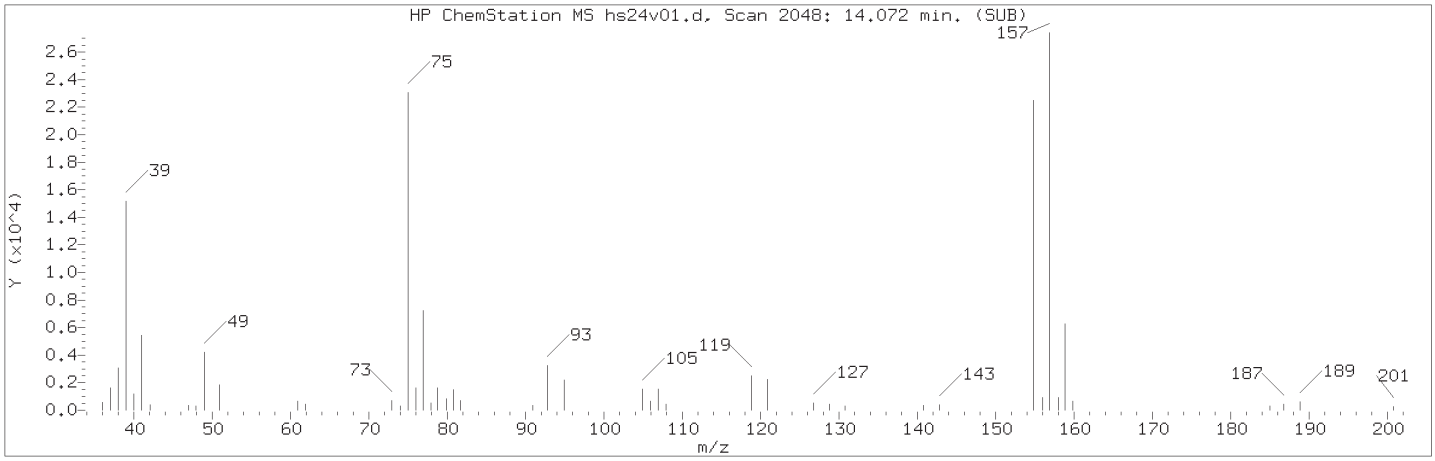
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

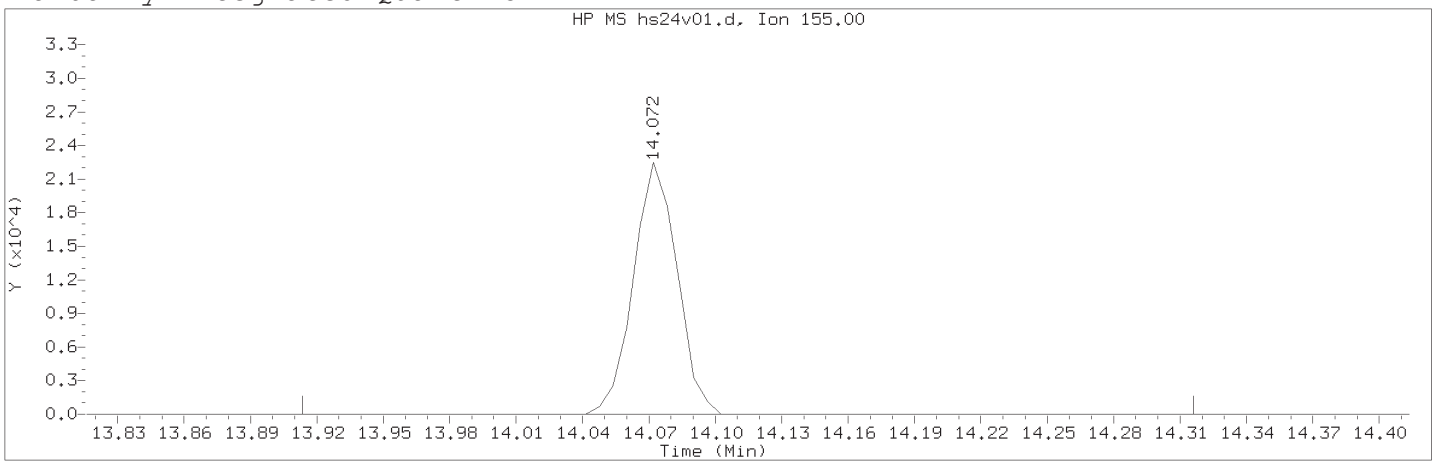
Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area : 77799
On-column Amount (ng) : 5.0401
Integration start scan : 1922 Integration stop scan: 1940
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

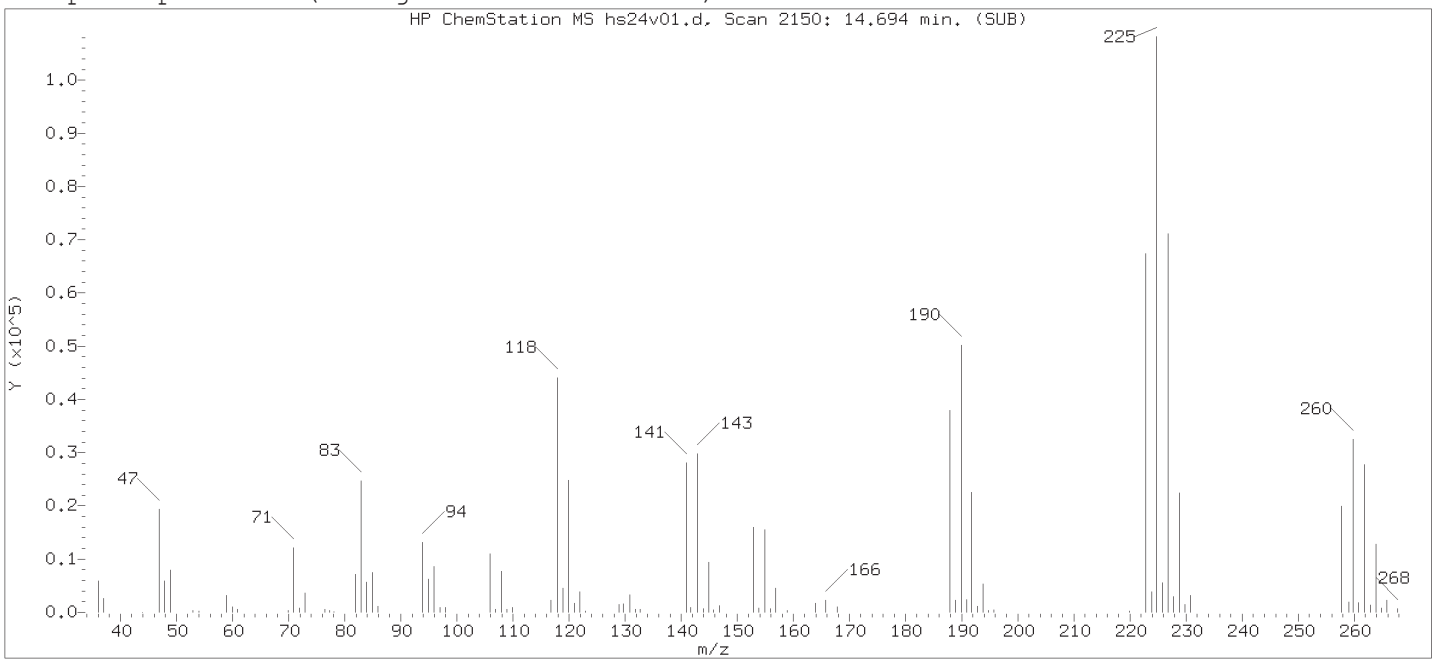
Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2048
Retention Time (minutes): 14.072
Quant Ion : 155.00
Area (flag) : 30890M
On-Column Amount (ng) : 5.3040
Integration start scan : 2021 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

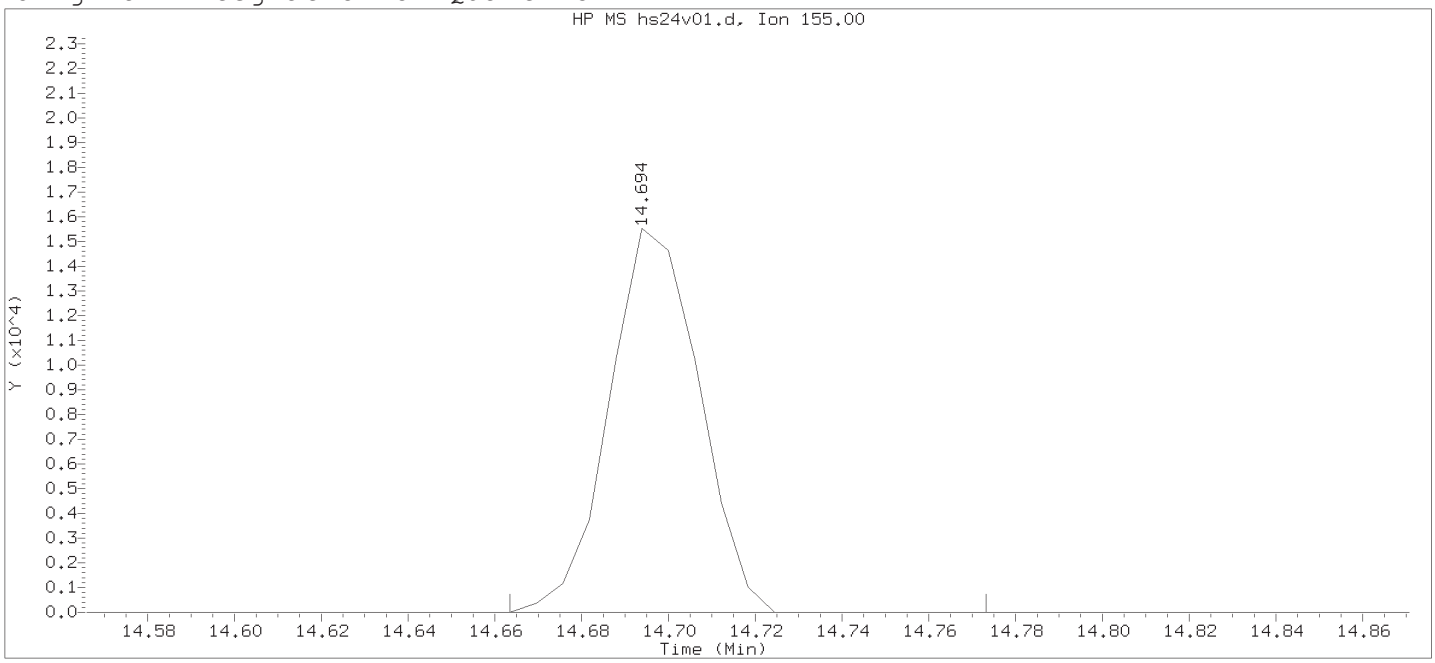
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2150
Retention Time (minutes): 14.694
Quant Ion : 155.00
Area : 22433
On-column Amount (ng) : 7.5577
Integration start scan : 2144 Integration stop scan: 2162
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Data File: /chem2/HP19094.i/18nov05b.b/hn05t05.d

Date : 05-NOV-2018 19:34

Client ID: aug7-18

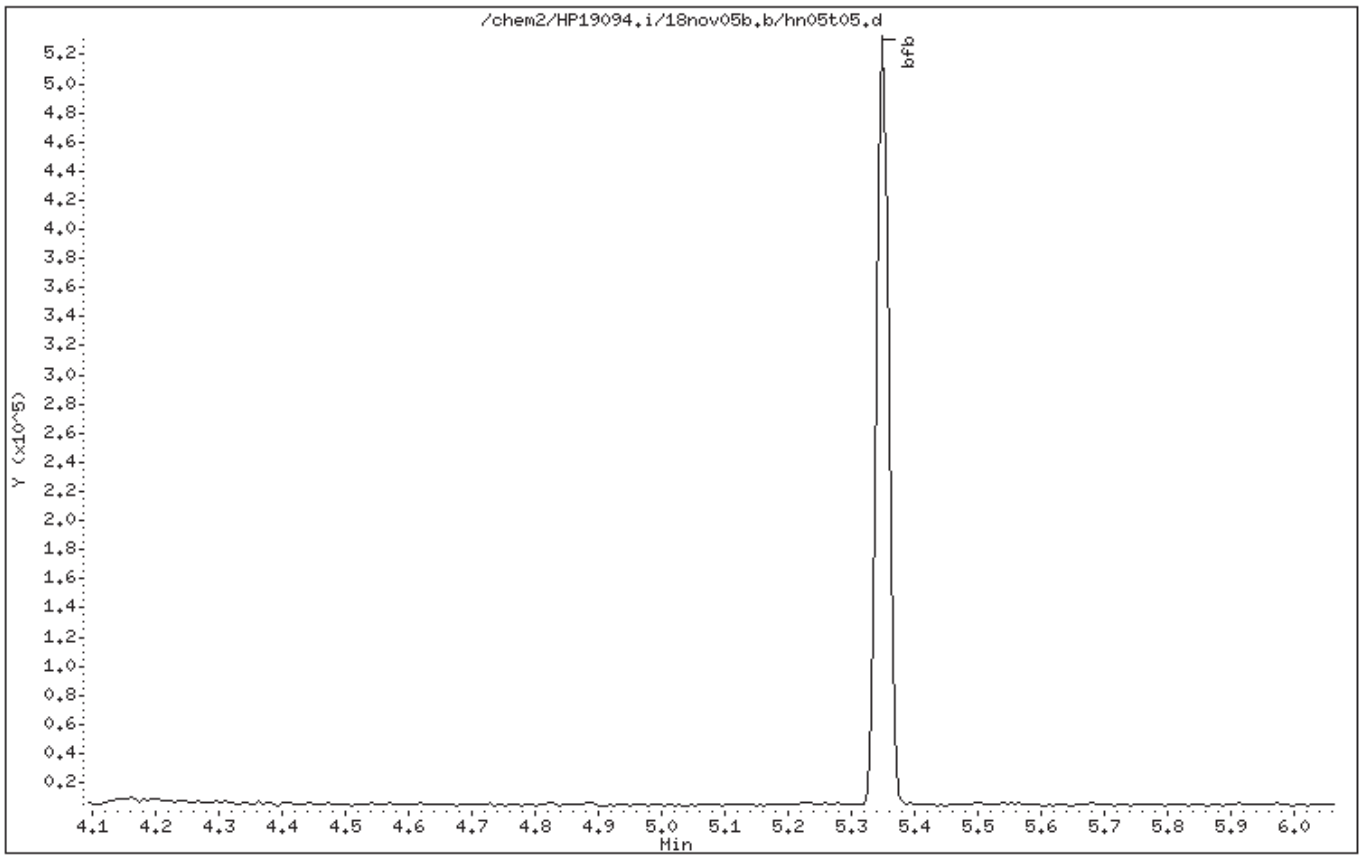
Instrument: HP19094.i

Sample Info: aug7-18;50NGBFB;1;3;;;;;;

Operator: JGC14951

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Joel G. Chachapoya on 11/05/2018 at 19:43.
Target 3.5 esignature user ID: jgc14951

Data File: /chem2/HP19094.i/18nov05b.b/hn05t05.d

Date : 05-NOV-2018 19:34

Client ID: aug7-18

Instrument: HP19094.i

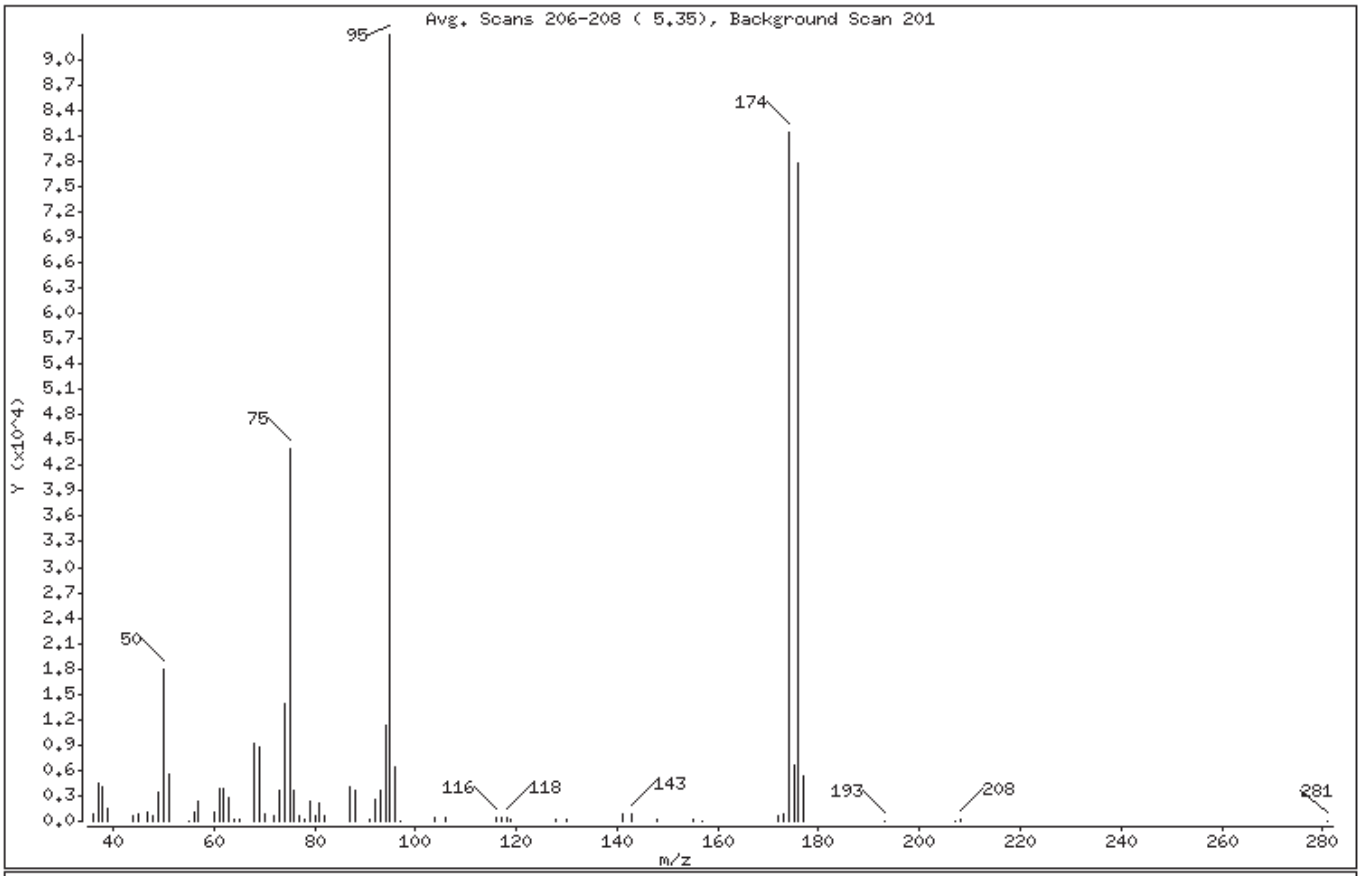
Sample Info: aug7-18;50NGBFB;1;3;;;;;;

Operator: JGC14951

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.24
75	30.00 - 60.00% of mass 95	47.28
96	5.00 - 9.00% of mass 95	6.97
173	Less than 2.00% of mass 174	0.97 (1.10)
174	50.00 - 100.00% of mass 95	87.59
175	5.00 - 9.00% of mass 174	7.08 (8.08)
176	95.00 - 101.00% of mass 174	83.77 (95.64)
177	5.00 - 9.00% of mass 176	5.80 (6.92)

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 19:43.
Target 3.5 esignature user ID: jgc14951

Date : 05-NOV-2018 19:34

Client ID: aug7-18 Instrument: HP19094.i

Sample Info: aug7-18;50NGBFB;1;3;;;;;;

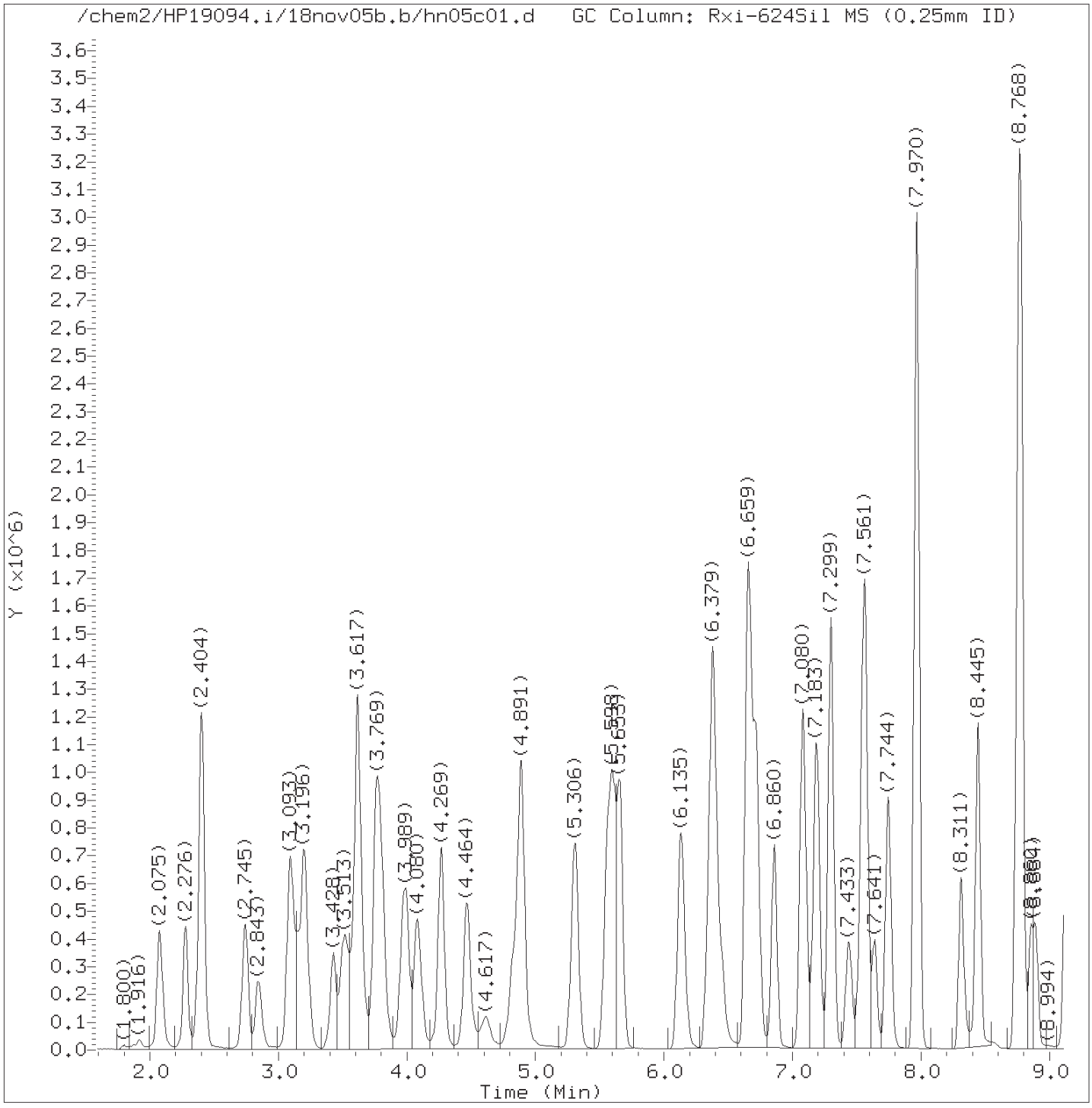
Operator: JGC14951

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hn05t05.d
Spectrum: Avg. Scans 206-208 (5.35), Background Scan 201
Location of Maximum: 95.00
Number of points: 66

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	947	63.00	2778	87.00	4155	141.00	864
37.00	4476	64.00	244	88.00	3722	143.00	958
38.00	4022	65.00	303	91.00	282	148.00	263
39.00	1488	68.00	9138	92.00	2519	155.00	203
44.00	737	69.00	8769	93.00	3667	157.00	88
45.00	922	70.00	776	94.00	11267	172.00	635
47.00	1082	72.00	613	95.00	92896	173.00	899
48.00	654	73.00	3726	96.00	6472	174.00	81368
49.00	3460	74.00	13953	97.00	98	175.00	6576
50.00	17864	75.00	43920	104.00	444	176.00	77824
51.00	5577	76.00	3618	106.00	406	177.00	5389
55.00	92	77.00	684	116.00	447	193.00	86
56.00	1140	78.00	309	117.00	425	207.00	41
57.00	2249	79.00	2244	118.00	416	208.00	214
60.00	1060	80.00	698	119.00	298	281.00	25
61.00	3770	81.00	2125	128.00	236		
62.00	3873	82.00	583	130.00	261		

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 19:43.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

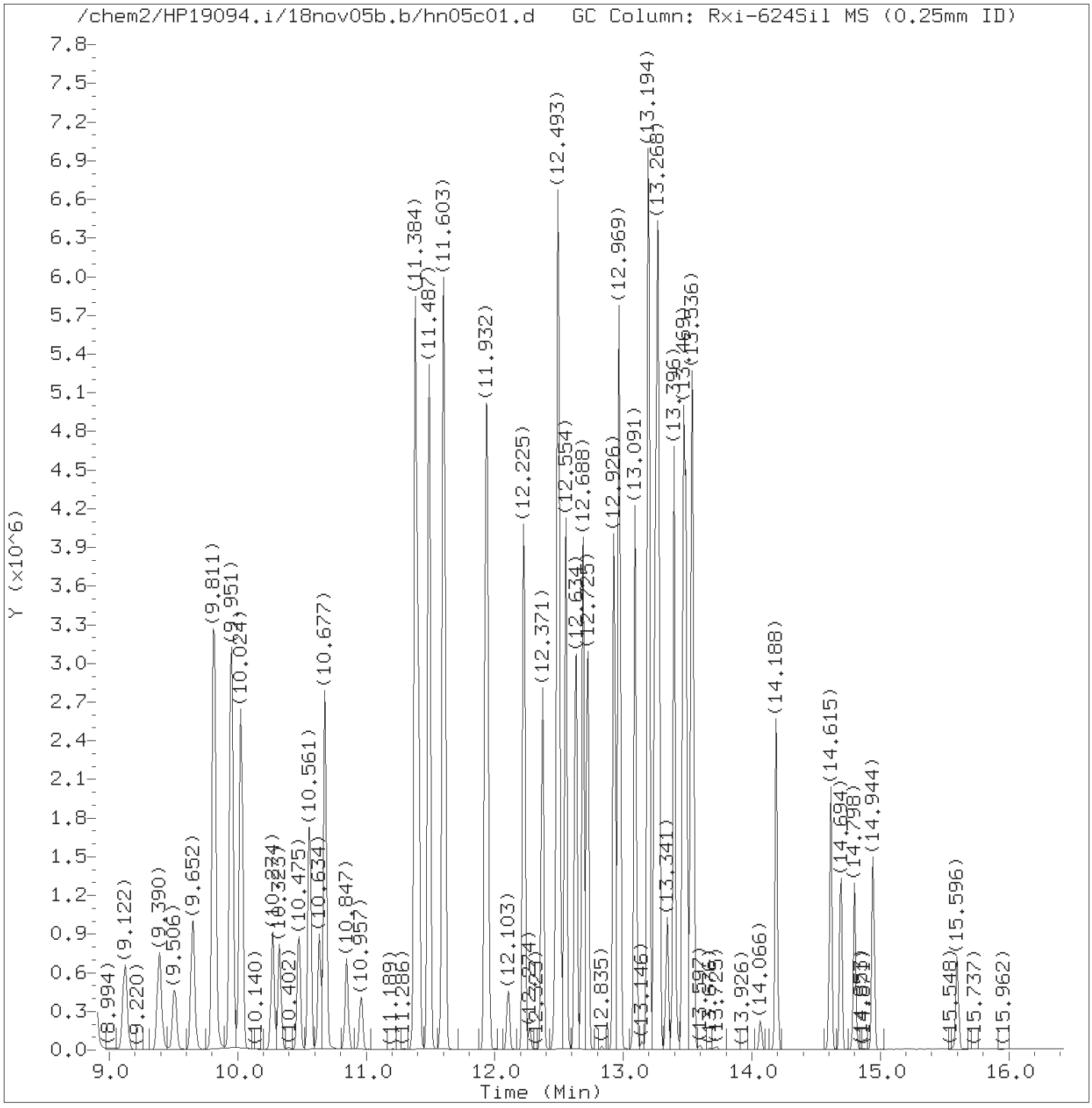
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.075	85	774650	7.753
2) Chloromethane	(2)	2.276	50	757774	7.744
5) Vinyl Chloride	(2)	2.404	62	709141	7.739
6) 1,3-Butadiene	(2)	2.404	39	723880	6.974
7) Bromomethane	(2)	2.739	94	561341	7.880
8) Chloroethane	(2)	2.843	64	429750	7.733
9) Dichlorofluoromethane	(2)	3.093	67	999492	7.561
10) Trichlorofluoromethane	(2)	3.148	101	902136	7.793
11) Ethyl ether	(2)	3.428	59	348492	8.879
12) Freon 123a	(2)	3.519	67	620037	8.454
13) Acrolein	(1)	3.617	56	2419929	443.929
15) 1,1-Dichloroethene	(2)	3.757	96	443407	8.846
16) Freon 113	(2)	3.794	101	475563	8.050
14) Acetone	(1)	3.800	43	565716	77.265
17) Methyl Iodide	(2)	3.971	142	897245	8.587
18) Carbon Disulfide	(2)	4.080	76	1355559	8.499
21) Methyl Acetate	(1)	4.239	43	180454	8.779
22) Allyl Chloride	(2)	4.269	41	841313	8.829
23) Methylene Chloride	(2)	4.464	84	471736	8.342
26)*t-Butyl Alcohol-d10	(1)	4.483	65	122842M	50.000
28) t-Butyl Alcohol	(1)	4.617	59	374572M	178.639
29) Acrylonitrile	(1)	4.818	53	437472	46.266
30) Methyl Tertiary Butyl Ether	(2)	4.873	73	916837	8.893
31) trans-1,2-Dichloroethene	(2)	4.891	96	489815	8.658
32) n-Hexane	(2)	5.312	57	743404	8.264
33) 1,1-Dichloroethane	(2)	5.556	63	965618	8.965
34) di-Isopropyl Ether	(2)	5.598	45	1683700	8.802
35) 2-Chloro-1,3-Butadiene	(2)	5.659	53	879032	9.069
40) 1,2-Dichloroethene (Total)	(2)		96	1046961	17.571
37) Ethyl t-butyl ether	(2)	6.135	59	1306041M	8.608
38) 2-Butanone	(1)	6.348	43	1141782	95.267
39) cis-1,2-Dichloroethene	(2)	6.379	96	557146	8.913
41) 2,2-Dichloropropane	(2)	6.397	77	688303	8.947
42) Propionitrile	(1)	6.446	54	651671	200.319
45) Methacrylonitrile	(1)	6.659	67	1091619	93.061
47) Bromochloromethane	(2)	6.714	128	231475	8.766
48) Tetrahydrofuran	(1)	6.720	71	298857	93.795
49) Chloroform	(2)	6.860	83	887167	8.859

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.074	113	616523	9.568
50)$Dibromofluoromethane	(2)	7.080	111	630812	9.511
51) 1,1,1-Trichloroethane	(2)	7.092	97	741684	8.658
52) Cyclohexane	(2)	7.189	56	934029	8.353
52) Cyclohexane	(2)	7.189	84	761922	8.264
52) Cyclohexane	(2)	7.183	69	277220	8.412
54) Carbon Tetrachloride	(2)	7.299	117	640305	8.703
55) 1,1-Dichloropropene	(2)	7.299	75	716038	8.815
56) Isobutyl Alcohol	(1)	7.433	41	381831	470.650
57)$1,2-Dichloroethane-d4	(2)	7.531	102	110711	9.856
57)$1,2-Dichloroethane-d4	(2)	7.531	65	548516	10.096
57)$1,2-Dichloroethane-d4	(2)	7.543	104	70572	9.809
58) Benzene	(2)	7.567	78	2116507	8.820
59) 1,2-Dichloroethane	(2)	7.641	62	469475M	8.501
60) t-Amyl methyl ether	(2)	7.744	73	1081152	8.595
62) n-Heptane	(2)	7.970	43	774002	8.345
63)*Fluorobenzene	(2)	7.970	96	2556545	10.000
65) n-Butanol	(1)	8.311	56	675794	985.966
67) Trichloroethene	(2)	8.445	95	541755	8.817
69) Methylcyclohexane	(2)	8.750	83	941356	8.113
70) 1,2-Dichloropropane	(2)	8.781	63	521114	8.951
71) Methyl Methacrylate	(1)	8.854	69	205697M	9.474
72) 1,4-Dioxane	(1)	8.866	88	84962M	514.834
73) Dibromomethane	(2)	8.896	93	215725	8.928
74) Bromodichloromethane	(2)	9.122	83	590957	9.029
76) 2-Nitropropane	(1)	9.390	41	624165M	101.484
80) cis-1,3-Dichloropropene	(2)	9.646	75	700941	9.198
81) 4-Methyl-2-Pentanone	(1)	9.811	43	2845952M	95.463
82)$Toluene-d8	(3)	9.951	98	2484692	10.342
82)$Toluene-d8	(3)	9.951	100	1586567	10.232
83) Toluene	(3)	10.024	92	1298349	9.373
85) 1,3-Dichloropropene (total)	(3)		75	1231701	19.142
84) trans-1,3-Dichloropropene	(3)	10.274	75	530760	9.944
86) Ethyl Methacrylate	(3)	10.323	69	457524	10.005
88) 1,1,2-Trichloroethane	(3)	10.475	97	300552	9.429
89) Tetrachloroethene	(3)	10.561	166	572684	9.150
90) 1,3-Dichloropropane	(3)	10.634	76	533524	9.444
91) 2-Hexanone	(1)	10.677	43	1921932M	94.709

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	371289	9.719
95) 1,2-Dibromoethane	(3)	10.957	107	285829	9.567
96) 1-Chlorohexane	(3)	11.384	91	738364	8.937
97)*Chlorobenzene-d5	(3)	11.384	117	1866671	10.000
98) Chlorobenzene	(3)	11.408	112	1377499	9.373
100) Ethylbenzene	(3)	11.487	91	2558955	9.452
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	467210	9.633
101) m+p-Xylene	(3)	11.603	106	1895589	18.877
105) Xylene (Total)	(3)		106	2805690	28.355
104) o-Xylene	(3)	11.926	106	910101	9.480
106) Styrene	(3)	11.945	104	1499081	9.760
107) Bromoform	(3)	12.103	173	202824	9.660
108) Isopropylbenzene	(3)	12.225	105	2460884	9.390
111)$4-Bromofluorobenzene	(3)	12.371	95	857562	9.804
111)$4-Bromofluorobenzene	(3)	12.371	174	735851	9.688
113) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	354977	9.703
114) Bromobenzene	(4)	12.487	156	542848	9.760
115) trans-1,4-Dichloro-2-butene	(1)	12.493	53	876544M	93.876
116) 1,2,3-Trichloropropane	(4)	12.518	110	92470	9.777
117) n-Propylbenzene	(4)	12.554	91	2994665	9.902
119) 2-Chlorotoluene	(4)	12.634	126	569432	9.708
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	2004833	9.786
122) 4-Chlorotoluene	(4)	12.725	126	573261	9.753
125) tert-Butylbenzene	(4)	12.926	134	441481M	9.909
126) Pentachloroethane	(4)	12.963	167	349411	10.048
127) 1,2,4-Trimethylbenzene	(4)	12.969	105	2060526	9.857
128) sec-Butylbenzene	(4)	13.091	105	2636046	9.930
131) 1,3-Dichlorobenzene	(4)	13.194	146	1062339	9.614
132) p-Isopropyltoluene	(4)	13.194	119	2197623	9.994
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	922290	10.000
134) 1,4-Dichlorobenzene	(4)	13.268	146	1030519	9.500
135) 1,2,3-Trimethylbenzene	(4)	13.274	120	907343	9.460
136) Benzyl Chloride	(4)	13.341	126	139400	10.540
138) n-Butylbenzene	(4)	13.487	92	1087102	9.960
139) 1,2-Dichlorobenzene	(4)	13.524	146	907404	9.307
143) 1,2-Dibromo-3-chloropropane	(1)	14.066	155	42745M	8.459
144) 1,3,5-Trichlorobenzene	(4)	14.188	180	748600	9.106
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	576624	8.611

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

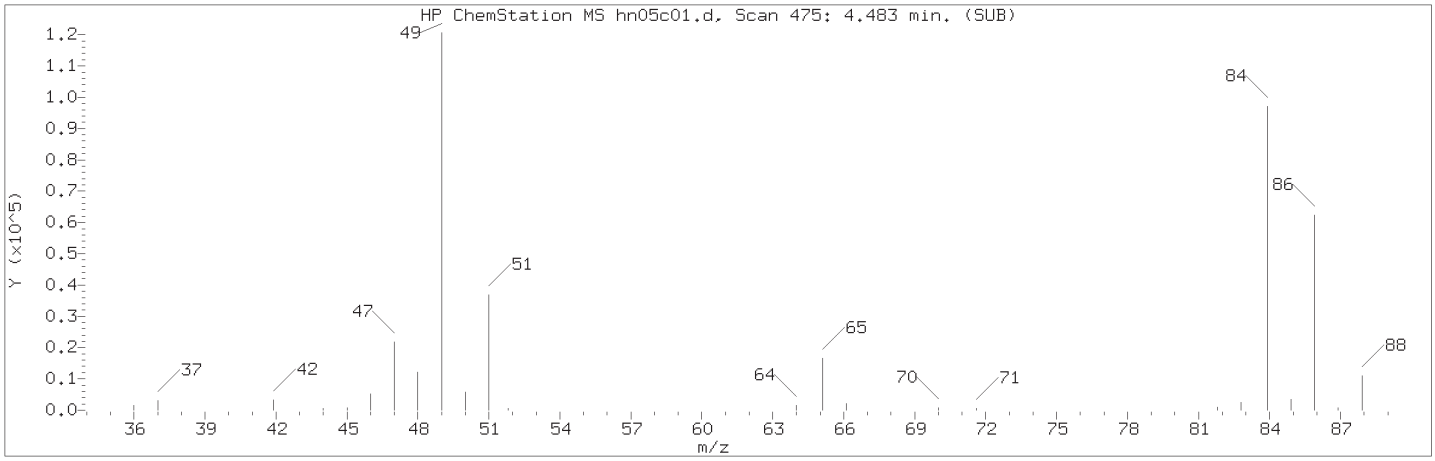
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

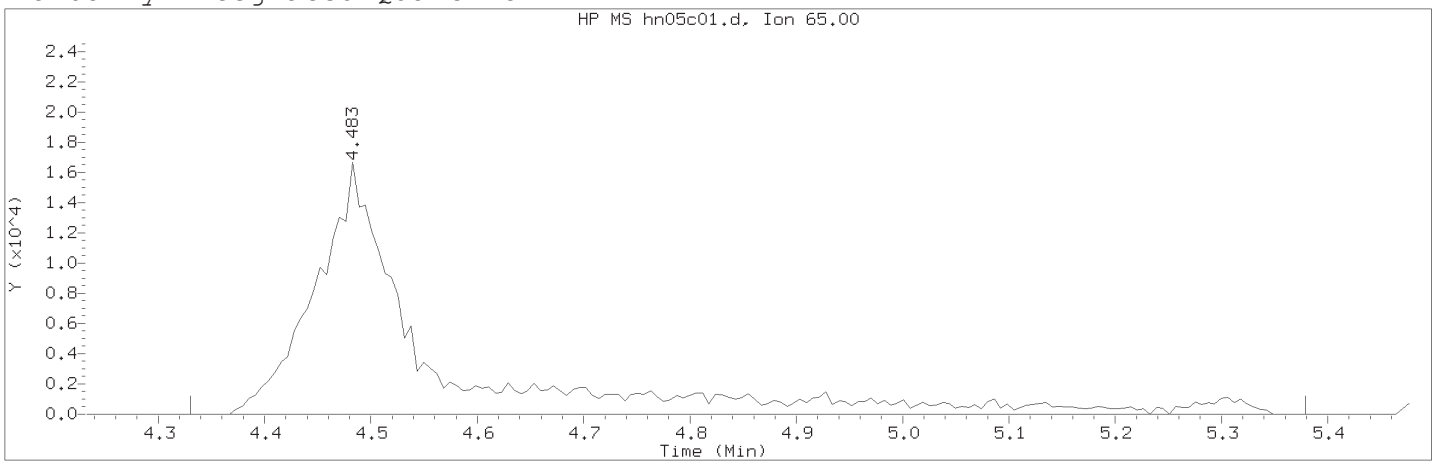
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.694	225	228528	9.029
147) Naphthalene	(4)	14.798	128	914643	8.632
148) 1,2,3-Trichlorobenzene	(4)	14.944	180	452520	8.219

Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

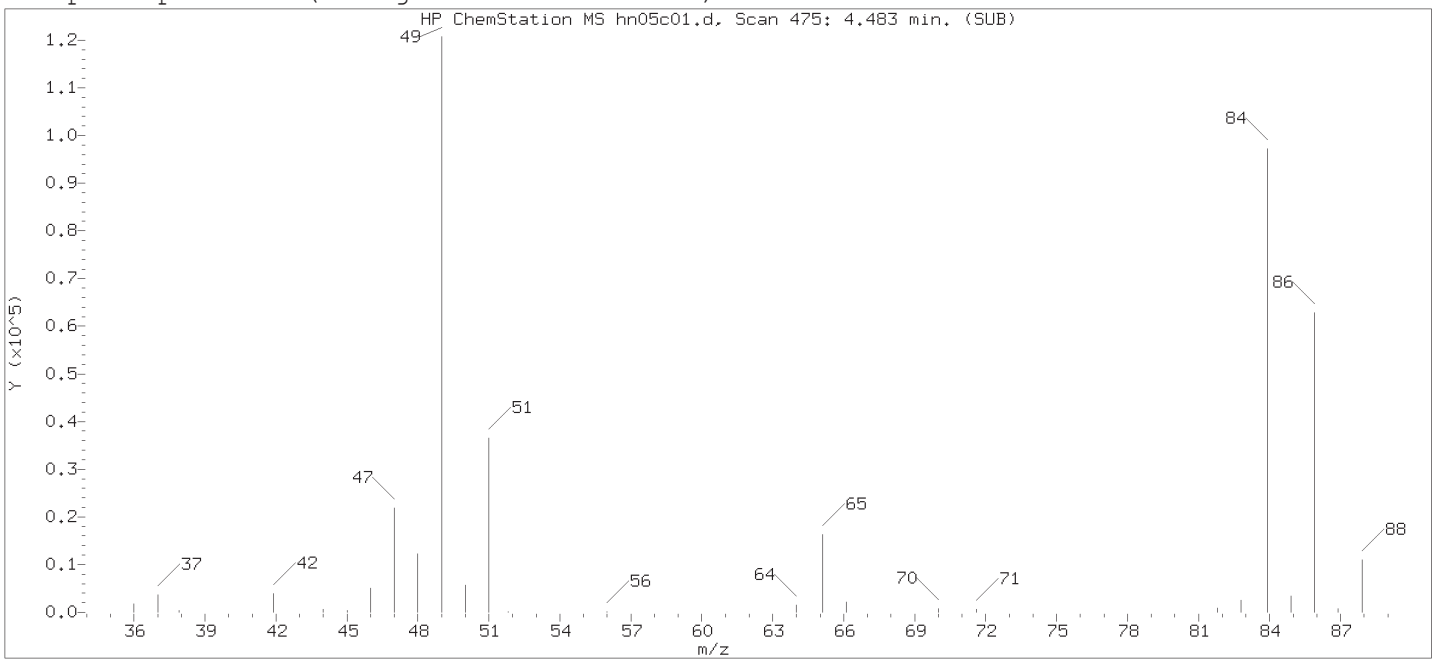
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area (flag) : 122842M
On-Column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 621
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

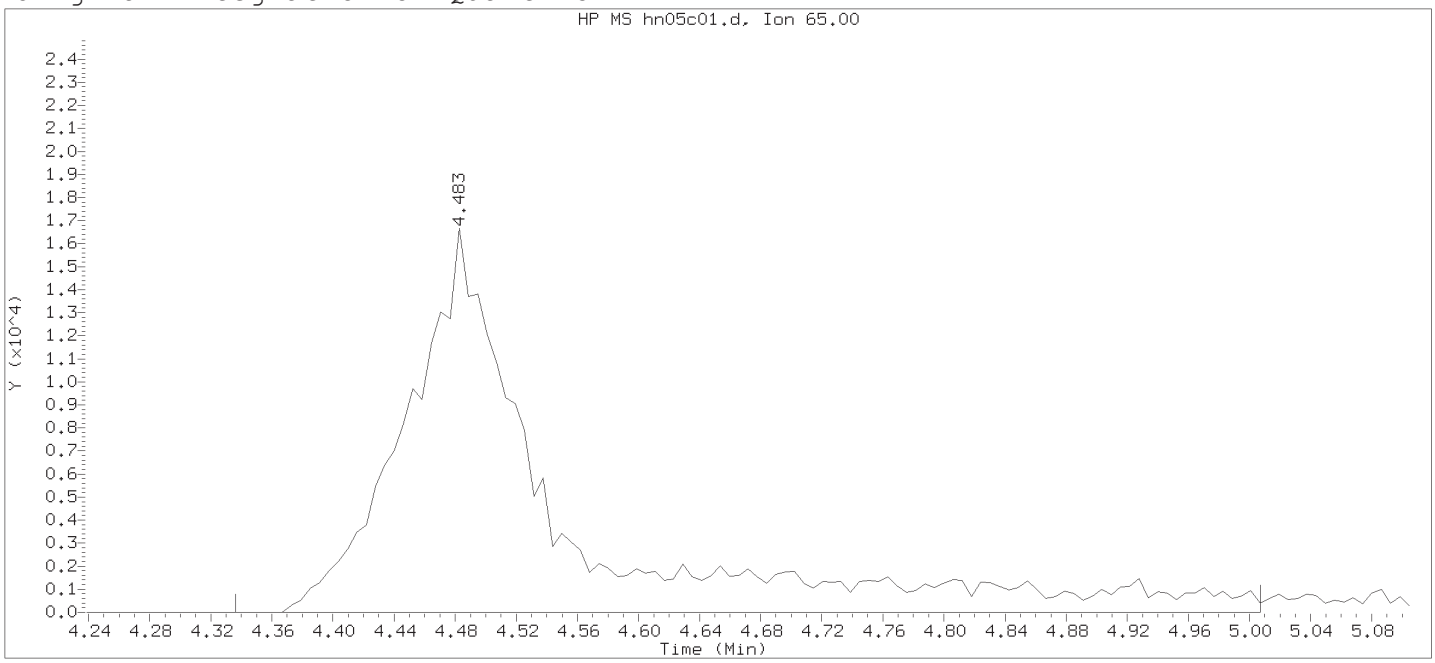
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 13:12.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

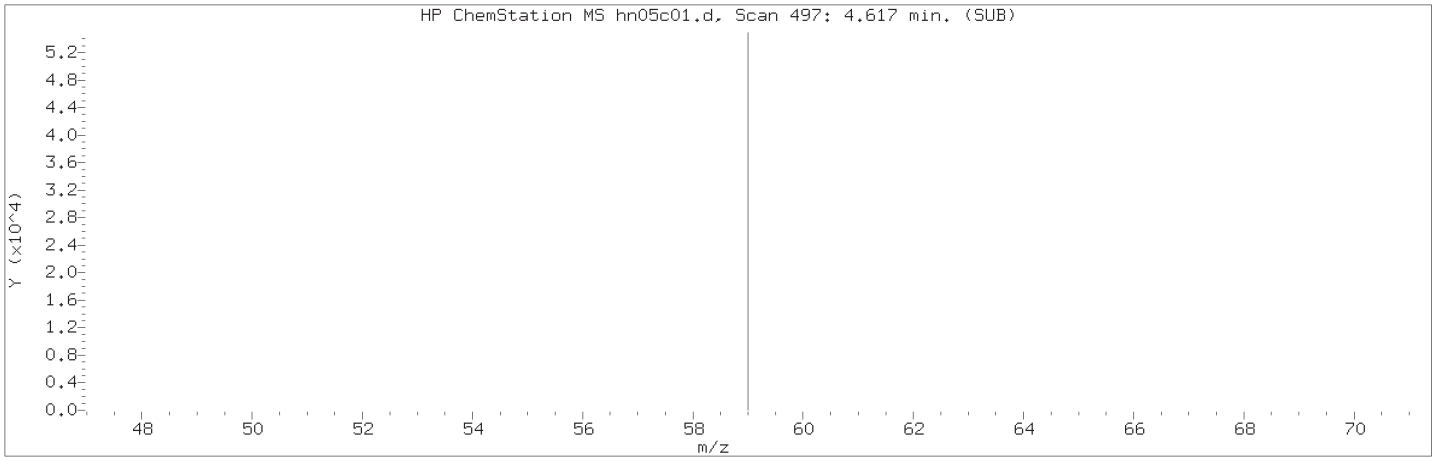
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

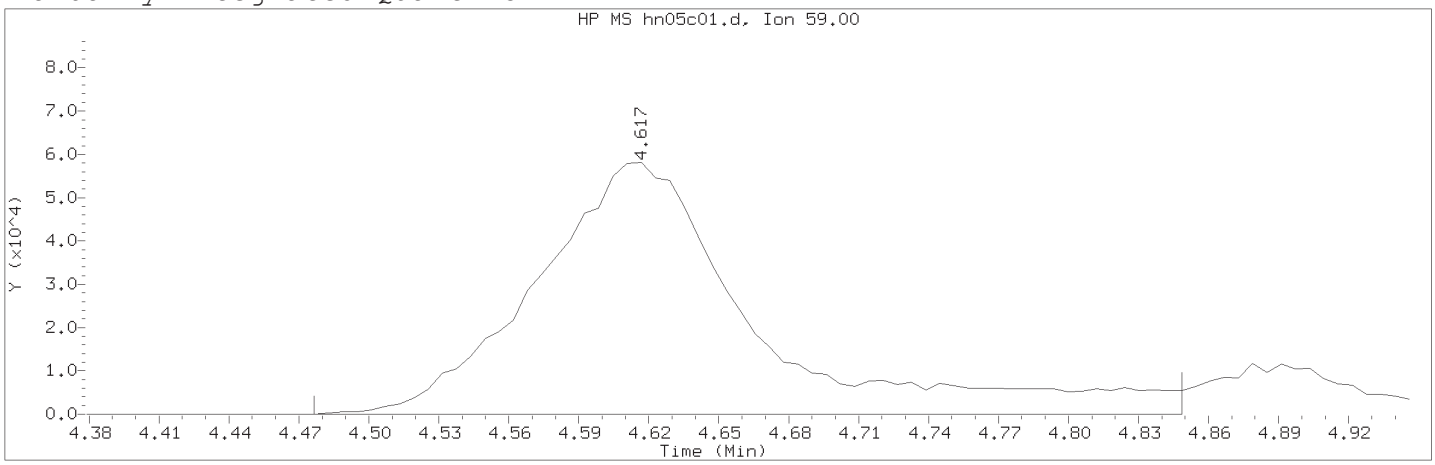
Compound Number	: 26
Compound Name	: t-Butyl Alcohol-d10
Scan Number	: 475
Retention Time (minutes)	: 4.483
Quant Ion	: 65.00
Area	: 111834
On-column Amount (ng)	: 50.0000
Integration start scan	: 450 Integration stop scan: 560
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

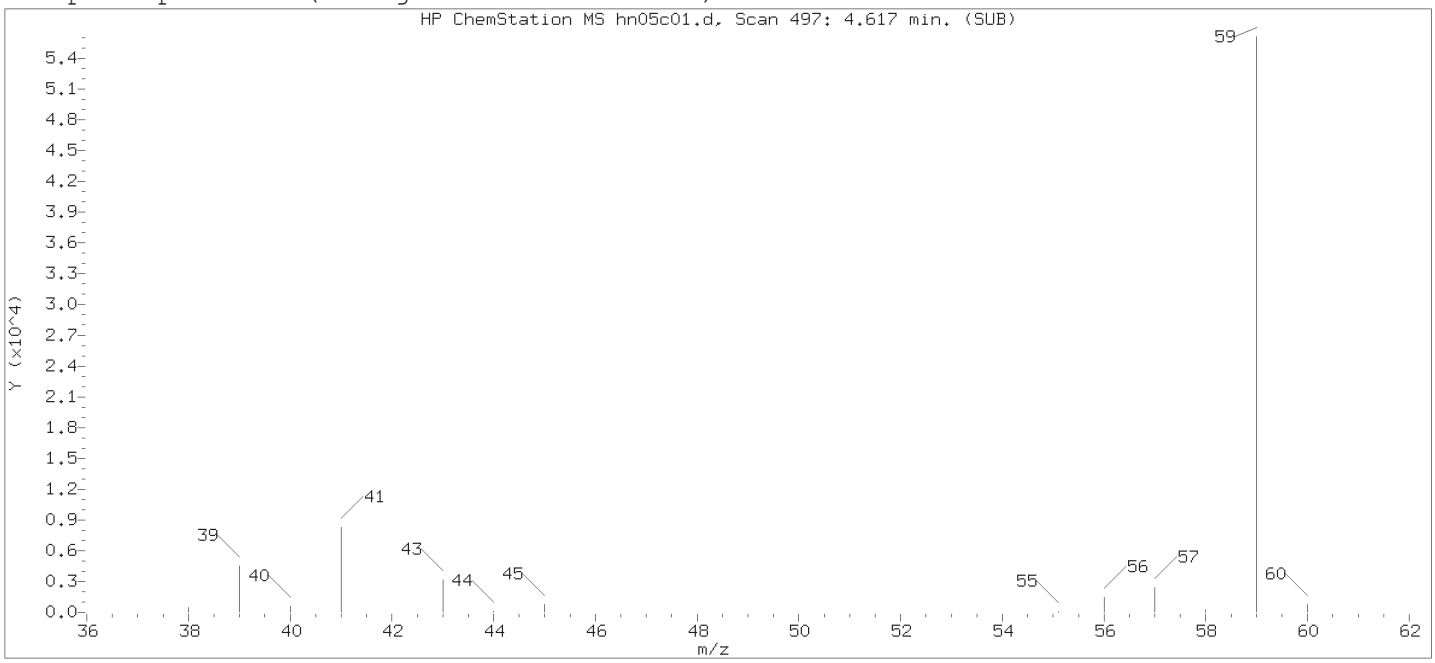
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 497
Retention Time (minutes): 4.617
Quant Ion : 59.00
Area (flag) : 374572M
On-Column Amount (ng) : 178.6394
Integration start scan : 473 Integration stop scan: 534
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

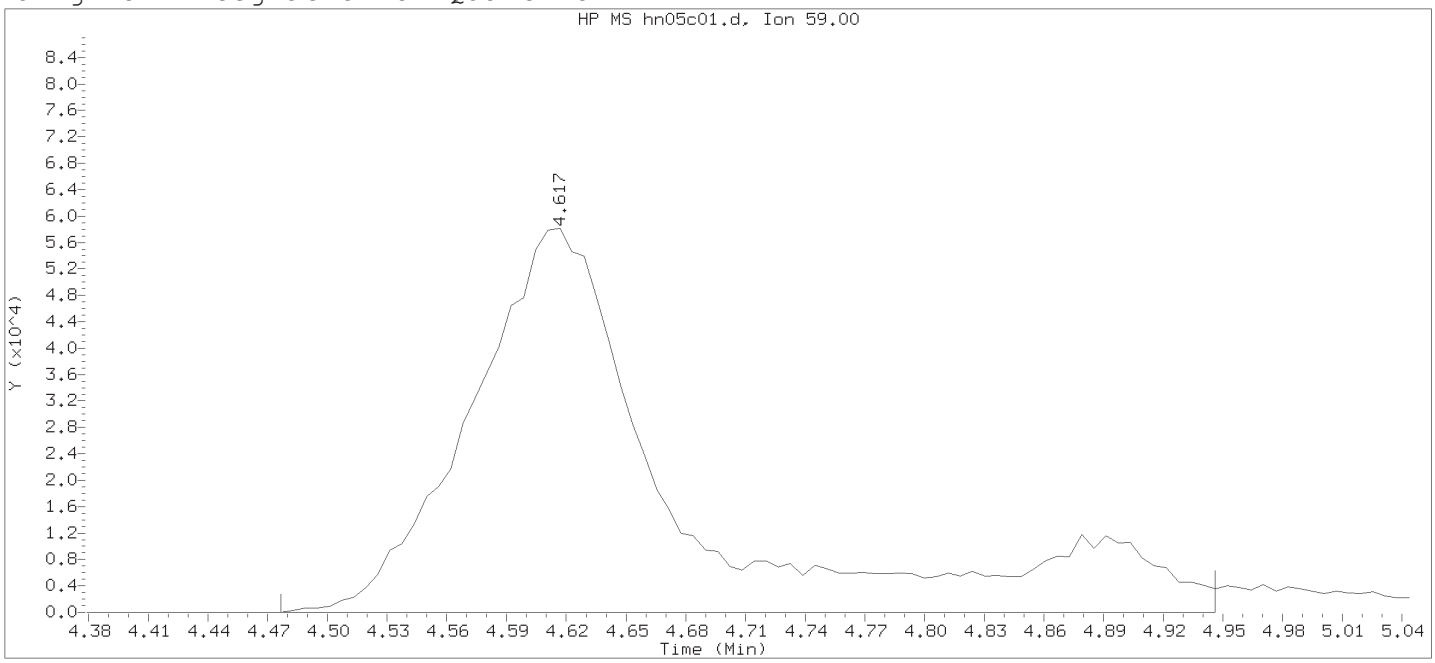
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 13:12.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

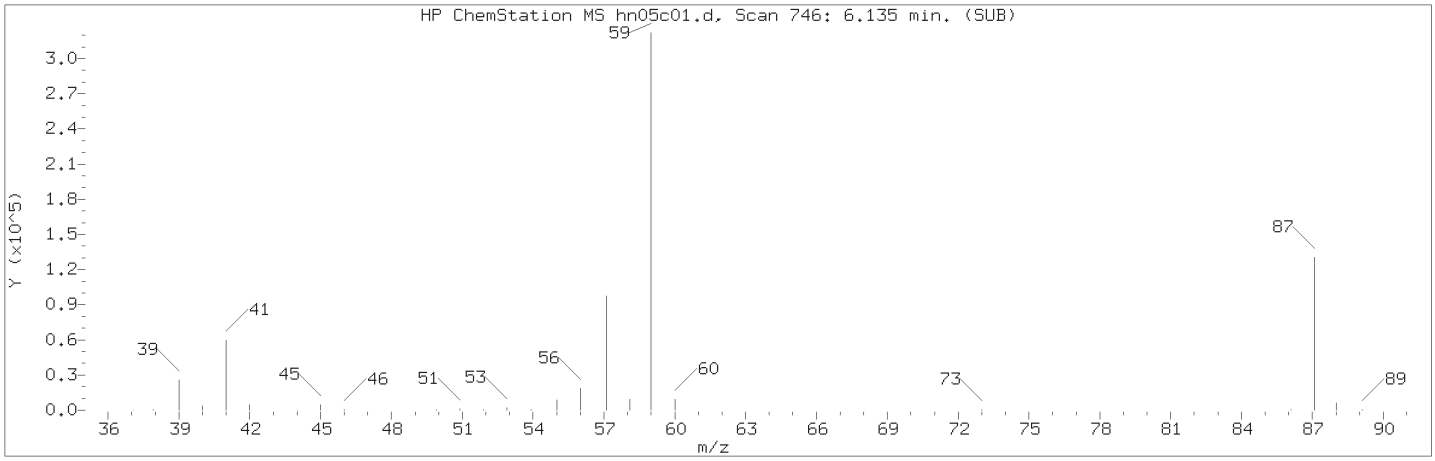
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

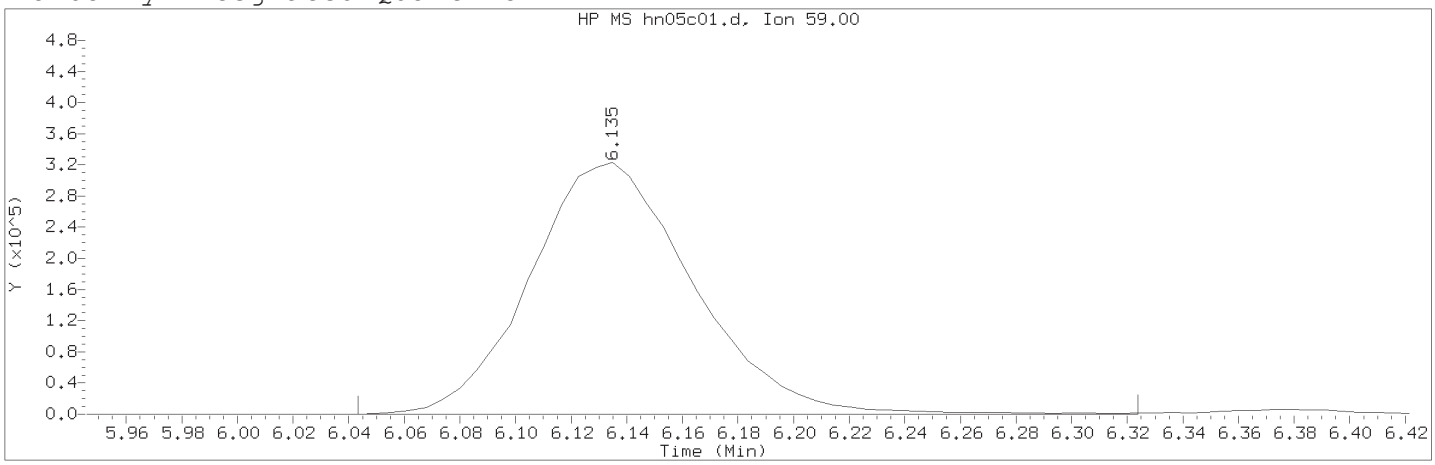
Compound Number	: 28
Compound Name	: t-Butyl Alcohol
Scan Number	: 497
Retention Time (minutes)	: 4.617
Quant Ion	: 59.00
Area	: 419255
On-column Amount (ng)	: 219.6296
Integration start scan	: 473 Integration stop scan: 550
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

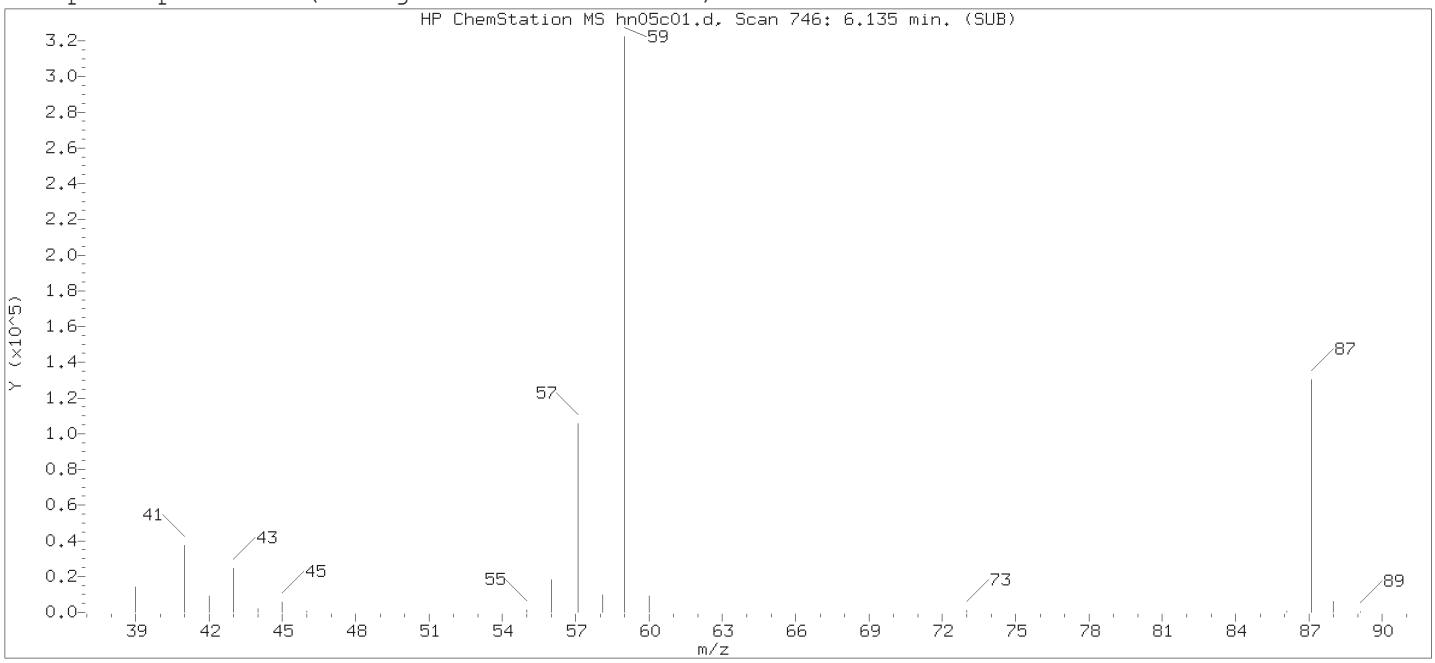
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 746
Retention Time (minutes): 6.135
Quant Ion : 59.00
Area (flag) : 1306041M
On-Column Amount (ng) : 8.6082
Integration start scan : 730 Integration stop scan: 776
Y at integration start : 0 Y at integration end: 363

Reason for manual integration: improper integration

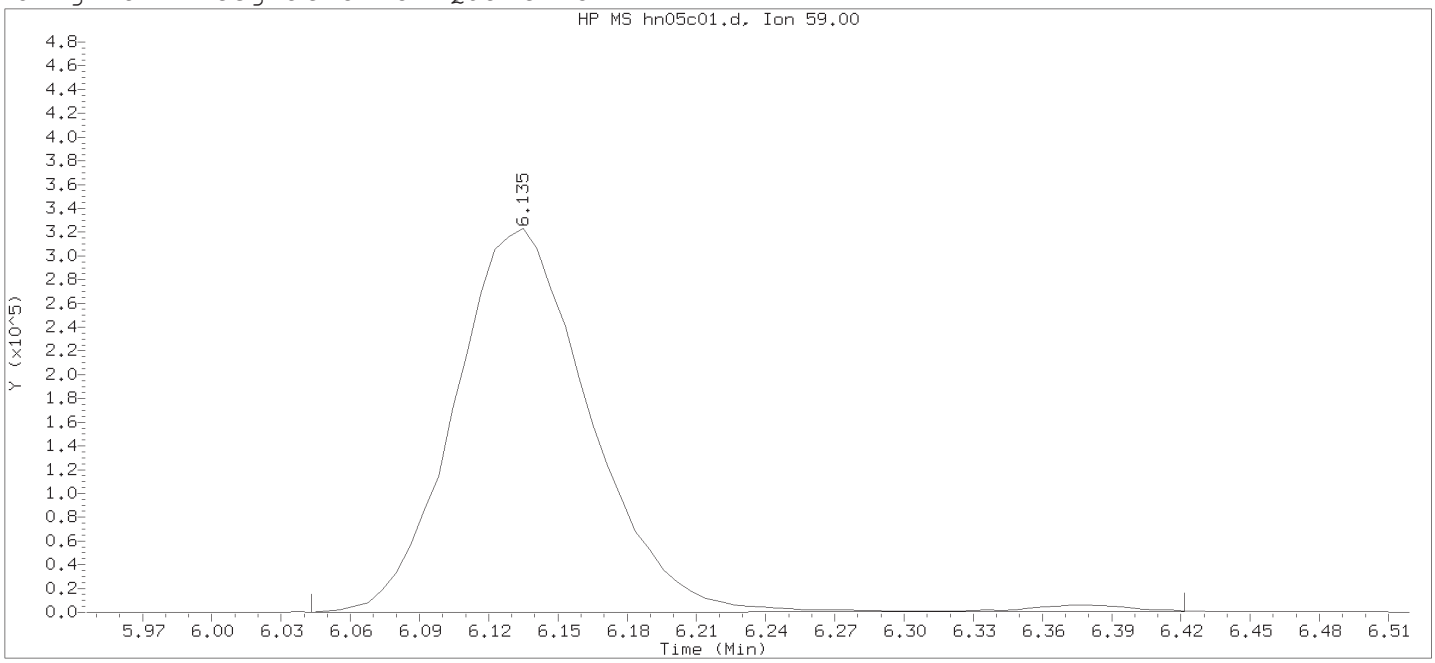
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 13:12.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

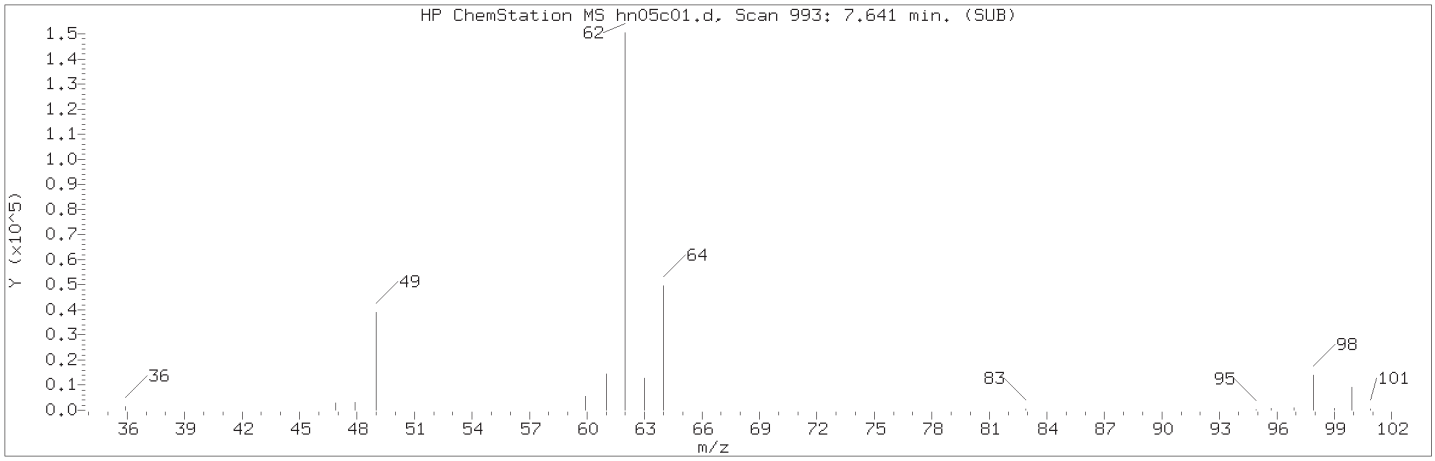
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

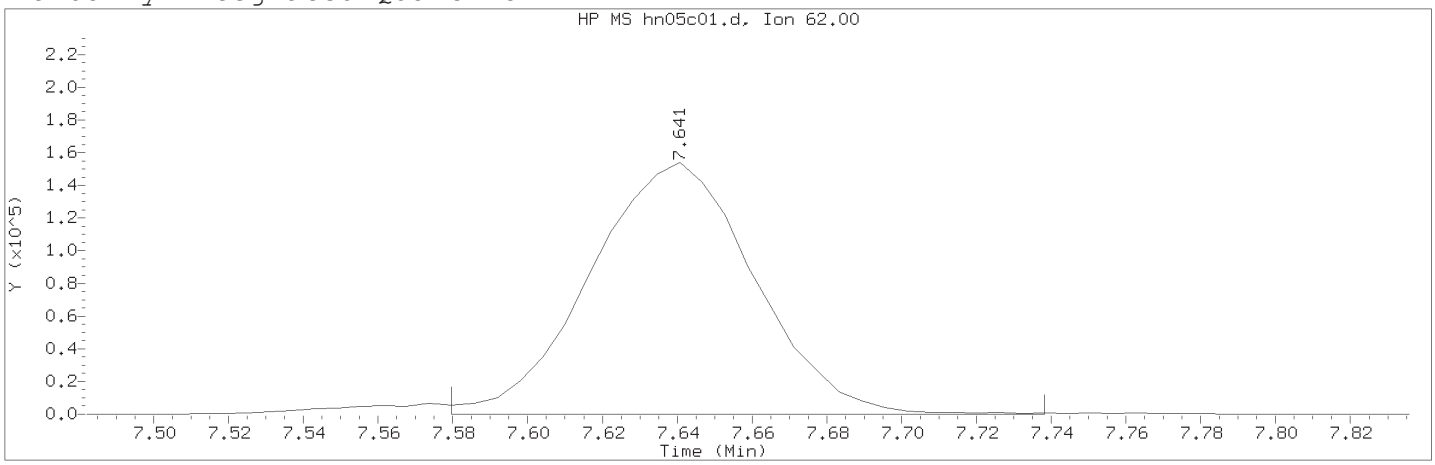
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 746
Retention Time (minutes): 6.135
Quant Ion : 59.00
Area : 1323280
On-column Amount (ng) : 8.7218
Integration start scan : 730 Integration stop scan: 792
Y at integration start : 0 Y at integration end: 490

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

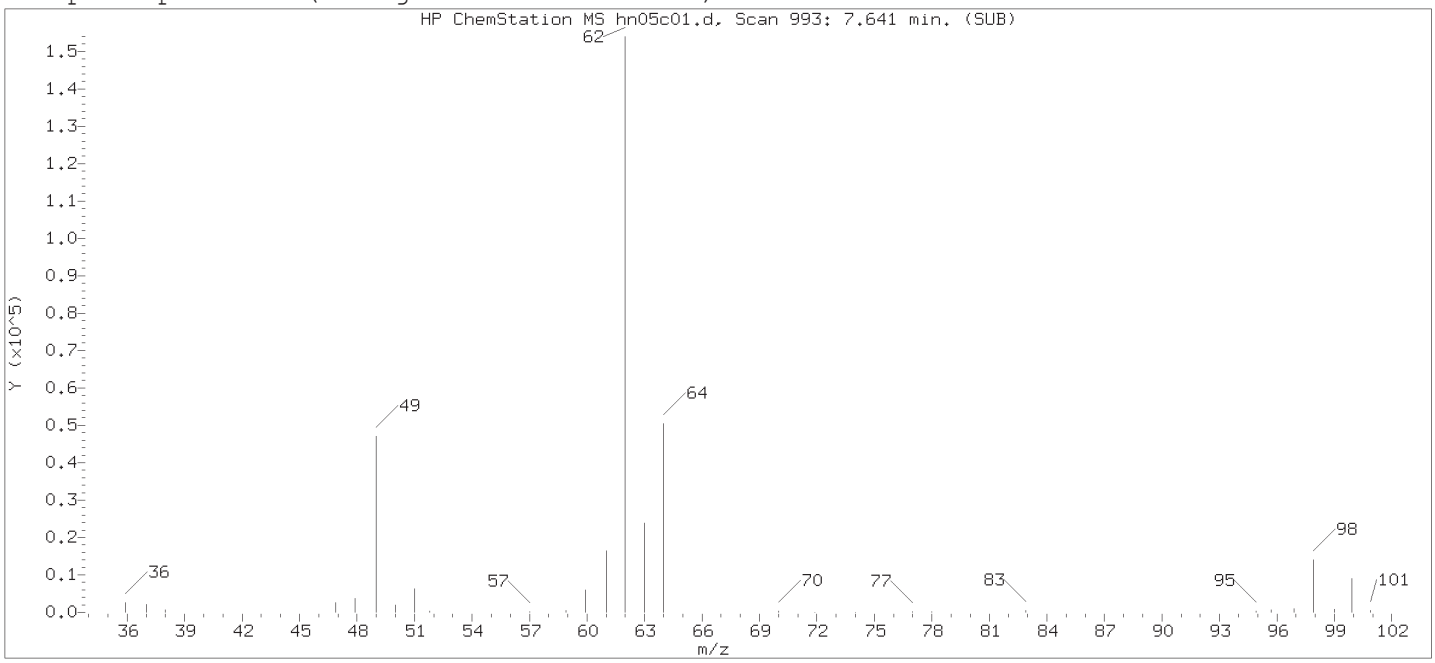
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.641
Quant Ion : 62.00
Area (flag) : 469475M
On-Column Amount (ng) : 8.5012
Integration start scan : 982 Integration stop scan: 1008
Y at integration start : 30 Y at integration end: 30

Reason for manual integration: improper integration

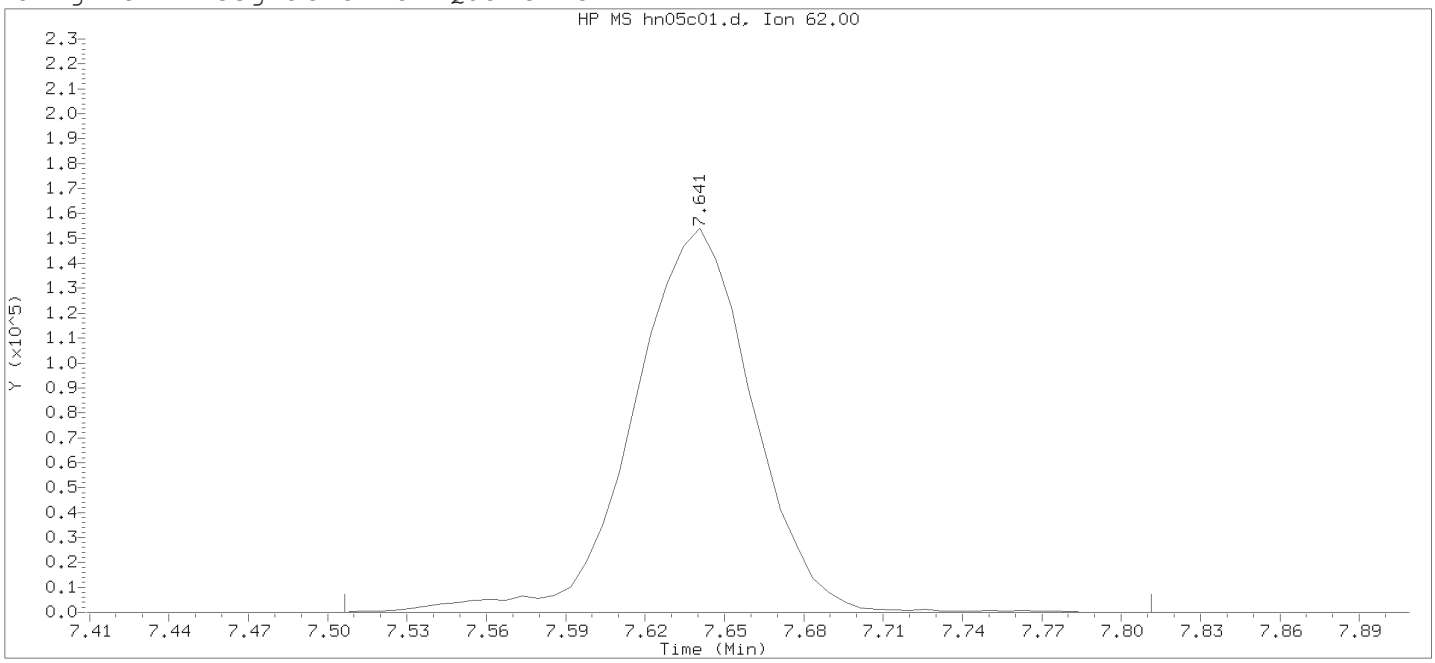
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 13:12.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

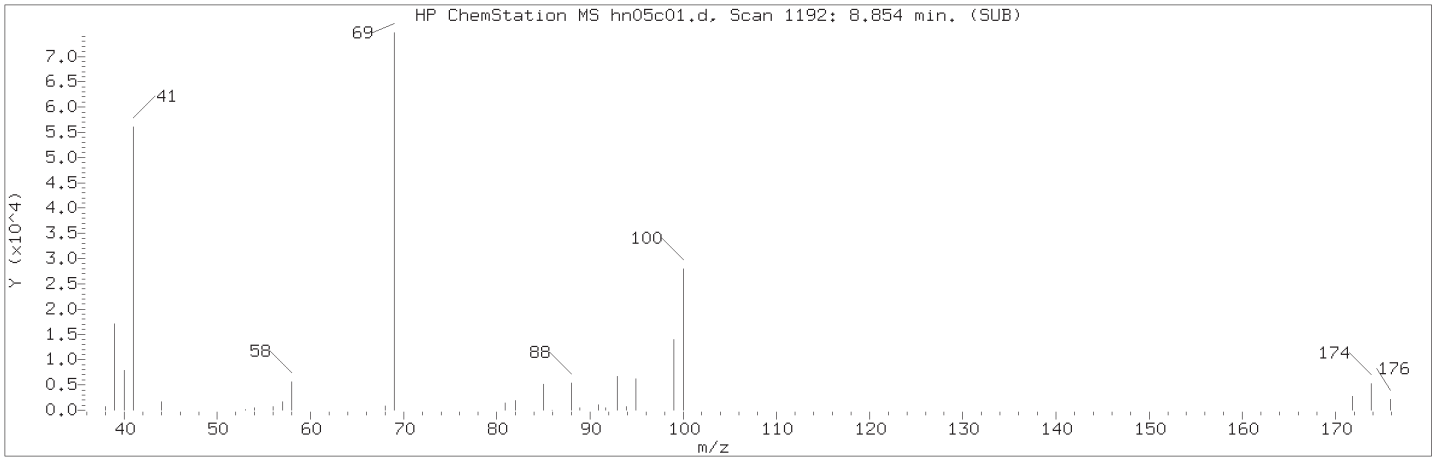
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

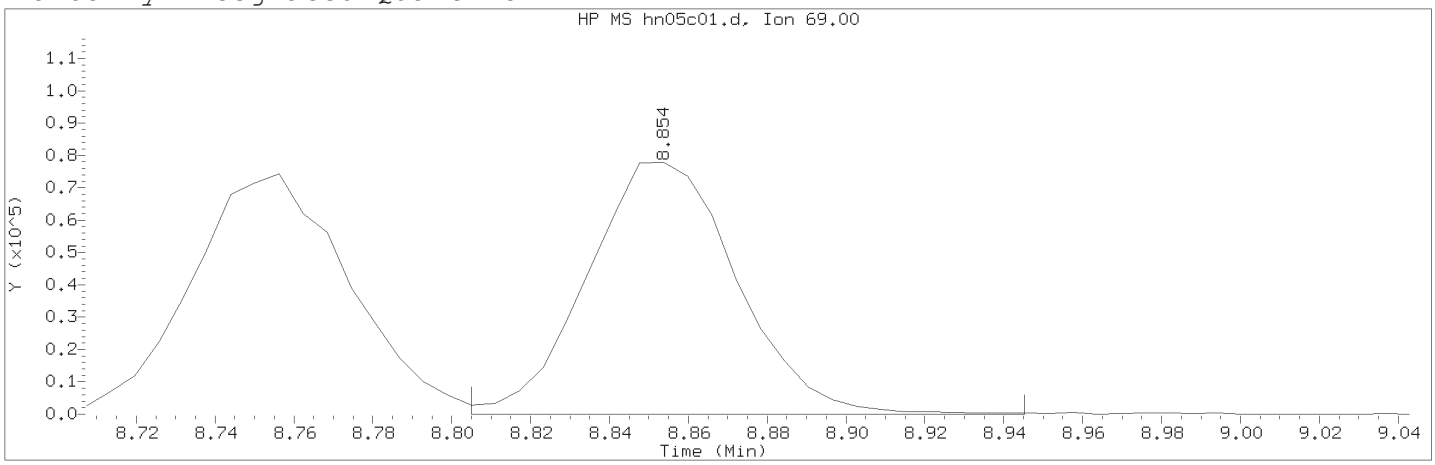
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.641
Quant Ion : 62.00
Area : 483514
On-column Amount (ng) : 8.7554
Integration start scan : 970 Integration stop scan: 1020
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

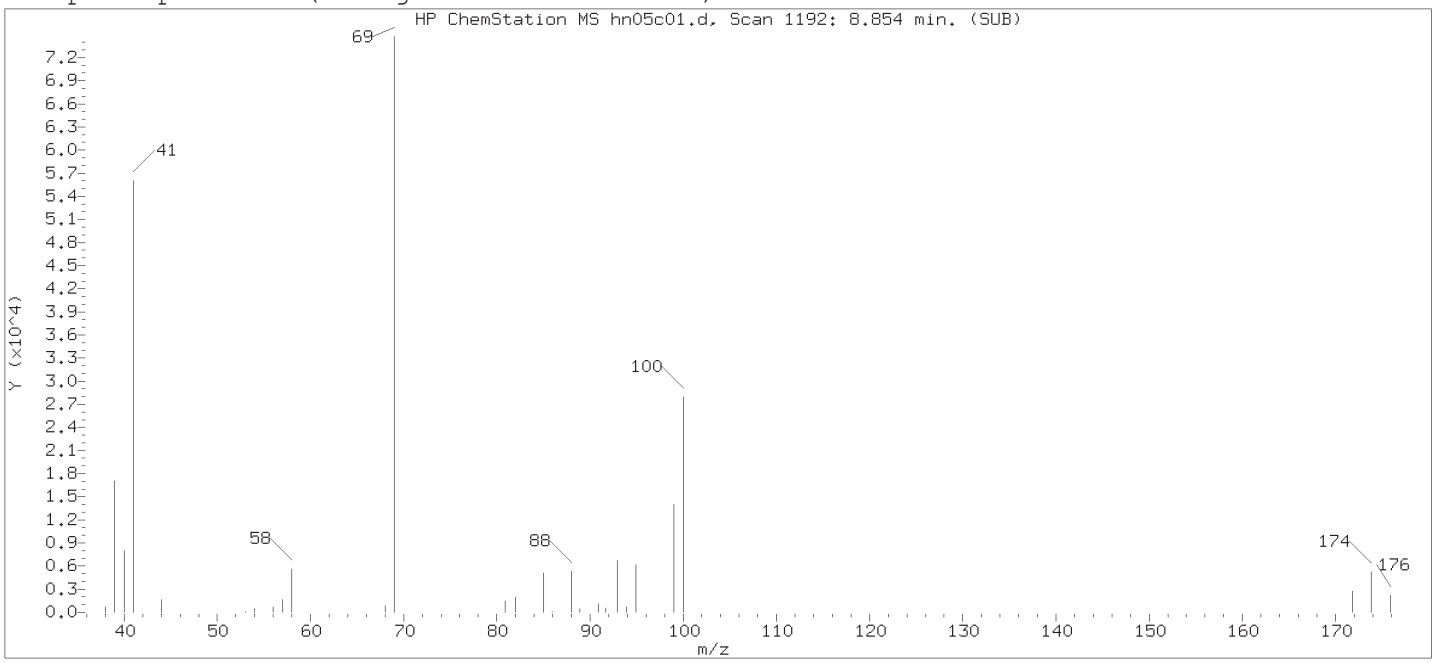
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1192
Retention Time (minutes): 8.854
Quant Ion : 69.00
Area (flag) : 205697M
On-Column Amount (ng) : 9.4738
Integration start scan : 1183 Integration stop scan: 1206
Y at integration start : 7 Y at integration end: 7

Reason for manual integration: improper integration

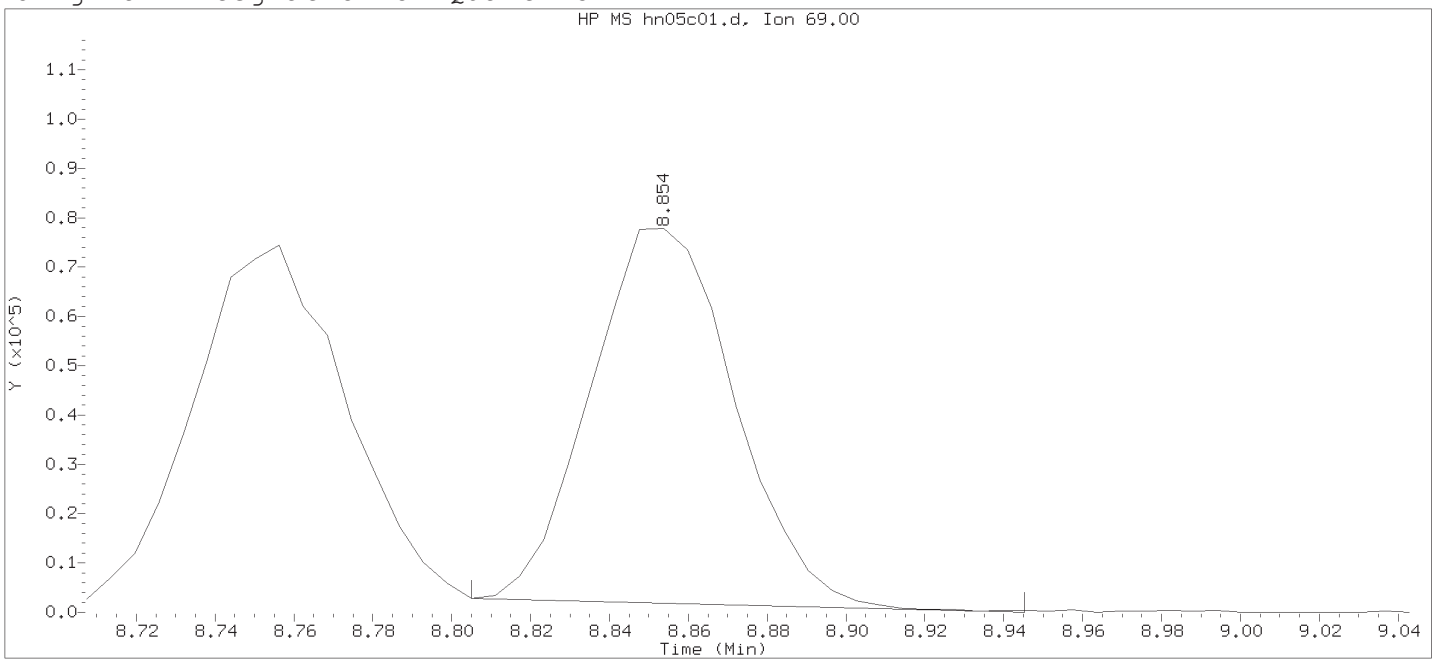
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 13:12.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

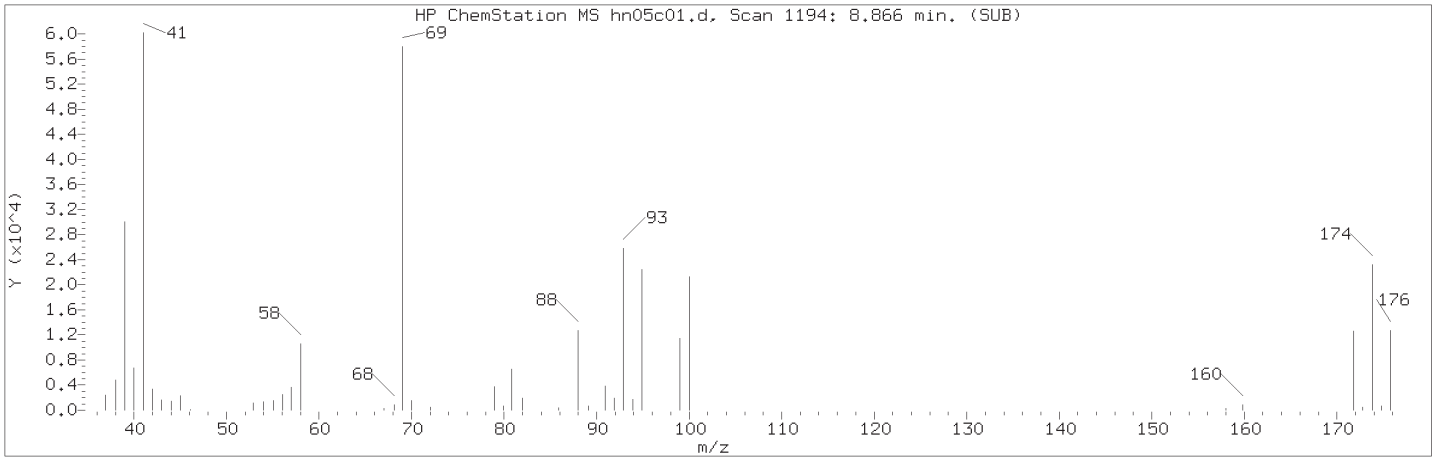
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

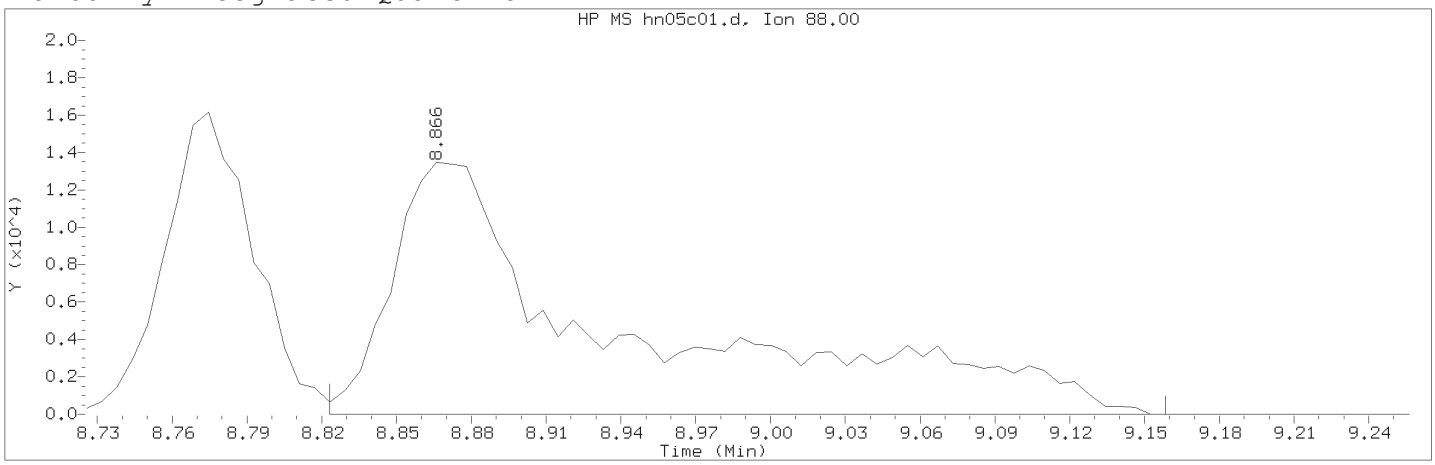
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1192
Retention Time (minutes): 8.854
Quant Ion : 69.00
Area : 193439
On-column Amount (ng) : 9.7861
Integration start scan : 1183 Integration stop scan: 1206
Y at integration start : 2793 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

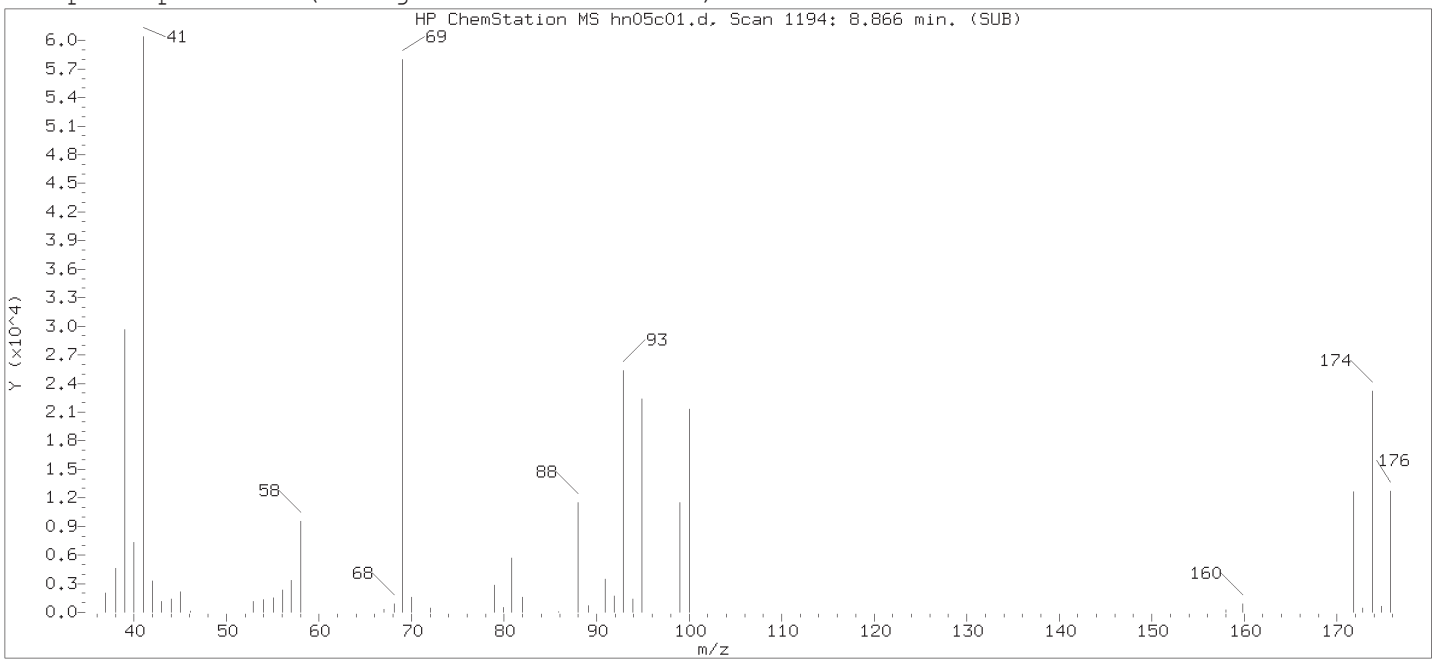
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1194
Retention Time (minutes): 8.866
Quant Ion : 88.00
Area (flag) : 84962M
On-Column Amount (ng) : 514.8339
Integration start scan : 1186 Integration stop scan: 1241
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

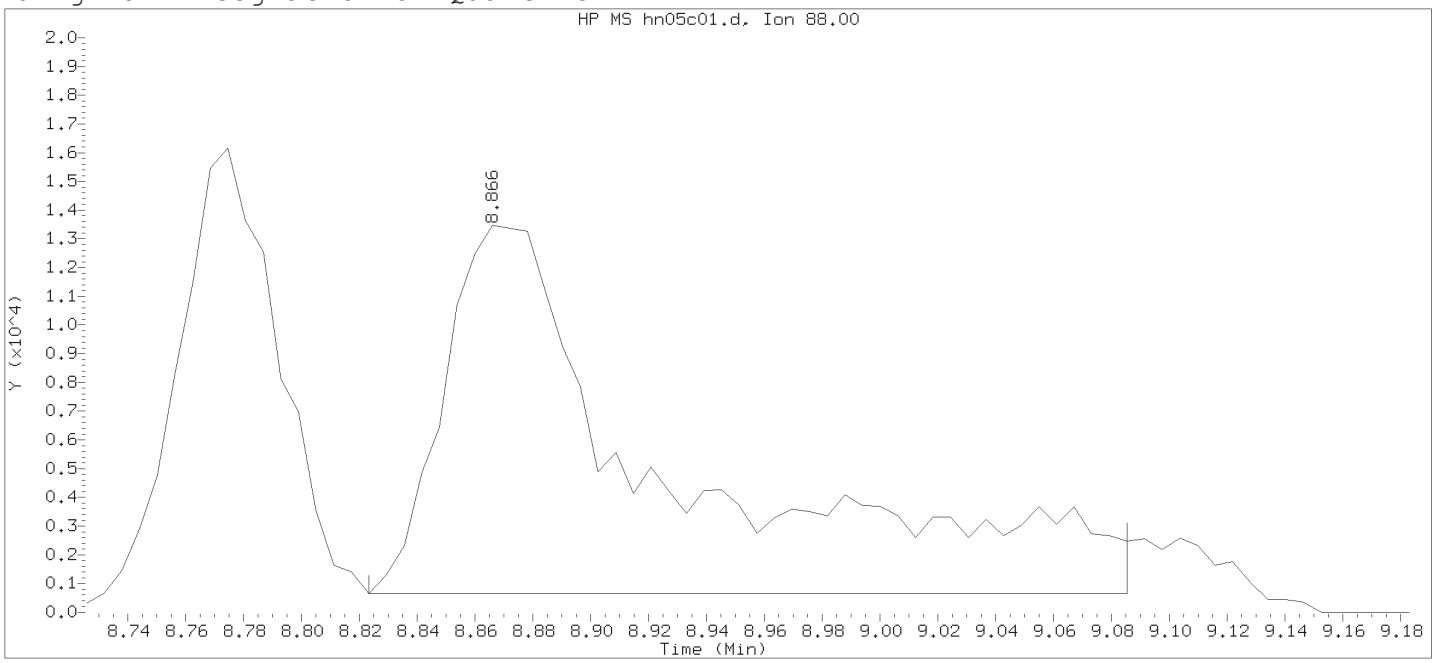
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 13:12.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

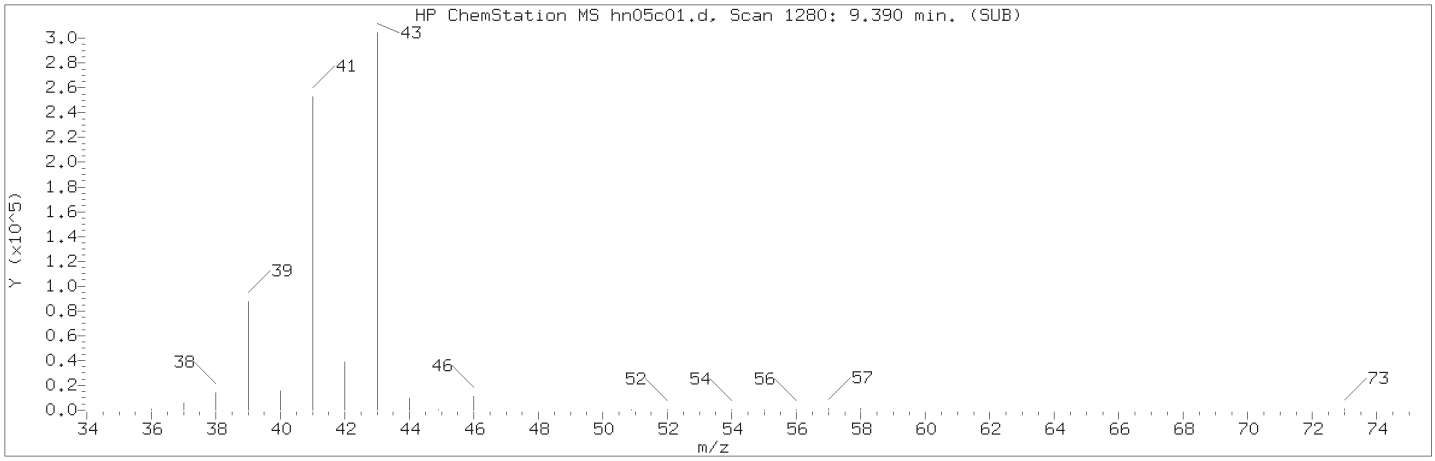
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

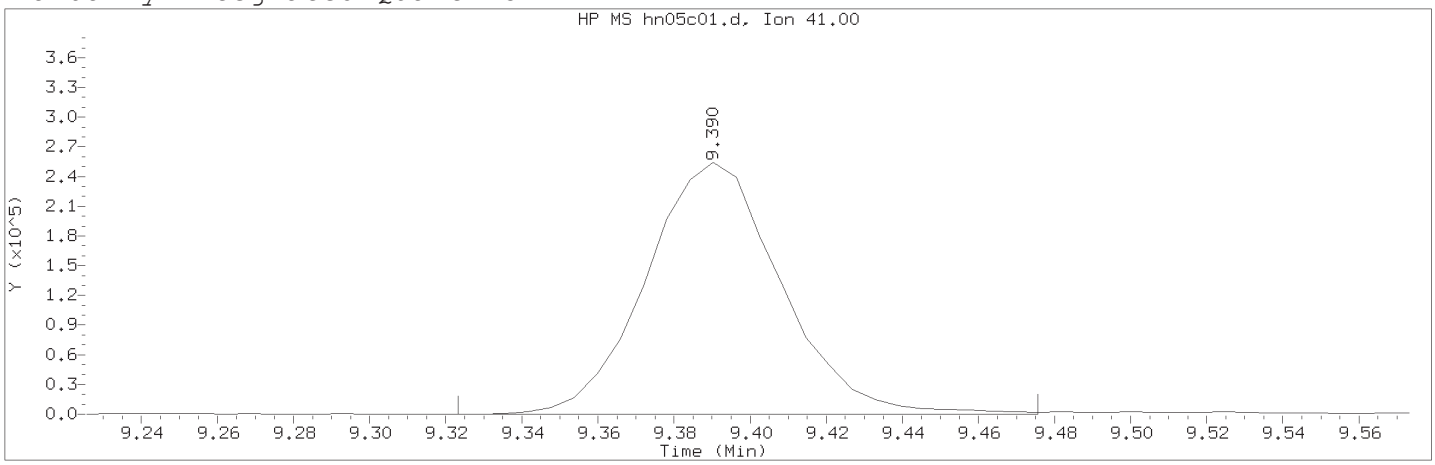
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1194
Retention Time (minutes): 8.866
Quant Ion : 88.00
Area : 68616
On-column Amount (ng) : 456.7133
Integration start scan : 1186 Integration stop scan: 1229
Y at integration start : 647 Y at integration end: 647

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

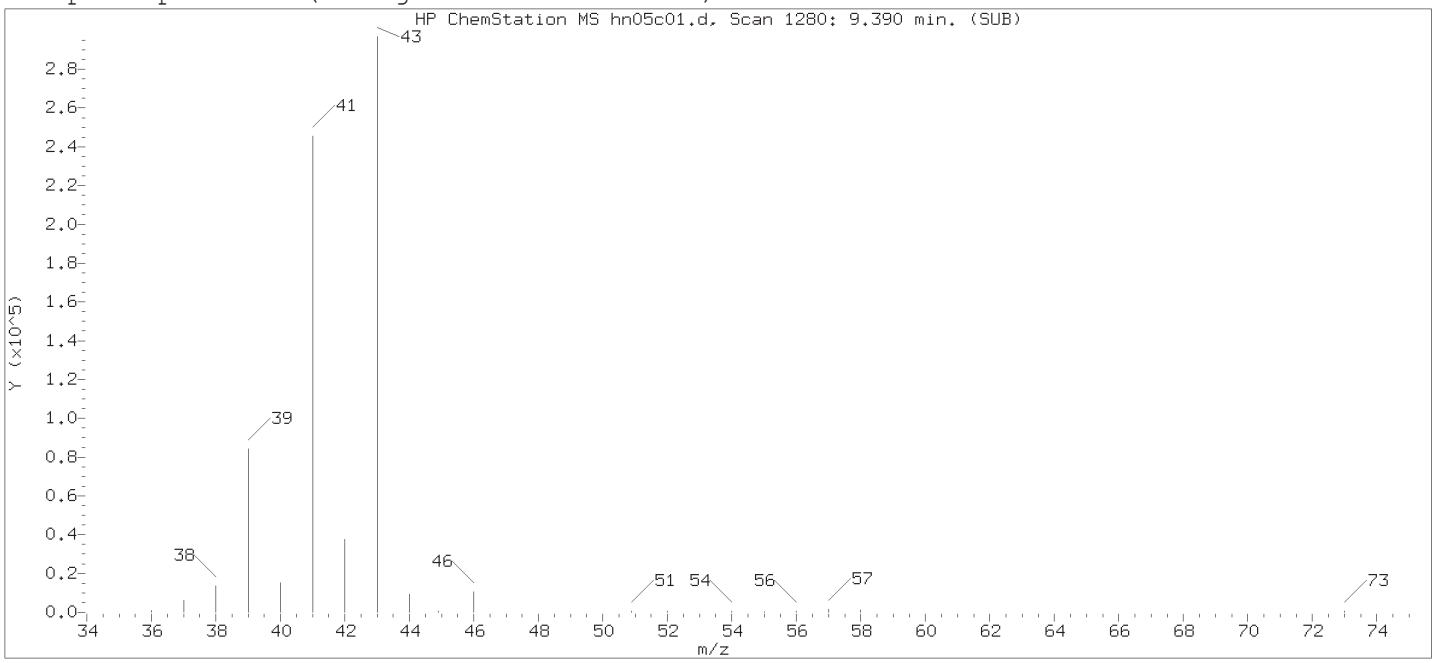
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1280
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area (flag) : 624165M
On-Column Amount (ng) : 101.4844
Integration start scan : 1268 Integration stop scan: 1293
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

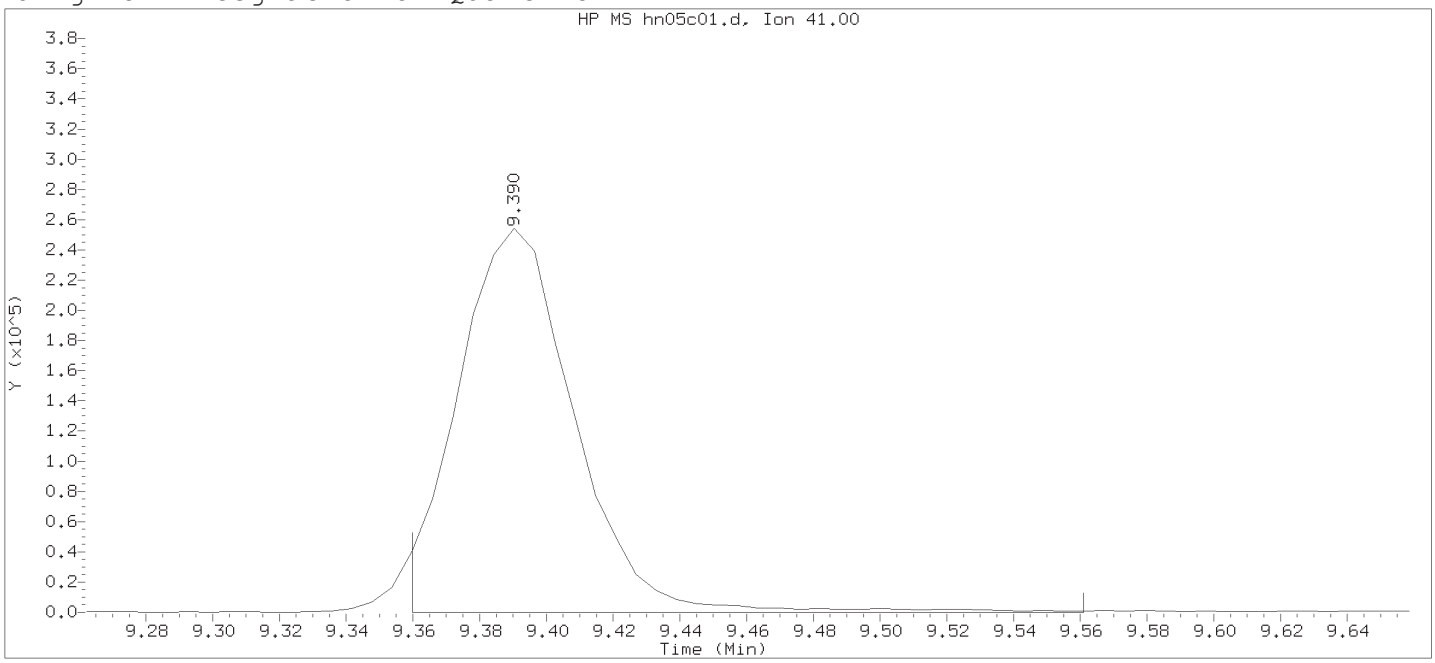
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 13:12.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

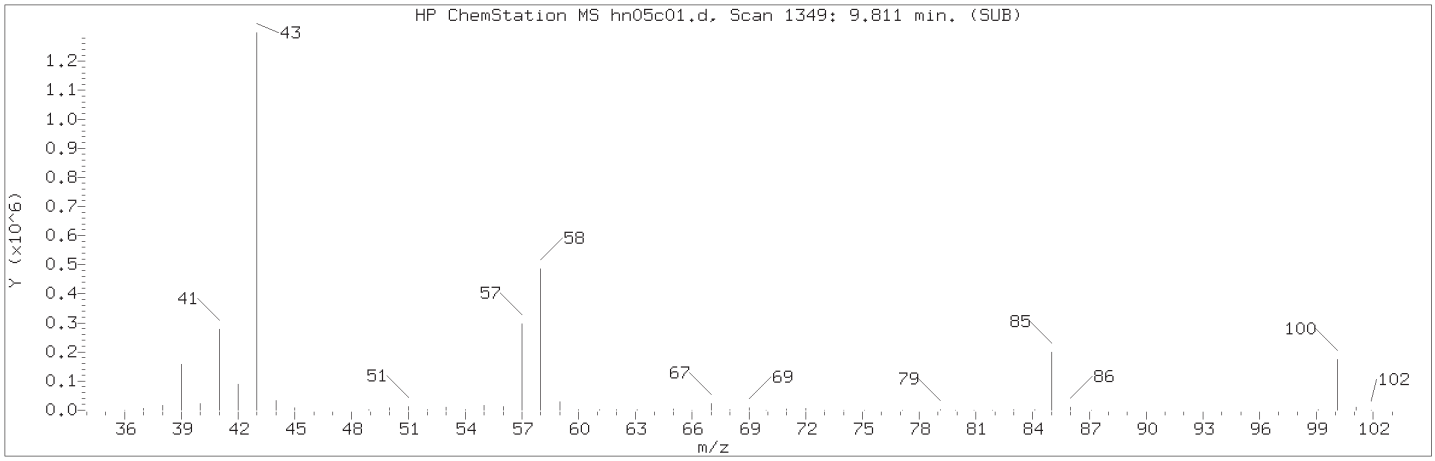
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

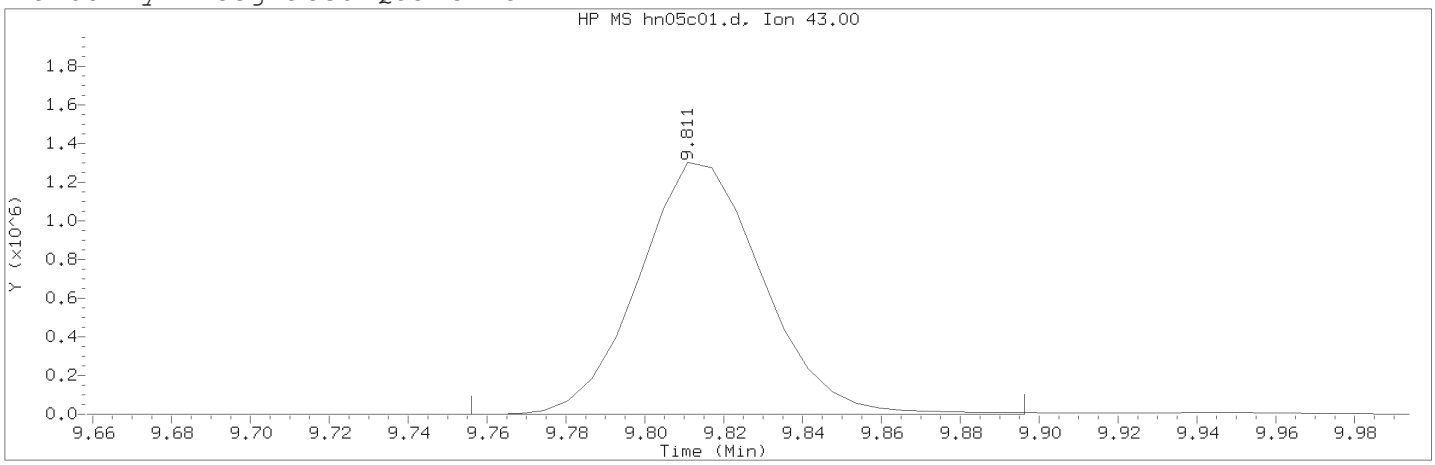
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1280
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area : 615345
On-column Amount (ng) : 109.8977
Integration start scan : 1274 Integration stop scan: 1307
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

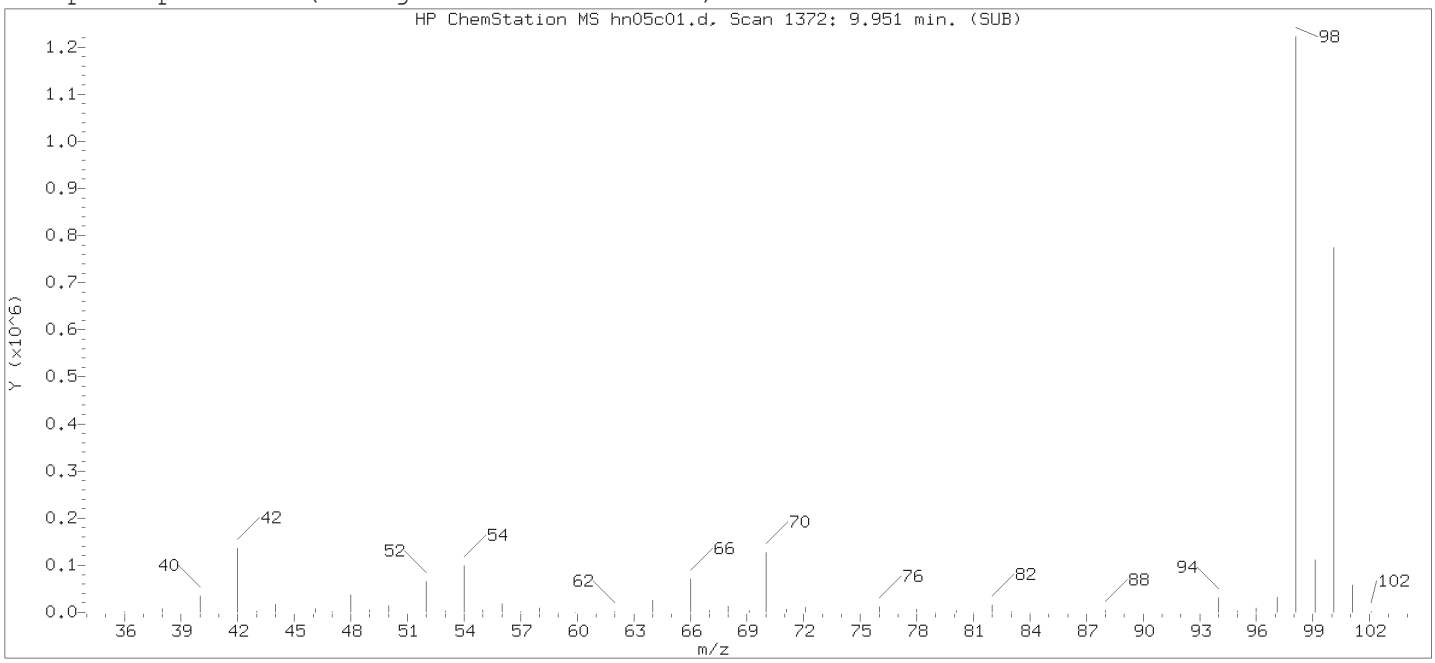
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1349
Retention Time (minutes): 9.811
Quant Ion : 43.00
Area (flag) : 2845952M
On-Column Amount (ng) : 95.4628
Integration start scan : 1339 Integration stop scan: 1362
Y at integration start : 5 Y at integration end: 5

Reason for manual integration: improper integration

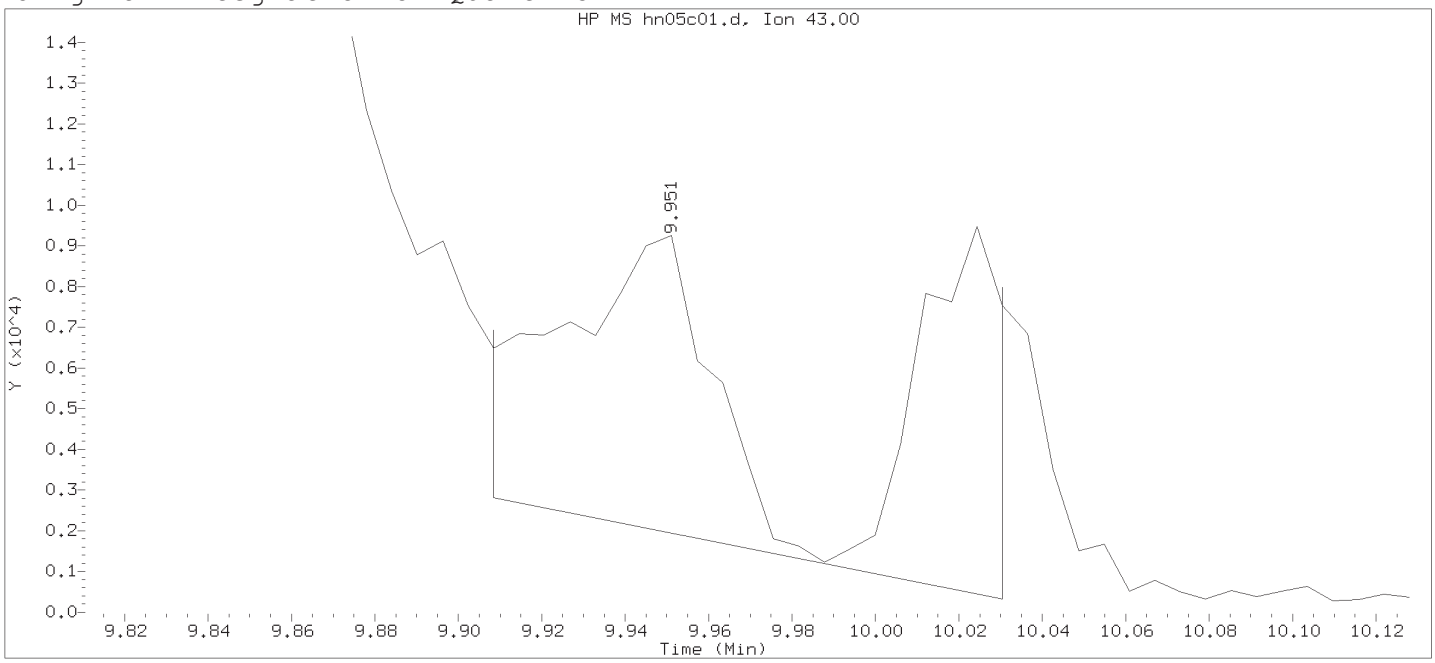
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 13:12.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

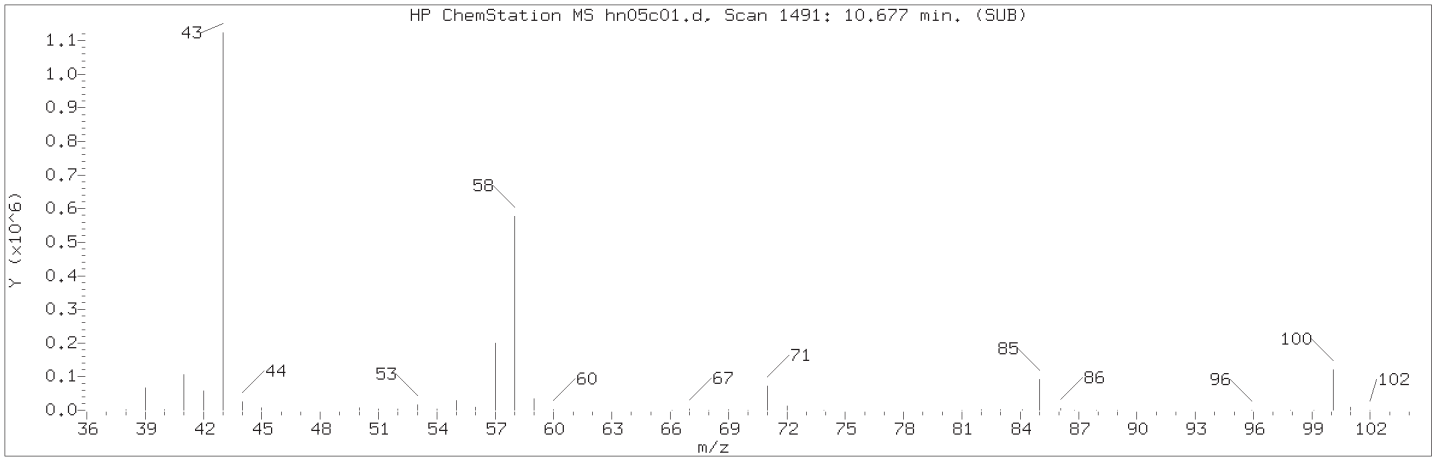
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

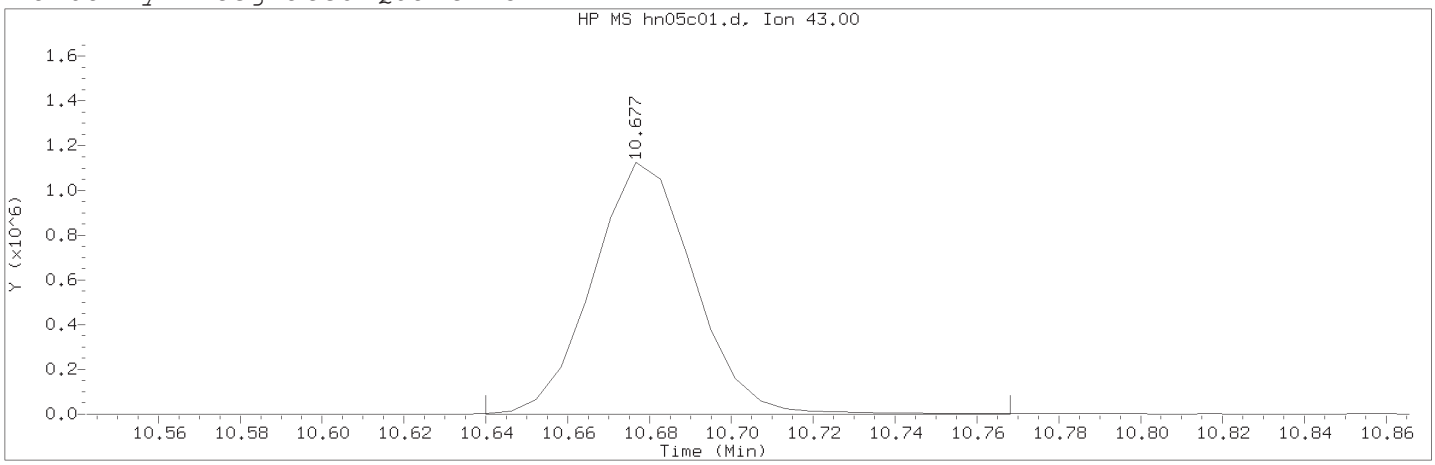
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1372
Retention Time (minutes): 9.951
Quant Ion : 43.00
Area : 30038
On-column Amount (ng) : 1.1068
Integration start scan : 1364 Integration stop scan: 1384
Y at integration start : 2808 Y at integration end: 320

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

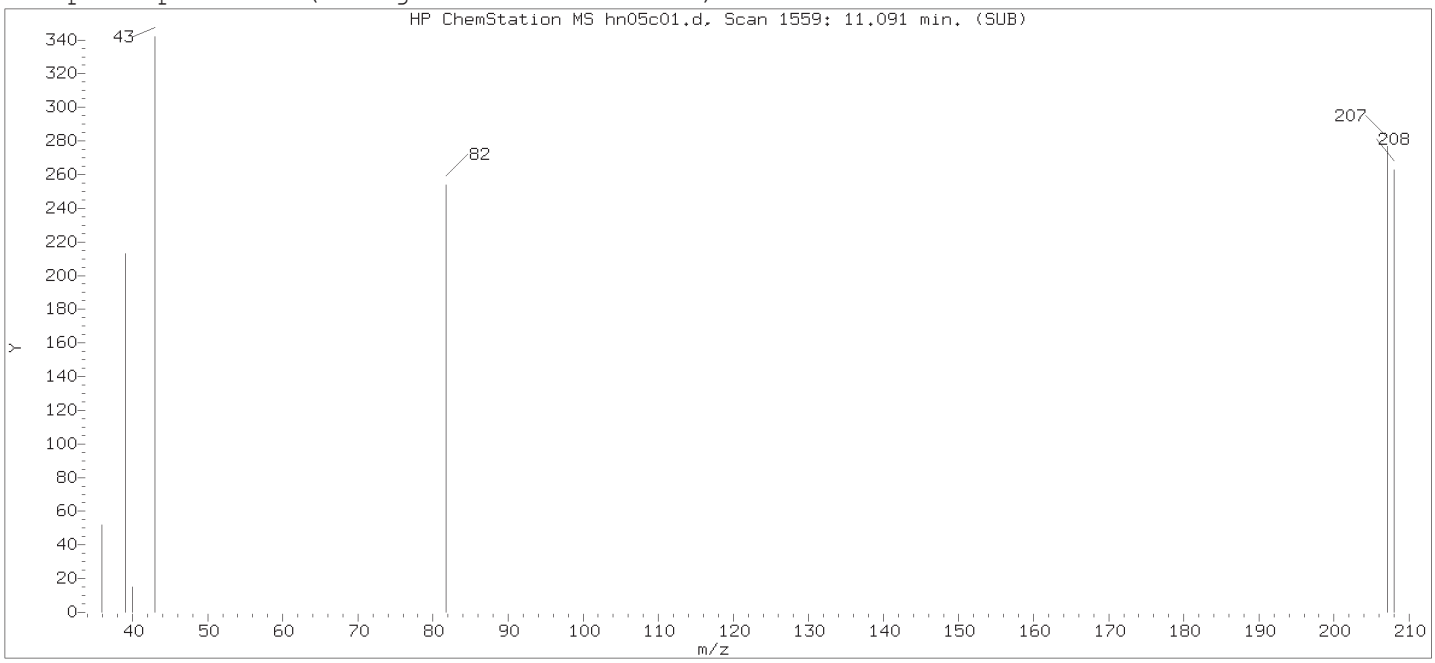
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1491
Retention Time (minutes): 10.677
Quant Ion : 43.00
Area (flag) : 1921932M
On-Column Amount (ng) : 94.7091
Integration start scan : 1484 Integration stop scan: 1505
Y at integration start : 181 Y at integration end: 181

Reason for manual integration: improper integration

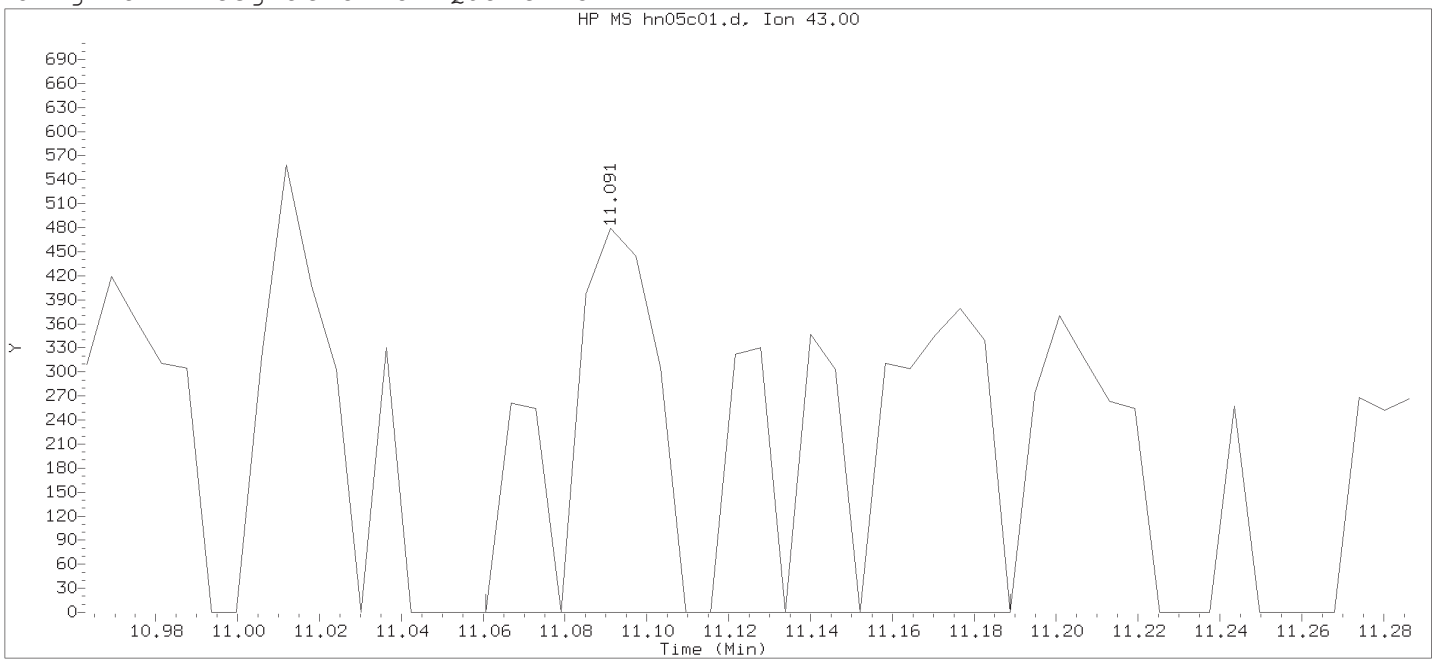
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 13:12.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

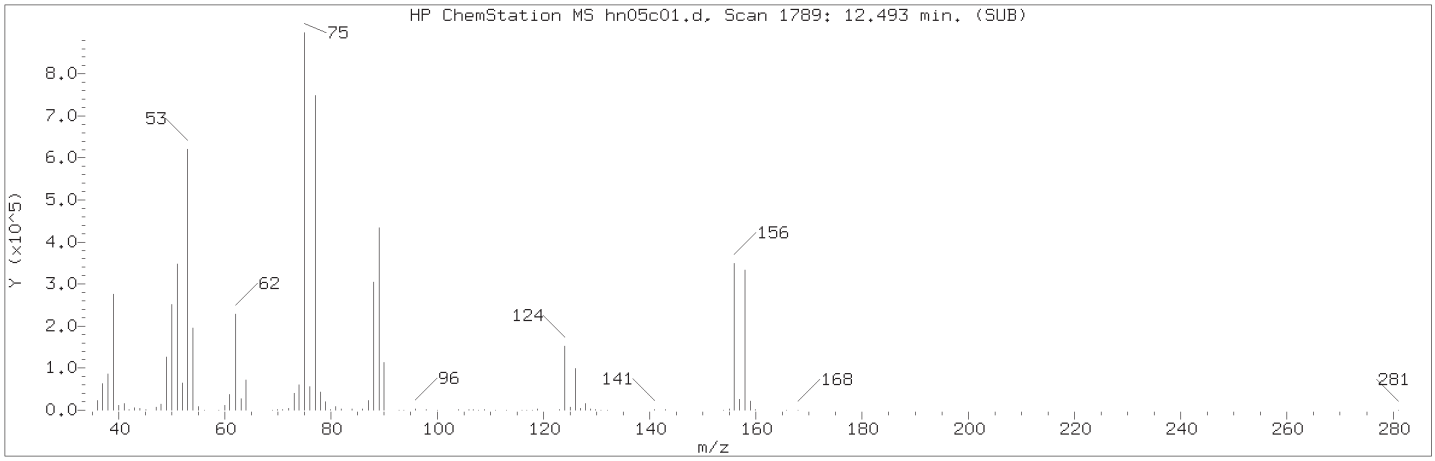
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

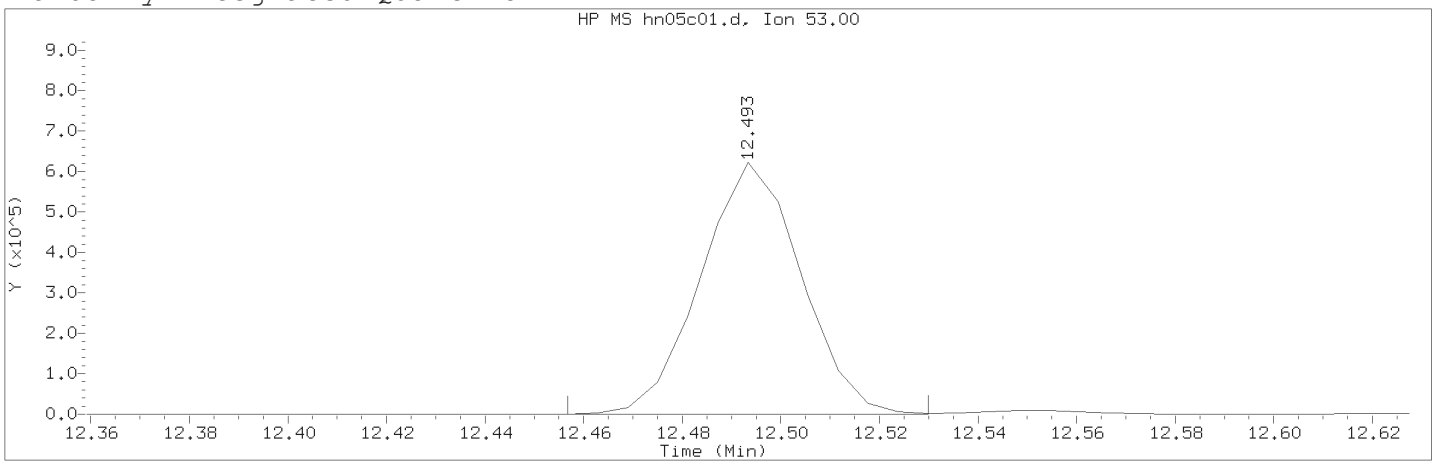
Compound Number	: 91		
Compound Name	: 2-Hexanone		
Scan Number	: 1559		
Retention Time (minutes)	: 11.091		
Quant Ion	: 43.00		
Area	: 1873		
On-column Amount (ng)	: 0.1014		
Integration start scan	: 1553	Integration stop scan:	1574
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

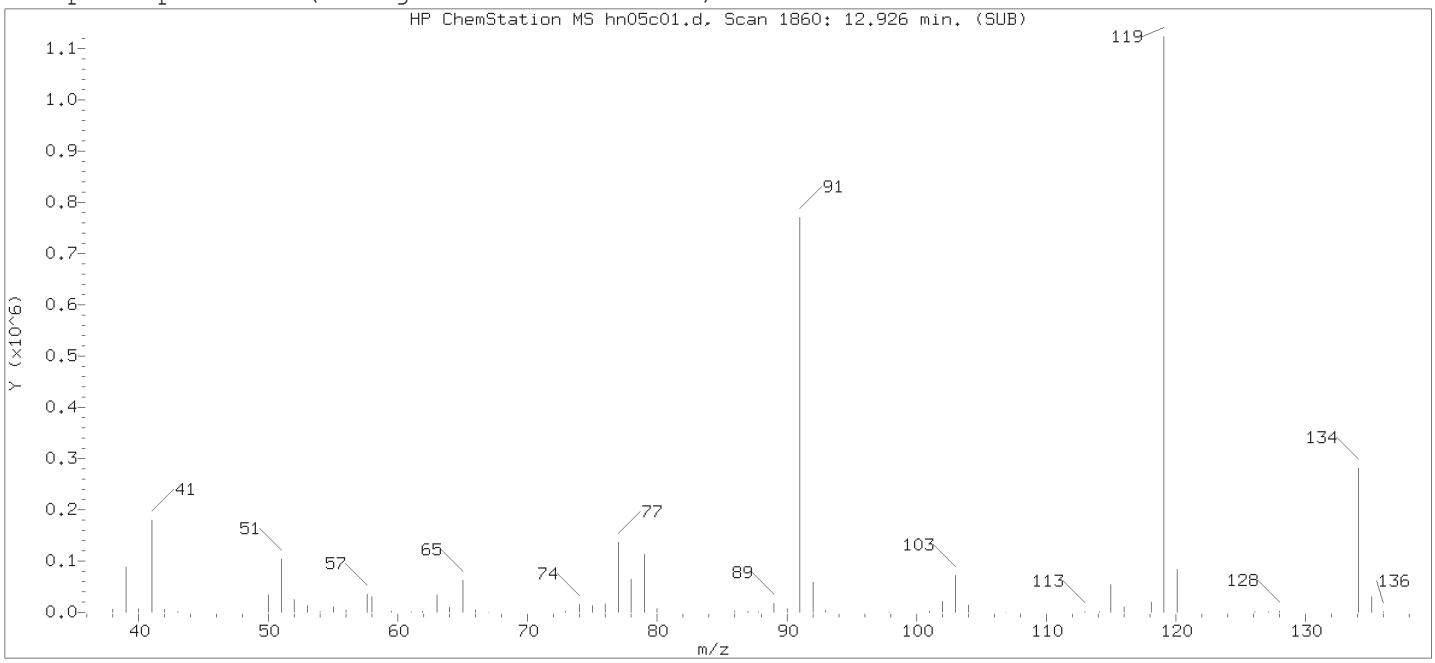
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area (flag) : 876544M
On-Column Amount (ng) : 93.8763
Integration start scan : 1782 Integration stop scan: 1794
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

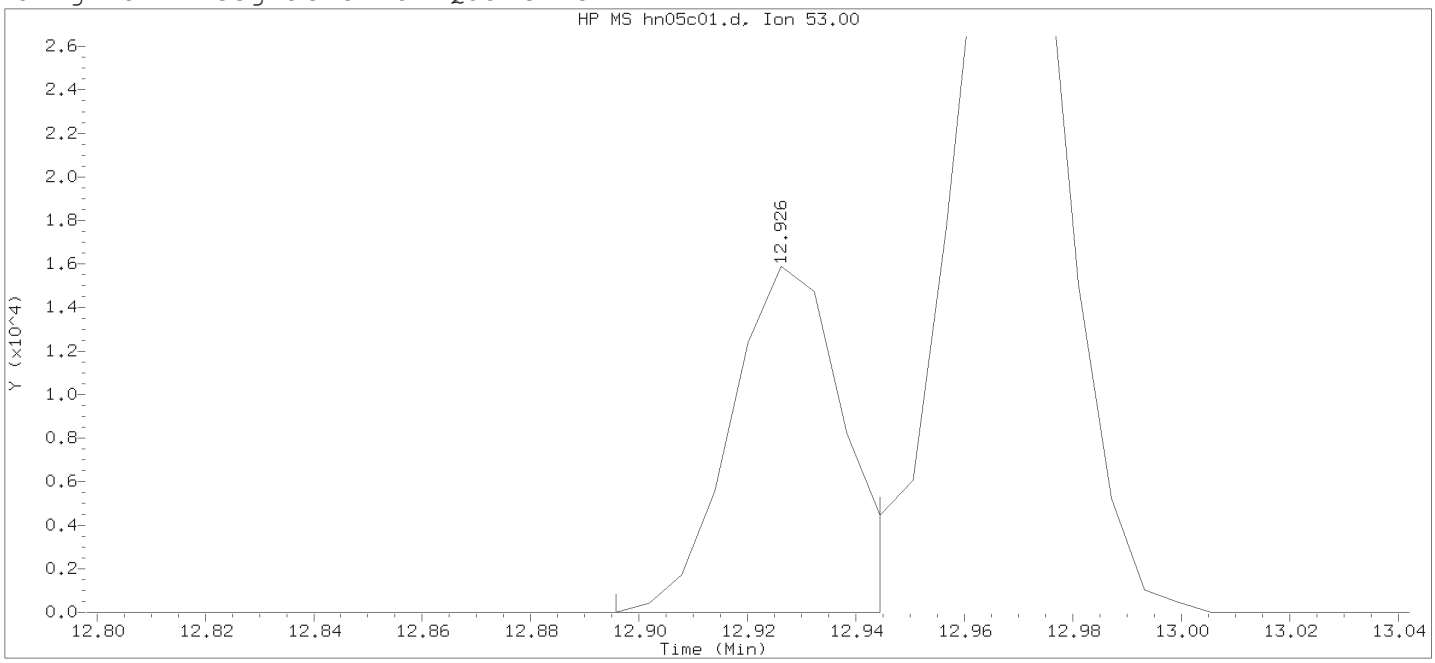
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 13:12.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

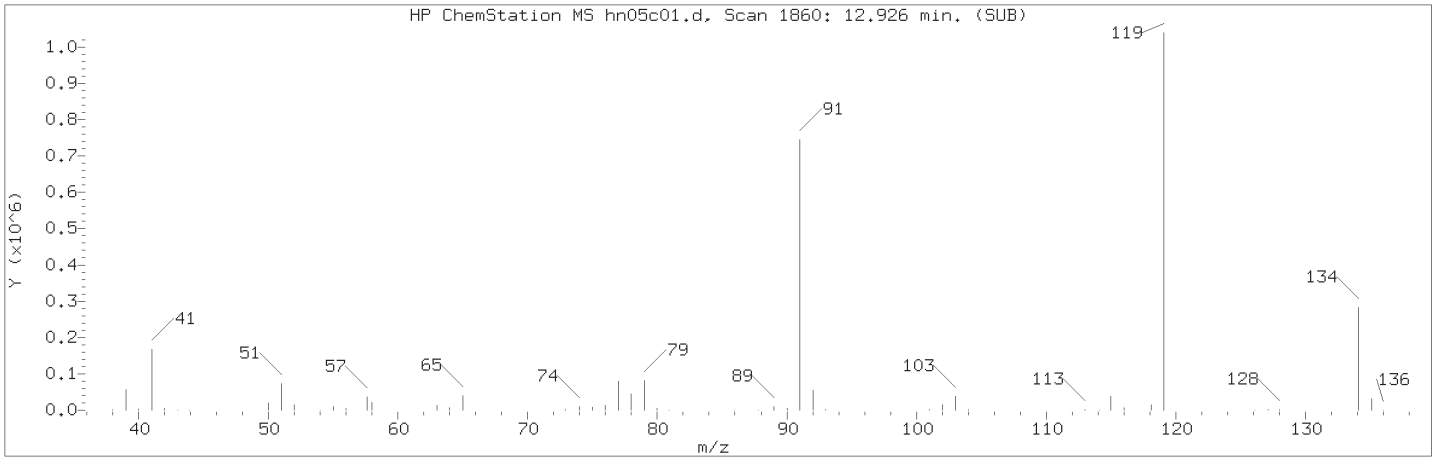
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

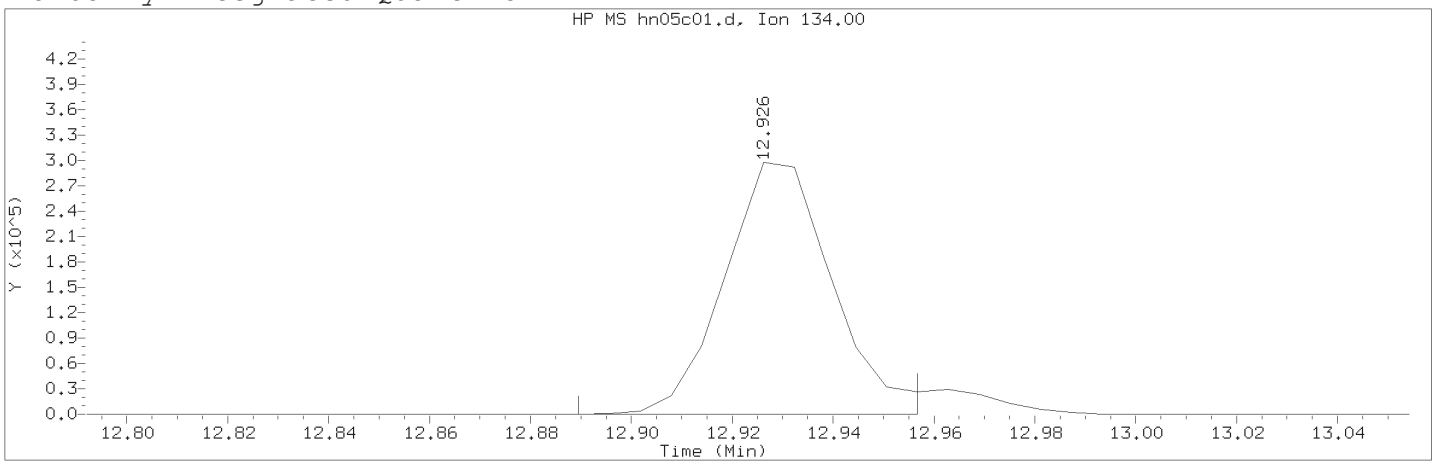
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1860
Retention Time (minutes): 12.926
Quant Ion : 53.00
Area : 22366
On-column Amount (ng) : 2.6311
Integration start scan : 1854 Integration stop scan: 1862
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

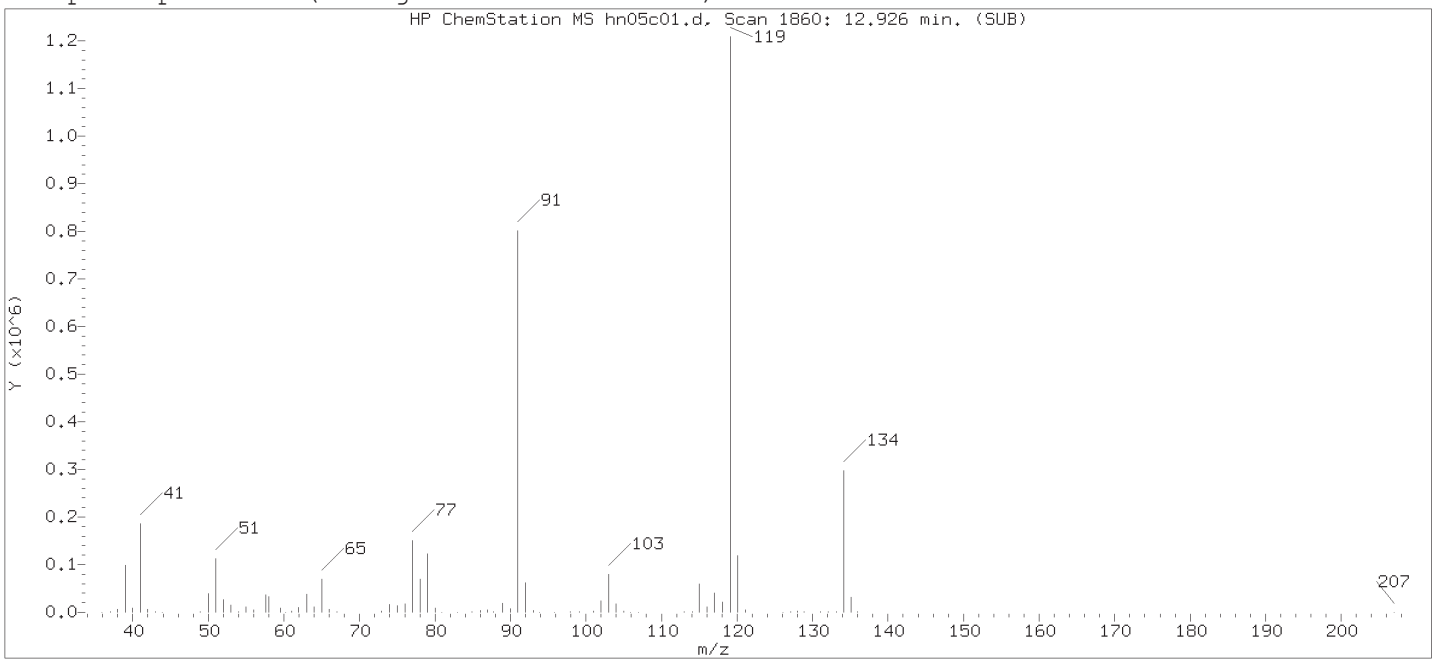
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1860
Retention Time (minutes): 12.926
Quant Ion : 134.00
Area (flag) : 441481M
On-Column Amount (ng) : 9.9089
Integration start scan : 1853 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

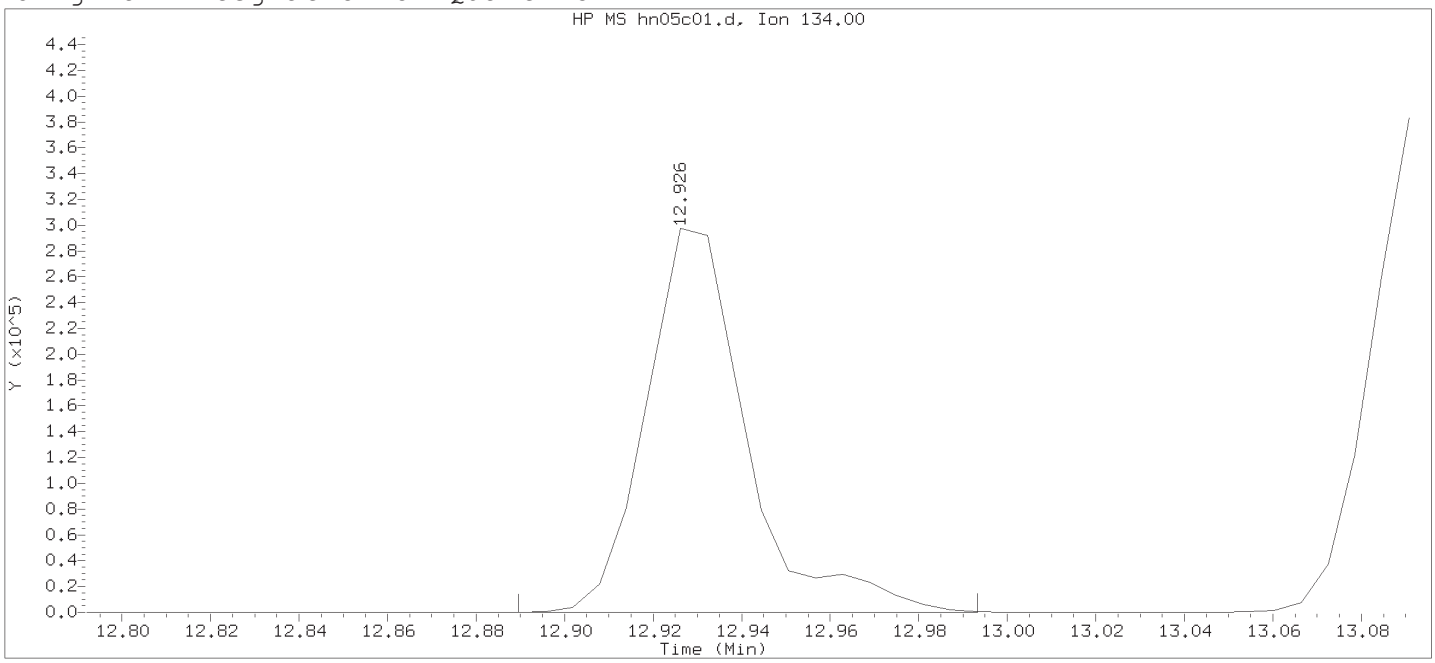
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 13:12.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

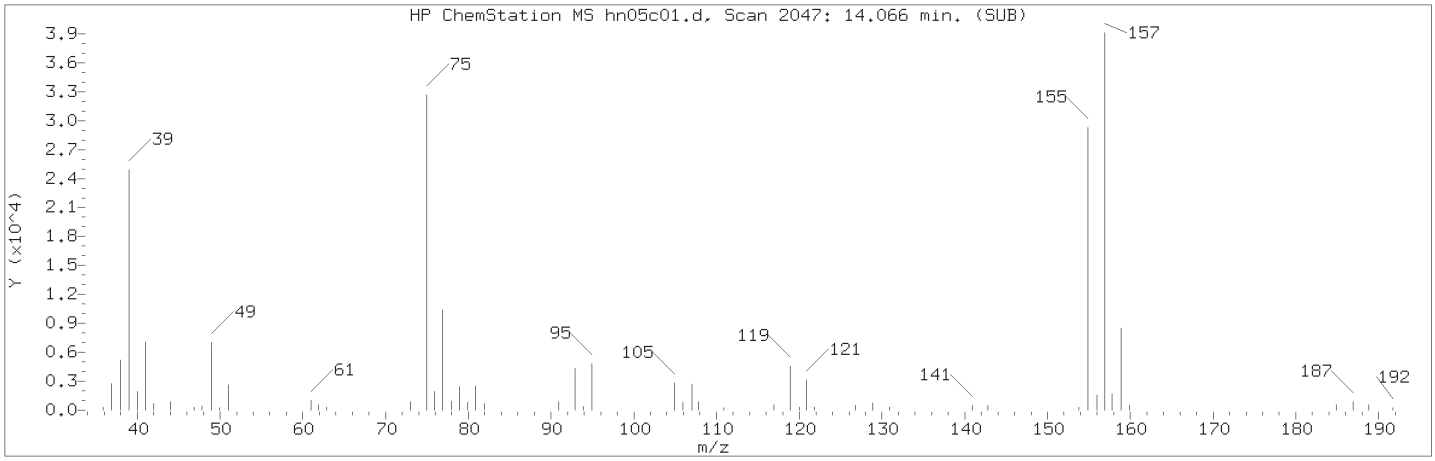
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

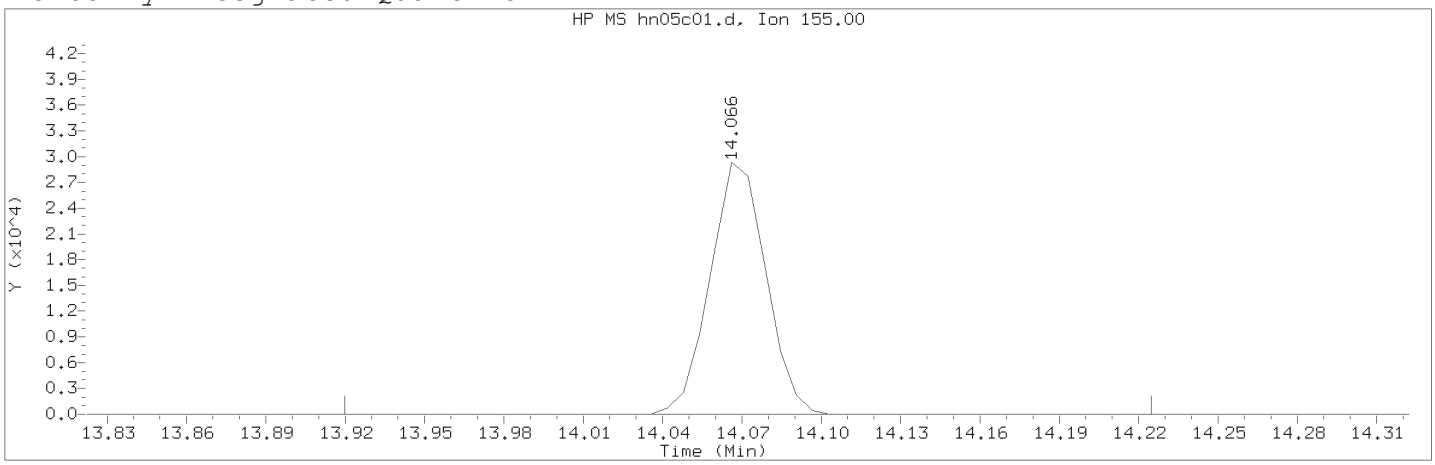
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1860
Retention Time (minutes): 12.926
Quant Ion : 134.00
Area : 468421
On-column Amount (ng) : 10.5136
Integration start scan : 1853 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

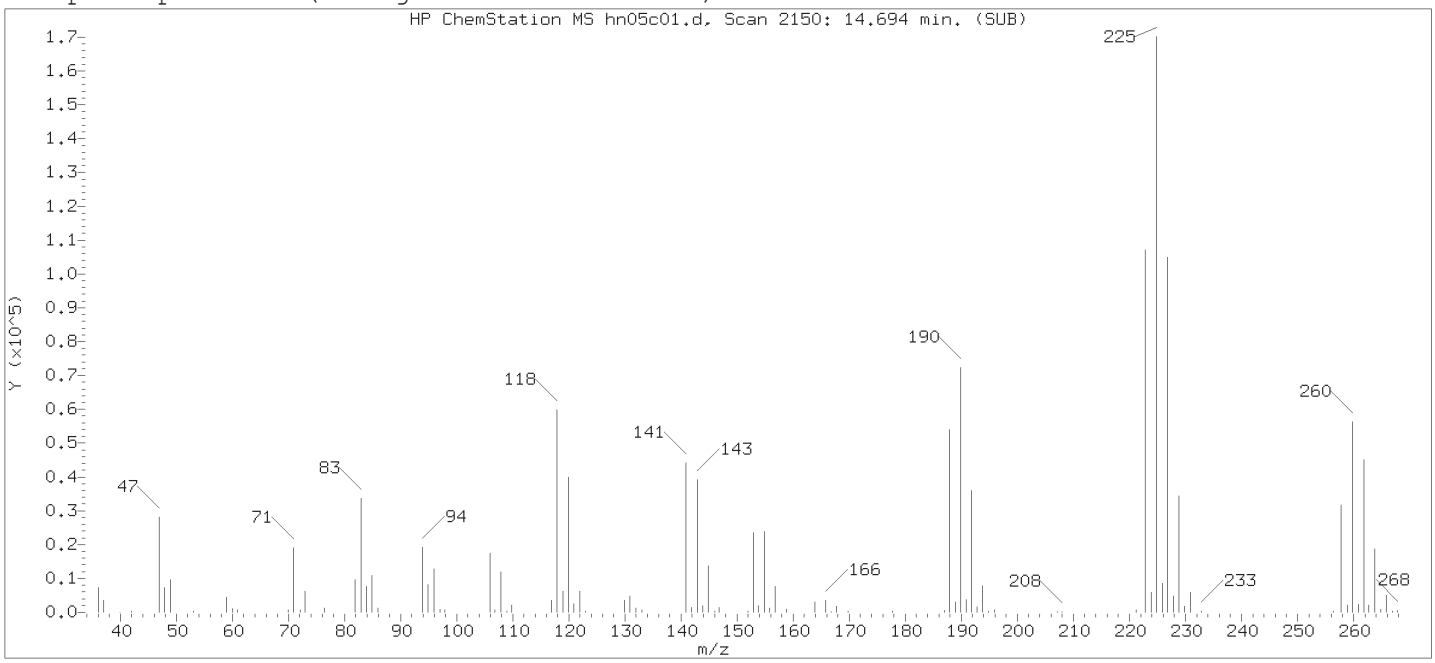
Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2047
Retention Time (minutes): 14.066
Quant Ion : 155.00
Area (flag) : 42745M
On-Column Amount (ng) : 8.4585
Integration start scan : 2022 Integration stop scan: 2072
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

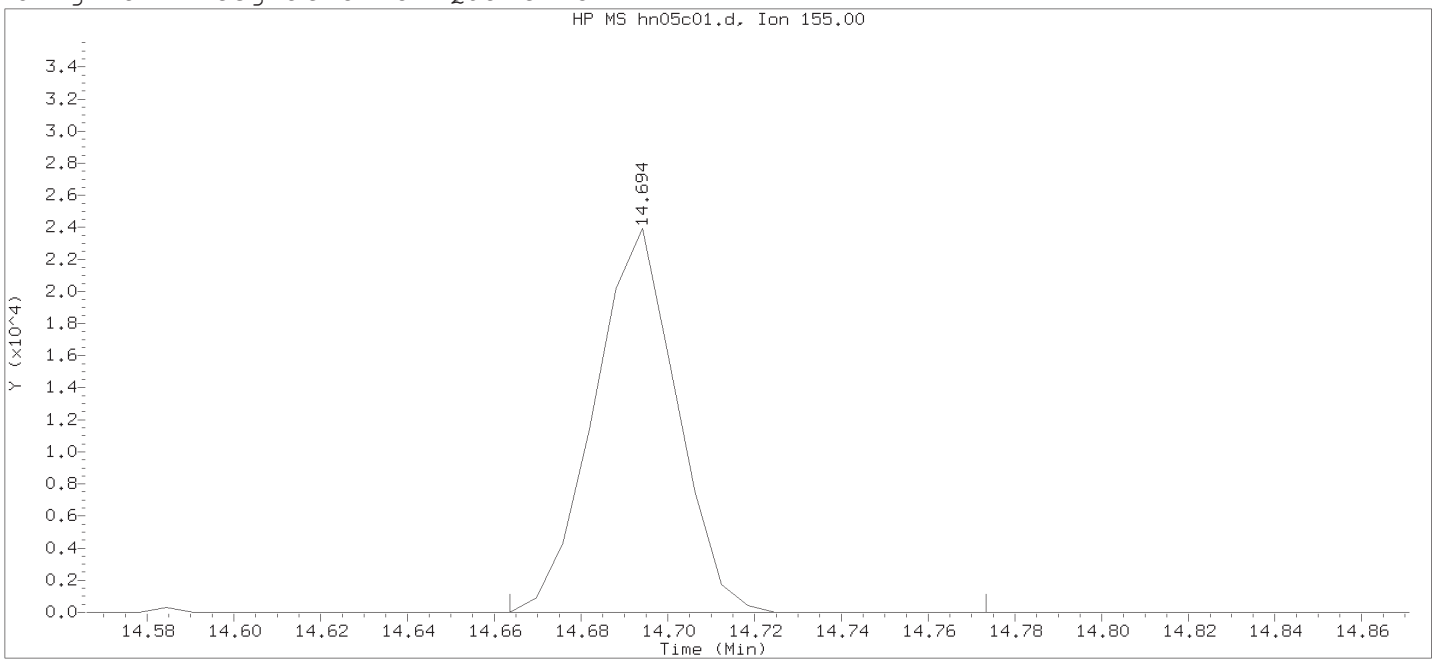
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 13:12.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c01.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2150
Retention Time (minutes): 14.694
Quant Ion : 155.00
Area : 31589
On-column Amount (ng) : 6.8663
Integration start scan : 2144 Integration stop scan: 2162
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: JGC14951

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

SECC010

Data file: /chem2/HP19094.i/18nov05b.b/hn05ec5.d Injection date and time: **06-NOV-2018 07:01**
Data file Sample Info. Line: SECC010;SECC010;1;3;LCS;;;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 07:40 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18nov05b.b/hn05b10.d**

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: **25789-SM**
Calibration date and time (Last Method Edit): 06-NOV-2018 07:40
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18nov05b.b/hn05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.477	(0.006)	474	65	121222M	(-1)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2378952	(-7)	10.00	
97) Chlorobenzene-d5	11.378	(0.006)	1606	117	1843369	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	906263	(-2)	10.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(-0.001)	113	536362	8.946	89%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.531	(-0.001)	102	98121	9.387	94%		81 - 118
82) Toluene-d8	(3)	9.951	(0.000)	98	2428642	10.237	102%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371	(-0.001)	95	841878	9.746	97%		85 - 114

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
1) Dichlorodifluoromethane	(2)	2.075	(-0.000)	85	778665	8.375	8.38			0.05	0.5
2) Chloromethane	(2)	2.276	(-0.000)	50	722523	7.935	7.94			0.06	0.5
5) Vinyl Chloride	(2)	2.398	(0.000)	62	682542	8.005	8.01			0.1	0.5
7) Bromomethane	(2)	2.739	(-0.000)	94	550110	8.299	8.30			0.07	0.5
8) Chloroethane	(2)	2.843	(-0.000)	64	404172	7.815	7.82			0.07	0.5
10) Trichlorofluoromethane	(2)	3.148	(-0.000)	101	880045	8.170	8.17			0.05	0.5
15) 1,1-Dichloroethene	(2)	3.757	(-0.000)	96	437039	9.370	9.37			0.06	0.5
16) Freon 113	(2)	3.794	(-0.000)	101	492292	8.955	8.95			0.06	0.5
14) Acetone	(1)	3.794	(0.000)	43	641257M	88.753	88.75			0.9	5
18) Carbon Disulfide	(2)	4.080	(-0.000)	76	1323563	8.918	8.92			0.06	1
21) Methyl Acetate	(1)	4.233	(0.000)	43	172207	8.490	8.49			0.1	1
23) Methylene Chloride	(2)	4.464	(-0.000)	84	464989	8.836	8.84			0.07	0.5
31) trans-1,2-Dichloroethene	(2)	4.891	(-0.000)	96	447785	8.506	8.51			0.06	0.5
30) Methyl Tertiary Butyl Ether	(2)	4.879	(-0.001)	73	858175	8.946	8.95			0.05	0.5
33) 1,1-Dichloroethane	(2)	5.550	(0.000)	63	933325	9.312	9.31			0.07	0.5
39) cis-1,2-Dichloroethene	(2)	6.379	(-0.000)	96	535444	9.205	9.21			0.05	0.5
38) 2-Butanone	(1)	6.348	(-0.001)	43	1098346	92.867	92.87			0.6	5
49) Chloroform	(2)	6.854	(0.000)	83	760964	8.166	8.17			0.09	0.5
51) 1,1,1-Trichloroethane	(2)	7.086	(0.000)	97	652278	8.183	8.18			0.06	0.5
52) Cyclohexane	(2)	7.183	(0.000)	56	818570	7.867	7.87			0.05	0.5
54) Carbon Tetrachloride	(2)	7.299	(-0.000)	117	564628	8.248	8.25			0.07	0.5
58) Benzene	(2)	7.561	(0.000)	78	1828851	8.190	8.19			0.05	0.5
59) 1,2-Dichloroethane	(2)	7.641	(-0.000)	62	399847M	7.781	7.78			0.05	0.5
67) Trichloroethene	(2)	8.445	(-0.000)	95	523645	9.159	9.16			0.06	0.5
69) Methylcyclohexane	(2)	8.756	(-0.001)	83	947976	8.780	8.78			0.05	0.5
70) 1,2-Dichloropropane	(2)	8.781	(-0.000)	63	511820	9.447	9.45			0.06	0.5
74) Bromodichloromethane	(2)	9.122	(-0.000)	83	582603	9.566	9.57			0.05	0.5
80) cis-1,3-Dichloropropene	(2)	9.646	(-0.000)	75	676681	9.543	9.54			0.05	0.5
81) 4-Methyl-2-Pentanone	(1)	9.811	(-0.002)	43	2812904	95.615	95.62			0.7	5
83) Toluene	(3)	10.024	(-0.000)	92	1270162	9.285	9.29			0.07	0.5

M = Compound was manually integrated.

Digitally signed by Jennifer K. Howe on 11/06/2018 at 10:54. Target 3.5 esignature user ID: jkh09052

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

SECC010

Data file: /chem2/HP19094.i/18nov05b.b/hn05ec5.d Injection date and time: **06-NOV-2018 07:01**
Data file Sample Info. Line: SECC010;SECC010;1;3;LCS;;;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 07:40 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18nov05b.b/hn05b10.d**

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: **25789-SM**
Calibration date and time (Last Method Edit): 06-NOV-2018 07:40
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18nov05b.b/hn05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

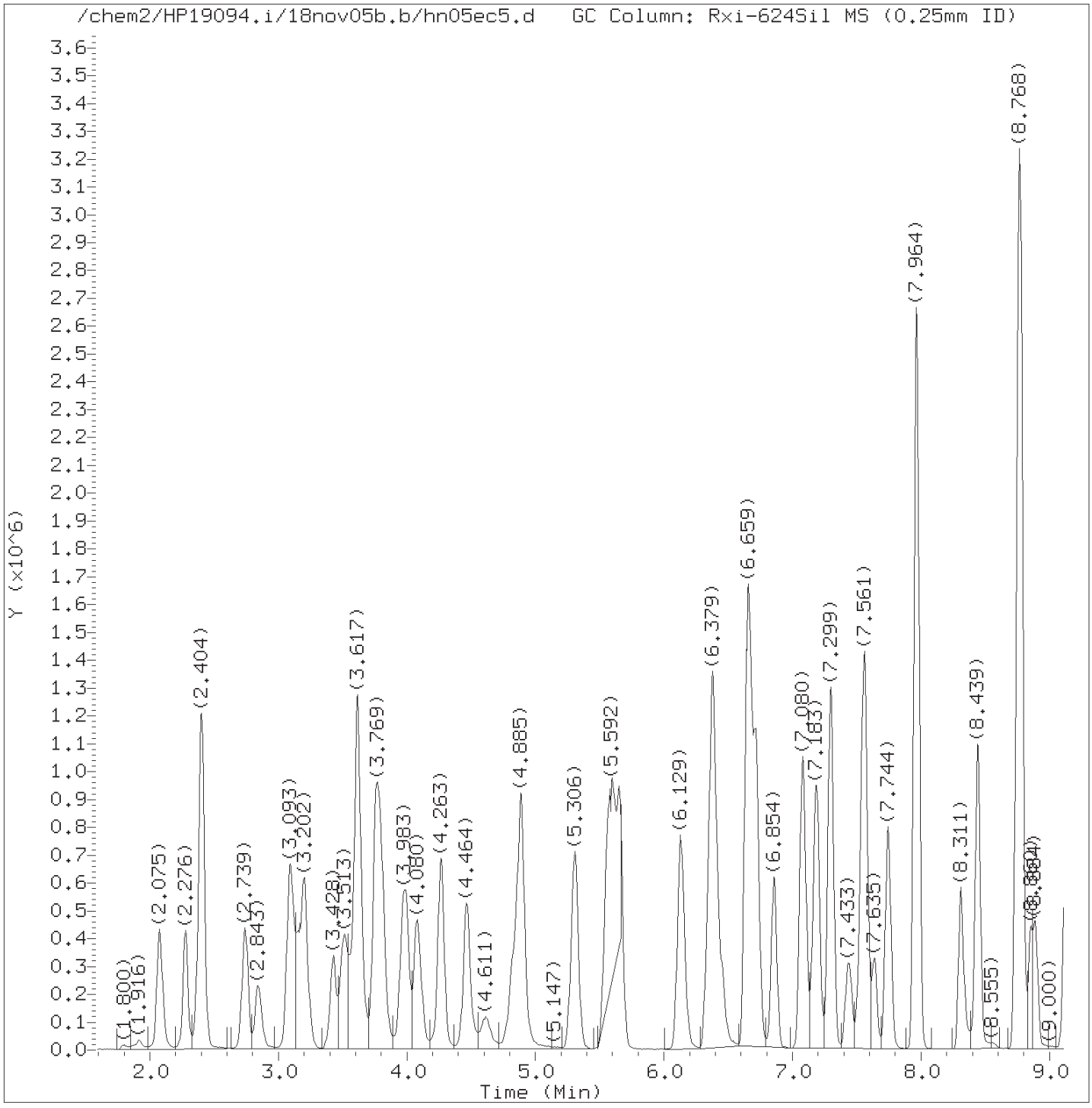
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
84) trans-1,3-Dichloropropene	(3)	10.268(0.000)	75	525507	9.970	9.97			0.06	0.5
88) 1,1,2-Trichloroethane	(3)	10.475(-0.000)	97	299981	9.530	9.53			0.06	0.5
89) Tetrachloroethene	(3)	10.561(-0.000)	166	562545	9.102	9.10			0.06	0.5
91) 2-Hexanone	(1)	10.677(-0.003)	43	1971324	98.441	98.44			0.6	5
93) Dibromochloromethane	(3)	10.847(-0.000)	129	366657	9.719	9.72			0.07	0.5
95) 1,2-Dibromoethane	(3)	10.957(-0.000)	107	288388	9.775	9.77			0.06	0.5
98) Chlorobenzene	(3)	11.408(-0.000)	112	1356148	9.344	9.34			0.06	0.5
100) Ethylbenzene	(3)	11.487(-0.000)	91	2515442	9.409	9.41			0.06	0.5
101) m+p-Xylene	(3)	11.603(-0.000)	106	1870382	18.861	18.86			0.1	0.5
104) o-Xylene	(3)	11.926(-0.000)	106	897234	9.464	9.46			0.05	0.5
105) Xylene (Total)	(3)		106	2767616	28.325	28.32			0.1	0.5
106) Styrene	(3)	11.945(-0.000)	104	1456415	9.602	9.60			0.05	0.5
107) Bromoform	(3)	12.103(-0.000)	173	203181	9.799	9.80			0.3	1
108) Isopropylbenzene	(3)	12.225(-0.000)	105	2416851	9.338	9.34			0.05	0.5
113) 1,1,2,2-Tetrachloroethane	(4)	12.469(0.000)	83	352122M	9.795	9.80			0.07	0.5
131) 1,3-Dichlorobenzene	(4)	13.194(0.000)	146	1052166	9.690	9.69			0.06	0.5
134) 1,4-Dichlorobenzene	(4)	13.268(0.000)	146	1019306	9.563	9.56			0.07	0.5
139) 1,2-Dichlorobenzene	(4)	13.524(0.000)	146	804716	8.400	8.40			0.06	0.5
143) 1,2-Dibromo-3-chloropropane	(1)	14.066(-0.004)	155	39626	7.946	7.95			0.1	0.5
145) 1,2,4-Trichlorobenzene	(4)	14.615(0.000)	180	521788	7.930	7.93			0.06	0.5

M = Compound was manually integrated.

Total number of targets = 50

Digitally signed by Jennifer K. Howe on 11/06/2018 at 10:54. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

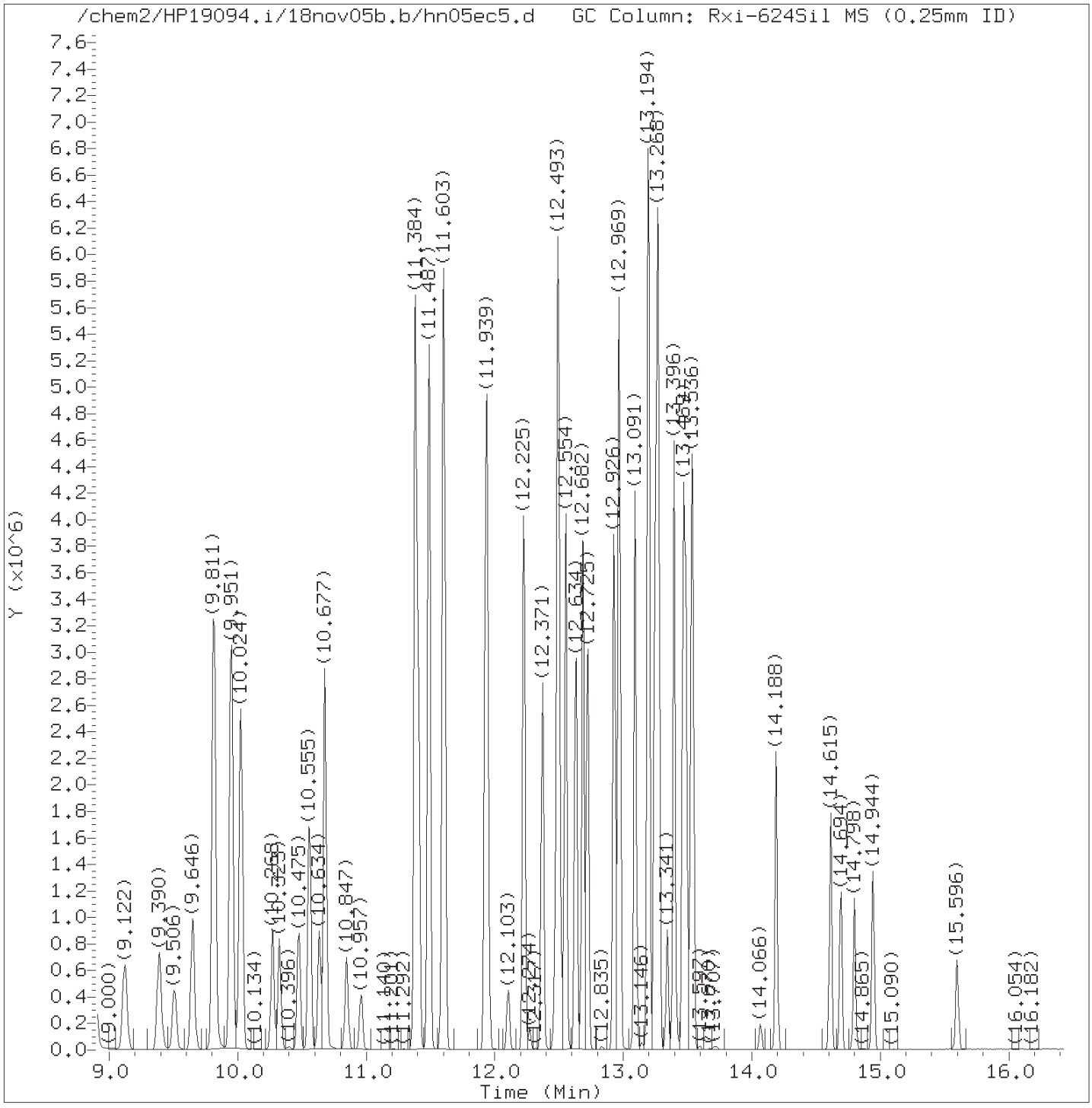
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05ec5.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:01 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 07:40
Date, time and analyst ID of latest file update: 06-Nov-2018 07:40 jkh09052

Sample Name: SECC010 Lab Sample ID: SECC010

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05ec5.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:01 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 07:40
Date, time and analyst ID of latest file update: 06-Nov-2018 07:40 jkh09052

Sample Name: SECC010 Lab Sample ID: SECC010

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05ec5.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:01 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 07:40
Date, time and analyst ID of latest file update: 06-Nov-2018 07:40 jkh09052

Sample Name: SECC010 Lab Sample ID: SECC010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.075	85	778665	8.375
2) Chloromethane	(2)	2.276	50	722523	7.935
5) Vinyl Chloride	(2)	2.398	62	682542	8.005
7) Bromomethane	(2)	2.739	94	550110	8.299
8) Chloroethane	(2)	2.843	64	404172	7.815
10) Trichlorofluoromethane	(2)	3.148	101	880045	8.170
15) 1,1-Dichloroethene	(2)	3.757	96	437039	9.370
16) Freon 113	(2)	3.794	101	492292	8.955
14) Acetone	(1)	3.794	43	641257M	88.753
18) Carbon Disulfide	(2)	4.080	76	1323563	8.918
21) Methyl Acetate	(1)	4.233	43	172207	8.490
23) Methylene Chloride	(2)	4.464	84	464989	8.836
26)*t-Butyl Alcohol-d10	(1)	4.477	65	121222M	50.000
30) Methyl Tertiary Butyl Ether	(2)	4.879	73	858175	8.946
31) trans-1,2-Dichloroethene	(2)	4.891	96	447785	8.506
33) 1,1-Dichloroethane	(2)	5.550	63	933325	9.312
38) 2-Butanone	(1)	6.348	43	1098346	92.867
39) cis-1,2-Dichloroethene	(2)	6.379	96	535444	9.205
49) Chloroform	(2)	6.854	83	760964	8.166
50)$Dibromofluoromethane	(2)	7.074	113	536362	8.946
51) 1,1,1-Trichloroethane	(2)	7.086	97	652278	8.183
52) Cyclohexane	(2)	7.183	56	818570	7.867
54) Carbon Tetrachloride	(2)	7.299	117	564628	8.248
57)$1,2-Dichloroethane-d4	(2)	7.531	102	98121	9.387
58) Benzene	(2)	7.561	78	1828851	8.190
59) 1,2-Dichloroethane	(2)	7.641	62	399847M	7.781
63)*Fluorobenzene	(2)	7.964	96	2378952	10.000
67) Trichloroethene	(2)	8.445	95	523645	9.159
69) Methylcyclohexane	(2)	8.756	83	947976	8.780
70) 1,2-Dichloropropane	(2)	8.781	63	511820	9.447
74) Bromodichloromethane	(2)	9.122	83	582603	9.566
80) cis-1,3-Dichloropropene	(2)	9.646	75	676681	9.543
81) 4-Methyl-2-Pentanone	(1)	9.811	43	2812904	95.615
82)$Toluene-d8	(3)	9.951	98	2428642	10.237
83) Toluene	(3)	10.024	92	1270162	9.285
84) trans-1,3-Dichloropropene	(3)	10.268	75	525507	9.970
88) 1,1,2-Trichloroethane	(3)	10.475	97	299981	9.530
89) Tetrachloroethene	(3)	10.561	166	562545	9.102

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05ec5.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:01 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 07:40
Date, time and analyst ID of latest file update: 06-Nov-2018 07:40 jkh09052

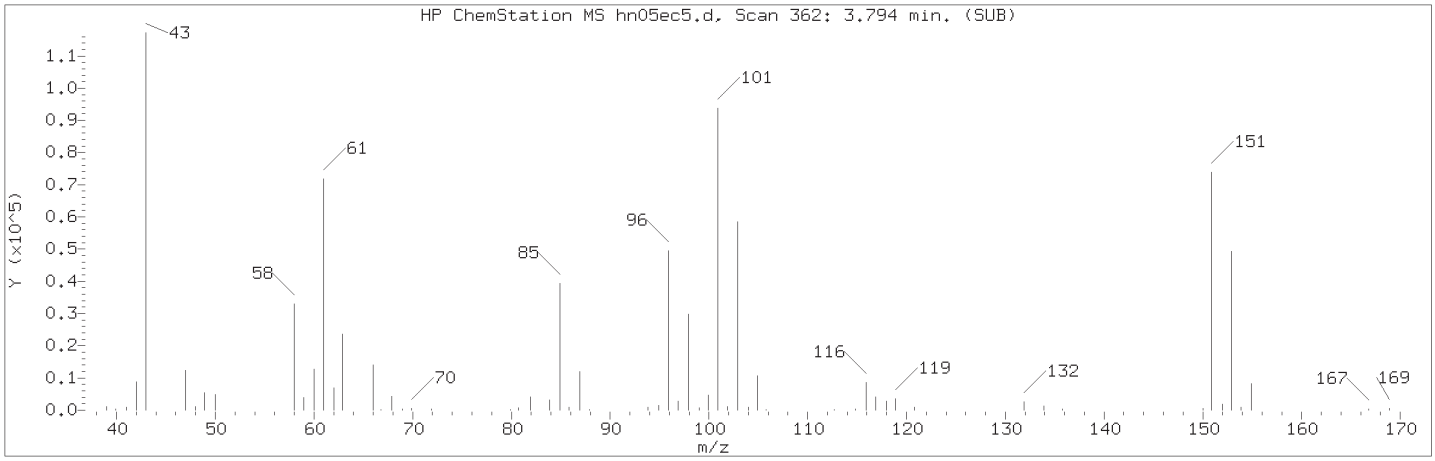
Sample Name: SECC010 Lab Sample ID: SECC010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 2-Hexanone	(1)	10.677	43	1971324	98.441
93) Dibromochloromethane	(3)	10.847	129	366657	9.719
95) 1,2-Dibromoethane	(3)	10.957	107	288388	9.775
97)*Chlorobenzene-d5	(3)	11.378	117	1843369	10.000
98) Chlorobenzene	(3)	11.408	112	1356148	9.344
100) Ethylbenzene	(3)	11.487	91	2515442	9.409
101) m+p-Xylene	(3)	11.603	106	1870382	18.861
105) Xylene (Total)	(3)		106	2767616	28.325
104) o-Xylene	(3)	11.926	106	897234	9.464
106) Styrene	(3)	11.945	104	1456415	9.602
107) Bromoform	(3)	12.103	173	203181	9.799
108) Isopropylbenzene	(3)	12.225	105	2416851	9.338
111)$4-Bromofluorobenzene	(3)	12.371	95	841878	9.746
113) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	352122M	9.795
131) 1,3-Dichlorobenzene	(4)	13.194	146	1052166	9.690
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	906263	10.000
134) 1,4-Dichlorobenzene	(4)	13.268	146	1019306	9.563
139) 1,2-Dichlorobenzene	(4)	13.524	146	804716	8.400
143) 1,2-Dibromo-3-chloropropane	(1)	14.066	155	39626	7.946
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	521788	7.930

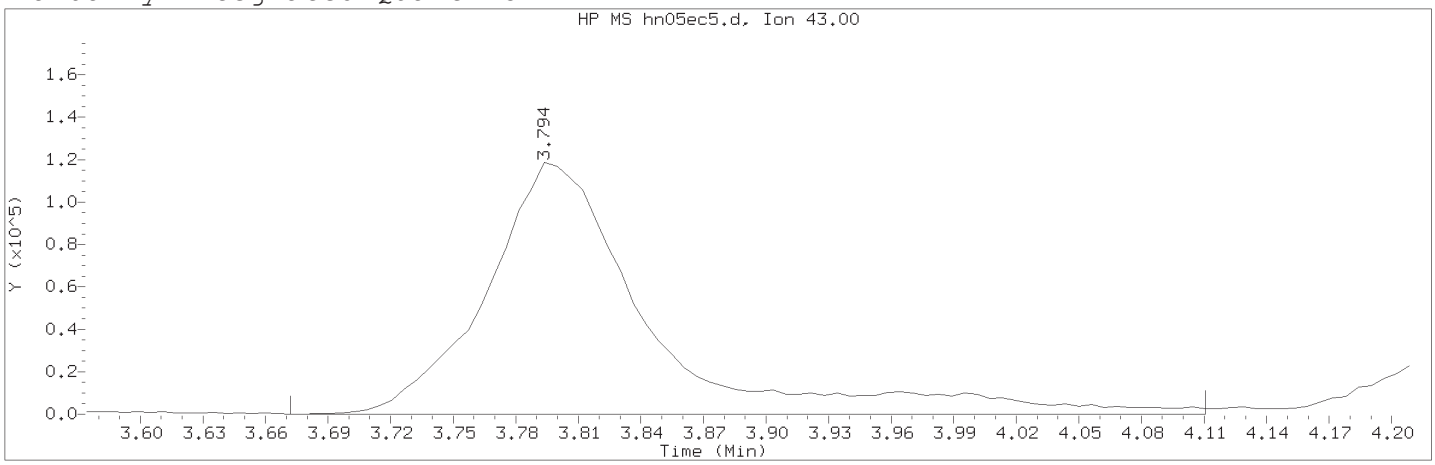
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05ec5.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:01 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 07:40
Date, time and analyst ID of latest file update: 06-Nov-2018 07:40 jkh09052

Sample Name: SECC010 Lab Sample ID: SECC010

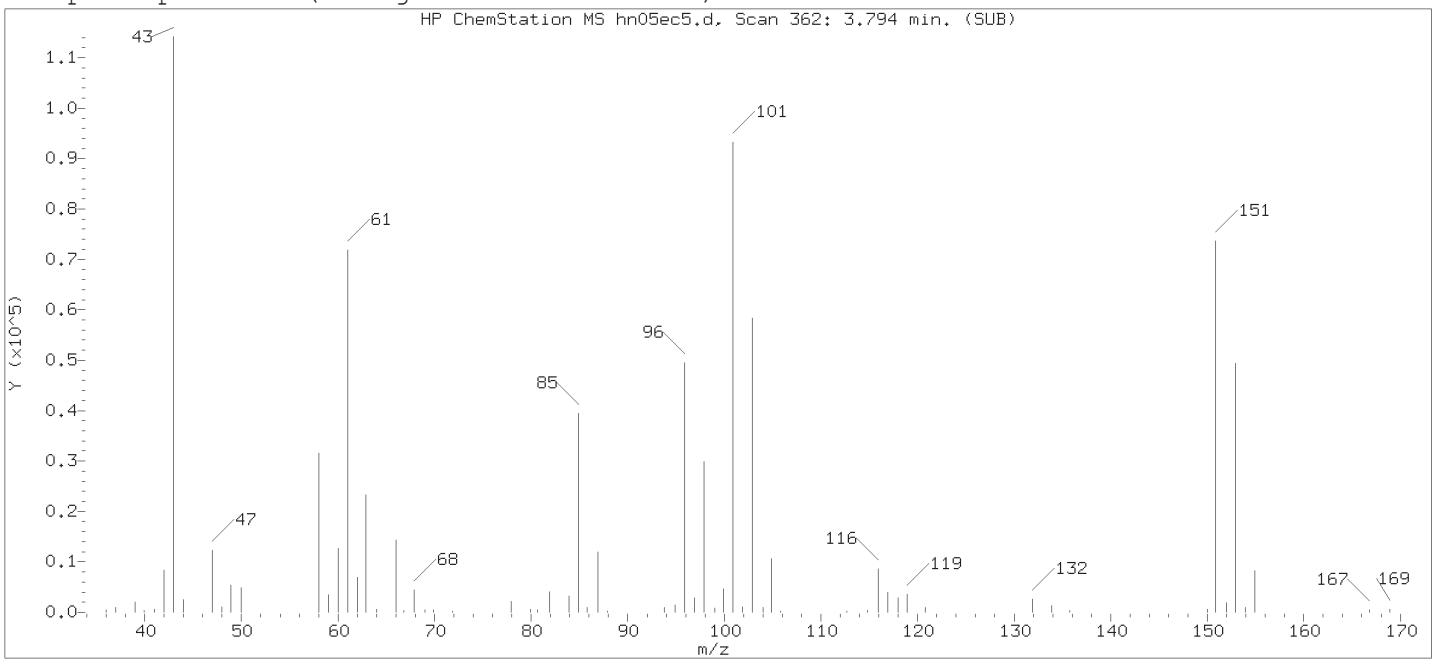
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area (flag) : 641257M
On-Column Amount (ng) : 88.7531
Integration start scan : 341 Integration stop scan: 413
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

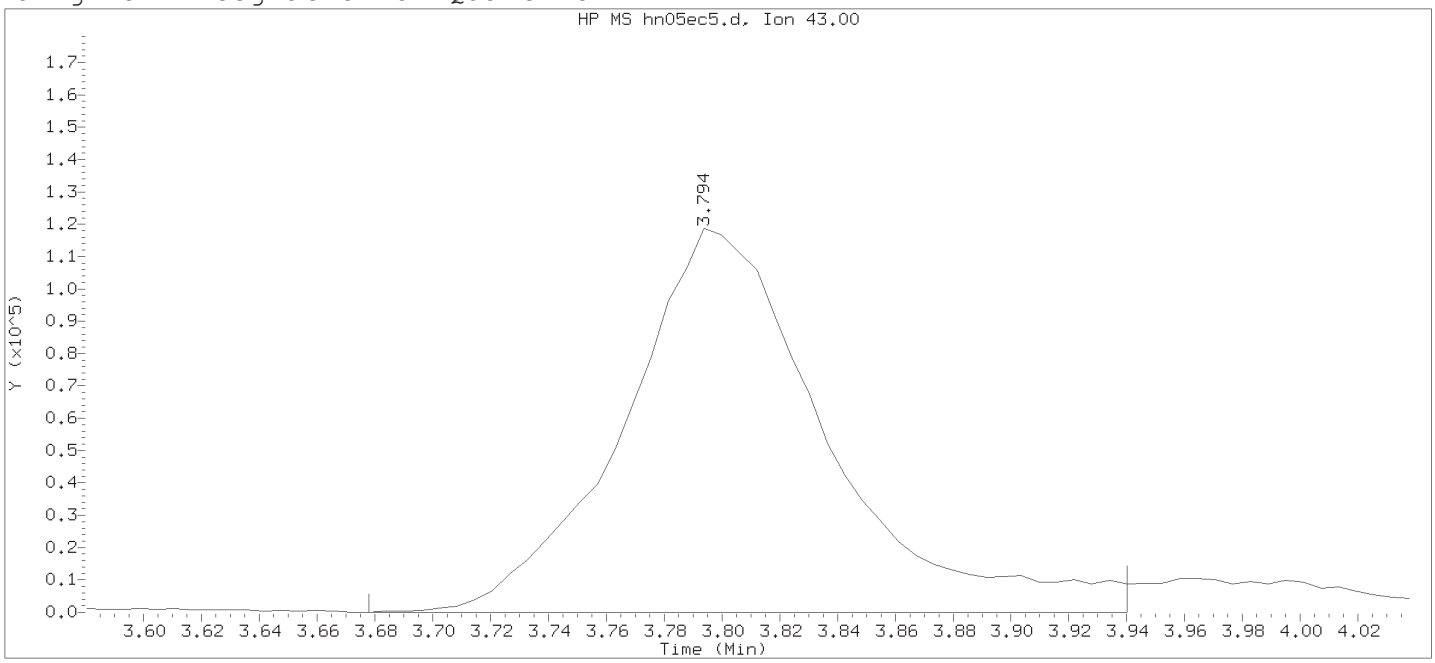
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05ec5.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:01 Analyst ID: JGC14951

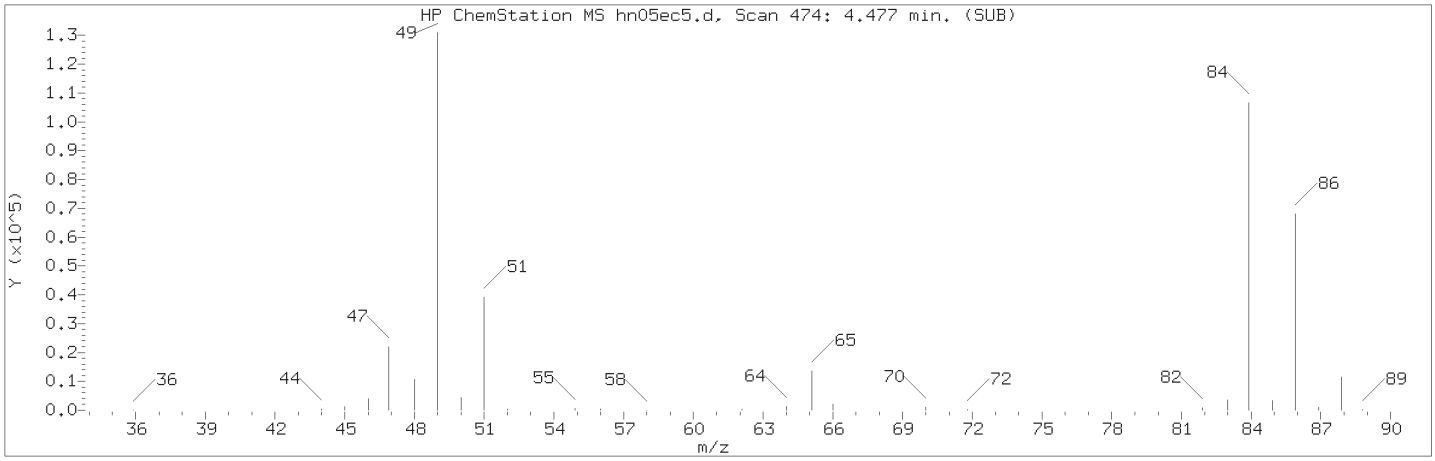
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 05-NOV-2018 22:04
Date, time and analyst ID of latest file update: 06-Nov-2018 07:19 Automation

Sample Name: SECC010 Lab Sample ID: SECC010

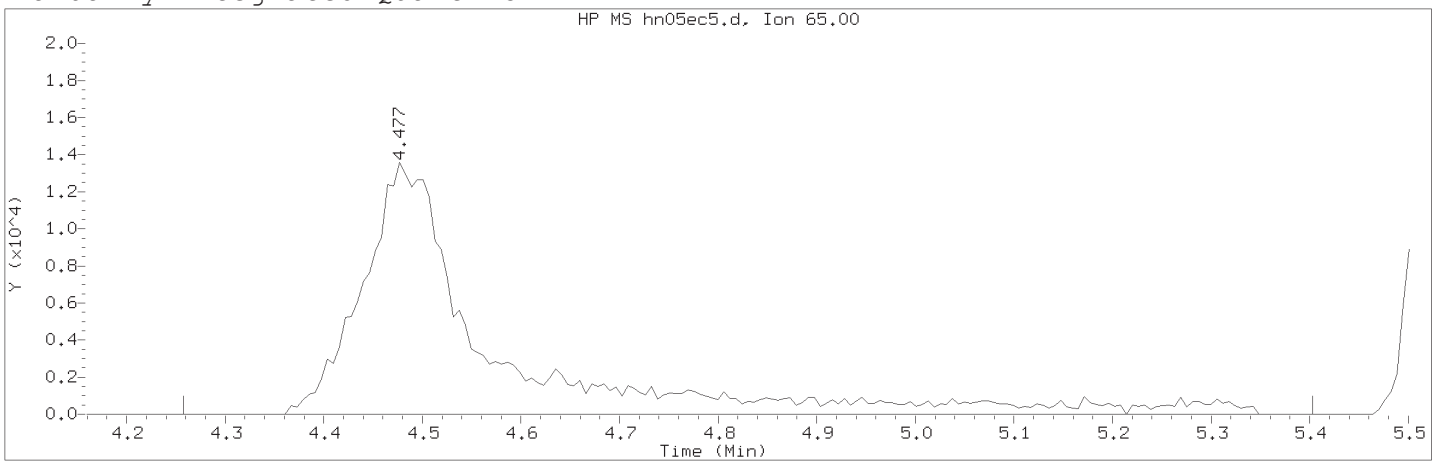
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area : 576857
On-column Amount (ng) : 82.5527
Integration start scan : 342 Integration stop scan: 385
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05ec5.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:01 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 07:40
Date, time and analyst ID of latest file update: 06-Nov-2018 07:40 jkh09052

Sample Name: SECC010 Lab Sample ID: SECC010

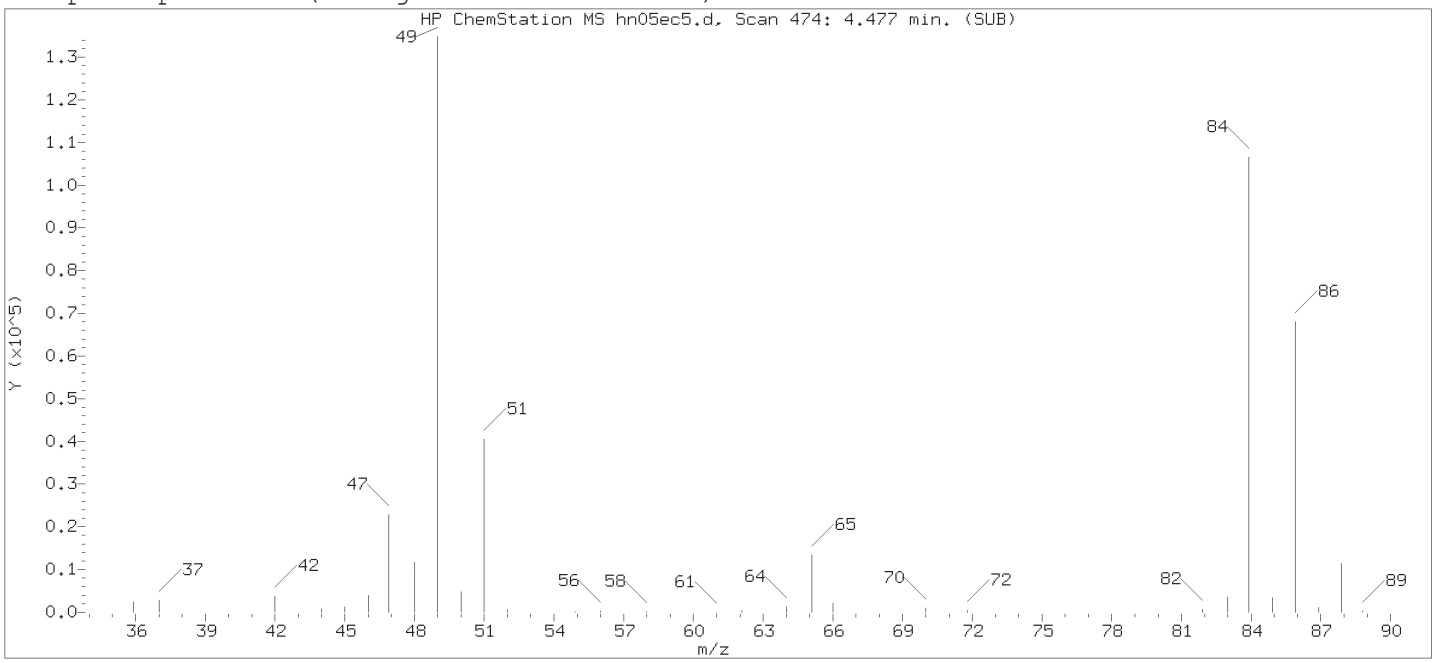
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.477
Quant Ion : 65.00
Area (flag) : 121222M
On-Column Amount (ng) : 50.0000
Integration start scan : 437 Integration stop scan: 625
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

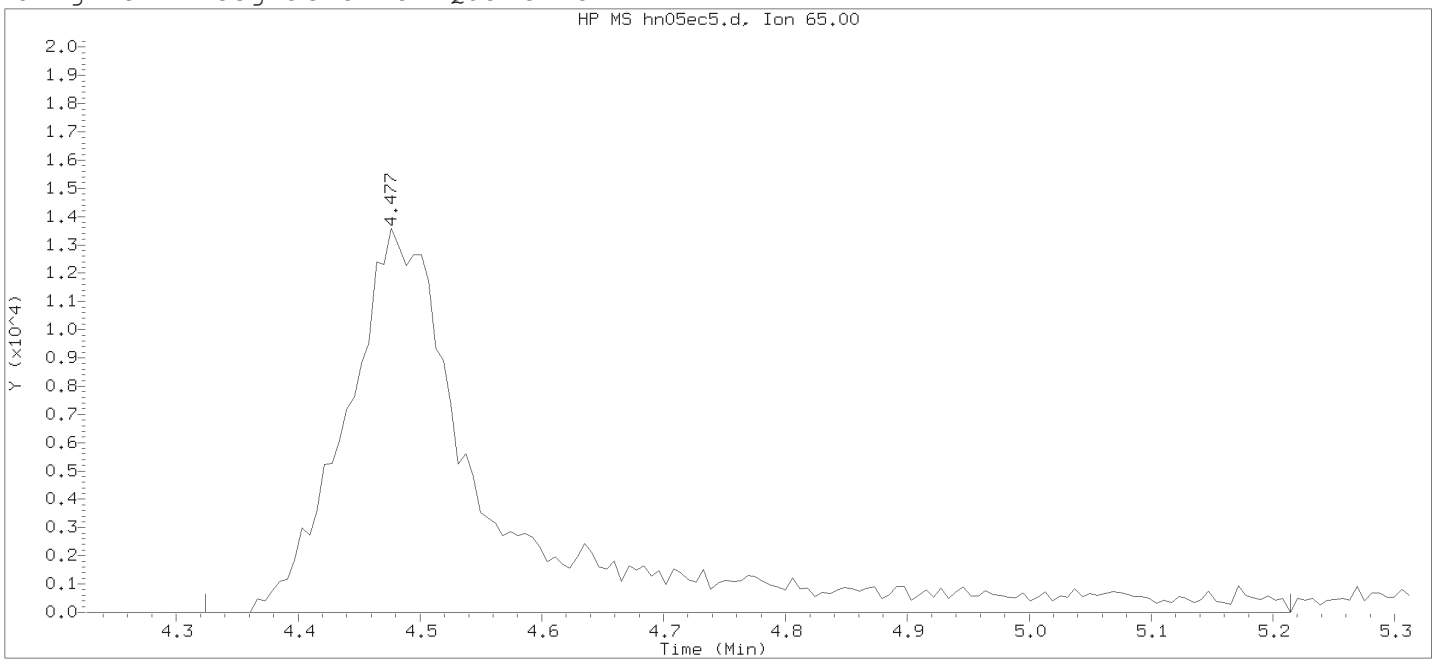
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05ec5.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:01 Analyst ID: JGC14951

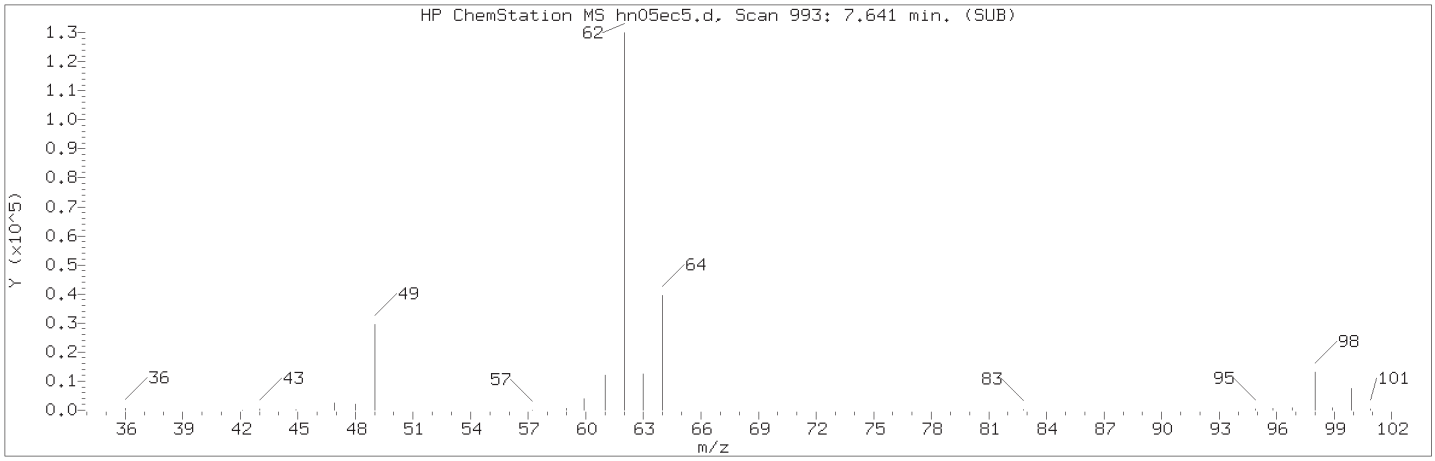
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 05-NOV-2018 22:04
Date, time and analyst ID of latest file update: 06-Nov-2018 07:19 Automation

Sample Name: SECC010 Lab Sample ID: SECC010

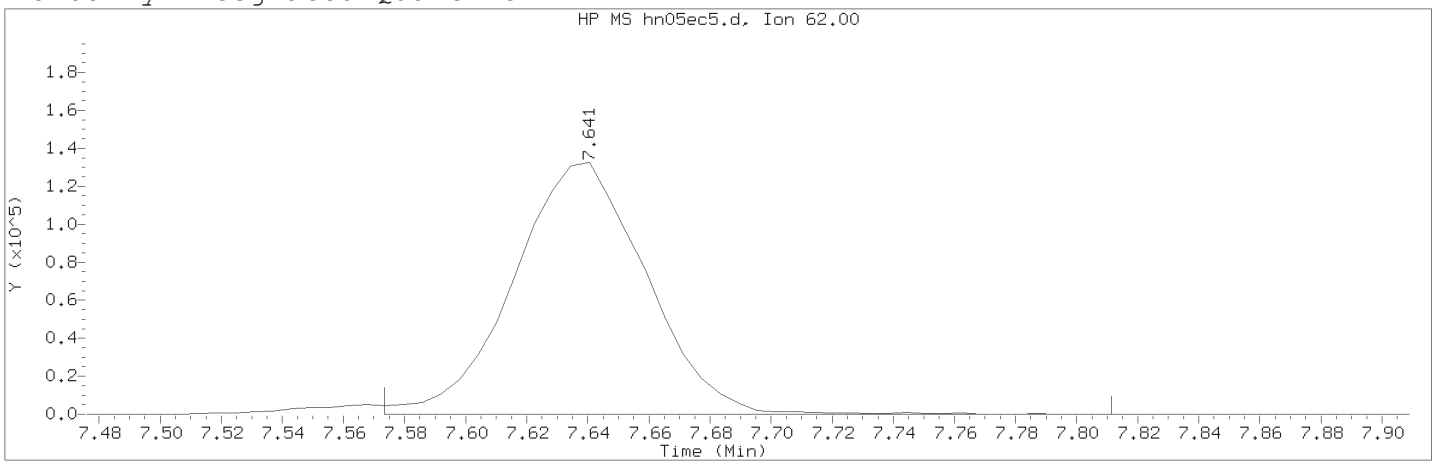
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.477
Quant Ion : 65.00
Area : 117238
On-column Amount (ng) : 50.0000
Integration start scan : 448 Integration stop scan: 594
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05ec5.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:01 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 07:40
Date, time and analyst ID of latest file update: 06-Nov-2018 07:40 jkh09052

Sample Name: SECC010 Lab Sample ID: SECC010

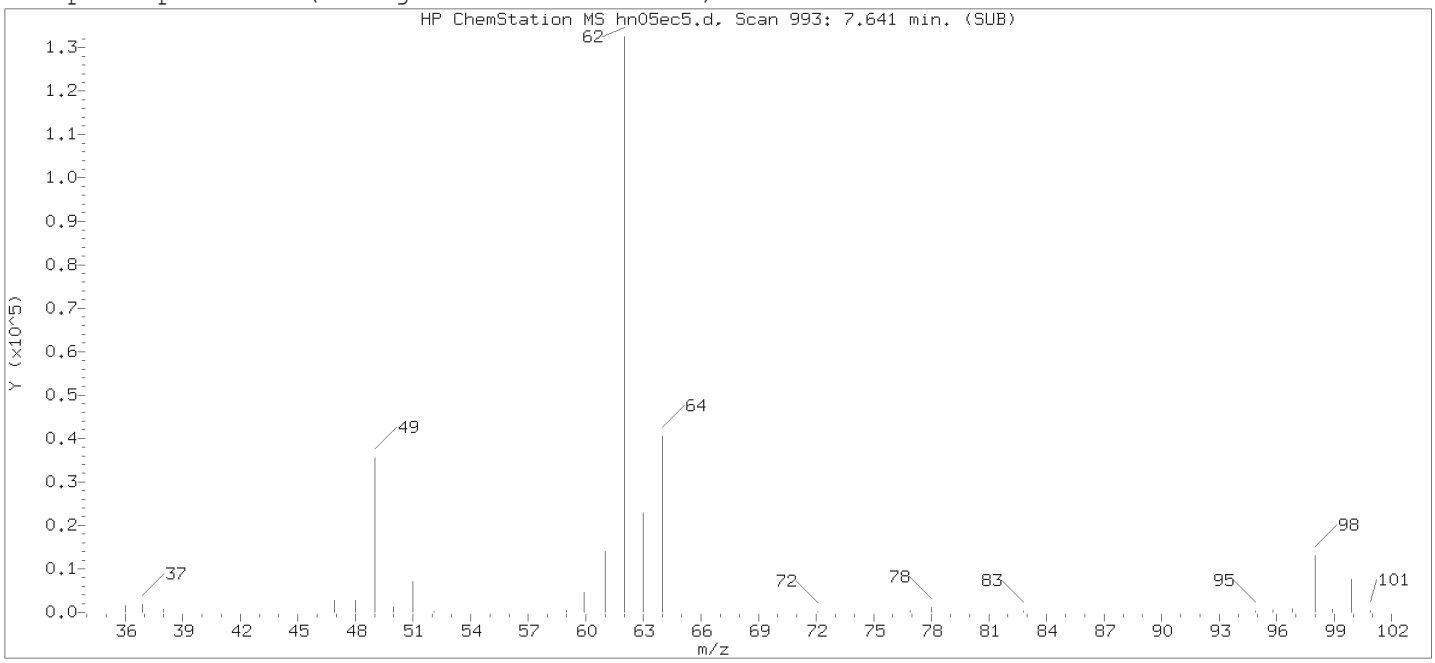
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.641
Quant Ion : 62.00
Area (flag) : 399847M
On-Column Amount (ng) : 7.7809
Integration start scan : 981 Integration stop scan: 1020
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

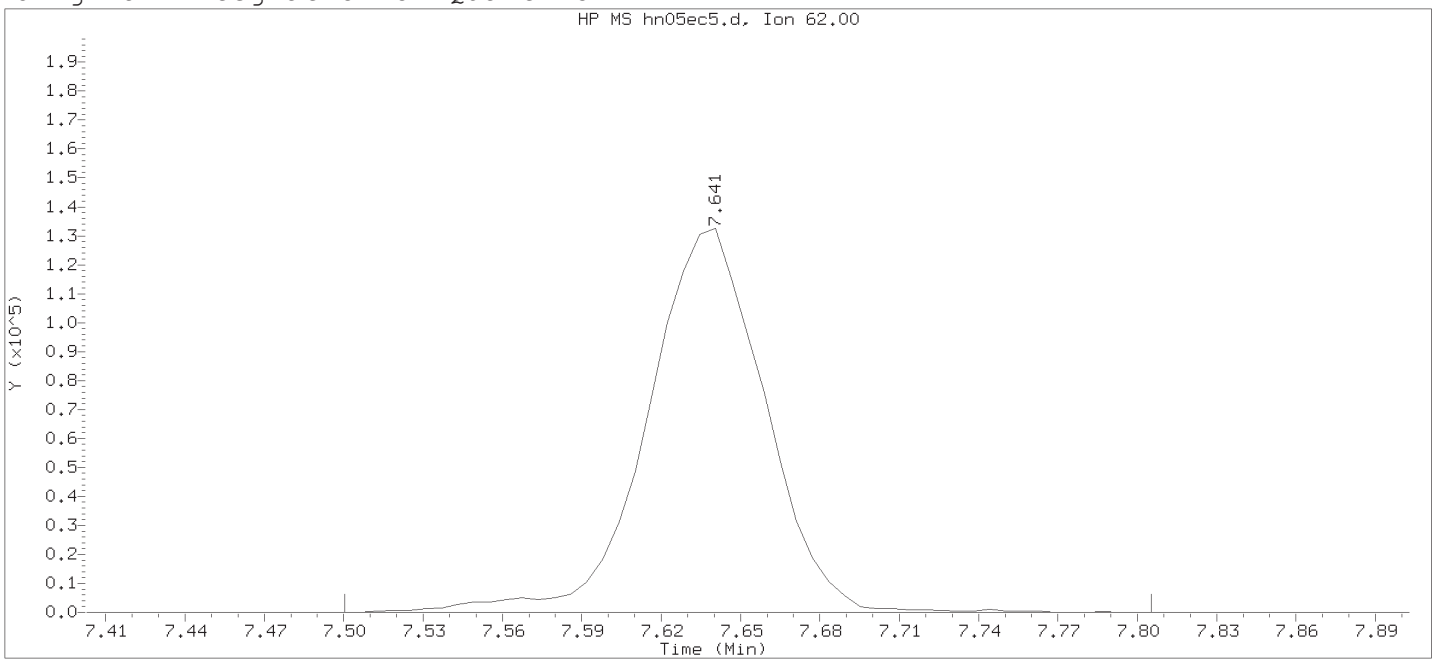
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05ec5.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:01 Analyst ID: JGC14951

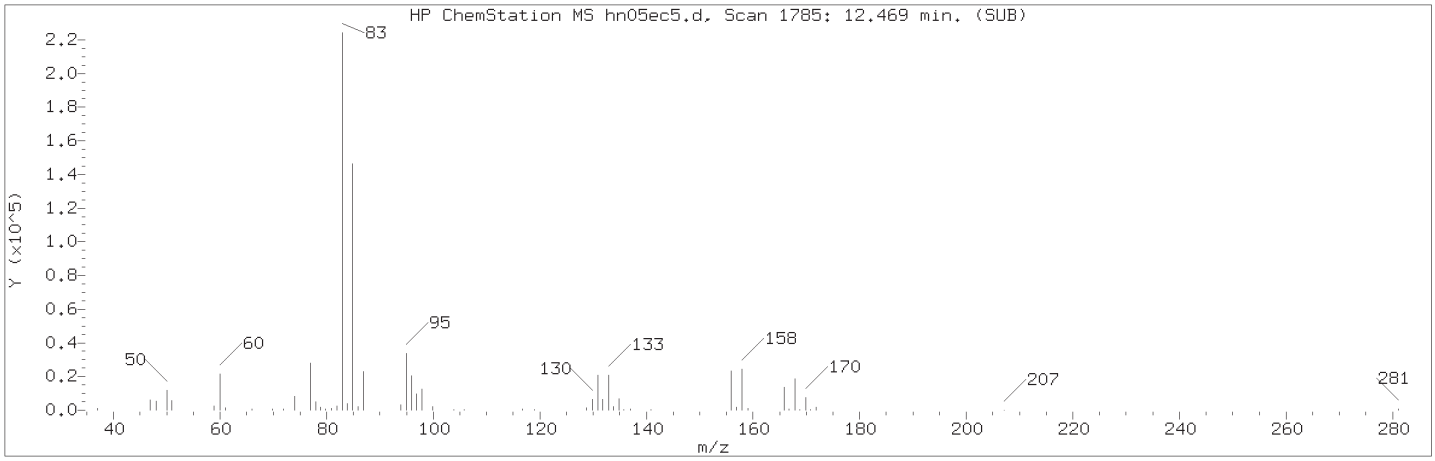
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 05-NOV-2018 22:04
Date, time and analyst ID of latest file update: 06-Nov-2018 07:19 Automation

Sample Name: SECC010 Lab Sample ID: SECC010

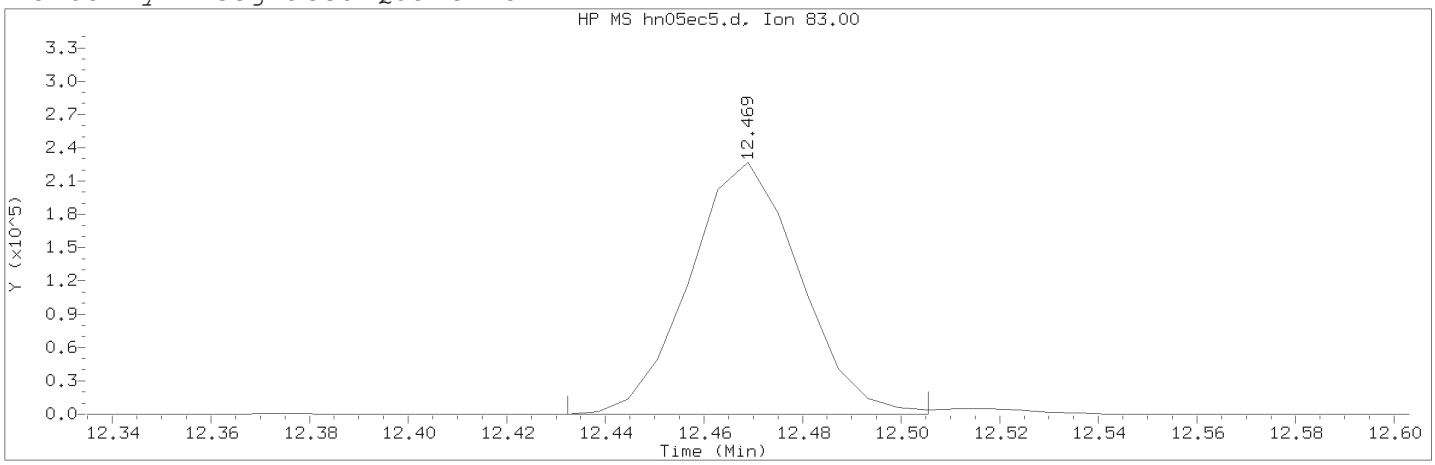
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.641
Quant Ion : 62.00
Area : 408576
On-column Amount (ng) : 7.9507
Integration start scan : 969 Integration stop scan: 1019
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05ec5.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:01 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 07:40
Date, time and analyst ID of latest file update: 06-Nov-2018 07:40 jkh09052

Sample Name: SECC010 Lab Sample ID: SECC010

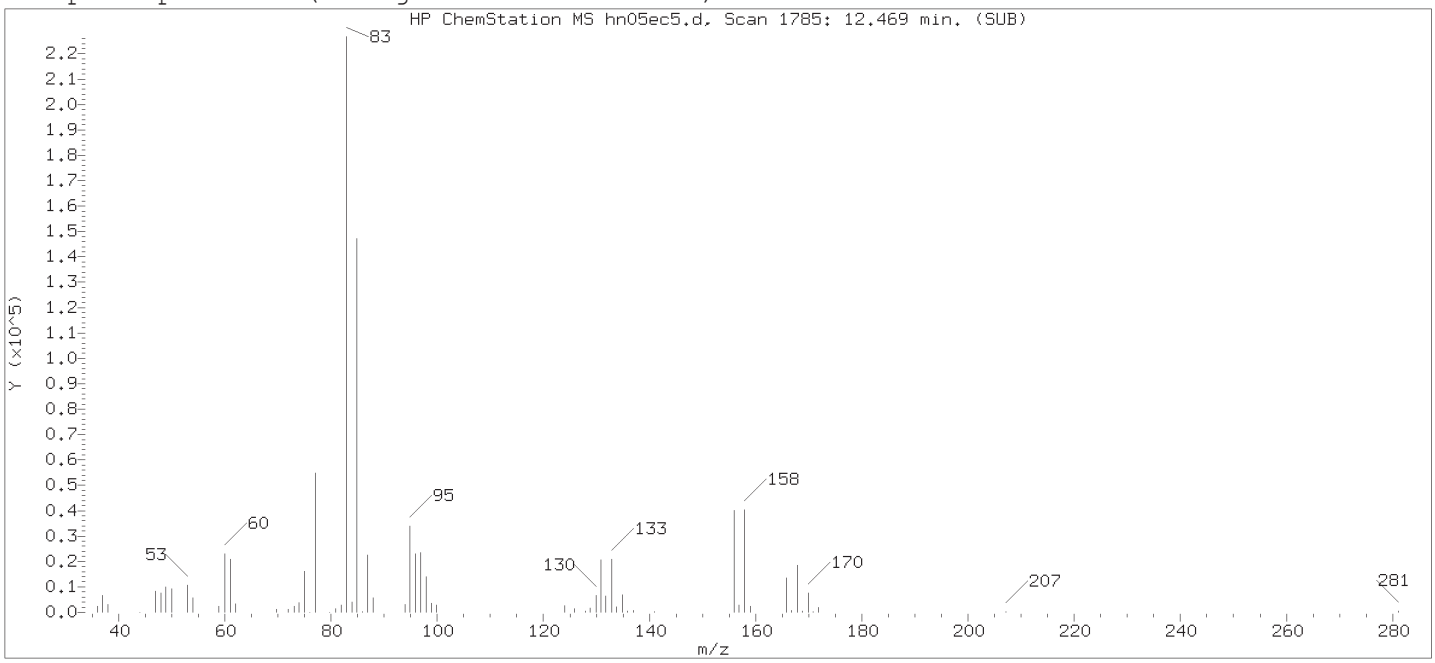
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area (flag) : 352122M
On-Column Amount (ng) : 9.7951
Integration start scan : 1778 Integration stop scan: 1790
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

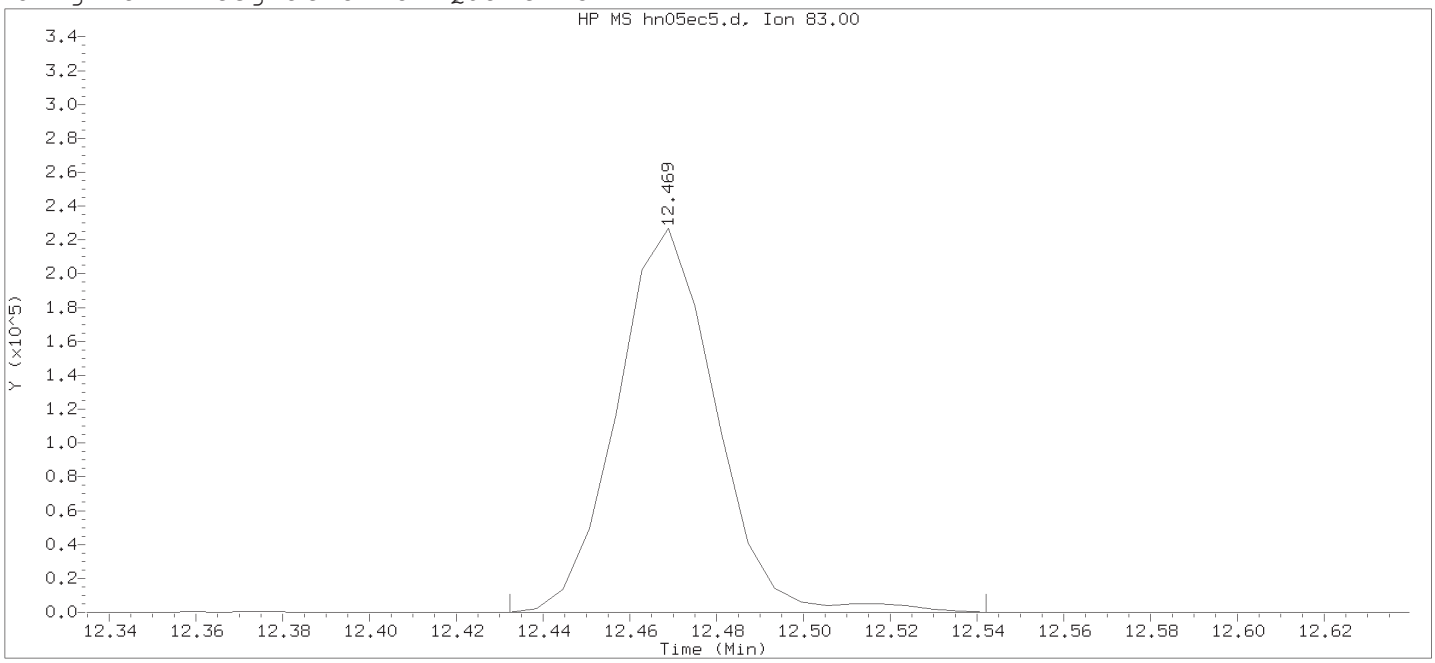
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05ec5.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:01 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 05-NOV-2018 22:04
Date, time and analyst ID of latest file update: 06-Nov-2018 07:19 Automation

Sample Name: SECC010 Lab Sample ID: SECC010

Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area : 358093
On-column Amount (ng) : 9.9612
Integration start scan : 1778 Integration stop scan: 1796
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jgc14951

Data File: /chem2/HP19094.i/18may02b.b/hy02t07.d

Date : 02-MAY-2018 18:32

Client ID: BFB 50ng

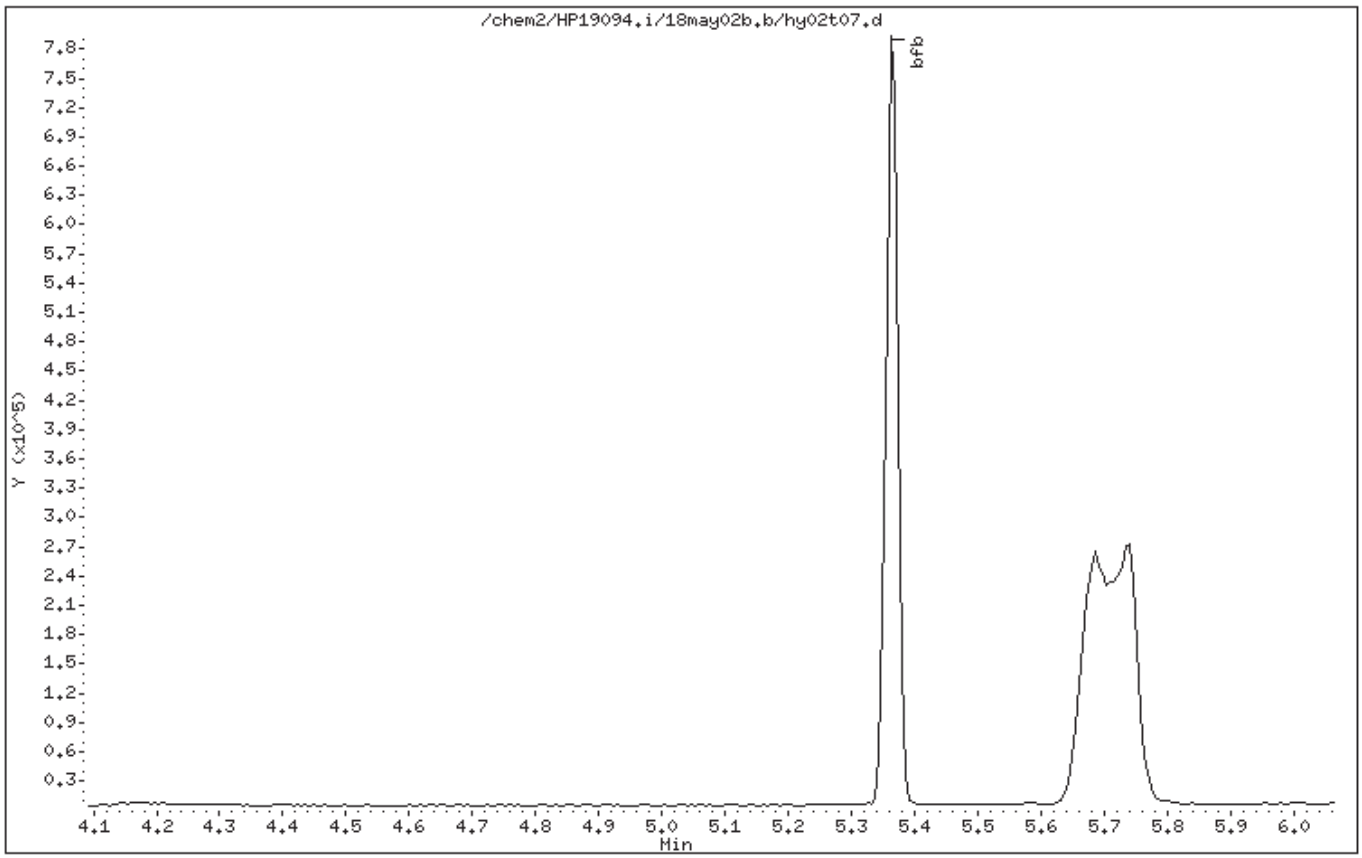
Instrument: HP19094.i

Sample Info: BFB 50ng;BFB FEB13-18;1;3;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Don V. Viray on 05/02/2018 at 18:38.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP19094.i/18may02b.b/hy02t07.d

Date : 02-MAY-2018 18:32

Client ID: BFB 50ng

Instrument: HP19094.i

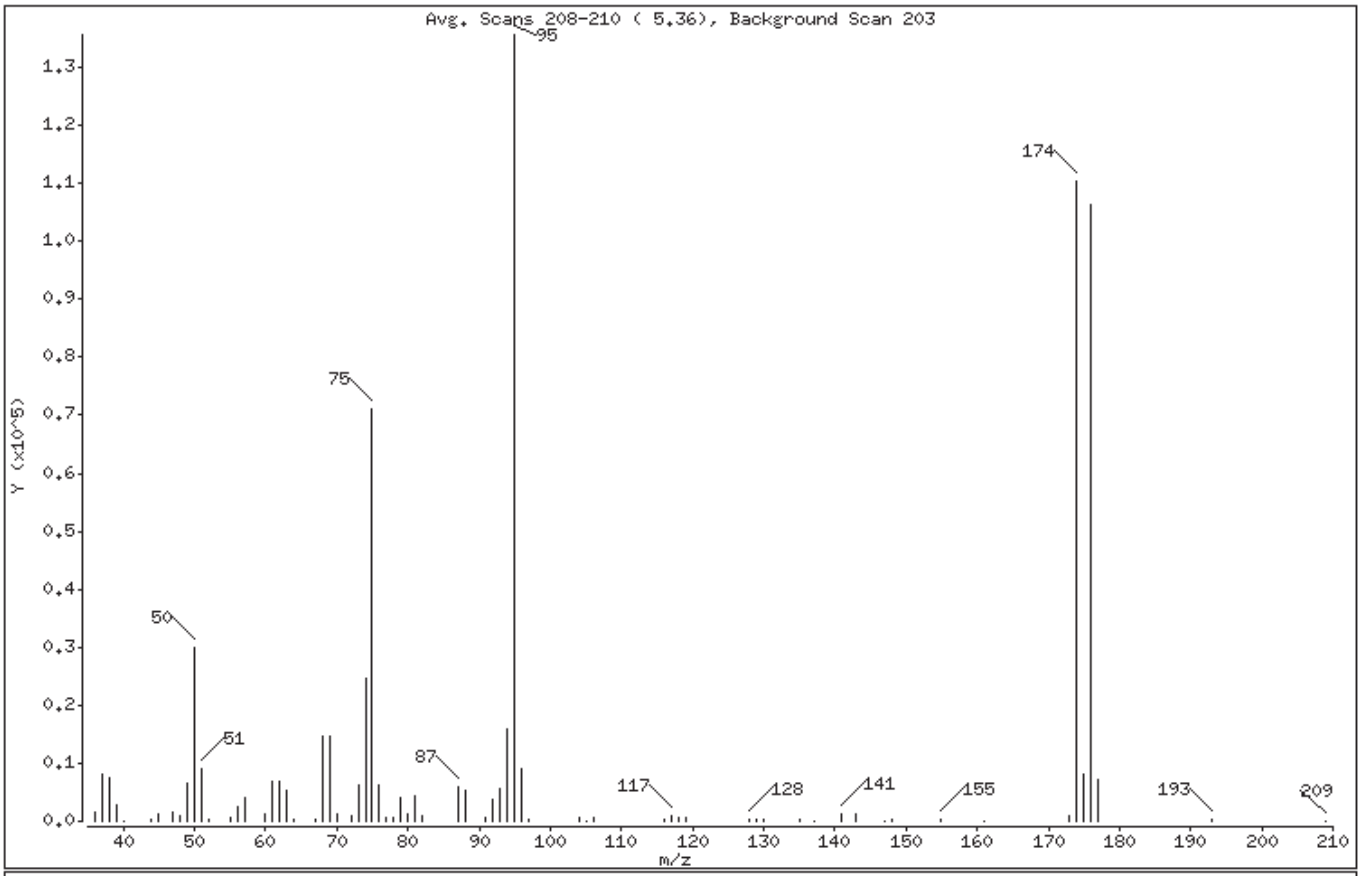
Sample Info: BFB 50ng;BFB FEB13-18;1;3;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.13
75	30.00 - 60.00% of mass 95	52.51
96	5.00 - 9.00% of mass 95	6.69
173	Less than 2.00% of mass 174	0.74 (0.91)
174	50.00 - 100.00% of mass 95	81.35
175	5.00 - 9.00% of mass 174	6.02 (7.39)
176	95.00 - 101.00% of mass 174	78.44 (96.43)
177	5.00 - 9.00% of mass 176	5.34 (6.81)

Digitally signed by Don V. Viray on 05/02/2018 at 18:38.
Target 3.5 esignature user ID: dvv10203

Date : 02-MAY-2018 18:32

Client ID: BFB 50ng Instrument: HP19094.i

Sample Info: BFB 50ng;BFB FEB13-18;1;3;;;;;

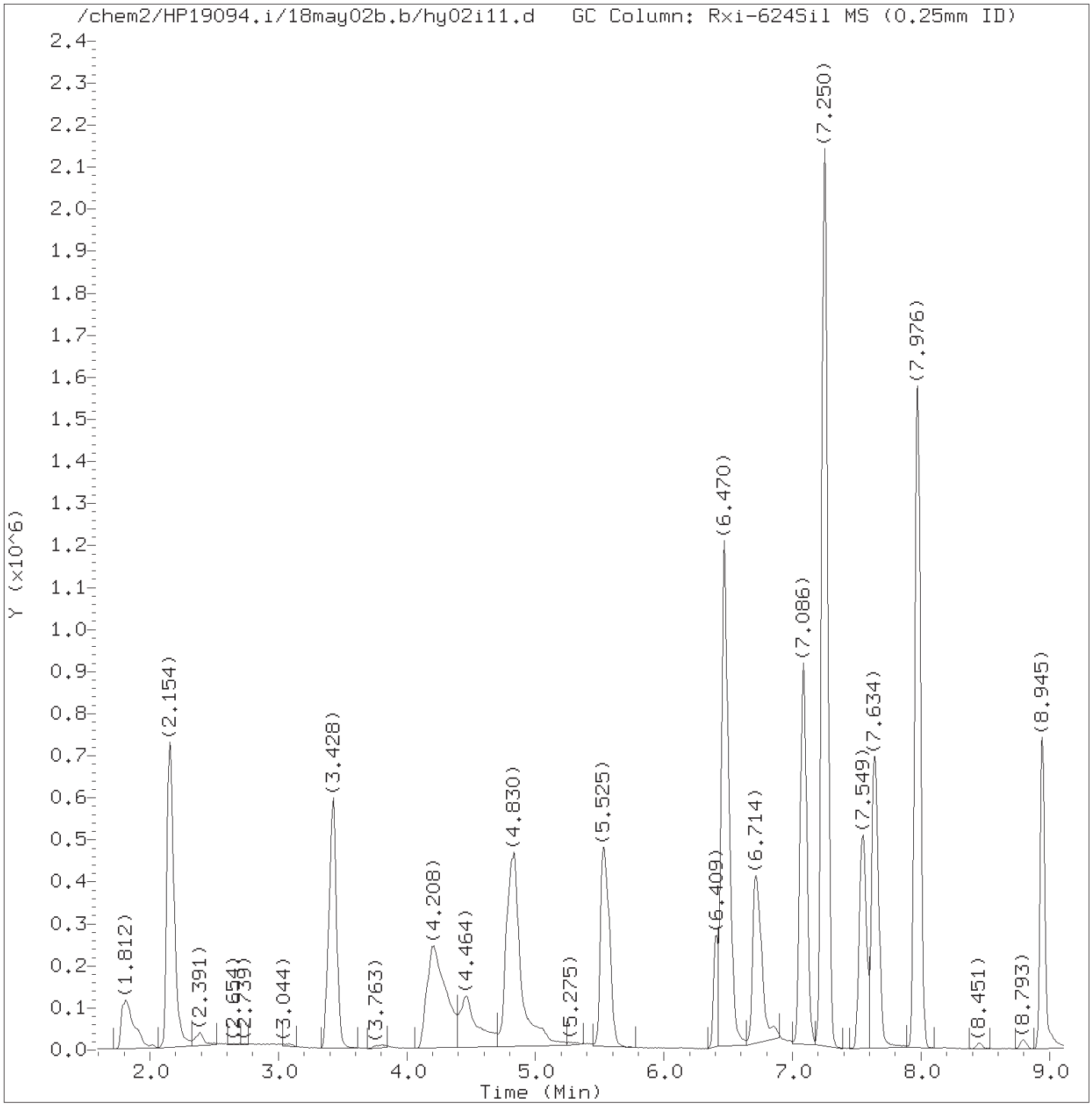
Operator: DVV10203

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hy02t07.d
Spectrum: Avg. Scans 208-210 (5.36), Background Scan 203
Location of Maximum: 95.00
Number of points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1470	62.00	6734	87.00	5881	130.00	433
37.00	8118	63.00	5366	88.00	5267	135.00	242
38.00	7563	64.00	344	91.00	509	137.00	100
39.00	2730	67.00	437	92.00	3621	141.00	1337
40.00	63	68.00	14675	93.00	5521	143.00	1332
44.00	285	69.00	14780	94.00	15980	147.00	90
45.00	1328	70.00	1336	95.00	135616	148.00	267
47.00	1648	72.00	799	96.00	9072	155.00	234
48.00	966	73.00	6302	97.00	295	161.00	98
49.00	6556	74.00	24648	104.00	568	173.00	1005
50.00	30024	75.00	71232	105.00	133	174.00	110368
51.00	9082	76.00	6135	106.00	520	175.00	8161
52.00	462	77.00	713	116.00	465	176.00	106424
55.00	540	78.00	701	117.00	851	177.00	7246
56.00	2506	79.00	4126	118.00	543	193.00	227
57.00	3993	80.00	1277	119.00	727	209.00	128
60.00	1270	81.00	4251	128.00	453		
61.00	6851	82.00	901	129.00	243		

Digitally signed by Don V. Viray on 05/02/2018 at 18:38.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

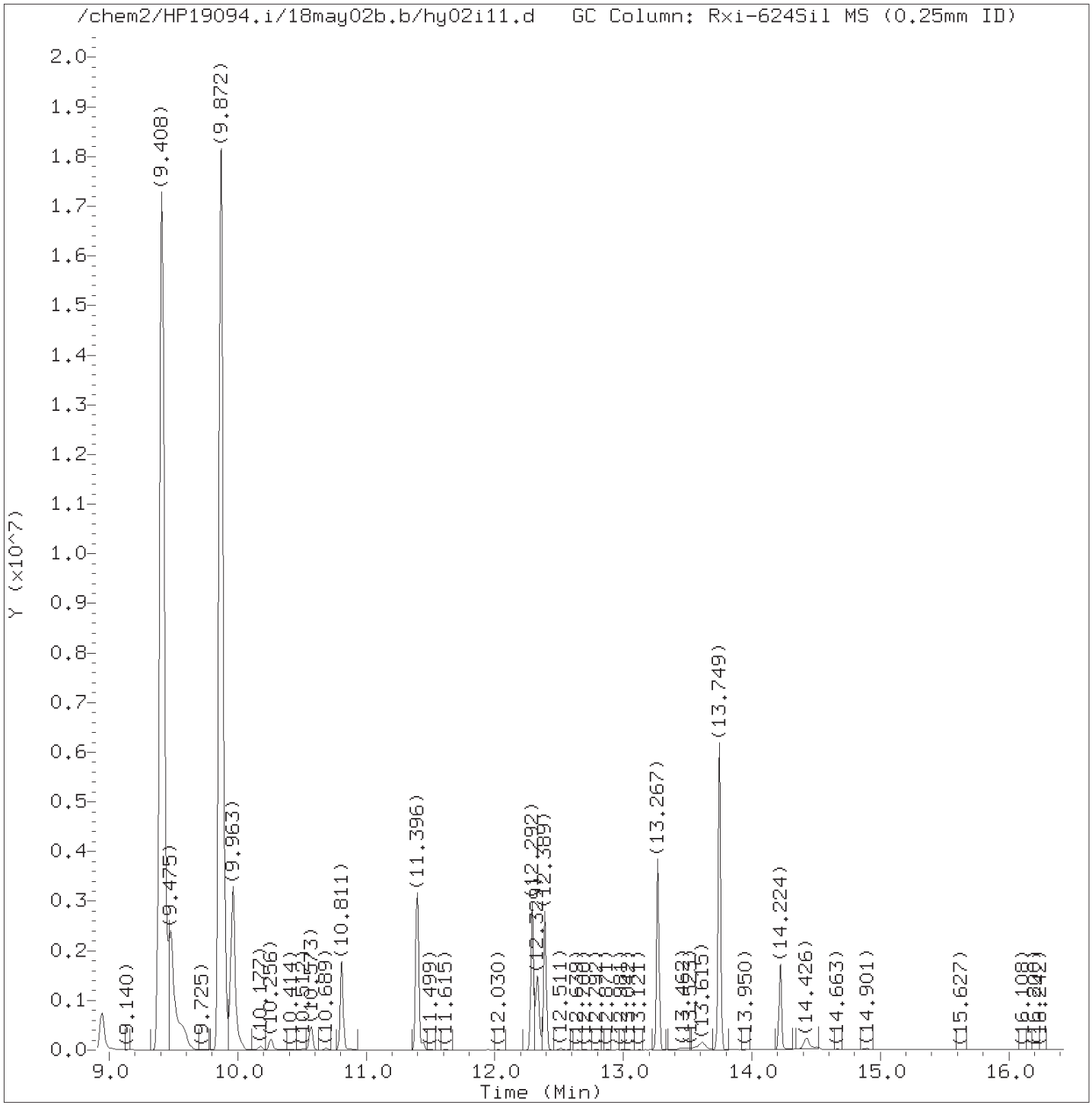
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

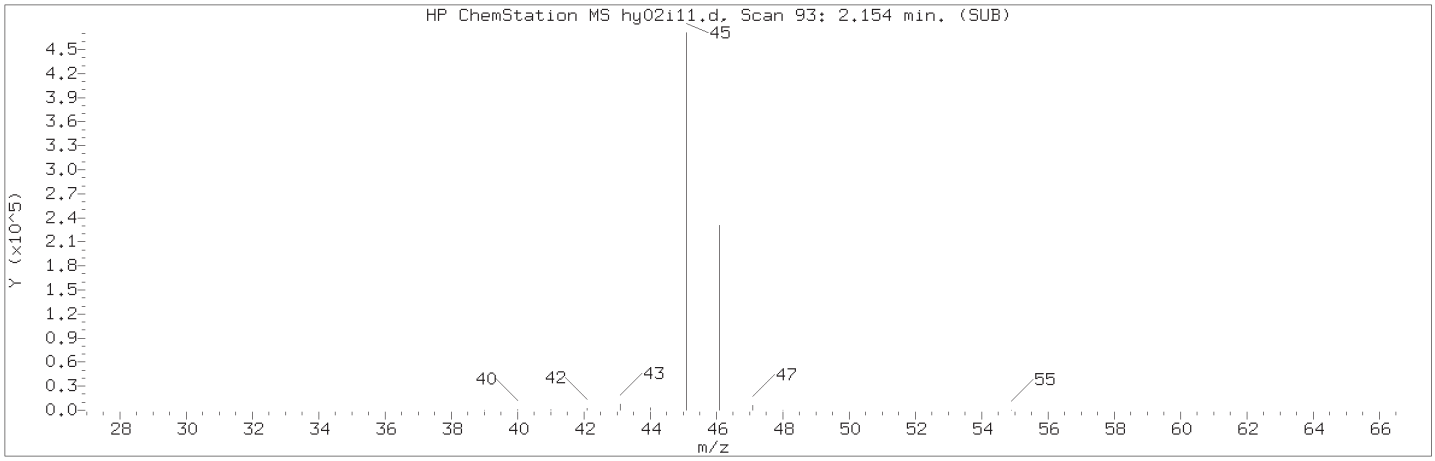
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.154	45	1873450M	25.332
25) Acetonitrile	(1)	4.196	41	2114112M	889.435
26)*t-Butyl Alcohol-d10	(1)	4.458	65	98437M	50.000
36) Vinyl Acetate	(2)	5.531	43	1821283	25.848
43) Methyl Acrylate	(2)	6.470	55	2806876	129.110
53) 1-Chlorobutane	(2)	7.250	56	2820529	27.109
63)*Fluorobenzene	(2)	7.970	96	2303816	10.000
77) Chloroacetonitrile	(2)	9.463	75	1310379	1512.419
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	567006	27.220
97)*Chlorobenzene-d5	(3)	11.396	117	1683927	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	653577M	51.268
112) Cyclohexanone	(1)	12.335	55	752493M	1160.656
133)*1,4-Dichlorobenzene-d4	(4)	13.267	152	883503	10.000
142) Hexachloroethane	(4)	13.749	117	1117191	30.036

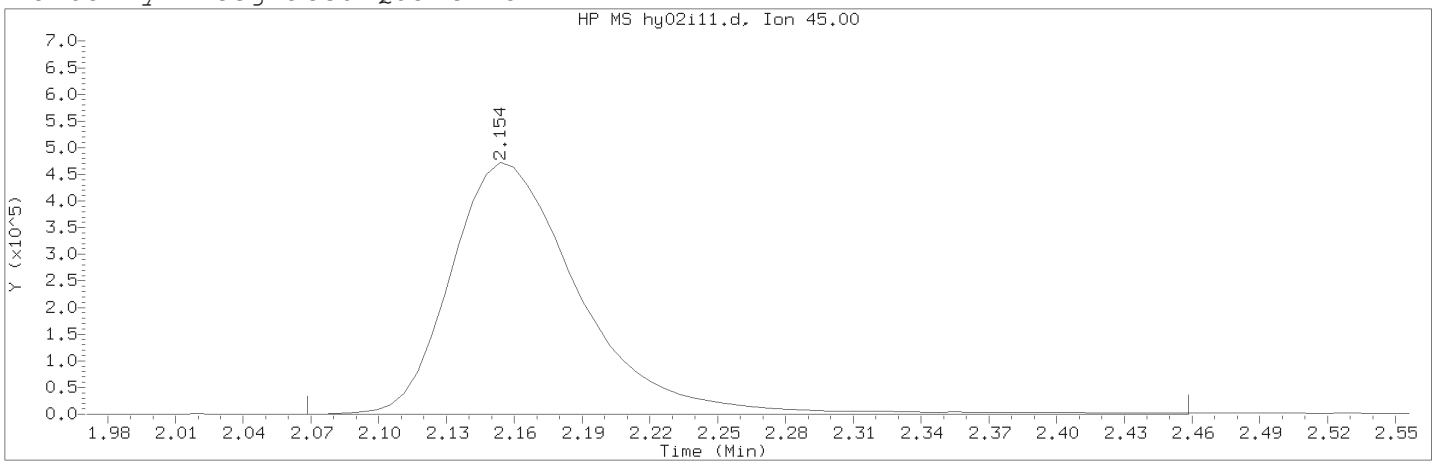
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

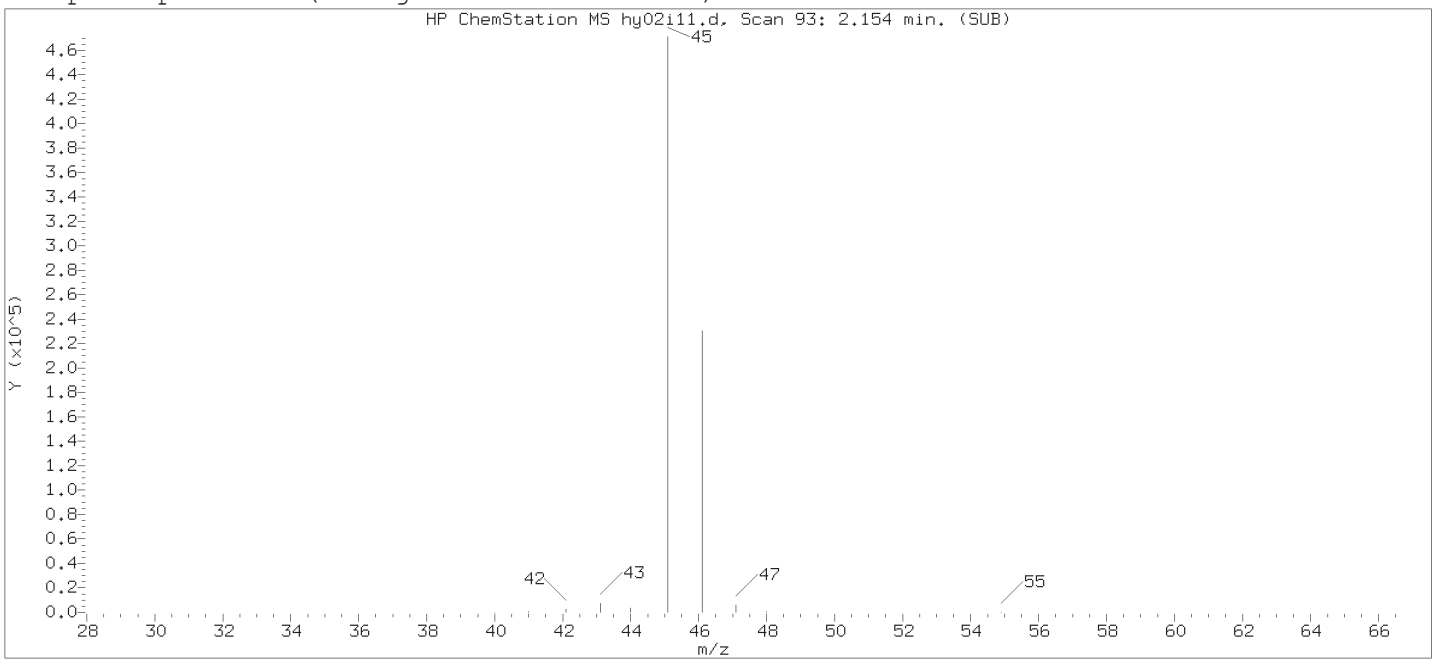
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 1873450M
On-Column Amount (ng) : 25.3318
Integration start scan : 78 Integration stop scan: 142
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

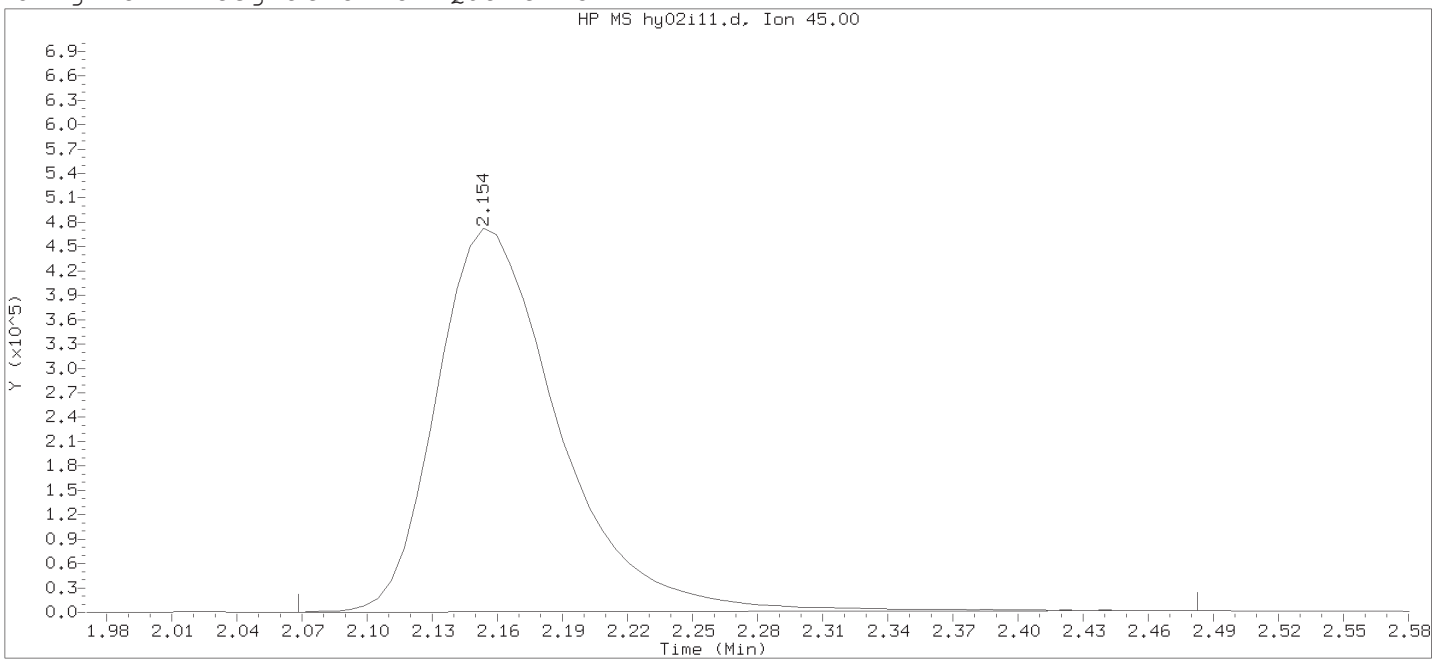
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

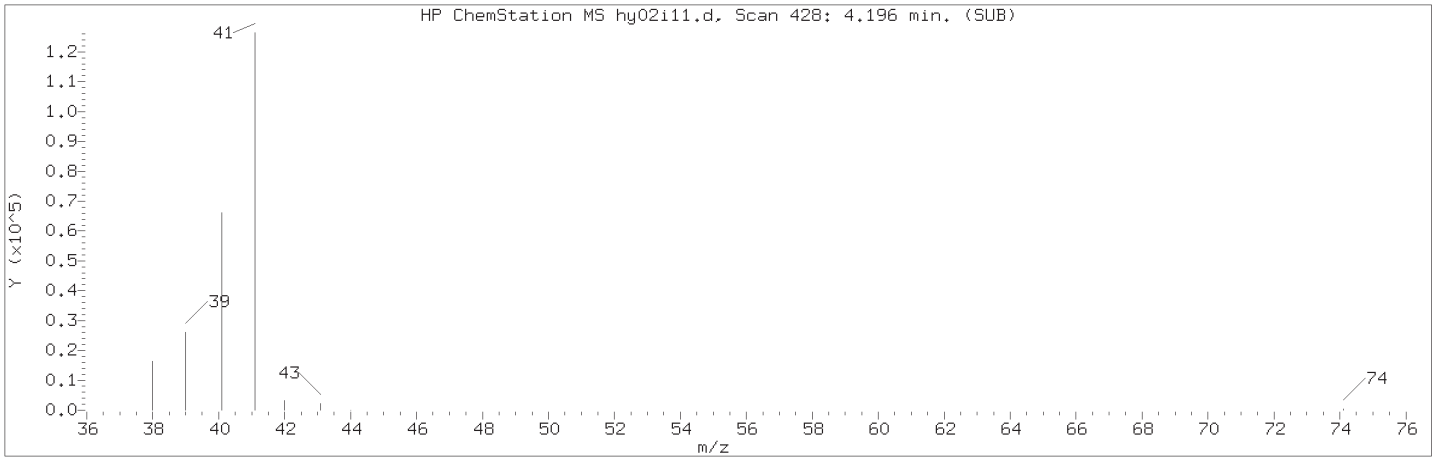
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:33
Date, time and analyst ID of latest file update: 02-May-2018 19:33 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

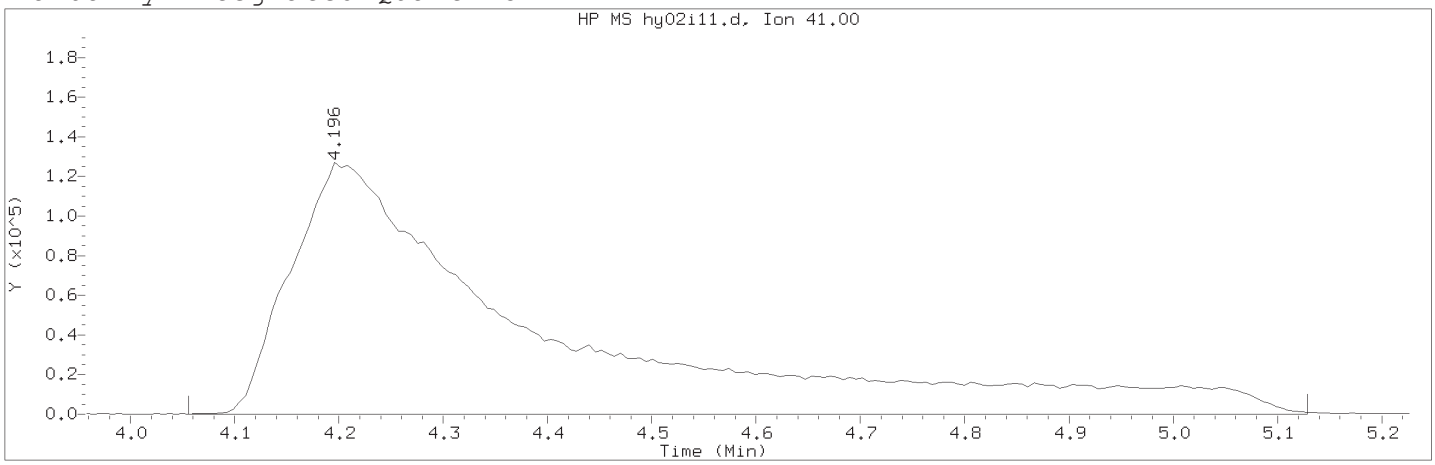
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 93		
Retention Time (minutes)	: 2.154		
Quant Ion	: 45.00		
Area	: 1849760		
On-column Amount (ng)	: 24.0567		
Integration start scan	: 78	Integration stop scan:	146
Y at integration start	: 0	Y at integration end:	2143

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

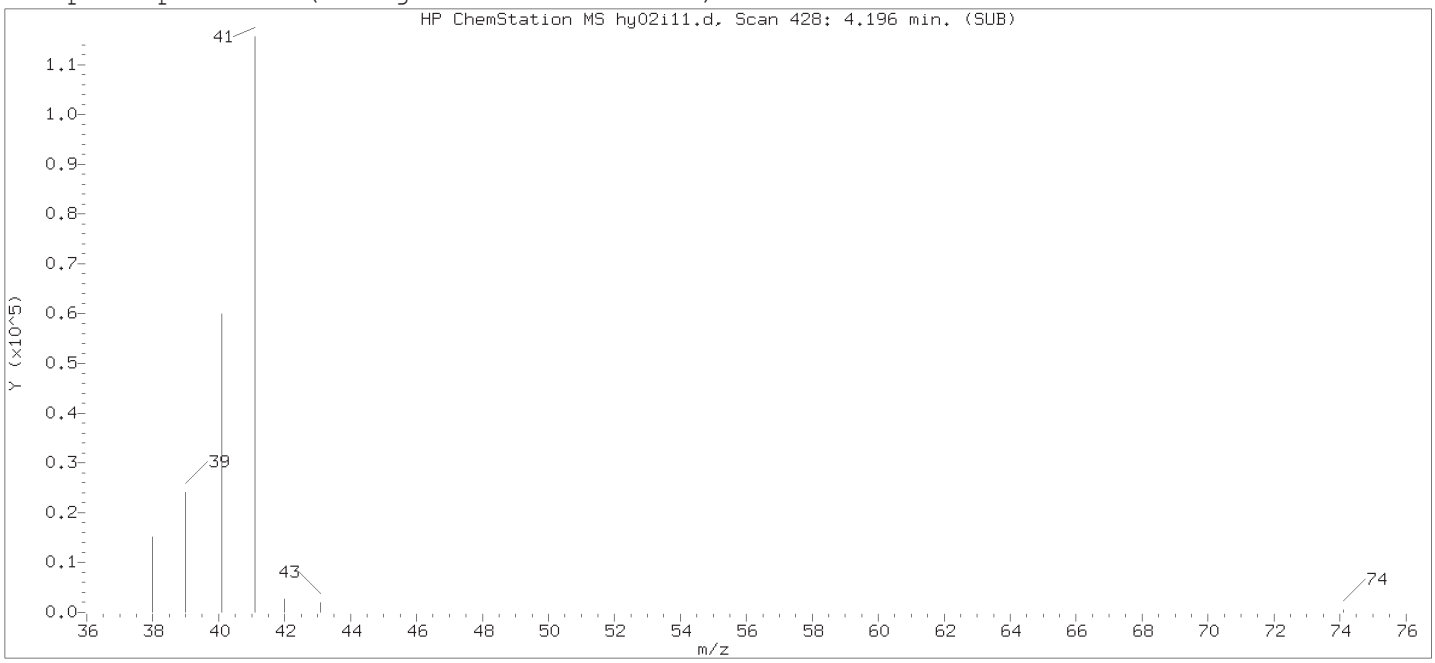
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 428
Retention Time (minutes): 4.196
Quant Ion : 41.00
Area (flag) : 2114112M
On-Column Amount (ng) : 889.4345
Integration start scan : 404 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

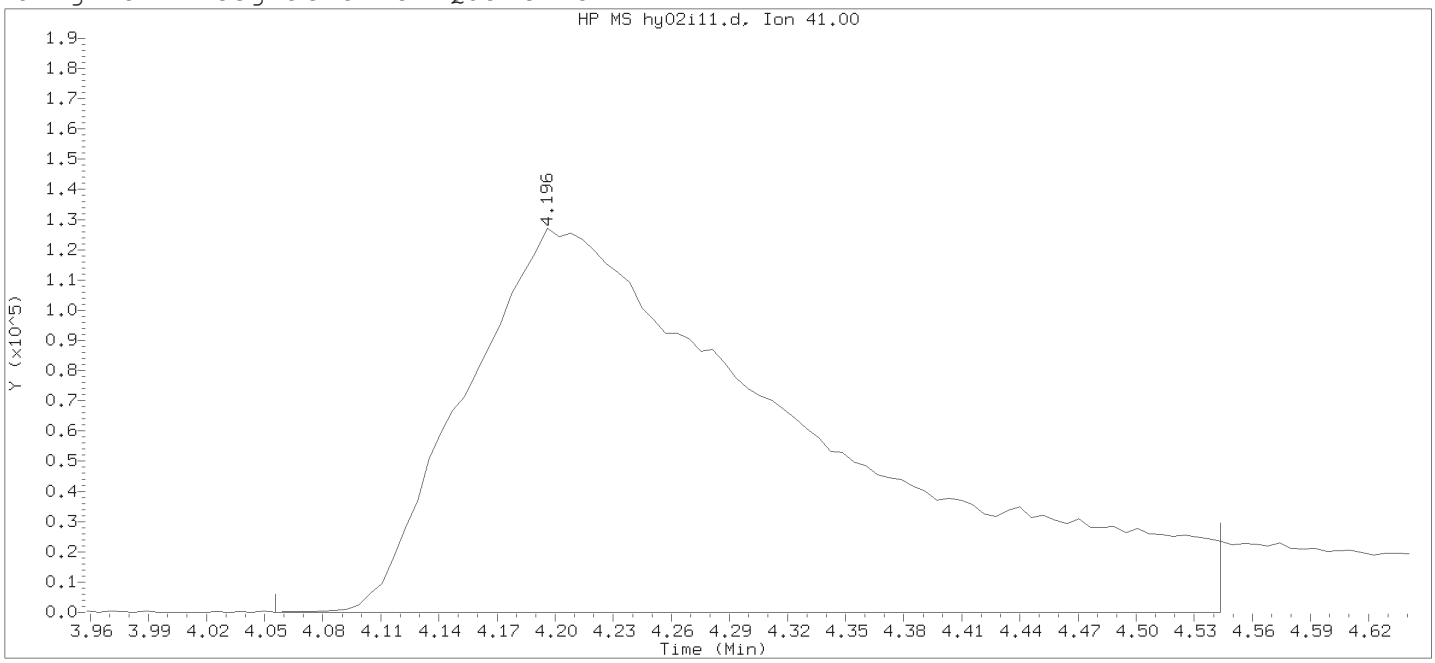
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

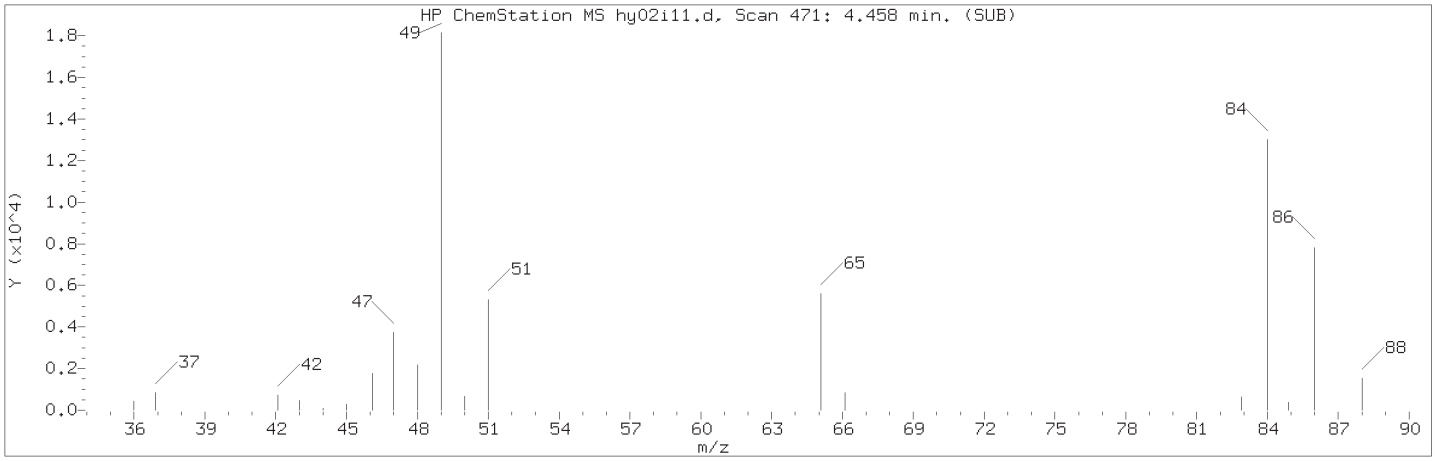
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:33
Date, time and analyst ID of latest file update: 02-May-2018 19:33 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

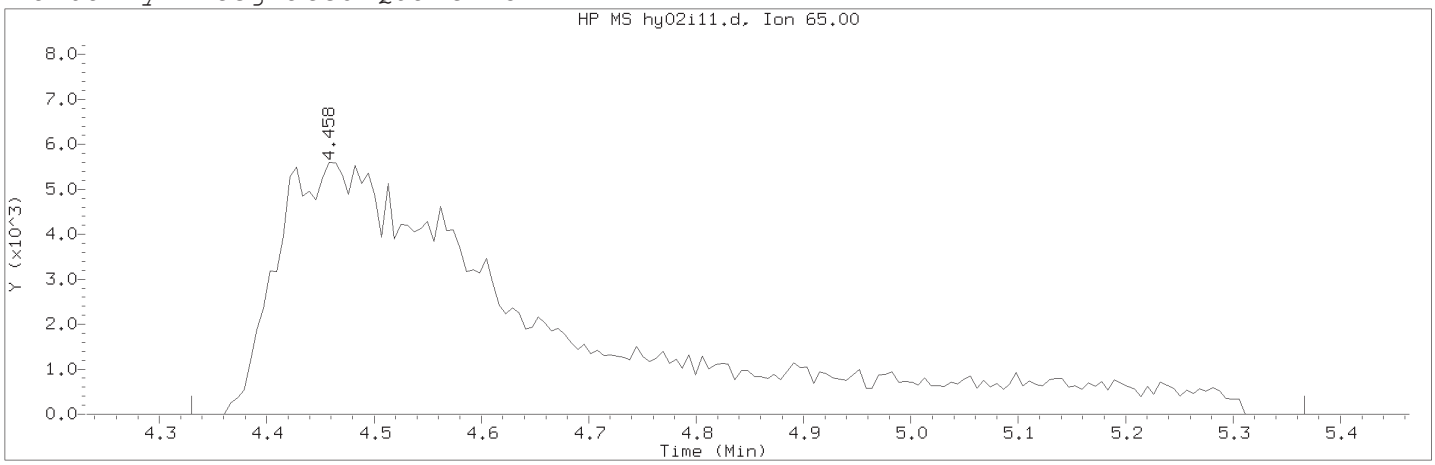
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 428
Retention Time (minutes): 4.196
Quant Ion : 41.00
Area : 1586970
On-column Amount (ng) : 557.8895
Integration start scan : 404 Integration stop scan: 484
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

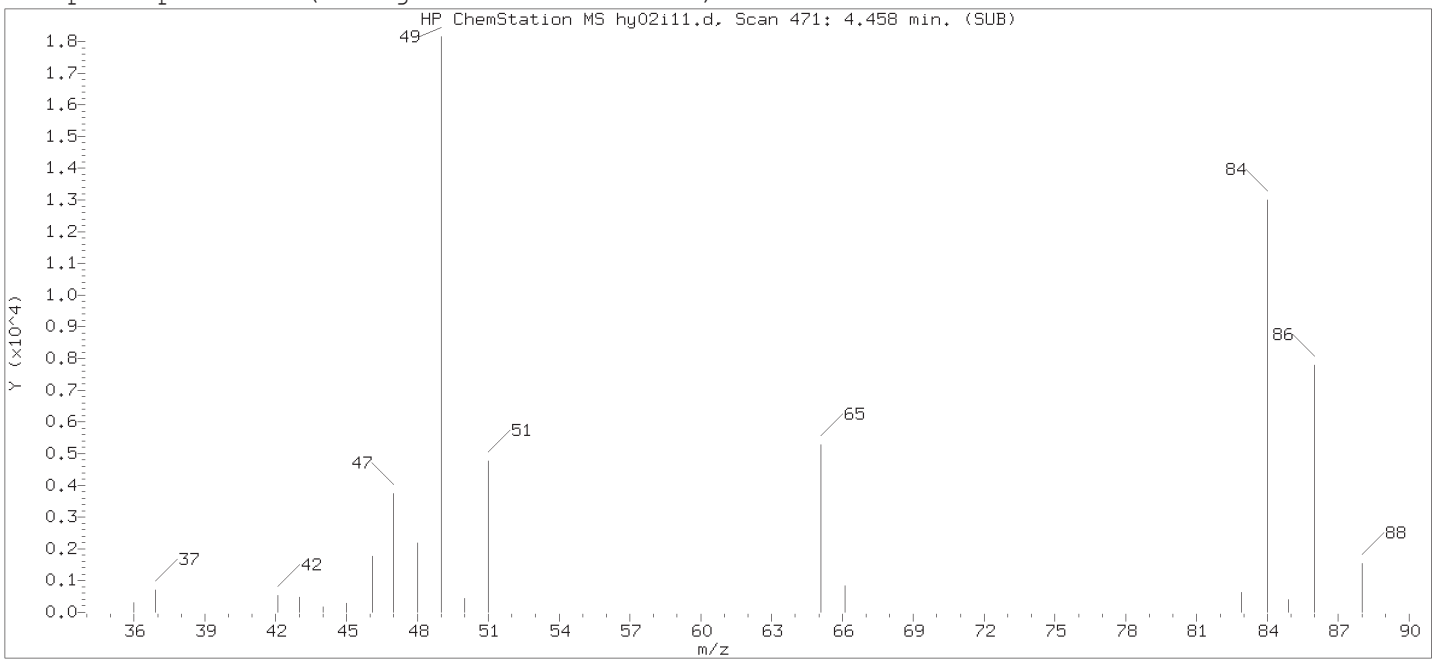
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 471
Retention Time (minutes): 4.458
Quant Ion : 65.00
Area (flag) : 98437M
On-Column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 619
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

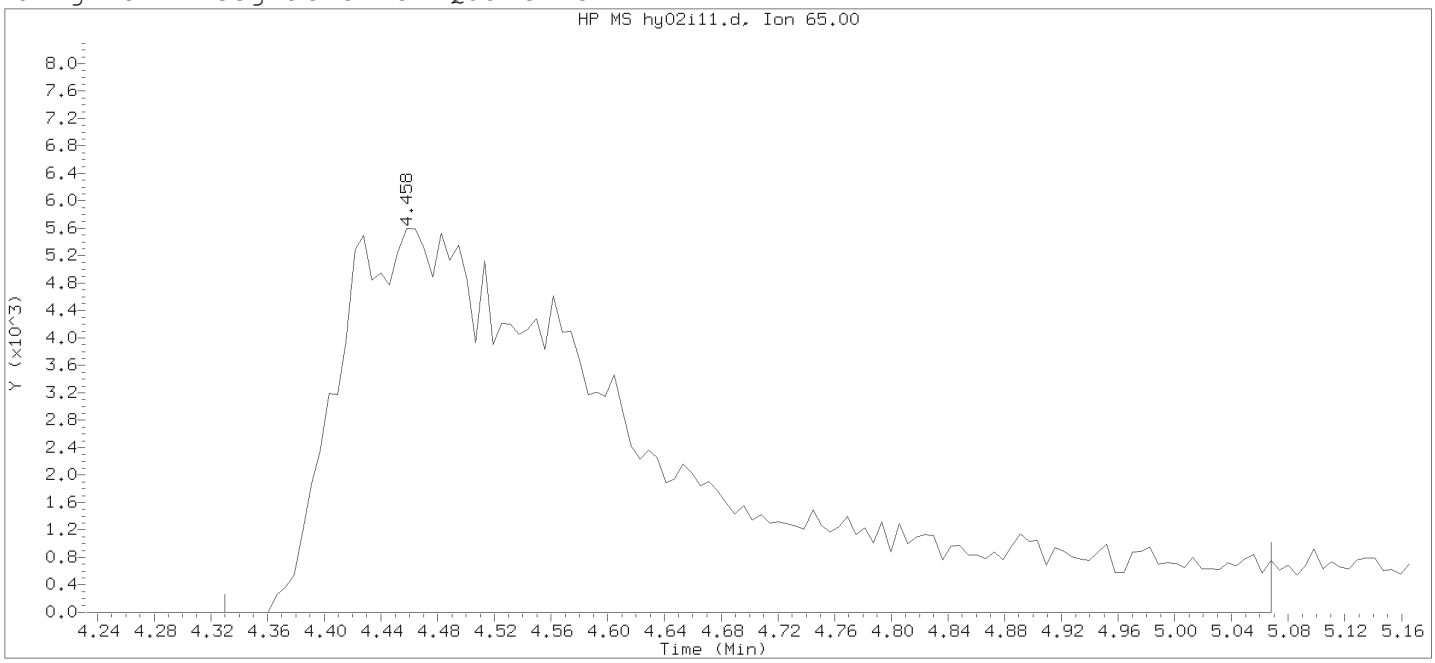
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

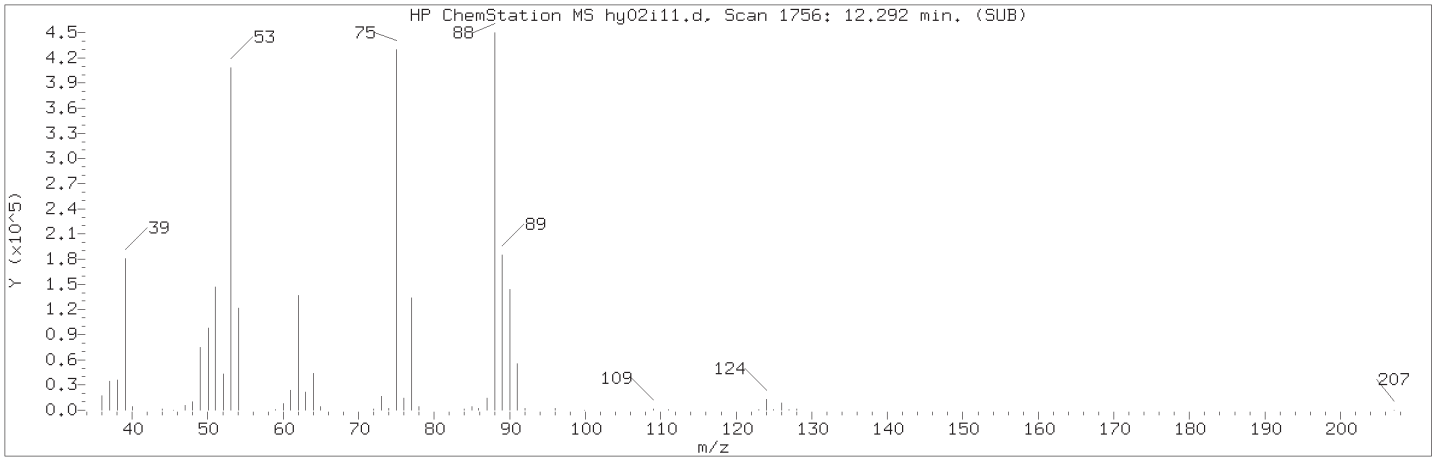
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:33
Date, time and analyst ID of latest file update: 02-May-2018 19:33 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

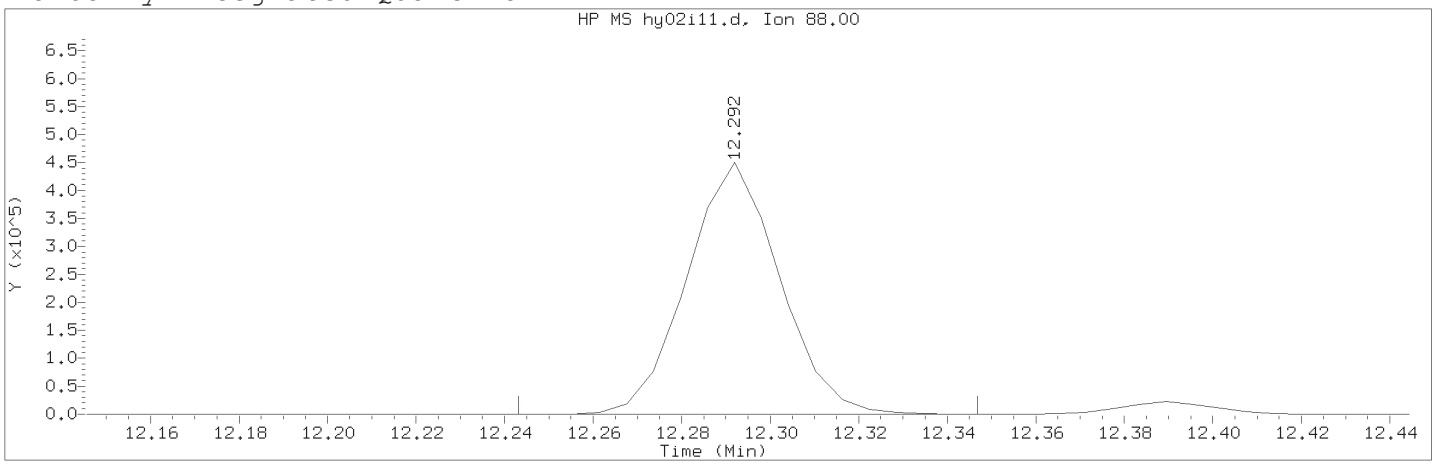
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 471
Retention Time (minutes): 4.458
Quant Ion : 65.00
Area : 89717
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 570
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

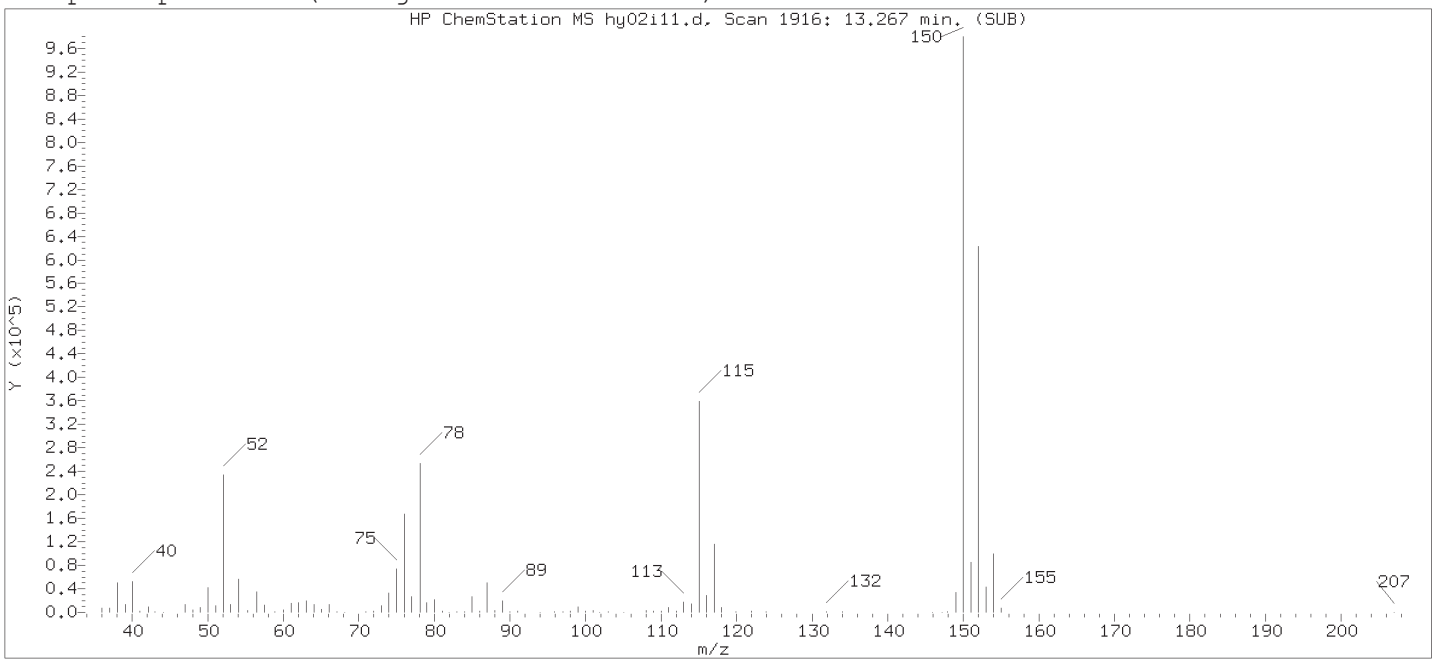
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 653577M
On-Column Amount (ng) : 51.2675
Integration start scan : 1747 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

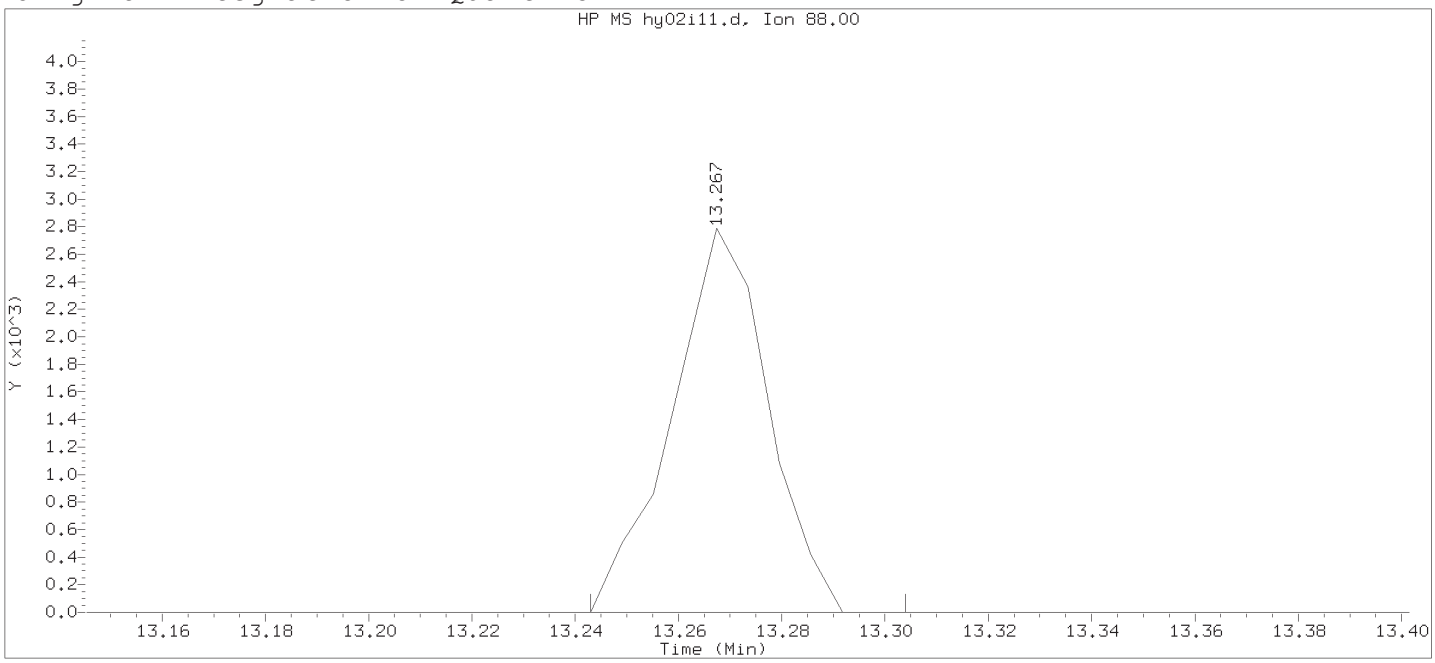
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

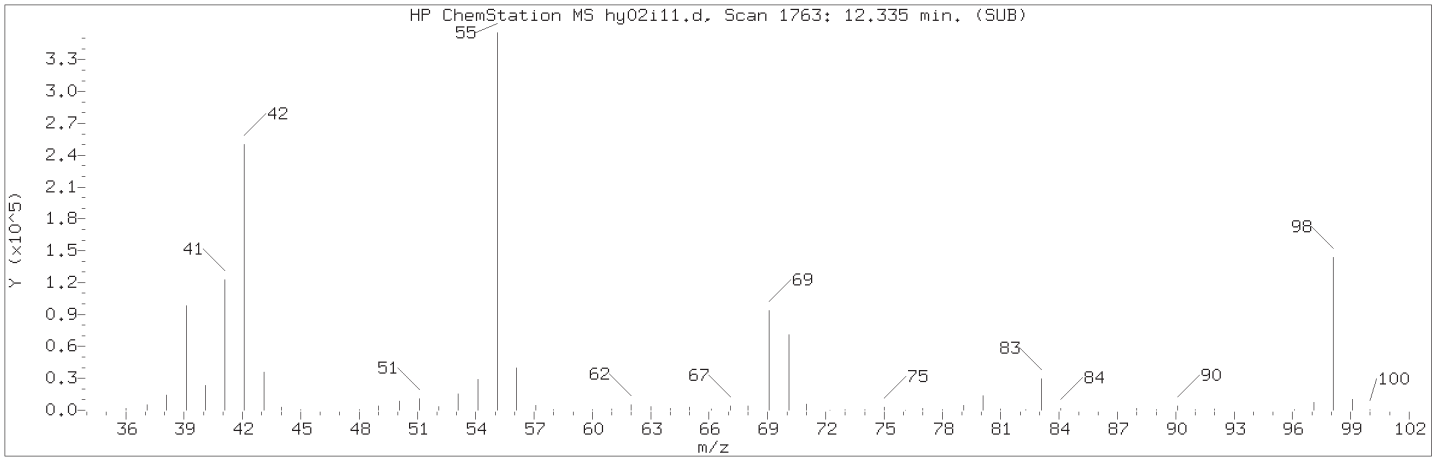
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:33
Date, time and analyst ID of latest file update: 02-May-2018 19:33 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

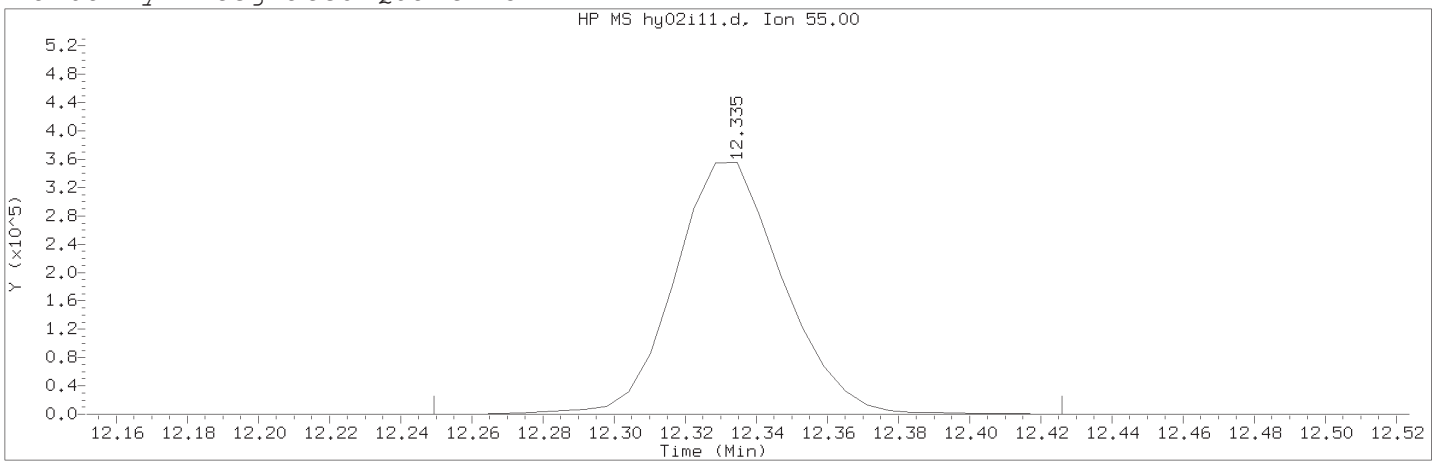
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1916
Retention Time (minutes): 13.267
Quant Ion : 88.00
Area : 3604
On-column Amount (ng) : 0.2776
Integration start scan : 1911 Integration stop scan: 1921
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

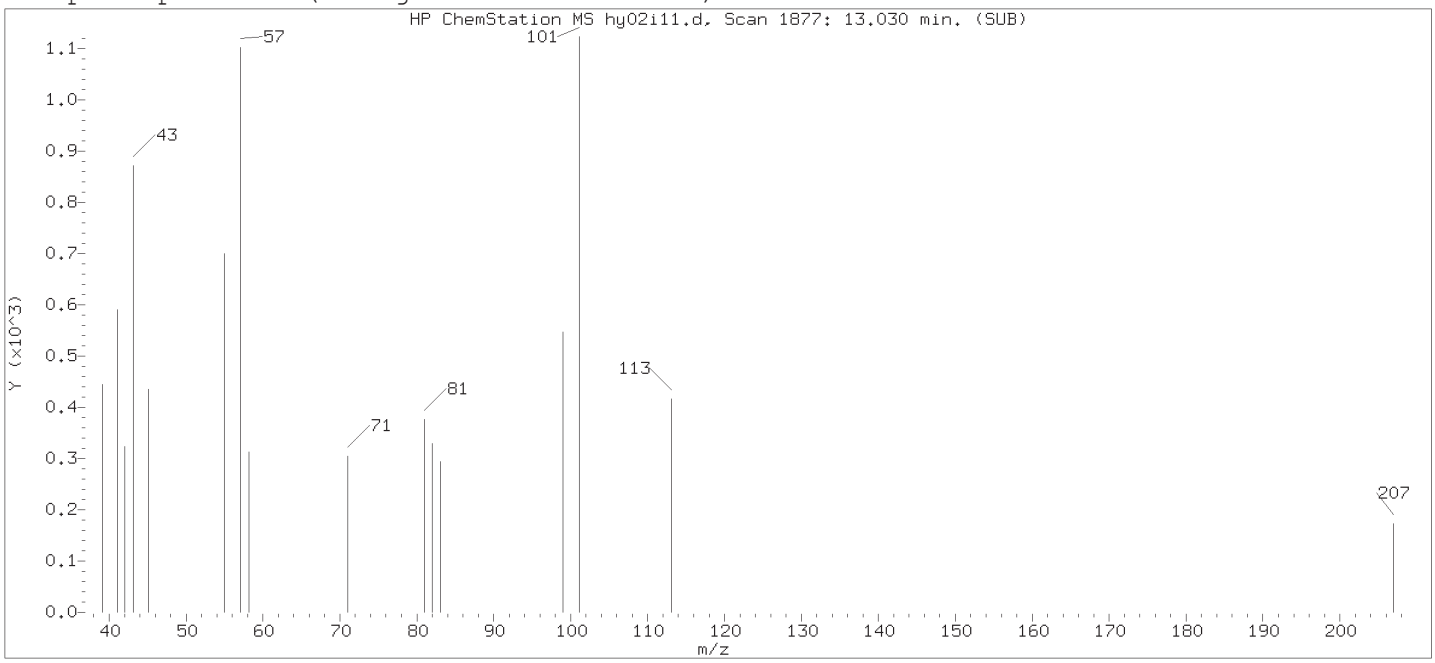
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1763
Retention Time (minutes): 12.335
Quant Ion : 55.00
Area (flag) : 752493M
On-Column Amount (ng) : 1160.6564
Integration start scan : 1748 Integration stop scan: 1777
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

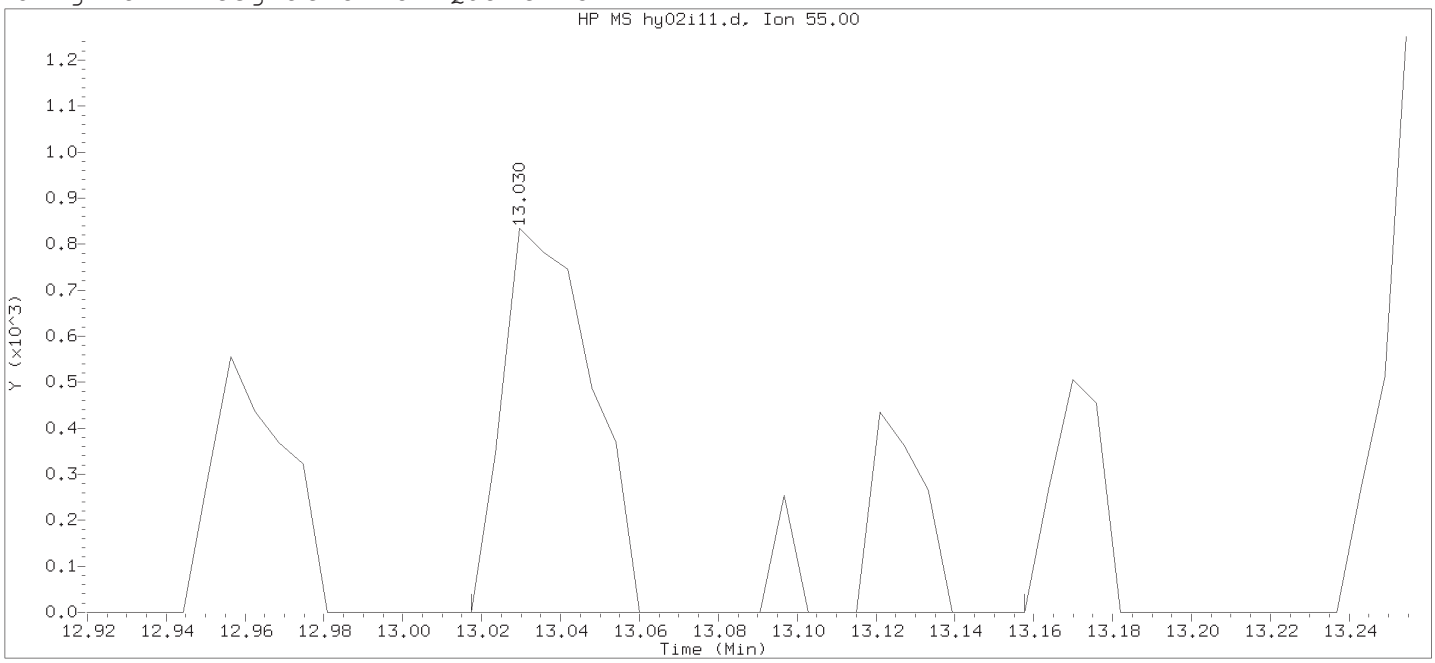
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



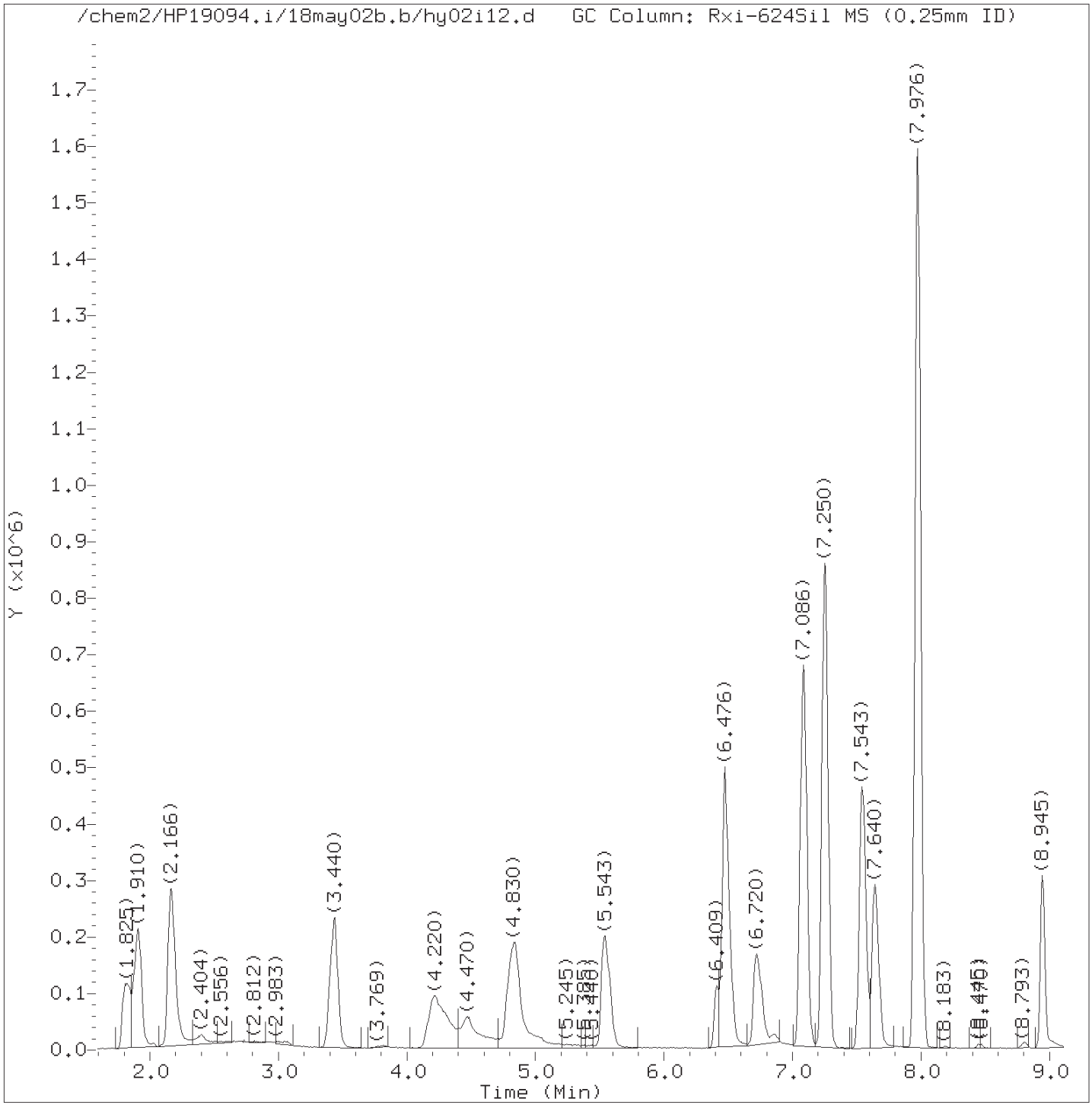
Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:33
Date, time and analyst ID of latest file update: 02-May-2018 19:33 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1877
Retention Time (minutes): 13.030
Quant Ion : 55.00
Area : 1786
On-column Amount (ng) : 2.0320
Integration start scan : 1874 Integration stop scan: 1897
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203



Total Ion Chromatogram (TIC)

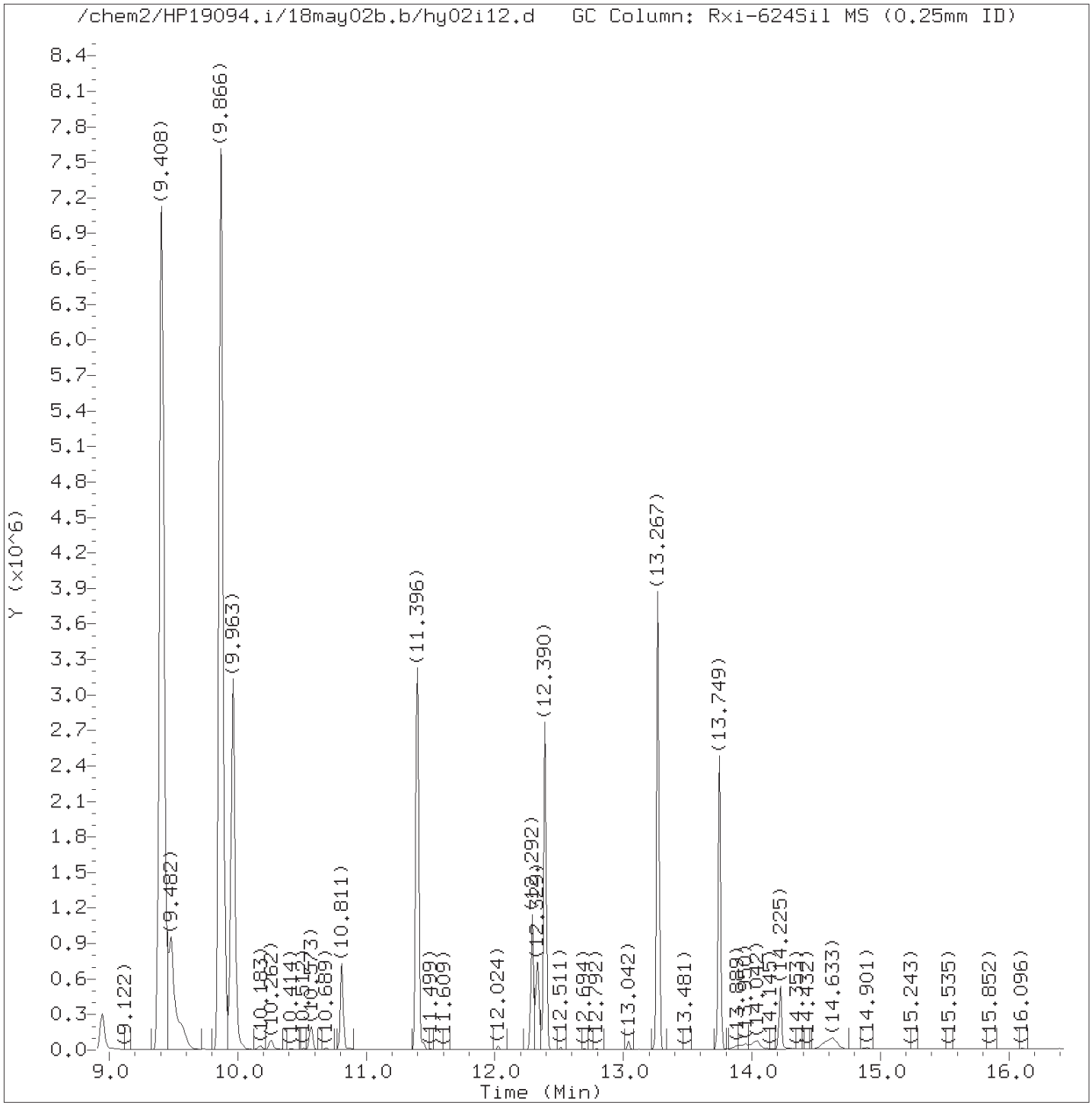
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

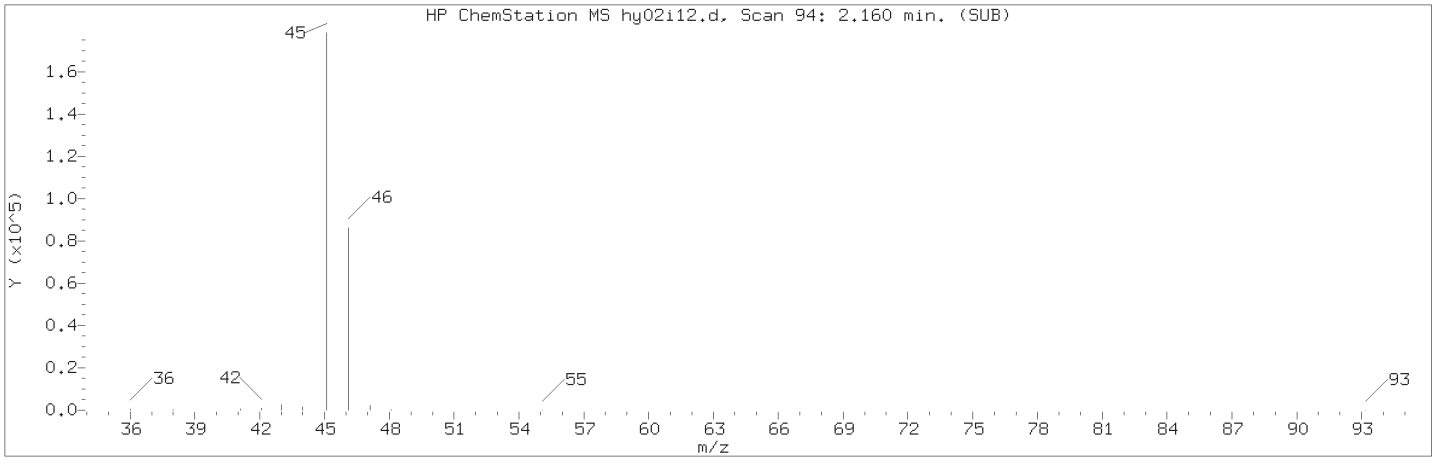
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.160	45	730585M	9.805
25) Acetonitrile	(1)	4.208	41	800300M	361.911
26)*t-Butyl Alcohol-d10	(1)	4.489	65	91579M	50.000
36) Vinyl Acetate	(2)	5.543	43	736143A	10.370
43) Methyl Acrylate	(2)	6.476	55	1106987	50.541
53) 1-Chlorobutane	(2)	7.256	56	1150342	10.974
63)*Fluorobenzene	(2)	7.976	96	2321054	10.000
77) Chloroacetonitrile	(2)	9.469	75	480074	549.979
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	226026	10.770
97)*Chlorobenzene-d5	(3)	11.396	117	1697976	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	244920M	20.651
112) Cyclohexanone	(1)	12.335	55	365686M	606.278
133)*1,4-Dichlorobenzene-d4	(4)	13.267	152	883093	10.000
142) Hexachloroethane	(4)	13.749	117	434603	11.690

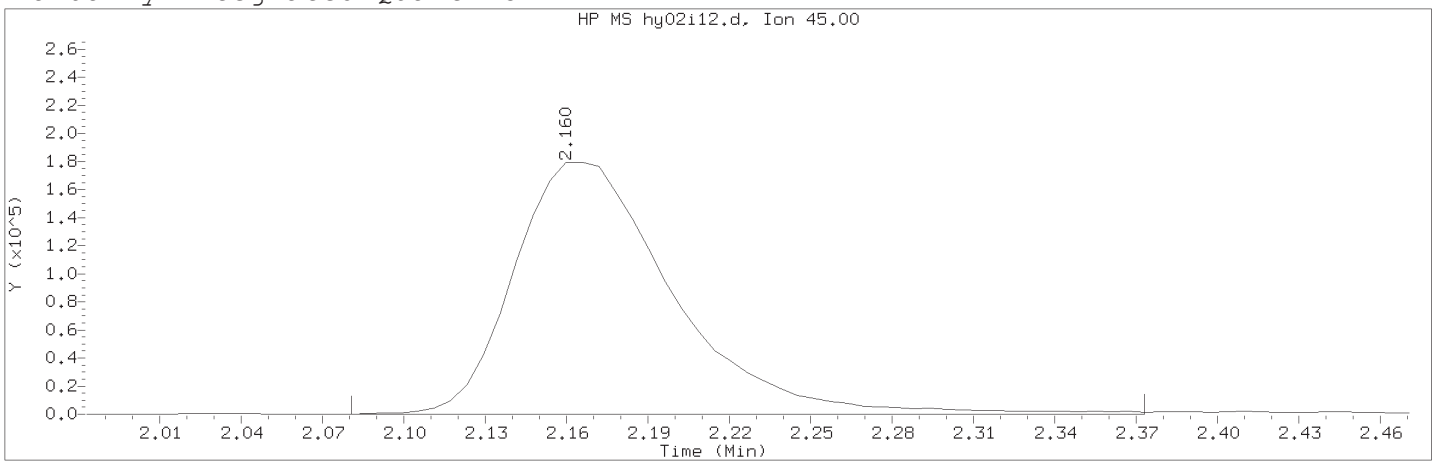
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

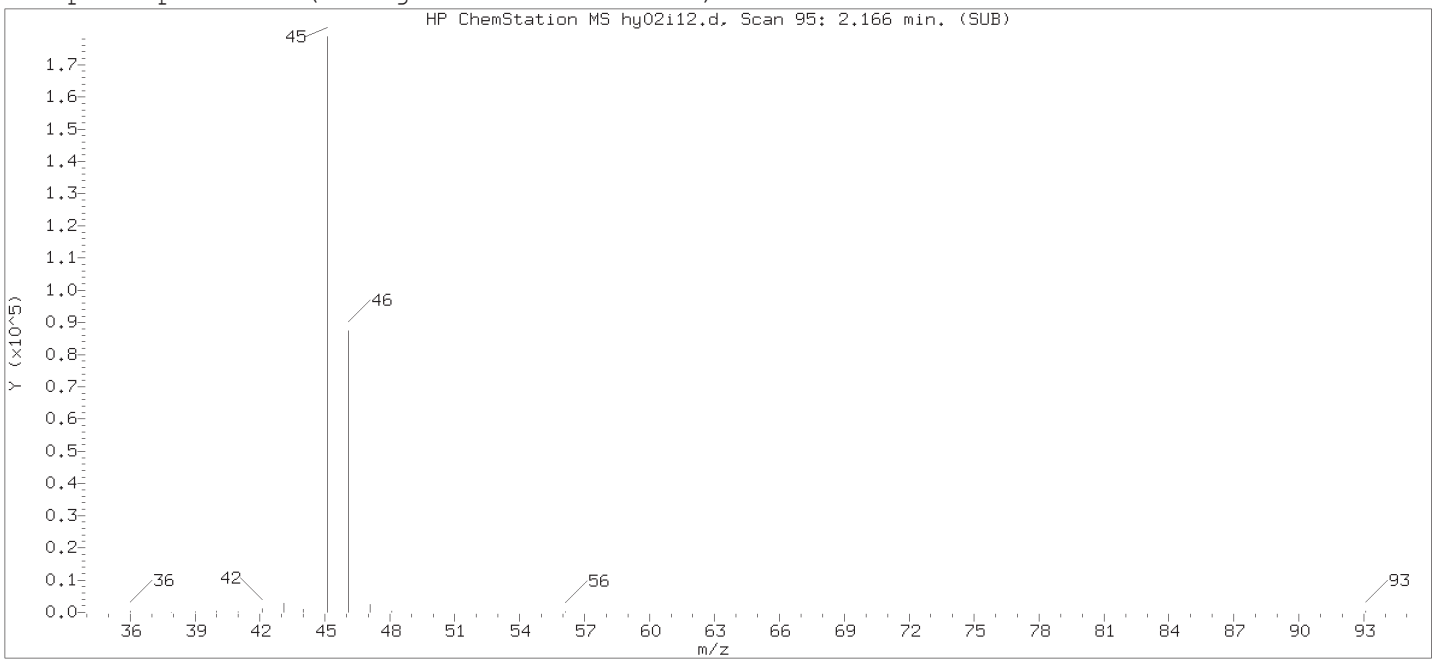
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 730585M
On-Column Amount (ng) : 9.8052
Integration start scan : 80 Integration stop scan: 128
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

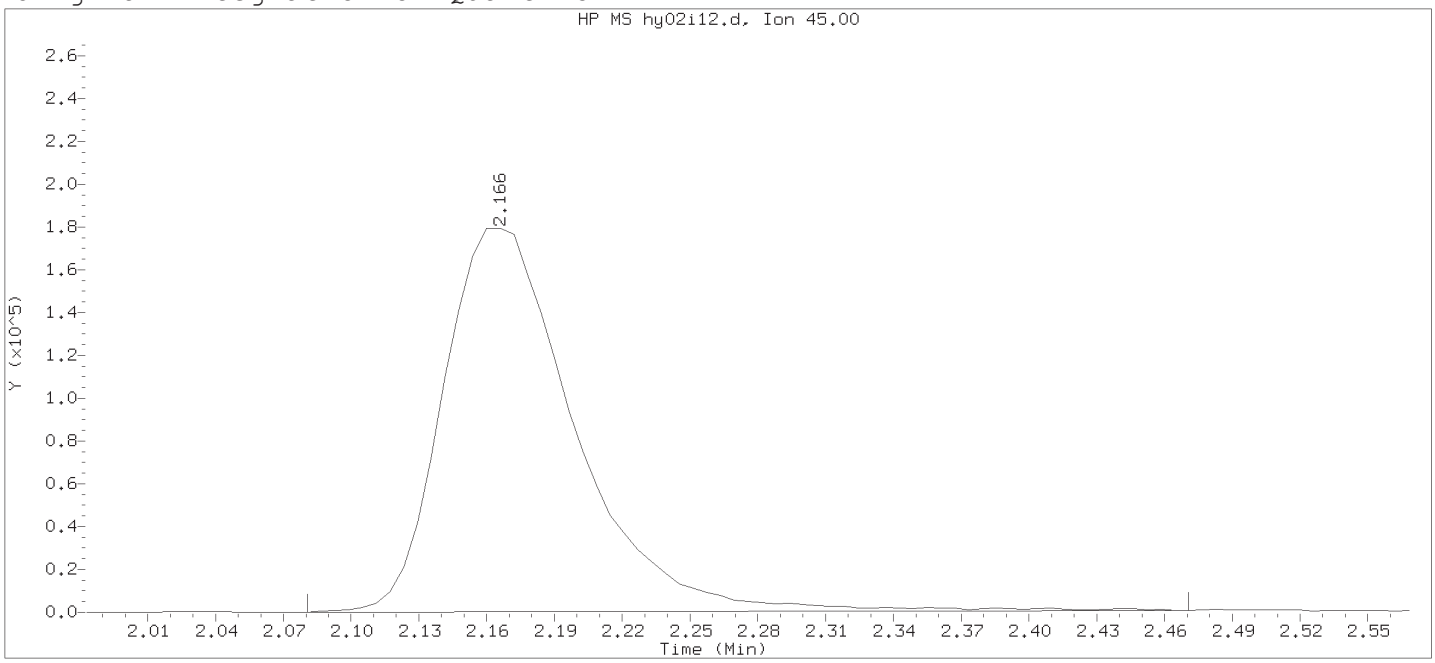
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

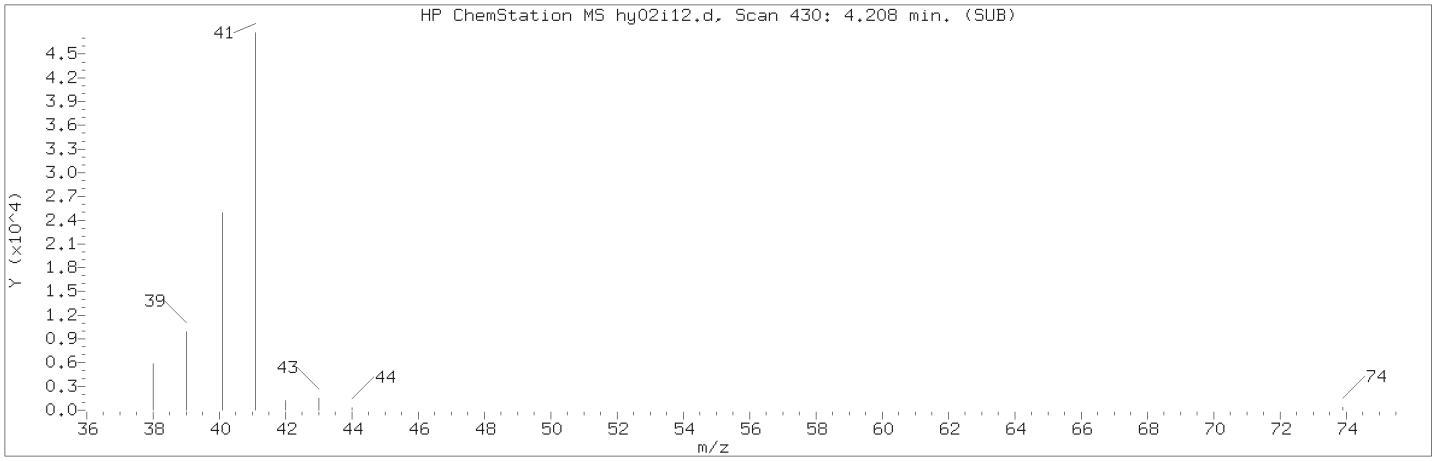
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

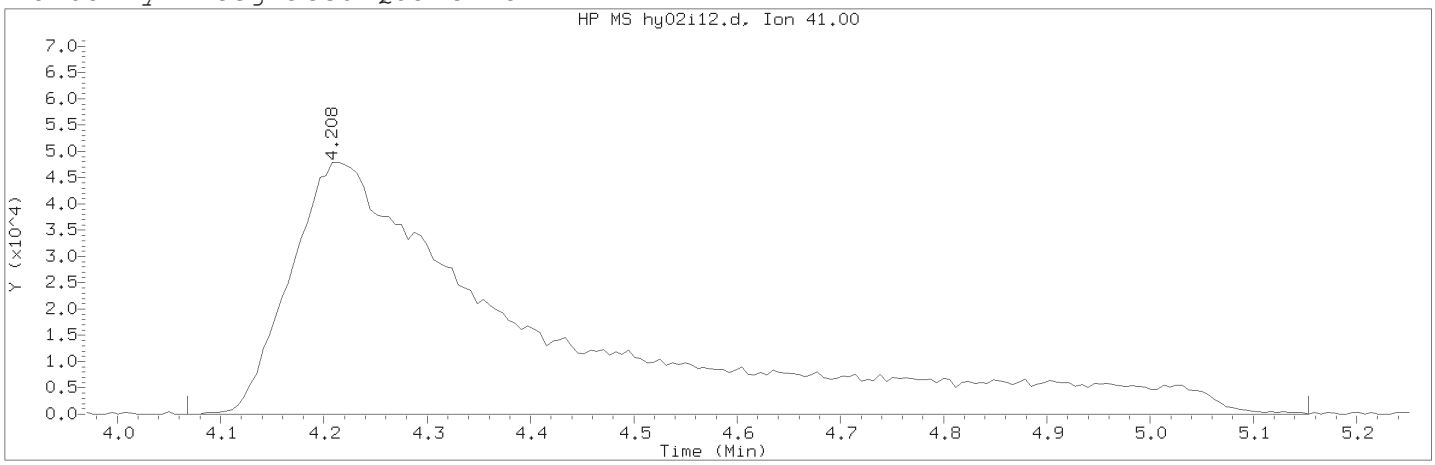
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 95		
Retention Time (minutes)	: 2.166		
Quant Ion	: 45.00		
Area	: 728833		
On-column Amount (ng)	: 9.4714		
Integration start scan	: 80	Integration stop scan:	144
Y at integration start	: 0	Y at integration end:	872

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

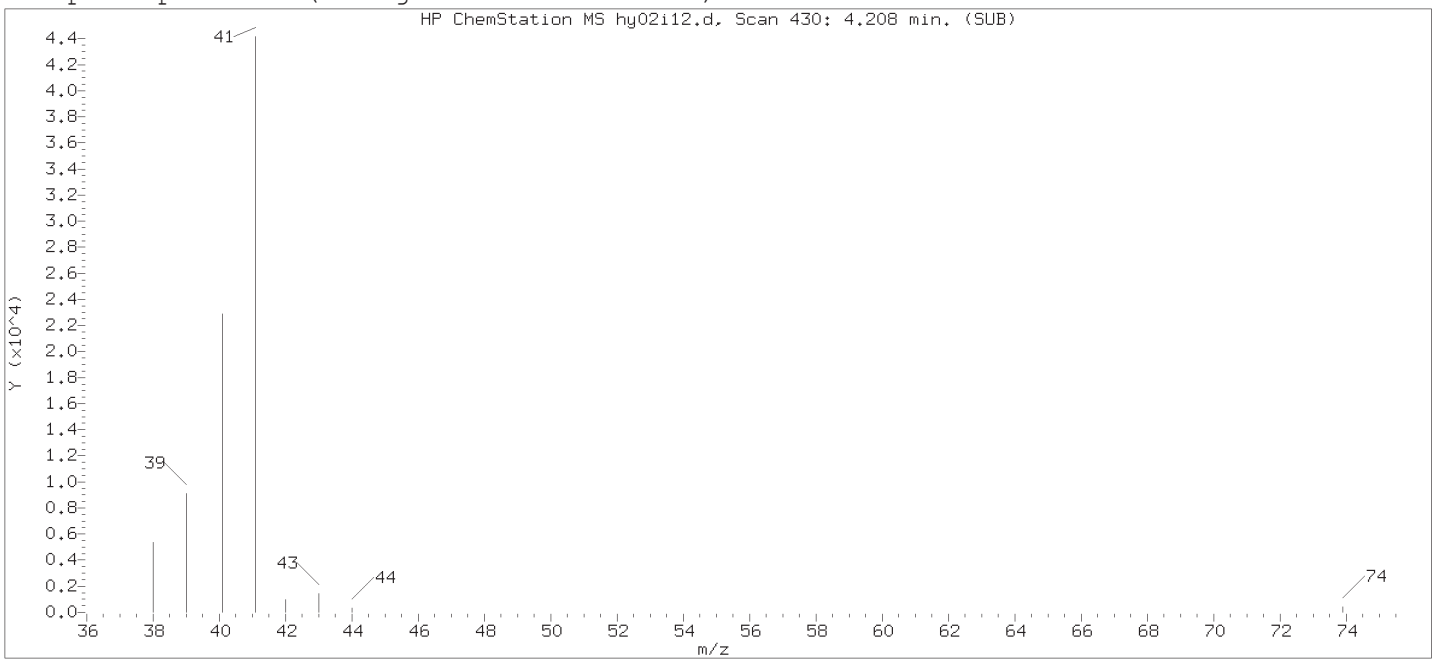
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area (flag) : 800300M
On-Column Amount (ng) : 361.9106
Integration start scan : 406 Integration stop scan: 584
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

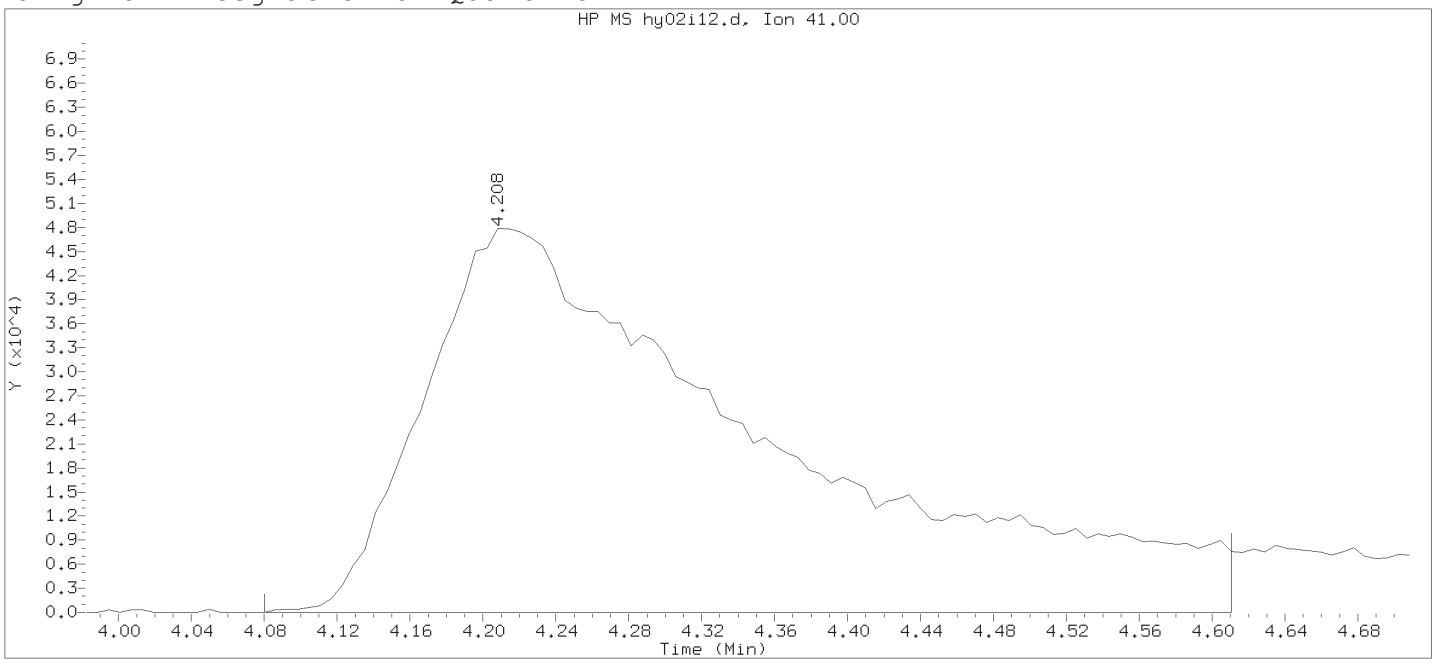
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

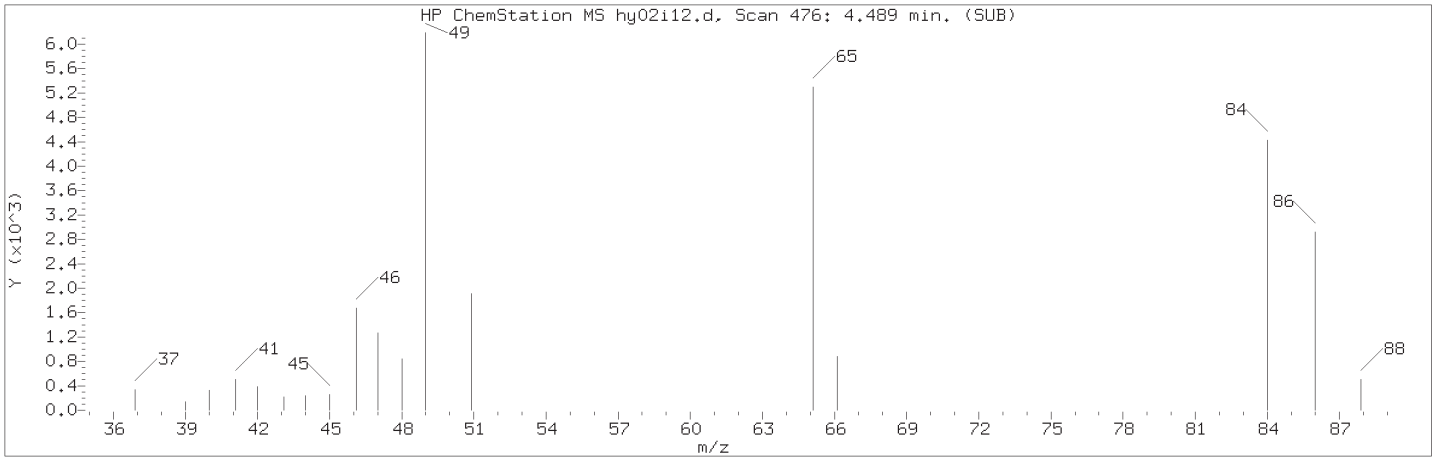
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

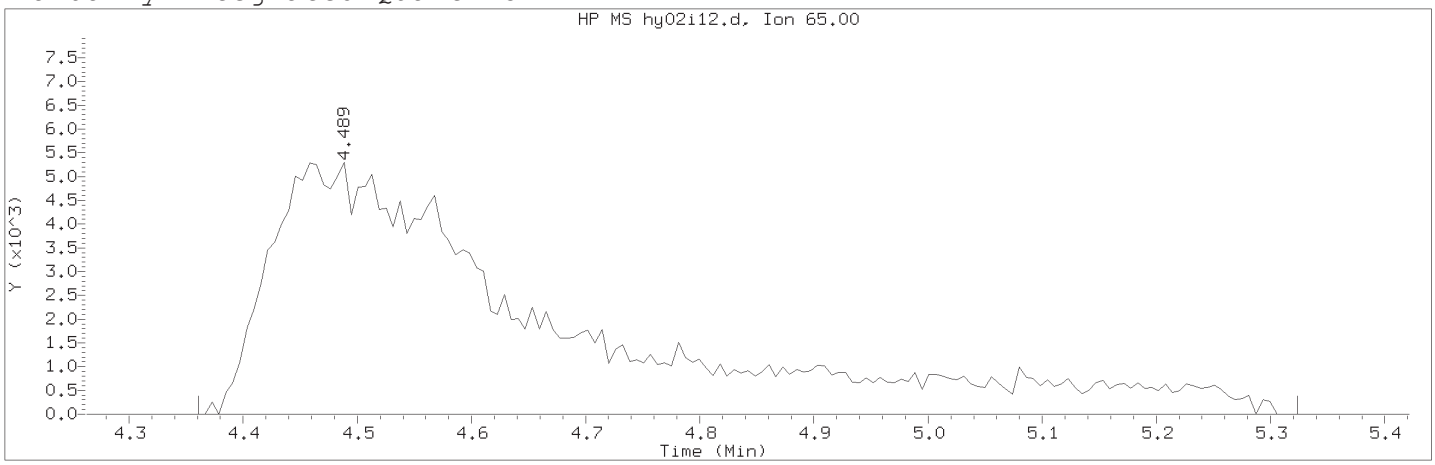
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area : 627768
On-column Amount (ng) : 250.5418
Integration start scan : 408 Integration stop scan: 495
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

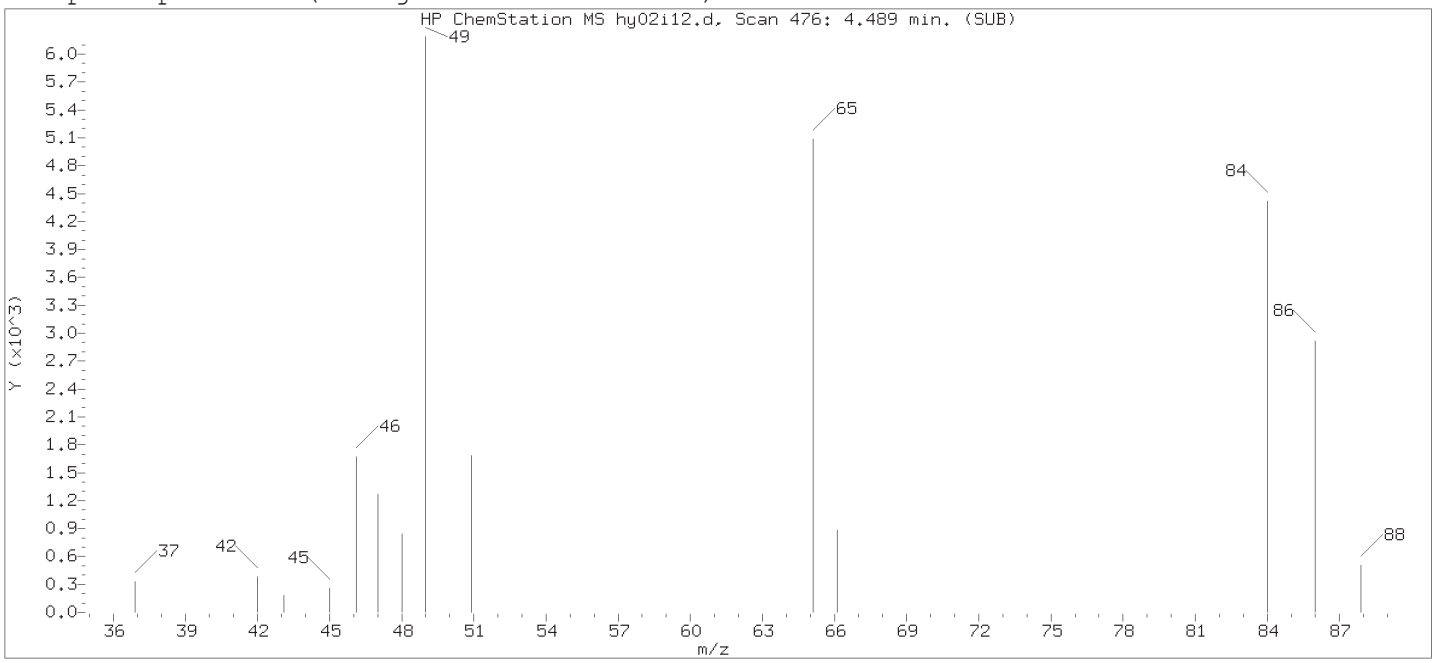
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 476
Retention Time (minutes): 4.489
Quant Ion : 65.00
Area (flag) : 91579M
On-Column Amount (ng) : 50.0000
Integration start scan : 454 Integration stop scan: 612
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

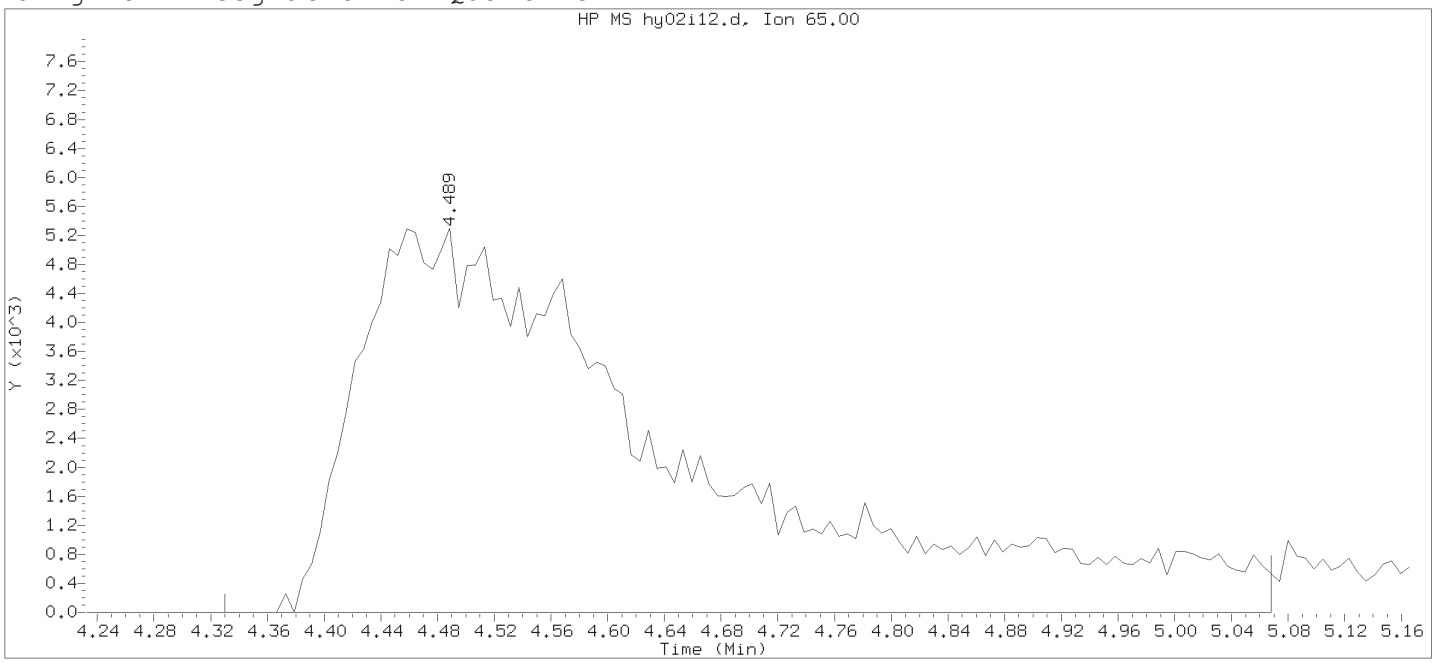
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

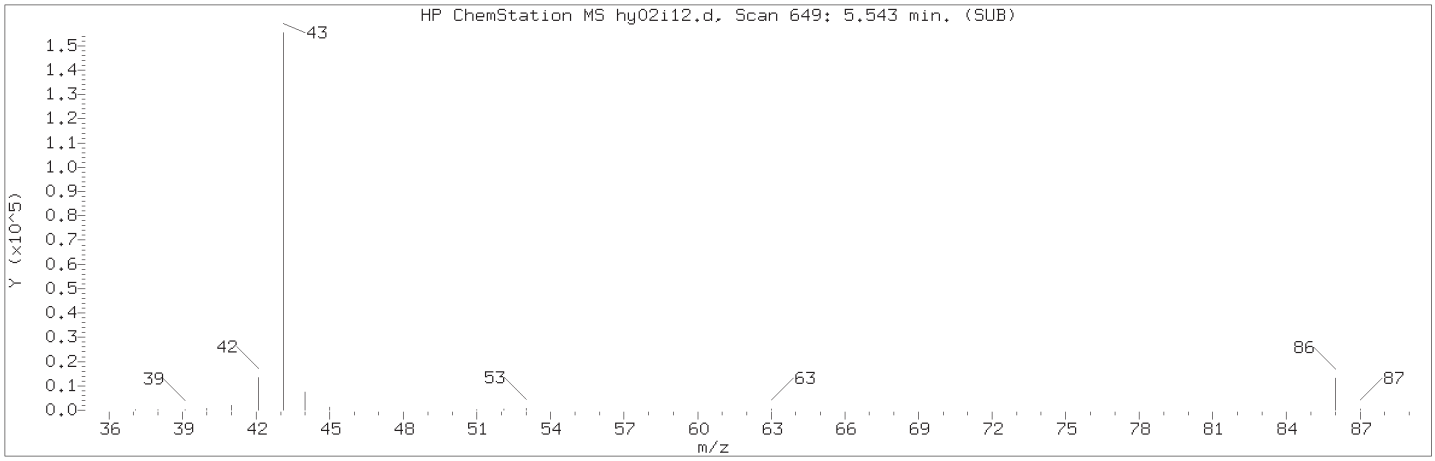
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

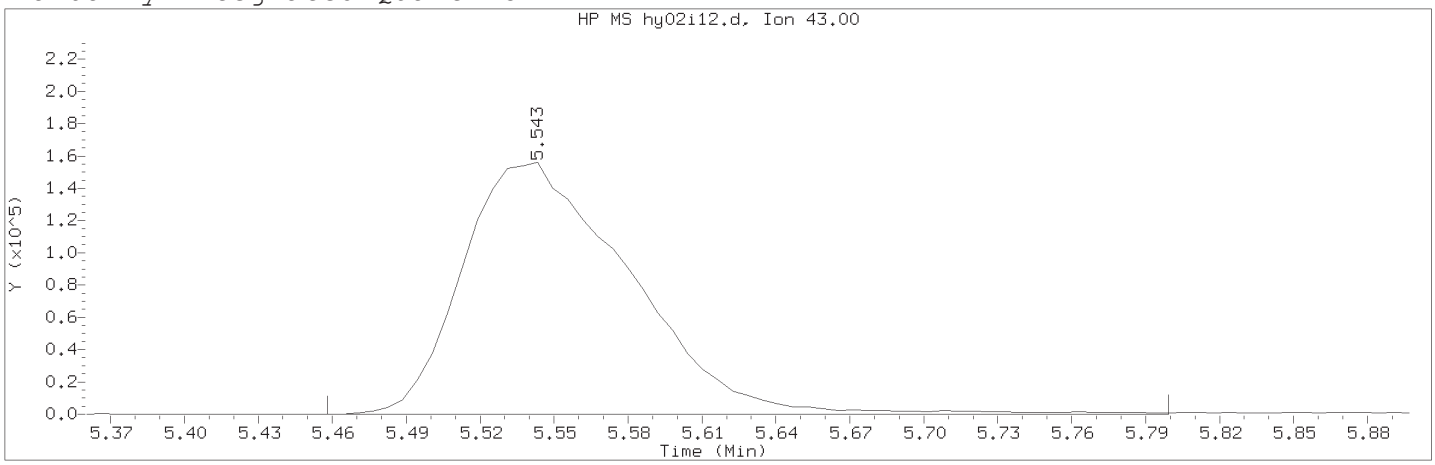
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 476
Retention Time (minutes): 4.489
Quant Ion : 65.00
Area : 83894
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 570
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

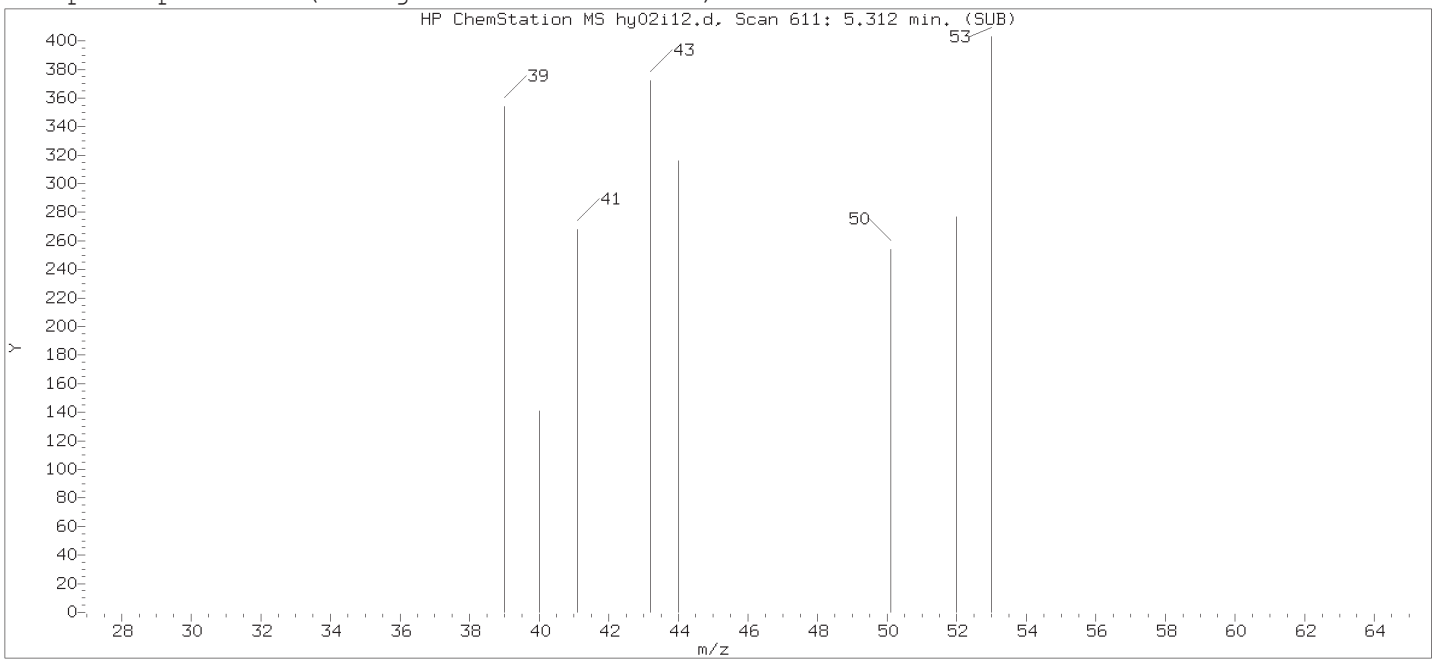
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 649
Retention Time (minutes): 5.543
Quant Ion : 43.00
Area (flag) : 736143A
On-Column Amount (ng) : 10.3701
Integration start scan : 634 Integration stop scan: 690
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

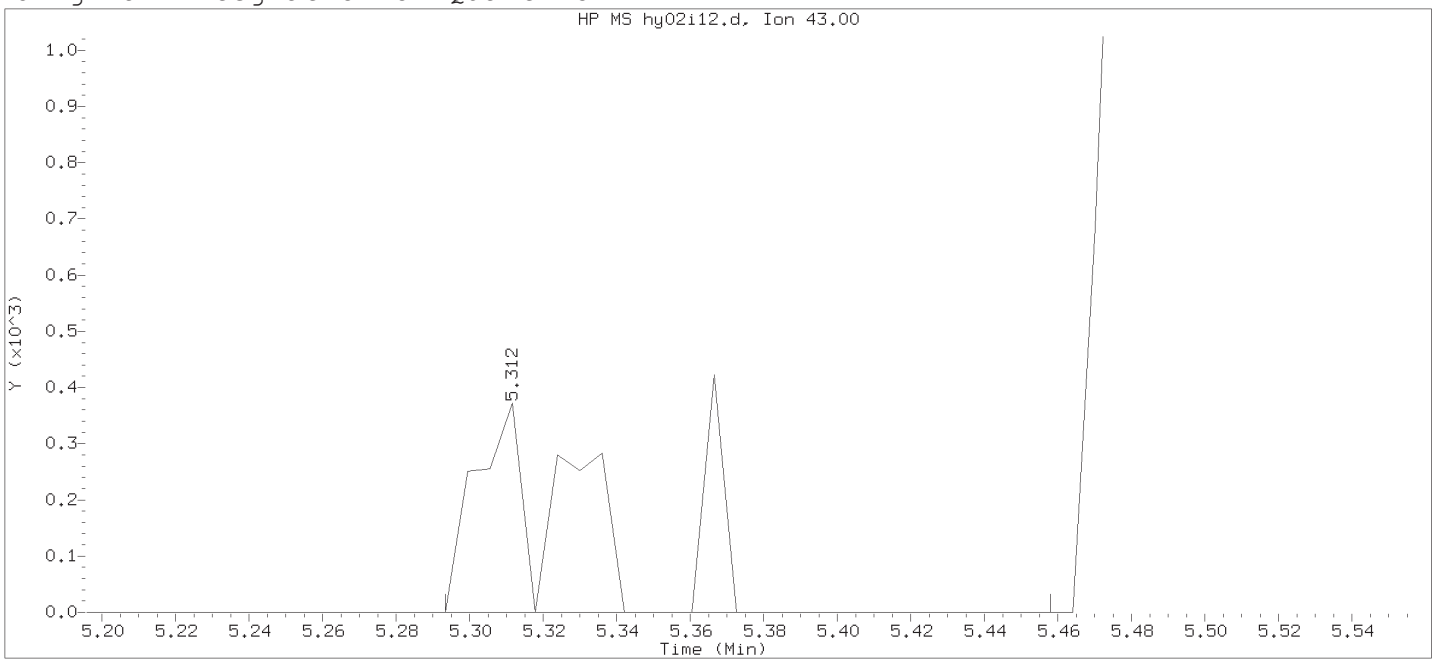
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

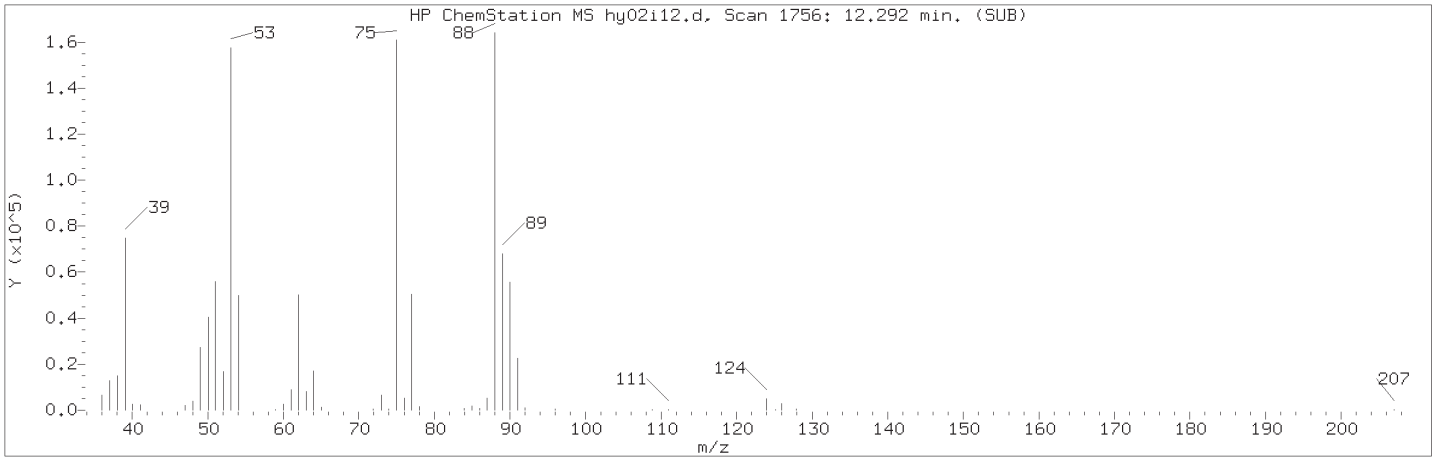
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

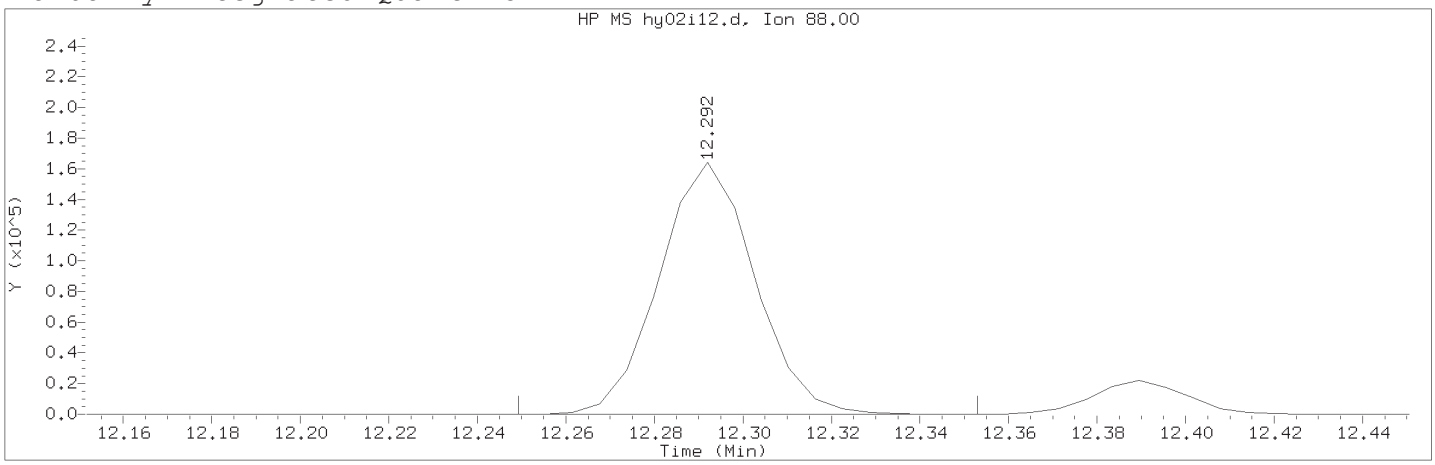
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 611
Retention Time (minutes): 5.312
Quant Ion : 43.00
Area : 774
On-column Amount (ng) : 0.0131
Integration start scan : 607 Integration stop scan: 634
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

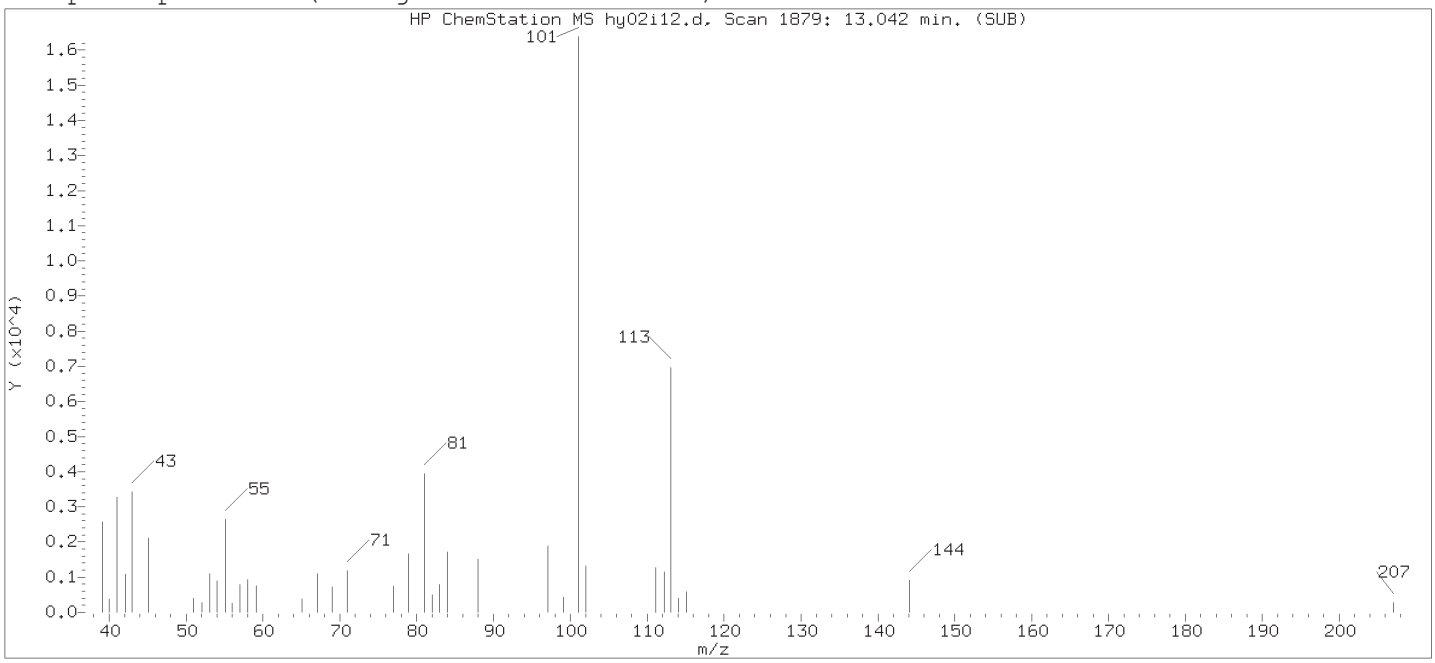
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 244920M
On-Column Amount (ng) : 20.6506
Integration start scan : 1748 Integration stop scan: 1765
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

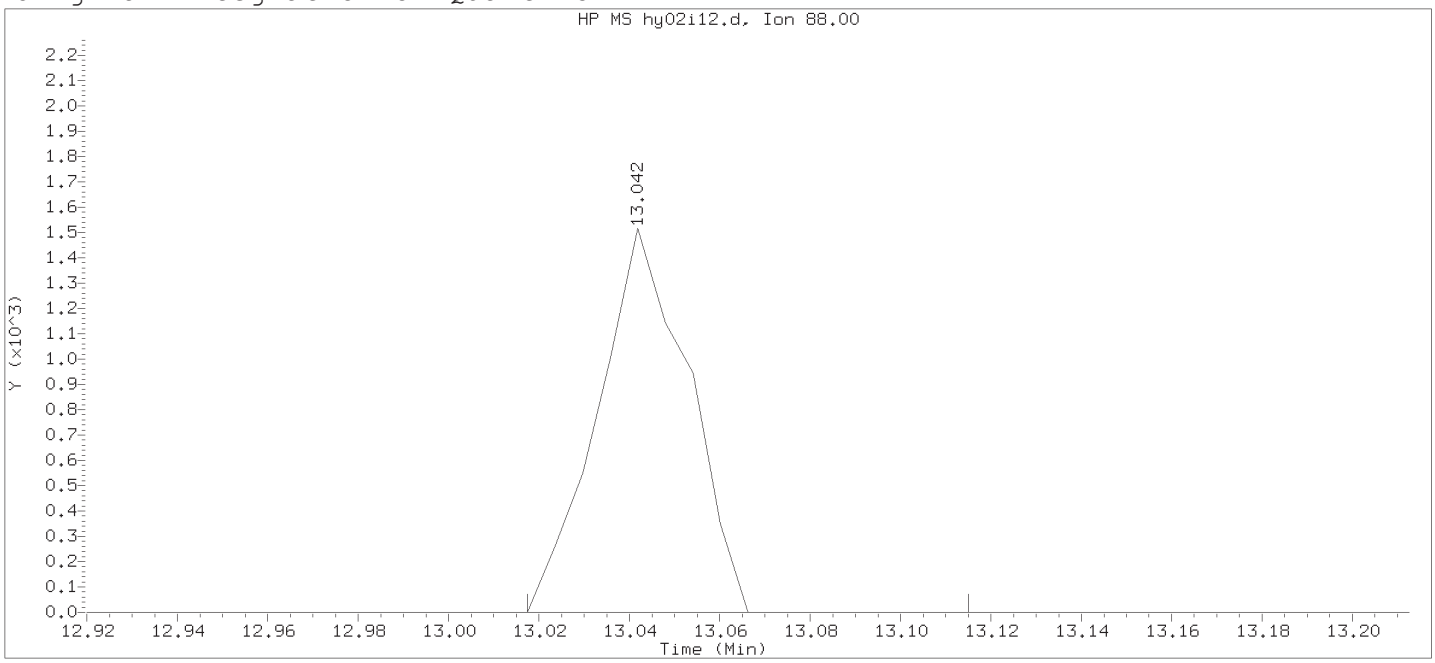
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

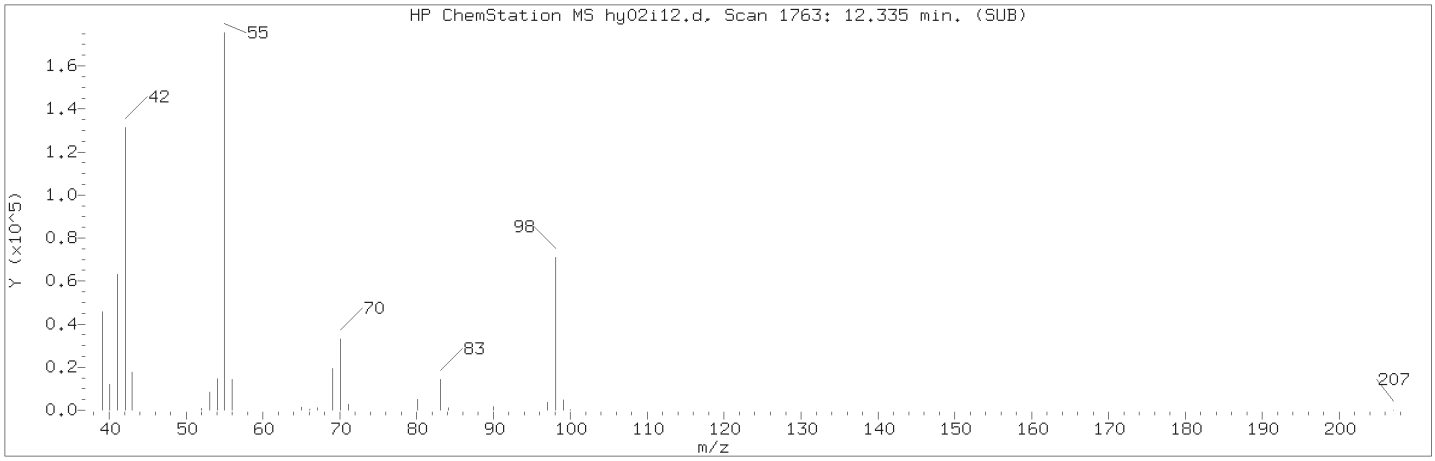
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

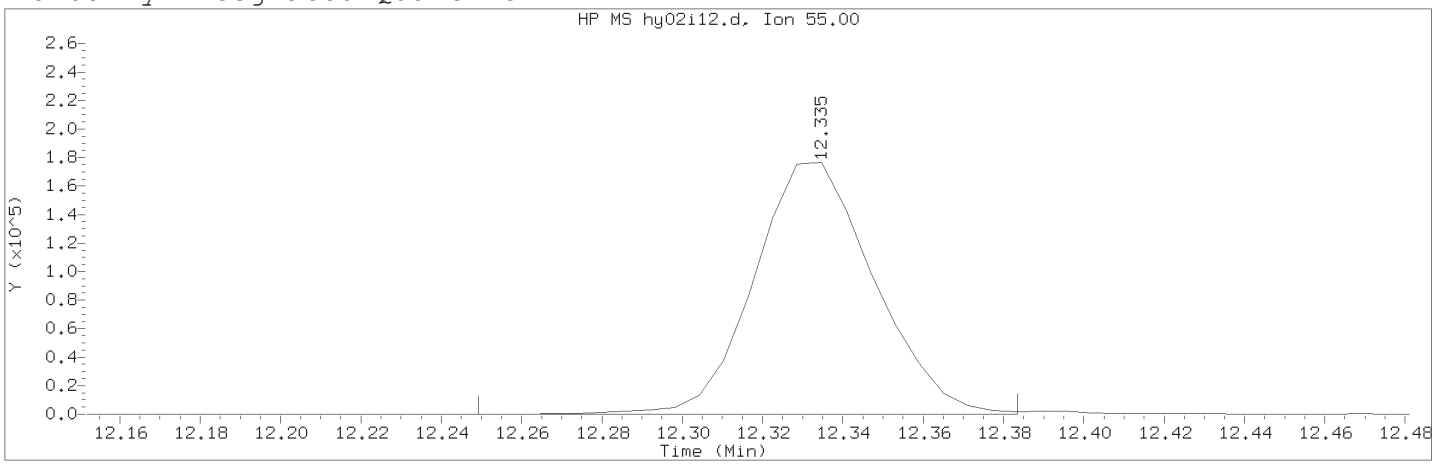
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 88.00
Area : 2111
On-column Amount (ng) : 0.2156
Integration start scan : 1874 Integration stop scan: 1890
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

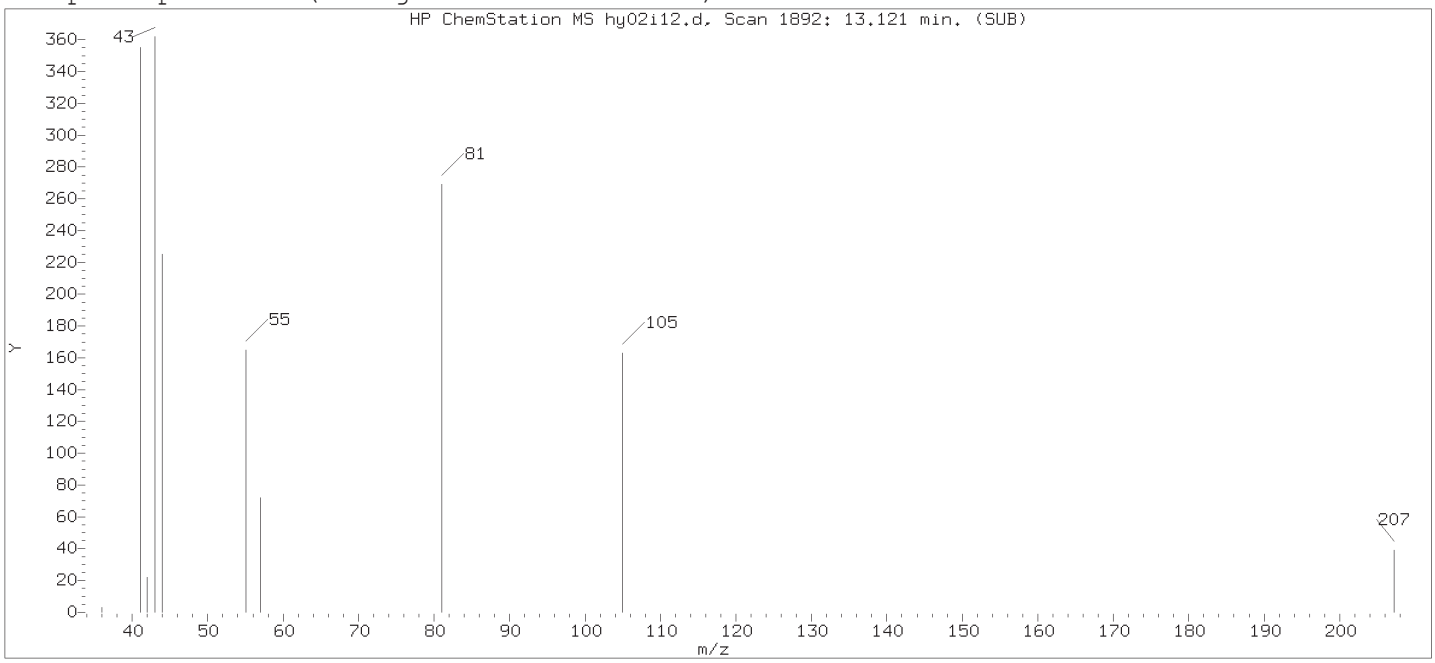
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1763
Retention Time (minutes): 12.335
Quant Ion : 55.00
Area (flag) : 365686M
On-Column Amount (ng) : 606.2783
Integration start scan : 1748 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

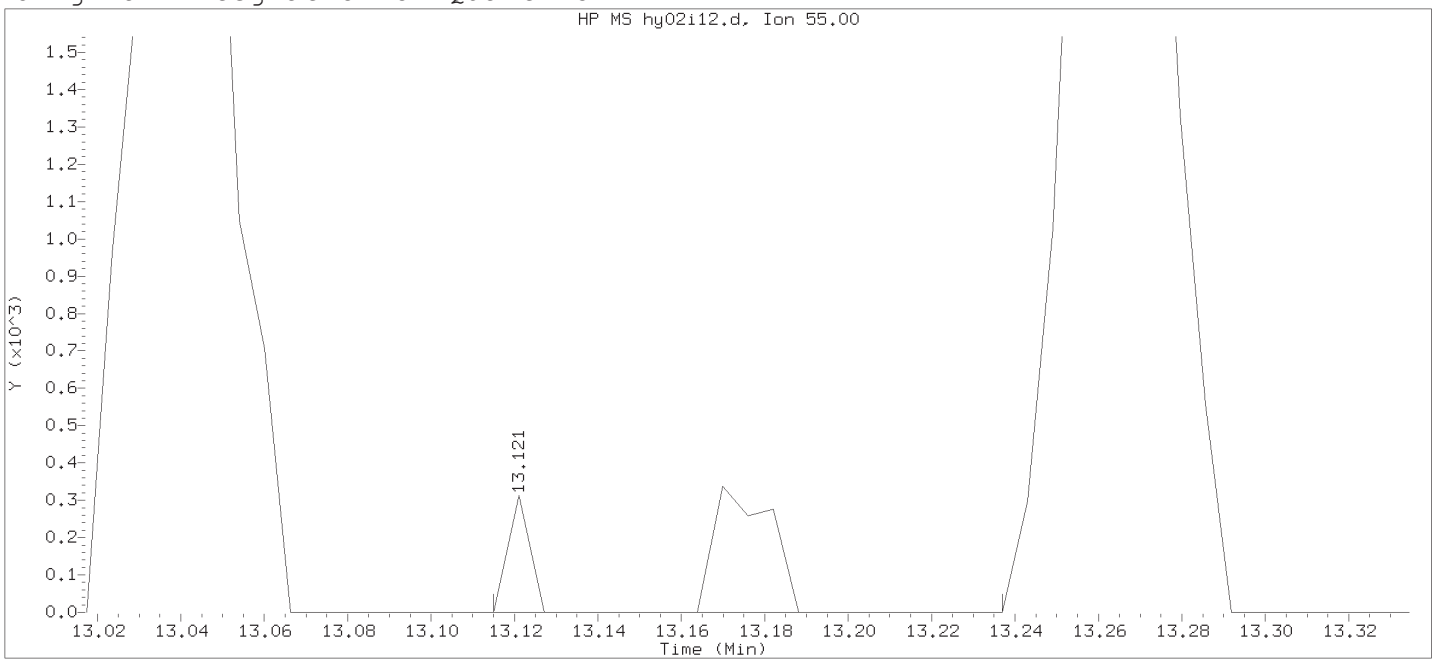
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



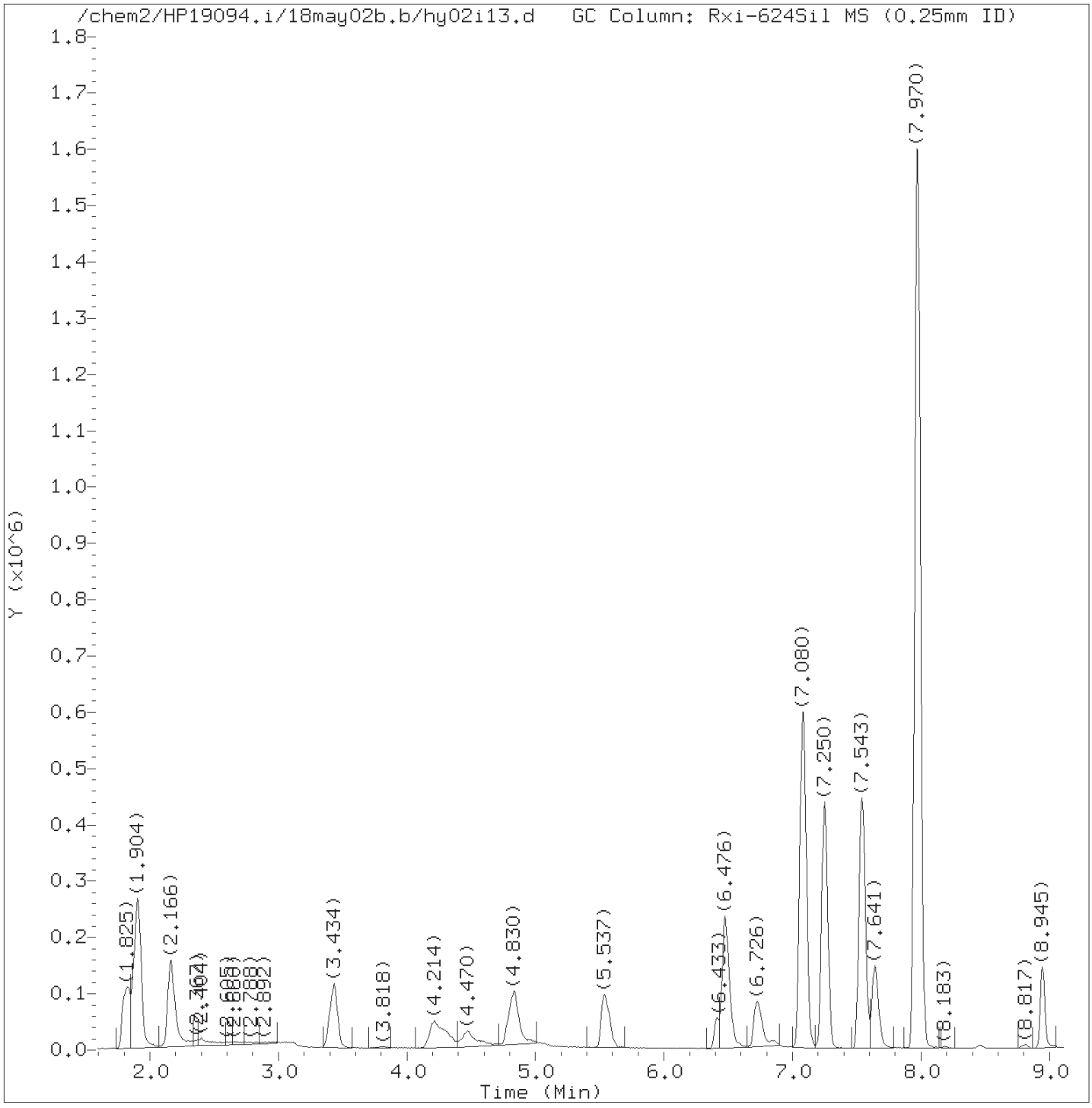
Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 112		
Compound Name	: Cyclohexanone		
Scan Number	: 1892		
Retention Time (minutes)	: 13.121		
Quant Ion	: 55.00		
Area	: 434		
On-column Amount (ng)	: 0.6361		
Integration start scan	: 1890	Integration stop scan:	1910
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203



Total Ion Chromatogram (TIC)

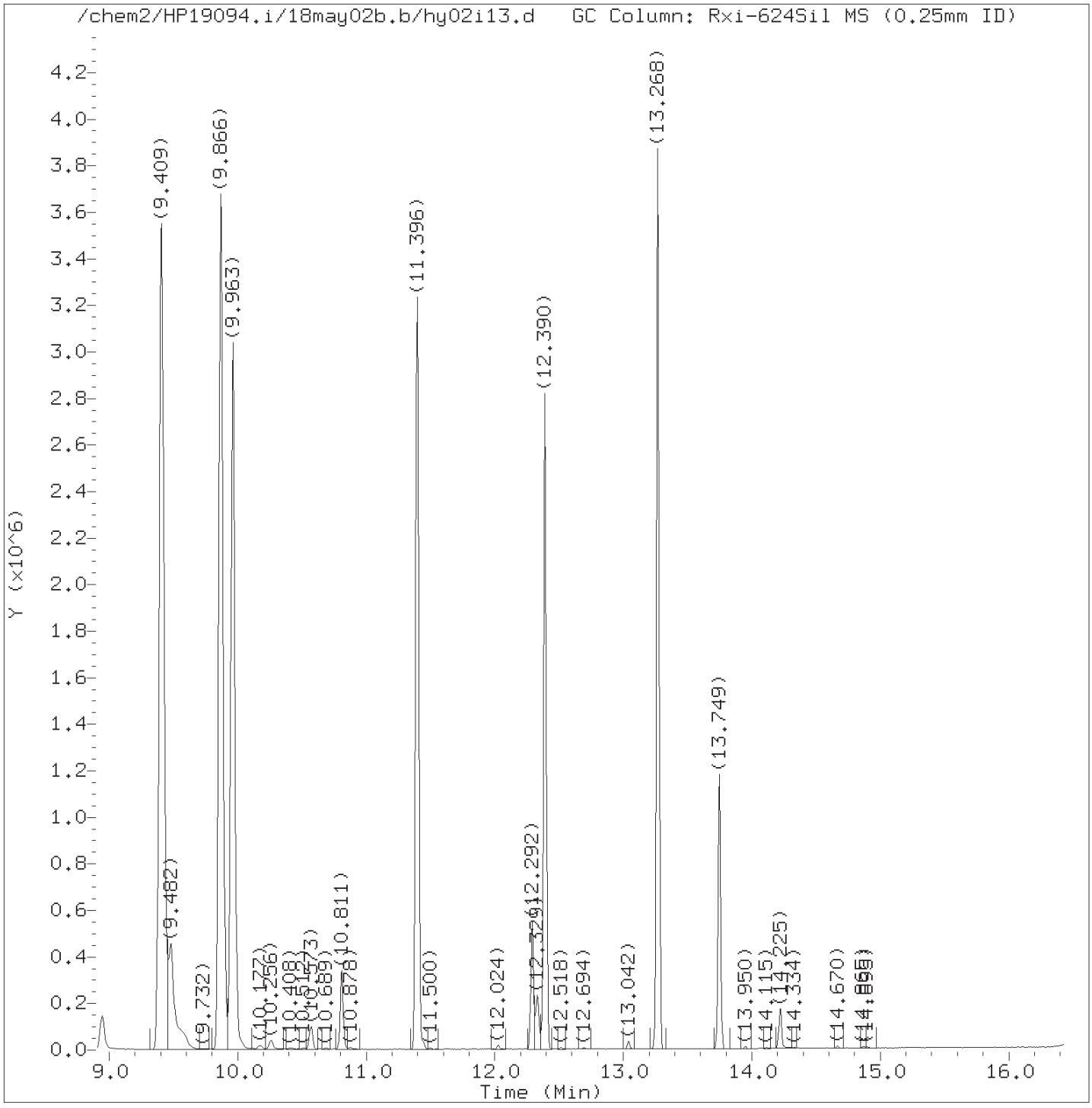
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

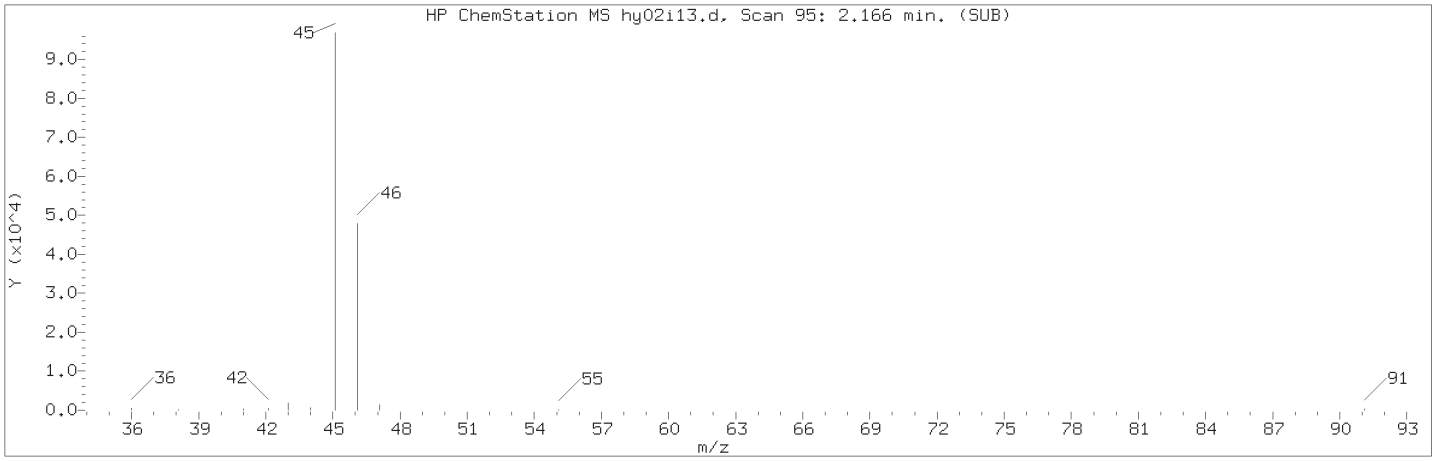
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.166	45	376311M	5.039
25) Acetonitrile	(1)	4.214	41	346001M	192.762
26)*t-Butyl Alcohol-d10	(1)	4.495	65	74336	50.000
36) Vinyl Acetate	(2)	5.537	43	346883	4.875
43) Methyl Acrylate	(2)	6.476	55	550131	25.059
53) 1-Chlorobutane	(2)	7.250	56	571057	5.435
63)*Fluorobenzene	(2)	7.976	96	2326423	10.000
77) Chloroacetonitrile	(2)	9.476	75	181895	207.900
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	110899	5.272
97)*Chlorobenzene-d5	(3)	11.396	117	1698280	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	118032M	12.260
112) Cyclohexanone	(1)	12.329	55	116048M	237.027
133)*1,4-Dichlorobenzene-d4	(4)	13.268	152	890934	10.000
142) Hexachloroethane	(4)	13.749	117	203238	5.419

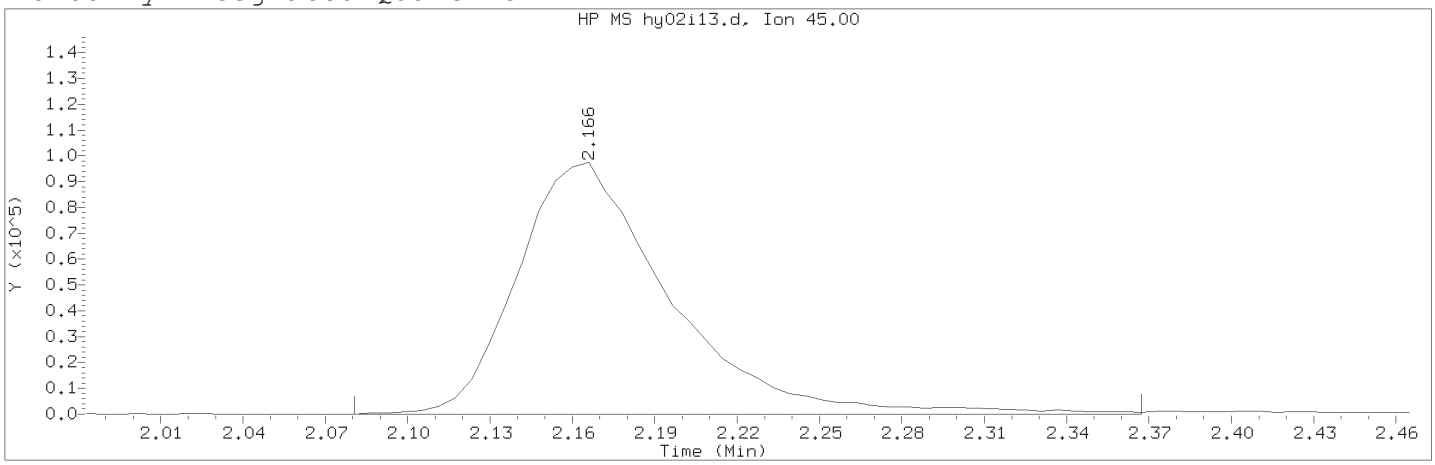
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

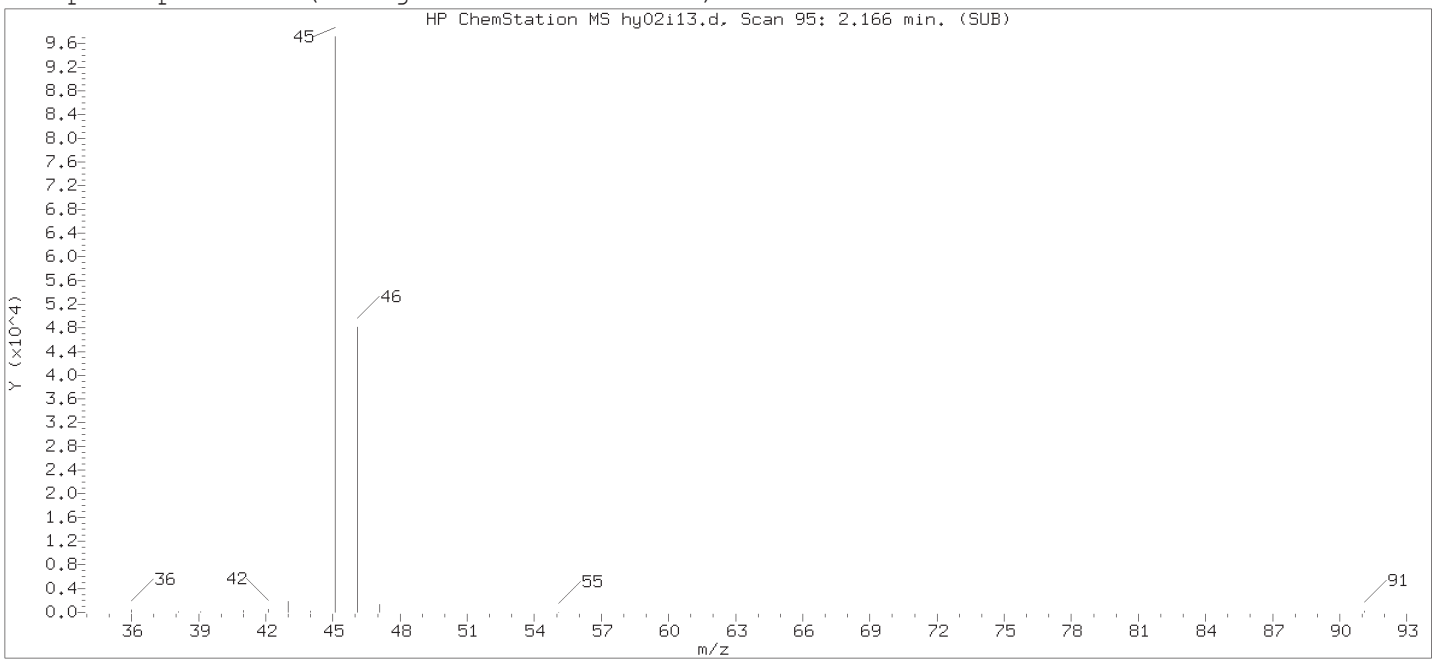
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 95
Retention Time (minutes): 2.166
Quant Ion : 45.00
Area (flag) : 376311M
On-Column Amount (ng) : 5.0388
Integration start scan : 80 Integration stop scan: 127
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

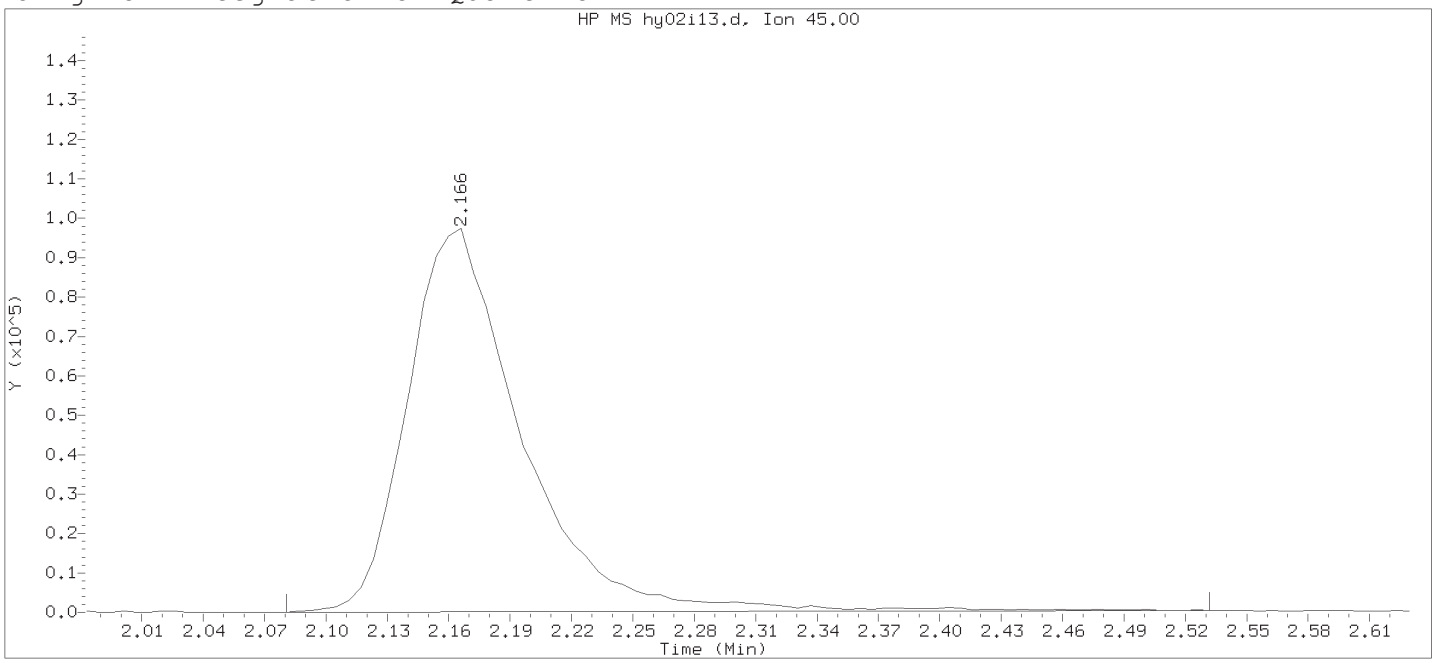
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

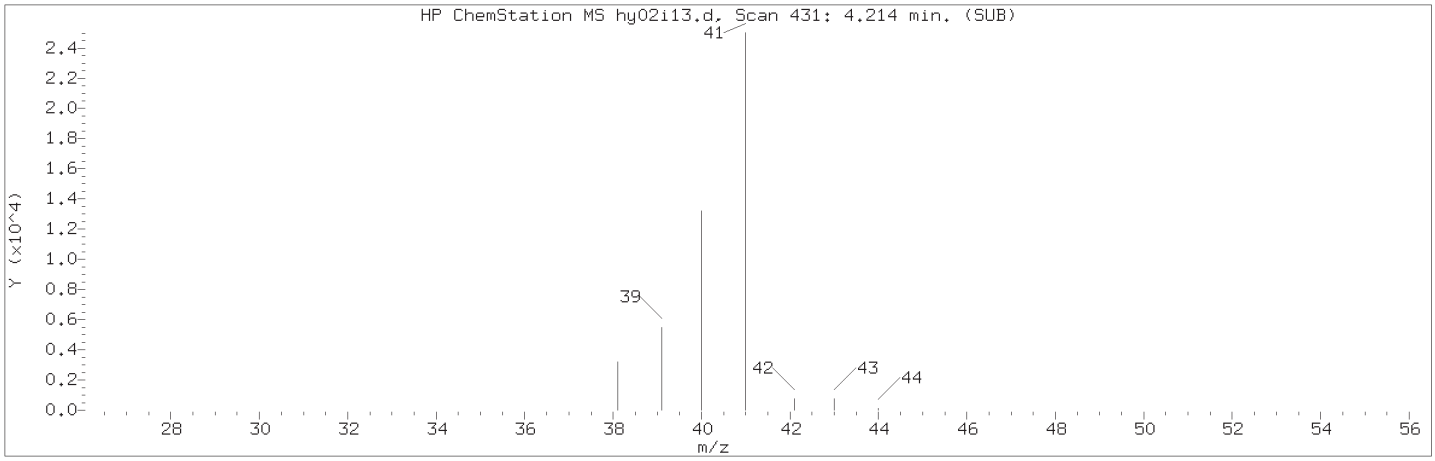
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:16
Date, time and analyst ID of latest file update: 02-May-2018 20:16 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

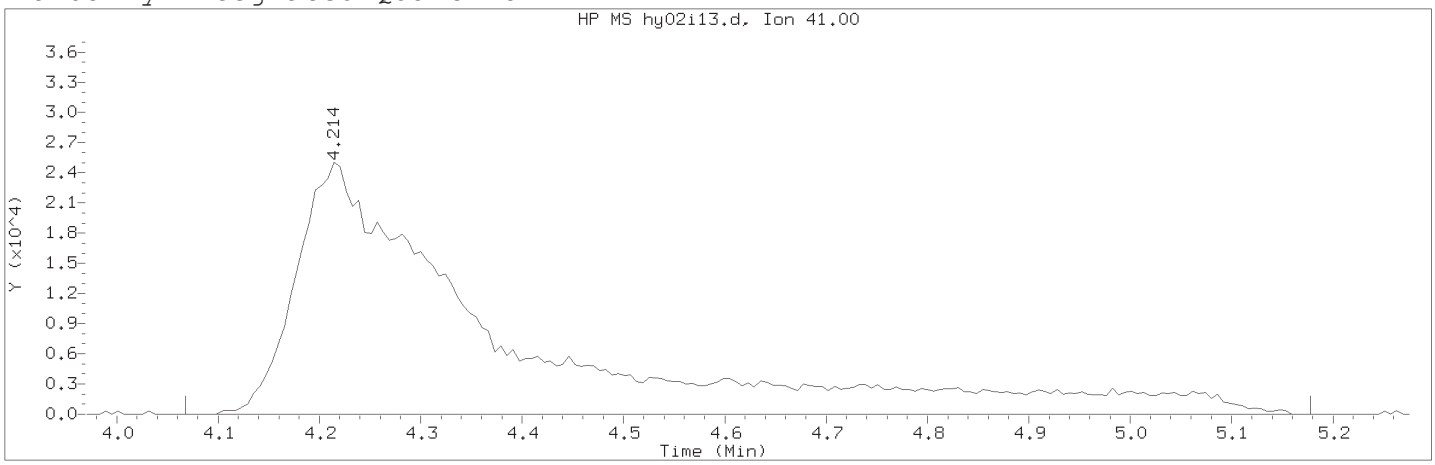
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 95
Retention Time (minutes): 2.166
Quant Ion : 45.00
Area : 377915
On-column Amount (ng) : 4.9207
Integration start scan : 80 Integration stop scan: 154
Y at integration start : 0 Y at integration end: 409

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

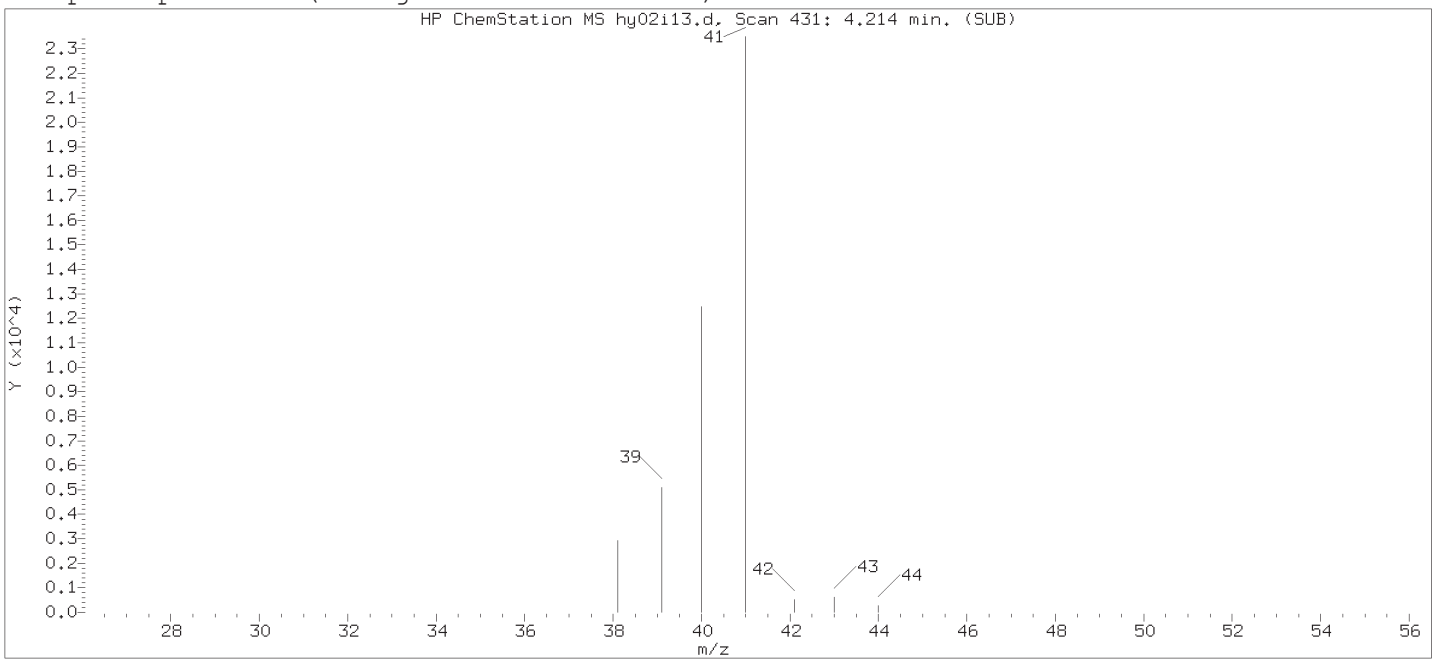
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area (flag) : 346001M
On-Column Amount (ng) : 192.7625
Integration start scan : 406 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

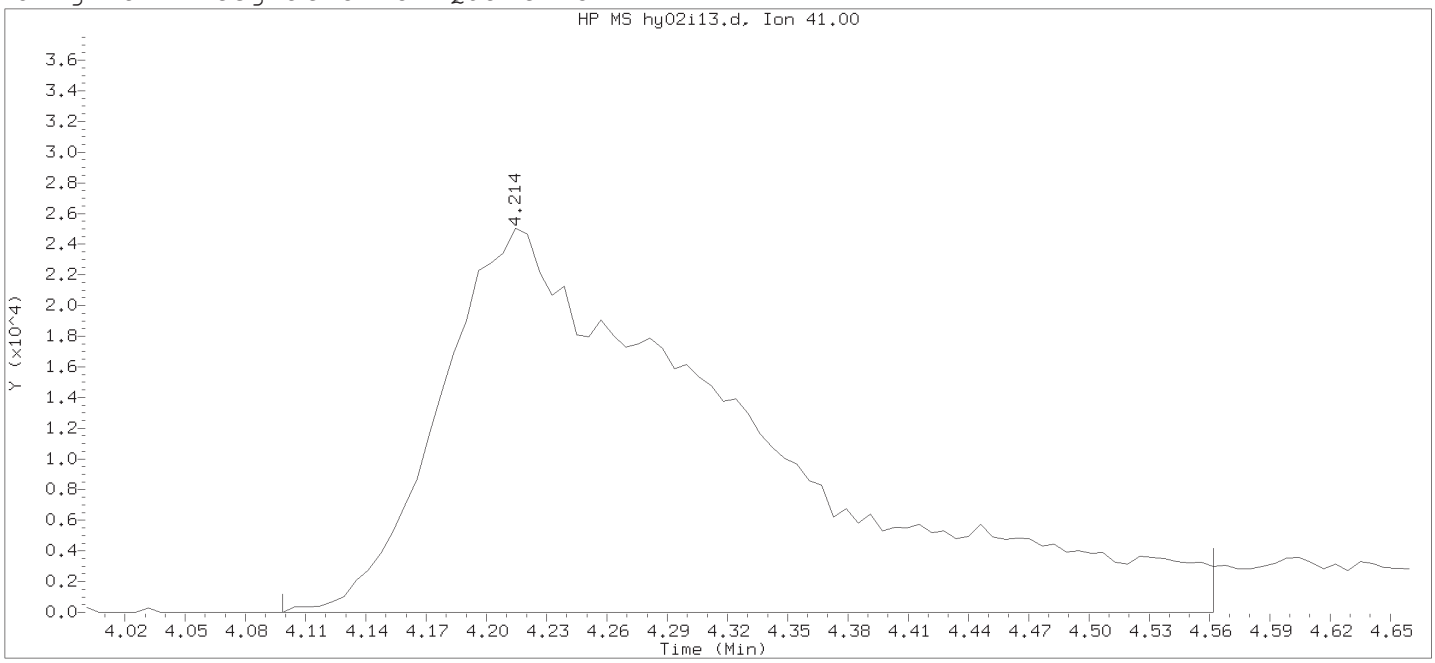
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

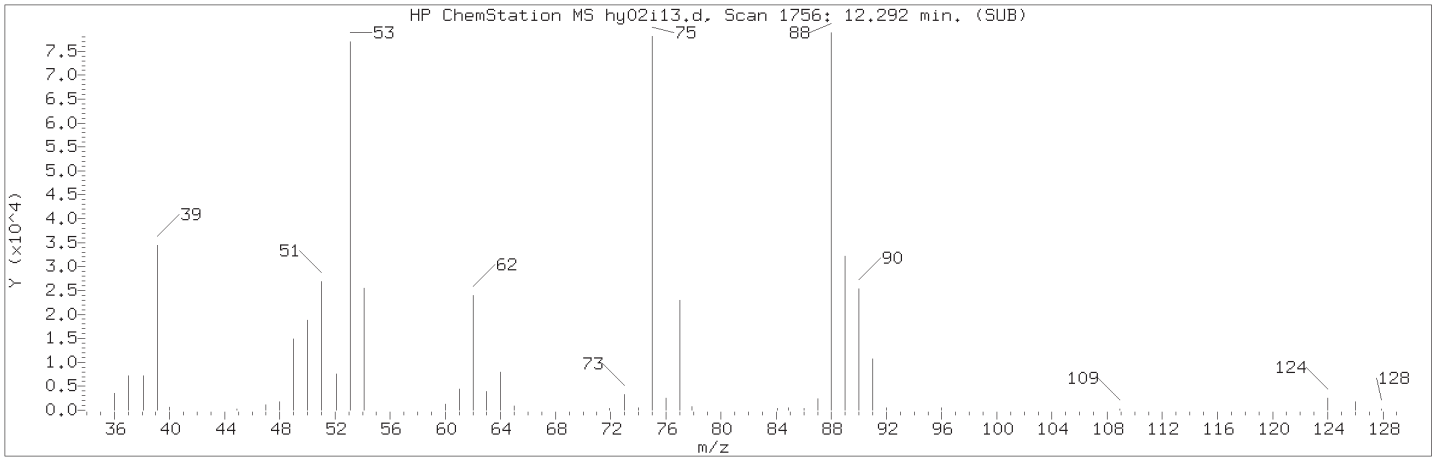
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:16
Date, time and analyst ID of latest file update: 02-May-2018 20:16 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

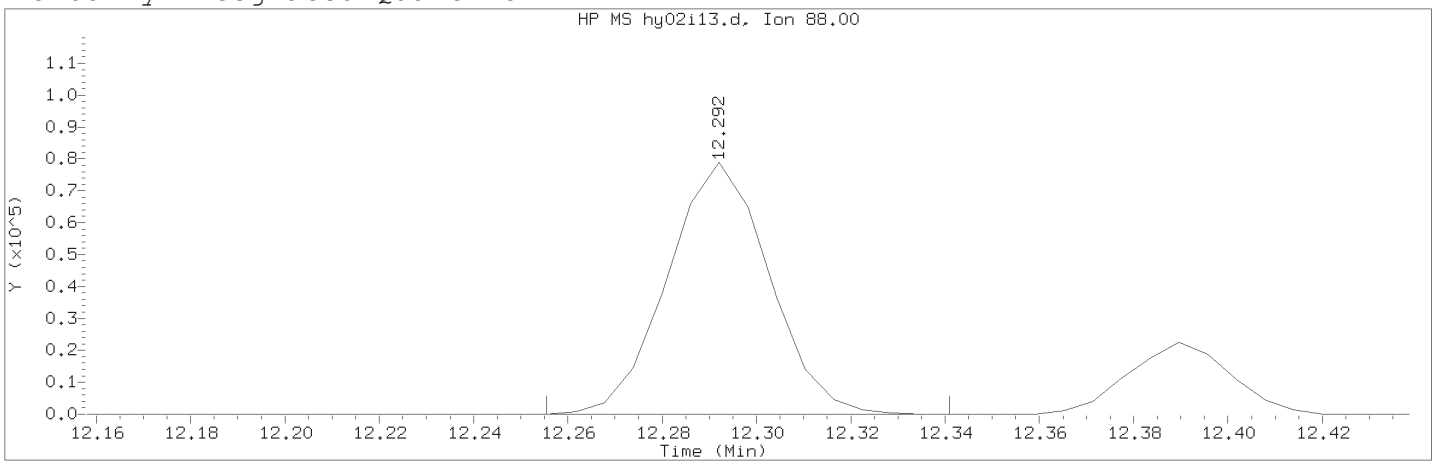
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area : 265890
On-column Amount (ng) : 127.0548
Integration start scan : 411 Integration stop scan: 487
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

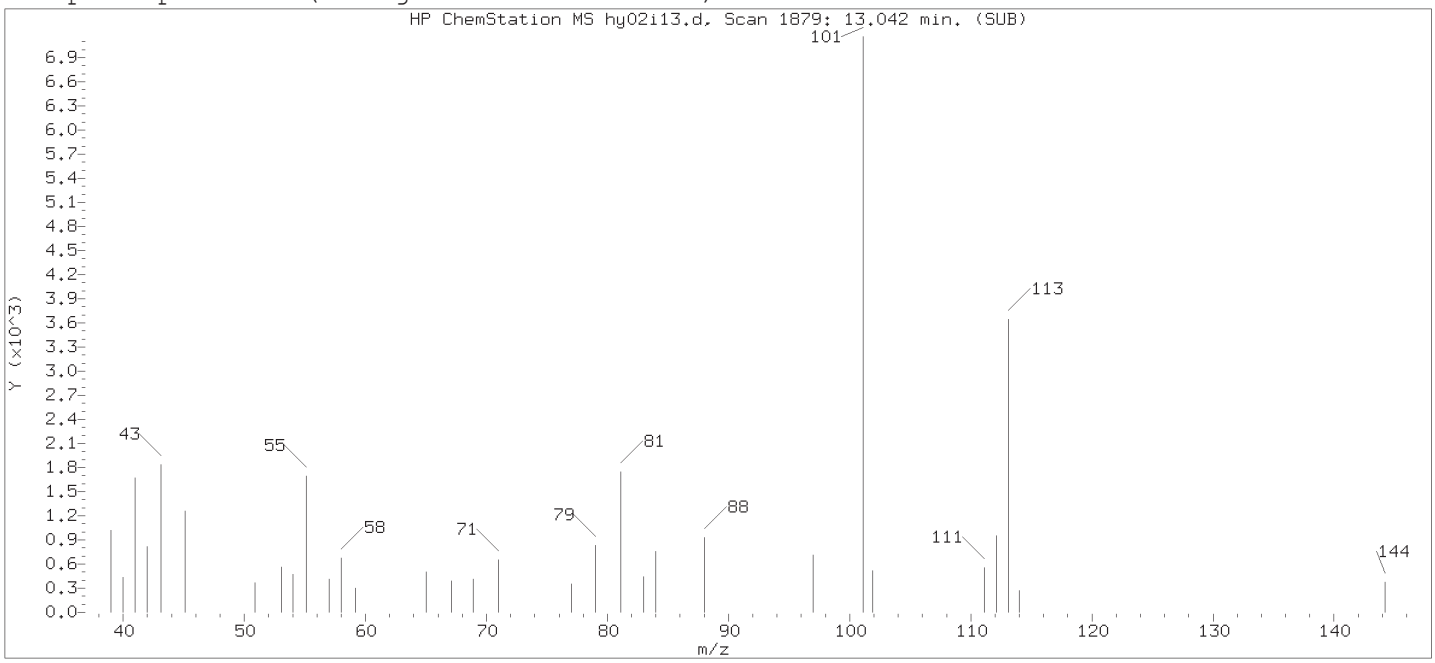
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 118032M
On-Column Amount (ng) : 12.2604
Integration start scan : 1749 Integration stop scan: 1763
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

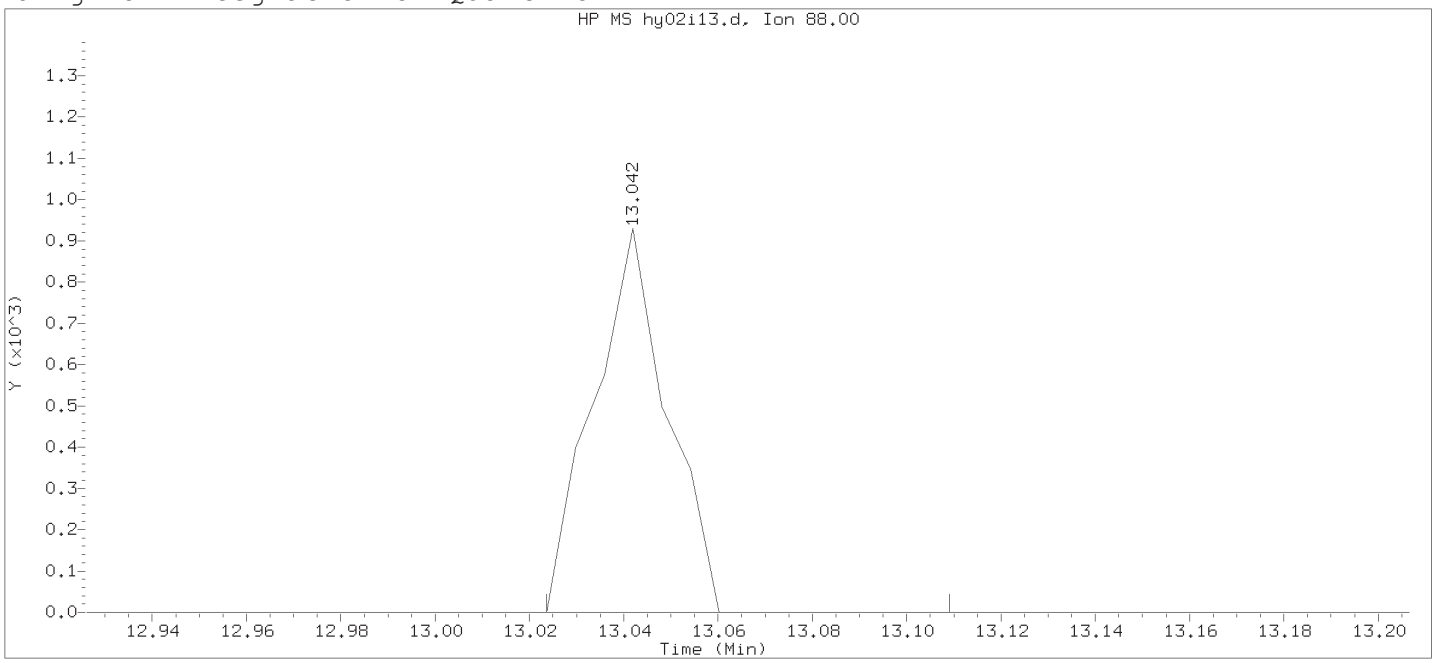
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

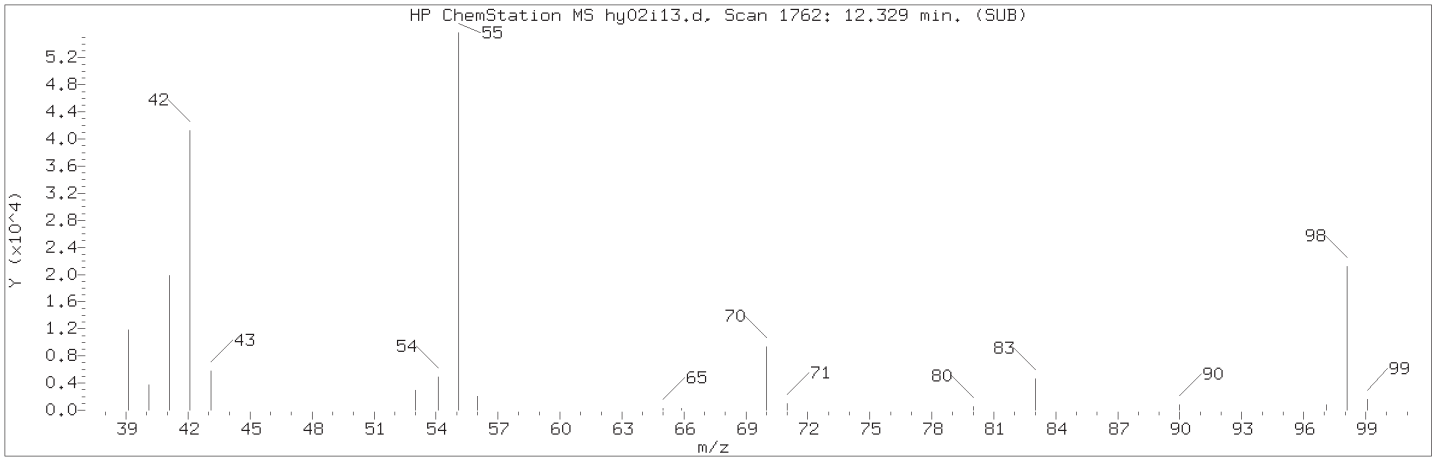
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:16
Date, time and analyst ID of latest file update: 02-May-2018 20:16 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

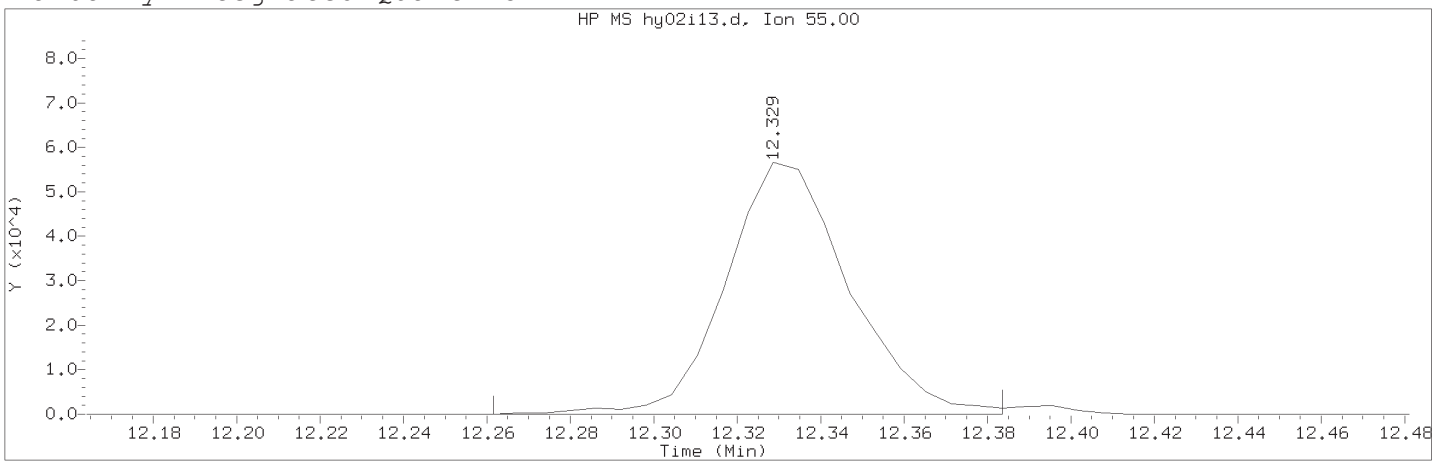
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 88.00
Area : 1005
On-column Amount (ng) : 0.1485
Integration start scan : 1875 Integration stop scan: 1889
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

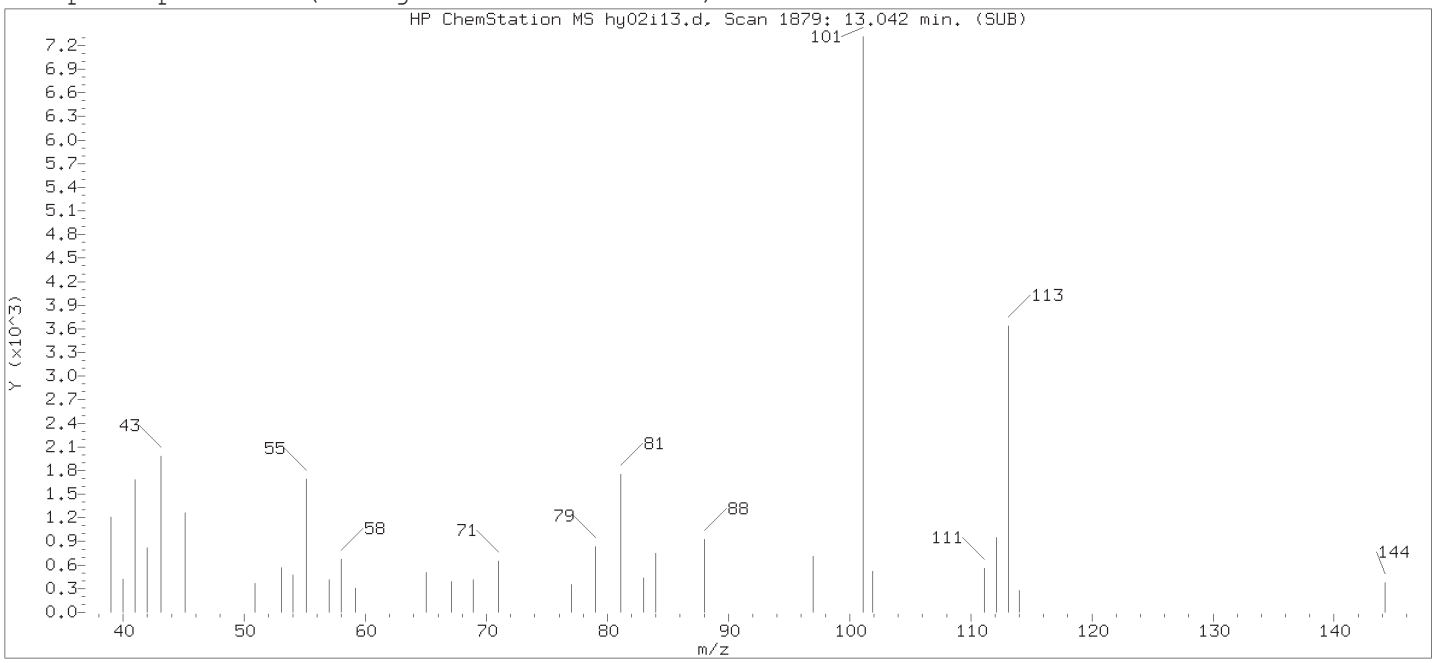
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 116048M
On-Column Amount (ng) : 237.0271
Integration start scan : 1750 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

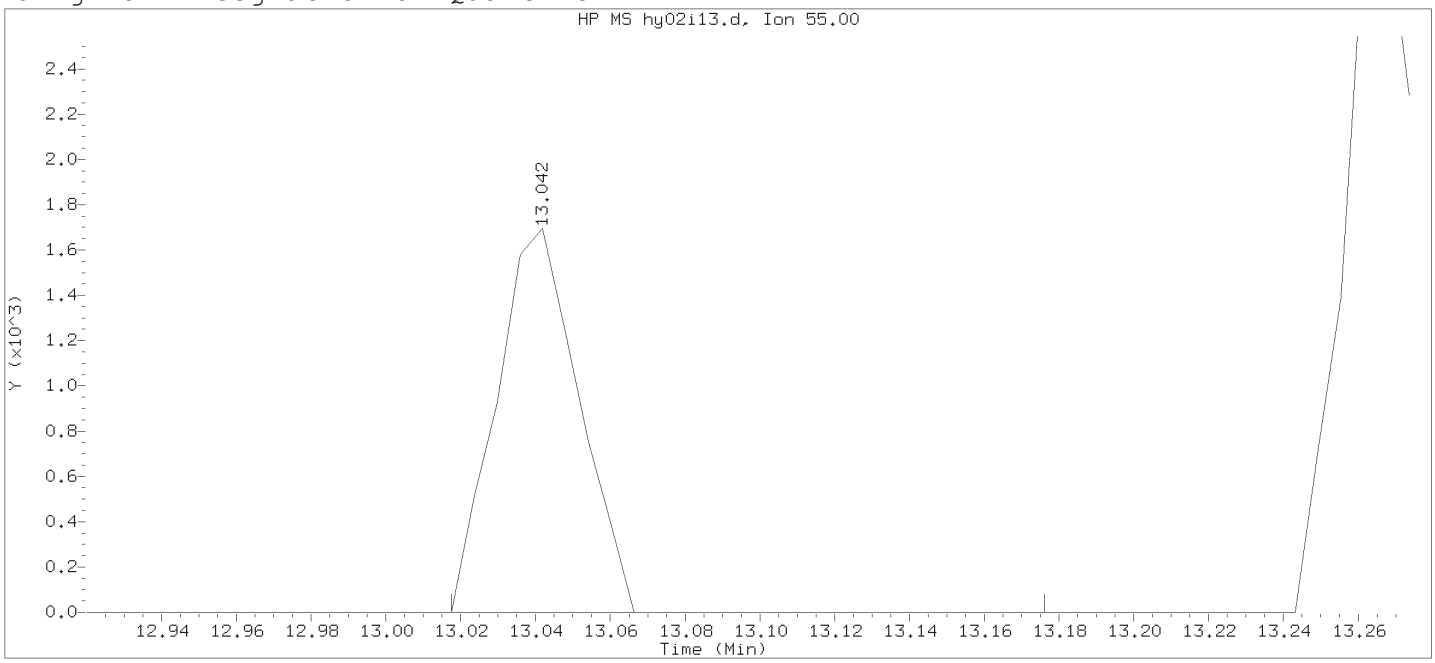
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



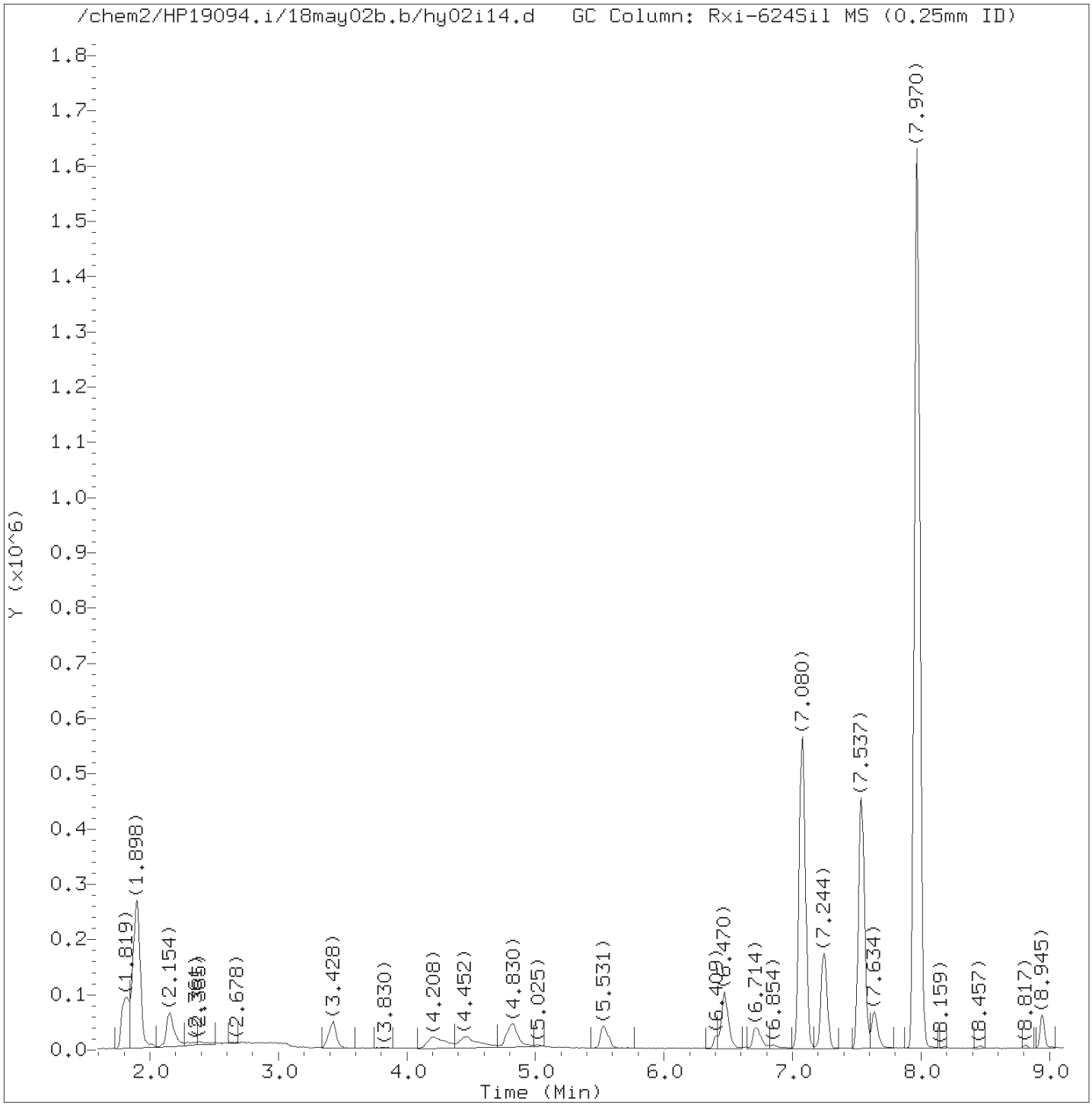
Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:16
Date, time and analyst ID of latest file update: 02-May-2018 20:16 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 55.00
Area : 2596
On-column Amount (ng) : 5.5293
Integration start scan : 1874 Integration stop scan: 1900
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203



Total Ion Chromatogram (TIC)

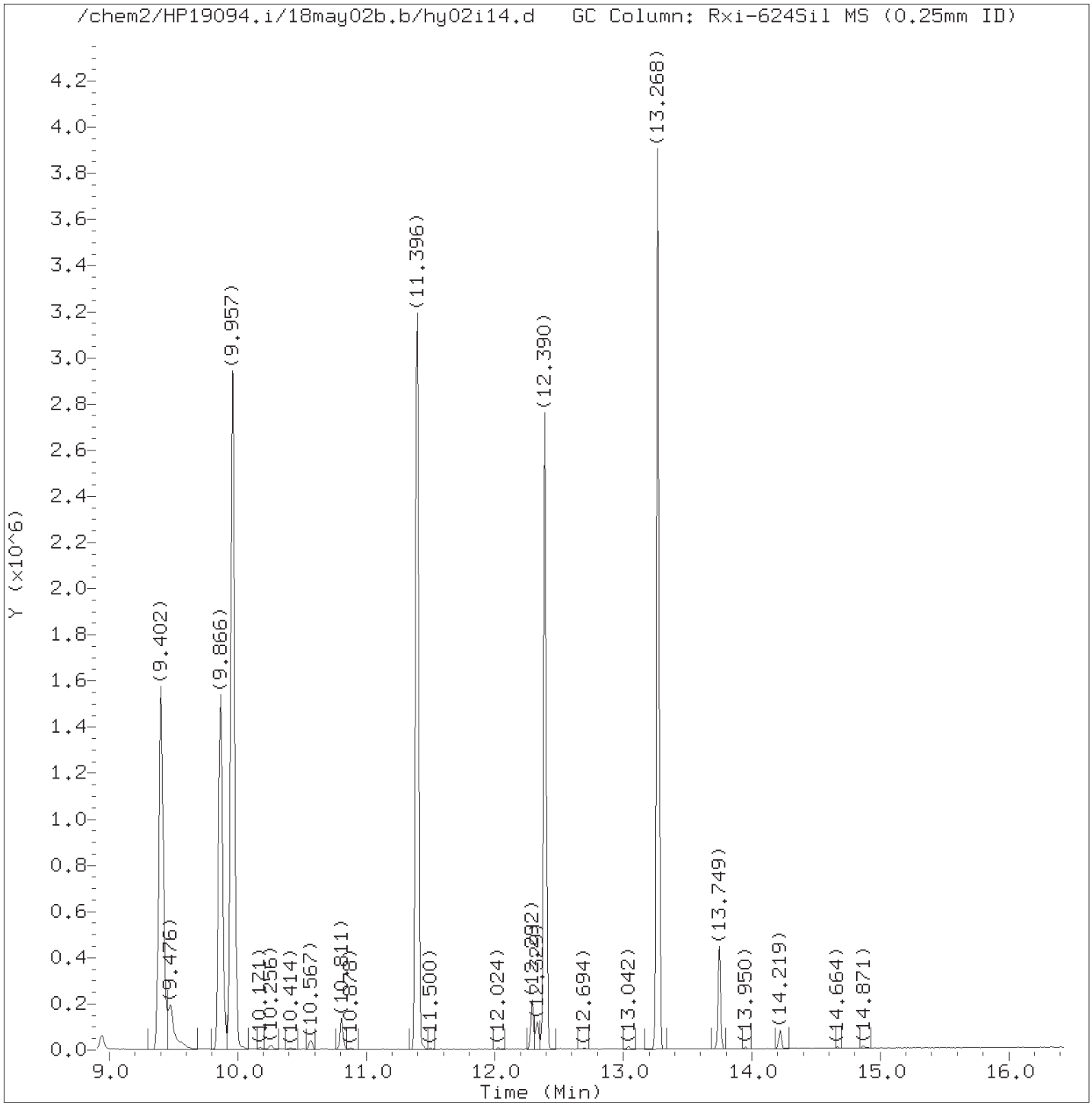
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

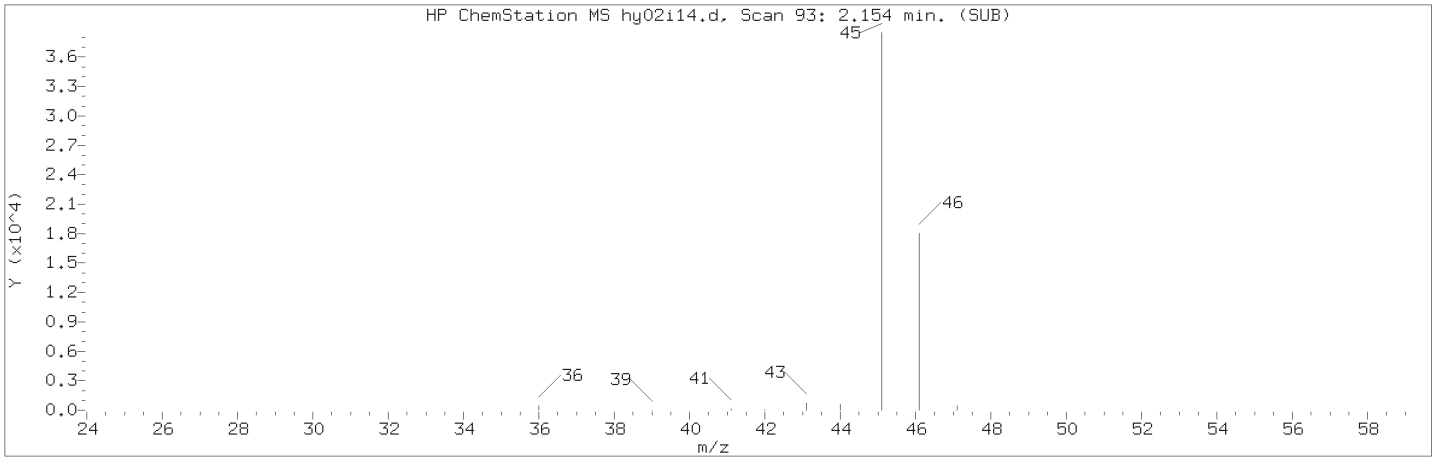
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.154	45	145626M	1.971
25) Acetonitrile	(1)	4.208	41	174320M	78.221
26)*t-Butyl Alcohol-d10	(1)	4.470	65	92293M	50.000
36) Vinyl Acetate	(2)	5.531	43	143775	2.043
43) Methyl Acrylate	(2)	6.470	55	214639M	9.882
53) 1-Chlorobutane	(2)	7.244	56	224469	2.160
63)*Fluorobenzene	(2)	7.970	96	2301576	10.000
77) Chloroacetonitrile	(2)	9.463	75	91318	105.500
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	42627	2.048
97)*Chlorobenzene-d5	(3)	11.396	117	1681083	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	45666M	3.821
112) Cyclohexanone	(1)	12.329	55	57098M	93.932
133)*1,4-Dichlorobenzene-d4	(4)	13.268	152	885161	10.000
142) Hexachloroethane	(4)	13.749	117	77231	2.073

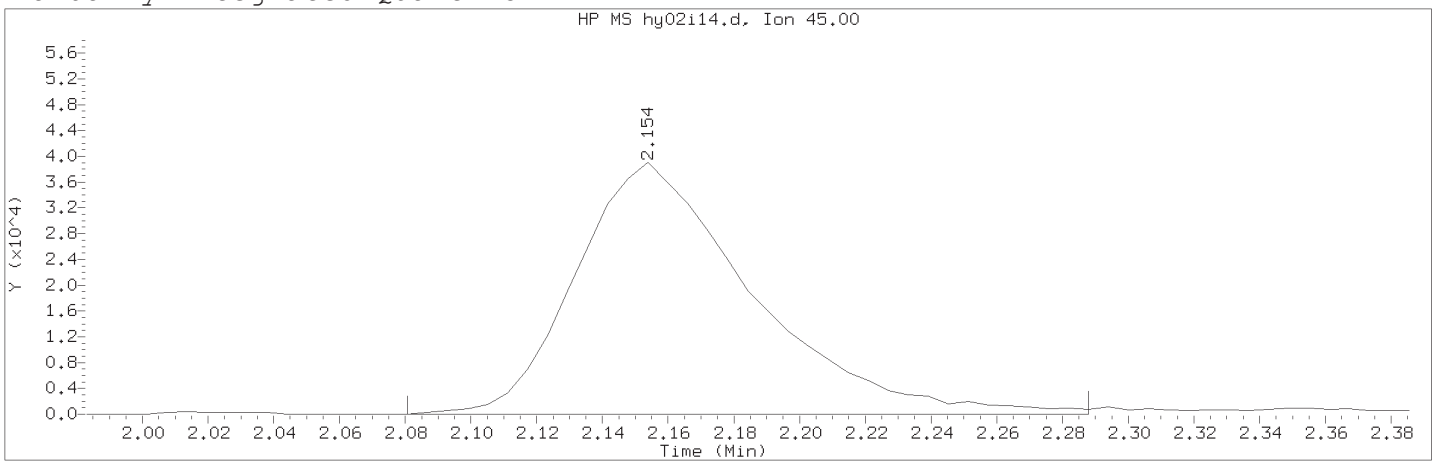
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

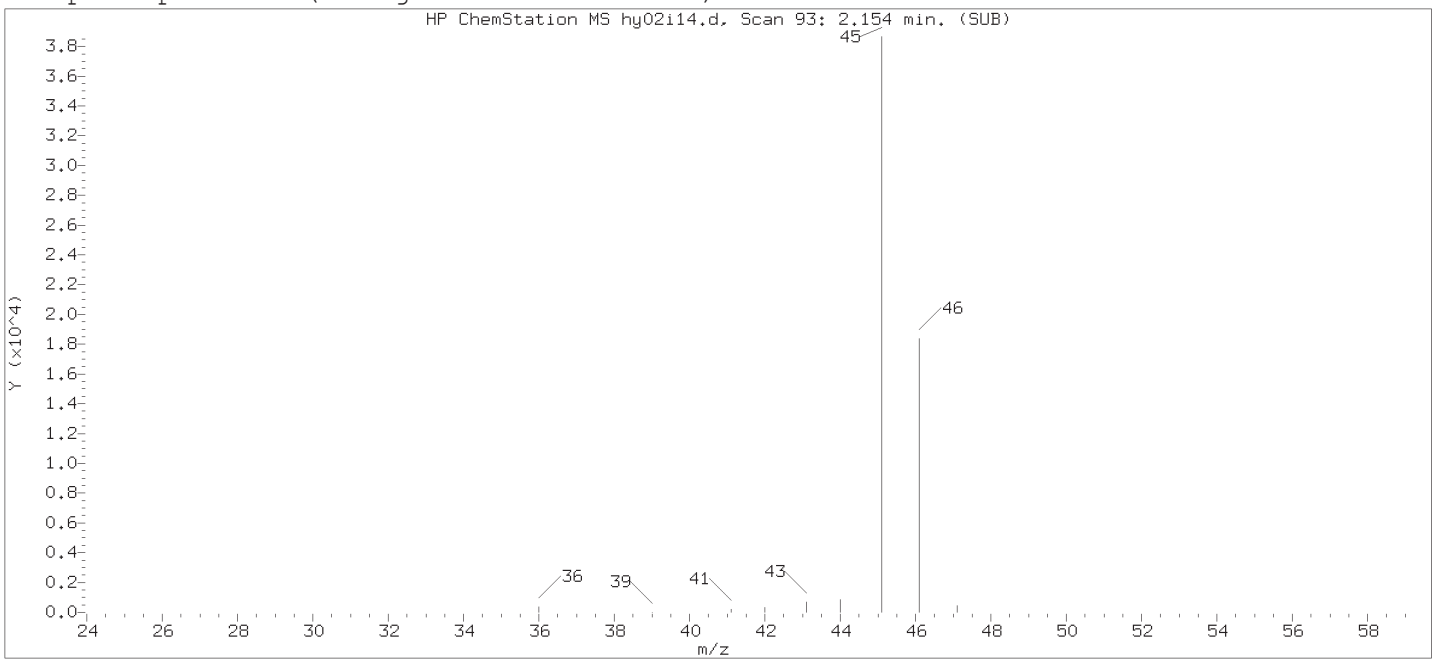
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 145626M
On-Column Amount (ng) : 1.9710
Integration start scan : 80 Integration stop scan: 114
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

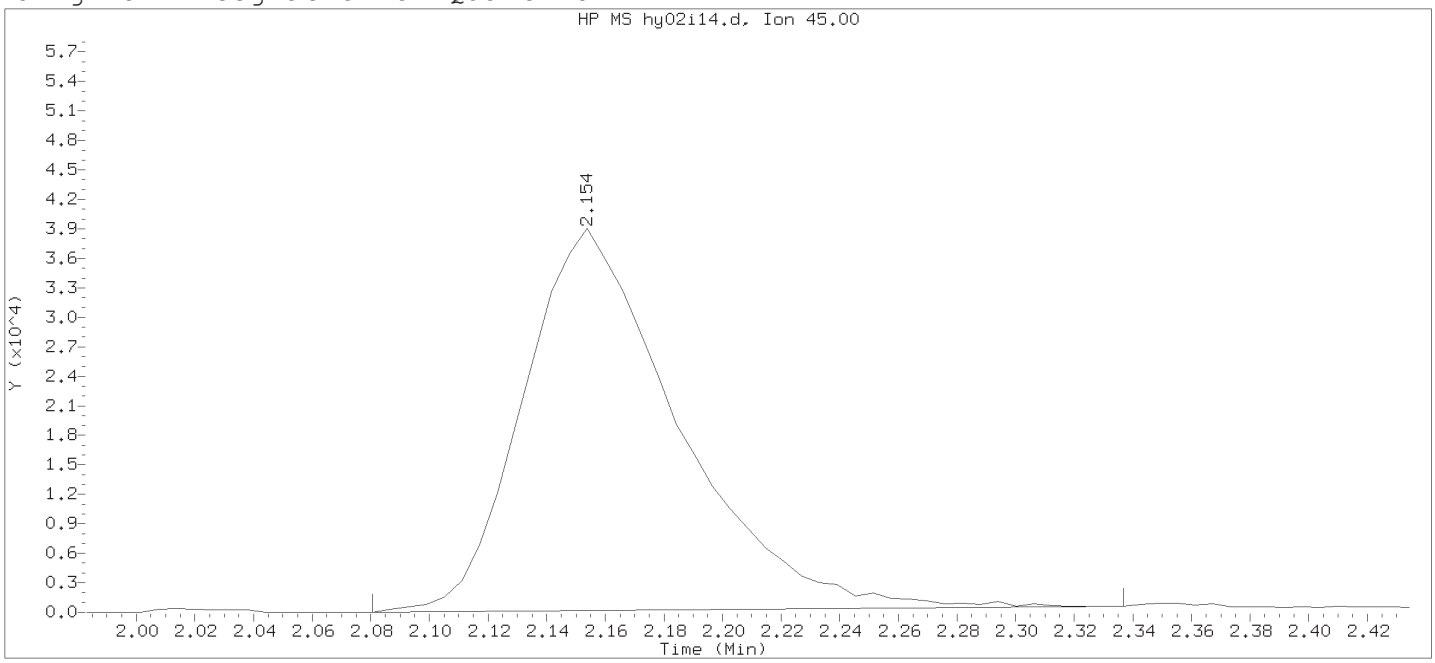
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

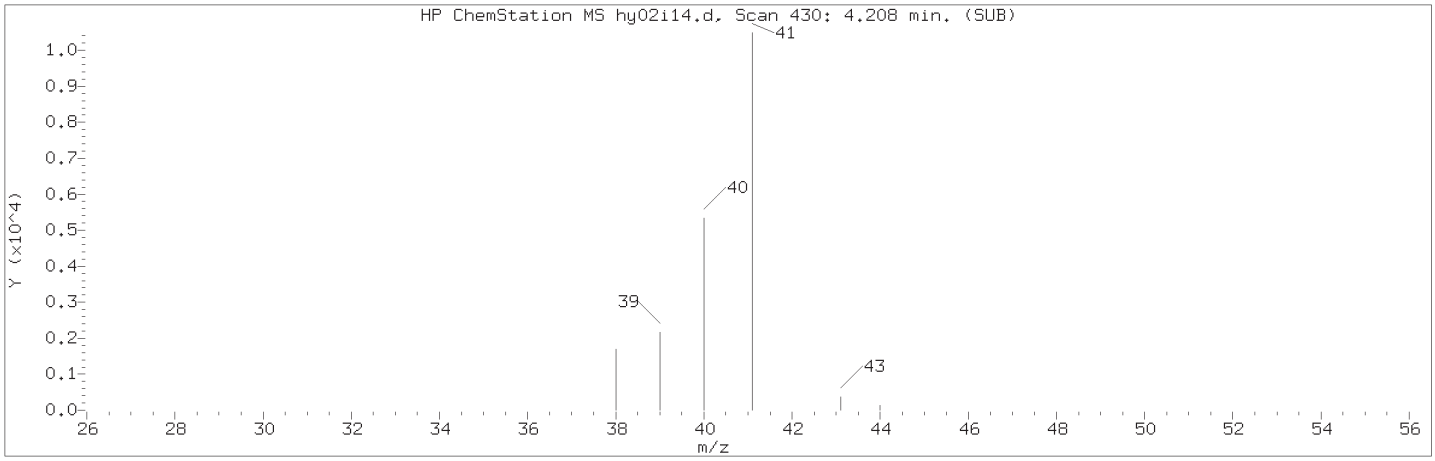
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

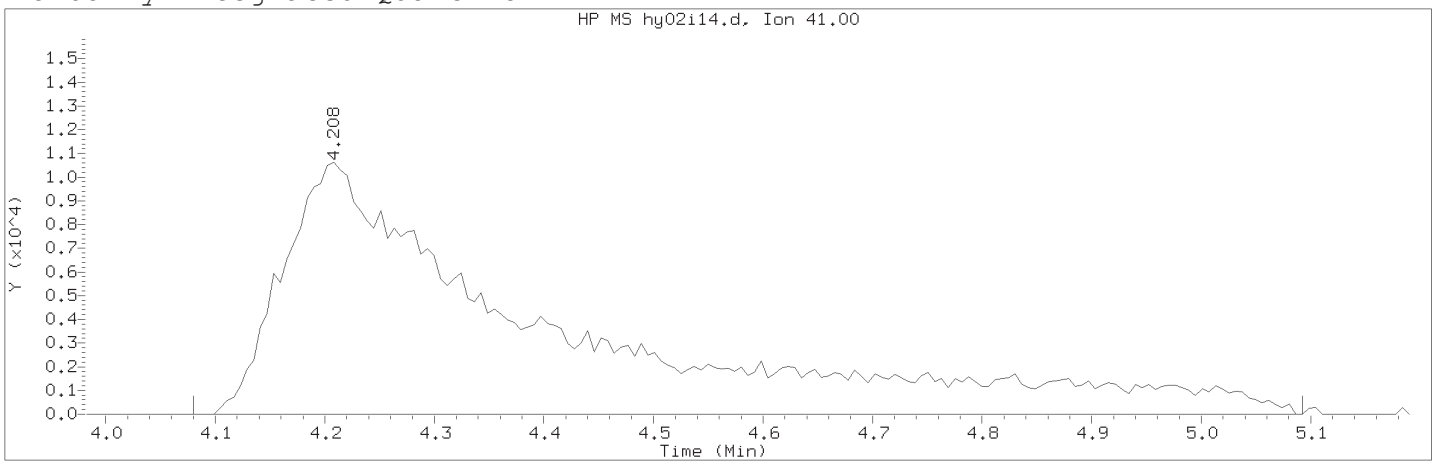
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area : 143014
On-column Amount (ng) : 1.8848
Integration start scan : 80 Integration stop scan: 122
Y at integration start : 0 Y at integration end: 597

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

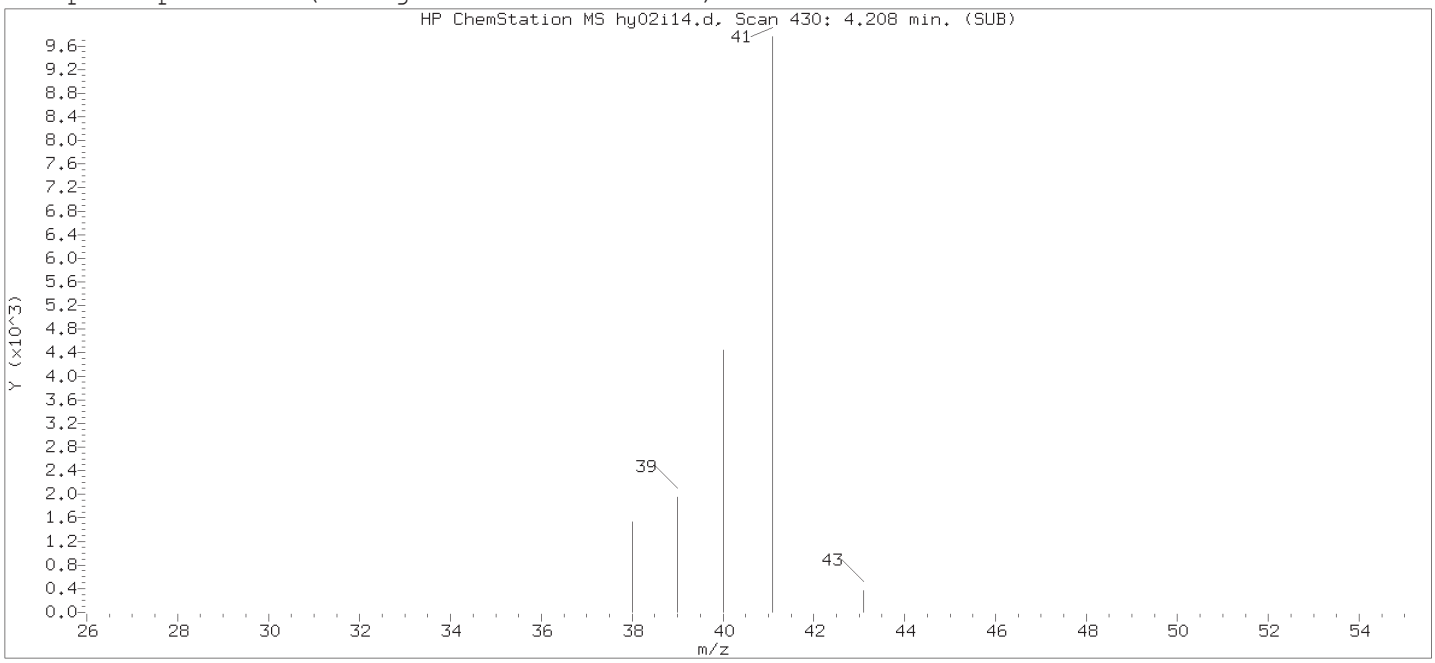
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area (flag) : 174320M
On-Column Amount (ng) : 78.2209
Integration start scan : 408 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

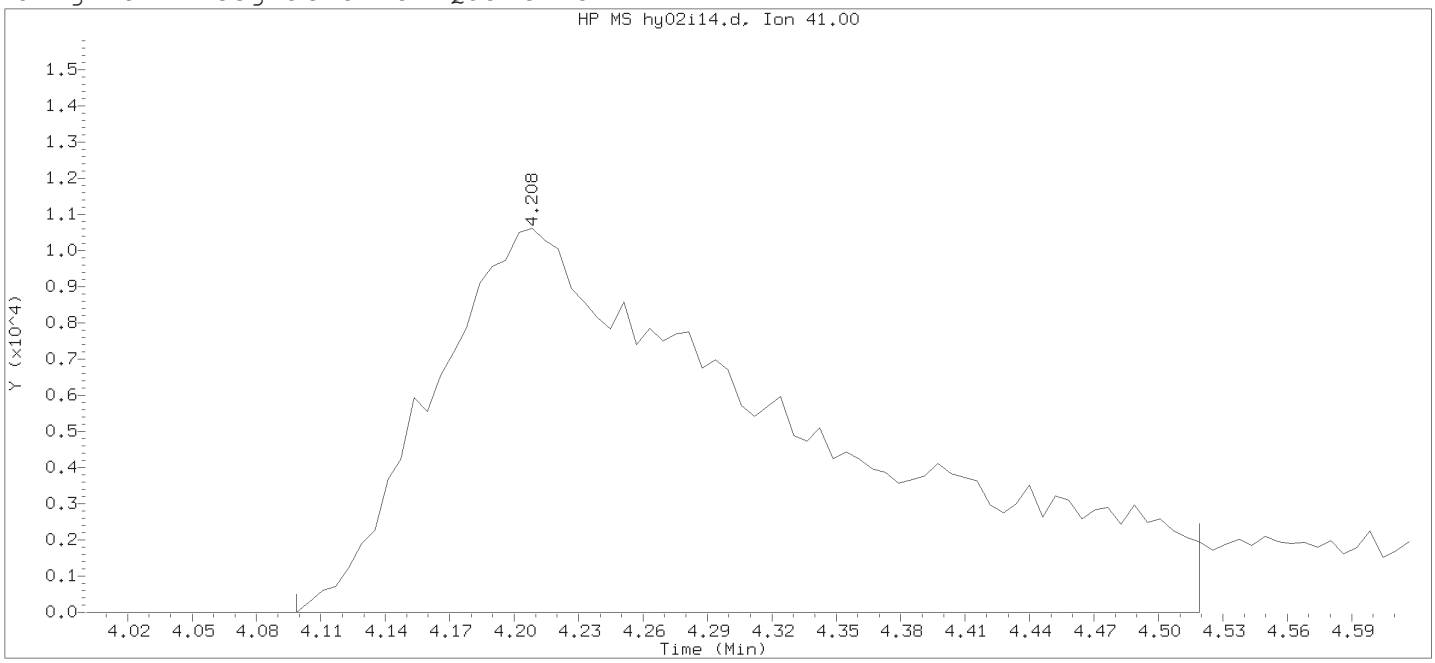
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

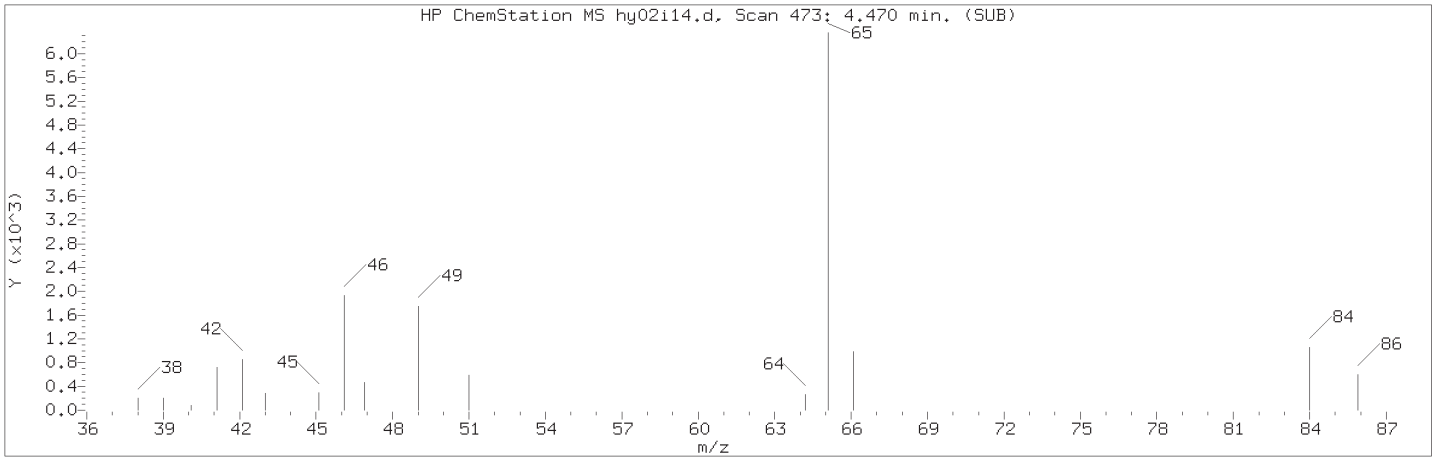
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

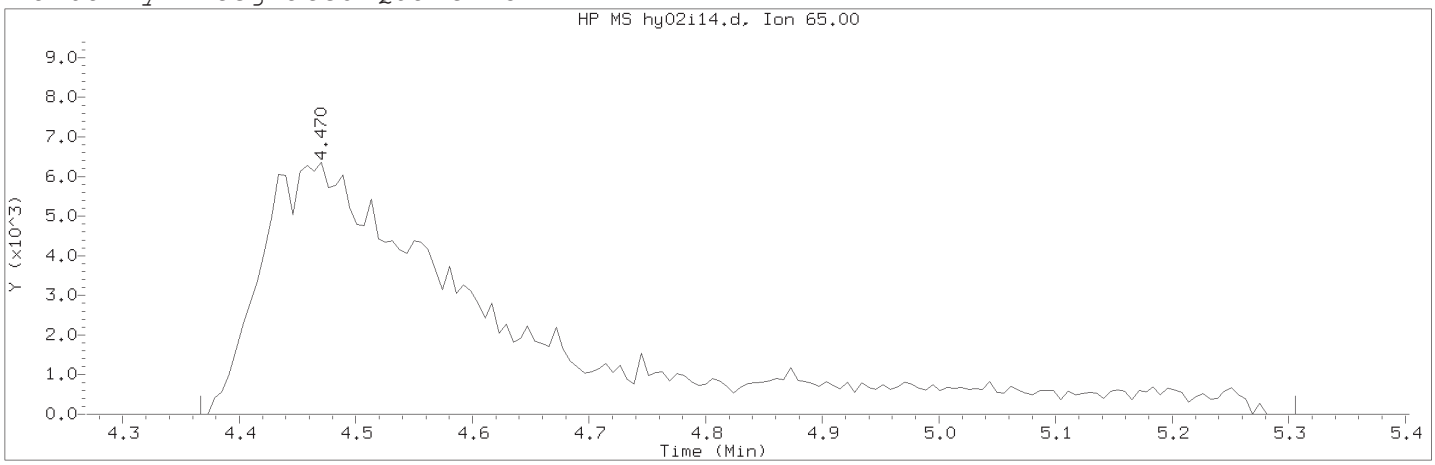
Compound Number	: 25		
Compound Name	: Acetonitrile		
Scan Number	: 430		
Retention Time (minutes)	: 4.208		
Quant Ion	: 41.00		
Area	: 127478		
On-column Amount (ng)	: 55.3756		
Integration start scan	: 411	Integration stop scan:	480
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

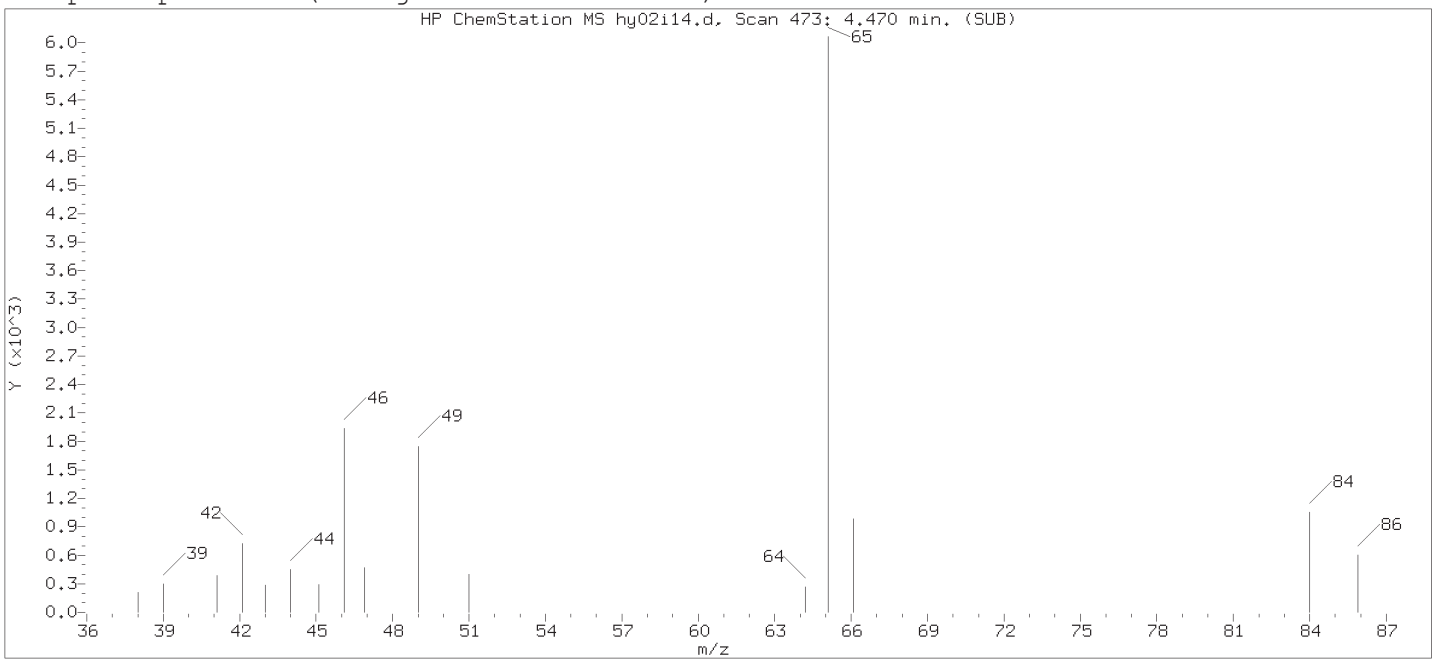
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 92293M
On-Column Amount (ng) : 50.0000
Integration start scan : 455 Integration stop scan: 609
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

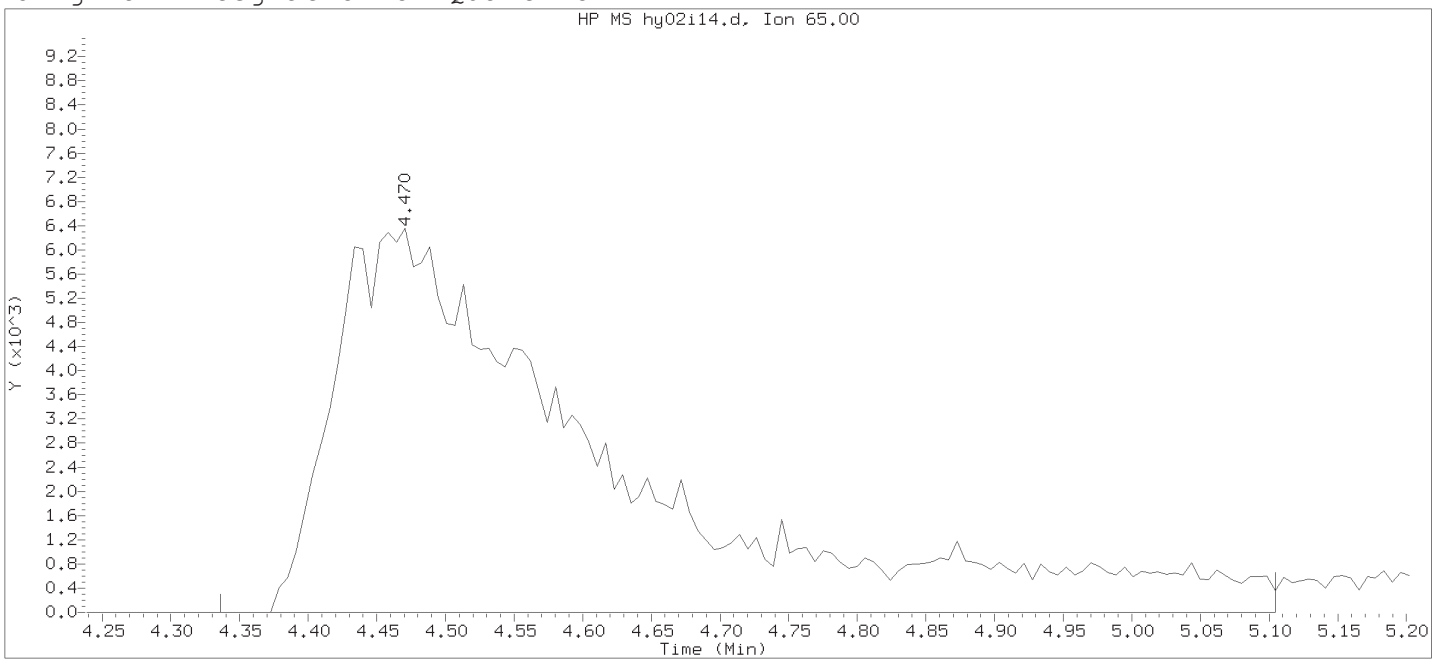
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

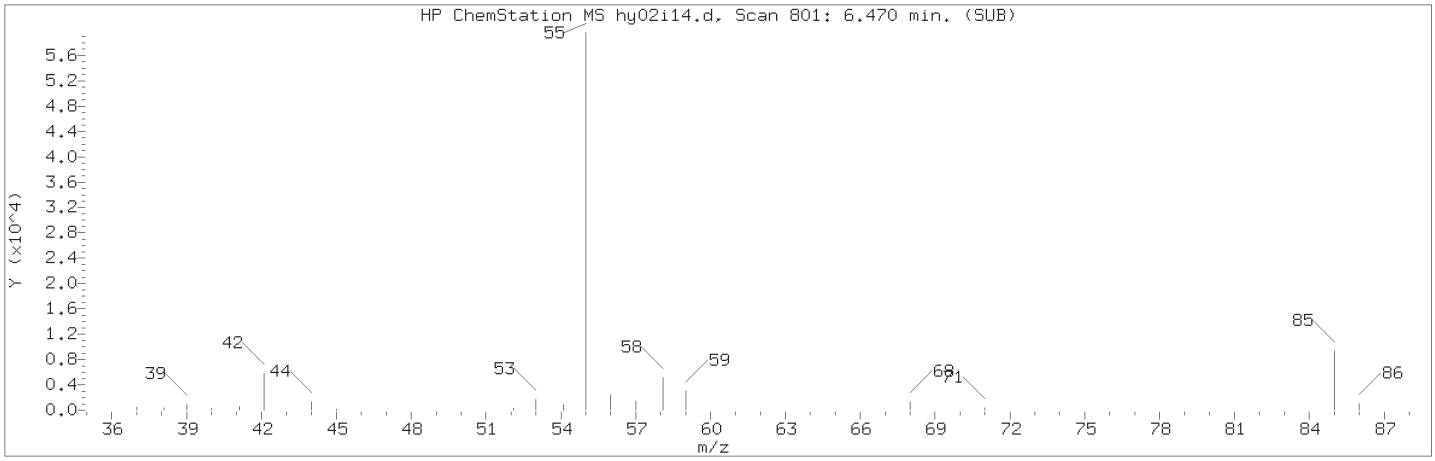
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

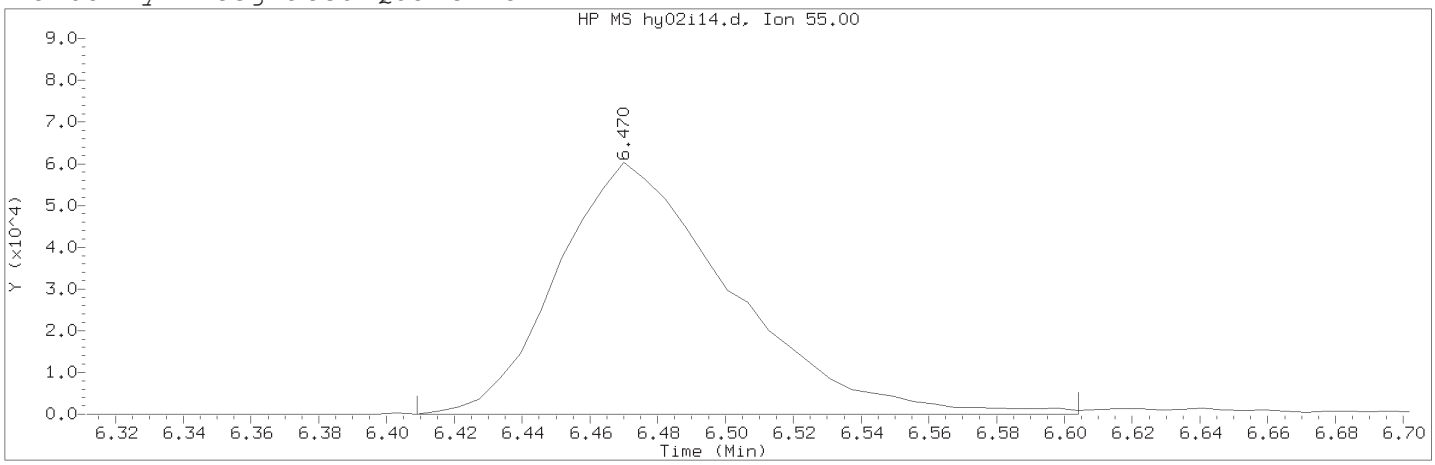
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area : 87182
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

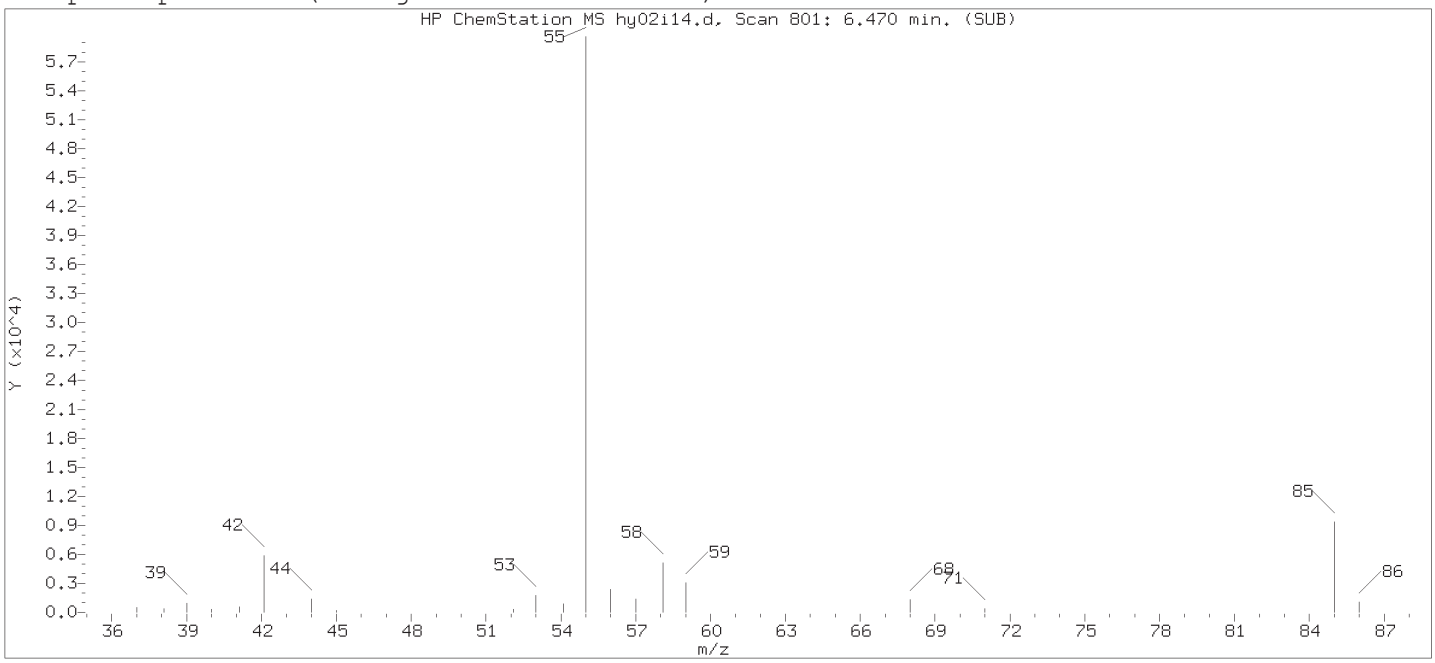
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 801
Retention Time (minutes): 6.470
Quant Ion : 55.00
Area (flag) : 214639M
On-Column Amount (ng) : 9.8825
Integration start scan : 790 Integration stop scan: 822
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

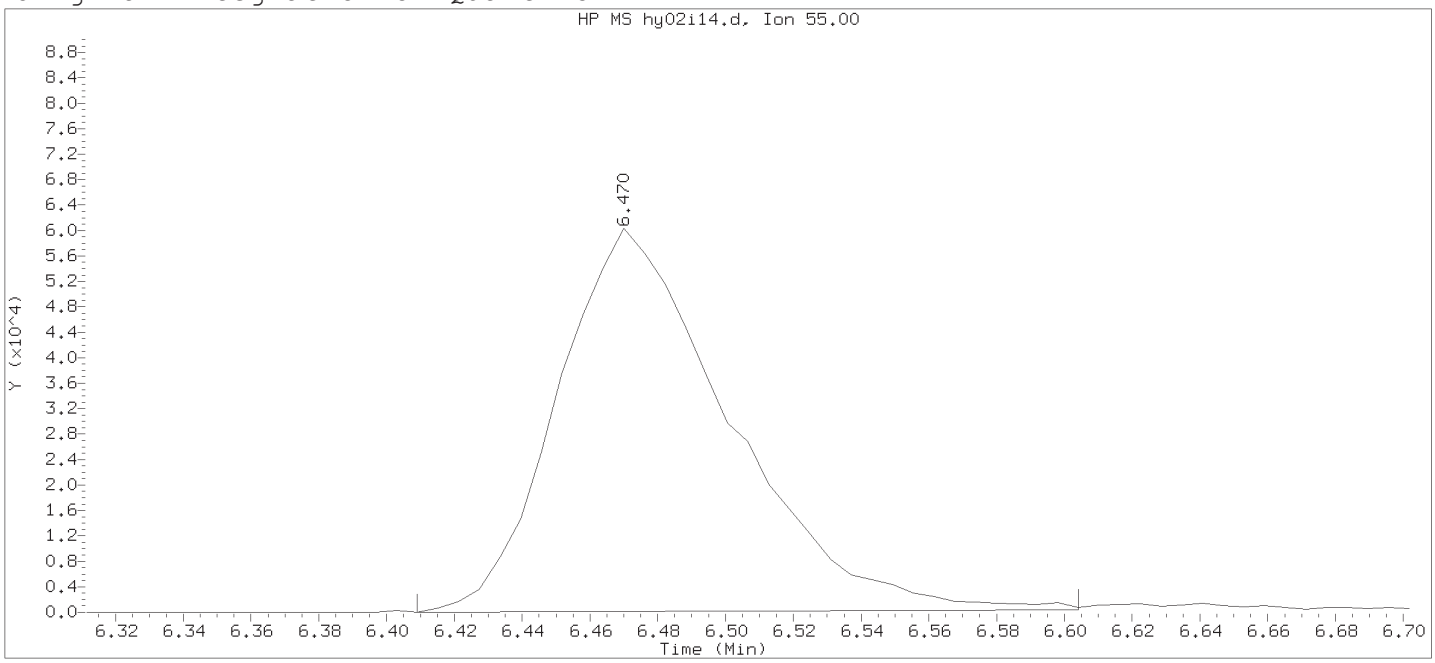
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

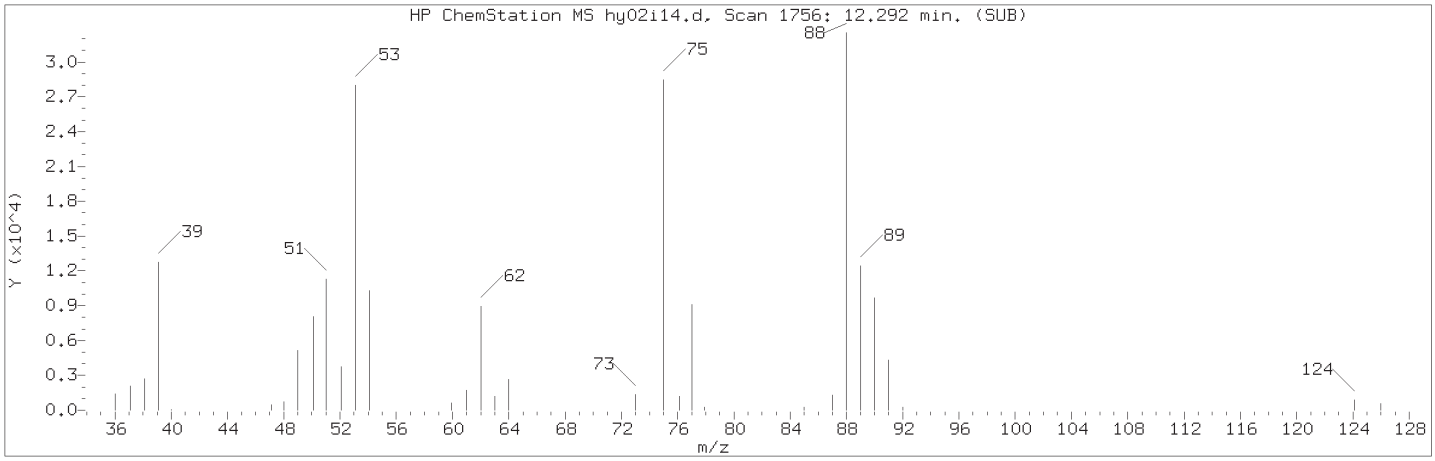
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

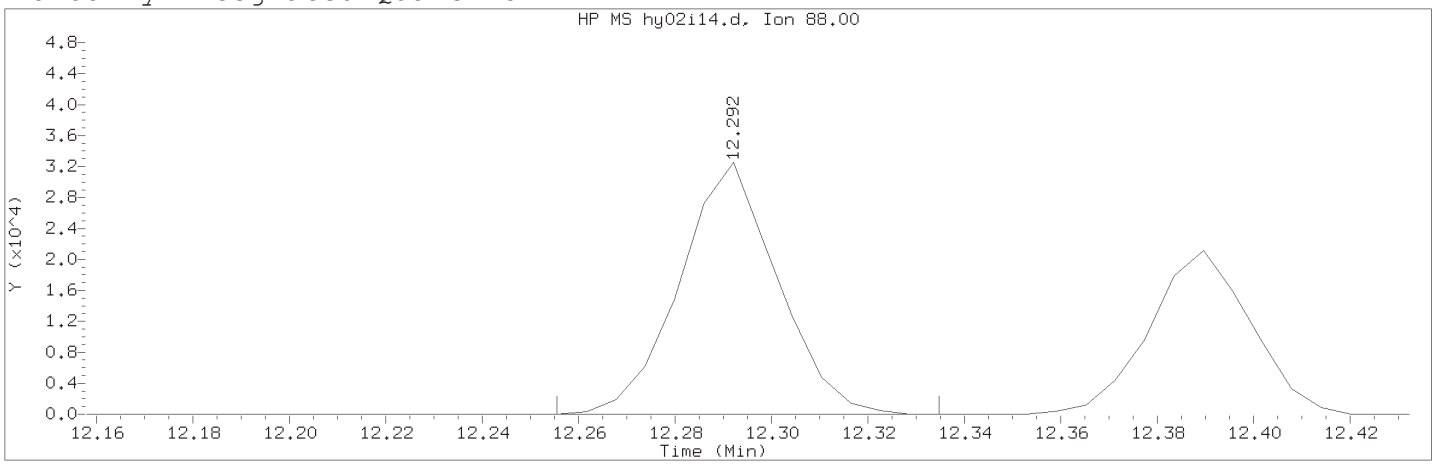
Compound Number	: 43		
Compound Name	: Methyl Acrylate		
Scan Number	: 801		
Retention Time (minutes)	: 6.470		
Quant Ion	: 55.00		
Area	: 212156		
On-column Amount (ng)	: 9.7793		
Integration start scan	: 790	Integration stop scan:	822
Y at integration start	: 0	Y at integration end:	400

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

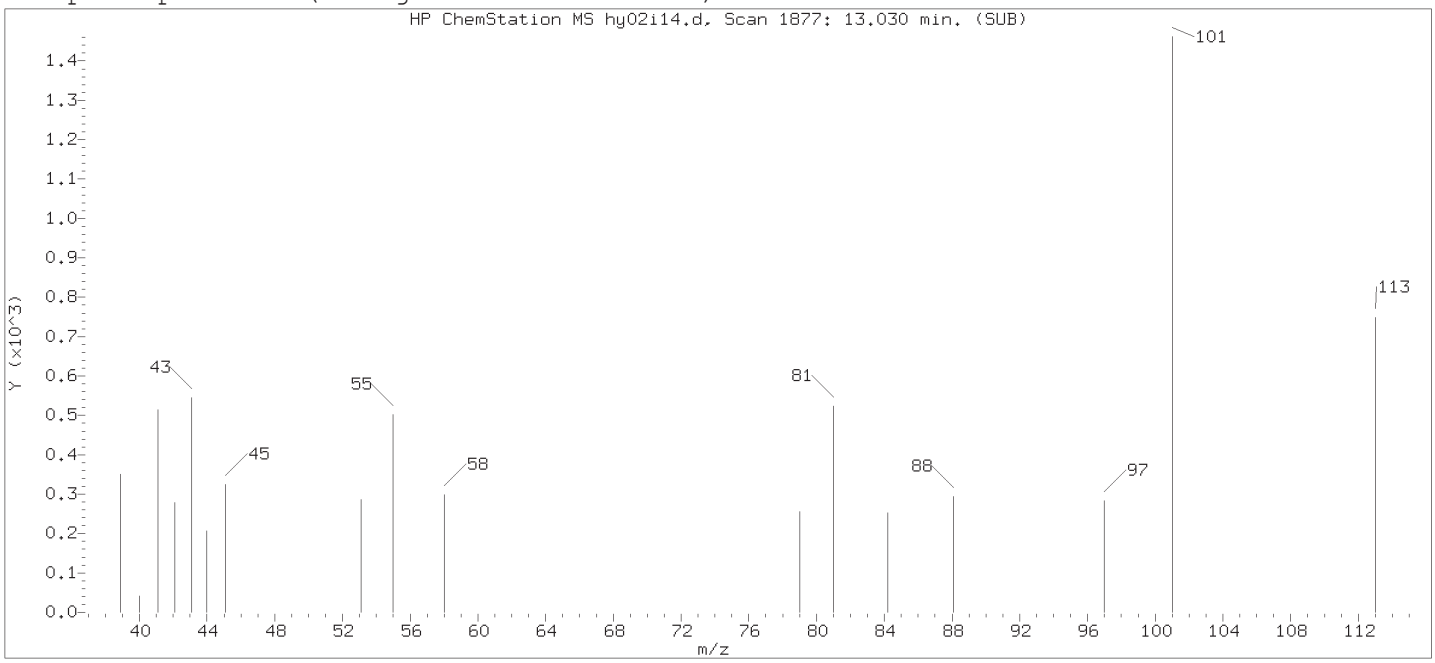
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 45666M
On-Column Amount (ng) : 3.8206
Integration start scan : 1749 Integration stop scan: 1762
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

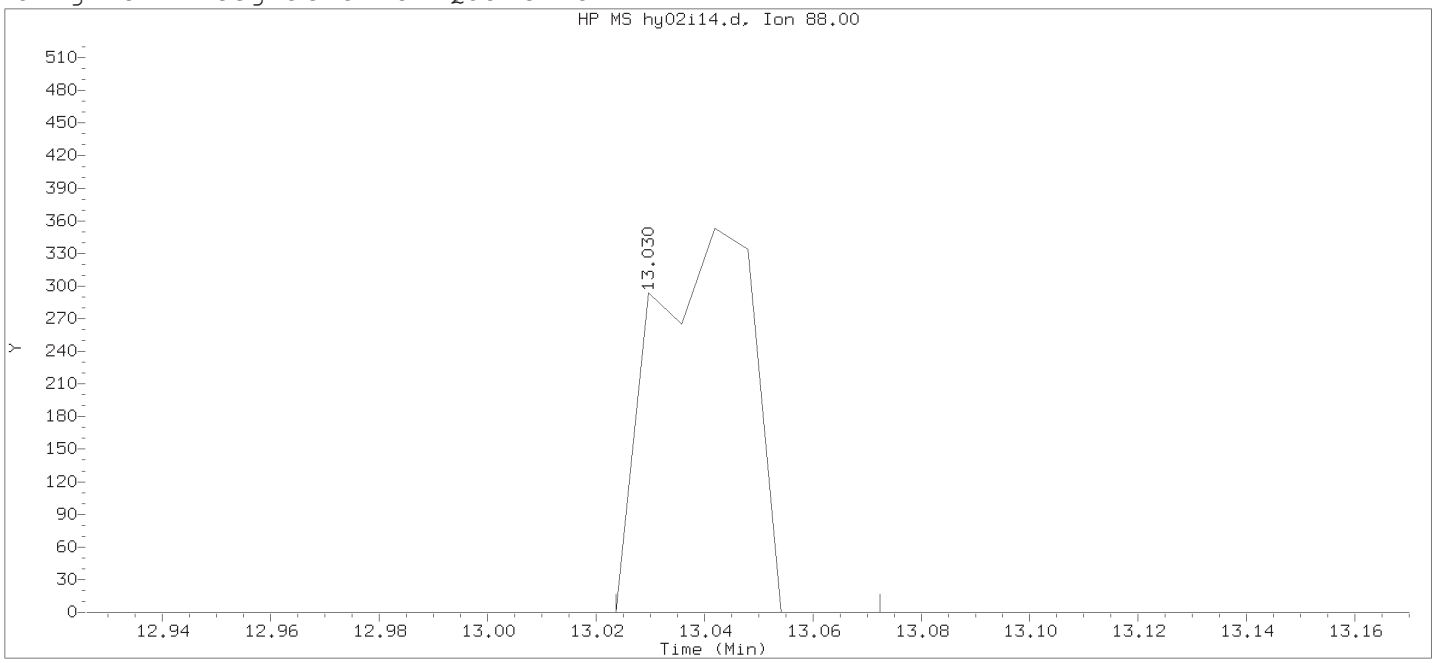
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

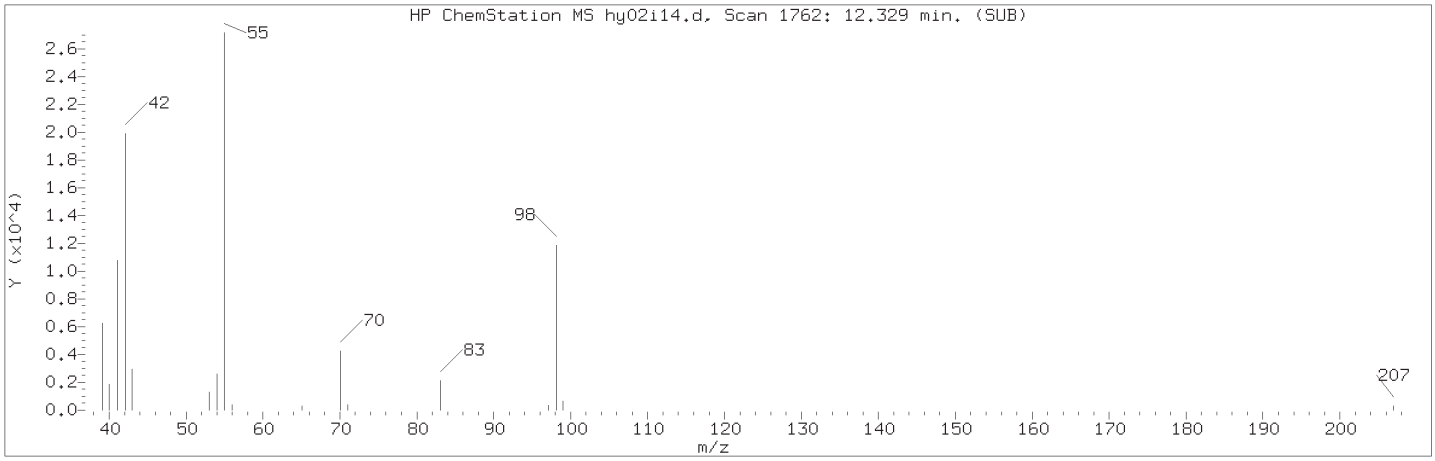
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

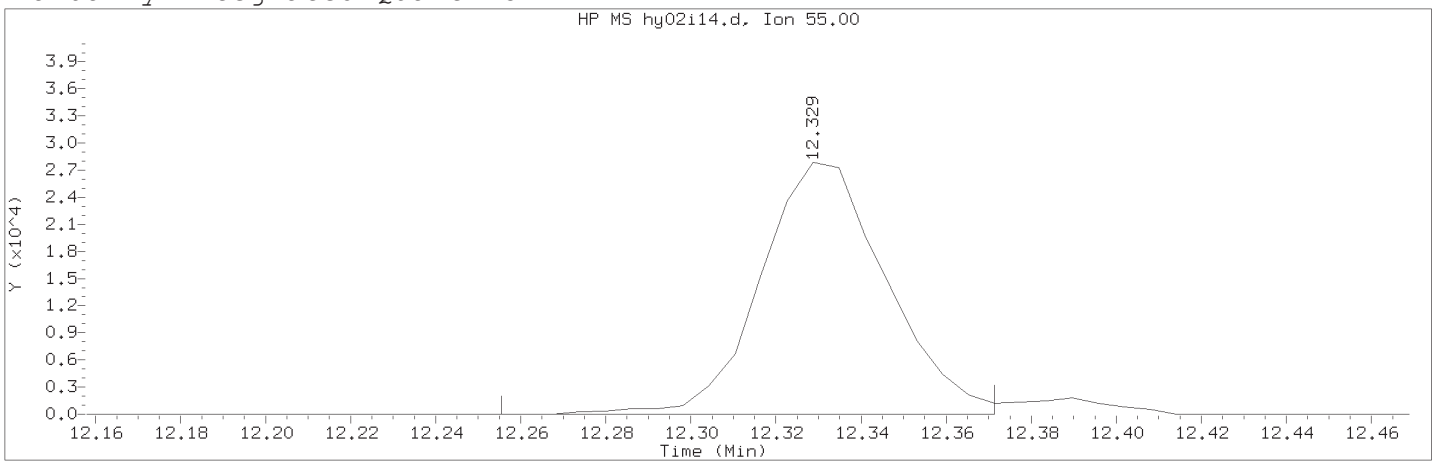
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1877
Retention Time (minutes): 13.030
Quant Ion : 88.00
Area : 455
On-column Amount (ng) : 0.0756
Integration start scan : 1875 Integration stop scan: 1883
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

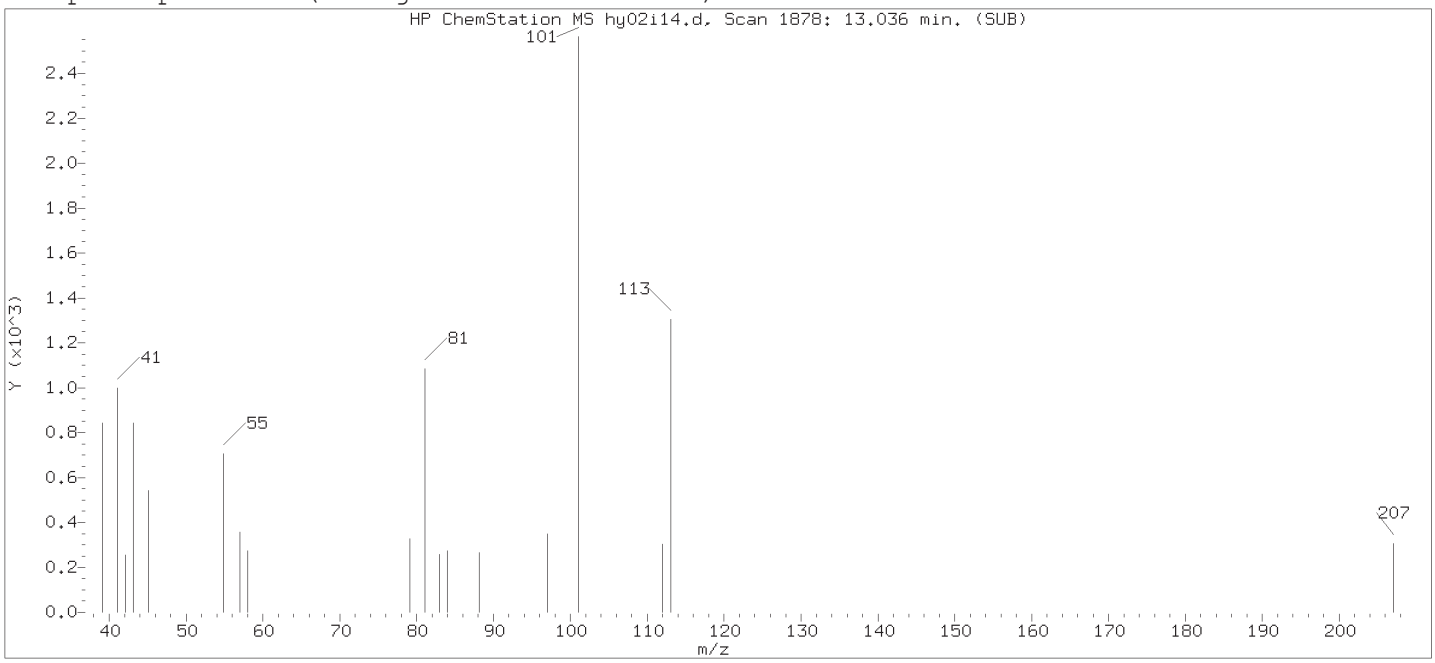
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 57098M
On-Column Amount (ng) : 93.9316
Integration start scan : 1749 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

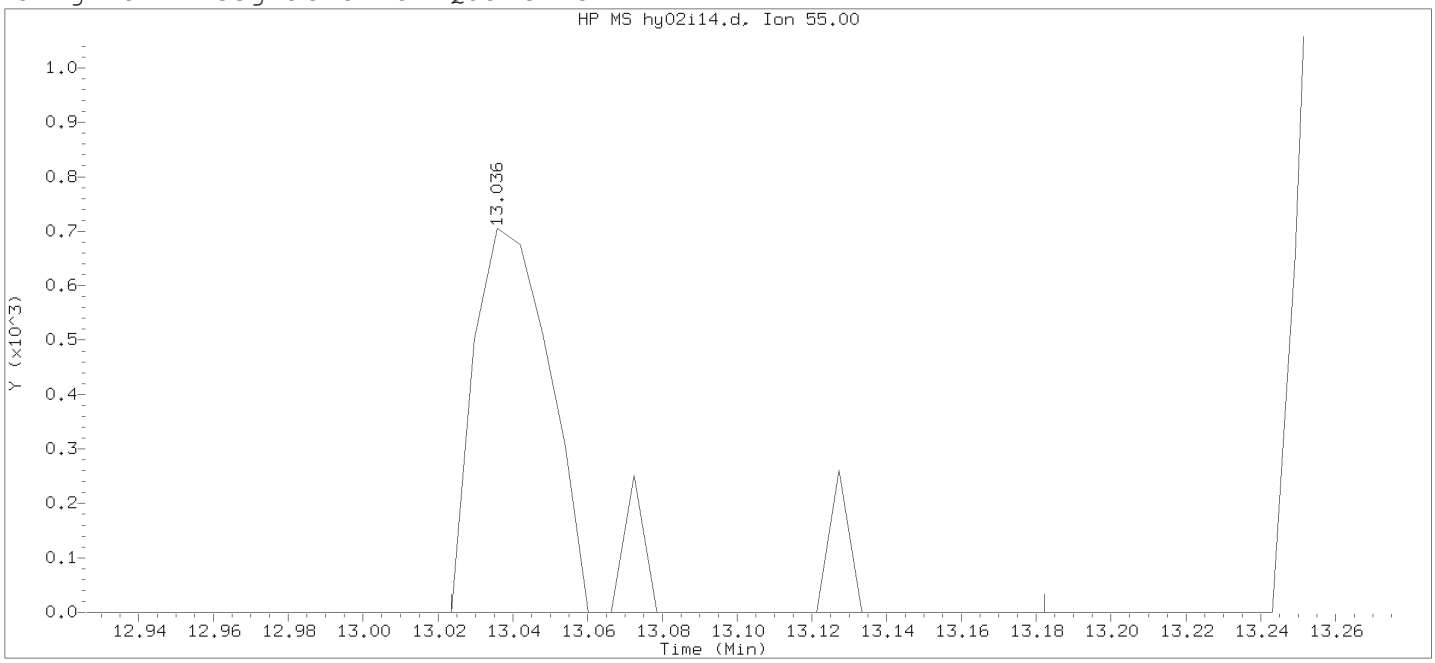
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



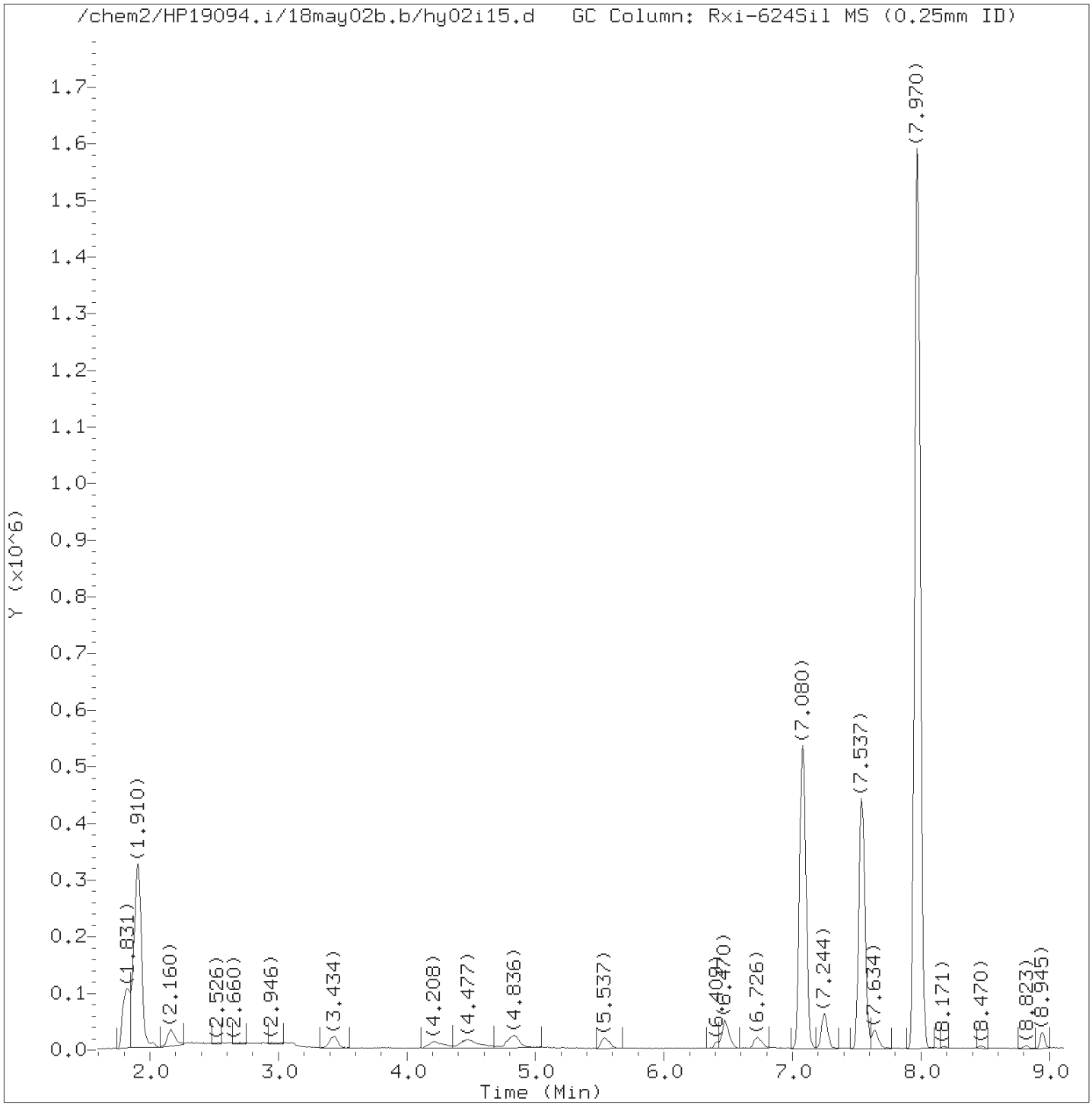
Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 112		
Compound Name	: Cyclohexanone		
Scan Number	: 1878		
Retention Time (minutes)	: 13.036		
Quant Ion	: 55.00		
Area	: 1174		
On-column Amount (ng)	: 3.0474		
Integration start scan	: 1875	Integration stop scan:	1901
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV10203



Total Ion Chromatogram (TIC)

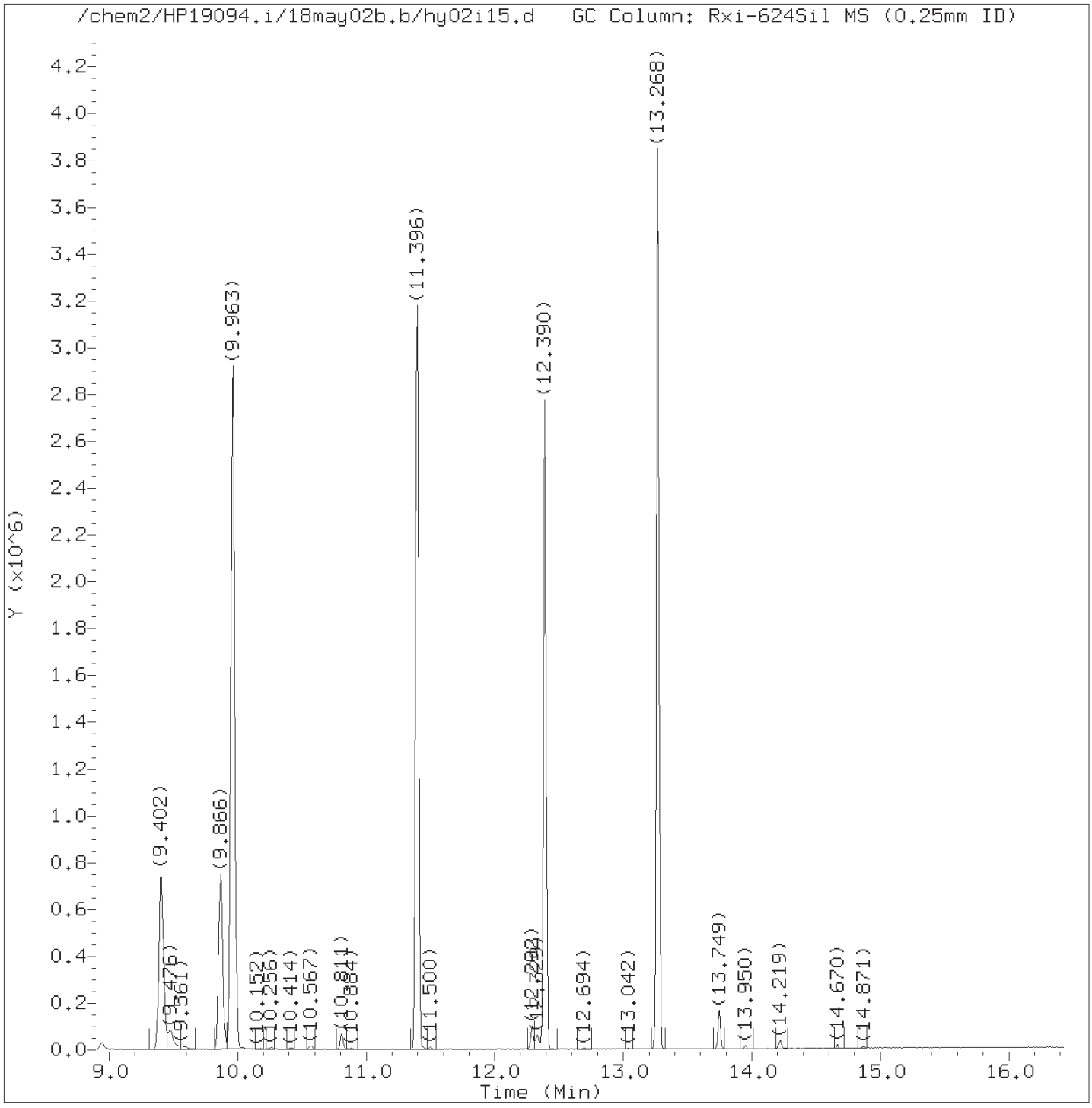
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

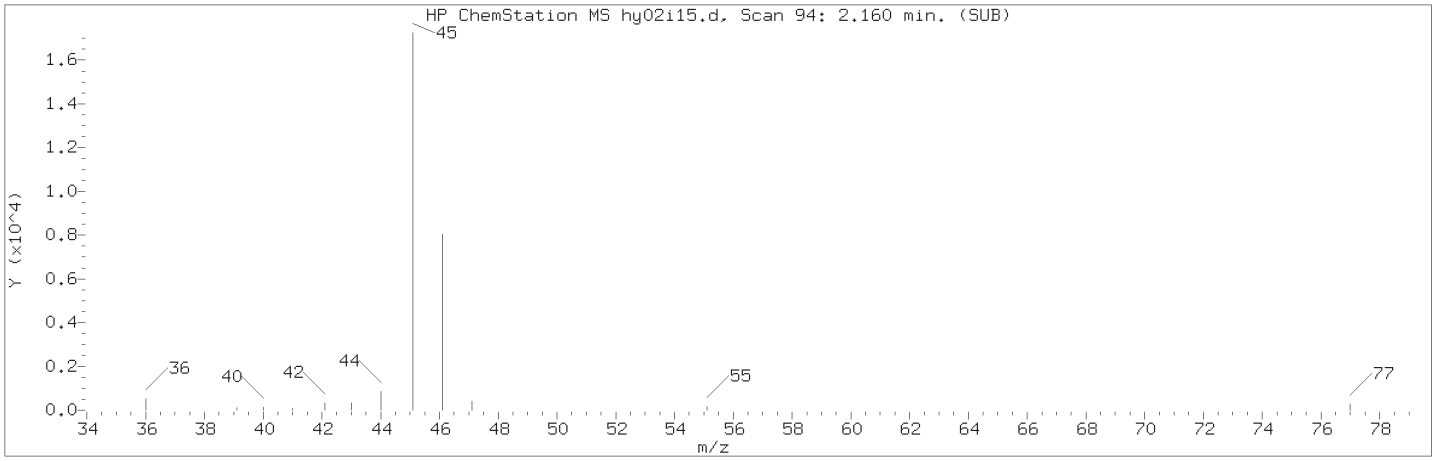
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.160	45	66497M	0.914
25) Acetonitrile	(1)	4.239	41	91043M	41.604
26)*t-Butyl Alcohol-d10	(1)	4.483	65	90627M	50.000
36) Vinyl Acetate	(2)	5.525	43	66540	0.960
43) Methyl Acrylate	(2)	6.476	55	109424	5.115
53) 1-Chlorobutane	(2)	7.244	56	80289	0.784
63)*Fluorobenzene	(2)	7.970	96	2267030	10.000
77) Chloroacetonitrile	(2)	9.463	75	44327	51.992
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	19766	0.964
97)*Chlorobenzene-d5	(3)	11.396	117	1663736	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	20531M	1.749
112) Cyclohexanone	(1)	12.329	55	29836M	49.985
133)*1,4-Dichlorobenzene-d4	(4)	13.268	152	872428	10.000
142) Hexachloroethane	(4)	13.749	117	28244	0.769

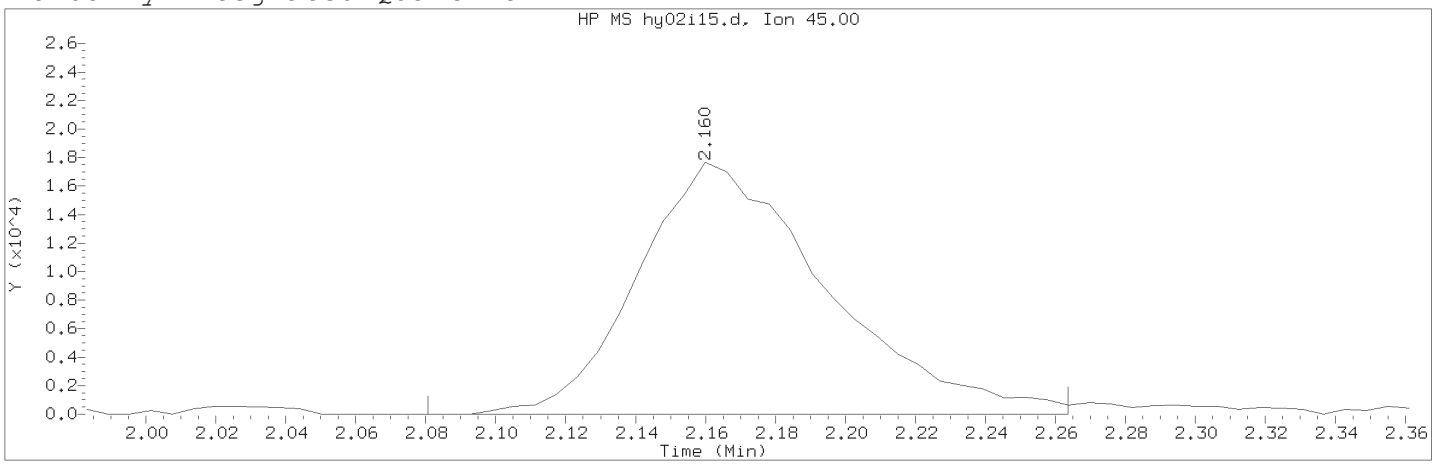
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

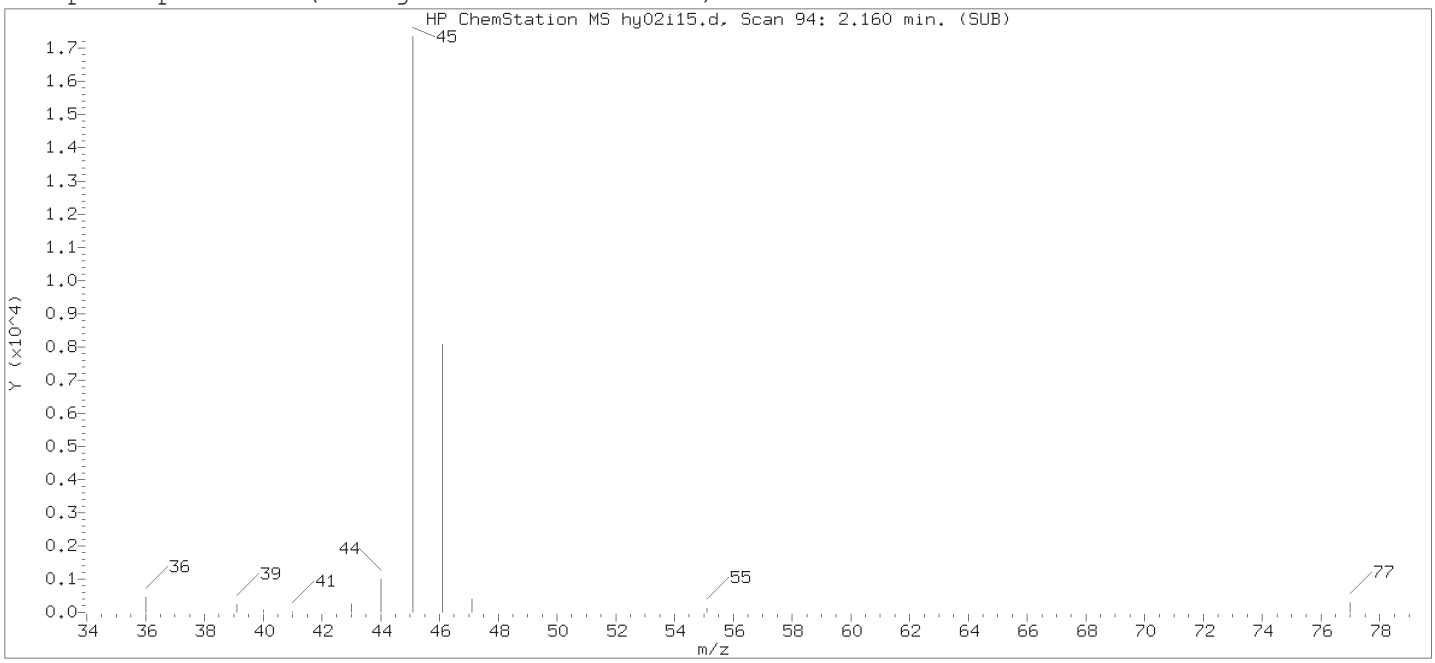
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 66497M
On-Column Amount (ng) : 0.9137
Integration start scan : 80 Integration stop scan: 110
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

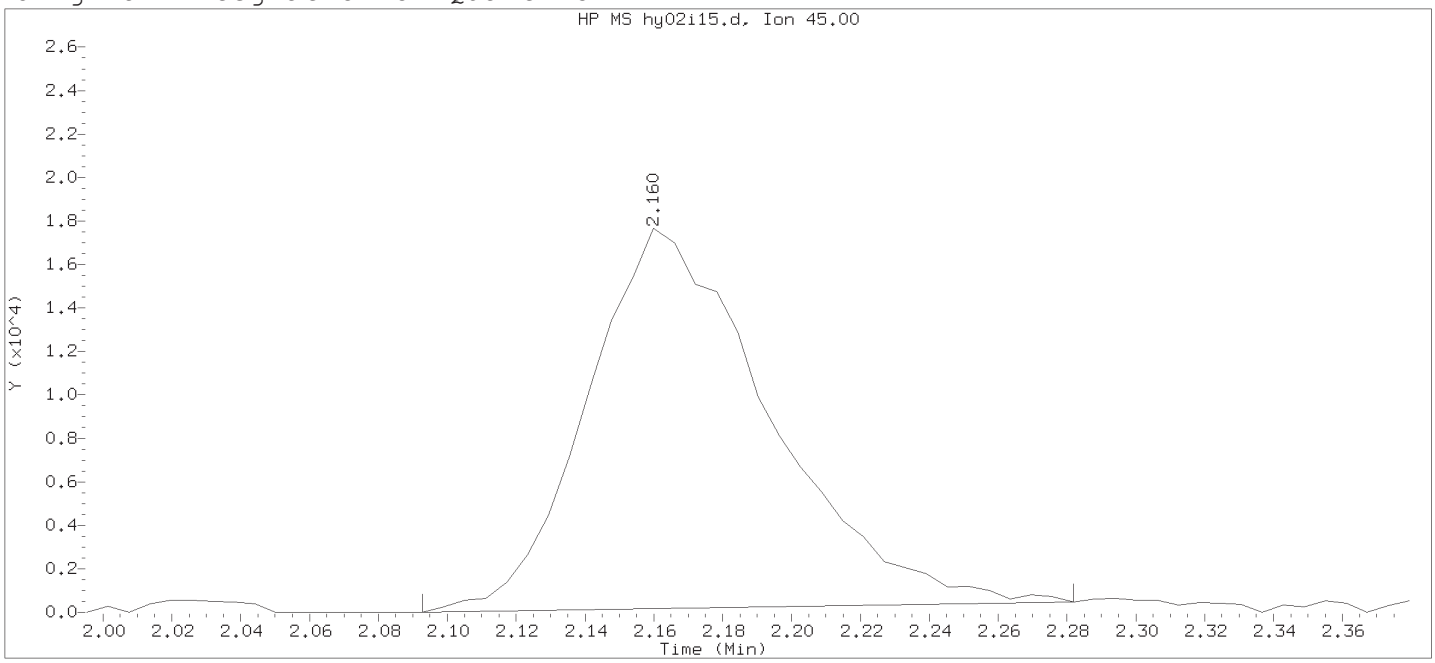
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

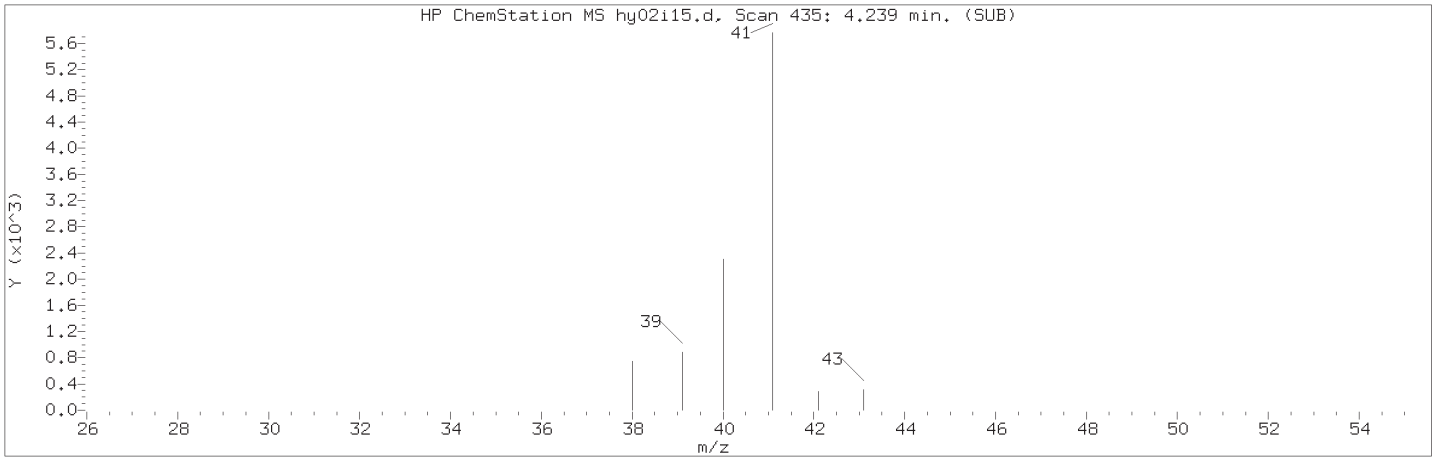
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:58
Date, time and analyst ID of latest file update: 02-May-2018 20:58 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

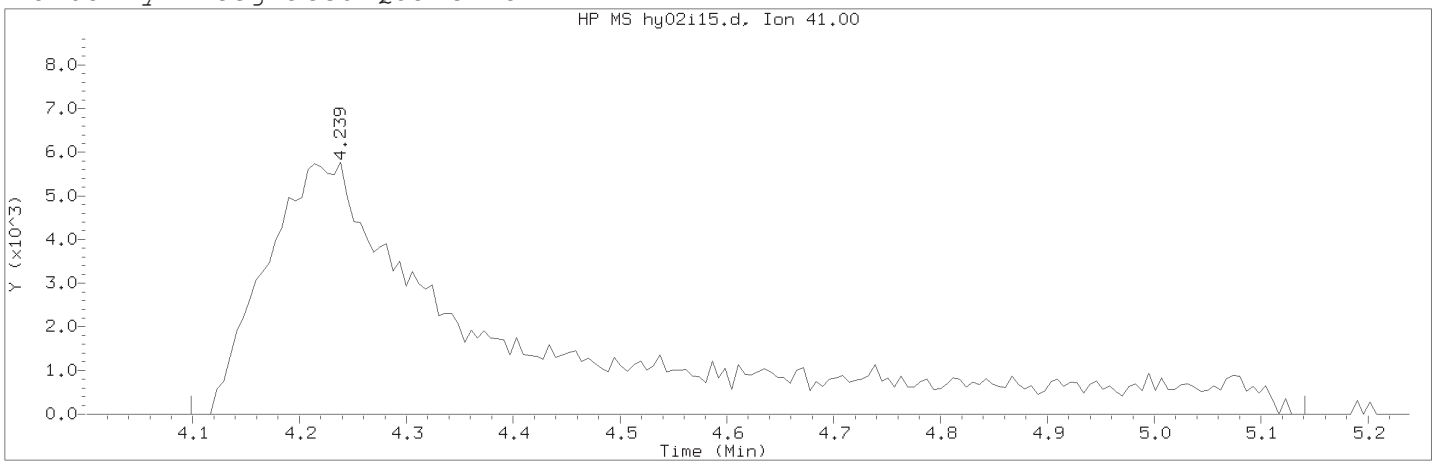
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 94		
Retention Time (minutes)	: 2.160		
Quant Ion	: 45.00		
Area	: 64528		
On-column Amount (ng)	: 0.8809		
Integration start scan	: 82	Integration stop scan:	113
Y at integration start	: 0	Y at integration end:	461

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

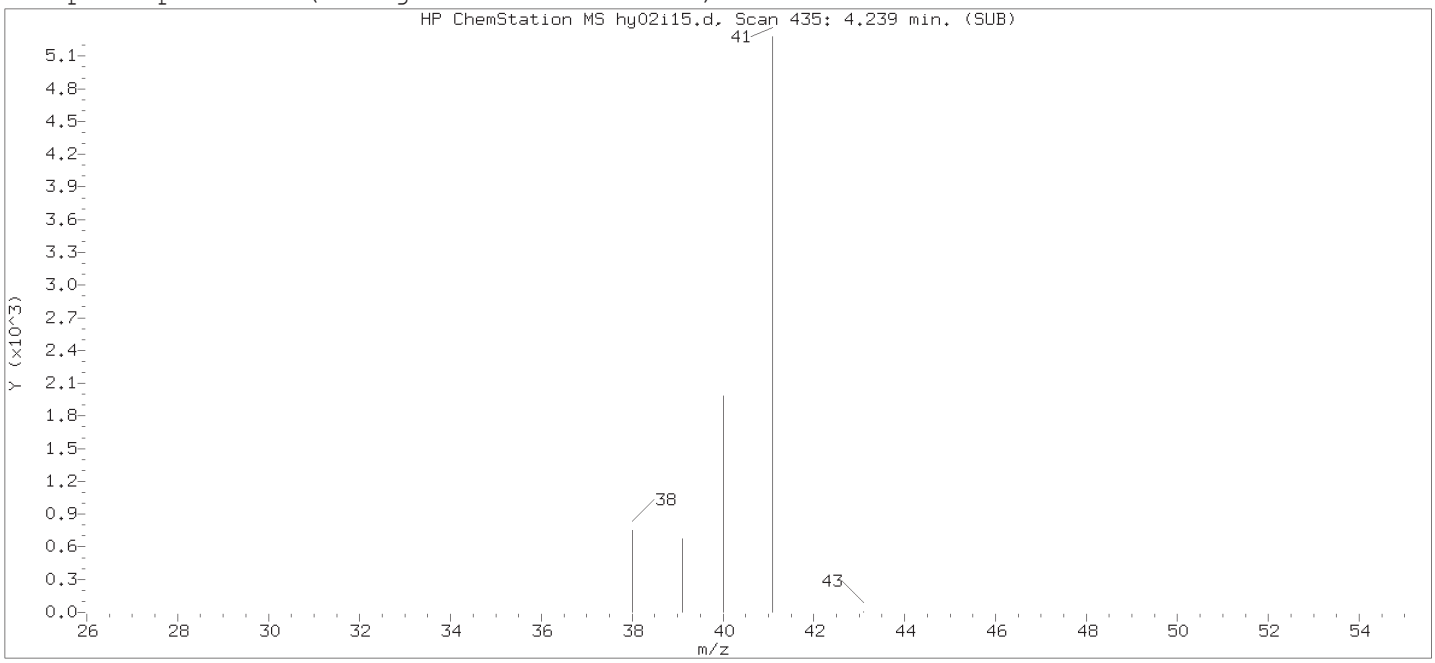
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 435
Retention Time (minutes): 4.239
Quant Ion : 41.00
Area (flag) : 91043M
On-Column Amount (ng) : 41.6038
Integration start scan : 411 Integration stop scan: 582
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

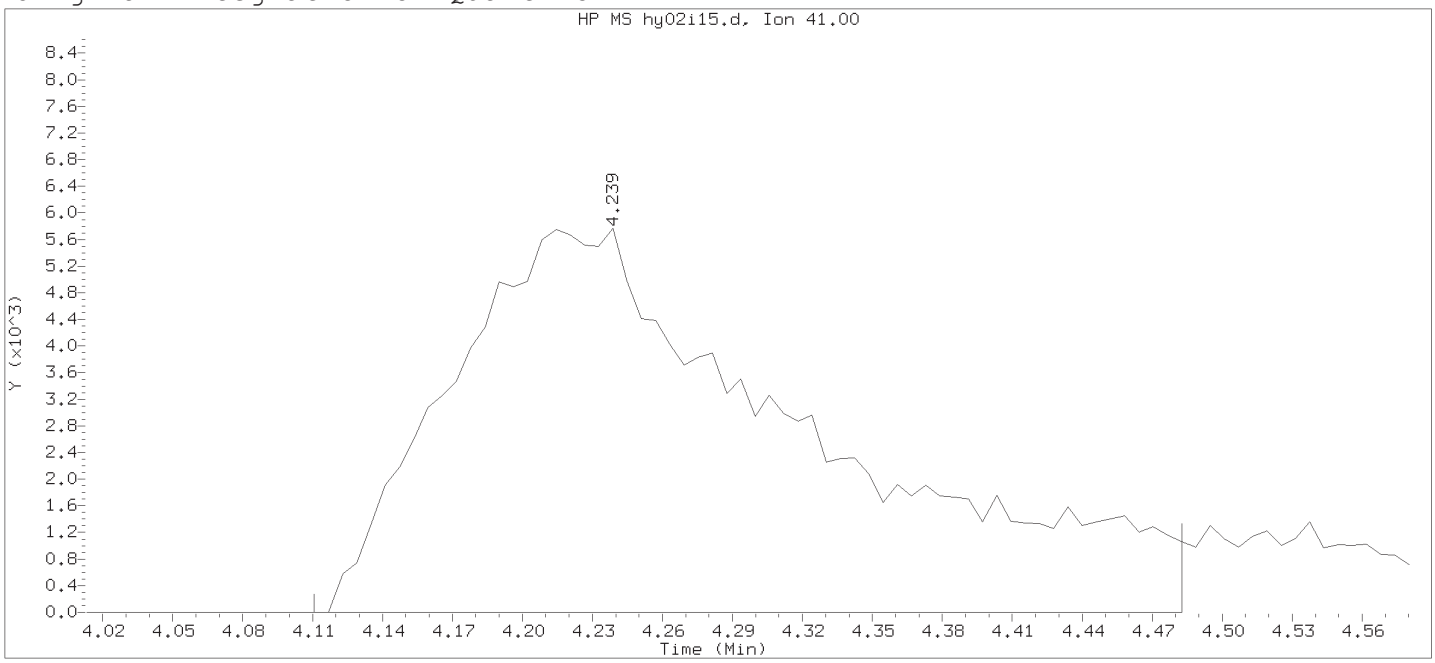
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

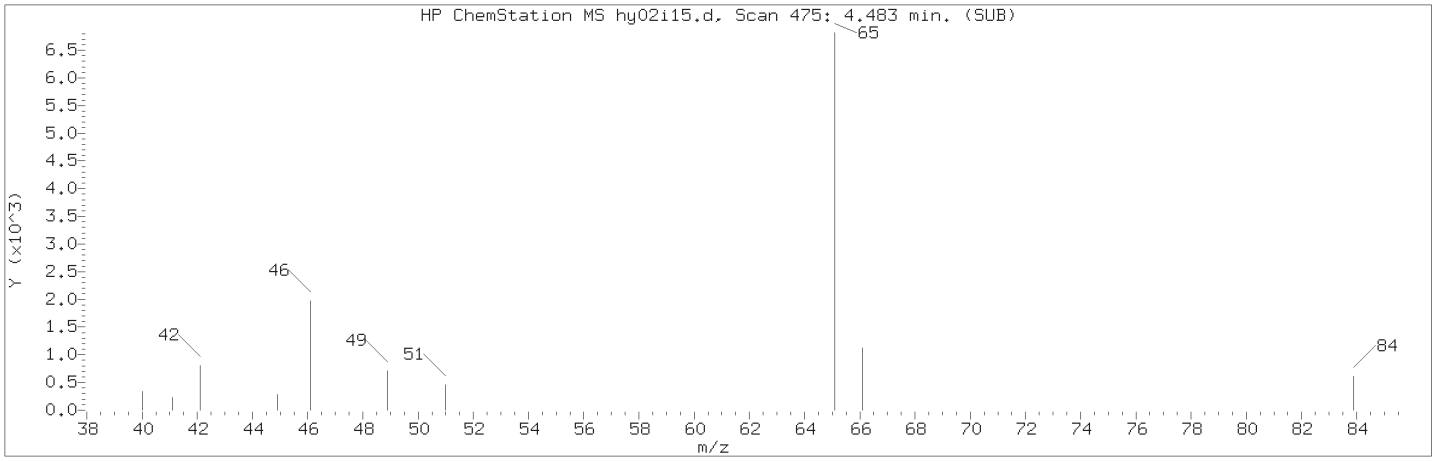
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:58
Date, time and analyst ID of latest file update: 02-May-2018 20:58 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

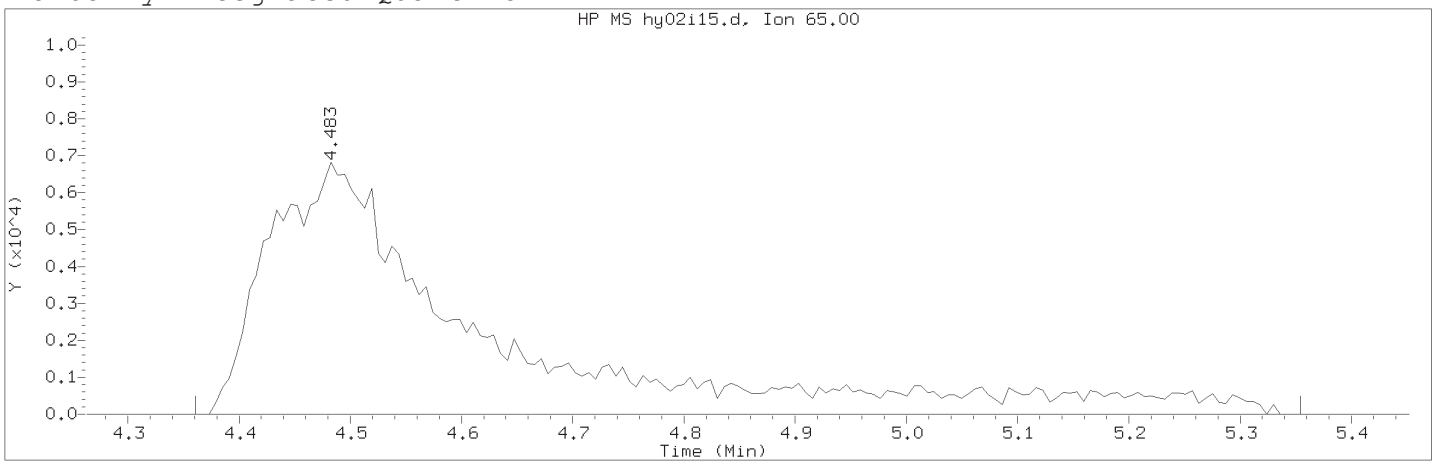
Compound Number	: 25
Compound Name	: Acetonitrile
Scan Number	: 435
Retention Time (minutes)	: 4.239
Quant Ion	: 41.00
Area	: 61510
On-column Amount (ng)	: 30.2073
Integration start scan	: 413 Integration stop scan: 474
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

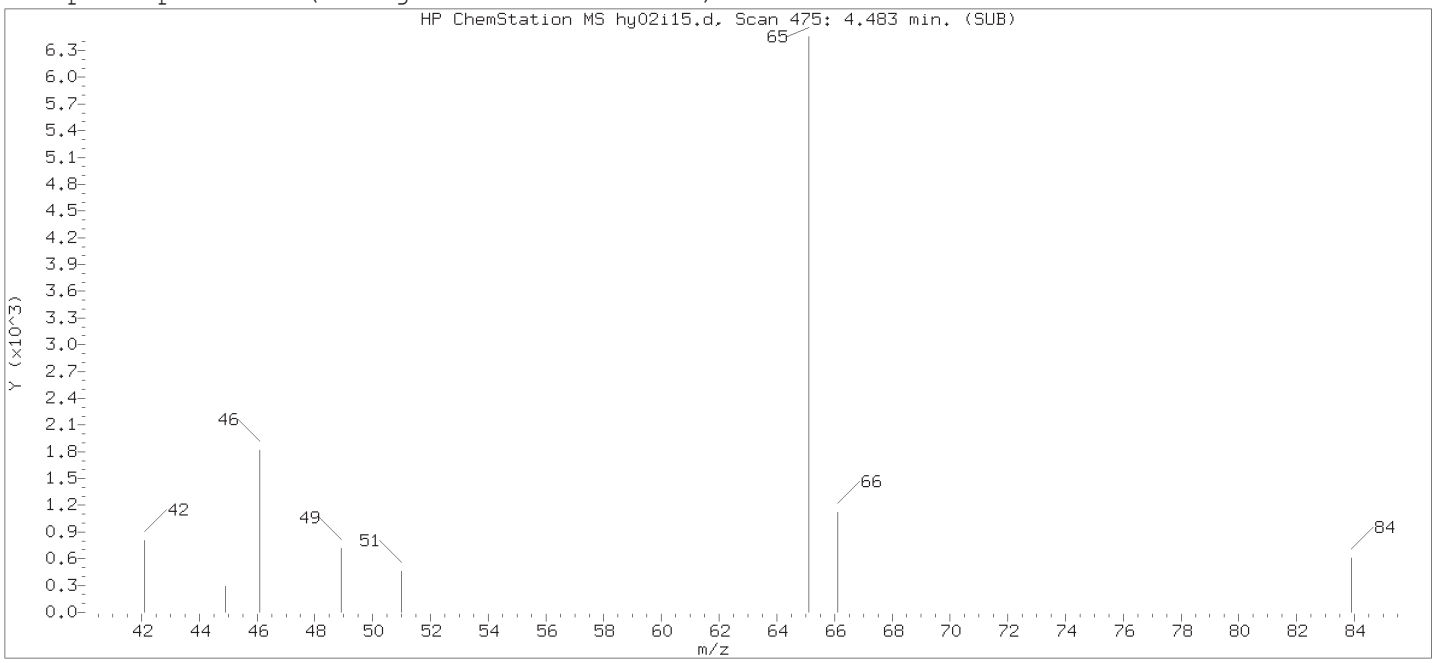
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area (flag) : 90627M
On-Column Amount (ng) : 50.0000
Integration start scan : 454 Integration stop scan: 617
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

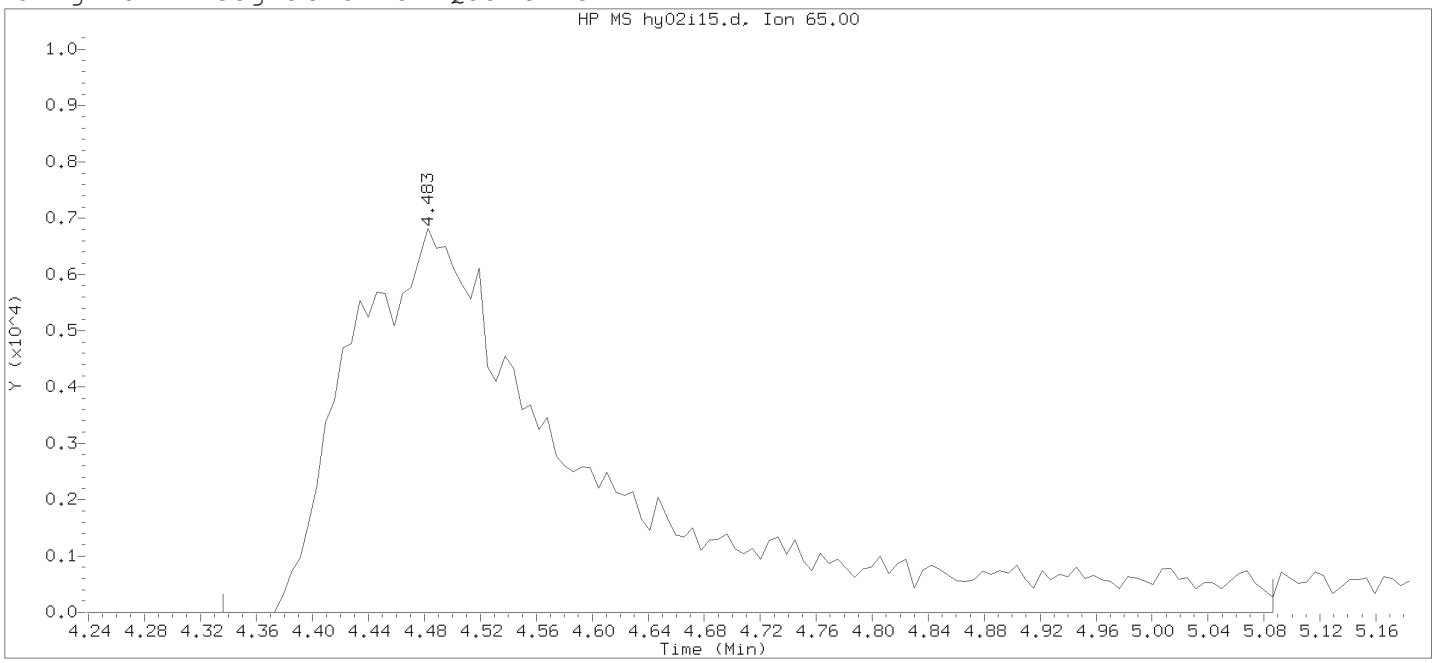
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

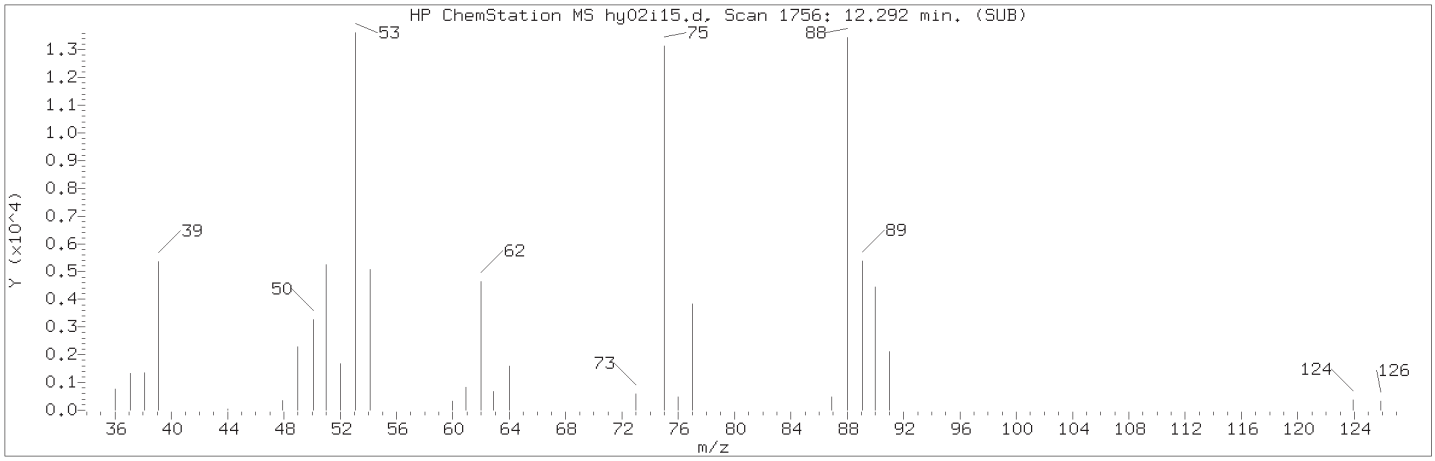
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:58
Date, time and analyst ID of latest file update: 02-May-2018 20:58 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

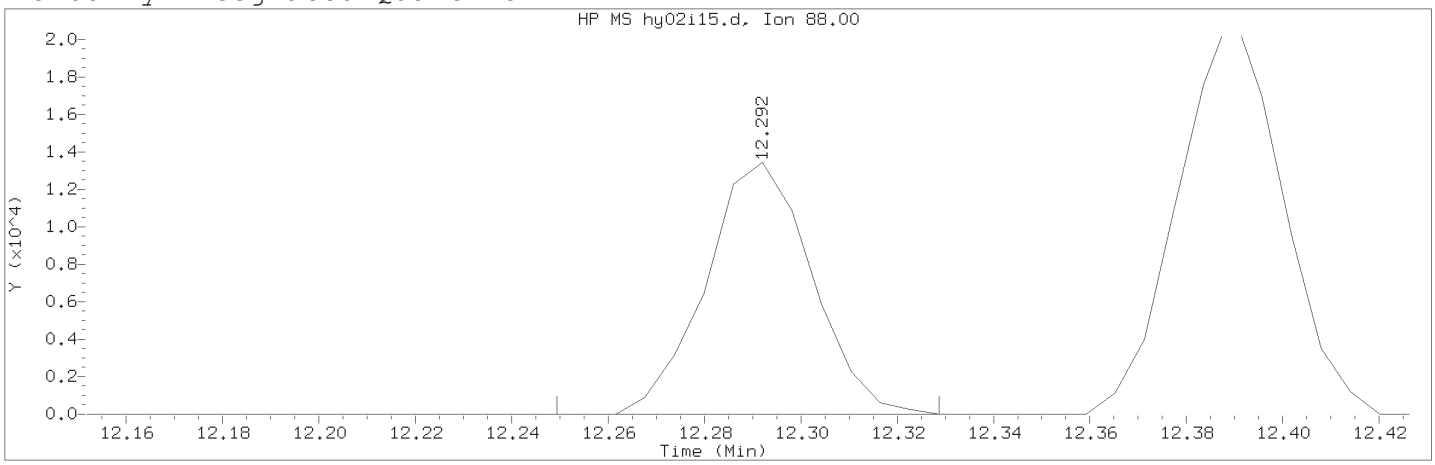
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area : 83546
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

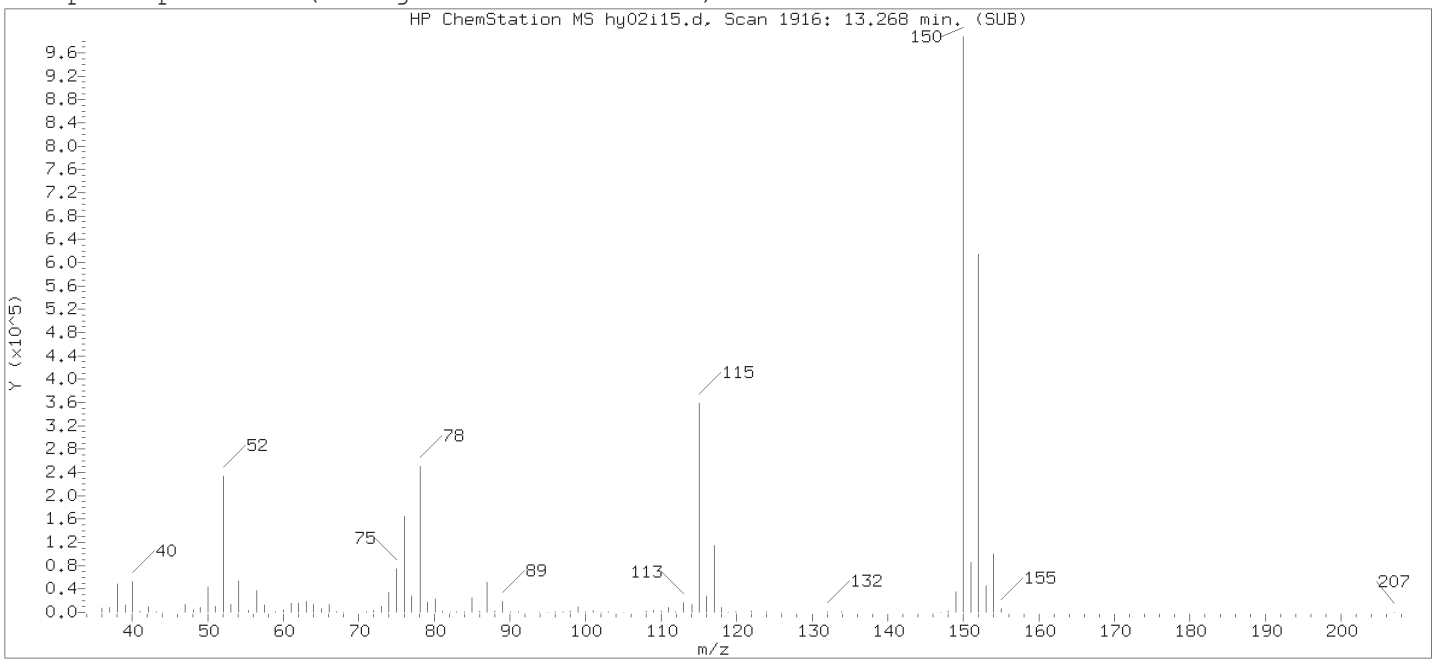
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 20531M
On-Column Amount (ng) : 1.7493
Integration start scan : 1748 Integration stop scan: 1761
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

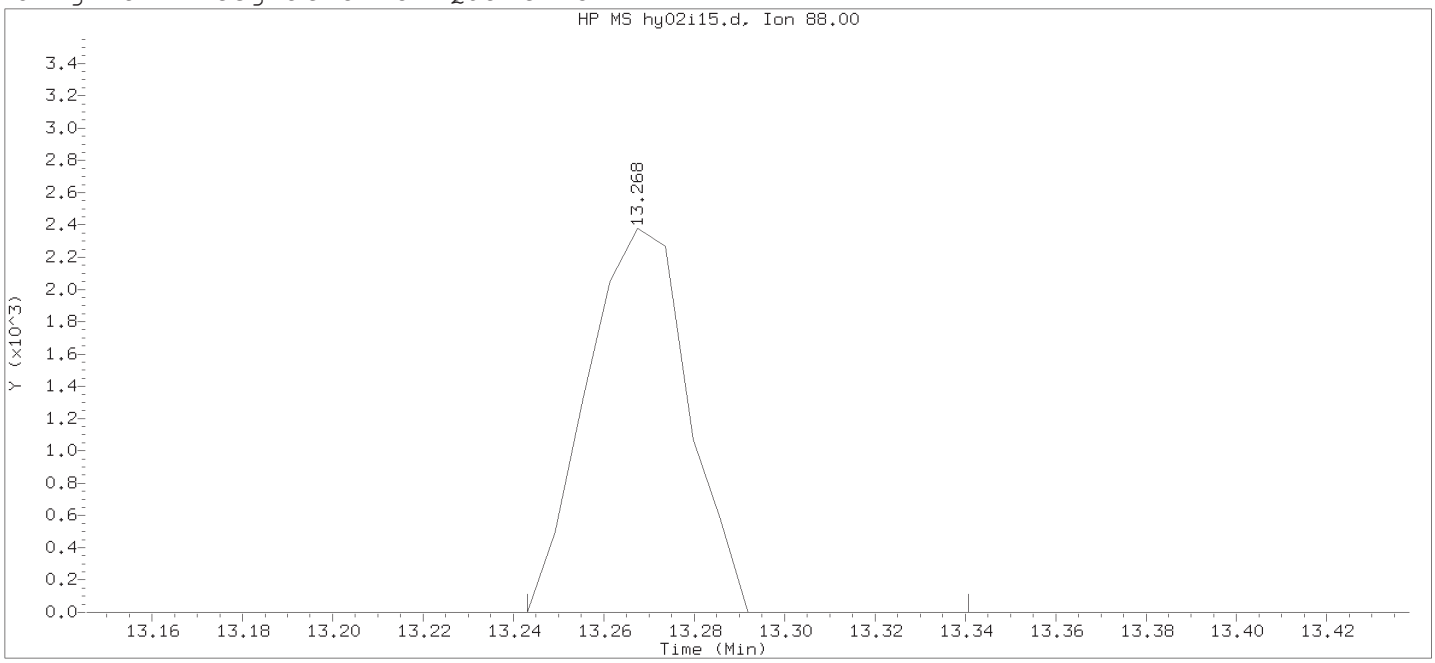
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

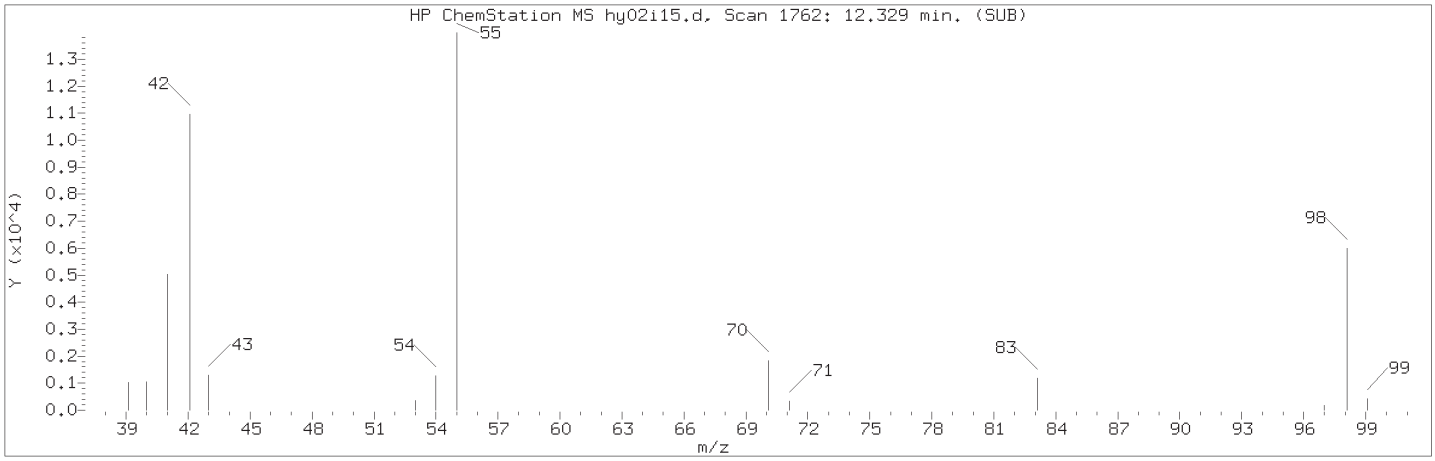
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:58
Date, time and analyst ID of latest file update: 02-May-2018 20:58 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

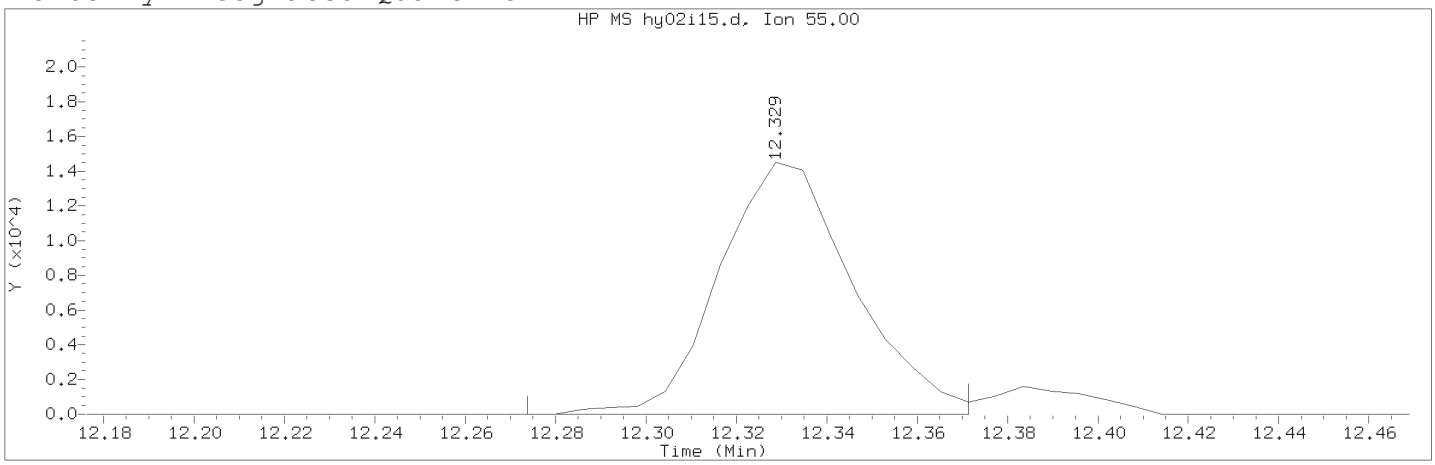
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1916
Retention Time (minutes): 13.268
Quant Ion : 88.00
Area : 3717
On-column Amount (ng) : 0.8719
Integration start scan : 1911 Integration stop scan: 1927
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

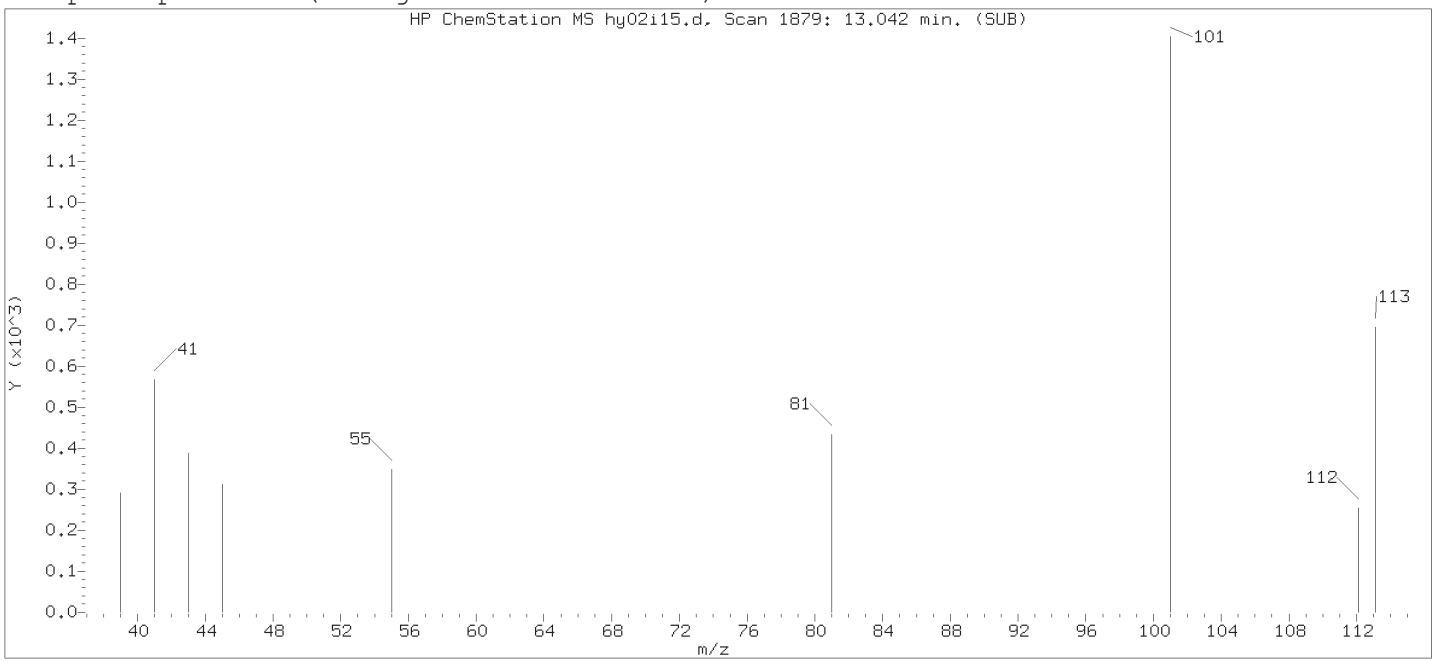
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 29836M
On-Column Amount (ng) : 49.9853
Integration start scan : 1752 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

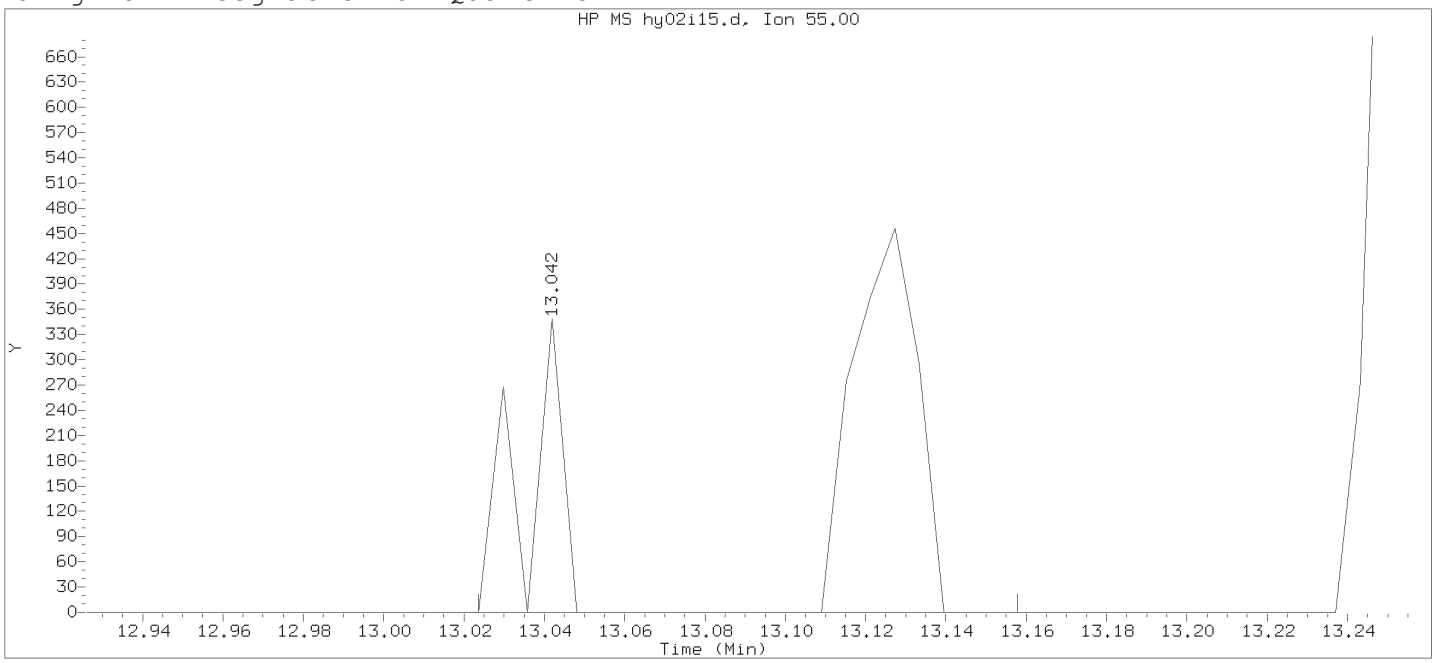
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



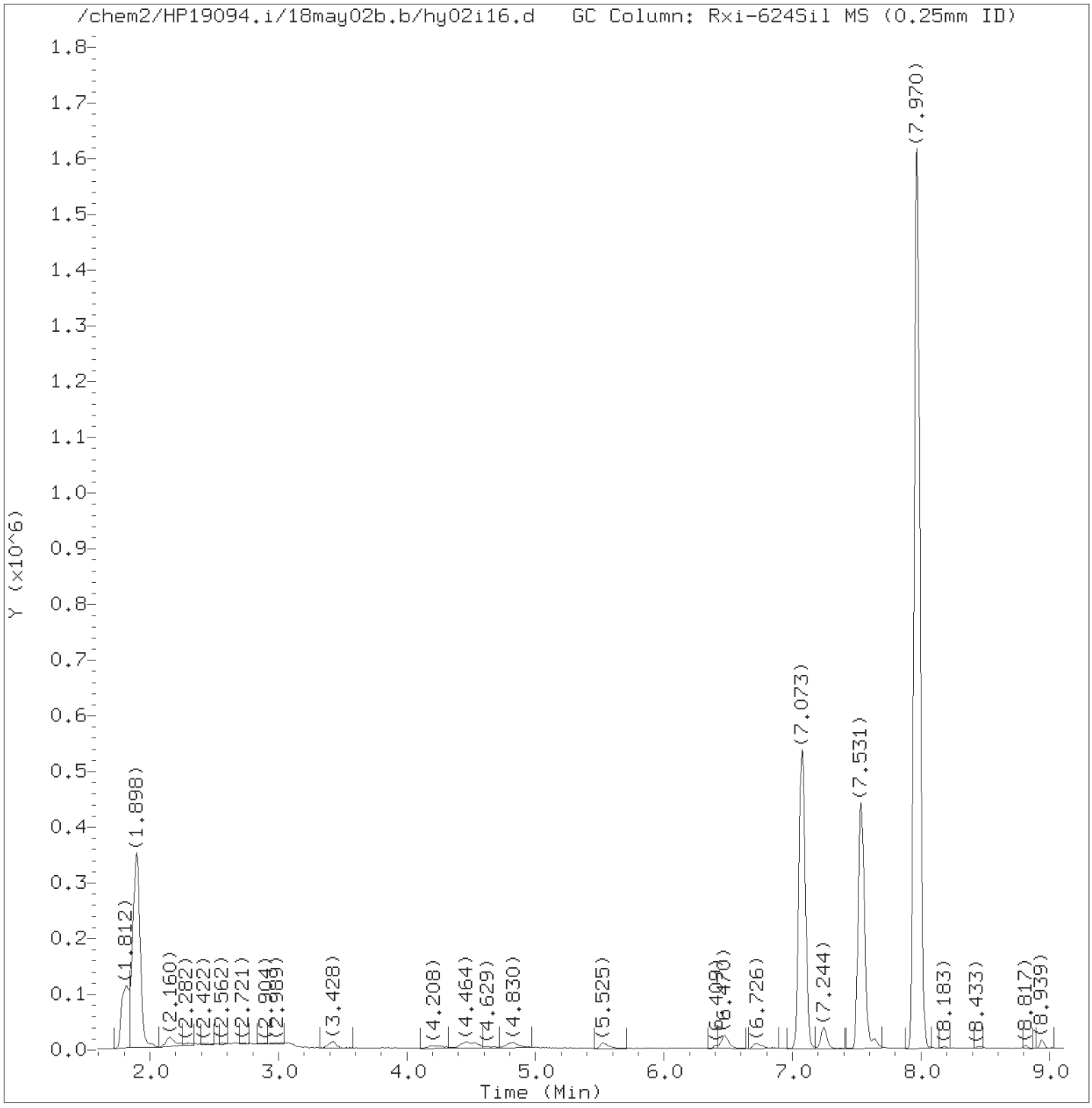
Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:58
Date, time and analyst ID of latest file update: 02-May-2018 20:58 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 55.00
Area : 737
On-column Amount (ng) : 3.0063
Integration start scan : 1875 Integration stop scan: 1897
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV10203



Total Ion Chromatogram (TIC)

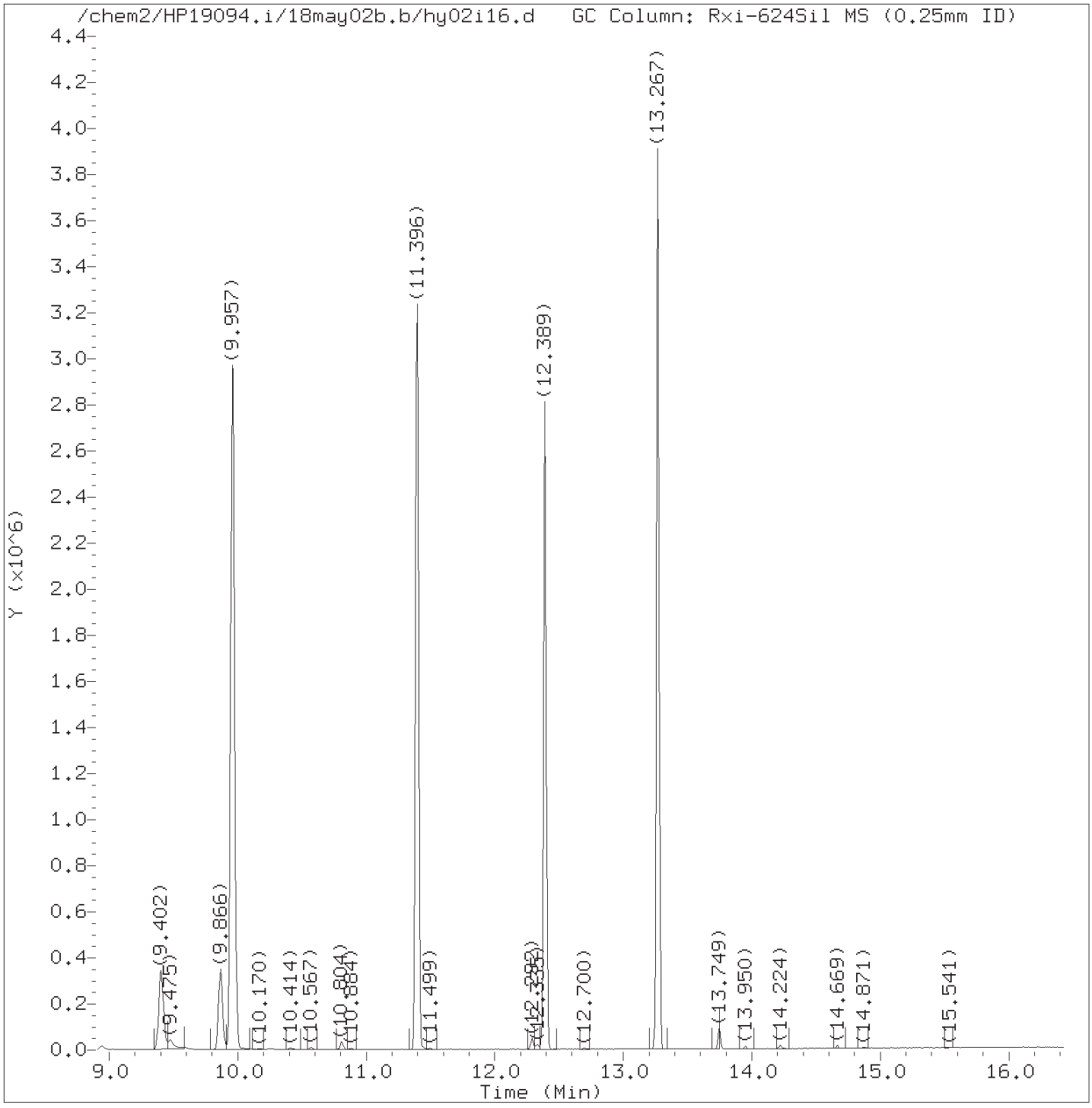
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

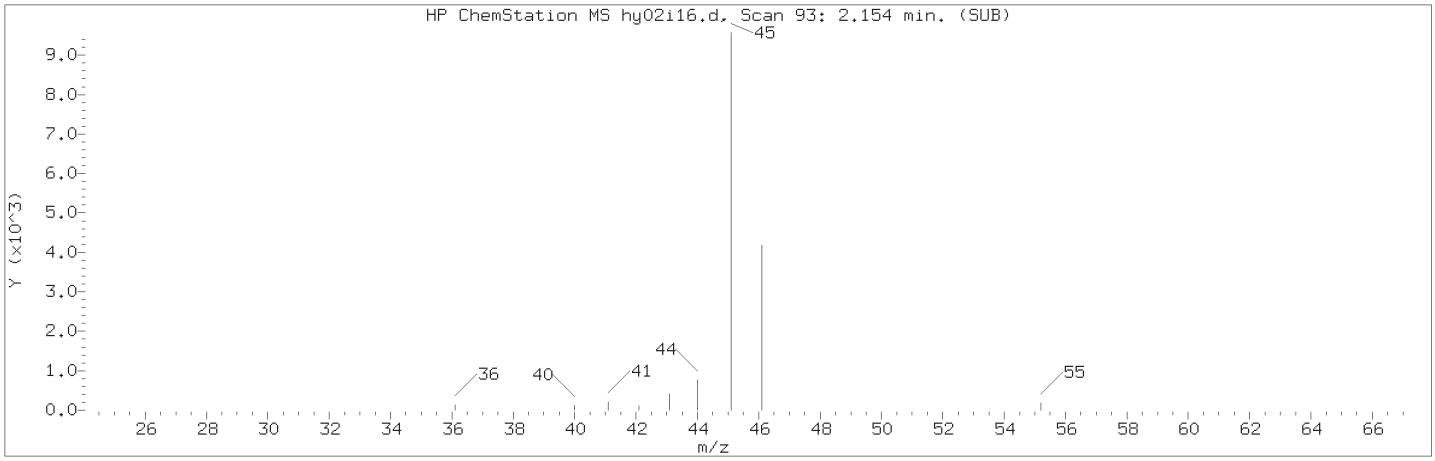
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.154	45	39145M	0.522
25) Acetonitrile	(1)	4.202	41	43595M	22.874
26)*t-Butyl Alcohol-d10	(1)	4.464	65	78931M	50.000
36) Vinyl Acetate	(2)	5.525	43	33612	0.471
43) Methyl Acrylate	(2)	6.470	55	53484	2.427
53) 1-Chlorobutane	(2)	7.238	56	46395	0.440
63)*Fluorobenzene	(2)	7.970	96	2334989	10.000
77) Chloroacetonitrile	(2)	9.469	75	17578	20.017
78) 2-Chloroethyl vinyl ether	(2)	9.481	63	10015	0.474
97)*Chlorobenzene-d5	(3)	11.396	117	1693467	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	10342M	1.012
112) Cyclohexanone	(1)	12.328	55	11242M	21.625
133)*1,4-Dichlorobenzene-d4	(4)	13.267	152	891691	10.000
142) Hexachloroethane	(4)	13.749	117	15983	0.426

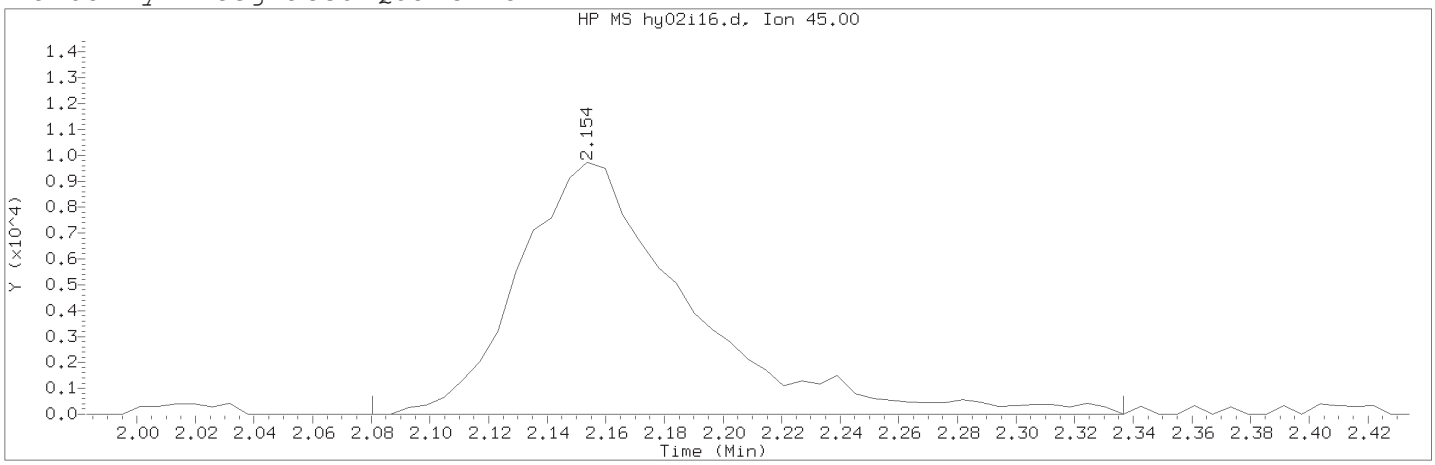
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

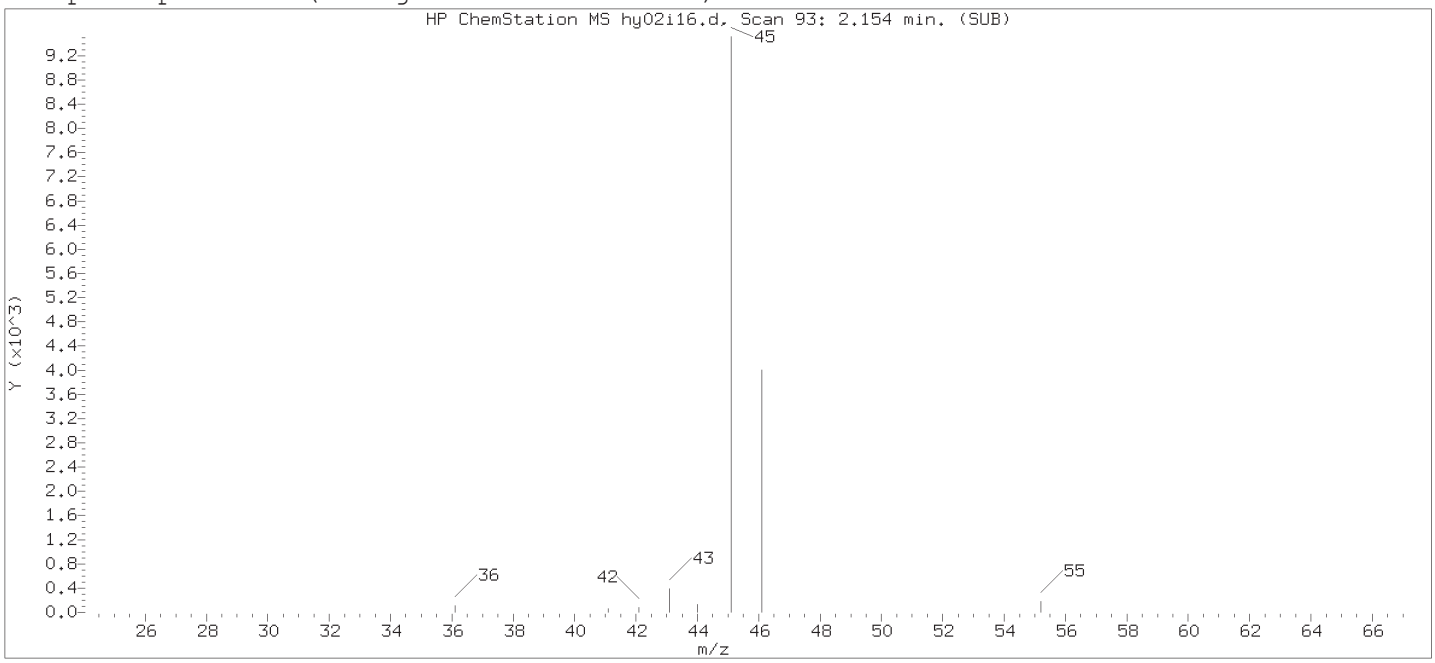
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 39145M
On-Column Amount (ng) : 0.5222
Integration start scan : 80 Integration stop scan: 122
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

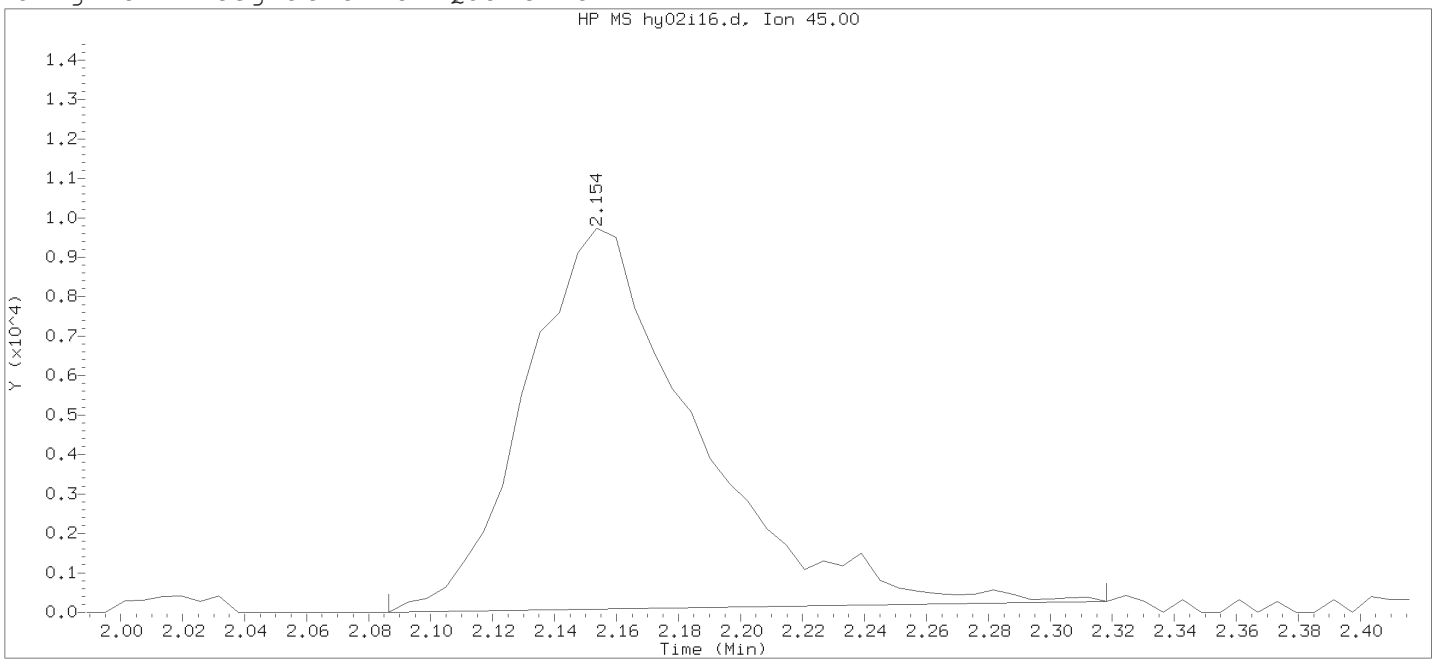
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

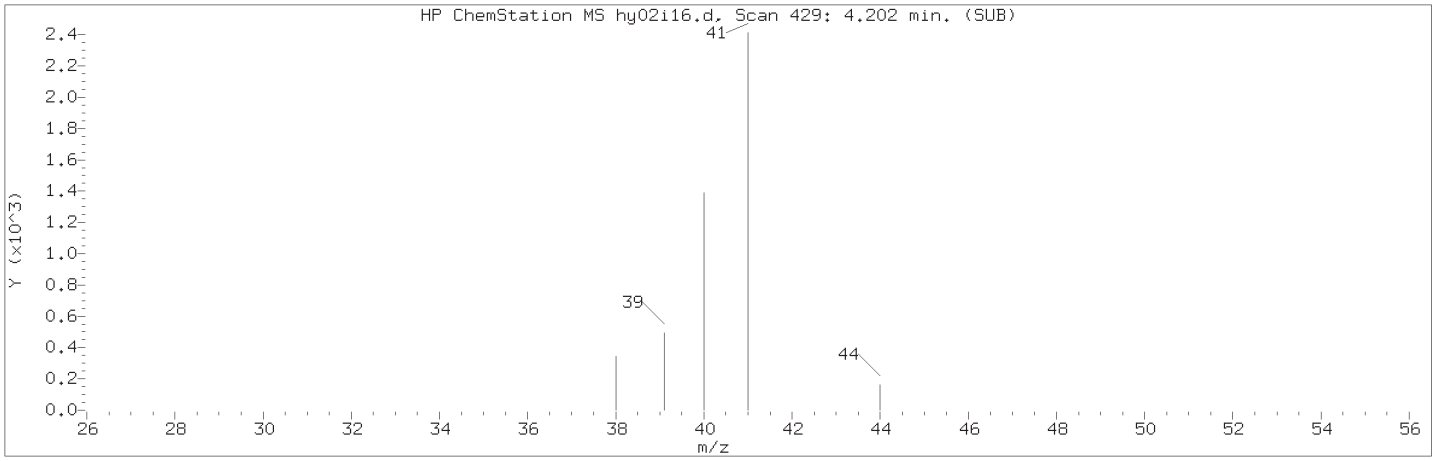
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:20
Date, time and analyst ID of latest file update: 02-May-2018 21:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

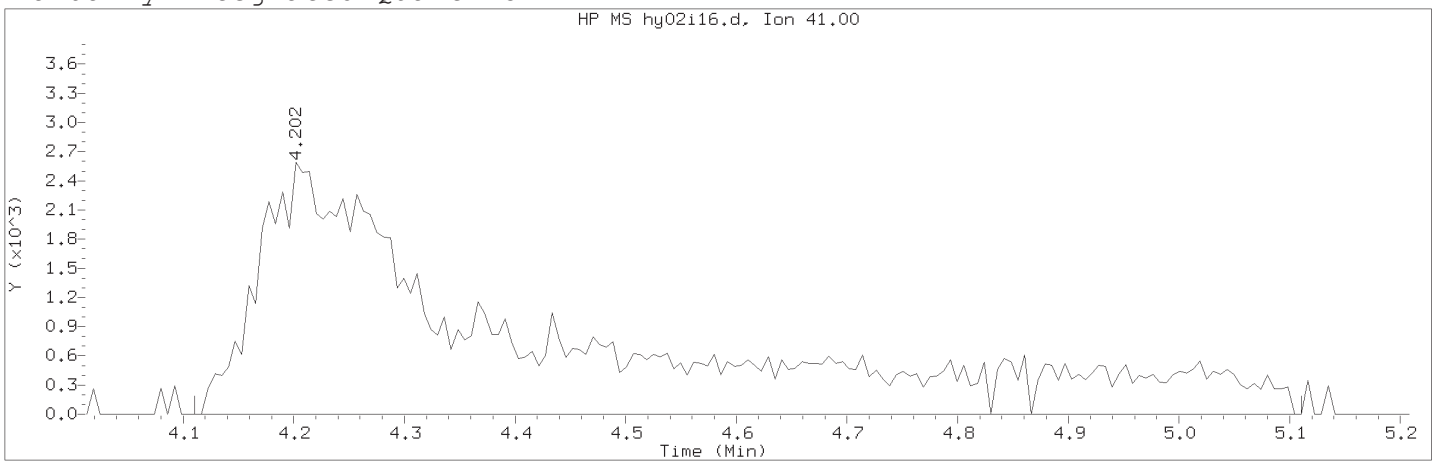
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area : 36886
On-column Amount (ng) : 0.4905
Integration start scan : 81 Integration stop scan: 119
Y at integration start : 0 Y at integration end: 281

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

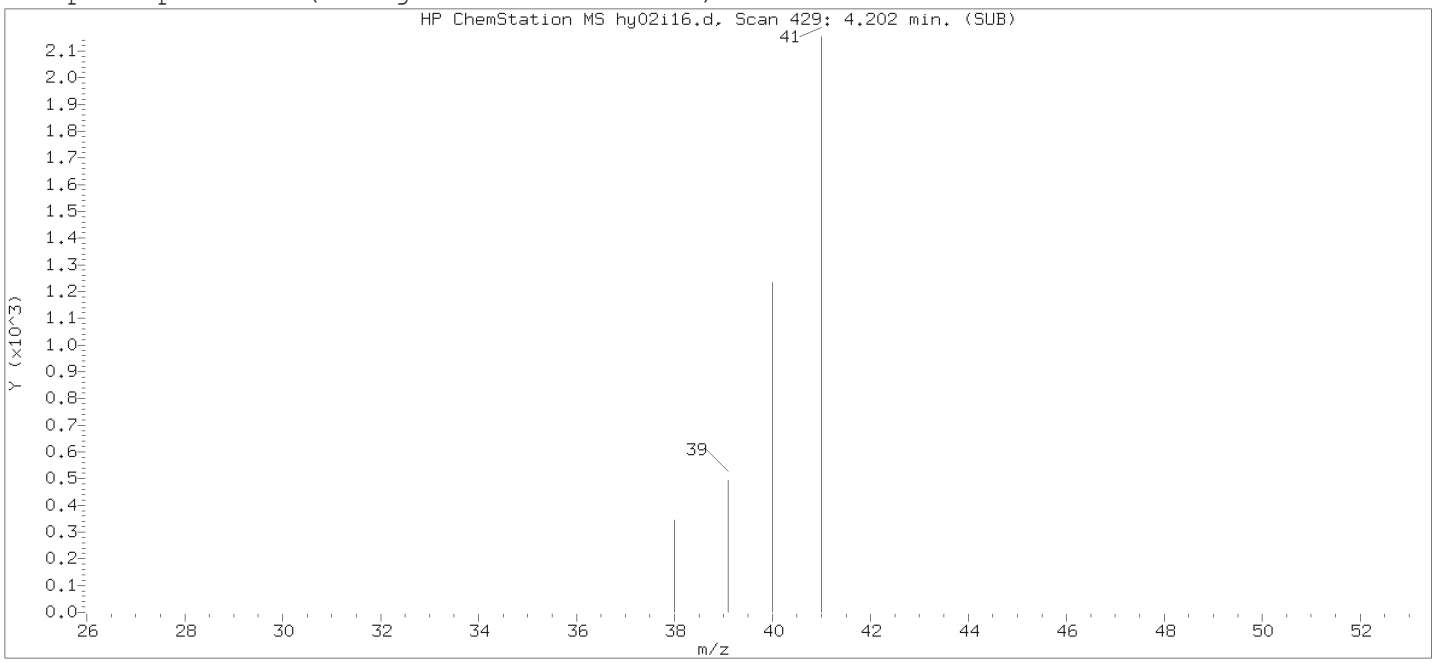
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 429
Retention Time (minutes): 4.202
Quant Ion : 41.00
Area (flag) : 43595M
On-Column Amount (ng) : 22.8735
Integration start scan : 413 Integration stop scan: 577
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

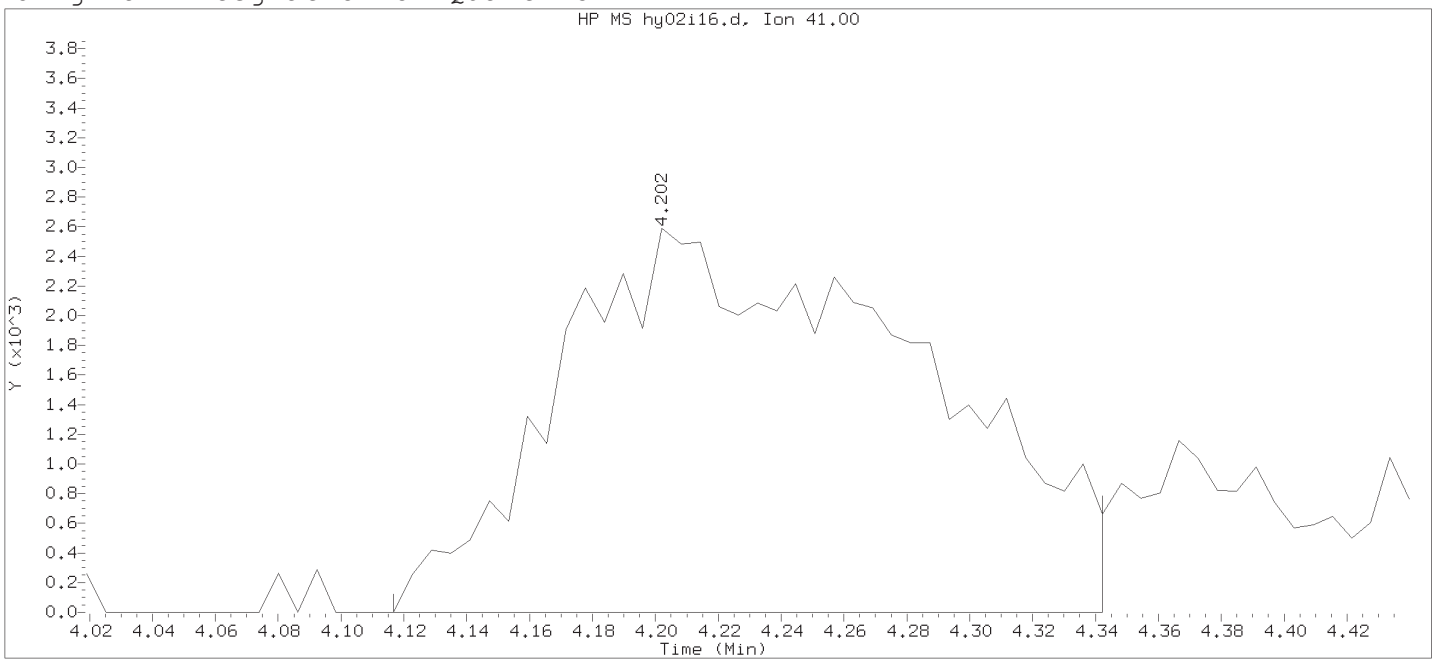
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

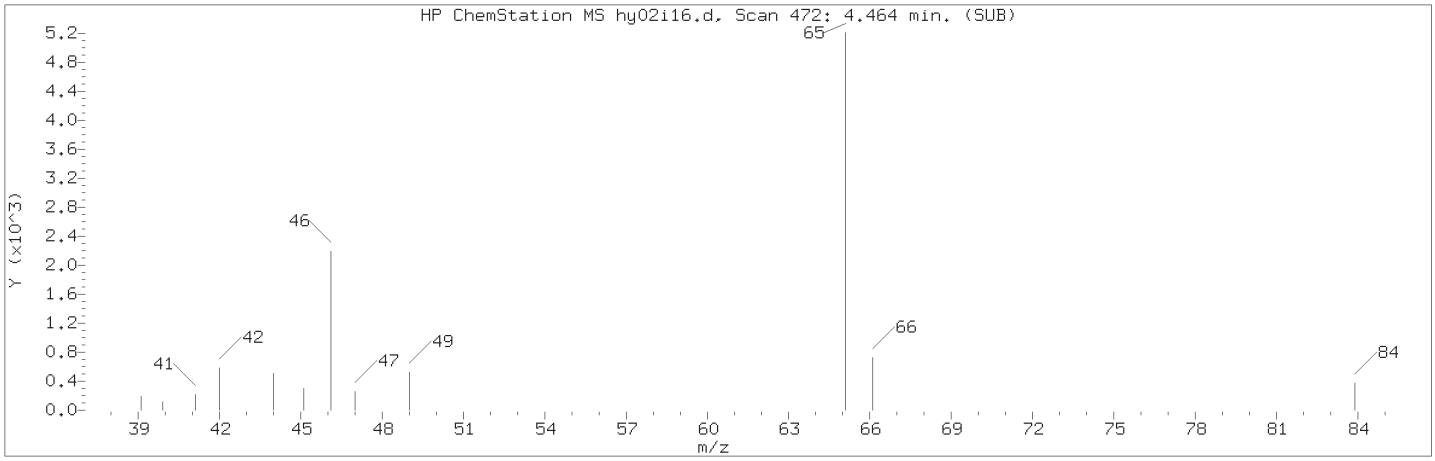
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:20
Date, time and analyst ID of latest file update: 02-May-2018 21:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

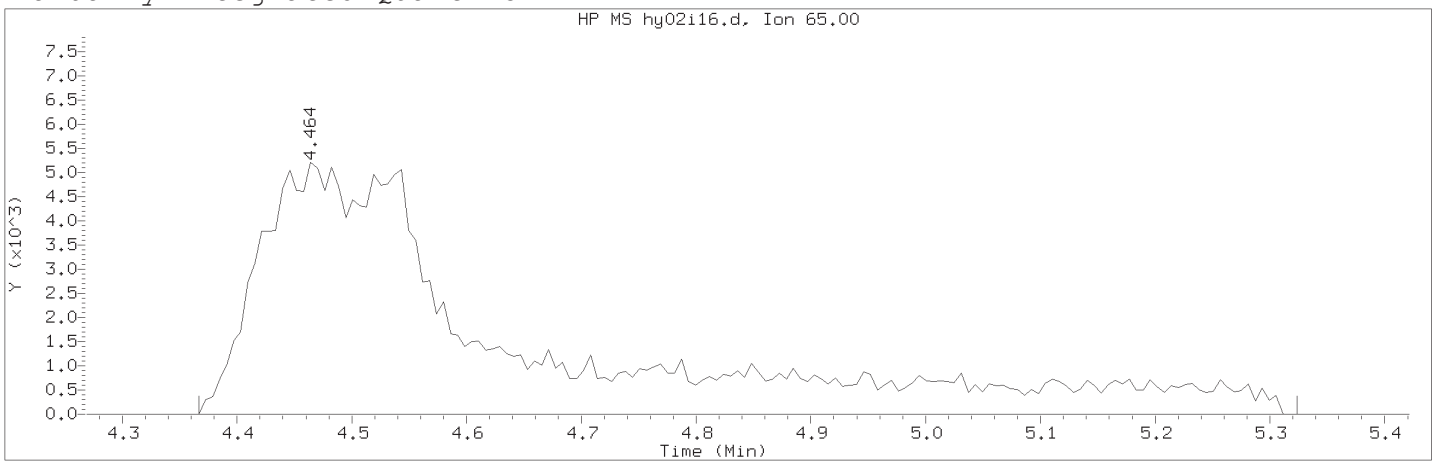
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 429
Retention Time (minutes): 4.202
Quant Ion : 41.00
Area : 20787
On-column Amount (ng) : 11.9110
Integration start scan : 414 Integration stop scan: 451
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

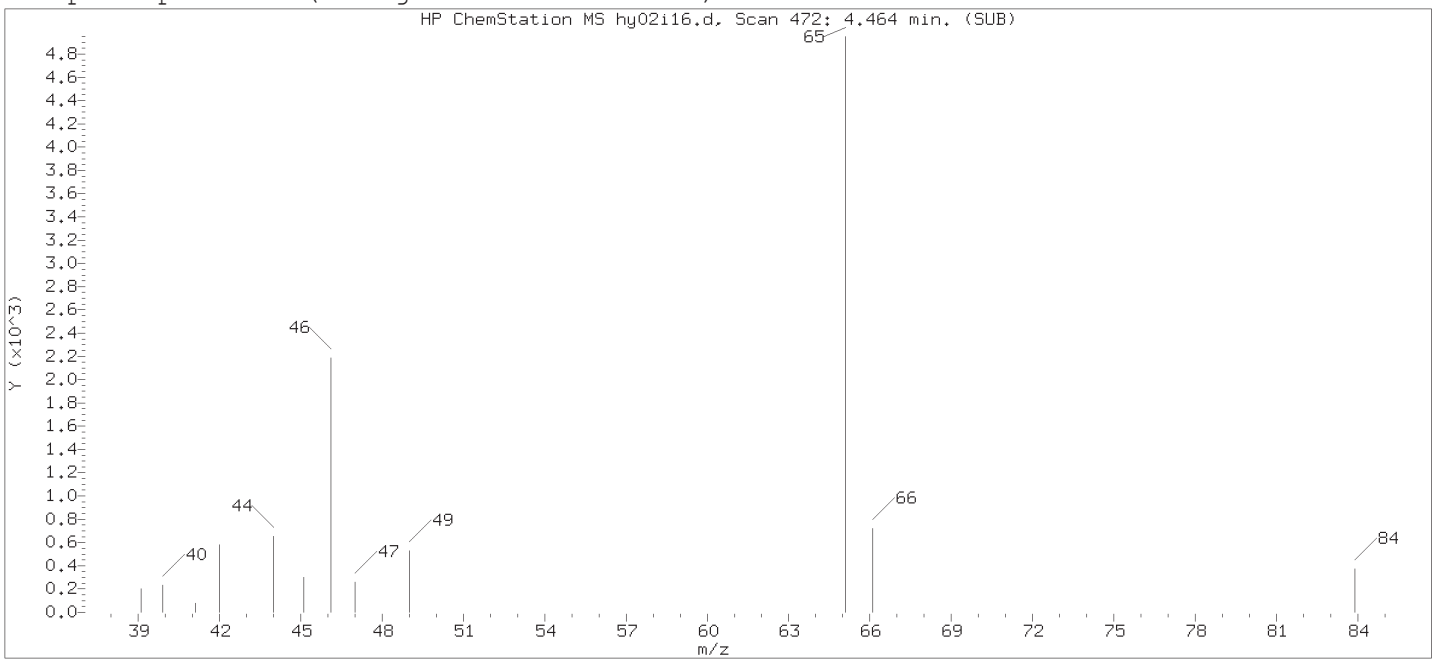
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 472
Retention Time (minutes): 4.464
Quant Ion : 65.00
Area (flag) : 78931M
On-Column Amount (ng) : 50.0000
Integration start scan : 455 Integration stop scan: 612
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

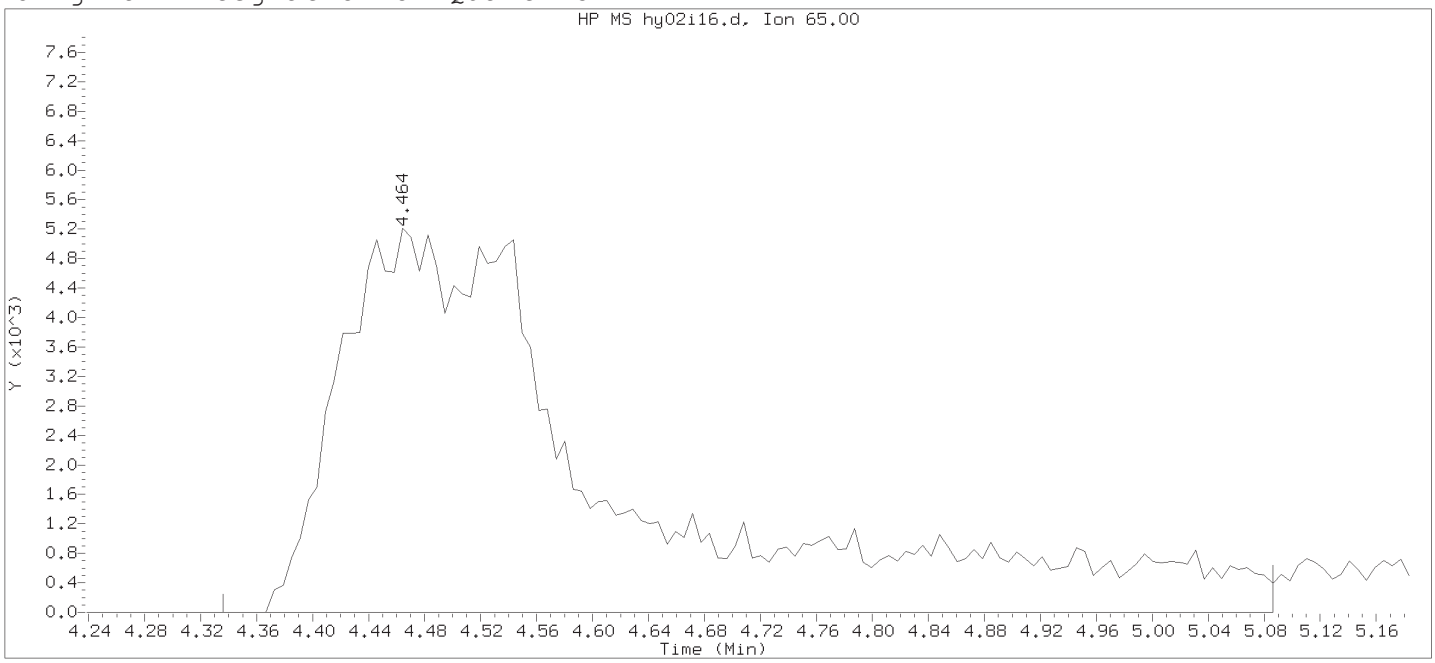
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

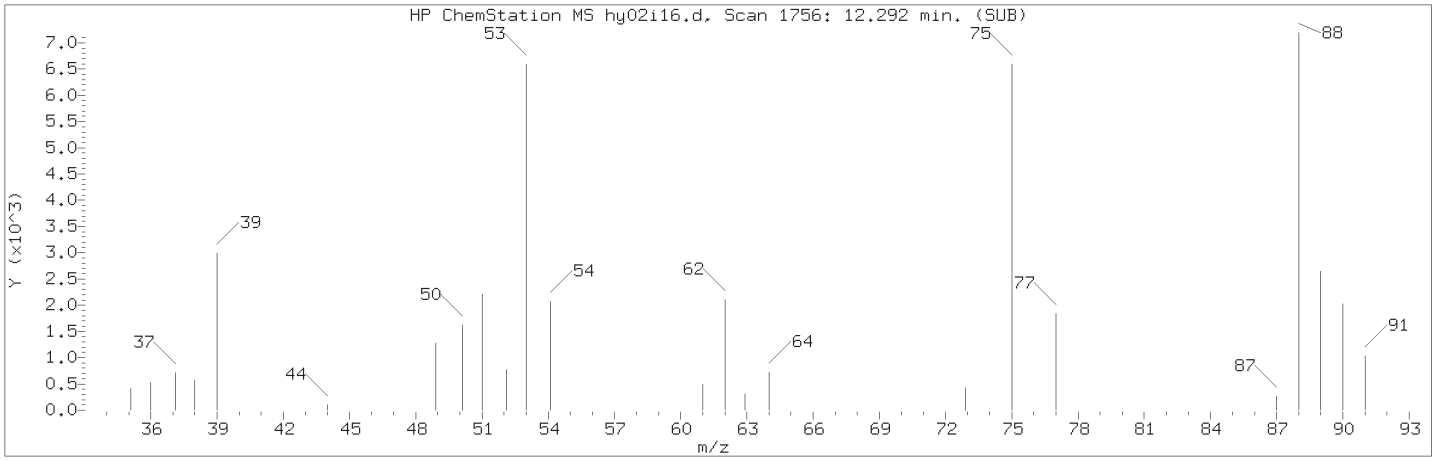
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:20
Date, time and analyst ID of latest file update: 02-May-2018 21:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

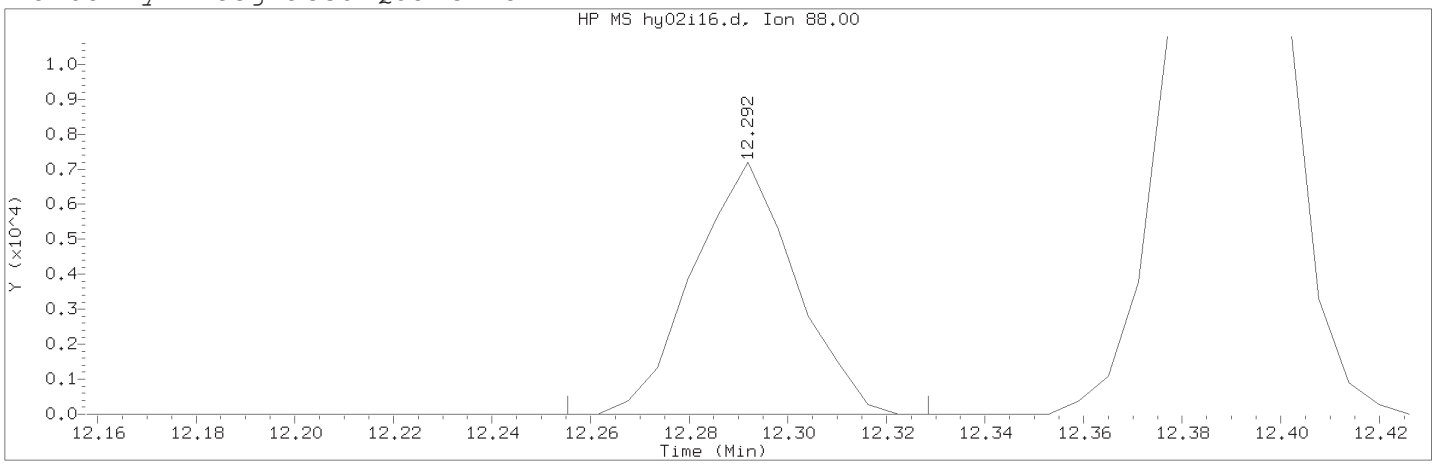
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 472
Retention Time (minutes): 4.464
Quant Ion : 65.00
Area : 71620
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

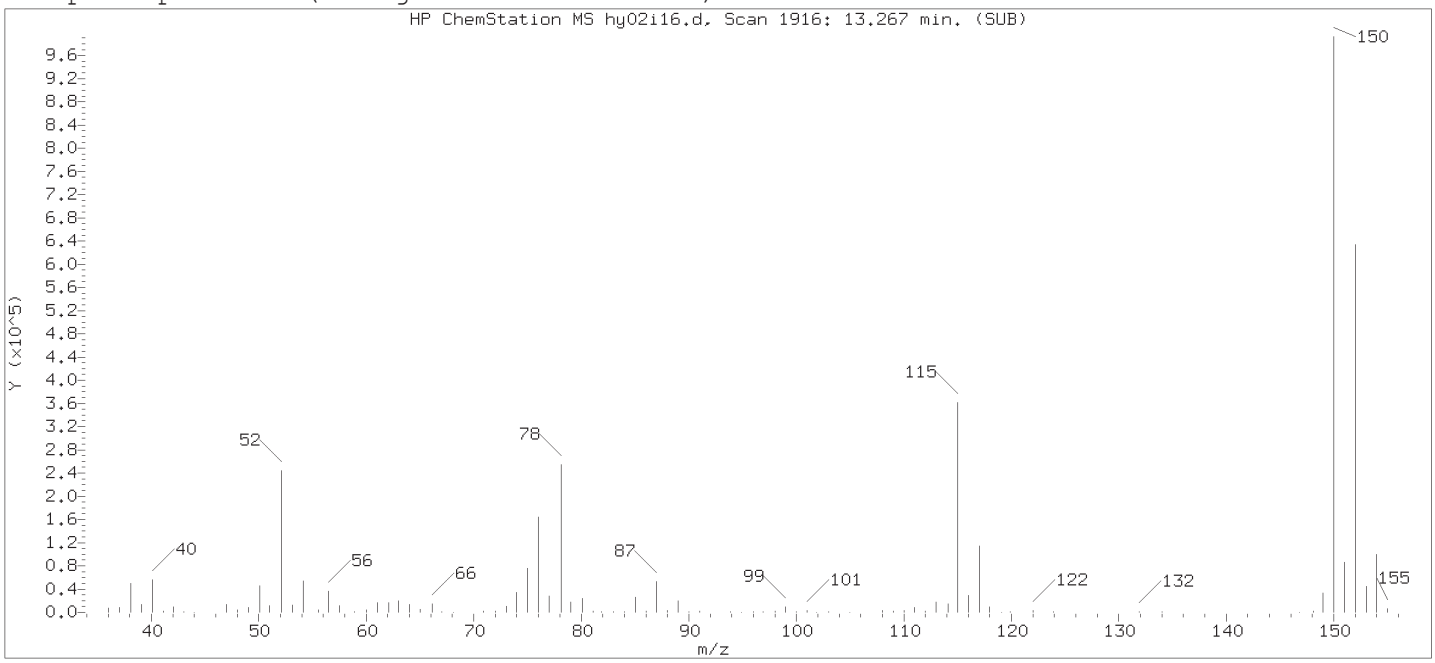
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 10342M
On-Column Amount (ng) : 1.0117
Integration start scan : 1749 Integration stop scan: 1761
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

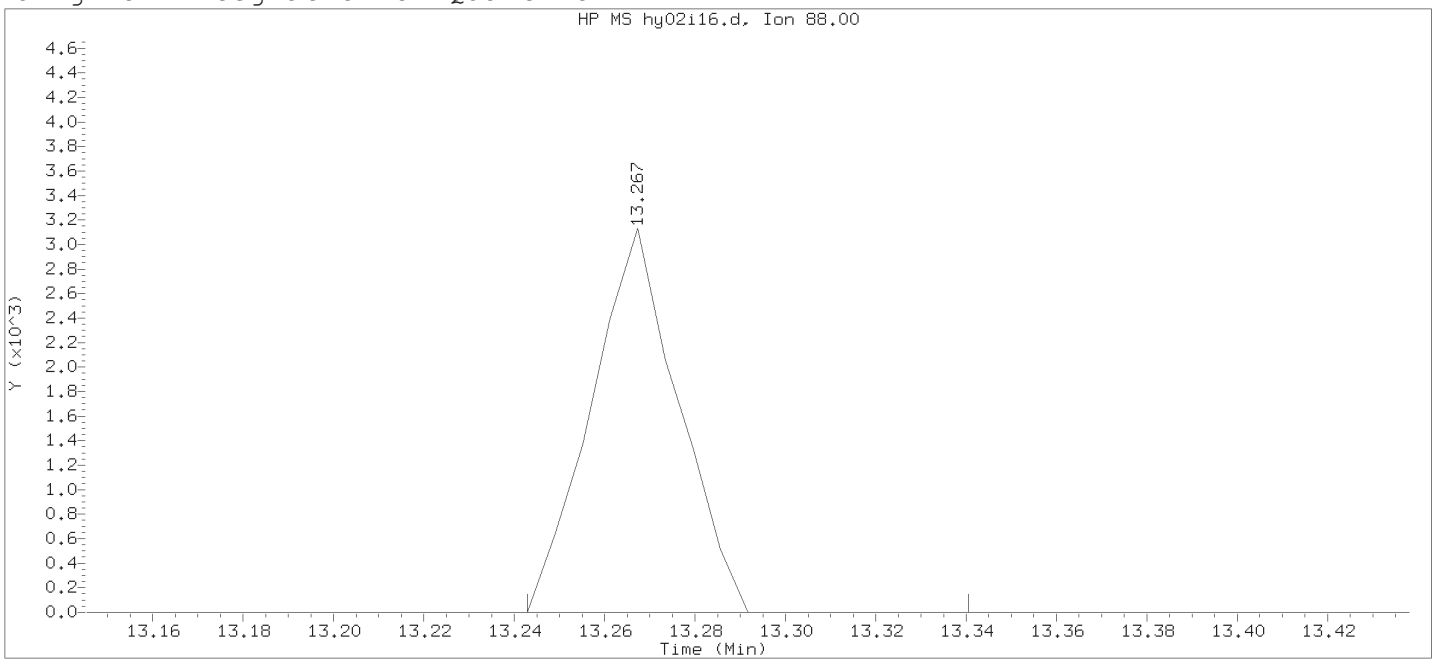
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

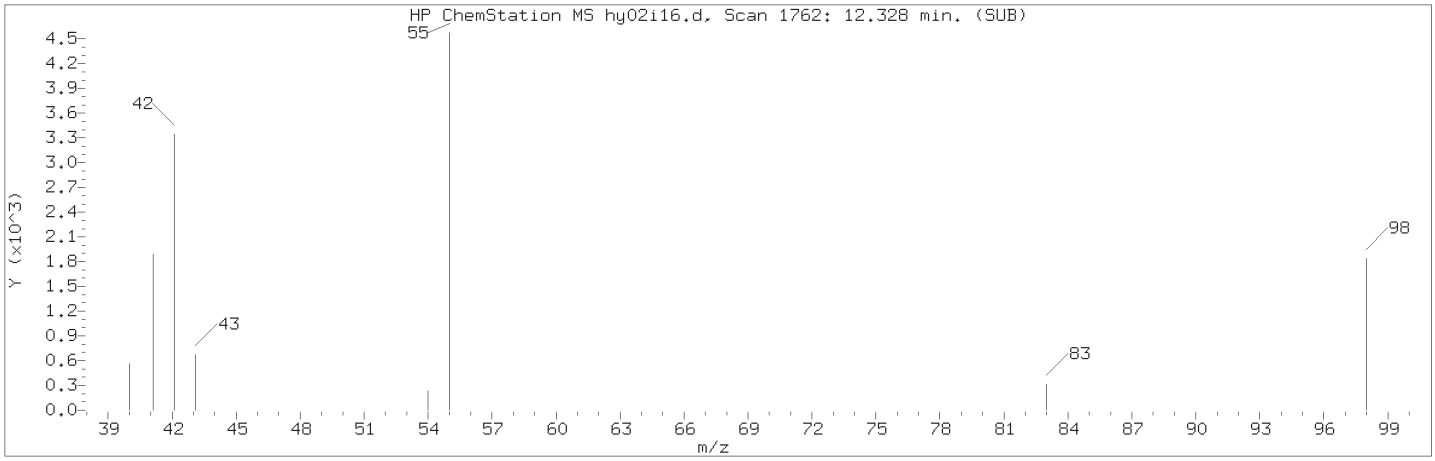
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:20
Date, time and analyst ID of latest file update: 02-May-2018 21:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

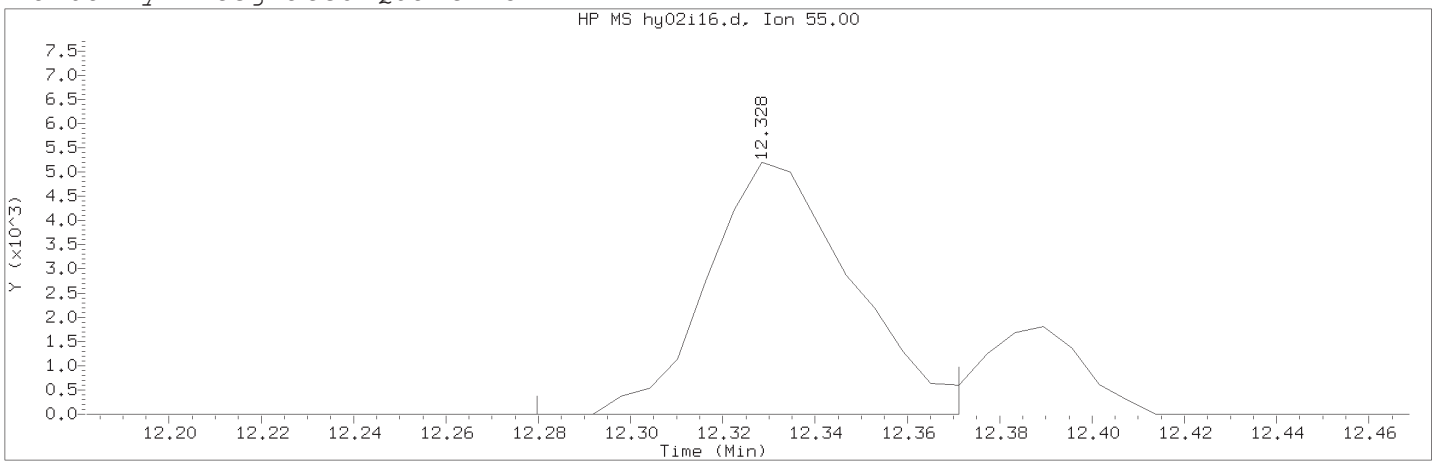
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1916
Retention Time (minutes): 13.267
Quant Ion : 88.00
Area : 4184
On-column Amount (ng) : 0.4845
Integration start scan : 1911 Integration stop scan: 1927
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

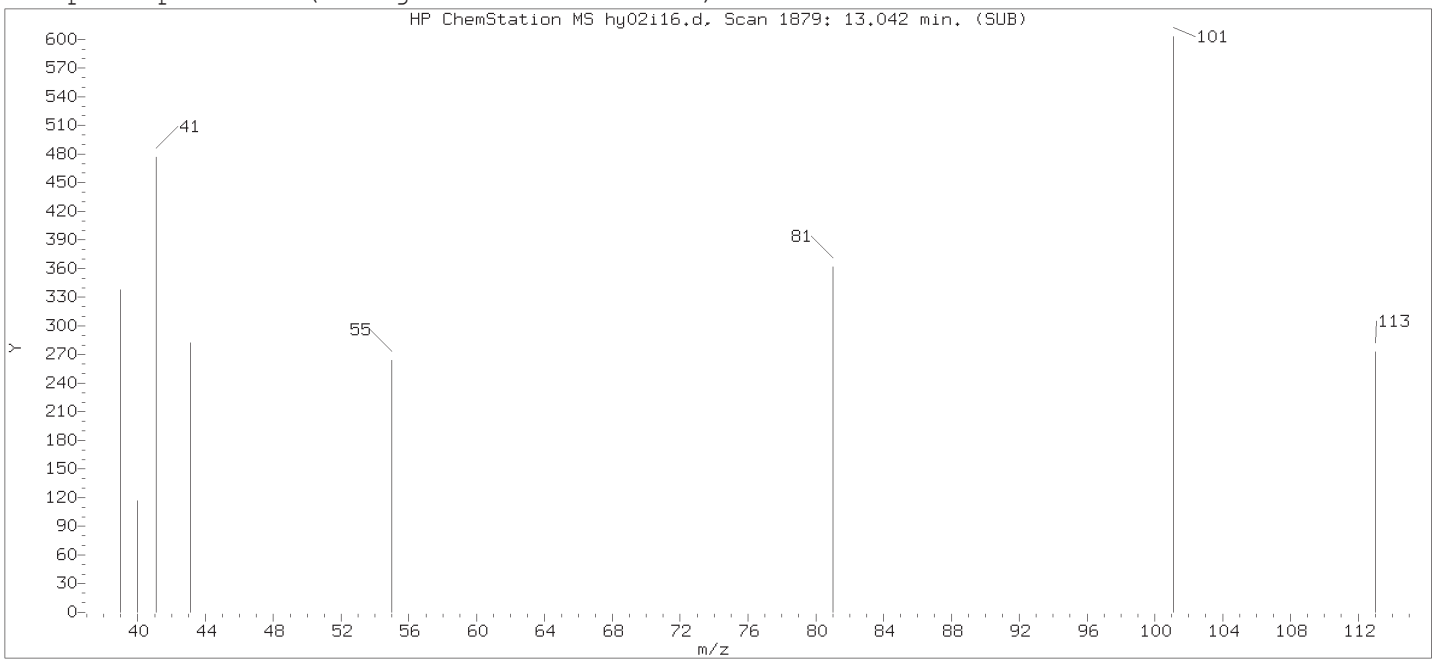
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.328
Quant Ion : 55.00
Area (flag) : 11242M
On-Column Amount (ng) : 21.6250
Integration start scan : 1753 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

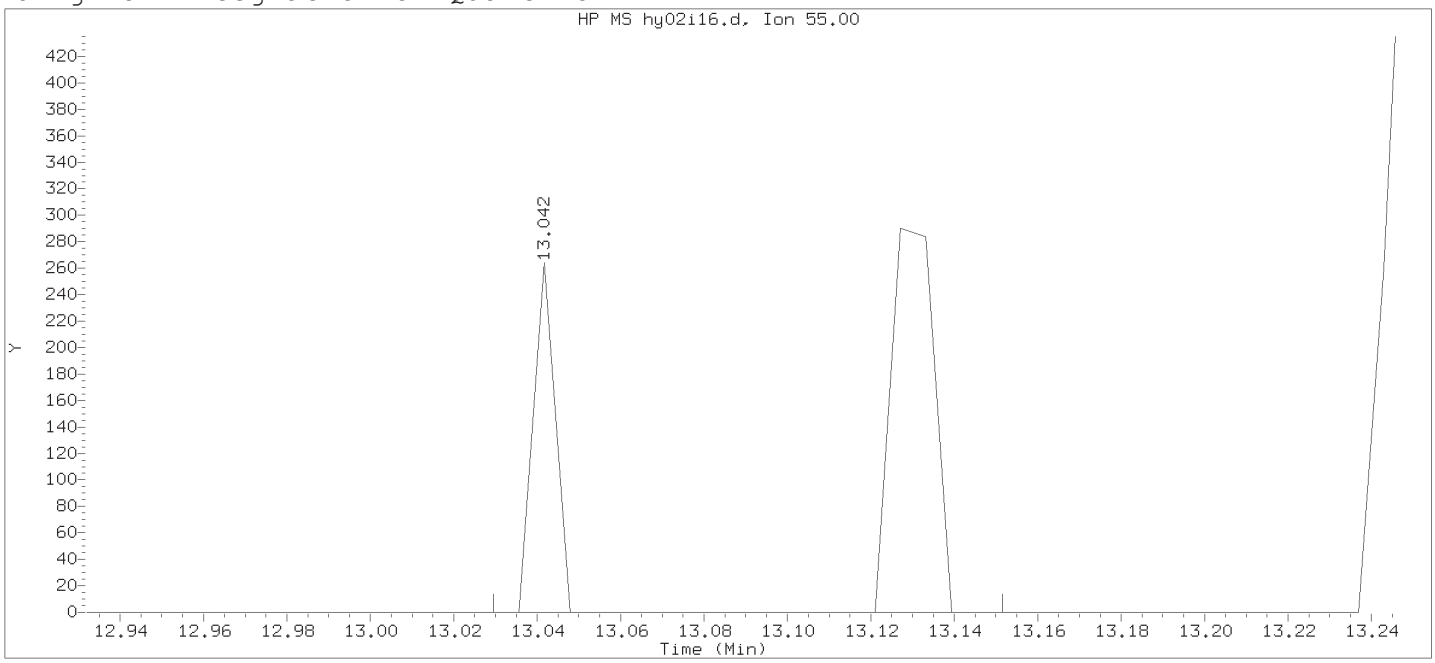
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



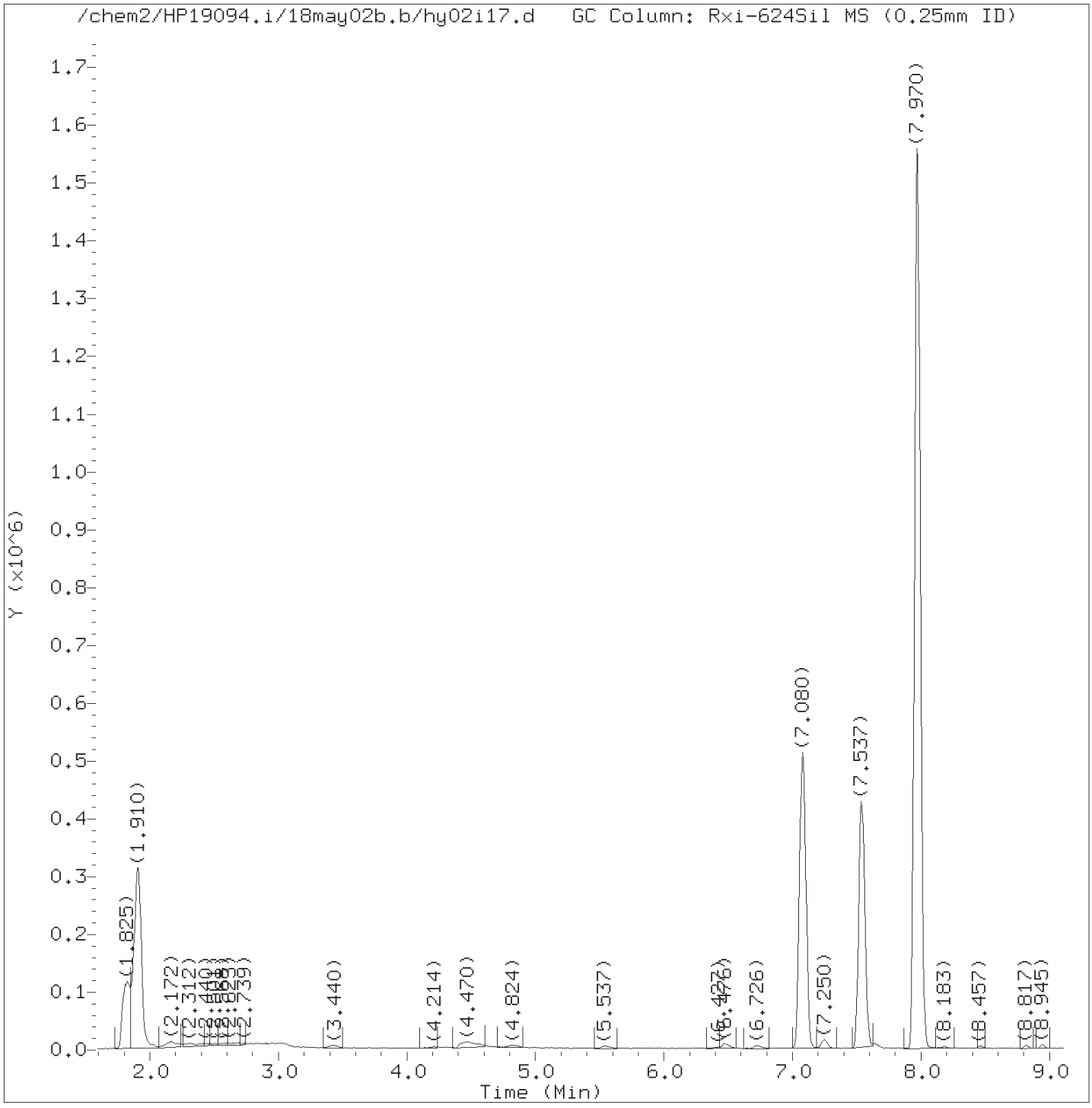
Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:20
Date, time and analyst ID of latest file update: 02-May-2018 21:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 55.00
Area : 306
On-column Amount (ng) : 0.6844
Integration start scan : 1876 Integration stop scan: 1896
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV10203



Total Ion Chromatogram (TIC)

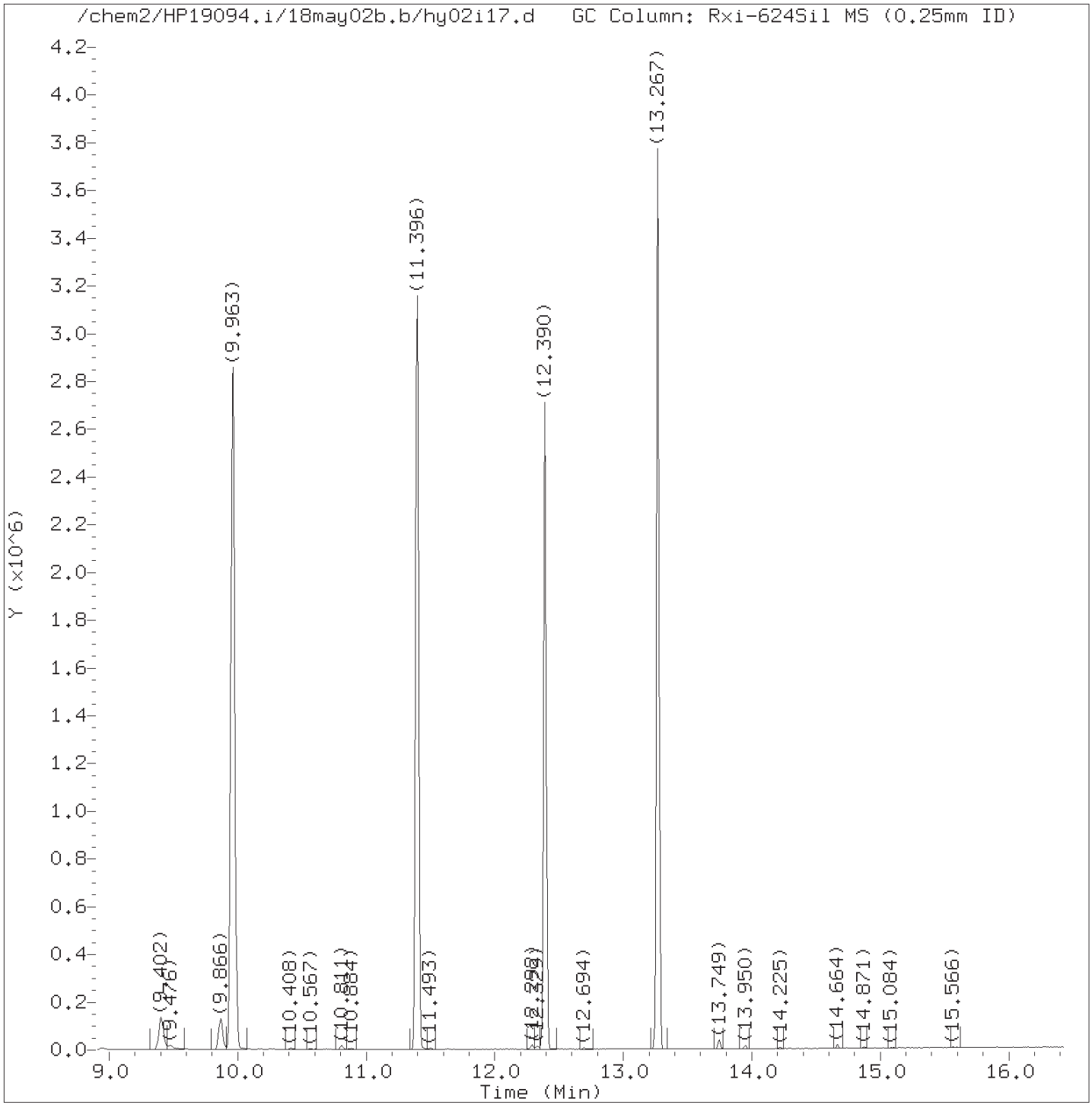
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

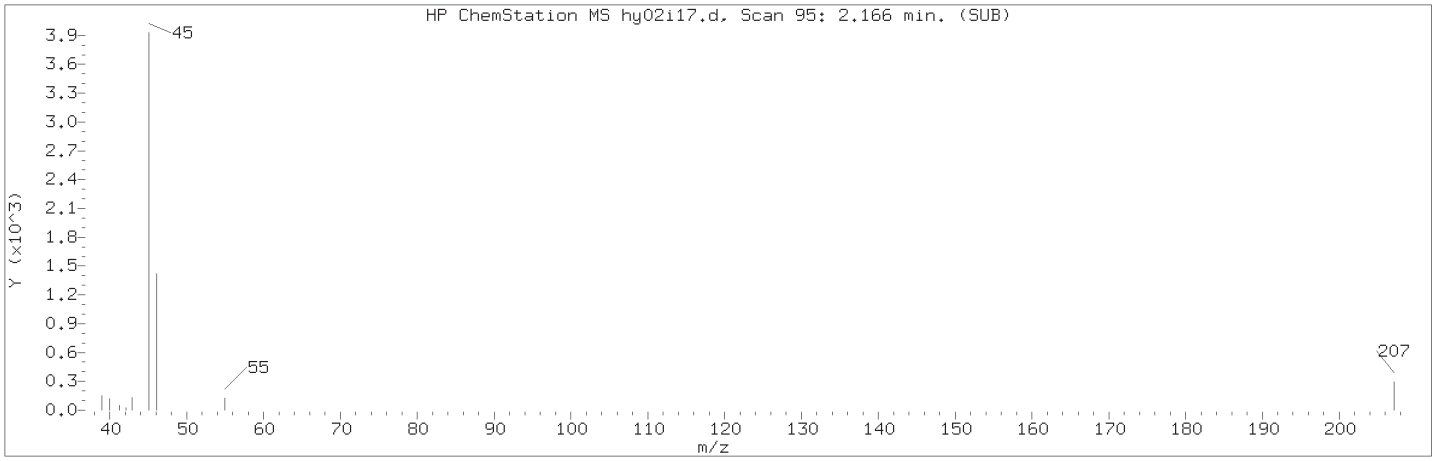
Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.166	45	15219M	0.211
25) Acetonitrile	(1)	4.214	41	18284M	8.644
26)*t-Butyl Alcohol-d10	(1)	4.476	65	87604	50.000
36) Vinyl Acetate	(2)	5.537	43	14183	0.206
43) Methyl Acrylate	(2)	6.476	55	20610	0.972
53) 1-Chlorobutane	(2)	7.256	56	20042	0.197
63)*Fluorobenzene	(2)	7.970	96	2247400	10.000
77) Chloroacetonitrile	(2)	9.476	75	8139	9.630
78) 2-Chloroethyl vinyl ether	(2)	9.476	63	3424	0.169
97)*Chlorobenzene-d5	(3)	11.396	117	1641487	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	3969M	0.350
112) Cyclohexanone	(1)	12.329	55	6386M	11.068
133)*1,4-Dichlorobenzene-d4	(4)	13.267	152	866486	10.000
142) Hexachloroethane	(4)	13.749	117	6486	0.178

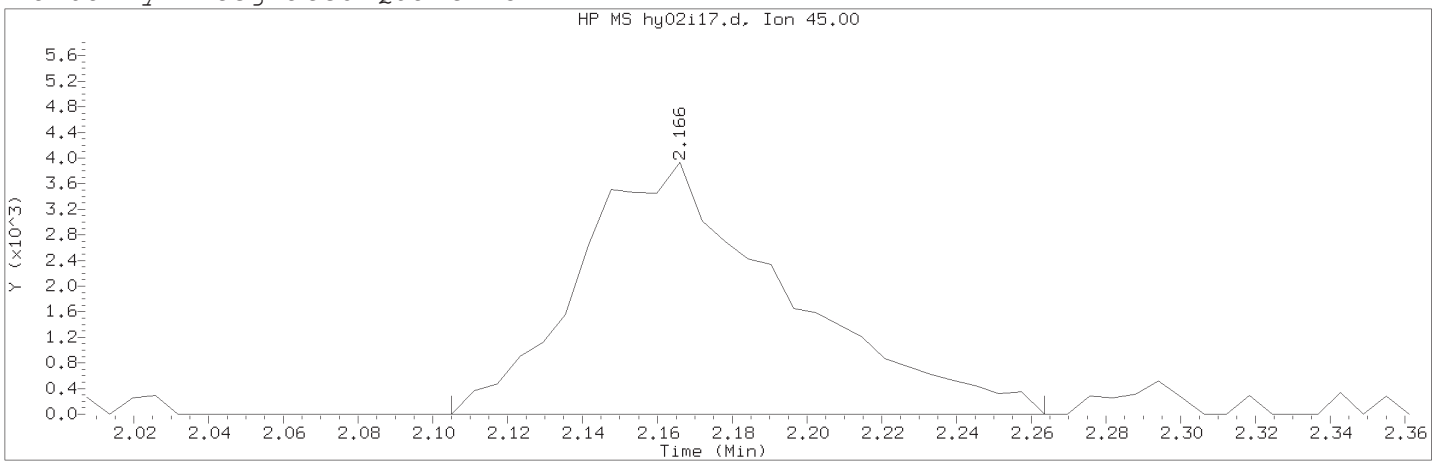
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

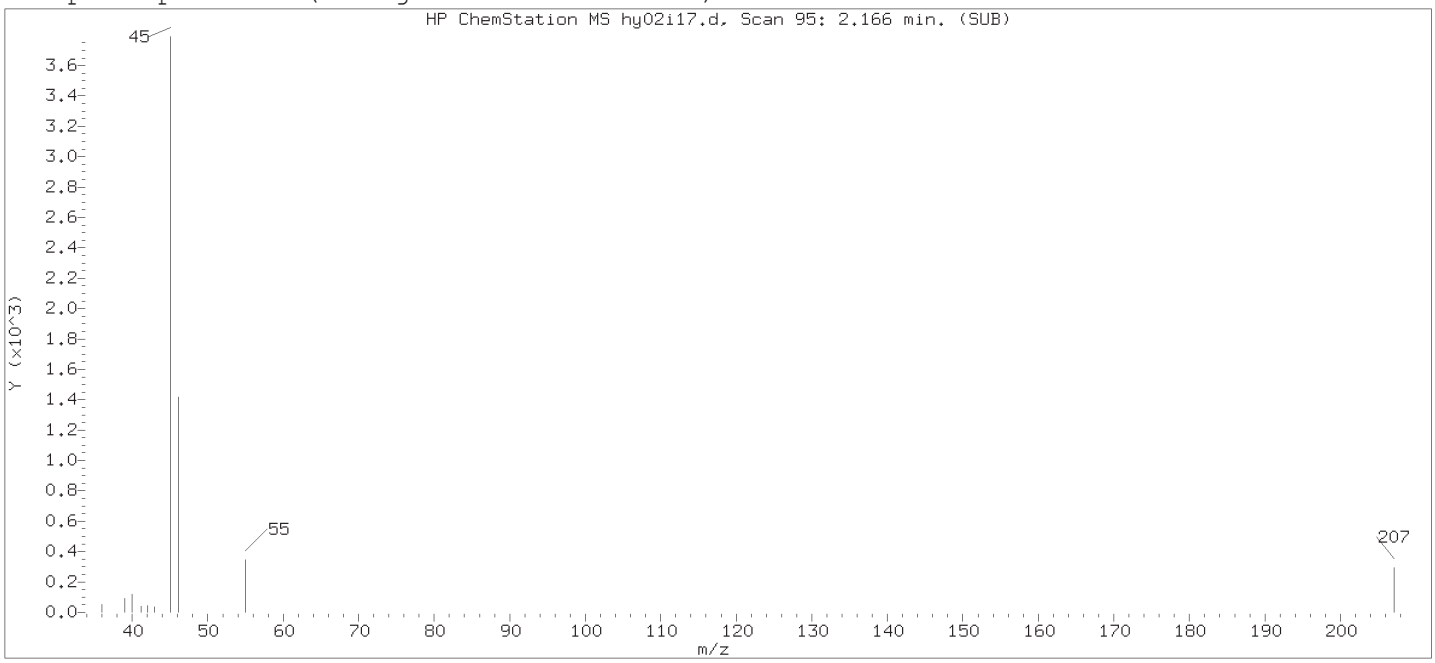
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 95
Retention Time (minutes): 2.166
Quant Ion : 45.00
Area (flag) : 15219M
On-Column Amount (ng) : 0.2109
Integration start scan : 84 Integration stop scan: 110
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

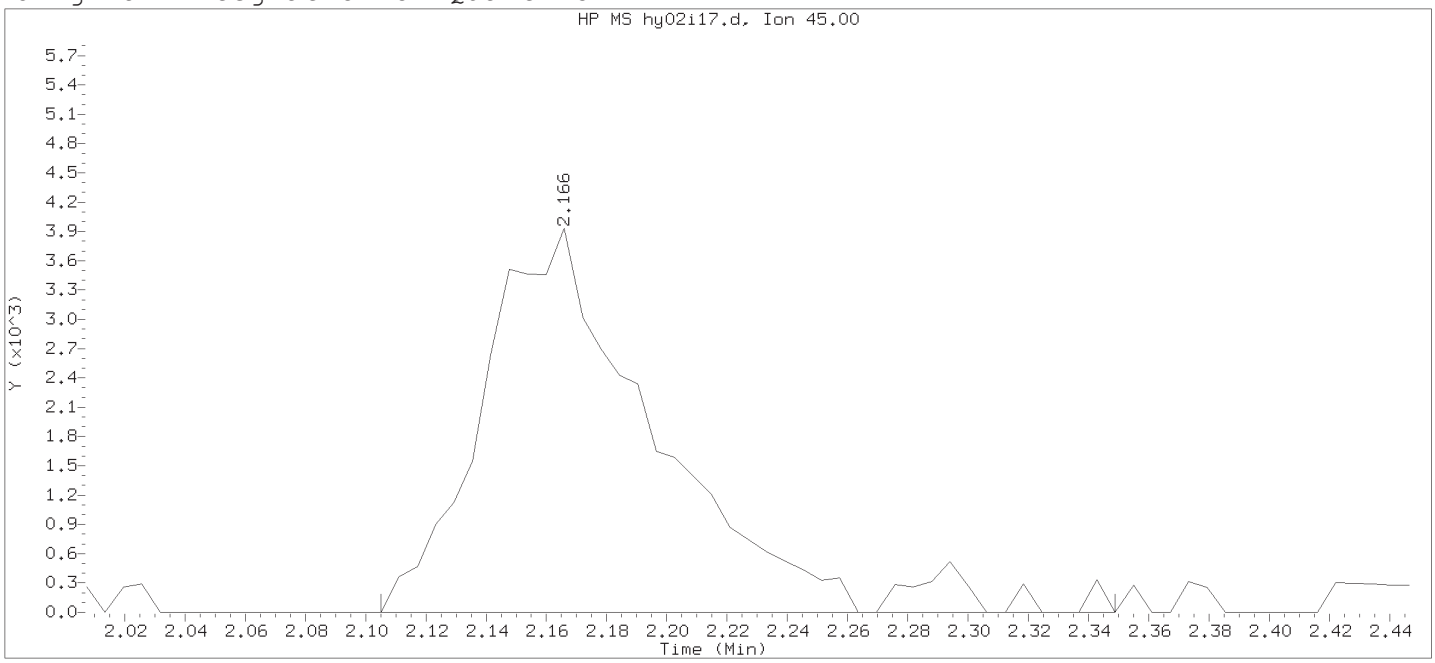
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

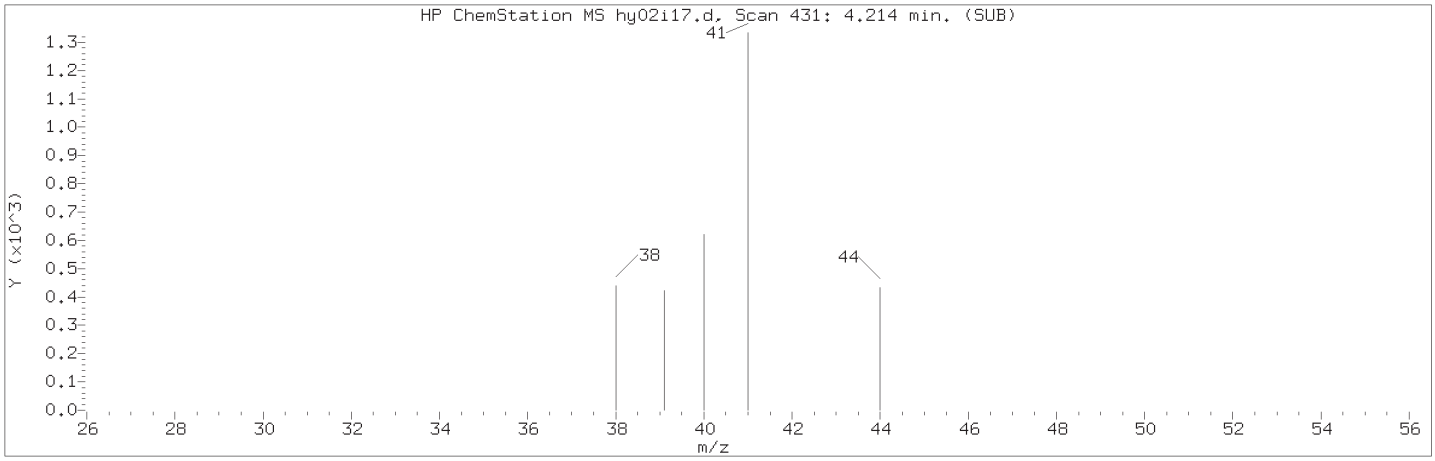
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:41
Date, time and analyst ID of latest file update: 02-May-2018 21:41 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

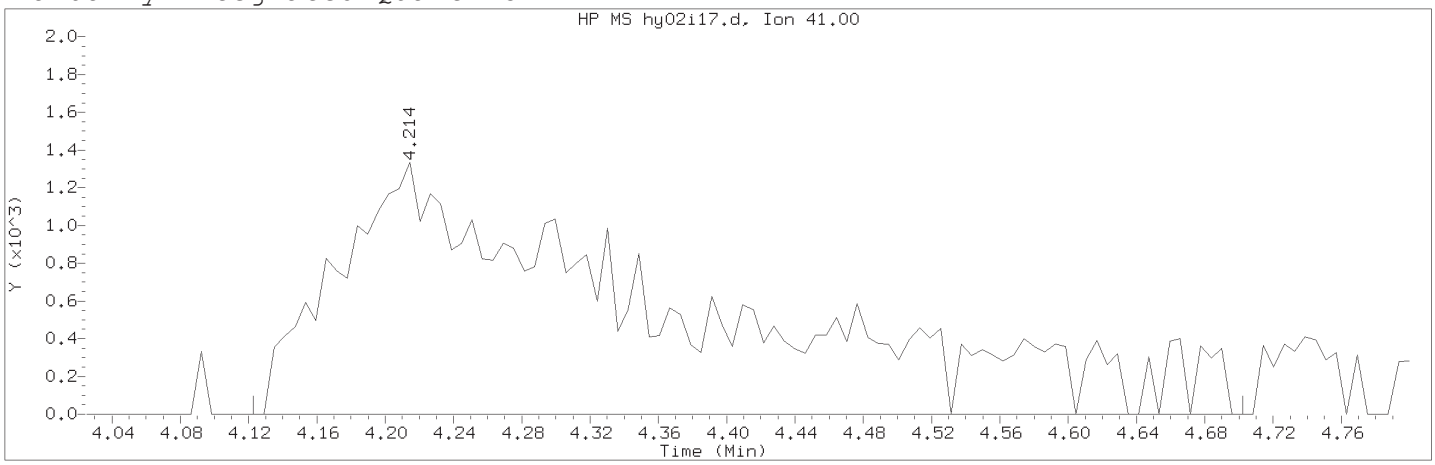
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 95
Retention Time (minutes): 2.166
Quant Ion : 45.00
Area : 16050
On-column Amount (ng) : 0.2226
Integration start scan : 84 Integration stop scan: 124
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

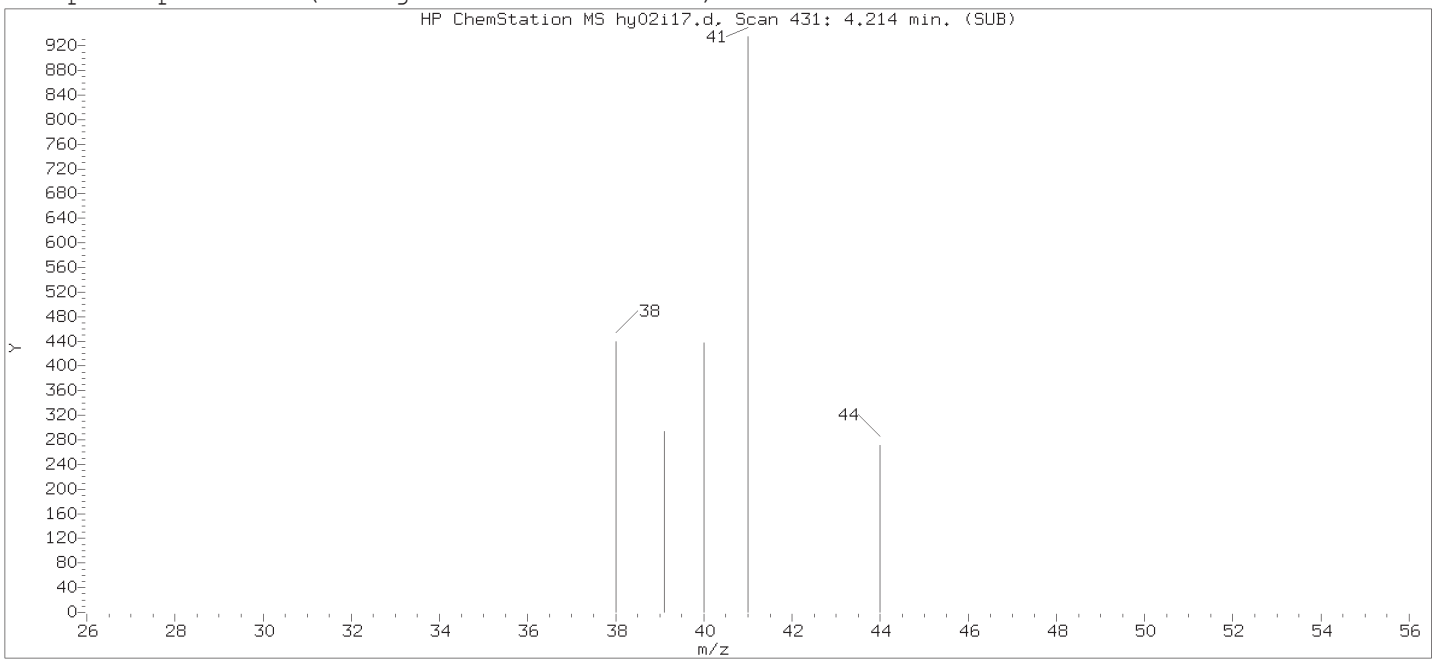
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area (flag) : 18284M
On-Column Amount (ng) : 8.6435
Integration start scan : 415 Integration stop scan: 510
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

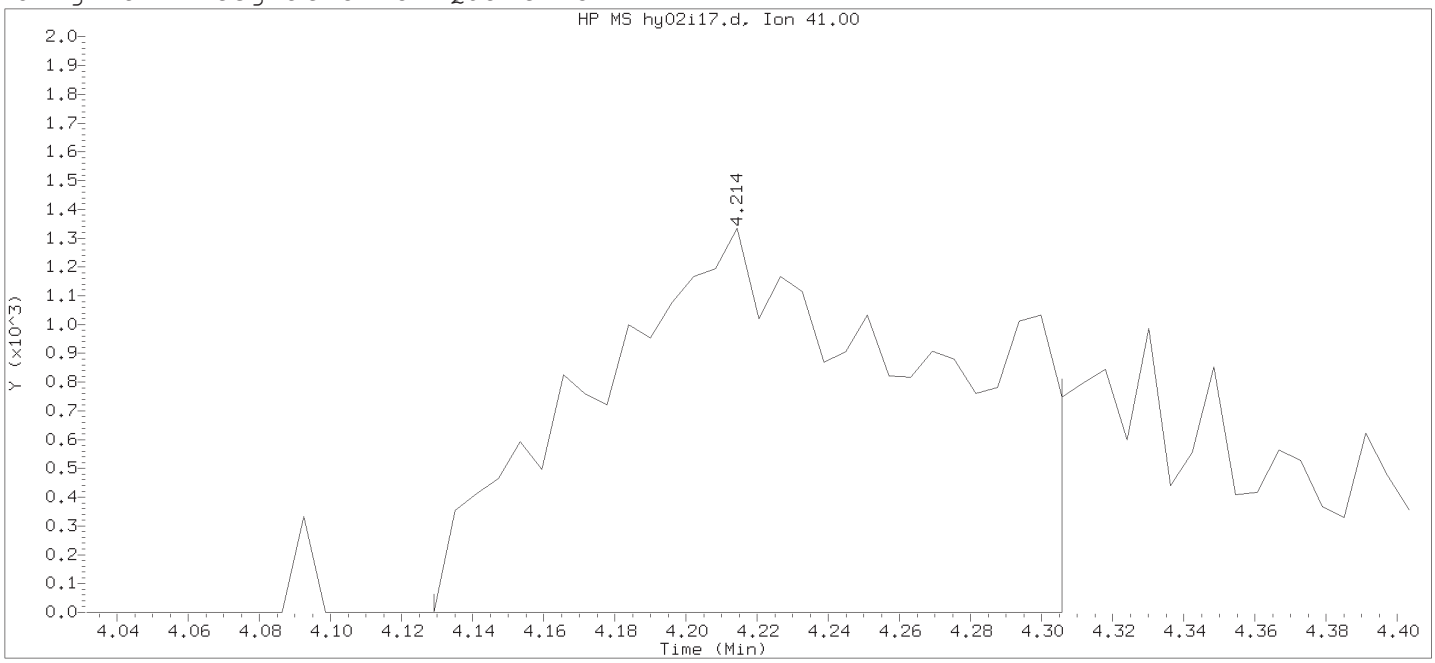
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

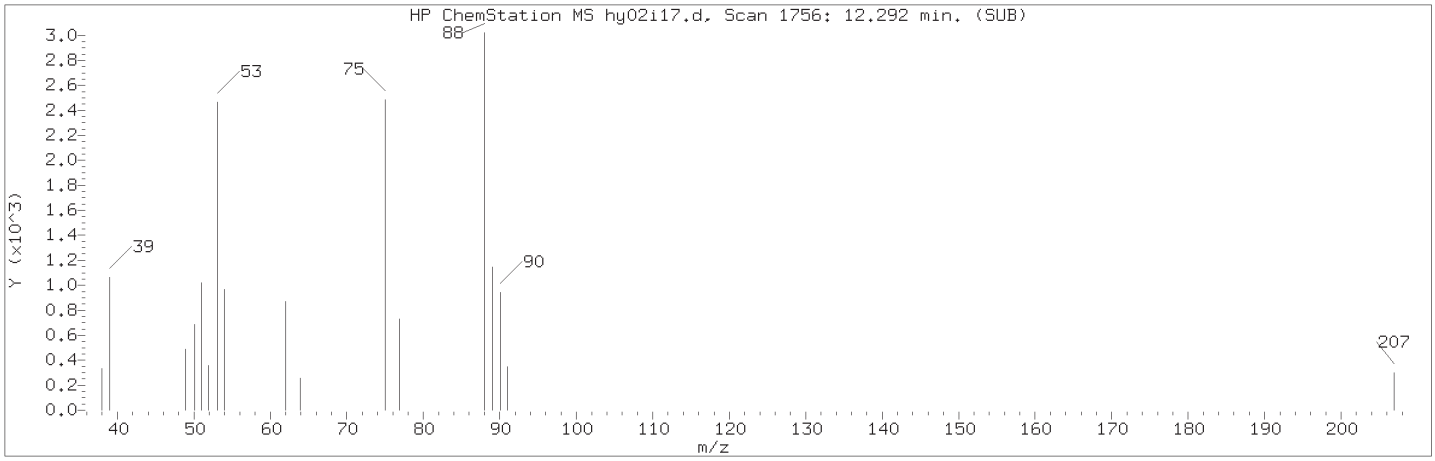
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:41
Date, time and analyst ID of latest file update: 02-May-2018 21:41 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

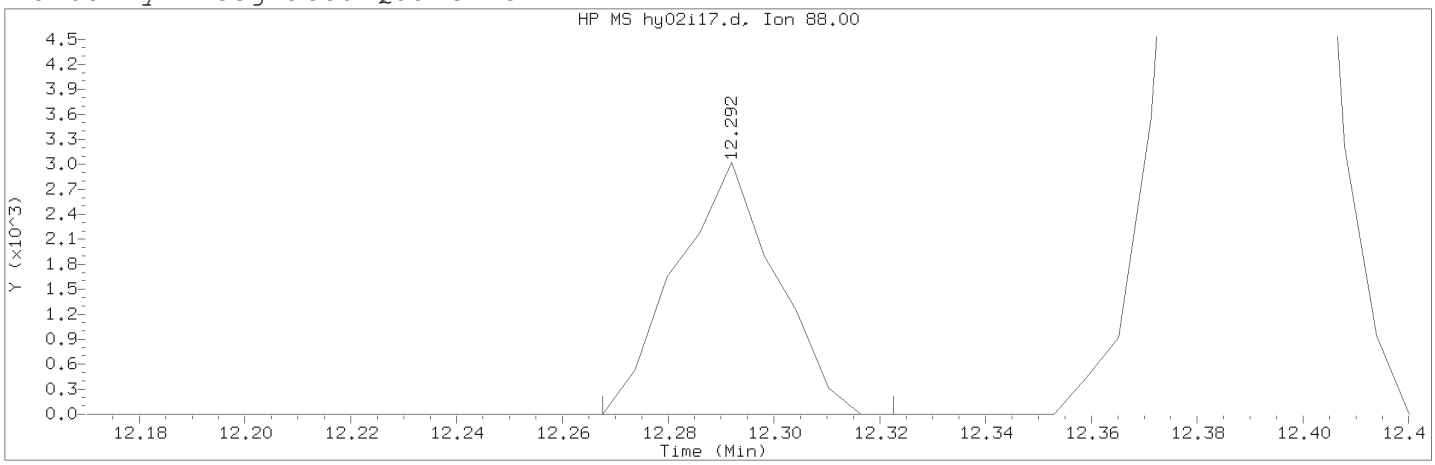
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area : 9088
On-column Amount (ng) : 5.0856
Integration start scan : 416 Integration stop scan: 445
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

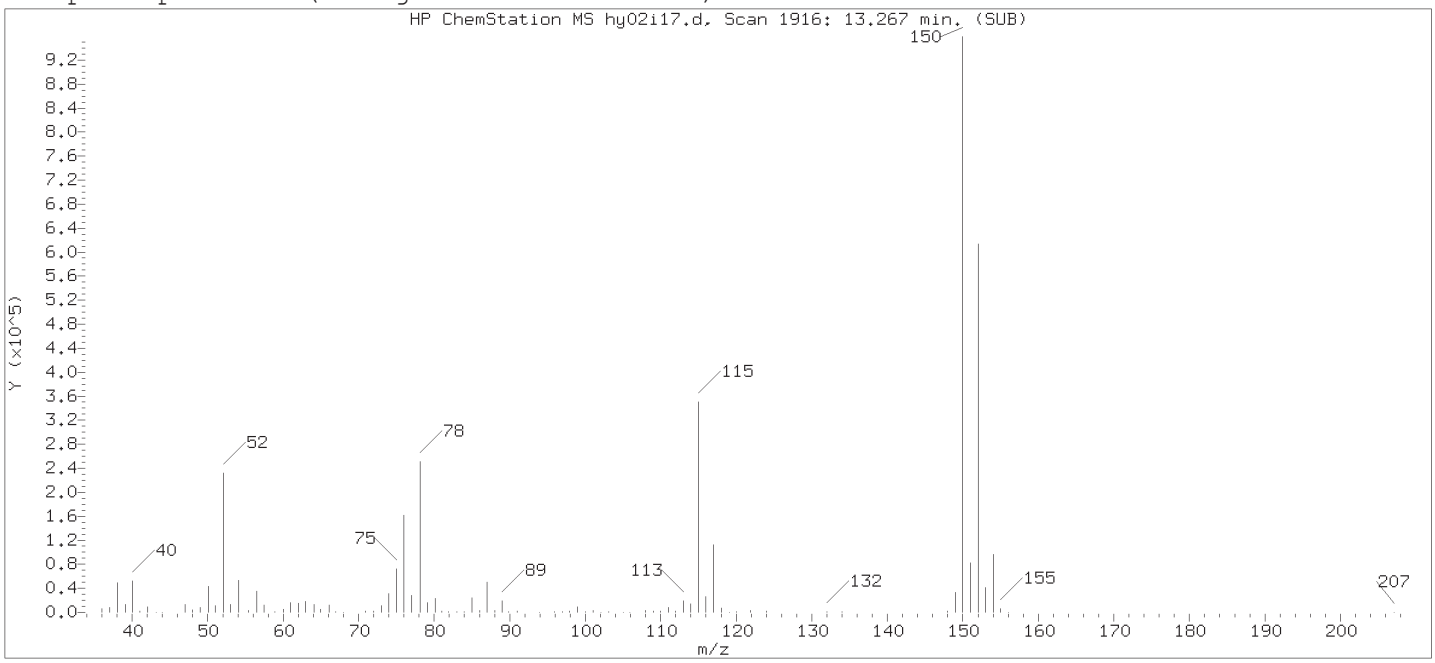
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 3969M
On-Column Amount (ng) : 0.3498
Integration start scan : 1751 Integration stop scan: 1760
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

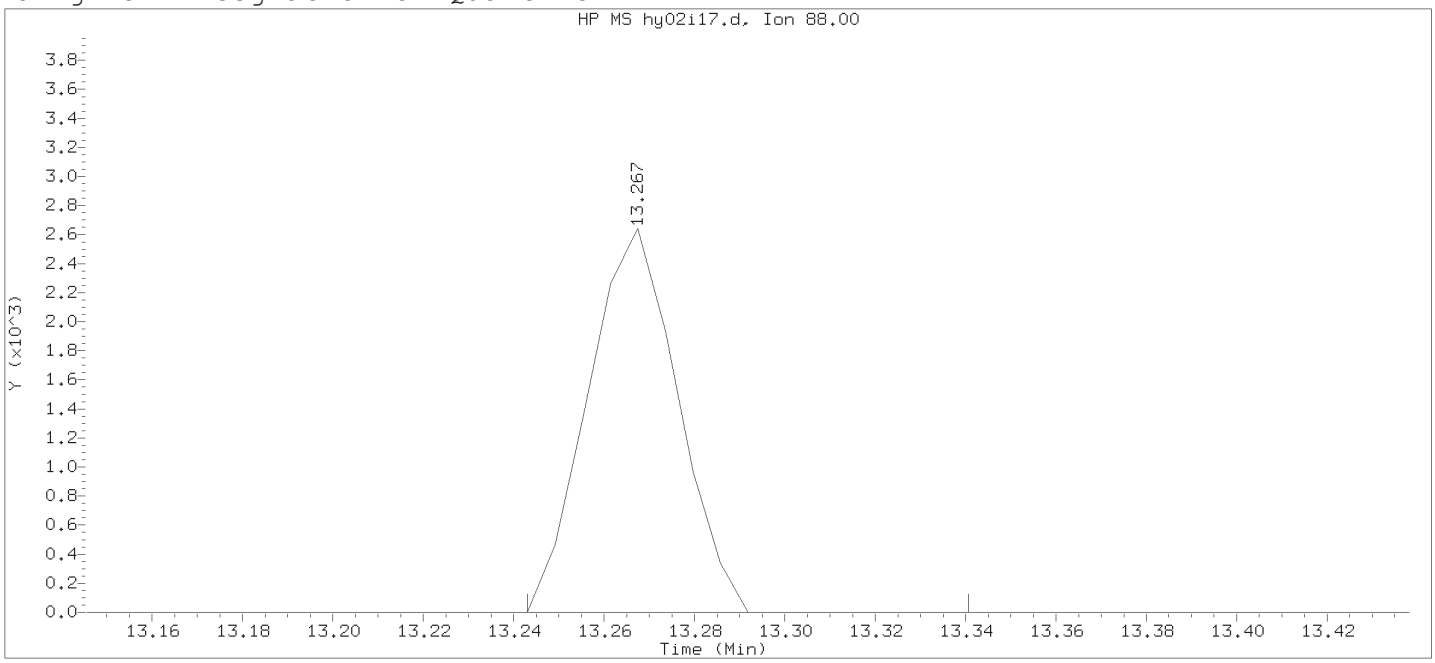
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

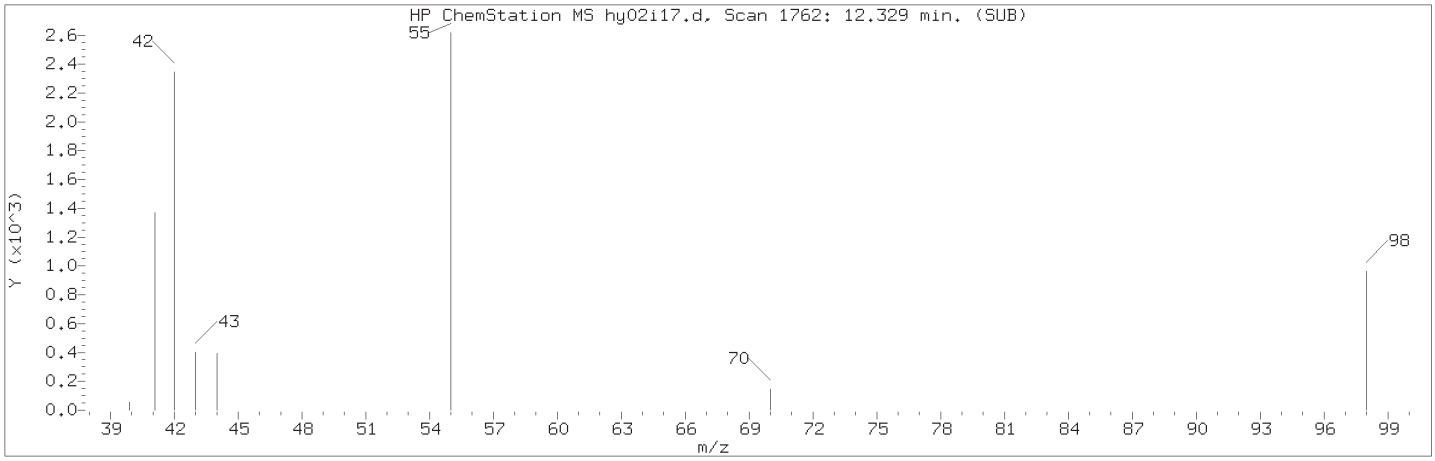
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:41
Date, time and analyst ID of latest file update: 02-May-2018 21:41 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

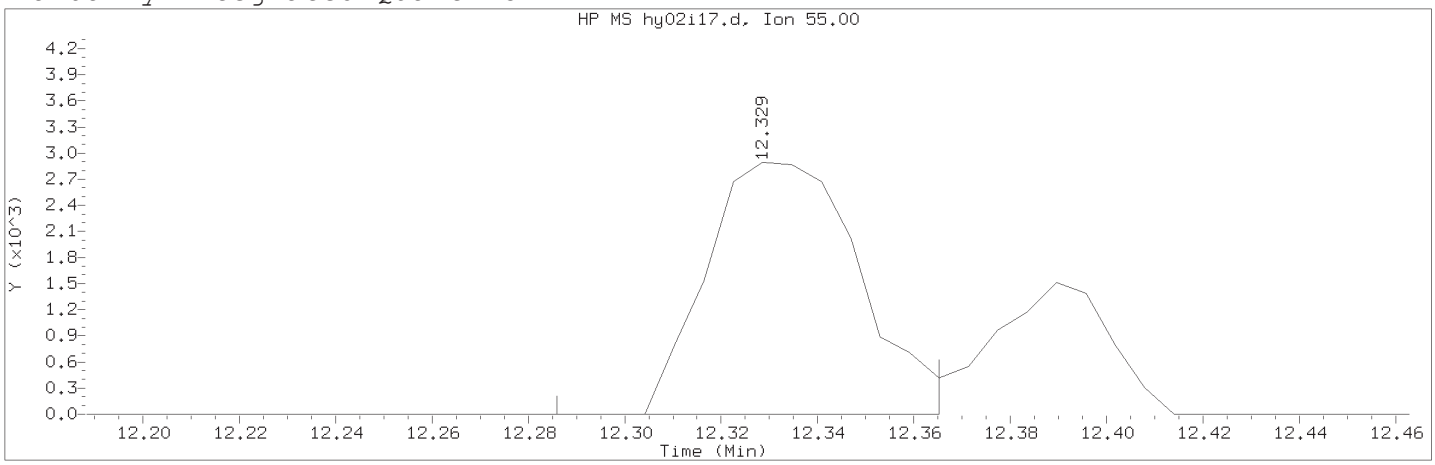
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1916
Retention Time (minutes): 13.267
Quant Ion : 88.00
Area : 3639
On-column Amount (ng) : 0.3604
Integration start scan : 1911 Integration stop scan: 1927
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

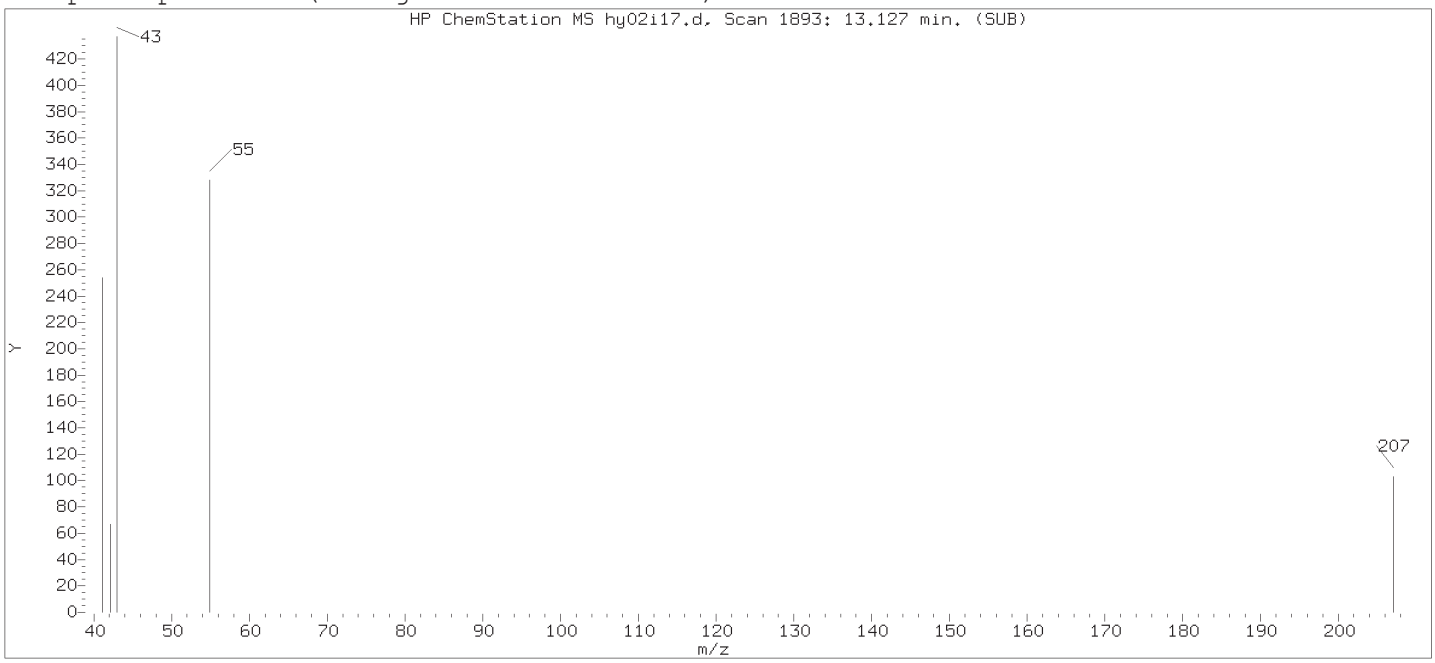
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 6386M
On-Column Amount (ng) : 11.0679
Integration start scan : 1754 Integration stop scan: 1767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

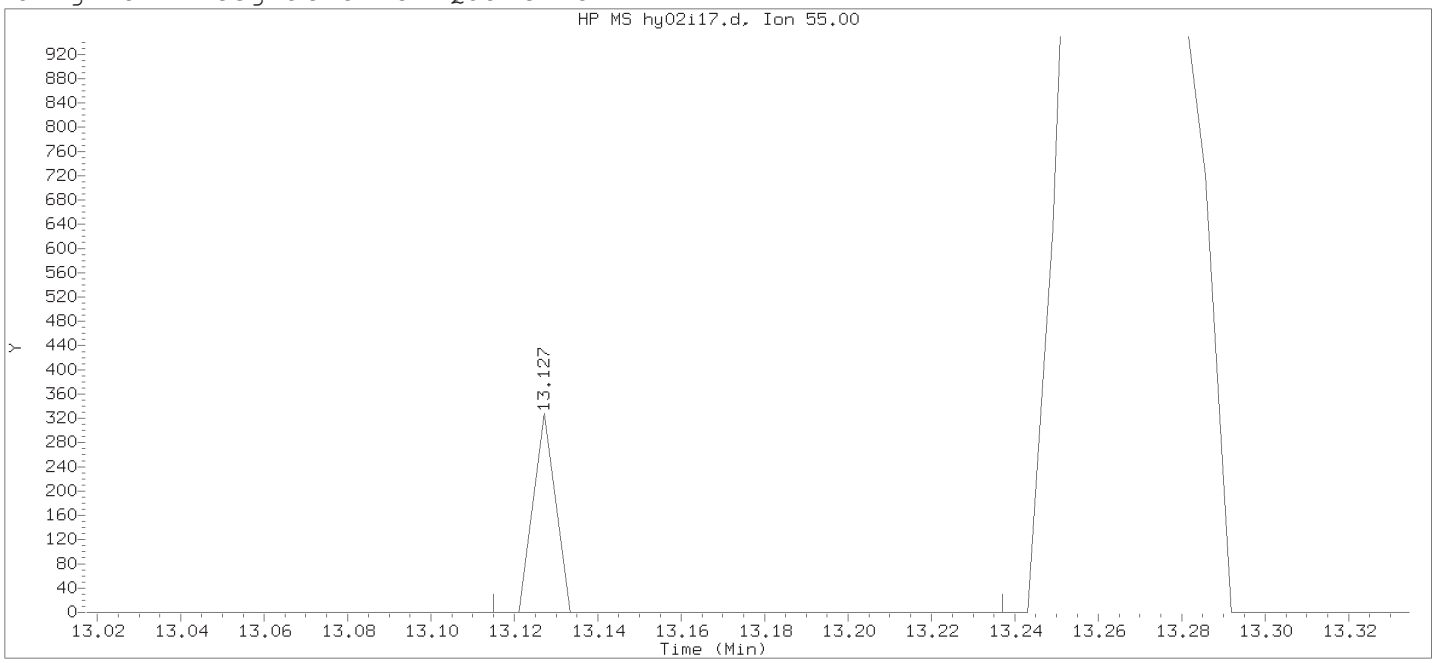
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



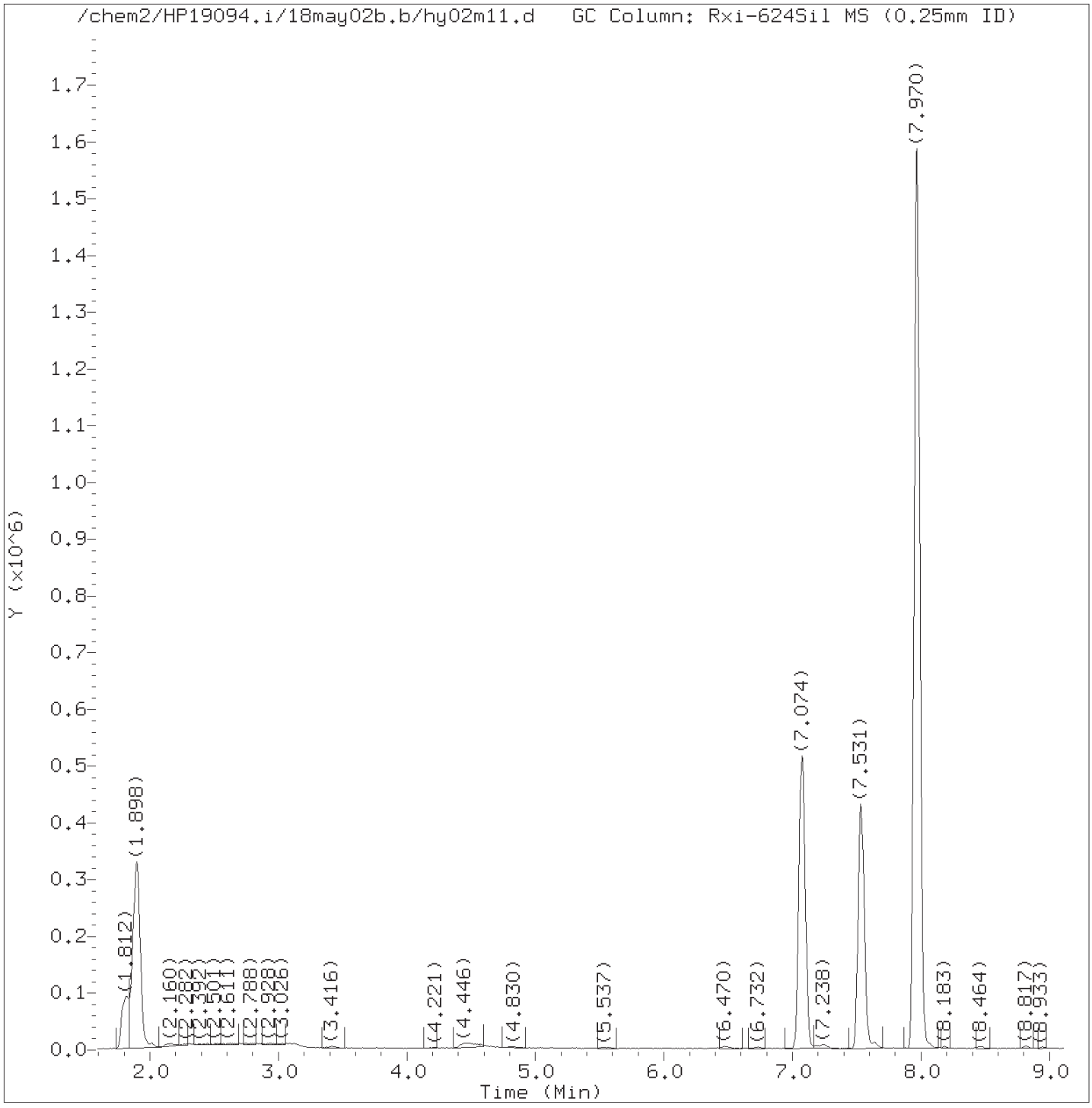
Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:41
Date, time and analyst ID of latest file update: 02-May-2018 21:41 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1893
Retention Time (minutes): 13.127
Quant Ion : 55.00
Area : 119
On-column Amount (ng) : 0.2868
Integration start scan : 1890 Integration stop scan: 1910
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV10203



Total Ion Chromatogram (TIC)

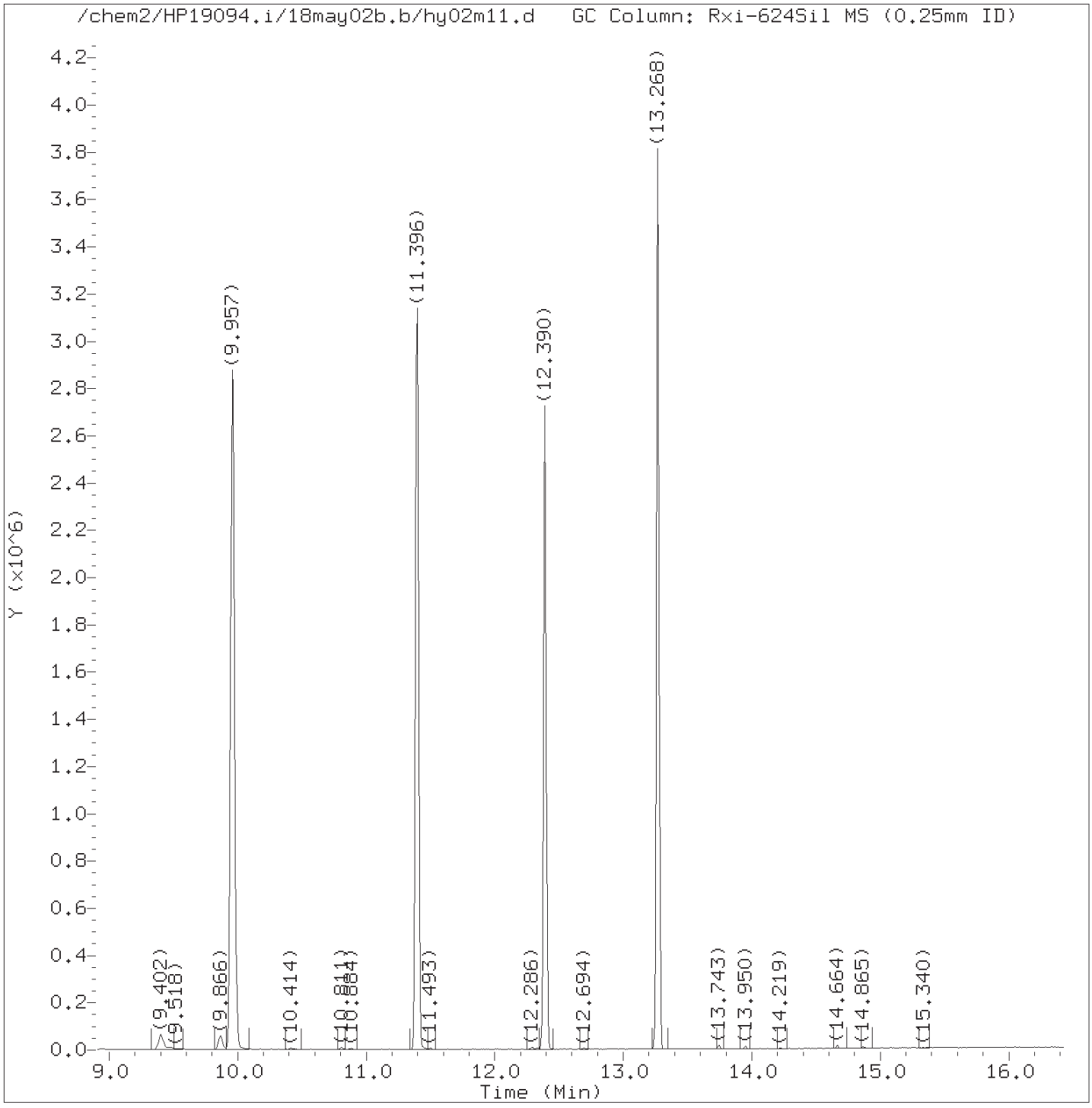
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

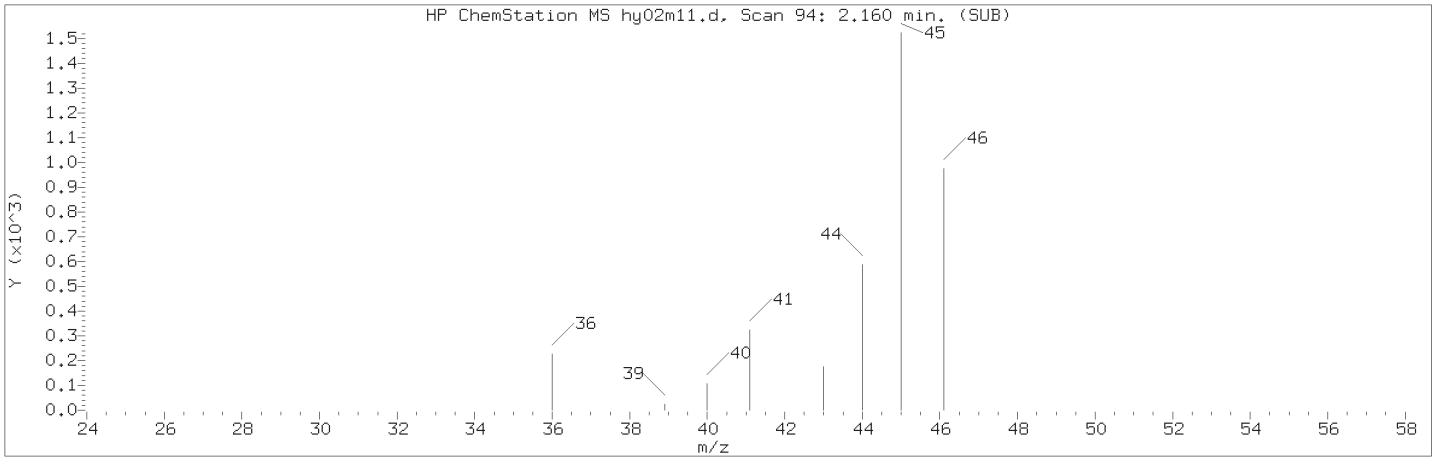
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.160	45	7839M	0.107
25) Acetonitrile	(1)	4.208	41	8867M	4.300
26)*t-Butyl Alcohol-d10	(1)	4.458	65	85408M	50.000
36) Vinyl Acetate	(2)	5.525	43	6614	0.095
43) Methyl Acrylate	(2)	6.476	55	9556M	0.444
50)$Dibromofluoromethane	(2)	7.074	113	541631	9.601
53) 1-Chlorobutane	(2)	7.238	56	8275	0.080
57)$1,2-Dichloroethane-d4	(2)	7.537	102	99600	10.012
63)*Fluorobenzene	(2)	7.970	96	2283251	10.000
77) Chloroacetonitrile	(2)	9.476	75	2884	3.359
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	1644	0.080
82)$Toluene-d8	(3)	9.957	98	2300054	10.082
97)*Chlorobenzene-d5	(3)	11.396	117	1651612	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	1506M	0.136
112) Cyclohexanone	(1)	12.341	55	2470M	4.391
111)$4-Bromofluorobenzene	(3)	12.390	95	809970	10.008
133)*1,4-Dichlorobenzene-d4	(4)	13.268	152	873882	10.000
142) Hexachloroethane	(4)	13.749	117	2414	0.066

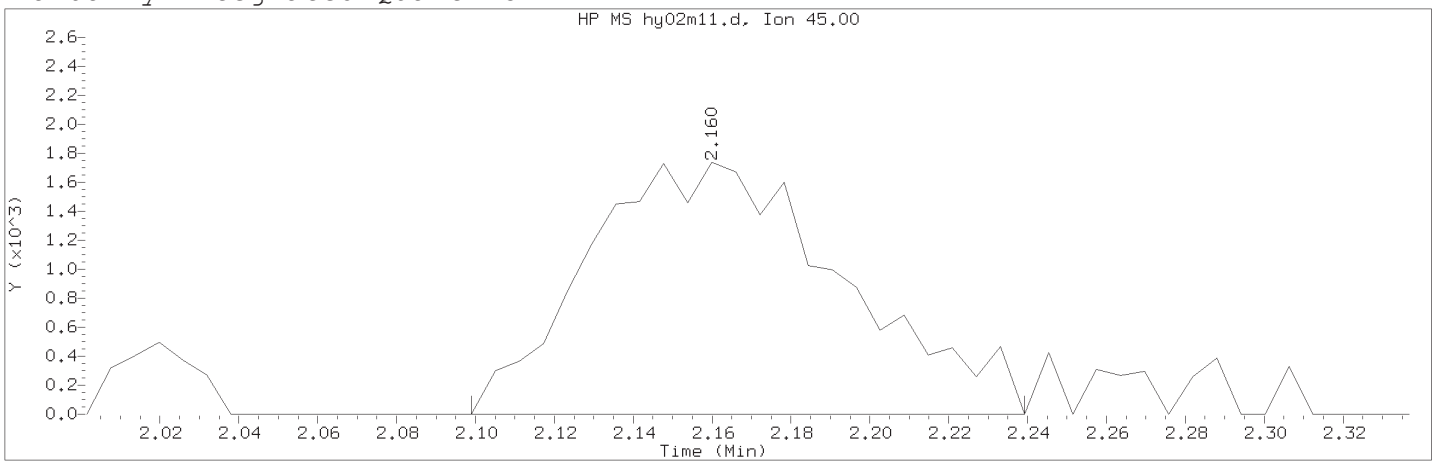
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

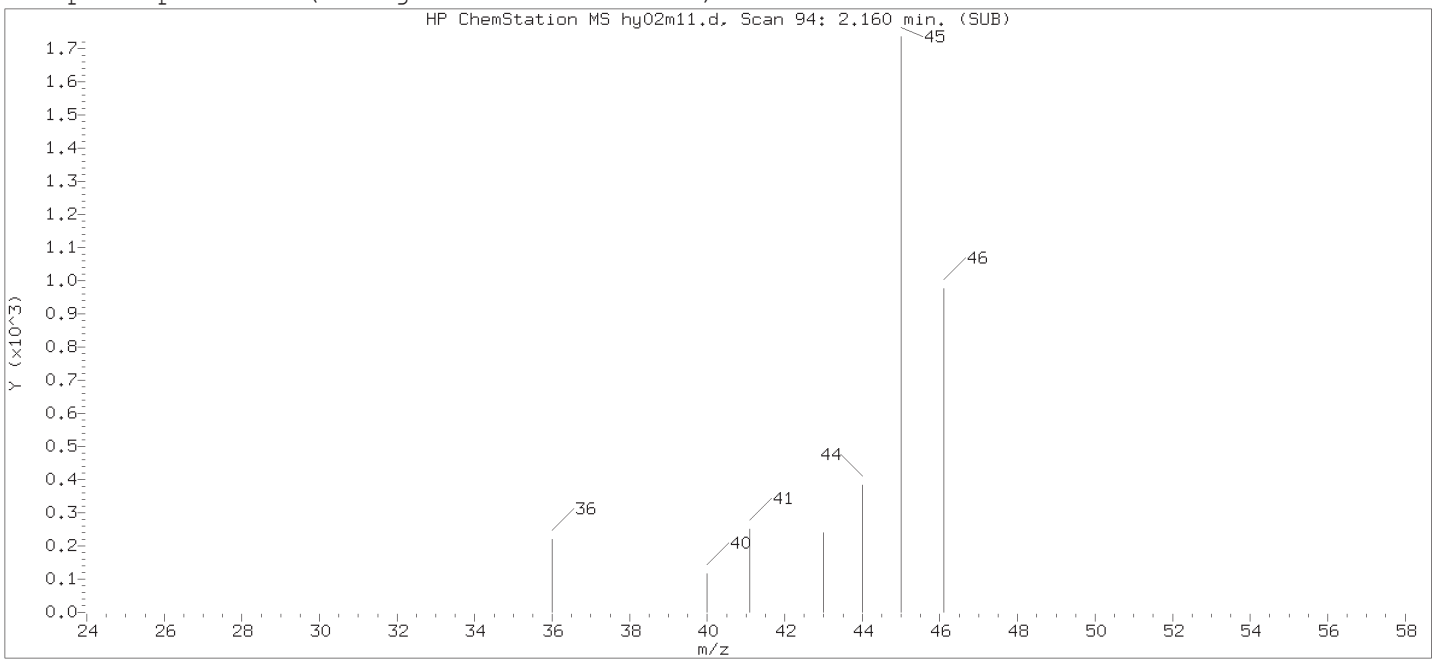
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 7839M
On-Column Amount (ng) : 0.1069
Integration start scan : 83 Integration stop scan: 106
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

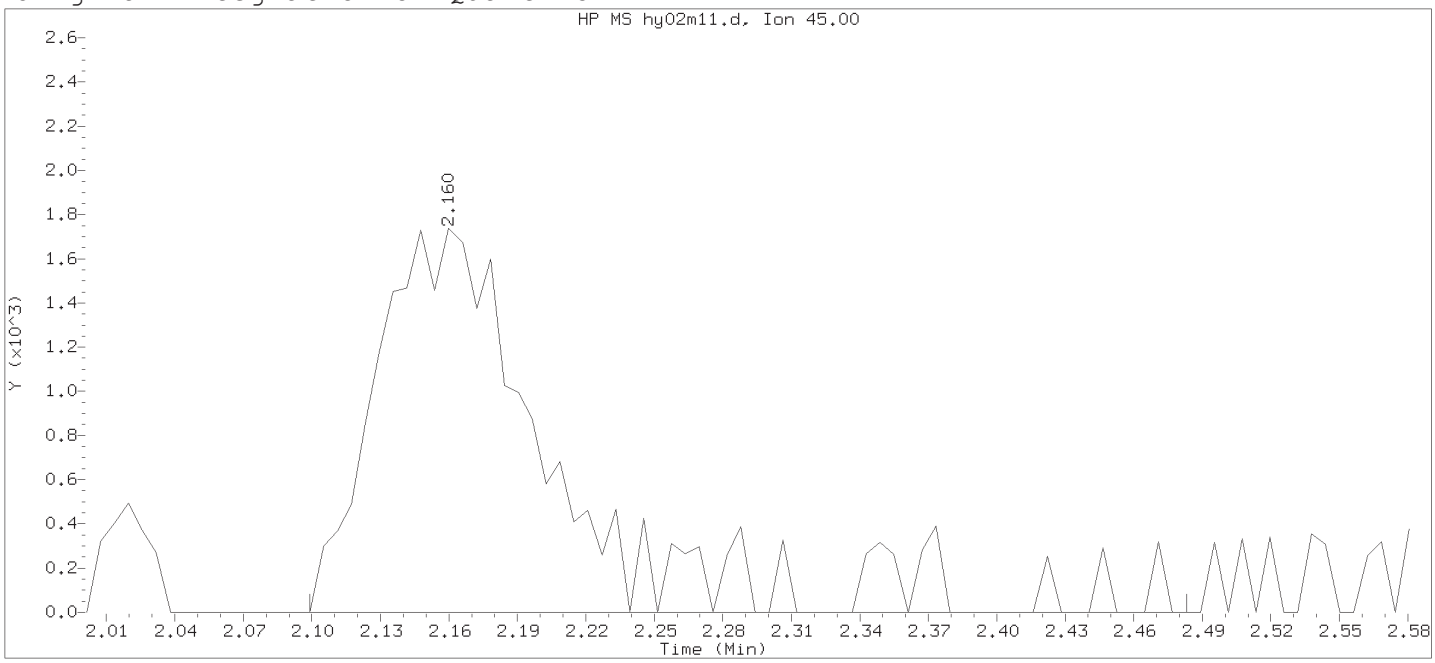
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

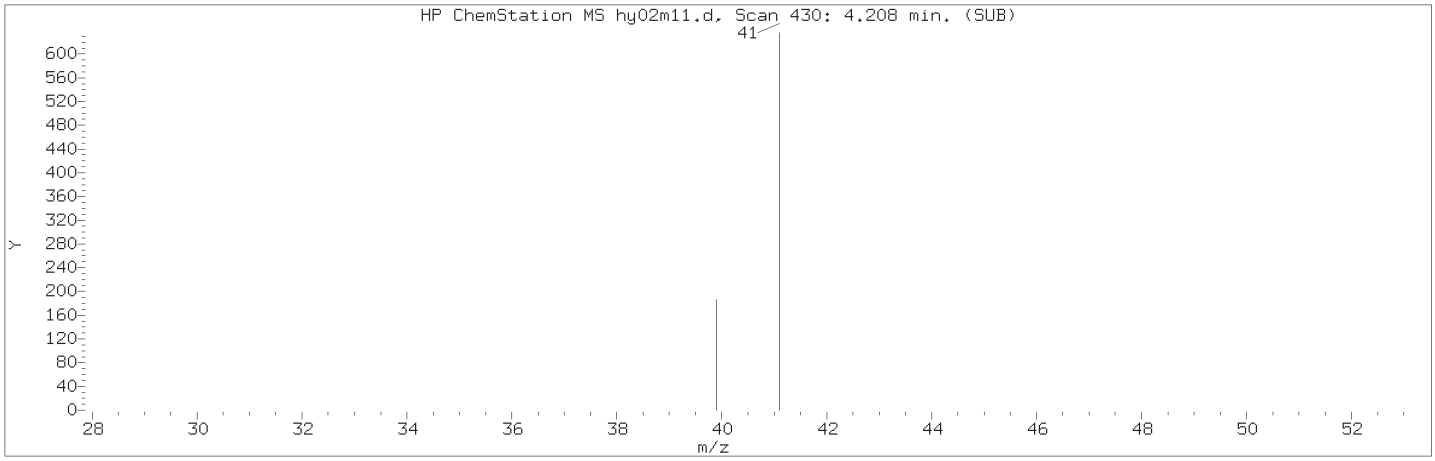
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

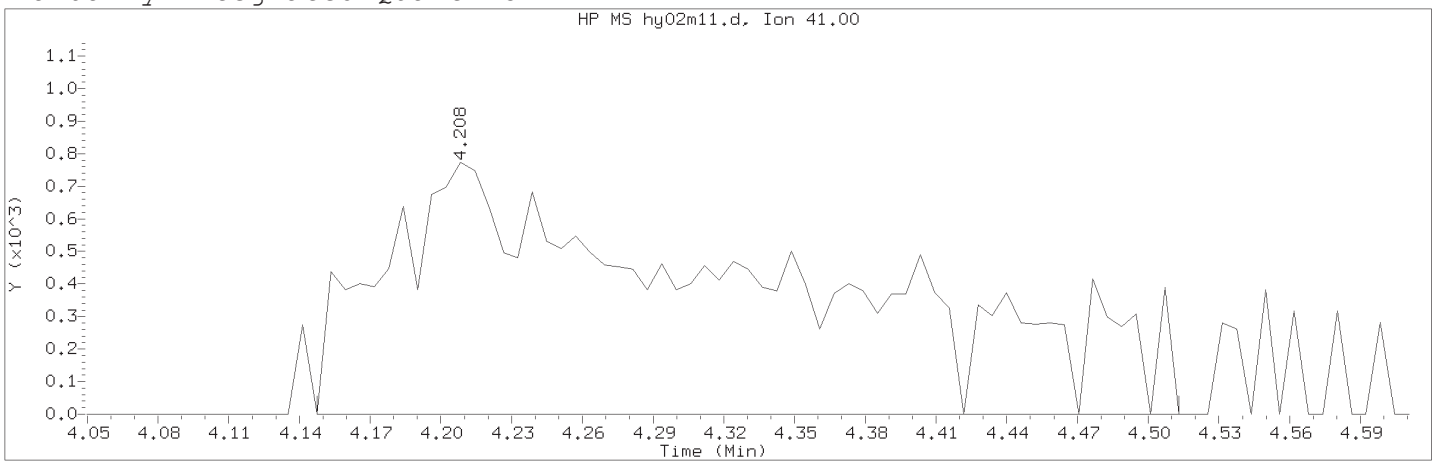
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area : 9539
On-column Amount (ng) : 0.1302
Integration start scan : 83 Integration stop scan: 146
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

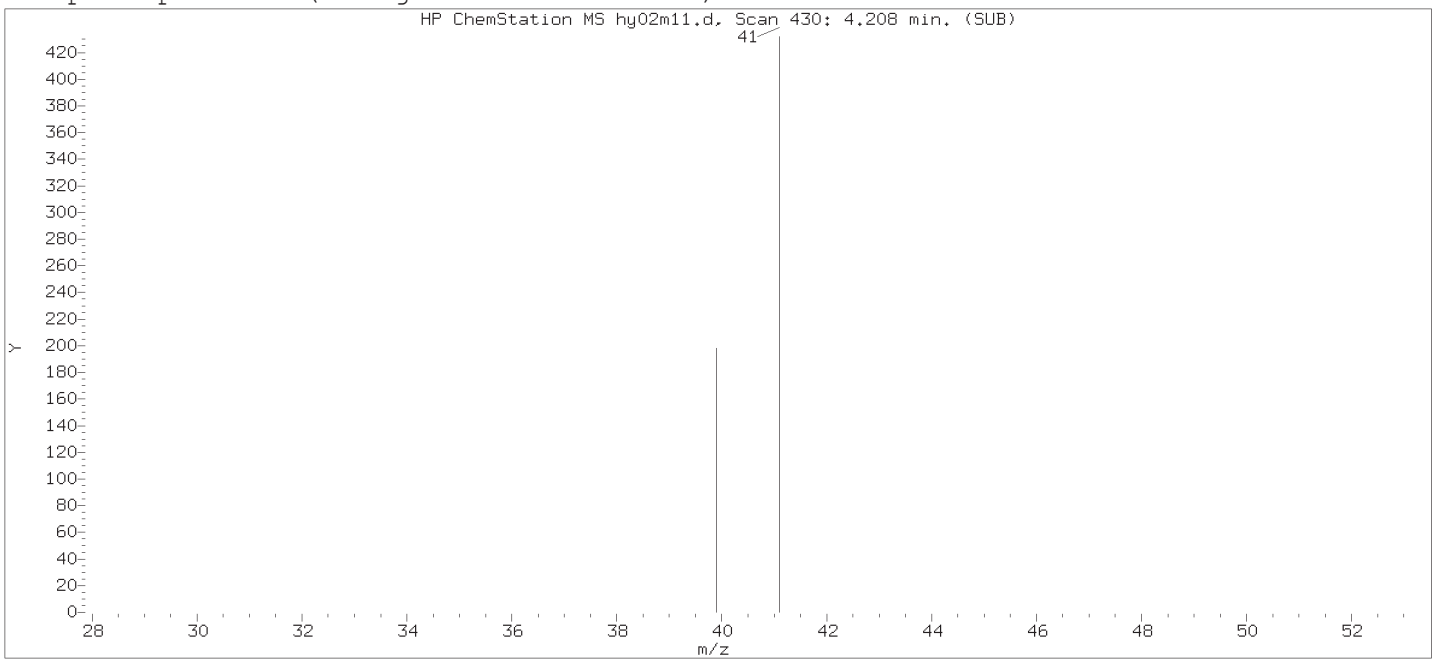
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area (flag) : 8867M
On-Column Amount (ng) : 4.2995
Integration start scan : 419 Integration stop scan: 479
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

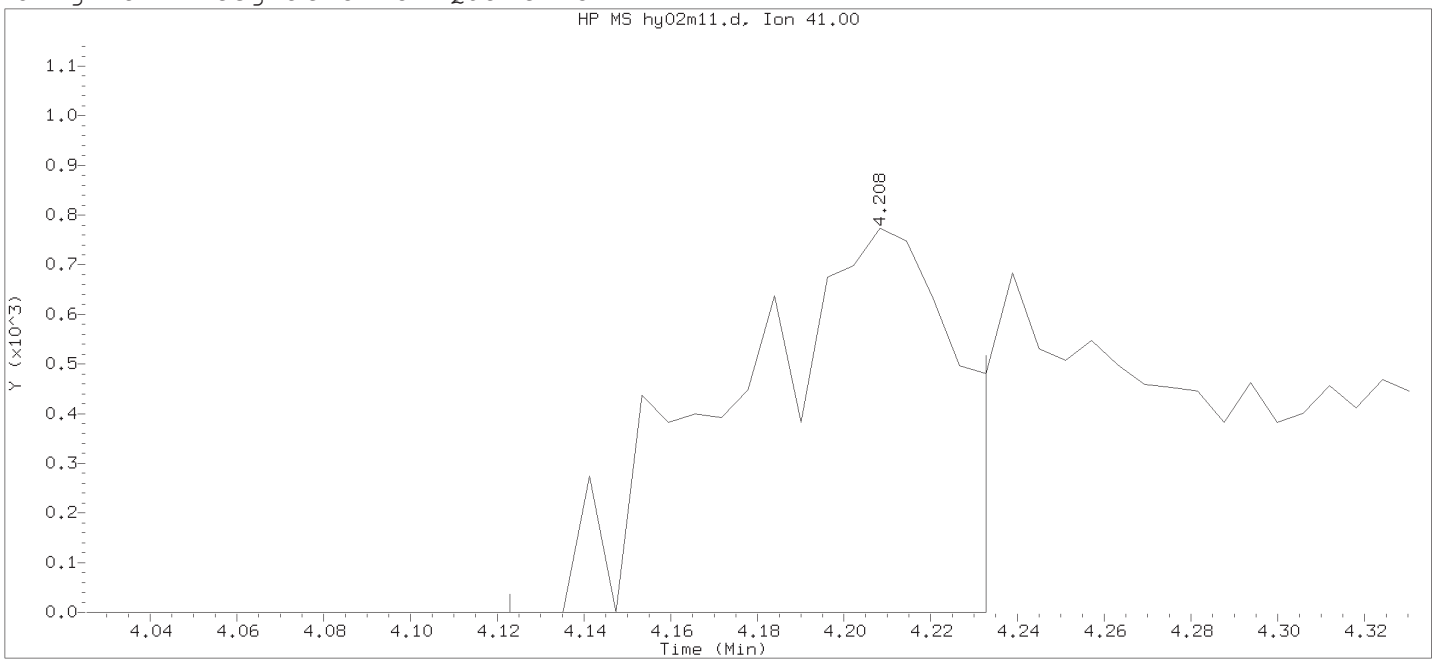
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

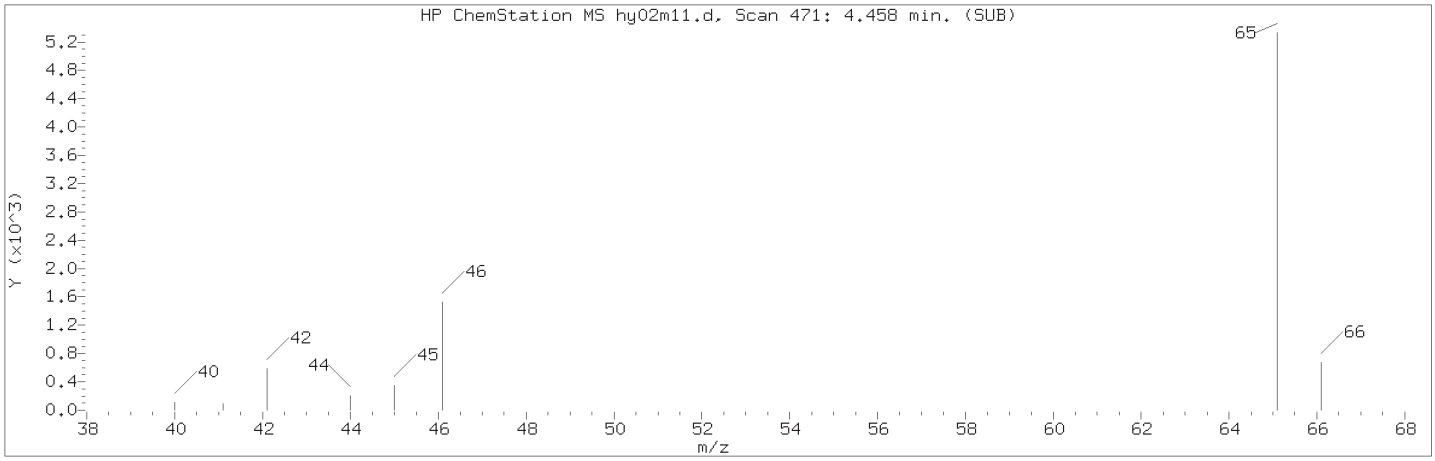
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

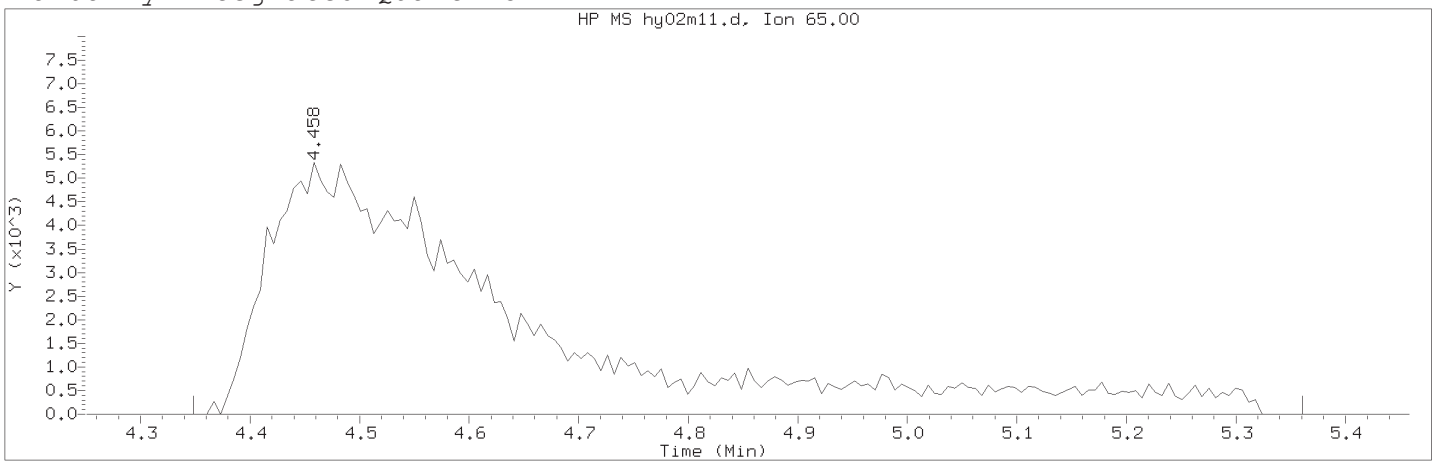
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area : 2786
On-column Amount (ng) : 1.5113
Integration start scan : 415 Integration stop scan: 433
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

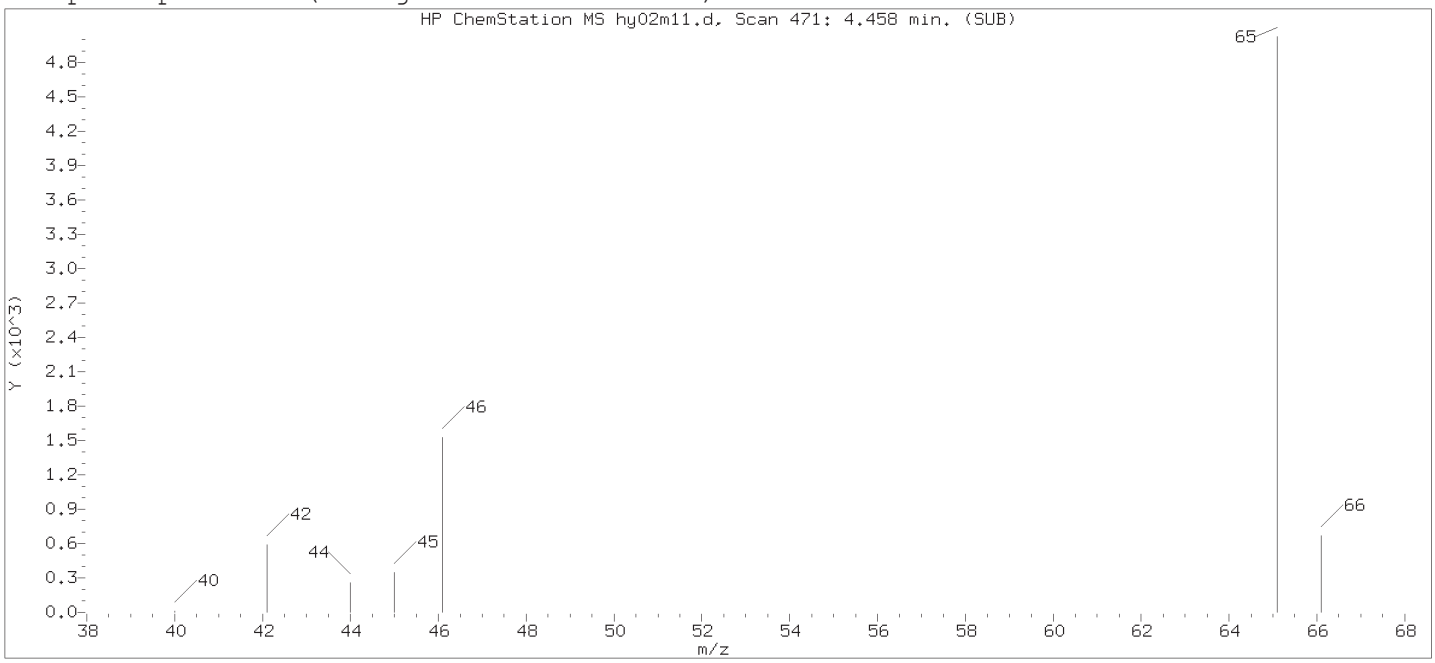
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 471
Retention Time (minutes): 4.458
Quant Ion : 65.00
Area (flag) : 85408M
On-Column Amount (ng) : 50.0000
Integration start scan : 452 Integration stop scan: 618
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

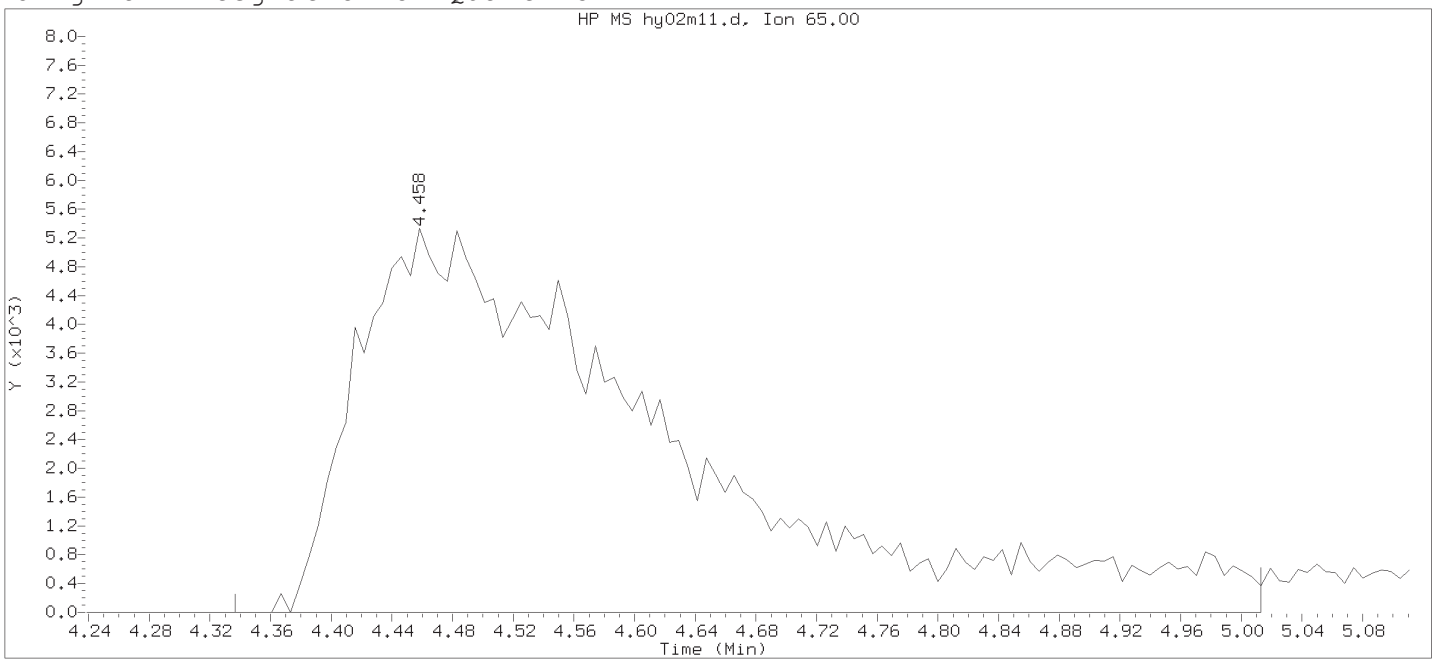
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

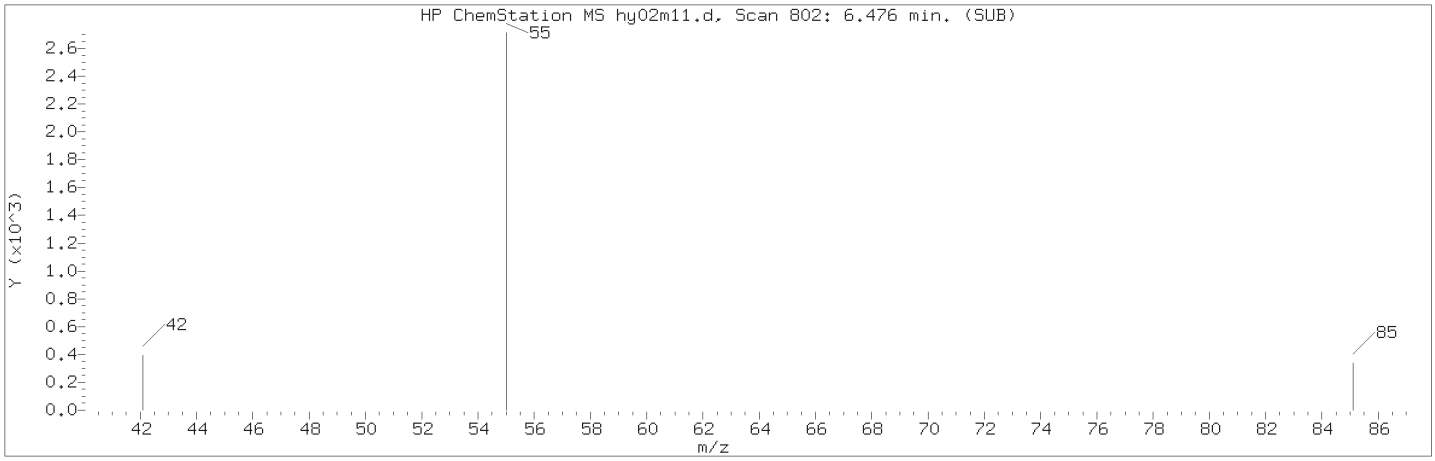
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

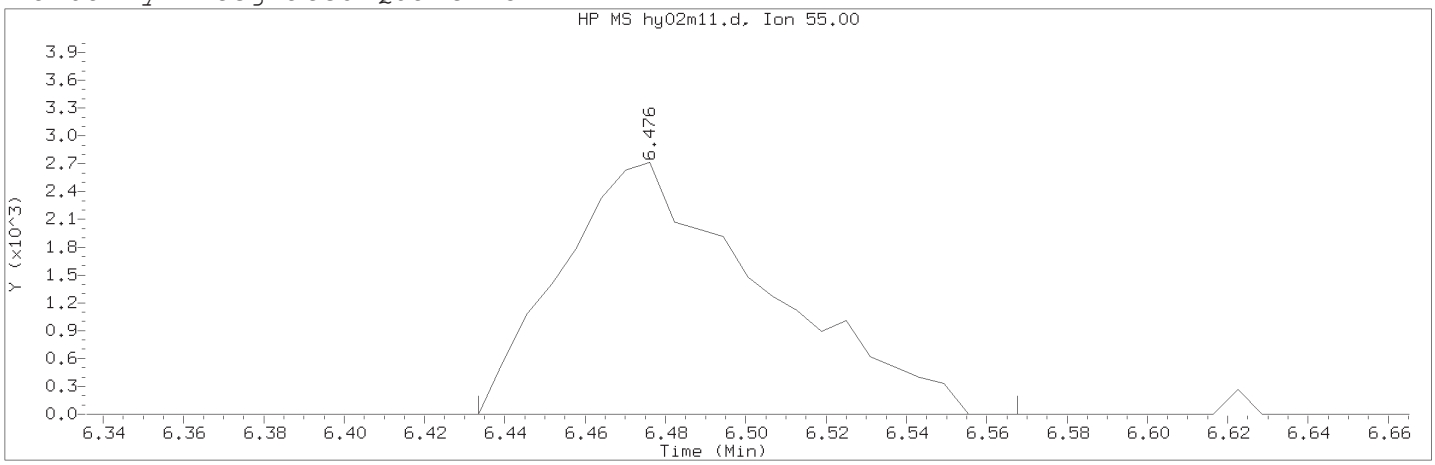
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 471
Retention Time (minutes): 4.458
Quant Ion : 65.00
Area : 76364
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 561
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

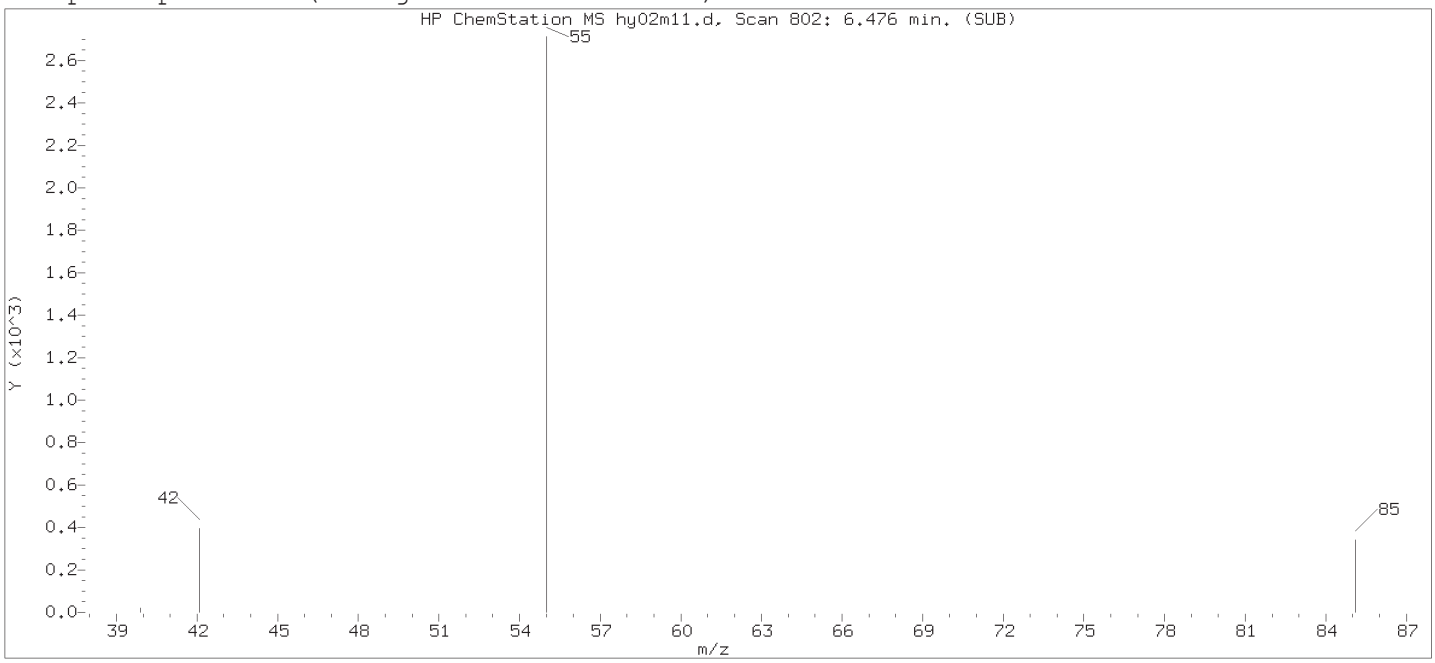
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 802
Retention Time (minutes): 6.476
Quant Ion : 55.00
Area (flag) : 9556M
On-Column Amount (ng) : 0.4435
Integration start scan : 794 Integration stop scan: 816
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

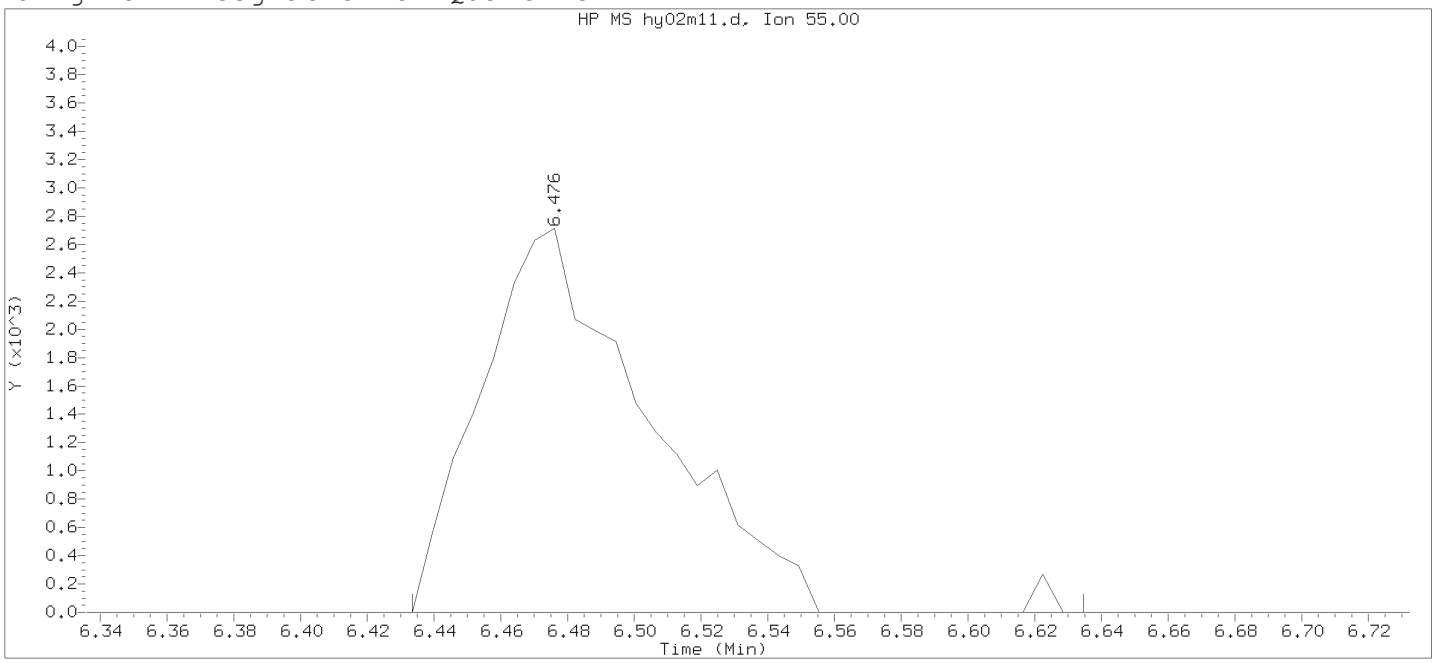
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

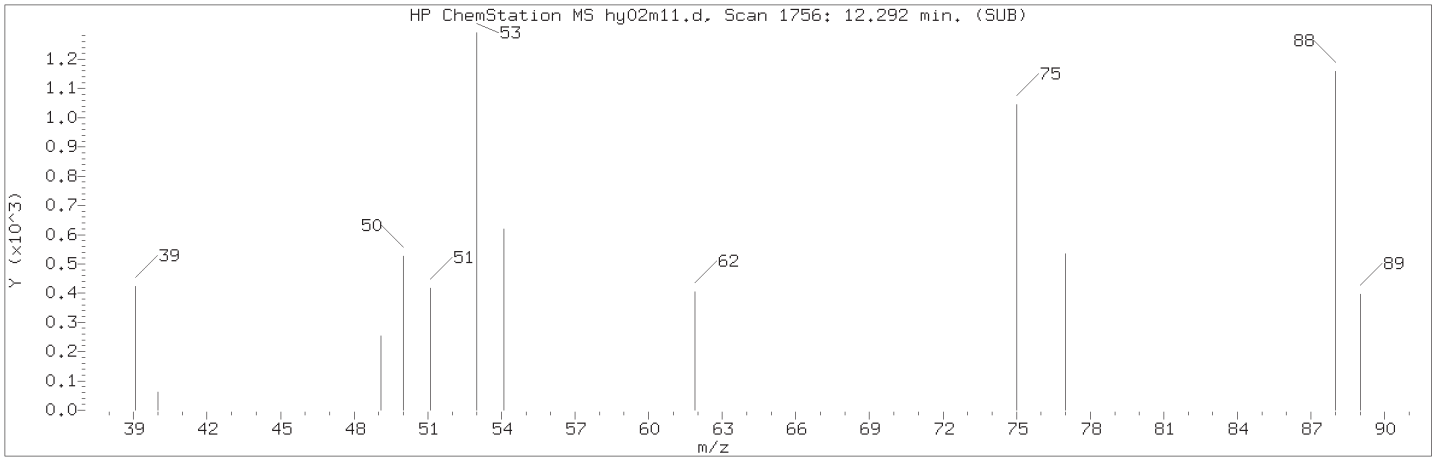
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

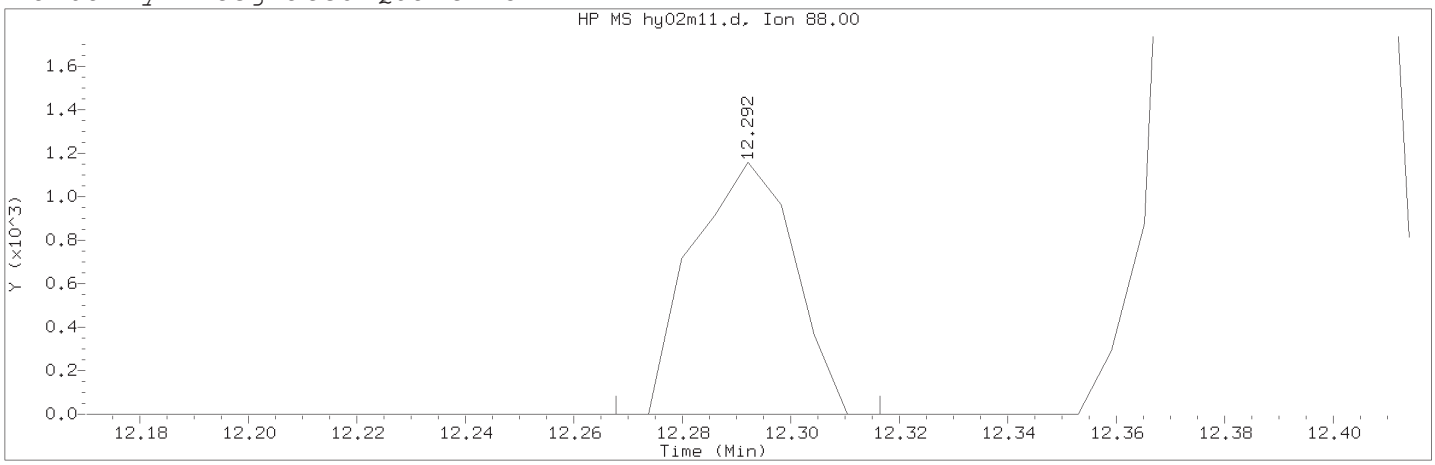
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 802
Retention Time (minutes): 6.476
Quant Ion : 55.00
Area : 9654
On-column Amount (ng) : 0.4481
Integration start scan : 794 Integration stop scan: 827
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

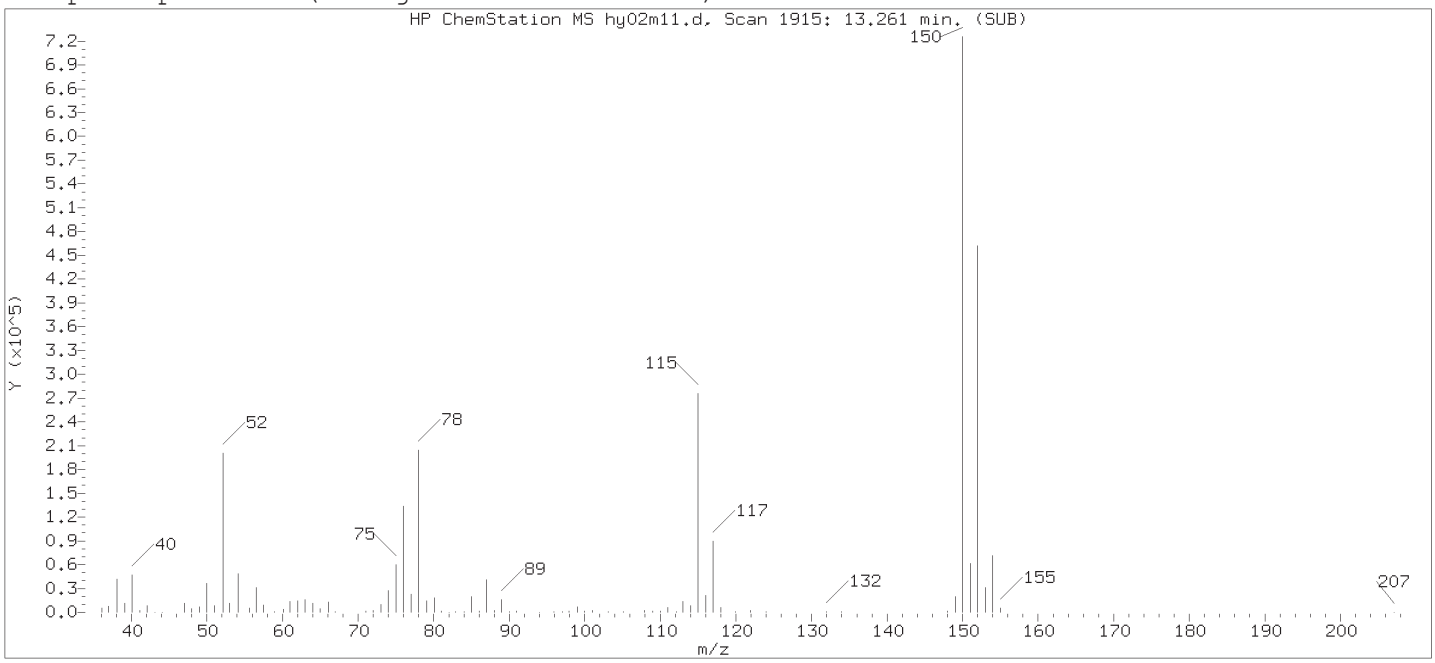
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 1506M
On-Column Amount (ng) : 0.1362
Integration start scan : 1751 Integration stop scan: 1759
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

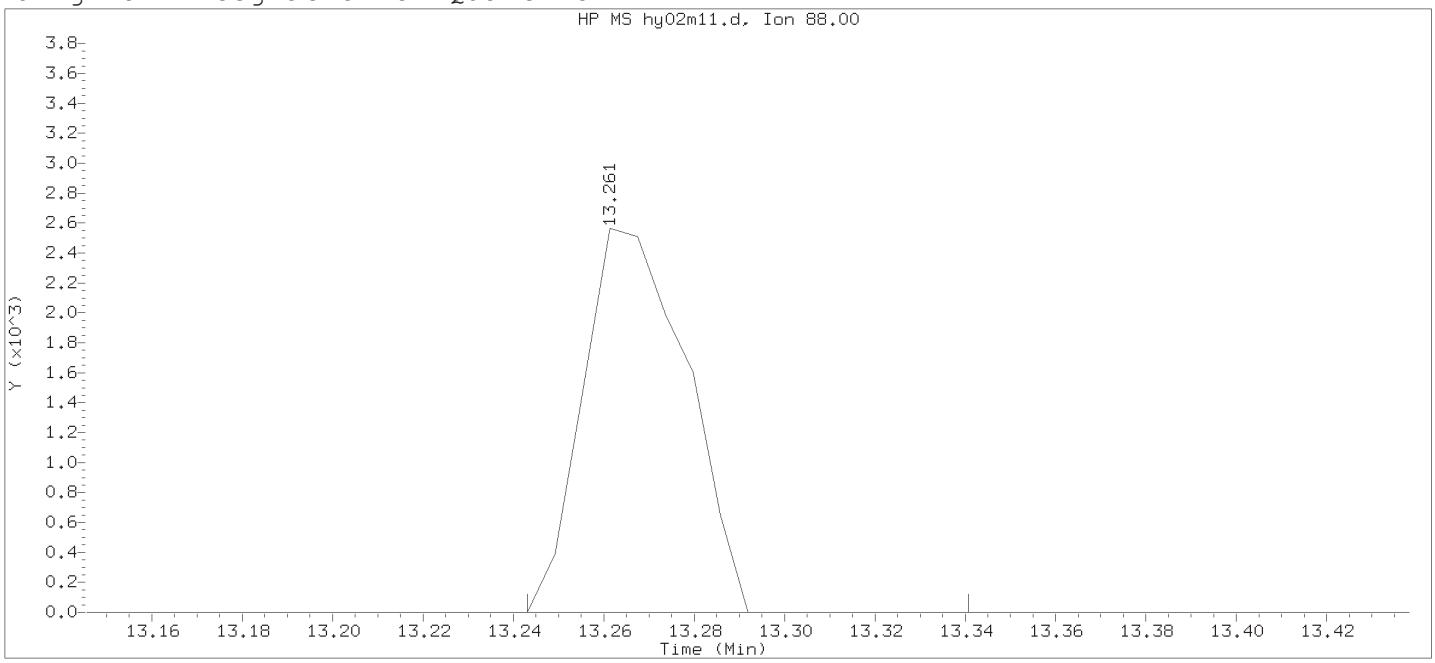
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

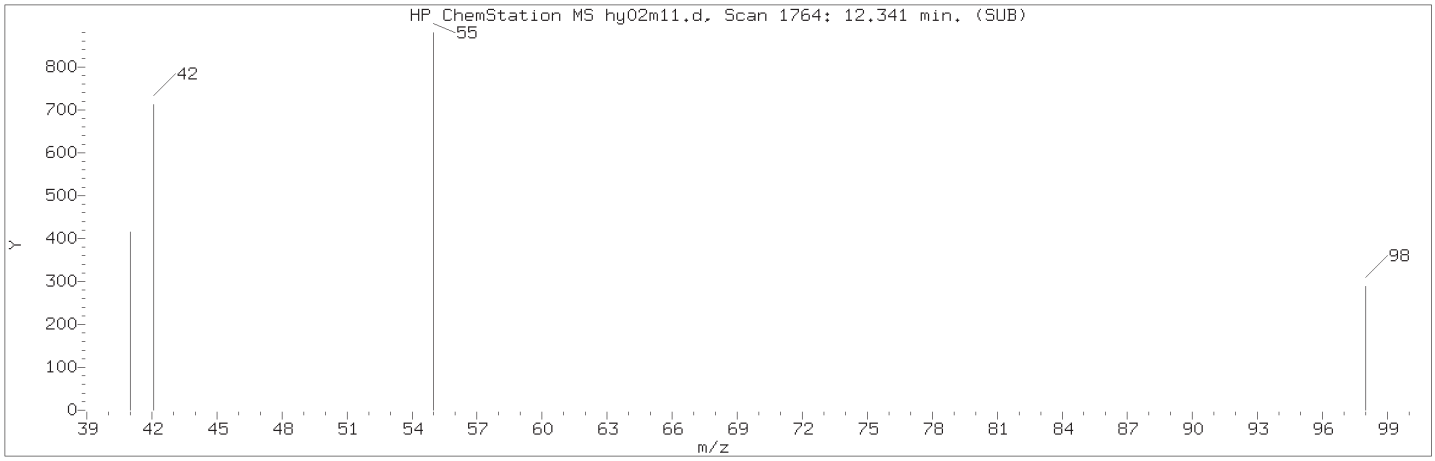
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

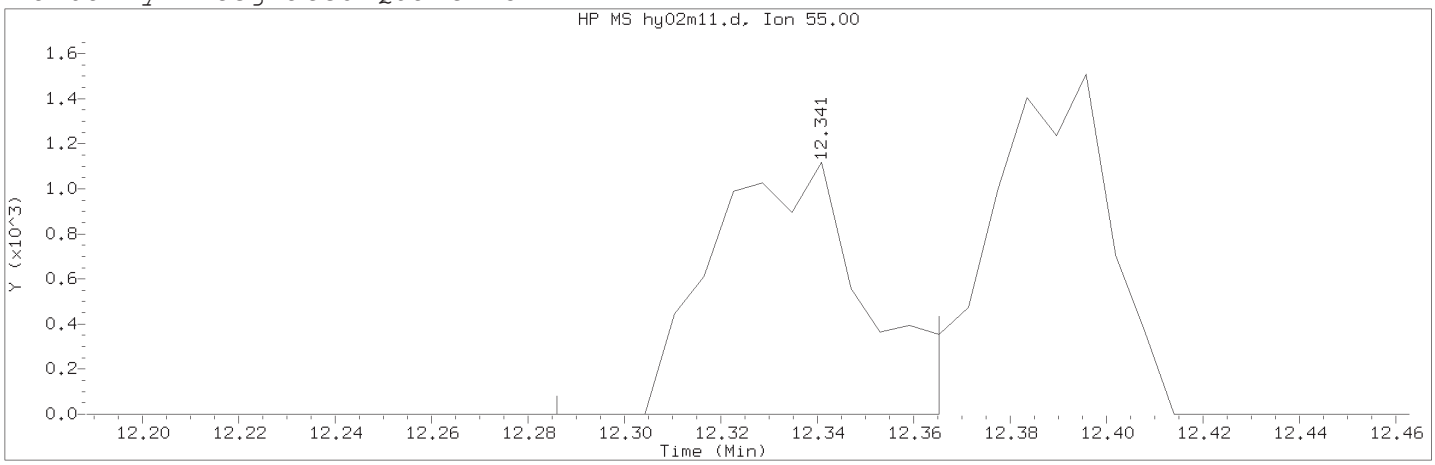
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1915
Retention Time (minutes): 13.261
Quant Ion : 88.00
Area : 4090
On-column Amount (ng) : 0.4136
Integration start scan : 1911 Integration stop scan: 1927
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

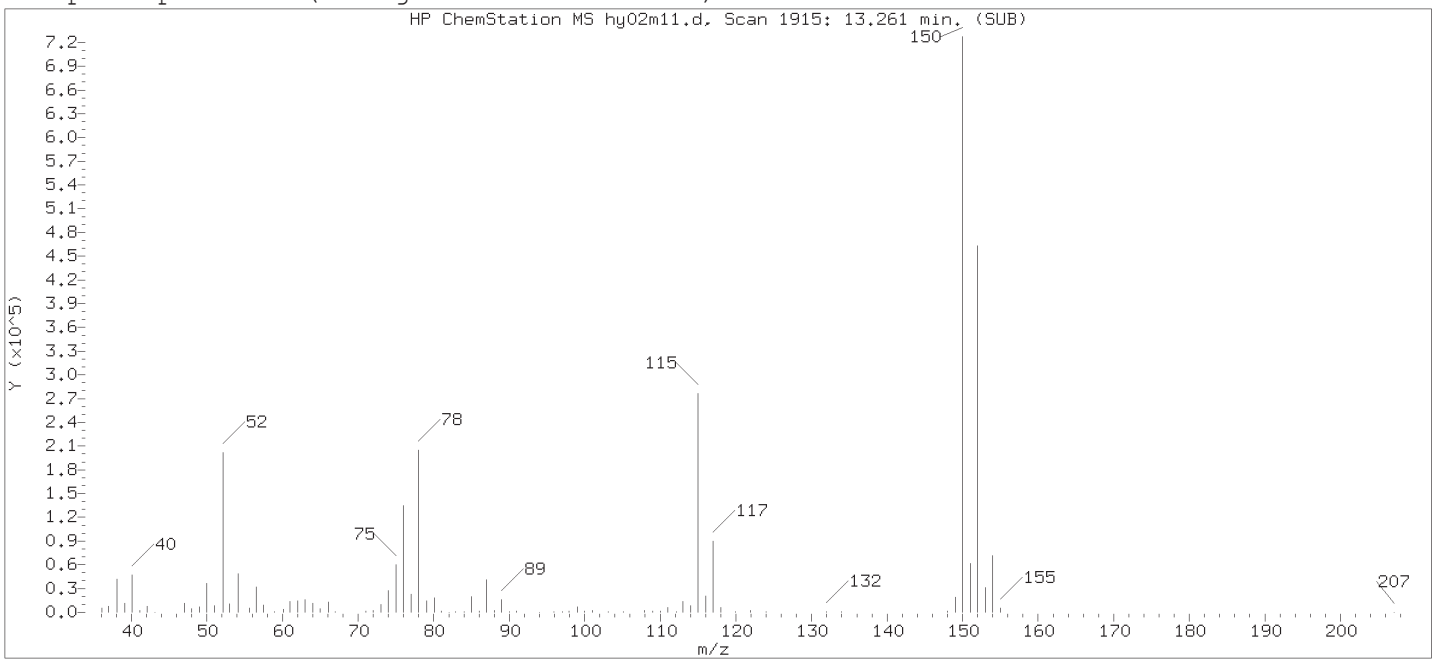
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1764
Retention Time (minutes): 12.341
Quant Ion : 55.00
Area (flag) : 2470M
On-Column Amount (ng) : 4.3909
Integration start scan : 1754 Integration stop scan: 1767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

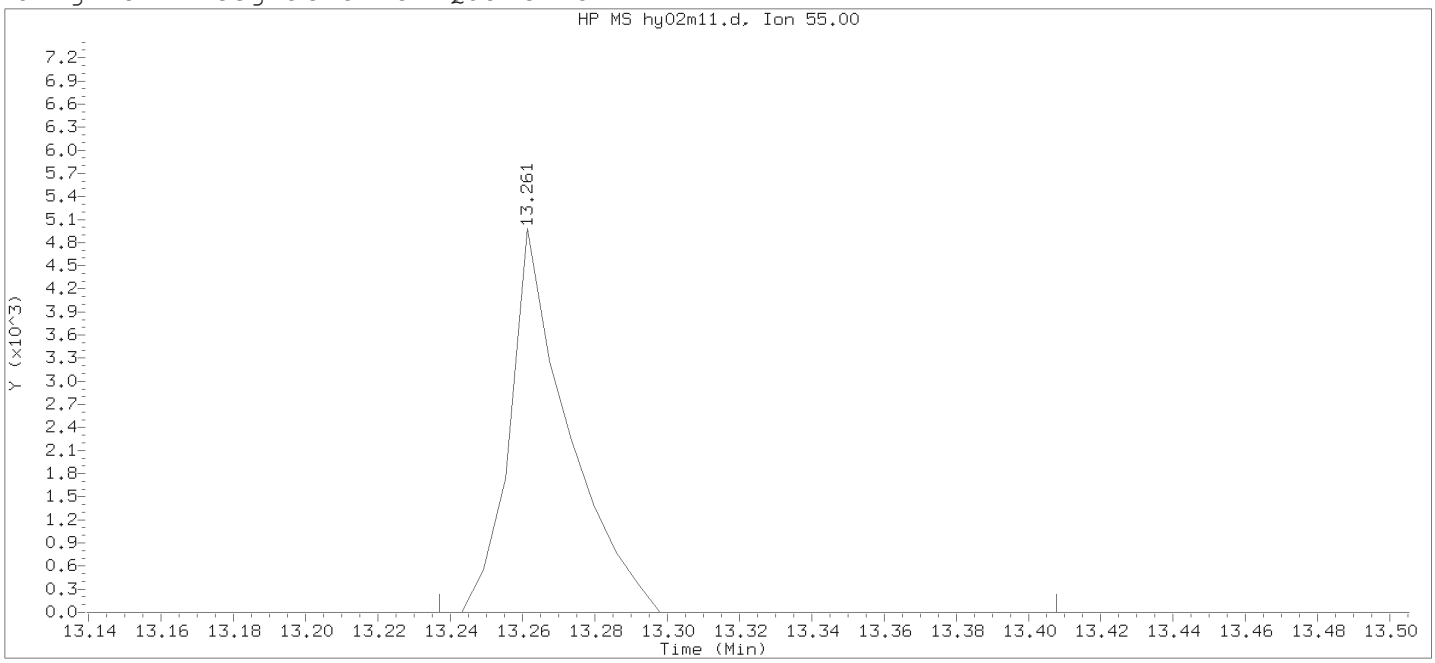
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



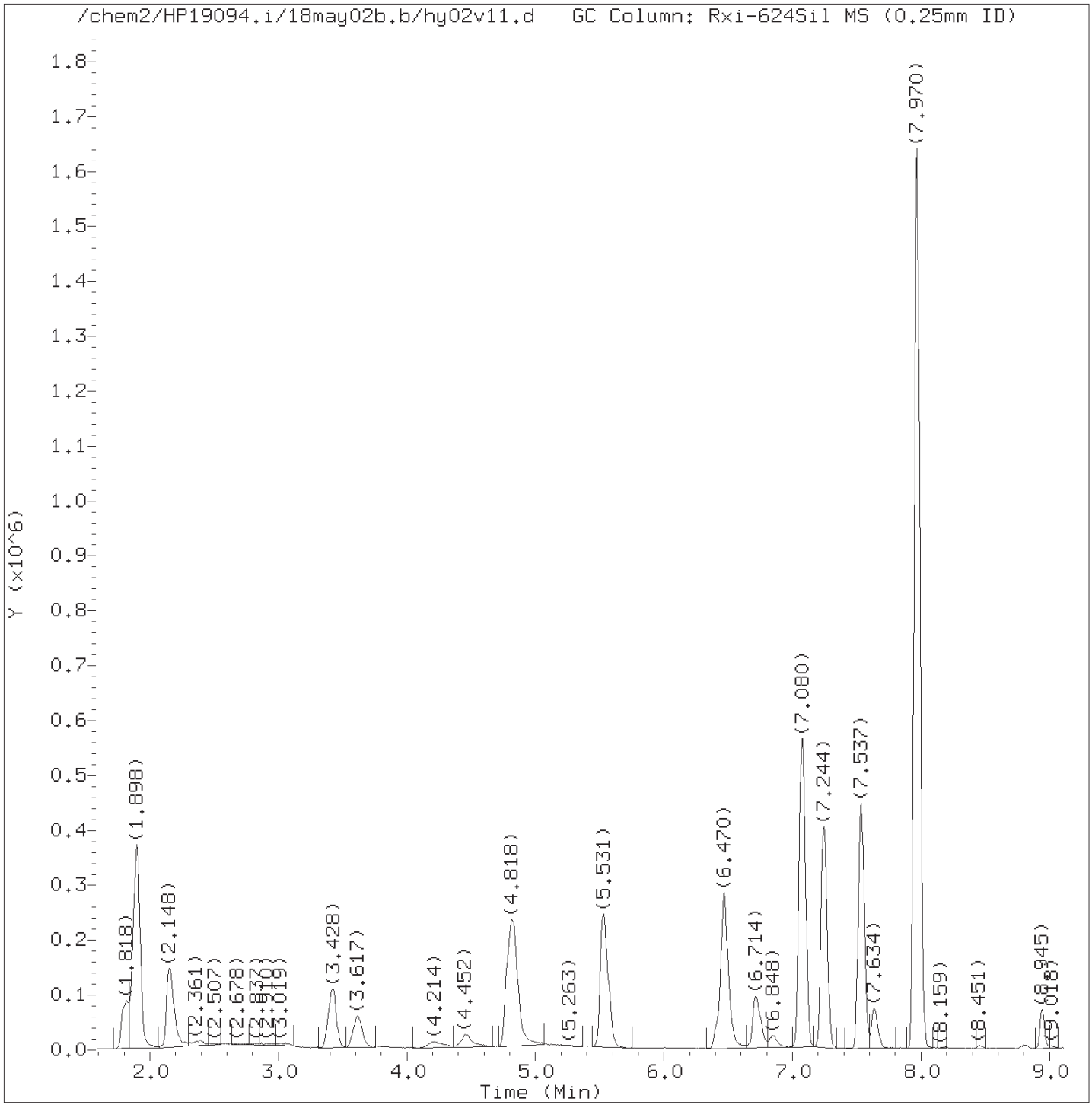
Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1915
Retention Time (minutes): 13.261
Quant Ion : 55.00
Area : 5604
On-column Amount (ng) : 11.1430
Integration start scan : 1910 Integration stop scan: 1938
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: DVV10203



Total Ion Chromatogram (TIC)

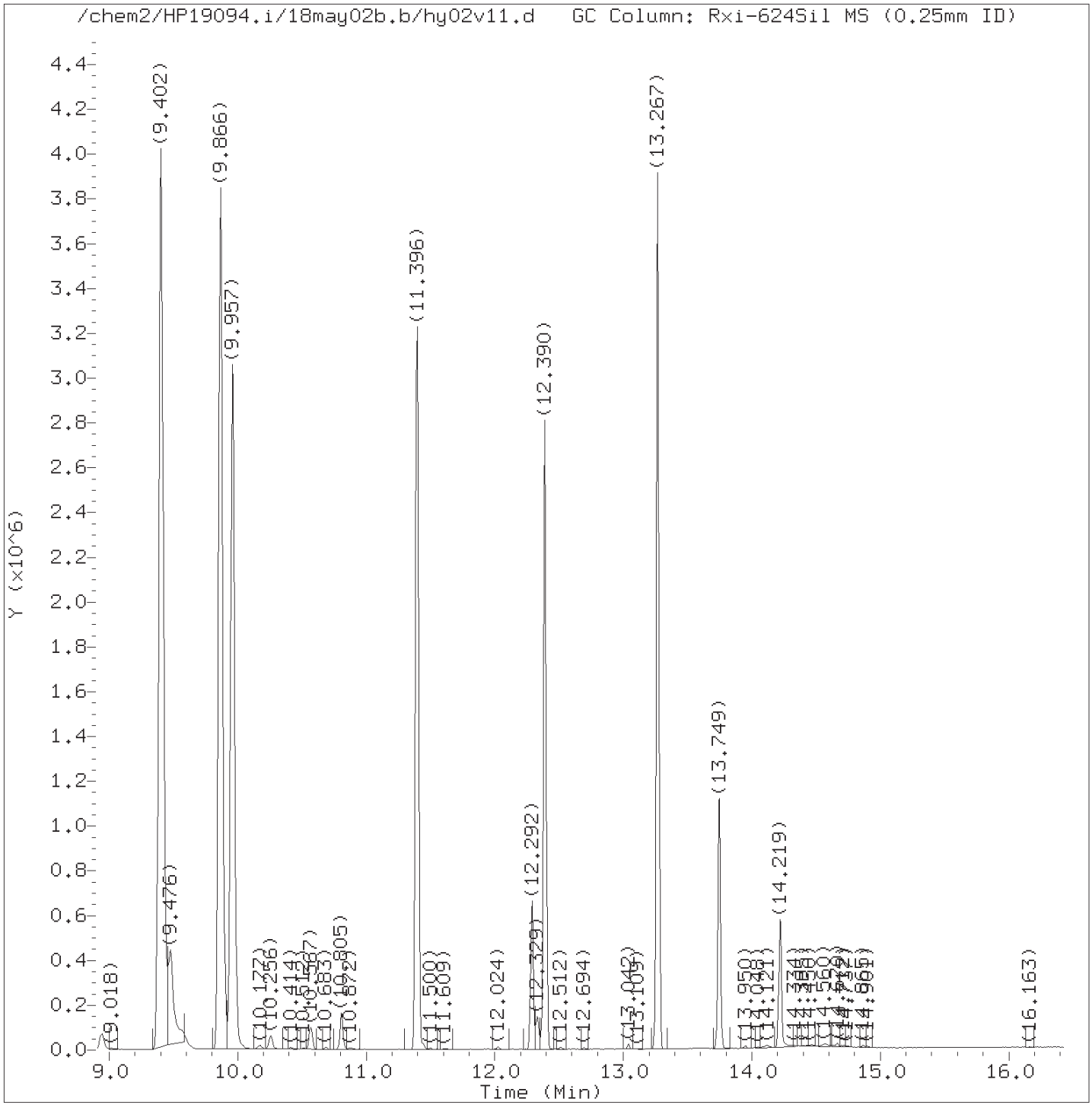
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

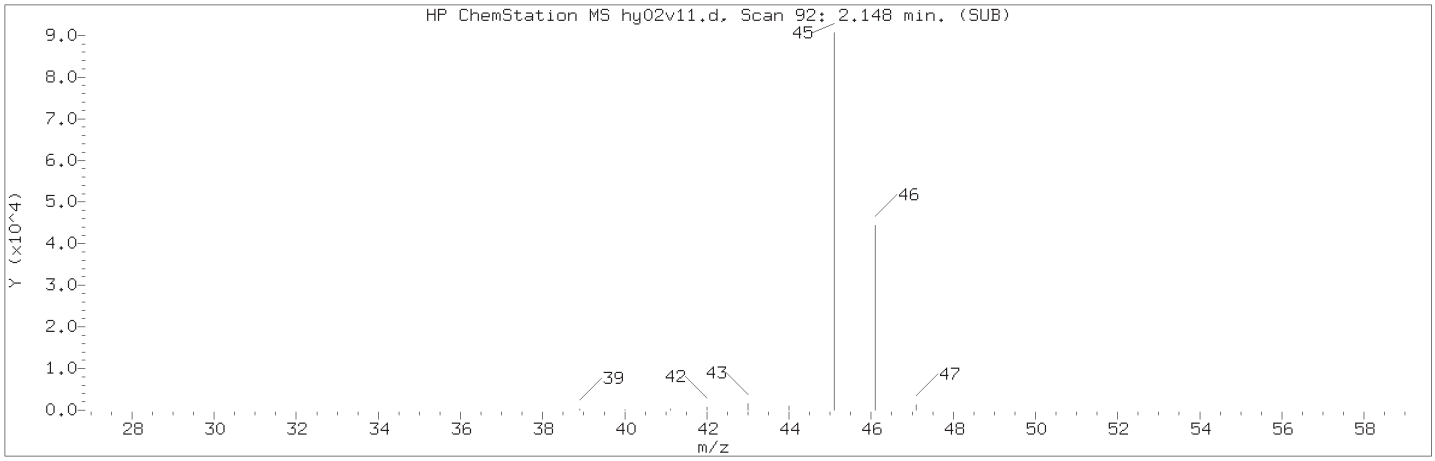
Sample Name: LCSH88 Lab Sample ID: LCSH88

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.148	45	368555M	4.907
25) Acetonitrile	(1)	4.214	41	82341M	40.799
26)*t-Butyl Alcohol-d10	(1)	4.470	65	83582M	50.000
36) Vinyl Acetate	(2)	5.531	43	844654	11.805
43) Methyl Acrylate	(2)	6.470	55	584105	26.458
50)$Dibromofluoromethane	(2)	7.074	113	565872	9.789
53) 1-Chlorobutane	(2)	7.244	56	535230	5.066
57)$1,2-Dichloroethane-d4	(2)	7.531	102	101751	9.983
63)*Fluorobenzene	(2)	7.970	96	2339478	10.000
77) Chloroacetonitrile	(2)	9.463	75	217752	247.495
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	107445	5.079
82)$Toluene-d8	(3)	9.957	98	2378040	10.120
97)*Chlorobenzene-d5	(3)	11.396	117	1701187	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	141422M	13.065
112) Cyclohexanone	(1)	12.329	55	72992M	132.593
111)$4-Bromofluorobenzene	(3)	12.390	95	830464	9.962
133)*1,4-Dichlorobenzene-d4	(4)	13.267	152	891015	10.000
142) Hexachloroethane	(4)	13.743	117	197454	5.264

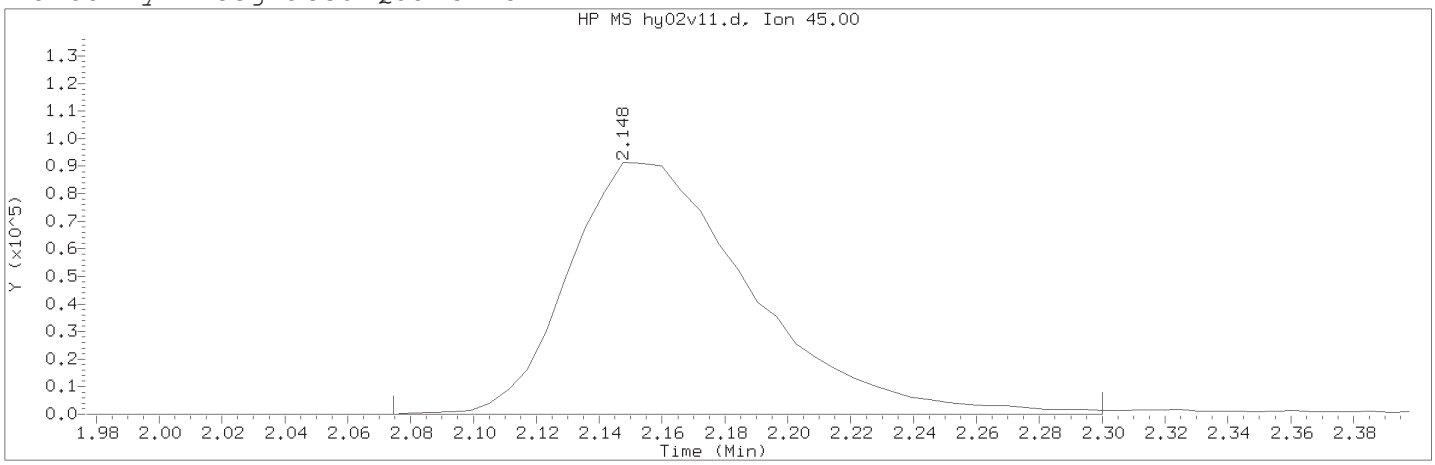
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

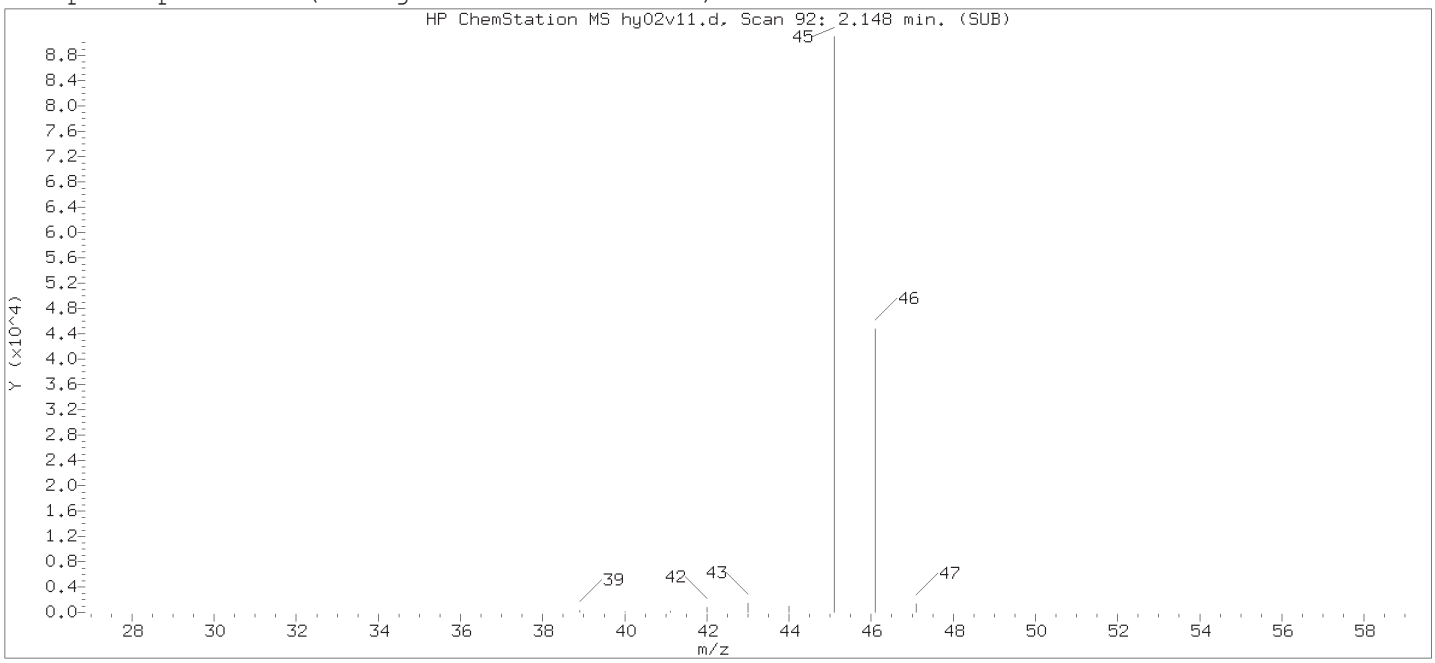
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Quant Ion : 45.00
Area (flag) : 368555M
On-Column Amount (ng) : 4.9074
Integration start scan : 79 Integration stop scan: 116
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

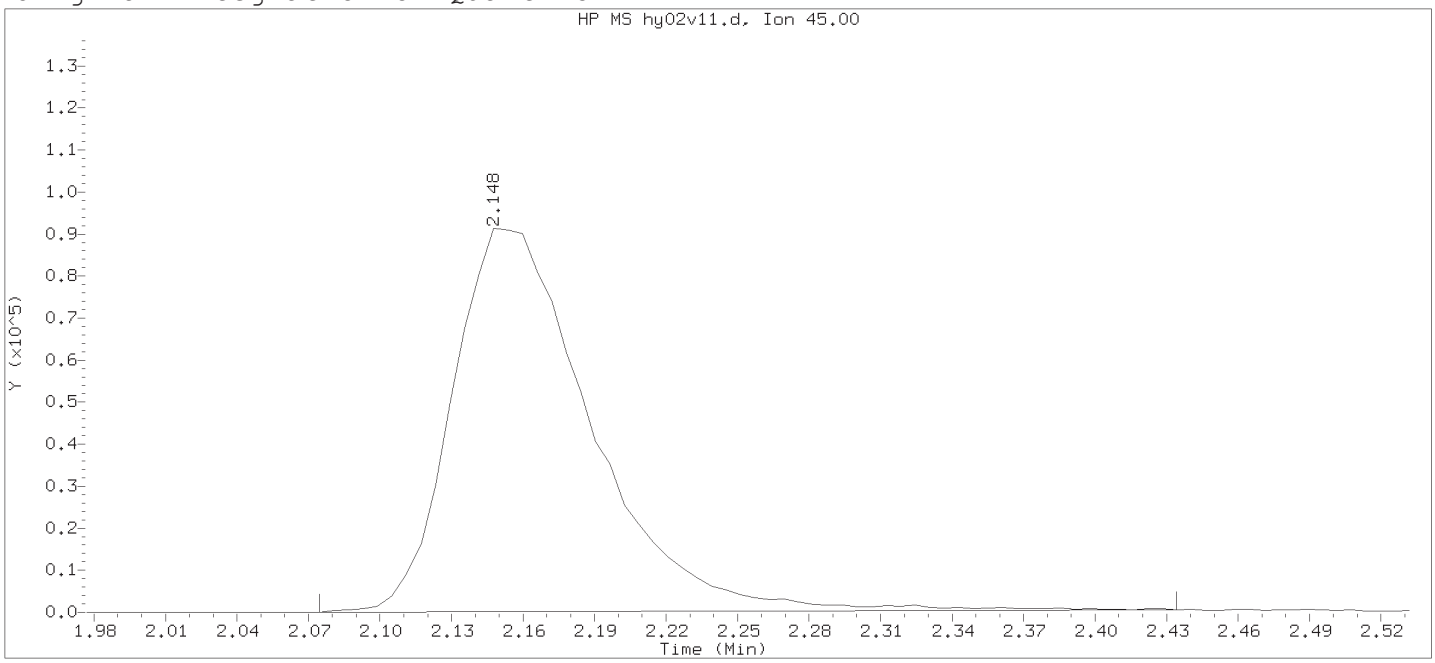
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

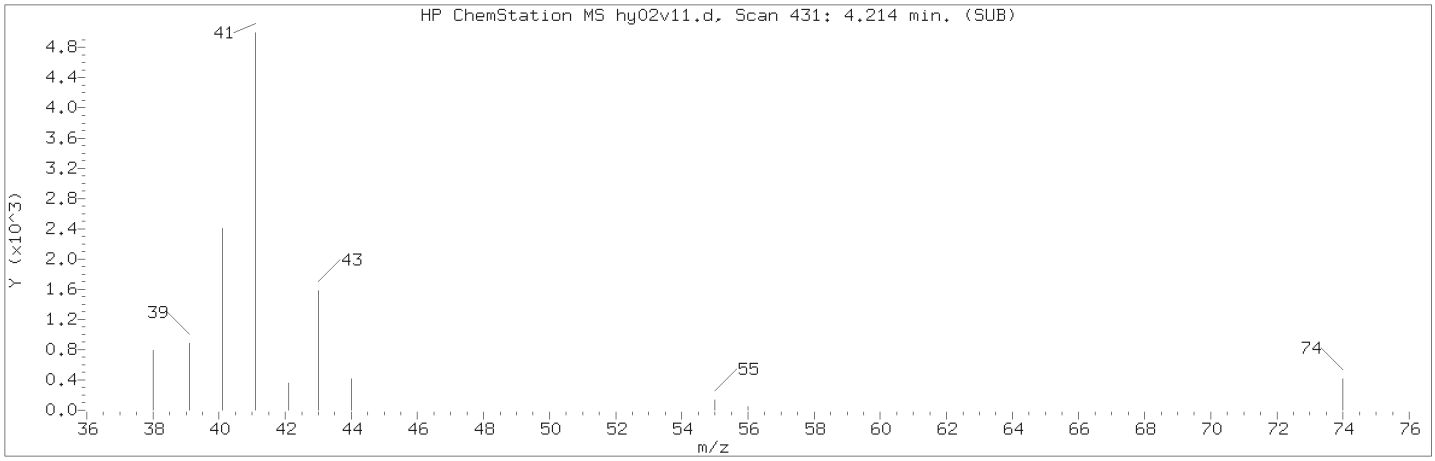
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

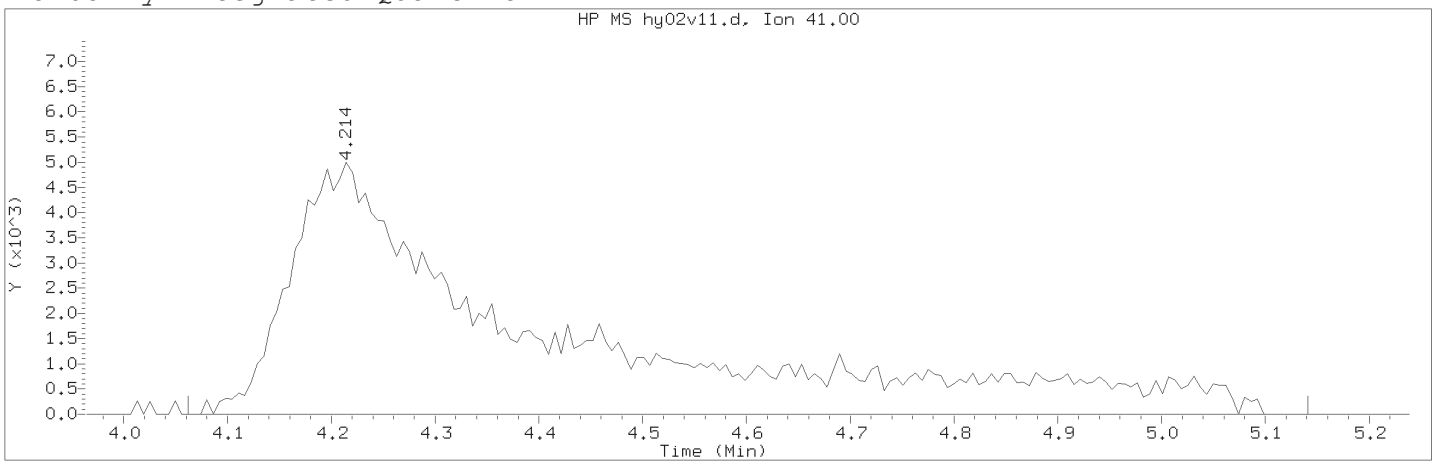
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 92		
Retention Time (minutes)	: 2.148		
Quant Ion	: 45.00		
Area	: 369928		
On-column Amount (ng)	: 4.9257		
Integration start scan	: 79	Integration stop scan:	138
Y at integration start	: 0	Y at integration end:	605

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

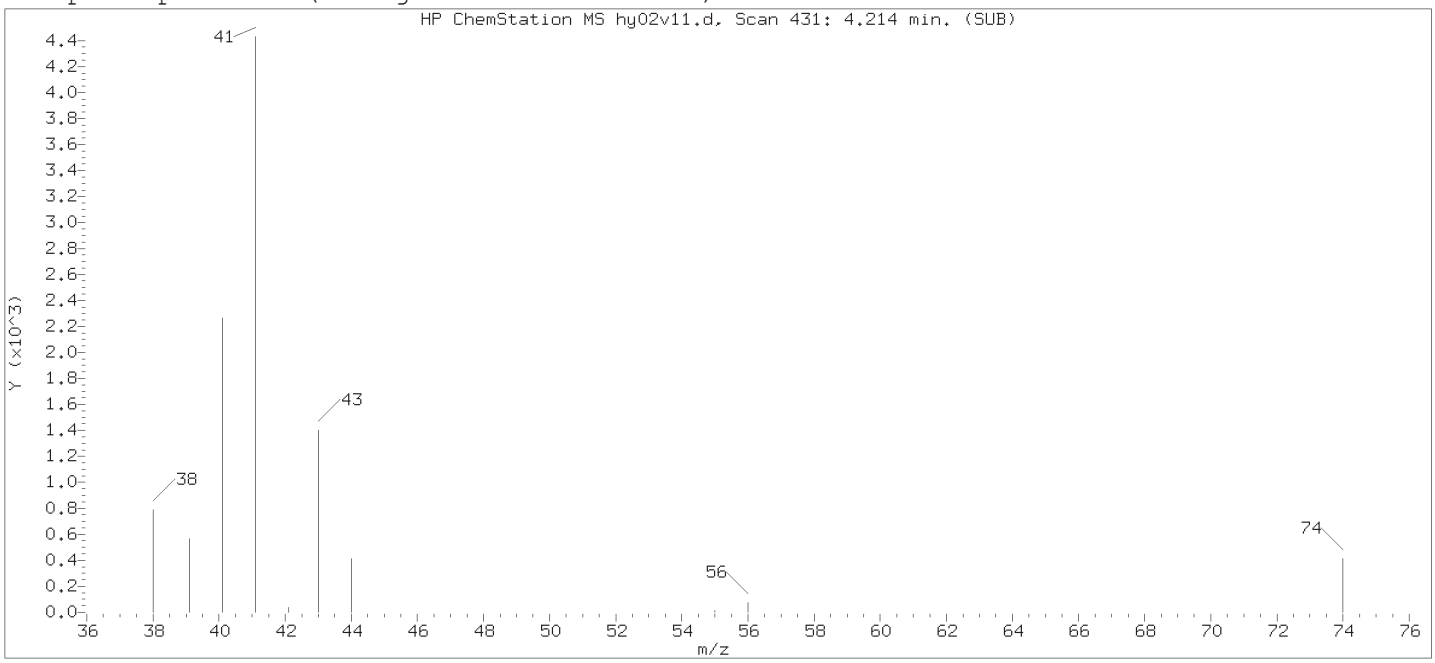
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area (flag) : 82341M
On-Column Amount (ng) : 40.7988
Integration start scan : 405 Integration stop scan: 582
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

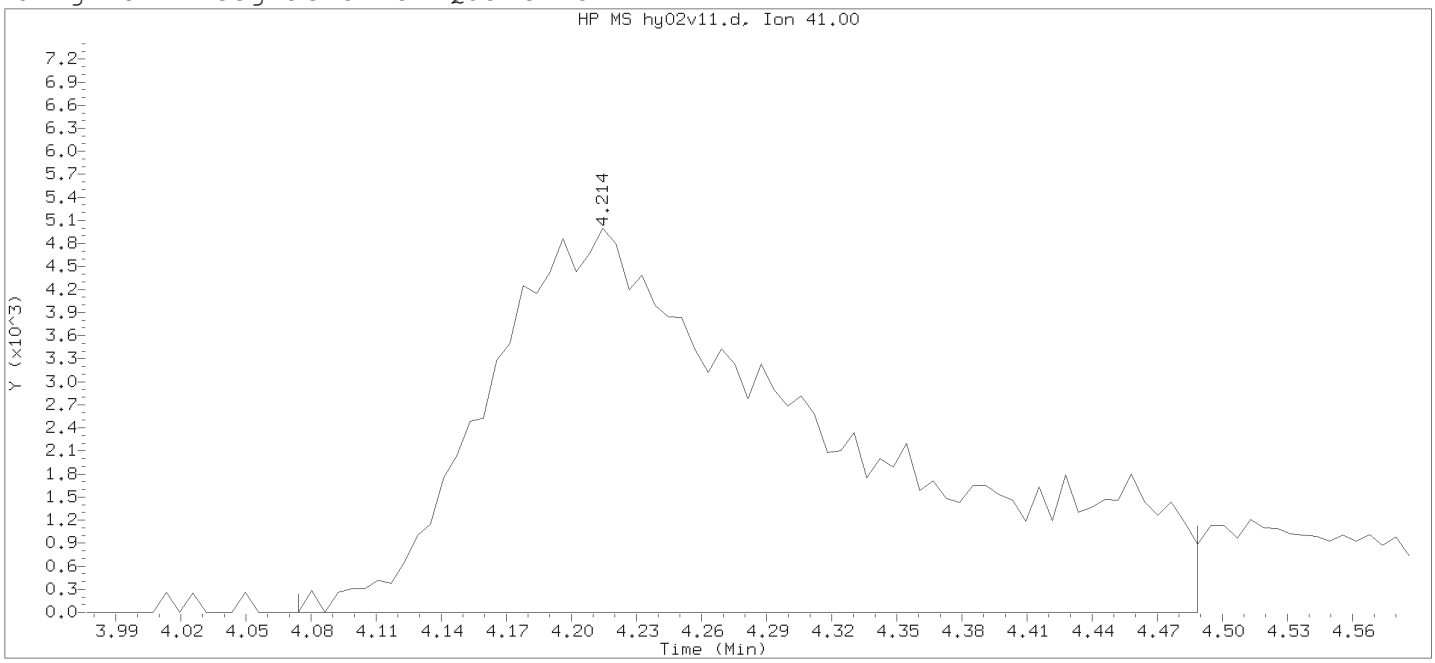
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

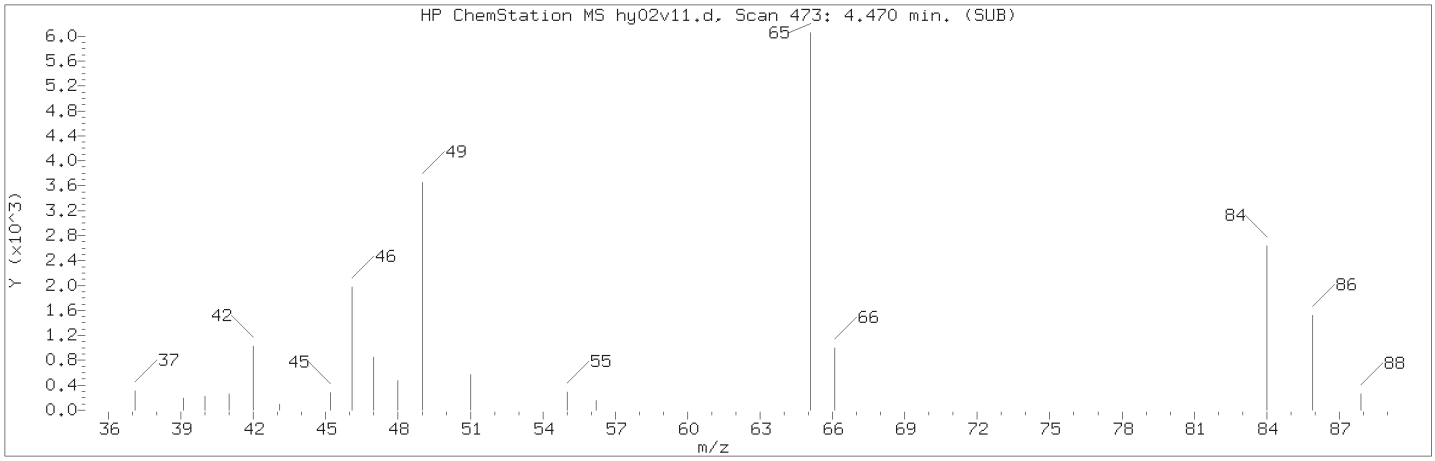
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

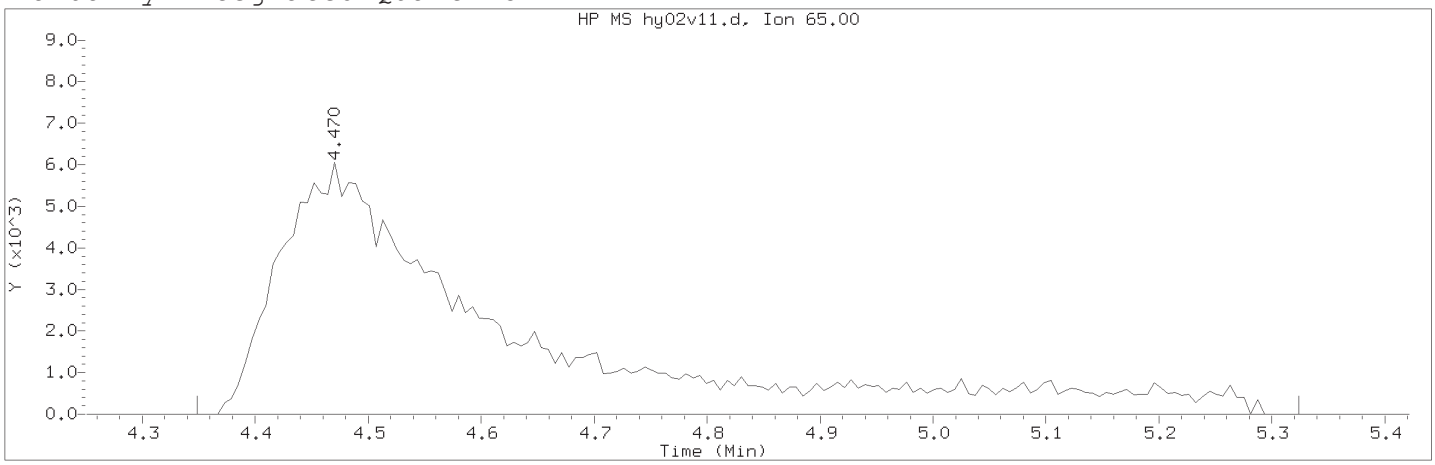
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area : 56012
On-column Amount (ng) : 28.2326
Integration start scan : 407 Integration stop scan: 475
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

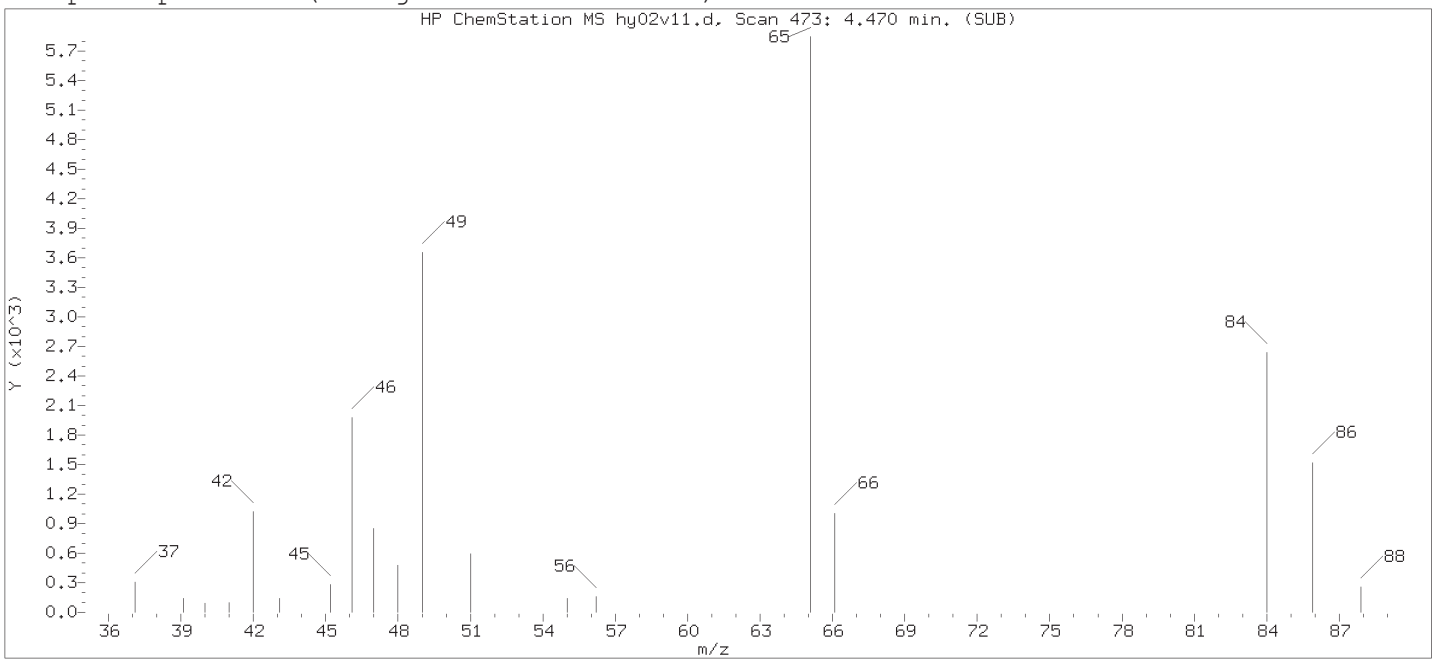
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 83582M
On-Column Amount (ng) : 50.0000
Integration start scan : 452 Integration stop scan: 612
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

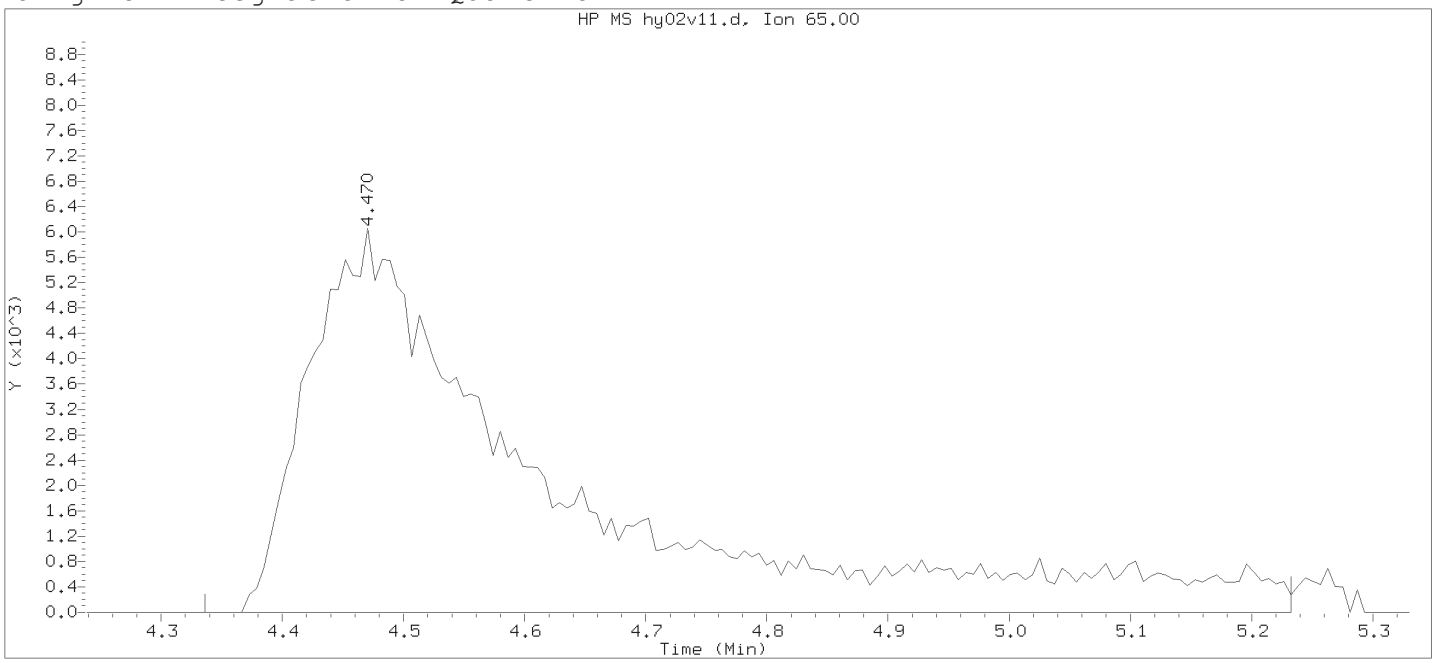
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

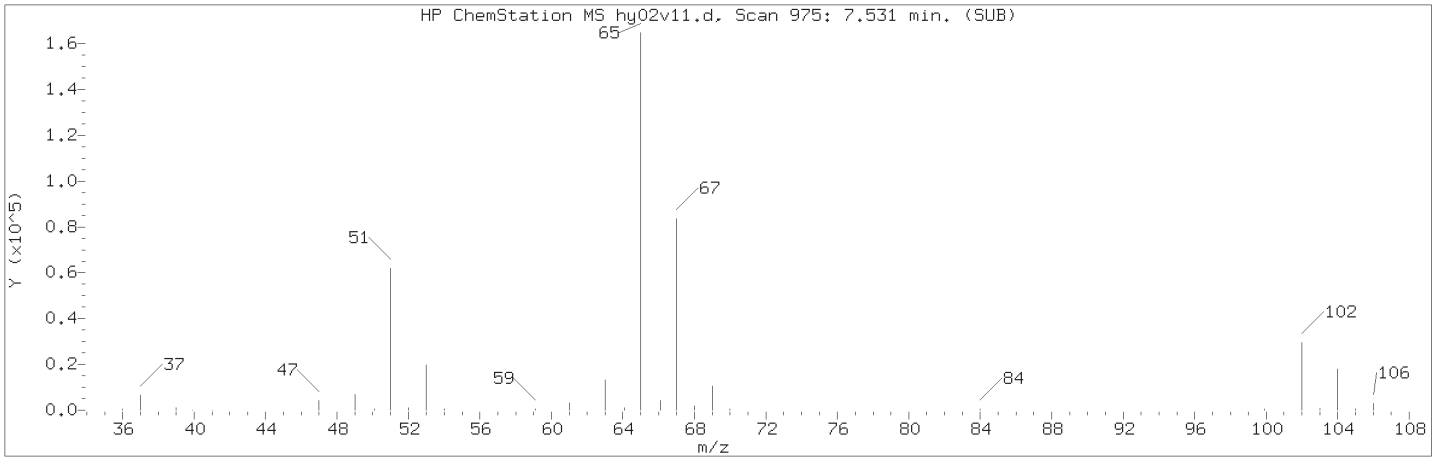
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

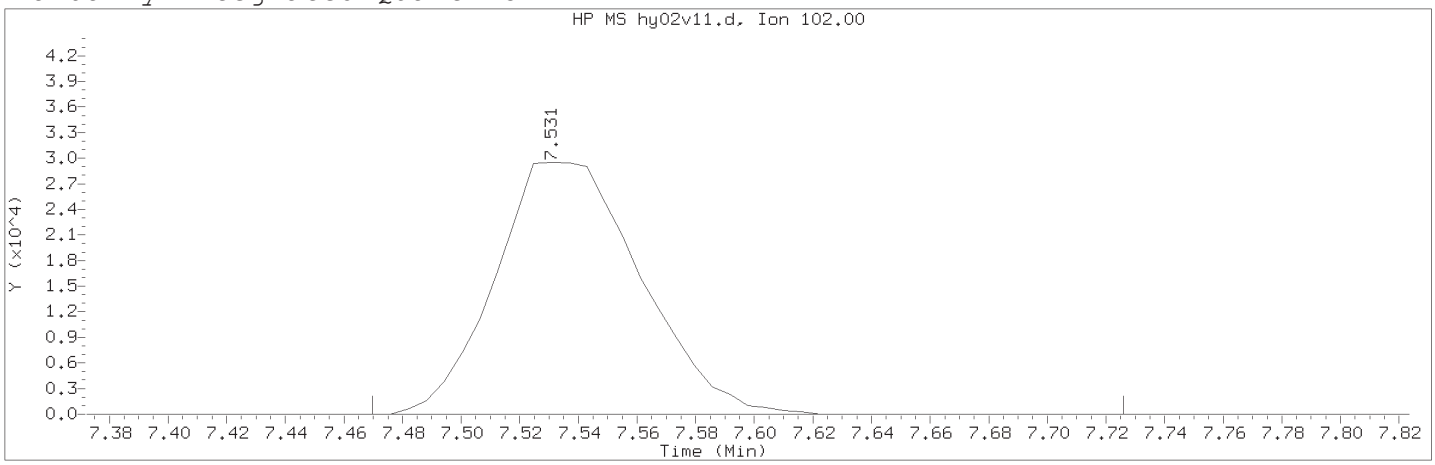
Compound Number	: 26
Compound Name	: t-Butyl Alcohol-d10
Scan Number	: 473
Retention Time (minutes)	: 4.470
Quant Ion	: 65.00
Area	: 82163
On-column Amount (ng)	: 50.0000
Integration start scan	: 450 Integration stop scan: 597
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

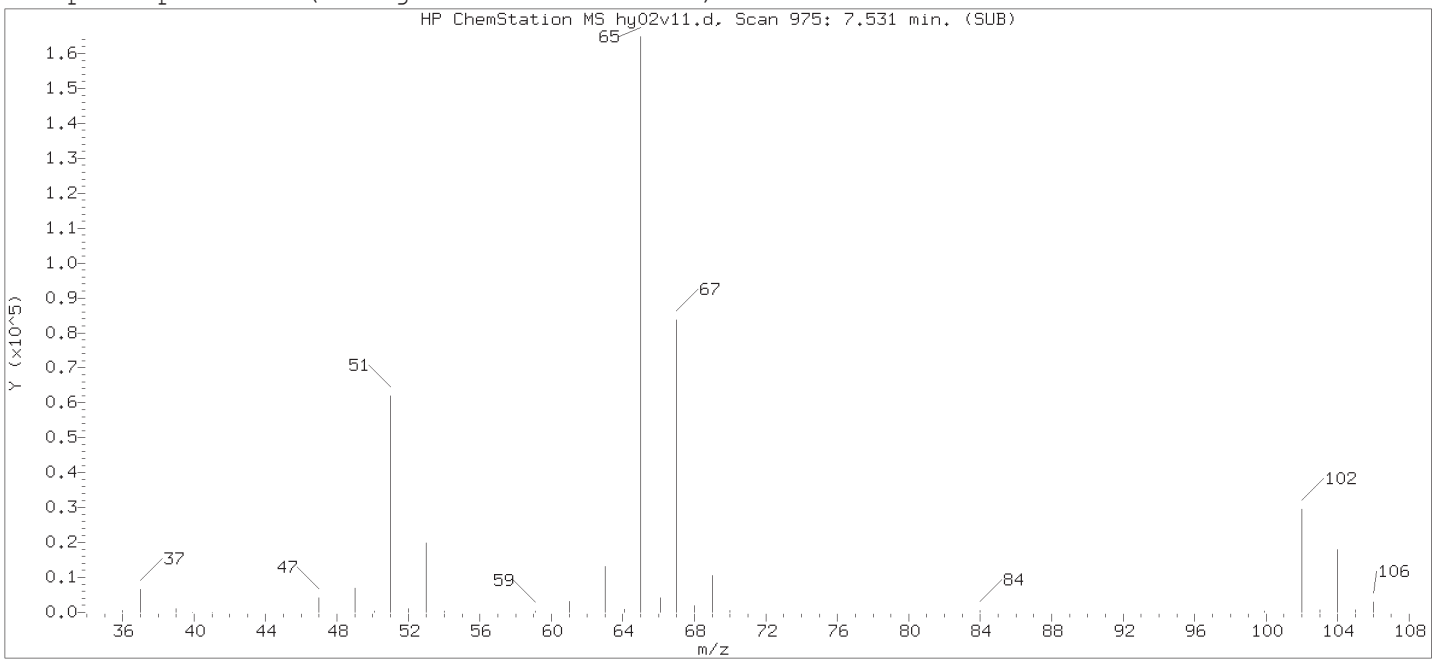
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 975
Retention Time (minutes): 7.531
Quant Ion : 102.00
Area (flag) : 101751M
On-Column Amount (ng) : 9.9826
Integration start scan : 964 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

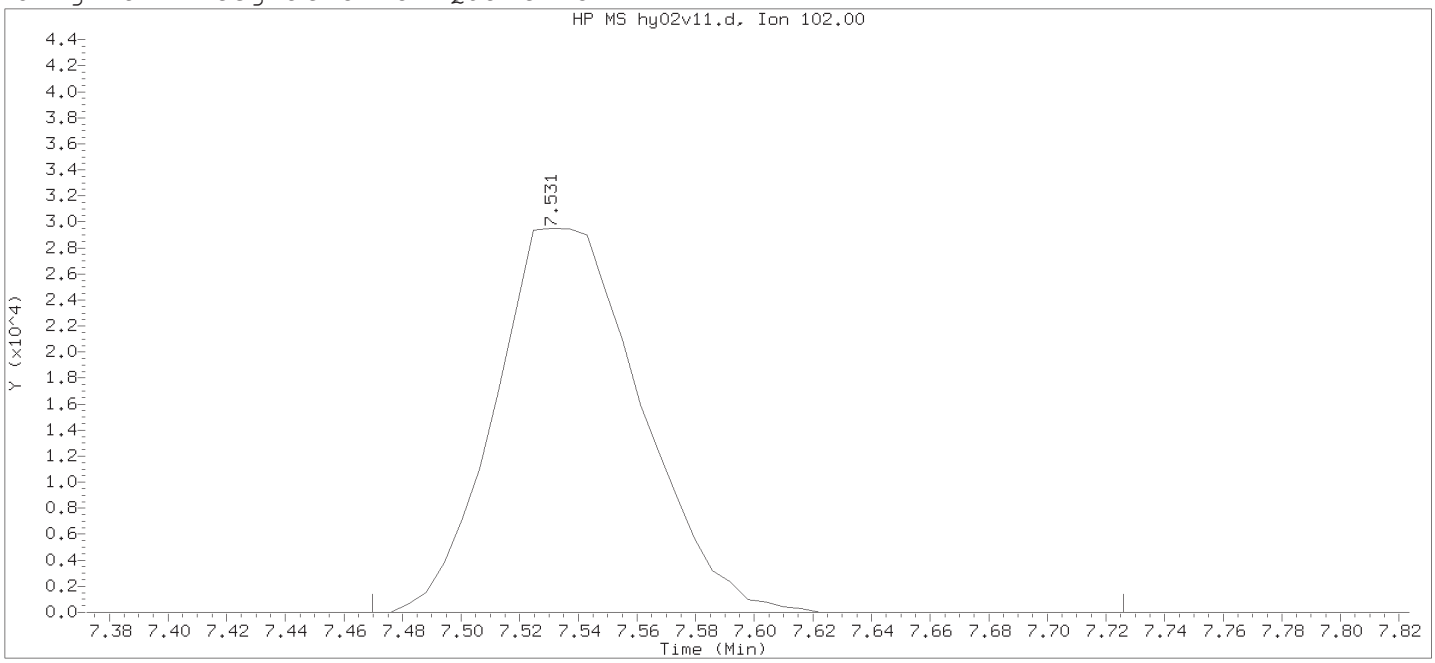
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

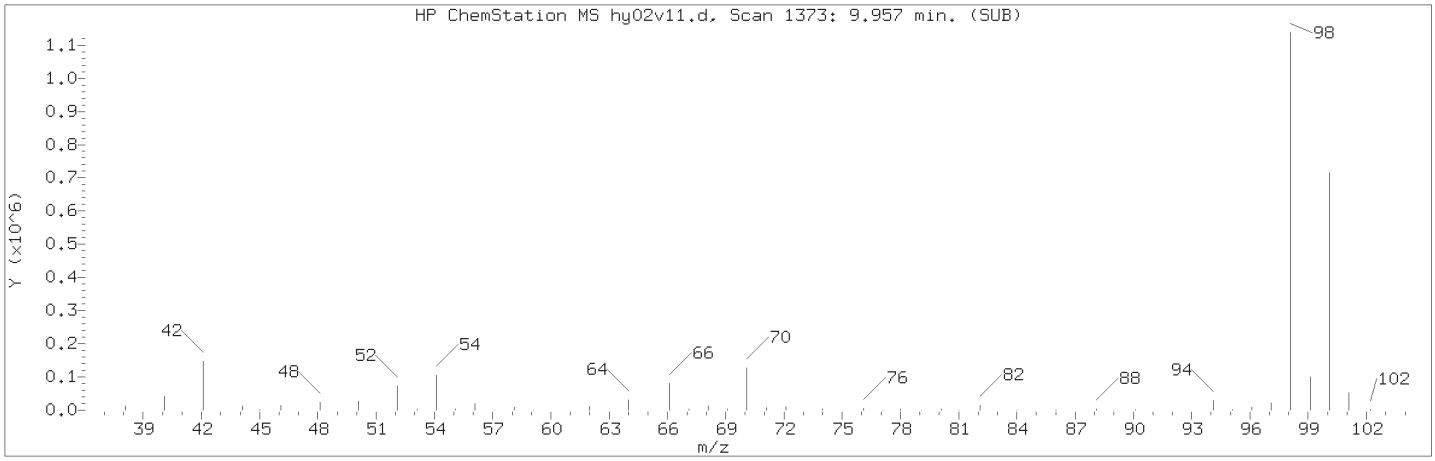
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

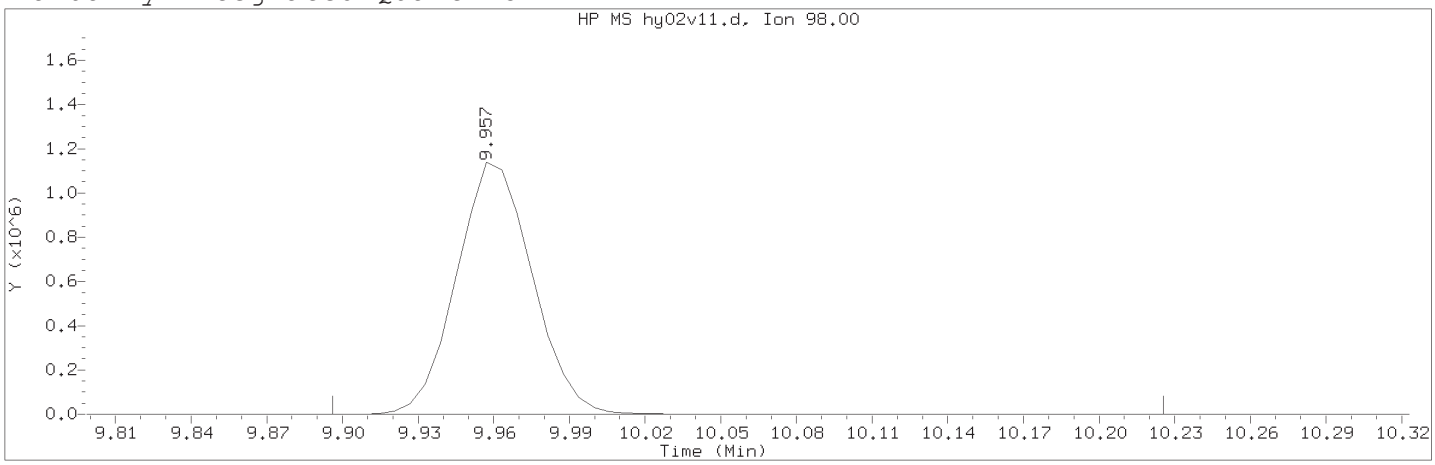
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 975
Retention Time (minutes): 7.531
Quant Ion : 102.00
Area : 101751
On-column Amount (ng) : 0.0000
Integration start scan : 964 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

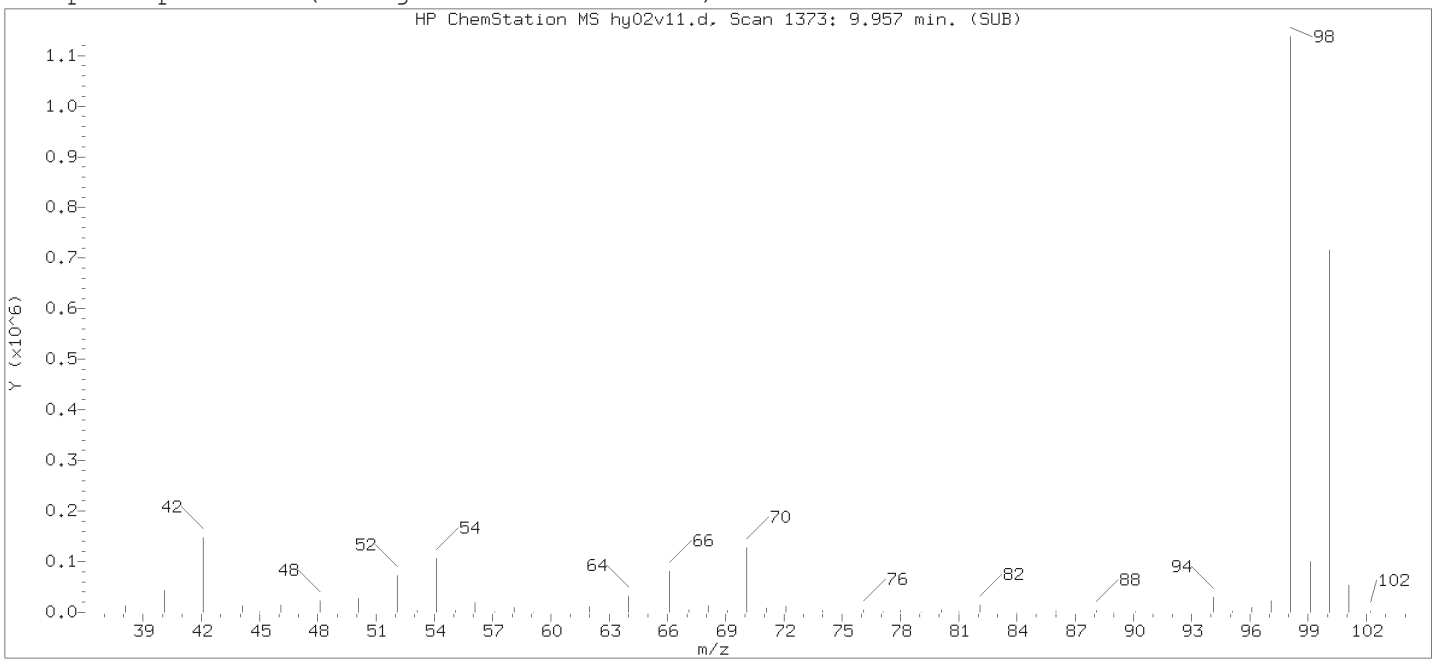
Compound Number : 82
Compound Name : Toluene-d8
Scan Number : 1373
Retention Time (minutes): 9.957
Quant Ion : 98.00
Area (flag) : 2378040M
On-Column Amount (ng) : 10.1199
Integration start scan : 1362 Integration stop scan: 1416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

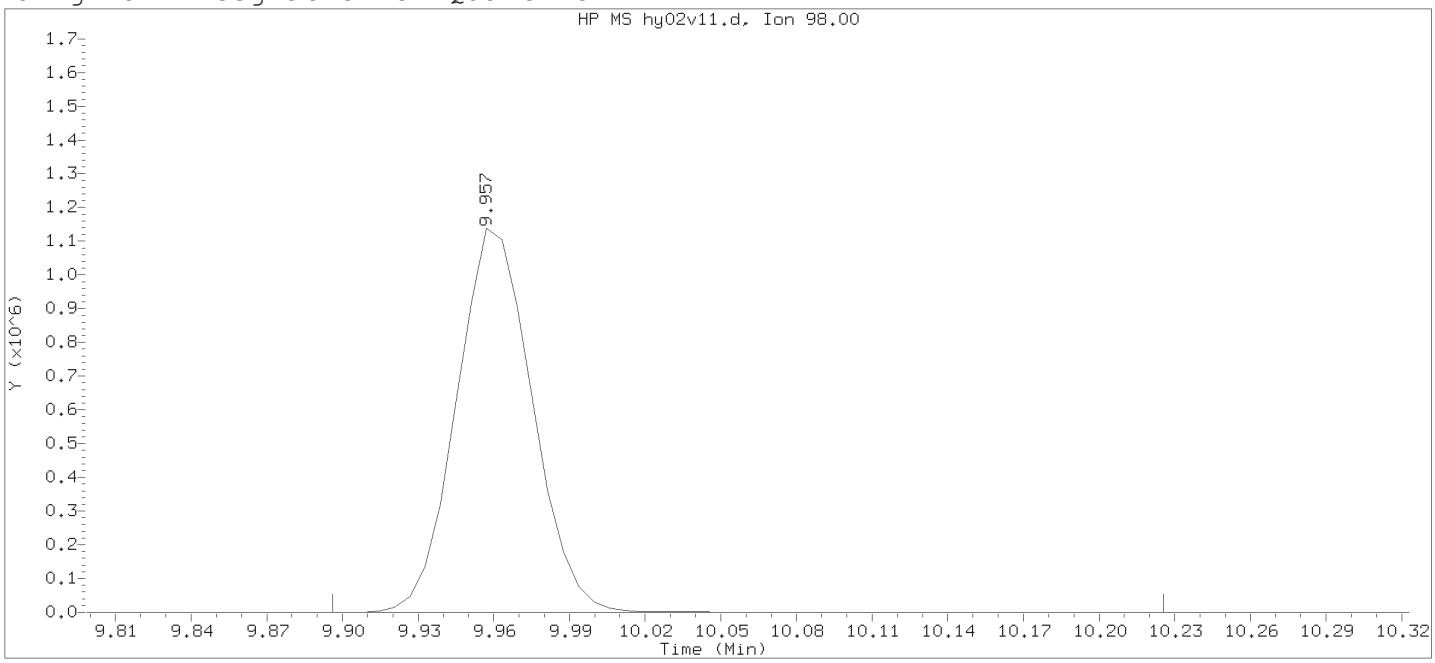
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

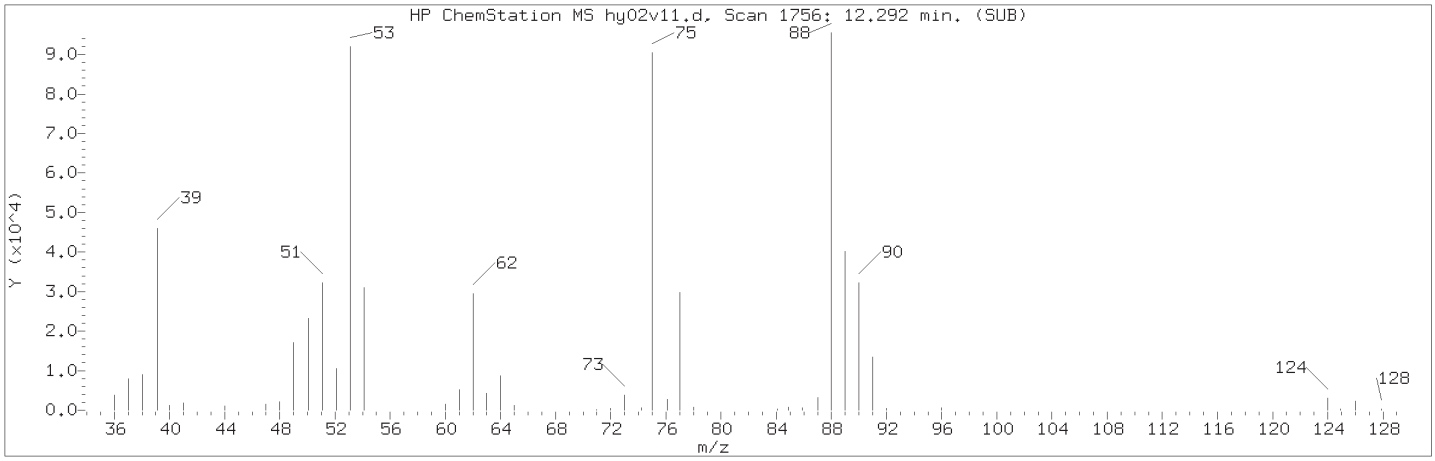
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

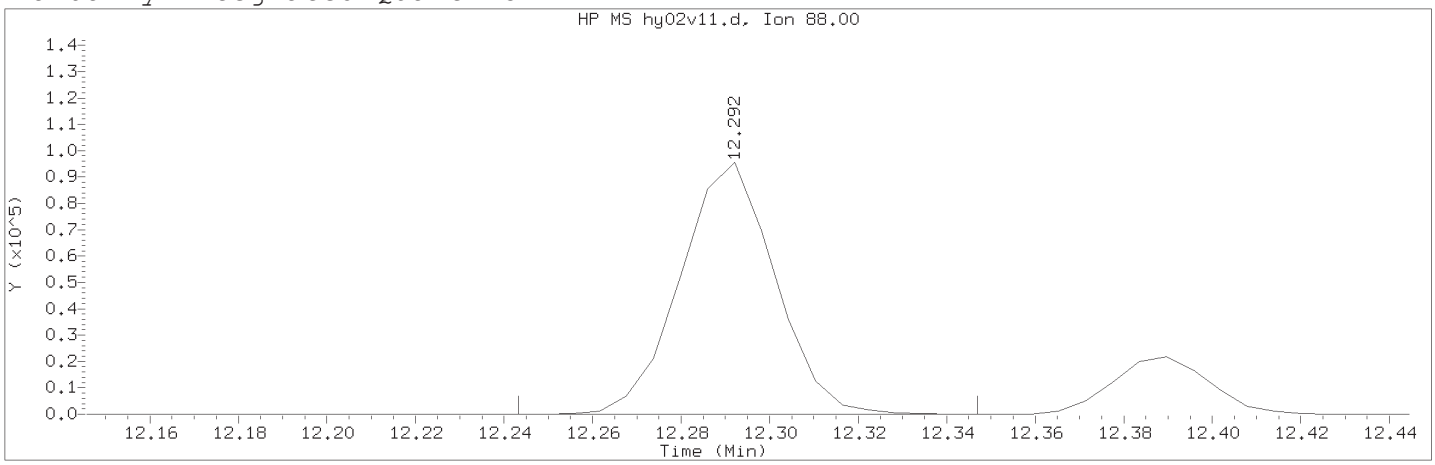
Compound Number : 82
Compound Name : Toluene-d8
Scan Number : 1373
Retention Time (minutes): 9.957
Quant Ion : 98.00
Area : 2378040
On-column Amount (ng) : 0.0000
Integration start scan : 1362 Integration stop scan: 1416
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

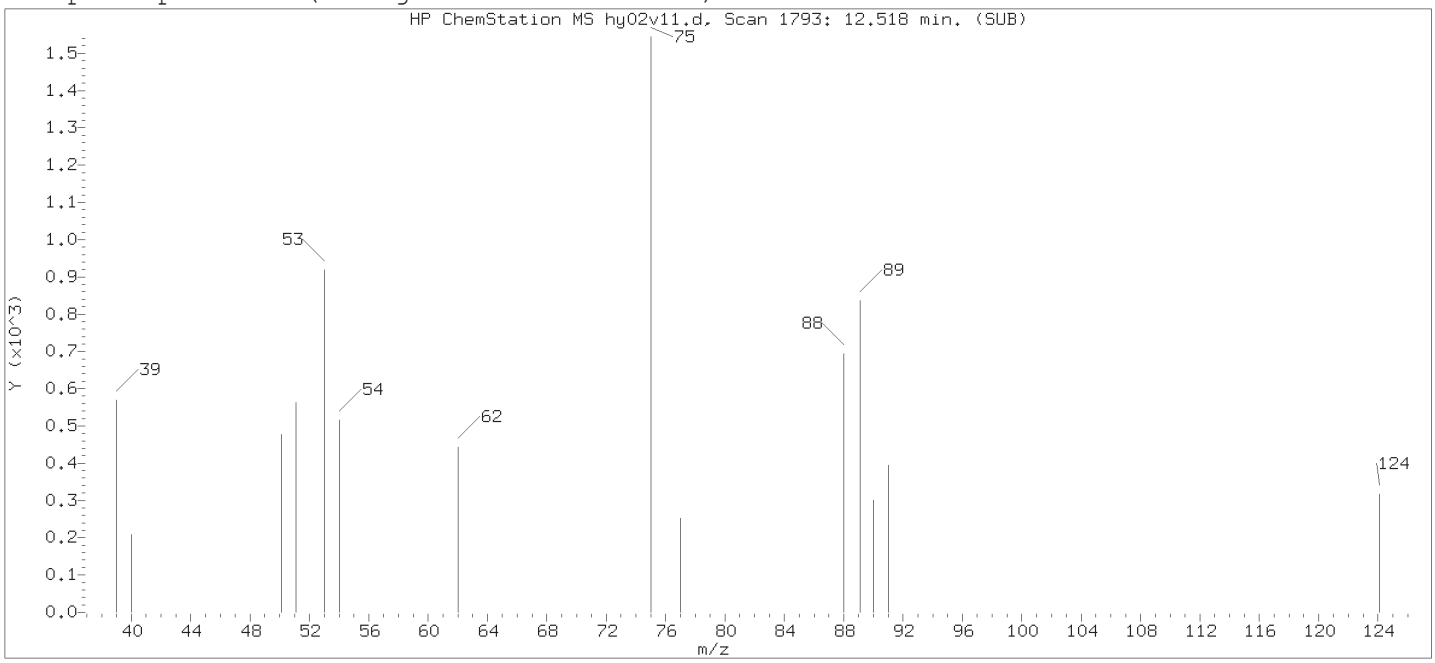
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 141422M
On-Column Amount (ng) : 13.0650
Integration start scan : 1747 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

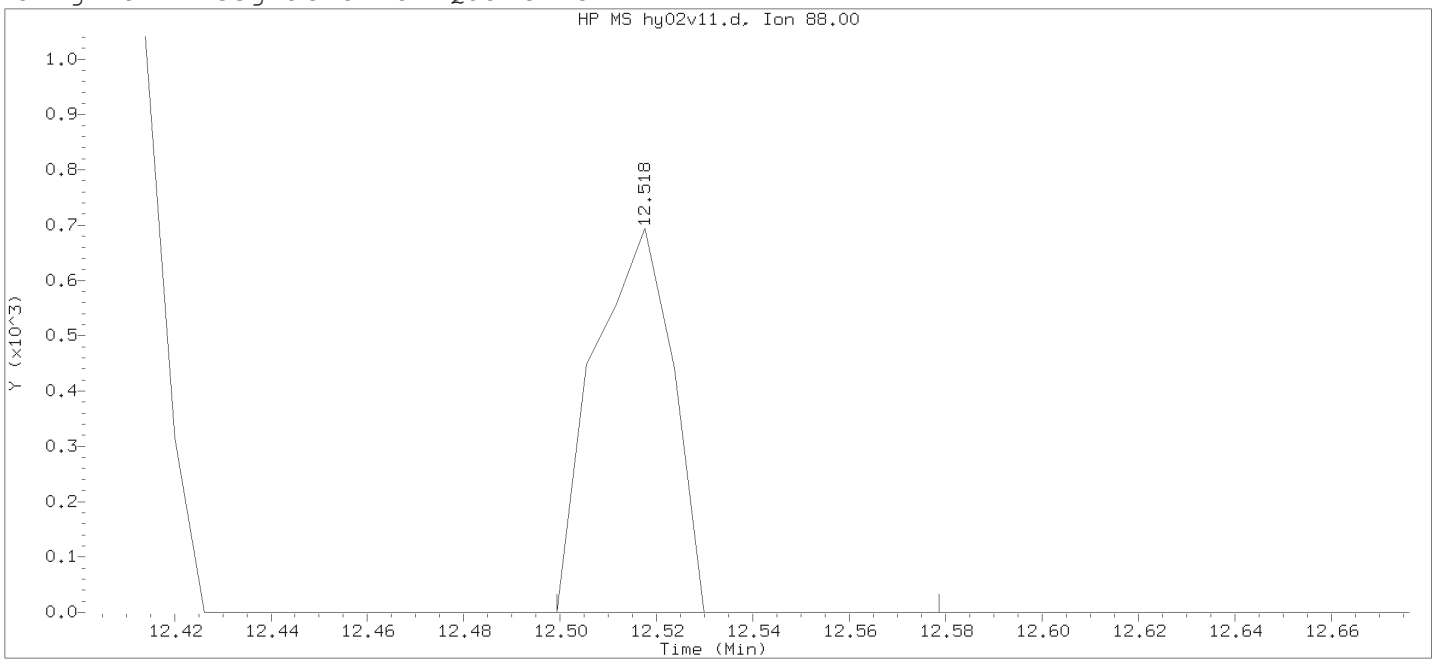
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

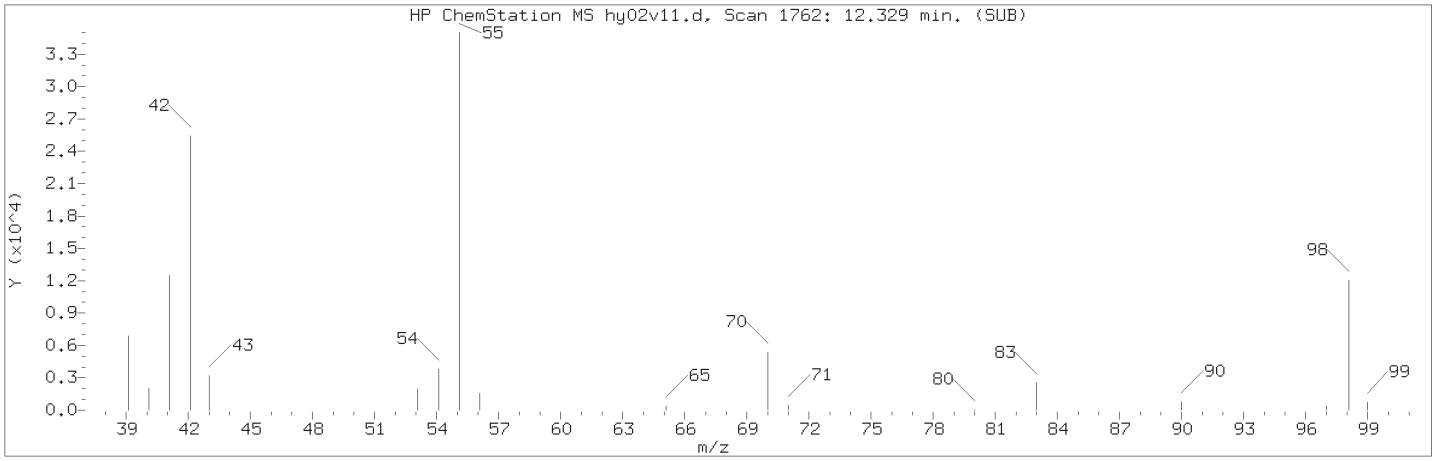
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

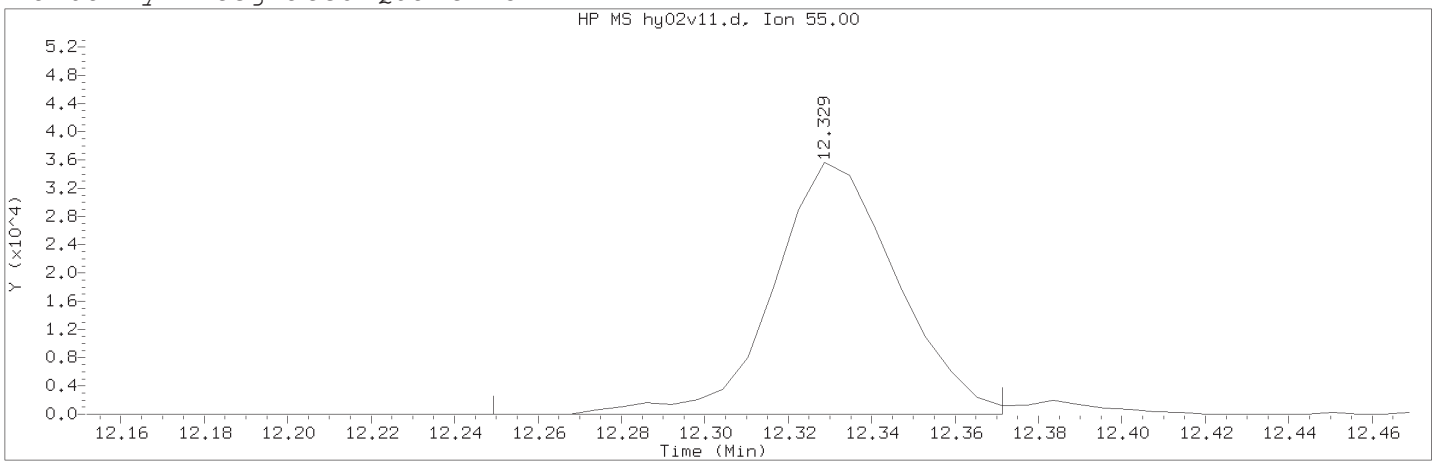
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 88.00
Area : 782
On-column Amount (ng) : 0.0735
Integration start scan : 1789 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

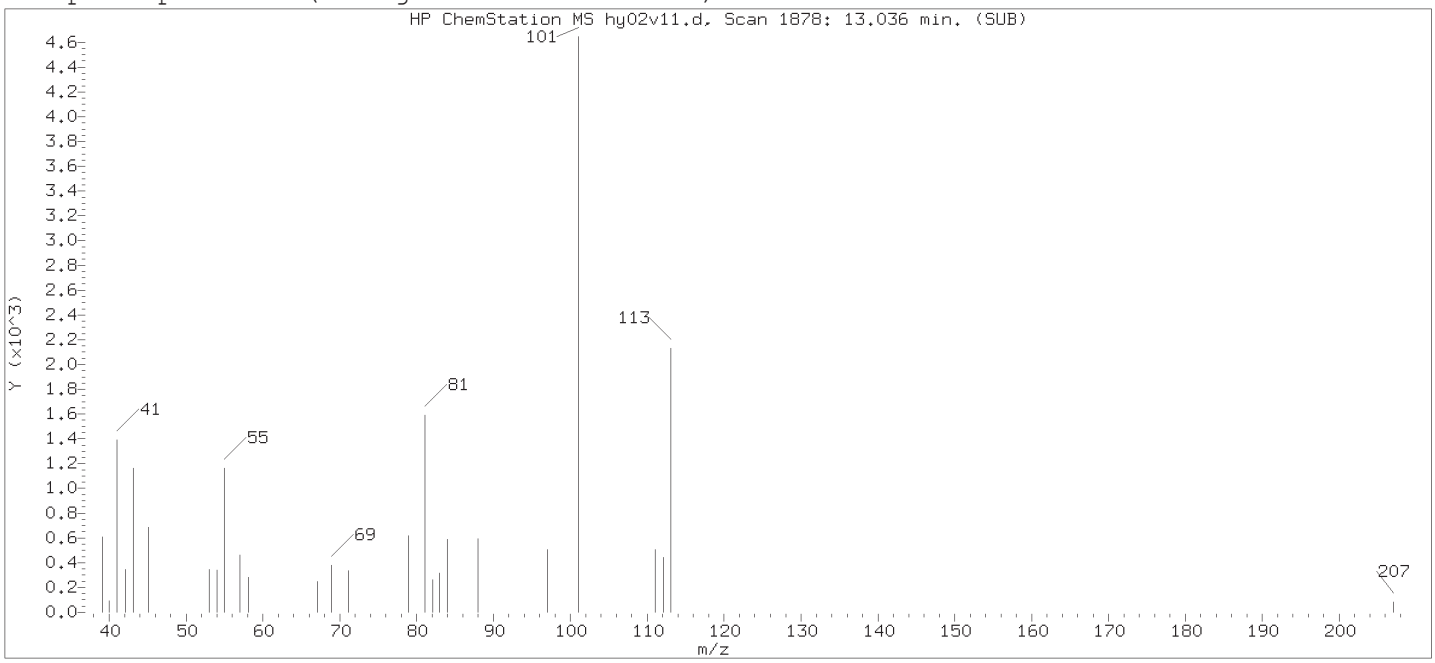
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 72992M
On-Column Amount (ng) : 132.5935
Integration start scan : 1748 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

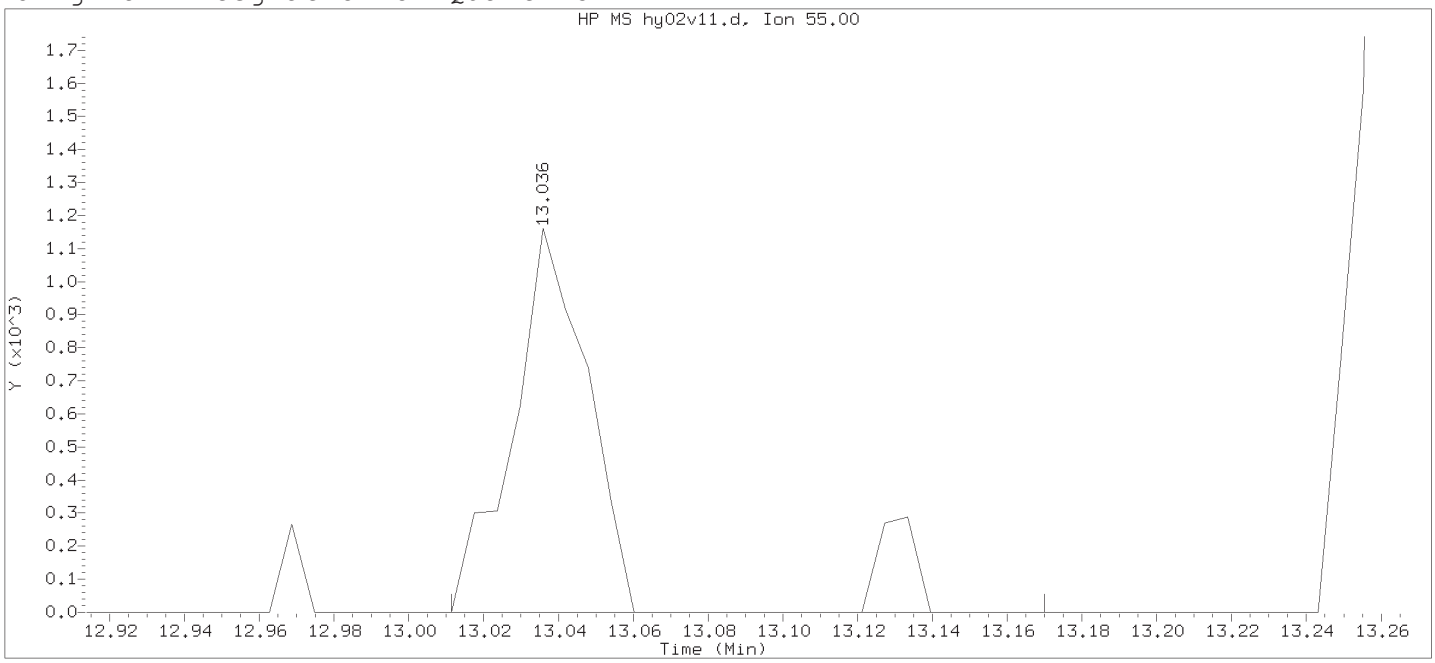
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



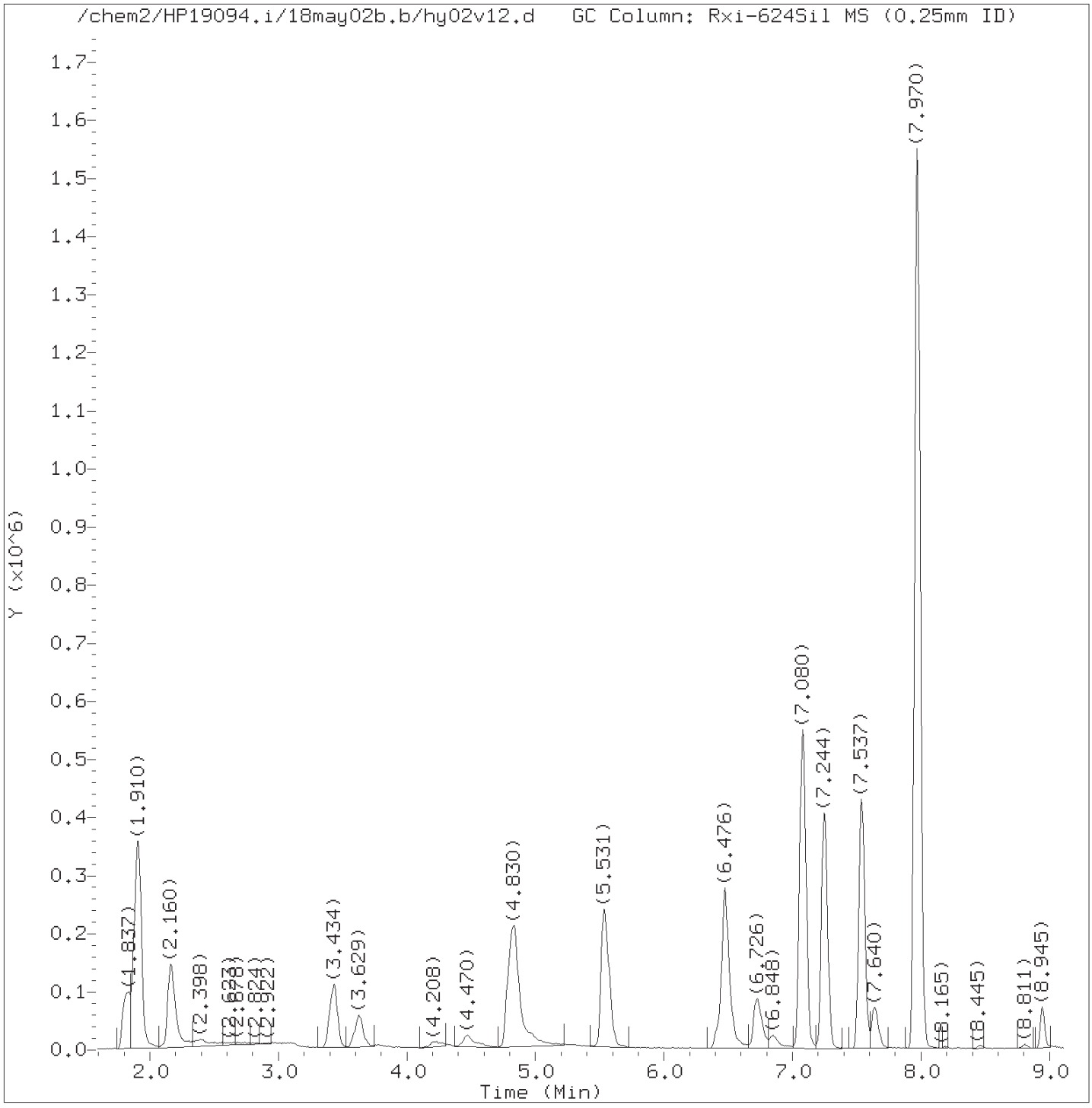
Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1878
Retention Time (minutes): 13.036
Quant Ion : 55.00
Area : 1809
On-column Amount (ng) : 3.3432
Integration start scan : 1873 Integration stop scan: 1899
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: DVV10203



Total Ion Chromatogram (TIC)

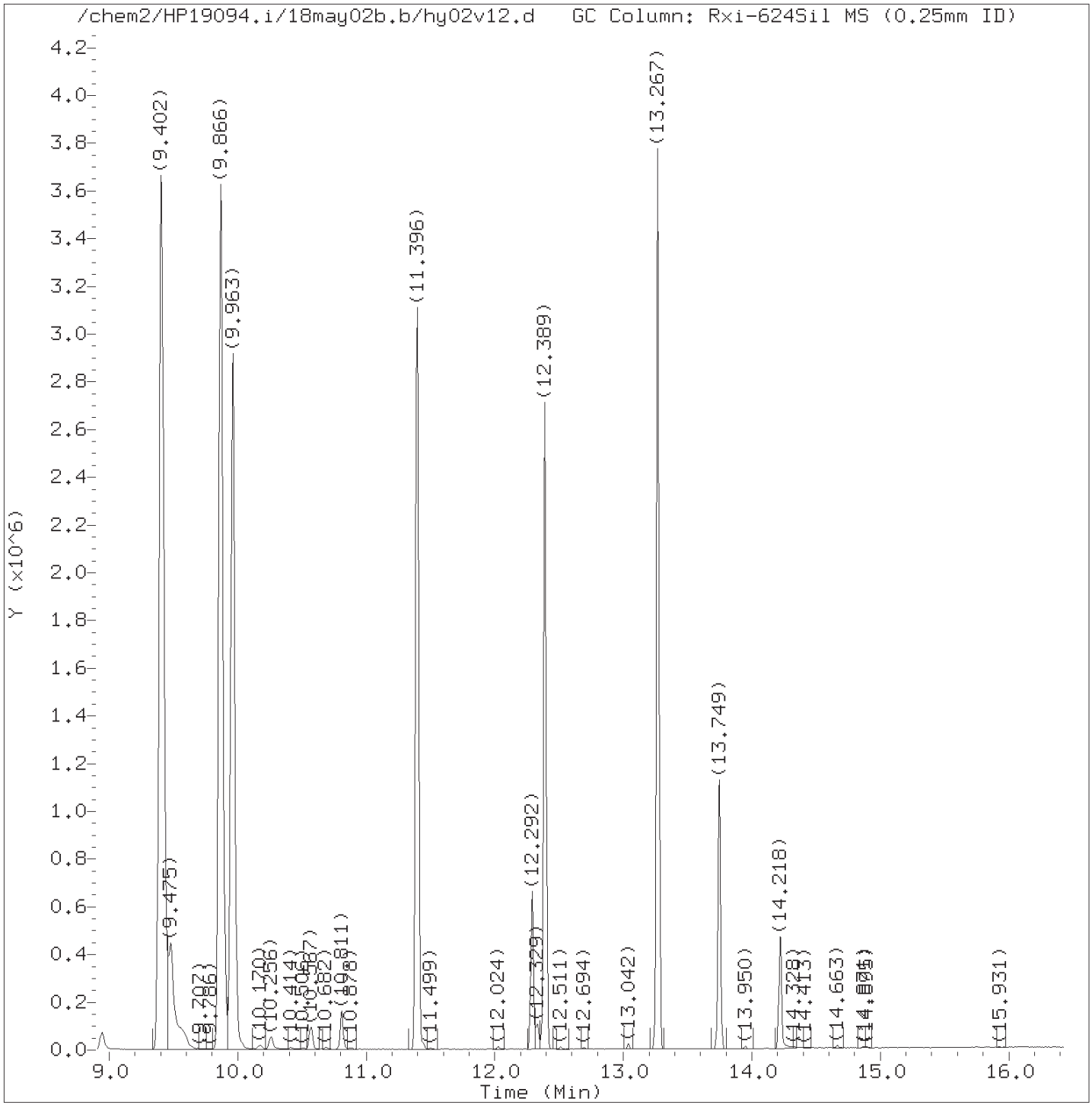
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCDH88 Lab Sample ID: LCDH88

Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCDH88 Lab Sample ID: LCDH88

Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

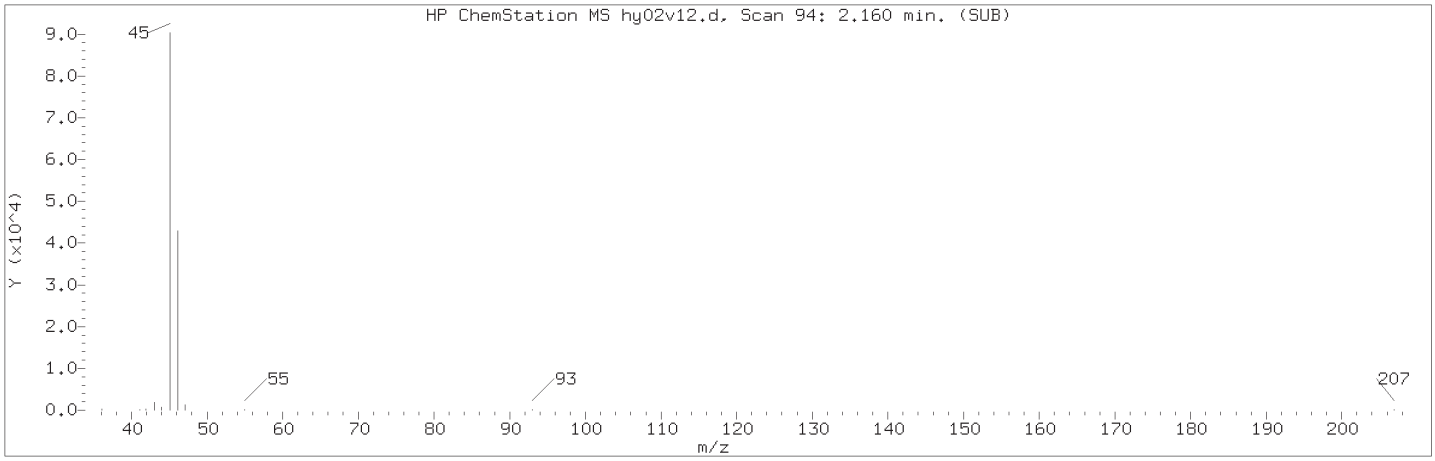
Sample Name: LCDH88 Lab Sample ID: LCDH88

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.160	45	367108M	5.115
25) Acetonitrile	(1)	4.208	41	76036M	44.742
26)*t-Butyl Alcohol-d10	(1)	4.470	65	70380M	50.000
36) Vinyl Acetate	(2)	5.531	43	844612	12.351
43) Methyl Acrylate	(2)	6.476	55	568762	26.957
50)$Dibromofluoromethane	(2)	7.080	113	548216	9.924
53) 1-Chlorobutane	(2)	7.244	56	532521	5.274
57)$1,2-Dichloroethane-d4	(2)	7.543	102	99061	10.169
63)*Fluorobenzene	(2)	7.970	96	2235850	10.000
77) Chloroacetonitrile	(2)	9.475	75	176428	209.820
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	106420	5.264
82)$Toluene-d8	(3)	9.963	98	2273416	10.021
97)*Chlorobenzene-d5	(3)	11.396	117	1642381	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	141379M	15.511
112) Cyclohexanone	(1)	12.329	55	53752M	115.959
111)$4-Bromofluorobenzene	(3)	12.389	95	800571	9.947
133)*1,4-Dichlorobenzene-d4	(4)	13.267	152	870448	10.000
142) Hexachloroethane	(4)	13.749	117	200862	5.481

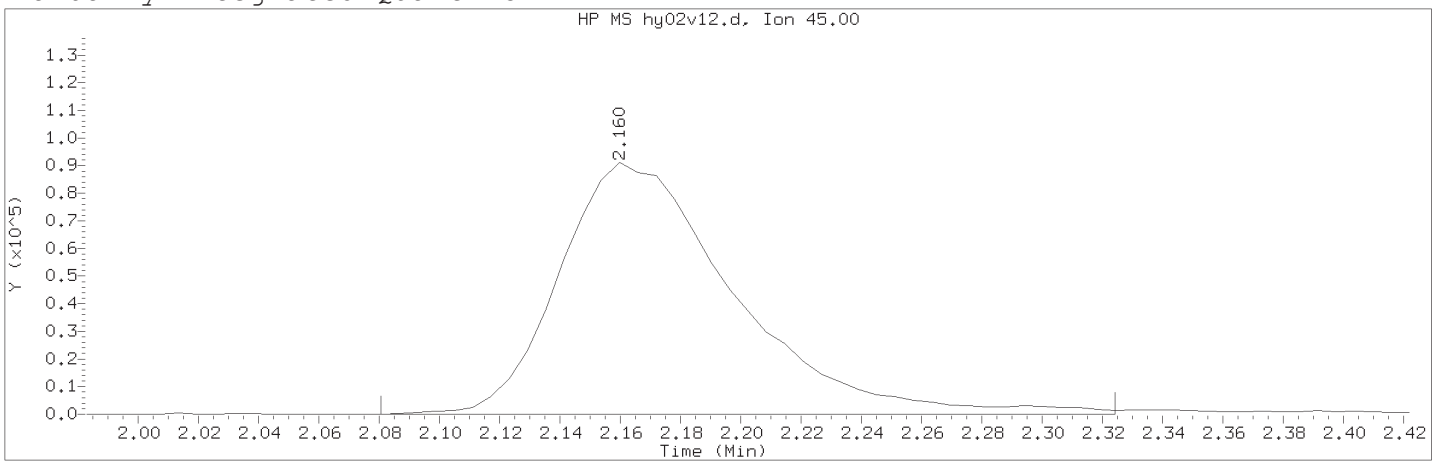
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCDH88 Lab Sample ID: LCDH88

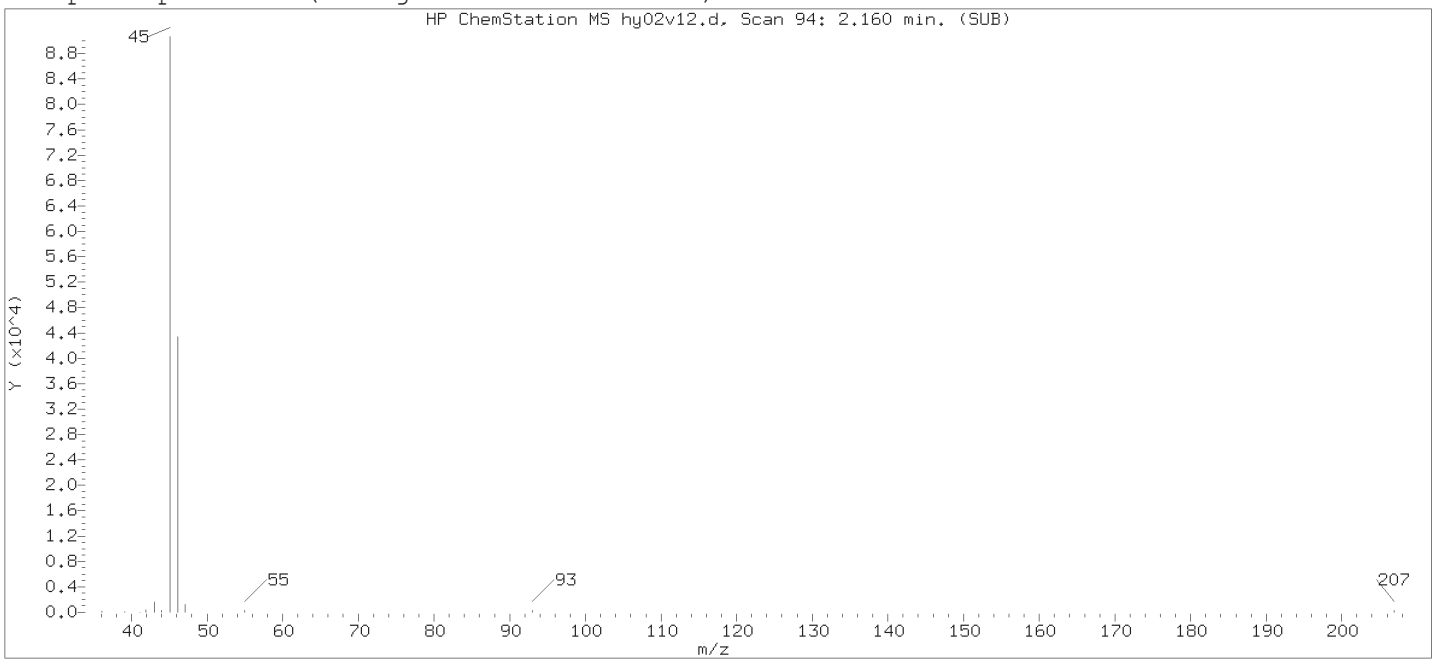
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 367108M
On-Column Amount (ng) : 5.1147
Integration start scan : 80 Integration stop scan: 120
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

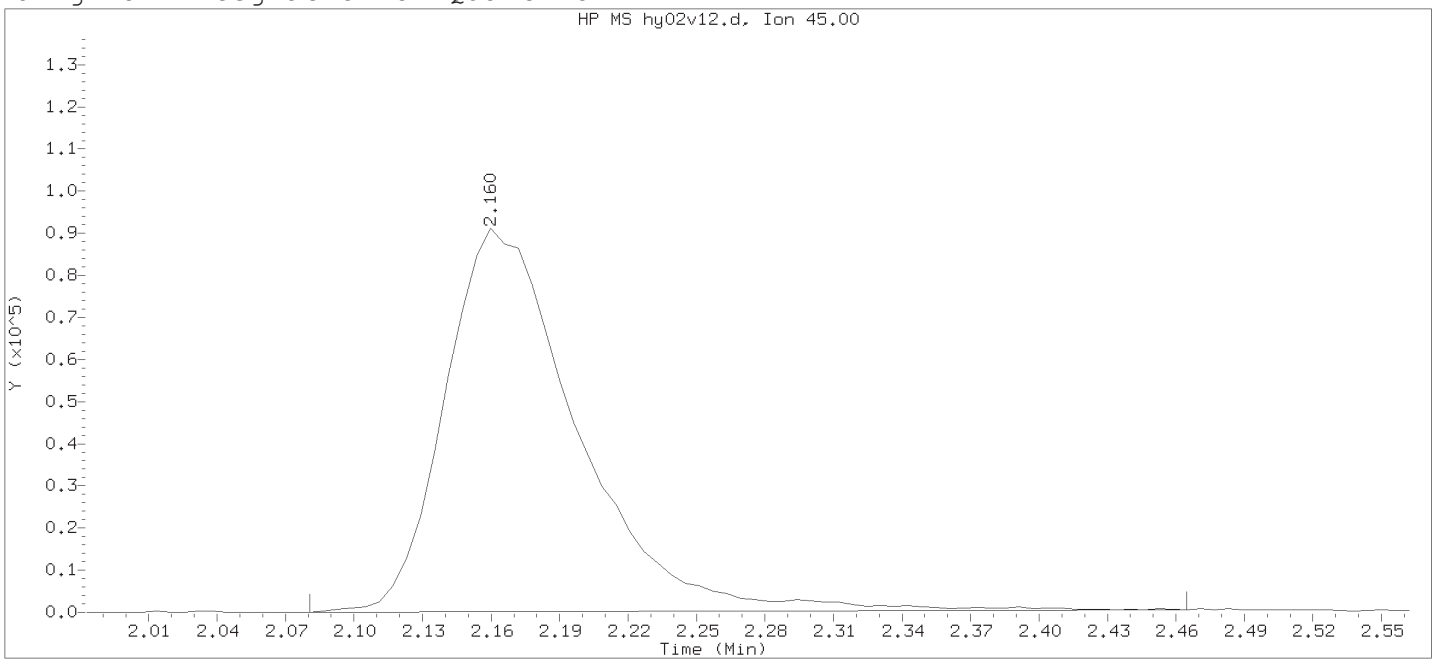
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 05/03/2018 at 16:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

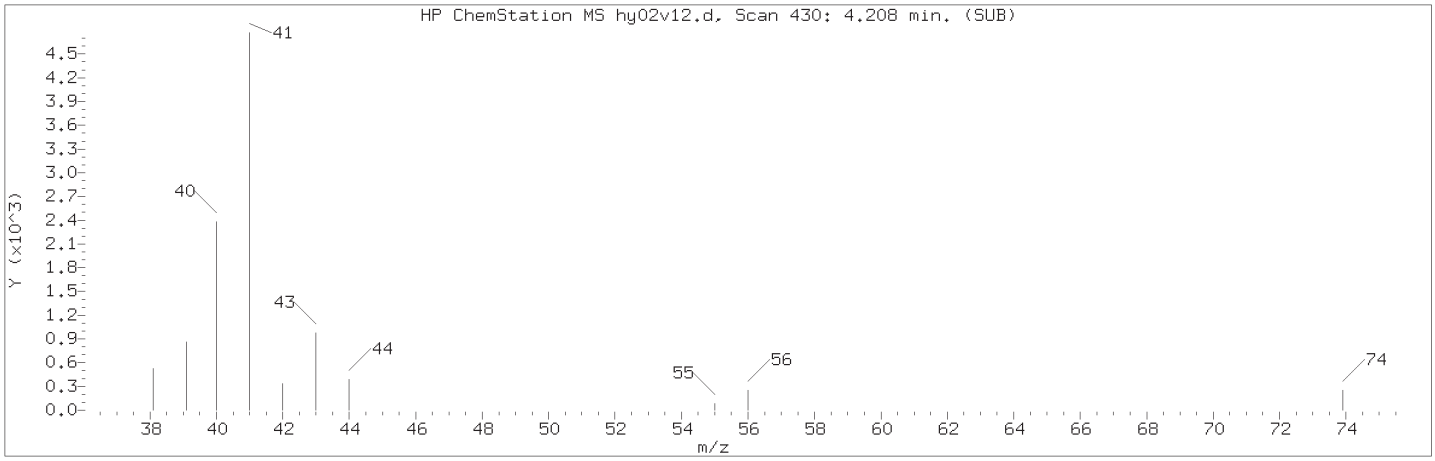
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:46 Automation

Sample Name: LCDH88 Lab Sample ID: LCDH88

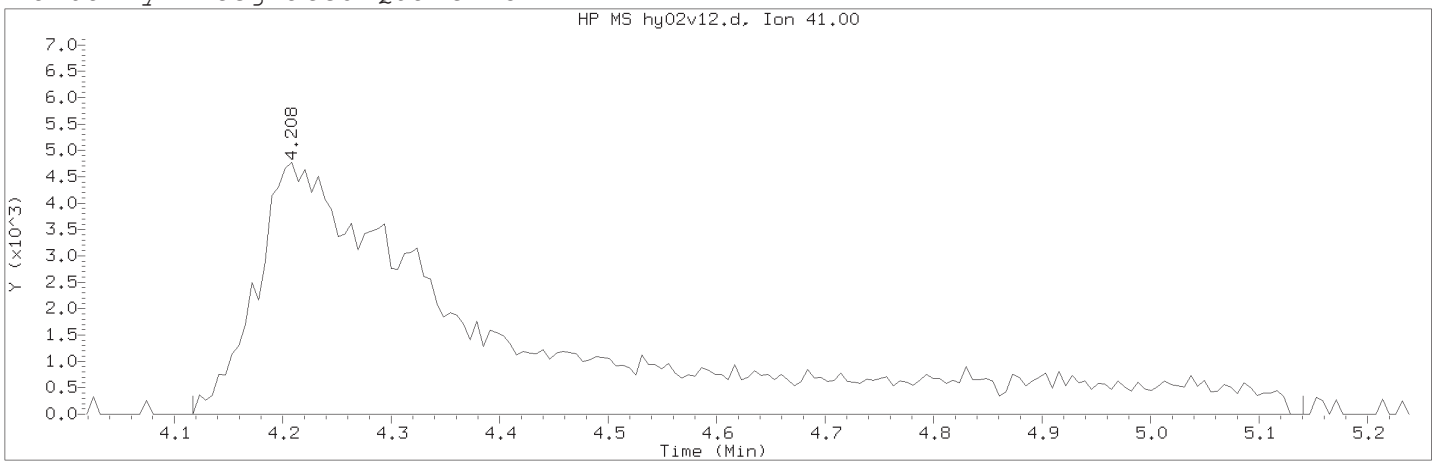
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area : 368442
On-column Amount (ng) : 5.1333
Integration start scan : 80 Integration stop scan: 143
Y at integration start : 0 Y at integration end: 584

Digitally signed by Don V. Viray on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCDH88 Lab Sample ID: LCDH88

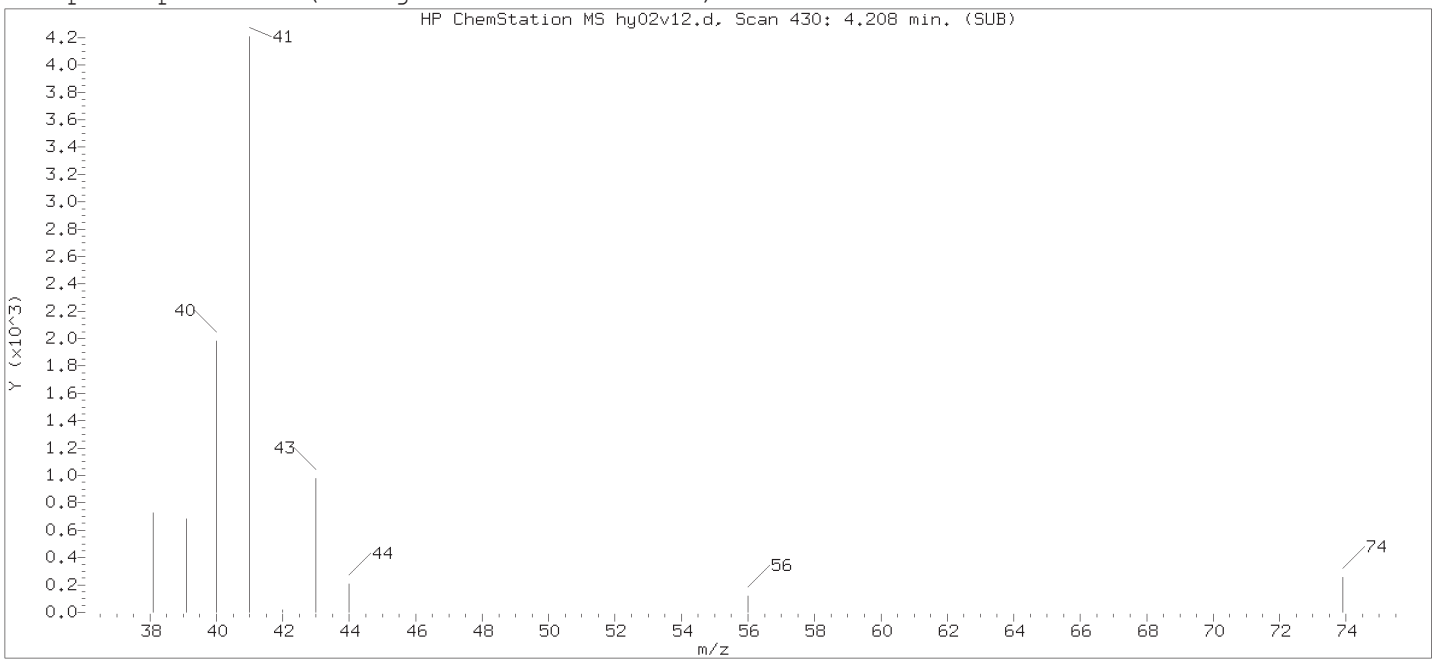
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area (flag) : 76036M
On-Column Amount (ng) : 44.7419
Integration start scan : 414 Integration stop scan: 582
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

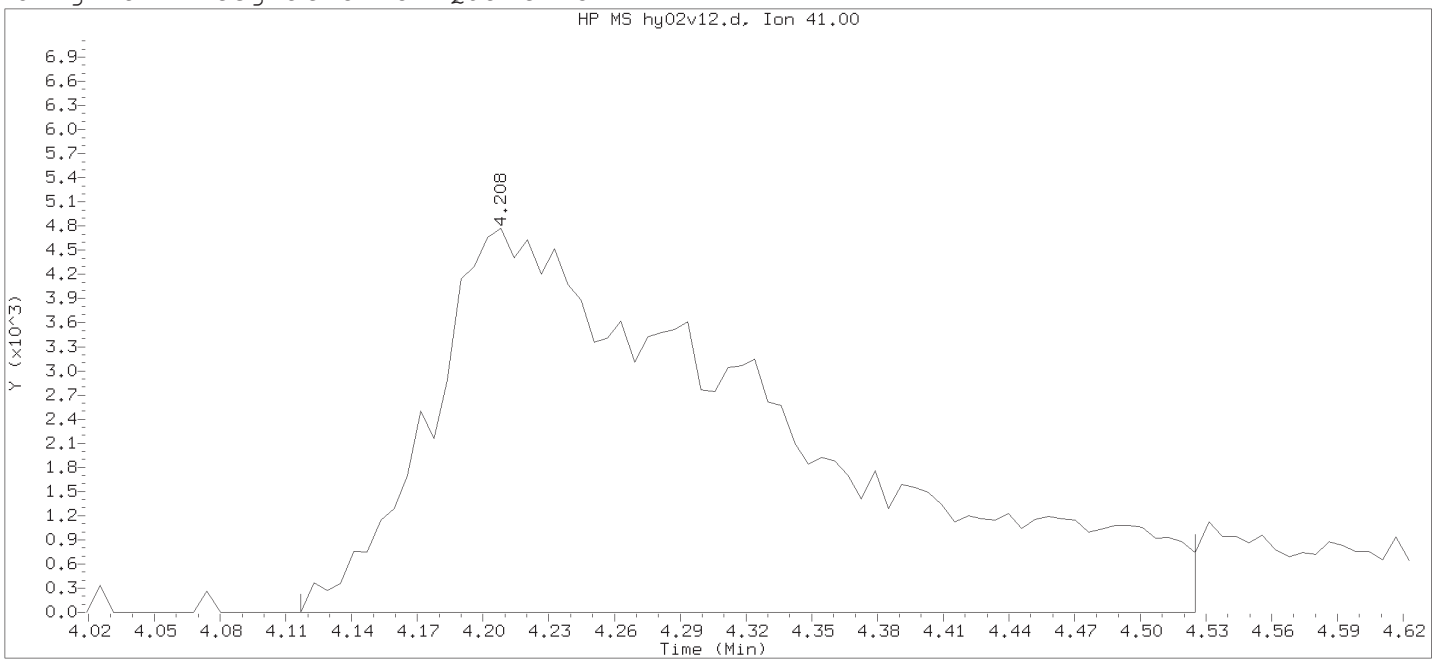
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 05/03/2018 at 16:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

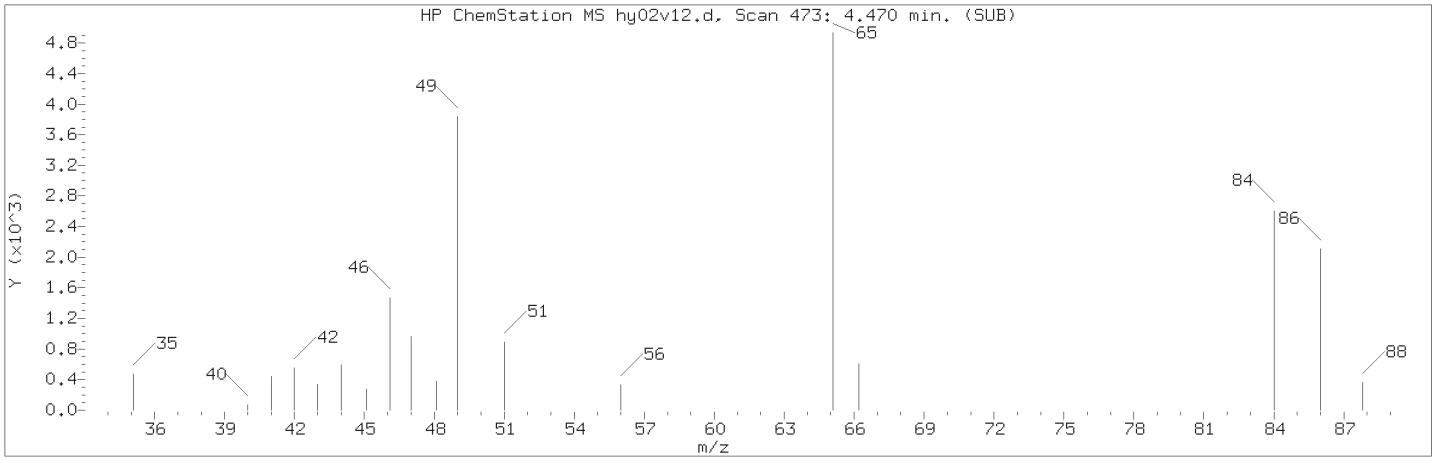
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:46 Automation

Sample Name: LCDH88 Lab Sample ID: LCDH88

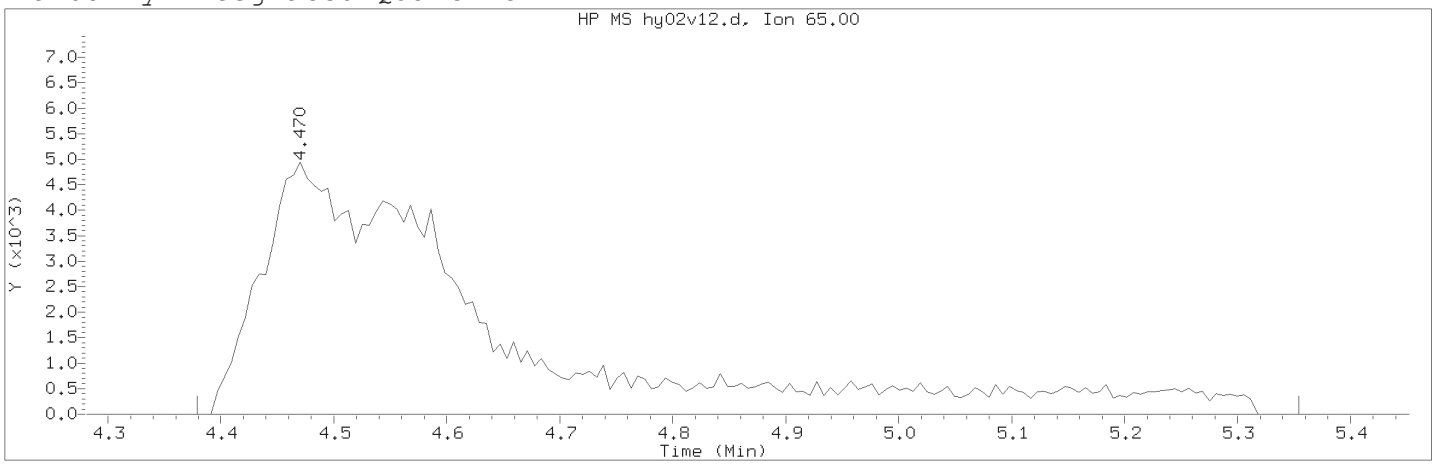
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area : 53034
On-column Amount (ng) : 31.5863
Integration start scan : 414 Integration stop scan: 481
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCDH88 Lab Sample ID: LCDH88

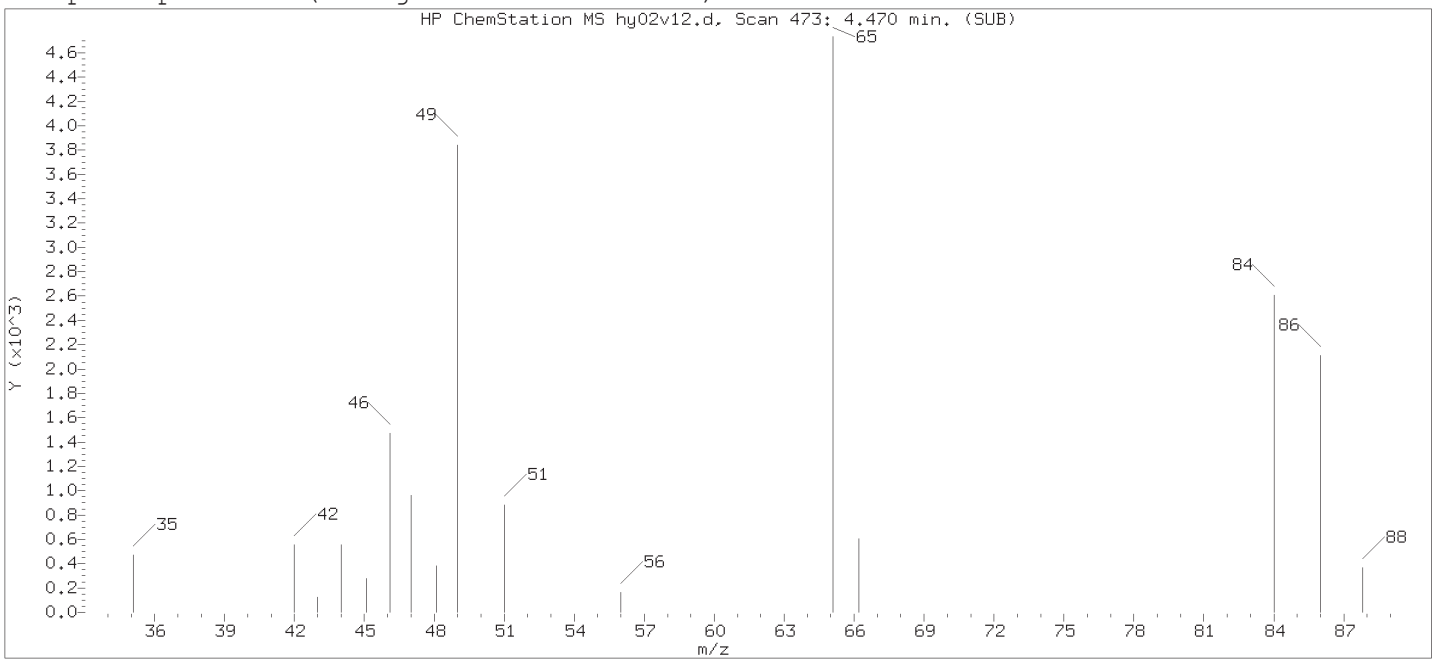
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 70380M
On-Column Amount (ng) : 50.0000
Integration start scan : 457 Integration stop scan: 617
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

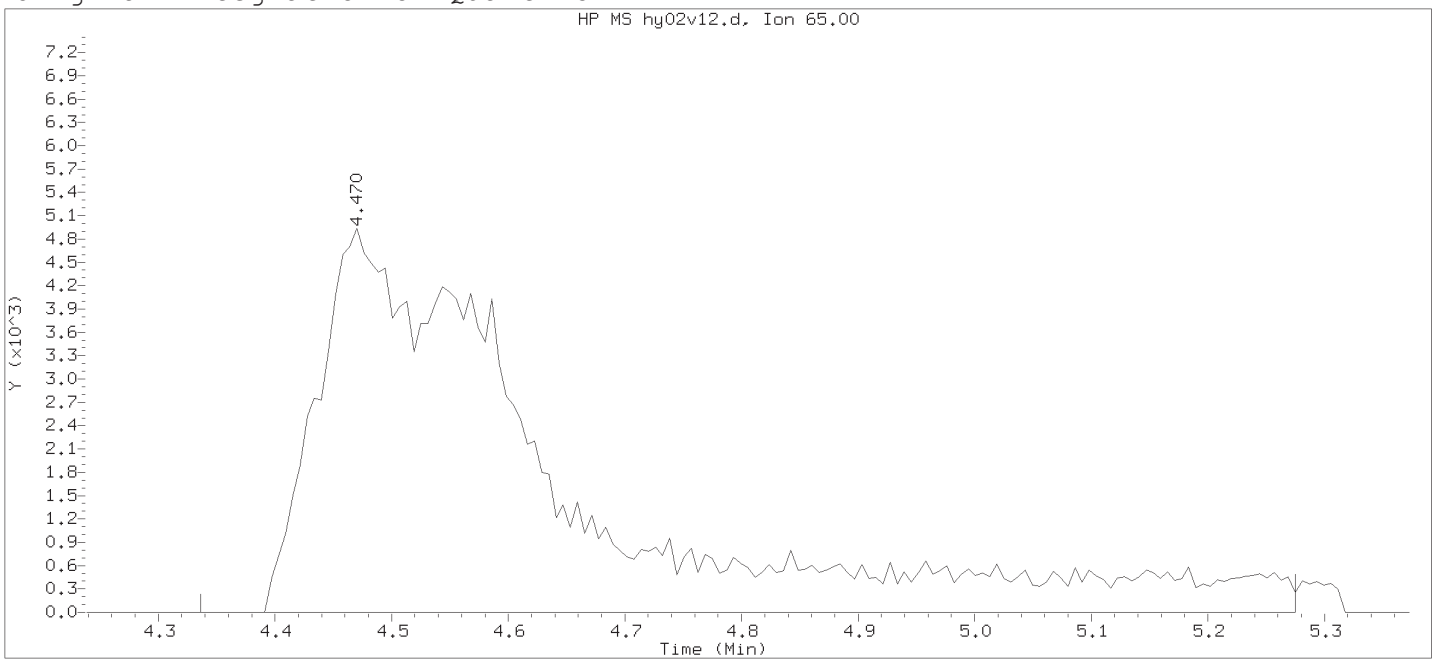
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 05/03/2018 at 16:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

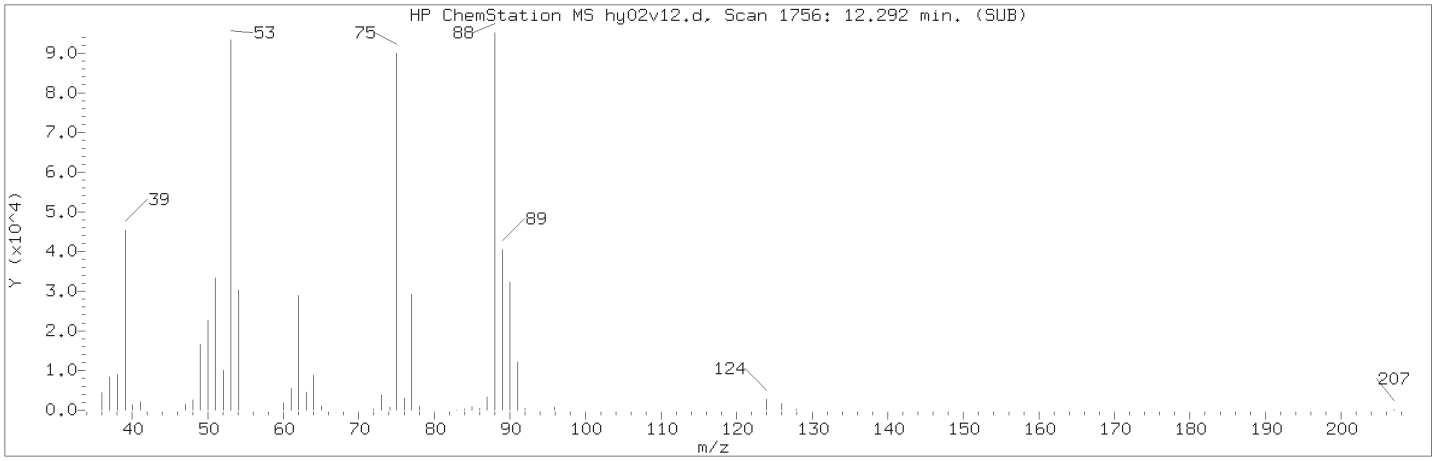
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:46 Automation

Sample Name: LCDH88 Lab Sample ID: LCDH88

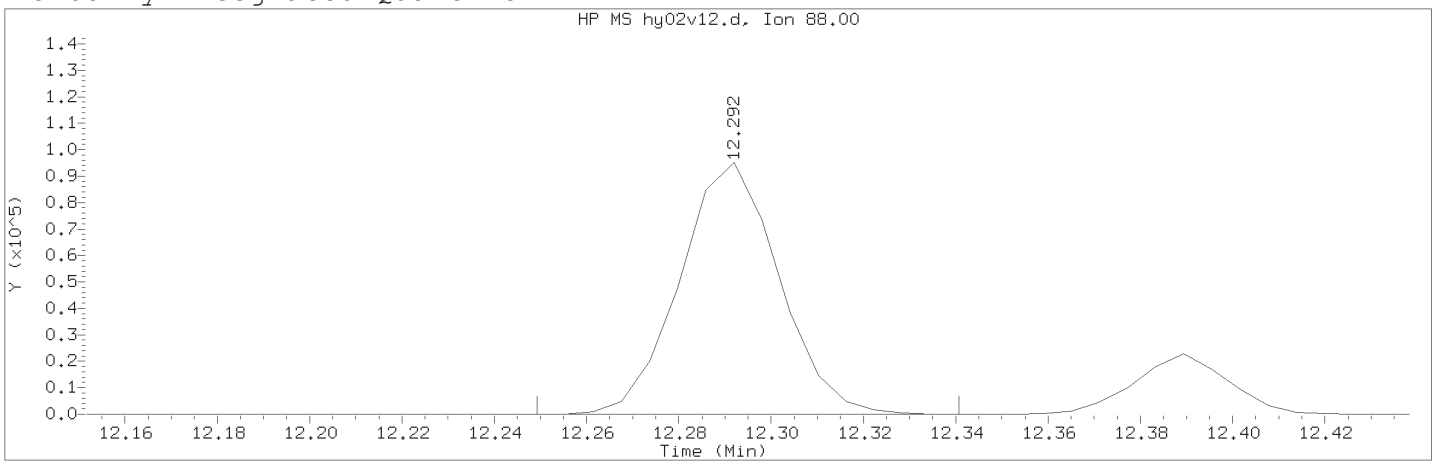
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area : 69535
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 604
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCDH88 Lab Sample ID: LCDH88

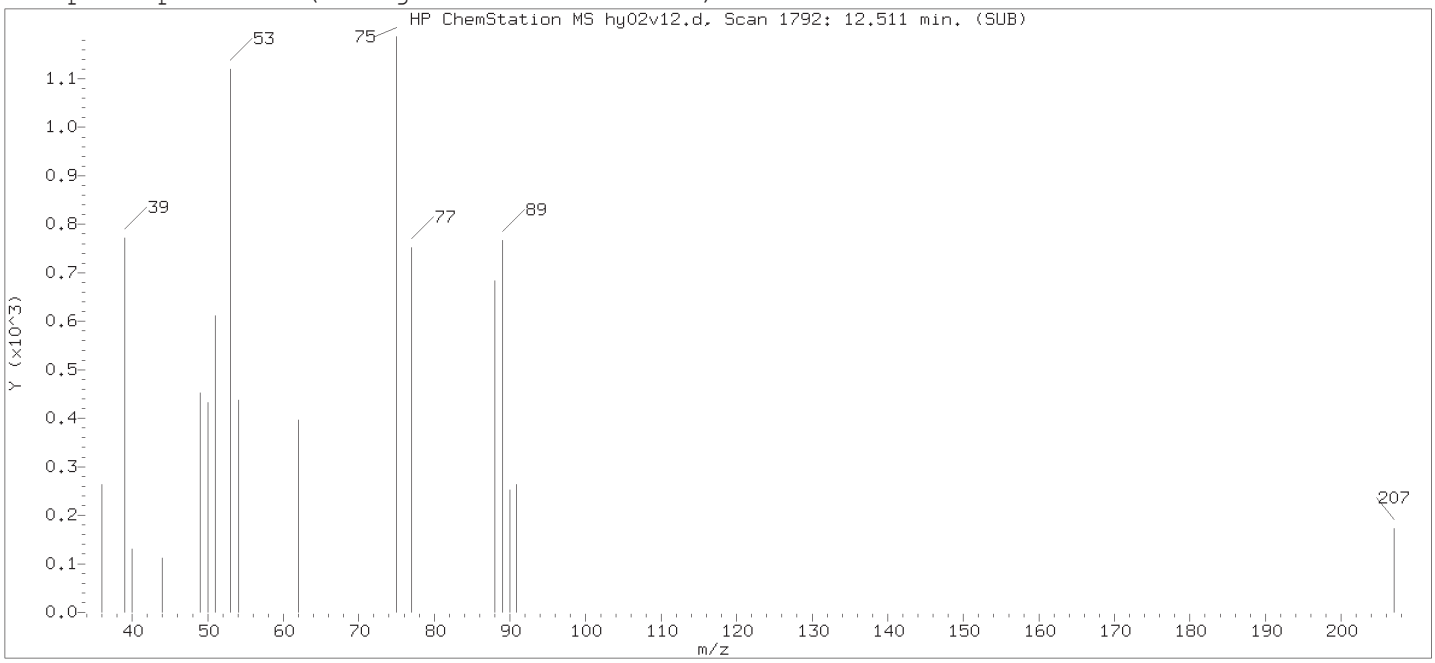
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 141379M
On-Column Amount (ng) : 15.5110
Integration start scan : 1748 Integration stop scan: 1763
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

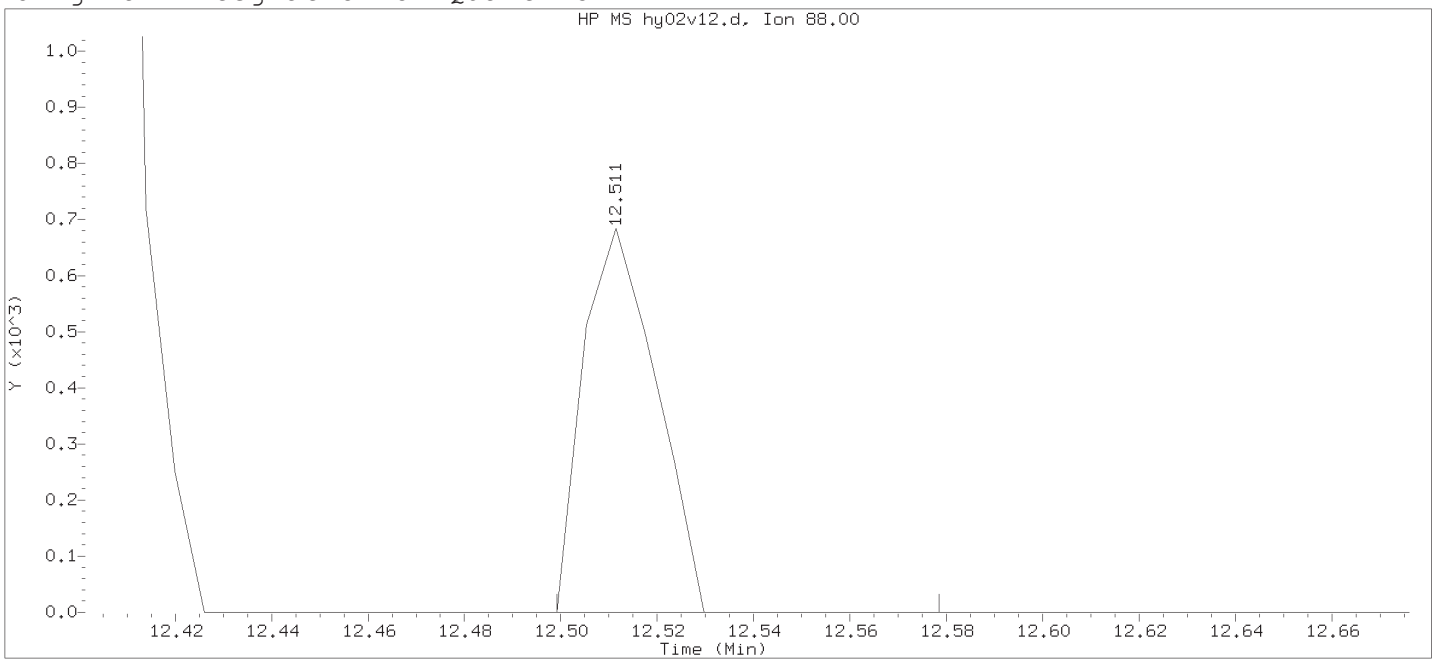
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 05/03/2018 at 16:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

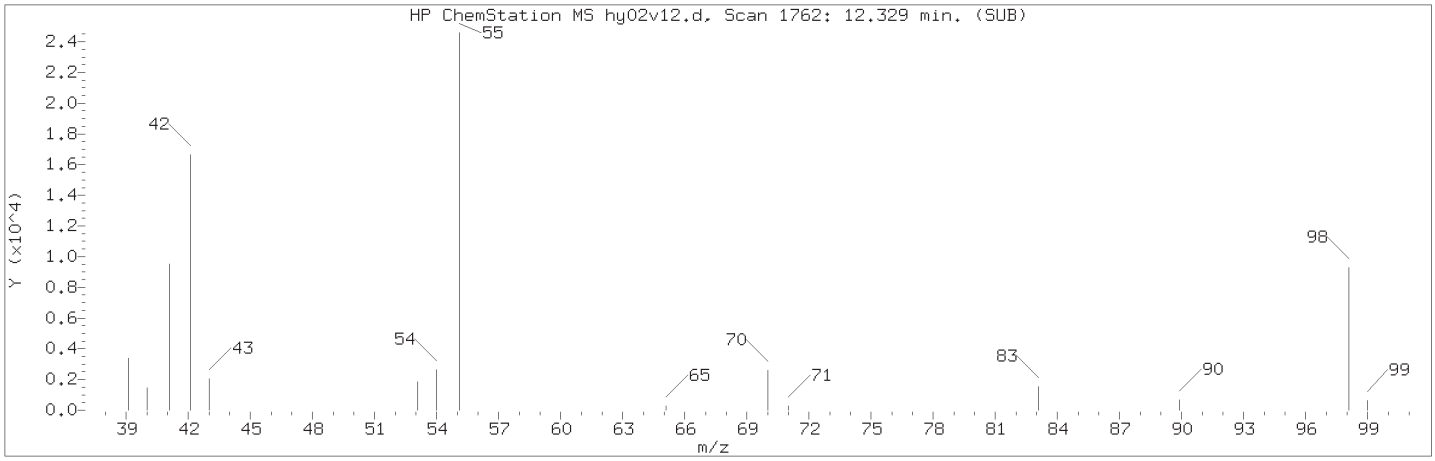
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:46 Automation

Sample Name: LCDH88 Lab Sample ID: LCDH88

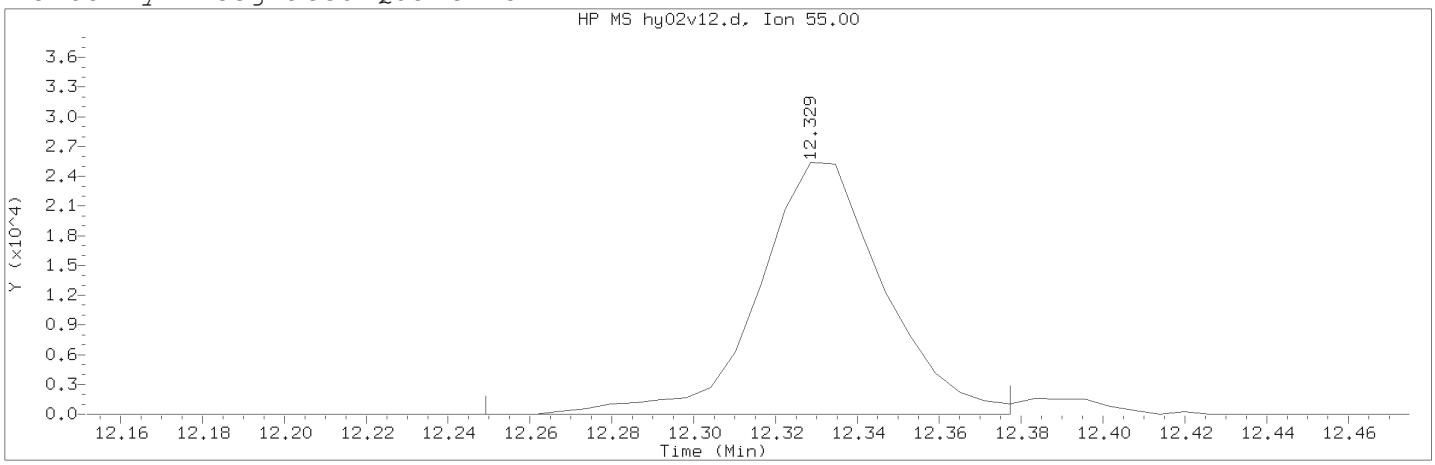
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1792
Retention Time (minutes): 12.511
Quant Ion : 88.00
Area : 718
On-column Amount (ng) : 0.0798
Integration start scan : 1789 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCDH88 Lab Sample ID: LCDH88

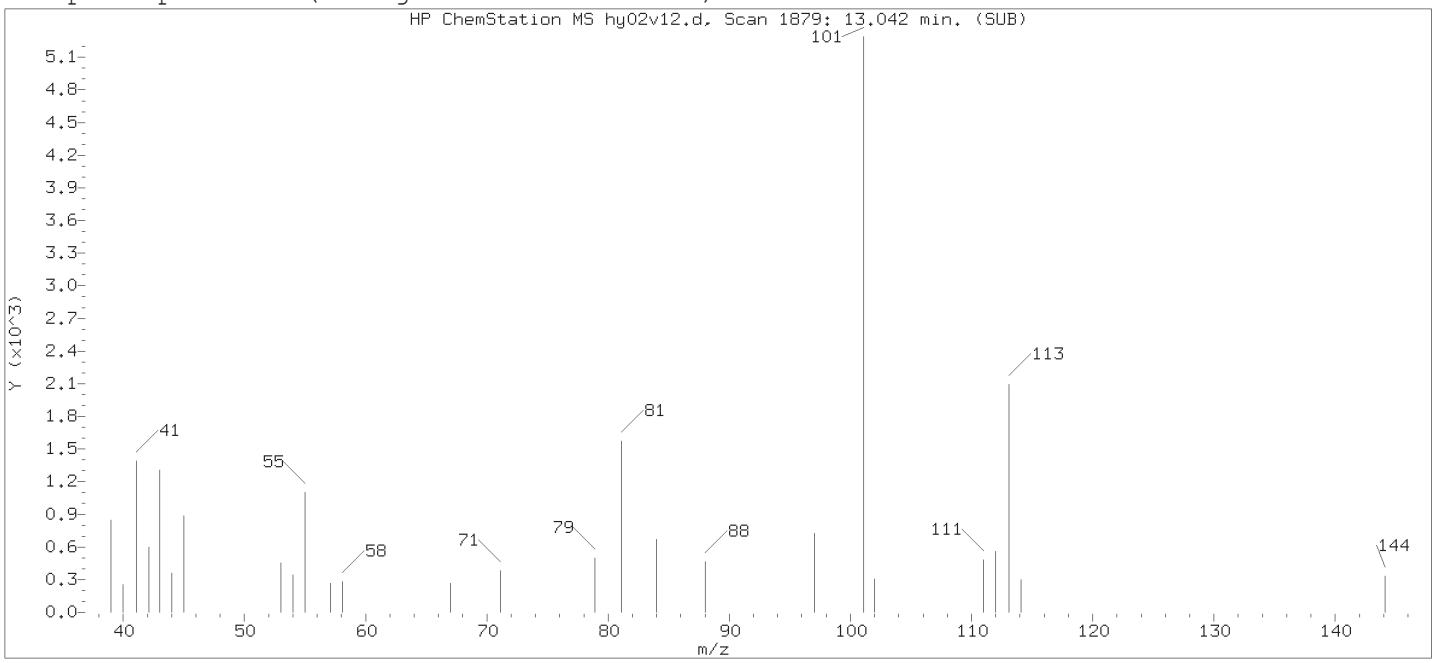
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 53752M
On-Column Amount (ng) : 115.9591
Integration start scan : 1748 Integration stop scan: 1769
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

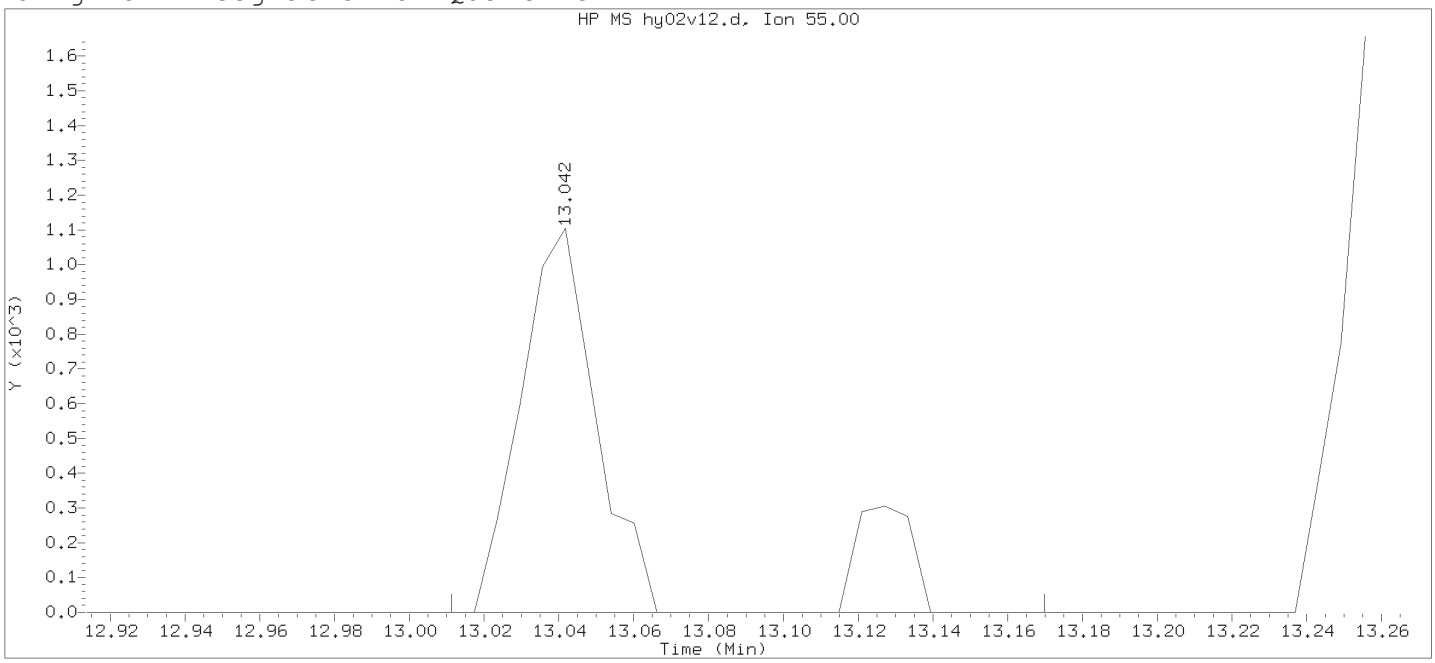
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 05/03/2018 at 16:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



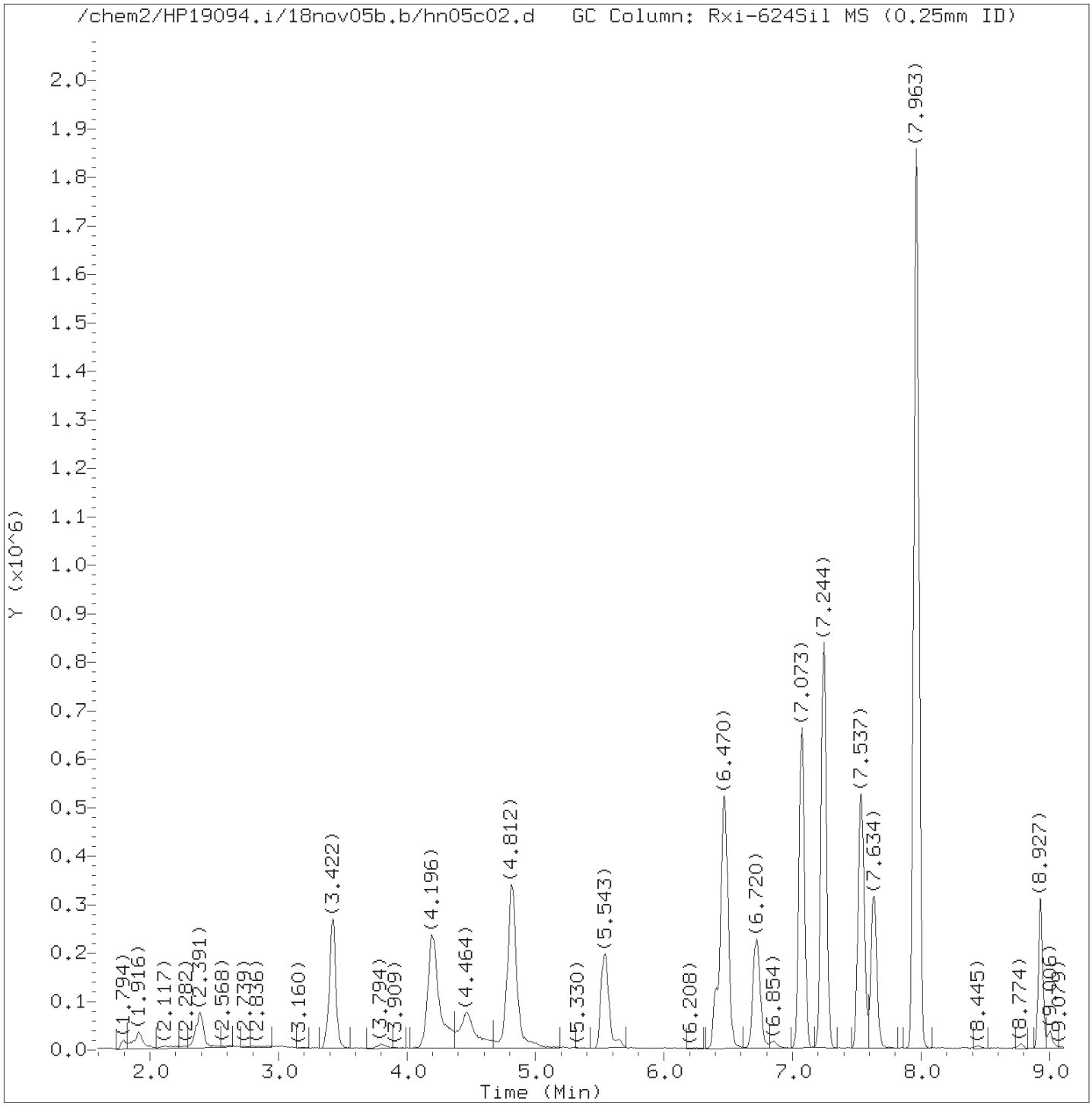
Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:46 Automation

Sample Name: LCDH88 Lab Sample ID: LCDH88

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 55.00
Area : 1857
On-column Amount (ng) : 4.0549
Integration start scan : 1873 Integration stop scan: 1899
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: DVV10203



Total Ion Chromatogram (TIC)

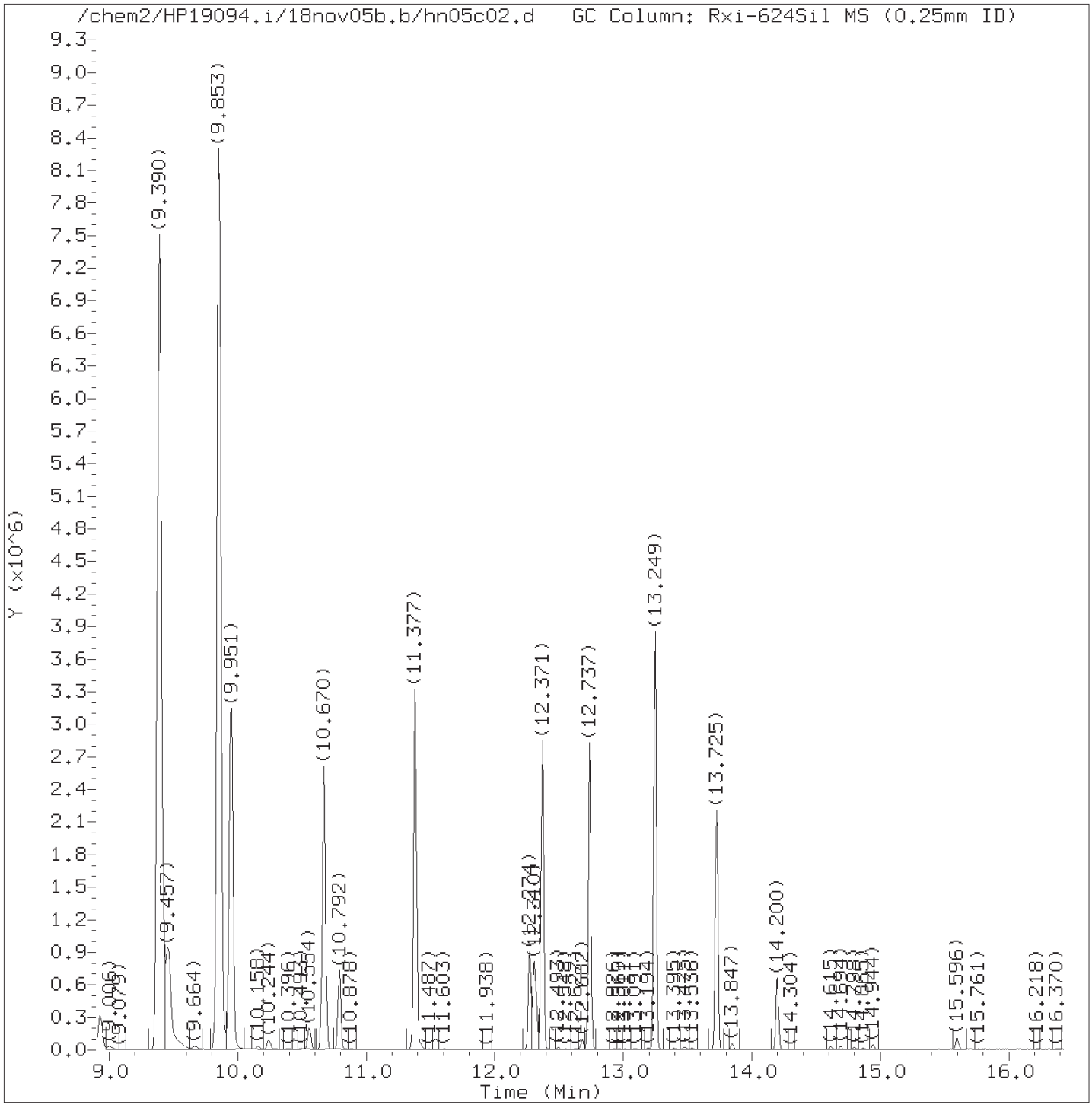
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05c02.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:39 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 05-NOV-2018 21:47
Date, time and analyst ID of latest file update: 05-Nov-2018 21:47 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 21:50.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05c02.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:39 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 05-NOV-2018 21:47
Date, time and analyst ID of latest file update: 05-Nov-2018 21:47 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 21:51.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05c02.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:39 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 05-NOV-2018 21:47
Date, time and analyst ID of latest file update: 05-Nov-2018 21:47 jgc14951

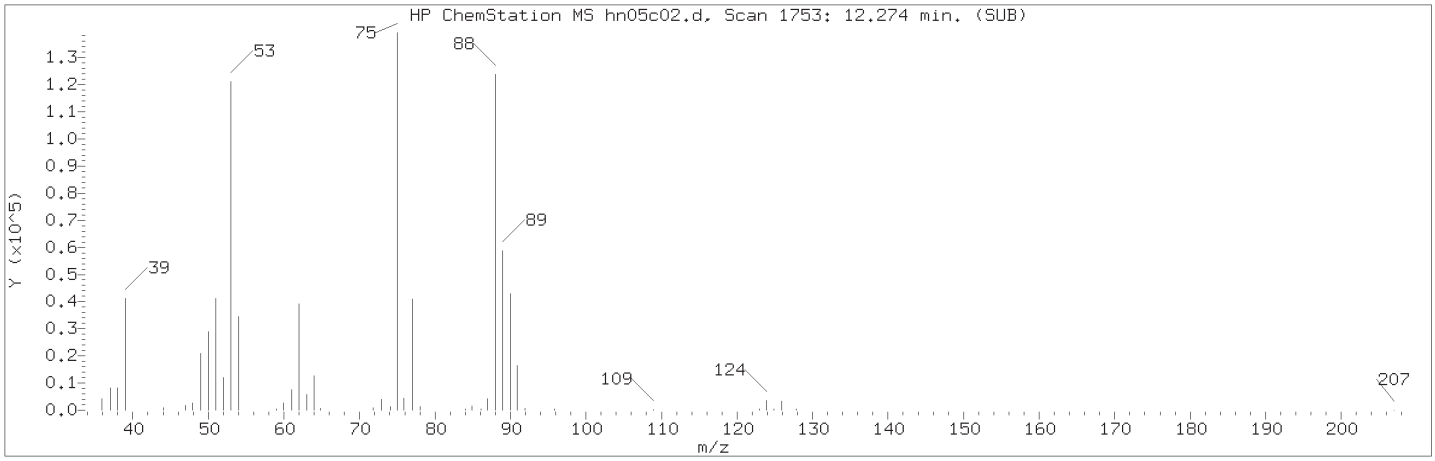
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
25) Acetonitrile	(1)	4.196	41	820246	283.291
26)*t-Butyl Alcohol-d10	(1)	4.482	65	119910	50.000
36) Vinyl Acetate	(2)	5.543	43	652956	8.307
43) Methyl Acrylate	(2)	6.470	55	1159126	47.796
53) 1-Chlorobutane	(2)	7.244	56	1016466	8.758
63)*Fluorobenzene	(2)	7.963	96	2569937	10.000
77) Chloroacetonitrile	(2)	9.451	75	660295	683.185
78) 2-Chloroethyl vinyl ether	(2)	9.469	63	211715	9.111
97)*Chlorobenzene-d5	(3)	11.377	117	1862937	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	185388M	11.938
112) Cyclohexanone	(1)	12.310	55	414036M	524.255
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	923209	10.000
142) Hexachloroethane	(4)	13.725	117	399546	10.280

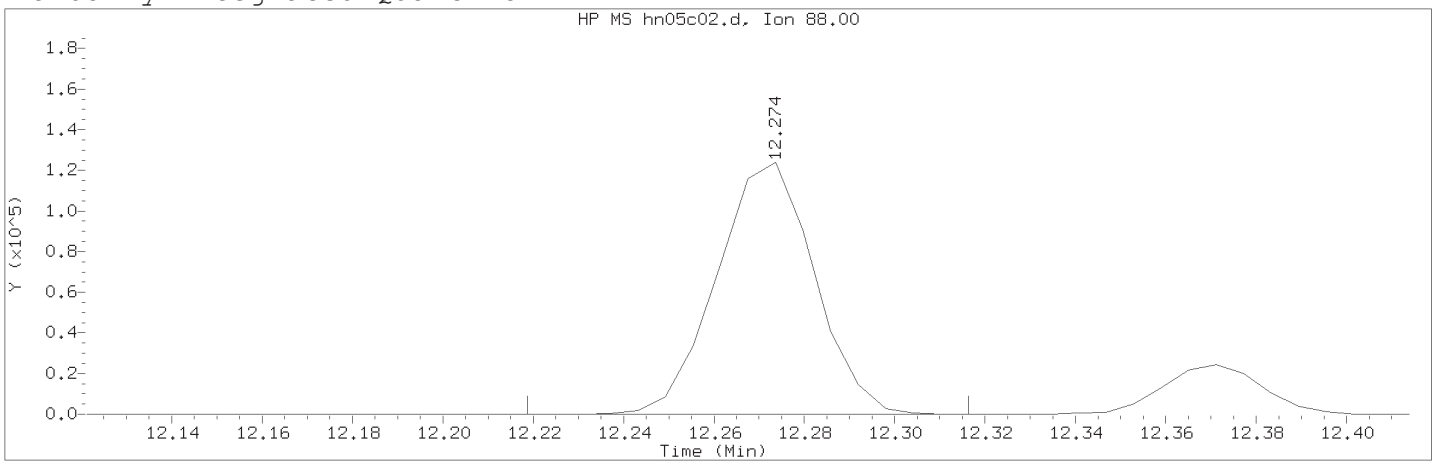
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 21:51.
Target 3.5 esignature user ID: jgc14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c02.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:39 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 05-NOV-2018 21:47
Date, time and analyst ID of latest file update: 05-Nov-2018 21:47 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

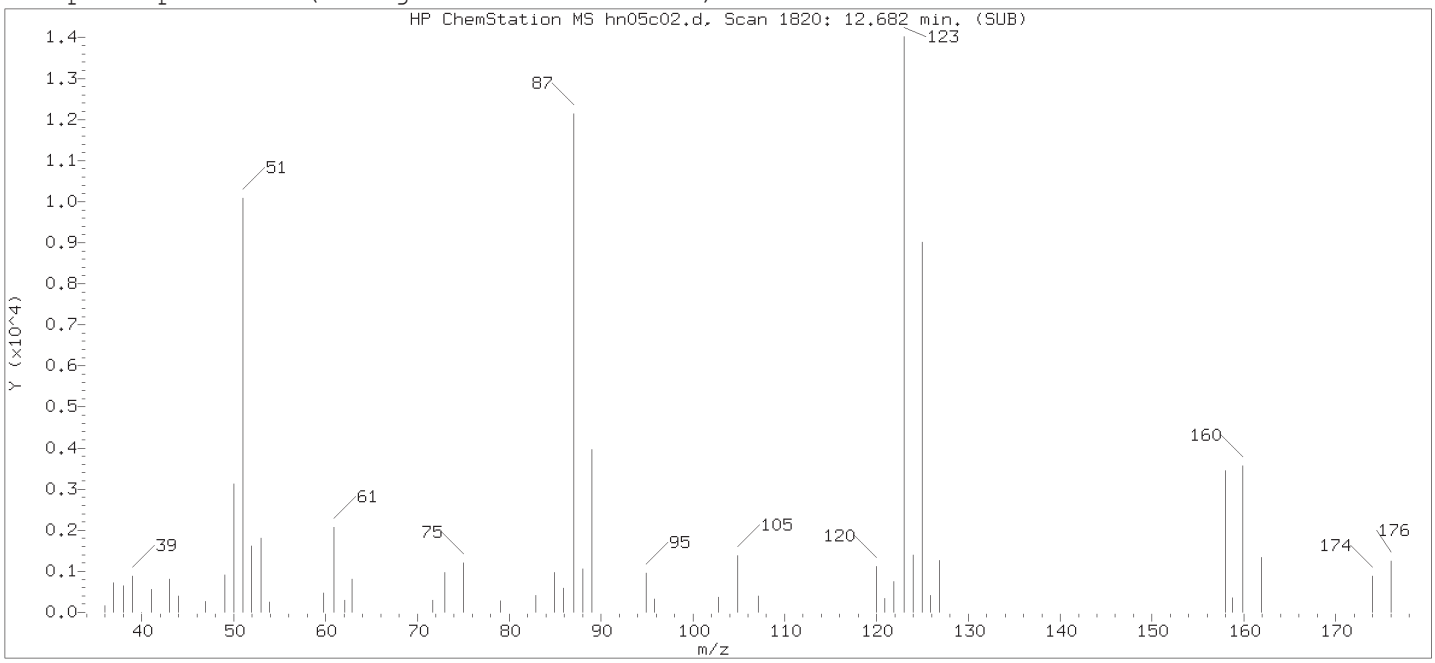
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1753
Retention Time (minutes): 12.274
Quant Ion : 88.00
Area (flag) : 185388M
On-Column Amount (ng) : 11.9380
Integration start scan : 1743 Integration stop scan: 1759
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

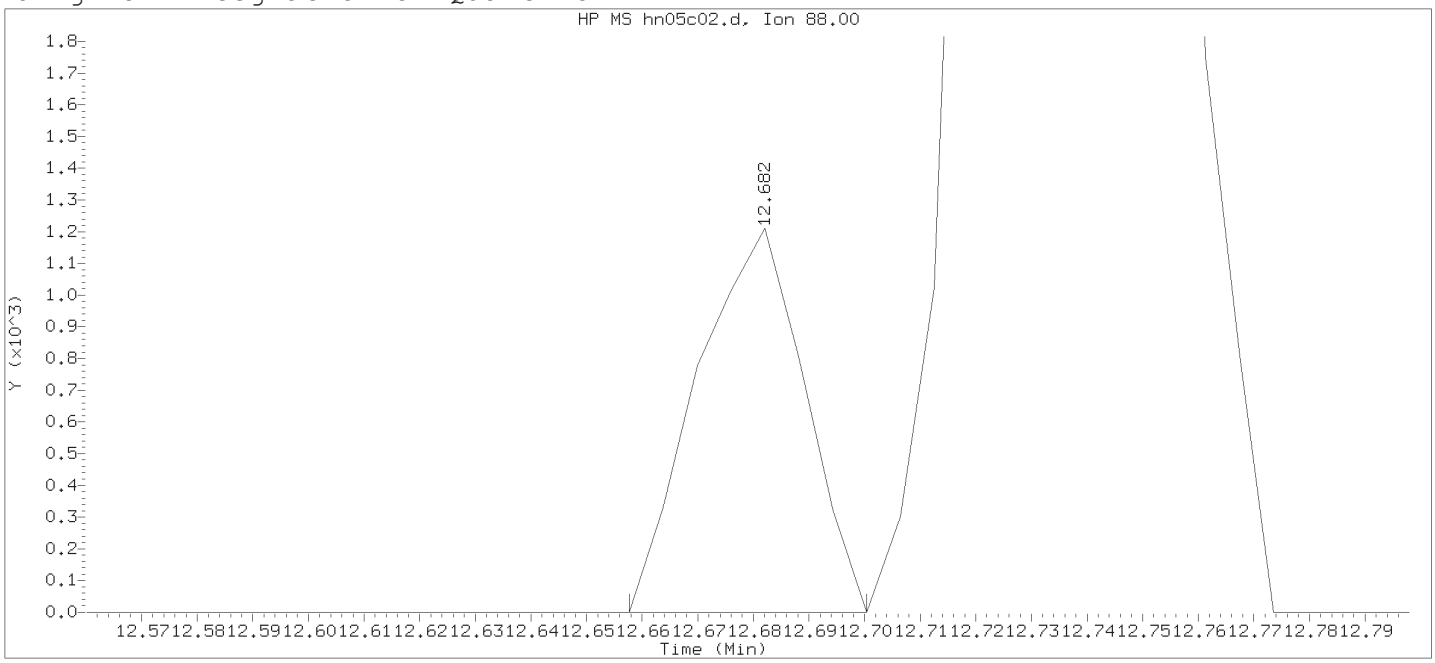
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 21:51.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 13:12.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c02.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:39 Analyst ID: JGC14951

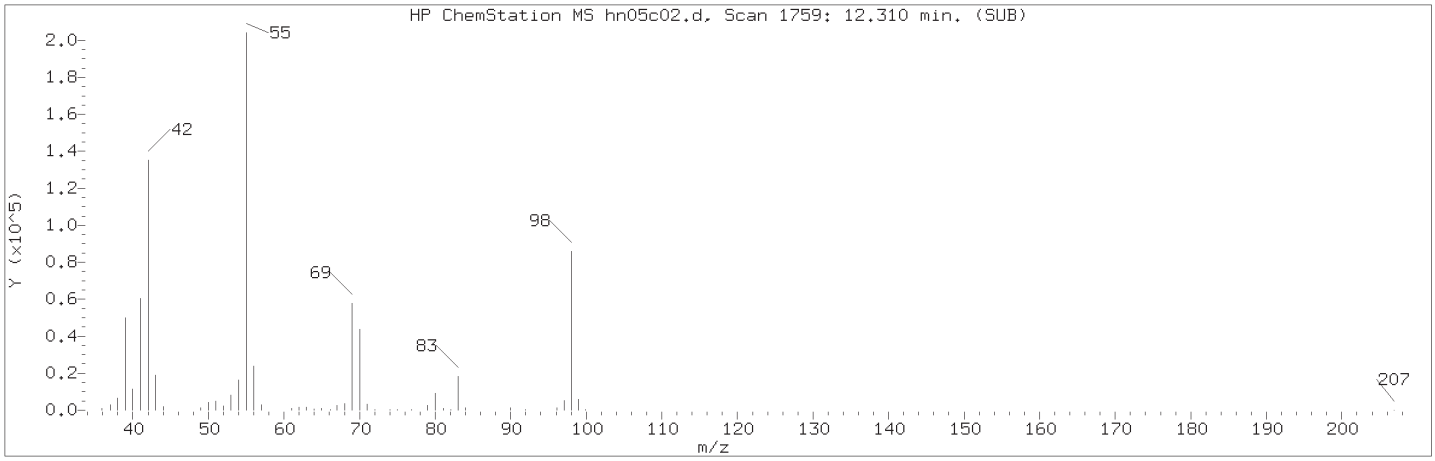
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 05-NOV-2018 20:57
Date, time and analyst ID of latest file update: 05-Nov-2018 20:57 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

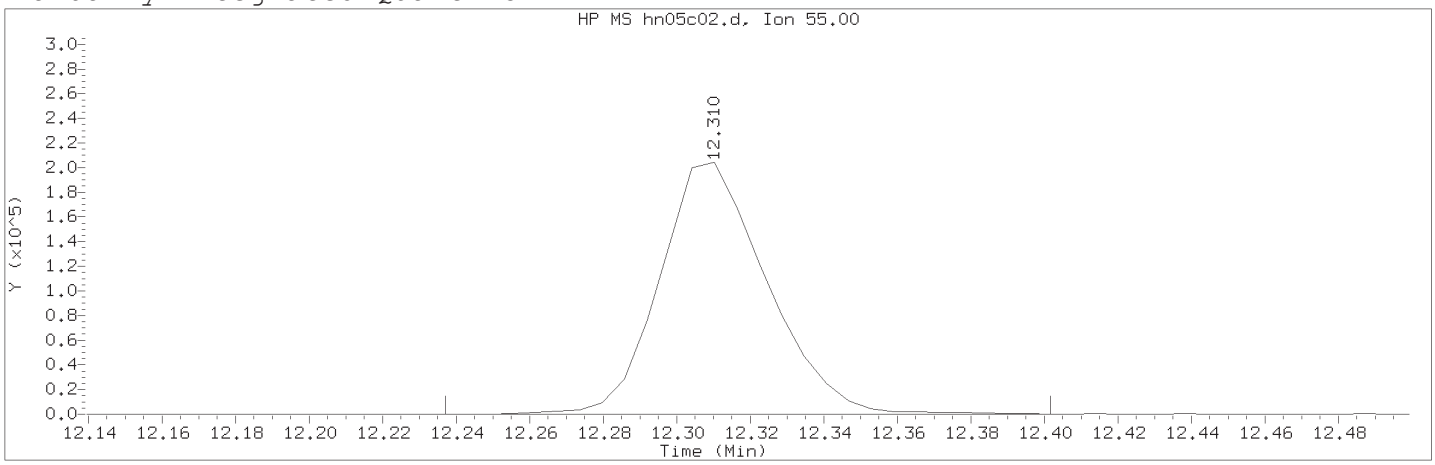
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1820
Retention Time (minutes): 12.682
Quant Ion : 88.00
Area : 1630
On-column Amount (ng) : 0.1050
Integration start scan : 1815 Integration stop scan: 1822
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 21:51.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c02.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:39 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 05-NOV-2018 21:47
Date, time and analyst ID of latest file update: 05-Nov-2018 21:47 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

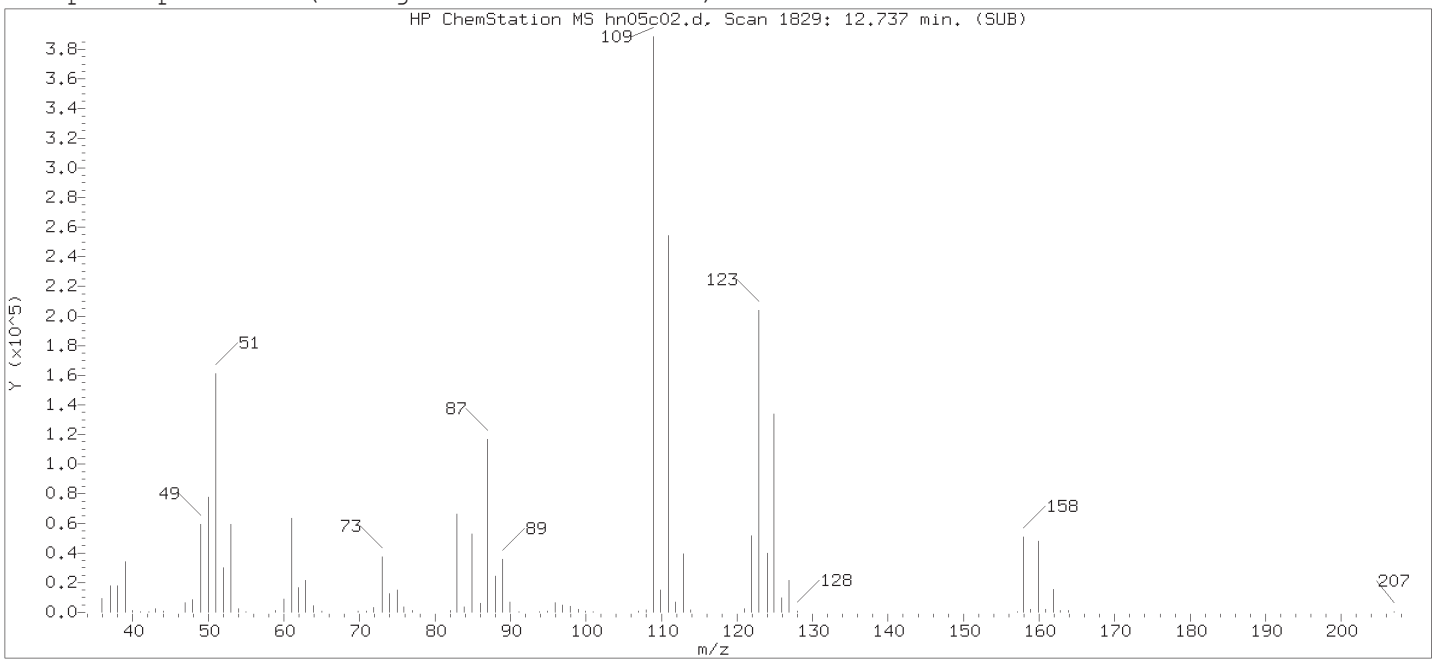
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1759
Retention Time (minutes): 12.310
Quant Ion : 55.00
Area (flag) : 414036M
On-Column Amount (ng) : 524.2546
Integration start scan : 1746 Integration stop scan: 1773
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

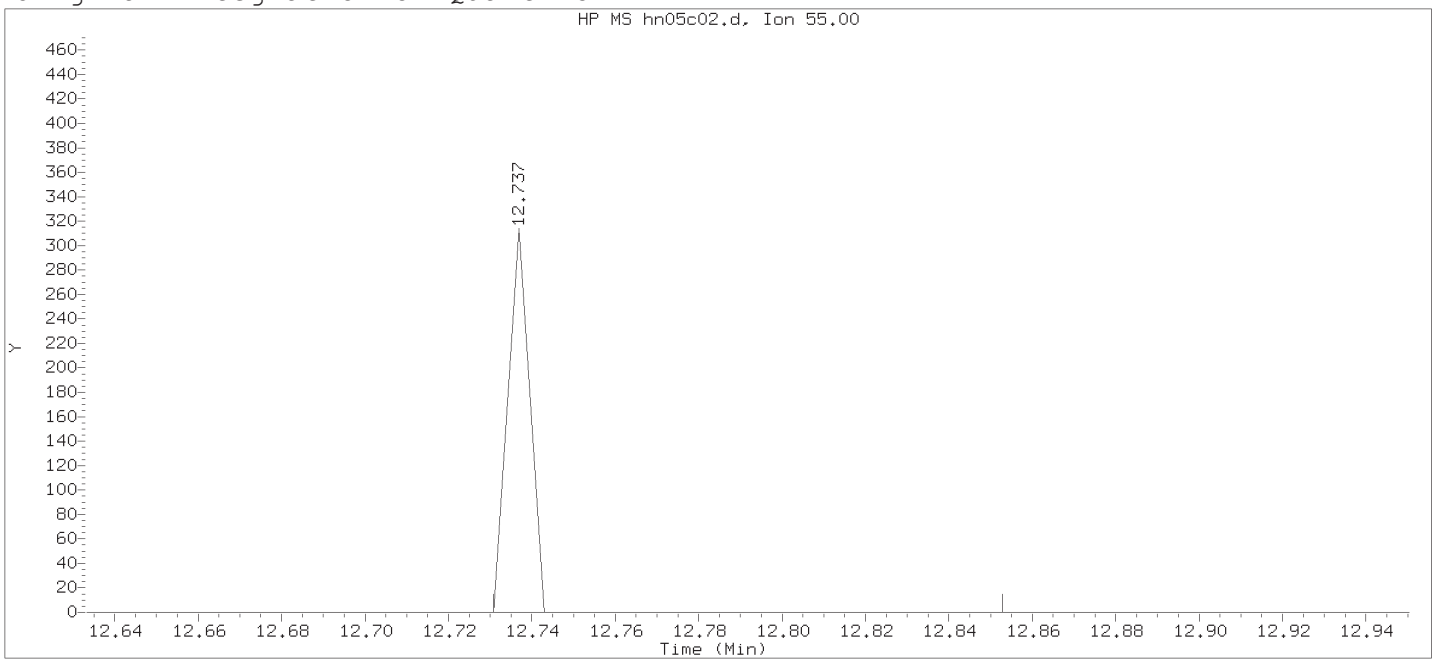
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 21:51.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 13:12.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05c02.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 20:39 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 05-NOV-2018 20:57
Date, time and analyst ID of latest file update: 05-Nov-2018 20:57 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1829
Retention Time (minutes): 12.737
Quant Ion : 55.00
Area : 114
On-column Amount (ng) : 0.1454
Integration start scan : 1827 Integration stop scan: 1847
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 11/05/2018 at 21:51.
Target 3.5 esignature user ID: jgc14951

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

SECD010

Data file: /chem2/HP19094.i/18nov05b.b/hn05ec6.d Injection date and time: **06-NOV-2018 07:22**
Data file Sample Info. Line: SECD010;SECD010;1;3;LCS;;;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 07:41 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18nov05b.b/hn05b10.d**

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: **25789SM**
Calibration date and time (Last Method Edit): 06-NOV-2018 07:40
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18nov05b.b/hn05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.470	(0.012)	473	65	98836	(-20)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2124872	(-17)	10.00	
97) Chlorobenzene-d5	11.378	(0.006)	1606	117	1564857	(-16)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	799490	(-13)	10.00	

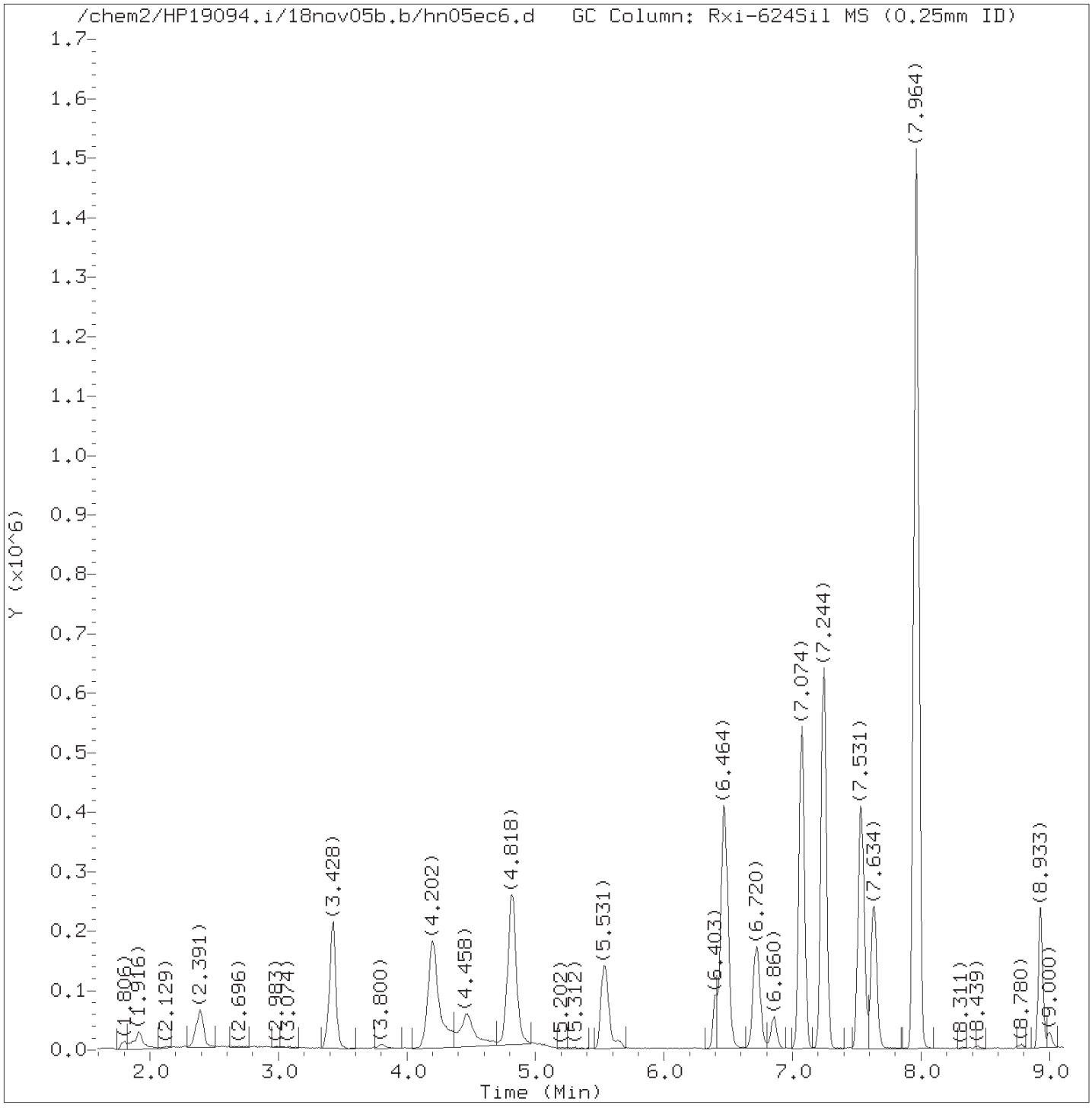
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(-0.001)	113	512034	9.561	96%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.531	(-0.001)	102	95518	10.231	102%		81 - 118
82) Toluene-d8	(3)	9.951	(0.000)	98	2070221	10.279	103%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371	(-0.001)	95	717396	9.783	98%		85 - 114

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
112) Cyclohexanone	(1)	12.310	(-0.007)	55	321555	493.968	493.97			2	25

Total number of targets = 1

Digitally signed by Jennifer K. Howe on 11/06/2018 at 10:54. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:17. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

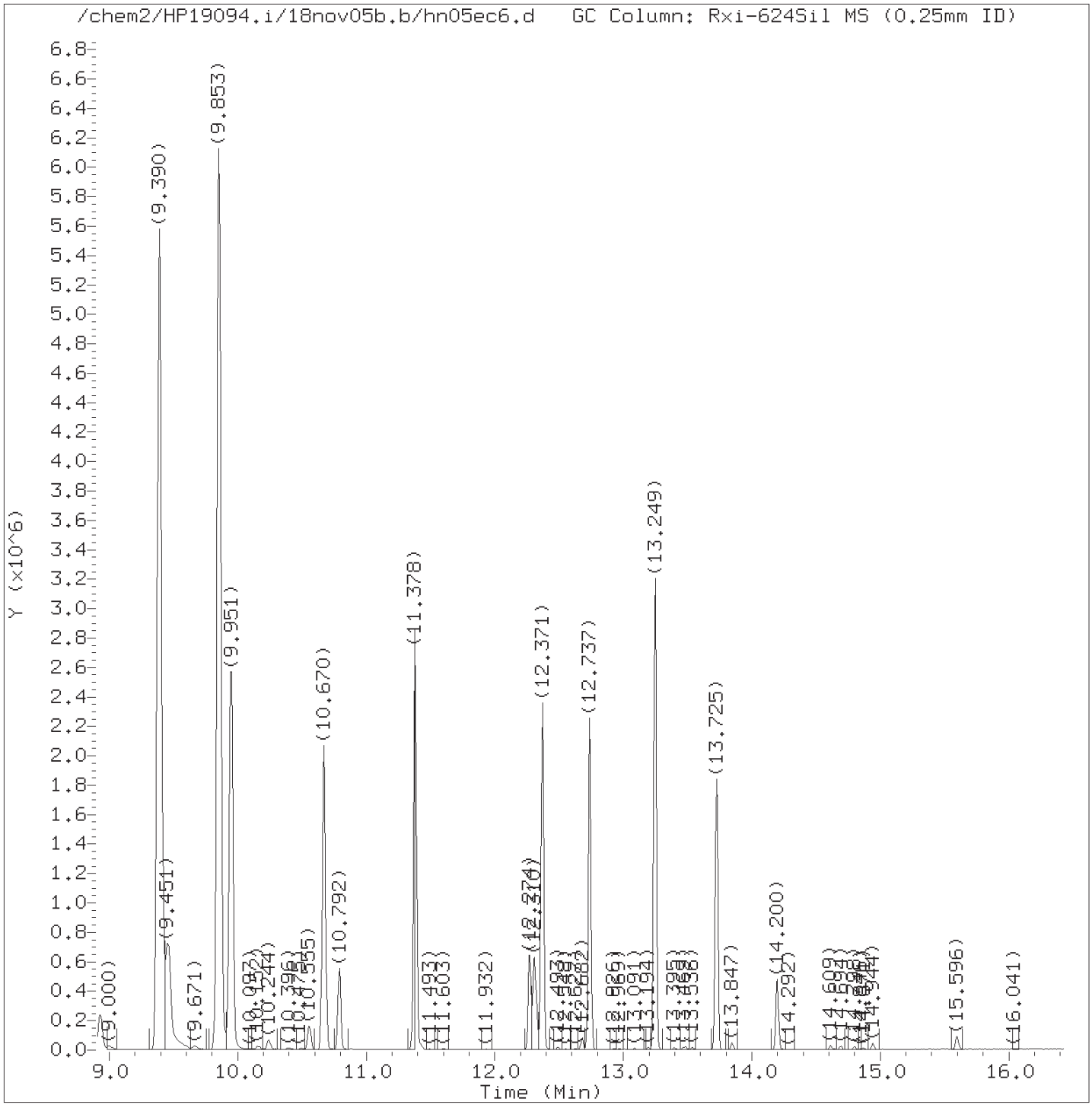
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05ec6.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:22 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789SM
Calibration date and time: 06-NOV-2018 07:40
Date, time and analyst ID of latest file update: 06-Nov-2018 07:41 jkh09052

Sample Name: SECD010 Lab Sample ID: SECD010

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05ec6.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:22 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789SM
Calibration date and time: 06-NOV-2018 07:40
Date, time and analyst ID of latest file update: 06-Nov-2018 07:41 jkh09052

Sample Name: SECD010 Lab Sample ID: SECD010

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05ec6.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 07:22 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789SM
Calibration date and time: 06-NOV-2018 07:40
Date, time and analyst ID of latest file update: 06-Nov-2018 07:41 jkh09052

Sample Name: SECD010 Lab Sample ID: SECD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.470	65	98836	50.000
50)$Dibromofluoromethane	(2)	7.074	113	512034	9.561
57)$1,2-Dichloroethane-d4	(2)	7.531	102	95518	10.231
63)*Fluorobenzene	(2)	7.964	96	2124872	10.000
82)$Toluene-d8	(3)	9.951	98	2070221	10.279
97)*Chlorobenzene-d5	(3)	11.378	117	1564857	10.000
112) Cyclohexanone	(1)	12.310	55	321555	493.968
111)$4-Bromofluorobenzene	(3)	12.371	95	717396	9.783
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	799490	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052

Raw QC Data

Volatiles by GC/MS

Data file: /chem2/HP09953.i/18oct31a.b/bc31b20.d Injection date and time: **31-OCT-2018 11:25**
Data file Sample Info. Line: VBLKB86;VBLKB86;2;3;;;DODSW;;; Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 14-Nov-2018 19:51 sej02002

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **B183042**
Calibration date and time (Last Method Edit): 14-NOV-2018 19:51
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.924	(0.006)	180	65	140050	(11)	250.00	
70) Fluorobenzene	3.938	(0.012)	511	96	1371595	(-6)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	1056268	(-6)	50.00	
140) 1,4-Dichlorobenzene-d4	9.224	(0.000)	1380	152	600674	(-8)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.311	(-0.001)	113	343180	50.203	100%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.615	(-0.001)	102	78149	53.115	106%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1338581	49.101	98%		85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	472796	47.607	95%		79 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)				Not Detected					0.6	5
4) Chloromethane	(2)				Not Detected					0.6	5
5) Vinyl Chloride	(2)				Not Detected					0.6	5
9) Bromomethane	(2)				Not Detected					0.7	5
10) Chloroethane	(2)				Not Detected					1	5
13) Trichlorofluoromethane	(2)				Not Detected					0.7	5
19) 1,1-Dichloroethene	(2)				Not Detected					0.5	5
20) Acetone	(1)				Not Detected					6	20
22) Freon 113	(2)				Not Detected					0.6	10
25) Carbon Disulfide	(2)				Not Detected					0.6	5
27) Methyl Acetate	(2)				Not Detected					1	5
31) Methylene Chloride	(2)				Not Detected					2	5
34) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.5	5
35) trans-1,2-Dichloroethene	(2)				Not Detected					0.5	5
40) 1,1-Dichloroethane	(2)				Not Detected					0.5	5
44) 2-Butanone	(1)				Not Detected					1	10
45) cis-1,2-Dichloroethene	(2)				Not Detected					0.5	5
52) Bromochloromethane	(2)				Not Detected					0.6	5
54) Chloroform	(2)				Not Detected					0.6	5
57) 1,1,1-Trichloroethane	(2)				Not Detected					0.6	5
58) Cyclohexane	(2)				Not Detected					0.5	5
61) Carbon Tetrachloride	(2)				Not Detected					0.5	5
64) Benzene	(2)				Not Detected					0.5	5
67) 1,2-Dichloroethane	(2)				Not Detected					0.6	5
75) Trichloroethene	(2)				Not Detected					0.5	5
76) Methylcyclohexane	(2)				Not Detected					0.6	5
77) 1,2-Dichloropropane	(2)				Not Detected					0.5	5
84) Bromodichloromethane	(2)				Not Detected					0.4	5
89) cis-1,3-Dichloropropene	(2)				Not Detected					0.4	5
90) 4-Methyl-2-pentanone	(2)				Not Detected					1	10

Digitally signed by Patrick T. Herres on 11/14/2018 at 20:11. Target 3.5 esignature user ID: pth10165

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18oct31a.b/bc31b20.d Injection date and time: **31-OCT-2018 11:25**
Data file Sample Info. Line: VBLKB86;VBLKB86;2;3;;;DODSW;;; Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 14-Nov-2018 19:51 sej02002

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **B183042**
Calibration date and time (Last Method Edit): 14-NOV-2018 19:51
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

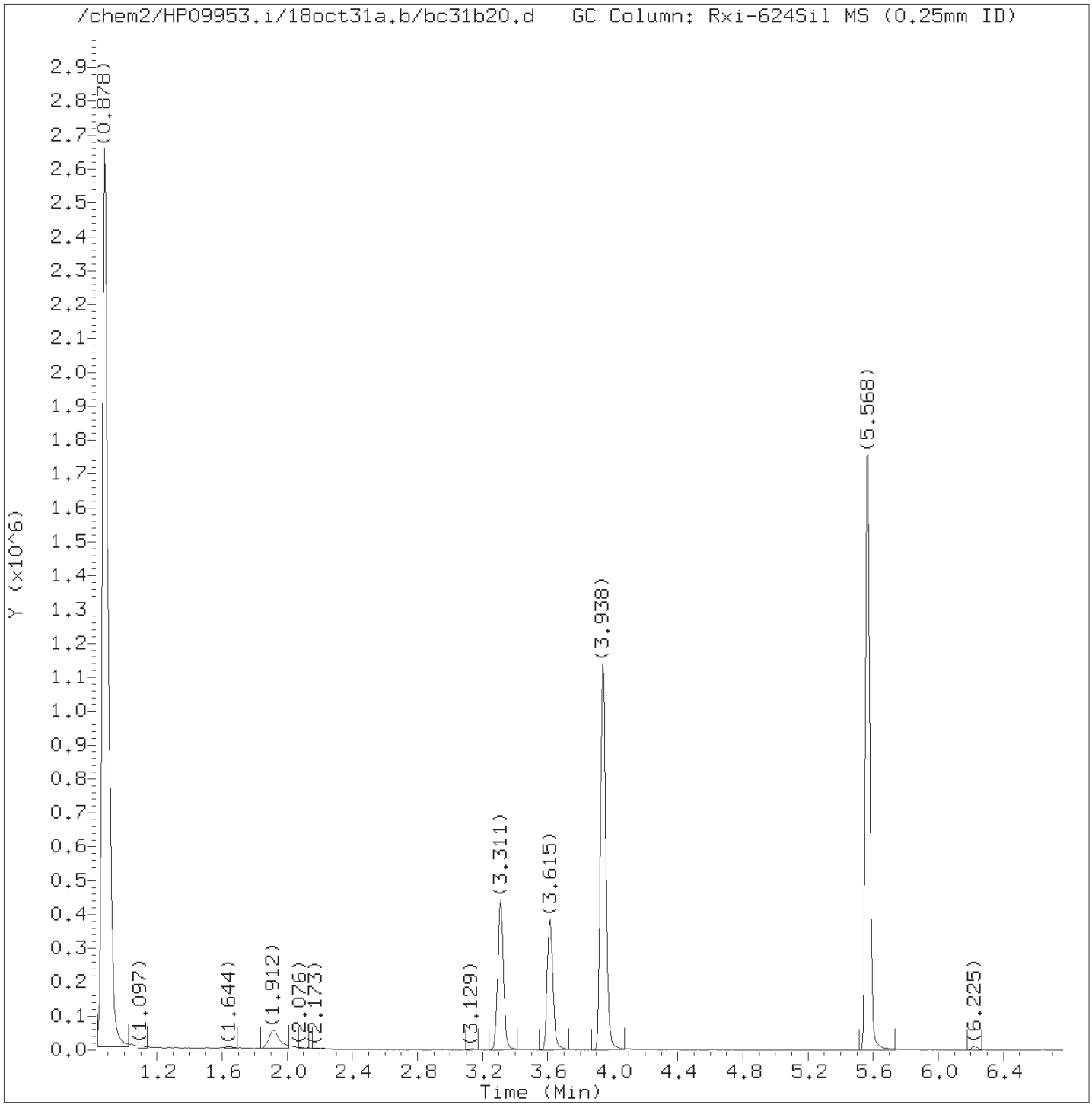
Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
92) Toluene	(3)				Not Detected					0.6	5
93) trans-1,3-Dichloropropene	(3)				Not Detected					0.3	5
96) 1,1,2-Trichloroethane	(3)				Not Detected					0.5	5
98) Tetrachloroethene	(3)				Not Detected					0.5	5
101) 2-Hexanone	(3)				Not Detected					1	10
103) Dibromochloromethane	(3)				Not Detected					0.4	5
104) 1,2-Dibromoethane	(3)				Not Detected					0.4	5
107) Chlorobenzene	(3)				Not Detected					0.5	5
108) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.5	5
109) Ethylbenzene	(3)				Not Detected					0.4	5
110) m+p-Xylene	(3)				Not Detected					1	5
111) o-Xylene	(3)				Not Detected					0.4	5
112) Xylene (Total)	(3)				Not Detected					1	5
113) Styrene	(3)				Not Detected					0.3	5
114) Bromoform	(3)				Not Detected					5	10
115) Isopropylbenzene	(3)				Not Detected					0.4	5
118) Cyclohexanone	(1)				Not Detected					25	250
120) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.4	5
138) 1,3-Dichlorobenzene	(4)				Not Detected					0.5	5
141) 1,4-Dichlorobenzene	(4)				Not Detected					0.4	5
147) 1,2-Dichlorobenzene	(4)				Not Detected					0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.4	5
153) 1,2,4-Trichlorobenzene	(4)				Not Detected					5	10
156) 1,2,3-Trichlorobenzene	(4)				Not Detected					5	10

Total number of targets = 54

Digitally signed by Patrick T. Herres on 11/14/2018 at 20:11. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 20:46. PARALLAX ID: sej02002



Total Ion Chromatogram (TIC)

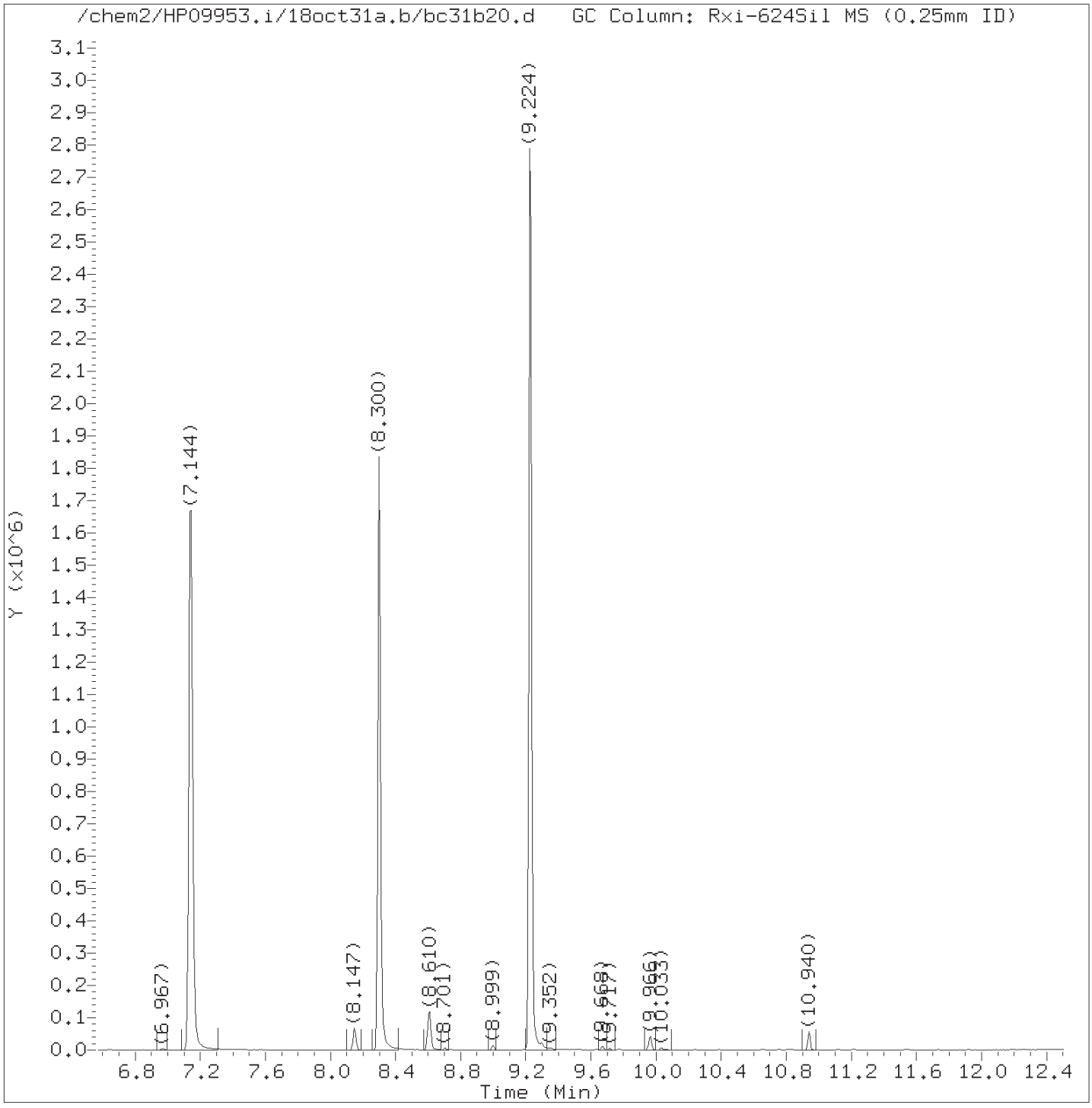
Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31b20.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 11:25 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:51 sej02002

Sample Name: VBLKB86 Lab Sample ID: VBLKB86

Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31b20.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 11:25 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:51 sej02002

Sample Name: VBLKB86 Lab Sample ID: VBLKB86

Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31b20.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 11:25 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:51 sej02002

Sample Name: VBLKB86 Lab Sample ID: VBLKB86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
30)*t-Butyl alcohol-d10	(1)	1.924	65	140050	250.000
56)$Dibromofluoromethane	(2)	3.311	113	343180	50.203
63)$1,2-Dichloroethane-d4	(2)	3.615	102	78149	53.115
70)*Fluorobenzene	(2)	3.938	96	1371595	50.000
91)$Toluene-d8	(3)	5.568	98	1338581	49.101
105)*Chlorobenzene-d5	(3)	7.144	117	1056268	50.000
119)$4-Bromofluorobenzene	(3)	8.300	95	472796	47.607
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	600674	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKB93

Data file: /chem2/HP09953.i/18nov06a.b/bn06b01.d Injection date and time: **06-NOV-2018 20:41**
Data file Sample Info. Line: VBLKB93;VBLKB93;2;3;;;DODSW;;; Instrument ID: **HP09953.i** Batch: **B183101AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 21:20 pth10165

Blank Data file reference: **/chem2/HP09953.i/18nov06a.b/bn06b01.d**

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 06-NOV-2018 20:48
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov06a.b/bn06c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.924	(0.000)	180	65	106420	(-12)	250.00	
70) Fluorobenzene	3.944	(0.000)	512	96	1179305	(-14)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	959320	(-13)	50.00	
140) 1,4-Dichlorobenzene-d4	9.230	(-0.006)	1381	152	538378	(-19)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.317	(0.000)	113	300057	51.052	102%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.621	(0.000)	102	67308	53.206	106%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1190326	48.075	96%		85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	424412	47.054	94%		79 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)				Not Detected					0.6	5
4) Chloromethane	(2)				Not Detected					0.6	5
5) Vinyl Chloride	(2)				Not Detected					0.6	5
9) Bromomethane	(2)				Not Detected					0.7	5
10) Chloroethane	(2)				Not Detected					1	5
13) Trichlorofluoromethane	(2)				Not Detected					0.7	5
19) 1,1-Dichloroethene	(2)				Not Detected					0.5	5
20) Acetone	(1)				Not Detected					6	20
22) Freon 113	(2)				Not Detected					0.6	10
25) Carbon Disulfide	(2)				Not Detected					0.6	5
27) Methyl Acetate	(2)				Not Detected					1	5
31) Methylene Chloride	(2)				Not Detected					2	5
34) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.5	5
35) trans-1,2-Dichloroethene	(2)				Not Detected					0.5	5
40) 1,1-Dichloroethane	(2)				Not Detected					0.5	5
44) 2-Butanone	(1)				Not Detected					1	10
45) cis-1,2-Dichloroethene	(2)				Not Detected					0.5	5
54) Chloroform	(2)				Not Detected					0.6	5
57) 1,1,1-Trichloroethane	(2)				Not Detected					0.6	5
58) Cyclohexane	(2)				Not Detected					0.5	5
61) Carbon Tetrachloride	(2)				Not Detected					0.5	5
64) Benzene	(2)				Not Detected					0.5	5
67) 1,2-Dichloroethane	(2)				Not Detected					0.6	5
75) Trichloroethene	(2)				Not Detected					0.5	5
76) Methylcyclohexane	(2)				Not Detected					0.6	5
77) 1,2-Dichloropropane	(2)				Not Detected					0.5	5
84) Bromodichloromethane	(2)				Not Detected					0.4	5
89) cis-1,3-Dichloropropene	(2)				Not Detected					0.4	5
90) 4-Methyl-2-pentanone	(2)				Not Detected					1	10
92) Toluene	(3)				Not Detected					0.6	5

Digitally signed by Patrick T. Herres on 11/06/2018 at 21:20. Target 3.5 esignature user ID: pth10165

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov06a.b/bn06b01.d Injection date and time: **06-NOV-2018 20:41**
Data file Sample Info. Line: VBLKB93;VBLKB93;2;3;;;DODSW;;; Instrument ID: **HP09953.i** Batch: **B183101AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 21:20 pth10165

Blank Data file reference: **/chem2/HP09953.i/18nov06a.b/bn06b01.d**

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 06-NOV-2018 20:48
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov06a.b/bn06c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

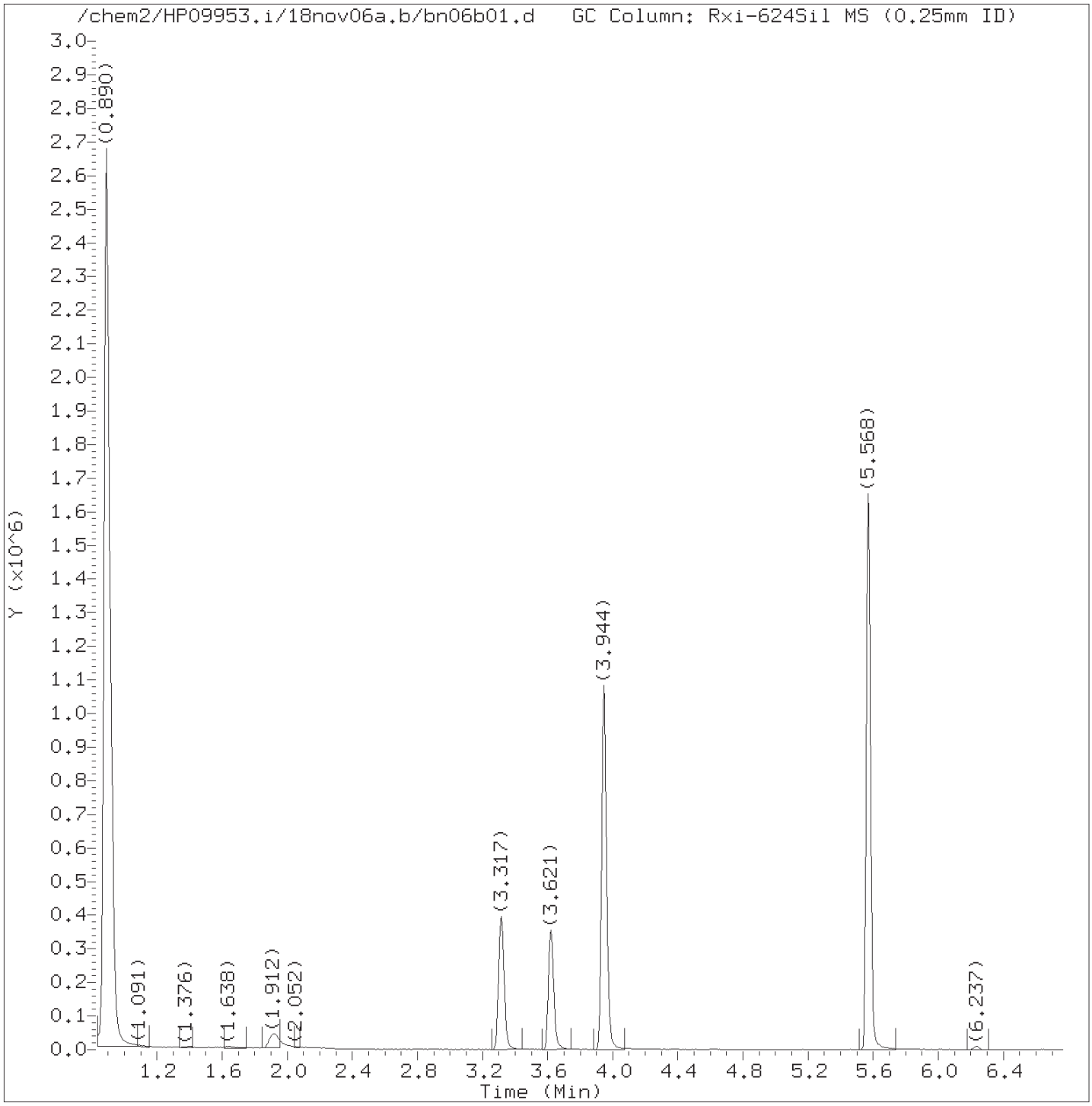
Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
93) trans-1,3-Dichloropropene	(3)				Not Detected					0.3	5
96) 1,1,2-Trichloroethane	(3)				Not Detected					0.5	5
98) Tetrachloroethene	(3)				Not Detected					0.5	5
101) 2-Hexanone	(3)				Not Detected					1	10
103) Dibromochloromethane	(3)				Not Detected					0.4	5
104) 1,2-Dibromoethane	(3)				Not Detected					0.4	5
107) Chlorobenzene	(3)				Not Detected					0.5	5
109) Ethylbenzene	(3)				Not Detected					0.4	5
110) m+p-Xylene	(3)				Not Detected					1	5
111) o-Xylene	(3)				Not Detected					0.4	5
112) Xylene (Total)	(3)				Not Detected					1	5
113) Styrene	(3)				Not Detected					0.3	5
114) Bromoform	(3)				Not Detected					5	10
115) Isopropylbenzene	(3)				Not Detected					0.4	5
118) Cyclohexanone	(1)				Not Detected					25	250
120) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.4	5
138) 1,3-Dichlorobenzene	(4)				Not Detected					0.5	5
141) 1,4-Dichlorobenzene	(4)				Not Detected					0.4	5
147) 1,2-Dichlorobenzene	(4)				Not Detected					0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.4	5
153) 1,2,4-Trichlorobenzene	(4)				Not Detected					5	10

Total number of targets = 51

Digitally signed by Patrick T. Herres on 11/06/2018 at 21:20. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Robin C. Runkle on 11/12/2018 at 11:31. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

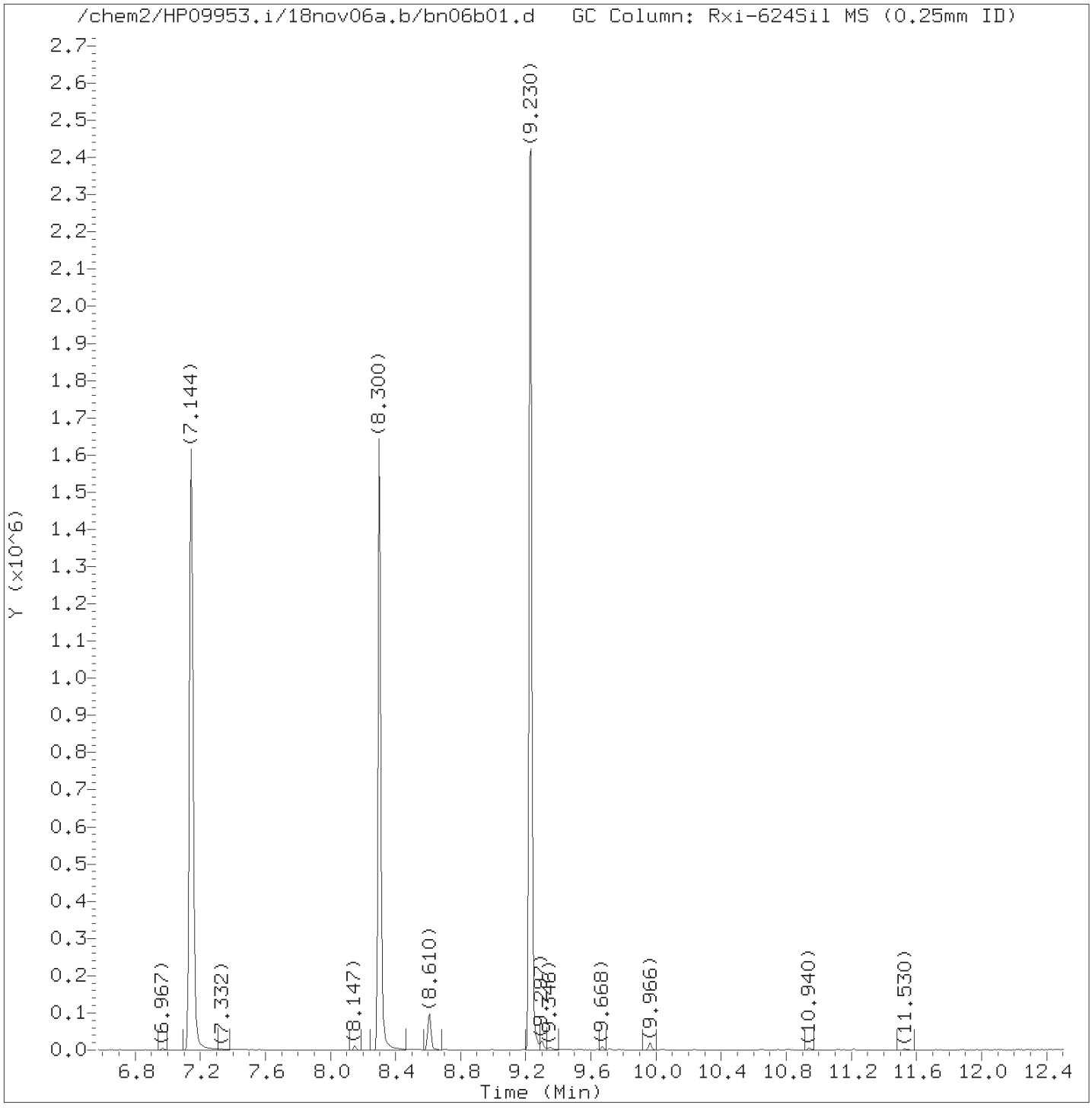
Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06b01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 20:41 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 20:48
Date, time and analyst ID of latest file update: 06-Nov-2018 21:20 pth10165

Sample Name: VBLKB93 Lab Sample ID: VBLKB93

Digitally signed by Patrick T. Herres
on 11/06/2018 at 21:20.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06b01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 20:41 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 20:48
Date, time and analyst ID of latest file update: 06-Nov-2018 21:20 pth10165

Sample Name: VBLKB93 Lab Sample ID: VBLKB93

Digitally signed by Patrick T. Herres
on 11/06/2018 at 21:20.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06b01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 20:41 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 20:48
Date, time and analyst ID of latest file update: 06-Nov-2018 21:20 pth10165

Sample Name: VBLKB93 Lab Sample ID: VBLKB93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
30)*t-Butyl alcohol-d10	(1)	1.924	65	106420	250.000
56)$Dibromofluoromethane	(2)	3.317	113	300057	51.052
63)$1,2-Dichloroethane-d4	(2)	3.621	102	67308	53.206
70)*Fluorobenzene	(2)	3.944	96	1179305	50.000
91)$Toluene-d8	(3)	5.568	98	1190326	48.075
105)*Chlorobenzene-d5	(3)	7.144	117	959320	50.000
119)$4-Bromofluorobenzene	(3)	8.300	95	424412	47.054
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	538378	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/06/2018 at 21:20.
Target 3.5 esignature user ID: pth10165

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKB97

Data file: /chem2/HP09953.i/18nov07a.b/bn07b30.d Injection date and time: **07-NOV-2018 10:32**
Data file Sample Info. Line: VBLKB97;VBLKB97;2;3;;;DODSW;;; Instrument ID: **HP09953.i** Batch: **B183112AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 10:55 jkh09052

Blank Data file reference: **/chem2/HP09953.i/18nov07a.b/bn07b30.d**

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: **B183112**
Calibration date and time (Last Method Edit): 07-NOV-2018 10:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov07a.b/bn07c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.924	(0.006)	180	65	112643	(0)	250.00	
70) Fluorobenzene	3.944	(0.006)	512	96	1220326	(-7)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	999590	(-5)	50.00	
140) 1,4-Dichlorobenzene-d4	9.230	(-0.006)	1381	152	564314	(-10)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.317	(-0.001)	113	307524	50.564	101%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.621	(-0.001)	102	68329	52.198	104%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1227151	47.566	95%		85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	439414	46.754	94%		79 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)				Not Detected					0.6	5
4) Chloromethane	(2)				Not Detected					0.6	5
5) Vinyl Chloride	(2)				Not Detected					0.6	5
9) Bromomethane	(2)				Not Detected					0.7	5
10) Chloroethane	(2)				Not Detected					1	5
13) Trichlorofluoromethane	(2)				Not Detected					0.7	5
19) 1,1-Dichloroethene	(2)				Not Detected					0.5	5
20) Acetone	(1)				Not Detected					6	20
22) Freon 113	(2)				Not Detected					0.6	10
25) Carbon Disulfide	(2)				Not Detected					0.6	5
27) Methyl Acetate	(2)				Not Detected					1	5
31) Methylene Chloride	(2)				Not Detected					2	5
34) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.5	5
35) trans-1,2-Dichloroethene	(2)				Not Detected					0.5	5
40) 1,1-Dichloroethane	(2)				Not Detected					0.5	5
44) 2-Butanone	(1)				Not Detected					1	10
45) cis-1,2-Dichloroethene	(2)				Not Detected					0.5	5
54) Chloroform	(2)				Not Detected					0.6	5
57) 1,1,1-Trichloroethane	(2)				Not Detected					0.6	5
58) Cyclohexane	(2)				Not Detected					0.5	5
61) Carbon Tetrachloride	(2)				Not Detected					0.5	5
64) Benzene	(2)				Not Detected					0.5	5
67) 1,2-Dichloroethane	(2)				Not Detected					0.6	5
75) Trichloroethene	(2)				Not Detected					0.5	5
76) Methylcyclohexane	(2)				Not Detected					0.6	5
77) 1,2-Dichloropropane	(2)				Not Detected					0.5	5
84) Bromodichloromethane	(2)				Not Detected					0.4	5
89) cis-1,3-Dichloropropene	(2)				Not Detected					0.4	5
90) 4-Methyl-2-pentanone	(2)				Not Detected					1	10
92) Toluene	(3)				Not Detected					0.6	5

Digitally signed by Jennifer K. Howe on 11/07/2018 at 10:55. Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov07a.b/bn07b30.d Injection date and time: **07-NOV-2018 10:32**
Data file Sample Info. Line: VBLKB97;VBLKB97;2;3;;;DODSW;;; Instrument ID: **HP09953.i** Batch: **B183112AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 10:55 jkh09052

Blank Data file reference: **/chem2/HP09953.i/18nov07a.b/bn07b30.d**

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: **B183112**
Calibration date and time (Last Method Edit): 07-NOV-2018 10:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov07a.b/bn07c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

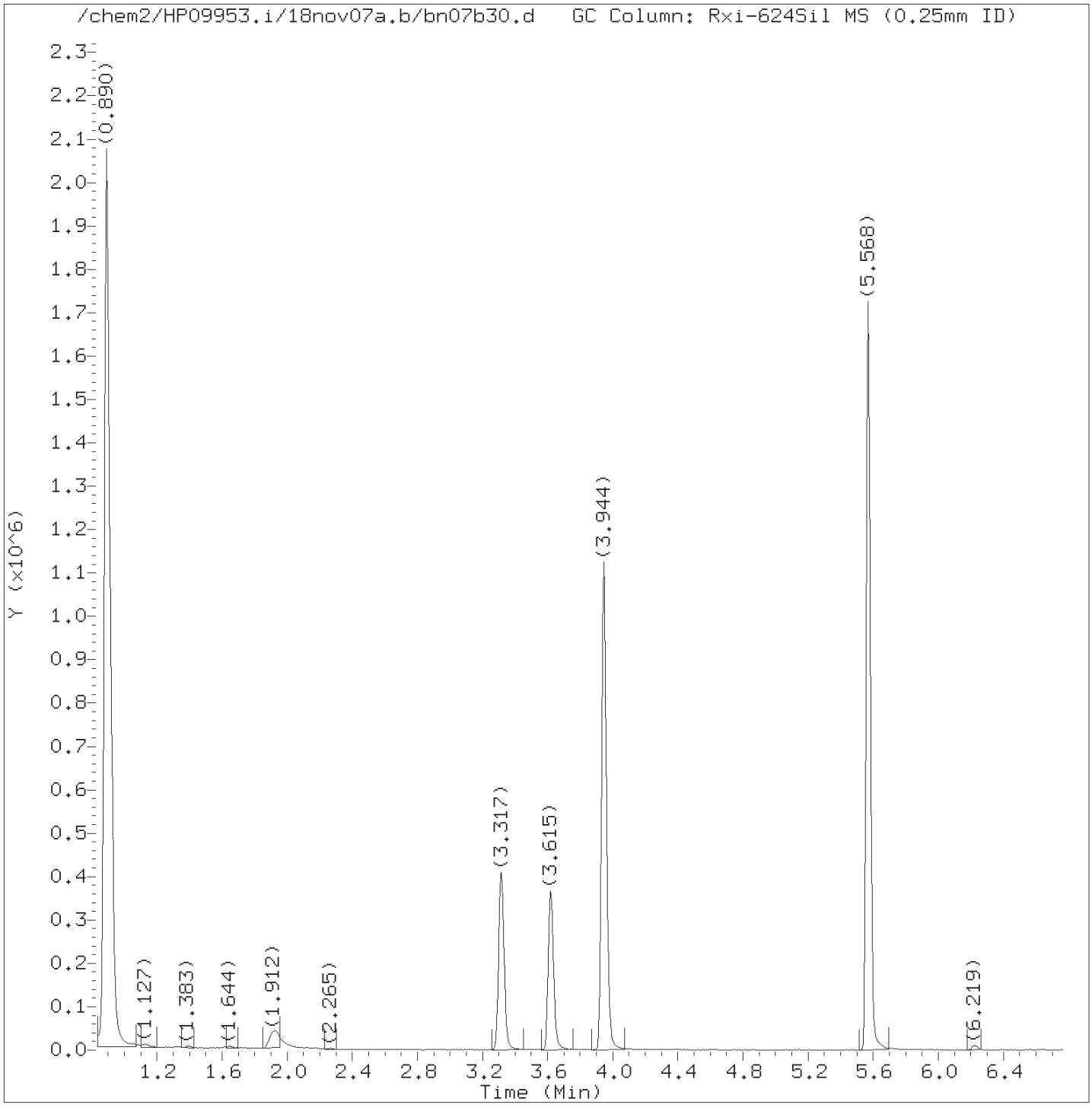
Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
93) trans-1,3-Dichloropropene	(3)				Not Detected					0.3	5
96) 1,1,2-Trichloroethane	(3)				Not Detected					0.5	5
98) Tetrachloroethene	(3)				Not Detected					0.5	5
101) 2-Hexanone	(3)				Not Detected					1	10
103) Dibromochloromethane	(3)				Not Detected					0.4	5
104) 1,2-Dibromoethane	(3)				Not Detected					0.4	5
107) Chlorobenzene	(3)				Not Detected					0.5	5
109) Ethylbenzene	(3)				Not Detected					0.4	5
110) m+p-Xylene	(3)				Not Detected					1	5
111) o-Xylene	(3)				Not Detected					0.4	5
112) Xylene (Total)	(3)				Not Detected					1	5
113) Styrene	(3)				Not Detected					0.3	5
114) Bromoform	(3)				Not Detected					5	10
115) Isopropylbenzene	(3)				Not Detected					0.4	5
118) Cyclohexanone	(1)				Not Detected					25	250
120) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.4	5
138) 1,3-Dichlorobenzene	(4)				Not Detected					0.5	5
141) 1,4-Dichlorobenzene	(4)				Not Detected					0.4	5
147) 1,2-Dichlorobenzene	(4)				Not Detected					0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.4	5
153) 1,2,4-Trichlorobenzene	(4)				Not Detected					5	10

Total number of targets = 51

Digitally signed by Jennifer K. Howe on 11/07/2018 at 10:55. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kerri E. Legerlotz on 11/12/2018 at 14:12. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

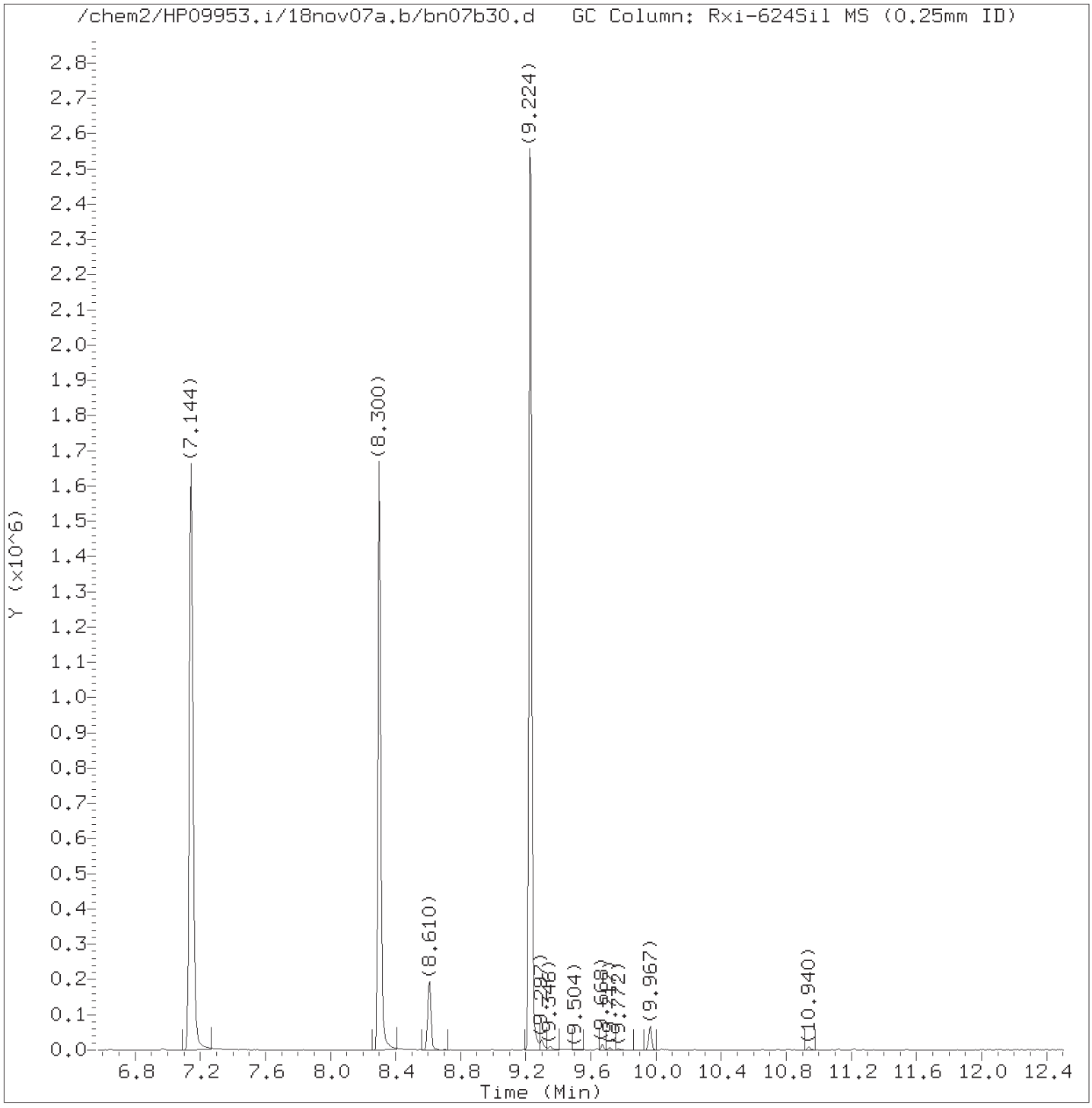
Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07b30.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 10:32 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:55 jkh09052

Sample Name: VBLKB97 Lab Sample ID: VBLKB97

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 10:55.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07b30.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 10:32 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:55 jkh09052

Sample Name: VBLKB97 Lab Sample ID: VBLKB97

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 10:55.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07b30.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 10:32 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:55 jkh09052

Sample Name: VBLKB97 Lab Sample ID: VBLKB97

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
30)*t-Butyl alcohol-d10	(1)	1.924	65	112643	250.000
56)$Dibromofluoromethane	(2)	3.317	113	307524	50.564
63)$1,2-Dichloroethane-d4	(2)	3.621	102	68329	52.198
70)*Fluorobenzene	(2)	3.944	96	1220326	50.000
91)$Toluene-d8	(3)	5.568	98	1227151	47.566
105)*Chlorobenzene-d5	(3)	7.144	117	999590	50.000
119)$4-Bromofluorobenzene	(3)	8.300	95	439414	46.754
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	564314	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 10:55.
Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05b10.d Injection date and time: **05-NOV-2018 22:48**
Data file Sample Info. Line: VBLKH96;VBLKH96;1;3;;;DOD25;;; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 15:12 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18nov05b.b/hn05b10.d**

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: **25789**
Calibration date and time (Last Method Edit): 06-NOV-2018 09:05
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18nov05b.b/hn05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.476	(0.006)	474	65	116767	(-5)	50.00	
63) Fluorobenzene	7.963	(0.006)	1046	96	2555930	(0)	10.00	
97) Chlorobenzene-d5	11.377	(0.006)	1606	117	1855788	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	936548	(2)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.073	(-0.001)	113	623364	9.677	97%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.537	(-0.001)	102	115790	10.310	103%		81 - 118
82) Toluene-d8	(3)	9.945	(0.000)	98	2470531	10.344	103%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371	(-0.001)	95	854467	9.826	98%		85 - 114

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	0.5
2) Chloromethane	(2)				Not Detected					0.06	0.5
5) Vinyl Chloride	(2)				Not Detected					0.1	0.5
7) Bromomethane	(2)				Not Detected					0.07	0.5
8) Chloroethane	(2)				Not Detected					0.07	0.5
10) Trichlorofluoromethane	(2)				Not Detected					0.05	0.5
15) 1,1-Dichloroethene	(2)				Not Detected					0.06	0.5
16) Freon 113	(2)				Not Detected					0.06	0.5
14) Acetone	(1)				Not Detected					0.9	5
18) Carbon Disulfide	(2)				Not Detected					0.06	1
21) Methyl Acetate	(1)				Not Detected					0.1	1
23) Methylene Chloride	(2)				Not Detected					0.07	0.5
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.06	0.5
30) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.05	0.5
33) 1,1-Dichloroethane	(2)				Not Detected					0.07	0.5
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.05	0.5
38) 2-Butanone	(1)				Not Detected					0.6	5
49) Chloroform	(2)				Not Detected					0.09	0.5
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	0.5
52) Cyclohexane	(2)				Not Detected					0.05	0.5
54) Carbon Tetrachloride	(2)				Not Detected					0.07	0.5
58) Benzene	(2)				Not Detected					0.05	0.5
59) 1,2-Dichloroethane	(2)				Not Detected					0.05	0.5
67) Trichloroethene	(2)				Not Detected					0.06	0.5
69) Methylcyclohexane	(2)				Not Detected					0.05	0.5
70) 1,2-Dichloropropane	(2)				Not Detected					0.06	0.5
74) Bromodichloromethane	(2)				Not Detected					0.05	0.5
80) cis-1,3-Dichloropropene	(2)				Not Detected					0.05	0.5
81) 4-Methyl-2-Pentanone	(1)				Not Detected					0.7	5
83) Toluene	(3)				Not Detected					0.07	0.5
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.06	0.5

Digitally signed by Joel G. Chachapoya on 11/07/2018 at 15:13. Target 3.5 esignature user ID: jgc14951

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05b10.d Injection date and time: **05-NOV-2018 22:48**
Data file Sample Info. Line: VBLKH96;VBLKH96;1;3;;;DOD25;;; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 15:12 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18nov05b.b/hn05b10.d**

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: **25789**
Calibration date and time (Last Method Edit): 06-NOV-2018 09:05
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18nov05b.b/hn05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

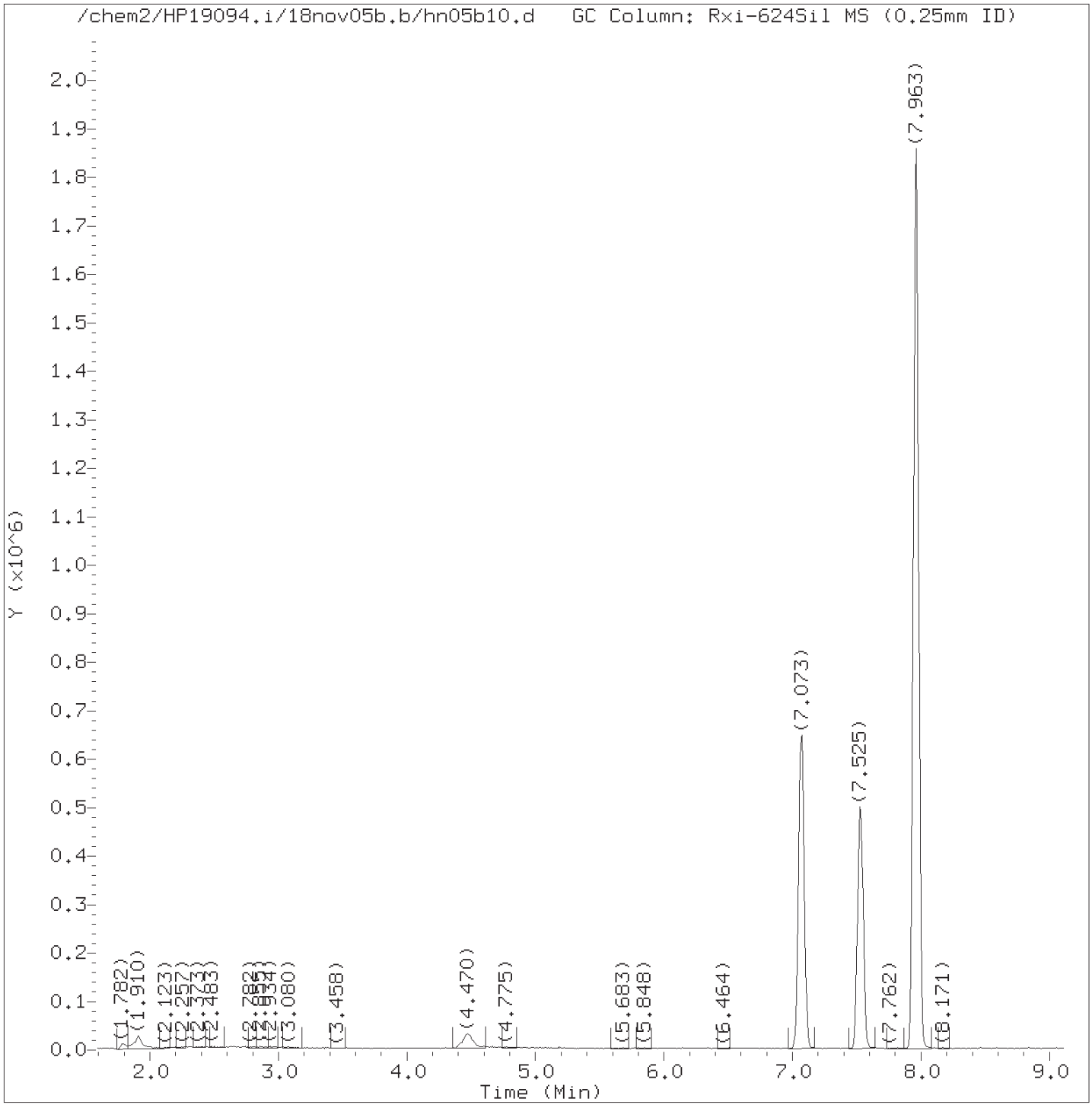
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.06	0.5
89) Tetrachloroethene	(3)				Not Detected					0.06	0.5
91) 2-Hexanone	(1)				Not Detected					0.6	5
93) Dibromochloromethane	(3)				Not Detected					0.07	0.5
95) 1,2-Dibromoethane	(3)				Not Detected					0.06	0.5
98) Chlorobenzene	(3)				Not Detected					0.06	0.5
100) Ethylbenzene	(3)				Not Detected					0.06	0.5
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	0.5
106) Styrene	(3)				Not Detected					0.05	0.5
107) Bromoform	(3)				Not Detected					0.3	1
108) Isopropylbenzene	(3)				Not Detected					0.05	0.5
112) Cyclohexanone	(1)				Not Detected					2	25
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.07	0.5
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.06	0.5
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.07	0.5
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.06	0.5
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.1	0.5
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.06	0.5

Total number of targets = 51

Digitally signed by Joel G. Chachapoya on 11/07/2018 at 15:13. Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

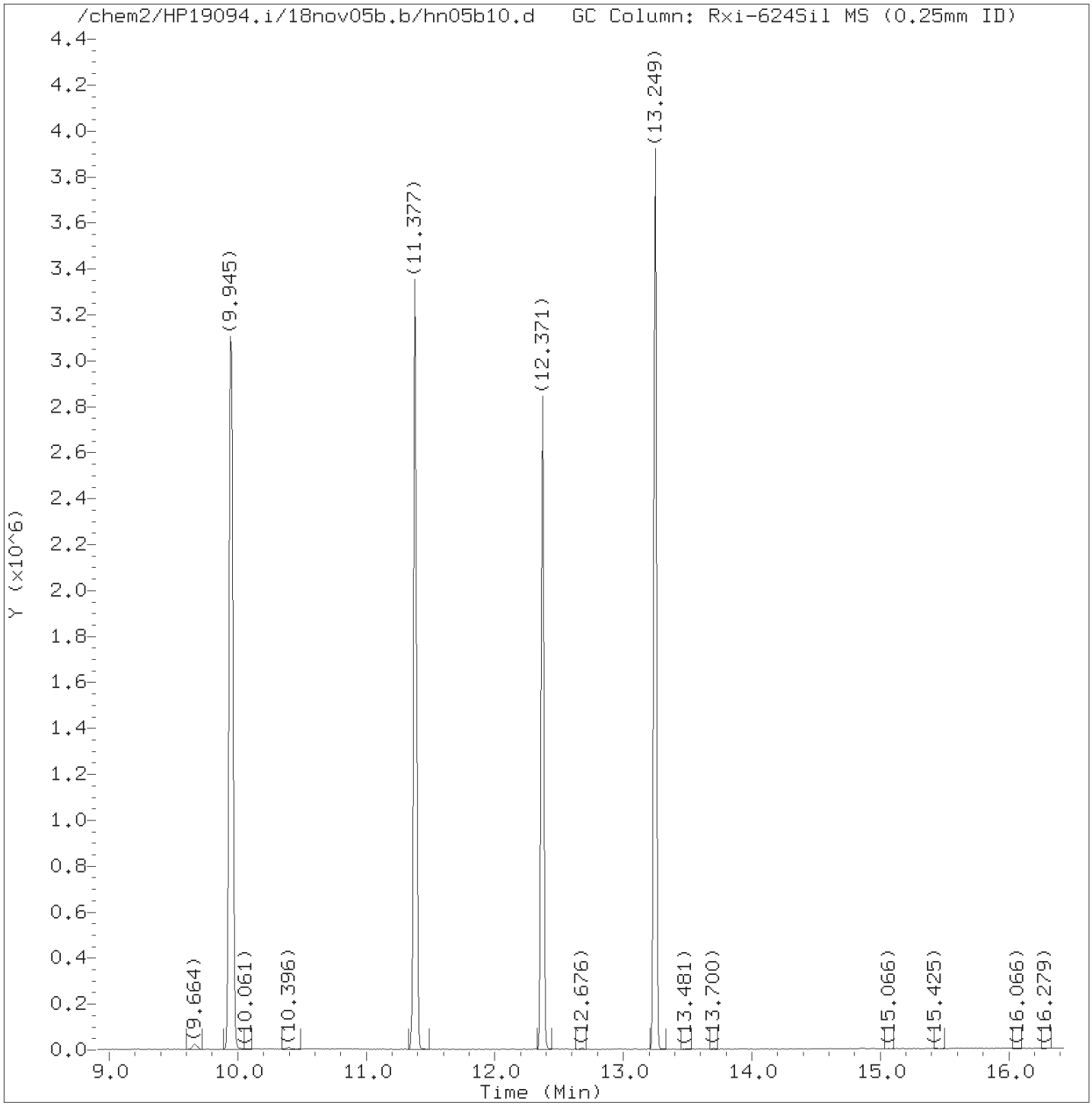
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05b10.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 22:48 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 07-Nov-2018 15:12 jgc14951

Sample Name: VBLKH96 Lab Sample ID: VBLKH96

Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05b10.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 22:48 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 07-Nov-2018 15:12 jgc14951

Sample Name: VBLKH96 Lab Sample ID: VBLKH96

Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05b10.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 22:48 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 07-Nov-2018 15:12 jgc14951

Sample Name: VBLKH96 Lab Sample ID: VBLKH96

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.476	65	116767	50.000
50)$Dibromofluoromethane	(2)	7.073	113	623364	9.677
57)$1,2-Dichloroethane-d4	(2)	7.537	102	115790	10.310
63)*Fluorobenzene	(2)	7.963	96	2555930	10.000
82)$Toluene-d8	(3)	9.945	98	2470531	10.344
97)*Chlorobenzene-d5	(3)	11.377	117	1855788	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	854467	9.826
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	936548	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951

T1003MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9867763MS

Data file: /chem2/HP09953.i/18oct31a.b/bc31s37.d Injection date and time: **31-OCT-2018 18:09**
Data file Sample Info. Line: T1003MS;9867763MS;2;3;MS;TID10;DODSW;;bc31b20 Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 31-Oct-2018 18:29 pth10165

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 31-OCT-2018 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: **050B** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.03**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 4.87 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.912	(0.018)	178	65	31285	(-75)	250.00	*
70) Fluorobenzene	3.944	(0.006)	512	96	1108527	(-24)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	611803	(-45)	50.00	
140) 1,4-Dichlorobenzene-d4	9.230	(-0.006)	1381	152	179088	(-73)	50.00	*

*** = Internal Standard area outside QC limits**

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.311	(0.000)	113	285357	51.651	103%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.615	(0.000)	102	61502	51.721	103%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1040474	65.893	132%	*	85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	204261	35.509	71%	*	79 - 119

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)	0.981	(0.001)	85	215777	21.558	22.13			0.6	5
4) Chloromethane	(2)	1.072	(-0.000)	50	205806	19.948	20.48			0.6	5
5) Vinyl Chloride	(2)	1.115	(0.001)	62	159246	19.808	20.34			0.6	5
9) Bromomethane	(2)	1.243	(0.001)	94	73095	10.216	10.49			0.7	5
10) Chloroethane	(2)	1.261	(0.001)	64	81395	18.822	19.32			1	5
13) Trichlorofluoromethane	(2)	1.407	(0.000)	101	272157	24.591	25.25			0.7	5
19) 1,1-Dichloroethene	(2)	1.620	(0.000)	96	123061	22.128	22.72			0.5	5
20) Acetone	(1)	1.638	(-0.004)	58	89139	709.417	728.35		E	6	21
22) Freon 113	(2)	1.650	(0.000)	101	154073	27.632	28.37			0.6	10
25) Carbon Disulfide	(2)	1.754	(0.002)	76	216463	9.728	9.99			0.6	5
27) Methyl Acetate	(2)	1.821	(0.002)	43	57218	20.064	20.60			1	5
31) Methylene Chloride	(2)	1.900	(0.000)	84	123150	18.738	19.24			2	5
34) Methyl Tertiary Butyl Ether	(2)	2.088	(0.000)	73	309185	19.545	20.07			0.5	5
35) trans-1,2-Dichloroethene	(2)	2.070	(0.002)	96	102874	15.906	16.33			0.5	5
40) 1,1-Dichloroethane	(2)	2.380	(0.000)	63	225637	21.516	22.09			0.5	5
44) 2-Butanone	(1)	2.885	(-0.007)	43	222001	276.013	283.38			1	10
45) cis-1,2-Dichloroethene	(2)	2.873	(0.001)	96	116585	16.607	17.05			0.5	5
54) Chloroform	(2)	3.165	(0.000)	83	209334	19.667	20.19			0.6	5
57) 1,1,1-Trichloroethane	(2)	3.336	(0.000)	97	199955	18.347	18.84			0.6	5
58) Cyclohexane	(2)	3.384	(0.001)	56	195812	19.125	19.64			0.5	5
61) Carbon Tetrachloride	(2)	3.488	(0.000)	117	160366	19.375	19.89			0.5	5
64) Benzene	(2)	3.664	(0.001)	78	440199	17.410	17.87			0.5	5
67) 1,2-Dichloroethane	(2)	3.688	(0.000)	62	126695	17.363	17.83			0.6	5
75) Trichloroethene	(2)	4.303	(-0.000)	95	97164	14.736	15.13			0.5	5
76) Methylcyclohexane	(2)	4.497	(-0.000)	83	129495	12.620	12.96			0.6	5
77) 1,2-Dichloropropane	(2)	4.522	(-0.000)	63	112676	18.765	19.27			0.5	5
84) Bromodichloromethane	(2)	4.820	(-0.000)	83	115357	15.384	15.79			0.4	5
89) cis-1,3-Dichloropropene	(2)	5.294	(-0.002)	75	74476	8.225	8.45			0.4	5

E = Compound concentration above calibration range.

Digitally signed by Patrick T. Herres on 10/31/2018 at 18:29. Target 3.5 esignature user ID: pth10165

Data file: /chem2/HP09953.i/18oct31a.b/bc31s37.d Injection date and time: **31-OCT-2018 18:09**
Data file Sample Info. Line: T1003MS;9867763MS;2;3;MS;TID10;DODSW;;bc31b20 Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 31-Oct-2018 18:29 pth10165

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 31-OCT-2018 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: **050B** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.03**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 4.87 g

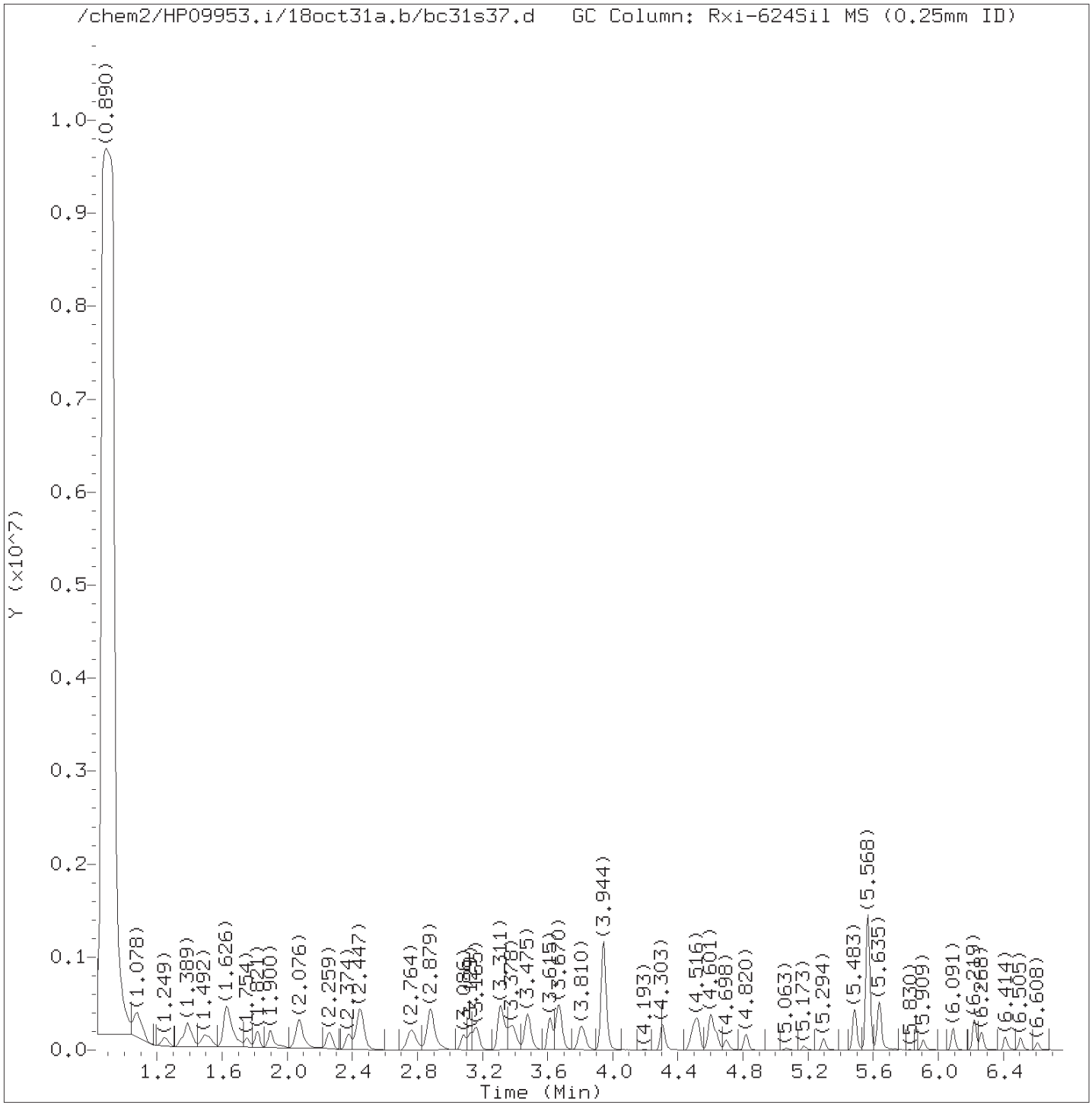
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
90) 4-Methyl-2-pentanone	(2)	5.483(-0.000)	43	299202	57.251	58.78			1	10
92) Toluene	(3)	5.635(0.000)	92	237110	20.245	20.79			0.6	5
93) trans-1,3-Dichloropropene	(3)	5.909(-0.000)	75	60696	10.819	11.11			0.3	5
96) 1,1,2-Trichloroethane	(3)	6.091(0.000)	97	77226	20.319	20.86			0.5	5
98) Tetrachloroethene	(3)	6.225(0.000)	166	98031	15.281	15.69			0.5	5
101) 2-Hexanone	(3)	6.408(0.000)	43	108359	39.345	40.40			1	10
103) Dibromochloromethane	(3)	6.505(0.000)	129	68632	15.674	16.09			0.4	5
104) 1,2-Dibromoethane	(3)	6.608(0.000)	107	59363	15.119	15.52			0.4	5
107) Chlorobenzene	(3)	7.174(0.000)	112	196382	14.362	14.75			0.5	5
109) Ethylbenzene	(3)	7.320(0.000)	91	358720	16.285	16.72			0.4	5
110) m+p-Xylene	(3)	7.448(0.000)	106	278713	31.008	31.84			1	5
111) o-Xylene	(3)	7.831(0.000)	106	132798	14.778	15.17			0.4	5
112) Xylene (Total)	(3)		106	411511	45.786	47.01			1	5
113) Styrene	(3)	7.850(0.000)	104	139915	9.445	9.70			0.3	5
114) Bromoform	(3)	7.996(0.000)	173	26326	9.648	9.91		J	5	10
115) Isopropylbenzene	(3)	8.178(0.000)	105	349149M	15.415	15.83			0.4	5
118) Cyclohexanone	(1)	8.239(-0.043)	55	25970A	358.173	367.73			26	260
120) 1,1,2,2-Tetrachloroethane	(4)	8.452(0.000)	83	62748	25.047	25.72			0.4	5
138) 1,3-Dichlorobenzene	(4)	9.176(0.000)	146	84705	13.755	14.12			0.5	5
141) 1,4-Dichlorobenzene	(4)	9.249(0.000)	146	86759	13.513	13.87			0.4	5
147) 1,2-Dichlorobenzene	(4)	9.516(0.000)	146	77315	12.842	13.18			0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)	10.070(0.000)	75	4647	10.676	10.96			0.4	5
153) 1,2,4-Trichlorobenzene	(4)			Not Detected					5	10

M = Compound was manually integrated. A = User selected an alternate peak.

Total number of targets = 51

Digitally signed by Patrick T. Herres on 10/31/2018 at 18:29. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/02/2018 at 10:18. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

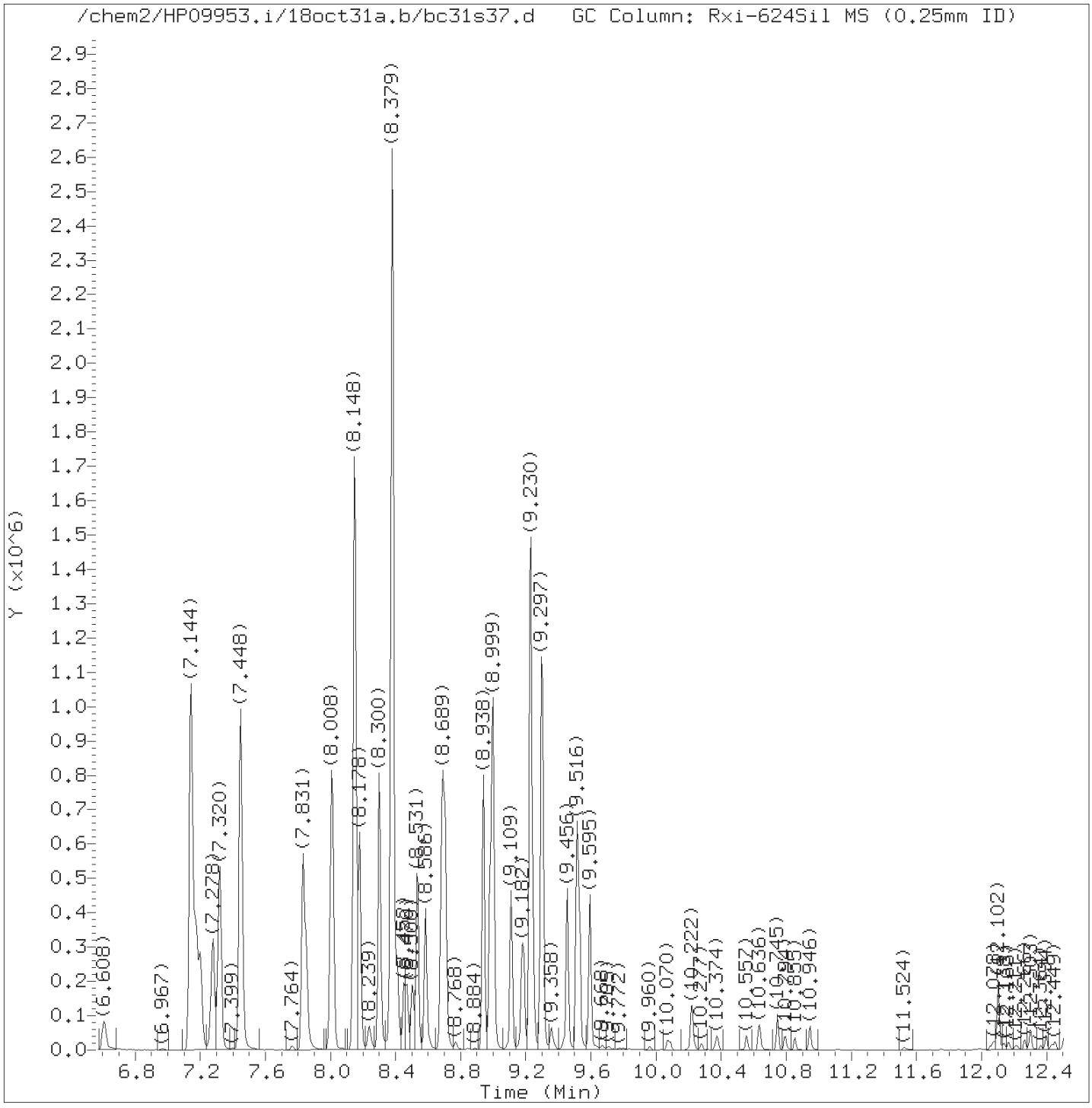
Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s37.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:09 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:29 pth10165

Sample Name: T1003MS Lab Sample ID: 9867763MS

Digitally signed by Patrick T. Herres
on 10/31/2018 at 18:29.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s37.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:09 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:29 pth10165

Sample Name: T1003MS Lab Sample ID: 9867763MS

Digitally signed by Patrick T. Herres
on 10/31/2018 at 18:29.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s37.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:09 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:29 pth10165

Sample Name: T1003MS Lab Sample ID: 9867763MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.981	85	215777	21.558
4) Chloromethane	(2)	1.072	50	205806	19.948
5) Vinyl Chloride	(2)	1.115	62	159246	19.808
9) Bromomethane	(2)	1.243	94	73095	10.216
10) Chloroethane	(2)	1.261	64	81395	18.822
13) Trichlorofluoromethane	(2)	1.407	101	272157	24.591
19) 1,1-Dichloroethene	(2)	1.620	96	123061	22.128
20) Acetone	(1)	1.638	58	89139	709.417
22) Freon 113	(2)	1.650	101	154073	27.632
25) Carbon Disulfide	(2)	1.754	76	216463	9.728
27) Methyl Acetate	(2)	1.821	43	57218	20.064
31) Methylene Chloride	(2)	1.900	84	123150	18.738
30)*t-Butyl alcohol-d10	(1)	1.912	65	31285	250.000
35) trans-1,2-Dichloroethene	(2)	2.070	96	102874	15.906
34) Methyl Tertiary Butyl Ether	(2)	2.088	73	309185	19.545
40) 1,1-Dichloroethane	(2)	2.380	63	225637	21.516
45) cis-1,2-Dichloroethene	(2)	2.873	96	116585	16.607
44) 2-Butanone	(1)	2.885	43	222001	276.013
54) Chloroform	(2)	3.165	83	209334	19.667
56)$Dibromofluoromethane	(2)	3.311	113	285357	51.651
57) 1,1,1-Trichloroethane	(2)	3.336	97	199955	18.347
58) Cyclohexane	(2)	3.384	56	195812	19.125
61) Carbon Tetrachloride	(2)	3.488	117	160366	19.375
63)$1,2-Dichloroethane-d4	(2)	3.615	102	61502	51.721
64) Benzene	(2)	3.664	78	440199	17.410
67) 1,2-Dichloroethane	(2)	3.688	62	126695	17.363
70)*Fluorobenzene	(2)	3.944	96	1108527	50.000
75) Trichloroethene	(2)	4.303	95	97164	14.736
76) Methylcyclohexane	(2)	4.497	83	129495	12.620
77) 1,2-Dichloropropane	(2)	4.522	63	112676	18.765
84) Bromodichloromethane	(2)	4.820	83	115357	15.384
89) cis-1,3-Dichloropropene	(2)	5.294	75	74476	8.225
90) 4-Methyl-2-pentanone	(2)	5.483	43	299202	57.251
91)$Toluene-d8	(3)	5.568	98	1040474	65.893
92) Toluene	(3)	5.635	92	237110	20.245
93) trans-1,3-Dichloropropene	(3)	5.909	75	60696	10.819
96) 1,1,2-Trichloroethane	(3)	6.091	97	77226	20.319
98) Tetrachloroethene	(3)	6.225	166	98031	15.281

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 10/31/2018 at 18:29.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s37.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:09 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:29 pth10165

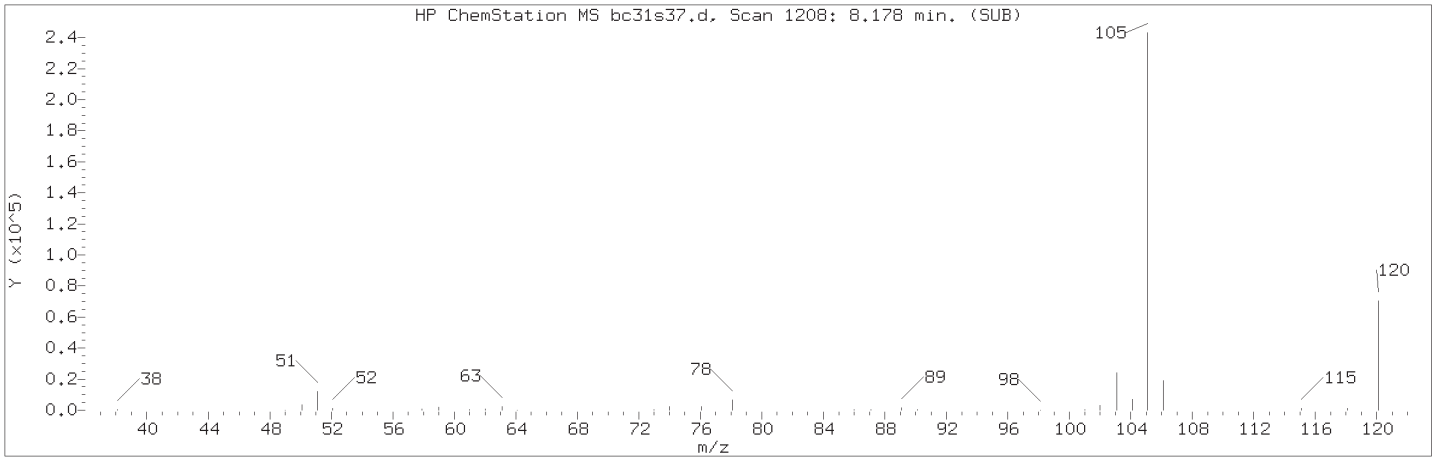
Sample Name: T1003MS Lab Sample ID: 9867763MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 2-Hexanone	(3)	6.408	43	108359	39.345
103) Dibromochloromethane	(3)	6.505	129	68632	15.674
104) 1,2-Dibromoethane	(3)	6.608	107	59363	15.119
105)*Chlorobenzene-d5	(3)	7.144	117	611803	50.000
107) Chlorobenzene	(3)	7.174	112	196382	14.362
109) Ethylbenzene	(3)	7.320	91	358720	16.285
110) m+p-Xylene	(3)	7.448	106	278713	31.008
111) o-Xylene	(3)	7.831	106	132798	14.778
113) Styrene	(3)	7.849	104	139915	9.445
112) Xylene (Total)	(3)		106	411511	45.786
114) Bromoform	(3)	7.996	173	26326	9.648
115) Isopropylbenzene	(3)	8.178	105	349149M	15.415
118) Cyclohexanone	(1)	8.239	55	25970A	358.173
119)$4-Bromofluorobenzene	(3)	8.300	95	204261	35.509
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	62748	25.047
138) 1,3-Dichlorobenzene	(4)	9.176	146	84705	13.755
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	179088	50.000
141) 1,4-Dichlorobenzene	(4)	9.249	146	86759	13.513
147) 1,2-Dichlorobenzene	(4)	9.516	146	77315	12.842
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	4647	10.676

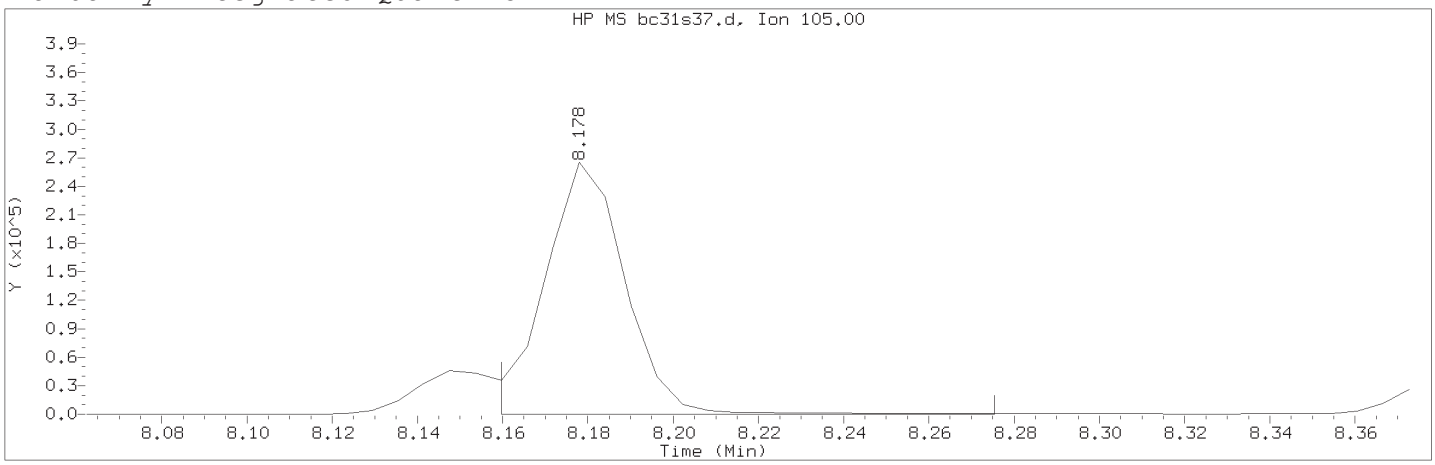
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 10/31/2018 at 18:29.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31s37.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:09 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:29 pth10165

Sample Name: T1003MS Lab Sample ID: 9867763MS

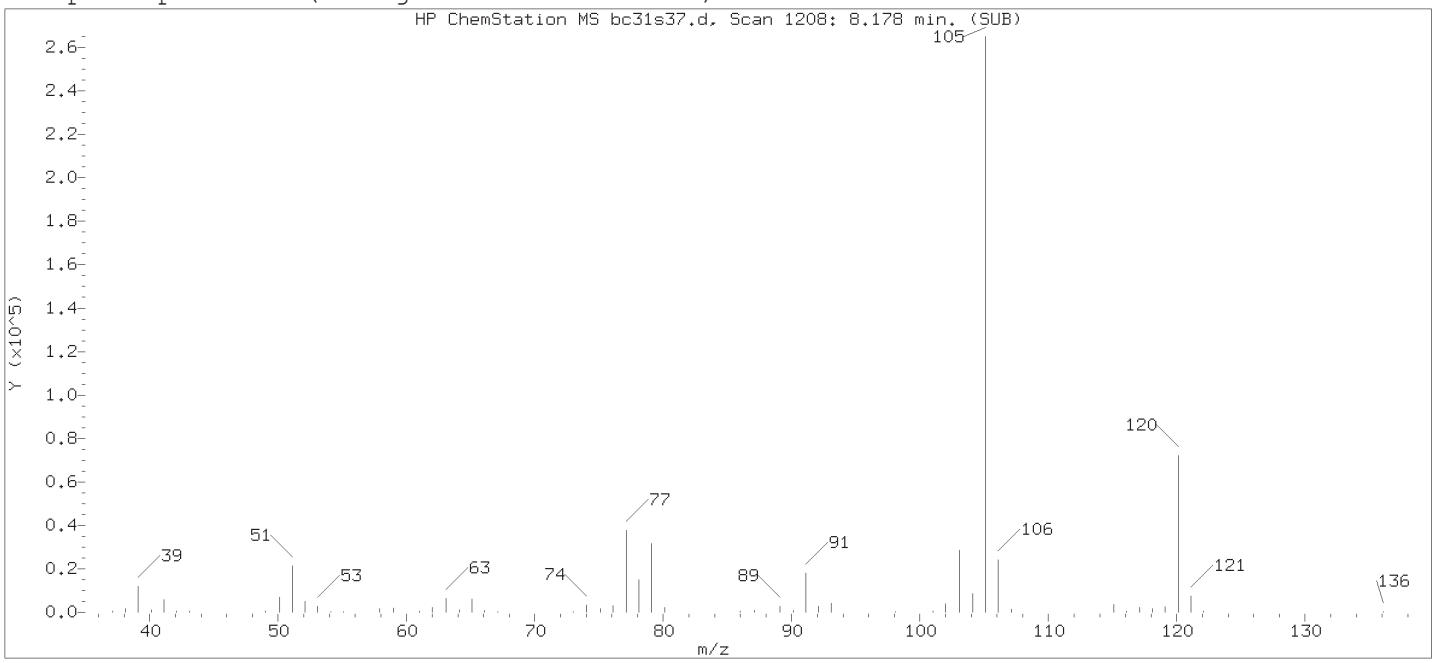
Compound Number : 115
Compound Name : Isopropylbenzene
Scan Number : 1208
Retention Time (minutes): 8.178
Quant Ion : 105.00
Area (flag) : 349149M
On-Column Amount (ng) : 15.4147
Integration start scan : 1204 Integration stop scan: 1223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

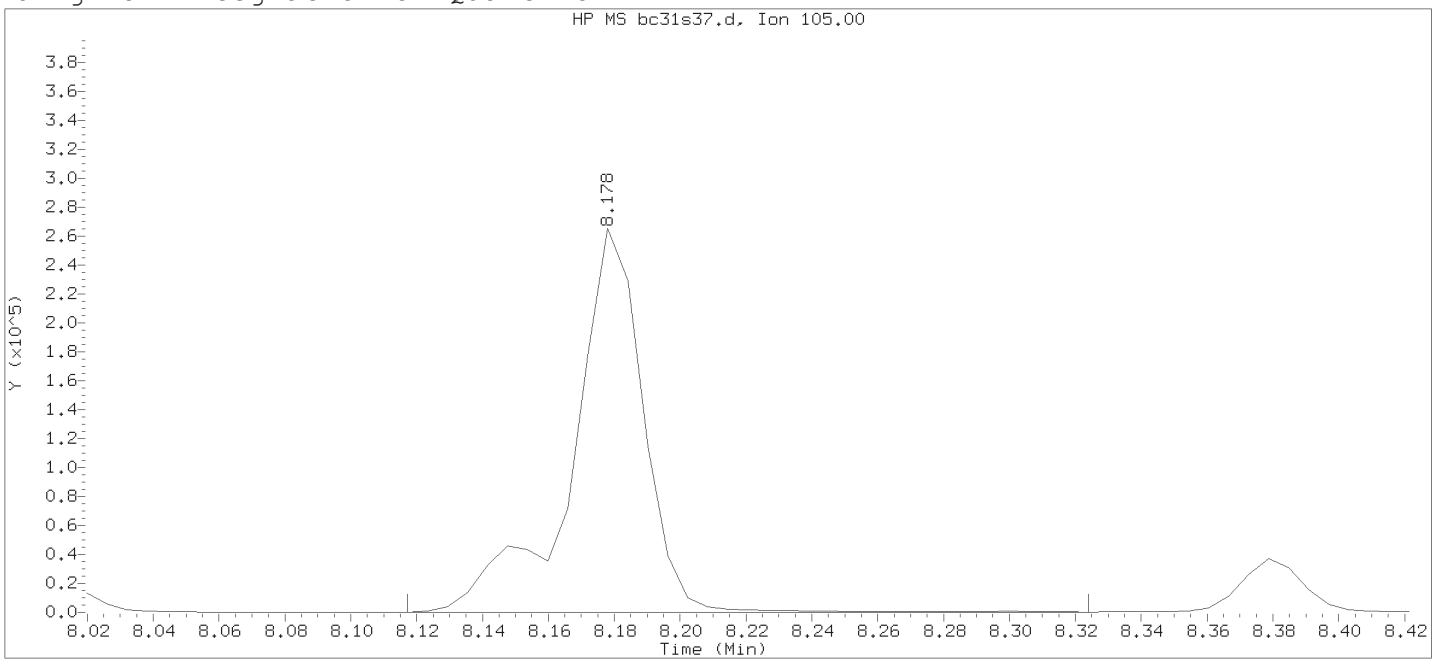
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 10/31/2018 at 18:29.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/02/2018 at 10:18.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31s37.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:09 Analyst ID: scn10072

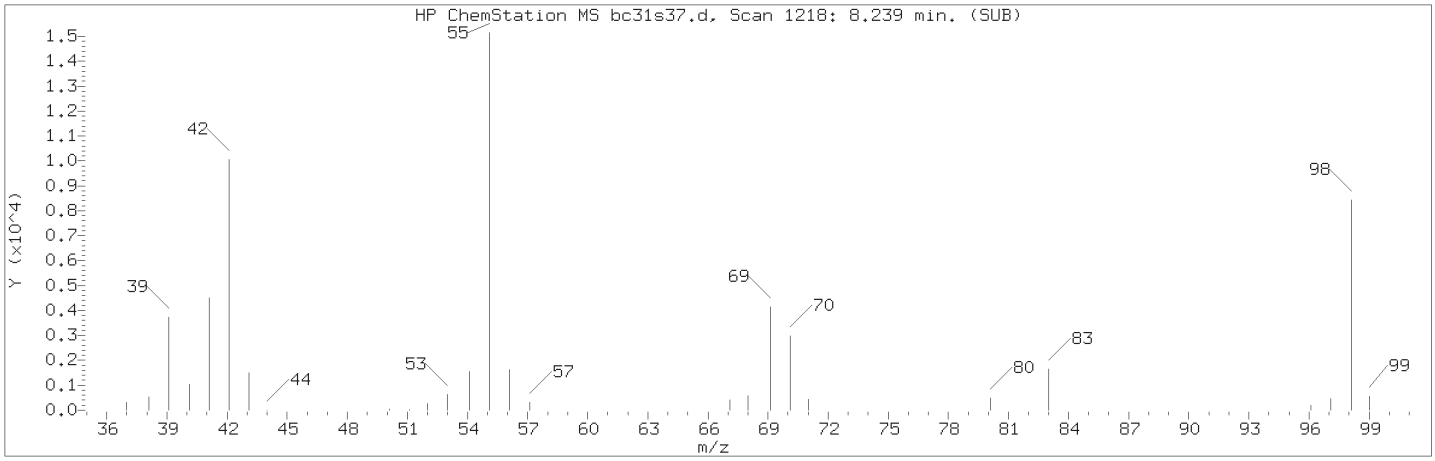
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:24 Automation

Sample Name: T1003MS Lab Sample ID: 9867763MS

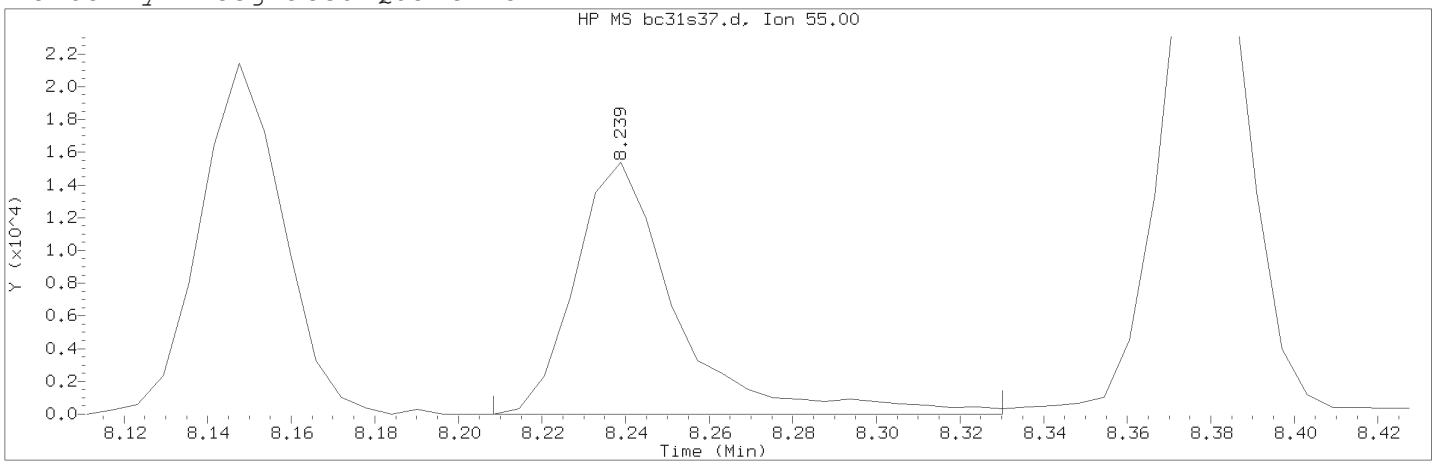
Compound Number : 115
Compound Name : Isopropylbenzene
Scan Number : 1208
Retention Time (minutes): 8.178
Quant Ion : 105.00
Area : 401311
On-column Amount (ng) : 17.7176
Integration start scan : 1197 Integration stop scan: 1231
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 10/31/2018 at 18:29.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31s37.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:09 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:29 pth10165

Sample Name: T1003MS Lab Sample ID: 9867763MS

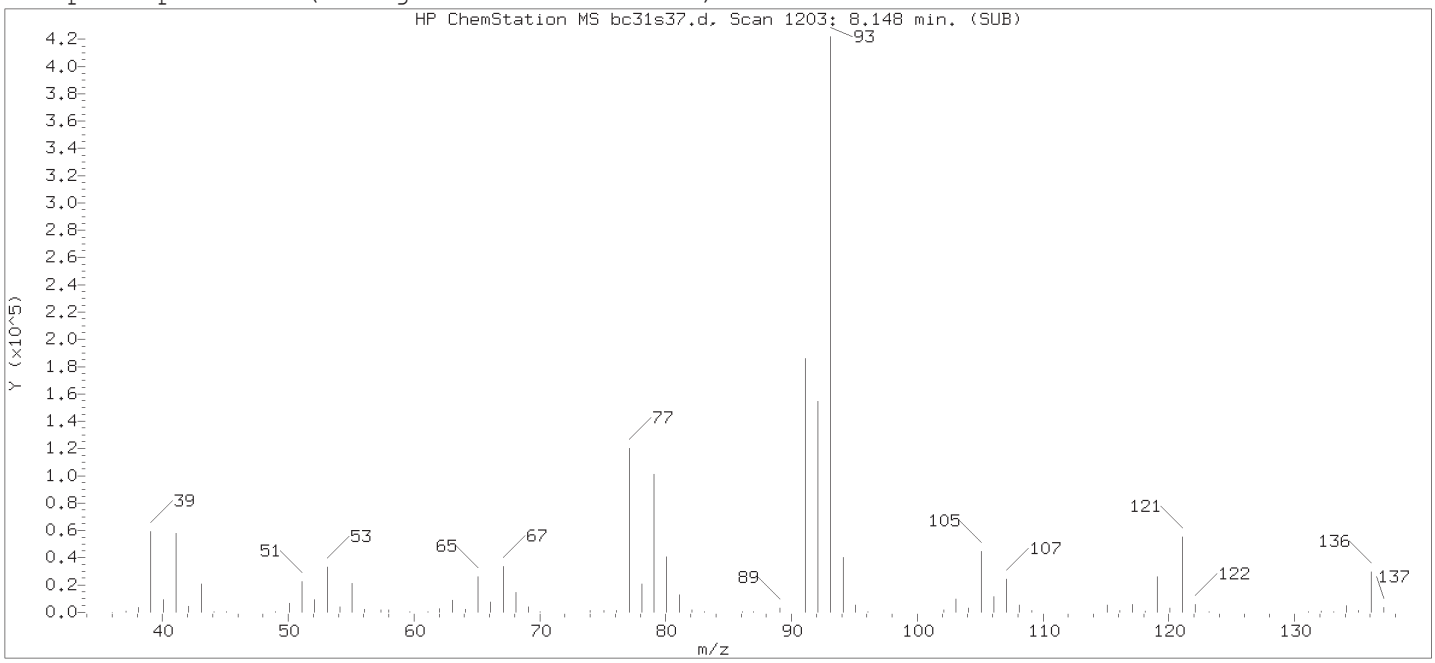
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1218
Retention Time (minutes): 8.239
Quant Ion : 55.00
Area (flag) : 25970A
On-Column Amount (ng) : 358.1731
Integration start scan : 1212 Integration stop scan: 1232
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

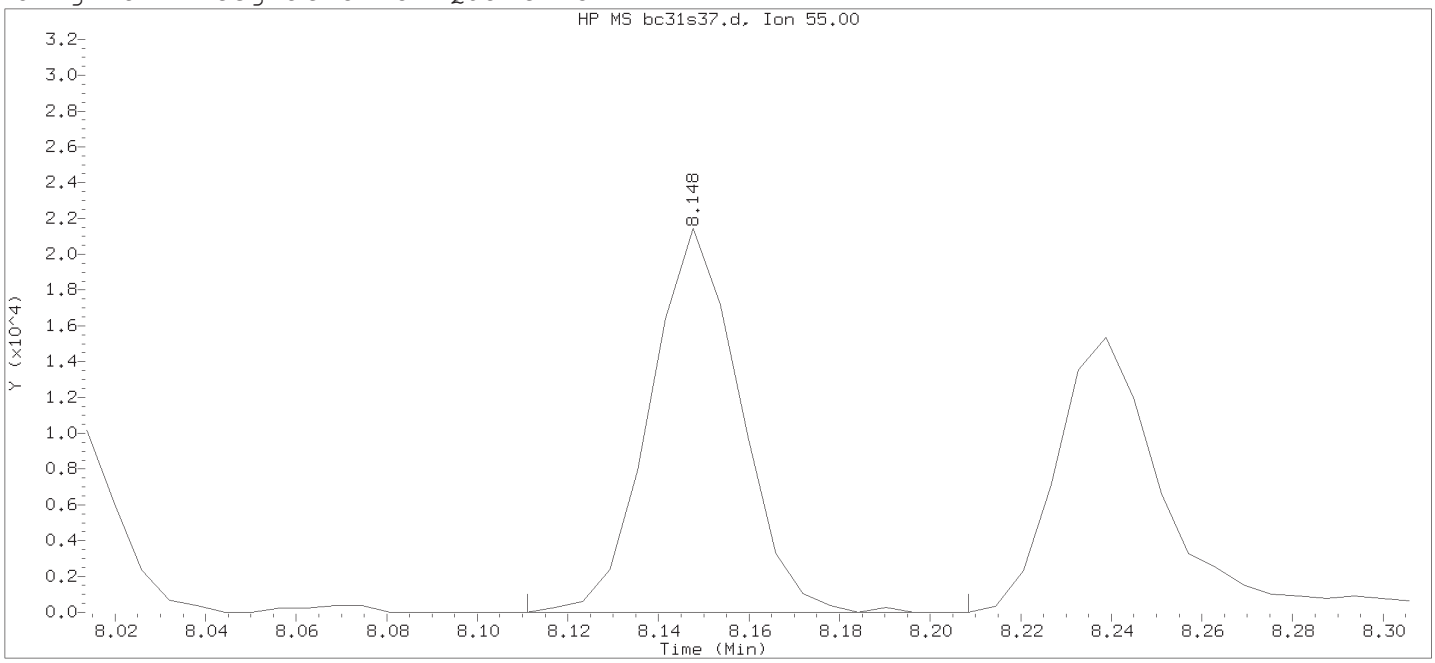
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 10/31/2018 at 18:29.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/02/2018 at 10:18.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31s37.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:09 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 18:24 Automation

Sample Name: T1003MS Lab Sample ID: 9867763MS

Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1203
Retention Time (minutes): 8.148
Quant Ion : 55.00
Area : 29569
On-column Amount (ng) : 407.8079
Integration start scan : 1196 Integration stop scan: 1212
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 10/31/2018 at 18:29.
Target 3.5 esignature used [illegible]

T1003MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9867764MSD

Data file: /chem2/HP09953.i/18oct31a.b/bc31s38.d Injection date and time: **31-OCT-2018 18:32**
Data file Sample Info. Line: T1003MSD;9867764MSD;2;3;MSD;TID10;DODSW;;bc31b20 Instrument ID: **HP09953.i** Batch: **B183042A**
Date, time and analyst ID of latest file update: 07-Nov-2018 00:36 pth10165

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 31-OCT-2018 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: **050A** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5.02 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.918	(0.012)	179	65	69540	(-45)	250.00	
70) Fluorobenzene	3.944	(0.006)	512	96	1112465	(-24)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	631002	(-44)	50.00	
140) 1,4-Dichlorobenzene-d4	9.230	(-0.006)	1381	152	194039	(-70)	50.00	*

*** = Internal Standard area outside QC limits**

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.311	(0.000)	113	288341	52.007	104%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.615	(0.000)	102	62776	52.605	105%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1058180	64.975	130%	*	85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	218530	36.834	74%	*	79 - 119

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)	0.981	(0.001)	85	219581	21.860	21.77			0.6	5
4) Chloromethane	(2)	1.072	(-0.000)	50	219367	21.187	21.10			0.6	5
5) Vinyl Chloride	(2)	1.115	(0.001)	62	159843	19.812	19.73			0.6	5
9) Bromomethane	(2)	1.243	(0.001)	94	83638	11.648	11.60			0.7	5
10) Chloroethane	(2)	1.261	(0.001)	64	68563	15.798	15.74			1	5
13) Trichlorofluoromethane	(2)	1.407	(0.000)	101	265512	23.906	23.81			0.7	5
19) 1,1-Dichloroethene	(2)	1.620	(0.000)	96	128473	23.019	22.93			0.5	5
20) Acetone	(1)	1.638	(-0.002)	58	107030	366.252	364.79			6	20
22) Freon 113	(2)	1.644	(0.002)	101	158862	28.390	28.28			0.6	10
25) Carbon Disulfide	(2)	1.754	(0.002)	76	246913M	11.057	11.01			0.6	5
27) Methyl Acetate	(2)	1.827	(0.000)	43	57244	20.002	19.92			1	5
31) Methylene Chloride	(2)	1.900	(0.000)	84	137968	20.918	20.83			2	5
34) Methyl Tertiary Butyl Ether	(2)	2.088	(0.000)	73	348556	21.956	21.87			0.5	5
35) trans-1,2-Dichloroethene	(2)	2.076	(0.000)	96	115360	17.774	17.70			0.5	5
40) 1,1-Dichloroethane	(2)	2.380	(0.000)	63	245757	23.352	23.26			0.5	5
44) 2-Butanone	(1)	2.885	(-0.003)	43	317166	177.404	176.70			1	10
45) cis-1,2-Dichloroethene	(2)	2.873	(0.001)	96	135406	19.220	19.14			0.5	5
54) Chloroform	(2)	3.165	(0.000)	83	233964	21.903	21.82			0.6	5
57) 1,1,1-Trichloroethane	(2)	3.335	(0.000)	97	214011	19.567	19.49			0.6	5
58) Cyclohexane	(2)	3.384	(0.001)	56	214495	20.875	20.79			0.5	5
61) Carbon Tetrachloride	(2)	3.488	(0.000)	117	170730	20.554	20.47			0.5	5
64) Benzene	(2)	3.670	(0.000)	78	487585	19.216	19.14			0.5	5
67) 1,2-Dichloroethane	(2)	3.688	(0.000)	62	147481	20.141	20.06			0.6	5
75) Trichloroethene	(2)	4.303	(-0.000)	95	107779	16.288	16.22			0.5	5
76) Methylcyclohexane	(2)	4.491	(0.001)	83	148885	14.458	14.40			0.6	5
77) 1,2-Dichloropropane	(2)	4.522	(-0.000)	63	125405	20.811	20.73			0.5	5
84) Bromodichloromethane	(2)	4.820	(-0.000)	83	129201	17.170	17.10			0.4	5
89) cis-1,3-Dichloropropene	(2)	5.294	(-0.002)	75	106844	11.759	11.71			0.4	5

M = Compound was manually integrated.

Digitally signed by Patrick T. Herres on 11/07/2018 at 00:36. Target 3.5 esignature user ID: pth10165

Data file: /chem2/HP09953.i/18oct31a.b/bc31s38.d Injection date and time: **31-OCT-2018 18:32**
Data file Sample Info. Line: T1003MSD;9867764MSD;2;3;MSD;TID10;DODSW;;bc31b20 Instrument ID: **HP09953.i** Batch: **B183042A**
Date, time and analyst ID of latest file update: 07-Nov-2018 00:36 pth10165

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 31-OCT-2018 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: **050A** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5.02 g

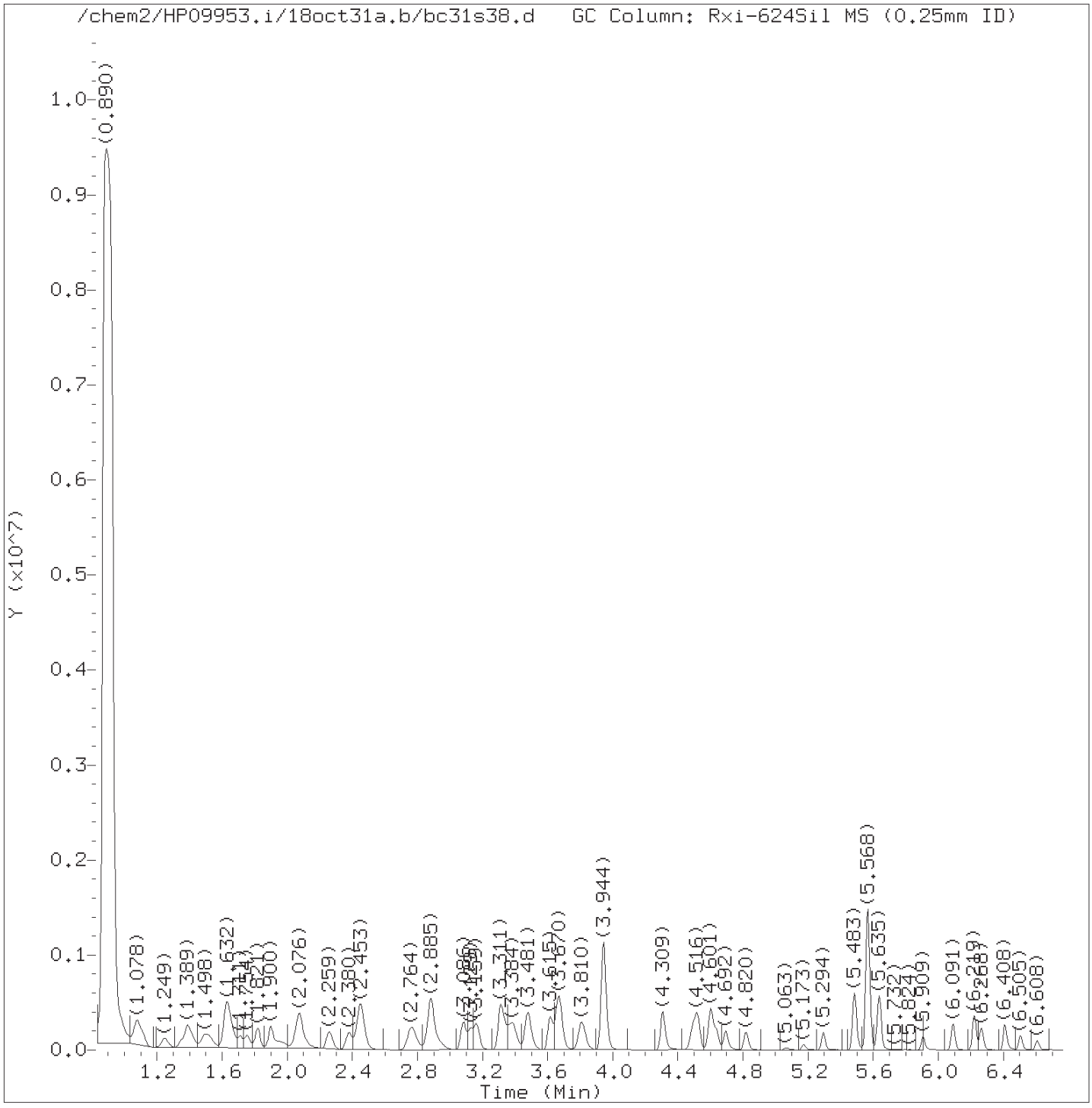
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
90) 4-Methyl-2-pentanone	(2)	5.483(-0.000)	43	408585	78.558	78.24			1	10
92) Toluene	(3)	5.635(0.000)	92	256870	21.265	21.18			0.6	5
93) trans-1,3-Dichloropropene	(3)	5.909(-0.000)	75	78714	13.604	13.55			0.3	5
96) 1,1,2-Trichloroethane	(3)	6.091(0.000)	97	92180	23.516	23.42			0.5	5
98) Tetrachloroethene	(3)	6.219(0.000)	166	108575	16.410	16.34			0.5	5
101) 2-Hexanone	(3)	6.408(0.000)	43	195606	69.261	68.99			1	10
103) Dibromochloromethane	(3)	6.505(0.000)	129	81725	18.096	18.02			0.4	5
104) 1,2-Dibromoethane	(3)	6.608(0.000)	107	72203	17.829	17.76			0.4	5
107) Chlorobenzene	(3)	7.174(-0.000)	112	221777	15.725	15.66			0.5	5
109) Ethylbenzene	(3)	7.320(0.000)	91	401766	17.685	17.61			0.4	5
110) m+p-Xylene	(3)	7.448(0.000)	106	315472	34.029	33.89			1	5
111) o-Xylene	(3)	7.831(0.000)	106	152518	16.457	16.39			0.4	5
112) Xylene (Total)	(3)		106	467990	50.486	50.28			1	5
113) Styrene	(3)	7.849(0.000)	104	161698	10.583	10.54			0.3	5
114) Bromoform	(3)	7.995(-0.000)	173	33742	11.990	11.94			5	10
115) Isopropylbenzene	(3)	8.178(0.000)	105	363387	15.555	15.49			0.4	5
118) Cyclohexanone	(1)	8.233(-0.027)	55	70233A	435.776	434.04			25	250
120) 1,1,2,2-Tetrachloroethane	(4)	8.452(0.000)	83	83245	30.669	30.55			0.4	5
138) 1,3-Dichlorobenzene	(4)	9.176(0.000)	146	102968	15.432	15.37			0.5	5
141) 1,4-Dichlorobenzene	(4)	9.243(0.000)	146	105053	15.102	15.04			0.4	5
147) 1,2-Dichlorobenzene	(4)	9.516(0.000)	146	99306	15.224	15.16			0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)	10.070(0.000)	75	8084	17.142	17.07			0.4	5
153) 1,2,4-Trichlorobenzene	(4)	10.636(0.000)	180	28652	5.956	5.93		J	5	10

A = User selected an alternate peak.

Total number of targets = 51

Digitally signed by Patrick T. Herres on 11/07/2018 at 00:36. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/07/2018 at 09:30. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

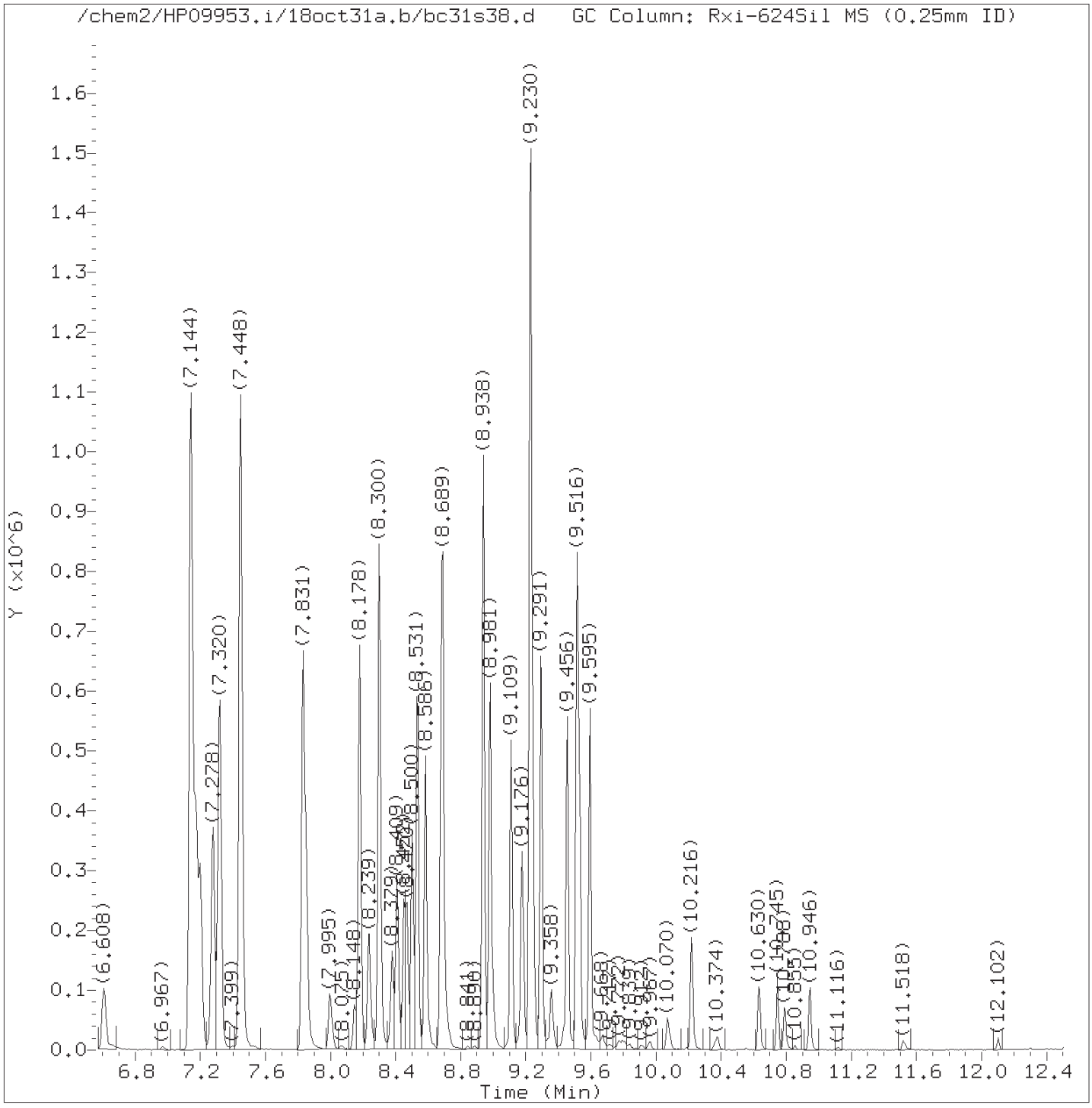
Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s38.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:32 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 07-Nov-2018 00:36 pth10165

Sample Name: T1003MSD Lab Sample ID: 9867764MSD

Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:36.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s38.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:32 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 07-Nov-2018 00:36 pth10165

Sample Name: T1003MSD Lab Sample ID: 9867764MSD

Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:36.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s38.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:32 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 07-Nov-2018 00:36 pth10165

Sample Name: T1003MSD Lab Sample ID: 9867764MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.981	85	219581	21.860
4) Chloromethane	(2)	1.072	50	219367	21.187
5) Vinyl Chloride	(2)	1.115	62	159843	19.812
9) Bromomethane	(2)	1.243	94	83638	11.648
10) Chloroethane	(2)	1.261	64	68563	15.798
13) Trichlorofluoromethane	(2)	1.407	101	265512	23.906
19) 1,1-Dichloroethene	(2)	1.620	96	128473	23.019
20) Acetone	(1)	1.638	58	107030	366.252
22) Freon 113	(2)	1.644	101	158862	28.390
25) Carbon Disulfide	(2)	1.754	76	246913M	11.057
27) Methyl Acetate	(2)	1.827	43	57244	20.002
31) Methylene Chloride	(2)	1.900	84	137968	20.918
30)*t-Butyl alcohol-d10	(1)	1.918	65	69540	250.000
35) trans-1,2-Dichloroethene	(2)	2.076	96	115360	17.774
34) Methyl Tertiary Butyl Ether	(2)	2.088	73	348556	21.956
40) 1,1-Dichloroethane	(2)	2.380	63	245757	23.352
45) cis-1,2-Dichloroethene	(2)	2.873	96	135406	19.220
44) 2-Butanone	(1)	2.885	43	317166	177.404
54) Chloroform	(2)	3.165	83	233964	21.903
56)$Dibromofluoromethane	(2)	3.311	113	288341	52.007
57) 1,1,1-Trichloroethane	(2)	3.335	97	214011	19.567
58) Cyclohexane	(2)	3.384	56	214495	20.875
61) Carbon Tetrachloride	(2)	3.488	117	170730	20.554
63)$1,2-Dichloroethane-d4	(2)	3.615	102	62776	52.605
64) Benzene	(2)	3.670	78	487585	19.216
67) 1,2-Dichloroethane	(2)	3.688	62	147481	20.141
70)*Fluorobenzene	(2)	3.944	96	1112465	50.000
75) Trichloroethene	(2)	4.303	95	107779	16.288
76) Methylcyclohexane	(2)	4.491	83	148885	14.458
77) 1,2-Dichloropropane	(2)	4.522	63	125405	20.811
84) Bromodichloromethane	(2)	4.820	83	129201	17.170
89) cis-1,3-Dichloropropene	(2)	5.294	75	106844	11.759
90) 4-Methyl-2-pentanone	(2)	5.483	43	408585	78.558
91)$Toluene-d8	(3)	5.568	98	1058180	64.975
92) Toluene	(3)	5.635	92	256870	21.265
93) trans-1,3-Dichloropropene	(3)	5.909	75	78714	13.604
96) 1,1,2-Trichloroethane	(3)	6.091	97	92180	23.516
98) Tetrachloroethene	(3)	6.219	166	108575	16.410

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:36.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31s38.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:32 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 07-Nov-2018 00:36 pth10165

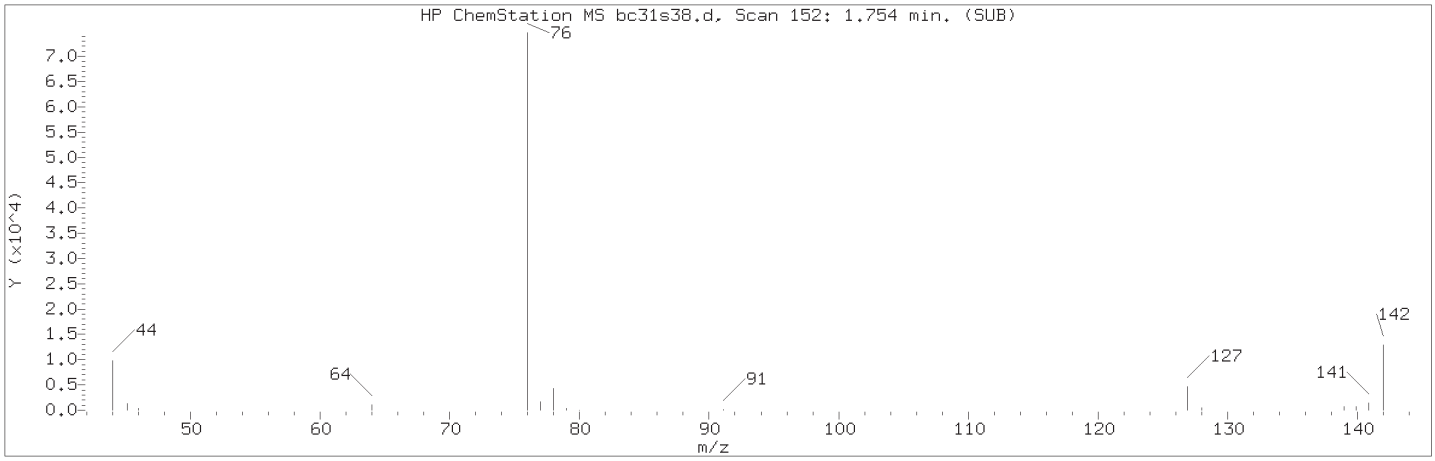
Sample Name: T1003MSD Lab Sample ID: 9867764MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 2-Hexanone	(3)	6.408	43	195606	69.261
103) Dibromochloromethane	(3)	6.505	129	81725	18.096
104) 1,2-Dibromoethane	(3)	6.608	107	72203	17.829
105)*Chlorobenzene-d5	(3)	7.144	117	631002	50.000
107) Chlorobenzene	(3)	7.174	112	221777	15.725
109) Ethylbenzene	(3)	7.320	91	401766	17.685
110) m+p-Xylene	(3)	7.448	106	315472	34.029
111) o-Xylene	(3)	7.831	106	152518	16.457
113) Styrene	(3)	7.849	104	161698	10.583
112) Xylene (Total)	(3)		106	467990	50.486
114) Bromoform	(3)	7.995	173	33742	11.990
115) Isopropylbenzene	(3)	8.178	105	363387	15.555
118) Cyclohexanone	(1)	8.233	55	70233A	435.776
119)$4-Bromofluorobenzene	(3)	8.300	95	218530	36.834
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	83245	30.669
138) 1,3-Dichlorobenzene	(4)	9.176	146	102968	15.432
140)*1,4-Dichlorobenzene-d4	(4)	9.230	152	194039	50.000
141) 1,4-Dichlorobenzene	(4)	9.243	146	105053	15.102
147) 1,2-Dichlorobenzene	(4)	9.516	146	99306	15.224
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	8084	17.142
153) 1,2,4-Trichlorobenzene	(4)	10.636	180	28652	5.956

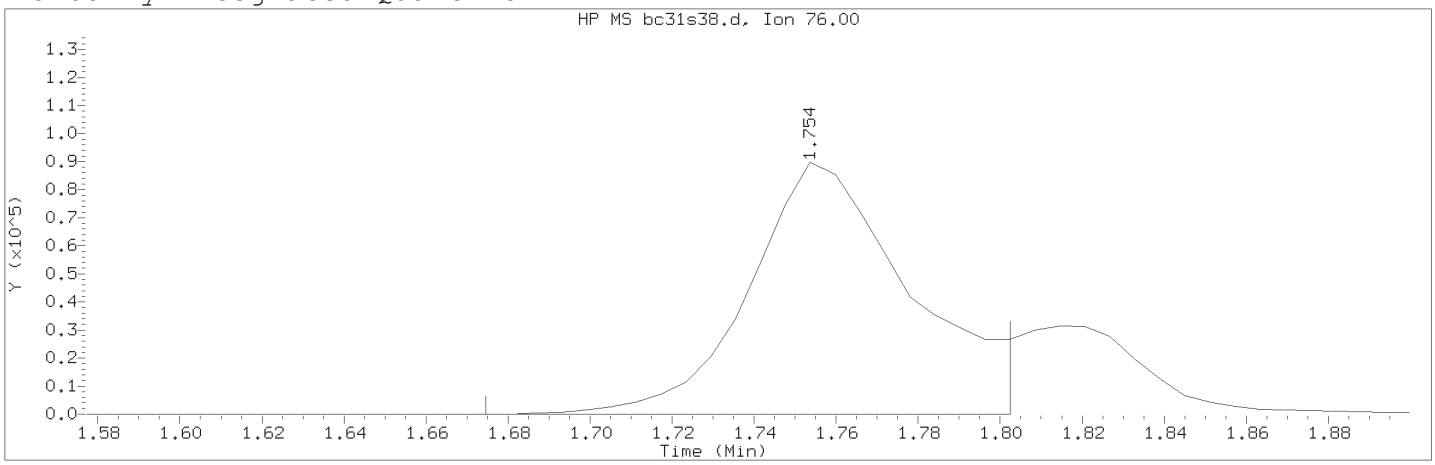
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:36.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31s38.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:32 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 07-Nov-2018 00:36 pth10165

Sample Name: T1003MSD Lab Sample ID: 9867764MSD

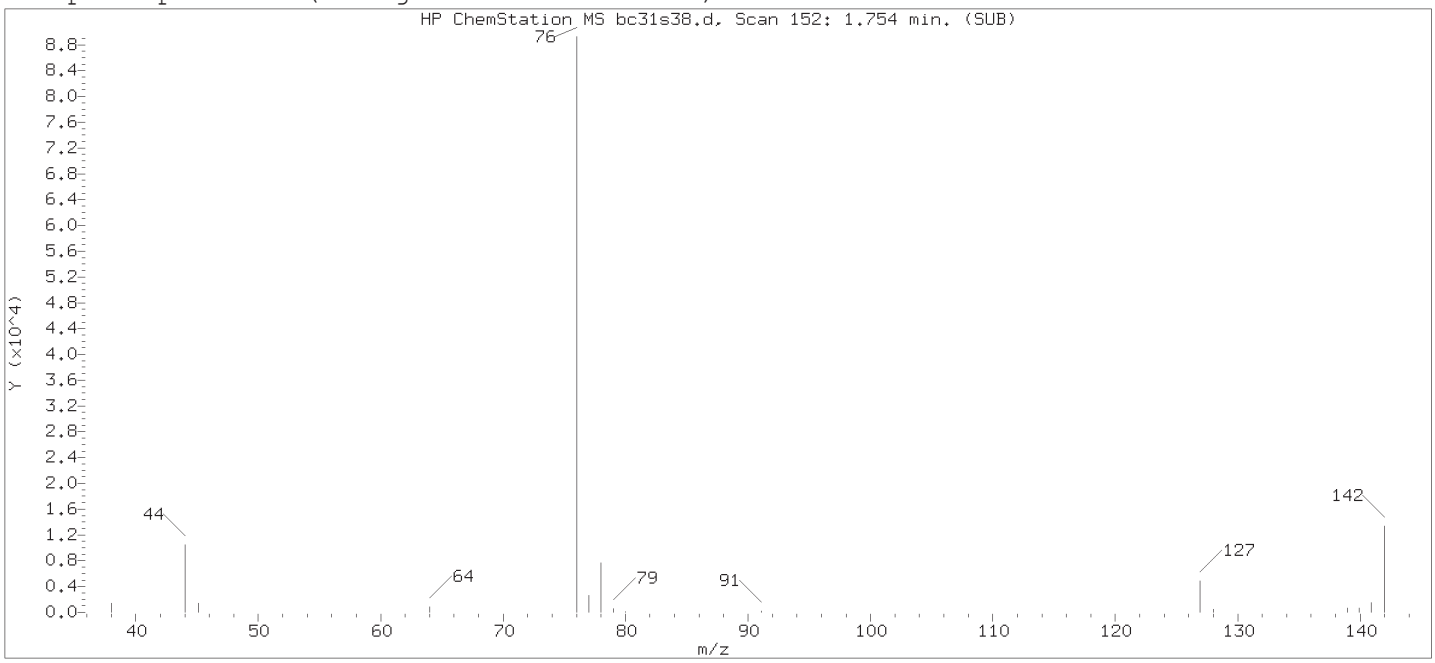
Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 152
Retention Time (minutes): 1.754
Quant Ion : 76.00
Area (flag) : 246913M
On-Column Amount (ng) : 11.0566
Integration start scan : 138 Integration stop scan: 159
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

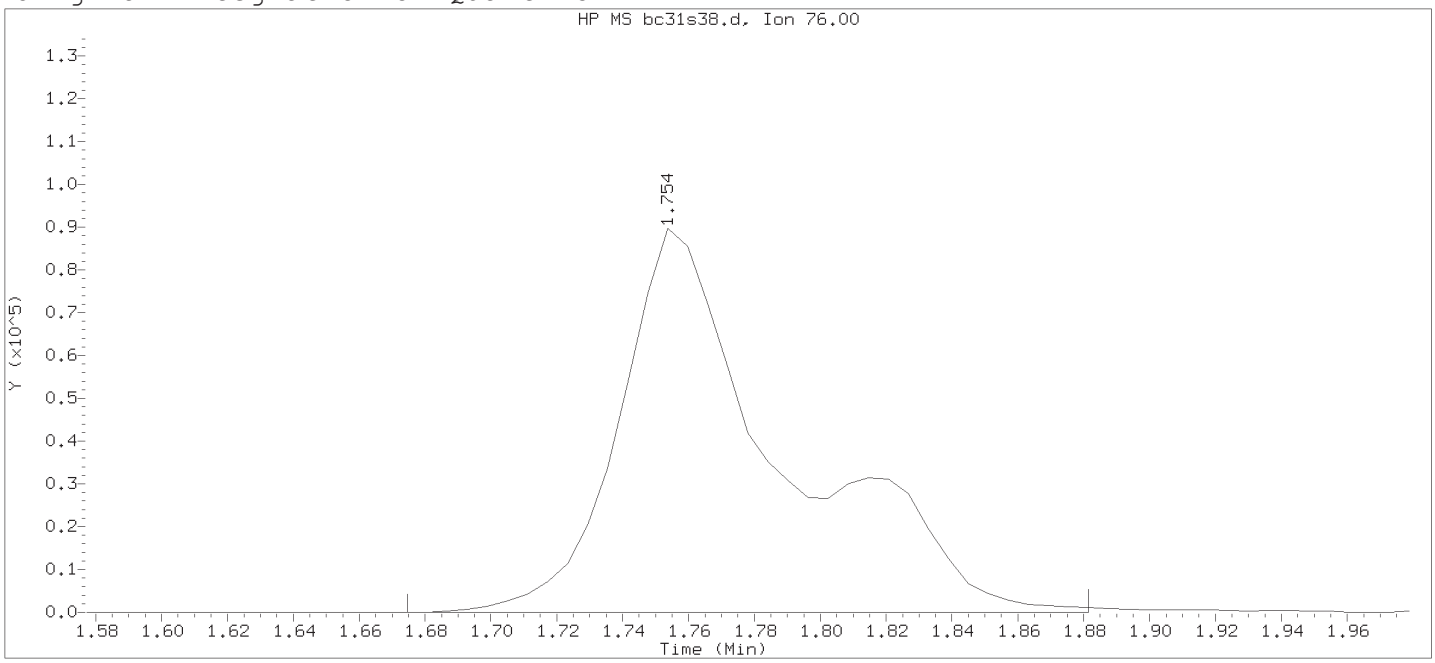
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:36.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/07/2018 at 09:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31s38.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:32 Analyst ID: scn10072

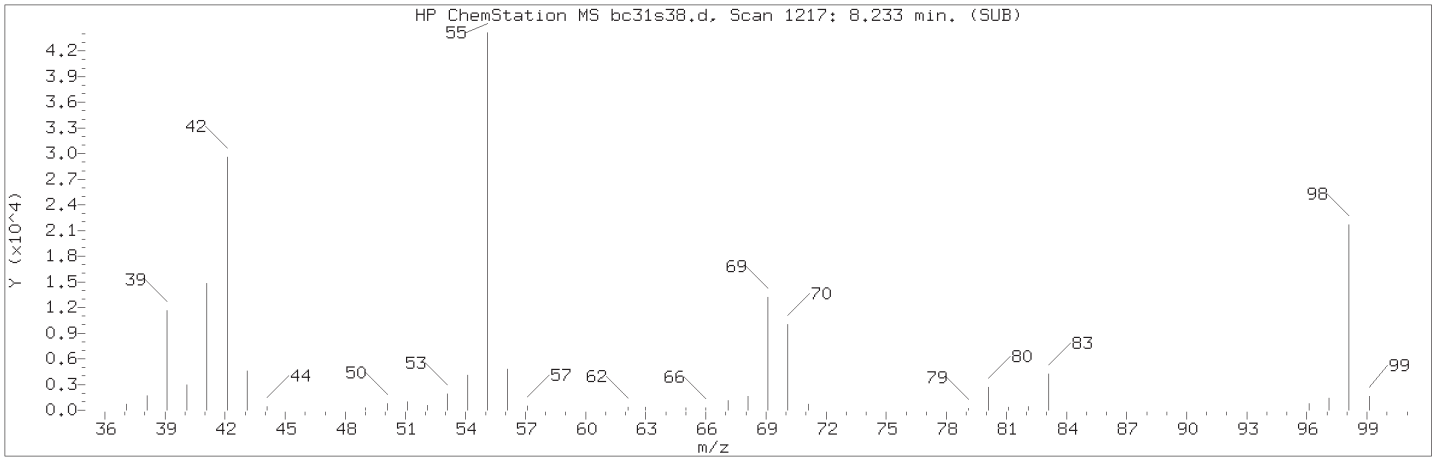
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 20:35 pth10165

Sample Name: T1003MSD Lab Sample ID: 9867764MSD

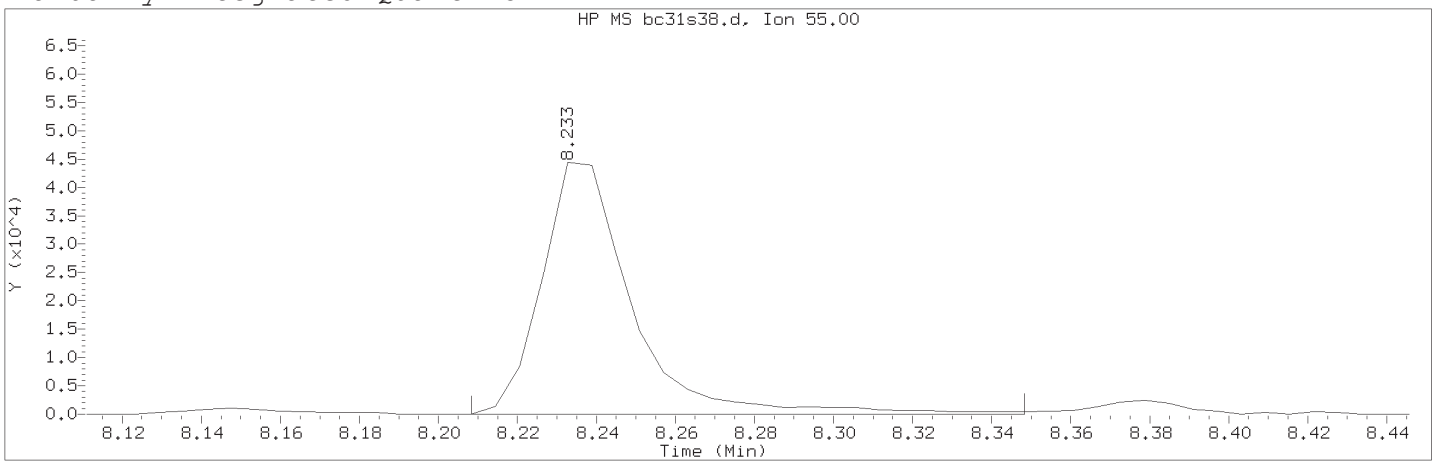
Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 152
Retention Time (minutes): 1.754
Quant Ion : 76.00
Area : 309516
On-column Amount (ng) : 13.8600
Integration start scan : 138 Integration stop scan: 172
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/07/2018 at 00:36.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31s38.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:32 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: 25809
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 07-Nov-2018 00:36 pth10165

Sample Name: T1003MSD Lab Sample ID: 9867764MSD

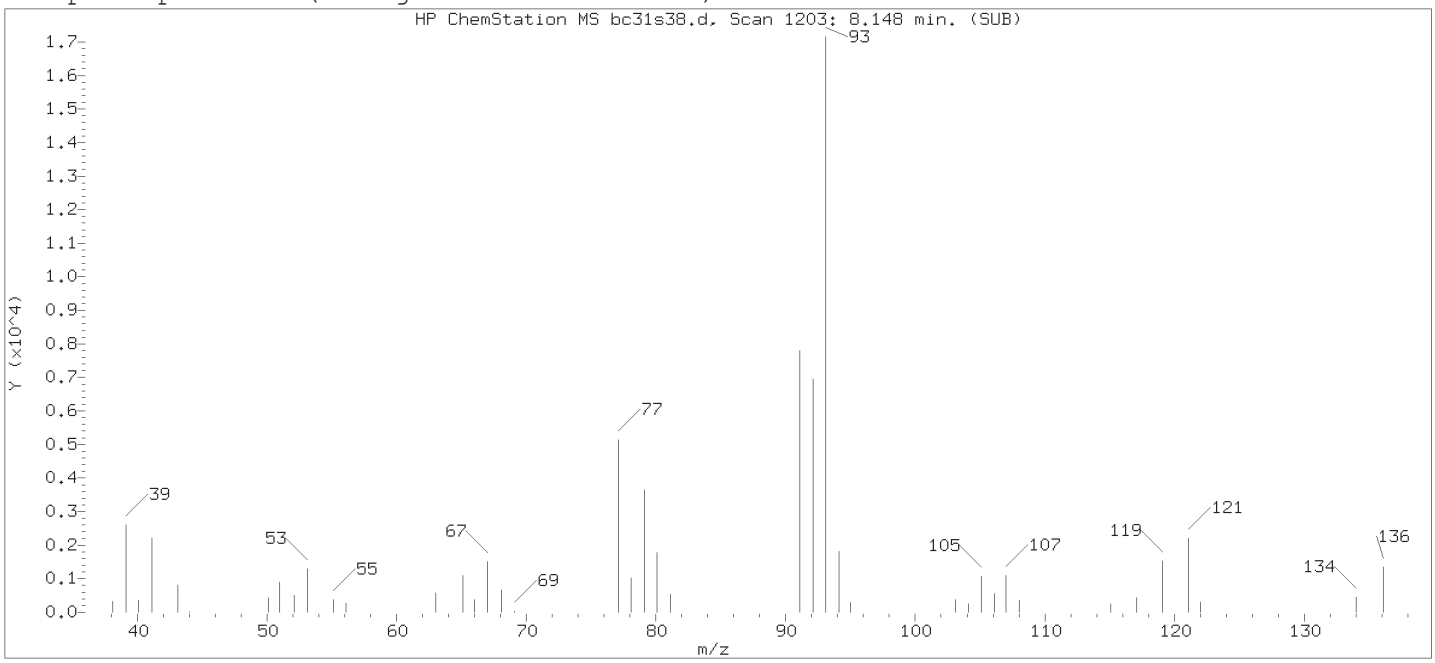
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1217
Retention Time (minutes): 8.233
Quant Ion : 55.00
Area (flag) : 70233A
On-Column Amount (ng) : 435.7764
Integration start scan : 1212 Integration stop scan: 1235
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

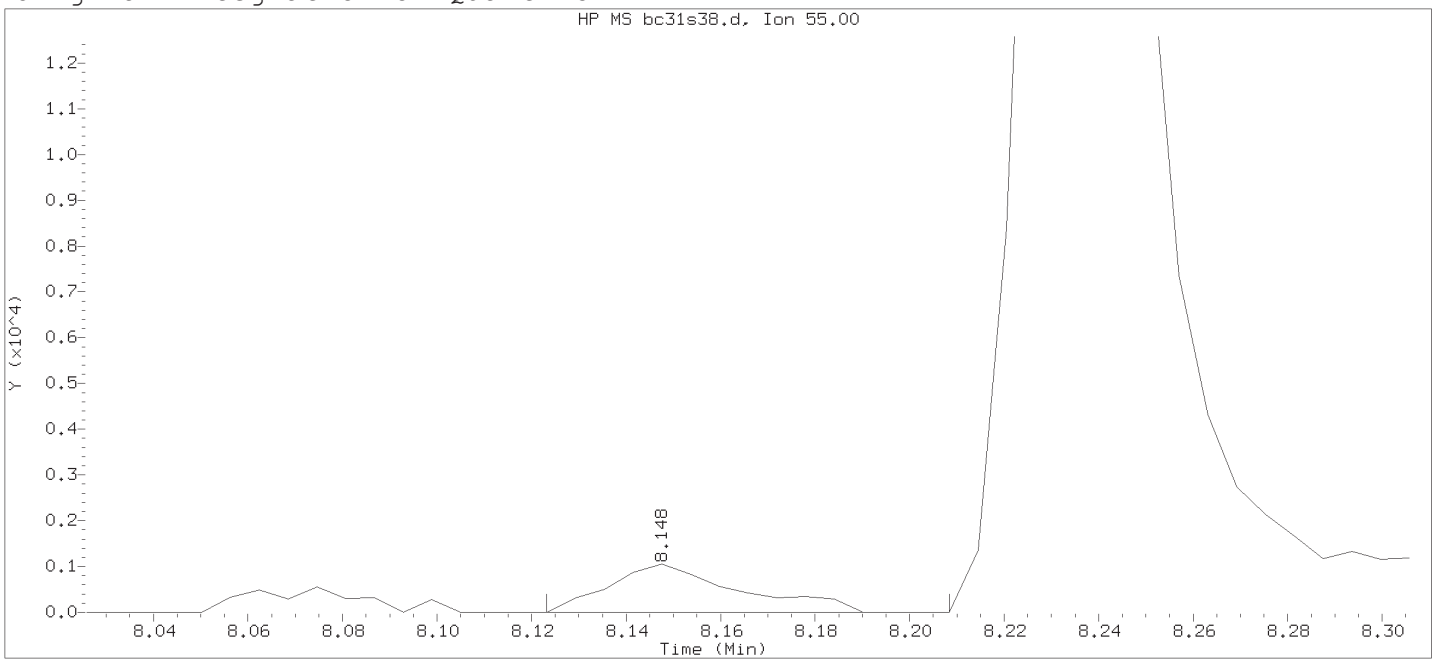
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/07/2018 at 00:36.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Chelsea B. Riehl on 11/07/2018 at 09:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31s38.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 18:32 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 20:35 pth10165

Sample Name: T1003MSD Lab Sample ID: 9867764MSD

Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1203
Retention Time (minutes): 8.148
Quant Ion : 55.00
Area : 2007
On-column Amount (ng) : 12.4540
Integration start scan : 1198 Integration stop scan: 1212
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/07/2018 at 00:36.
Target 3.5 esignature used [illegible]

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSB86

Data file: /chem2/HP09953.i/18oct31a.b/bc31l20.d Injection date and time: **31-OCT-2018 10:14**
Data file Sample Info. Line: LCSB86;LCSB86;2;3;LCS;;DODSW;;bc31b20; Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 14-Nov-2018 19:54 sej02002

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **B183042**
Calibration date and time (Last Method Edit): 14-NOV-2018 19:51
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.930	(0.000)	181	65	132096	(4)	250.00	
70) Fluorobenzene	3.944	(0.006)	512	96	1461172	(0)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	1159575	(3)	50.00	
140) 1,4-Dichlorobenzene-d4	9.224	(0.000)	1380	152	681114	(4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.311	(0.000)	113	369408	50.727	101%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.615	(0.000)	102	83816	53.475	107%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1482110	49.522	99%		85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	542206M	49.732	99%		79 - 119

M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)	0.981	(0.001)	85	216422	16.404	16.40			0.6	5
4) Chloromethane	(2)	1.066	(0.001)	50	280512	20.627	20.63			0.6	5
5) Vinyl Chloride	(2)	1.115	(0.001)	62	200156	18.888	18.89			0.6	5
9) Bromomethane	(2)	1.243	(0.001)	94	163102	17.294	17.29			0.7	5
10) Chloroethane	(2)	1.261	(0.001)	64	107109	18.790	18.79			1	5
13) Trichlorofluoromethane	(2)	1.407	(0.001)	101	273903	18.776	18.78			0.7	5
19) 1,1-Dichloroethene	(2)	1.626	(-0.000)	96	144347	19.691	19.69			0.5	5
20) Acetone	(1)	1.638	(0.003)	58	79223	134.677	134.68			6	20
22) Freon 113	(2)	1.650	(0.000)	101	145750	19.831	19.83			0.6	10
25) Carbon Disulfide	(2)	1.760	(0.000)	76	484257	16.510	16.51			0.6	5
27) Methyl Acetate	(2)	1.821	(0.002)	43	81136	21.584	21.58			1	5
31) Methylene Chloride	(2)	1.900	(0.000)	84	164981	19.044	19.04			2	5
34) Methyl Tertiary Butyl Ether	(2)	2.088	(0.000)	73	392663	18.831	18.83			0.5	5
35) trans-1,2-Dichloroethene	(2)	2.076	(0.000)	96	169916	19.932	19.93			0.5	5
40) 1,1-Dichloroethane	(2)	2.380	(0.000)	63	280002	20.256	20.26			0.5	5
44) 2-Butanone	(1)	2.885	(0.006)	43	424556	125.013	125.01			1	10
45) cis-1,2-Dichloroethene	(2)	2.879	(0.000)	96	192980	20.855	20.86			0.5	5
52) Bromochloromethane	(2)	3.086	(0.000)	128	95404	19.407	19.41			0.6	5
54) Chloroform	(2)	3.165	(0.000)	83	282700	20.149	20.15			0.6	5
57) 1,1,1-Trichloroethane	(2)	3.335	(0.000)	97	244055	16.989	16.99			0.6	5
58) Cyclohexane	(2)	3.390	(0.000)	56	251378	18.627	18.63			0.5	5
61) Carbon Tetrachloride	(2)	3.494	(-0.001)	117	202427	18.554	18.55			0.5	5
64) Benzene	(2)	3.670	(0.000)	78	648130	19.447	19.45			0.5	5
67) 1,2-Dichloroethane	(2)	3.688	(0.000)	62	194566	20.230	20.23			0.6	5
75) Trichloroethene	(2)	4.303	(-0.000)	95	167208	19.239	19.24			0.5	5
76) Methylcyclohexane	(2)	4.497	(-0.000)	83	267980	19.813	19.81			0.6	5
77) 1,2-Dichloropropane	(2)	4.522	(-0.000)	63	162971	20.591	20.59			0.5	5
84) Bromodichloromethane	(2)	4.820	(-0.000)	83	188701	19.092	19.09			0.4	5
89) cis-1,3-Dichloropropene	(2)	5.294	(-0.002)	75	230091	19.279	19.28			0.4	5

Digitally signed by Patrick T. Herres on 11/14/2018 at 20:11. Target 3.5 esignature user ID: pth10165

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18oct31a.b/bc31l20.d Injection date and time: **31-OCT-2018 10:14**
Data file Sample Info. Line: LCSB86;LCSB86;2;3;LCS;;DODSW;;bc31b20; Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 14-Nov-2018 19:54 sej02002

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **B183042**
Calibration date and time (Last Method Edit): 14-NOV-2018 19:51
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

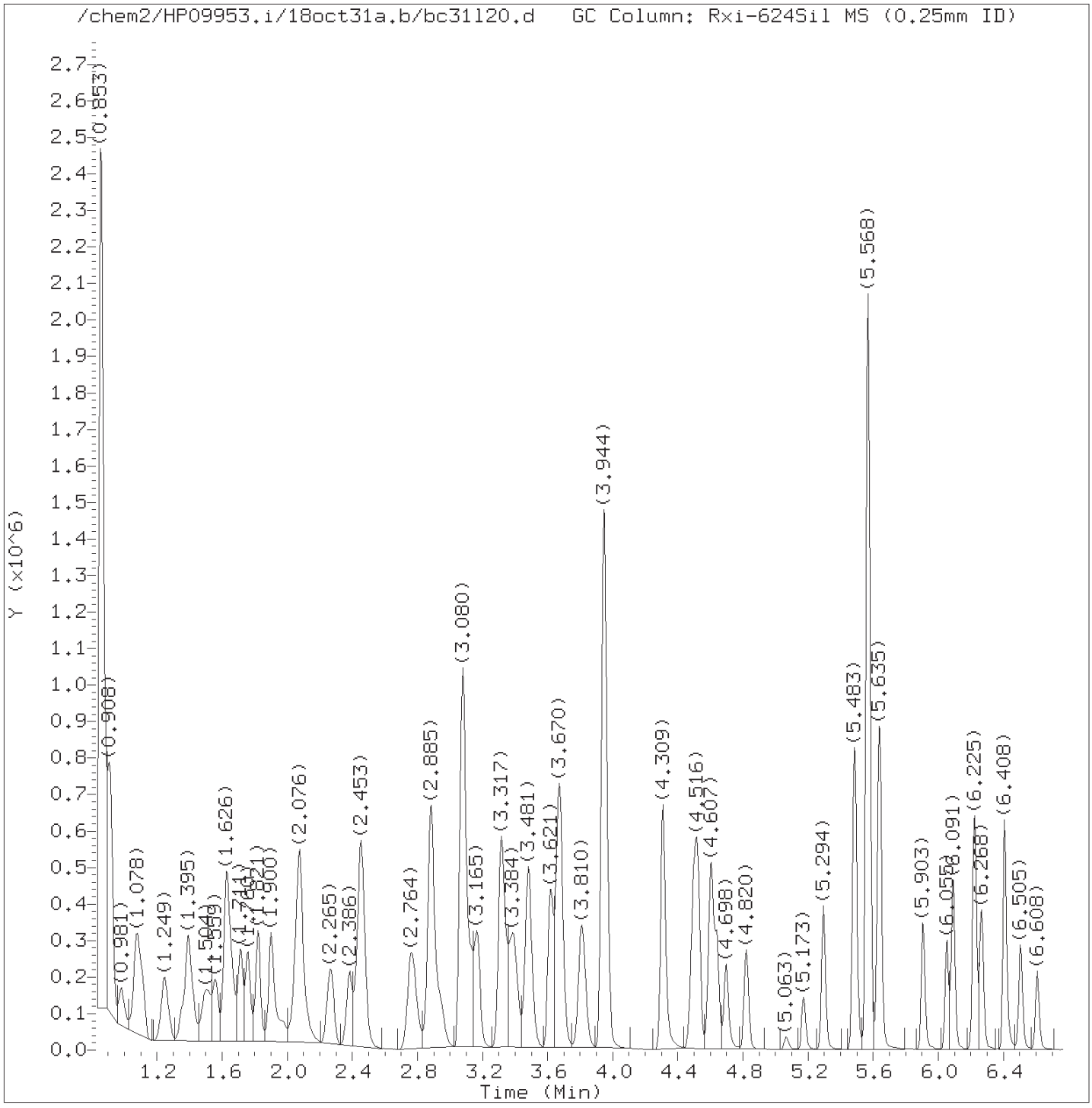
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
90) 4-Methyl-2-pentanone	(2)	5.483(-0.000)	43	590311	86.634	86.63			1	10
92) Toluene	(3)	5.641(0.000)	92	421814	19.003	19.00			0.6	5
93) trans-1,3-Dichloropropene	(3)	5.903(0.000)	75	190265	17.894	17.89			0.3	5
96) 1,1,2-Trichloroethane	(3)	6.091(0.000)	97	146852	20.386	20.39			0.5	5
98) Tetrachloroethene	(3)	6.225(0.000)	166	200948	16.527	16.53			0.5	5
101) 2-Hexanone	(3)	6.408(0.000)	43	409353	79.113	79.11			1	10
103) Dibromochloromethane	(3)	6.505(0.000)	129	153538	18.500	18.50			0.4	5
104) 1,2-Dibromoethane	(3)	6.608(0.000)	107	147075	19.763	19.76			0.4	5
107) Chlorobenzene	(3)	7.174(-0.000)	112	506145	19.530	19.53			0.5	5
108) 1,1,1,2-Tetrachloroethane	(3)	7.278(0.000)	131	162565M	18.498	18.50			0.5	5
109) Ethylbenzene	(3)	7.320(0.000)	91	802475	19.221	19.22			0.4	5
110) m+p-Xylene	(3)	7.448(0.000)	106	664068	38.979	38.98			1	5
111) o-Xylene	(3)	7.831(0.000)	106	321560	18.880	18.88			0.4	5
112) Xylene (Total)	(3)		106	985628	57.860	57.86			1	5
113) Styrene	(3)	7.849(0.000)	104	518034	18.450	18.45			0.3	5
114) Bromoform	(3)	7.995(-0.000)	173	87356	16.892	16.89			5	10
115) Isopropylbenzene	(3)	8.178(0.000)	105	834537	19.439	19.44			0.4	5
118) Cyclohexanone	(1)	8.239(-0.003)	55	101876	332.766	332.77			25	250
120) 1,1,2,2-Tetrachloroethane	(4)	8.452(0.000)	83	186435	19.567	19.57			0.4	5
138) 1,3-Dichlorobenzene	(4)	9.176(0.000)	146	448991	19.171	19.17			0.5	5
141) 1,4-Dichlorobenzene	(4)	9.242(-0.000)	146	475042	19.455	19.45			0.4	5
147) 1,2-Dichlorobenzene	(4)	9.516(0.000)	146	449423	19.628	19.63			0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)	10.070(-0.000)	75	30002	18.124	18.12			0.4	5
153) 1,2,4-Trichlorobenzene	(4)	10.630(0.000)	180	324068	19.192	19.19			5	10
156) 1,2,3-Trichlorobenzene	(4)	10.940(-0.000)	180	316574	19.661	19.66			5	10

M = Compound was manually integrated.

Total number of targets = 54

Digitally signed by Patrick T. Herres on 11/14/2018 at 20:11. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 20:46. PARALLAX ID: sej02002



Total Ion Chromatogram (TIC)

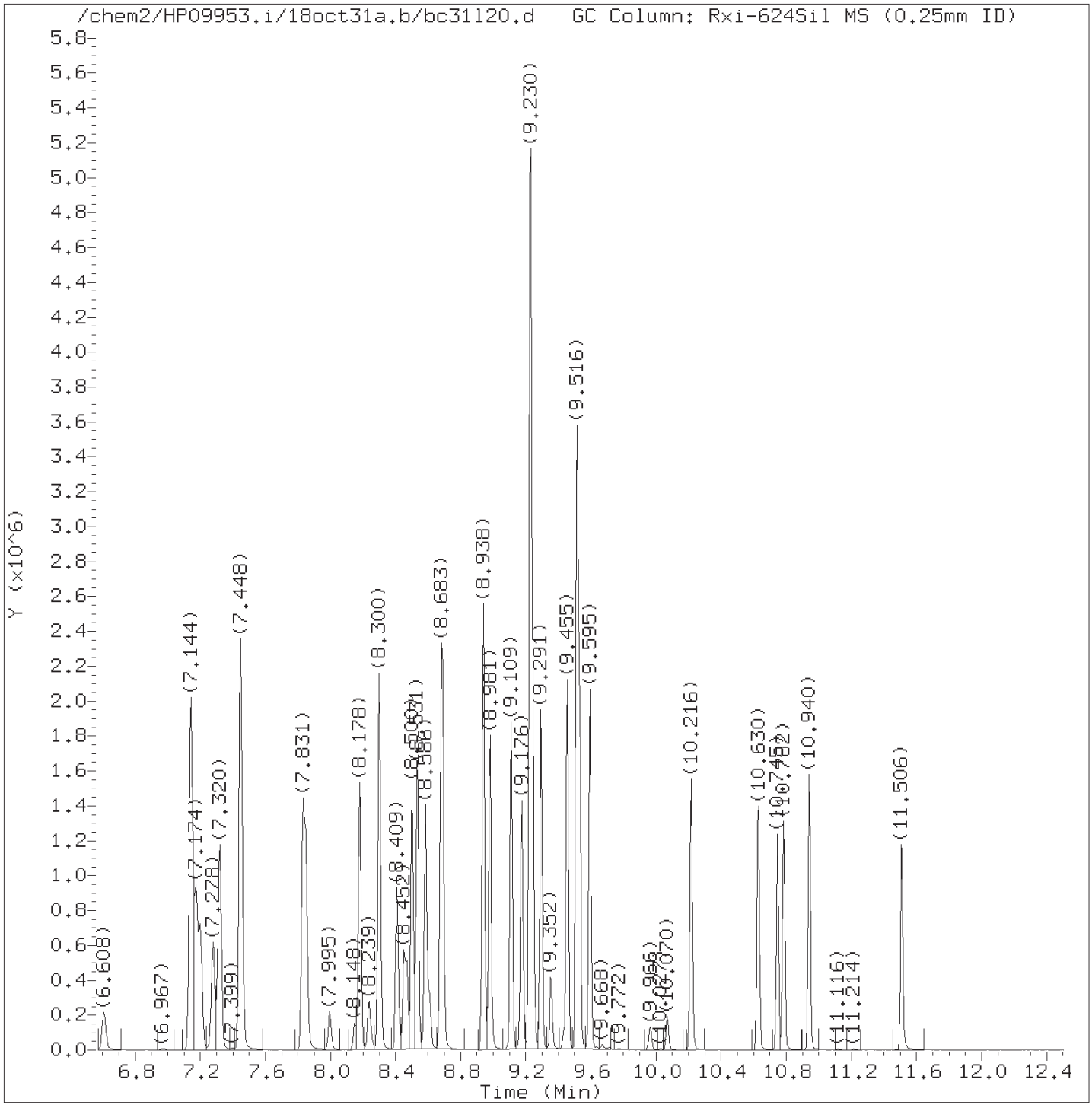
Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31120.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:14 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:54 sej02002

Sample Name: LCSB86 Lab Sample ID: LCSB86

Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31120.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:14 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:54 sej02002

Sample Name: LCSB86 Lab Sample ID: LCSB86

Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31l20.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:14 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:54 sej02002

Sample Name: LCSB86 Lab Sample ID: LCSB86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.981	85	216422	16.404
4) Chloromethane	(2)	1.066	50	280512	20.627
5) Vinyl Chloride	(2)	1.115	62	200156	18.888
9) Bromomethane	(2)	1.243	94	163102	17.294
10) Chloroethane	(2)	1.261	64	107109	18.790
13) Trichlorofluoromethane	(2)	1.407	101	273903	18.776
19) 1,1-Dichloroethene	(2)	1.626	96	144347	19.691
20) Acetone	(1)	1.638	58	79223	134.677
22) Freon 113	(2)	1.650	101	145750	19.831
25) Carbon Disulfide	(2)	1.760	76	484257	16.510
27) Methyl Acetate	(2)	1.821	43	81136	21.584
31) Methylene Chloride	(2)	1.900	84	164981	19.044
30)*t-Butyl alcohol-d10	(1)	1.930	65	132096	250.000
35) trans-1,2-Dichloroethene	(2)	2.076	96	169916	19.932
34) Methyl Tertiary Butyl Ether	(2)	2.088	73	392663	18.831
40) 1,1-Dichloroethane	(2)	2.380	63	280002	20.256
45) cis-1,2-Dichloroethene	(2)	2.879	96	192980	20.855
44) 2-Butanone	(1)	2.885	43	424556	125.013
52) Bromochloromethane	(2)	3.086	128	95404	19.407
54) Chloroform	(2)	3.165	83	282700	20.149
56)$Dibromofluoromethane	(2)	3.311	113	369408	50.727
57) 1,1,1-Trichloroethane	(2)	3.335	97	244055	16.989
58) Cyclohexane	(2)	3.390	56	251378	18.627
61) Carbon Tetrachloride	(2)	3.494	117	202427	18.554
63)$1,2-Dichloroethane-d4	(2)	3.615	102	83816	53.475
64) Benzene	(2)	3.670	78	648130	19.447
67) 1,2-Dichloroethane	(2)	3.688	62	194566	20.230
70)*Fluorobenzene	(2)	3.944	96	1461172	50.000
75) Trichloroethene	(2)	4.303	95	167208	19.239
76) Methylcyclohexane	(2)	4.497	83	267980	19.813
77) 1,2-Dichloropropane	(2)	4.522	63	162971	20.591
84) Bromodichloromethane	(2)	4.820	83	188701	19.092
89) cis-1,3-Dichloropropene	(2)	5.294	75	230091	19.279
90) 4-Methyl-2-pentanone	(2)	5.483	43	590311	86.634
91)$Toluene-d8	(3)	5.568	98	1482110	49.522
92) Toluene	(3)	5.641	92	421814	19.003
93) trans-1,3-Dichloropropene	(3)	5.903	75	190265	17.894
96) 1,1,2-Trichloroethane	(3)	6.091	97	146852	20.386

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31l20.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:14 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:54 sej02002

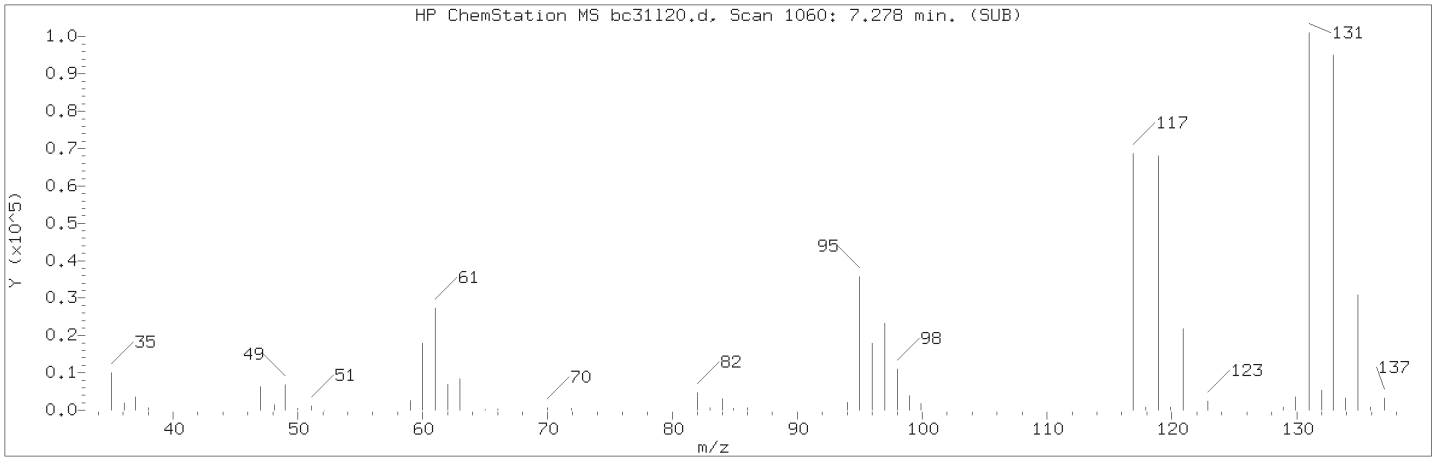
Sample Name: LCSB86 Lab Sample ID: LCSB86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
98) Tetrachloroethene	(3)	6.225	166	200948	16.527
101) 2-Hexanone	(3)	6.408	43	409353	79.113
103) Dibromochloromethane	(3)	6.505	129	153538	18.500
104) 1,2-Dibromoethane	(3)	6.608	107	147075	19.763
105)*Chlorobenzene-d5	(3)	7.144	117	1159575	50.000
107) Chlorobenzene	(3)	7.174	112	506145	19.530
108) 1,1,1,2-Tetrachloroethane	(3)	7.278	131	162565M	18.498
109) Ethylbenzene	(3)	7.320	91	802475	19.221
110) m+p-Xylene	(3)	7.448	106	664068	38.979
111) o-Xylene	(3)	7.831	106	321560	18.880
113) Styrene	(3)	7.849	104	518034	18.450
112) Xylene (Total)	(3)		106	985628	57.860
114) Bromoform	(3)	7.995	173	87356	16.892
115) Isopropylbenzene	(3)	8.178	105	834537	19.439
118) Cyclohexanone	(1)	8.239	55	101876	332.766
119)$4-Bromofluorobenzene	(3)	8.300	95	542206M	49.732
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	186435	19.567
138) 1,3-Dichlorobenzene	(4)	9.176	146	448991	19.171
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	681114	50.000
141) 1,4-Dichlorobenzene	(4)	9.243	146	475042	19.455
147) 1,2-Dichlorobenzene	(4)	9.516	146	449423	19.628
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	30002	18.124
153) 1,2,4-Trichlorobenzene	(4)	10.630	180	324068	19.192
156) 1,2,3-Trichlorobenzene	(4)	10.940	180	316574	19.661

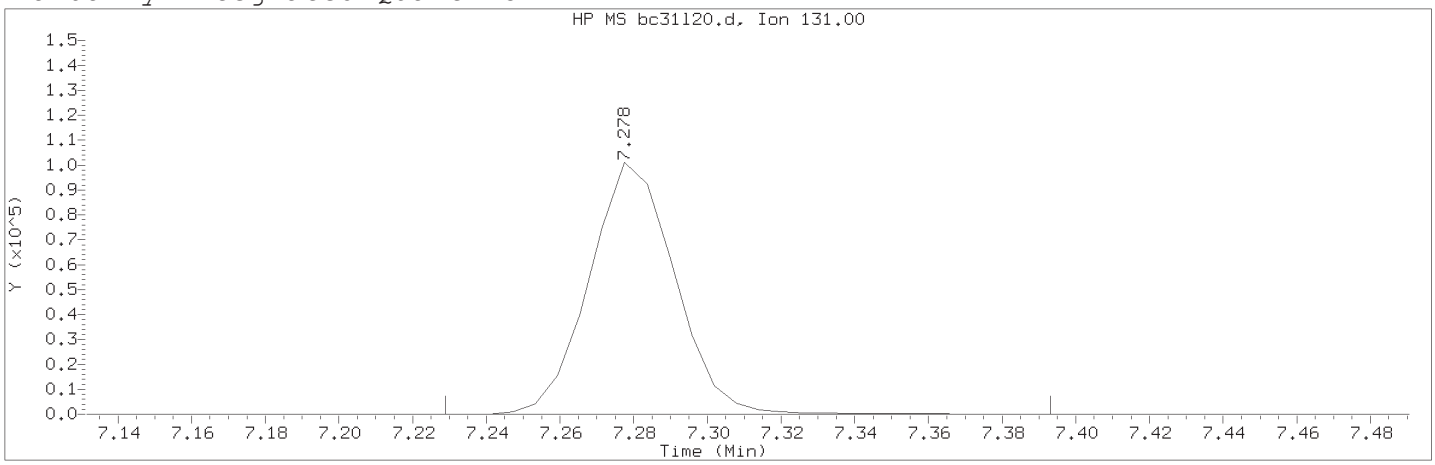
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31l20.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:14 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:54 sej02002

Sample Name: LCSB86 Lab Sample ID: LCSB86

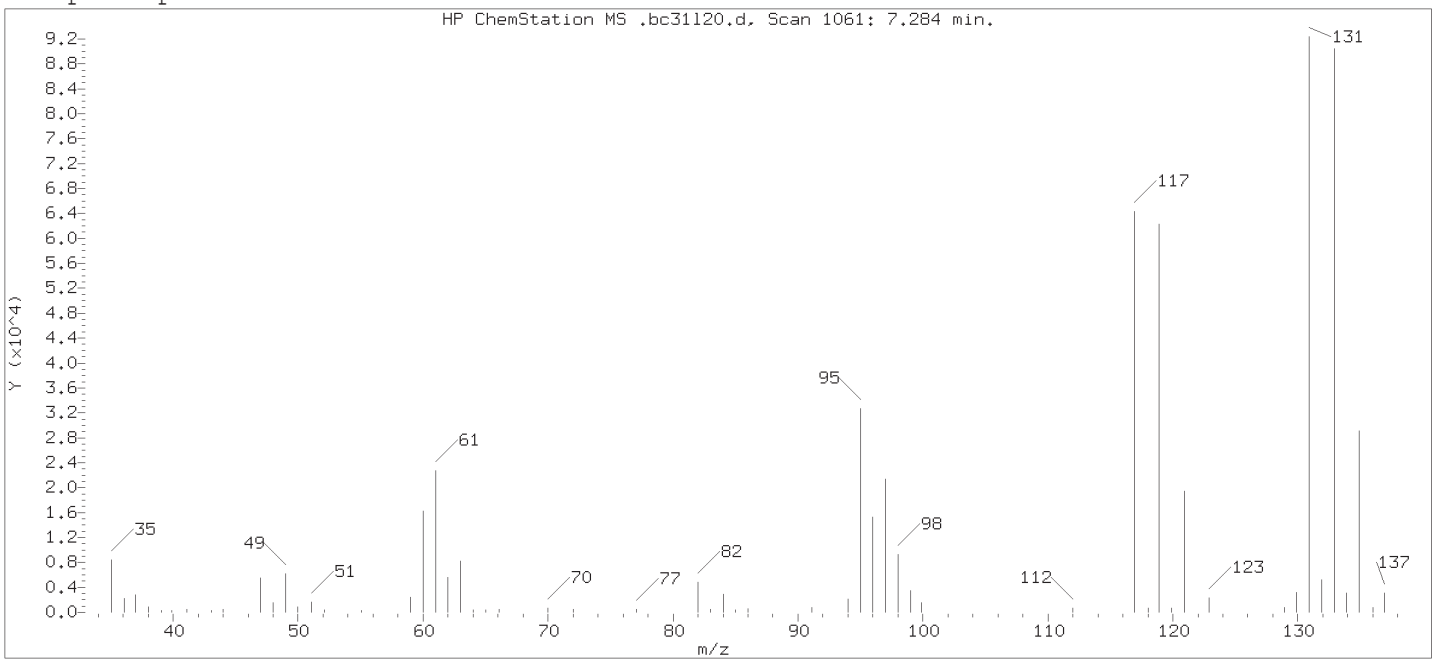
Compound Number : 108
Compound Name : 1,1,1,2-Tetrachloroethane
Scan Number : 1060
Retention Time (minutes): 7.278
Quant Ion : 131.00
Area (flag) : 162565M
On-Column Amount (ng) : 18.4981
Integration start scan : 1051 Integration stop scan: 1078
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

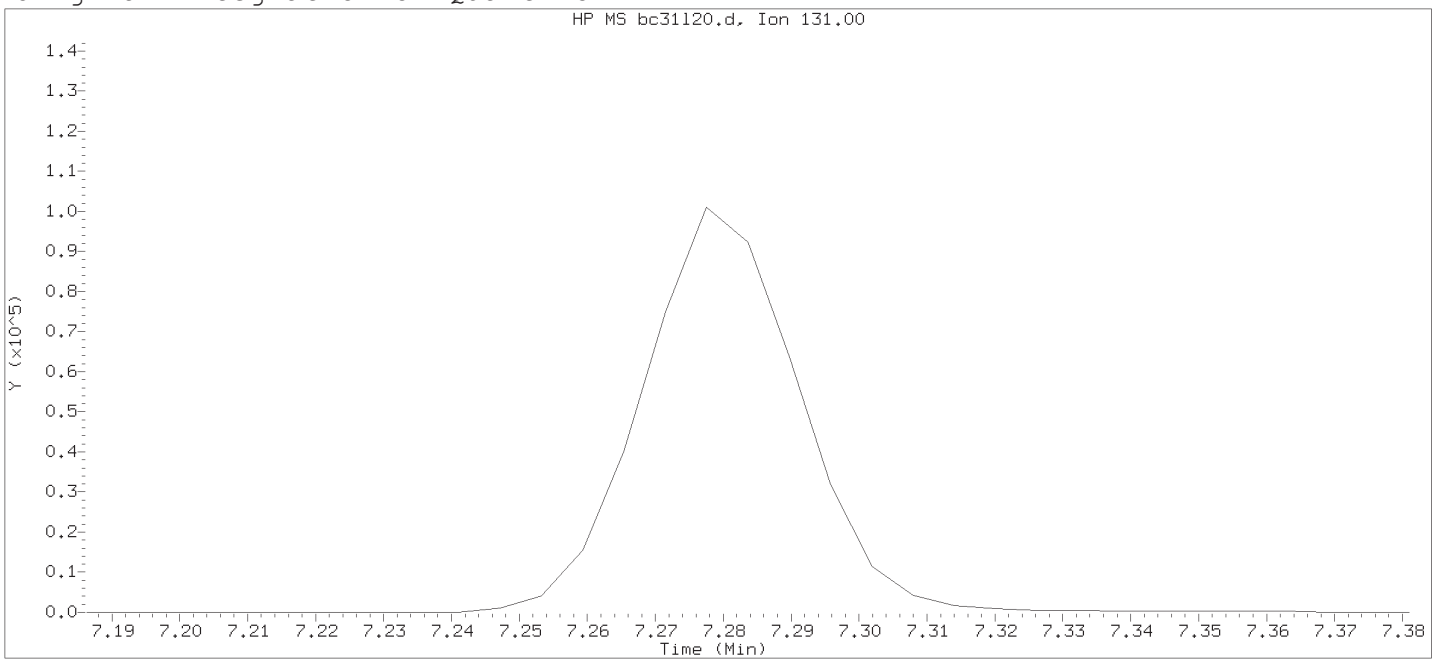
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 20:46.
PARALLAX ID: sej02002

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31l20.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:14 Analyst ID: scn10072

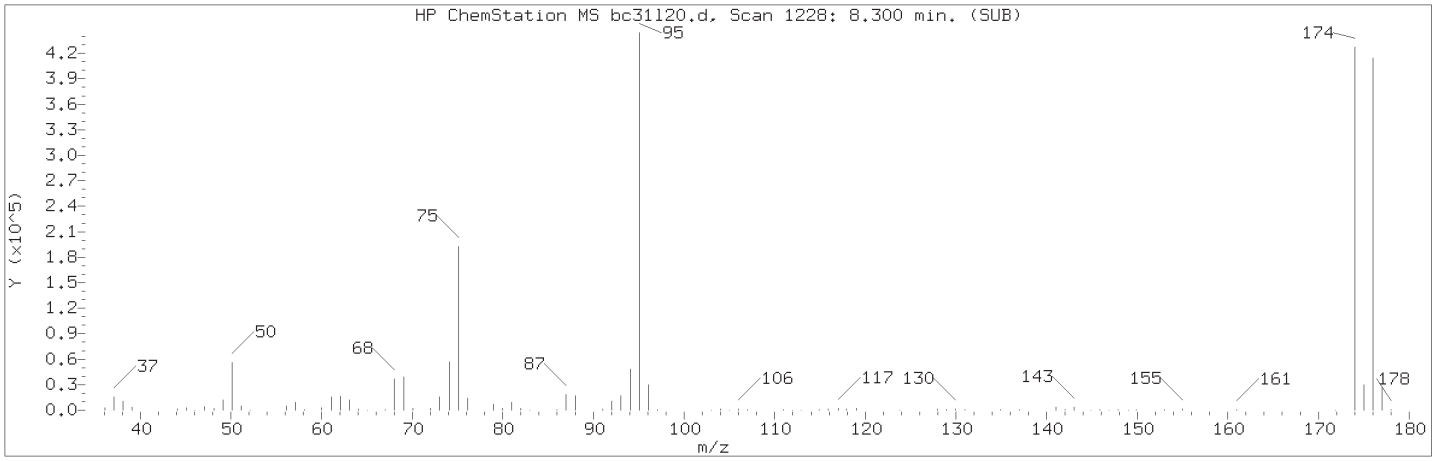
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 11:17 scn10072

Sample Name: LCSB86 Lab Sample ID: LCSB86

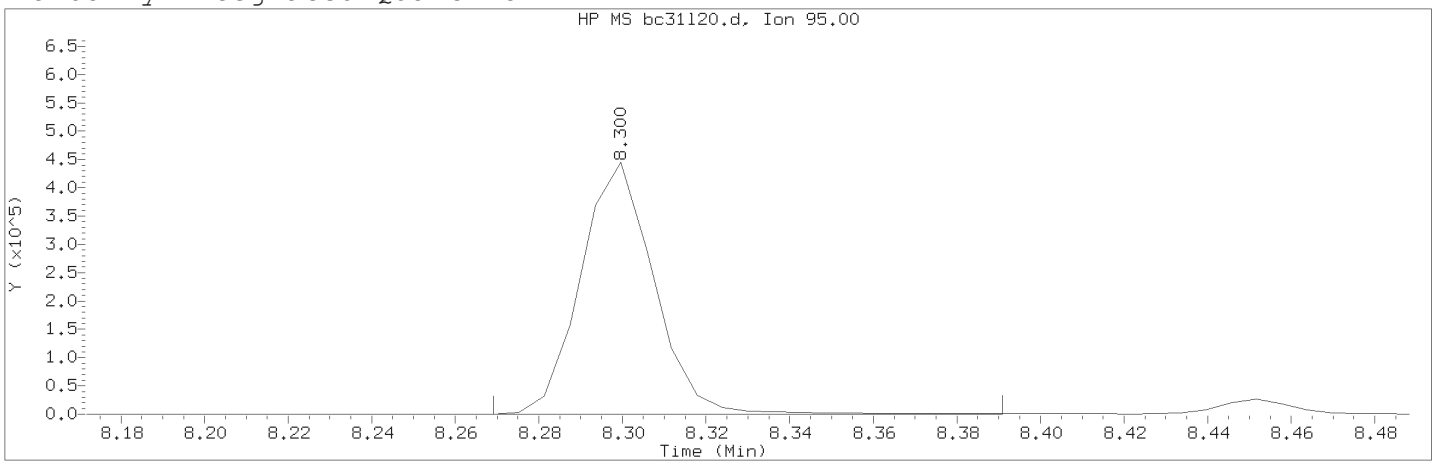
Compound Number : 108
Compound Name : 1,1,1,2-Tetrachloroethane
Expected RT (minutes) : 7.284
Quant Ion : 131.00

Digitally signed by Patrick T. Herres on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31l20.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:14 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:54 sej02002

Sample Name: LCSB86 Lab Sample ID: LCSB86

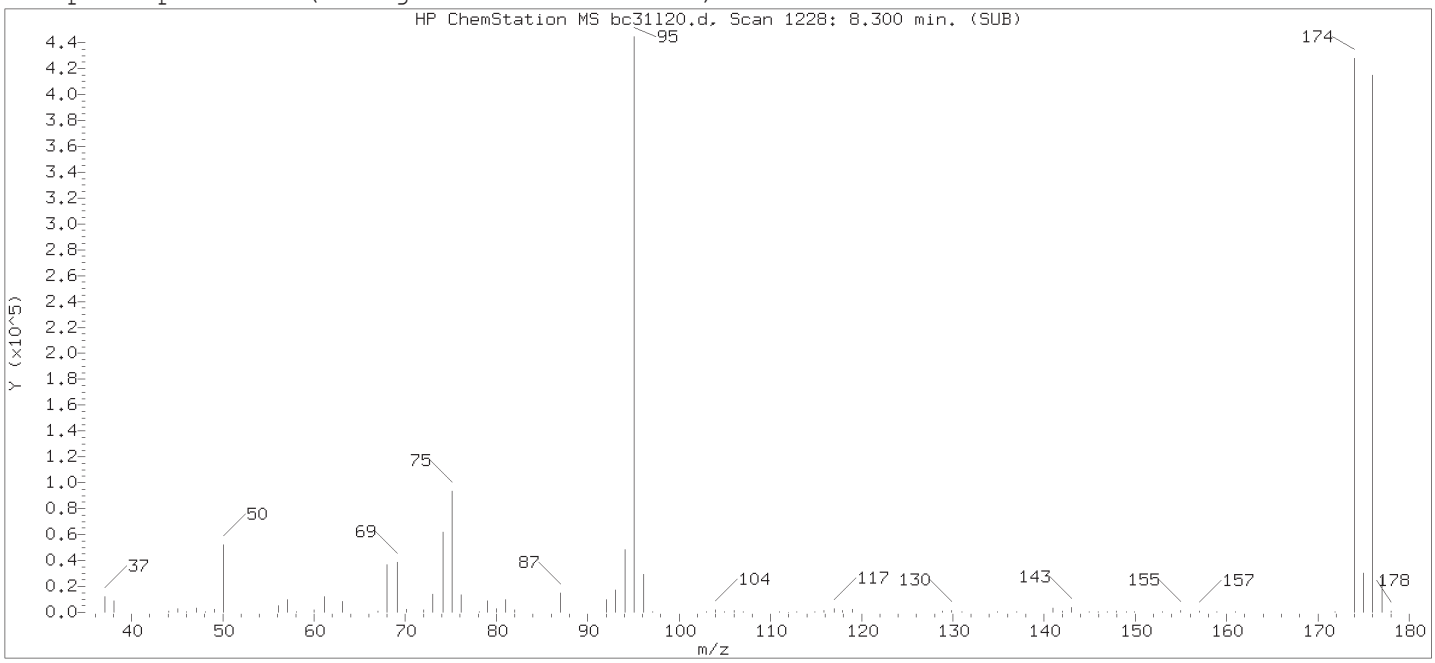
Compound Number : 119
Compound Name : 4-Bromofluorobenzene
Scan Number : 1228
Retention Time (minutes): 8.300
Quant Ion : 95.00
Area (flag) : 542206M
On-Column Amount (ng) : 49.7319
Integration start scan : 1222 Integration stop scan: 1242
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

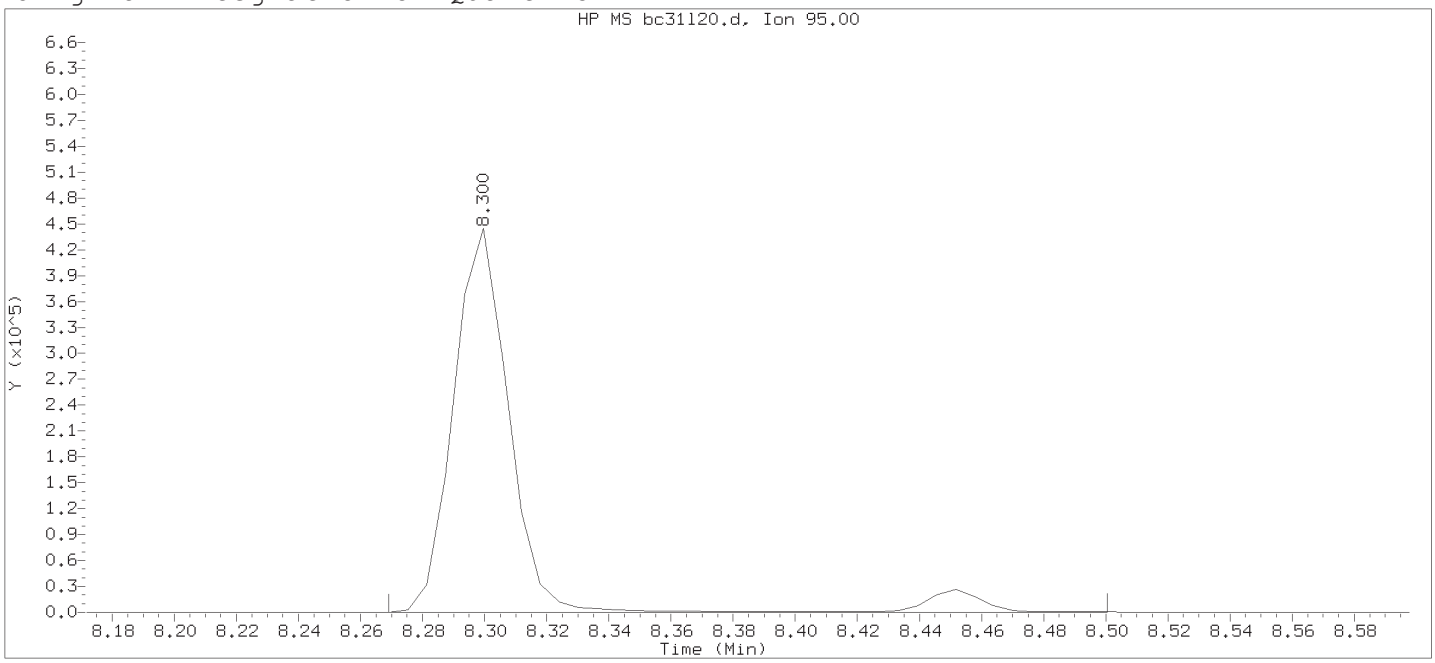
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 20:46.
PARALLAX ID: sej02002

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31l20.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:14 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 11:17 scn10072

Sample Name: LCSB86 Lab Sample ID: LCSB86

Compound Number	: 119		
Compound Name	: 4-Bromofluorobenzene		
Scan Number	: 1228		
Retention Time (minutes)	: 8.300		
Quant Ion	: 95.00		
Area	: 575532		
On-column Amount (ng)	: 52.7887		
Integration start scan	: 1222	Integration stop scan:	1260
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Patrick T. Herres on 11/14/2018 at 20:11.
Target 3.5 esignature used [illegible]

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18oct31a.b/bc31l21.d Injection date and time: **31-OCT-2018 10:37**
Data file Sample Info. Line: LCDB86;LCDB86;2;3;LCSD;;DODSW;;bc31b20; Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 14-Nov-2018 19:55 sej02002

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **B183042**
Calibration date and time (Last Method Edit): 14-NOV-2018 19:51
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.918	(0.012)	179	65	137376	(9)	250.00	
70) Fluorobenzene	3.944	(0.006)	512	96	1426823	(-2)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	1125913	(0)	50.00	
140) 1,4-Dichlorobenzene-d4	9.224	(0.000)	1380	152	652054	(-1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.317	(-0.001)	113	359127	50.503	101%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.621	(-0.001)	102	82208	53.711	107%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1447133	49.799	100%		85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	527311	49.812	100%		79 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)	0.987	(-0.000)	85	212312	16.480	16.48			0.6	5
4) Chloromethane	(2)	1.072	(-0.000)	50	258334	19.454	19.45			0.6	5
5) Vinyl Chloride	(2)	1.121	(-0.000)	62	200025	19.330	19.33			0.6	5
9) Bromomethane	(2)	1.249	(-0.000)	94	159719	17.343	17.34			0.7	5
10) Chloroethane	(2)	1.267	(-0.000)	64	103046	18.513	18.51			1	5
13) Trichlorofluoromethane	(2)	1.419	(-0.002)	101	268416	18.843	18.84			0.7	5
19) 1,1-Dichloroethene	(2)	1.626	(-0.000)	96	142628	19.925	19.93			0.5	5
20) Acetone	(1)	1.644	(-0.005)	58	81049M	132.334	132.33			6	20
22) Freon 113	(2)	1.650	(0.000)	101	143404	19.981	19.98			0.6	10
25) Carbon Disulfide	(2)	1.760	(0.000)	76	484033M	16.899	16.90			0.6	5
27) Methyl Acetate	(2)	1.827	(0.000)	43	84575	23.041	23.04			1	5
31) Methylene Chloride	(2)	1.906	(-0.000)	84	166401	19.671	19.67			2	5
34) Methyl Tertiary Butyl Ether	(2)	2.094	(-0.000)	73	407374	20.007	20.01			0.5	5
35) trans-1,2-Dichloroethene	(2)	2.082	(-0.000)	96	166733	20.029	20.03			0.5	5
40) 1,1-Dichloroethane	(2)	2.386	(-0.000)	63	277814	20.582	20.58			0.5	5
44) 2-Butanone	(1)	2.891	(-0.006)	43	447798	126.789	126.79			1	10
45) cis-1,2-Dichloroethene	(2)	2.879	(0.000)	96	194424	21.517	21.52			0.5	5
52) Bromochloromethane	(2)	3.092	(-0.001)	128	97625	20.336	20.34			0.6	5
54) Chloroform	(2)	3.171	(-0.001)	83	283175	20.669	20.67			0.6	5
57) 1,1,1-Trichloroethane	(2)	3.341	(-0.001)	97	241595	17.223	17.22			0.6	5
58) Cyclohexane	(2)	3.390	(0.000)	56	247758	18.800	18.80			0.5	5
61) Carbon Tetrachloride	(2)	3.494	(-0.001)	117	201343	18.899	18.90			0.5	5
64) Benzene	(2)	3.670	(0.000)	78	649873	19.969	19.97			0.5	5
67) 1,2-Dichloroethane	(2)	3.694	(-0.001)	62	199948	21.290	21.29			0.6	5
75) Trichloroethene	(2)	4.309	(-0.001)	95	169529	19.975	19.98			0.5	5
76) Methylcyclohexane	(2)	4.497	(-0.000)	83	268412	20.323	20.32			0.6	5
77) 1,2-Dichloropropane	(2)	4.528	(-0.001)	63	163555	21.162	21.16			0.5	5
84) Bromodichloromethane	(2)	4.820	(-0.000)	83	190800	19.769	19.77			0.4	5
89) cis-1,3-Dichloropropene	(2)	5.294	(-0.002)	75	234240	20.099	20.10			0.4	5
90) 4-Methyl-2-pentanone	(2)	5.483	(-0.000)	43	633762	95.497	95.50			1	10

M = Compound was manually integrated.

Digitally signed by Patrick T. Herres on 11/14/2018 at 20:11. Target 3.5 esignature user ID: pth10165

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18oct31a.b/bc31l21.d Injection date and time: **31-OCT-2018 10:37**
Data file Sample Info. Line: LCDB86;LCDB86;2;3;LCSD;;DODSW;;bc31b20; Instrument ID: **HP09953.i** Batch: **B183042AA**
Date, time and analyst ID of latest file update: 14-Nov-2018 19:55 sej02002

Blank Data file reference: **/chem2/HP09953.i/18oct31a.b/bc31b20.d**

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: **B183042**
Calibration date and time (Last Method Edit): 14-NOV-2018 19:51
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18oct31a.b/bc31c10.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

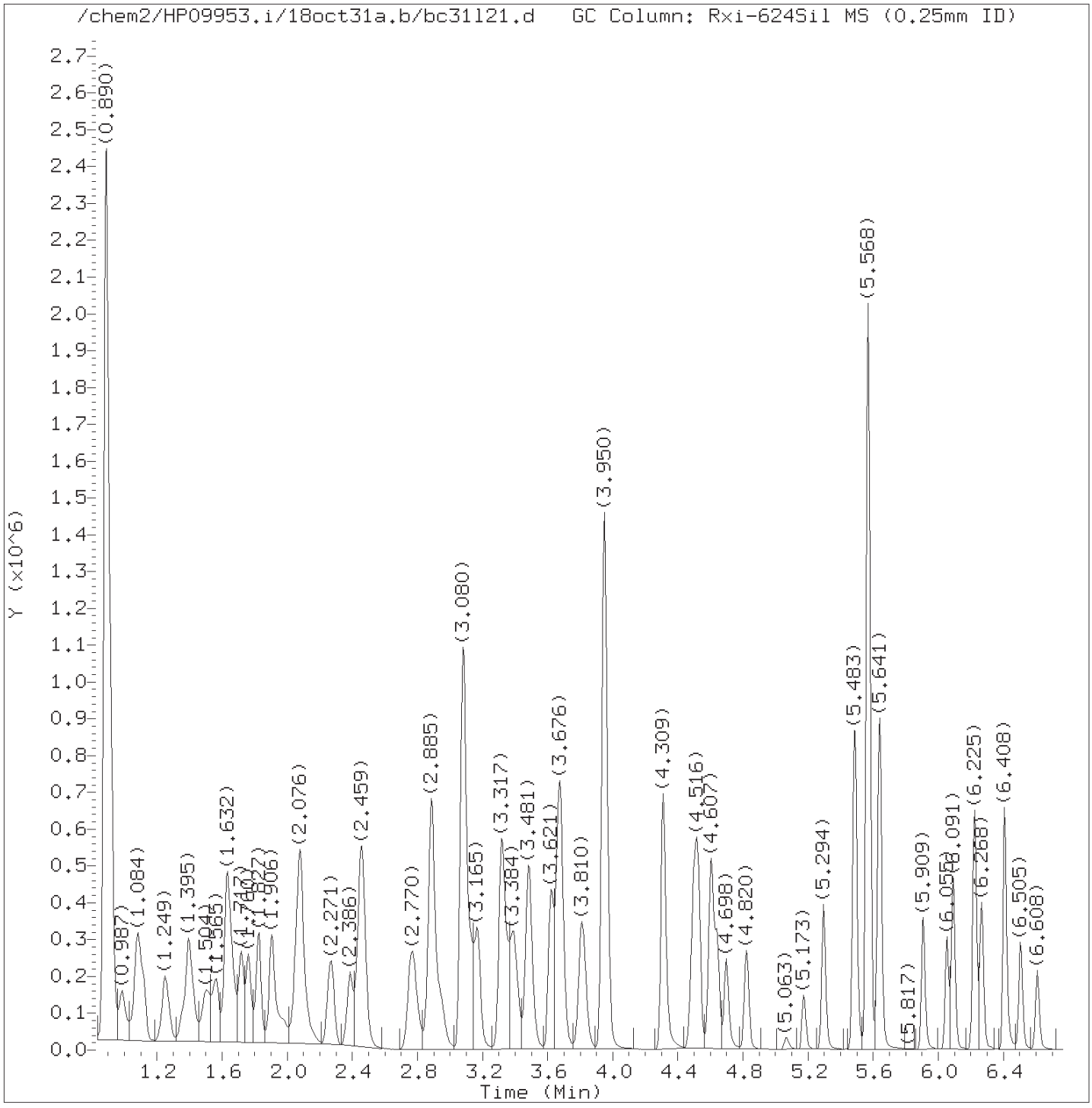
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
92) Toluene	(3)	5.641(0.000)	92	421181	19.541	19.54			0.6	5
93) trans-1,3-Dichloropropene	(3)	5.909(-0.000)	75	196121	18.996	19.00			0.3	5
96) 1,1,2-Trichloroethane	(3)	6.091(0.000)	97	152868	21.856	21.86			0.5	5
98) Tetrachloroethene	(3)	6.225(0.000)	166	201299	17.051	17.05			0.5	5
101) 2-Hexanone	(3)	6.408(0.000)	43	440064	87.842	87.84			1	10
103) Dibromochloromethane	(3)	6.505(0.000)	129	154630	19.189	19.19			0.4	5
104) 1,2-Dibromoethane	(3)	6.608(0.000)	107	150368	20.809	20.81			0.4	5
107) Chlorobenzene	(3)	7.174(-0.000)	112	509875	20.262	20.26			0.5	5
108) 1,1,1,2-Tetrachloroethane	(3)	7.278(0.000)	131	163381M	19.147	19.15			0.5	5
109) Ethylbenzene	(3)	7.320(0.000)	91	805539	19.872	19.87			0.4	5
110) m+p-Xylene	(3)	7.448(0.000)	106	666241	40.276	40.28			1	5
111) o-Xylene	(3)	7.831(0.000)	106	324026	19.594	19.59			0.4	5
112) Xylene (Total)	(3)		106	990267	59.870	59.87			1	5
113) Styrene	(3)	7.849(0.000)	104	520947	19.109	19.11			0.3	5
114) Bromoform	(3)	7.995(-0.000)	173	89369	17.797	17.80			5	10
115) Isopropylbenzene	(3)	8.178(-0.000)	105	836952	20.078	20.08			0.4	5
118) Cyclohexanone	(1)	8.239(-0.030)	55	105530MA	331.453	331.45			25	250
120) 1,1,2,2-Tetrachloroethane	(4)	8.452(-0.000)	83	192112	21.062	21.06			0.4	5
138) 1,3-Dichlorobenzene	(4)	9.176(0.000)	146	450014	20.071	20.07			0.5	5
141) 1,4-Dichlorobenzene	(4)	9.242(-0.000)	146	475816	20.355	20.35			0.4	5
147) 1,2-Dichlorobenzene	(4)	9.516(-0.000)	146	453056	20.668	20.67			0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)	10.070(-0.000)	75	31286	19.742	19.74			0.4	5
153) 1,2,4-Trichlorobenzene	(4)	10.630(-0.000)	180	333111	20.607	20.61			5	10
156) 1,2,3-Trichlorobenzene	(4)	10.940(-0.000)	180	324242	21.034	21.03			5	10

M = Compound was manually integrated. A = User selected an alternate peak.

Total number of targets = 54

Digitally signed by Patrick T. Herres on 11/14/2018 at 20:11. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 20:46. PARALLAX ID: sej02002



Total Ion Chromatogram (TIC)

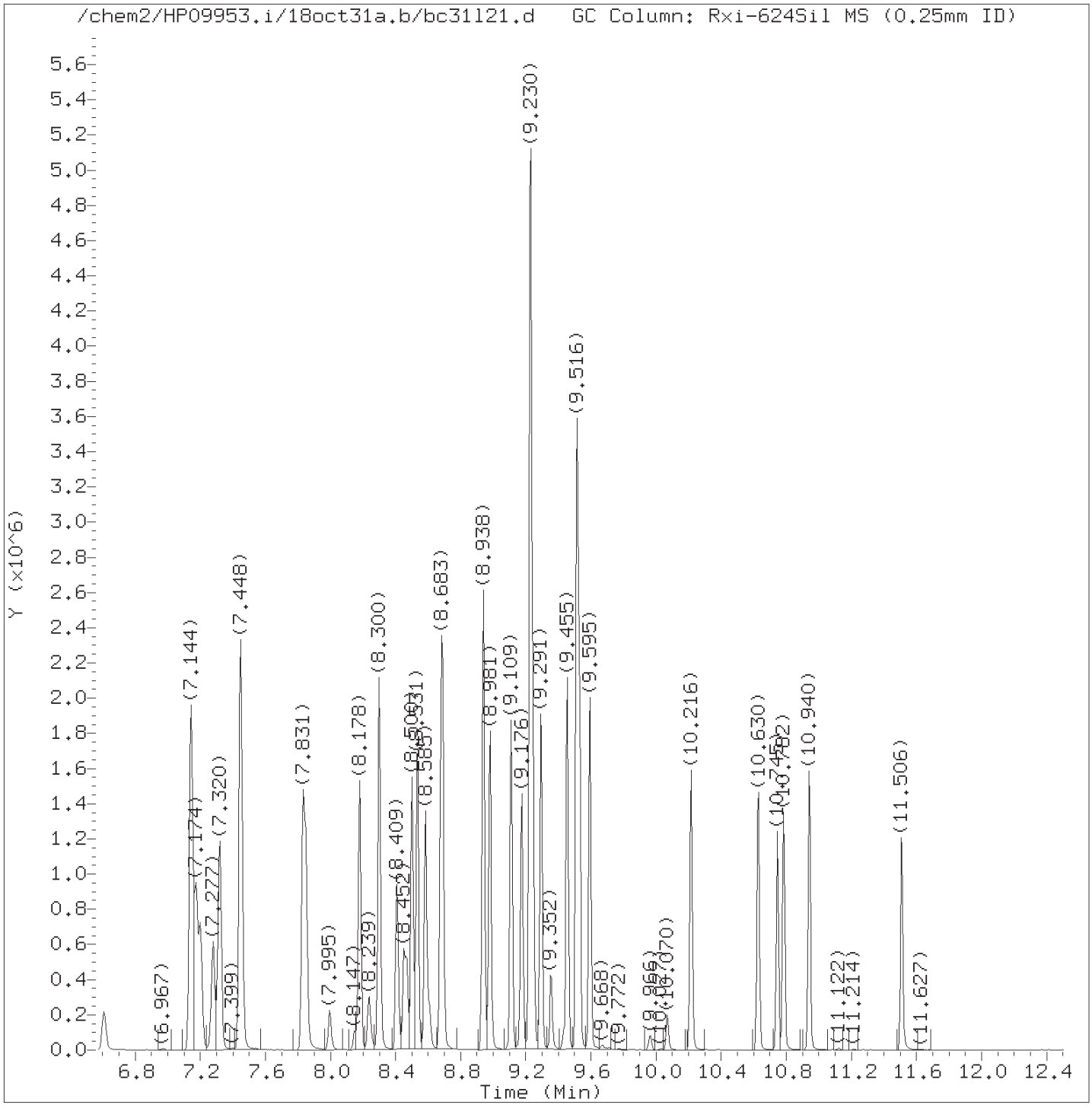
Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31l21.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:37 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:55 sej02002

Sample Name: LCDB86 Lab Sample ID: LCDB86

Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31l21.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:37 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:55 sej02002

Sample Name: LCDB86 Lab Sample ID: LCDB86

Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31l21.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:37 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:55 sej02002

Sample Name: LCDB86 Lab Sample ID: LCDB86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.987	85	212312	16.480
4) Chloromethane	(2)	1.072	50	258334	19.454
5) Vinyl Chloride	(2)	1.121	62	200025	19.330
9) Bromomethane	(2)	1.249	94	159719	17.343
10) Chloroethane	(2)	1.267	64	103046	18.513
13) Trichlorofluoromethane	(2)	1.419	101	268416	18.843
19) 1,1-Dichloroethene	(2)	1.626	96	142628	19.925
20) Acetone	(1)	1.644	58	81049M	132.334
22) Freon 113	(2)	1.650	101	143404	19.981
25) Carbon Disulfide	(2)	1.760	76	484033M	16.899
27) Methyl Acetate	(2)	1.827	43	84575	23.041
31) Methylene Chloride	(2)	1.906	84	166401	19.671
30)*t-Butyl alcohol-d10	(1)	1.918	65	137376	250.000
35) trans-1,2-Dichloroethene	(2)	2.082	96	166733	20.029
34) Methyl Tertiary Butyl Ether	(2)	2.094	73	407374	20.007
40) 1,1-Dichloroethane	(2)	2.386	63	277814	20.582
45) cis-1,2-Dichloroethene	(2)	2.879	96	194424	21.517
44) 2-Butanone	(1)	2.891	43	447798	126.789
52) Bromochloromethane	(2)	3.092	128	97625	20.336
54) Chloroform	(2)	3.171	83	283175	20.669
56)$Dibromofluoromethane	(2)	3.317	113	359127	50.503
57) 1,1,1-Trichloroethane	(2)	3.341	97	241595	17.223
58) Cyclohexane	(2)	3.390	56	247758	18.800
61) Carbon Tetrachloride	(2)	3.494	117	201343	18.899
63)$1,2-Dichloroethane-d4	(2)	3.621	102	82208	53.711
64) Benzene	(2)	3.670	78	649873	19.969
67) 1,2-Dichloroethane	(2)	3.694	62	199948	21.290
70)*Fluorobenzene	(2)	3.944	96	1426823	50.000
75) Trichloroethene	(2)	4.309	95	169529	19.975
76) Methylcyclohexane	(2)	4.497	83	268412	20.323
77) 1,2-Dichloropropane	(2)	4.528	63	163555	21.162
84) Bromodichloromethane	(2)	4.820	83	190800	19.769
89) cis-1,3-Dichloropropene	(2)	5.294	75	234240	20.099
90) 4-Methyl-2-pentanone	(2)	5.483	43	633762	95.497
91)$Toluene-d8	(3)	5.568	98	1447133	49.799
92) Toluene	(3)	5.641	92	421181	19.541
93) trans-1,3-Dichloropropene	(3)	5.909	75	196121	18.996
96) 1,1,2-Trichloroethane	(3)	6.091	97	152868	21.856

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18oct31a.b/bc31l21.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:37 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:55 sej02002

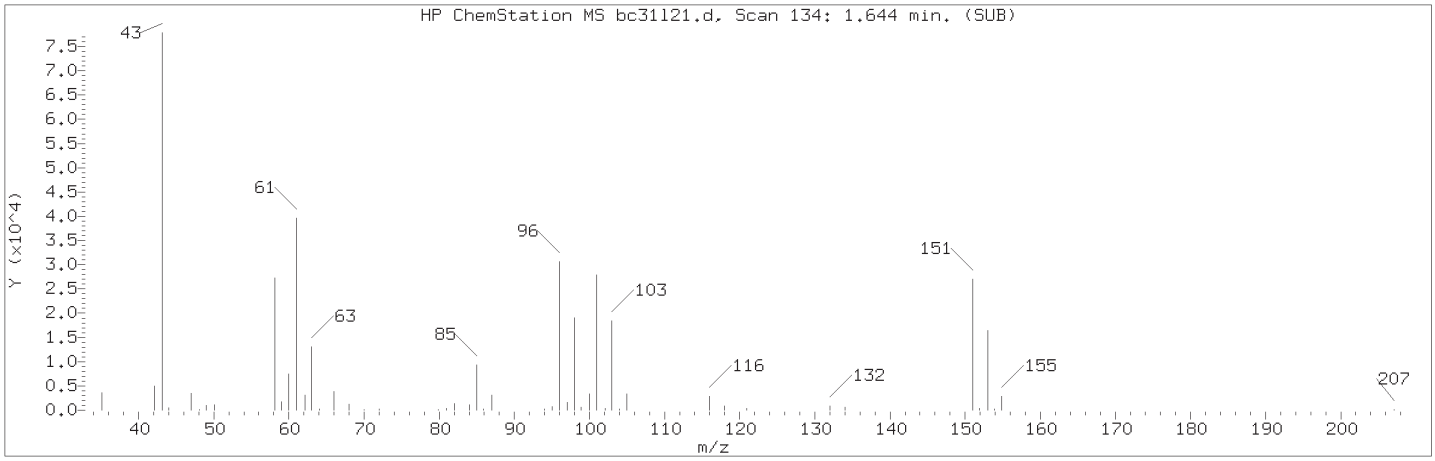
Sample Name: LCDB86 Lab Sample ID: LCDB86

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
98) Tetrachloroethene	(3)	6.225	166	201299	17.051
101) 2-Hexanone	(3)	6.408	43	440064	87.842
103) Dibromochloromethane	(3)	6.505	129	154630	19.189
104) 1,2-Dibromoethane	(3)	6.608	107	150368	20.809
105)*Chlorobenzene-d5	(3)	7.144	117	1125913	50.000
107) Chlorobenzene	(3)	7.174	112	509875	20.262
108) 1,1,1,2-Tetrachloroethane	(3)	7.277	131	163381M	19.147
109) Ethylbenzene	(3)	7.320	91	805539	19.872
110) m+p-Xylene	(3)	7.448	106	666241	40.276
111) o-Xylene	(3)	7.831	106	324026	19.594
113) Styrene	(3)	7.849	104	520947	19.109
112) Xylene (Total)	(3)		106	990267	59.870
114) Bromoform	(3)	7.995	173	89369	17.797
115) Isopropylbenzene	(3)	8.178	105	836952	20.078
118) Cyclohexanone	(1)	8.239	55	105530MA	331.453
119)$4-Bromofluorobenzene	(3)	8.300	95	527311	49.812
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	192112	21.062
138) 1,3-Dichlorobenzene	(4)	9.176	146	450014	20.071
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	652054	50.000
141) 1,4-Dichlorobenzene	(4)	9.242	146	475816	20.355
147) 1,2-Dichlorobenzene	(4)	9.516	146	453056	20.668
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	31286	19.742
153) 1,2,4-Trichlorobenzene	(4)	10.630	180	333111	20.607
156) 1,2,3-Trichlorobenzene	(4)	10.940	180	324242	21.034

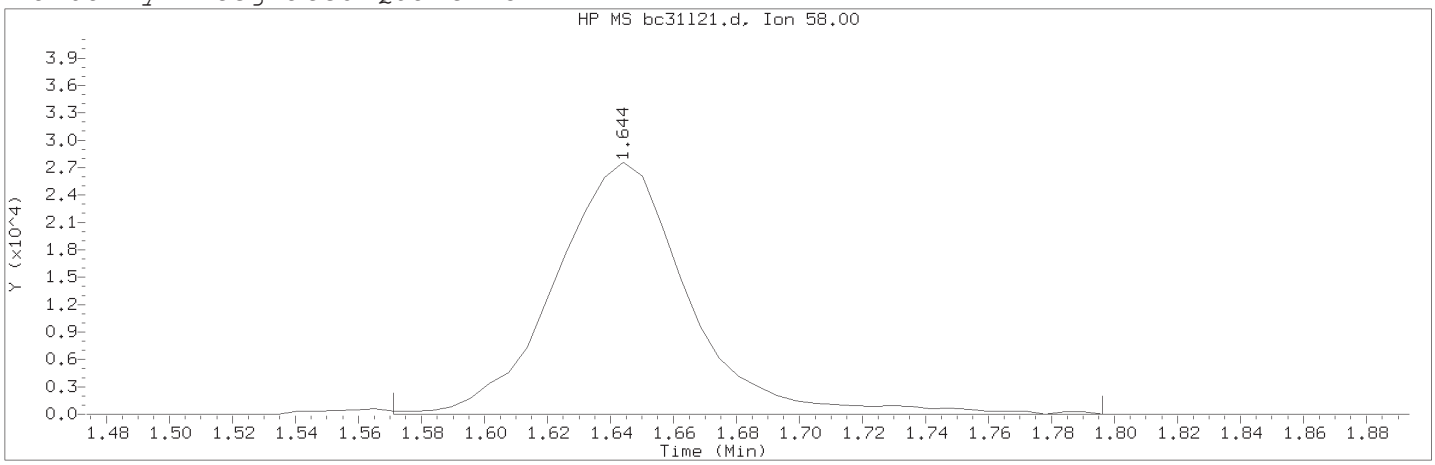
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31l21.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:37 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:55 sej02002

Sample Name: LCDB86 Lab Sample ID: LCDB86

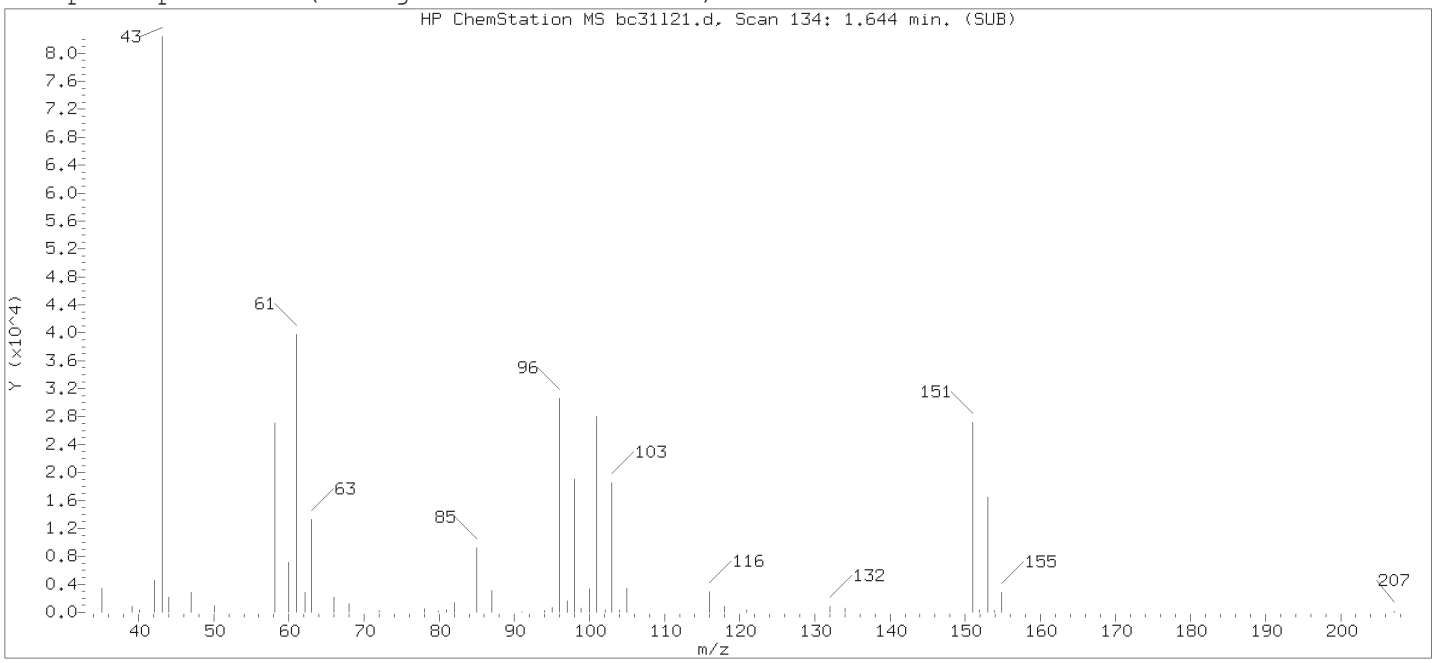
Compound Number : 20
Compound Name : Acetone
Scan Number : 134
Retention Time (minutes): 1.644
Quant Ion : 58.00
Area (flag) : 81049M
On-Column Amount (ng) : 132.3342
Integration start scan : 121 Integration stop scan: 158
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

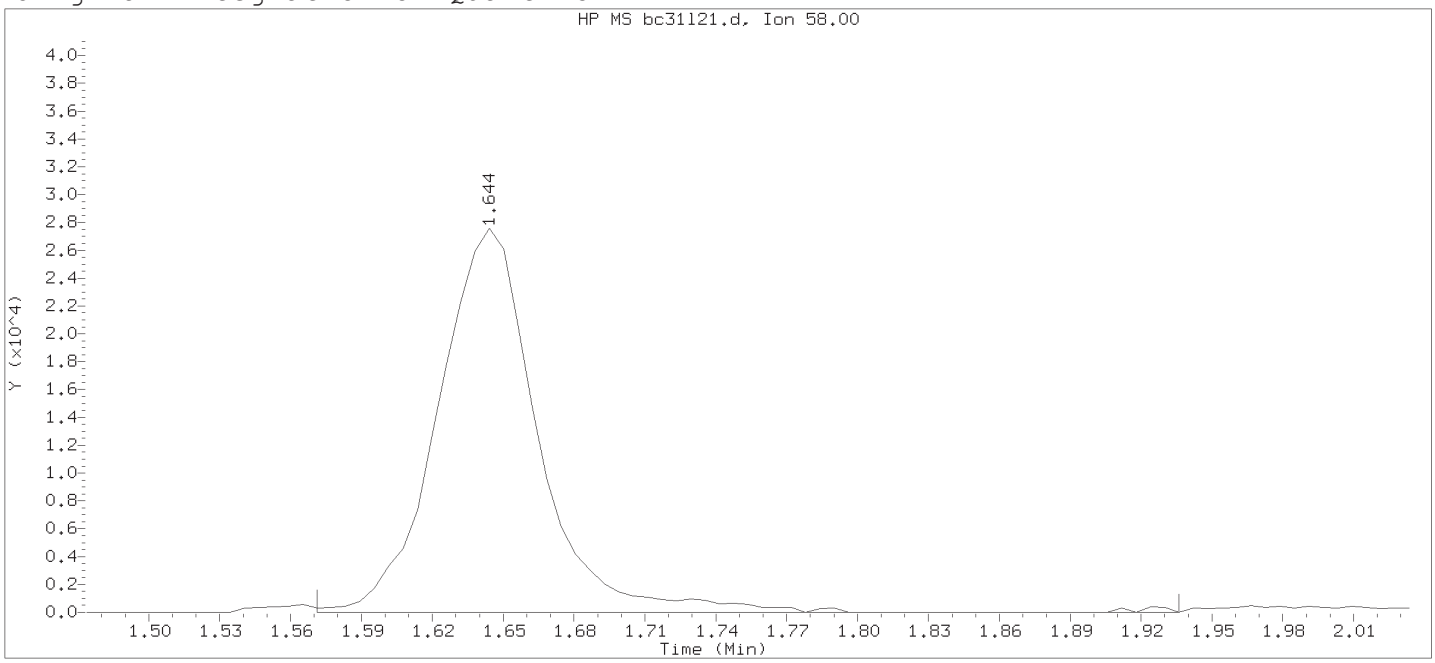
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 20:46.
PARALLAX ID: sej02002

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31l21.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:37 Analyst ID: scn10072

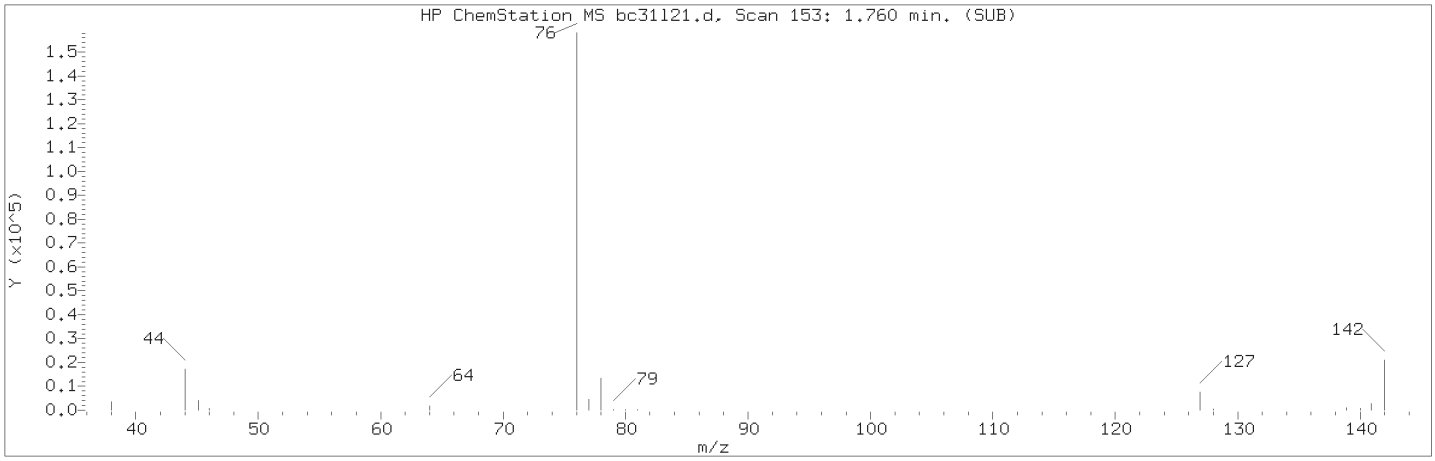
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 11:17 scn10072

Sample Name: LCDB86 Lab Sample ID: LCDB86

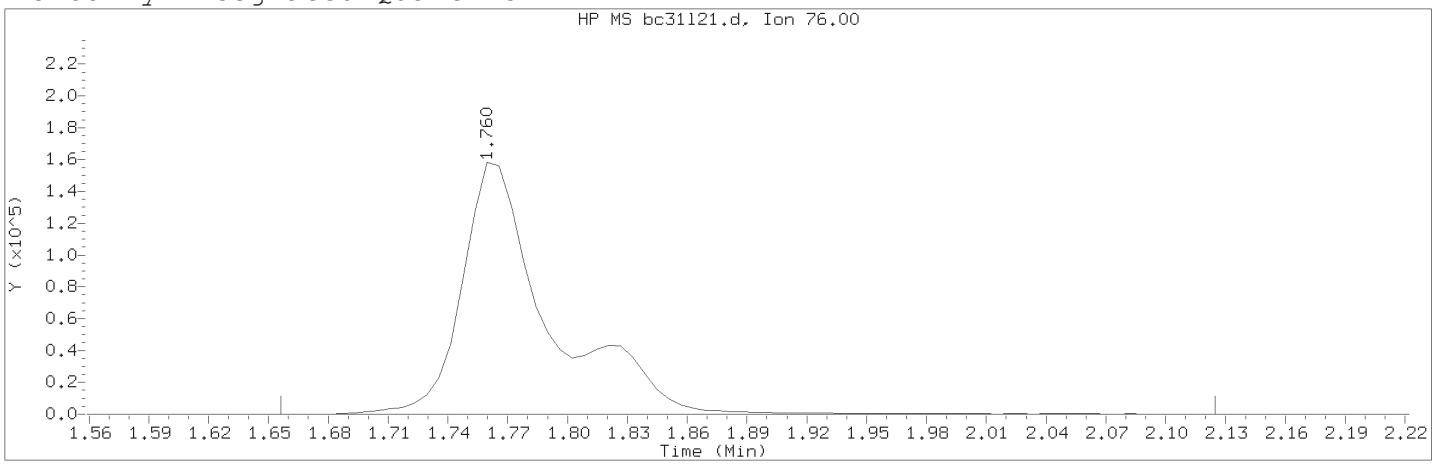
Compound Number : 20
Compound Name : Acetone
Scan Number : 134
Retention Time (minutes): 1.644
Quant Ion : 58.00
Area : 81376
On-column Amount (ng) : 132.9068
Integration start scan : 121 Integration stop scan: 181
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pdr1039

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31l21.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:37 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:55 sej02002

Sample Name: LCDB86 Lab Sample ID: LCDB86

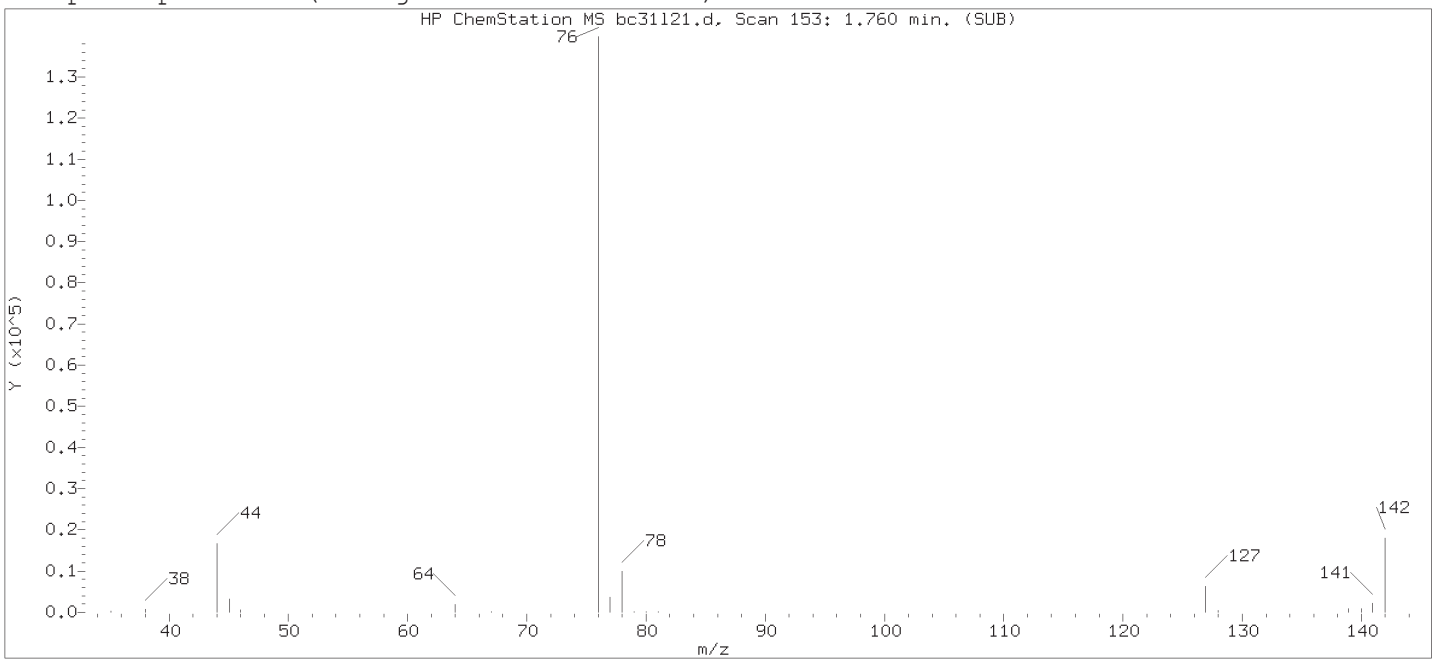
Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 153
Retention Time (minutes): 1.760
Quant Ion : 76.00
Area (flag) : 484033M
On-Column Amount (ng) : 16.8994
Integration start scan : 135 Integration stop scan: 212
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

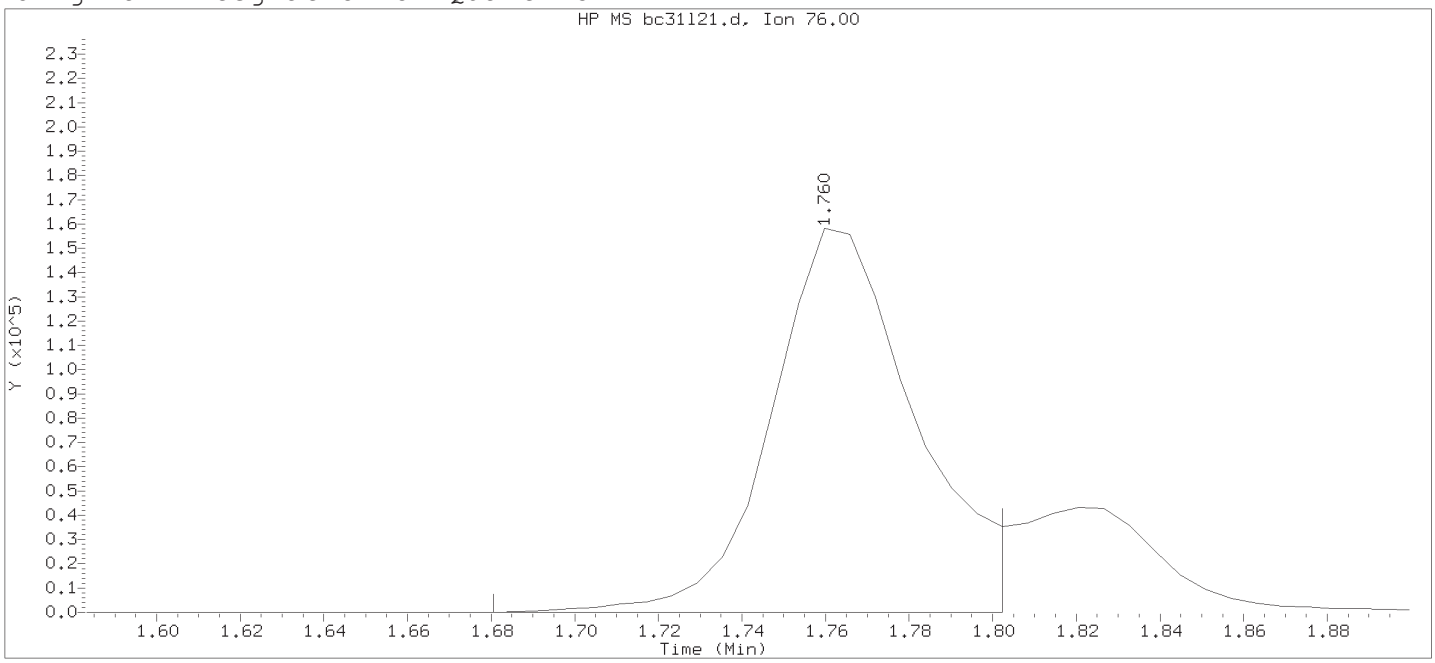
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 20:46.
PARALLAX ID: sej02002

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31l21.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:37 Analyst ID: scn10072

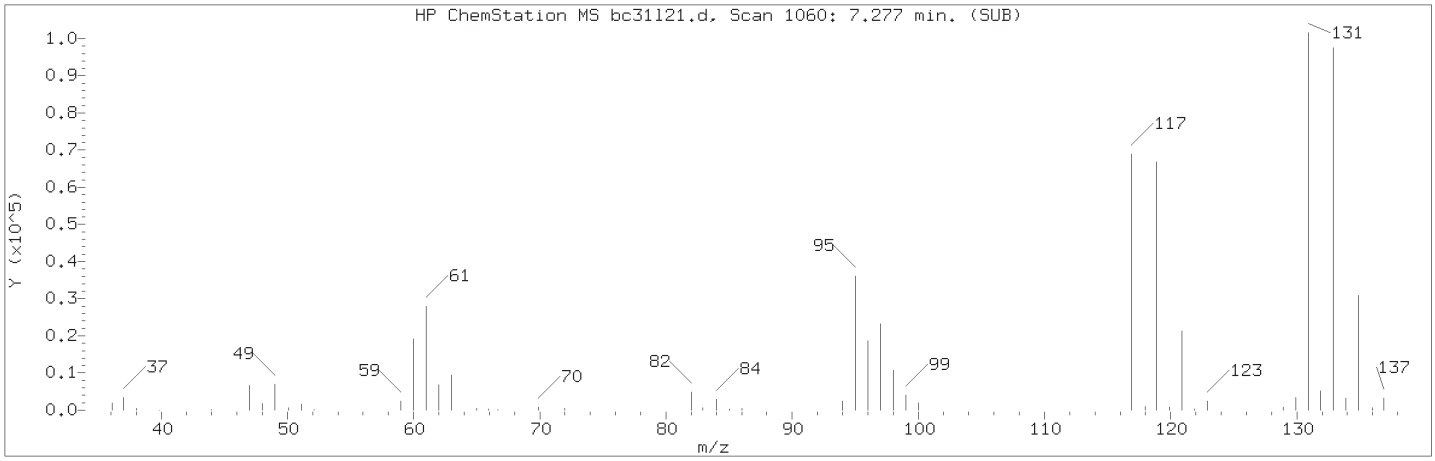
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 11:17 scn10072

Sample Name: LCDB86 Lab Sample ID: LCDB86

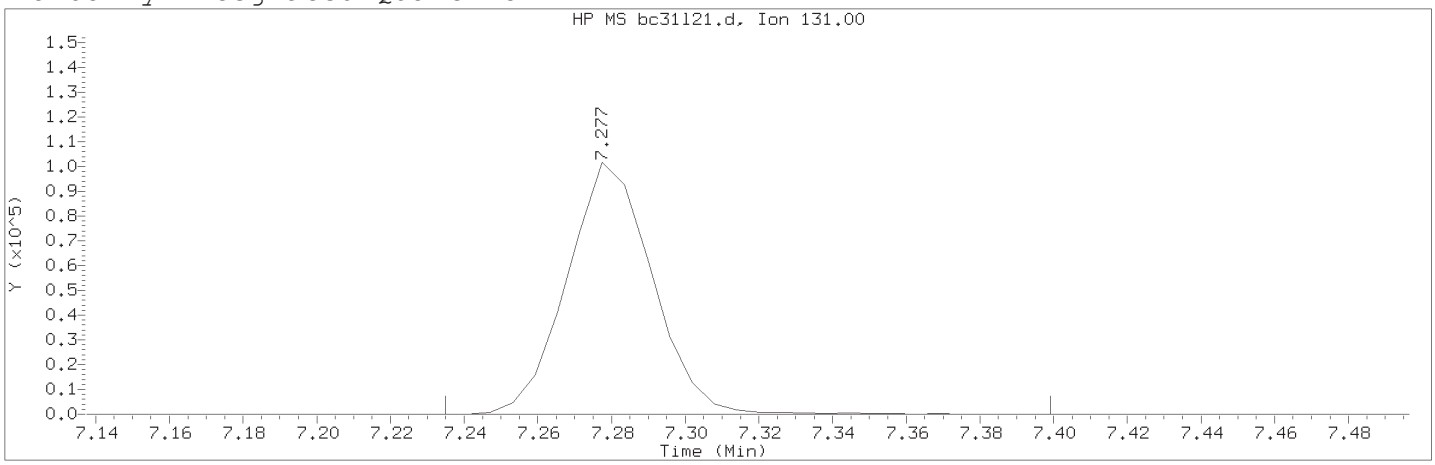
Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 153
Retention Time (minutes): 1.760
Quant Ion : 76.00
Area : 375272
On-column Amount (ng) : 13.1021
Integration start scan : 139 Integration stop scan: 159
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/14/2018 at 20:11.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31l21.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:37 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:55 sej02002

Sample Name: LCDB86 Lab Sample ID: LCDB86

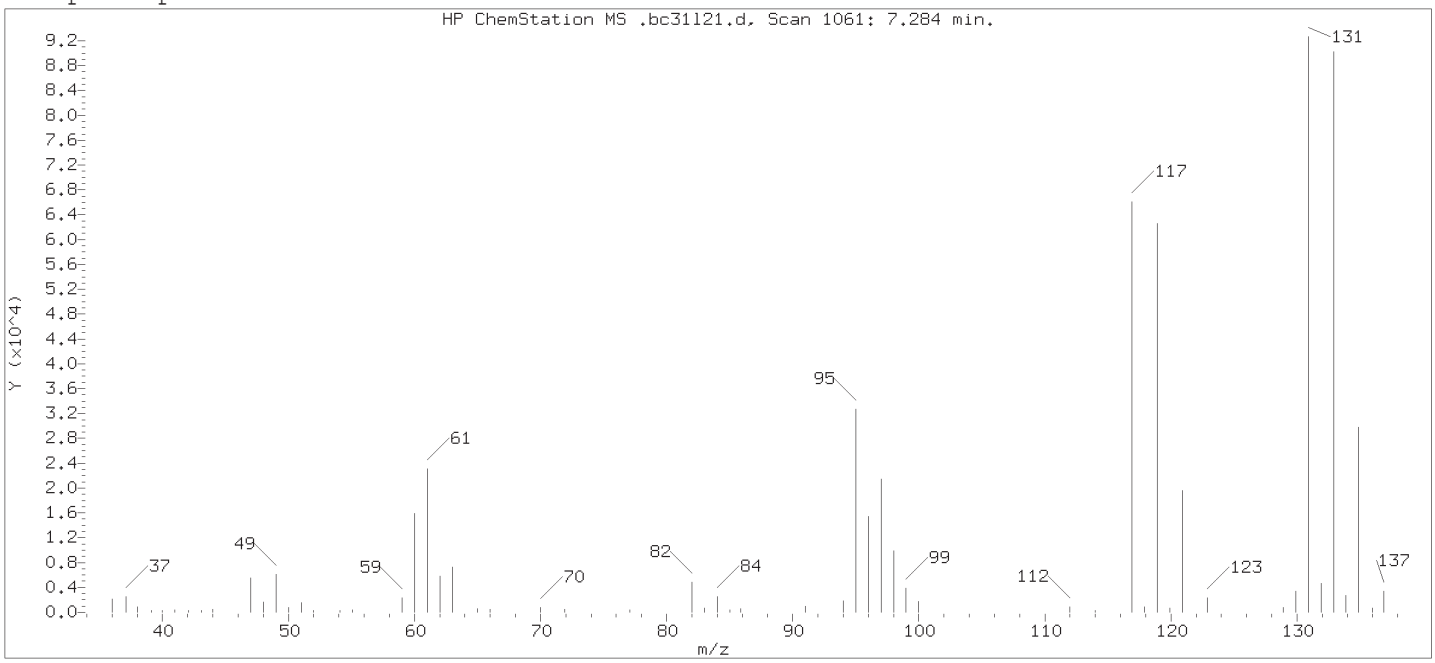
Compound Number : 108
Compound Name : 1,1,1,2-Tetrachloroethane
Scan Number : 1060
Retention Time (minutes): 7.277
Quant Ion : 131.00
Area (flag) : 163381M
On-Column Amount (ng) : 19.1468
Integration start scan : 1052 Integration stop scan: 1079
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

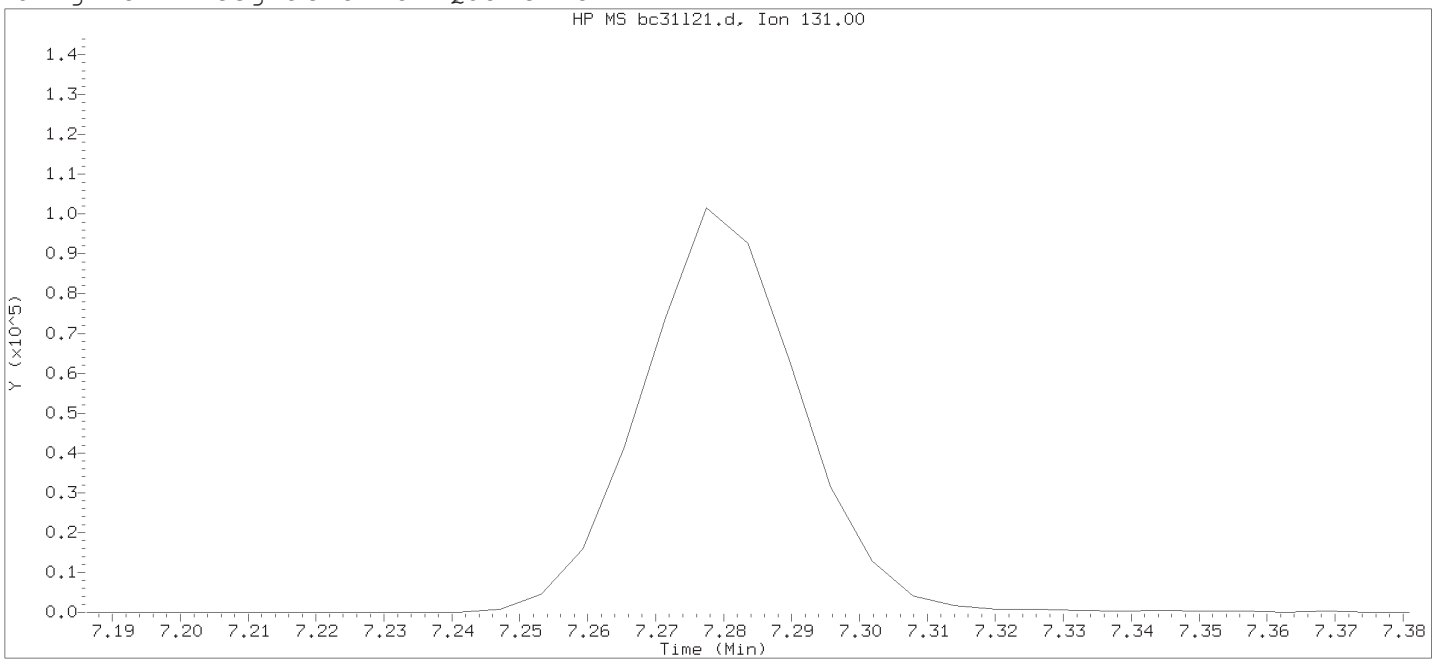
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 20:46.
PARALLAX ID: sej02002

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31l21.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:37 Analyst ID: scn10072

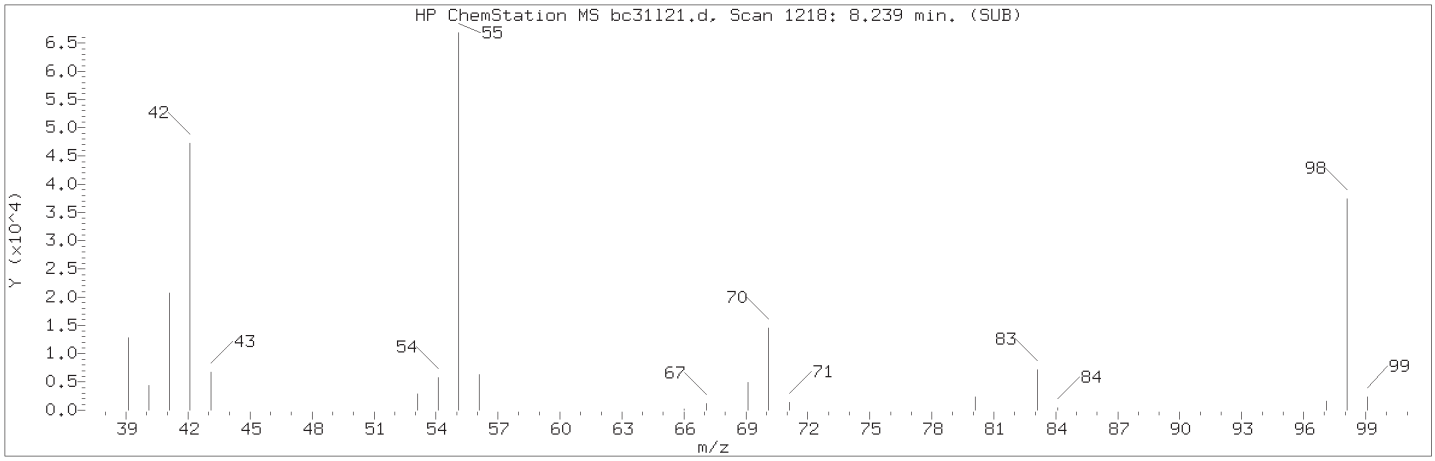
Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 11:17 scn10072

Sample Name: LCDB86 Lab Sample ID: LCDB86

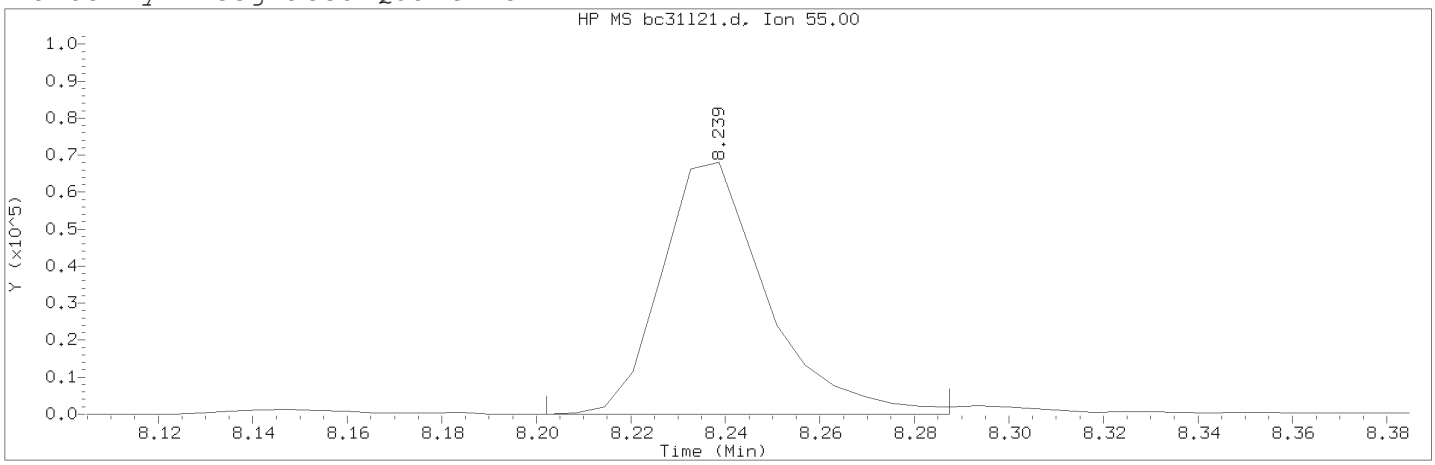
Compound Number : 108
Compound Name : 1,1,1,2-Tetrachloroethane
Expected RT (minutes) : 7.284
Quant Ion : 131.00

Digitally signed by Patrick T. Herres on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31l21.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:37 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 14-NOV-2018 19:51
Date, time and analyst ID of latest file update: 14-Nov-2018 19:55 sej02002

Sample Name: LCDB86 Lab Sample ID: LCDB86

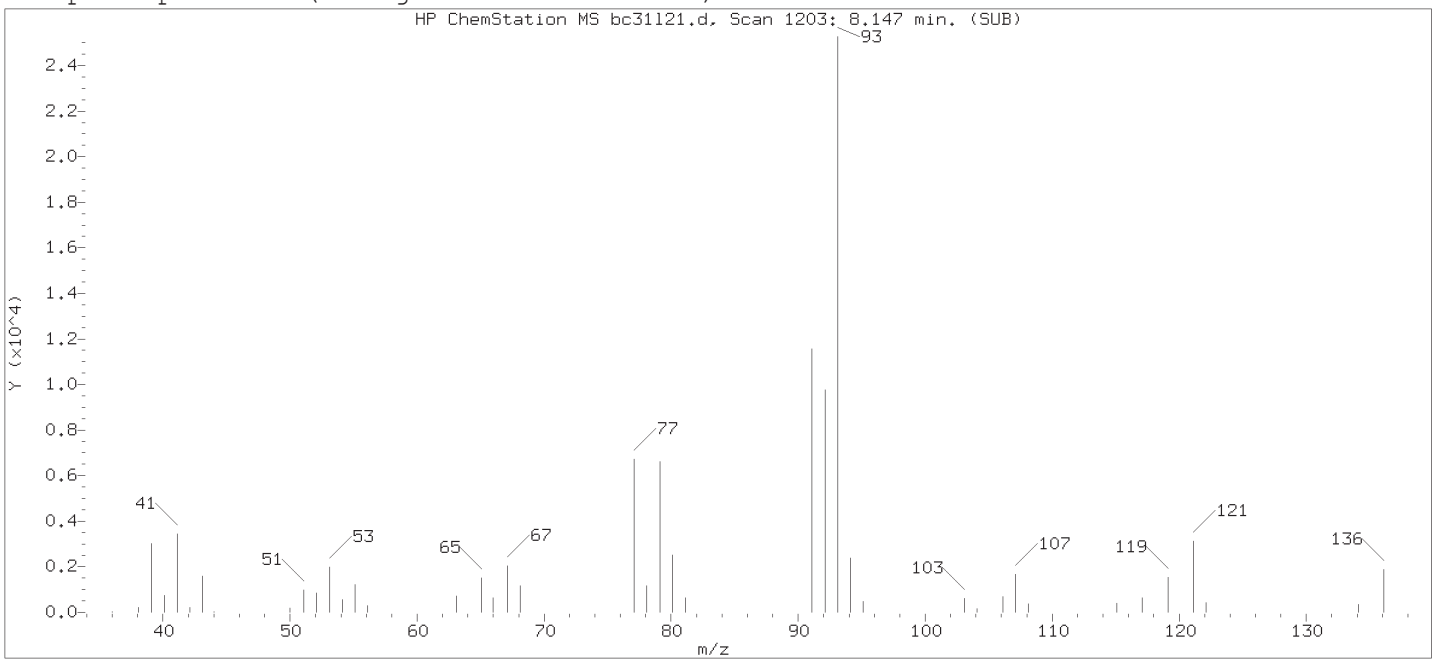
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1218
Retention Time (minutes): 8.239
Quant Ion : 55.00
Area (flag) : 105530MA
On-Column Amount (ng) : 331.4532
Integration start scan : 1211 Integration stop scan: 1225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

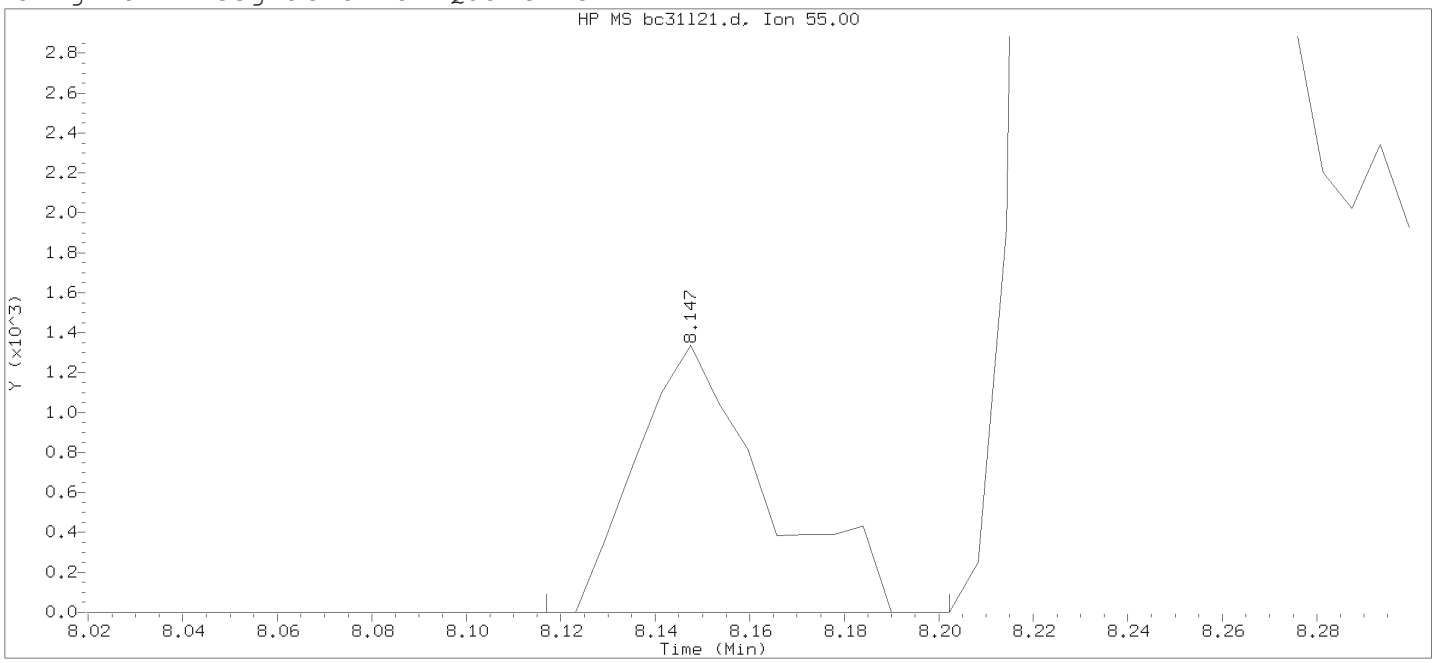
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/14/2018 at 20:11.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Sara E. Johnson on 11/14/2018 at 20:46.
PARALLAX ID: sej02002

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18oct31a.b/bc31121.d Instrument ID: HP09953.i
Injection date and time: 31-OCT-2018 10:37 Analyst ID: scn10072

Method used: /chem2/HP09953.i/18oct31a.b/di8260c.m Sublist used: B183042
Calibration date and time: 31-OCT-2018 11:16
Date, time and analyst ID of latest file update: 31-Oct-2018 11:17 scn10072

Sample Name: LCDB86 Lab Sample ID: LCDB86

Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1203
Retention Time (minutes): 8.147
Quant Ion : 55.00
Area : 2548
On-column Amount (ng) : 8.0056
Integration start scan : 1197 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/14/2018 at 20:11.
Target 3.5 esignature used [illegible]

Data file: /chem2/HP09953.i/18nov06a.b/bn06s01.d Injection date and time: **06-NOV-2018 21:07**
Data file Sample Info. Line: LCSB93;LCSB93;2;3;LCS;;DODSW;;bn06b01; Instrument ID: **HP09953.i** Batch: **B183101AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 21:33 pth10165

Blank Data file reference: **/chem2/HP09953.i/18nov06a.b/bn06b01.d**

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 06-NOV-2018 20:48
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov06a.b/bn06c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.924	(0.000)	180	65	142440	(17)	250.00	
70) Fluorobenzene	3.944	(0.000)	512	96	1348442	(-1)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	1093863	(-1)	50.00	
140) 1,4-Dichlorobenzene-d4	9.224	(0.000)	1380	152	639786	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.311	(0.002)	113	345357	51.389	103%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.615	(0.002)	102	78966	54.592	109%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1391129	49.274	99%		85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	513841	49.962	100%		79 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)	0.981	(0.001)	85	215423	17.693	17.69			0.6	5
4) Chloromethane	(2)	1.072	(-0.000)	50	238375	18.994	18.99			0.6	5
5) Vinyl Chloride	(2)	1.115	(0.001)	62	182174	18.629	18.63			0.6	5
9) Bromomethane	(2)	1.243	(-0.000)	94	138853	15.953	15.95			0.7	5
10) Chloroethane	(2)	1.261	(0.001)	64	92816	17.644	17.64			1	5
13) Trichlorofluoromethane	(2)	1.407	(0.001)	101	266635	19.806	19.81			0.7	5
19) 1,1-Dichloroethene	(2)	1.620	(0.001)	96	145133	21.453	21.45			0.5	5
20) Acetone	(1)	1.638	(0.003)	58	74548	116.380	116.38			6	20
22) Freon 113	(2)	1.650	(0.001)	101	156409	23.060	23.06			0.6	10
25) Carbon Disulfide	(2)	1.754	(0.001)	76	387882M	14.330	14.33			0.6	5
27) Methyl Acetate	(2)	1.820	(0.001)	43	74980	21.614	21.61			1	5
31) Methylene Chloride	(2)	1.900	(0.001)	84	156661	19.596	19.60			2	5
34) Methyl Tertiary Butyl Ether	(2)	2.082	(0.003)	73	353714	18.382	18.38			0.5	5
35) trans-1,2-Dichloroethene	(2)	2.076	(0.001)	96	162678	20.678	20.68			0.5	5
40) 1,1-Dichloroethane	(2)	2.380	(0.001)	63	264006	20.696	20.70			0.5	5
44) 2-Butanone	(1)	2.891	(0.000)	43	408227	111.476	111.48			1	10
45) cis-1,2-Dichloroethene	(2)	2.879	(-0.000)	96	181772	21.286	21.29			0.5	5
54) Chloroform	(2)	3.165	(0.001)	83	266721	20.600	20.60			0.6	5
57) 1,1,1-Trichloroethane	(2)	3.335	(0.001)	97	235155	17.738	17.74			0.6	5
58) Cyclohexane	(2)	3.390	(0.001)	56	260497	20.916	20.92			0.5	5
61) Carbon Tetrachloride	(2)	3.487	(0.001)	117	202374	20.100	20.10			0.5	5
64) Benzene	(2)	3.670	(0.000)	78	619498	20.142	20.14			0.5	5
67) 1,2-Dichloroethane	(2)	3.688	(0.000)	62	185643	20.916	20.92			0.6	5
75) Trichloroethene	(2)	4.309	(0.000)	95	164358	20.492	20.49			0.5	5
76) Methylcyclohexane	(2)	4.497	(0.001)	83	277291	22.216	22.22			0.6	5
77) 1,2-Dichloropropane	(2)	4.522	(0.001)	63	153158	20.969	20.97			0.5	5
84) Bromodichloromethane	(2)	4.820	(0.000)	83	180207	19.757	19.76			0.4	5
89) cis-1,3-Dichloropropene	(2)	5.294	(0.000)	75	221084	20.073	20.07			0.4	5
90) 4-Methyl-2-pentanone	(2)	5.483	(0.001)	43	578330	92.121	92.12			1	10
92) Toluene	(3)	5.641	(-0.000)	92	403651	19.277	19.28			0.6	5

M = Compound was manually integrated.

Digitally signed by Patrick T. Herres on 11/06/2018 at 21:34. Target 3.5 esignature user ID: pth10165

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov06a.b/bn06s01.d Injection date and time: **06-NOV-2018 21:07**
Data file Sample Info. Line: LCSB93;LCSB93;2;3;LCS;;DODSW;;bn06b01; Instrument ID: **HP09953.i** Batch: **B183101AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 21:33 pth10165

Blank Data file reference: **/chem2/HP09953.i/18nov06a.b/bn06b01.d**

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 06-NOV-2018 20:48
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov06a.b/bn06c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

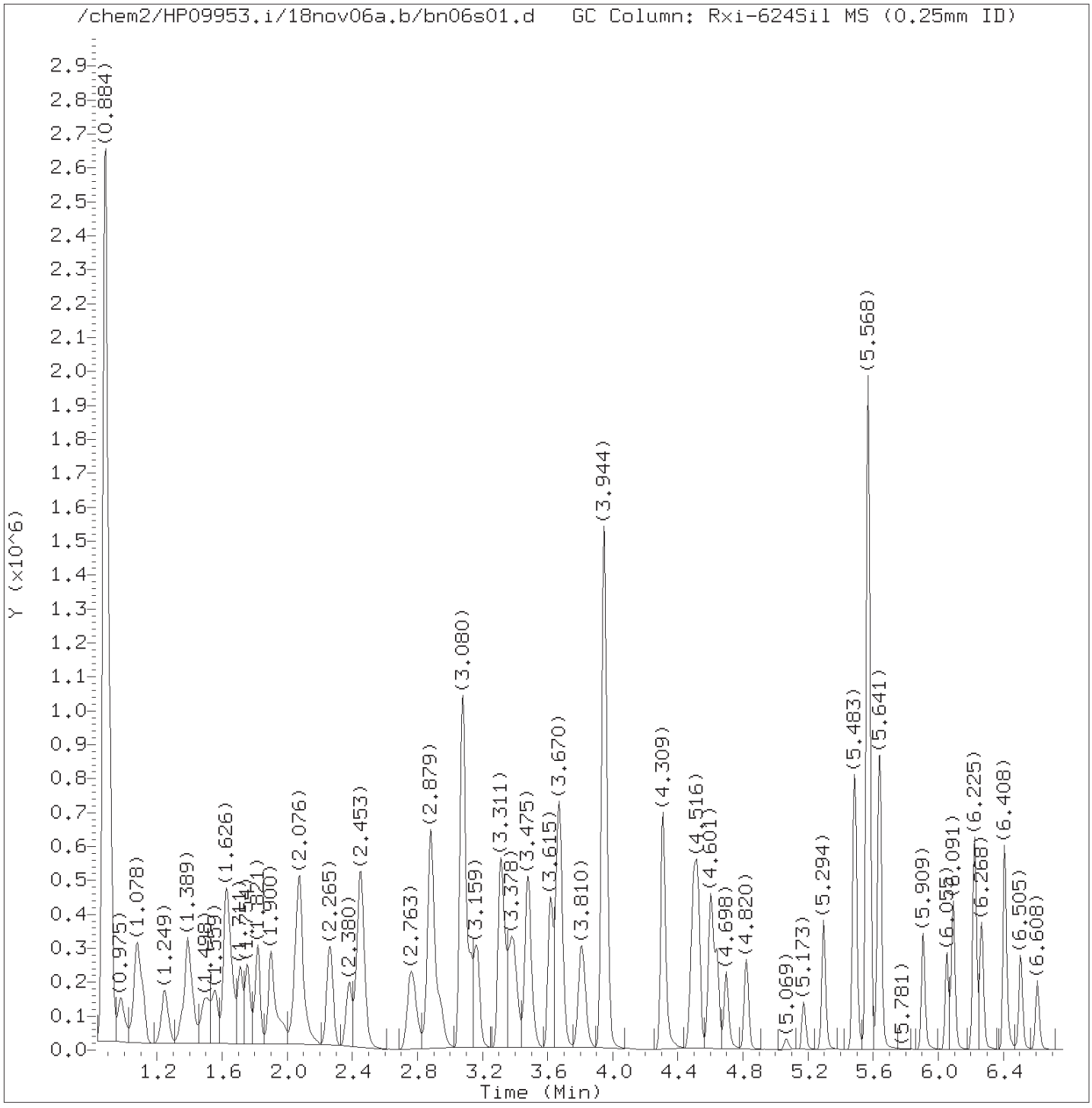
Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
93) trans-1,3-Dichloropropene	(3)	5.909(-0.000)	75	187649	18.708	18.71			0.3	5
96) 1,1,2-Trichloroethane	(3)	6.091(-0.000)	97	140080	20.614	20.61			0.5	5
98) Tetrachloroethene	(3)	6.225(-0.000)	166	194665	16.972	16.97			0.5	5
101) 2-Hexanone	(3)	6.408(-0.000)	43	405615	83.210	83.21			1	10
103) Dibromochloromethane	(3)	6.505(-0.000)	129	146030	18.653	18.65			0.4	5
104) 1,2-Dibromoethane	(3)	6.608(-0.000)	107	139463	19.866	19.87			0.4	5
107) Chlorobenzene	(3)	7.174(0.000)	112	479316	19.605	19.61			0.5	5
109) Ethylbenzene	(3)	7.320(-0.000)	91	768745	19.520	19.52			0.4	5
110) m+p-Xylene	(3)	7.448(0.000)	106	641854	39.939	39.94			1	5
111) o-Xylene	(3)	7.831(-0.000)	106	304009	18.922	18.92			0.4	5
112) Xylene (Total)	(3)		106	945863	58.861	58.86			1	5
113) Styrene	(3)	7.849(0.000)	104	493166	18.620	18.62			0.3	5
114) Bromoform	(3)	7.995(0.000)	173	83546	17.125	17.13			5	10
115) Isopropylbenzene	(3)	8.178(-0.000)	105	791801	19.552	19.55			0.4	5
118) Cyclohexanone	(1)	8.239(-0.003)	55	142323	431.122	431.12			25	250
120) 1,1,2,2-Tetrachloroethane	(4)	8.452(-0.000)	83	179942	20.106	20.11			0.4	5
138) 1,3-Dichlorobenzene	(4)	9.176(-0.000)	146	420096	19.096	19.10			0.5	5
141) 1,4-Dichlorobenzene	(4)	9.242(0.000)	146	443151	19.321	19.32			0.4	5
147) 1,2-Dichlorobenzene	(4)	9.516(-0.000)	146	417942	19.432	19.43			0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)	10.070(0.000)	75	29539	18.997	19.00			0.4	5
153) 1,2,4-Trichlorobenzene	(4)	10.630(-0.000)	180	308977	19.481	19.48			5	10

Total number of targets = 51

Digitally signed by Patrick T. Herres on 11/06/2018 at 21:34. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Robin C. Runkle on 11/12/2018 at 11:31. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

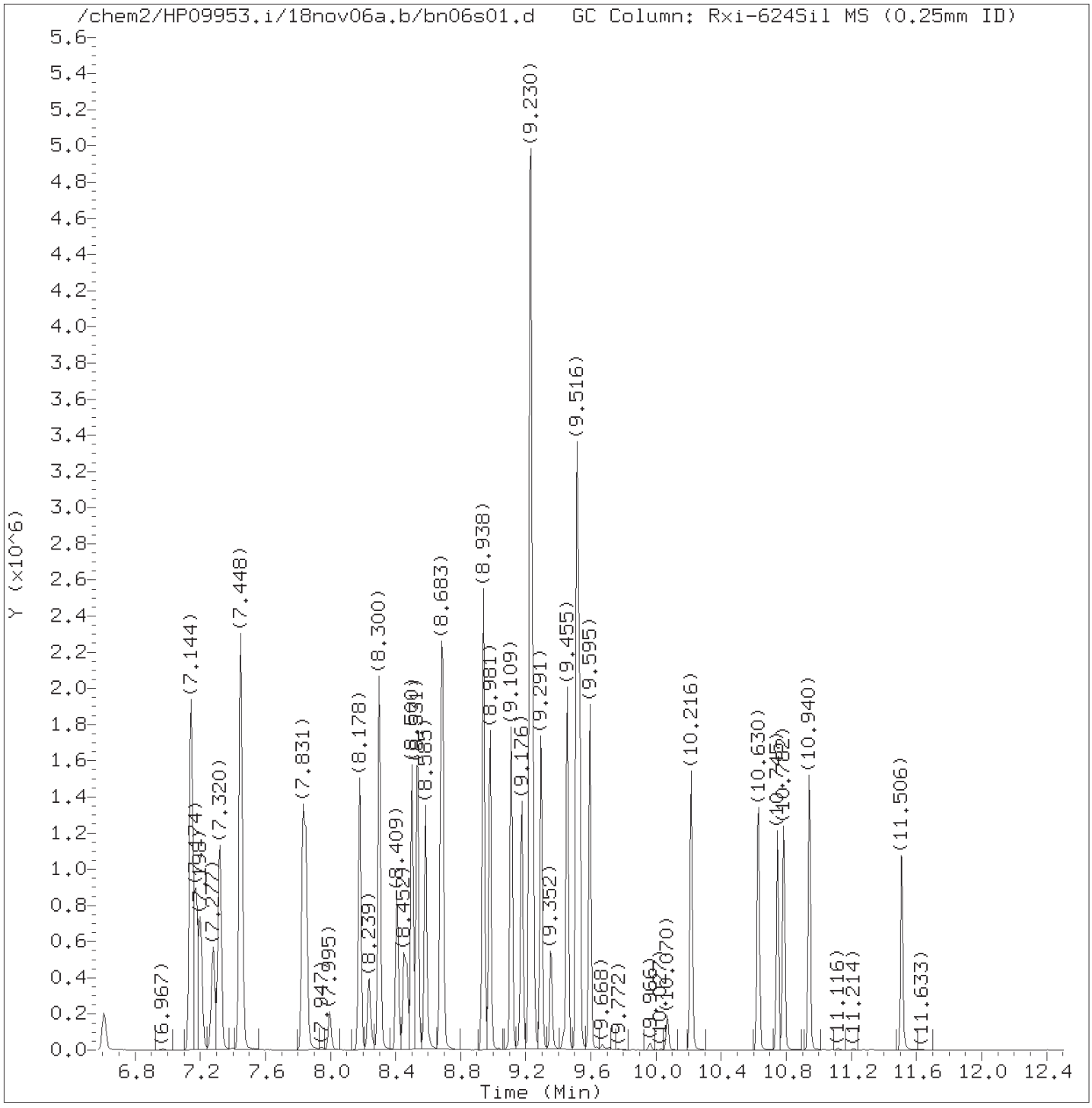
Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 21:07 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 20:48
Date, time and analyst ID of latest file update: 06-Nov-2018 21:33 pth10165

Sample Name: LCSB93 Lab Sample ID: LCSB93

Digitally signed by Patrick T. Herres
on 11/06/2018 at 21:34.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 21:07 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 20:48
Date, time and analyst ID of latest file update: 06-Nov-2018 21:33 pth10165

Sample Name: LCSB93 Lab Sample ID: LCSB93

Digitally signed by Patrick T. Herres
on 11/06/2018 at 21:34.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 21:07 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 20:48
Date, time and analyst ID of latest file update: 06-Nov-2018 21:33 pth10165

Sample Name: LCSB93 Lab Sample ID: LCSB93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.981	85	215423	17.693
4) Chloromethane	(2)	1.072	50	238375	18.994
5) Vinyl Chloride	(2)	1.115	62	182174	18.629
9) Bromomethane	(2)	1.243	94	138853	15.953
10) Chloroethane	(2)	1.261	64	92816	17.644
13) Trichlorofluoromethane	(2)	1.407	101	266635	19.806
19) 1,1-Dichloroethene	(2)	1.620	96	145133	21.453
20) Acetone	(1)	1.638	58	74548	116.380
22) Freon 113	(2)	1.650	101	156409	23.060
25) Carbon Disulfide	(2)	1.754	76	387882M	14.330
27) Methyl Acetate	(2)	1.821	43	74980	21.614
31) Methylene Chloride	(2)	1.900	84	156661	19.596
30)*t-Butyl alcohol-d10	(1)	1.924	65	142440	250.000
35) trans-1,2-Dichloroethene	(2)	2.076	96	162678	20.678
34) Methyl Tertiary Butyl Ether	(2)	2.082	73	353714	18.382
40) 1,1-Dichloroethane	(2)	2.380	63	264006	20.696
45) cis-1,2-Dichloroethene	(2)	2.879	96	181772	21.286
44) 2-Butanone	(1)	2.891	43	408227	111.476
54) Chloroform	(2)	3.165	83	266721	20.600
56)$Dibromofluoromethane	(2)	3.311	113	345357	51.389
57) 1,1,1-Trichloroethane	(2)	3.335	97	235155	17.738
58) Cyclohexane	(2)	3.390	56	260497	20.916
61) Carbon Tetrachloride	(2)	3.487	117	202374	20.100
63)$1,2-Dichloroethane-d4	(2)	3.615	102	78966	54.592
64) Benzene	(2)	3.670	78	619498	20.142
67) 1,2-Dichloroethane	(2)	3.688	62	185643	20.916
70)*Fluorobenzene	(2)	3.944	96	1348442	50.000
75) Trichloroethene	(2)	4.309	95	164358	20.492
76) Methylcyclohexane	(2)	4.497	83	277291	22.216
77) 1,2-Dichloropropane	(2)	4.522	63	153158	20.969
84) Bromodichloromethane	(2)	4.820	83	180207	19.757
89) cis-1,3-Dichloropropene	(2)	5.294	75	221084	20.073
90) 4-Methyl-2-pentanone	(2)	5.483	43	578330	92.121
91)$Toluene-d8	(3)	5.568	98	1391129	49.274
92) Toluene	(3)	5.641	92	403651	19.277
93) trans-1,3-Dichloropropene	(3)	5.909	75	187649	18.708
96) 1,1,2-Trichloroethane	(3)	6.091	97	140080	20.614
98) Tetrachloroethene	(3)	6.225	166	194665	16.972

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/06/2018 at 21:34.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 21:07 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 20:48
Date, time and analyst ID of latest file update: 06-Nov-2018 21:33 pth10165

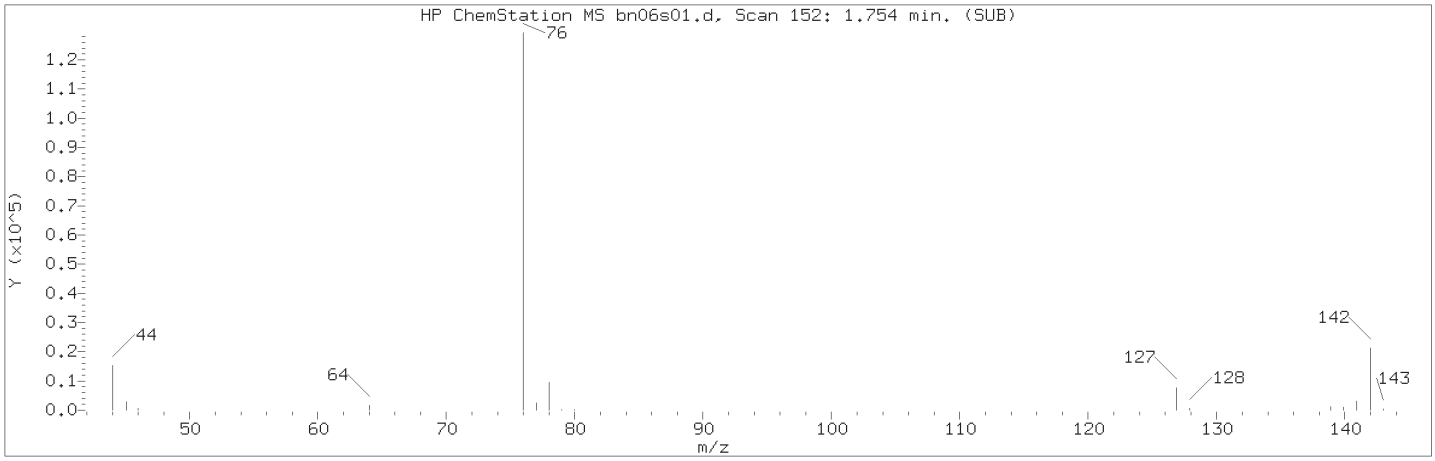
Sample Name: LCSB93 Lab Sample ID: LCSB93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 2-Hexanone	(3)	6.408	43	405615	83.210
103) Dibromochloromethane	(3)	6.505	129	146030	18.653
104) 1,2-Dibromoethane	(3)	6.608	107	139463	19.866
105)*Chlorobenzene-d5	(3)	7.144	117	1093863	50.000
107) Chlorobenzene	(3)	7.174	112	479316	19.605
109) Ethylbenzene	(3)	7.320	91	768745	19.520
110) m+p-Xylene	(3)	7.448	106	641854	39.939
111) o-Xylene	(3)	7.831	106	304009	18.922
113) Styrene	(3)	7.849	104	493166	18.620
112) Xylene (Total)	(3)		106	945863	58.861
114) Bromoform	(3)	7.995	173	83546	17.125
115) Isopropylbenzene	(3)	8.178	105	791801	19.552
118) Cyclohexanone	(1)	8.239	55	142323	431.122
119)$4-Bromofluorobenzene	(3)	8.300	95	513841	49.962
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	179942	20.106
138) 1,3-Dichlorobenzene	(4)	9.176	146	420096	19.096
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	639786	50.000
141) 1,4-Dichlorobenzene	(4)	9.242	146	443151	19.321
147) 1,2-Dichlorobenzene	(4)	9.516	146	417942	19.432
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	29539	18.997
153) 1,2,4-Trichlorobenzene	(4)	10.630	180	308977	19.481

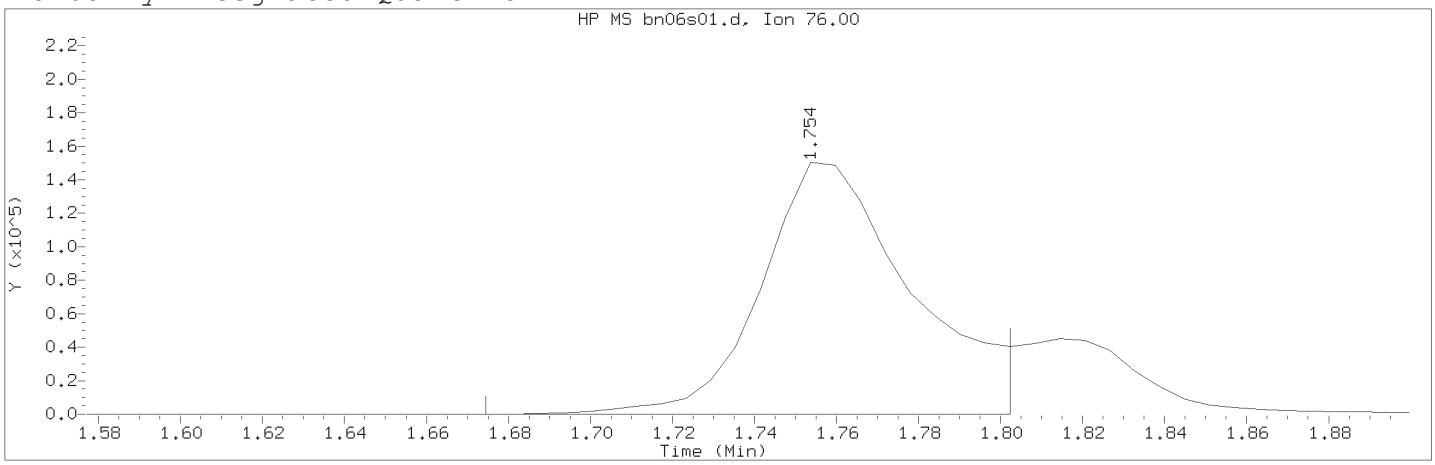
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/06/2018 at 21:34.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06s01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 21:07 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 20:48
Date, time and analyst ID of latest file update: 06-Nov-2018 21:33 pth10165

Sample Name: LCSB93 Lab Sample ID: LCSB93

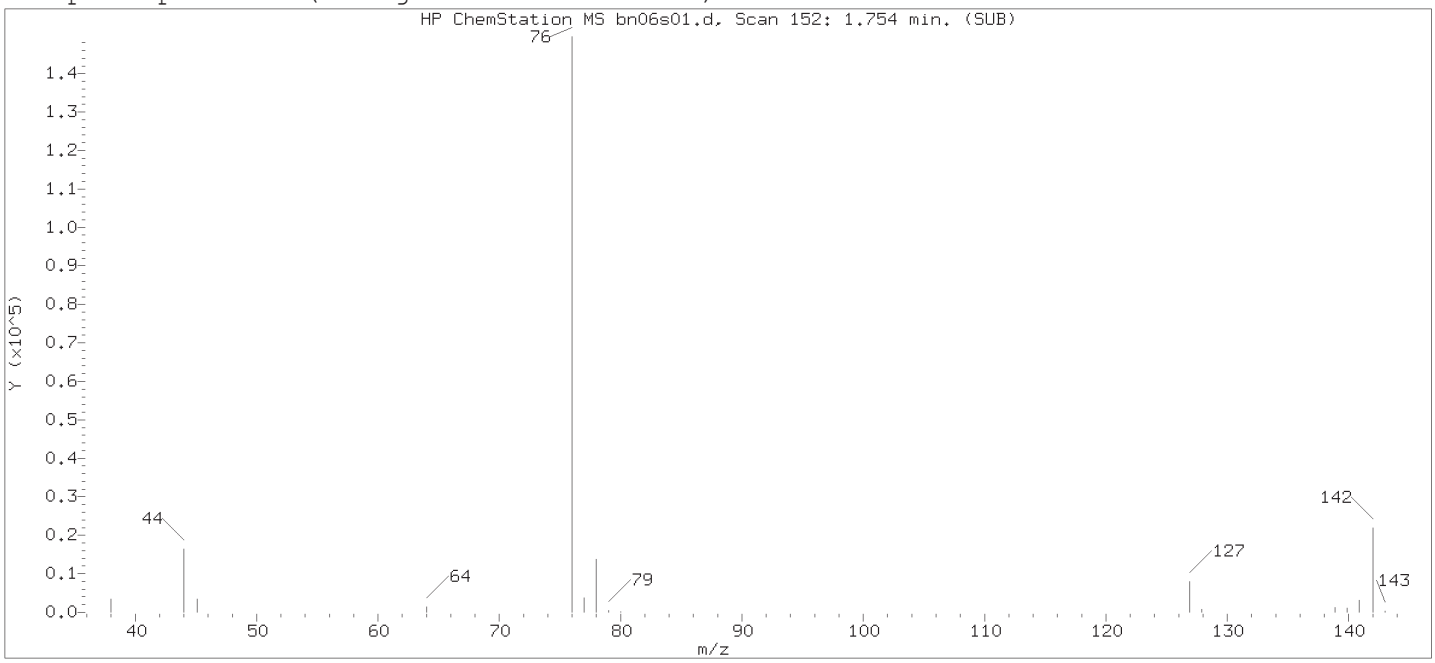
Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 152
Retention Time (minutes): 1.754
Quant Ion : 76.00
Area (flag) : 387882M
On-Column Amount (ng) : 14.3296
Integration start scan : 138 Integration stop scan: 159
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

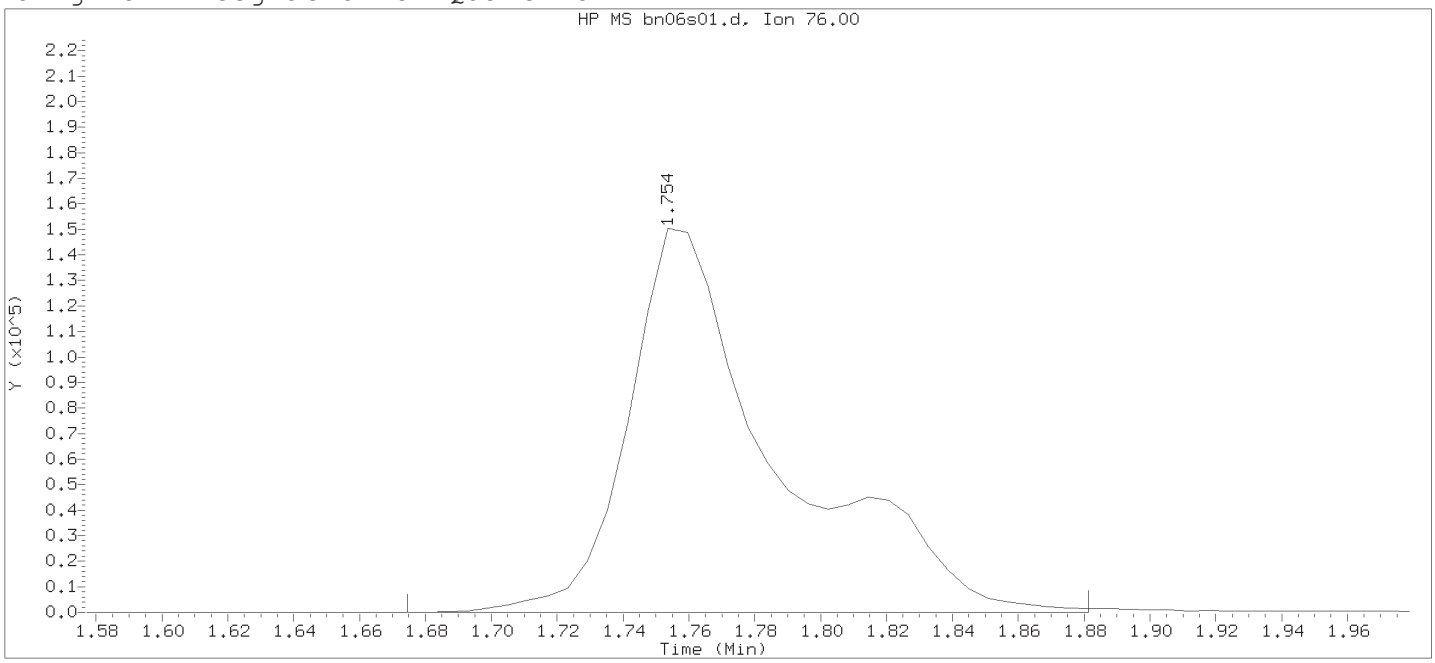
Analyst responsible for change: Digitally signed by Patrick T. Herres on 11/06/2018 at 21:34.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Robin C. Runkle on 11/12/2018 at 11:31.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06s01.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 21:07 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 20:48
Date, time and analyst ID of latest file update: 06-Nov-2018 21:32 pth10165

Sample Name: LCSB93 Lab Sample ID: LCSB93

Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 152
Retention Time (minutes): 1.754
Quant Ion : 76.00
Area : 474711
On-column Amount (ng) : 17.5373
Integration start scan : 138 Integration stop scan: 172
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/06/2018 at 21:34.
Target 3.5 esignature used [illegible]

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov06a.b/bn06s02.d Injection date and time: **06-NOV-2018 21:29**
Data file Sample Info. Line: LCDB93;LCDB93;2;3;LCSD;;DODSW;;bn06b01; Instrument ID: **HP09953.i** Batch: **B183101AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 21:48 pth10165

Blank Data file reference: **/chem2/HP09953.i/18nov06a.b/bn06b01.d**

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 06-NOV-2018 21:35
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov06a.b/bn06c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.924	(0.000)	180	65	99308	(-18)	250.00	
70) Fluorobenzene	3.944	(0.000)	512	96	1323832	(-3)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	1063185	(-4)	50.00	
140) 1,4-Dichlorobenzene-d4	9.224	(0.000)	1380	152	622740	(-6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.311	(0.002)	113	337583	51.166	102%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.615	(0.002)	102	74309	52.327	105%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1361573	49.619	99%		85 - 116
119) 4-Bromofluorobenzene	(3)	8.299	(0.000)	95	498976	49.916	100%		79 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)	0.987	(-0.000)	85	211536	17.697	17.70			0.6	5
4) Chloromethane	(2)	1.072	(-0.000)	50	230638	18.719	18.72			0.6	5
5) Vinyl Chloride	(2)	1.121	(-0.000)	62	178111	18.552	18.55			0.6	5
9) Bromomethane	(2)	1.249	(-0.001)	94	140525	16.446	16.45			0.7	5
10) Chloroethane	(2)	1.267	(-0.000)	64	92159	17.845	17.84			1	5
13) Trichlorofluoromethane	(2)	1.413	(-0.000)	101	262643	19.872	19.87			0.7	5
19) 1,1-Dichloroethene	(2)	1.626	(-0.000)	96	144006	21.683	21.68			0.5	5
20) Acetone	(1)	1.644	(-0.000)	58	60292	136.450	136.45			6	20
22) Freon 113	(2)	1.662	(-0.001)	101	154867	23.257	23.26			0.6	10
25) Carbon Disulfide	(2)	1.766	(-0.001)	76	384852M	14.482	14.48			0.6	5
27) Methyl Acetate	(2)	1.826	(-0.000)	43	61774	18.138	18.14			1	5
31) Methylene Chloride	(2)	1.906	(-0.000)	84	152678	19.452	19.45			2	5
34) Methyl Tertiary Butyl Ether	(2)	2.088	(0.001)	73	327714	17.347	17.35			0.5	5
35) trans-1,2-Dichloroethene	(2)	2.082	(0.000)	96	160790	20.818	20.82			0.5	5
40) 1,1-Dichloroethane	(2)	2.386	(0.000)	63	263081	21.007	21.01			0.5	5
44) 2-Butanone	(1)	2.891	(0.000)	43	330130	129.304	129.30			1	10
45) cis-1,2-Dichloroethene	(2)	2.879	(0.000)	96	179950	21.464	21.46			0.5	5
54) Chloroform	(2)	3.171	(0.000)	83	262399	20.643	20.64			0.6	5
57) 1,1,1-Trichloroethane	(2)	3.341	(0.000)	97	233449	17.937	17.94			0.6	5
58) Cyclohexane	(2)	3.390	(0.001)	56	256919	21.012	21.01			0.5	5
61) Carbon Tetrachloride	(2)	3.493	(-0.000)	117	199140	20.146	20.15			0.5	5
64) Benzene	(2)	3.670	(0.000)	78	612889	20.298	20.30			0.5	5
67) 1,2-Dichloroethane	(2)	3.688	(0.000)	62	178102	20.439	20.44			0.6	5
75) Trichloroethene	(2)	4.309	(0.000)	95	161001	20.446	20.45			0.5	5
76) Methylcyclohexane	(2)	4.497	(0.001)	83	272395	22.229	22.23			0.6	5
77) 1,2-Dichloropropane	(2)	4.528	(0.000)	63	151773	21.166	21.17			0.5	5
84) Bromodichloromethane	(2)	4.820	(0.000)	83	175302	19.576	19.58			0.4	5
89) cis-1,3-Dichloropropene	(2)	5.294	(0.000)	75	214652	19.851	19.85			0.4	5
90) 4-Methyl-2-pentanone	(2)	5.489	(0.000)	43	463790	74.839	74.84			1	10
92) Toluene	(3)	5.641	(-0.000)	92	398499	19.580	19.58			0.6	5

M = Compound was manually integrated.

Digitally signed by Patrick T. Herres on 11/06/2018 at 21:48. Target 3.5 esignature user ID: pth10165

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov06a.b/bn06s02.d Injection date and time: **06-NOV-2018 21:29**
Data file Sample Info. Line: LCDB93;LCDB93;2;3;LCSD;;DODSW;;bn06b01; Instrument ID: **HP09953.i** Batch: **B183101AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 21:48 pth10165

Blank Data file reference: **/chem2/HP09953.i/18nov06a.b/bn06b01.d**

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: **25809**
Calibration date and time (Last Method Edit): 06-NOV-2018 21:35
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov06a.b/bn06c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

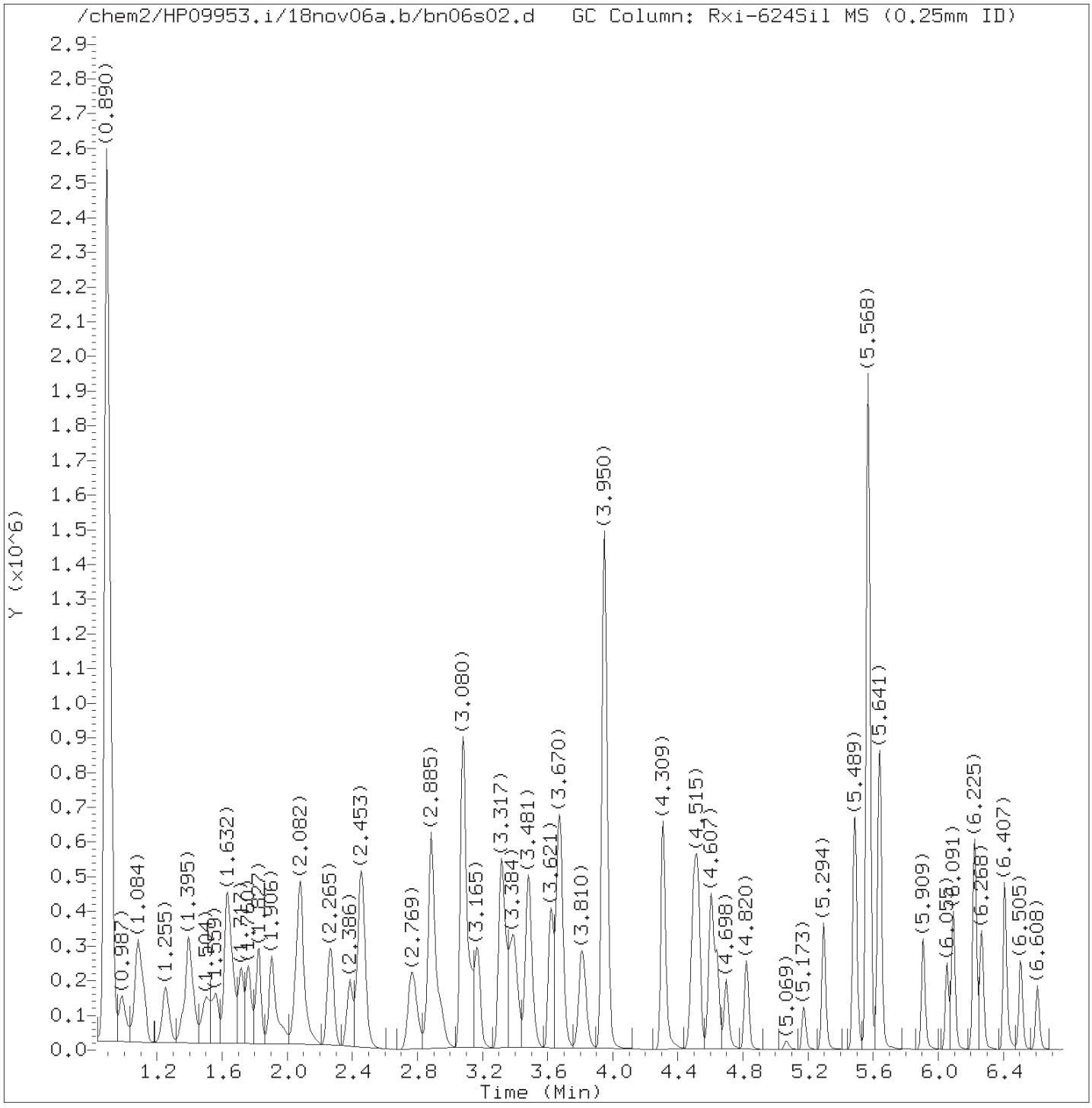
Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
93) trans-1,3-Dichloropropene	(3)	5.909(-0.000)	75	175502	18.002	18.00			0.3	5
96) 1,1,2-Trichloroethane	(3)	6.091(-0.000)	97	129661	19.632	19.63			0.5	5
98) Tetrachloroethene	(3)	6.225(-0.000)	166	190962	17.130	17.13			0.5	5
101) 2-Hexanone	(3)	6.407(-0.000)	43	327530	68.822	68.82			1	10
103) Dibromochloromethane	(3)	6.505(-0.000)	129	136998	18.004	18.00			0.4	5
104) 1,2-Dibromoethane	(3)	6.608(-0.000)	107	128268	18.798	18.80			0.4	5
107) Chlorobenzene	(3)	7.174(0.000)	112	471388	19.837	19.84			0.5	5
109) Ethylbenzene	(3)	7.320(-0.000)	91	755866	19.746	19.75			0.4	5
110) m+p-Xylene	(3)	7.448(0.000)	106	629640	40.309	40.31			1	5
111) o-Xylene	(3)	7.831(-0.000)	106	296316	18.976	18.98			0.4	5
112) Xylene (Total)	(3)		106	925956	59.285	59.28			1	5
113) Styrene	(3)	7.849(0.000)	104	480767	18.675	18.68			0.3	5
114) Bromoform	(3)	7.995(0.000)	173	76461	16.125	16.13			5	10
115) Isopropylbenzene	(3)	8.178(-0.000)	105	789640	20.061	20.06			0.4	5
118) Cyclohexanone	(1)	8.239(-0.003)	55	112842	490.279	490.28			25	250
120) 1,1,2,2-Tetrachloroethane	(4)	8.452(-0.000)	83	157757	18.109	18.11			0.4	5
138) 1,3-Dichlorobenzene	(4)	9.175(-0.000)	146	414190	19.342	19.34			0.5	5
141) 1,4-Dichlorobenzene	(4)	9.242(0.000)	146	434999	19.485	19.48			0.4	5
147) 1,2-Dichlorobenzene	(4)	9.516(-0.000)	146	410573	19.612	19.61			0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)	10.070(0.000)	75	24642	16.281	16.28			0.4	5
153) 1,2,4-Trichlorobenzene	(4)	10.629(-0.000)	180	297142	19.247	19.25			5	10

Total number of targets = 51

Digitally signed by Patrick T. Herres on 11/06/2018 at 21:48. Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Robin C. Runkle on 11/12/2018 at 11:31. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

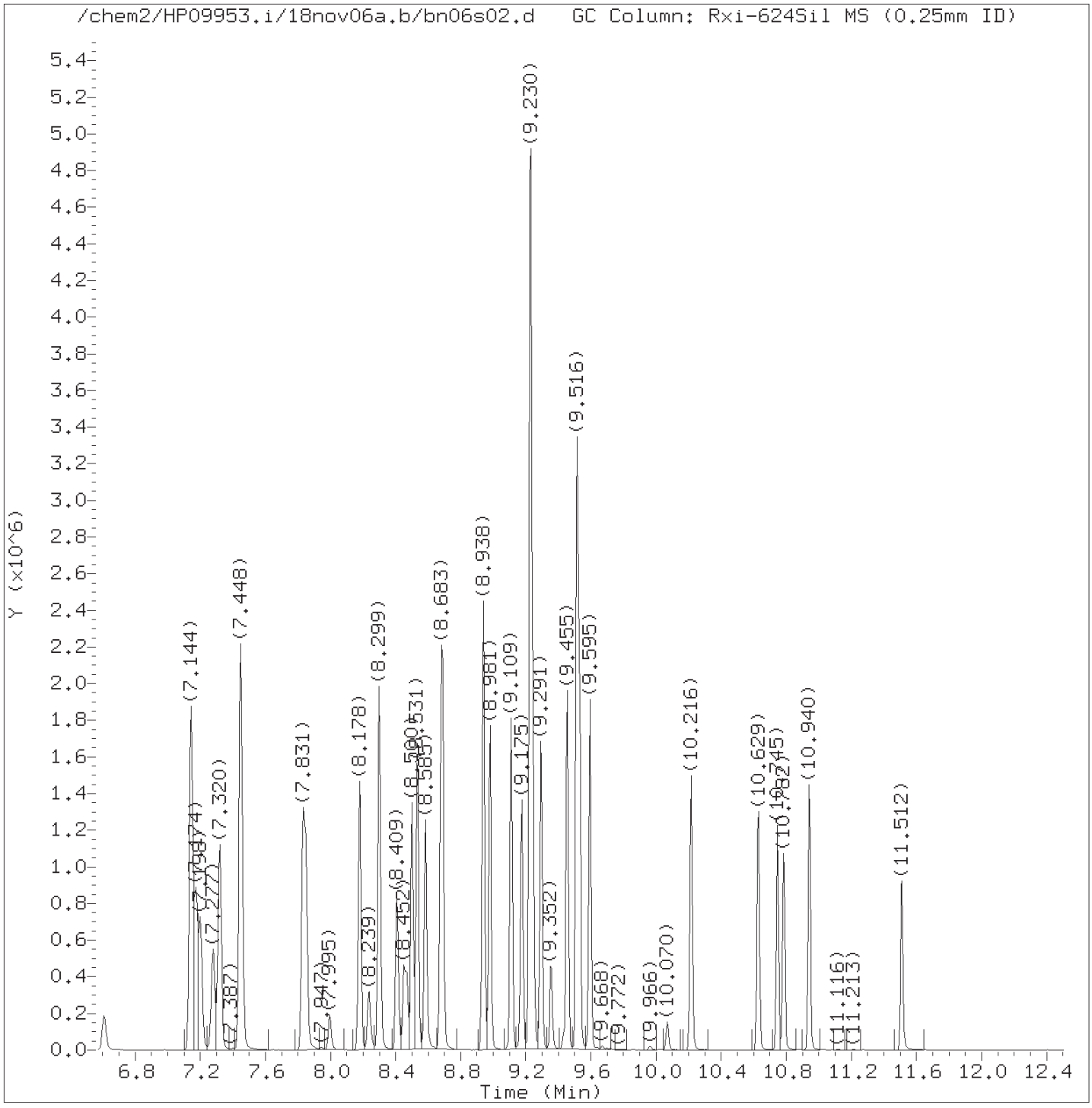
Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s02.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 21:29 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 06-Nov-2018 21:48 pth10165

Sample Name: LCDB93 Lab Sample ID: LCDB93

Digitally signed by Patrick T. Herres
on 11/06/2018 at 21:48.
Target 3.5 esignature user ID: pth10165



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s02.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 21:29 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 06-Nov-2018 21:48 pth10165

Sample Name: LCDB93 Lab Sample ID: LCDB93

Digitally signed by Patrick T. Herres
on 11/06/2018 at 21:48.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s02.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 21:29 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 06-Nov-2018 21:48 pth10165

Sample Name: LCDB93 Lab Sample ID: LCDB93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.987	85	211536	17.697
4) Chloromethane	(2)	1.072	50	230638	18.719
5) Vinyl Chloride	(2)	1.121	62	178111	18.552
9) Bromomethane	(2)	1.249	94	140525	16.446
10) Chloroethane	(2)	1.267	64	92159	17.845
13) Trichlorofluoromethane	(2)	1.413	101	262643	19.872
19) 1,1-Dichloroethene	(2)	1.626	96	144006	21.683
20) Acetone	(1)	1.644	58	60292	136.450
22) Freon 113	(2)	1.662	101	154867	23.257
25) Carbon Disulfide	(2)	1.766	76	384852M	14.482
27) Methyl Acetate	(2)	1.827	43	61774	18.138
31) Methylene Chloride	(2)	1.906	84	152678	19.452
30)*t-Butyl alcohol-d10	(1)	1.924	65	99308	250.000
35) trans-1,2-Dichloroethene	(2)	2.082	96	160790	20.818
34) Methyl Tertiary Butyl Ether	(2)	2.088	73	327714	17.347
40) 1,1-Dichloroethane	(2)	2.386	63	263081	21.007
45) cis-1,2-Dichloroethene	(2)	2.879	96	179950	21.464
44) 2-Butanone	(1)	2.891	43	330130	129.304
54) Chloroform	(2)	3.171	83	262399	20.643
56)$Dibromofluoromethane	(2)	3.311	113	337583	51.166
57) 1,1,1-Trichloroethane	(2)	3.341	97	233449	17.937
58) Cyclohexane	(2)	3.390	56	256919	21.012
61) Carbon Tetrachloride	(2)	3.493	117	199140	20.146
63)$1,2-Dichloroethane-d4	(2)	3.615	102	74309	52.327
64) Benzene	(2)	3.670	78	612889	20.298
67) 1,2-Dichloroethane	(2)	3.688	62	178102	20.439
70)*Fluorobenzene	(2)	3.944	96	1323832	50.000
75) Trichloroethene	(2)	4.309	95	161001	20.446
76) Methylcyclohexane	(2)	4.497	83	272395	22.229
77) 1,2-Dichloropropane	(2)	4.528	63	151773	21.166
84) Bromodichloromethane	(2)	4.820	83	175302	19.576
89) cis-1,3-Dichloropropene	(2)	5.294	75	214652	19.851
90) 4-Methyl-2-pentanone	(2)	5.489	43	463790	74.839
91)$Toluene-d8	(3)	5.568	98	1361573	49.619
92) Toluene	(3)	5.641	92	398499	19.580
93) trans-1,3-Dichloropropene	(3)	5.909	75	175502	18.002
96) 1,1,2-Trichloroethane	(3)	6.091	97	129661	19.632
98) Tetrachloroethene	(3)	6.225	166	190962	17.130

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/06/2018 at 21:48.
Target 3.5 esignature user ID: pth10165

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov06a.b/bn06s02.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 21:29 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 06-Nov-2018 21:48 pth10165

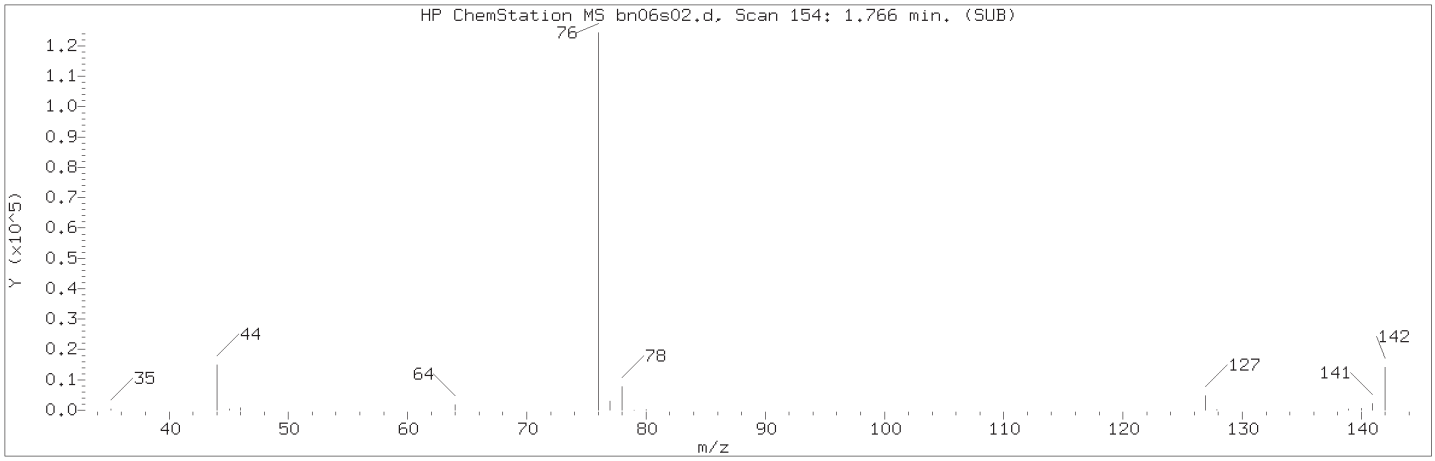
Sample Name: LCDB93 Lab Sample ID: LCDB93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 2-Hexanone	(3)	6.407	43	327530	68.822
103) Dibromochloromethane	(3)	6.505	129	136998	18.004
104) 1,2-Dibromoethane	(3)	6.608	107	128268	18.798
105)*Chlorobenzene-d5	(3)	7.144	117	1063185	50.000
107) Chlorobenzene	(3)	7.174	112	471388	19.837
109) Ethylbenzene	(3)	7.320	91	755866	19.746
110) m+p-Xylene	(3)	7.448	106	629640	40.309
111) o-Xylene	(3)	7.831	106	296316	18.976
113) Styrene	(3)	7.849	104	480767	18.675
112) Xylene (Total)	(3)		106	925956	59.285
114) Bromoform	(3)	7.995	173	76461	16.125
115) Isopropylbenzene	(3)	8.178	105	789640	20.061
118) Cyclohexanone	(1)	8.239	55	112842	490.279
119)$4-Bromofluorobenzene	(3)	8.299	95	498976	49.916
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	157757	18.109
138) 1,3-Dichlorobenzene	(4)	9.175	146	414190	19.342
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	622740	50.000
141) 1,4-Dichlorobenzene	(4)	9.242	146	434999	19.485
147) 1,2-Dichlorobenzene	(4)	9.516	146	410573	19.612
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	24642	16.281
153) 1,2,4-Trichlorobenzene	(4)	10.629	180	297142	19.247

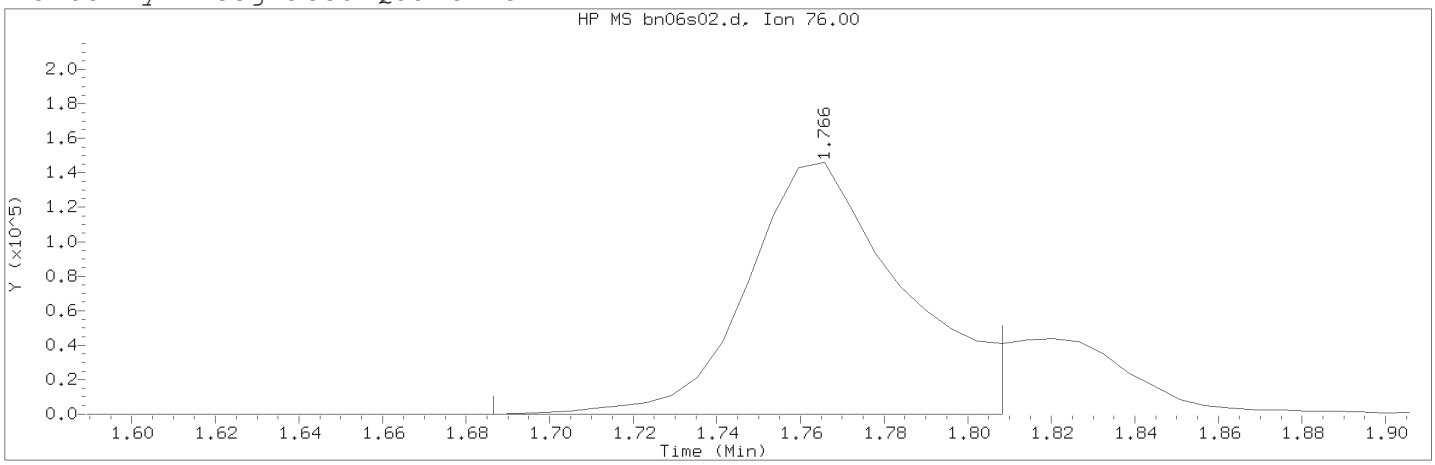
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Patrick T. Herres
on 11/06/2018 at 21:48.
Target 3.5 esignature user ID: pth10165

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06s02.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 21:29 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 06-Nov-2018 21:48 pth10165

Sample Name: LCDB93 Lab Sample ID: LCDB93

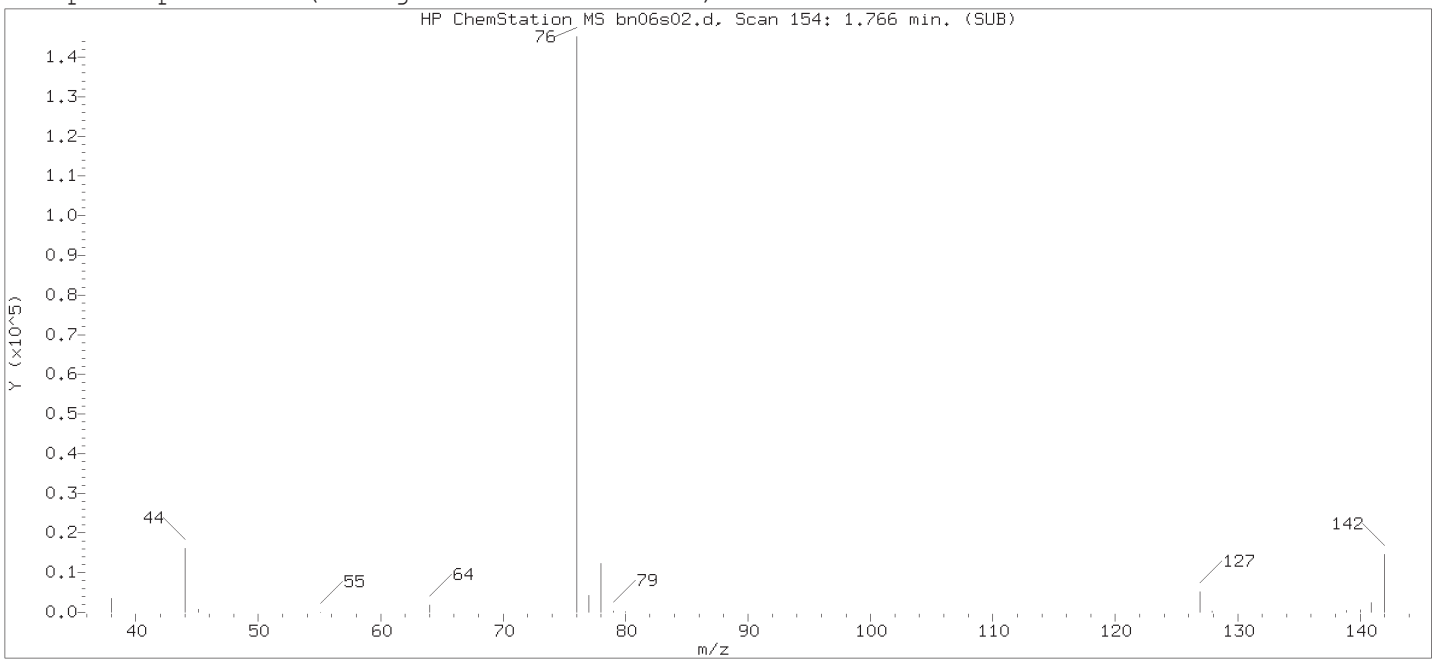
Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 154
Retention Time (minutes): 1.766
Quant Ion : 76.00
Area (flag) : 384852M
On-Column Amount (ng) : 14.4819
Integration start scan : 140 Integration stop scan: 160
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

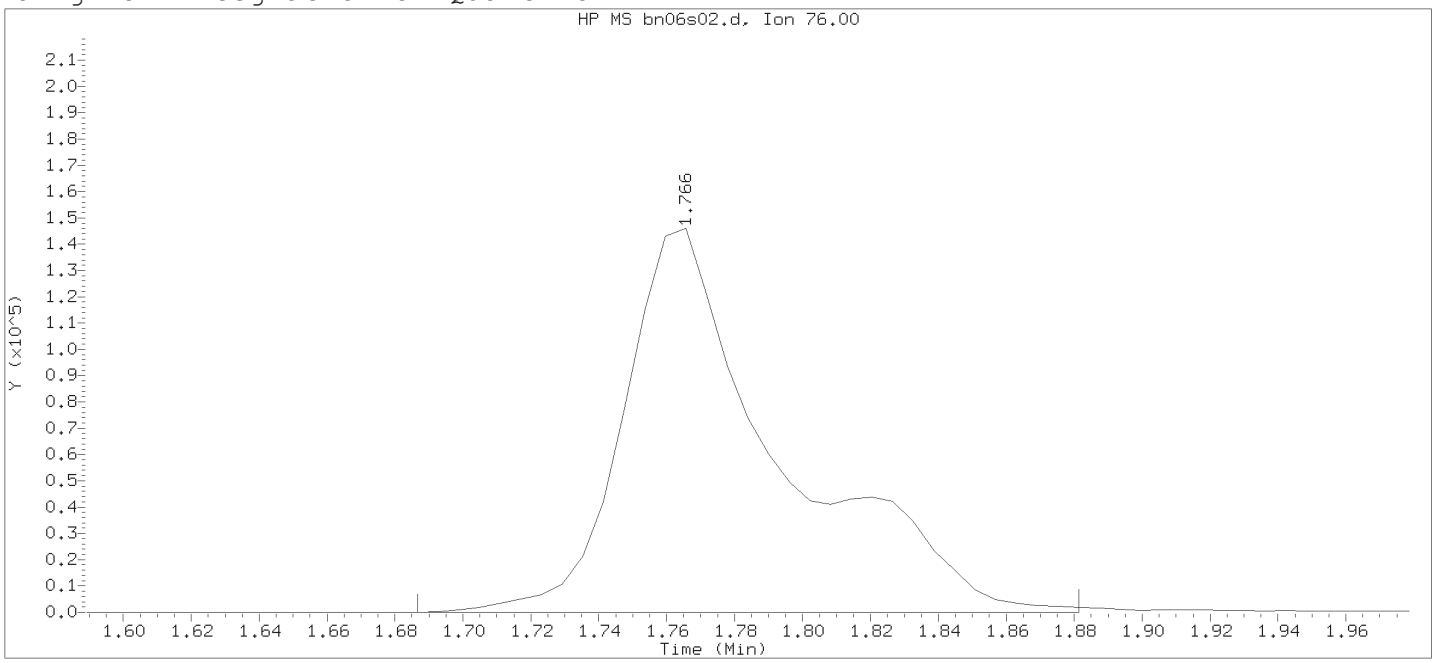
Analyst responsible for change: Digitally signed by Patrick T. Herres
on 11/06/2018 at 21:48.
Target 3.5 esignature user ID: pth10165

Secondary review performed and digitally signed by Robin C. Runkle on 11/12/2018 at 11:31.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov06a.b/bn06s02.d Instrument ID: HP09953.i
Injection date and time: 06-NOV-2018 21:29 Analyst ID: PTH10165

Method used: /chem2/HP09953.i/18nov06a.b/di8260c.m Sublist used: 25809
Calibration date and time: 06-NOV-2018 21:35
Date, time and analyst ID of latest file update: 06-Nov-2018 21:47 pth10165

Sample Name: LCDB93 Lab Sample ID: LCDB93

Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 154
Retention Time (minutes): 1.766
Quant Ion : 76.00
Area : 467311
On-column Amount (ng) : 17.5848
Integration start scan : 140 Integration stop scan: 172
Y at integration start : 0 Y at integration end: 0

Digitally signed by Patrick T. Herres on 11/06/2018 at 21:48.
Target 3.5 esignature used [illegible]

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov07a.b/bn07l31.d Injection date and time: **07-NOV-2018 09:01**
Data file Sample Info. Line: LCSB97;LCSB97;2;3;LCS;;DODSW;;bn07b30; Instrument ID: **HP09953.i** Batch: **B183112AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Blank Data file reference: **/chem2/HP09953.i/18nov07a.b/bn07b30.d**

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: **B183112**
Calibration date and time (Last Method Edit): 07-NOV-2018 10:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov07a.b/bn07c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.918	(0.012)	179	65	117629	(4)	250.00	
70) Fluorobenzene	3.944	(0.006)	512	96	1327711	(1)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	1052922	(0)	50.00	
140) 1,4-Dichlorobenzene-d4	9.224	(0.000)	1380	152	628677	(0)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.311	(0.000)	113	331889	50.156	100%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.615	(0.000)	102	73843M	51.847	104%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1351218	49.722	99%		85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	492239M	49.722	99%		79 - 119

M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)	0.981	(0.001)	85	197459	16.471	16.47			0.6	5
4) Chloromethane	(2)	1.066	(0.001)	50	244338	19.773	19.77			0.6	5
5) Vinyl Chloride	(2)	1.115	(0.001)	62	181474	18.847	18.85			0.6	5
9) Bromomethane	(2)	1.242	(0.001)	94	147111	17.166	17.17			0.7	5
10) Chloroethane	(2)	1.261	(0.001)	64	95553	18.448	18.45			1	5
13) Trichlorofluoromethane	(2)	1.407	(0.001)	101	248824	18.772	18.77			0.7	5
19) 1,1-Dichloroethene	(2)	1.620	(0.000)	96	153073	22.980	22.98			0.5	5
20) Acetone	(1)	1.638	(-0.002)	58	62979	119.259	119.26			6	20
22) Freon 113	(2)	1.650	(0.000)	101	168222	25.189	25.19			0.6	10
25) Carbon Disulfide	(2)	1.760	(0.000)	76	513067	19.250	19.25			0.6	5
27) Methyl Acetate	(2)	1.820	(0.000)	43	71668	20.982	20.98			1	5
31) Methylene Chloride	(2)	1.900	(0.000)	84	158456	20.130	20.13			2	5
34) Methyl Tertiary Butyl Ether	(2)	2.088	(0.000)	73	355892	18.784	18.78			0.5	5
35) trans-1,2-Dichloroethene	(2)	2.076	(0.000)	96	168099	21.701	21.70			0.5	5
40) 1,1-Dichloroethane	(2)	2.380	(0.000)	63	273650	21.787	21.79			0.5	5
44) 2-Butanone	(1)	2.885	(-0.006)	43	343324	113.527	113.53			1	10
45) cis-1,2-Dichloroethene	(2)	2.879	(-0.001)	96	188465	22.414	22.41			0.5	5
54) Chloroform	(2)	3.165	(0.000)	83	271730	21.314	21.31			0.6	5
57) 1,1,1-Trichloroethane	(2)	3.335	(0.000)	97	244848	18.758	18.76			0.6	5
58) Cyclohexane	(2)	3.390	(0.000)	56	283261	23.099	23.10			0.5	5
61) Carbon Tetrachloride	(2)	3.487	(0.000)	117	212394	21.424	21.42			0.5	5
64) Benzene	(2)	3.670	(0.000)	78	635957	21.000	21.00			0.5	5
67) 1,2-Dichloroethane	(2)	3.688	(0.000)	62	185630	21.241	21.24			0.6	5
75) Trichloroethene	(2)	4.309	(-0.001)	95	169954	21.520	21.52			0.5	5
76) Methylcyclohexane	(2)	4.497	(-0.000)	83	297253	24.187	24.19			0.6	5
77) 1,2-Dichloropropane	(2)	4.522	(-0.000)	63	156412	21.749	21.75			0.5	5
84) Bromodichloromethane	(2)	4.820	(-0.001)	83	180483	20.096	20.10			0.4	5
89) cis-1,3-Dichloropropene	(2)	5.294	(-0.002)	75	218137	20.115	20.11			0.4	5
90) 4-Methyl-2-pentanone	(2)	5.483	(-0.000)	43	467982	75.308	75.31			1	10

Digitally signed by Jennifer K. Howe on 11/07/2018 at 11:03. Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov07a.b/bn07l31.d Injection date and time: **07-NOV-2018 09:01**
Data file Sample Info. Line: LCSB97;LCSB97;2;3;LCS;;DODSW;;bn07b30; Instrument ID: **HP09953.i** Batch: **B183112AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Blank Data file reference: **/chem2/HP09953.i/18nov07a.b/bn07b30.d**

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: **B183112**
Calibration date and time (Last Method Edit): 07-NOV-2018 10:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov07a.b/bn07c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

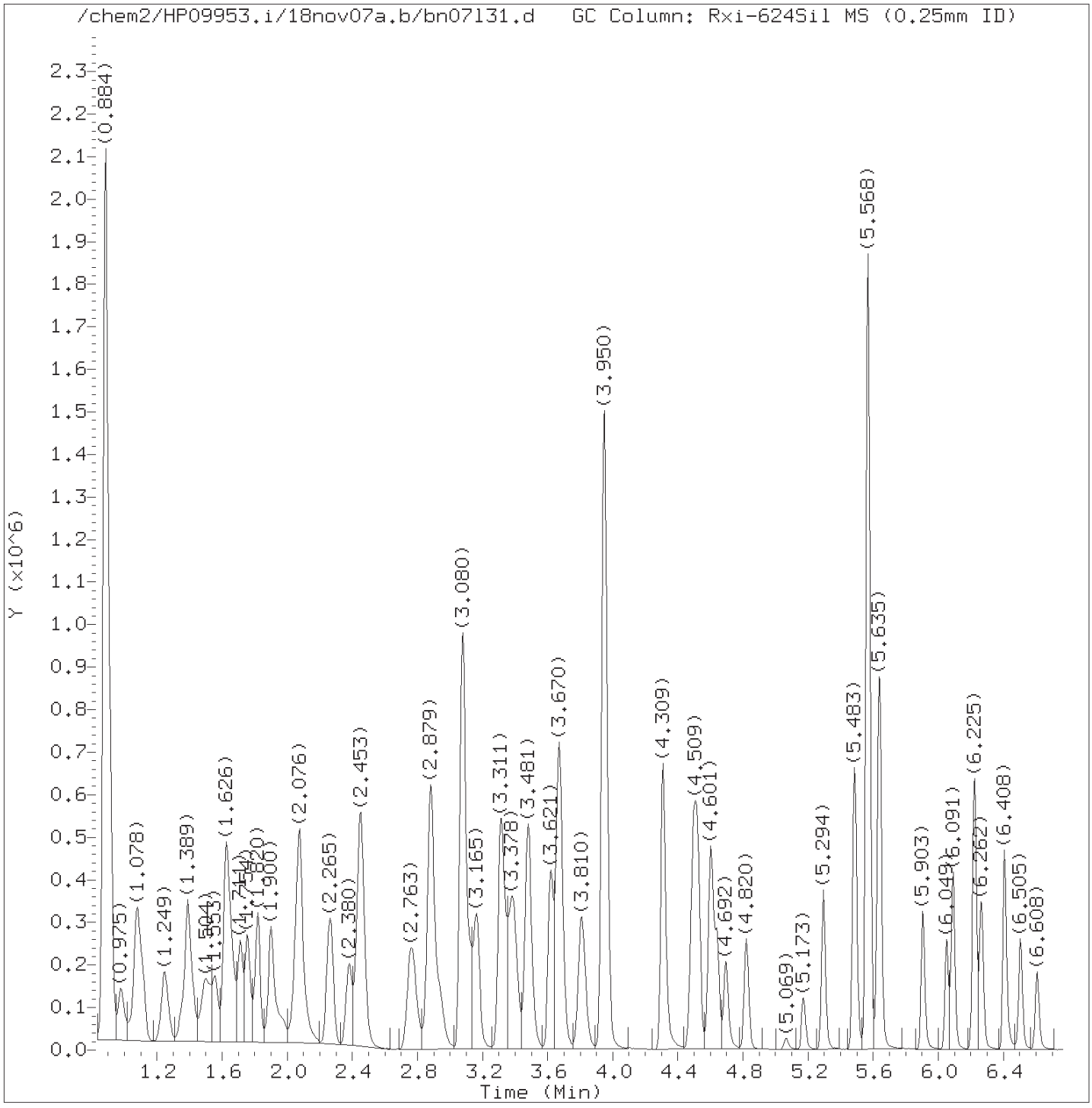
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
92) Toluene	(3)	5.641(0.000)	92	412460	20.463	20.46			0.6	5
93) trans-1,3-Dichloropropene	(3)	5.902(0.000)	75	176821	18.314	18.31			0.3	5
96) 1,1,2-Trichloroethane	(3)	6.091(0.000)	97	133000	20.333	20.33			0.5	5
98) Tetrachloroethene	(3)	6.225(0.000)	166	198334	17.964	17.96			0.5	5
101) 2-Hexanone	(3)	6.408(0.000)	43	315954	67.001	67.00			1	10
103) Dibromochloromethane	(3)	6.505(0.000)	129	137616	18.261	18.26			0.4	5
104) 1,2-Dibromoethane	(3)	6.608(-0.000)	107	131080	19.398	19.40			0.4	5
107) Chlorobenzene	(3)	7.174(-0.000)	112	478598	20.337	20.34			0.5	5
109) Ethylbenzene	(3)	7.320(-0.000)	91	786429	20.745	20.75			0.4	5
110) m+p-Xylene	(3)	7.448(-0.000)	106	653138	42.221	42.22			1	5
111) o-Xylene	(3)	7.831(-0.000)	106	306416	19.814	19.81			0.4	5
112) Xylene (Total)	(3)		106	959554	62.035	62.03			1	5
113) Styrene	(3)	7.849(-0.000)	104	488495	19.160	19.16			0.3	5
114) Bromoform	(3)	7.995(-0.000)	173	76259	16.239	16.24			5	10
115) Isopropylbenzene	(3)	8.178(-0.000)	105	809229	20.759	20.76			0.4	5
118) Cyclohexanone	(1)	8.232(-0.027)	55	94058MA	345.015	345.02			25	250
120) 1,1,2,2-Tetrachloroethane	(4)	8.452(0.000)	83	163879	18.635	18.63			0.4	5
138) 1,3-Dichlorobenzene	(4)	9.176(-0.000)	146	428048	19.801	19.80			0.5	5
141) 1,4-Dichlorobenzene	(4)	9.242(-0.000)	146	449616	19.949	19.95			0.4	5
147) 1,2-Dichlorobenzene	(4)	9.516(-0.000)	146	420065	19.876	19.88			0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)	10.070(-0.000)	75	25529	16.708	16.71			0.4	5
153) 1,2,4-Trichlorobenzene	(4)	10.630(-0.000)	180	309650	19.868	19.87			5	10

M = Compound was manually integrated. A = User selected an alternate peak.

Total number of targets = 51

Digitally signed by Jennifer K. Howe on 11/07/2018 at 11:03. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kerri E. Legerlotz on 11/12/2018 at 14:12. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

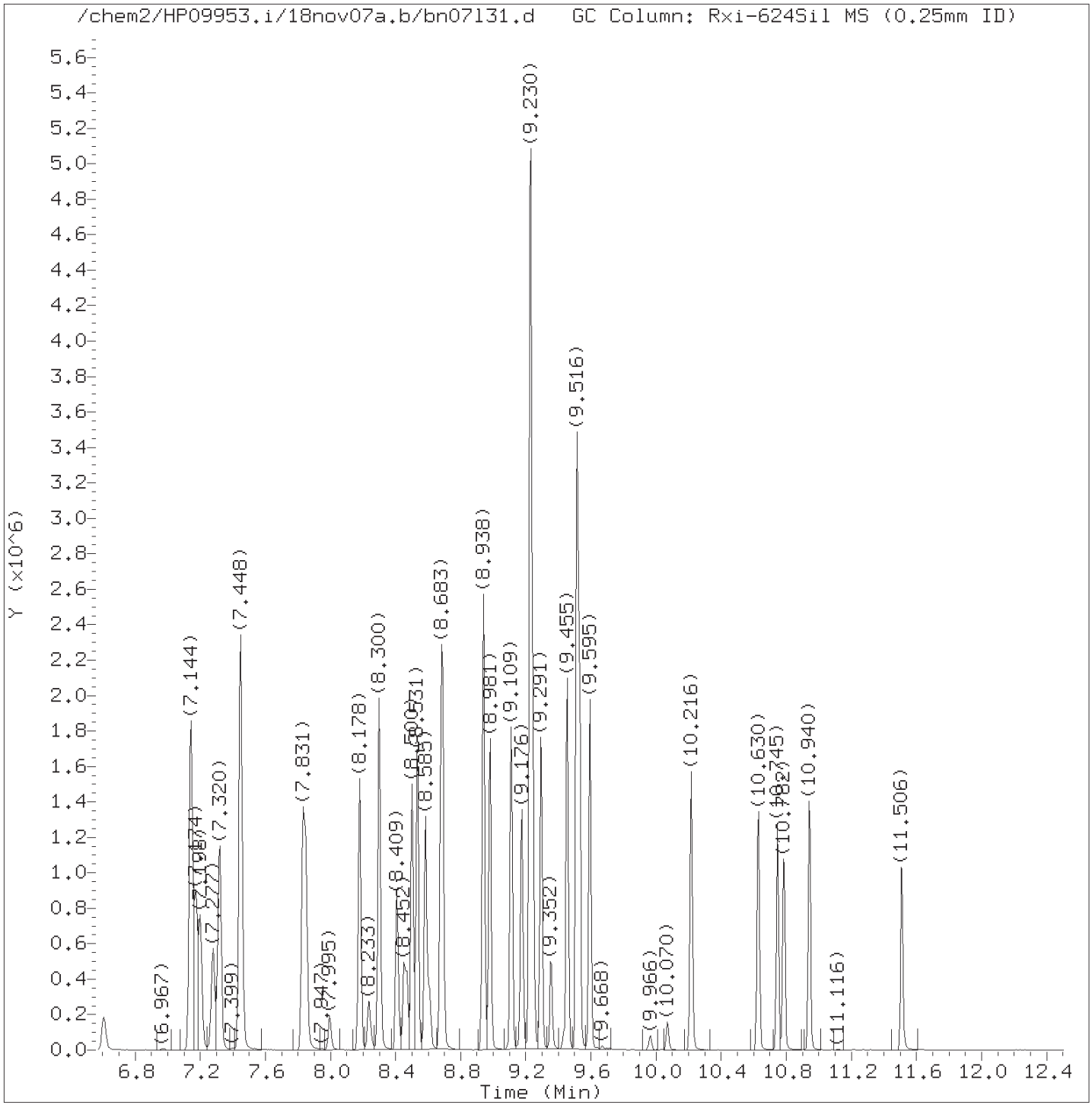
Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07l31.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:01 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Sample Name: LCSB97 Lab Sample ID: LCSB97

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07l31.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:01 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Sample Name: LCSB97 Lab Sample ID: LCSB97

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07l31.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:01 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Sample Name: LCSB97 Lab Sample ID: LCSB97

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.981	85	197459	16.471
4) Chloromethane	(2)	1.066	50	244338	19.773
5) Vinyl Chloride	(2)	1.115	62	181474	18.847
9) Bromomethane	(2)	1.243	94	147111	17.166
10) Chloroethane	(2)	1.261	64	95553	18.448
13) Trichlorofluoromethane	(2)	1.407	101	248824	18.772
19) 1,1-Dichloroethene	(2)	1.620	96	153073	22.980
20) Acetone	(1)	1.638	58	62979	119.259
22) Freon 113	(2)	1.650	101	168222	25.189
25) Carbon Disulfide	(2)	1.760	76	513067	19.250
27) Methyl Acetate	(2)	1.820	43	71668	20.982
31) Methylene Chloride	(2)	1.900	84	158456	20.130
30)*t-Butyl alcohol-d10	(1)	1.918	65	117629	250.000
35) trans-1,2-Dichloroethene	(2)	2.076	96	168099	21.701
34) Methyl Tertiary Butyl Ether	(2)	2.088	73	355892	18.784
40) 1,1-Dichloroethane	(2)	2.380	63	273650	21.787
45) cis-1,2-Dichloroethene	(2)	2.879	96	188465	22.414
44) 2-Butanone	(1)	2.885	43	343324	113.527
54) Chloroform	(2)	3.165	83	271730	21.314
56)$Dibromofluoromethane	(2)	3.311	113	331889	50.156
57) 1,1,1-Trichloroethane	(2)	3.335	97	244848	18.758
58) Cyclohexane	(2)	3.390	56	283261	23.099
61) Carbon Tetrachloride	(2)	3.487	117	212394	21.424
63)$1,2-Dichloroethane-d4	(2)	3.615	102	73843M	51.847
64) Benzene	(2)	3.670	78	635957	21.000
67) 1,2-Dichloroethane	(2)	3.688	62	185630	21.241
70)*Fluorobenzene	(2)	3.944	96	1327711	50.000
75) Trichloroethene	(2)	4.309	95	169954	21.520
76) Methylcyclohexane	(2)	4.497	83	297253	24.187
77) 1,2-Dichloropropane	(2)	4.522	63	156412	21.749
84) Bromodichloromethane	(2)	4.820	83	180483	20.096
89) cis-1,3-Dichloropropene	(2)	5.294	75	218137	20.115
90) 4-Methyl-2-pentanone	(2)	5.483	43	467982	75.308
91)$Toluene-d8	(3)	5.568	98	1351218	49.722
92) Toluene	(3)	5.641	92	412460	20.463
93) trans-1,3-Dichloropropene	(3)	5.903	75	176821	18.314
96) 1,1,2-Trichloroethane	(3)	6.091	97	133000	20.333
98) Tetrachloroethene	(3)	6.225	166	198334	17.964

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07l31.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:01 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

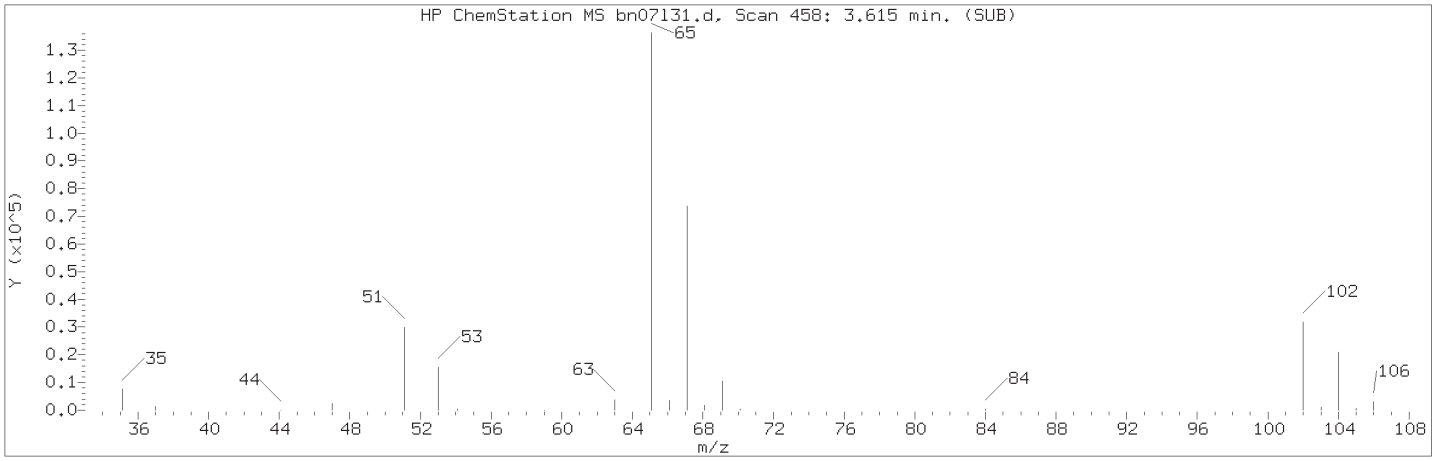
Sample Name: LCSB97 Lab Sample ID: LCSB97

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 2-Hexanone	(3)	6.408	43	315954	67.001
103) Dibromochloromethane	(3)	6.505	129	137616	18.261
104) 1,2-Dibromoethane	(3)	6.608	107	131080	19.398
105)*Chlorobenzene-d5	(3)	7.144	117	1052922	50.000
107) Chlorobenzene	(3)	7.174	112	478598	20.337
109) Ethylbenzene	(3)	7.320	91	786429	20.745
110) m+p-Xylene	(3)	7.448	106	653138	42.221
111) o-Xylene	(3)	7.831	106	306416	19.814
113) Styrene	(3)	7.849	104	488495	19.160
112) Xylene (Total)	(3)		106	959554	62.035
114) Bromoform	(3)	7.995	173	76259	16.239
115) Isopropylbenzene	(3)	8.178	105	809229	20.759
118) Cyclohexanone	(1)	8.233	55	94058MA	345.015
119)$4-Bromofluorobenzene	(3)	8.300	95	492239M	49.722
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	163879	18.635
138) 1,3-Dichlorobenzene	(4)	9.176	146	428048	19.801
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	628677	50.000
141) 1,4-Dichlorobenzene	(4)	9.242	146	449616	19.949
147) 1,2-Dichlorobenzene	(4)	9.516	146	420065	19.876
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	25529	16.708
153) 1,2,4-Trichlorobenzene	(4)	10.630	180	309650	19.868

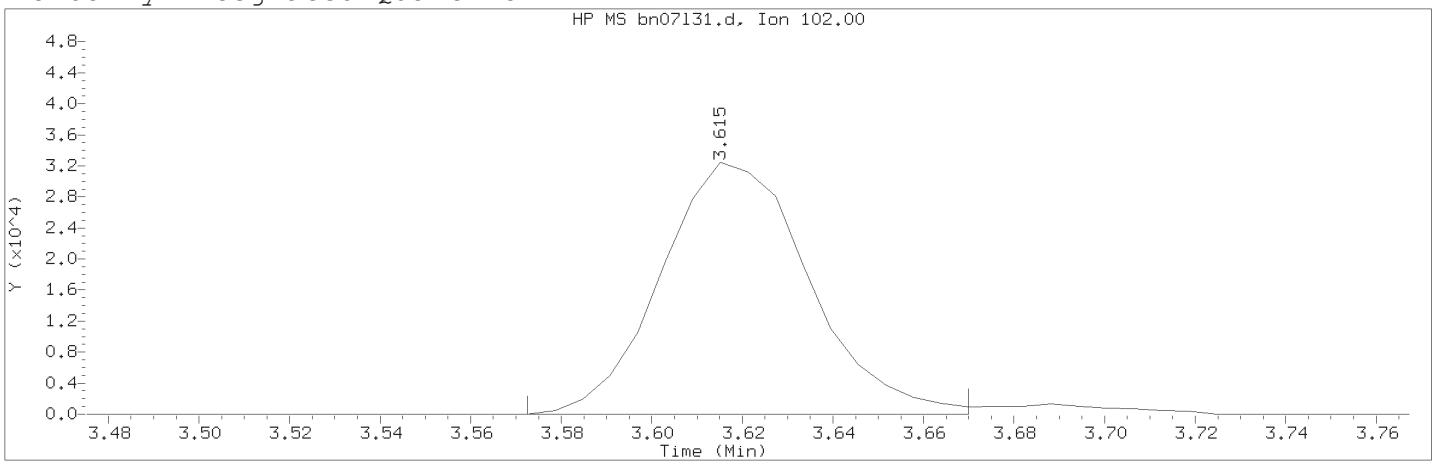
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07131.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:01 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Sample Name: LCSB97 Lab Sample ID: LCSB97

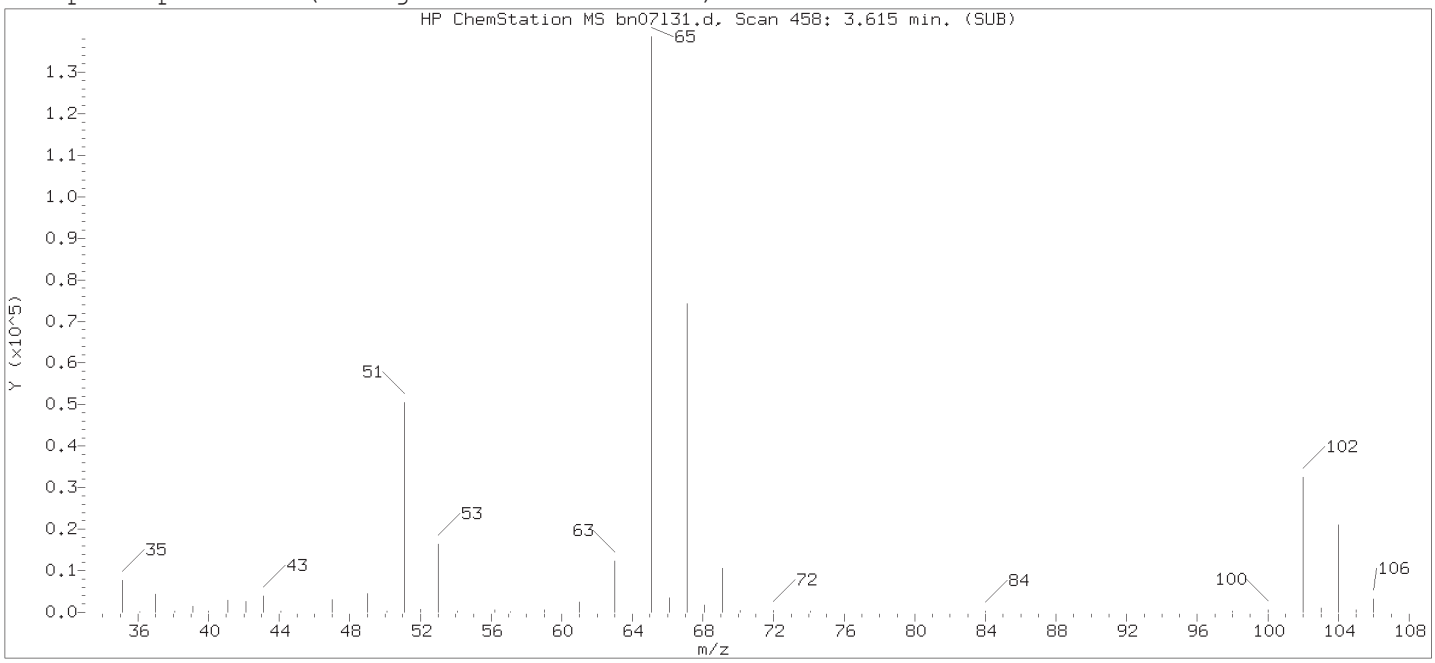
Compound Number : 63
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 458
Retention Time (minutes): 3.615
Quant Ion : 102.00
Area (flag) : 73843M
On-Column Amount (ng) : 51.8474
Integration start scan : 450 Integration stop scan: 466
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

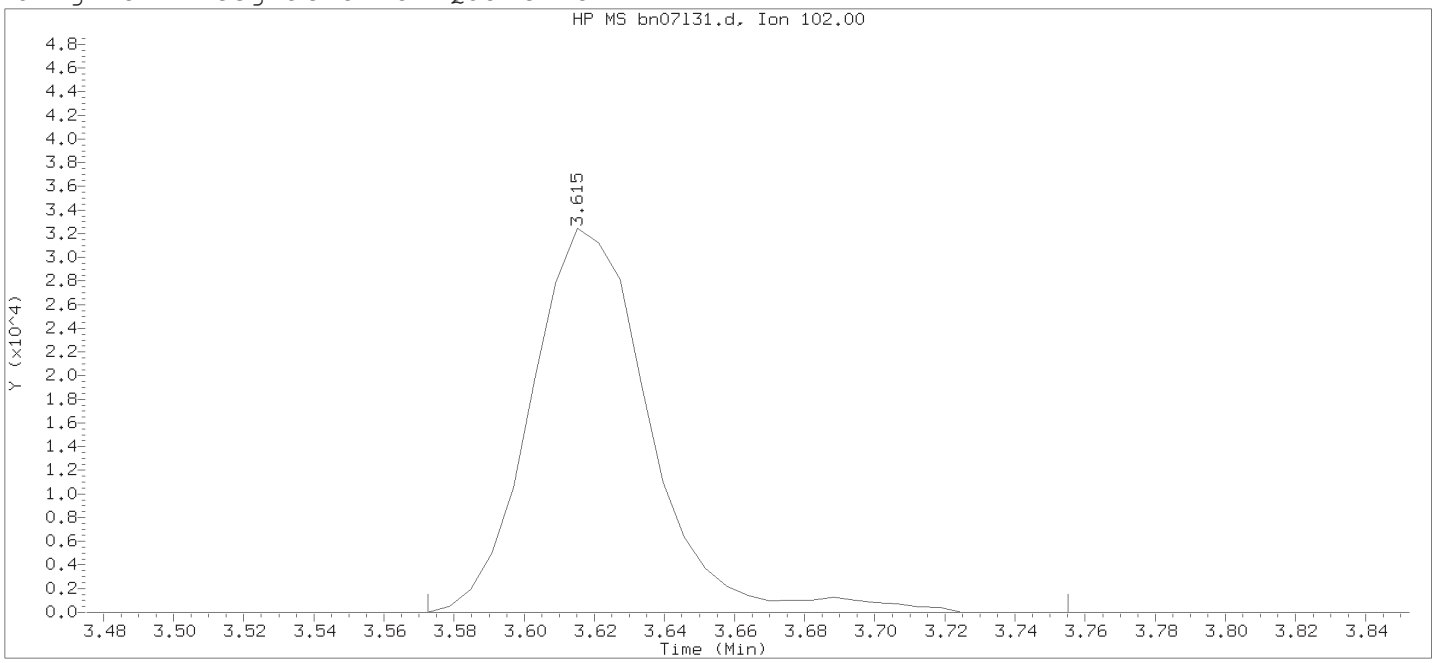
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kerri E. Legerlotz on 11/12/2018 at 14:12.
PARALLAX ID: kel01973

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07131.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:01 Analyst ID: JKH09052

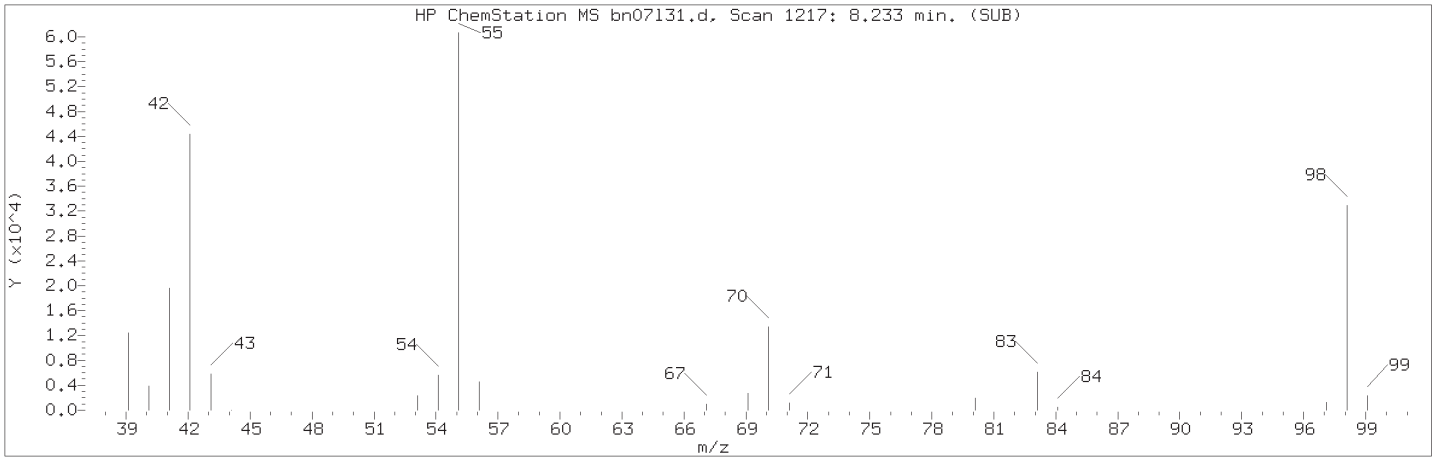
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:40 jkh09052

Sample Name: LCSB97 Lab Sample ID: LCSB97

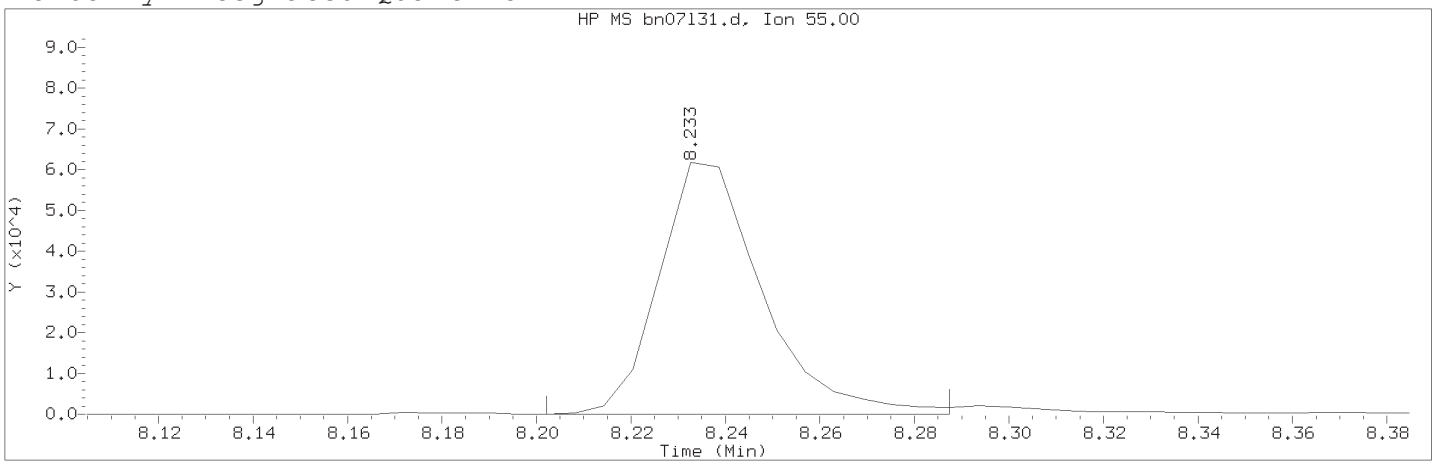
Compound Number : 63
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 458
Retention Time (minutes): 3.615
Quant Ion : 102.00
Area : 76328
On-column Amount (ng) : 53.5926
Integration start scan : 450 Integration stop scan: 480
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 11:03.
Target 3.5 esignature used 11/07/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07131.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:01 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Sample Name: LCSB97 Lab Sample ID: LCSB97

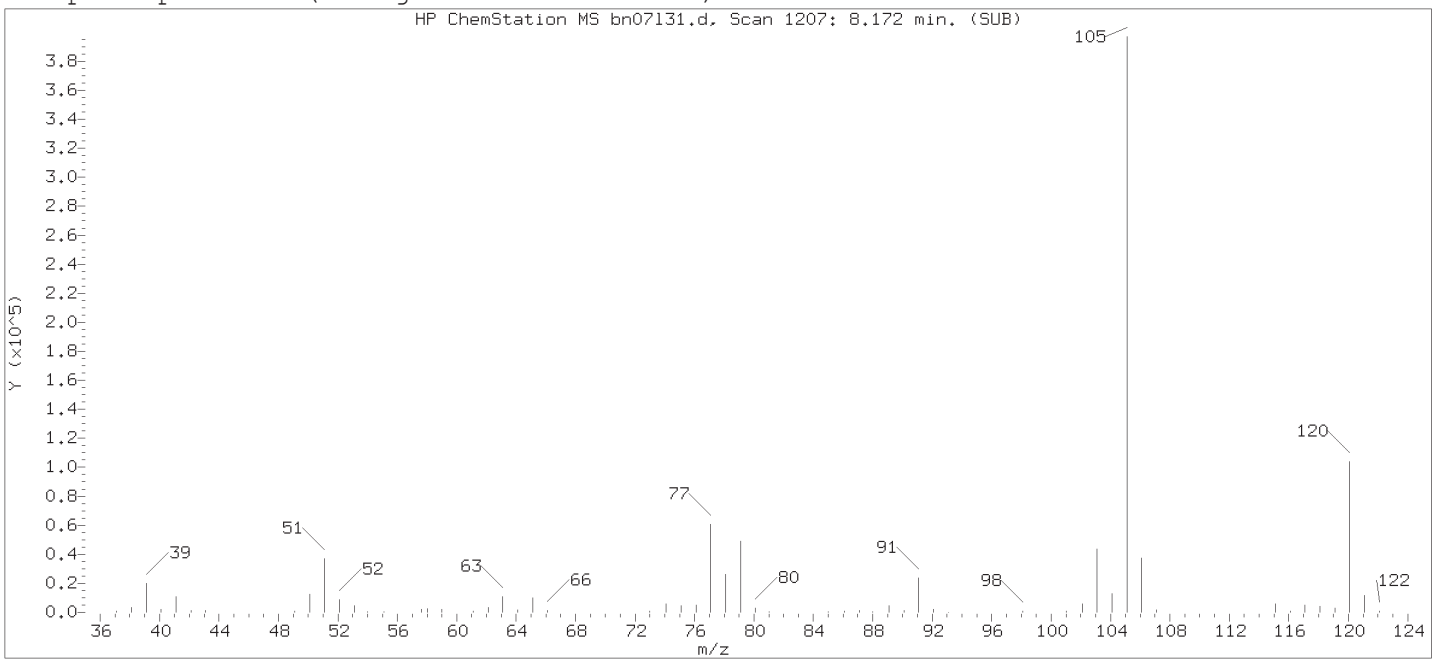
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1217
Retention Time (minutes): 8.233
Quant Ion : 55.00
Area (flag) : 94058MA
On-Column Amount (ng) : 345.0154
Integration start scan : 1211 Integration stop scan: 1225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

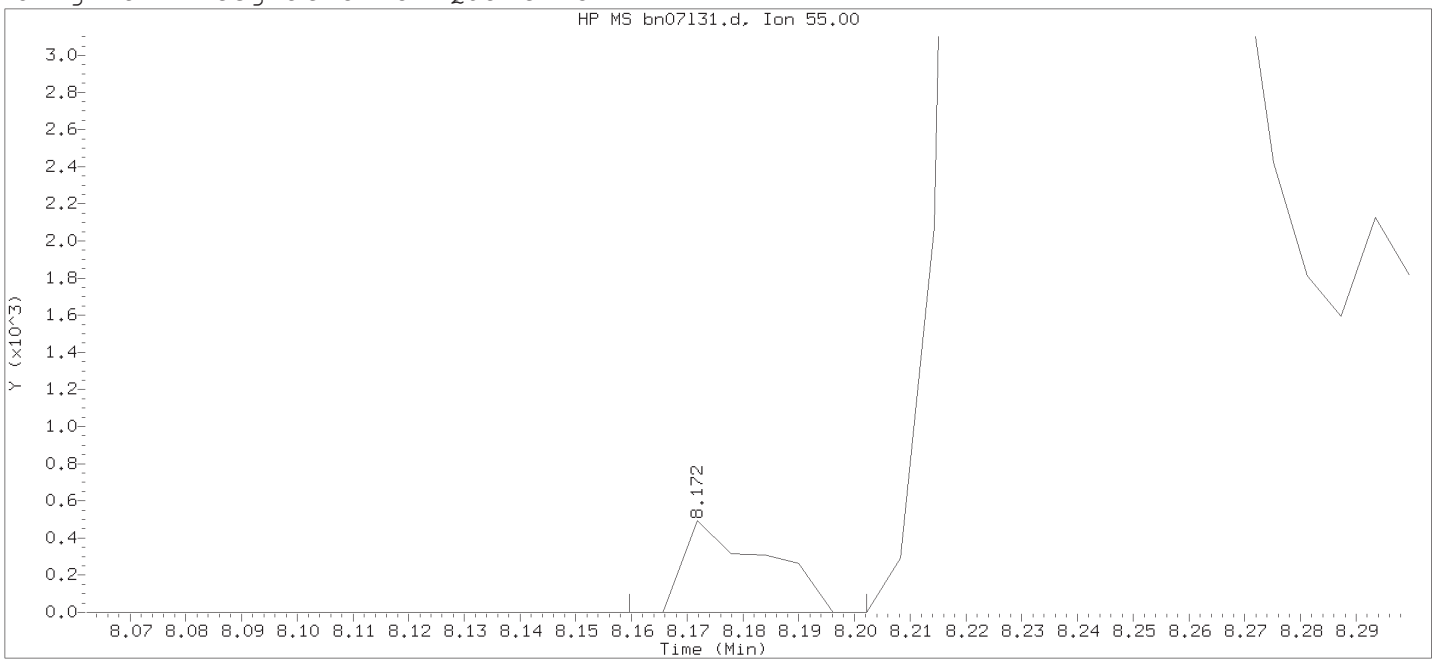
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kerri E. Legerlotz on 11/12/2018 at 14:12.
PARALLAX ID: kel01973

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07l31.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:01 Analyst ID: JKH09052

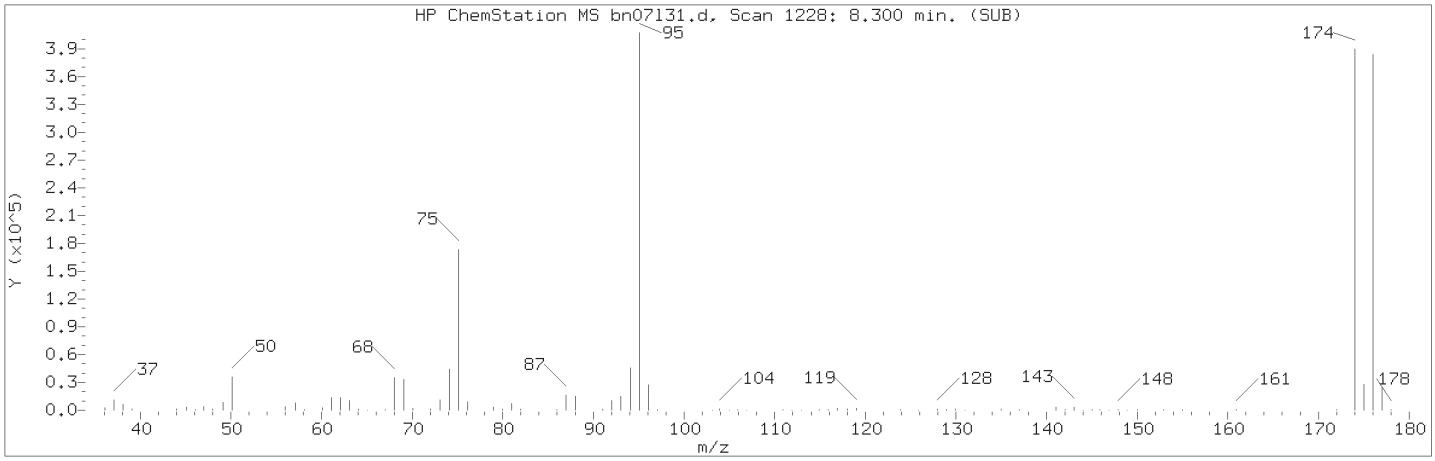
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:40 jkh09052

Sample Name: LCSB97 Lab Sample ID: LCSB97

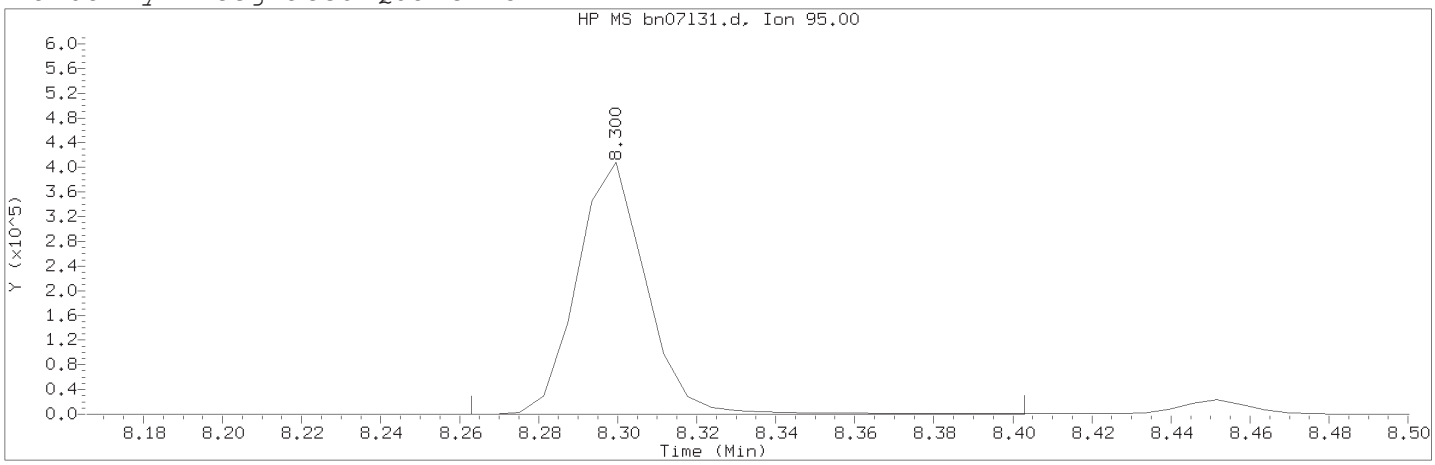
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1207
Retention Time (minutes): 8.172
Quant Ion : 55.00
Area : 502
On-column Amount (ng) : 1.8450
Integration start scan : 1204 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07131.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:01 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Sample Name: LCSB97 Lab Sample ID: LCSB97

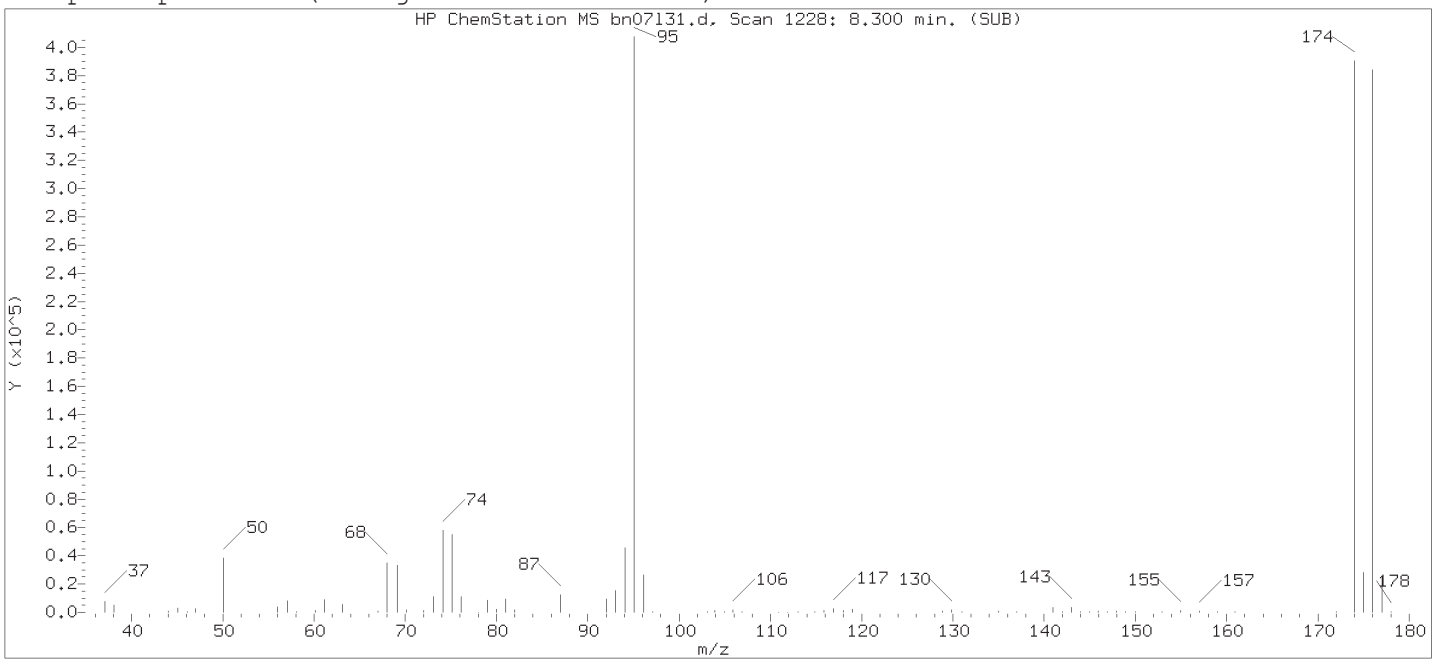
Compound Number : 119
Compound Name : 4-Bromofluorobenzene
Scan Number : 1228
Retention Time (minutes): 8.300
Quant Ion : 95.00
Area (flag) : 492239M
On-Column Amount (ng) : 49.7221
Integration start scan : 1221 Integration stop scan: 1244
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

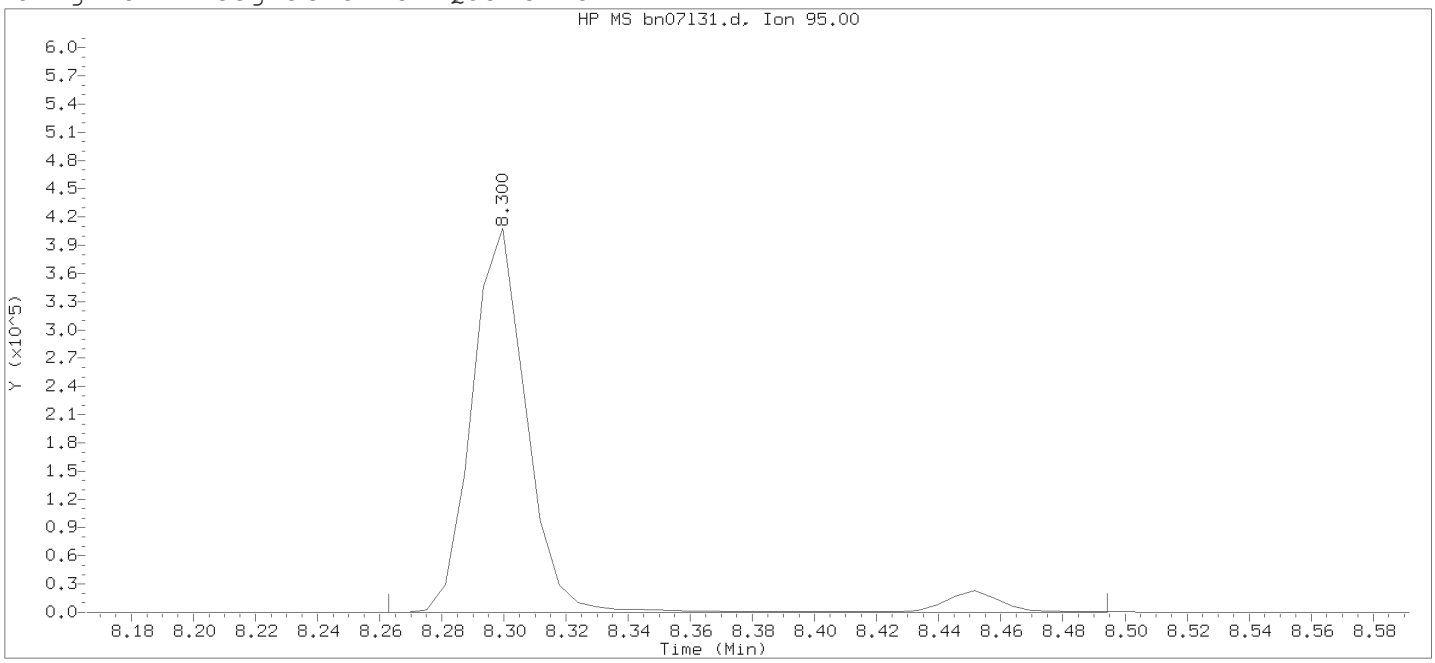
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kerri E. Legerlotz on 11/12/2018 at 14:12.
PARALLAX ID: kel01973

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07131.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:01 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:40 jkh09052

Sample Name: LCSB97 Lab Sample ID: LCSB97

Compound Number	: 119		
Compound Name	: 4-Bromofluorobenzene		
Scan Number	: 1228		
Retention Time (minutes)	: 8.300		
Quant Ion	: 95.00		
Area	: 521011		
On-column Amount (ng)	: 52.6284		
Integration start scan	: 1221	Integration stop scan:	1259
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 11:03.
Target 3.5 esignature used.

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov07a.b/bn07l32.d Injection date and time: **07-NOV-2018 09:24**
Data file Sample Info. Line: LCDB97;LCDB97;2;3;LCSD;;DODSW;;bn07b30; Instrument ID: **HP09953.i** Batch: **B183112AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Blank Data file reference: **/chem2/HP09953.i/18nov07a.b/bn07b30.d**

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: **B183112**
Calibration date and time (Last Method Edit): 07-NOV-2018 10:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov07a.b/bn07c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	1.912	(0.018)	178	65	129391	(15)	250.00	
70) Fluorobenzene	3.944	(0.006)	512	96	1318617	(0)	50.00	
105) Chlorobenzene-d5	7.144	(0.000)	1038	117	1068273	(2)	50.00	
140) 1,4-Dichlorobenzene-d4	9.224	(0.000)	1380	152	633484	(1)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	3.305	(0.002)	113	334731	50.935	102%		78 - 119
63) 1,2-Dichloroethane-d4	(2)	3.615	(0.000)	102	74370M	52.578	105%		71 - 136
91) Toluene-d8	(3)	5.568	(0.000)	98	1360401	49.340	99%		85 - 116
119) 4-Bromofluorobenzene	(3)	8.300	(0.000)	95	498906M	49.671	99%		79 - 119

M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)	0.975	(0.002)	85	200847	16.869	16.87			0.6	5
4) Chloromethane	(2)	1.066	(0.001)	50	242111	19.728	19.73			0.6	5
5) Vinyl Chloride	(2)	1.109	(0.002)	62	183248	19.162	19.16			0.6	5
9) Bromomethane	(2)	1.236	(0.002)	94	147031	17.275	17.28			0.7	5
10) Chloroethane	(2)	1.255	(0.002)	64	94357	18.343	18.34			1	5
13) Trichlorofluoromethane	(2)	1.401	(0.002)	101	247495	18.800	18.80			0.7	5
19) 1,1-Dichloroethene	(2)	1.614	(0.002)	96	152239	23.013	23.01			0.5	5
20) Acetone	(1)	1.632	(-0.001)	58	65371	112.045	112.05			6	20
22) Freon 113	(2)	1.644	(0.002)	101	168605	25.421	25.42			0.6	10
25) Carbon Disulfide	(2)	1.754	(0.002)	76	522245	19.730	19.73			0.6	5
27) Methyl Acetate	(2)	1.820	(0.000)	43	72495	21.370	21.37			1	5
31) Methylene Chloride	(2)	1.894	(0.002)	84	160653	20.550	20.55			2	5
34) Methyl Tertiary Butyl Ether	(2)	2.082	(0.002)	73	373551	19.852	19.85			0.5	5
35) trans-1,2-Dichloroethene	(2)	2.070	(0.002)	96	168875	21.951	21.95			0.5	5
40) 1,1-Dichloroethane	(2)	2.374	(0.002)	63	275864	22.114	22.11			0.5	5
44) 2-Butanone	(1)	2.885	(-0.011)	43	365076	109.746	109.75			1	10
45) cis-1,2-Dichloroethene	(2)	2.873	(0.000)	96	188918	22.623	22.62			0.5	5
54) Chloroform	(2)	3.159	(0.001)	83	274757	21.700	21.70			0.6	5
57) 1,1,1-Trichloroethane	(2)	3.335	(0.000)	97	247427	19.086	19.09			0.6	5
58) Cyclohexane	(2)	3.384	(0.001)	56	284240	23.338	23.34			0.5	5
61) Carbon Tetrachloride	(2)	3.487	(0.000)	117	213405	21.675	21.67			0.5	5
64) Benzene	(2)	3.670	(0.000)	78	649434	21.593	21.59			0.5	5
67) 1,2-Dichloroethane	(2)	3.688	(0.000)	62	189682	21.854	21.85			0.6	5
75) Trichloroethene	(2)	4.309	(-0.001)	95	169610M	21.625	21.62			0.5	5
76) Methylcyclohexane	(2)	4.497	(-0.000)	83	300438	24.615	24.61			0.6	5
77) 1,2-Dichloropropane	(2)	4.522	(-0.000)	63	158506	22.192	22.19			0.5	5
84) Bromodichloromethane	(2)	4.820	(-0.001)	83	185251	20.769	20.77			0.4	5
89) cis-1,3-Dichloropropene	(2)	5.294	(-0.002)	75	228676	21.232	21.23			0.4	5
90) 4-Methyl-2-pentanone	(2)	5.483	(-0.000)	43	513723	83.463	83.46			1	10

M = Compound was manually integrated.

Digitally signed by Jennifer K. Howe on 11/07/2018 at 11:03. Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09953.i/18nov07a.b/bn07l32.d Injection date and time: **07-NOV-2018 09:24**
Data file Sample Info. Line: LCDB97;LCDB97;2;3;LCSD;;DODSW;;bn07b30; Instrument ID: **HP09953.i** Batch: **B183112AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Blank Data file reference: **/chem2/HP09953.i/18nov07a.b/bn07b30.d**

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: **B183112**
Calibration date and time (Last Method Edit): 07-NOV-2018 10:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP09953.i/18nov07a.b/bn07c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

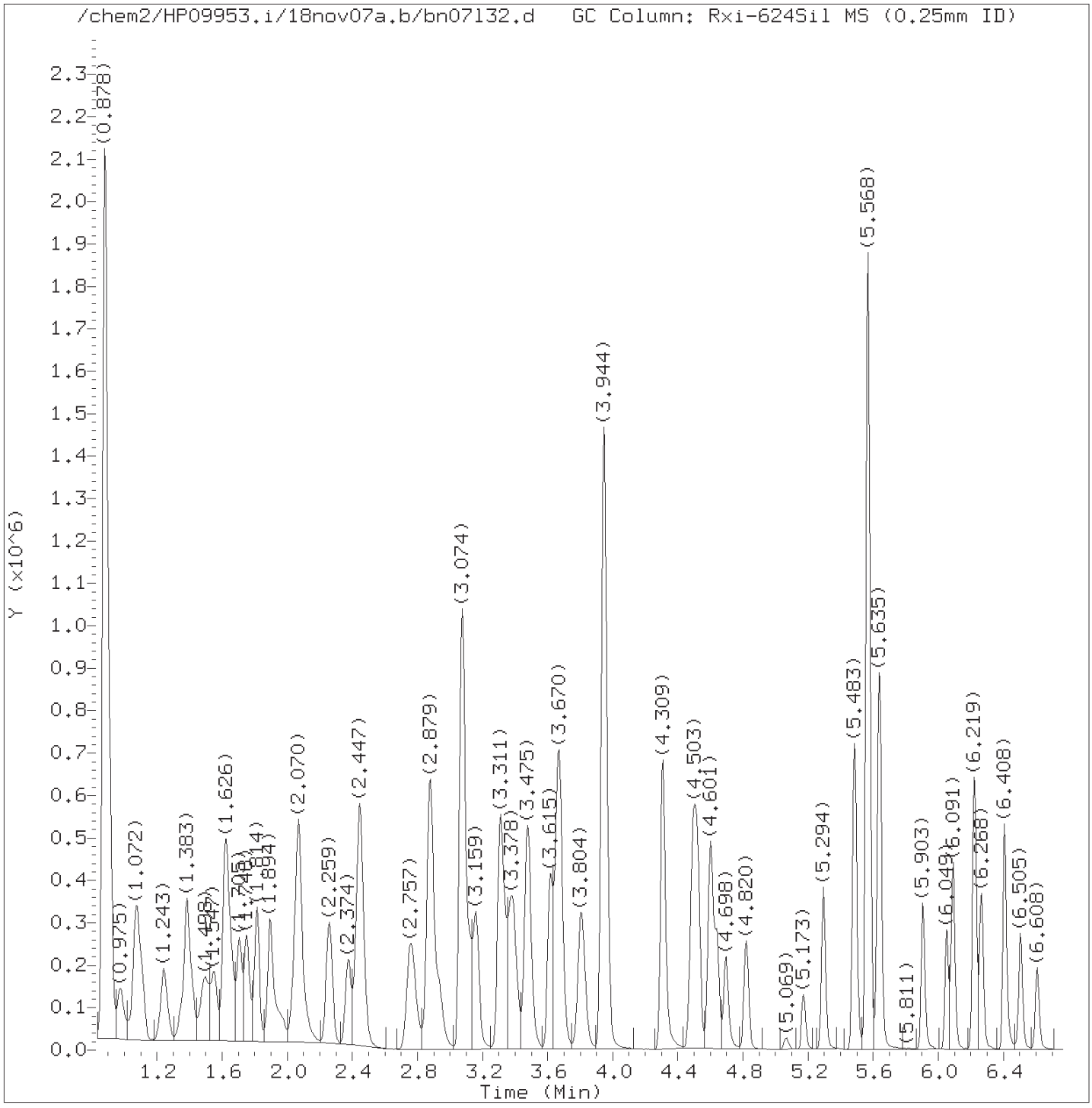
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
92) Toluene	(3)	5.641(0.000)	92	424737	20.770	20.77			0.6	5
93) trans-1,3-Dichloropropene	(3)	5.903(0.000)	75	191753	19.575	19.58			0.3	5
96) 1,1,2-Trichloroethane	(3)	6.091(-0.000)	97	140373	21.152	21.15			0.5	5
98) Tetrachloroethene	(3)	6.225(0.000)	166	204528	18.259	18.26			0.5	5
101) 2-Hexanone	(3)	6.408(0.000)	43	357914	74.986	74.99			1	10
103) Dibromochloromethane	(3)	6.505(-0.000)	129	148134	19.375	19.37			0.4	5
104) 1,2-Dibromoethane	(3)	6.608(-0.000)	107	137849	20.106	20.11			0.4	5
107) Chlorobenzene	(3)	7.174(-0.000)	112	496802	20.807	20.81			0.5	5
109) Ethylbenzene	(3)	7.320(-0.000)	91	801235	20.832	20.83			0.4	5
110) m+p-Xylene	(3)	7.448(-0.000)	106	664839	42.360	42.36			1	5
111) o-Xylene	(3)	7.831(-0.000)	106	316650	20.181	20.18			0.4	5
112) Xylene (Total)	(3)		106	981489	62.541	62.54			1	5
113) Styrene	(3)	7.849(-0.000)	104	504815	19.516	19.52			0.3	5
114) Bromoform	(3)	7.995(-0.000)	173	81955	17.202	17.20			5	10
115) Isopropylbenzene	(3)	8.178(-0.000)	105	832597	21.052	21.05			0.4	5
118) Cyclohexanone	(1)	8.233(-0.040)	55	104563MA	348.683	348.68			25	250
120) 1,1,2,2-Tetrachloroethane	(4)	8.452(0.000)	83	174964	19.744	19.74			0.4	5
138) 1,3-Dichlorobenzene	(4)	9.176(-0.000)	146	440003	20.199	20.20			0.5	5
141) 1,4-Dichlorobenzene	(4)	9.242(-0.000)	146	460253	20.266	20.27			0.4	5
147) 1,2-Dichlorobenzene	(4)	9.516(-0.000)	146	432722	20.319	20.32			0.5	5
151) 1,2-Dibromo-3-chloropropane	(4)	10.070(-0.000)	75	27173	17.649	17.65			0.4	5
153) 1,2,4-Trichlorobenzene	(4)	10.630(-0.000)	180	315642	20.099	20.10			5	10

M = Compound was manually integrated. A = User selected an alternate peak.

Total number of targets = 51

Digitally signed by Jennifer K. Howe on 11/07/2018 at 11:03. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kerri E. Legerlotz on 11/12/2018 at 14:12. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

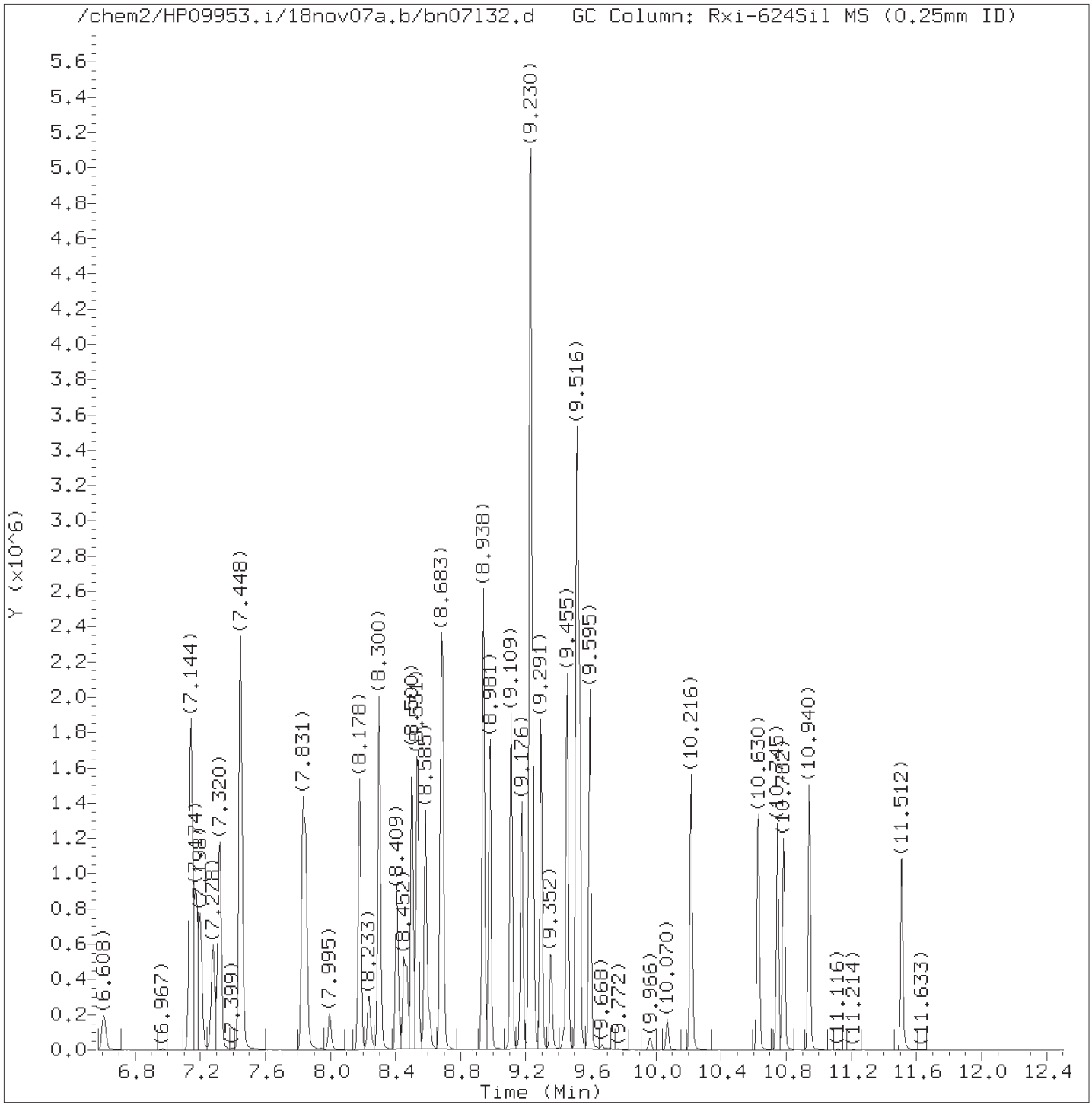
Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07132.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:24 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Sample Name: LCDB97 Lab Sample ID: LCDB97

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07132.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:24 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Sample Name: LCDB97 Lab Sample ID: LCDB97

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07l32.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:24 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Sample Name: LCDB97 Lab Sample ID: LCDB97

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	0.975	85	200847	16.869
4) Chloromethane	(2)	1.066	50	242111	19.728
5) Vinyl Chloride	(2)	1.109	62	183248	19.162
9) Bromomethane	(2)	1.237	94	147031	17.275
10) Chloroethane	(2)	1.255	64	94357	18.343
13) Trichlorofluoromethane	(2)	1.401	101	247495	18.800
19) 1,1-Dichloroethene	(2)	1.614	96	152239	23.013
20) Acetone	(1)	1.632	58	65371	112.045
22) Freon 113	(2)	1.644	101	168605	25.421
25) Carbon Disulfide	(2)	1.754	76	522245	19.730
27) Methyl Acetate	(2)	1.821	43	72495	21.370
31) Methylene Chloride	(2)	1.894	84	160653	20.550
30)*t-Butyl alcohol-d10	(1)	1.912	65	129391	250.000
35) trans-1,2-Dichloroethene	(2)	2.070	96	168875	21.951
34) Methyl Tertiary Butyl Ether	(2)	2.082	73	373551	19.852
40) 1,1-Dichloroethane	(2)	2.374	63	275864	22.114
45) cis-1,2-Dichloroethene	(2)	2.873	96	188918	22.623
44) 2-Butanone	(1)	2.885	43	365076	109.746
54) Chloroform	(2)	3.159	83	274757	21.700
56)$Dibromofluoromethane	(2)	3.305	113	334731	50.935
57) 1,1,1-Trichloroethane	(2)	3.335	97	247427	19.086
58) Cyclohexane	(2)	3.384	56	284240	23.338
61) Carbon Tetrachloride	(2)	3.487	117	213405	21.675
63)$1,2-Dichloroethane-d4	(2)	3.615	102	74370M	52.578
64) Benzene	(2)	3.670	78	649434	21.593
67) 1,2-Dichloroethane	(2)	3.688	62	189682	21.854
70)*Fluorobenzene	(2)	3.944	96	1318617	50.000
75) Trichloroethene	(2)	4.309	95	169610M	21.625
76) Methylcyclohexane	(2)	4.497	83	300438	24.615
77) 1,2-Dichloropropane	(2)	4.522	63	158506	22.192
84) Bromodichloromethane	(2)	4.820	83	185251	20.769
89) cis-1,3-Dichloropropene	(2)	5.294	75	228676	21.232
90) 4-Methyl-2-pentanone	(2)	5.483	43	513723	83.463
91)$Toluene-d8	(3)	5.568	98	1360401	49.340
92) Toluene	(3)	5.641	92	424737	20.770
93) trans-1,3-Dichloropropene	(3)	5.903	75	191753	19.575
96) 1,1,2-Trichloroethane	(3)	6.091	97	140373	21.152
98) Tetrachloroethene	(3)	6.225	166	204528	18.259

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09953.i/18nov07a.b/bn07l32.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:24 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

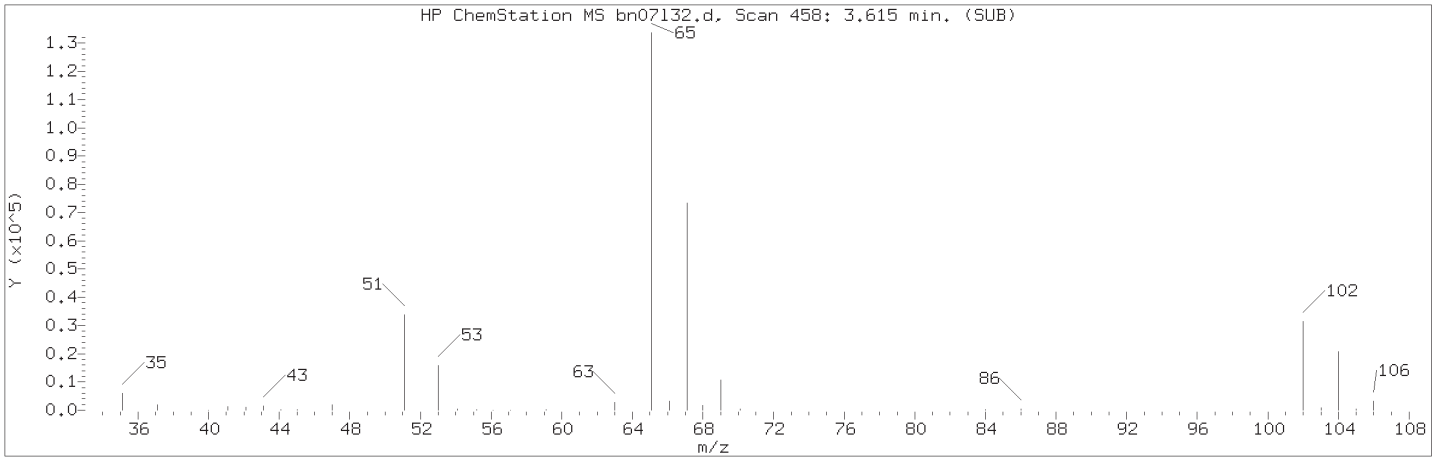
Sample Name: LCDB97 Lab Sample ID: LCDB97

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 2-Hexanone	(3)	6.408	43	357914	74.986
103) Dibromochloromethane	(3)	6.505	129	148134	19.375
104) 1,2-Dibromoethane	(3)	6.608	107	137849	20.106
105)*Chlorobenzene-d5	(3)	7.144	117	1068273	50.000
107) Chlorobenzene	(3)	7.174	112	496802	20.807
109) Ethylbenzene	(3)	7.320	91	801235	20.832
110) m+p-Xylene	(3)	7.448	106	664839	42.360
111) o-Xylene	(3)	7.831	106	316650	20.181
113) Styrene	(3)	7.849	104	504815	19.516
112) Xylene (Total)	(3)		106	981489	62.541
114) Bromoform	(3)	7.995	173	81955	17.202
115) Isopropylbenzene	(3)	8.178	105	832597	21.052
118) Cyclohexanone	(1)	8.233	55	104563MA	348.683
119)$4-Bromofluorobenzene	(3)	8.300	95	498906M	49.671
120) 1,1,2,2-Tetrachloroethane	(4)	8.452	83	174964	19.744
138) 1,3-Dichlorobenzene	(4)	9.176	146	440003	20.199
140)*1,4-Dichlorobenzene-d4	(4)	9.224	152	633484	50.000
141) 1,4-Dichlorobenzene	(4)	9.243	146	460253	20.266
147) 1,2-Dichlorobenzene	(4)	9.516	146	432722	20.319
151) 1,2-Dibromo-3-chloropropane	(4)	10.070	75	27173	17.649
153) 1,2,4-Trichlorobenzene	(4)	10.630	180	315642	20.099

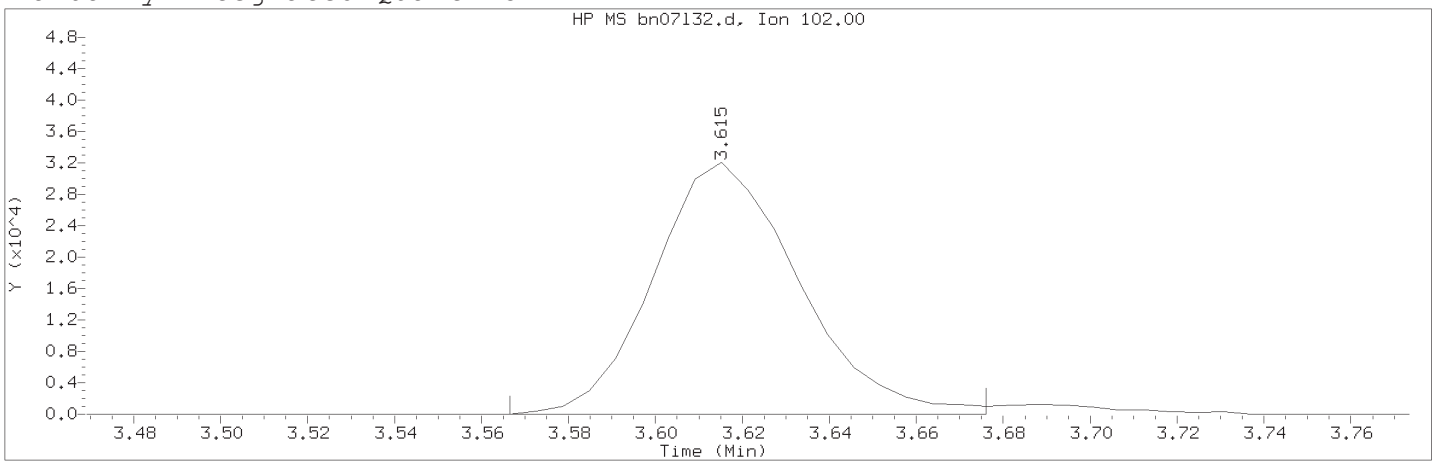
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07132.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:24 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Sample Name: LCDB97 Lab Sample ID: LCDB97

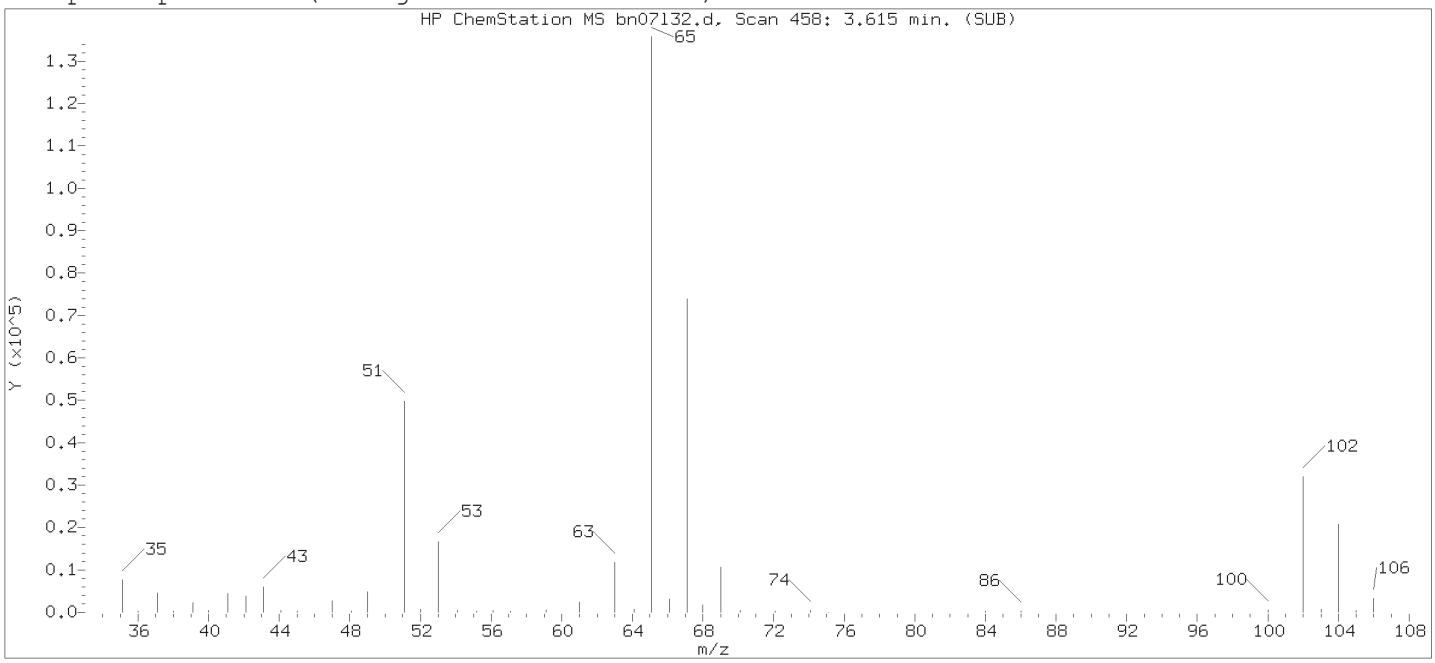
Compound Number : 63
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 458
Retention Time (minutes): 3.615
Quant Ion : 102.00
Area (flag) : 74370M
On-Column Amount (ng) : 52.5776
Integration start scan : 449 Integration stop scan: 467
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

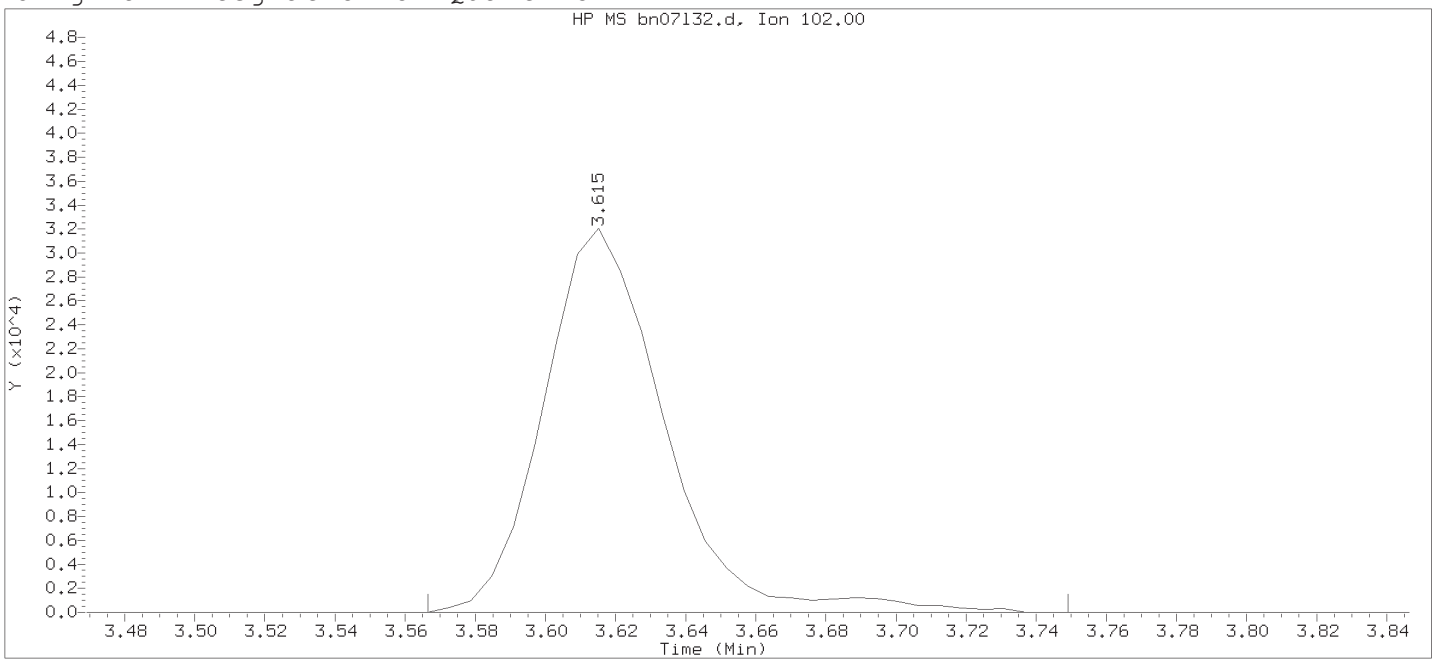
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kerri E. Legerlotz on 11/12/2018 at 14:12.
PARALLAX ID: kel01973

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07132.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:24 Analyst ID: JKH09052

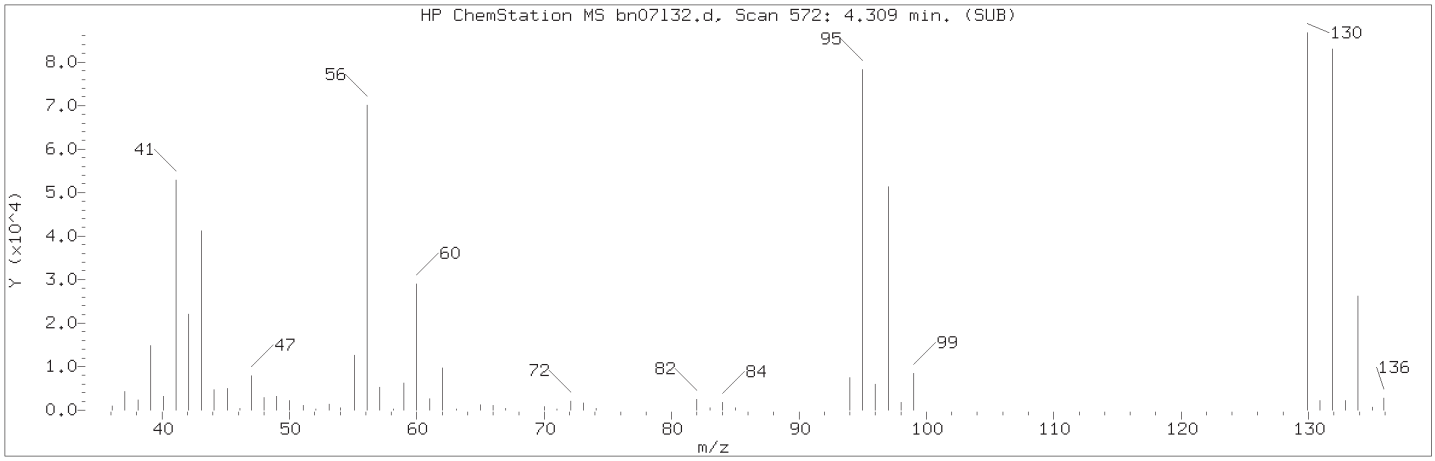
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:40 jkh09052

Sample Name: LCDB97 Lab Sample ID: LCDB97

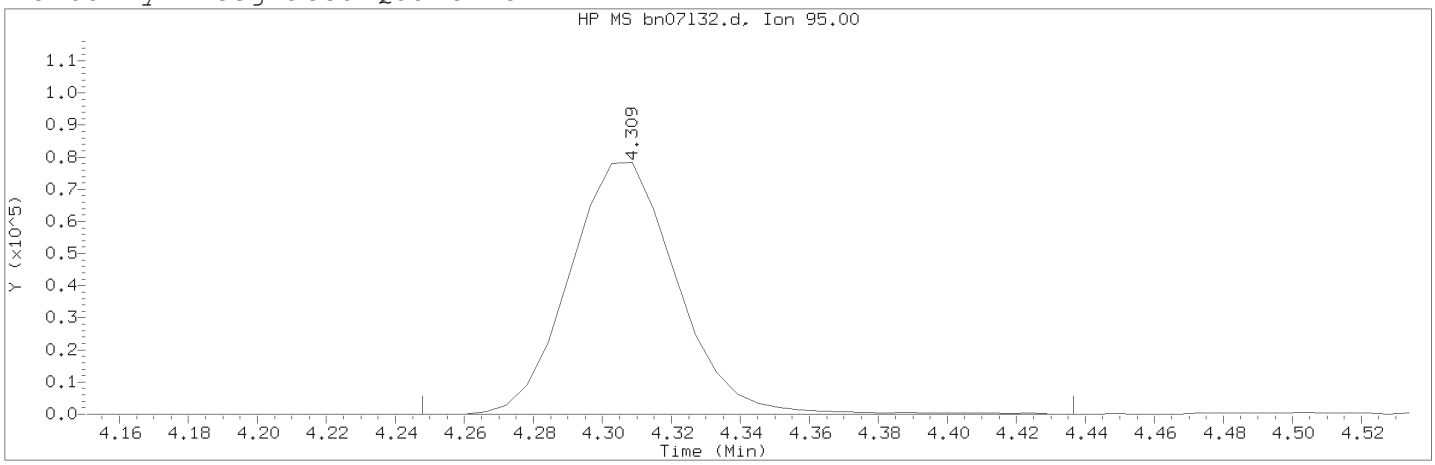
Compound Number : 63
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 458
Retention Time (minutes): 3.615
Quant Ion : 102.00
Area : 76688
On-column Amount (ng) : 54.2168
Integration start scan : 449 Integration stop scan: 479
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 11:03.
Target 3.5 esignature used 11/07/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07132.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:24 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Sample Name: LCDB97 Lab Sample ID: LCDB97

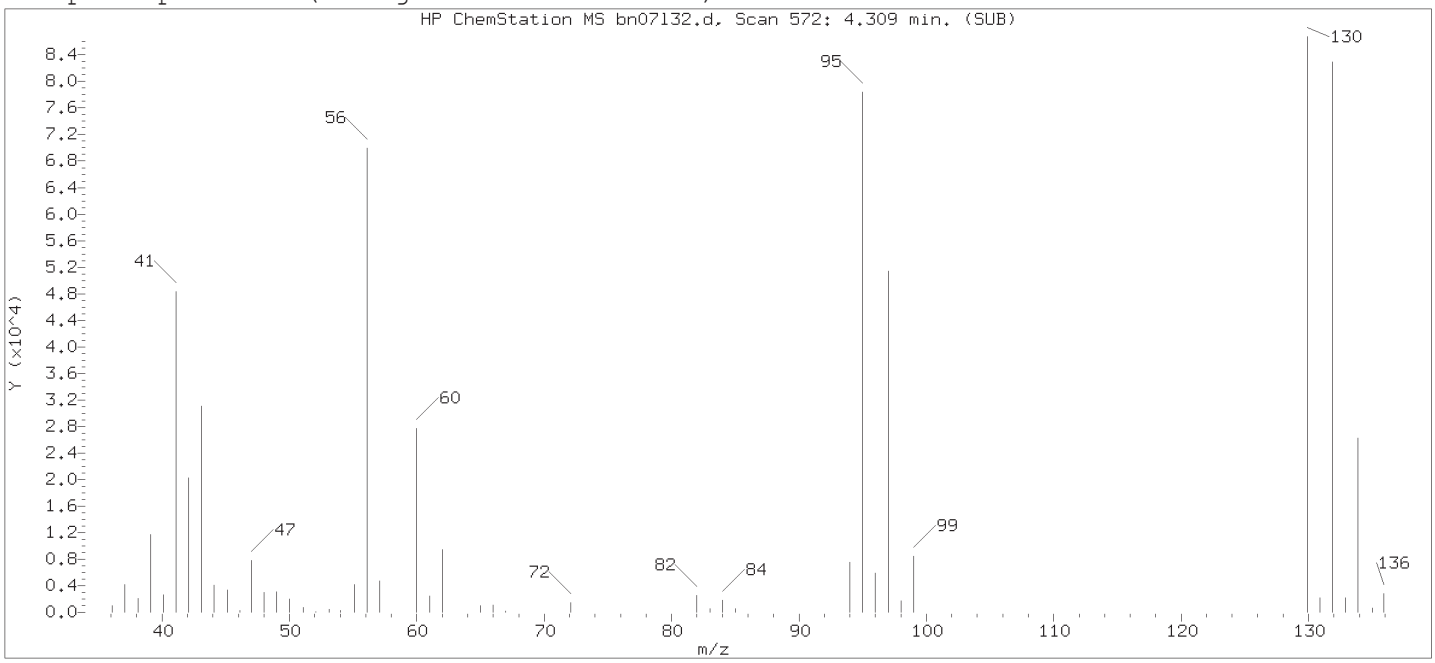
Compound Number : 75
Compound Name : Trichloroethene
Scan Number : 572
Retention Time (minutes): 4.309
Quant Ion : 95.00
Area (flag) : 169610M
On-Column Amount (ng) : 21.6250
Integration start scan : 561 Integration stop scan: 592
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

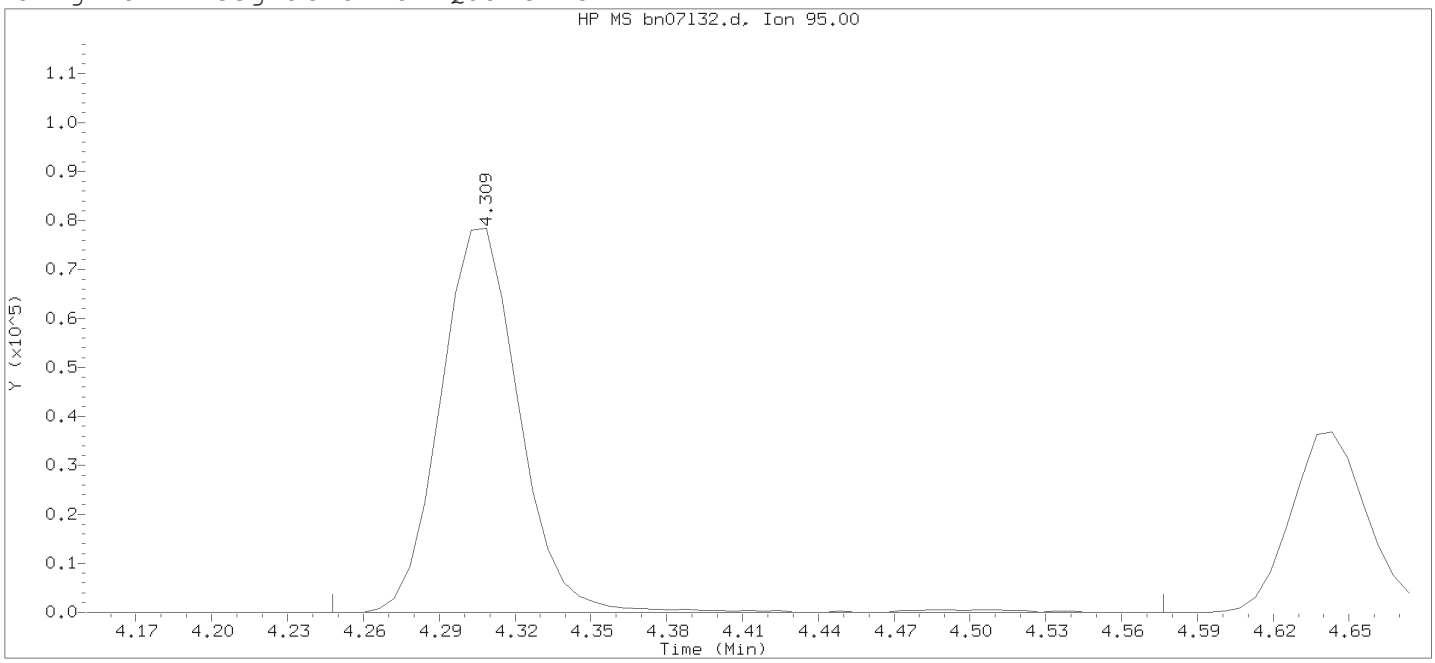
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kerri E. Legerlotz on 11/12/2018 at 14:12.
PARALLAX ID: kel01973

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07132.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:24 Analyst ID: JKH09052

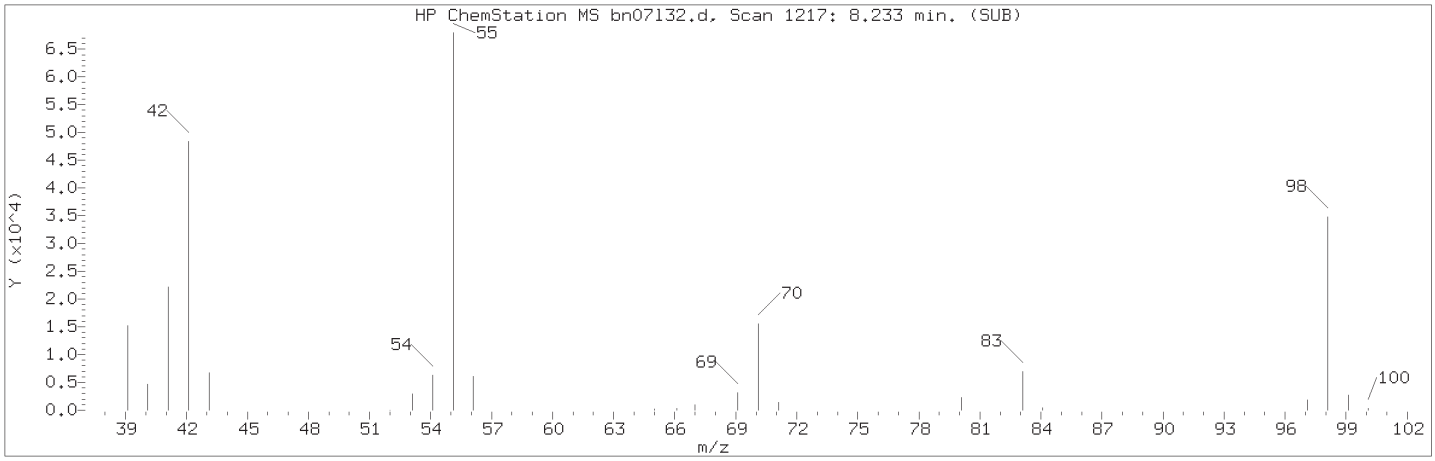
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:40 jkh09052

Sample Name: LCDB97 Lab Sample ID: LCDB97

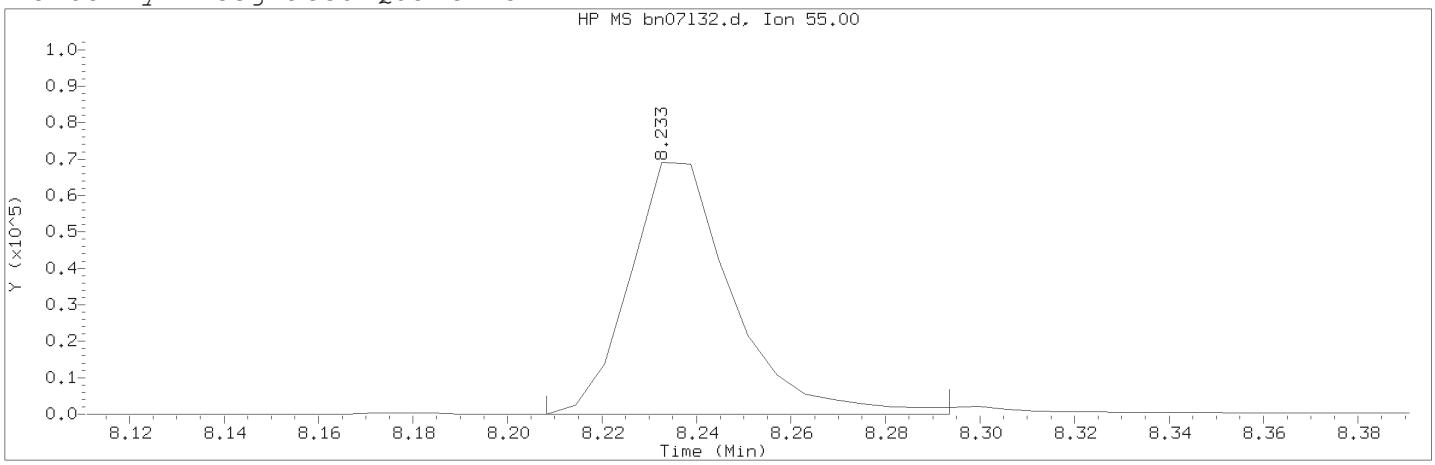
Compound Number : 75
Compound Name : Trichloroethene
Scan Number : 572
Retention Time (minutes): 4.309
Quant Ion : 95.00
Area : 171331
On-column Amount (ng) : 21.8445
Integration start scan : 561 Integration stop scan: 615
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 11:03.
Target 3.5 esignature used 11/07/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07132.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:24 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Sample Name: LCDB97 Lab Sample ID: LCDB97

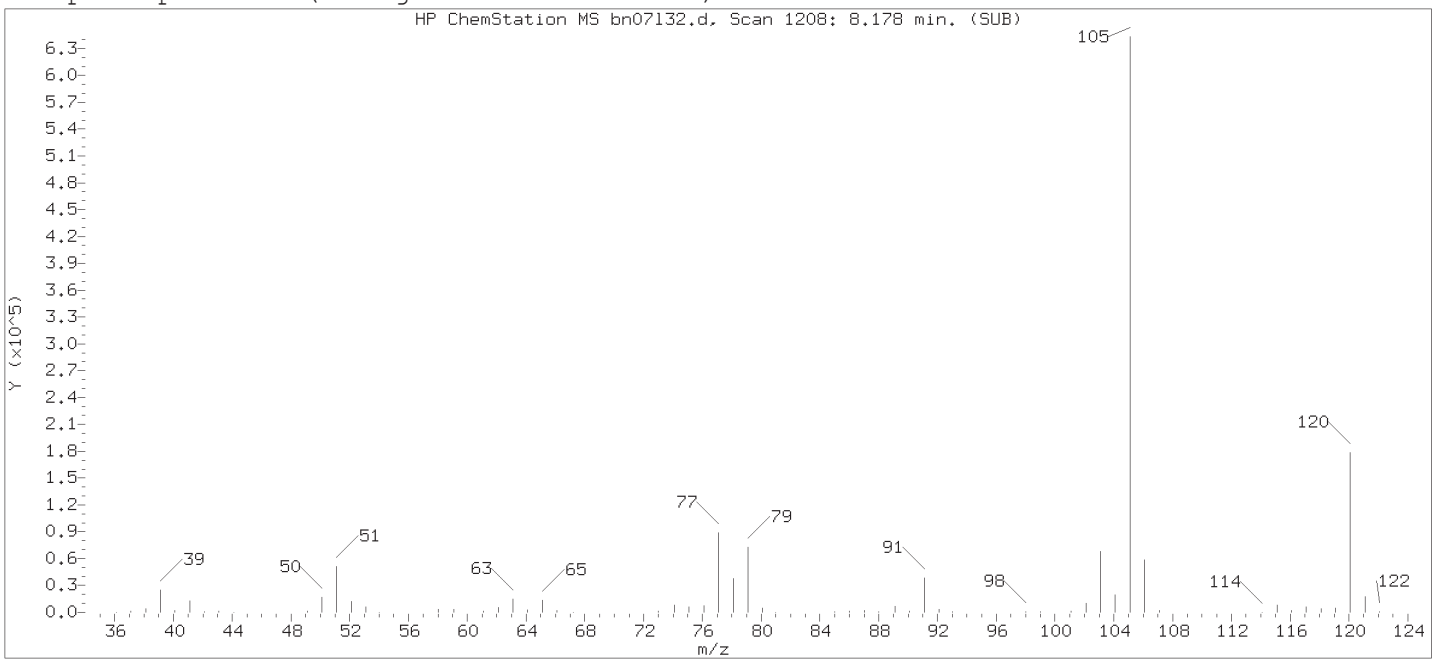
Compound Number : 118
Compound Name : Cyclohexanone
Scan Number : 1217
Retention Time (minutes): 8.233
Quant Ion : 55.00
Area (flag) : 104563MA
On-Column Amount (ng) : 348.6833
Integration start scan : 1212 Integration stop scan: 1226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

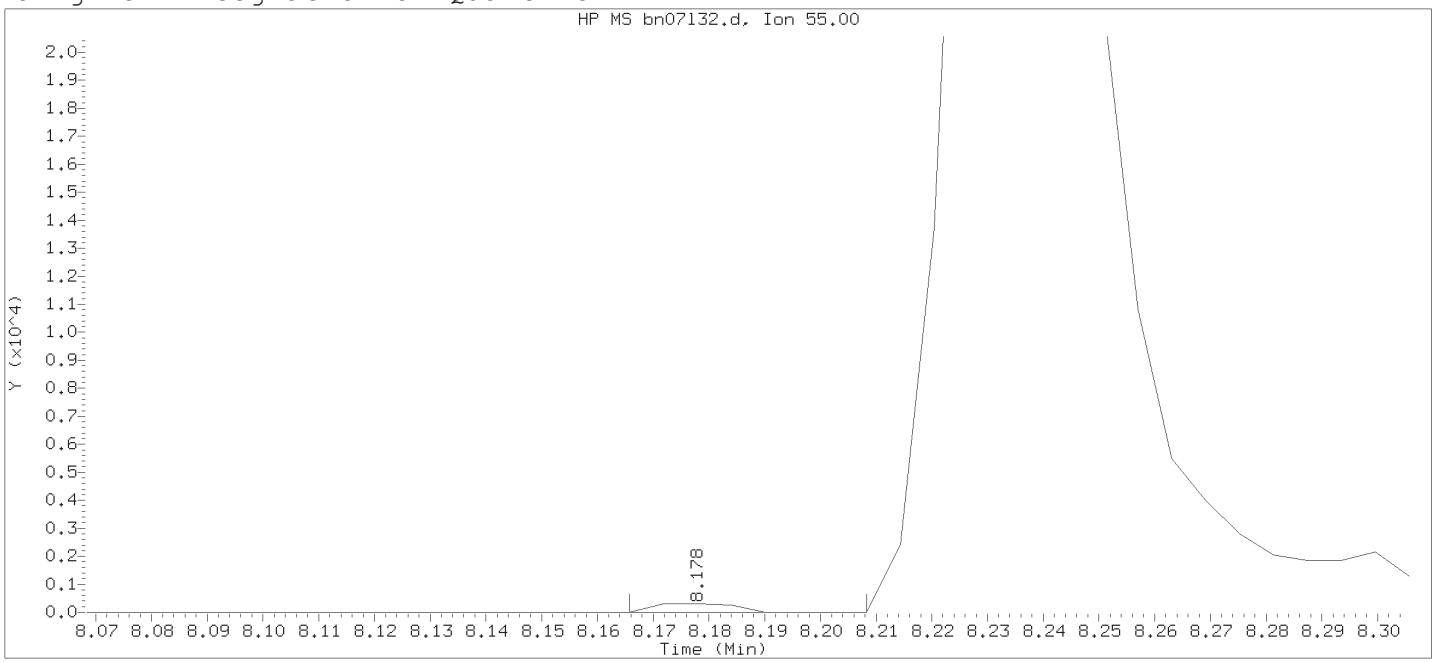
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kerri E. Legerlotz on 11/12/2018 at 14:12.
PARALLAX ID: kel01973

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07132.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:24 Analyst ID: JKH09052

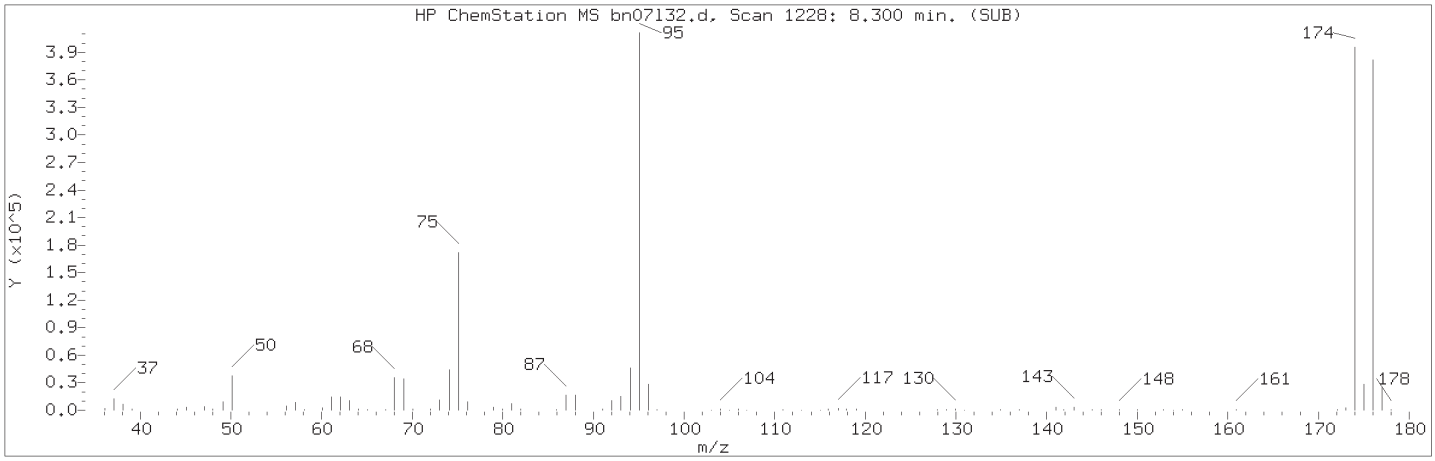
Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:40 jkh09052

Sample Name: LCDB97 Lab Sample ID: LCDB97

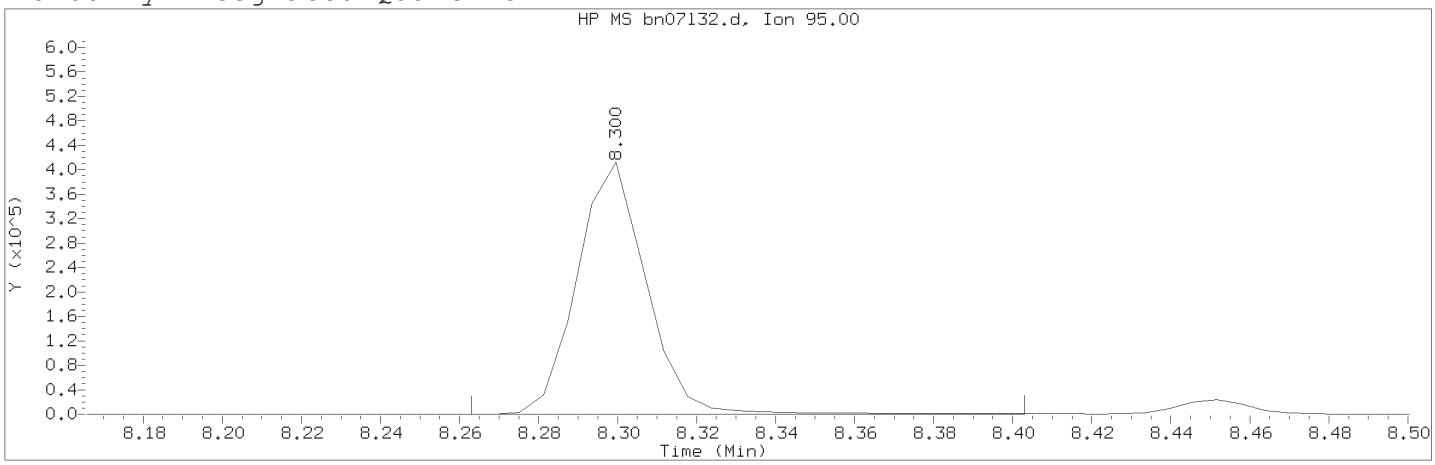
Compound Number	: 118		
Compound Name	: Cyclohexanone		
Scan Number	: 1208		
Retention Time (minutes)	: 8.178		
Quant Ion	: 55.00		
Area	: 319		
On-column Amount (ng)	: 1.0651		
Integration start scan	: 1205	Integration stop scan:	1212
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 11:03.
Target 3.5 esignature used 11/07/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07132.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:24 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:56 jkh09052

Sample Name: LCDB97 Lab Sample ID: LCDB97

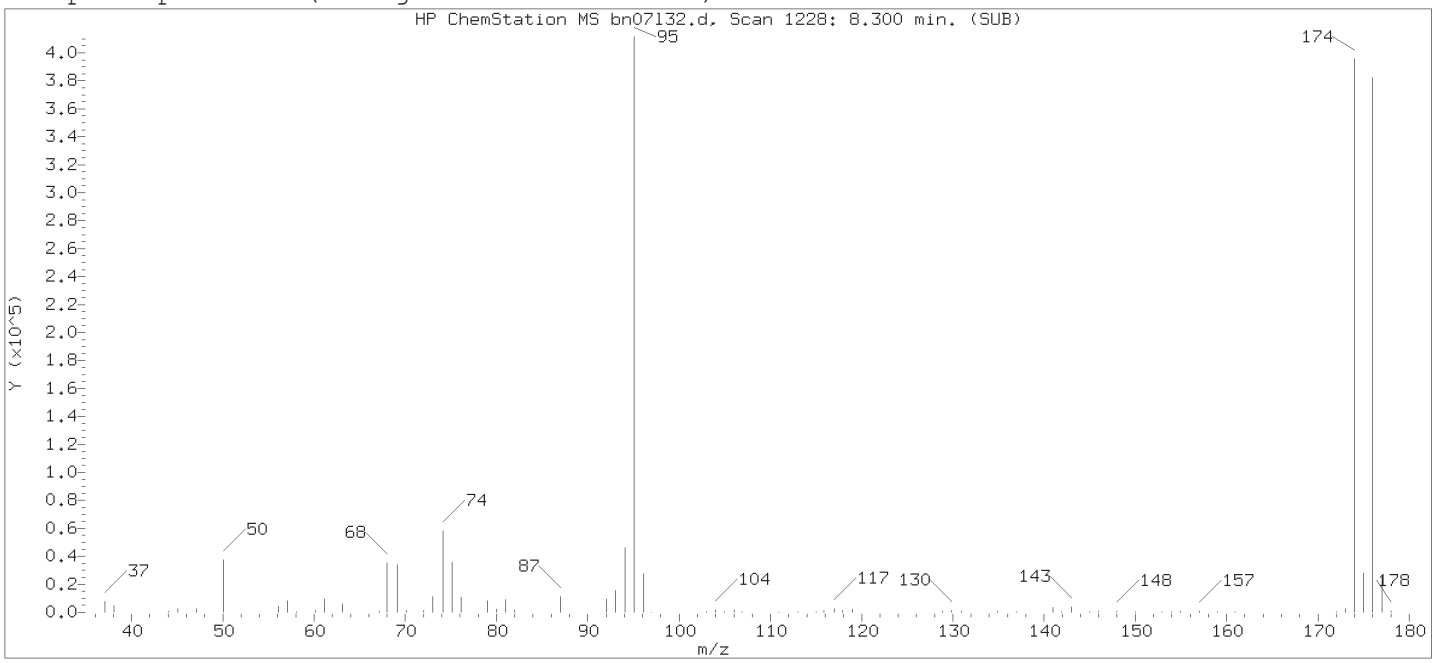
Compound Number : 119
Compound Name : 4-Bromofluorobenzene
Scan Number : 1228
Retention Time (minutes): 8.300
Quant Ion : 95.00
Area (flag) : 498906M
On-Column Amount (ng) : 49.6714
Integration start scan : 1221 Integration stop scan: 1244
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

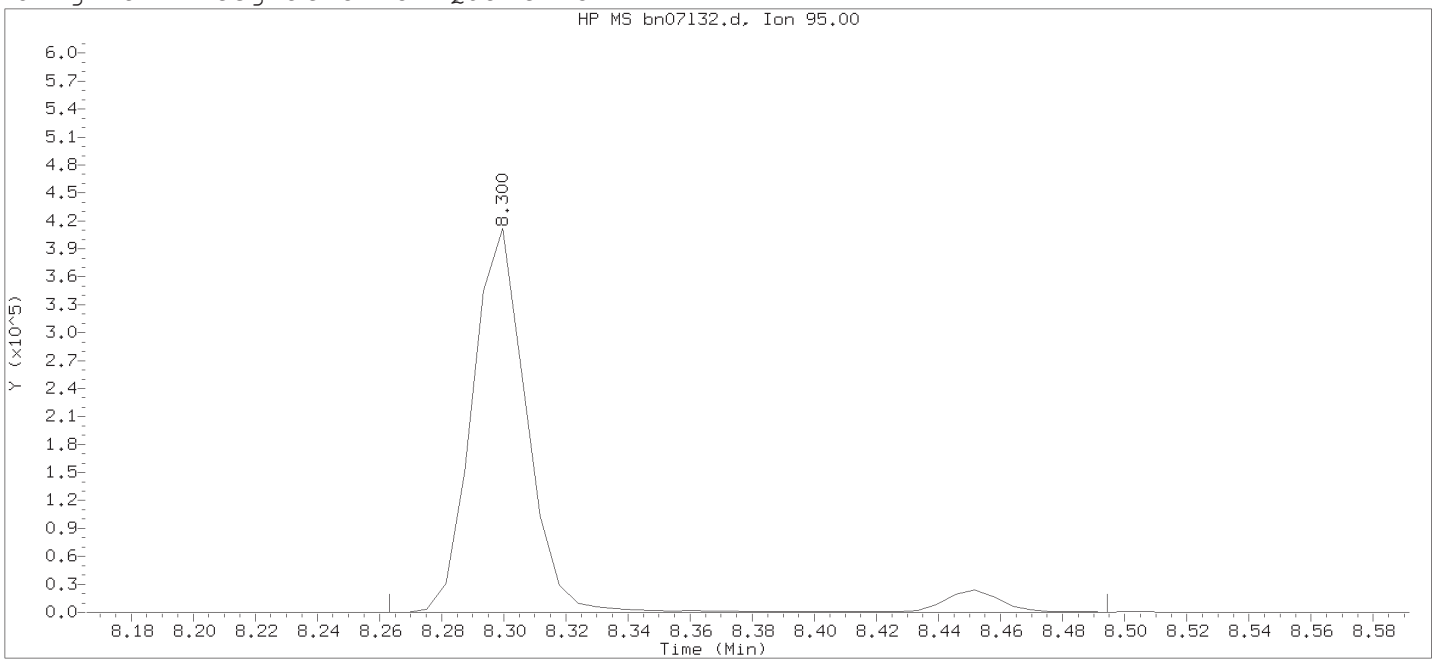
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/07/2018 at 11:03.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kerri E. Legerlotz on 11/12/2018 at 14:12.
PARALLAX ID: kel01973

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09953.i/18nov07a.b/bn07132.d Instrument ID: HP09953.i
Injection date and time: 07-NOV-2018 09:24 Analyst ID: JKH09052

Method used: /chem2/HP09953.i/18nov07a.b/di8260c.m Sublist used: B183112
Calibration date and time: 07-NOV-2018 10:39
Date, time and analyst ID of latest file update: 07-Nov-2018 10:40 jkh09052

Sample Name: LCDB97 Lab Sample ID: LCDB97

Compound Number : 119
Compound Name : 4-Bromofluorobenzene
Scan Number : 1228
Retention Time (minutes): 8.300
Quant Ion : 95.00
Area : 529222
On-column Amount (ng) : 52.6897
Integration start scan : 1221 Integration stop scan: 1259
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/07/2018 at 11:03.
Target 3.5 esignature used 11/07/2018

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSH97

Data file: /chem2/HP19094.i/18nov05b.b/hn05s73.d Injection date and time: **05-NOV-2018 21:43**
Data file Sample Info. Line: LCSH97;LCSH97;1;3;LCS;;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 15:11 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18nov05b.b/hn05b10.d**

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: **25789SM**
Calibration date and time (Last Method Edit): 06-NOV-2018 09:05
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18nov05b.b/hn05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.489	(-0.006)	476	65	122558	(0)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2570449	(1)	10.00	
97) Chlorobenzene-d5	11.378	(0.006)	1606	117	1839489	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	937740	(2)	10.00	

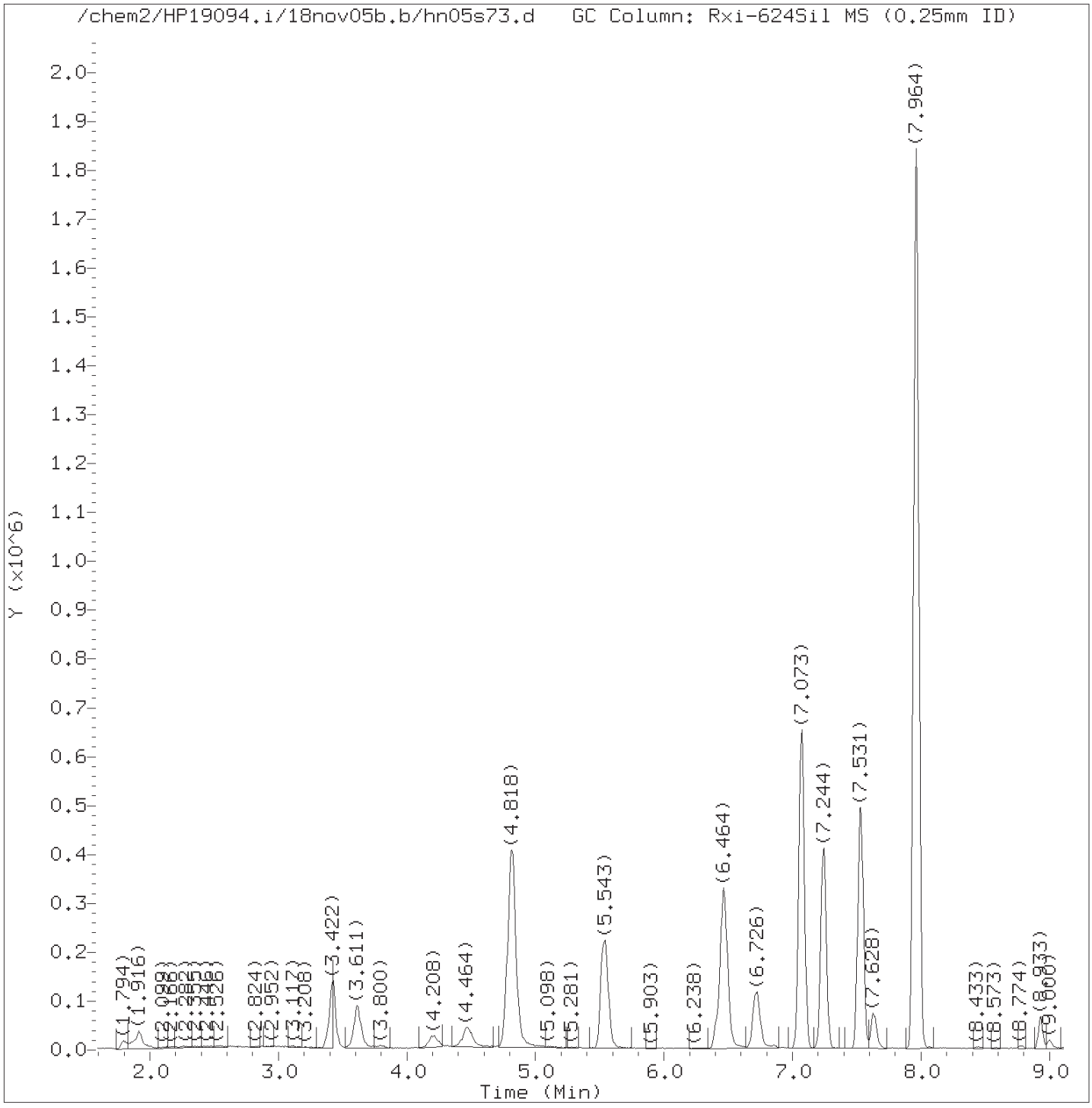
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.067	(0.000)	113	618684	9.550	95%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	111320	9.856	99%		81 - 118
82) Toluene-d8	(3)	9.951	(0.000)	98	2485166	10.497	105%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371	(-0.001)	95	863717	10.020	100%		85 - 114

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
112) Cyclohexanone	(1)	12.310	(0.003)	55	79688	98.721	98.72			2	25

Total number of targets = 1

Digitally signed by Joel G. Chachapoya on 11/07/2018 at 15:13. Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

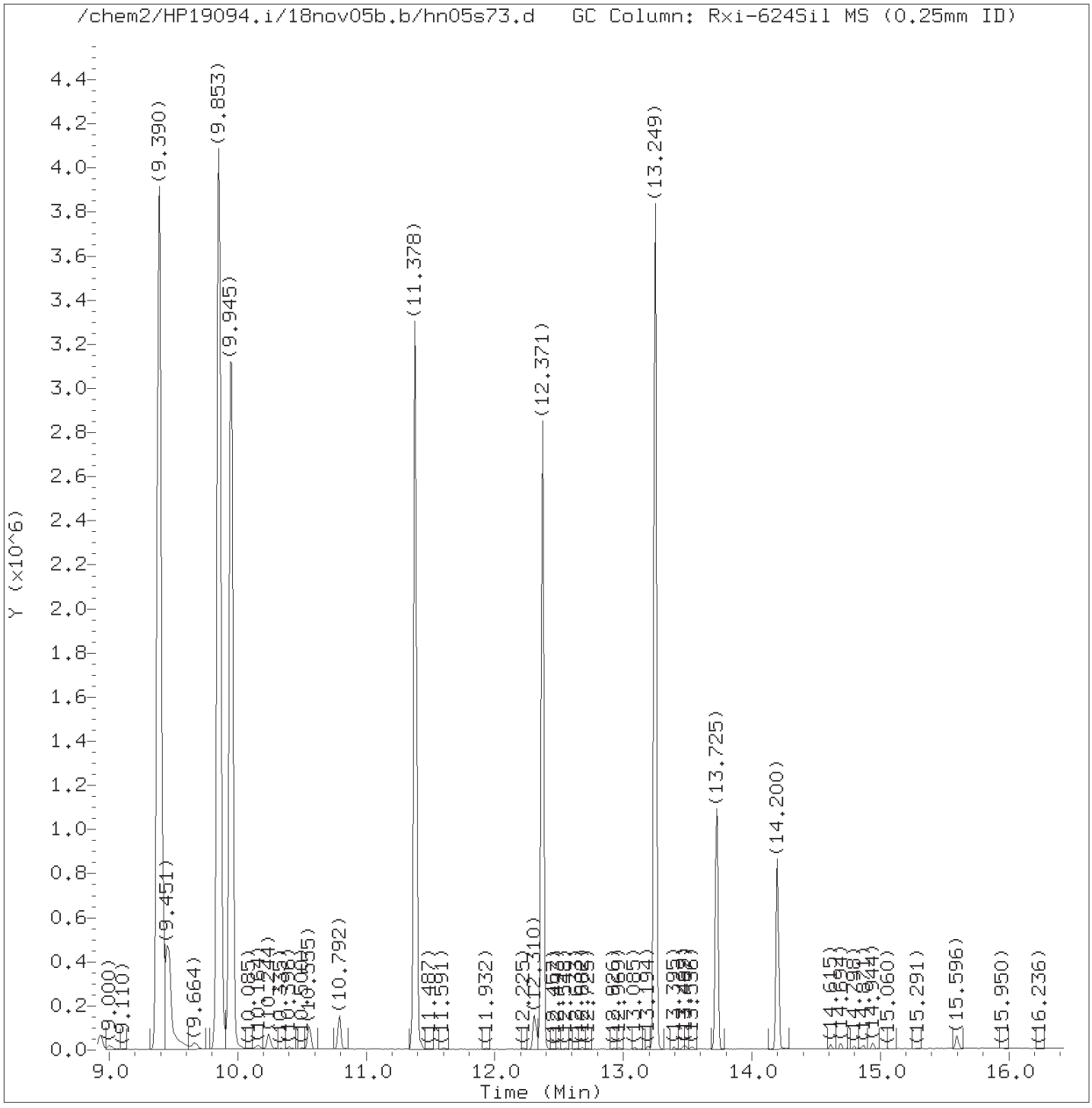
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s73.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 21:43 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789SM
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 07-Nov-2018 15:11 jgc14951

Sample Name: LCSH97 Lab Sample ID: LCSH97

Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s73.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 21:43 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789SM
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 07-Nov-2018 15:11 jgc14951

Sample Name: LCSH97 Lab Sample ID: LCSH97

Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s73.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 21:43 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789SM
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 07-Nov-2018 15:11 jgc14951

Sample Name: LCSH97 Lab Sample ID: LCSH97

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.489	65	122558	50.000
50)$Dibromofluoromethane	(2)	7.067	113	618684	9.550
57)$1,2-Dichloroethane-d4	(2)	7.525	102	111320	9.856
63)*Fluorobenzene	(2)	7.964	96	2570449	10.000
82)$Toluene-d8	(3)	9.951	98	2485166	10.497
97)*Chlorobenzene-d5	(3)	11.378	117	1839489	10.000
112) Cyclohexanone	(1)	12.310	55	79688	98.721
111)$4-Bromofluorobenzene	(3)	12.371	95	863717	10.020
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	937740	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05s74.d Injection date and time: **05-NOV-2018 22:05**
Data file Sample Info. Line: LCDH97;LCDH97;1;3;LCSD;;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 15:12 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18nov05b.b/hn05b10.d**

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: **25789SM**
Calibration date and time (Last Method Edit): 06-NOV-2018 09:05
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18nov05b.b/hn05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.483	(0.000)	475	65	125004M	(2)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2585990	(1)	10.00	
97) Chlorobenzene-d5	11.377	(0.006)	1606	117	1868311	(0)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	942166	(2)	10.00	

M = Internal Standard was manually integrated

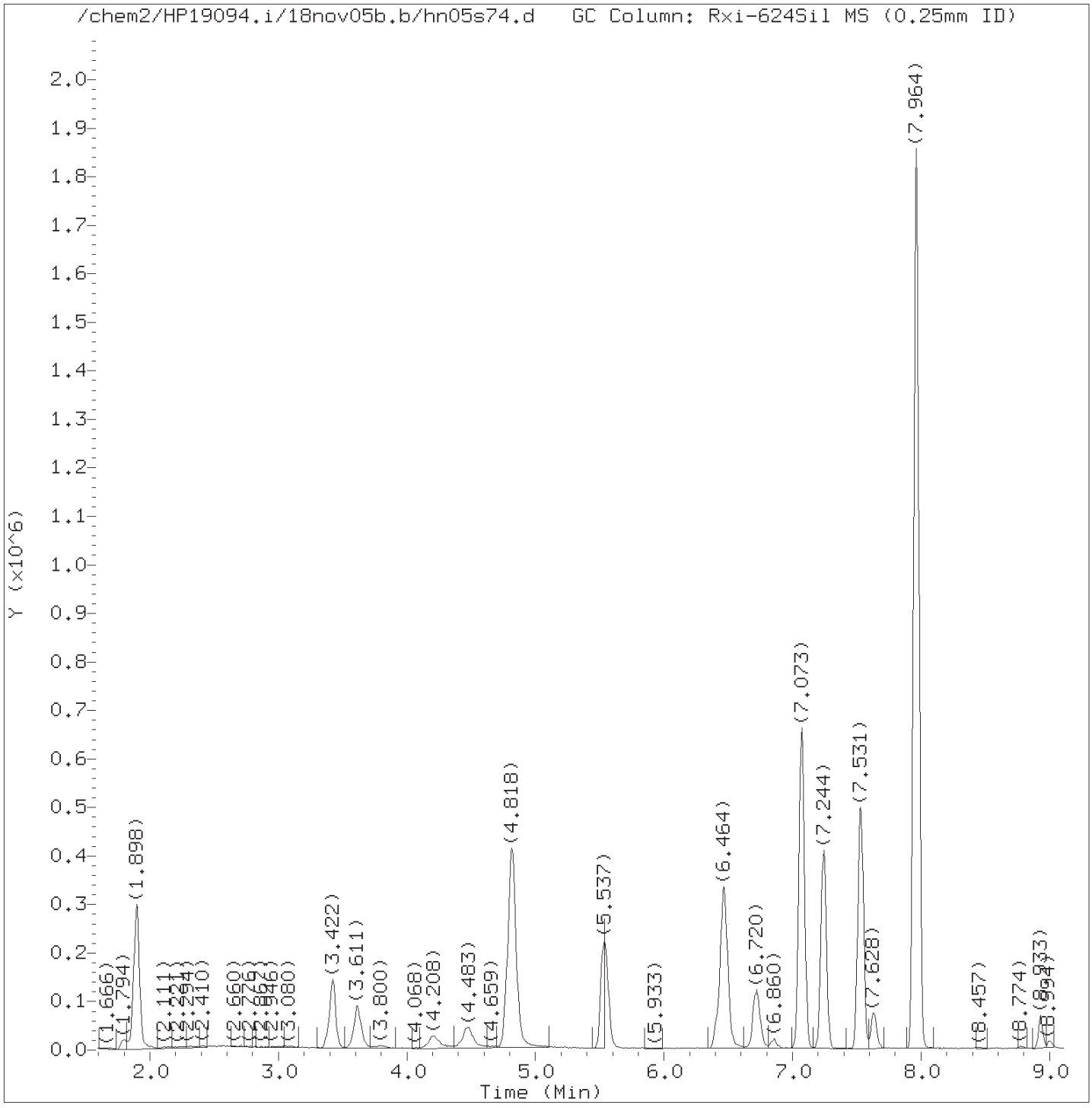
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.073	(-0.001)	113	626823	9.617	96%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.537	(-0.001)	102	118698	10.447	104%		81 - 118
82) Toluene-d8	(3)	9.945	(0.000)	98	2509422	10.436	104%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371	(-0.001)	95	870444	9.942	99%		85 - 114

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
112) Cyclohexanone	(1)	12.304	(0.001)	55	90994	110.522	110.52			2	25

Total number of targets = 1

Digitally signed by Joel G. Chachapoya on 11/07/2018 at 15:13. Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

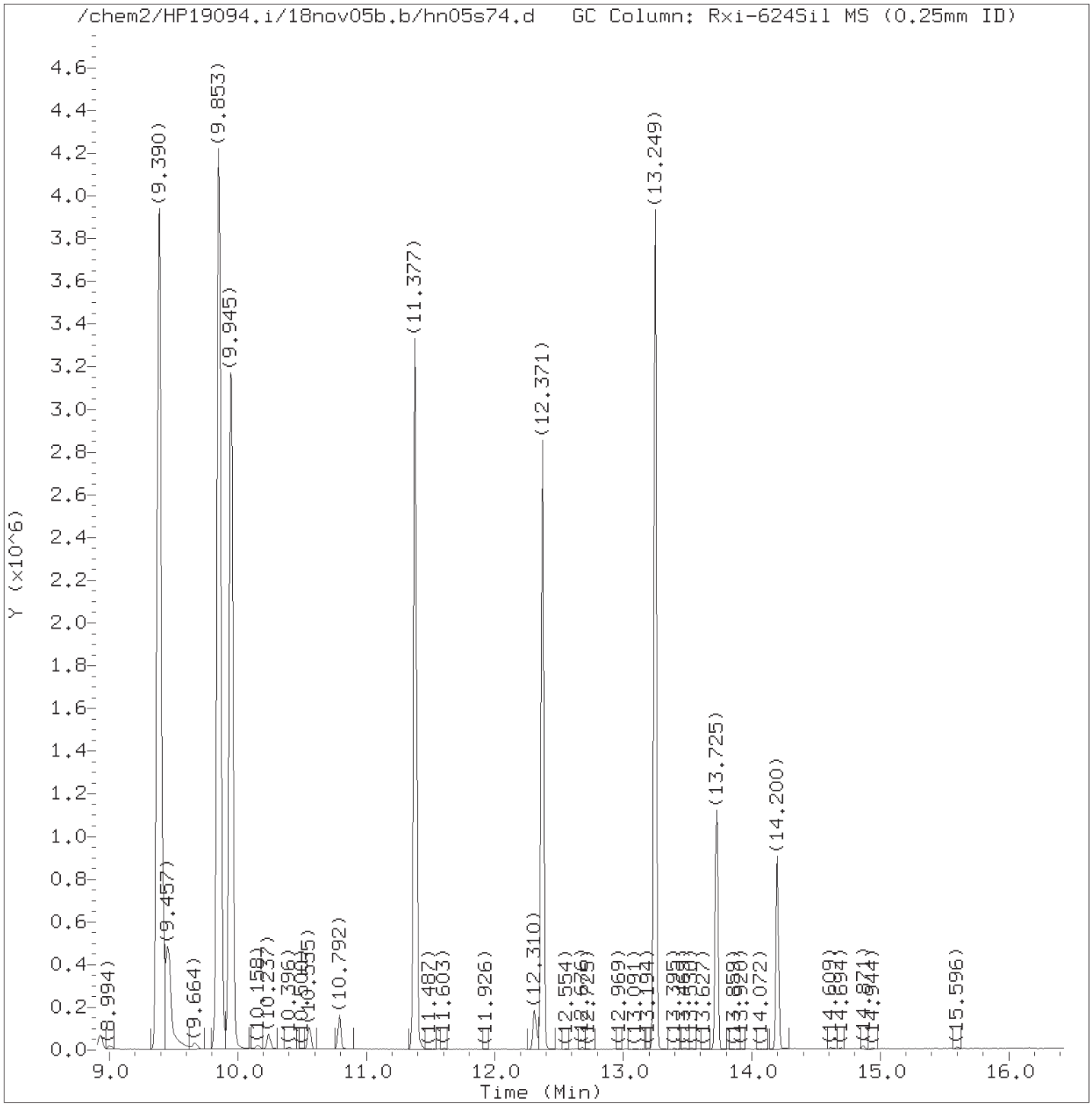
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s74.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 22:05 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789SM
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 07-Nov-2018 15:12 jgc14951

Sample Name: LCDH97 Lab Sample ID: LCDH97

Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s74.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 22:05 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789SM
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 07-Nov-2018 15:12 jgc14951

Sample Name: LCDH97 Lab Sample ID: LCDH97

Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s74.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 22:05 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789SM
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 07-Nov-2018 15:12 jgc14951

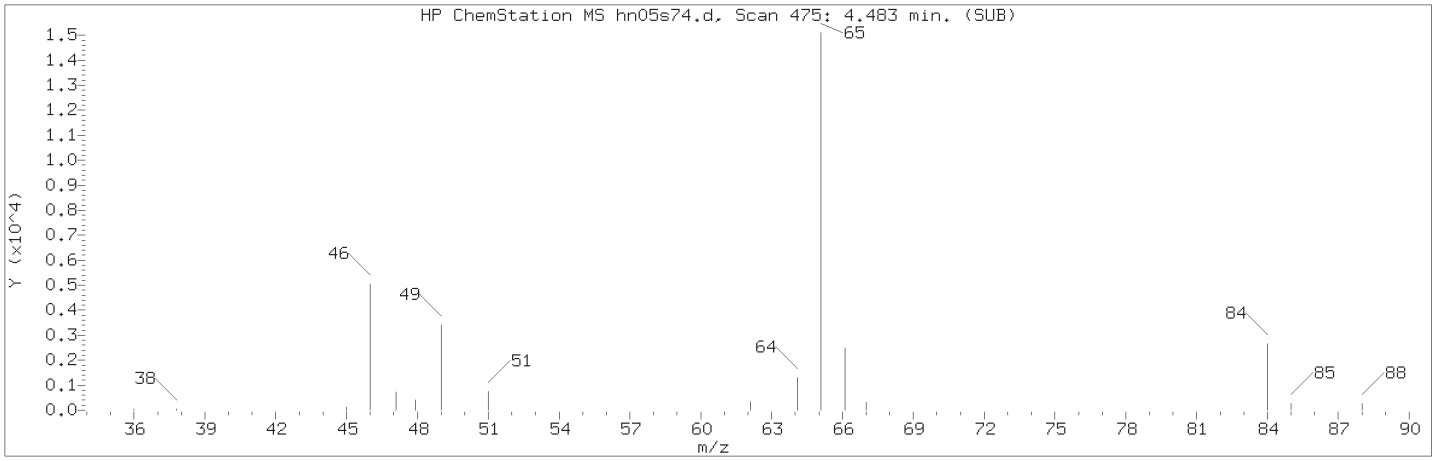
Sample Name: LCDH97 Lab Sample ID: LCDH97

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.483	65	125004M	50.000
50)$Dibromofluoromethane	(2)	7.073	113	626823	9.617
57)$1,2-Dichloroethane-d4	(2)	7.537	102	118698	10.447
63)*Fluorobenzene	(2)	7.964	96	2585990	10.000
82)$Toluene-d8	(3)	9.945	98	2509422	10.436
97)*Chlorobenzene-d5	(3)	11.377	117	1868311	10.000
112) Cyclohexanone	(1)	12.304	55	90994	110.522
111)$4-Bromofluorobenzene	(3)	12.371	95	870444	9.942
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	942166	10.000

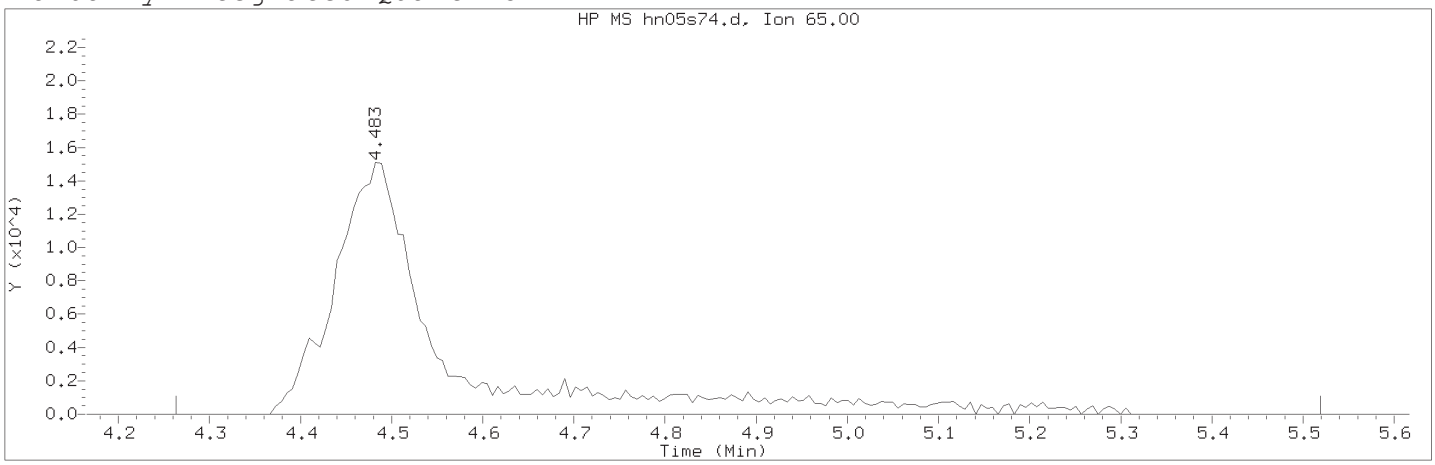
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05s74.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 22:05 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789SM
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 07-Nov-2018 15:12 jgc14951

Sample Name: LCDH97 Lab Sample ID: LCDH97

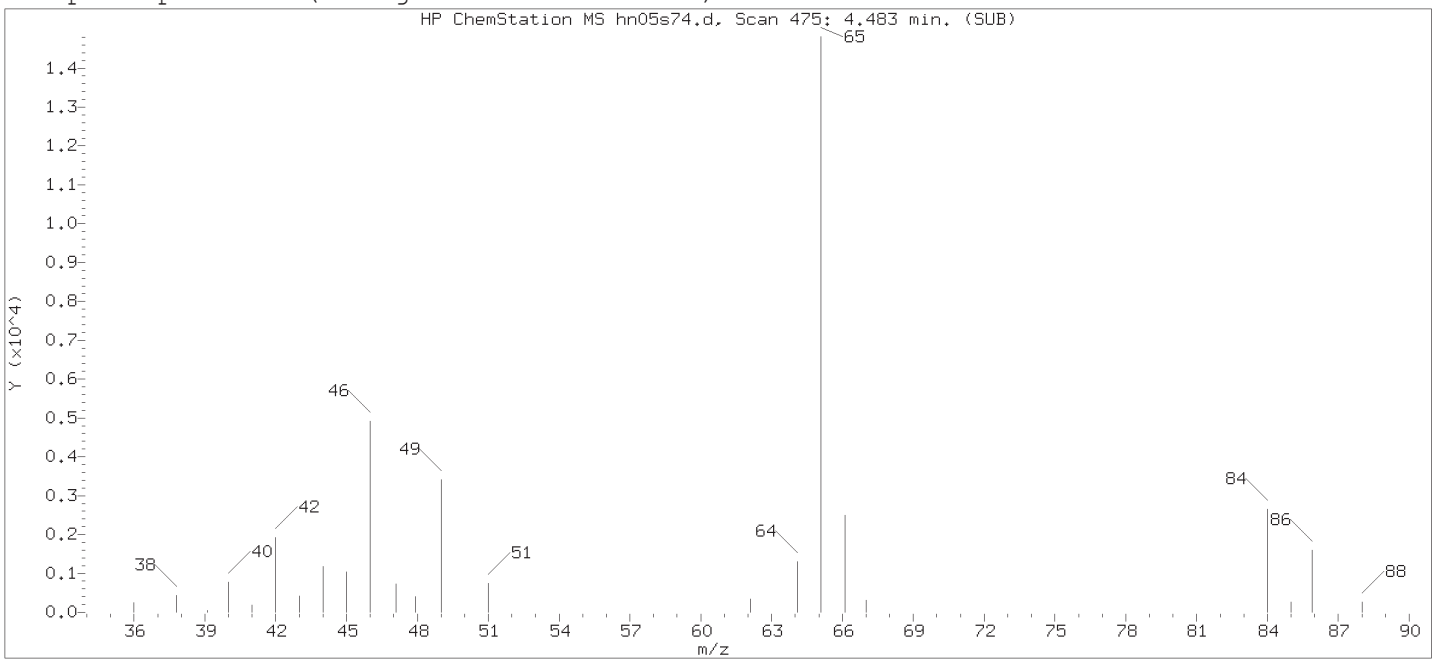
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area (flag) : 125004M
On-Column Amount (ng) : 50.0000
Integration start scan : 438 Integration stop scan: 644
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

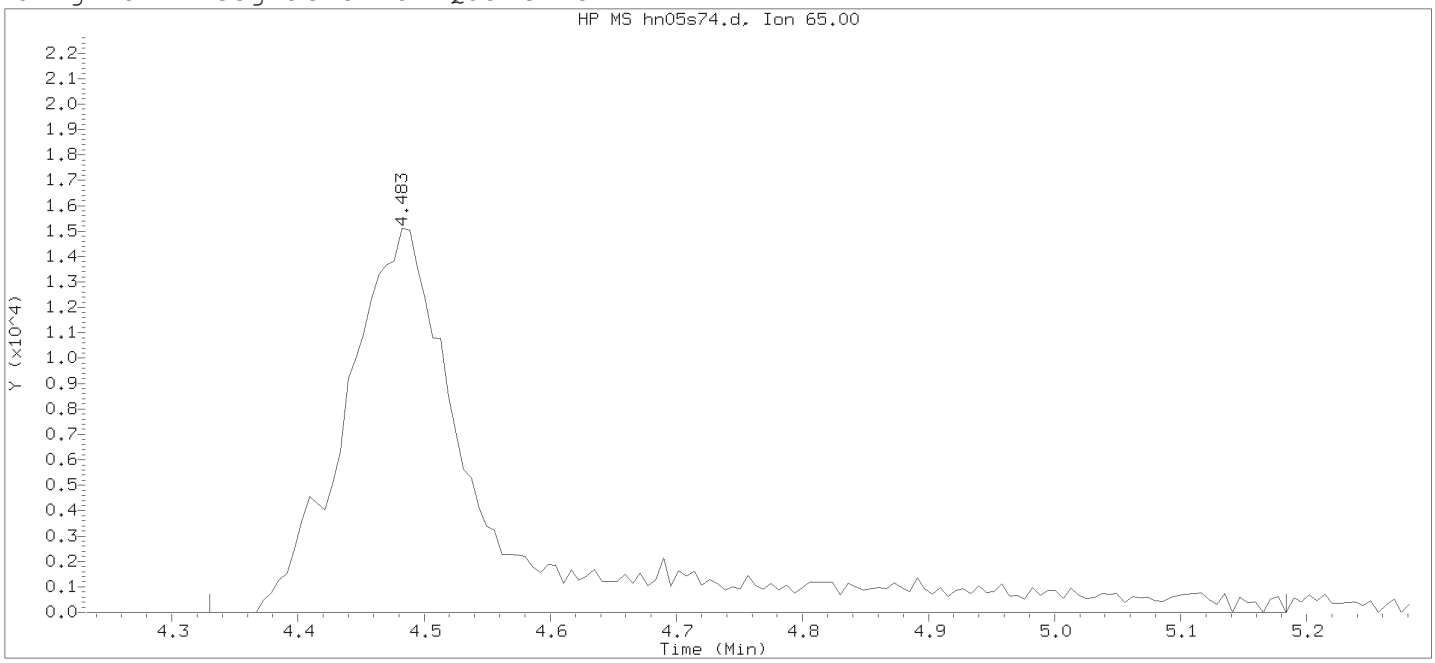
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05s74.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 22:05 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: SMQC-2
Calibration date and time: 05-NOV-2018 22:04
Date, time and analyst ID of latest file update: 05-Nov-2018 23:19 jgc14951

Sample Name: LCDH97 Lab Sample ID: LCDH97

Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area : 122312
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 589
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 11/07/2018 at 15:13.
Target 3.5 esignature used 11/07/2018

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05s72.d Injection date and time: **05-NOV-2018 21:22**
Data file Sample Info. Line: LCSH96;LCSH96;1;3;LCS;;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 15:11 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18nov05b.b/hn05b10.d**

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: **25789-SM**
Calibration date and time (Last Method Edit): 06-NOV-2018 09:05
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18nov05b.b/hn05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.476	(0.006)	474	65	131378	(7)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2594120	(1)	10.00	
97) Chlorobenzene-d5	11.378	(0.006)	1606	117	1875552	(0)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	945698	(3)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(-0.001)	113	624676	9.554	96%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.531	(-0.001)	102	115973	10.175	102%		81 - 118
82) Toluene-d8	(3)	9.945	(0.000)	98	2506286	10.383	104%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371	(-0.001)	95	875537	9.962	100%		85 - 114

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.074	(-0.000)	85	286211	2.823	2.82			0.05	0.5
2) Chloromethane	(2)	2.276	(-0.000)	50	335545	3.380	3.38			0.06	0.5
5) Vinyl Chloride	(2)	2.404	(-0.000)	62	322841	3.472	3.47			0.1	0.5
7) Bromomethane	(2)	2.739	(-0.000)	94	243767	3.372	3.37			0.07	0.5
8) Chloroethane	(2)	2.836	(0.000)	64	196867	3.491	3.49			0.07	0.5
10) Trichlorofluoromethane	(2)	3.141	(0.000)	101	405357	3.451	3.45			0.05	0.5
15) 1,1-Dichloroethene	(2)	3.751	(0.000)	96	229652	4.515	4.52			0.06	0.5
16) Freon 113	(2)	3.794	(-0.000)	101	237417	3.960	3.96			0.06	0.5
14) Acetone	(1)	3.794	(0.000)	43	232383	29.677	29.68			0.9	5
18) Carbon Disulfide	(2)	4.074	(0.000)	76	623413	3.852	3.85			0.06	1
21) Methyl Acetate	(1)	4.233	(0.000)	43	87773	3.993	3.99			0.1	1
23) Methylene Chloride	(2)	4.464	(-0.000)	84	249122	4.342	4.34			0.07	0.5
31) trans-1,2-Dichloroethene	(2)	4.891	(-0.000)	96	260391	4.536	4.54			0.06	0.5
30) Methyl Tertiary Butyl Ether	(2)	4.879	(-0.001)	73	465554	4.450	4.45			0.05	0.5
33) 1,1-Dichloroethane	(2)	5.549	(0.000)	63	497514	4.552	4.55			0.07	0.5
39) cis-1,2-Dichloroethene	(2)	6.378	(-0.000)	96	296191	4.670	4.67			0.05	0.5
38) 2-Butanone	(1)	6.348	(-0.001)	43	422855	32.989	32.99			0.6	5
49) Chloroform	(2)	6.854	(0.000)	83	475019	4.675	4.67			0.09	0.5
51) 1,1,1-Trichloroethane	(2)	7.086	(0.000)	97	394636	4.540	4.54			0.06	0.5
52) Cyclohexane	(2)	7.183	(0.000)	56	447694	3.946	3.95			0.05	0.5
54) Carbon Tetrachloride	(2)	7.293	(0.000)	117	338122	4.529	4.53			0.07	0.5
58) Benzene	(2)	7.561	(0.000)	78	1102224	4.527	4.53			0.05	0.5
59) 1,2-Dichloroethane	(2)	7.634	(0.000)	62	252490	4.506	4.51			0.05	0.5
67) Trichloroethene	(2)	8.439	(-0.000)	95	282017	4.524	4.52			0.06	0.5
69) Methylcyclohexane	(2)	8.750	(-0.000)	83	439931	3.736	3.74			0.05	0.5
70) 1,2-Dichloropropane	(2)	8.780	(-0.000)	63	277576	4.699	4.70			0.06	0.5
74) Bromodichloromethane	(2)	9.122	(-0.000)	83	311472	4.690	4.69			0.05	0.5
80) cis-1,3-Dichloropropene	(2)	9.646	(-0.000)	75	361556	4.676	4.68			0.05	0.5
81) 4-Methyl-2-Pentanone	(1)	9.811	(-0.003)	43	683104	21.425	21.42			0.7	5
83) Toluene	(3)	10.024	(-0.000)	92	680772	4.891	4.89			0.07	0.5
84) trans-1,3-Dichloropropene	(3)	10.268	(0.000)	75	271337	5.060	5.06			0.06	0.5

Digitally signed by Joel G. Chachapoya on 11/07/2018 at 15:13. Target 3.5 esignature user ID: jgc14951

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05s72.d Injection date and time: **05-NOV-2018 21:22**
Data file Sample Info. Line: LCSH96;LCSH96;1;3;LCS;;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 07-Nov-2018 15:11 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18nov05b.b/hn05b10.d**

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: **25789-SM**
Calibration date and time (Last Method Edit): 06-NOV-2018 09:05
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18nov05b.b/hn05c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

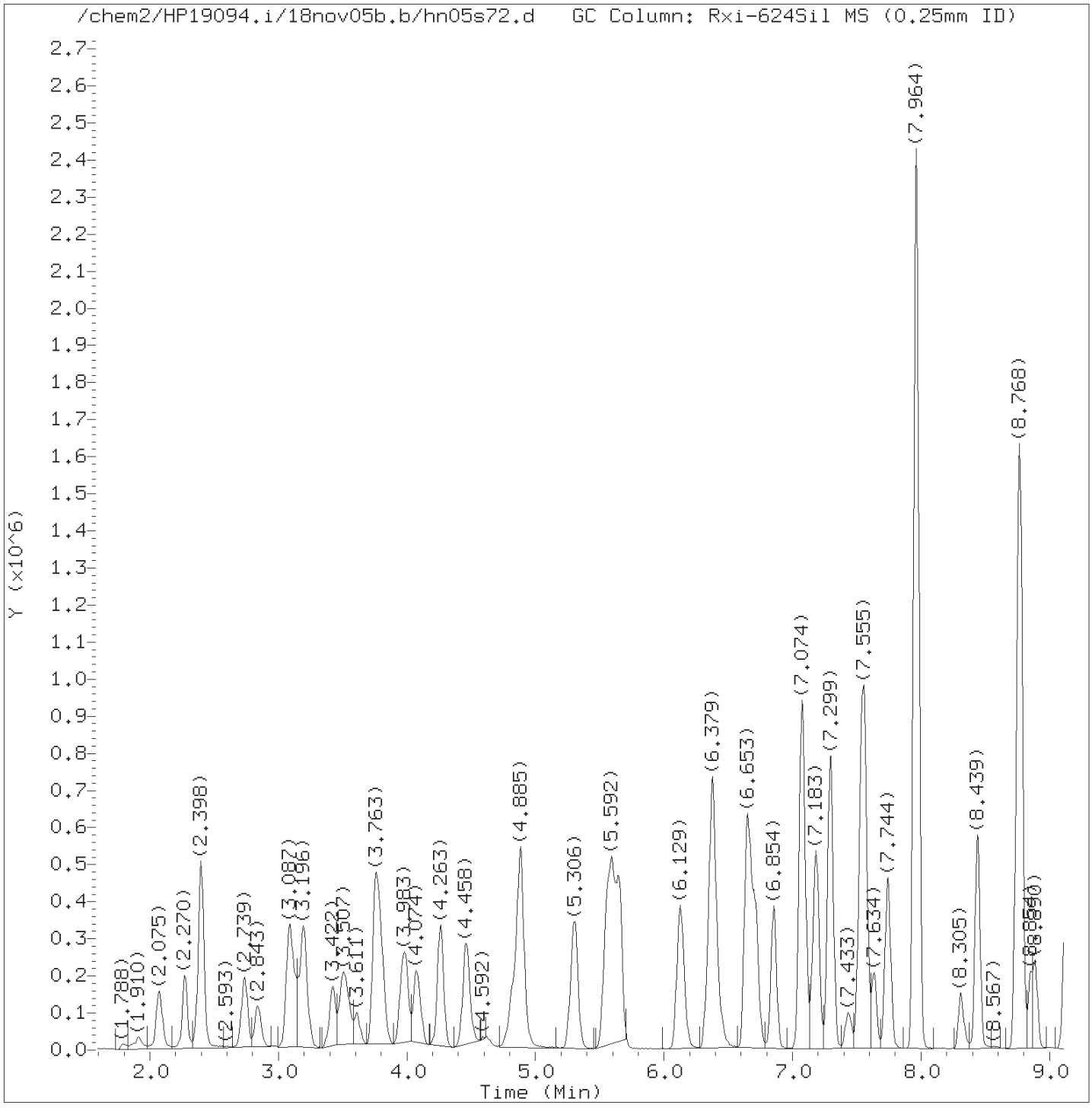
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
88) 1,1,2-Trichloroethane	(3)	10.475(-0.000)	97	165803	5.177	5.18			0.06	0.5
89) Tetrachloroethene	(3)	10.554(0.000)	166	303170	4.821	4.82			0.06	0.5
91) 2-Hexanone	(1)	10.676(-0.003)	43	465804	21.463	21.46			0.6	5
93) Dibromochloromethane	(3)	10.847(-0.000)	129	190837	4.972	4.97			0.07	0.5
95) 1,2-Dibromoethane	(3)	10.957(-0.000)	107	149444	4.978	4.98			0.06	0.5
98) Chlorobenzene	(3)	11.408(-0.000)	112	725539	4.914	4.91			0.06	0.5
100) Ethylbenzene	(3)	11.487(-0.000)	91	1340631	4.928	4.93			0.06	0.5
101) m+p-Xylene	(3)	11.603(-0.000)	106	1002943	9.940	9.94			0.1	0.5
104) o-Xylene	(3)	11.926(-0.000)	106	478743	4.963	4.96			0.05	0.5
105) Xylene (Total)	(3)		106	1481686	14.903	14.90			0.1	0.5
106) Styrene	(3)	11.944(-0.000)	104	777931	5.041	5.04			0.05	0.5
107) Bromoform	(3)	12.103(-0.000)	173	103921	4.926	4.93			0.3	1
108) Isopropylbenzene	(3)	12.225(-0.000)	105	1296221	4.922	4.92			0.05	0.5
113) 1,1,2,2-Tetrachloroethane	(4)	12.469(0.000)	83	186182	4.963	4.96			0.07	0.5
131) 1,3-Dichlorobenzene	(4)	13.194(0.000)	146	559729	4.940	4.94			0.06	0.5
134) 1,4-Dichlorobenzene	(4)	13.267(0.000)	146	551515	4.958	4.96			0.07	0.5
139) 1,2-Dichlorobenzene	(4)	13.524(0.000)	146	490387	4.905	4.91			0.06	0.5
143) 1,2-Dibromo-3-chloropropane	(1)	14.066(-0.004)	155	23277	4.307	4.31			0.1	0.5
145) 1,2,4-Trichlorobenzene	(4)	14.615(0.000)	180	311647	4.539	4.54			0.06	0.5

Total number of targets = 50

Digitally signed by Joel G. Chachapoya on 11/07/2018 at 15:13. Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

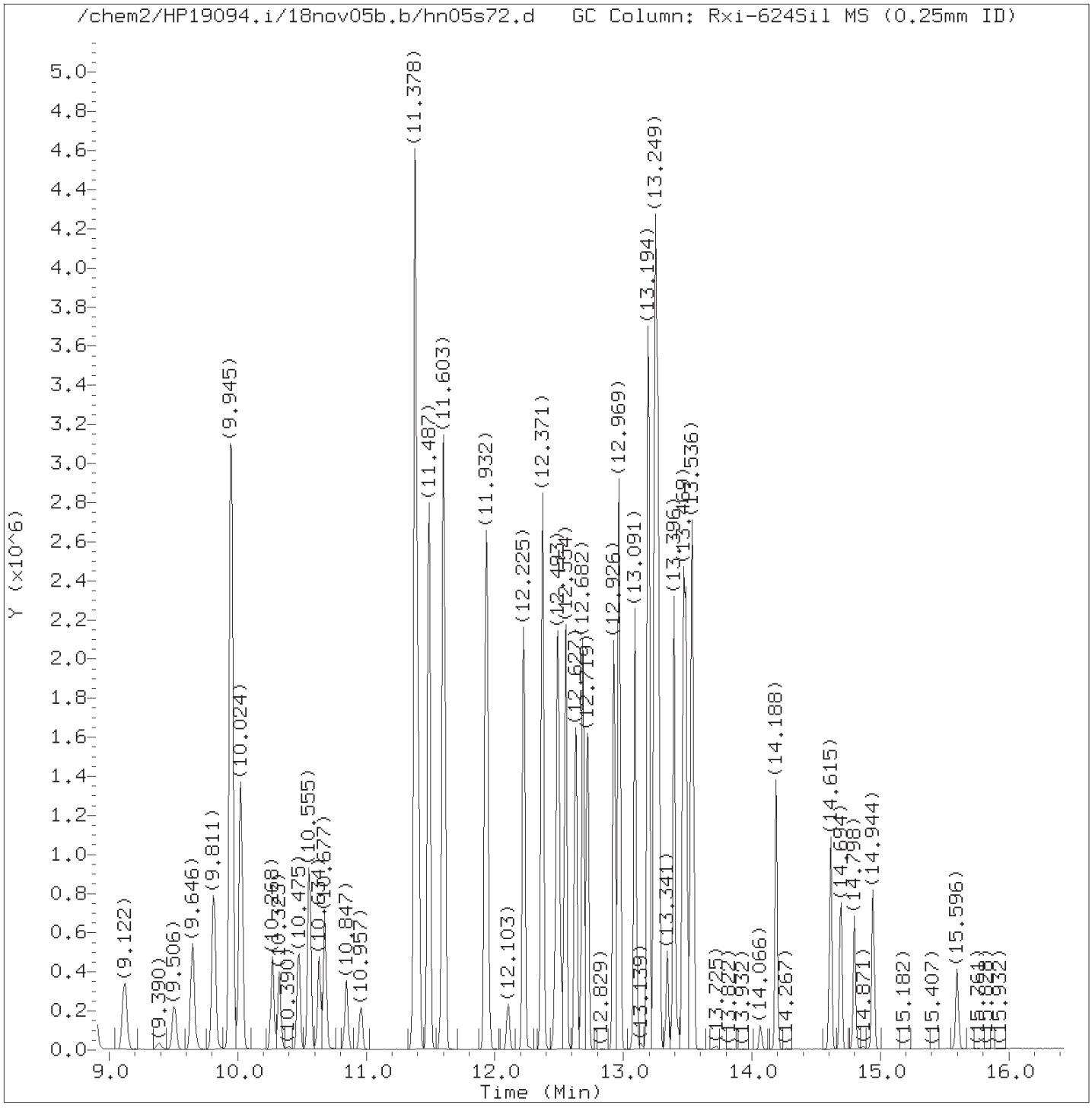
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s72.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 21:22 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 07-Nov-2018 15:11 jgc14951

Sample Name: LCSH96 Lab Sample ID: LCSH96

Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s72.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 21:22 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 07-Nov-2018 15:11 jgc14951

Sample Name: LCSH96 Lab Sample ID: LCSH96

Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s72.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 21:22 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 07-Nov-2018 15:11 jgc14951

Sample Name: LCSH96 Lab Sample ID: LCSH96

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.075	85	286211	2.823
2) Chloromethane	(2)	2.276	50	335545	3.380
5) Vinyl Chloride	(2)	2.404	62	322841	3.472
7) Bromomethane	(2)	2.739	94	243767	3.372
8) Chloroethane	(2)	2.837	64	196867	3.491
10) Trichlorofluoromethane	(2)	3.141	101	405357	3.451
15) 1,1-Dichloroethene	(2)	3.751	96	229652	4.515
16) Freon 113	(2)	3.794	101	237417	3.960
14) Acetone	(1)	3.794	43	232383	29.677
18) Carbon Disulfide	(2)	4.074	76	623413	3.852
21) Methyl Acetate	(1)	4.233	43	87773	3.993
23) Methylene Chloride	(2)	4.464	84	249122	4.342
26)*t-Butyl Alcohol-d10	(1)	4.476	65	131378	50.000
30) Methyl Tertiary Butyl Ether	(2)	4.879	73	465554	4.450
31) trans-1,2-Dichloroethene	(2)	4.891	96	260391	4.536
33) 1,1-Dichloroethane	(2)	5.549	63	497514	4.552
38) 2-Butanone	(1)	6.348	43	422855	32.989
39) cis-1,2-Dichloroethene	(2)	6.379	96	296191	4.670
49) Chloroform	(2)	6.854	83	475019	4.675
50)$Dibromofluoromethane	(2)	7.074	113	624676	9.554
51) 1,1,1-Trichloroethane	(2)	7.086	97	394636	4.540
52) Cyclohexane	(2)	7.183	56	447694	3.946
54) Carbon Tetrachloride	(2)	7.293	117	338122	4.529
57)$1,2-Dichloroethane-d4	(2)	7.531	102	115973	10.175
58) Benzene	(2)	7.561	78	1102224	4.527
59) 1,2-Dichloroethane	(2)	7.634	62	252490	4.506
63)*Fluorobenzene	(2)	7.964	96	2594120	10.000
67) Trichloroethene	(2)	8.439	95	282017	4.524
69) Methylcyclohexane	(2)	8.750	83	439931	3.736
70) 1,2-Dichloropropane	(2)	8.781	63	277576	4.699
74) Bromodichloromethane	(2)	9.122	83	311472	4.690
80) cis-1,3-Dichloropropene	(2)	9.646	75	361556	4.676
81) 4-Methyl-2-Pentanone	(1)	9.811	43	683104	21.425
82)$Toluene-d8	(3)	9.945	98	2506286	10.383
83) Toluene	(3)	10.024	92	680772	4.891
84) trans-1,3-Dichloropropene	(3)	10.268	75	271337	5.060
88) 1,1,2-Trichloroethane	(3)	10.475	97	165803	5.177
89) Tetrachloroethene	(3)	10.555	166	303170	4.821

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s72.d Instrument ID: HP19094.i
Injection date and time: 05-NOV-2018 21:22 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 07-Nov-2018 15:11 jgc14951

Sample Name: LCSH96 Lab Sample ID: LCSH96

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 2-Hexanone	(1)	10.677	43	465804	21.463
93) Dibromochloromethane	(3)	10.847	129	190837	4.972
95) 1,2-Dibromoethane	(3)	10.957	107	149444	4.978
97)*Chlorobenzene-d5	(3)	11.378	117	1875552	10.000
98) Chlorobenzene	(3)	11.408	112	725539	4.914
100) Ethylbenzene	(3)	11.487	91	1340631	4.928
101) m+p-Xylene	(3)	11.603	106	1002943	9.940
105) Xylene (Total)	(3)		106	1481686	14.903
104) o-Xylene	(3)	11.926	106	478743	4.963
106) Styrene	(3)	11.945	104	777931	5.041
107) Bromoform	(3)	12.103	173	103921	4.926
108) Isopropylbenzene	(3)	12.225	105	1296221	4.922
111)$4-Bromofluorobenzene	(3)	12.371	95	875537	9.962
113) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	186182	4.963
131) 1,3-Dichlorobenzene	(4)	13.194	146	559729	4.940
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	945698	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	551515	4.958
139) 1,2-Dichlorobenzene	(4)	13.524	146	490387	4.905
143) 1,2-Dibromo-3-chloropropane	(1)	14.066	155	23277	4.307
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	311647	4.539

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951

Preparation Logs

Volatiles by GC/MS

eurofins | Lancaster Laboratories Environmental

VOA Prep Summary by SDG: TID10

21 - GC/MS Volatiles

Sample Number	Bottle Code	Prep Analysis#	Vial ID	Used for Analysis?	Collected	Prepared	Initial Weight	Final Weight	Net soil weight	Weight requirement	Meets require-ments?	Preserv. lot #	Preservative (volume)	Final Extraction Vol (mL)	Problem Codes
9867761	014A	07579	18818192	N	10/24/18 09:15	10/24/18 09:15	29.56 g	33.97 g	4.41 g	4.50 g - 5.50 g	N	17102494	MeOH (5 mL)	5.000	A
9867761	050A	06176	18818190	Y	10/24/18 09:15	10/25/18 16:09	31.96 g	37.00 g	5.04 g	4.50 g - 5.50 g	Y	3-27-17	DI Water (5 mL)	5.000	
9867761	050B	06176	18818191	Y	10/24/18 09:15	10/25/18 16:09	32.05 g	36.72 g	4.67 g	4.50 g - 5.50 g	Y	3-27-17	DI Water (5 mL)	5.000	
9867762	014A	07579	18818193	N	10/24/18 09:50	10/24/18 09:50	29.56 g	34.02 g	4.46 g	4.50 g - 5.50 g	N	17030507	MeOH (5 mL)	5.000	A
9867762	050A	06176	18818194	Y	10/24/18 09:50	10/25/18 16:09	31.96 g	36.70 g	4.74 g	4.50 g - 5.50 g	Y	3-27-17	DI Water (5 mL)	5.000	
9867762	050B	06176	18818195	N	10/24/18 09:50	10/25/18 16:09	32.04 g	36.69 g	4.65 g	4.50 g - 5.50 g	Y	3-27-17	DI Water (5 mL)	5.000	
9867763	014A	07579	18818198	N	10/24/18 09:50	10/24/18 09:50	29.68 g	33.91 g	4.23 g	4.50 g - 5.50 g	N	17102494	MeOH (5 mL)	5.000	A
9867763	050A	06176	18818196	N	10/24/18 09:50	10/25/18 16:09	32.21 g	36.75 g	4.54 g	4.50 g - 5.50 g	Y	6-08-16	DI Water (5 mL)	5.000	
9867763	050B	06176	18818197	Y	10/24/18 09:50	10/25/18 16:09	32.06 g	36.93 g	4.87 g	4.50 g - 5.50 g	Y	6-08-16	DI Water (5 mL)	5.000	
9867764	014A	07579	18818199	N	10/24/18 09:50	10/24/18 09:50	29.47 g	33.12 g	3.65 g	4.50 g - 5.50 g	N	17102494	MeOH (5 mL)	5.000	A
9867764	050A	06176	18818200	Y	10/24/18 09:50	10/25/18 16:09	32.07 g	37.09 g	5.02 g	4.50 g - 5.50 g	Y	3-27-17	DI Water (5 mL)	5.000	
9867764	050B	06176	18818201	N	10/24/18 09:50	10/25/18 16:09	32.07 g	36.87 g	4.80 g	4.50 g - 5.50 g	Y	3-27-17	DI Water (5 mL)	5.000	
9867766	014A	07579	18818204	N	10/24/18 10:45	10/24/18 10:45	29.66 g	35.08 g	5.42 g	4.50 g - 5.50 g	Y	17102494	MeOH (5 mL)	5.000	
9867766	050A	06176	18818202	Y	10/24/18 10:45	10/25/18 16:09	32.60 g	37.89 g	5.29 g	4.50 g - 5.50 g	Y	3-27-17	DI Water (5 mL)	5.000	
9867766	050B	06176	18818203	Y	10/24/18 10:45	10/25/18 16:09	32.02 g	38.03 g	6.01 g	4.50 g - 5.50 g	N	3-27-17	DI Water (5 mL)	5.000	A
9867767	014A	07579	18818205	N	10/24/18 11:30	10/24/18 11:30	29.60 g	33.98 g	4.38 g	4.50 g - 5.50 g	N	17102494	MeOH (5 mL)	5.000	A
9867767	050A	06176	18818206	N	10/24/18 11:30	10/25/18 16:09	31.55 g	35.68 g	4.13 g	4.50 g - 5.50 g	N	6-08-16	DI Water (5 mL)	5.000	A
9867767	050B	06176	18818207	Y	10/24/18 11:30	10/25/18 16:10	32.03 g	35.96 g	3.93 g	4.50 g - 5.50 g	N	6-08-16	DI Water (5 mL)	5.000	A

Final Extraction Vol (mL) = Preservative Vol + Added MeOH (if applicable)

KEY to problem codes:

A = wt. does not meet requirements B = vial leaked C# where # = volume of MeOH added in mL due to sample not covered/matrix (lot #)
D = sampler not full E = effervescence observed F = pH >= 2 G = headspace in container

Semivolatiles by GC/MS Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS

eurofins | Lancaster Laboratories Environmental

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID10

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9867761	OU2-1-SS004		X	1	
9867762	OU2-1-SS006		X	1	Unspiked
9867763	OU2-1-SS006 MS		X	1	Matrix Spike
9867764	OU2-1-SS006 MSD		X	1	Matrix Spike Duplicate
9867766	OU2-1-SS002		X	1	
9867767	OU2-1-SS008		X	1	

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Method Blank

For noncompliant preparation/method blanks, corrective action is not required if the sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

(Sample number(s): 9867761-9867762, 9867766-9867767: Analysis: 10726)
Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.

eurofins | Lancaster Laboratories Environmental

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID10

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS/LCSD

Batch#: 18317SLB026 (Sample number(s): 9867761-9867762, 9867766-9867767)
The recovery(ies) for the following analyte(s) in the LCS and LCSD were below the acceptance window: Pyridine
Refer to the QC Summary forms for more information.

MS/MSD

Batch#: 18302SLI026 (Sample number(s): 9867761-9867764, 9867766-9867767, UNSPK: 9867762)
The relative percent difference(s) for the following analyte(s) in the MS/MSD is outside the acceptance window: 2-Chloronaphthalene, 2-Nitroaniline, Hexachloroethane
The recovery(ies) for the following analyte(s) in the MS were below the acceptance window: Hexachloroethane

The recovery(ies) for the following analyte(s) in the MS and MSD were below the acceptance window: 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Chloroaniline, 4-Nitroaniline, Aniline, Hexachlorocyclopentadiene, Pyridine

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Semivolatiles by GC/MS

eurofins | Lancaster Laboratories Environmental

Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Tidewater, Inc.
SDG: TID10

Fraction: Semivolatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
SVOA 8270D (microwave)	18302SLI026	SBLKLI302	11/11/2018 21:57
		302LILCS	11/11/2018 22:44
		9867761	11/11/2018 23:31
		9867762 UNSPK	11/11/2018 23:55
		9867763 MS	11/12/2018 00:18
		9867764 MSD	11/12/2018 00:41
		9867766	11/12/2018 01:05
		9867767	11/12/2018 01:28
SVOA 8270D (microwave)	18317SLB026	SBLKLB317	11/16/2018 14:51
		317LBLCS	11/16/2018 15:39
		317LBLCSD	11/16/2018 16:03
		9867761RE	11/16/2018 16:28
		9867762RE	11/16/2018 16:53
		9867766RE	11/16/2018 17:17
		9867767RE	11/16/2018 17:42

Fraction: Semivolatiles by GC/MS

18302SLI026 / SBLKLI302 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Pyridine	11/11/18	N.D.	mg/kg	0.067	0.13	0.17
1,2-Dichlorobenzene	11/11/18	N.D.	mg/kg	0.020	0.040	0.050
Phenol	11/11/18	N.D.	mg/kg	0.023	0.047	0.050
Aniline	11/11/18	N.D.	mg/kg	0.17	0.33	0.50
bis(2-Chloroethyl)ether	11/11/18	N.D.	mg/kg	0.023	0.047	0.050
2-Chlorophenol	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
1,3-Dichlorobenzene	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
1,4-Dichlorobenzene	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
Benzyl alcohol	11/11/18	N.D.	mg/kg	0.17	0.33	0.50
2-Methylphenol	11/11/18	N.D.	mg/kg	0.027	0.053	0.067
2,2'-oxybis(1-Chloropropane)	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
Hexachloroethane	11/11/18	N.D.	mg/kg	0.033	0.067	0.17
4-Methylphenol	11/11/18	N.D.	mg/kg	0.020	0.040	0.050
Nitrobenzene	11/11/18	N.D.	mg/kg	0.027	0.053	0.067
N-Nitroso-di-n-propylamine	11/11/18	N.D.	mg/kg	0.020	0.040	0.050
bis(2-Chloroethoxy)methane	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
2,4-Dichlorophenol	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
2,4-Dimethylphenol	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
Isophorone	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
2-Nitrophenol	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
1,2,4-Trichlorobenzene	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
4-Chloro-3-methylphenol	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
4-Chloroaniline	11/11/18	N.D.	mg/kg	0.033	0.067	0.17
2-Chloronaphthalene	11/11/18	N.D.	mg/kg	0.007	0.013	0.033
Dimethylphthalate	11/11/18	N.D.	mg/kg	0.067	0.13	0.17
Hexachlorobutadiene	11/11/18	N.D.	mg/kg	0.020	0.040	0.050
Hexachlorocyclopentadiene	11/11/18	N.D.	mg/kg	0.17	0.33	0.50
2-Methylnaphthalene	11/11/18	0.012 J	mg/kg	0.010	0.020	0.033
2-Nitroaniline	11/11/18	N.D.	mg/kg	0.020	0.040	0.050
2,4,5-Trichlorophenol	11/11/18	N.D.	mg/kg	0.020	0.040	0.050
2,4,6-Trichlorophenol	11/11/18	N.D.	mg/kg	0.020	0.040	0.050
4-Bromophenyl-phenylether	11/11/18	N.D.	mg/kg	0.020	0.040	0.050
Carbazole	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
4-Chlorophenyl-phenylether	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
Dibenzofuran	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
3,3'-Dichlorobenzidine	11/11/18	N.D.	mg/kg	0.10	0.20	0.33
Diethylphthalate	11/11/18	N.D.	mg/kg	0.067	0.13	0.17
4,6-Dinitro-2-methylphenol	11/11/18	N.D.	mg/kg	0.17	0.33	0.50
2,4-Dinitrophenol	11/11/18	N.D.	mg/kg	0.37	0.73	1.0
2,4-Dinitrotoluene	11/11/18	N.D.	mg/kg	0.067	0.13	0.17
2,6-Dinitrotoluene	11/11/18	N.D.	mg/kg	0.020	0.040	0.050
Hexachlorobenzene	11/11/18	N.D.	mg/kg	0.003	0.007	0.017
3-Nitroaniline	11/11/18	N.D.	mg/kg	0.067	0.13	0.17
4-Nitroaniline	11/11/18	N.D.	mg/kg	0.067	0.13	0.17
4-Nitrophenol	11/11/18	N.D.	mg/kg	0.17	0.33	0.50

Fraction: Semivolatiles by GC/MS

18302SLI026 / SBLKLI302 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
N-Nitrosodiphenylamine	11/11/18	N.D.	mg/kg	0.017	0.033	0.037
Di-n-octylphthalate	11/11/18	N.D.	mg/kg	0.067	0.13	0.17
Pentachlorophenol	11/11/18	N.D.	mg/kg	0.037	0.13	0.17

18317SLB026 / SBLKLB317 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Pyridine	11/16/18	N.D.	mg/kg	0.067	0.13	0.17
1,2-Dichlorobenzene	11/16/18	N.D.	mg/kg	0.020	0.040	0.050
Phenol	11/16/18	N.D.	mg/kg	0.023	0.047	0.050
Aniline	11/16/18	N.D.	mg/kg	0.17	0.33	0.50
bis(2-Chloroethyl)ether	11/16/18	N.D.	mg/kg	0.023	0.047	0.050
2-Chlorophenol	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
1,3-Dichlorobenzene	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
1,4-Dichlorobenzene	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
Benzyl alcohol	11/16/18	N.D.	mg/kg	0.17	0.33	0.50
2-Methylphenol	11/16/18	N.D.	mg/kg	0.027	0.053	0.067
2,2'-oxybis(1-Chloropropane)	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
Hexachloroethane	11/16/18	N.D.	mg/kg	0.033	0.067	0.17
4-Methylphenol	11/16/18	N.D.	mg/kg	0.020	0.040	0.050
Nitrobenzene	11/16/18	N.D.	mg/kg	0.027	0.053	0.067
N-Nitroso-di-n-propylamine	11/16/18	N.D.	mg/kg	0.020	0.040	0.050
bis(2-Chloroethoxy)methane	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
2,4-Dichlorophenol	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
2,4-Dimethylphenol	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
Isophorone	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
2-Nitrophenol	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
1,2,4-Trichlorobenzene	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
4-Chloro-3-methylphenol	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
4-Chloroaniline	11/16/18	N.D.	mg/kg	0.033	0.067	0.17
2-Chloronaphthalene	11/16/18	N.D.	mg/kg	0.007	0.013	0.033
Dimethylphthalate	11/16/18	N.D.	mg/kg	0.067	0.13	0.17
Hexachlorobutadiene	11/16/18	N.D.	mg/kg	0.020	0.040	0.050
Hexachlorocyclopentadiene	11/16/18	N.D.	mg/kg	0.17	0.33	0.50
2-Methylnaphthalene	11/16/18	N.D.	mg/kg	0.010	0.020	0.033
2-Nitroaniline	11/16/18	N.D.	mg/kg	0.020	0.040	0.050
2,4,5-Trichlorophenol	11/16/18	N.D.	mg/kg	0.020	0.040	0.050
2,4,6-Trichlorophenol	11/16/18	N.D.	mg/kg	0.020	0.040	0.050
4-Bromophenyl-phenylether	11/16/18	N.D.	mg/kg	0.020	0.040	0.050
Carbazole	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
4-Chlorophenyl-phenylether	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
Dibenzofuran	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
3,3'-Dichlorobenzidine	11/16/18	N.D.	mg/kg	0.10	0.20	0.33
Diethylphthalate	11/16/18	N.D.	mg/kg	0.067	0.13	0.17
4,6-Dinitro-2-methylphenol	11/16/18	N.D.	mg/kg	0.17	0.33	0.50
2,4-Dinitrophenol	11/16/18	N.D.	mg/kg	0.37	0.73	1.0

Fraction: Semivolatiles by GC/MS

18317SLB026 / SBLKLB317 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
2,4-Dinitrotoluene	11/16/18	N.D.	mg/kg	0.067	0.13	0.17
2,6-Dinitrotoluene	11/16/18	N.D.	mg/kg	0.020	0.040	0.050
Hexachlorobenzene	11/16/18	N.D.	mg/kg	0.003	0.007	0.017
3-Nitroaniline	11/16/18	N.D.	mg/kg	0.067	0.13	0.17
4-Nitroaniline	11/16/18	N.D.	mg/kg	0.067	0.13	0.17
4-Nitrophenol	11/16/18	N.D.	mg/kg	0.17	0.33	0.50
N-Nitrosodiphenylamine	11/16/18	N.D.	mg/kg	0.017	0.033	0.037
Di-n-octylphthalate	11/16/18	N.D.	mg/kg	0.067	0.13	0.17
Pentachlorophenol	11/16/18	N.D.	mg/kg	0.037	0.13	0.17

eurofins | Lancaster Laboratories Environmental

Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: TID10
Matrix: SOLID

Fraction: Semivolatiles by GC/MS

18302SLI026	2,4,6-Tribromophenol		2-Fluorobiphenyl		2-Fluorophenol		Nitrobenzene-d5		Phenol-d6		Terphenyl-d14	
	Spike Added	6.666667 mg/kg	Spike Added	3.333333 mg/kg	Spike Added	6.666667 mg/kg	Spike Added	3.333333 mg/kg	Spike Added	6.666667 mg/kg	Spike Added	3.333333 mg/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKLI302	87	39 - 132	86	44 - 115	87	35 - 115	84	37 - 122	81	47 - 120	100	54 - 127
302LILCS	95	39 - 132	94	44 - 115	87	35 - 115	86	37 - 122	81	47 - 120	98	54 - 127
9867761	79	39 - 132	85	44 - 115	87	35 - 115	81	37 - 122	83	47 - 120	94	54 - 127
9867762 UNSPK	77	39 - 132	87	44 - 115	81	35 - 115	82	37 - 122	81	47 - 120	94	54 - 127
9867763 MS	79	39 - 132	85	44 - 115	86	35 - 115	82	37 - 122	83	47 - 120	87	54 - 127
9867764 MSD	82	39 - 132	86	44 - 115	82	35 - 115	79	37 - 122	79	47 - 120	87	54 - 127
9867766	80	39 - 132	84	44 - 115	83	35 - 115	78	37 - 122	83	47 - 120	94	54 - 127
9867767	50	39 - 132	55	44 - 115	48	35 - 115	51	37 - 122	47	47 - 120	57	54 - 127

18317SLB026	2,4,6-Tribromophenol		2-Fluorobiphenyl		2-Fluorophenol		Nitrobenzene-d5		Phenol-d6		Terphenyl-d14	
	Spike Added	6.666667 mg/kg	Spike Added	3.333333 mg/kg	Spike Added	6.666667 mg/kg	Spike Added	3.333333 mg/kg	Spike Added	6.666667 mg/kg	Spike Added	3.333333 mg/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKLB317	96	39 - 132	75	44 - 115	78	35 - 115	74	37 - 122	73	47 - 120	82	54 - 127
317LBLCS	98	39 - 132	75	44 - 115	85	35 - 115	77	37 - 122	80	47 - 120	82	54 - 127
317LBLCSD	98	39 - 132	75	44 - 115	83	35 - 115	77	37 - 122	79	47 - 120	81	54 - 127
9867761RE	80	39 - 132	63	44 - 115	71	35 - 115	64	37 - 122	70	47 - 120	69	54 - 127
9867762RE	82	39 - 132	67	44 - 115	71	35 - 115	65	37 - 122	70	47 - 120	71	54 - 127
9867766RE	93	39 - 132	76	44 - 115	78	35 - 115	72	37 - 122	75	47 - 120	79	54 - 127
9867767RE	72	39 - 132	68	44 - 115	65	35 - 115	63	37 - 122	61	47 - 120	66	54 - 127

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 9867762 MS: 9867763 MSD: 9867764 **Analyte**	Batch: **18302SLI026** (Sample number(s): 9867761-9867764, 9867766-9867767)								
	Spike Added mg/kg MS/MSD	**Unspiked Conc mg/kg**	**MS Conc mg/kg**	**MSD Conc mg/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Pyridine	1.65 / 1.65	N.D.	0.798	0.770	48 *	47 *	57-96	4	20
1,2-Dichlorobenzene	1.65 / 1.65	N.D.	1.38	1.31	83	78	33-117	5	20
Phenol	1.65 / 1.65	N.D.	1.37	1.30	83	79	34-121	5	20
Aniline	1.65 / 1.65	N.D.	N.D.	N.D.	0 *	0 *	44-113	0	20
bis(2-Chloroethyl)ether	1.65 / 1.65	N.D.	1.35	1.28	82	78	31-120	6	20
2-Chlorophenol	1.65 / 1.65	N.D.	1.41	1.35	85	82	34-121	4	20
1,3-Dichlorobenzene	1.65 / 1.65	N.D.	1.35	1.28	82	78	30-115	5	20
1,4-Dichlorobenzene	1.65 / 1.65	0.0508	1.46	1.36	86	79	31-115	8	20
Benzyl alcohol	1.65 / 1.65	N.D.	1.52	1.45	92	88	29-122	5	20
2-Methylphenol	1.65 / 1.65	N.D.	1.34	1.34	81	81	32-122	0	20
2,2'-oxybis(1-Chloropropane)	1.65 / 1.65	N.D.	1.32	1.25	79	75	68-112	6	20
4-Methylphenol	1.65 / 1.65	N.D.	1.24	1.26	74	76	42-126	2	20
Hexachloroethane	1.65 / 1.65	N.D.	0.295	0.755	18 *	46	28-117	88 *	20
Nitrobenzene	1.65 / 1.65	N.D.	1.31	1.29	78	78	34-122	1	20
N-Nitroso-di-n-propylamine	1.65 / 1.65	N.D.	1.41	1.34	86	81	36-120	5	20
1,2,4-Trichlorobenzene	1.65 / 1.65	N.D.	1.38	1.35	84	82	34-118	2	20
2,4-Dichlorophenol	1.65 / 1.65	N.D.	1.32	1.38	80	84	40-122	4	20
2,4-Dimethylphenol	1.65 / 1.65	N.D.	0.668	0.767	41	47	30-127	14	20
2-Nitrophenol	1.65 / 1.65	N.D.	1.37	1.33	83	81	36-123	3	20
bis(2-Chloroethoxy)methane	1.65 / 1.65	N.D.	1.34	1.30	81	79	36-121	3	20
Isophorone	1.65 / 1.65	N.D.	1.36	1.32	82	79	30-122	3	20
2,4,5-Trichlorophenol	1.65 / 1.65	N.D.	1.40	1.43	85	87	41-124	3	20
2,4,6-Trichlorophenol	1.65 / 1.65	N.D.	1.42	1.47	86	89	39-126	4	20
2-Chloronaphthalene	1.65 / 1.65	N.D.	1.23	1.69	75	102	41-114	31 *	20
2-Methylnaphthalene	1.65 / 1.65	0.0661	1.45	1.41	84	81	38-122	3	20
2-Nitroaniline	1.65 / 1.65	N.D.	1.05	1.33	64	81	44-127	24 *	20
4-Chloro-3-methylphenol	1.65 / 1.65	N.D.	1.31	1.30	79	79	45-122	0	20
4-Chloroaniline	1.65 / 1.65	N.D.	N.D.	N.D.	0 *	0 *	17-106	0	20
Dimethylphthalate	1.65 / 1.65	N.D.	1.35	1.39	82	84	48-124	3	20
Hexachlorobutadiene	1.65 / 1.65	N.D.	1.51	1.44	92	88	32-123	5	20
Hexachlorocyclopentadiene	3.30 / 3.30	N.D.	N.D.	N.D.	0 *	0 *	37-161	0	20
2,4-Dinitrophenol	3.30 / 3.30	N.D.	2.31	2.50	70	76	41-136	8	20
2,4-Dinitrotoluene	1.65 / 1.65	N.D.	1.26	1.31	74	77	48-126	4	20
2,6-Dinitrotoluene	1.65 / 1.65	N.D.	1.27	1.32	76	80	46-124	4	20
3,3'-Dichlorobenzidine	1.65 / 1.65	N.D.	N.D.	N.D.	0 *	0 *	22-121	0	20
3-Nitroaniline	1.65 / 1.65	N.D.	N.D.	N.D.	0 *	0 *	33-119	0	20
4,6-Dinitro-2-methylphenol	1.65 / 1.65	N.D.	1.28	1.36	78	82	29-132	6	20

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 9867762 MS: 9867763 MSD: 9867764 **Analyte**	Batch: **18302SLI026** (Sample number(s): 9867761-9867764, 9867766-9867767)								
	Spike Added mg/kg MS/MSD	**Unspiked Conc mg/kg**	**MS Conc mg/kg**	**MSD Conc mg/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
4-Bromophenyl-phenylether	1.65 / 1.65	N.D.	1.48	1.47	90	89	46-124	0	20
4-Chlorophenyl-phenylether	1.65 / 1.65	N.D.	1.27	1.35	77	82	45-121	6	20
4-Nitroaniline	1.65 / 1.65	N.D.	N.D.	N.D.	0 *	0 *	54-103	0	20
4-Nitrophenol	1.65 / 1.65	N.D.	1.22	1.22	74	74	30-132	0	20
Carbazole	1.65 / 1.65	0.0259	1.35	1.27	80	76	50-123	5	20
Dibenzofuran	1.65 / 1.65	0.0264	1.37	1.38	82	82	44-120	0	20
Diethylphthalate	1.65 / 1.65	N.D.	1.32	1.38	80	84	50-124	5	20
Di-n-octylphthalate	1.65 / 1.65	N.D.	1.57	1.42	95	86	45-140	10	20
Hexachlorobenzene	1.65 / 1.65	N.D.	1.56	1.48	94	90	45-122	5	20
N-Nitrosodiphenylamine	1.65 / 1.65	N.D.	1.18	1.39	71	84	38-127	16	20
Pentachlorophenol	1.65 / 1.65	N.D.	1.68	1.60	102	97	25-133	5	20

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: TID10
Matrix: SOLID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 302LILCS	Batch: **18302SLI026** (Sample number(s): 9867761-9867764, 9867766-9867767)							
Analyte	**Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Pyridine	1.67	0.993	NA	60	NA	57-96	NA	NA
1,2-Dichlorobenzene	1.67	1.33	NA	80	NA	33-117	NA	NA
Phenol	1.67	1.42	NA	85	NA	34-121	NA	NA
Aniline	1.67	0.843	NA	51	NA	44-113	NA	NA
bis(2-Chloroethyl)ether	1.67	1.32	NA	79	NA	31-120	NA	NA
2-Chlorophenol	1.67	1.41	NA	84	NA	34-121	NA	NA
1,3-Dichlorobenzene	1.67	1.35	NA	81	NA	30-115	NA	NA
1,4-Dichlorobenzene	1.67	1.37	NA	82	NA	31-115	NA	NA
Benzyl alcohol	1.67	1.42	NA	85	NA	29-122	NA	NA
2-Methylphenol	1.67	1.40	NA	84	NA	32-122	NA	NA
2,2'-oxybis(1-Chloropropane)	1.67	1.30	NA	78	NA	68-112	NA	NA
4-Methylphenol	1.67	1.39	NA	83	NA	42-126	NA	NA
Hexachloroethane	1.67	1.35	NA	81	NA	28-117	NA	NA
Nitrobenzene	1.67	1.43	NA	86	NA	34-122	NA	NA
N-Nitroso-di-n-propylamine	1.67	1.35	NA	81	NA	36-120	NA	NA
1,2,4-Trichlorobenzene	1.67	1.48	NA	89	NA	34-118	NA	NA
2,4-Dichlorophenol	1.67	1.51	NA	91	NA	40-122	NA	NA
2,4-Dimethylphenol	1.67	1.16	NA	70	NA	30-127	NA	NA
2-Nitrophenol	1.67	1.48	NA	89	NA	36-123	NA	NA
bis(2-Chloroethoxy)methane	1.67	1.48	NA	89	NA	36-121	NA	NA
Isophorone	1.67	1.46	NA	88	NA	30-122	NA	NA
2,4,5-Trichlorophenol	1.67	1.66	NA	99	NA	41-124	NA	NA
2,4,6-Trichlorophenol	1.67	1.65	NA	99	NA	39-126	NA	NA
2-Chloronaphthalene	1.67	1.54	NA	92	NA	41-114	NA	NA
2-Methylnaphthalene	1.67	1.49	NA	89	NA	38-122	NA	NA
2-Nitroaniline	1.67	1.60	NA	96	NA	44-127	NA	NA
4-Chloro-3-methylphenol	1.67	1.53	NA	92	NA	45-122	NA	NA
4-Chloroaniline	1.67	0.936	NA	56	NA	17-106	NA	NA
Dimethylphthalate	1.67	1.60	NA	96	NA	48-124	NA	NA
Hexachlorobutadiene	1.67	1.54	NA	93	NA	32-123	NA	NA
Hexachlorocyclopentadiene	3.33	2.51	NA	75	NA	37-161	NA	NA
2,4-Dinitrophenol	3.33	3.39	NA	102	NA	41-136	NA	NA
2,4-Dinitrotoluene	1.67	1.58	NA	95	NA	48-126	NA	NA
2,6-Dinitrotoluene	1.67	1.56	NA	94	NA	46-124	NA	NA
3,3'-Dichlorobenzidine	1.67	1.23	NA	74	NA	22-121	NA	NA
3-Nitroaniline	1.67	1.50	NA	90	NA	33-119	NA	NA
4,6-Dinitro-2-methylphenol	1.67	1.56	NA	94	NA	29-132	NA	NA
4-Bromophenyl-phenylether	1.67	1.58	NA	95	NA	46-124	NA	NA
4-Chlorophenyl-phenylether	1.67	1.54	NA	92	NA	45-121	NA	NA
4-Nitroaniline	1.67	1.30	NA	78	NA	54-103	NA	NA
4-Nitrophenol	1.67	1.47	NA	88	NA	30-132	NA	NA
Carbazole	1.67	1.58	NA	95	NA	50-123	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 302LILCS	Batch: **18302SLI026** (Sample number(s): 9867761-9867764, 9867766-9867767)							
Analyte	**Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dibenzofuran	1.67	1.58	NA	95	NA	44-120	NA	NA
Diethylphthalate	1.67	1.60	NA	96	NA	50-124	NA	NA
Di-n-octylphthalate	1.67	1.65	NA	99	NA	45-140	NA	NA
Hexachlorobenzene	1.67	1.57	NA	94	NA	45-122	NA	NA
N-Nitrosodiphenylamine	1.67	1.56	NA	94	NA	38-127	NA	NA
Pentachlorophenol	1.67	1.64	NA	99	NA	25-133	NA	NA

LCS: 317LBLCS LCSD: 317LBLCSD	Batch: **18317SLB026** (Sample number(s): 9867761-9867762, 9867766-9867767)							
Analyte	**Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Pyridine	1.67	0.921	0.834	55 *	50 *	57-96	10	30
1,2-Dichlorobenzene	1.67	1.23	1.21	74	73	33-117	2	20
Phenol	1.67	1.28	1.26	77	75	34-121	1	20
Aniline	1.67	0.873	0.851	52	51	44-113	3	30
bis(2-Chloroethyl)ether	1.67	1.23	1.24	74	74	31-120	1	20
2-Chlorophenol	1.67	1.50	1.45	90	87	34-121	4	20
1,3-Dichlorobenzene	1.67	1.28	1.21	77	73	30-115	6	20
1,4-Dichlorobenzene	1.67	1.30	1.19	78	71	31-115	10	20
Benzyl alcohol	1.67	1.38	1.42	83	85	29-122	3	20
2-Methylphenol	1.67	1.31	1.33	79	80	32-122	1	20
2,2'-oxybis(1-Chloropropane)	1.67	1.21	1.21	73	73	68-112	0	30
4-Methylphenol	1.67	1.47	1.48	88	89	42-126	1	20
Hexachloroethane	1.67	1.34	1.26	81	76	28-117	6	20
Nitrobenzene	1.67	1.27	1.28	76	77	34-122	1	20
N-Nitroso-di-n-propylamine	1.67	1.28	1.28	77	77	36-120	0	20
1,2,4-Trichlorobenzene	1.67	1.35	1.36	81	82	34-118	1	20
2,4-Dichlorophenol	1.67	1.47	1.52	88	91	40-122	4	20
2,4-Dimethylphenol	1.67	1.14	1.19	68	71	30-127	4	20
2-Nitrophenol	1.67	1.41	1.41	85	84	36-123	0	20
bis(2-Chloroethoxy)methane	1.67	1.34	1.36	80	81	36-121	2	20
Isophorone	1.67	1.29	1.32	77	79	30-122	3	20
2,4,5-Trichlorophenol	1.67	1.49	1.41	89	85	41-124	5	20
2,4,6-Trichlorophenol	1.67	1.46	1.48	87	89	39-126	1	20
2-Chloronaphthalene	1.67	1.29	1.28	78	77	41-114	1	20
2-Methylnaphthalene	1.67	1.36	1.42	82	85	38-122	4	20
2-Nitroaniline	1.67	1.50	1.52	90	91	44-127	1	20
4-Chloro-3-methylphenol	1.67	1.55	1.62	93	97	45-122	5	20
4-Chloroaniline	1.67	0.391	0.466	23	28	17-106	18	20
Dimethylphthalate	1.67	1.41	1.34	85	80	48-124	5	20
Hexachlorobutadiene	1.67	1.33	1.38	80	83	32-123	4	20
Hexachlorocyclopentadiene	3.33	2.14	1.99	64	60	37-161	7	30

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 317LBLCS LCSD: 317LBLCSD	Batch: **18317SLB026** (Sample number(s): 9867761-9867762, 9867766-9867767)							
Analyte	**Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2,4-Dinitrophenol	3.33	2.48	2.55	74	77	41-136	3	30
2,4-Dinitrotoluene	1.67	1.43	1.46	86	88	48-126	2	20
2,6-Dinitrotoluene	1.67	1.44	1.47	86	88	46-124	2	20
3,3'-Dichlorobenzidine	1.67	0.994	0.989	60	59	22-121	1	20
3-Nitroaniline	1.67	1.27	1.30	76	78	33-119	2	20
4,6-Dinitro-2-methylphenol	1.67	1.36	1.33	82	80	29-132	2	20
4-Bromophenyl-phenylether	1.67	1.31	1.24	78	75	46-124	5	20
4-Chlorophenyl-phenylether	1.67	1.37	1.35	82	81	45-121	2	20
4-Nitroaniline	1.67	1.10	1.07	66	64	54-103	3	30
4-Nitrophenol	1.67	1.46	1.36	88	81	30-132	7	20
Carbazole	1.67	1.46	1.40	88	84	50-123	5	20
Dibenzofuran	1.67	1.41	1.35	84	81	44-120	4	20
Diethylphthalate	1.67	1.40	1.41	84	84	50-124	0	20
Di-n-octylphthalate	1.67	1.46	1.48	88	89	45-140	1	20
Hexachlorobenzene	1.67	1.36	1.25	82	75	45-122	9	20
N-Nitrosodiphenylamine	1.67	1.43	1.36	86	81	38-127	5	20
Pentachlorophenol	1.67	1.15	1.11	69	66	25-133	4	20

Fraction: Semivolatiles by GC/MS

10726: SVOA 8270D (microwave) Analyte Name	Default DL	Default LOD	Default LOQ	Units
Pyridine	0.067	0.13	0.17	mg/kg
1,2-Dichlorobenzene	0.020	0.040	0.050	mg/kg
Phenol	0.023	0.047	0.050	mg/kg
Aniline	0.17	0.33	0.50	mg/kg
bis(2-Chloroethyl)ether	0.023	0.047	0.050	mg/kg
2-Chlorophenol	0.017	0.033	0.037	mg/kg
1,3-Dichlorobenzene	0.017	0.033	0.037	mg/kg
1,4-Dichlorobenzene	0.017	0.033	0.037	mg/kg
Benzyl alcohol	0.17	0.33	0.50	mg/kg
2-Methylphenol	0.027	0.053	0.067	mg/kg
2,2'-oxybis(1-Chloropropane)	0.017	0.033	0.037	mg/kg
4-Methylphenol	0.020	0.040	0.050	mg/kg
N-Nitroso-di-n-propylamine	0.020	0.040	0.050	mg/kg
Hexachloroethane	0.033	0.067	0.17	mg/kg
Nitrobenzene	0.027	0.053	0.067	mg/kg
Isophorone	0.017	0.033	0.037	mg/kg
2-Nitrophenol	0.017	0.033	0.037	mg/kg
2,4-Dimethylphenol	0.017	0.033	0.037	mg/kg
bis(2-Chloroethoxy)methane	0.017	0.033	0.037	mg/kg
2,4-Dichlorophenol	0.017	0.033	0.037	mg/kg
1,2,4-Trichlorobenzene	0.017	0.033	0.037	mg/kg
4-Chloroaniline	0.033	0.067	0.17	mg/kg
Hexachlorobutadiene	0.020	0.040	0.050	mg/kg
4-Chloro-3-methylphenol	0.017	0.033	0.037	mg/kg
2-Methylnaphthalene	0.010	0.020	0.033	mg/kg
Hexachlorocyclopentadiene	0.17	0.33	0.50	mg/kg
2,4,6-Trichlorophenol	0.020	0.040	0.050	mg/kg
2,4,5-Trichlorophenol	0.020	0.040	0.050	mg/kg
2-Chloronaphthalene	0.007	0.013	0.033	mg/kg
2-Nitroaniline	0.020	0.040	0.050	mg/kg
Dimethylphthalate	0.067	0.13	0.17	mg/kg
2,6-Dinitrotoluene	0.020	0.040	0.050	mg/kg
3-Nitroaniline	0.067	0.13	0.17	mg/kg
2,4-Dinitrophenol	0.37	0.73	1.0	mg/kg
4-Nitrophenol	0.17	0.33	0.50	mg/kg
2,4-Dinitrotoluene	0.067	0.13	0.17	mg/kg
Dibenzofuran	0.017	0.033	0.037	mg/kg
Diethylphthalate	0.067	0.13	0.17	mg/kg
4-Chlorophenyl-phenylether	0.017	0.033	0.037	mg/kg
4-Nitroaniline	0.067	0.13	0.17	mg/kg
4,6-Dinitro-2-methylphenol	0.17	0.33	0.50	mg/kg
N-Nitrosodiphenylamine	0.017	0.033	0.037	mg/kg
4-Bromophenyl-phenylether	0.020	0.040	0.050	mg/kg
Hexachlorobenzene	0.003	0.007	0.017	mg/kg
Pentachlorophenol	0.037	0.13	0.17	mg/kg
Carbazole	0.017	0.033	0.037	mg/kg
3,3'-Dichlorobenzidine	0.10	0.20	0.33	mg/kg

Fraction: Semivolatiles by GC/MS

10726: SVOA 8270D (microwave) Analyte Name	Default DL	Default LOD	Default LOQ	Units
Di-n-octylphthalate	0.067	0.13	0.17	mg/kg

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: gk0550c.d DFTPP Injection Date: 11/11/18

Instrument ID: HP11165 DFTPP Injection Time: 10:20

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	50.8
68	Less than 2.0% of mass 69	0.83 (1.37)1
69	Mass 69 relative abundance	60.5
70	Less than 2.0% of mass 69	0.51 (0.84)1
127	10.0 - 80.00% of mass 198	57.2
197	Less than 2.0% of mass 198	1.25
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.26
275	10.0 - 60.0% of mass 198	23.8
365	Greater than 1.00% of mass 198	2.56
441	Present, and less than mass 443	8.15
442	Greater than 50.00% of mass 198	55.2
443	15.00 - 24.00% of mass 442	10.1 (18.3)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD2928 - SSTD30	gk0551.d	11/11/18	10:36
02	STD2928 - SSTD120	gk0552.d	11/11/18	12:07
03	STD2928 - SSTD80	gk0553.d	11/11/18	12:31
04	STD2928 - SSTD50	gk0554.d	11/11/18	12:55
05	STD2928 - SSTD15	gk0555.d	11/11/18	13:20
06	STD2928 - SSTD5	gk0556.d	11/11/18	13:44
07	STD2928 - SSTD1	gk0557.d	11/11/18	14:08
08	STD2928 - SSTD.5	gk0558.d	11/11/18	14:32
09	MDL2928 - SSTD0.50	gk0559.d	11/11/18	14:57
10	MDLPAH2928 - SSTD0.10	gk0560.d	11/11/18	15:21
11	ICV2968 - SSTD050	gk0561.d	11/11/18	15:45
12	BAS3108 - SSTD50	gk0562.d	11/11/18	16:10
13	BAS3108 - SSTD120	gk0563.d	11/11/18	16:34
14	BAS3108 - SSTD80	gk0564.d	11/11/18	16:58
15	BAS3108 - SSTD30	gk0565.d	11/11/18	17:22
16	BAS3108 - SSTD15	gk0566.d	11/11/18	17:47
17	BAS3108 - SSTD5	gk0567.d	11/11/18	18:11
18	BASMDL3108 - SSTD001	gk0568.d	11/11/18	18:36

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: gk0550c.d DFTPP Injection Date: 11/11/18

Instrument ID: HP11165 DFTPP Injection Time: 10:20

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	50.8
68	Less than 2.0% of mass 69	0.83 (1.37)1
69	Mass 69 relative abundance	60.5
70	Less than 2.0% of mass 69	0.51 (0.84)1
127	10.0 - 80.00% of mass 198	57.2
197	Less than 2.0% of mass 198	1.25
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.26
275	10.0 - 60.0% of mass 198	23.8
365	Greater than 1.00% of mass 198	2.56
441	Present, and less than mass 443	8.15
442	Greater than 50.00% of mass 198	55.2
443	15.00 - 24.00% of mass 442	10.1 (18.3)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	BASICV2578 - SSTD050	gk0569.d	11/11/18	19:01

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: gk0850.d DFTPP Injection Date: 11/16/18

Instrument ID: HP11165 DFTPP Injection Time: 09:46

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	47.6
68	Less than 2.0% of mass 69	0.86 (1.52)1
69	Mass 69 relative abundance	56.4
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	10.0 - 80.00% of mass 198	56.6
197	Less than 2.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	7.11
275	10.0 - 60.0% of mass 198	25.0
365	Greater than 1.00% of mass 198	2.8
441	Present, and less than mass 443	9.22
442	Greater than 50.00% of mass 198	63.9
443	15.00 - 24.00% of mass 442	11.9 (18.6)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD2928 - SSTD30	gk0851.d	11/16/18	10:04
02	BAS3108 - SSTD50	gk0852.d	11/16/18	13:33
03	318LELCS	gk0853.d	11/16/18	13:57
04	SBLKLB317	gk0854.d	11/16/18	14:51
05	SBLKLE318	gk0863.d	11/16/18	15:15
06	317LBLCS	gk0855.d	11/16/18	15:39
07	317LBLCSD	gk0856.d	11/16/18	16:03
08	9867761RE	gk0857.d	11/16/18	16:28
09	9867762RE	gk0858.d	11/16/18	16:53
10	9867766RE	gk0859.d	11/16/18	17:17
11	9867767RE	gk0860.d	11/16/18	17:42
12	9872065RE	gk0861.d	11/16/18	18:06
13	STD2928	gk0862.d	11/16/18	18:30
14	BAS3108	gk0863a.d	11/16/18	18:55

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: pk0310.d DFTPP Injection Date: 11/09/18

Instrument ID: HP23262 DFTPP Injection Time: 15:24

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	44.1
68	Less than 2.0% of mass 69	0.7 (1.45)1
69	Mass 69 relative abundance	48.3
70	Less than 2.0% of mass 69	0.26 (0.53)1
127	10.0 - 80.00% of mass 198	44.4
197	Less than 2.0% of mass 198	1.02
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.88
275	10.0 - 60.0% of mass 198	23.1
365	Greater than 1.00% of mass 198	2.1
441	Present, and less than mass 443	9.95
442	Greater than 50.00% of mass 198	66.6
443	15.00 - 24.00% of mass 442	12.8 (19.3)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD2928 - SSTD30	pk0311.d	11/09/18	15:38
02	STD2928 - SSTD.5	pk0312.d	11/09/18	16:05
03	STD292 - SSTD120	pk0313.d	11/09/18	16:29
04	STD2928 - SSTD80	pk0314.d	11/09/18	16:52
05	STD2928 - SSTD1	pk0315.d	11/09/18	17:15
06	STD2928 - SSTD50	pk0316.d	11/09/18	17:38
07	STD2928 - SSTD15	pk0317.d	11/09/18	18:01
08	STD2928 - SSTD5	pk0318.d	11/09/18	18:24
09	MDL2928 - SSTD0.5	pk0320.d	11/09/18	19:11
10	PAHMDL2928 - SSTD0.1	pk0321.d	11/09/18	19:34
11	ICV2968 - SSTD050	pk0322.d	11/09/18	19:57
12	BASICV2578 - SSTD050	pk0323.d	11/09/18	20:20
13	ICV2338 - SSTD050	pk0325.d	11/09/18	21:06

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: pk0360d.d DFTPP Injection Date: 11/11/18

Instrument ID: HP23262 DFTPP Injection Time: 20:44

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	43.8
68	Less than 2.0% of mass 69	0.78 (1.61)1
69	Mass 69 relative abundance	48.3
70	Less than 2.0% of mass 69	0.32 (0.67)1
127	10.0 - 80.00% of mass 198	45.0
197	Less than 2.0% of mass 198	0.27
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	7.11
275	10.0 - 60.0% of mass 198	24.1
365	Greater than 1.00% of mass 198	2.4
441	Present, and less than mass 443	10.6
442	Greater than 50.00% of mass 198	72.6
443	15.00 - 24.00% of mass 442	13.9 (19.2)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD2928 - SSTD30	pk0361.d	11/11/18	20:58
02	BAS3108 - SSTD50	pk0362.d	11/11/18	21:23
03	SBLKLI302	pk0363.d	11/11/18	21:57
04	SBLKLA311	pk0367.d	11/11/18	22:21
05	302LILCS	pk0364.d	11/11/18	22:44
06	311LALCS	pk0368.d	11/11/18	23:08
07	9867761	pk0371.d	11/11/18	23:31
08	9867762	pk0372.d	11/11/18	23:55
09	9867763MS	pk0373.d	11/12/18	00:18
10	9867764MSD	pk0374.d	11/12/18	00:41
11	9867766	pk0375.d	11/12/18	01:05
12	9867767	pk0376.d	11/12/18	01:28
13	9872064	pk0377.d	11/12/18	01:51
14	9872065	pk0378.d	11/12/18	02:14
15	STD2928x	pk0392a.d	11/12/18	02:38
16	9884645	pk0379.d	11/12/18	03:01
17	9884646	pk0380.d	11/12/18	03:24
18	9884647	pk0381.d	11/12/18	03:48

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: pk0360d.d DFTPP Injection Date: 11/11/18

Instrument ID: HP23262 DFTPP Injection Time: 20:44

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	43.8
68	Less than 2.0% of mass 69	0.78 (1.61)1
69	Mass 69 relative abundance	48.3
70	Less than 2.0% of mass 69	0.32 (0.67)1
127	10.0 - 80.00% of mass 198	45.0
197	Less than 2.0% of mass 198	0.27
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	7.11
275	10.0 - 60.0% of mass 198	24.1
365	Greater than 1.00% of mass 198	2.4
441	Present, and less than mass 443	10.6
442	Greater than 50.00% of mass 198	72.6
443	15.00 - 24.00% of mass 442	13.9 (19.2)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	9885261	pk0382.d	11/12/18	04:11
20	9884806	pk0383.d	11/12/18	04:34
21	9884807	pk0384.d	11/12/18	04:57
22	9884808	pk0385.d	11/12/18	05:20
23	9884809	pk0386.d	11/12/18	05:43
24	9884810MS	pk0387.d	11/12/18	06:06
25	9884811MSD	pk0388.d	11/12/18	06:30
26	9884813	pk0389.d	11/12/18	06:53
27	9884814	pk0390.d	11/12/18	07:16
28	9884815	pk0391.d	11/12/18	07:40
29	STD2928	pk0392.d	11/12/18	08:03

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date(s): 11/11/18 11/11/18

Calibration Times: 10:36 14:32

LAB FILE ID:RRF0.5 = gk0558.d RRF1 = gk0557.d RRF5 = gk0556.d RRF15 = gk0555.d
RRF30 = gk0551.d RRF50 = gk0554.d RRF80 = gk0553.d RRF120 = gk0552.d

COMPOUND	RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	RRF	% RSD	CAL. METHOD
1,4-Dioxane			0.789	0.643	0.776	0.670	0.702	0.653	0.706	9	AVG
N-Nitrosodimethylamine			1.090	0.913	1.117	1.062	1.136	1.118	1.073	8	AVG
Pyridine			1.792	1.727	1.843	1.899	1.761	1.793	1.803	3	AVG
2-Picoline			1.958	1.992	1.973	1.992	1.909	1.892	1.953	2	AVG
N-Nitrosomethylethylamine			1.029	0.943	1.015	0.970	0.940	0.889	0.964	5	AVG
Methyl methanesulfonate			1.010	1.017	1.071	1.045	0.989	0.917	1.008	5	AVG
N-Nitrosodiethylamine		0.676	0.844	0.849	0.958	0.933	0.912	0.879	0.864	11	AVG
Ethyl methanesulfonate		1.039	0.936	0.860	0.936	0.920	0.869	0.857	0.917	7	AVG
Phenol		2.298	2.528	2.787	2.822	2.852	2.722	2.712	2.674	7	AVG
Aniline		3.380	2.977	3.136	3.252	3.201	3.039	2.982	3.138	5	AVG
a-methylstyrene			0.168	0.158	0.156	0.155	0.137	0.137	0.152	8	AVG
bis(2-Chloroethyl)ether		1.883	2.016	1.827	1.999	2.047	1.877	1.797	1.921	5	AVG
2-Chlorophenol		1.296	1.419	1.494	1.611	1.544	1.460	1.495	1.474	7	AVG
1,3-Dichlorobenzene		1.691	1.626	1.571	1.709	1.658	1.562	1.551	1.624	4	AVG
1,4-Dichlorobenzene		1.976	1.625	1.638	1.713	1.691	1.608	1.613	1.695	8	AVG
Benzyl alcohol		1.064	1.122	1.166	1.230	1.277	1.187	1.175	1.174	6	AVG
1,2-Dichlorobenzene		1.934	1.735	1.491	1.643	1.598	1.540	1.541	1.640	9	AVG
Indene			1.868	1.774	1.871	1.930	1.728	1.670	1.807	5	AVG
2-Methylphenol	2.530	1.710	1.653	1.630	1.777	1.777	1.676	1.672	1.803	17	AVG
2,2'-oxybis(1-Chloropropane)		1.685	1.949	2.017	2.107	2.061	1.934	1.894	1.949	7	AVG
bis(2-Chloroisopropyl)ether		1.685	1.949	2.017	2.107	2.061	1.934	1.894	1.949	7	AVG
N-Nitrosopyrrolidine		0.811	0.971	0.962	0.988	1.029	0.965	0.979	0.958	7	AVG
Acetophenone		2.160	2.404	2.299	2.604	2.718	2.485	2.362	2.433	8	AVG
4-Methylphenol		1.529	1.772	1.718	1.880	1.948	1.965	1.971	1.826	9	AVG
Total Cresols		1.620	1.712	1.674	1.828	1.862	1.820	1.822	1.763	5	AVG
N-Nitroso-di-n-propylamine		1.595	1.748	1.758	1.785	1.758	1.715	1.671	1.719	4	AVG
N-Nitrosomorpholine			1.213	1.253	1.279	1.340	1.268	1.198	1.259	4	AVG
o-Toluidine		2.691	2.835	2.911	2.994	2.995	2.828	2.784	2.863	4	AVG
Hexachloroethane			0.616	0.601	0.688	0.657	0.638	0.627	0.638	5	AVG
Nitrobenzene		0.513	0.551	0.537	0.571	0.549	0.567	0.558	0.550	4	AVG
N-Nitrosopiperidine		0.178	0.217	0.206	0.221	0.211	0.225	0.223	0.212	8	AVG
Isophorone		0.858	1.047	0.951	1.064	0.996	1.040	0.998	0.993	7	AVG
2-Nitrophenol		0.168	0.189	0.192	0.207	0.204	0.215	0.211	0.198	8	AVG
2,4-Dimethylphenol	0.388	0.423	0.443	0.432	0.463	0.438	0.457	0.455	0.438	5	AVG
O,O,O-Triethylphosphorothioate			0.195	0.181	0.207	0.177	0.198	0.190	0.191	6	AVG
bis(2-Chloroethoxy)methane		0.468	0.583	0.555	0.577	0.564	0.549	0.569	0.552	7	AVG
Benzoic acid			0.277	0.335	0.344	0.352	0.360	0.371	0.340	10	AVG
2,4-Dichlorophenol		0.244	0.296	0.308	0.328	0.317	0.315	0.329	0.305	10	AVG
1,2,4-Trichlorobenzene			0.325	0.318	0.328	0.308	0.329	0.324	0.322	2	AVG
Naphthalene	1.221	1.100	1.146	1.070	1.153	1.080	1.131	1.136	1.130	4	AVG
4-Chloroaniline		0.448	0.479	0.467	0.475	0.454	0.462	0.471	0.465	2	AVG
2,6-Dichlorophenol		0.279	0.308	0.306	0.314	0.311	0.316	0.324	0.308	5	AVG
Hexachloropropene			0.155	0.156	0.162	0.163	0.167	0.164	0.161	3	AVG
Hexachlorobutadiene	0.196	0.144	0.181	0.157	0.181	0.170	0.178	0.175	0.173	9	AVG
Quinoline			0.745	0.733	0.751	0.724	0.741	0.725	0.737	1	AVG
Caprolactam			0.132	0.136	0.138	0.155	0.152	0.138	0.142	6	AVG
N-Nitrosodi-n-butylamine		0.507	0.456	0.473	0.494	0.464	0.462		0.476	4	AVG
4-Chloro-3-methylphenol		0.340	0.361	0.371	0.416	0.385	0.394	0.399	0.381	7	AVG
Safrole			0.322	0.295	0.312	0.303	0.314	0.309	0.309	3	AVG
2-Methylnaphthalene	0.838	0.804	0.827	0.773	0.795	0.777	0.797	0.799	0.801	3	AVG
1-Methylnaphthalene	0.757	0.809	0.745	0.740	0.783	0.743	0.767	0.767	0.764	3	AVG
Hexachlorocyclopentadiene			0.291	0.298	0.307	0.296	0.294	0.283	0.295	3	AVG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date(s): 11/11/18 11/11/18

Calibration Times: 10:36 14:32

LAB FILE ID:RRF0.5 = gk0558.d RRF1 = gk0557.d RRF5 = gk0556.d RRF15 = gk0555.d
RRF30 = gk0551.d RRF50 = gk0554.d RRF80 = gk0553.d RRF120 = gk0552.d

COMPOUND	RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	RRF	% RSD	CAL. METHOD
1,2,4,5-Tetrachlorobenzene		0.707	0.545	0.560	0.562	0.572	0.578	0.596	0.589	9	AVG
cis-Isosafrole			0.562	0.565	0.610	0.587	0.549	0.595	0.578	4	AVG
2,4,6-Trichlorophenol		0.367	0.378	0.387	0.417	0.419	0.396	0.424	0.398	6	AVG
2,4,5-Trichlorophenol		0.382	0.454	0.434	0.439	0.451	0.435	0.442	0.434	6	AVG
trans-Isosafrole			0.500	0.537	0.567	0.566	0.568	0.587	0.554	6	AVG
Isosafrole			0.510	0.541	0.574	0.569	0.565	0.588	0.558	5	AVG
1,1'-Biphenyl		1.860	1.823	1.595	1.767	1.803	1.743	1.752	1.763	5	AVG
2-Chloronaphthalene		1.278	1.395	1.308	1.264	1.616	1.324	1.502	1.384	9	AVG
1-Chloronaphthalene		1.198	1.291	1.266	1.410	1.302	1.293	1.212	1.282	5	AVG
Diphenyl ether		0.953	0.952	0.921	0.977	0.945	0.919	0.961	0.947	2	AVG
2-Nitroaniline		0.251	0.466	0.441	0.450	0.484	0.464	0.470	0.432	19	AVG
1,4-Naphthoquinone			0.575	0.517	0.581	0.588	0.574	0.569	0.567	5	AVG
1,4-Dinitrobenzene			0.198	0.228	0.241	0.253	0.246	0.265	0.238	10	AVG
Dimethylphthalate			1.651	1.626	1.607	1.622	1.574	1.645	1.621	2	AVG
1,3-Dinitrobenzene			0.287	0.259	0.267	0.280	0.280	0.287	0.277	4	AVG
2,6-Dinitrotoluene		0.254	0.375	0.363	0.393	0.394	0.387	0.382	0.364	14	AVG
Acenaphthylene	2.057	1.659	1.861	1.848	1.976	1.990	1.937	1.941	1.909	6	AVG
3-Nitroaniline		0.359	0.437	0.405	0.406	0.432	0.400	0.417	0.408	6	AVG
Acenaphthene	1.471	1.450	1.340	1.342	1.417	1.418	1.382	1.465	1.411	4	AVG
2,4-Dinitrophenol				0.214	0.242	0.256	0.251	0.264	0.245	8	AVG
4-Nitrophenol			0.278	0.273	0.276	0.297	0.286	0.290	0.283	3	AVG
Pentachlorobenzene		0.472	0.519	0.500	0.518	0.497	0.505	0.521	0.505	3	AVG
2,4-Dinitrotoluene			0.492	0.479	0.492	0.539	0.503	0.530	0.506	5	AVG
2,4_2,6-Dinitrotoluenes			0.434	0.421	0.443	0.466	0.445	0.456	0.444	4	AVG
Dibenzofuran		1.795	1.999	1.908	2.028	2.007	1.964	2.049	1.964	4	AVG
1-Naphthylamine			1.563	1.473	1.522	1.593	1.497	1.534	1.530	3	AVG
2,3,4,6-Tetrachlorophenol		0.268	0.343	0.359	0.362	0.376	0.365	0.374	0.350	11	AVG
2-Naphthylamine			1.465	1.479	1.515	1.531	1.473	1.469	1.489	2	AVG
Diethylphthalate			1.673	1.621	1.653	1.642	1.572	1.602	1.627	2	AVG
Thionazin			0.332	0.286	0.295	0.300	0.331	0.314	0.310	6	AVG
Fluorene	1.634	1.371	1.727	1.594	1.671	1.706	1.657	1.773	1.642	7	AVG
4-Chlorophenyl-phenylether		0.758	0.769	0.702	0.779	0.772	0.760	0.803	0.763	4	AVG
5-Nitro-o-toluidine		0.518	0.526	0.451	0.473	0.507	0.480	0.490	0.492	5	AVG
4-Nitroaniline		0.363	0.477	0.448	0.474	0.483	0.429	0.438	0.445	9	AVG
4,6-Dinitro-2-methylphenol			0.114	0.134	0.150	0.166	0.159	0.166	0.148	14	AVG
N-Nitrosodiphenylamine (1)	0.604	0.618	0.755	0.709	0.742	0.727	0.724	0.764	0.706	9	AVG
NDPA as diphenylamine	0.604	0.618	0.755	0.709	0.742	0.727	0.724	0.764	0.706	9	AVG
1,2-Diphenylhydrazine		0.919	1.133	1.060	1.145	1.118	1.112	1.173	1.094	8	AVG
Tetraethyldithiopyrophosphate			0.144	0.154	0.170	0.160	0.162	0.173	0.161	7	AVG
1,3,5-Trinitrobenzene				0.077	0.092	0.101	0.099	0.105	0.095	11	AVG
Diallate (peak 1)			0.458	0.483	0.516	0.512	0.529	0.554	0.509	7	AVG
Phorate		0.532	0.628	0.652	0.703	0.685	0.687	0.740	0.661	10	AVG
Phenacetin		0.383	0.423	0.457	0.487	0.488	0.499	0.509	0.464	10	AVG
4-Bromophenyl-phenylether			0.222	0.213	0.218	0.223	0.220	0.223	0.220	2	AVG
Diallate (peak 2)			0.461	0.399	0.450	0.402	0.408	0.429	0.425	6	AVG
Diallate trans/cis			0.459	0.468	0.505	0.493	0.509	0.533	0.495	6	AVG
Hexachlorobenzene	0.243	0.174	0.215	0.205	0.200	0.201	0.196	0.207	0.205	9	AVG
Dimethoate			0.353	0.381	0.402	0.387	0.376	0.382	0.380	4	AVG
Pentachlorophenol			0.101	0.132	0.143	0.148	0.148	0.148	0.137	14	AVG
4-Aminobiphenyl		0.354	0.338	0.318	0.330	0.297	0.275		0.319	9	AVG
Pentachloronitrobenzene			0.099	0.094	0.095	0.098	0.098	0.099	0.097	2	AVG
Pronamide		0.315	0.347	0.348	0.367	0.362	0.365	0.390	0.356	6	AVG

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

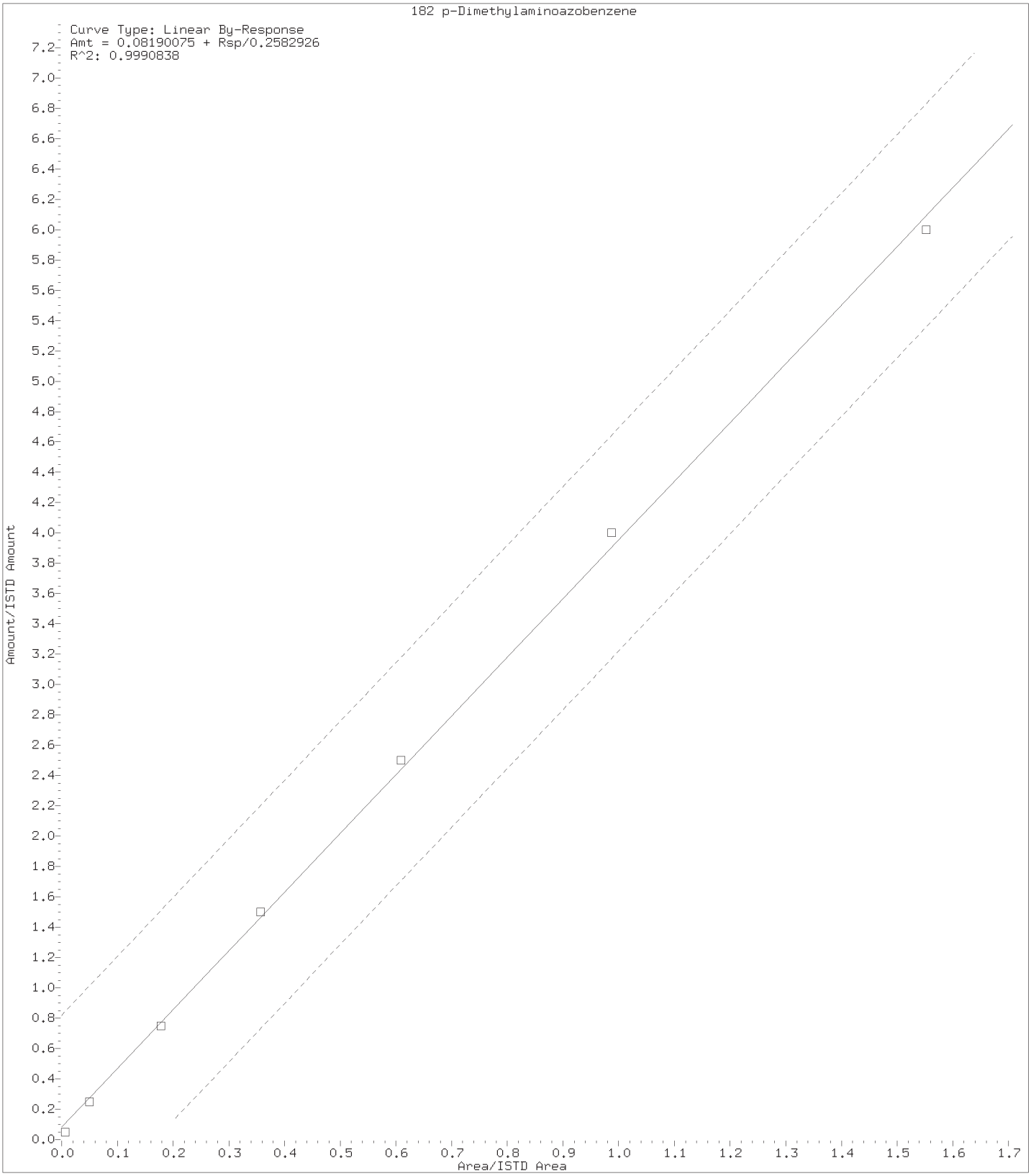
Instrument ID: HP11165 Calibration Date(s): 11/11/18 11/11/18

Calibration Times: 10:36 14:32

LAB FILE ID:RRF0.5 = gk0558.d RRF1 = gk0557.d RRF5 = gk0556.d RRF15 = gk0555.d
RRF30 = gk0551.d RRF50 = gk0554.d RRF80 = gk0553.d RRF120 = gk0552.d

COMPOUND	RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	RRF	% RSD	CAL. METHOD
Dinoseb				0.189	0.206	0.212	0.234	0.240	0.216	10	AVG
Phenanthrene	1.291	1.309	1.321	1.174	1.236	1.205	1.210	1.253	1.250	4	AVG
Anthracene	1.135	1.253	1.248	1.184	1.259	1.238	1.252	1.303	1.234	4	AVG
Carbazole		1.012	1.152	1.105	1.144	1.134	1.120	1.169	1.119	5	AVG
Methyl parathion			0.236	0.267	0.303	0.302	0.287	0.289	0.281	9	AVG
Di-n-butylphthalate			1.238	1.324	1.437	1.431	1.432	1.513	1.396	7	AVG
Parathion			0.150	0.164	0.193	0.196	0.192	0.209	0.184	12	AVG
4-Nitroquinoline-1-oxide				0.096	0.110	0.132	0.126	0.136	0.120	14	AVG
Octachlorostyrene			0.078	0.073	0.083	0.081	0.080	0.083	0.080	5	AVG
Isodrin		0.162	0.142	0.118	0.142	0.141	0.135	0.141	0.140	9	AVG
Fluoranthene	1.155	1.303	1.304	1.258	1.310	1.311	1.300	1.358	1.287	5	AVG
Benzidine			0.832	0.865	0.948	0.926	0.918	0.885	0.896	5	AVG
Pyrene	1.713	1.364	1.387	1.342	1.436	1.392	1.458	1.455	1.443	8	AVG
p-Dimethylaminoazobenzene		0.121	0.199	0.238	0.238	0.244	0.247	0.259	0.221	22	1STDEG
Chlorobenzilate		0.294	0.413	0.417	0.461	0.449	0.480	0.480	0.428	15	AVG
3,3'-Dimethylbenzidine			0.653	0.682	0.804	0.726	0.762	0.787	0.735	8	AVG
Butylbenzylphthalate			0.628	0.617	0.682	0.691	0.697	0.713	0.671	6	AVG
2-Acetylaminofluorene			0.403	0.508	0.568	0.576	0.590	0.602	0.541	14	AVG
3,3'-Dichlorobenzidine			0.422	0.437	0.459	0.455	0.476	0.493	0.457	6	AVG
4,4'-Methylenebis(2-chloroanil			0.204	0.235	0.257	0.252	0.267	0.277	0.249	11	AVG
Benzo(a)anthracene	1.405	1.110	1.323	1.273	1.341	1.348	1.377	1.383	1.320	7	AVG
Chrysene	1.292	1.231	1.244	1.227	1.279	1.265	1.315	1.305	1.270	3	AVG
bis(2-Ethylhexyl)phthalate			0.800	0.849	0.923	0.943	0.953	0.990	0.910	8	AVG
6-Methylchrysene			0.834	0.814	0.857	0.892	0.894	0.914	0.868	4	AVG
Di-n-octylphthalate			1.416	1.632	1.843	1.897	1.904	2.115	1.801	14	AVG
Benzo(b)fluoranthene	1.559	1.270	1.319	1.389	1.505	1.439	1.454	1.494	1.429	7	AVG
7,12-Dimethylbenz[a]anthracene		0.500	0.610	0.639	0.686	0.687	0.693	0.738	0.651	12	AVG
Benzo(k)fluoranthene	1.124	1.217	1.454	1.297	1.370	1.437	1.411	1.537	1.356	10	AVG
Benzo(a)pyrene	1.031	0.998	1.277	1.264	1.341	1.333	1.327	1.371	1.243	12	AVG
3-Methylcholanthrene		0.357	0.463	0.480	0.536	0.518	0.510	0.533	0.485	13	AVG
Dibenz(a,h)acridine			0.847	0.900	0.945	0.948	0.941	0.935	0.919	4	AVG
Dibenz(a,j)acridine			0.907	0.996	1.028	0.992	1.007	0.997	0.988	4	AVG
Indeno(1,2,3-cd)pyrene	1.050	1.033	1.298	1.319	1.380	1.307	1.329	1.327	1.256	11	AVG
Dibenz(a,h)anthracene	0.785	0.919	1.083	1.072	1.118	1.108	1.114	1.091	1.036	12	AVG
Benzo(g,h,i)perylene	1.078	0.904	1.075	1.065	1.156	1.073	1.100	1.082	1.067	7	AVG
Total PAHs	1.161	1.119	1.240	1.260	1.372	1.342	1.371	1.466	1.291	9	AVG
2-Fluorophenol			1.572	1.437	1.564	1.535	1.509	1.484	1.517	3	AVG
Phenol-d6			2.279	2.243	2.457	2.489	2.323	2.303	2.349	4	AVG
Nitrobenzene-d5			0.524	0.500	0.541	0.518	0.544	0.535	0.527	3	AVG
2-Fluorobiphenyl			1.662	1.543	1.611	1.603	1.603	1.691	1.619	3	AVG
2,4,6-Tribromophenol			0.136	0.161	0.161	0.171	0.161	0.171	0.160	8	AVG
Terphenyl-d14			0.929	0.912	0.969	0.960	0.995	1.037	0.967	5	AVG
								Average %RSD	7		

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.



Digitally signed by Edward Monborne on 11/12/2018 at 09:55.
Target 3.5 esignature user ID: em10340

Internal Standard
Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP11165.i/18nov11.b/gk0551.d SSTD030
/chem/HP11165.i/18nov11.b/gk0552.d SSTD120
/chem/HP11165.i/18nov11.b/gk0553.d SSTD080
/chem/HP11165.i/18nov11.b/gk0554.d SSTD050
/chem/HP11165.i/18nov11.b/gk0555.d SSTD015
/chem/HP11165.i/18nov11.b/gk0556.d SSTD005
/chem/HP11165.i/18nov11.b/gk0557.d SSTD001
/chem/HP11165.i/18nov11.b/gk0558.d SSTD0.50

Area Summary

	File ID:									
Internal Standard Name	gk0551.d	gk0552.d	gk0553.d	gk0554.d	gk0555.d	gk0556.d	gk0557.d	gk0558.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	157805	158544	148142	133331	136077	135792	133153	138219	142633	7	Yes
Naphthalene-d8	667588	647478	607174	609035	589762	565387	562185	560145	601094	7	Yes
Acenaphthene-d10	367881	346664	334621	324050	324996	321301	308573	316541	330578	6	Yes
Phenanthrene-d10	724156	666035	646762	656356	643241	640283	629388	663990	658776	4	Yes
Pyrene-d10	669260	600487	572891	602684	605873	627172	602904	622130	612925	5	Yes
Perylene-d12	544347	467493	478558	493502	506110	545328	548893	584152	521048	8	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:								
Internal Standard Name	gk0551.d	gk0552.d	gk0553.d	gk0554.d	gk0555.d	gk0556.d	gk0557.d	gk0558.d	Avg. RT
1,4-Dichlorobenzene-d4	5.734	5.734	5.734	5.734	5.734	5.734	5.734	5.734	5.734
Naphthalene-d8	6.969	6.975	6.975	6.969	6.969	6.969	6.969	6.969	6.970
Acenaphthene-d10	8.686	8.692	8.687	8.686	8.687	8.686	8.686	8.687	8.687
Phenanthrene-d10	10.139	10.145	10.145	10.139	10.139	10.139	10.139	10.139	10.141
Pyrene-d10	11.533	11.539	11.533	11.533	11.528	11.527	11.527	11.528	11.531
Perylene-d12	14.204	14.210	14.210	14.204	14.204	14.204	14.204	14.204	14.205

Comments:_____

_____

Report generated on 11/12/2018 at 07:56

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP11165

Method: SW-846 8270D File ID: gk0561.d

ICV SAMPLE ID: ICV2968 BATCH: 18NOV11026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	50.00	47.72	-5	30	YES
N-Nitrosodimethylamine	50.00	58.17	16	30	YES
Pyridine	50.00	51.50	3	30	YES
2-Picoline	50.00	53.05	6	30	YES
N-Nitrosomethylethylamine	50.00	44.88	-10	30	YES
Methyl methanesulfonate	50.00	54.48	9	30	YES
N-Nitrosodiethylamine	50.00	49.30	-1	30	YES
Ethyl methanesulfonate	50.00	45.46	-9	30	YES
Phenol	50.00	53.48	7	30	YES
Aniline	50.00	50.11	0	30	YES
bis(2-Chloroethyl)ether	50.00	54.48	9	30	YES
2-Chlorophenol	50.00	56.57	13	30	YES
1,3-Dichlorobenzene	50.00	53.76	8	30	YES
1,4-Dichlorobenzene	50.00	53.54	7	30	YES
Benzyl alcohol	50.00	58.50	17	30	YES
1,2-Dichlorobenzene	50.00	51.68	3	30	YES
Indene	50.00	77.25	55	30	NO*
2-Methylphenol	50.00	51.28	3	30	YES
2,2'-oxybis(1-Chloropropane	50.00	51.90	4	30	YES
bis(2-Chloroisopropyl)ether	50.00	51.90	4	30	YES
N-Nitrosopyrrolidine	50.00	47.53	-5	30	YES
Acetophenone	50.00	57.53	15	30	YES
4-Methylphenol	50.00	54.93	10	30	YES
N-Nitroso-di-n-propylamine	50.00	54.89	10	30	YES
N-Nitrosomorpholine	50.00	47.16	-6	30	YES
o-Toluidine	50.00	53.40	7	30	YES
Total Cresols	100.00	106.20	6	30	YES
Hexachloroethane	50.00	55.04	10	30	YES
Nitrobenzene	50.00	54.51	9	30	YES
N-Nitrosopiperidine	50.00	47.43	-5	30	YES
Isophorone	50.00	55.33	11	30	YES
2-Nitrophenol	50.00	55.76	12	30	YES
bis(2-Chloroethoxy)methane	50.00	57.01	14	30	YES
Benzoic acid	100.00	105.27	5	30	YES
O,O,O-Triethylphosphorothio	50.00	46.33	-7	30	YES
2,4-Dichlorophenol	50.00	54.76	10	30	YES
1,2,4-Trichlorobenzene	50.00	53.84	8	30	YES

NC = Could not calculate

Comments: _____*Run hits undervalid ICV ECM10340 11/12/18_____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP11165

Method: SW-846 8270D File ID: gk0561.d

ICV SAMPLE ID: ICV2968 BATCH: 18NOV11026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Naphthalene	50.00	52.46	5	30	YES
4-Chloroaniline	50.00	54.67	9	30	YES
2,6-Dichlorophenol	50.00	47.62	-5	30	YES
Hexachloropropene	50.00	62.68	25	30	YES
Hexachlorobutadiene	50.00	56.71	13	30	YES
Quinoline	50.00	48.21	-4	30	YES
N-Nitrosodi-n-butylamine	50.00	35.76	-28	30	YES
4-Chloro-3-methylphenol	50.00	56.20	12	30	YES
Safrole	50.00	47.84	-4	30	YES
2-Methylnaphthalene	50.00	52.70	5	30	YES
1-Methylnaphthalene	50.00	51.09	2	30	YES
Hexachlorocyclopentadiene	100.00	118.90	19	30	YES
1,2,4,5-Tetrachlorobenzene	50.00	54.94	10	30	YES
cis-Isosafrole	6.00	6.31	5	30	YES
2,4,6-Trichlorophenol	50.00	58.62	17	30	YES
2,4,5-Trichlorophenol	50.00	58.31	17	30	YES
trans-Isosafrole	44.00	53.44	21	30	YES
1,1'-Biphenyl	50.00	55.77	12	30	YES
2-Chloronaphthalene	50.00	62.33	25	30	YES
Isosafrole	50.00	59.75	20	30	YES
1-Chloronaphthalene	50.00	47.46	-5	30	YES
Diphenyl ether	50.00	48.20	-4	30	YES
2-Nitroaniline	50.00	61.01	22	30	YES**
1,4-Naphthoquinone	62.50	62.72	0	30	YES
1,4-Dinitrobenzene	50.00	56.58	13	30	YES
Dimethylphthalate	50.00	56.00	12	30	YES
1,3-Dinitrobenzene	50.00	57.14	14	30	YES
2,6-Dinitrotoluene	50.00	58.41	17	30	YES
Acenaphthylene	50.00	62.56	25	30	YES**
3-Nitroaniline	50.00	56.64	13	30	YES
Acenaphthene	50.00	57.31	15	30	YES
2,4-Dinitrophenol	100.00	120.24	20	30	YES
4-Nitrophenol	50.00	56.73	13	30	YES
Pentachlorobenzene	50.00	50.11	0	30	YES
2,4-Dinitrotoluene	50.00	56.89	14	30	YES
Dibenzofuran	50.00	56.83	14	30	YES
2,4_2,6-Dinitrotoluenes	100.00	115.30	15	30	YES

NC = Could not calculate

Comments: _____**For samples run on or after Nov 21 see ICV file HP11165/18nov20a_____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS | LAB CODE: LANCAS | INSTRUMENT: HP11165

Method: SW-846 8270D | File ID: gk0561.d

ICV SAMPLE ID: ICV2968 | BATCH: 18NOV11026 | Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1-Naphthylamine	100.00	107.98	8	30	YES
2,3,4,6-Tetrachlorophenol	50.00	55.94	12	30	YES
Diethylphthalate	50.00	56.32	13	30	YES
Thionazin	50.00	49.29	-1	30	YES
Fluorene	50.00	56.42	13	30	YES
4-Chlorophenyl-phenylether	50.00	56.45	13	30	YES
5-Nitro-o-toluidine	50.00	49.13	-2	30	YES
4-Nitroaniline	50.00	58.62	17	30	YES
4,6-Dinitro-2-methylphenol	50.00	59.98	20	30	YES
N-Nitrosodiphenylamine	50.00	59.23	18	30	YES
NDPA as diphenylamine	50.00	59.23	18	30	YES
1,2-Diphenylhydrazine	50.00	59.00	18	30	YES
Tetraethyldithiopyrophospha	50.00	50.99	2	30	YES
1,3,5-Trinitrobenzene	50.00	44.84	-10	30	YES
Diallate (peak 1)	37.50	36.16	-4	30	YES
Phorate	50.00	51.84	4	30	YES
Phenacetin	50.00	52.89	6	30	YES
4-Bromophenyl-phenylether	50.00	54.25	9	30	YES
Diallate (peak 2)	12.50	13.58	9	30	YES
Hexachlorobenzene	50.00	54.52	9	30	YES
Diallate trans/cis	50.00	49.74	-1	30	YES
Dimethoate	50.00	49.89	0	30	YES
Pentachlorophenol	50.00	64.55	29	30	YES**
4-Aminobiphenyl	50.00	142.05	184	30	NO*
Pentachloronitrobenzene	50.00	52.24	4	30	YES
Pronamide	50.00	50.89	2	30	YES
Dinoseb	50.00	47.71	-5	30	YES
Phenanthrene	50.00	55.75	12	30	YES
Anthracene	50.00	55.97	12	30	YES
Carbazole	50.00	58.26	17	30	YES
Methyl parathion	50.00	55.08	10	30	YES
Di-n-butylphthalate	50.00	58.19	16	30	YES
Parathion	50.00	52.65	5	30	YES
4-Nitroquinoline-1-oxide	600.00	860.28	43	30	NO*
Isodrin	50.00	48.93	-2	30	YES
Fluoranthene	50.00	55.67	11	30	YES
Benzidine	250.00	245.58	-2	30	YES

NC = Could not calculate

Comments: __*Run hits undervalid ICV ECM10340 11/12/18_____

_____**For samples run on or after Nov 21 see ICV file HP11165/18nov20a_____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS | LAB CODE: LANCAS | INSTRUMENT: HP11165

Method: SW-846 8270D | File ID: gk0561.d

ICV SAMPLE ID: ICV2968 | BATCH: 18NOV11026 | Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Pyrene	50.00	52.97	6	30	YES
p-Dimethylaminoazobenzene	50.00	57.19	14	30	YES
Chlorobenzilate	50.00	54.74	9	30	YES
3,3'-Dimethylbenzidine	100.00	108.73	9	30	YES
Butylbenzylphthalate	50.00	57.12	14	30	YES
2-Acetylaminofluorene	50.00	48.53	-3	30	YES
3,3'-Dichlorobenzidine	50.00	49.39	-1	30	YES
Benzo(a)anthracene	50.00	54.77	10	30	YES
Chrysene	50.00	53.55	7	30	YES
4,4'-Methylenebis(2-chloroa	50.00	51.01	2	30	YES
bis(2-Ethylhexyl)phthalate	50.00	55.02	10	30	YES
6-Methylchrysene	50.00	47.58	-5	30	YES
Di-n-octylphthalate	50.00	53.94	8	30	YES
Benzo(b)fluoranthene	50.00	51.41	3	30	YES
7,12-Dimethylbenz[a]anthrac	50.00	56.55	13	30	YES
Benzo(k)fluoranthene	50.00	57.28	15	30	YES
Benzo(a)pyrene	50.00	56.44	13	30	YES
3-Methylcholanthrene	50.00	61.55	23	30	YES
Dibenz(a,h)acridine	50.00	45.37	-9	30	YES
Dibenz(a,j)acridine	50.00	46.28	-7	30	YES
Indeno(1,2,3-cd)pyrene	50.00	54.31	9	30	YES
Dibenz(a,h)anthracene	50.00	56.60	13	30	YES
Benzo(g,h,i)perylene	50.00	52.23	4	30	YES
Total PAHs	900.00	989.49	10	30	YES

NC = Could not calculate

Comments: _____

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23262 Calibration Date(s): 11/09/18 11/09/18

Calibration Times: 15:38 18:24

LAB FILE ID:RRF0.5 = pk0312.d RRF1 = pk0315.d RRF5 = pk0318.d RRF15 = pk0317.d
RRF30 = pk0311.d RRF50 = pk0316.d RRF80 = pk0314.d RRF120 = pk0313.d

COMPOUND	RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	RRF	% RSD	CAL. METHOD
1,4-Dioxane			0.792	0.755	0.729	0.717	0.703	0.698	0.732	5	AVG
N-Nitrosodimethylamine			1.038	1.132	1.184	1.119	1.276	1.253	1.167	8	AVG
Pyridine			2.184	1.950	2.153	1.899	2.199	2.150	2.089	6	AVG
2-Picoline			2.128	2.095	2.181	2.116	2.210	2.151	2.147	2	AVG
N-Nitrosomethylethylamine			0.955	0.901	0.941	0.924	0.998	0.976	0.949	4	AVG
Methyl methanesulfonate			0.898	0.950	0.969	0.925	0.975	0.960	0.946	3	AVG
N-Nitrosodiethylamine		0.895	0.906	0.929	0.910	0.911	0.919	0.944	0.916	2	AVG
Ethyl methanesulfonate		1.055	0.941	0.853	0.894	0.880	0.927	0.912	0.923	7	AVG
Phenol		2.873	2.910	2.723	2.818	2.806	3.000	2.953	2.869	3	AVG
Aniline		3.353	3.184	3.042	3.217	3.128	3.257	3.251	3.204	3	AVG
bis(2-Chloroethyl)ether		1.973	2.145	1.880	2.074	1.998	2.054	2.067	2.027	4	AVG
2-Chlorophenol		1.668	1.493	1.445	1.552	1.506	1.553	1.596	1.545	5	AVG
1,3-Dichlorobenzene		1.556	1.532	1.532	1.542	1.518	1.581	1.565	1.546	1	AVG
1,4-Dichlorobenzene		1.424	1.619	1.490	1.548	1.490	1.617	1.574	1.538	5	AVG
Benzyl alcohol			1.272	1.157	1.267	1.251	1.261	1.278	1.248	4	AVG
1,2-Dichlorobenzene		1.584	1.602	1.433	1.576	1.473	1.559	1.530	1.537	4	AVG
Indene			1.843	1.693	1.853	1.867	1.859	1.829	1.824	4	AVG
2-Methylphenol		1.710	1.702	1.685	1.783	1.754	1.815	1.844	1.756	3	AVG
2,2'-oxybis(1-Chloropropane)		2.798	2.954	2.878	3.011	2.958	3.035	3.035	2.953	3	AVG
bis(2-Chloroisopropyl)ether		2.798	2.954	2.878	3.011	2.958	3.035	3.035	2.953	3	AVG
N-Nitrosopyrrolidine		1.092	1.195	1.105	1.129	1.130	1.201	1.160	1.145	4	AVG
Acetophenone		2.939	2.564	2.400	2.636	2.648	2.682	2.572	2.634	6	AVG
4-Methylphenol		2.028	2.065	1.991	2.066	2.080	2.108	2.122	2.066	2	AVG
Total Cresols		1.869	1.883	1.838	1.925	1.917	1.961	1.983	1.911	3	AVG
N-Nitroso-di-n-propylamine		1.768	1.758	1.734	1.766	1.729	1.782	1.780	1.759	1	AVG
N-Nitrosomorpholine			1.466	1.384	1.407	1.399	1.432	1.389	1.413	2	AVG
o-Toluidine		2.951	2.948	2.843	3.032	2.909	3.028	3.033	2.964	2	AVG
Hexachloroethane			0.697	0.611	0.652	0.646	0.670	0.654	0.655	4	AVG
Nitrobenzene		0.577	0.581	0.559	0.567	0.548	0.550	0.538	0.560	3	AVG
N-Nitrosopiperidine		0.274	0.235	0.230	0.237	0.237	0.222	0.221	0.236	7	AVG
Isophorone		0.987	1.056	1.037	1.082	1.065	1.022	1.038	1.041	3	AVG
2-Nitrophenol		0.198	0.192	0.190	0.210	0.203	0.208	0.200	0.200	4	AVG
2,4-Dimethylphenol		0.473	0.454	0.456	0.475	0.453	0.449	0.442	0.458	3	AVG
O,O,O-Triethylphosphorothioate			0.220	0.216	0.231	0.219	0.210	0.209	0.218	4	AVG
bis(2-Chloroethoxy)methane		0.631	0.633	0.604	0.633	0.633	0.602	0.606	0.620	2	AVG
Benzoic acid			0.294	0.314	0.325	0.328	0.313	0.321	0.316	4	AVG
2,4-Dichlorophenol		0.357	0.321	0.317	0.351	0.334	0.328	0.326	0.333	5	AVG
1,2,4-Trichlorobenzene			0.367	0.336	0.353	0.339	0.340	0.341	0.346	3	AVG
Naphthalene	1.166	1.252	1.201	1.088	1.131	1.118	1.095	1.091	1.143	5	AVG
4-Chloroaniline		0.439	0.470	0.445	0.480	0.470	0.456	0.456	0.459	3	AVG
2,6-Dichlorophenol		0.347	0.342	0.315	0.326	0.329	0.316	0.312	0.327	4	AVG
Hexachloropropene			0.215	0.194	0.213	0.195	0.193	0.197	0.201	5	AVG
Hexachlorobutadiene		0.161	0.218	0.200	0.205	0.202	0.199	0.202	0.198	9	AVG
Quinoline			0.804	0.764	0.808	0.788	0.767	0.745	0.779	3	AVG
Caprolactam			0.184	0.159	0.167	0.168	0.153	0.144	0.162	8	AVG
N-Nitrosodi-n-butylamine		0.582	0.559	0.505	0.535	0.517	0.502	0.380	0.512	13	AVG
4-Chloro-3-methylphenol		0.462	0.444	0.413	0.427	0.424	0.412	0.401	0.426	5	AVG
Safrole			0.306	0.310	0.322	0.316	0.310	0.311	0.312	2	AVG
2-Methylnaphthalene	0.792	0.743	0.781	0.781	0.823	0.792	0.760	0.768	0.780	3	AVG
1-Methylnaphthalene	0.793	0.713	0.782	0.762	0.764	0.756	0.740	0.739	0.756	3	AVG
Hexachlorocyclopentadiene				0.324	0.383	0.332	0.322	0.307	0.333	9	AVG
1,2,4,5-Tetrachlorobenzene		0.695	0.704	0.635	0.686	0.650	0.658	0.650	0.668	4	AVG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23262 Calibration Date(s): 11/09/18 11/09/18

Calibration Times: 15:38 18:24

LAB FILE ID:RRF0.5 = pk0312.d RRF1 = pk0315.d RRF5 = pk0318.d RRF15 = pk0317.d
RRF30 = pk0311.d RRF50 = pk0316.d RRF80 = pk0314.d RRF120 = pk0313.d

COMPOUND	RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	___ RRF	% RSD	CAL. METHOD
cis-Isosafrole			0.593	0.563	0.561	0.530	0.542	0.536	0.554	4	AVG
2,4,6-Trichlorophenol		0.434	0.447	0.429	0.475	0.445	0.447	0.440	0.445	3	AVG
2,4,5-Trichlorophenol		0.517	0.489	0.461	0.508	0.481	0.487	0.472	0.488	4	AVG
trans-Isosafrole			0.566	0.534	0.571	0.526	0.542	0.539	0.546	3	AVG
Isosafrole			0.571	0.539	0.570	0.527	0.542	0.538	0.548	3	AVG
1,1'-Biphenyl		1.877	1.695	1.523	1.720	1.680	1.650	1.579	1.675	7	AVG
2-Chloronaphthalene		1.446	1.480	1.318	1.326	1.192	1.526	1.224	1.359	9	AVG
1-Chloronaphthalene		1.336	1.377	1.203	1.312	1.346	1.278	1.308	1.309	4	AVG
Diphenyl ether		1.062	1.000	0.936	0.966	0.936	0.940	0.930	0.967	5	AVG
2-Nitroaniline		0.474	0.453	0.453	0.470	0.440	0.451	0.446	0.456	3	AVG
1,4-Naphthoquinone			0.558	0.553	0.621	0.580	0.589	0.568	0.578	4	AVG
1,4-Dinitrobenzene			0.237	0.236	0.259	0.255	0.252	0.253	0.249	4	AVG
Dimethylphthalate			1.674	1.601	1.682	1.594	1.603	1.573	1.621	3	AVG
1,3-Dinitrobenzene			0.284	0.269	0.310	0.283	0.303	0.283	0.289	5	AVG
2,6-Dinitrotoluene		0.429	0.389	0.355	0.405	0.376	0.376	0.370	0.386	6	AVG
Acenaphthylene	2.009	1.927	1.963	1.888	1.997	1.919	1.917	1.874	1.937	3	AVG
3-Nitroaniline		0.405	0.359	0.405	0.418	0.402	0.400	0.381	0.396	5	AVG
Acenaphthene	1.247	1.462	1.453	1.332	1.437	1.365	1.367	1.351	1.377	5	AVG
2,4-Dinitrophenol			0.174	0.193	0.218	0.223	0.229	0.230	0.211	11	AVG
4-Nitrophenol			0.256	0.246	0.297	0.259	0.274	0.254	0.264	7	AVG
Pentachlorobenzene		0.684	0.635	0.599	0.628	0.620	0.611	0.588	0.623	5	AVG
2,4-Dinitrotoluene			0.518	0.492	0.547	0.505	0.509	0.491	0.510	4	AVG
2,4_2,6-Dinitrotoluenes			0.453	0.423	0.476	0.440	0.442	0.430	0.444	4	AVG
Dibenzofuran		2.176	2.213	2.018	2.165	2.069	2.045	1.996	2.097	4	AVG
1-Naphthylamine			1.488	1.389	1.563	1.426	1.437	1.367	1.445	5	AVG
2,3,4,6-Tetrachlorophenol		0.444	0.408	0.389	0.446	0.408	0.407	0.397	0.414	5	AVG
2-Naphthylamine			1.565	1.450	1.572	1.426	1.386	1.303	1.450	7	AVG
Diethylphthalate			1.803	1.600	1.740	1.646	1.623	1.582	1.666	5	AVG
Thionazin			0.312	0.306	0.311	0.309	0.291	0.280	0.302	4	AVG
Fluorene	1.608	1.814	1.758	1.642	1.757	1.700	1.650	1.602	1.691	5	AVG
4-Chlorophenyl-phenylether		0.988	1.025	0.861	0.940	0.896	0.883	0.845	0.920	7	AVG
5-Nitro-o-toluidine		0.461	0.523	0.495	0.507	0.474	0.475	0.465	0.486	5	AVG
4-Nitroaniline		0.531	0.473	0.457	0.461	0.423	0.416	0.406	0.452	10	AVG
4,6-Dinitro-2-methylphenol			0.104	0.118	0.131	0.133	0.138	0.144	0.128	11	AVG
N-Nitrosodiphenylamine (1)		0.655	0.641	0.617	0.652	0.639	0.633	0.669	0.644	3	AVG
NDPA as diphenylamine		0.655	0.641	0.617	0.652	0.639	0.633	0.669	0.644	3	AVG
1,2-Diphenylhydrazine		0.969	0.963	0.920	0.998	0.968	0.973	1.018	0.973	3	AVG
Tetraethyldithiopyrophosphate			0.150	0.136	0.142	0.139	0.140	0.142	0.141	3	AVG
1,3,5-Trinitrobenzene			0.083	0.090	0.095	0.095	0.099	0.099	0.094	6	AVG
Diallate (peak 1)			0.430	0.452	0.467	0.439	0.441	0.454	0.447	3	AVG
Phorate		0.628	0.621	0.625	0.656	0.827	0.841	0.863	0.723	16	AVG
Phenacetin		0.463	0.419	0.403	0.441	0.416	0.412	0.419	0.425	5	AVG
4-Bromophenyl-phenylether			0.229	0.202	0.229	0.216	0.216	0.225	0.219	5	AVG
Diallate (peak 2)			0.421	0.392	0.367	0.364	0.376	0.390	0.385	5	AVG
Diallate trans/cis			0.428	0.441	0.450	0.427	0.430	0.443	0.437	2	AVG
Hexachlorobenzene	0.209	0.163	0.233	0.216	0.215	0.208	0.211	0.223	0.209	10	AVG
Dimethoate			0.392	0.377	0.400	0.375	0.366	0.353	0.377	5	AVG
Pentachlorophenol			0.095	0.107	0.131	0.127	0.132	0.134	0.121	13	AVG
4-Aminobiphenyl		0.419	0.325	0.285	0.298	0.285	0.262	0.250	0.303	19	AVG
Pentachloronitrobenzene			0.099	0.096	0.103	0.099	0.102	0.100	0.100	2	AVG
Pronamide		0.333	0.331	0.329	0.353	0.347	0.342	0.350	0.341	3	AVG
Dinoseb			0.149	0.176	0.201	0.204	0.215	0.227	0.195	15	AVG

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23262 Calibration Date(s): 11/09/18 11/09/18

Calibration Times: 15:38 18:24

LAB FILE ID:RRF0.5 = pk0312.d RRF1 = pk0315.d RRF5 = pk0318.d RRF15 = pk0317.d
RRF30 = pk0311.d RRF50 = pk0316.d RRF80 = pk0314.d RRF120 = pk0313.d

COMPOUND	RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	___ RRF	% RSD	CAL. METHOD
Phenanthrene	1.190	1.185	1.152	1.086	1.164	1.094	1.110	1.104	1.136	4	AVG
Anthracene	1.133	1.113	1.153	1.124	1.207	1.142	1.151	1.176	1.150	3	AVG
Carbazole		1.066	1.135	1.014	1.072	1.032	1.043	1.053	1.059	4	AVG
Methyl parathion			0.282	0.271	0.283	0.276	0.269	0.258	0.273	3	AVG
Di-n-butylphthalate			1.310	1.238	1.346	1.291	1.281	1.116	1.264	6	AVG
Parathion			0.157	0.167	0.179	0.177	0.178	0.176	0.172	5	AVG
4-Nitroquinoline-1-oxide				0.093	0.108	0.109	0.118	0.117	0.109	9	AVG
Octachlorostyrene			0.090	0.080	0.085	0.082	0.076	0.081	0.082	6	AVG
Isodrin		0.173	0.140	0.126	0.144	0.136	0.133	0.136	0.141	11	AVG
Fluoranthene	1.268	1.217	1.347	1.289	1.392	1.338	1.344	1.258	1.307	4	AVG
Benzidine			0.846	0.802	0.869	0.791	0.698	0.572	0.763	14	AVG
Pyrene	1.474	1.336	1.452	1.293	1.396	1.309	1.330	1.270	1.357	6	AVG
p-Dimethylaminoazobenzene		0.246	0.234	0.224	0.232	0.237	0.236	0.239	0.235	3	AVG
Chlorobenzilate		0.300	0.366	0.325	0.356	0.332	0.344	0.344	0.338	6	AVG
3,3'-Dimethylbenzidine			0.911	0.823	0.818	0.764	0.738	0.737	0.798	8	AVG
Butylbenzylphthalate			0.601	0.546	0.581	0.572	0.576	0.572	0.575	3	AVG
2-Acetylaminofluorene			0.518	0.462	0.497	0.480	0.493	0.488	0.490	4	AVG
3,3'-Dichlorobenzidine			0.498	0.459	0.466	0.443	0.449	0.446	0.460	4	AVG
4,4'-Methylenebis(2-chloroanil			0.276	0.249	0.246	0.239	0.240	0.231	0.247	6	AVG
Benzo(a)anthracene	1.234	1.165	1.321	1.232	1.318	1.240	1.256	1.228	1.249	4	AVG
Chrysene	1.106	1.170	1.264	1.227	1.242	1.201	1.207	1.194	1.201	4	AVG
bis(2-Ethylhexyl)phthalate			0.840	0.777	0.820	0.810	0.815	0.820	0.814	3	AVG
6-Methylchrysene			0.863	0.823	0.828	0.812	0.832	0.832	0.832	2	AVG
Di-n-octylphthalate			1.603	1.503	1.625	1.662	1.704	1.467	1.594	6	AVG
Benzo(b)fluoranthene	1.467	1.441	1.356	1.310	1.427	1.340	1.443	1.421	1.401	4	AVG
7,12-Dimethylbenz[a]anthracene		0.571	0.620	0.610	0.671	0.634	0.671	0.666	0.635	6	AVG
Benzo(k)fluoranthene	1.503	1.256	1.358	1.337	1.378	1.396	1.392	1.355	1.372	5	AVG
Benzo(a)pyrene	1.381	1.212	1.298	1.218	1.293	1.271	1.315	1.310	1.287	4	AVG
3-Methylcholanthrene		0.503	0.525	0.500	0.531	0.514	0.528	0.517	0.517	2	AVG
Dibenz(a,h)acridine			1.014	0.965	0.999	0.999	1.039	1.007	1.004	2	AVG
Dibenz(a,j)acridine			1.066	0.999	1.046	1.022	1.059	1.035	1.038	2	AVG
Indeno(1,2,3-cd)pyrene	1.291	1.261	1.334	1.340	1.365	1.349	1.396	1.311	1.331	3	AVG
Dibenz(a,h)anthracene	1.270	1.065	1.157	1.114	1.179	1.154	1.173	1.141	1.156	5	AVG
Benzo(g,h,i)perylene	1.165	1.081	1.158	1.116	1.161	1.125	1.151	1.100	1.132	3	AVG
Total PAHs	1.073	1.082	1.092	1.103	1.184	1.154	1.211	1.212	1.139	5	AVG
2-Fluorophenol			1.522	1.450	1.528	1.508	1.591	1.588	1.531	3	AVG
Phenol-d6			2.400	2.292	2.420	2.350	2.505	2.508	2.413	4	AVG
Nitrobenzene-d5			0.534	0.496	0.530	0.520	0.519	0.513	0.518	3	AVG
2-Fluorobiphenyl			1.587	1.531	1.631	1.570	1.576	1.351	1.541	6	AVG
2,4,6-Tribromophenol			0.213	0.194	0.213	0.197	0.195	0.188	0.200	5	AVG
Terphenyl-d14			0.894	0.856	0.914	0.853	0.875	0.727	0.853	8	AVG

Average %RSD 5

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

Internal Standard
Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP23262.i/18nov09a.b/pk0311.d SSTD030
/chem/HP23262.i/18nov09a.b/pk0312.d SSTD0.5
/chem/HP23262.i/18nov09a.b/pk0313.d SSTD120
/chem/HP23262.i/18nov09a.b/pk0314.d SSTD080
/chem/HP23262.i/18nov09a.b/pk0315.d SSTD001
/chem/HP23262.i/18nov09a.b/pk0316.d SSTD050
/chem/HP23262.i/18nov09a.b/pk0317.d SSTD015
/chem/HP23262.i/18nov09a.b/pk0318.d SSTD005

Area Summary

	File ID:									
Internal Standard Name	pk0311.d	pk0312.d	pk0313.d	pk0314.d	pk0315.d	pk0316.d	pk0317.d	pk0318.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	179919	150966	200868	180240	169195	180715	169972	161042	174115	9	Yes
Naphthalene-d8	781428	655810	923313	823867	697610	781992	739955	696589	762570	11	Yes
Acenaphthene-d10	475081	401180	549853	493748	413747	486294	458927	420761	462449	11	Yes
Phenanthrene-d10	1108399	971463	1163404	1120477	1036748	1118293	1061095	1004124	1073000	6	Yes
Pyrene-d10	1141913	1046297	1176300	1124935	1116077	1157721	1097432	1065028	1115713	4	Yes
Perylene-d12	982327	1000248	953612	924931	969720	978450	967102	1005502	972736	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:								
Internal Standard Name	pk0311.d	pk0312.d	pk0313.d	pk0314.d	pk0315.d	pk0316.d	pk0317.d	pk0318.d	Avg. RT
1,4-Dichlorobenzene-d4	5.501	5.501	5.501	5.501	5.501	5.501	5.501	5.501	5.501
Naphthalene-d8	6.737	6.731	6.737	6.737	6.731	6.737	6.731	6.731	6.734
Acenaphthene-d10	8.442	8.442	8.448	8.448	8.442	8.442	8.442	8.442	8.444
Phenanthrene-d10	9.895	9.889	9.895	9.895	9.889	9.895	9.889	9.889	9.892
Pyrene-d10	11.277	11.277	11.283	11.277	11.278	11.278	11.277	11.277	11.278
Perylene-d12	13.907	13.907	13.913	13.913	13.907	13.907	13.907	13.907	13.908

Comments:_____

_____

Report generated on 11/11/2018 at 19:00

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP23262

Method: SW-846 8270D File ID: pk0322.d

ICV SAMPLE ID: ICV2968 BATCH: 18NOV09A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	50.00	46.57	-7	30	YES
N-Nitrosodimethylamine	50.00	59.89	20	30	YES
Pyridine	50.00	53.69	7	30	YES
2-Picoline	50.00	55.62	11	30	YES
N-Nitrosomethylethylamine	50.00	49.90	0	30	YES
Methyl methanesulfonate	50.00	54.67	9	30	YES
N-Nitrosodiethylamine	50.00	49.14	-2	30	YES
Ethyl methanesulfonate	50.00	46.71	-7	30	YES
Phenol	50.00	56.79	14	30	YES
Aniline	50.00	51.60	3	30	YES
bis(2-Chloroethyl)ether	50.00	53.74	7	30	YES
2-Chlorophenol	50.00	54.28	9	30	YES
1,3-Dichlorobenzene	50.00	54.62	9	30	YES
1,4-Dichlorobenzene	50.00	57.51	15	30	YES
Benzyl alcohol	50.00	58.45	17	30	YES
1,2-Dichlorobenzene	50.00	55.15	10	30	YES
Indene	50.00	79.11	58	30	NO*
2-Methylphenol	50.00	55.46	11	30	YES
2,2'-oxybis(1-Chloropropane	50.00	53.05	6	30	YES
bis(2-Chloroisopropyl)ether	50.00	53.05	6	30	YES
N-Nitrosopyrrolidine	50.00	49.34	-1	30	YES
Acetophenone	50.00	55.91	12	30	YES
4-Methylphenol	50.00	56.86	14	30	YES
N-Nitroso-di-n-propylamine	50.00	55.93	12	30	YES
N-Nitrosomorpholine	50.00	48.49	-3	30	YES
o-Toluidine	50.00	55.02	10	30	YES
Total Cresols	100.00	112.43	12	30	YES
Hexachloroethane	50.00	52.78	6	30	YES
Nitrobenzene	50.00	51.71	3	30	YES
N-Nitrosopiperidine	50.00	44.51	-11	30	YES
Isophorone	50.00	55.56	11	30	YES
2-Nitrophenol	50.00	54.47	9	30	YES
2,4-Dimethylphenol	50.00	44.68	-11	30	YES
bis(2-Chloroethoxy)methane	50.00	54.70	9	30	YES
Benzoic acid	100.00	105.56	6	30	YES
O,O,O-Triethylphosphorothio	50.00	47.07	-6	30	YES
2,4-Dichlorophenol	50.00	55.55	11	30	YES

NC = Could not calculate

Comments: _____*re-run any hits under valid ICV_____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP23262

Method: SW-846 8270D File ID: pk0322.d

ICV SAMPLE ID: ICV2968 BATCH: 18NOV09A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,2,4-Trichlorobenzene	50.00	53.41	7	30	YES
Naphthalene	50.00	52.47	5	30	YES
4-Chloroaniline	50.00	57.60	15	30	YES
2,6-Dichlorophenol	50.00	47.66	-5	30	YES
Hexachloropropene	50.00	57.93	16	30	YES
Hexachlorobutadiene	50.00	55.32	11	30	YES
Quinoline	50.00	48.37	-3	30	YES
N-Nitrosodi-n-butylamine	50.00	36.74	-27	30	YES
4-Chloro-3-methylphenol	50.00	55.52	11	30	YES
Safrole	50.00	49.45	-1	30	YES
2-Methylnaphthalene	50.00	55.22	10	30	YES
1-Methylnaphthalene	50.00	53.53	7	30	YES
Hexachlorocyclopentadiene	100.00	113.93	14	30	YES
1,2,4,5-Tetrachlorobenzene	50.00	54.60	9	30	YES
cis-Isosafrole	6.00	6.68	11	30	YES
2,4,6-Trichlorophenol	50.00	57.55	15	30	YES
2,4,5-Trichlorophenol	50.00	58.68	17	30	YES
trans-Isosafrole	44.00	52.85	20	30	YES
1,1'-Biphenyl	50.00	56.67	13	30	YES
2-Chloronaphthalene	50.00	52.20	4	30	YES
Isosafrole	50.00	59.48	19	30	YES
1-Chloronaphthalene	50.00	48.70	-3	30	YES
Diphenyl ether	50.00	48.70	-3	30	YES
2-Nitroaniline	50.00	58.22	16	30	YES
1,4-Naphthoquinone	62.50	64.44	3	30	YES
1,4-Dinitrobenzene	50.00	57.44	15	30	YES
Dimethylphthalate	50.00	56.56	13	30	YES
1,3-Dinitrobenzene	50.00	57.89	16	30	YES
2,6-Dinitrotoluene	50.00	57.81	16	30	YES
3-Nitroaniline	50.00	58.91	18	30	YES
Acenaphthene	50.00	56.64	13	30	YES
4-Nitrophenol	50.00	55.35	11	30	YES
Pentachlorobenzene	50.00	50.04	0	30	YES
2,4-Dinitrotoluene	50.00	56.46	13	30	YES
Dibenzofuran	50.00	56.54	13	30	YES
2,4_2,6-Dinitrotoluenes	100.00	115.00	15	30	YES
1-Naphthylamine	100.00	107.44	7	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP23262

Method: SW-846 8270D File ID: pk0322.d

ICV SAMPLE ID: ICV2968 BATCH: 18NOV09A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2,3,4,6-Tetrachlorophenol	50.00	52.27	5	30	YES
2-Naphthylamine	100.00	104.79	5	30	YES
Diethylphthalate	50.00	56.63	13	30	YES
Thionazin	50.00	51.53	3	30	YES
Fluorene	50.00	57.16	14	30	YES
4-Chlorophenyl-phenylether	50.00	54.20	8	30	YES
5-Nitro-o-toluidine	50.00	49.35	-1	30	YES
4-Nitroaniline	50.00	52.42	5	30	YES
N-Nitrosodiphenylamine	50.00	57.71	15	30	YES
NDPA as diphenylamine	50.00	57.71	15	30	YES
1,2-Diphenylhydrazine	50.00	57.42	15	30	YES
Tetraethyldithiopyrophospha	50.00	47.09	-6	30	YES
1,3,5-Trinitrobenzene	50.00	46.07	-8	30	YES
Diallate (peak 1)	37.50	35.85	-4	30	YES
Phorate	50.00	56.10	12	30	YES
Phenacetin	50.00	47.00	-6	30	YES
4-Bromophenyl-phenylether	50.00	54.78	10	30	YES
Diallate (peak 2)	12.50	13.38	7	30	YES
Hexachlorobenzene	50.00	57.26	15	30	YES
Diallate trans/cis	50.00	48.52	-3	30	YES
Dimethoate	50.00	48.23	-4	30	YES
4-Aminobiphenyl	50.00	131.95	164	30	NO*
Pentachloronitrobenzene	50.00	49.44	-1	30	YES
Pronamide	50.00	49.85	0	30	YES
Dinoseb	50.00	49.38	-1	30	YES
Phenanthrene	50.00	54.56	9	30	YES
Anthracene	50.00	55.81	12	30	YES
Carbazole	50.00	55.80	12	30	YES
Methyl parathion	50.00	50.05	0	30	YES
Di-n-butylphthalate	50.00	57.35	15	30	YES
Parathion	50.00	48.85	-2	30	YES
4-Nitroquinoline-1-oxide	600.00	807.39	35	30	NO*
Isodrin	50.00	48.42	-3	30	YES
Fluoranthene	50.00	56.59	13	30	YES
Benzidine	250.00	236.21	-6	30	YES
Pyrene	50.00	54.34	9	30	YES
p-Dimethylaminoazobenzene	50.00	58.79	18	30	YES

NC = Could not calculate

Comments: _____*re-run any hits under valid ICV_____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS | LAB CODE: LANCAS | INSTRUMENT: HP23262

Method: SW-846 8270D | File ID: pk0322.d

ICV SAMPLE ID: ICV2968 | BATCH: 18NOV09A026 | Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Chlorobenzilate	50.00	50.91	2	30	YES
3,3'-Dimethylbenzidine	100.00	99.53	0	30	YES
Butylbenzylphthalate	50.00	55.63	11	30	YES
2-Acetylaminofluorene	50.00	47.11	-6	30	YES
3,3'-Dichlorobenzidine	50.00	48.67	-3	30	YES
Benzo(a)anthracene	50.00	53.96	8	30	YES
Chrysene	50.00	54.38	9	30	YES
4,4'-Methylenebis(2-chloroa	50.00	49.33	-1	30	YES
bis(2-Ethylhexyl)phthalate	50.00	54.44	9	30	YES
6-Methylchrysene	50.00	47.13	-6	30	YES
Di-n-octylphthalate	50.00	57.46	15	30	YES
Benzo(b)fluoranthene	50.00	55.39	11	30	YES
7,12-Dimethylbenz[a]anthrac	50.00	58.88	18	30	YES
Benzo(k)fluoranthene	50.00	57.77	16	30	YES
Benzo(a)pyrene	50.00	56.94	14	30	YES
3-Methylcholanthrene	50.00	64.10	28	30	YES
Dibenz(a,h)acridine	50.00	49.12	-2	30	YES
Dibenz(a,j)acridine	50.00	49.70	-1	30	YES
Indeno(1,2,3-cd)pyrene	50.00	56.58	13	30	YES
Dibenz(a,h)anthracene	50.00	56.90	14	30	YES
Benzo(g,h,i)perylene	50.00	54.49	9	30	YES
Total PAHs	900.00	1004.58	12	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP23262

Method: SW-846 8270D File ID: pk0323.d

ICV SAMPLE ID: BASICV2578 BATCH: 18NOV09A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Caprolactam	50.00	51.25	3	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP23262

Method: SW-846 8270D File ID: pk0325.d

ICV SAMPLE ID: ICV2338 BATCH: 18NOV09A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Acenaphthylene	50.00	57.92	16	30	YES
2,4-Dinitrophenol	100.00	118.79	19	30	YES
4,6-Dinitro-2-methylphenol	50.00	57.95	16	30	YES
Pentachlorophenol	50.00	55.37	11	30	YES

NC = Could not calculate

Comments: _____

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/16/18 Time: 10:04

Lab File ID: gk0851.d Init. Calib. Date(s): 11/11/18 11/11/18

Init. Calib. Times(s): 10:36 14:32

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.706	0.666	28.300	30.0	-6
N-Nitrosodimethylamine	1.073	1.067	29.840	30.0	-1
Pyridine	1.803	1.584	26.370	30.0	-12
2-Picoline	1.953	1.826	28.060	30.0	-6
N-Nitrosomethylethylamine	0.964	0.872	27.140	30.0	-10
Methyl methanesulfonate	1.008	1.020	30.370	30.0	1
N-Nitrosodiethylamine	0.864	0.943	32.720	30.0	9
Ethyl methanesulfonate	0.917	0.957	31.330	30.0	4
Phenol	2.674	2.664	29.880	30.0	0
Aniline	3.138	3.116	29.790	30.0	-1
a-methylstyrene	0.152	0.156	30.840	30.0	3
bis(2-Chloroethyl)ether	1.921	1.887	29.470	30.0	-2
2-Chlorophenol	1.474	1.666	33.910	30.0	13
1,3-Dichlorobenzene	1.624	1.647	30.430	30.0	1
1,4-Dichlorobenzene	1.695	1.718	30.410	30.0	1
Benzyl alcohol	1.174	1.285	32.830	30.0	9
1,2-Dichlorobenzene	1.640	1.627	29.760	30.0	-1
Indene	1.807	1.910	31.710	30.0	6
2-Methylphenol	1.803	1.884	31.350	30.0	5
2,2'-oxybis(1-Chloropropane)	1.949	1.902	29.270	30.0	-2
bis(2-Chloroisopropyl)ether	1.949	1.902	29.270	30.0	-2
N-Nitrosopyrrolidine	0.958	1.184	37.080	30.0	24
Acetophenone	2.433	2.595	32.000	30.0	7
4-Methylphenol	1.826	2.113	34.710	30.0	16
Total Cresols	1.763	1.999	66.060	60.0	10
N-Nitroso-di-n-propylamine	1.719	1.705	29.750	30.0	-1
N-Nitrosomorpholine	1.259	1.392	33.180	30.0	11
o-Toluidine	2.863	3.053	32.000	30.0	7
Hexachloroethane	0.638	0.674	31.680	30.0	6
Nitrobenzene	0.550	0.545	29.730	30.0	-1
N-Nitrosopiperidine	0.212	0.233	33.060	30.0	10
Isophorone	0.993	0.987	29.820	30.0	-1
2-Nitrophenol	0.198	0.219	33.170	30.0	11
2,4-Dimethylphenol	0.438	0.464	31.830	30.0	6
O,O,O-Triethylphosphorothioate	0.191	0.201	31.480	30.0	5
bis(2-Chloroethoxy)methane	0.552	0.582	31.620	30.0	5

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/16/18 Time: 10:04

Lab File ID: gk0851.d Init. Calib. Date(s): 11/11/18 11/11/18

Init. Calib. Times(s): 10:36 14:32

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
Benzoic acid	0.340	0.295	34.670	40.0	-13
2,4-Dichlorophenol	0.305	0.331	32.500	30.0	8
1,2,4-Trichlorobenzene	0.322	0.325	30.280	30.0	1
Naphthalene	1.130	1.197	31.780	30.0	6
4-Chloroaniline	0.465	0.480	30.960	30.0	3
2,6-Dichlorophenol	0.308	0.326	31.700	30.0	6
Hexachloropropene	0.161	0.184	34.330	30.0	14
Hexachlorobutadiene	0.173	0.171	29.730	30.0	-1
Quinoline	0.737	0.821	33.450	30.0	12
Caprolactam	0.142	0.166	35.130	30.0	17
N-Nitrosodi-n-butylamine	0.476	0.503	31.720	30.0	6
4-Chloro-3-methylphenol	0.381	0.439	34.530	30.0	15
Safrole	0.309	0.341	33.090	30.0	10
2-Methylnaphthalene	0.801	0.830	31.080	30.0	4
1-Methylnaphthalene	0.764	0.775	30.430	30.0	1
Hexachlorocyclopentadiene	0.295	0.264	26.820	30.0	-11
1,2,4,5-Tetrachlorobenzene	0.589	0.557	28.400	30.0	-5
cis-Isosafrole	0.578	0.548	4.840	5.1	-5
2,4,6-Trichlorophenol	0.398	0.403	30.360	30.0	1
2,4,5-Trichlorophenol	0.434	0.441	30.460	30.0	2
trans-Isosafrole	0.554	0.561	25.210	24.9	1
Isosafrole	0.558	0.559	30.050	30.0	0
1,1'-Biphenyl	1.763	1.604	27.280	30.0	-9
2-Chloronaphthalene	1.384	1.282	27.790	30.0	-7
1-Chloronaphthalene	1.282	1.201	28.110	30.0	-6
Diphenyl ether	0.947	0.894	28.330	30.0	-6
2-Nitroaniline	0.432	0.456	31.670	30.0	6
1,4-Naphthoquinone	0.567	0.546	28.850	30.0	-4
1,4-Dinitrobenzene	0.238	0.250	31.510	30.0	5
Dimethylphthalate	1.621	1.582	29.270	30.0	-2
1,3-Dinitrobenzene	0.277	0.295	32.020	30.0	7
2,6-Dinitrotoluene	0.364	0.379	31.260	30.0	4
Acenaphthylene	1.909	1.905	29.940	30.0	0
3-Nitroaniline	0.408	0.410	30.160	30.0	1
Acenaphthene	1.411	1.391	29.570	30.0	-1
2,4-Dinitrophenol	0.245	0.227	36.930	40.0	-8

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/16/18 Time: 10:04

Lab File ID: gk0851.d Init. Calib. Date(s): 11/11/18 11/11/18

Init. Calib. Times(s): 10:36 14:32

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Nitrophenol	0.283	0.298	31.540	30.0	5
Pentachlorobenzene	0.505	0.499	29.690	30.0	-1
2,4-Dinitrotoluene	0.506	0.536	31.790	30.0	6
2,4_2,6-Dinitrotoluenes	0.444	0.458	63.040	60.0	5
Dibenzofuran	1.964	1.993	30.440	30.0	1
1-Naphthylamine	1.530	1.508	29.560	30.0	-1
2,3,4,6-Tetrachlorophenol	0.350	0.344	29.520	30.0	-2
2-Naphthylamine	1.489	1.487	29.960	30.0	0
Diethylphthalate	1.627	1.625	29.970	30.0	0
Thionazin	0.310	0.302	29.280	30.0	-2
Fluorene	1.642	1.650	30.140	30.0	0
4-Chlorophenyl-phenylether	0.763	0.781	30.690	30.0	2
5-Nitro-o-toluidine	0.492	0.503	30.650	30.0	2
4-Nitroaniline	0.445	0.453	30.590	30.0	2
4,6-Dinitro-2-methylphenol	0.148	0.155	31.410	30.0	5
N-Nitrosodiphenylamine (1)	0.706	0.723	30.750	30.0	2
NDPA as diphenylamine	0.706	0.723	30.750	30.0	2
1,2-Diphenylhydrazine	1.094	1.042	28.560	30.0	-5
Tetraethyldithiopyrophosphate	0.161	0.164	30.560	30.0	2
1,3,5-Trinitrobenzene	0.094	0.099	31.290	30.0	4
Diallate (peak 1)	0.509	0.500	24.470	24.9	-2
Phorate	0.661	0.912	41.400	30.0	38
Phenacetin	0.464	0.513	33.200	30.0	11
4-Bromophenyl-phenylether	0.220	0.209	28.480	30.0	-5
Diallate (peak 2)	0.425	0.390	4.680	5.1	-8
Diallate trans/cis	0.495	0.481	29.150	30.0	-3
Hexachlorobenzene	0.205	0.202	29.600	30.0	-1
Dimethoate	0.380	0.415	32.740	30.0	9
Pentachlorophenol	0.137	0.114	25.040	30.0	-17
4-Aminobiphenyl	0.319	0.300	28.190	30.0	-6
Pentachloronitrobenzene	0.097	0.096	29.640	30.0	-1
Pronamide	0.356	0.386	32.460	30.0	8
Dinoseb	0.216	0.221	30.680	30.0	2
Phenanthrene	1.250	1.233	29.590	30.0	-1
Anthracene	1.234	1.268	30.820	30.0	3
Carbazole	1.119	1.159	31.060	30.0	4

(1) Cannot be Separated from Diphenylamine

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/16/18 Time: 10:04

Lab File ID: gk0851.d Init. Calib. Date(s): 11/11/18 11/11/18

Init. Calib. Times(s): 10:36 14:32

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
Methyl parathion	0.281	0.321	34.370	30.0	15
Di-n-butylphthalate	1.396	1.431	30.760	30.0	3
Parathion	0.184	0.209	34.010	30.0	13
4-Nitroquinoline-1-oxide	0.120	0.100	24.940	30.0	-17
Octachlorostyrene	0.080	0.087	32.670	30.0	9
Isodrin	0.140	0.136	29.050	30.0	-3
Fluoranthene	1.287	1.337	31.150	30.0	4
Benzidine	0.896	0.939	94.370	90.0	5
Pyrene	1.443	1.449	30.120	30.0	0
p-Dimethylaminoazobenzene	0.221	0.240	29.540	30.0	-2
Chlorobenzilate	0.428	0.457	32.080	30.0	7
3,3'-Dimethylbenzidine	0.735	0.852	34.740	30.0	16
Butylbenzylphthalate	0.671	0.690	30.820	30.0	3
2-Acetylaminofluorene	0.541	0.634	35.160	30.0	17
3,3'-Dichlorobenzidine	0.457	0.475	31.190	30.0	4
4,4'-Methylenebis(2-chloroanil	0.249	0.254	30.680	30.0	2
Benzo(a)anthracene	1.320	1.340	30.440	30.0	1
Chrysene	1.270	1.219	28.800	30.0	-4
bis(2-Ethylhexyl)phthalate	0.910	0.930	30.680	30.0	2
6-Methylchrysene	0.868	0.878	30.340	30.0	1
Di-n-octylphthalate	1.801	1.878	31.290	30.0	4
Benzo(b)fluoranthene	1.429	1.410	29.610	30.0	-1
7,12-Dimethylbenz[a]anthracene	0.651	0.695	32.030	30.0	7
Benzo(k)fluoranthene	1.356	1.400	30.990	30.0	3
Benzo(a)pyrene	1.243	1.307	31.550	30.0	5
3-Methylcholanthrene	0.485	0.564	34.870	30.0	16
Dibenz(a,h)acridine	0.919	0.972	31.720	30.0	6
Dibenz(a,j)acridine	0.988	1.026	31.140	30.0	4
Indeno(1,2,3-cd)pyrene	1.256	1.354	32.360	30.0	8
Dibenz(a,h)anthracene	1.036	1.168	33.810	30.0	13
Benzo(g,h,i)perylene	1.066	1.131	31.820	30.0	6
Total PAHs	1.291	1.295	554.000	540.0	3
2-Fluorophenol	1.517	1.543	61.040	60.0	2
Phenol-d6	2.349	2.540	64.890	60.0	8
Nitrobenzene-d5	0.527	0.525	59.790	60.0	0

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/16/18 Time: 10:04

Lab File ID: gk0851.d Init. Calib. Date(s): 11/11/18 11/11/18

Init. Calib. Times(s): 10:36 14:32

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
2-Fluorobiphenyl	1.619	1.530	56.710	60.0	-5
2,4,6-Tribromophenol	0.160	0.188	70.520	60.0	18
Terphenyl-d14	0.967	0.944	58.560	60.0	-2
			Average %Drift:		6

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP11165.i/18nov11.b/gk0551.d **
/chem/HP11165.i/18nov11.b/gk0552.d
/chem/HP11165.i/18nov11.b/gk0553.d
/chem/HP11165.i/18nov11.b/gk0554.d
/chem/HP11165.i/18nov11.b/gk0555.d
/chem/HP11165.i/18nov11.b/gk0556.d
/chem/HP11165.i/18nov11.b/gk0557.d
/chem/HP11165.i/18nov11.b/gk0558.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP11165.i/18nov16.b/gk0851.d

Area Summary

File ID:

Internal Standard Name	gk0851.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	150545	157805	78902	315610	Yes
Naphthalene-d8	668579	667588	333794	1335176	Yes
Acenaphthene-d10	405368	367881	183940	735762	Yes
Phenanthrene-d10	821448	724156	362078	1448312	Yes
Pyrene-d10	780631	669260	334630	1338520	Yes
Perylene-d12	653821	544347	272174	1088694	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	gk0851.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	5.451	5.734	No
Naphthalene-d8	6.686	6.969	No
Acenaphthene-d10	8.398	8.686	No
Phenanthrene-d10	9.851	10.139	No
Pyrene-d10	11.239	11.533	No
Perylene-d12	13.874	14.204	No

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: Unless otherwise documented, the shift in retention time is due to routine injection port maintenance, which involves the removal of a length of the analytical column.

Data File: /chem/HP11165.i/18nov16.b/gk0862.d
Report Date: 11/19/2018 19:13

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP11165.i
Client ID: SECC50
Lab Sample ID: STD2928
Sublist used: 18nov16.sub
Injection Date and Time: 16-NOV-2018 18:30
Initial Calibration Date(s): 11-NOV-2018 11-NOV-2018
Initial Calibration Time(s): 10:36 ~~18:11~~
Method used: /chem/HP11165.i/18nov16.b/m8270d.m 14:32

3 dcw 13766 11/21/18

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Pyridine	1.80273	1.82707	0.010	-1.4	20.0
Phenol	2.67435	2.72639	0.010	-1.9	20.0
Aniline	3.13810	2.98565	0.010	4.9	20.0
bis(2-Chloroethyl)ether	1.92074	1.89013	0.010	1.6	20.0
2-Chlorophenol	1.47414	1.60436	0.010	-8.8	20.0
1,3-Dichlorobenzene	1.62383	1.57750	0.010	2.9	20.0
1,4-Dichlorobenzene	1.69489	1.59844	0.010	5.7	20.0
Benzyl alcohol	1.17438	1.33312	0.010	-13.5	20.0
1,2-Dichlorobenzene	1.64042	1.54838	0.010	5.6	20.0
2-Methylphenol	1.80307	1.83442	0.010	-1.7	20.0
2,2'-oxybis(1-Chloropropane)	1.94937	1.92307	0.010	1.3	20.0
Acetophenone	2.43307	2.63362	0.010	-8.2	20.0
4-Methylphenol	1.82604	2.12948	0.010	-16.6	20.0
N-Nitroso-di-n-propylamine	1.71866	1.72053	0.010	-0.1	20.0
Hexachloroethane	0.63795	0.65618	0.010	-2.9	20.0
Nitrobenzene	0.54964	0.53422	0.010	2.8	20.0
Isophorone	0.99335	0.98113	0.010	1.2	20.0
2-Nitrophenol	0.19802	0.21075	0.010	-6.4	20.0
2,4-Dimethylphenol	0.43757	0.47313	0.010	-8.1	20.0
bis(2-Chloroethoxy)methane	0.55217	0.55535	0.010	-0.6	20.0
2,4-Dichlorophenol	0.30532	0.32703	0.010	-7.1	20.0
1,2,4-Trichlorobenzene	0.32198	0.31996	0.010	0.6	20.0
Naphthalene	1.12970	1.15371	0.010	-2.1	20.0
4-Chloroaniline	0.46507	0.46770	0.010	-0.6	20.0
Hexachlorobutadiene	0.17278	0.16417	0.010	5.0	20.0
Caprolactam	0.14177	0.17103	0.010	-20.6	20.0
4-Chloro-3-methylphenol	0.38108	0.44057	0.010	-15.6	20.0
2-Methylnaphthalene	0.80112	0.81818	0.010	-2.1	20.0
1-Methylnaphthalene	0.76378	0.77380	0.010	-1.3	20.0
Hexachlorocyclopentadiene	0.29479	0.19049	0.010	35.4	20.0
2,4,6-Trichlorophenol	0.39837	0.43123	0.010	-8.2	20.0
2,4,5-Trichlorophenol	0.43392	0.47679	0.010	-9.9	20.0
1,1'-Biphenyl	1.76341	1.71300	0.010	2.9	20.0
2-Chloronaphthalene	1.38381	1.54377	0.010	-11.6	20.0
2-Nitroaniline	0.43236	0.50077	0.010	-15.8	20.0
Dimethylphthalate	1.62095	1.62718	0.010	-0.4	20.0
2,6-Dinitrotoluene	0.36399	0.39380	0.010	-8.2	20.0
Acenaphthylene	1.90860	1.92622	0.010	-0.9	20.0
3-Nitroaniline	0.40810	0.43369	0.010	-6.3	20.0
Acenaphthene	1.41074	1.44486	0.010	-2.4	20.0
2,4-Dinitrophenol	0.24546	0.25308	0.010	-3.1	20.0
4-Nitrophenol	0.28332	0.32265	0.010	-13.9	20.0
2,4-Dinitrotoluene	0.50578	0.56119	0.010	-11.0	20.0
Dibenzofuran	1.96408	2.01455	0.010	-2.6	20.0
Diethylphthalate	1.62709	1.60306	0.010	1.5	20.0
Fluorene	1.64171	1.74872	0.010	-6.5	20.0
4-Chlorophenyl-phenylether	0.76317	0.81106	0.010	-6.3	20.0
4-Nitroaniline	0.44456	0.48113	0.010	-8.2	20.0

Data File: /chem/HP11165.i/18nov16.b/gk0862.d
Report Date: 11/19/2018 19:13

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP11165.i
Client ID: SECC50
Lab Sample ID: STD2928
Sublist used: 18nov16.sub
Injection Date and Time: 16-NOV-2018 18:30
Initial Calibration Date(s): 11-NOV-2018 11-NOV-2018
Initial Calibration Time(s): 10:36 ~~18:11~~ 14:32
Method used: /chem/HP11165.i/18nov16.b/m8270d.m

(3) dcw 13766 11/21/18

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
4,6-Dinitro-2-methylphenol	0.14821	0.17066	0.010	-15.1	20.0
N-Nitrosodiphenylamine	0.70554	0.75099	0.010	-6.4	20.0
4-Bromophenyl-phenylether	0.21979	0.22019	0.010	-0.2	20.0
Hexachlorobenzene	0.20500	0.20876	0.010	-1.8	20.0
Pentachlorophenol	0.13690	0.11358	0.010	17.0	20.0
Phenanthrene	1.24991	1.23655	0.010	1.1	20.0
Anthracene	1.23412	1.25536	0.010	-1.7	20.0
Carbazole	1.11941	1.13191	0.010	-1.1	20.0
Di-n-butylphthalate	1.39593	1.37528	0.010	1.5	20.0
Fluoranthene	1.28725	1.25714	0.010	2.3	20.0
Pyrene	1.44329	1.36414	0.010	5.5	20.0
Butylbenzylphthalate	0.67143	0.70962	0.010	-5.7	20.0
3,3'-Dichlorobenzidine	0.45712	0.48157	0.010	-5.3	20.0
Benzo(a)anthracene	1.32016	1.33964	0.010	-1.5	20.0
Chrysene	1.26971	1.19313	0.010	6.0	20.0
bis(2-Ethylhexyl)phthalate	0.90956	0.99790	0.010	-9.7	20.0
Di-n-octylphthalate	1.80122	2.01397	0.010	-11.8	20.0
Benzo(b)fluoranthene	1.42863	1.38777	0.010	2.9	20.0
Benzo(k)fluoranthene	1.35577	1.31209	0.010	3.2	20.0
Benzo(a)pyrene	1.24269	1.23934	0.010	0.3	20.0
Indeno(1,2,3-cd)pyrene	1.25557	1.28687	0.010	-2.5	20.0
Dibenz(a,h)anthracene	1.03640	1.10942	0.010	-7.0	20.0
Benzo(g,h,i)perylene	1.06652	1.06220	0.010	0.4	20.0

Surrogate Standards	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
2-Fluorophenol	1.51691	1.52700	0.010	-0.7	20.0
Phenol-d6	2.34894	2.50446	0.010	-6.6	20.0
Nitrobenzene-d5	0.52693	0.51997	0.010	1.3	20.0
2-Fluorobiphenyl	1.61877	1.56946	0.010	3.0	20.0
2,4,6-Tribromophenol	0.16019	0.19447	0.010	-21.4	20.0
Terphenyl-d14	0.96713	0.94439	0.010	2.4	20.0

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23262 Calibration Date: 11/11/18 Time: 20:58

Lab File ID: pk0361.d Init. Calib. Date(s): 11/09/18 11/09/18

Init. Calib. Times(s): 15:38 18:24

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.732	0.750	30.740	30.0	2
N-Nitrosodimethylamine	1.167	1.246	32.020	30.0	7
Pyridine	2.089	2.111	30.310	30.0	1
2-Picoline	2.147	2.169	30.310	30.0	1
N-Nitrosomethylethylamine	0.949	0.995	31.460	30.0	5
Methyl methanesulfonate	0.946	0.981	31.120	30.0	4
N-Nitrosodiethylamine	0.916	0.944	30.910	30.0	3
Ethyl methanesulfonate	0.923	0.946	30.740	30.0	2
Phenol	2.869	2.830	29.590	30.0	-1
Aniline	3.204	3.267	30.580	30.0	2
bis(2-Chloroethyl)ether	2.027	2.082	30.810	30.0	3
2-Chlorophenol	1.545	1.581	30.710	30.0	2
1,3-Dichlorobenzene	1.546	1.606	31.160	30.0	4
1,4-Dichlorobenzene	1.538	1.574	30.700	30.0	2
Benzyl alcohol	1.248	1.262	30.350	30.0	1
1,2-Dichlorobenzene	1.537	1.552	30.290	30.0	1
Indene	1.824	1.883	30.970	30.0	3
2-Methylphenol	1.756	1.786	30.500	30.0	2
2,2'-oxybis(1-Chloropropane)	2.953	3.050	30.990	30.0	3
bis(2-Chloroisopropyl)ether	2.953	3.050	30.990	30.0	3
N-Nitrosopyrrolidine	1.145	1.103	28.910	30.0	-4
Acetophenone	2.635	2.697	30.710	30.0	2
4-Methylphenol	2.066	2.084	30.260	30.0	1
Total Cresols	1.911	1.935	60.750	60.0	1
N-Nitroso-di-n-propylamine	1.760	1.733	29.550	30.0	-1
N-Nitrosomorpholine	1.413	1.422	30.200	30.0	1
o-Toluidine	2.964	2.967	30.040	30.0	0
Hexachloroethane	0.655	0.664	30.420	30.0	1
Nitrobenzene	0.560	0.559	29.960	30.0	0
N-Nitrosopiperidine	0.236	0.223	28.260	30.0	-6
Isophorone	1.041	1.039	29.950	30.0	0
2-Nitrophenol	0.200	0.207	30.950	30.0	3
2,4-Dimethylphenol	0.458	0.456	29.880	30.0	0
O,O,O-Triethylphosphorothioate	0.218	0.224	30.890	30.0	3
bis(2-Chloroethoxy)methane	0.620	0.638	30.840	30.0	3
Benzoic acid	0.316	0.282	35.690	40.0	-11

FORM VII SV-1

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23262 Calibration Date: 11/11/18 Time: 20:58

Lab File ID: pk0361.d Init. Calib. Date(s): 11/09/18 11/09/18

Init. Calib. Times(s): 15:38 18:24

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dichlorophenol	0.333	0.323	29.060	30.0	-3
1,2,4-Trichlorobenzene	0.346	0.356	30.840	30.0	3
Naphthalene	1.143	1.120	29.400	30.0	-2
4-Chloroaniline	0.459	0.475	31.050	30.0	4
2,6-Dichlorophenol	0.327	0.322	29.530	30.0	-2
Hexachloropropene	0.201	0.202	30.140	30.0	0
Hexachlorobutadiene	0.198	0.215	32.550	30.0	8
Quinoline	0.779	0.784	30.200	30.0	1
Caprolactam	0.162	0.160	29.570	30.0	-1
N-Nitrosodi-n-butylamine	0.512	0.502	29.410	30.0	-2
4-Chloro-3-methylphenol	0.426	0.406	28.600	30.0	-5
Safrole	0.312	0.313	30.090	30.0	0
2-Methylnaphthalene	0.780	0.816	31.370	30.0	5
1-Methylnaphthalene	0.756	0.755	29.970	30.0	0
Hexachlorocyclopentadiene	0.333	0.363	32.670	30.0	9
1,2,4,5-Tetrachlorobenzene	0.668	0.713	32.010	30.0	7
cis-Isosafrole	0.554	0.553	5.090	5.1	0
2,4,6-Trichlorophenol	0.445	0.458	30.860	30.0	3
2,4,5-Trichlorophenol	0.488	0.499	30.670	30.0	2
trans-Isosafrole	0.546	0.578	26.330	24.9	6
Isosafrole	0.548	0.574	31.420	30.0	5
1,1'-Biphenyl	1.675	1.695	30.370	30.0	1
2-Chloronaphthalene	1.359	1.400	30.910	30.0	3
1-Chloronaphthalene	1.309	1.286	29.490	30.0	-2
Diphenyl ether	0.967	0.985	30.540	30.0	2
2-Nitroaniline	0.456	0.465	30.630	30.0	2
1,4-Naphthoquinone	0.578	0.611	31.730	30.0	6
1,4-Dinitrobenzene	0.249	0.263	31.720	30.0	6
Dimethylphthalate	1.621	1.677	31.040	30.0	3
1,3-Dinitrobenzene	0.289	0.284	29.560	30.0	-1
2,6-Dinitrotoluene	0.386	0.392	30.460	30.0	2
Acenaphthylene	1.937	1.979	30.660	30.0	2
3-Nitroaniline	0.396	0.415	31.420	30.0	5
Acenaphthene	1.377	1.424	31.040	30.0	3
2,4-Dinitrophenol	0.211	0.208	39.390	40.0	-2
4-Nitrophenol	0.264	0.265	30.060	30.0	0

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23262 Calibration Date: 11/11/18 Time: 20:58

Lab File ID: pk0361.d Init. Calib. Date(s): 11/09/18 11/09/18

Init. Calib. Times(s): 15:38 18:24

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
Pentachlorobenzene	0.623	0.625	30.080	30.0	0
2,4-Dinitrotoluene	0.510	0.532	31.270	30.0	4
2,4_2,6-Dinitrotoluenes	0.444	0.462	62.340	60.0	4
Dibenzofuran	2.097	2.164	30.950	30.0	3
1-Naphthylamine	1.445	1.512	31.380	30.0	5
2,3,4,6-Tetrachlorophenol	0.414	0.425	30.780	30.0	3
2-Naphthylamine	1.450	1.523	31.500	30.0	5
Diethylphthalate	1.666	1.695	30.530	30.0	2
Thionazin	0.302	0.317	31.510	30.0	5
Fluorene	1.691	1.735	30.770	30.0	3
4-Chlorophenyl-phenylether	0.920	0.918	29.930	30.0	0
5-Nitro-o-toluidine	0.486	0.530	32.760	30.0	9
4-Nitroaniline	0.452	0.464	30.790	30.0	3
4,6-Dinitro-2-methylphenol	0.128	0.134	31.460	30.0	5
N-Nitrosodiphenylamine (1)	0.644	0.666	31.020	30.0	3
NDPA as diphenylamine	0.644	0.666	31.020	30.0	3
1,2-Diphenylhydrazine	0.973	0.976	30.090	30.0	0
Tetraethyldithiopyrophosphate	0.141	0.147	31.170	30.0	4
1,3,5-Trinitrobenzene	0.094	0.094	30.170	30.0	1
Diallate (peak 1)	0.447	0.462	25.740	24.9	3
Phorate	0.723	0.596	24.750	30.0	-17
Phenacetin	0.425	0.426	30.070	30.0	0
4-Bromophenyl-phenylether	0.219	0.234	32.020	30.0	7
Diallate (peak 2)	0.385	0.380	5.040	5.1	-1
Diallate trans/cis	0.437	0.448	30.800	30.0	3
Hexachlorobenzene	0.209	0.221	31.710	30.0	6
Dimethoate	0.377	0.384	30.530	30.0	2
Pentachlorophenol	0.121	0.123	30.600	30.0	2
4-Aminobiphenyl	0.303	0.306	30.300	30.0	1
Pentachloronitrobenzene	0.100	0.108	32.370	30.0	8
Pronamide	0.341	0.354	31.180	30.0	4
Dinoseb	0.195	0.192	29.550	30.0	-2
Phenanthrene	1.136	1.155	30.520	30.0	2
Anthracene	1.150	1.203	31.380	30.0	5
Carbazole	1.059	1.085	30.720	30.0	2
Methyl parathion	0.273	0.293	32.260	30.0	8

(1) Cannot be Separated from Diphenylamine

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23262 Calibration Date: 11/11/18 Time: 20:58

Lab File ID: pk0361.d Init. Calib. Date(s): 11/09/18 11/09/18

Init. Calib. Times(s): 15:38 18:24

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
Di-n-butylphthalate	1.264	1.324	31.440	30.0	5
Parathion	0.172	0.172	29.980	30.0	0
4-Nitroquinoline-1-oxide	0.109	0.105	29.020	30.0	-3
Octachlorostyrene	0.082	0.080	29.020	30.0	-3
Isodrin	0.141	0.142	30.120	30.0	0
Fluoranthene	1.307	1.406	32.270	30.0	8
Benzidine	0.763	0.876	103.270	90.0	15
Pyrene	1.357	1.378	30.460	30.0	2
p-Dimethylaminoazobenzene	0.235	0.235	29.960	30.0	0
Chlorobenzilate	0.338	0.344	30.510	30.0	2
3,3'-Dimethylbenzidine	0.798	0.855	32.140	30.0	7
Butylbenzylphthalate	0.575	0.603	31.460	30.0	5
2-Acetylaminofluorene	0.490	0.490	30.030	30.0	0
3,3'-Dichlorobenzidine	0.460	0.480	31.330	30.0	4
4,4'-Methylenebis(2-chloroanil	0.247	0.257	31.210	30.0	4
Benzo(a)anthracene	1.249	1.322	31.740	30.0	6
Chrysene	1.201	1.297	32.380	30.0	8
bis(2-Ethylhexyl)phthalate	0.814	0.832	30.690	30.0	2
6-Methylchrysene	0.832	0.867	31.270	30.0	4
Di-n-octylphthalate	1.594	1.640	30.870	30.0	3
Benzo(b)fluoranthene	1.401	1.375	29.440	30.0	-2
7,12-Dimethylbenz[a]anthracene	0.635	0.662	31.300	30.0	4
Benzo(k)fluoranthene	1.372	1.483	32.440	30.0	8
Benzo(a)pyrene	1.287	1.320	30.770	30.0	3
3-Methylcholanthrene	0.517	0.529	30.720	30.0	2
Dibenz(a,h)acridine	1.004	1.009	30.150	30.0	1
Dibenz(a,j)acridine	1.038	1.054	30.480	30.0	2
Indeno(1,2,3-cd)pyrene	1.331	1.383	31.180	30.0	4
Dibenz(a,h)anthracene	1.156	1.189	30.830	30.0	3
Benzo(g,h,i)perylene	1.132	1.178	31.230	30.0	4
Total PAHs	1.139	1.183	561.050	540.0	4
2-Fluorophenol	1.531	1.579	61.880	60.0	3
Phenol-d6	2.412	2.480	61.670	60.0	3
Nitrobenzene-d5	0.518	0.536	62.000	60.0	3
2-Fluorobiphenyl	1.541	1.639	63.810	60.0	6

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP23262 Calibration Date: 11/11/18 Time: 20:58

Lab File ID: pk0361.d Init. Calib. Date(s): 11/09/18 11/09/18

Init. Calib. Times(s): 15:38 18:24

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4,6-Tribromophenol	0.200	0.204	61.070	60.0	2
Terphenyl-d14	0.853	0.924	64.980	60.0	8
			Average %Drift:		3

FORM VII SV-1

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP23262.i/18nov09a.b/pk0311.d **
/chem/HP23262.i/18nov09a.b/pk0312.d
/chem/HP23262.i/18nov09a.b/pk0313.d
/chem/HP23262.i/18nov09a.b/pk0314.d
/chem/HP23262.i/18nov09a.b/pk0315.d
/chem/HP23262.i/18nov09a.b/pk0316.d
/chem/HP23262.i/18nov09a.b/pk0317.d
/chem/HP23262.i/18nov09a.b/pk0318.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP23262.i/18nov11.b/pk0361.d

Area Summary

Internal Standard Name	File ID: pk0361.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	148838	179919	89960	359838	Yes
Naphthalene-d8	645044	781428	390714	1562856	Yes
Acenaphthene-d10	380233	475081	237540	950162	Yes
Phenanthrene-d10	868007	1108399	554200	2216798	Yes
Pyrene-d10	898203	1141913	570956	2283826	Yes
Perylene-d12	788919	982327	491164	1964654	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

Internal Standard Name	File ID: pk0361.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	5.501	5.501	Yes
Naphthalene-d8	6.731	6.737	Yes
Acenaphthene-d10	8.442	8.442	Yes
Phenanthrene-d10	9.889	9.895	Yes
Pyrene-d10	11.277	11.277	Yes
Perylene-d12	13.907	13.907	Yes

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: _____

Data File: /chem/HP23262.i/18nov11.b/pk0392.d
Report Date: 11/12/2018 23:33

09-NOV-2018
15:38
(3) dew 13766
11/14/18

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP23262.i
Client ID: SECC50
Lab Sample ID: STD2928
Sublist used: 311SLA.sub

Injection Date and Time: 12-NOV-2018 08:03
Initial Calibration Date(s): 06-NOV-~~2018~~ 09-NOV-2018
Initial Calibration Time(s): ~~14:30~~ 18:24
Method used: /chem/HP23262.i/18nov11.b/m8270d.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
1,4-Dioxane	0.73235	0.59134	0.010	19.3	20.0
Benzaldehyde	1.82250	0.95245	0.010	47.7	20.0
Phenol	2.86890	2.83122	0.010	1.3	20.0
bis(2-Chloroethyl)ether	2.02726	1.92536	0.010	5.0	20.0
2-Chlorophenol	1.54470	1.53751	0.010	0.5	20.0
2-Methylphenol	1.75623	1.75002	0.010	0.4	20.0
2,2'-oxybis(1-Chloropropane)	2.95288	2.80873	0.010	4.9	20.0
Acetophenone	2.63448	2.46371	0.010	6.5	20.0
4-Methylphenol	2.06566	1.93806	0.010	6.2	20.0
N-Nitroso-di-n-propylamine	1.75946	1.63554	0.010	7.0	20.0
Hexachloroethane	0.65497	0.59228	0.010	9.6	20.0
Nitrobenzene	0.56014	0.53594	0.010	4.3	20.0
Isophorone	1.04098	0.98902	0.010	5.0	20.0
2-Nitrophenol	0.20015	0.19811	0.010	1.0	20.0
2,4-Dimethylphenol	0.45764	0.43944	0.010	4.0	20.0
bis(2-Chloroethoxy)methane	0.62038	0.59141	0.010	4.7	20.0
2,4-Dichlorophenol	0.33347	0.32013	0.010	4.0	20.0
Naphthalene	1.14275	1.07424	0.010	6.0	20.0
4-Chloroaniline	0.45935	0.43034	0.010	6.3	20.0
Hexachlorobutadiene	0.19793	0.20596	0.010	-4.1	20.0
Caprolactam	0.16249	0.14866	0.010	8.5	20.0
4-Chloro-3-methylphenol	0.42600	0.40376	0.010	5.2	20.0
2-Methylnaphthalene	0.78006	0.77416	0.010	0.8	20.0
1-Methylnaphthalene	0.75598	0.73655	0.010	2.6	20.0
Hexachlorocyclopentadiene	0.33352	0.15075	0.010	54.8	20.0
1,2,4,5-Tetrachlorobenzene	0.66825	0.68503	0.010	-2.5	20.0
2,4,6-Trichlorophenol	0.44536	0.47720	0.010	-7.1	20.0
2,4,5-Trichlorophenol	0.48817	0.49173	0.010	-0.7	20.0
1,1'-Biphenyl	1.67488	1.71629	0.010	-2.5	20.0
2-Chloronaphthalene	1.35905	1.22434	0.010	9.9	20.0
2-Nitroaniline	0.45557	0.45345	0.010	0.5	20.0
Dimethylphthalate	1.62122	1.58234	0.010	2.4	20.0
2,6-Dinitrotoluene	0.38566	0.36608	0.010	5.1	20.0
Acenaphthylene	1.93677	1.90976	0.010	1.4	20.0
3-Nitroaniline	0.39580	0.39084	0.010	1.3	20.0
Acenaphthene	1.37672	1.39855	0.010	-1.6	20.0
2,4-Dinitrophenol	0.21112	0.18879	0.010	10.6	20.0
4-Nitrophenol	0.26426	0.27063	0.010	-2.4	20.0
2,4-Dinitrotoluene	0.51017	0.50612	0.010	0.8	20.0
Dibenzofuran	2.09741	2.05989	0.010	1.8	20.0
2,3,4,6-Tetrachlorophenol	0.41423	0.41741	0.010	-0.8	20.0
Diethylphthalate	1.66565	1.61622	0.010	3.0	20.0
Fluorene	1.69140	1.69721	0.010	-0.3	20.0
4-Chlorophenyl-phenylether	0.91970	0.91462	0.010	0.6	20.0
4-Nitroaniline	0.45228	0.41265	0.010	8.8	20.0
4,6-Dinitro-2-methylphenol	0.12797	0.12029	0.010	6.0	20.0
N-Nitrosodiphenylamine	0.64363	0.65344	0.010	-1.5	20.0
4-Bromophenyl-phenylether	0.21932	0.22528	0.010	-2.7	20.0

Data File: /chem/HP23262.i/18nov11.b/pk0392.d
Report Date: 11/12/2018 23:33

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

09-NOV-2018
15:38
dlw 13706
11/14/18

Instrument ID: HP23262.i
Client ID: SECC50
Lab Sample ID: STD2928
Sublist used: 311SLA.sub

Injection Date and Time: 12-NOV-2018 08:03
Initial Calibration Date(s): 06-NOV-2018 09-NOV-2018
Initial Calibration Time(s): 14:30 18:24
Method used: /chem/HP23262.i/18nov11.b/m8270d.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Hexachlorobenzene	0.20954	0.22062	0.010	-5.3	20.0
Atrazine	0.22581	0.18251	0.010	19.2	20.0
Pentachlorophenol	0.12097	0.12024	0.010	0.6	20.0
Phenanthrene	1.13568	1.10183	0.010	3.0	20.0
Anthracene	1.14981	1.13344	0.010	1.4	20.0
Carbazole	1.05920	1.02399	0.010	3.3	20.0
Di-n-butylphthalate	1.26361	1.27418	0.010	-0.8	20.0
Fluoranthene	1.30680	1.29159	0.010	1.2	20.0
Pyrene	1.35738	1.32438	0.010	2.4	20.0
Butylbenzylphthalate	0.57496	0.56546	0.010	1.7	20.0
3,3'-Dichlorobenzidine	0.45991	0.42384	0.010	7.8	20.0
Benzo(a)anthracene	1.24904	1.17821	0.010	5.7	20.0
Chrysene	1.20141	1.13059	0.010	5.9	20.0
bis(2-Ethylhexyl)phthalate	0.81360	0.79608	0.010	2.2	20.0
Di-n-octylphthalate	1.59421	1.71745	0.010	-7.7	20.0
Benzo(b)fluoranthene	1.40074	1.36738	0.010	2.4	20.0
Benzo(k)fluoranthene	1.37177	1.39881	0.010	-2.0	20.0
Benzo(a)pyrene	1.28729	1.29687	0.010	-0.7	20.0
Indeno(1,2,3-cd)pyrene	1.33105	1.37762	0.010	-3.5	20.0
Dibenz(a,h)anthracene	1.15650	1.14107	0.010	1.3	20.0
Benzo(g,h,i)perylene	1.13205	1.13798	0.010	-0.5	20.0

Surrogate Standards	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
2-Fluorophenol	1.53110	1.45586	0.010	4.9	20.0
Phenol-d6	2.41254	2.37390	0.010	1.6	20.0
Nitrobenzene-d5	0.51851	0.50702	0.010	2.2	20.0
2-Fluorobiphenyl	1.54102	1.60709	0.010	-4.3	20.0
2,4,6-Tribromophenol	0.20001	0.20309	0.010	-1.5	20.0
Terphenyl-d14	0.85311	0.88722	0.010	-4.0	20.0

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): gk0851.d Date Analyzed: 11/16/18

Instrument ID: HP11165 Time Analyzed: 10:04

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	150545	5.451	668579	6.686	405368	8.398
UPPER LIMIT	301090	5.951	1337158	7.186	810736	8.898
LOWER LIMIT	75273	4.951	334290	6.186	202684	7.898
LLI SAMPLE NO.						
01 318LELCS	136003	5.451	580364	6.686	338518	8.398
02 SBLKLB317	181226	5.451	739497	6.687	421612	8.398
03 SBLKLE318	144716	5.451	585295	6.687	326908	8.398
04 317LBLCS	159924	5.451	689812	6.687	409783	8.398
05 317LBLCSD	146941	5.451	625614	6.687	391458	8.398
06 9867761RE	186280	5.451	820307	6.686	495832	8.398
07 9867762RE	176014	5.451	773155	6.687	448281	8.398
08 9867766RE	193131	5.451	834468	6.687	468348	8.398
09 9867767RE	178695	5.451	751693	6.686	390259	8.398
10 9872065RE	180346	5.451	788290	6.687	422953	8.404
11 STD2928	187367	5.457	846796	6.692	495328	8.410
12 BAS3108	147818	5.451	638899	6.687	406659	8.404

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): gk0851.d Date Analyzed: 11/16/18

Instrument ID: HP11165 Time Analyzed: 10:04

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	821448	9.851	780631	11.239	653821	13.874
UPPER LIMIT	1642896	10.351	1561262	11.739	1307642	14.374
LOWER LIMIT	410724	9.351	390316	10.739	326911	13.374
LLI SAMPLE NO.						
01 318LELCS	702432	9.851	681084	11.239	570684	13.874
02 SBLKLB317	905534	9.851	894746	11.239	829920	13.874
03 SBLKLE318	734252	9.845	726794	11.233	617828	13.874
04 317LBLCS	847381	9.851	800819	11.239	655680	13.874
05 317LBLCSD	849945	9.851	770844	11.239	616840	13.874
06 9867761RE	932625	9.845	826022	11.239	653558	13.874
07 9867762RE	879157	9.851	747032	11.239	606453	13.874
08 9867766RE	908503	9.851	736933	11.239	615752	13.880
09 9867767RE	722684	9.851	629932	11.245	656198	13.915
10 9872065RE	740958	9.857	658637	11.251	766958	13.922
11 STD2928	998220	9.863	912794	11.251	784007	13.892
12 BAS3108	840243	9.857	729693	11.245	574789	13.886

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): pk0361.d Date Analyzed: 11/11/18

Instrument ID: HP23262 Time Analyzed: 20:58

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	148838	5.501	645044	6.731	380233	8.442
UPPER LIMIT	297676	6.001	1290088	7.231	760466	8.942
LOWER LIMIT	74419	5.001	322522	6.231	190117	7.942
LLI SAMPLE NO.						
01 SBLKLI302	156552	5.495	640809	6.731	384147	8.442
02 SBLKLA311	156107	5.501	632191	6.731	382008	8.442
03 302LILCS	156824	5.501	633783	6.731	359776	8.442
04 311LALCS	154860	5.501	671157	6.731	408376	8.442
05 9867761	173782	5.501	775634	6.731	457788	8.442
06 9867762	167613	5.501	728879	6.731	428623	8.442
07 9867763MS	157746	5.501	702180	6.737	407318	8.442
08 9867764MSD	165913	5.501	730129	6.737	411814	8.442
09 9867766	155162	5.501	703777	6.737	419729	8.442
10 9867767	154837	5.501	660821	6.736	377399	8.442
11 9872064	147807	5.501	623270	6.737	376449	8.442
12 9872065	169026	5.501	711917	6.736	397874	8.448
13 STD2928x	159144	5.507	755193	6.736	474932	8.448
14 9884645	160182	5.501	689591	6.737	415492	8.442
15 9884646	179098	5.501	783383	6.737	472953	8.448
16 9884647	148453	5.501	636621	6.737	391080	8.448
17 9885261	167623	5.507	670890	6.737	406469	8.460

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): pk0361.d Date Analyzed: 11/11/18

Instrument ID: HP23262 Time Analyzed: 20:58

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	868007	9.889	898203	11.277	788919	13.907
UPPER LIMIT	1736014	10.389	1796406	11.777	1577838	14.407
LOWER LIMIT	434004	9.389	449102	10.777	394460	13.407
LLI SAMPLE NO.						
01 SBLKLI302	898742	9.889	879313	11.272	799889	13.901
02 SBLKLA311	919701	9.889	950920	11.271	749601	13.901
03 302LILCS	842516	9.889	846551	11.277	700027	13.907
04 311LALCS	918756	9.889	935969	11.277	738592	13.907
05 9867761	949571	9.889	832119	11.272	648702	13.907
06 9867762	871841	9.889	784289	11.277	629212	13.907
07 9867763MS	817175	9.889	784053	11.277	585196	13.913
08 9867764MSD	872834	9.895	788441	11.278	626205	13.913
09 9867766	885277	9.895	763288	11.277	604749	13.913
10 9867767	803266	9.895	706851	11.283	605216	13.924
11 9872064	808122	9.895	771058	11.283	678083	13.918
12 9872065	781708	9.895	677592	11.283	586156	13.936
13 STD2928x	1048447	9.901	1007362	11.283	772851	13.918
14 9884645	902599	9.895	842135	11.283	647207	13.913
15 9884646	1006877	9.895	946801	11.278	704504	13.913
16 9884647	855385	9.895	838748	11.283	666291	13.918
17 9885261	809227	9.907	806416	11.289	684090	13.913

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): pk0361.d Date Analyzed: 11/11/18

Instrument ID: HP23262 Time Analyzed: 20:58

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	148838	5.501	645044	6.731	380233	8.442
UPPER LIMIT	297676	6.001	1290088	7.231	760466	8.942
LOWER LIMIT	74419	5.001	322522	6.231	190117	7.942
LLI SAMPLE NO.						
18 9884806	158702	5.501	696925	6.737	401175	8.448
19 9884807	152306	5.501	670779	6.737	414575	8.448
20 9884808	143970	5.501	628615	6.737	379147	8.448
21 9884809	143114	5.501	620967	6.737	364961	8.448
22 9884810MS	145973	5.501	632254	6.736	376104	8.448
23 9884811MSD	148095	5.501	619768	6.737	365759	8.448
24 9884813	144138	5.501	641284	6.737	387435	8.448
25 9884814	160543	5.501	692504	6.737	392665	8.448
26 9884815	151483	5.501	674766	6.736	381187	8.448
27 STD2928	177925	5.507	782350	6.736	456396	8.448

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): pk0361.d Date Analyzed: 11/11/18

Instrument ID: HP23262 Time Analyzed: 20:58

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	868007	9.889	898203	11.277	788919	13.907
UPPER LIMIT	1736014	10.389	1796406	11.777	1577838	14.407
LOWER LIMIT	434004	9.389	449102	10.777	394460	13.407
LLI SAMPLE NO.						
18 9884806	845344	9.895	817191	11.283	655763	13.919
19 9884807	889132	9.895	886748	11.283	680586	13.919
20 9884808	810083	9.895	789124	11.283	657891	13.919
21 9884809	813657	9.895	768933	11.283	672684	13.918
22 9884810MS	843574	9.895	787007	11.283	650360	13.918
23 9884811MSD	792694	9.895	751580	11.283	609639	13.918
24 9884813	808799	9.895	775531	11.283	647340	13.919
25 9884814	805875	9.895	766274	11.283	628557	13.918
26 9884815	845158	9.895	828090	11.283	659179	13.918
27 STD2928	1034118	9.901	994218	11.283	773269	13.918

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

Sample Data

Semivolatiles by GC/MS

T1002 Lancaster Laboratories, Inc. 9867761
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP23262.i/18nov11.b/pk0371.d Injection date and time: **11-NOV-2018 23:31**
Data file Sample Info. Line: T1002;9867761;2;0;SAMPLE;;DOD26;T1 Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 13-NOV-2018 11:28
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.16 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.501	(0.000)	590	152	173782	(17)	20.00	
65) Naphthalene-d8	6.731	(0.000)	799	136	775634	(20)	20.00	
113) Acenaphthene-d10	8.442	(0.000)	1090	164	457788	(20)	20.00	
153) Phenanthrene-d10	9.889	(0.000)	1336	188	949571	(9)	20.00	
175) Pyrene-d10	11.272	(0.006)	1571	212	832119	(-7)	20.00	
213) Perylene-d12	13.907	(0.000)	2019	264	648702	(-18)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.225	(-0.001)	112	2315458	174.044	87%		35 - 115
17) Phenol-d6	(1)	5.172	(-0.001)	99	3463445	165.219	83%		47 - 120
44) Nitrobenzene-d5	(2)	6.037	(0.000)	82	1622778	80.700	81%		37 - 122
93) 2-Fluorobiphenyl	(3)	7.795	(0.000)	172	2993899	84.878	85%		44 - 115
135) 2,4,6-Tribromophenol	(3)	9.213	(0.000)	330	724791	158.319	79%		39 - 132
179) Terphenyl-d14	(5)	11.466	(-0.001)	244	3328277	93.769	94%		54 - 127

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)				Not Detected					2
18) Phenol	(1)				Not Detected					0.7
19) Aniline	(1)				Not Detected					5
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.7
23) 2-Chlorophenol	(1)				Not Detected					0.5
24) 1,3-Dichlorobenzene	(1)				Not Detected					0.5
26) 1,4-Dichlorobenzene	(1)	5.513	(0.001)	146	21267M	1.592	52.78			0.5
27) Benzyl alcohol	(1)				Not Detected					5
28) 1,2-Dichlorobenzene	(1)	5.660	(-0.000)	146	9235	0.692	22.93		J	0.6
31) 2-Methylphenol	(1)				Not Detected					0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.5
37) 4-Methylphenol	(1)				Not Detected					0.6
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.6
43) Hexachloroethane	(1)				Not Detected					1
45) Nitrobenzene	(2)				Not Detected					0.8
50) Isophorone	(2)				Not Detected					0.5
51) 2-Nitrophenol	(2)				Not Detected					0.5
53) 2,4-Dimethylphenol	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.5
60) 2,4-Dichlorophenol	(2)				Not Detected					0.5
62) 1,2,4-Trichlorobenzene	(2)				Not Detected					0.5
67) 4-Chloroaniline	(2)				Not Detected					1
71) Hexachlorobutadiene	(2)				Not Detected					0.6
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)	7.431	(0.000)	142	27585M	0.912	30.23	12.196	B J	0.3
85) Hexachlorocyclopentadiene	(3)				Not Detected					5
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.6

M = Compound was manually integrated. B = Compound detected in referenced method blank.

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44. Target 3.5 esignature user ID: lmh00956

Data file: /chem/HP23262.i/18nov11.b/pk0371.d Injection date and time: **11-NOV-2018 23:31**
Data file Sample Info. Line: T1002;9867761;2;0;SAMPLE;;DOD26;T1 Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 13-NOV-2018 11:28
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

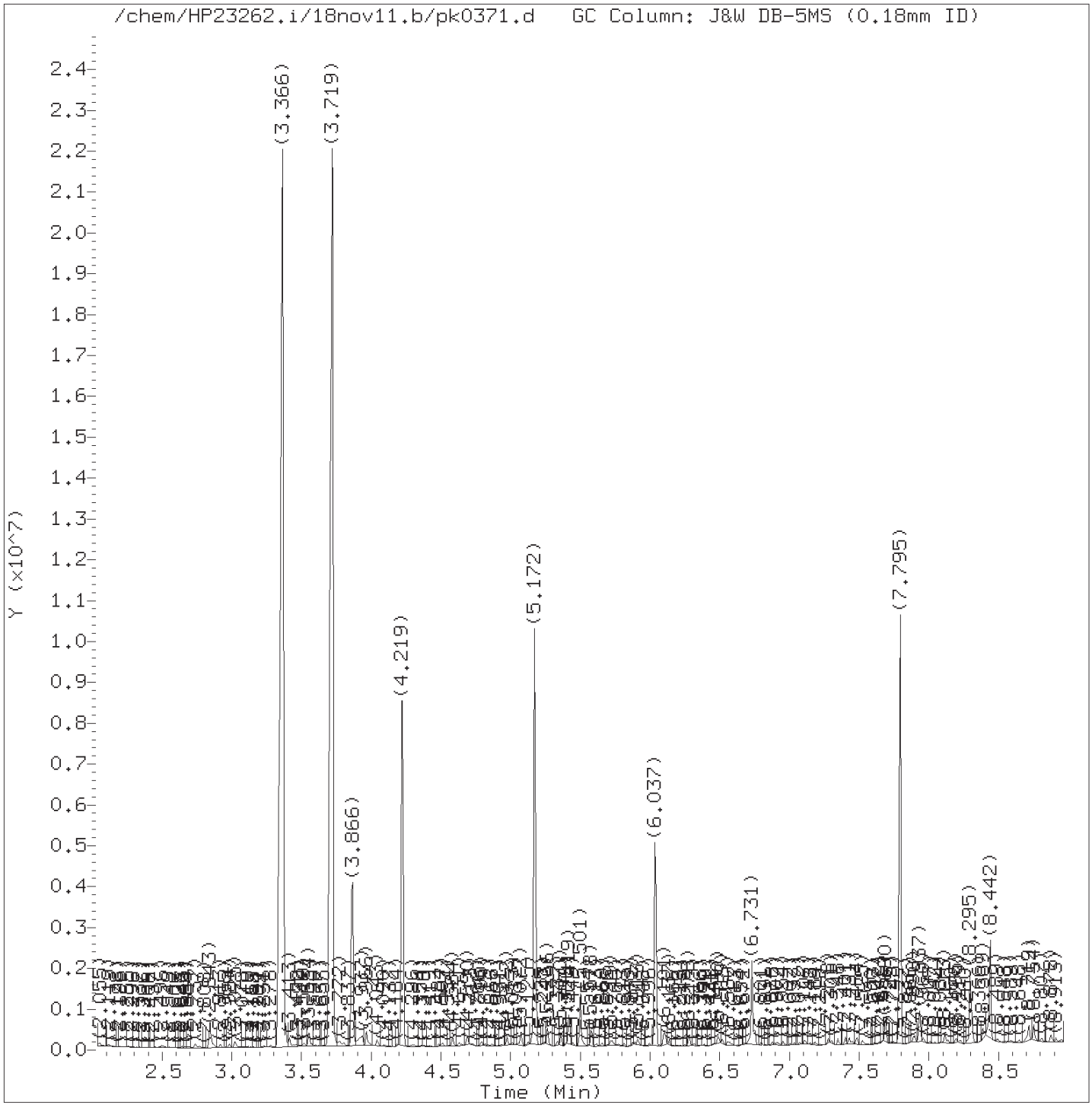
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.16 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.6
96) 2-Chloronaphthalene	(3)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.6
106) Dimethylphthalate	(3)				Not Detected					2
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.6
112) 3-Nitroaniline	(3)				Not Detected					2
115) 2,4-Dinitrophenol	(3)				Not Detected					11
116) 4-Nitrophenol	(3)				Not Detected					5
118) 2,4-Dinitrotoluene	(3)				Not Detected					2
119) Dibenzofuran	(3)				Not Detected					0.5
124) Diethylphthalate	(3)				Not Detected					2
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.5
129) 4-Nitroaniline	(3)				Not Detected					2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					5
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.5
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.6
145) Hexachlorobenzene	(4)				Not Detected					0.1
149) Pentachlorophenol	(4)				Not Detected					1
163) Carbazole	(4)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
205) Di-n-octylphthalate	(6)				Not Detected					2

Total number of targets = 48

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

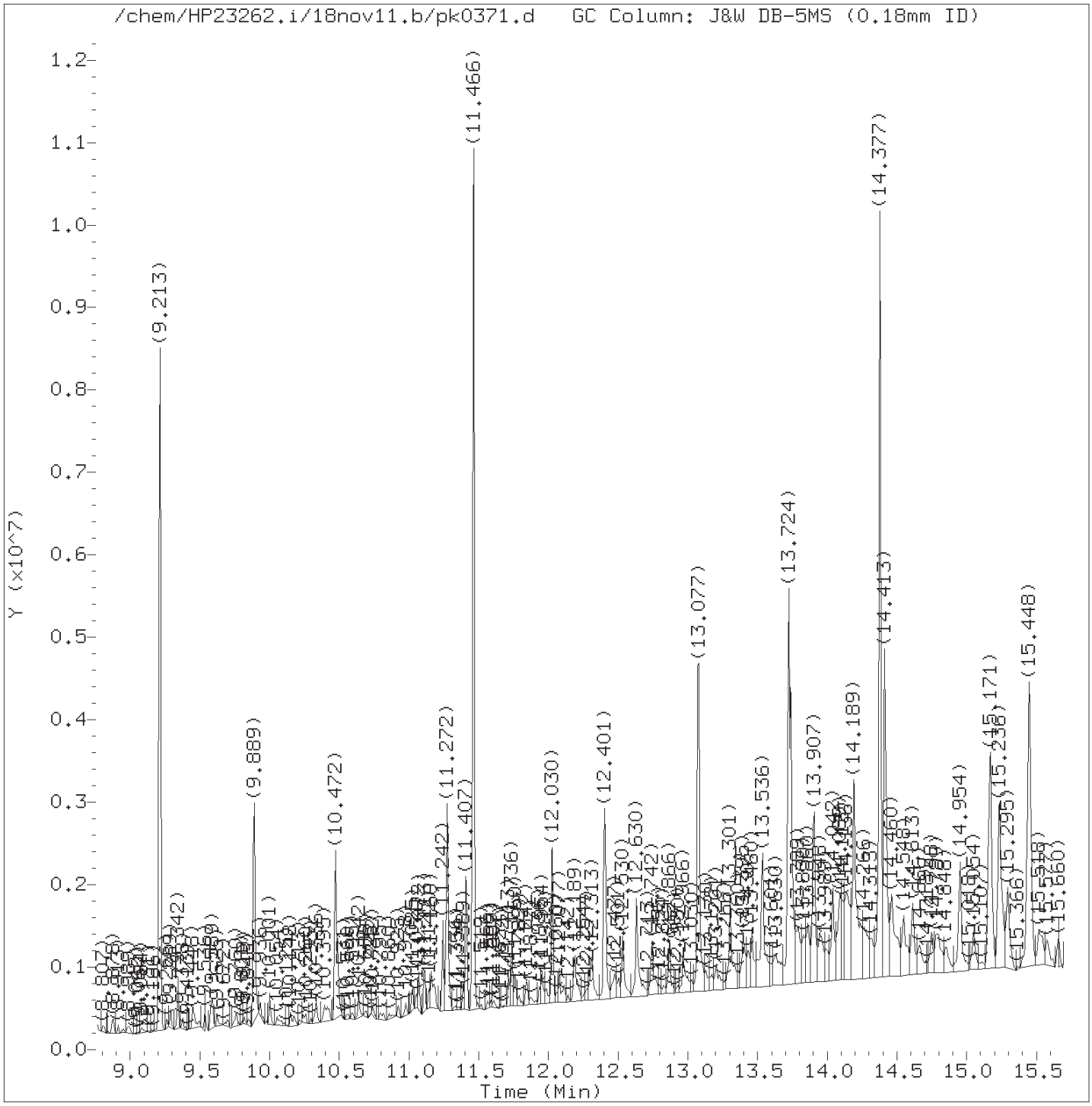
Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0371.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:31 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1002 Lab Sample ID: 9867761

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0371.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:31 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1002 Lab Sample ID: 9867761

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0371.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:31 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

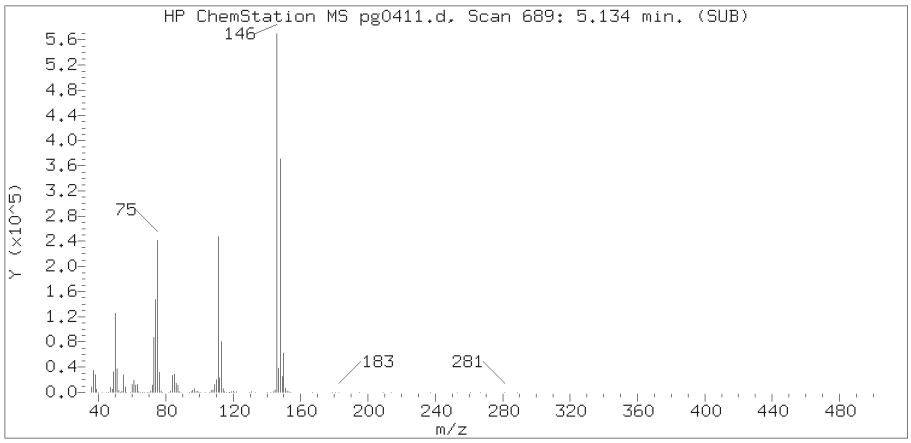
Sample Name: T1002 Lab Sample ID: 9867761

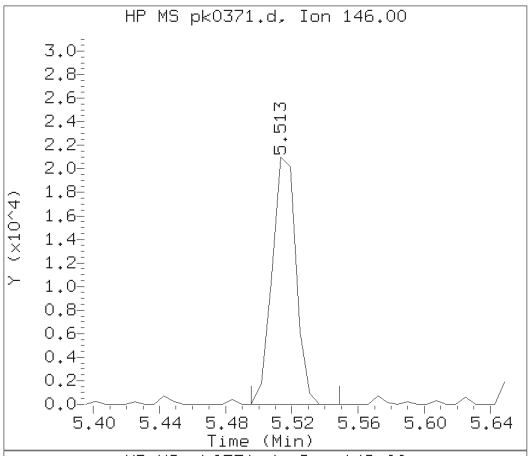
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.225	112	2315458	174.044
17)$Phenol-d6	(1)	5.172	99	3463445	165.219
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	173782	20.000
26) 1,4-Dichlorobenzene	(1)	5.513	146	21267M	1.592
28) 1,2-Dichlorobenzene	(1)	5.660	146	9235	0.692
44)$Nitrobenzene-d5	(2)	6.037	82	1622778	80.700
65)*Naphthalene-d8	(2)	6.731	136	775634	20.000
83) 2-Methylnaphthalene	(2)	7.431	142	27585M	0.912
93)$2-Fluorobiphenyl	(3)	7.795	172	2993899	84.878
113)*Acenaphthene-d10	(3)	8.442	164	457788	20.000
135)$2,4,6-Tribromophenol	(3)	9.213	330	724791	158.319
153)*Phenanthrene-d10	(4)	9.889	188	949571	20.000
175)*Pyrene-d10	(5)	11.272	212	832119	20.000
179)$Terphenyl-d14	(5)	11.466	244	3328277	93.769
213)*Perylene-d12	(6)	13.907	264	648702	20.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

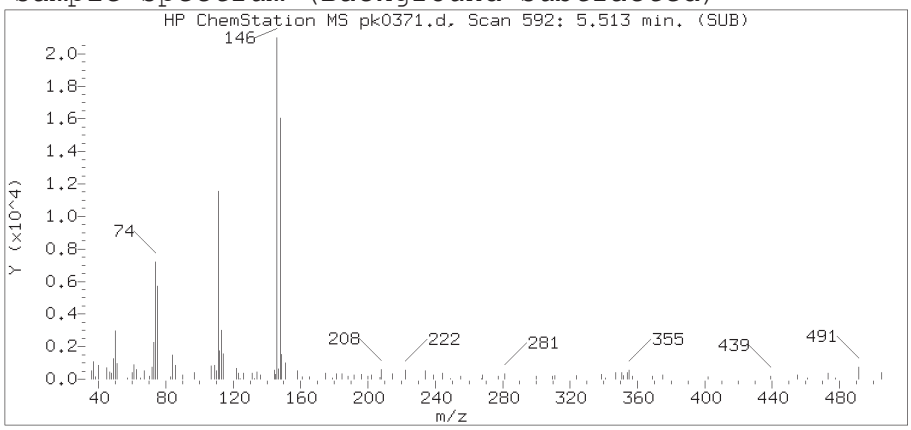
Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

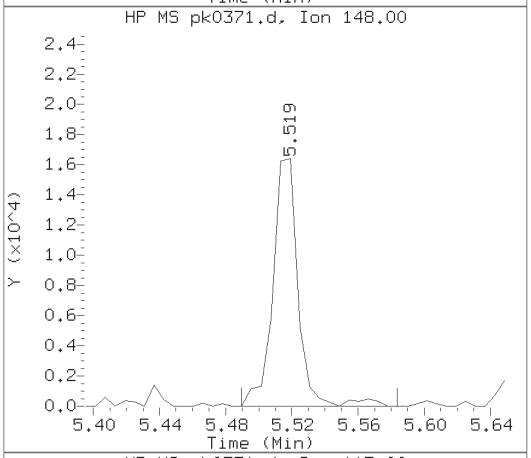
Reference Standard Spectrum for 1,4-Dichlorobenzene



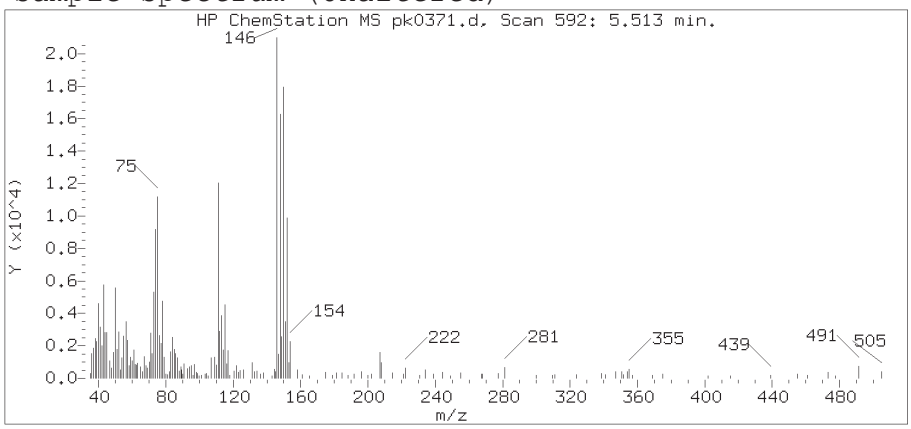


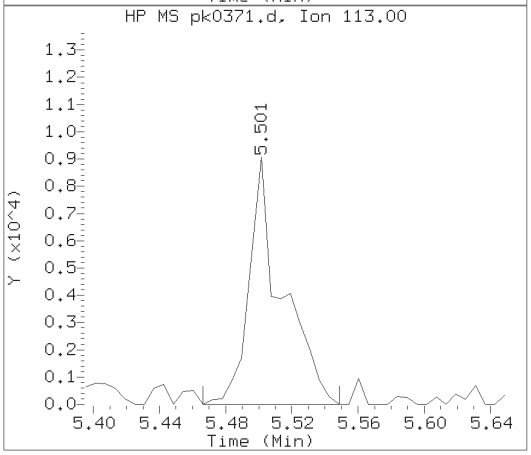
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23262.i/18nov11.b/pk0371.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:31 Analyst ID: apb10206

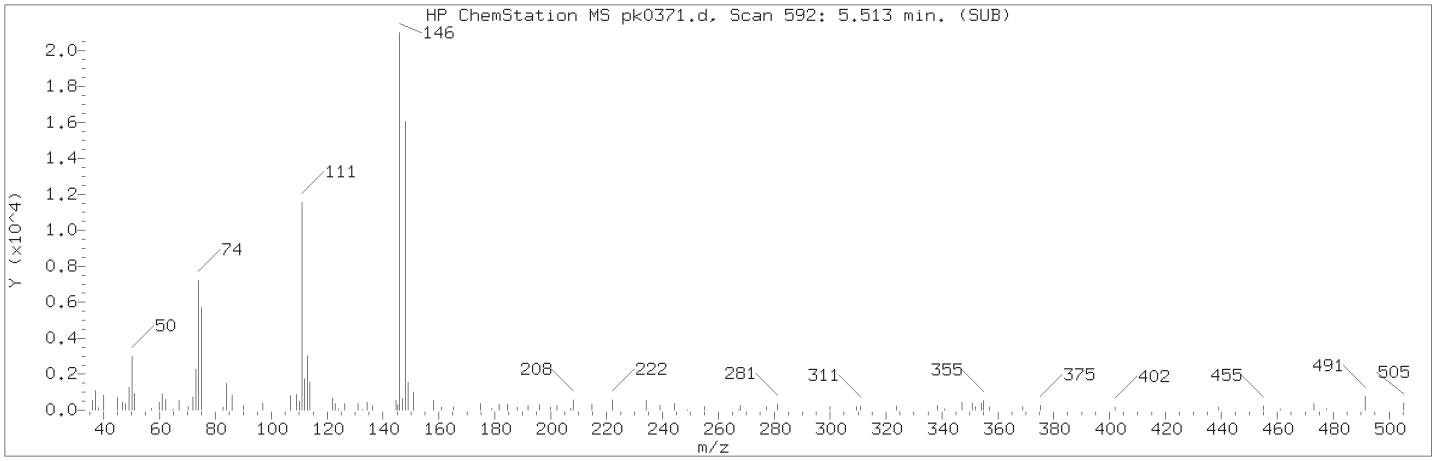
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1002 Lab Sample ID: 9867761

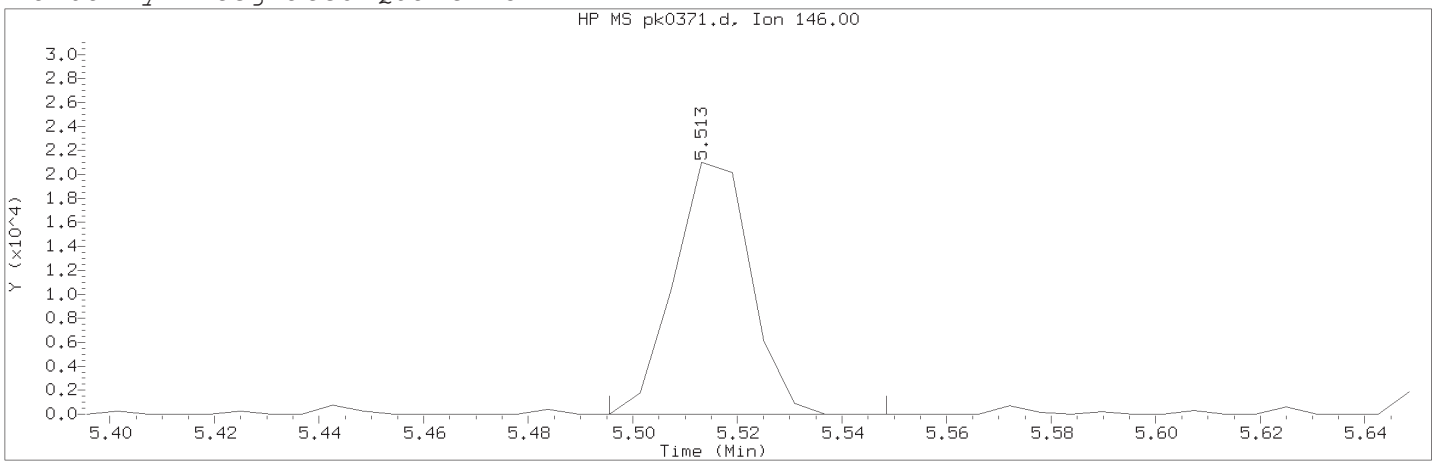
Compound Number	: 26
Compound Name	: 1,4-Dichlorobenzene
Scan Number	: 592
Retention Time (minutes)	: 5.513
Relative Retention Time	: 0.00107
Quant Ion	: 146.00
Area (flag)	: 21267M
On-column Amount (ng/ul)	: 1.5918

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0371.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:31 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1002 Lab Sample ID: 9867761

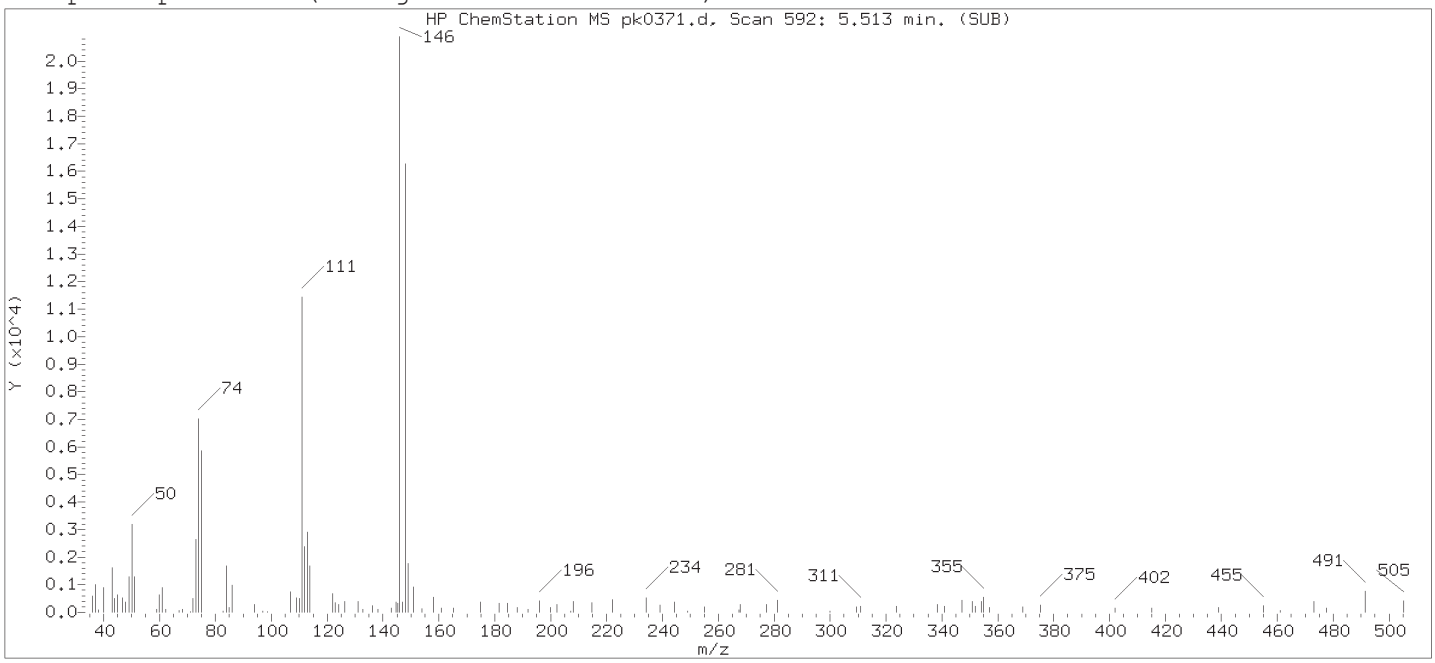
Compound Number : 26
Compound Name : 1,4-Dichlorobenzene
Scan Number : 592
Retention Time (minutes) : 5.513
Quant Ion : 146.00
Area (flag) : 21267M
On-column Amount (ng/ul) : 1.5918
Integration start scan : 588 Integration stop scan: 597
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

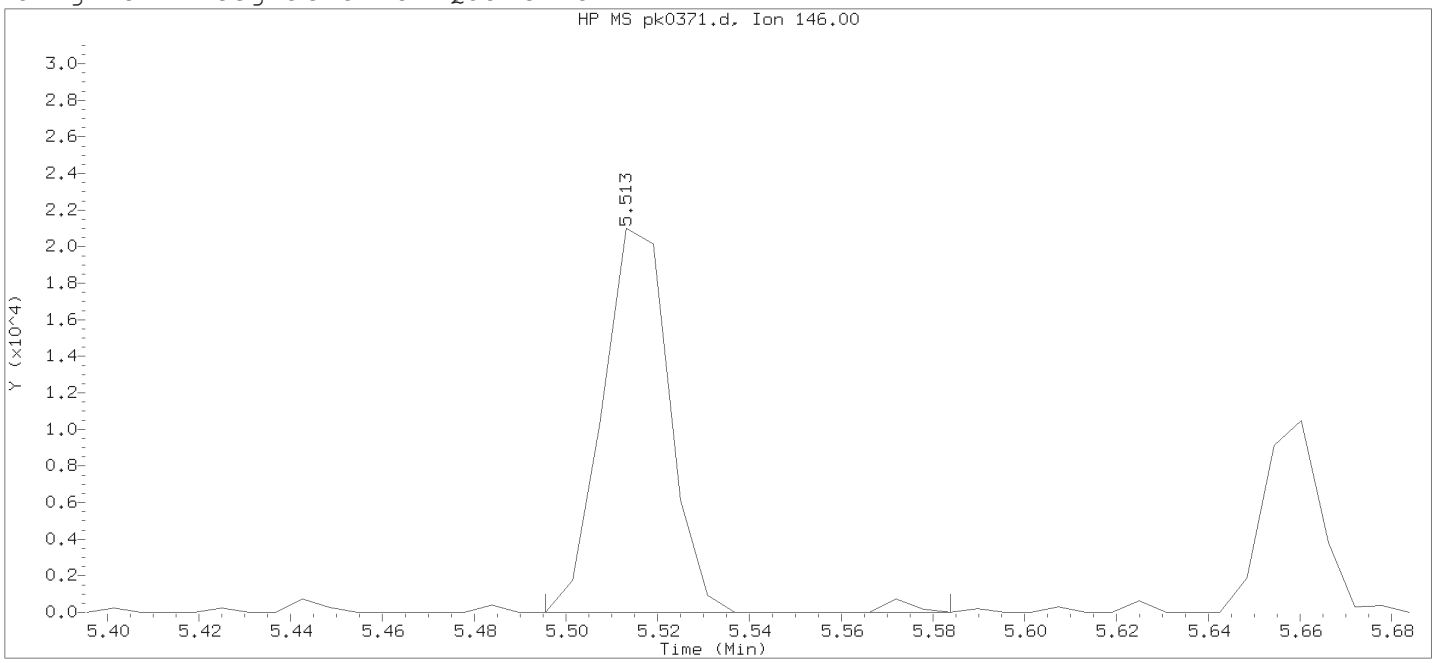
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0371.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:31 Analyst ID: apb10206

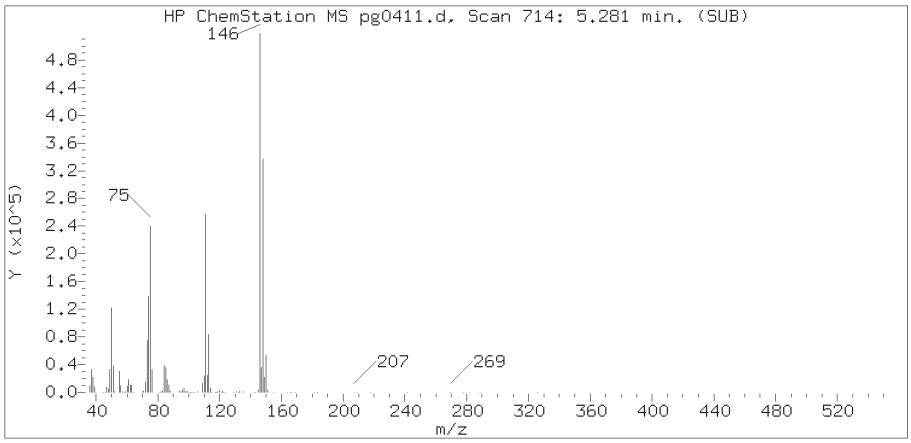
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 11-NOV-2018 22:43
Date, time and analyst ID of latest file update: 11-Nov-2018 23:52 Automation

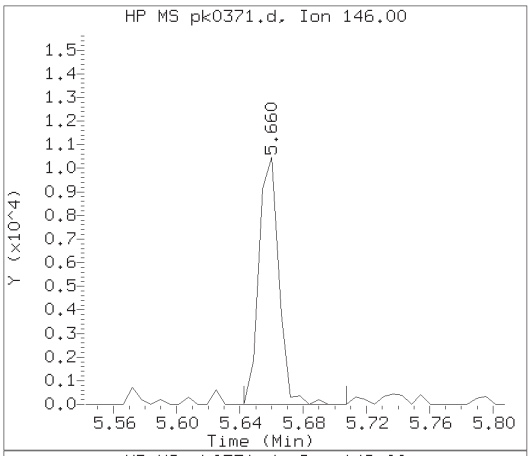
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	:	26
Compound Name	:	1,4-Dichlorobenzene
Scan Number	:	592
Retention Time (minutes)	:	5.513
Quant Ion	:	146.00
Area	:	21582
On-column Amount (ng/ul)	:	1.6155
Integration start scan	:	588 Integration stop scan: 603
Y at integration start	:	0 Y at integration end: 0

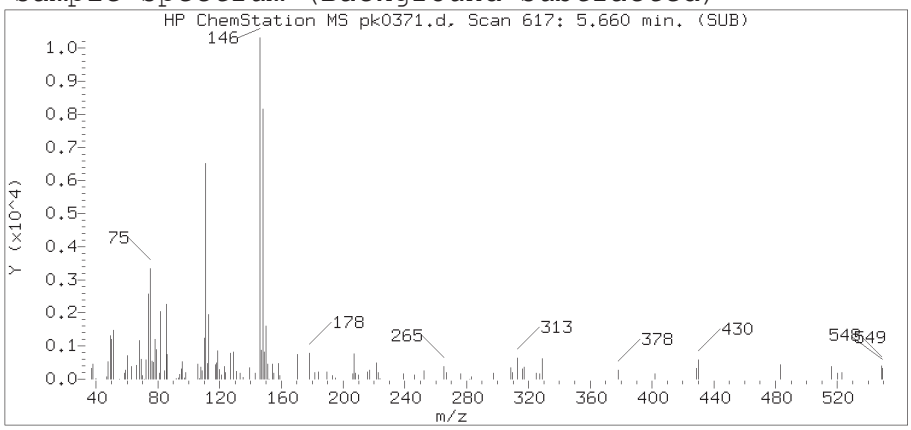
Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: 1010 [illegible]

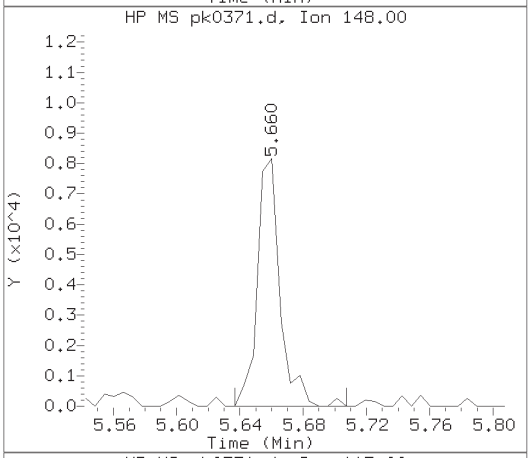
Reference Standard Spectrum for 1,2-Dichlorobenzene



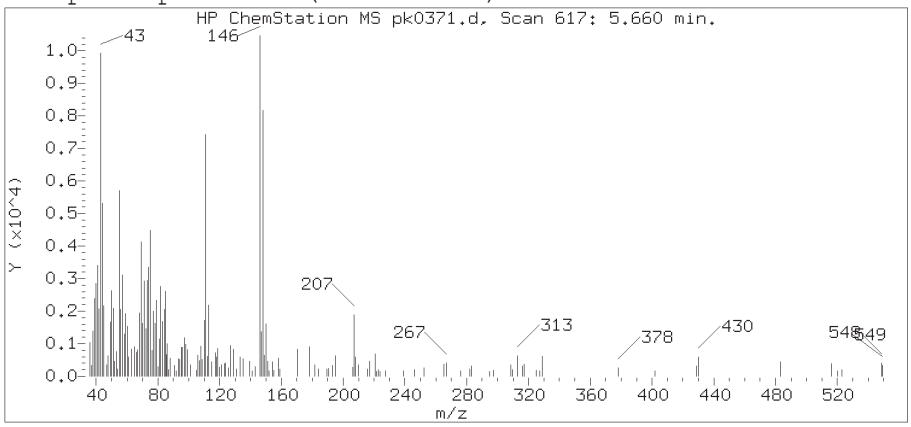


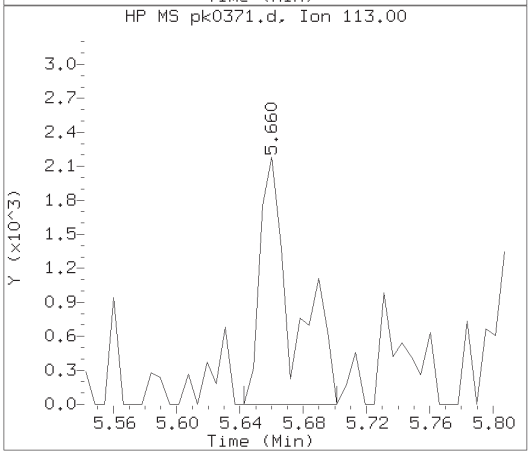
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23262.i/18nov11.b/pk0371.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:31 Analyst ID: apb10206

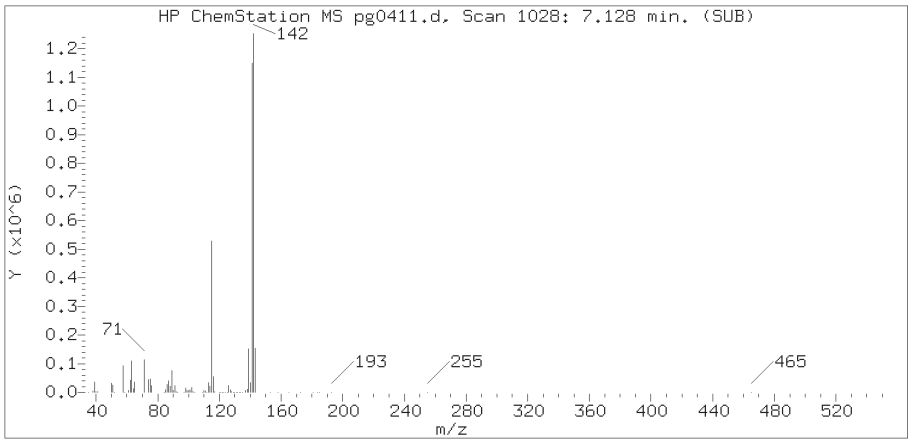
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

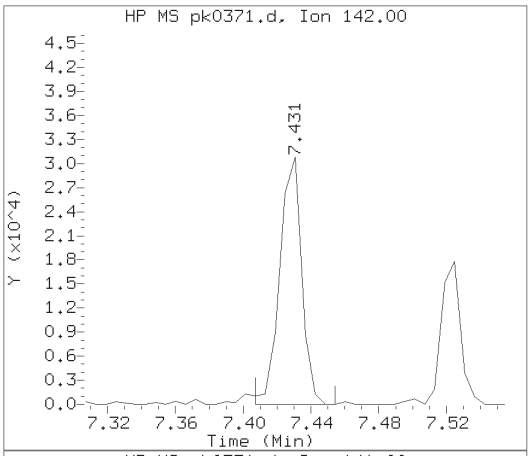
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 28
Compound Name	: 1,2-Dichlorobenzene
Scan Number	: 617
Retention Time (minutes)	: 5.660
Relative Retention Time	:-0.00000
Quant Ion	: 146.00
Area (flag)	: 9235
On-column Amount (ng/ul)	: 0.6915

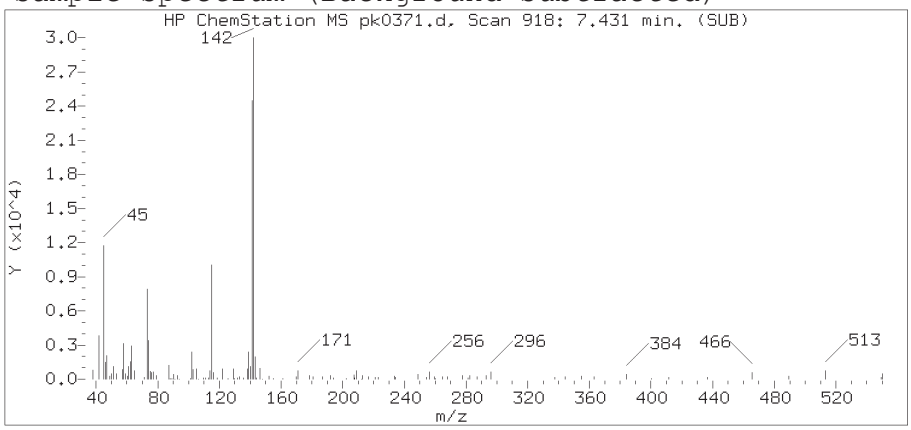
Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

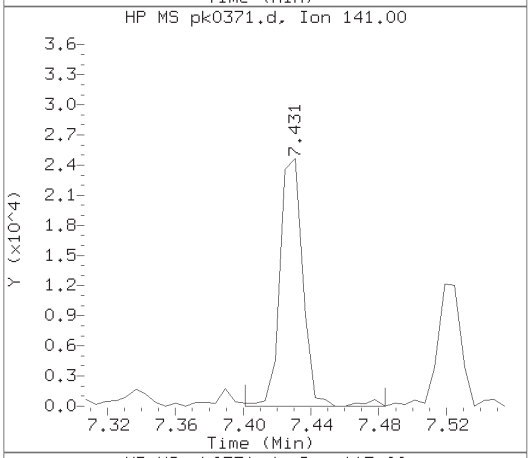
Reference Standard Spectrum for 2-Methylnaphthalene



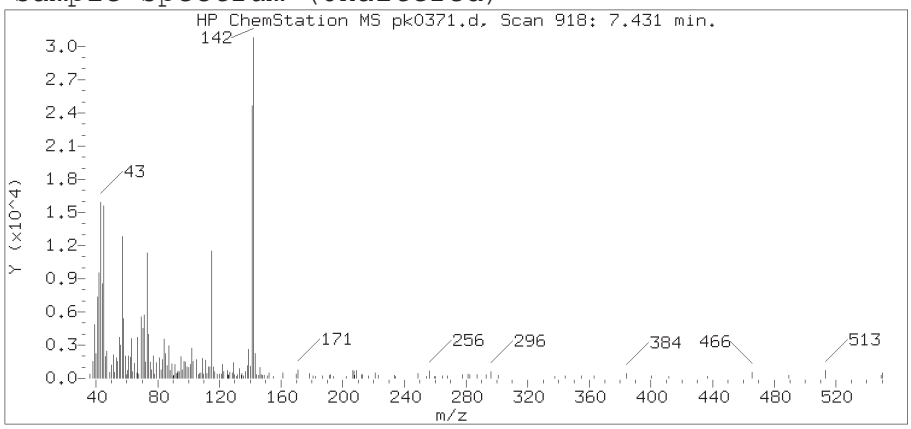


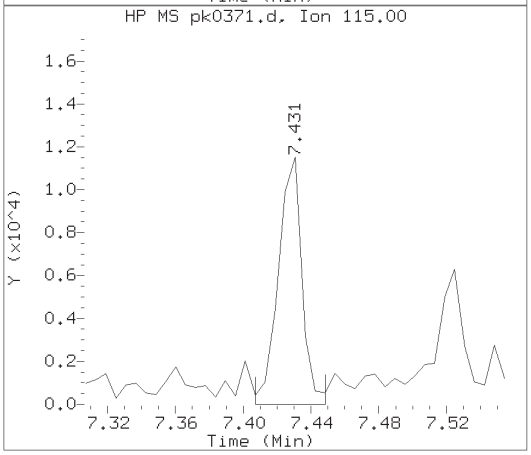
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23262.i/18nov11.b/pk0371.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:31 Analyst ID: apb10206

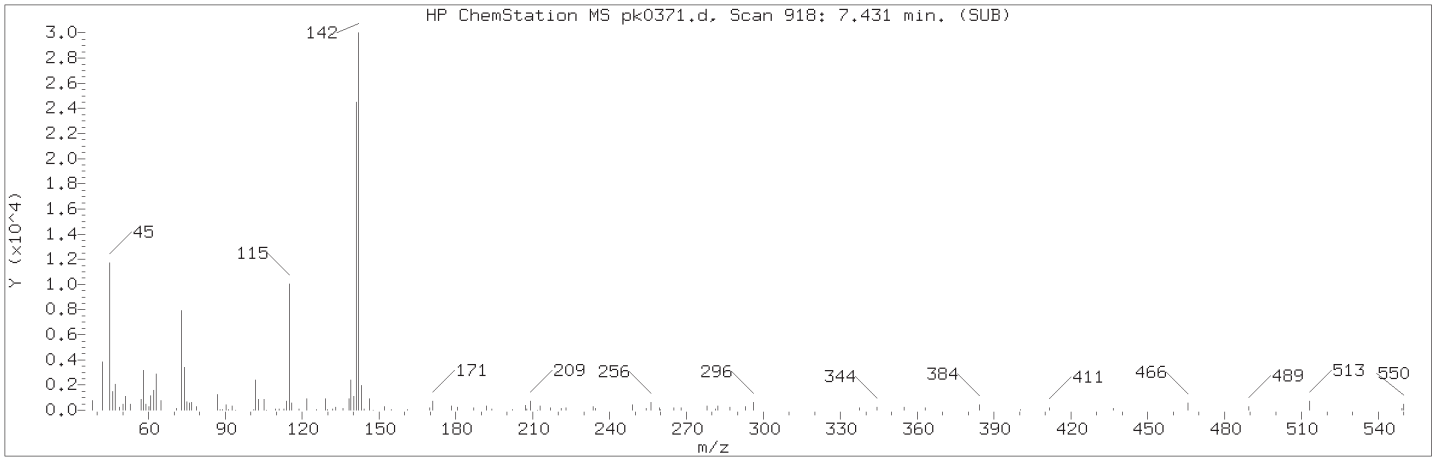
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1002 Lab Sample ID: 9867761

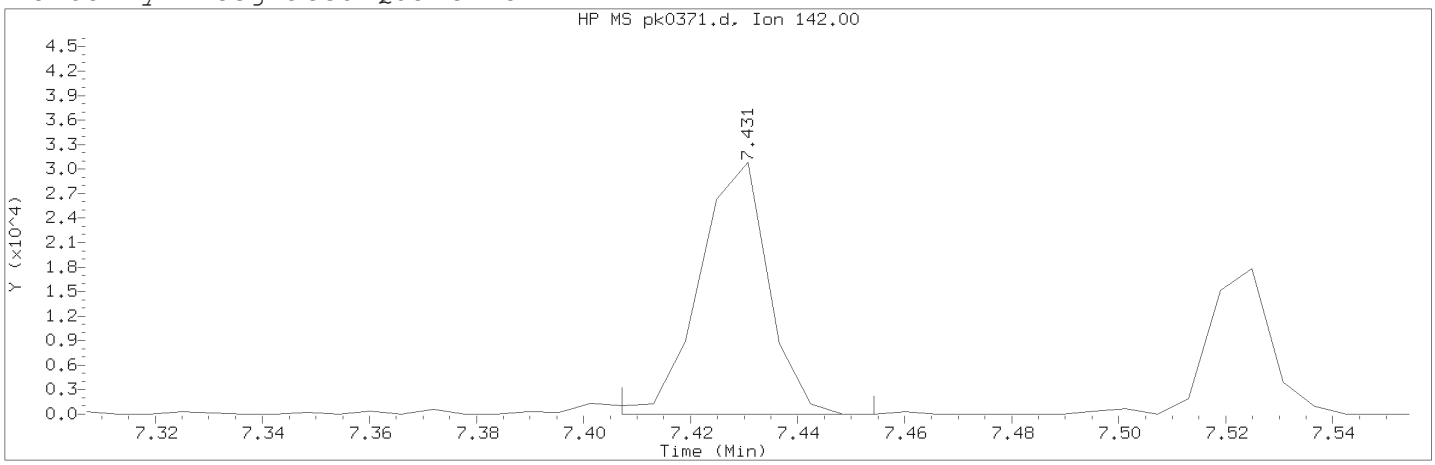
Compound Number	: 83
Compound Name	: 2-Methylnaphthalene
Scan Number	: 918
Retention Time (minutes)	: 7.431
Relative Retention Time	: 0.00000
Quant Ion	: 142.00
Area (flag)	: 27585M
On-column Amount (ng/ul)	: 0.9118

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0371.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:31 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1002 Lab Sample ID: 9867761

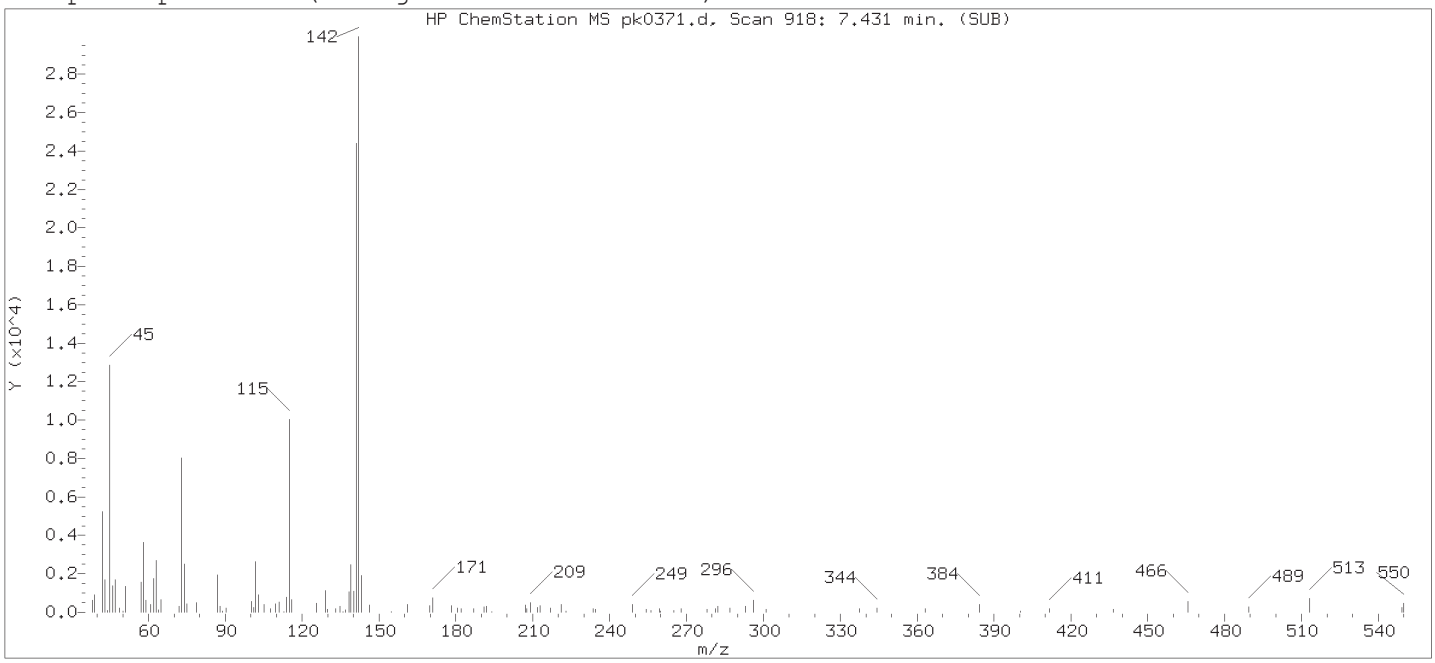
Compound Number	: 83		
Compound Name	: 2-Methylnaphthalene		
Scan Number	: 918		
Retention Time (minutes)	: 7.431		
Quant Ion	: 142.00		
Area (flag)	: 27585M		
On-column Amount (ng/ul)	: 0.9118		
Integration start scan	: 913	Integration stop scan:	921
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

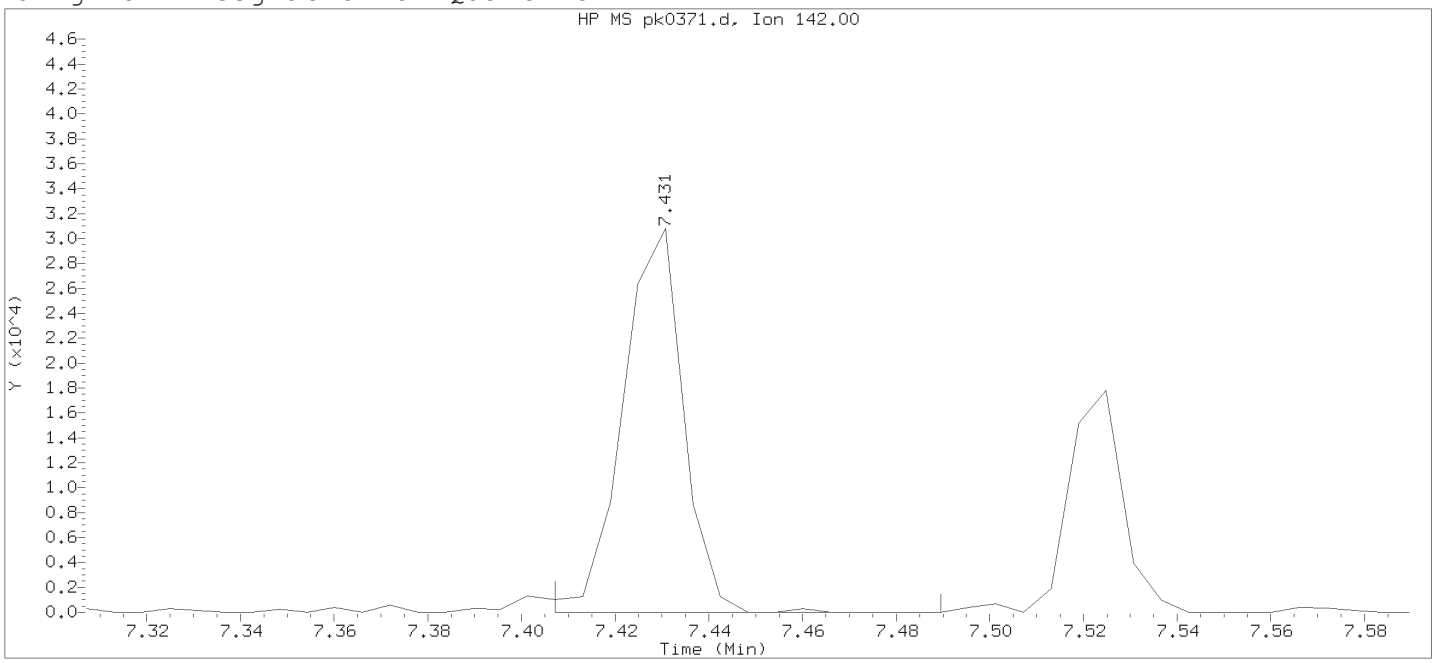
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0371.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:31 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 11-NOV-2018 22:43
Date, time and analyst ID of latest file update: 11-Nov-2018 23:52 Automation

Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 83		
Compound Name	: 2-Methylnaphthalene		
Scan Number	: 918		
Retention Time (minutes)	: 7.431		
Quant Ion	: 142.00		
Area	: 27499		
On-column Amount (ng/ul)	: 0.9090		
Integration start scan	: 913	Integration stop scan:	927
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature used 11/14/2018

T1002RE

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

9867761RE

Data file: /chem/HP11165.i/18nov16.b/gk0857.d
Data file Sample Info. Line: T1002RE;9867761RE;2;0;SAMPLE;;DOD26;T2
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Injection date and time: **16-NOV-2018 16:28**
Instrument ID: **HP11165.i** Batch: **18317SLB**

Blank Data file reference: **/chem/HP11165.i/18nov16.b/gk0854.d**

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 19-NOV-2018 19:11
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/18nov16.b/gk0851.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1
Final Extract Volume (Vt): 500 ul
GpcCleanup (No = 0, Yes = 1): 1
Volume Injected (Vi): 1 ul
Unit Correction Factor (Uf): 1
Sample Weight (Ws): 30.3 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.451	(0.000)	606	152	186280A	(24)	20.00	
65) Naphthalene-d8	6.686	(0.000)	816	136	820307	(23)	20.00	
113) Acenaphthene-d10	8.398	(0.000)	1107	164	495832	(22)	20.00	
153) Phenanthrene-d10	9.845	(0.006)	1353	188	932625	(14)	20.00	
175) Pyrene-d10	11.239	(0.000)	1590	212	826022	(6)	20.00	
213) Perylene-d12	13.874	(0.000)	2038	264	653558	(0)	20.00	

A = User selected an alternate peak

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.198	(0.000)	112	2000522	141.595	71%		35 - 115
17) Phenol-d6	(1)	5.163	(0.000)	99	3056438	139.704	70%		47 - 120
44) Nitrobenzene-d5	(2)	5.992	(0.000)	82	1393040	64.456	64%		37 - 122
93) 2-Fluorobiphenyl	(3)	7.751	(0.000)	172	2543016	63.366	63%		44 - 115
135) 2,4,6-Tribromophenol	(3)	9.175	(0.001)	330	637179	160.448	80%		39 - 132
179) Terphenyl-d14	(5)	11.433	(0.000)	244	2774257	69.454	69%		54 - 127

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)				Not Detected					2
18) Phenol	(1)				Not Detected					0.7
19) Aniline	(1)				Not Detected					5
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.7
23) 2-Chlorophenol	(1)				Not Detected					0.5
24) 1,3-Dichlorobenzene	(1)				Not Detected					0.5
26) 1,4-Dichlorobenzene	(1)	5.463	(0.001)	146	22295	1.412	46.61			0.5
27) Benzyl alcohol	(1)				Not Detected					5
28) 1,2-Dichlorobenzene	(1)	5.610	(0.000)	146	11047	0.723	23.86		J	0.6
31) 2-Methylphenol	(1)				Not Detected					0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.5
37) 4-Methylphenol	(1)				Not Detected					0.6
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.6
43) Hexachloroethane	(1)				Not Detected					1
45) Nitrobenzene	(2)				Not Detected					0.8
50) Isophorone	(2)				Not Detected					0.5
51) 2-Nitrophenol	(2)				Not Detected					0.5
53) 2,4-Dimethylphenol	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.5
60) 2,4-Dichlorophenol	(2)				Not Detected					0.5
62) 1,2,4-Trichlorobenzene	(2)				Not Detected					0.5
67) 4-Chloroaniline	(2)				Not Detected					1
71) Hexachlorobutadiene	(2)				Not Detected					0.6
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)	7.380	(0.000)	142	26858	0.817	26.98		J	0.3
85) Hexachlorocyclopentadiene	(3)				Not Detected					5

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14. Target 3.5 esignature user ID: bkc25363

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP11165.i/18nov16.b/gk0857.d Injection date and time: **16-NOV-2018 16:28**
Data file Sample Info. Line: T1002RE;9867761RE;2;0;SAMPLE;;DOD26;T2 Instrument ID: **HP11165.i** Batch: **18317SLB**
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Blank Data file reference: **/chem/HP11165.i/18nov16.b/gk0854.d**

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 19-NOV-2018 19:11
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/18nov16.b/gk0851.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

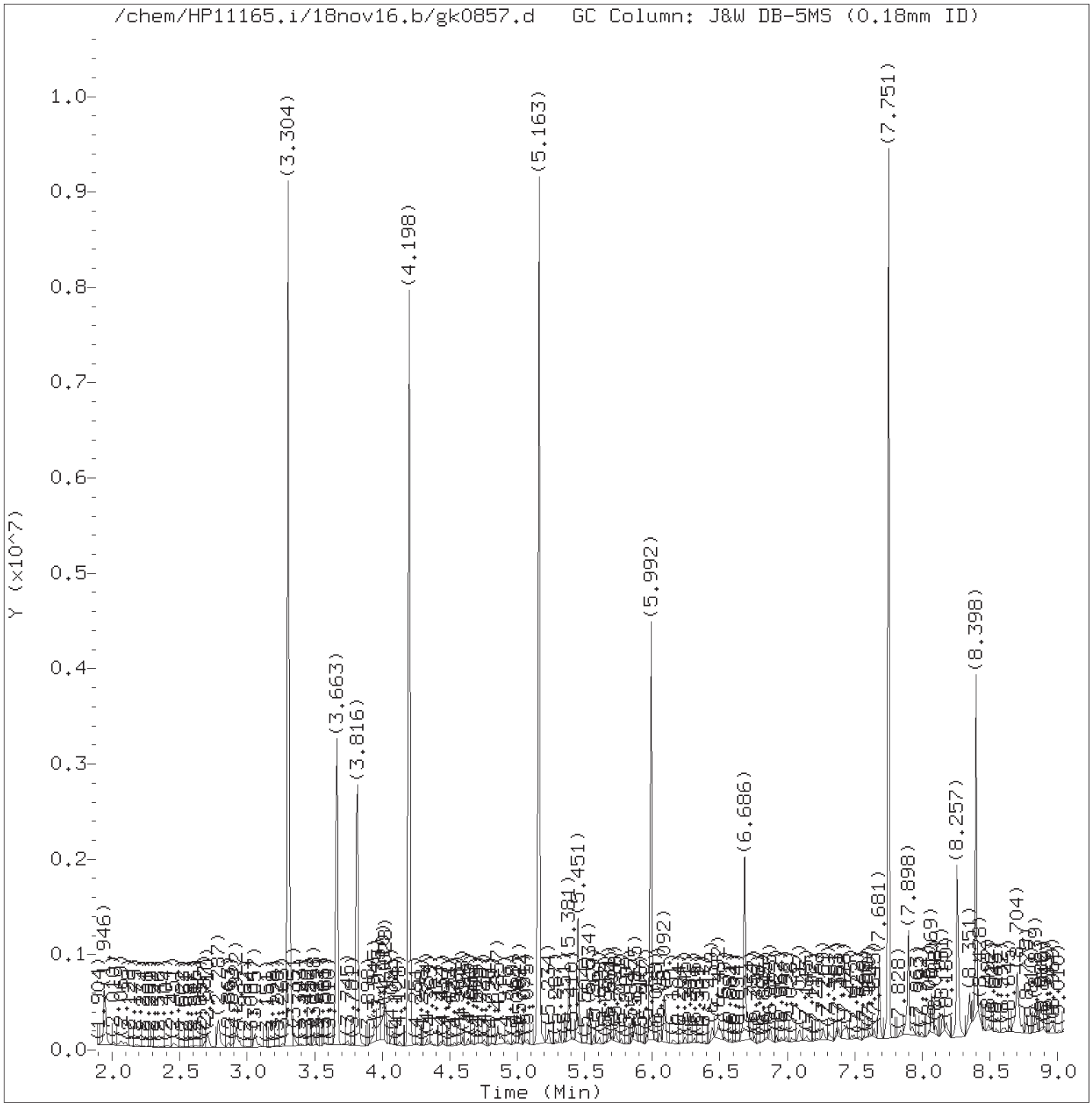
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.3 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.6
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.6
96) 2-Chloronaphthalene	(3)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.6
106) Dimethylphthalate	(3)				Not Detected					2
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.6
112) 3-Nitroaniline	(3)				Not Detected					2
115) 2,4-Dinitrophenol	(3)				Not Detected					11
116) 4-Nitrophenol	(3)				Not Detected					5
118) 2,4-Dinitrotoluene	(3)				Not Detected					2
119) Dibenzofuran	(3)				Not Detected					0.5
124) Diethylphthalate	(3)				Not Detected					2
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.5
129) 4-Nitroaniline	(3)				Not Detected					2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					5
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.5
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.6
145) Hexachlorobenzene	(4)				Not Detected					0.1
149) Pentachlorophenol	(4)				Not Detected					1
163) Carbazole	(4)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
205) Di-n-octylphthalate	(6)				Not Detected					2

Total number of targets = 48

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Chad A. Moline on 11/20/2018 at 12:59. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

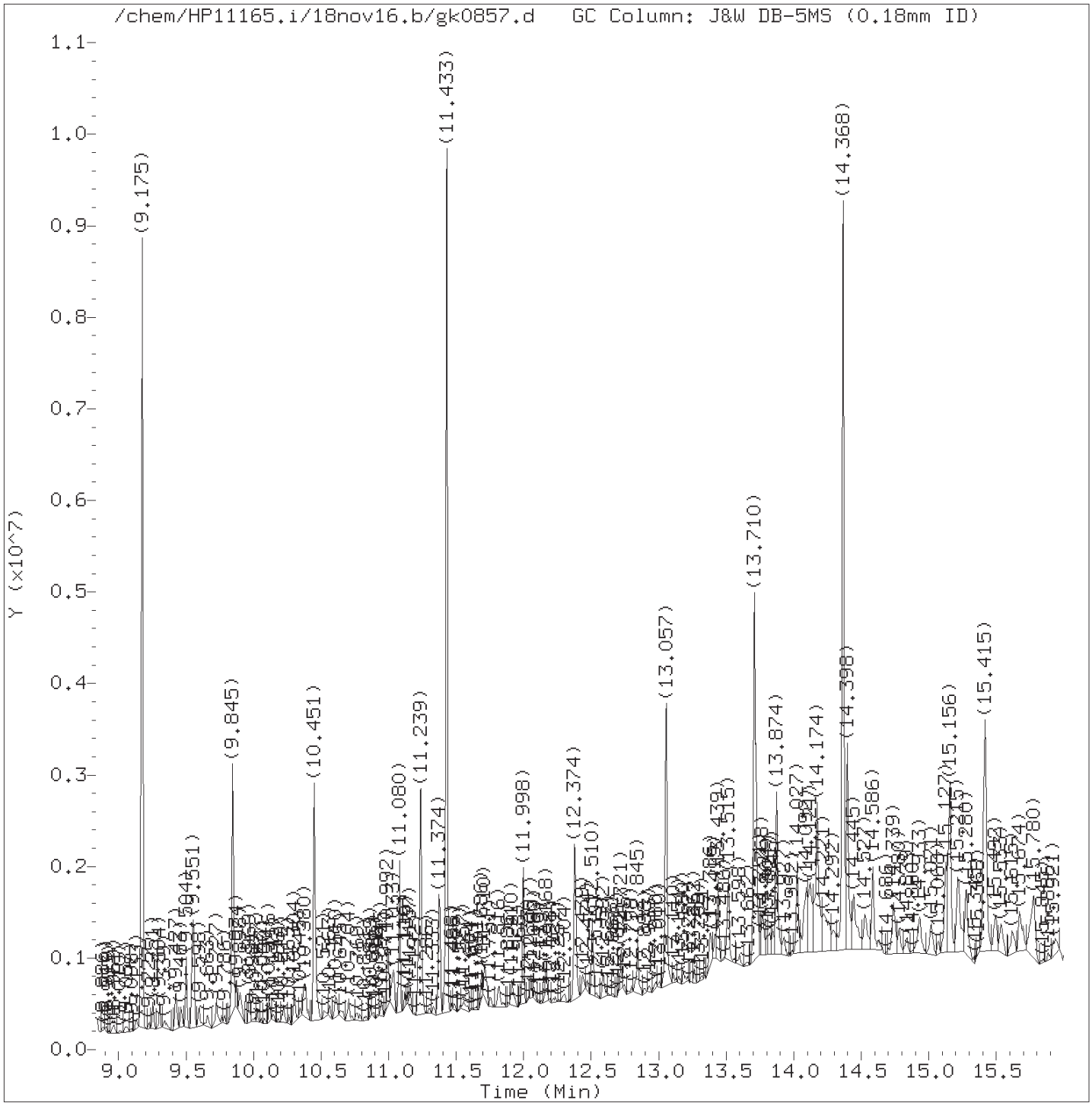
Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0857.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:28 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: T1002RE Lab Sample ID: 9867761RE

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0857.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:28 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: T1002RE Lab Sample ID: 9867761RE

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0857.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:28 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

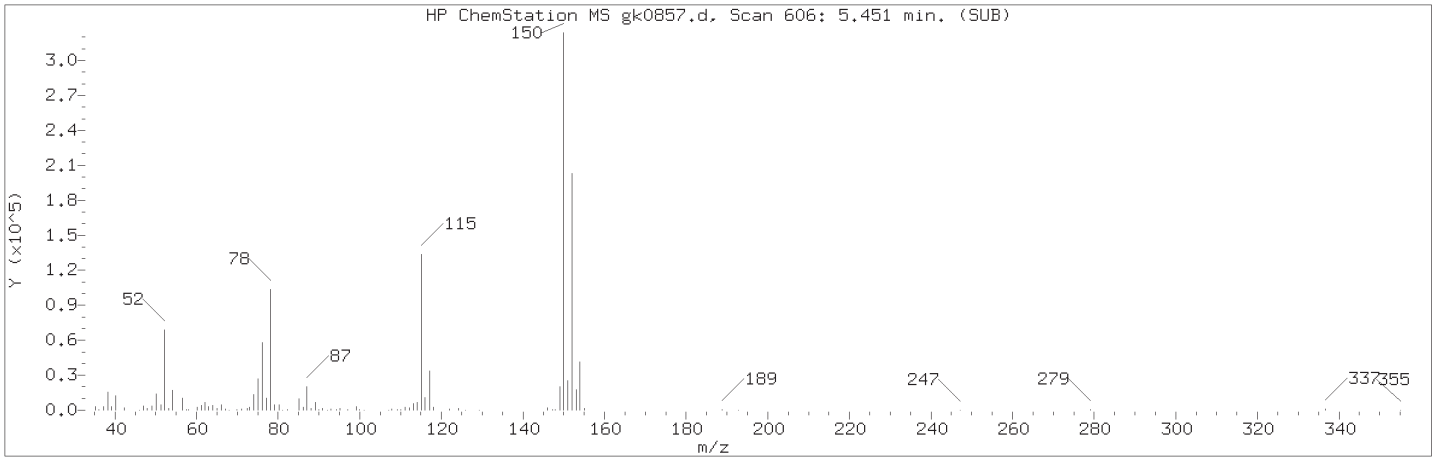
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.198	112	2000522	141.595
17)$Phenol-d6	(1)	5.163	99	3056438	139.704
25)*1,4-Dichlorobenzene-d4	(1)	5.451	152	186280A	20.000
26) 1,4-Dichlorobenzene	(1)	5.463	146	22295	1.412
28) 1,2-Dichlorobenzene	(1)	5.610	146	11047	0.723
44)$Nitrobenzene-d5	(2)	5.992	82	1393040	64.456
65)*Naphthalene-d8	(2)	6.686	136	820307	20.000
83) 2-Methylnaphthalene	(2)	7.381	142	26858	0.817
93)$2-Fluorobiphenyl	(3)	7.751	172	2543016	63.366
113)*Acenaphthene-d10	(3)	8.398	164	495832	20.000
135)$2,4,6-Tribromophenol	(3)	9.175	330	637179	160.448
153)*Phenanthrene-d10	(4)	9.845	188	932625	20.000
175)*Pyrene-d10	(5)	11.239	212	826022	20.000
179)$Terphenyl-d14	(5)	11.433	244	2774257	69.454
213)*Perylene-d12	(6)	13.874	264	653558	20.000

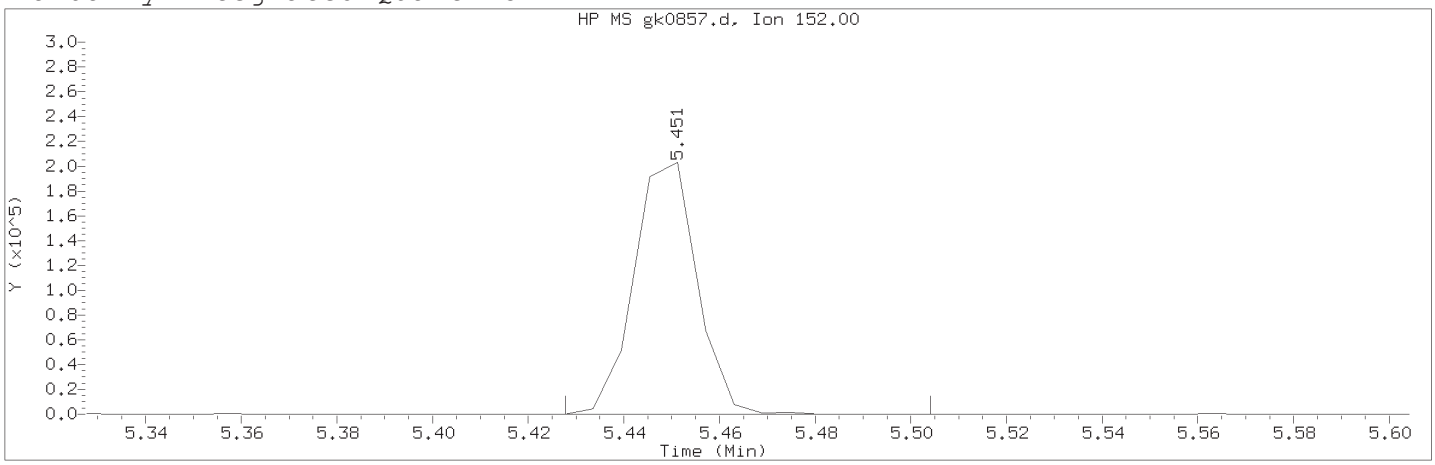
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0857.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:28 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: T1002RE Lab Sample ID: 9867761RE

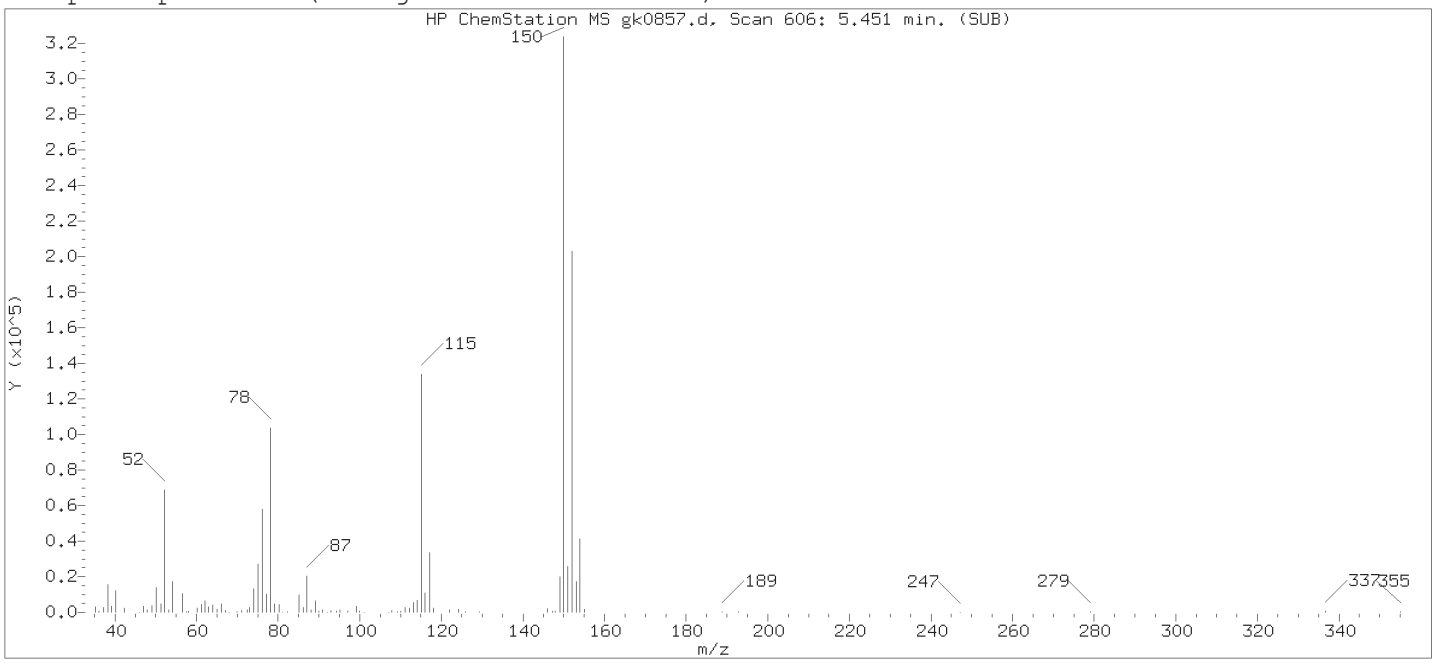
Compound Number : 25
Compound Name : 1,4-Dichlorobenzene-d4
Scan Number : 606
Retention Time (minutes) : 5.451
Quant Ion : 152.00
Area (flag) : 186280A
On-column Amount (ng/ul) : 20.0000
Integration start scan : 601 Integration stop scan: 614
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

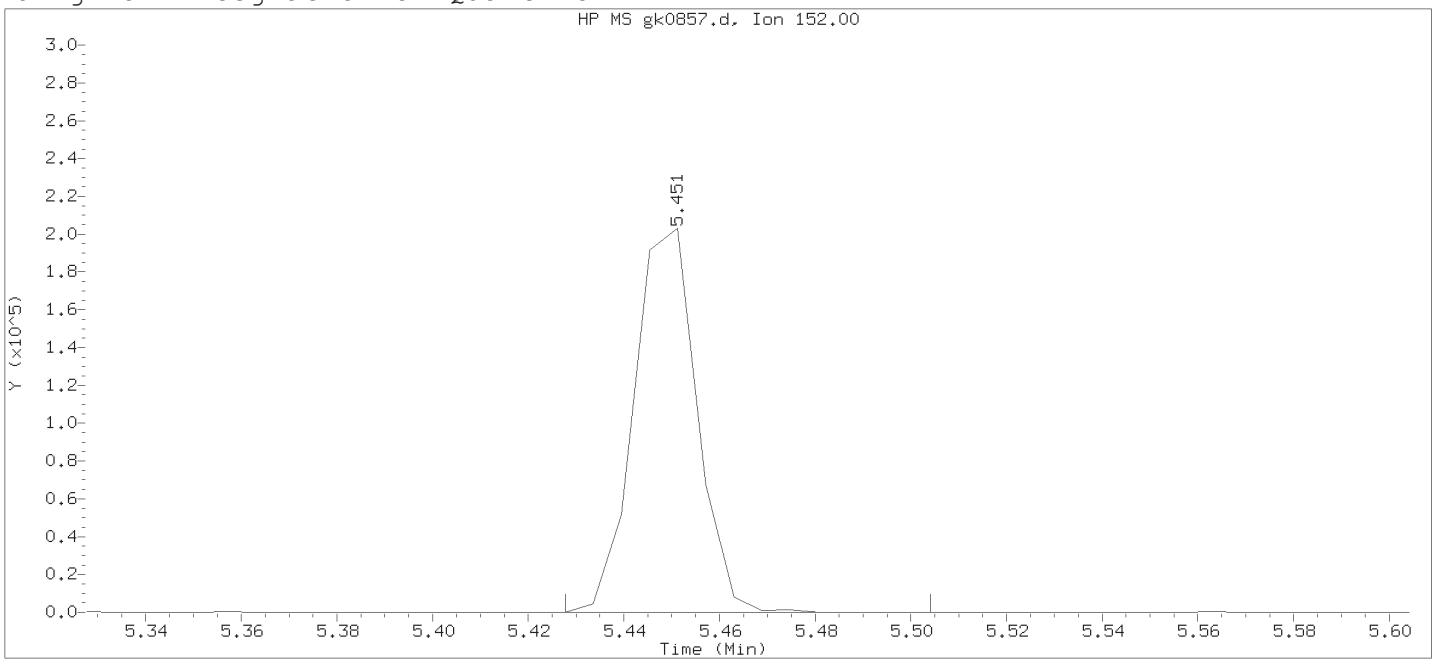
Analyst responsible for change: Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Chad A. Moline on 11/20/2018 at 12:59.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0857.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:28 Analyst ID: whs02991

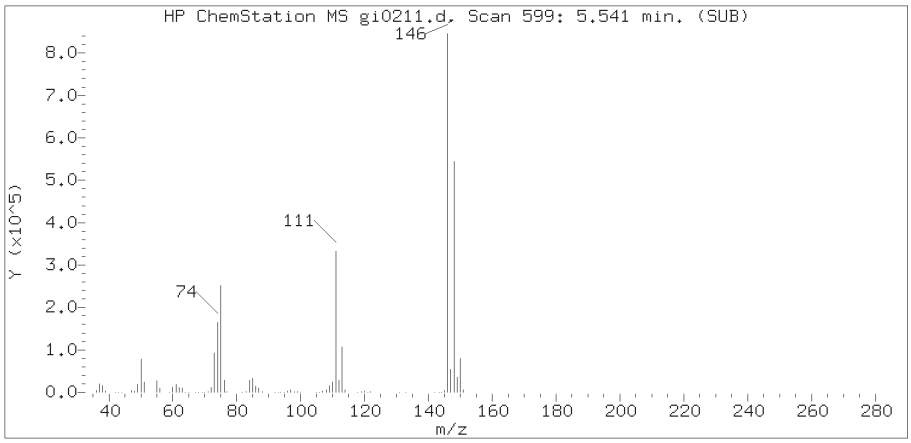
Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 16-NOV-2018 14:59
Date, time and analyst ID of latest file update: 16-Nov-2018 16:49 Automation

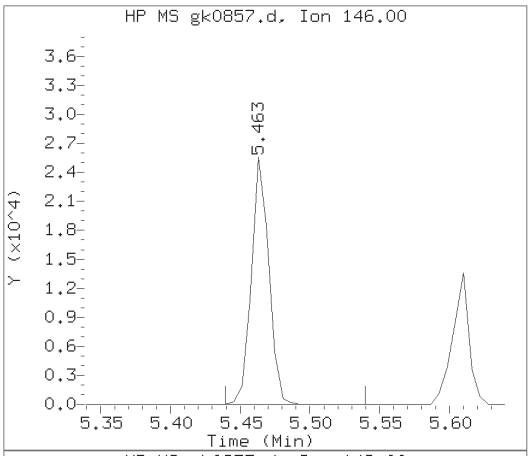
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number : 25
Compound Name : 1,4-Dichlorobenzene-d4
Scan Number : 606
Retention Time (minutes) : 5.451
Quant Ion : 152.00
Area : 186280
On-column Amount (ng/ul) : 20.0000
Integration start scan : 601 Integration stop scan: 614
Y at integration start : 0 Y at integration end: 0

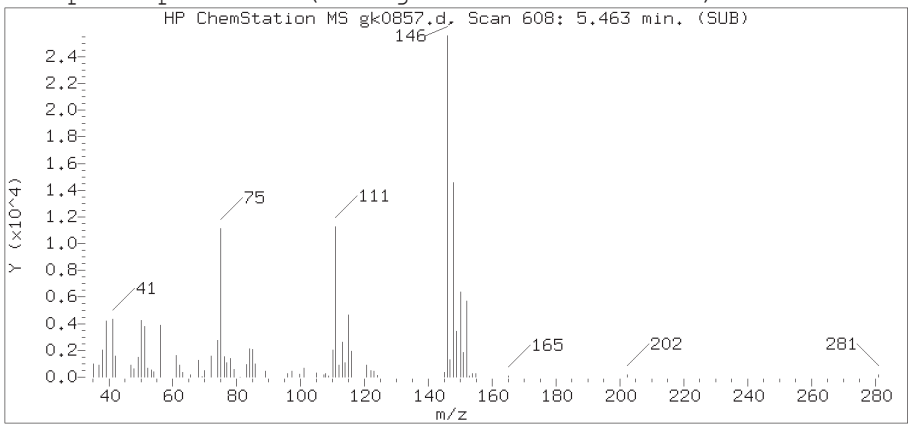
Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14.
Target 3.5 esignature used 11/19/2018

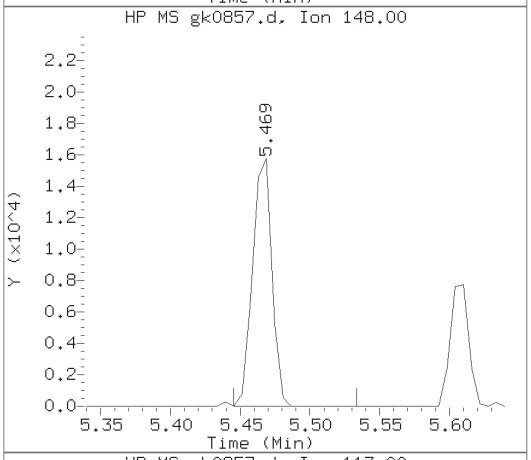
Reference Standard Spectrum for 1,4-Dichlorobenzene



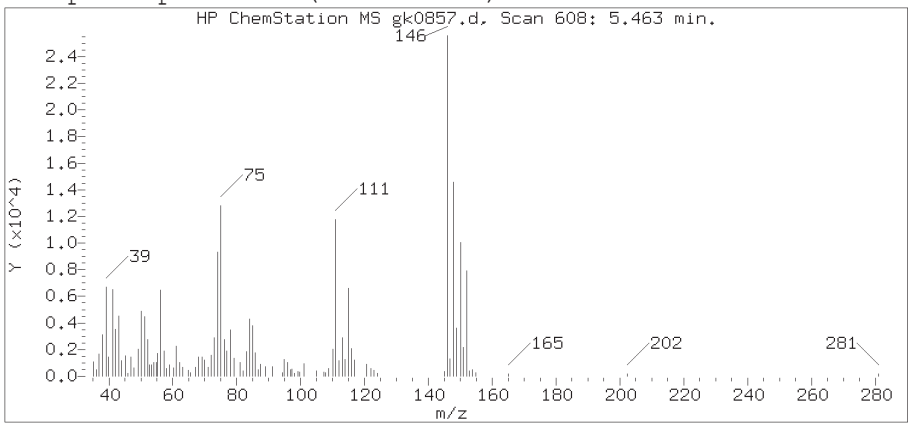


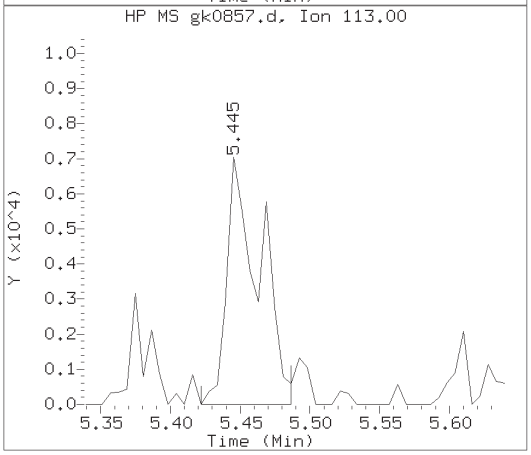
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/18nov16.b/gk0857.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:28 Analyst ID: whs02991

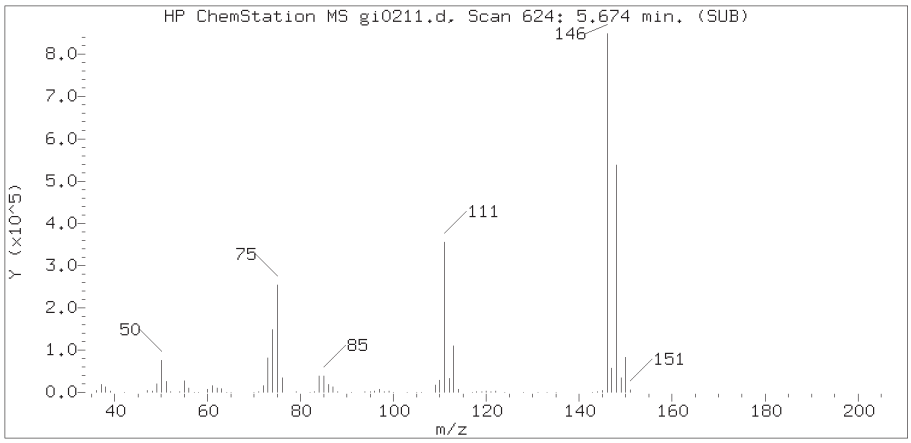
Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

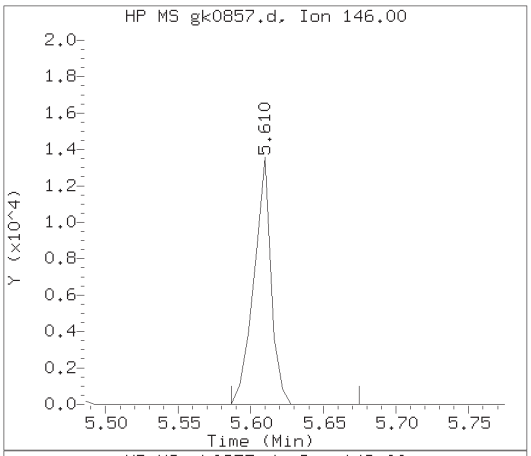
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 26
Compound Name	: 1,4-Dichlorobenzene
Scan Number	: 608
Retention Time (minutes)	: 5.463
Relative Retention Time	: 0.00108
Quant Ion	: 146.00
Area (flag)	: 22295
On-column Amount (ng/ul)	: 1.4123

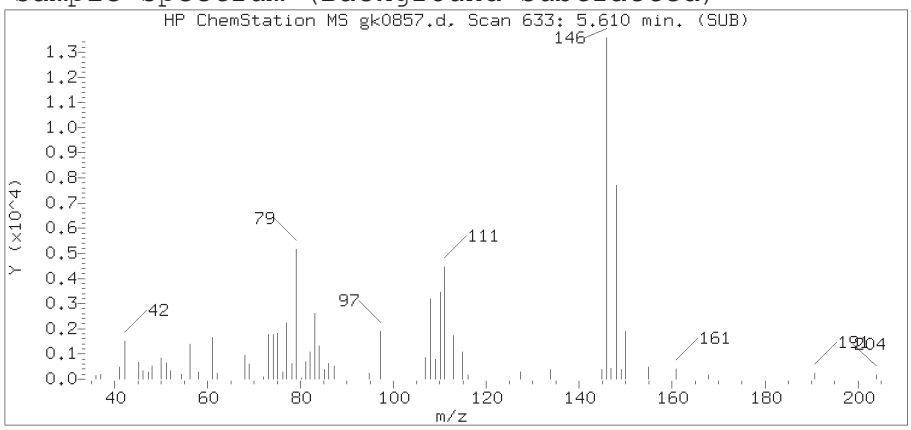
Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

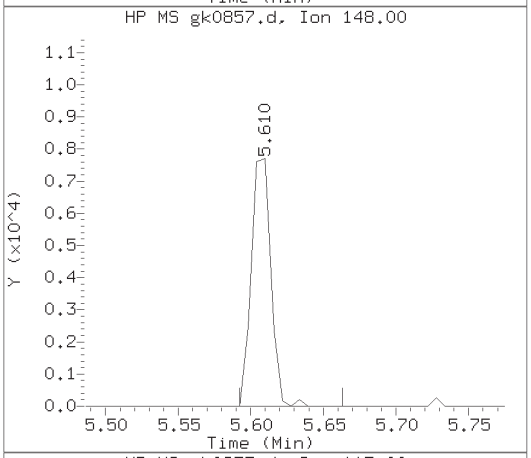
Reference Standard Spectrum for 1,2-Dichlorobenzene



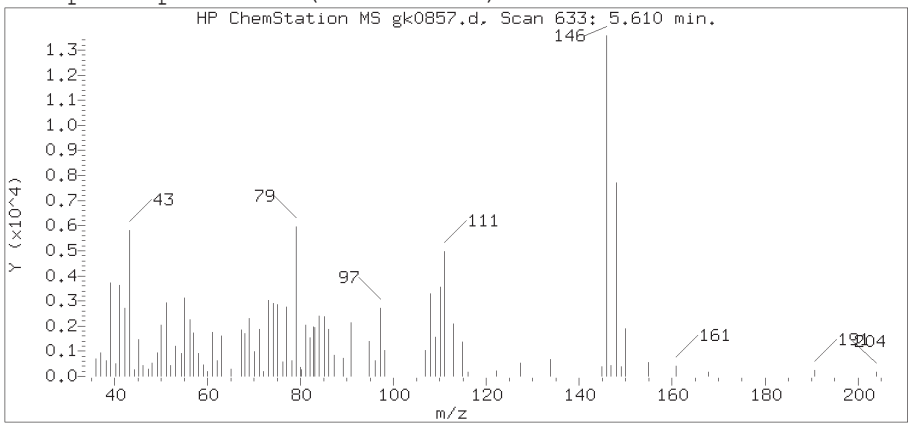


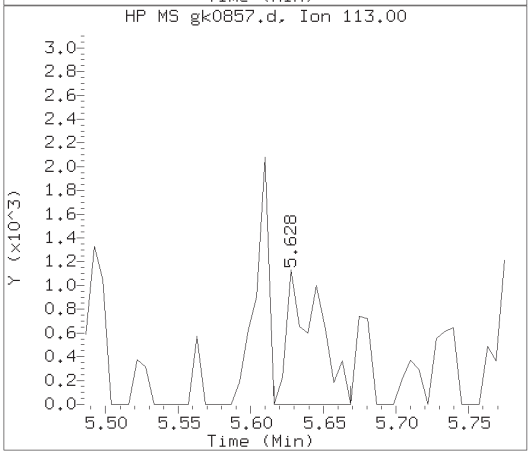
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/18nov16.b/gk0857.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:28 Analyst ID: whs02991

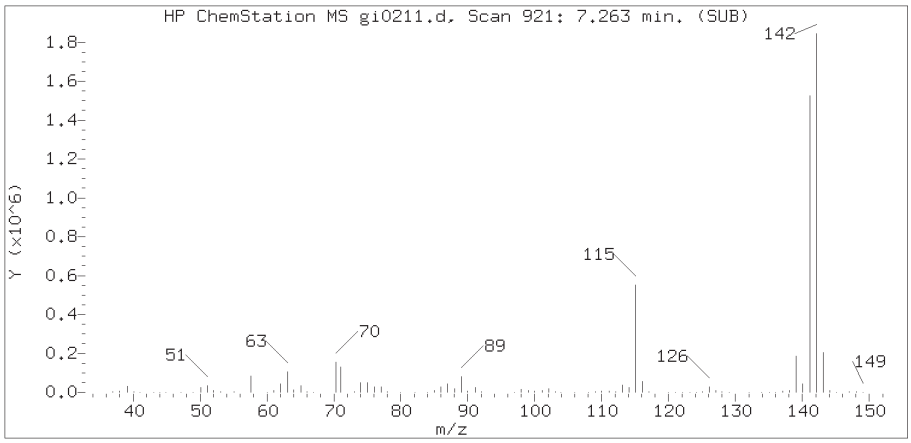
Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

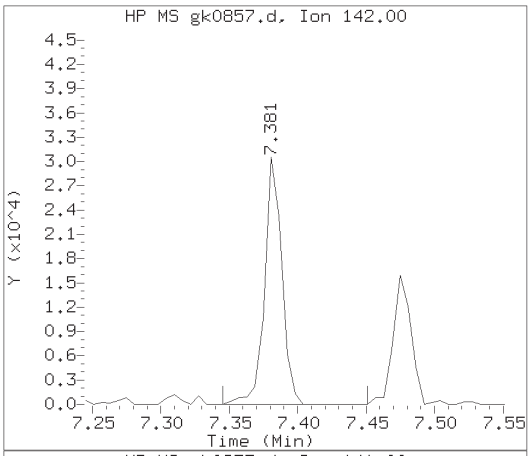
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 28
Compound Name	: 1,2-Dichlorobenzene
Scan Number	: 633
Retention Time (minutes)	: 5.610
Relative Retention Time	: 0.00000
Quant Ion	: 146.00
Area (flag)	: 11047
On-column Amount (ng/ul)	: 0.7230

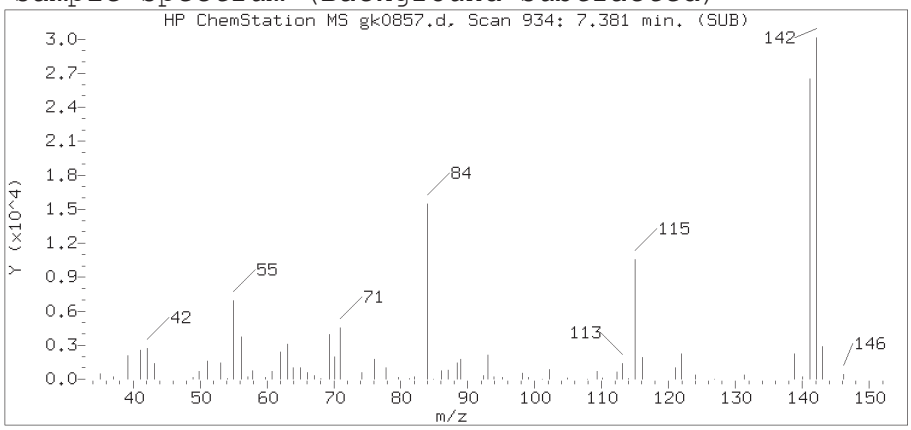
Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

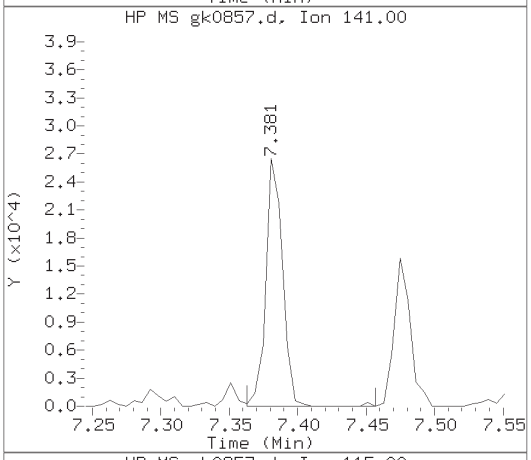
Reference Standard Spectrum for 2-Methylnaphthalene



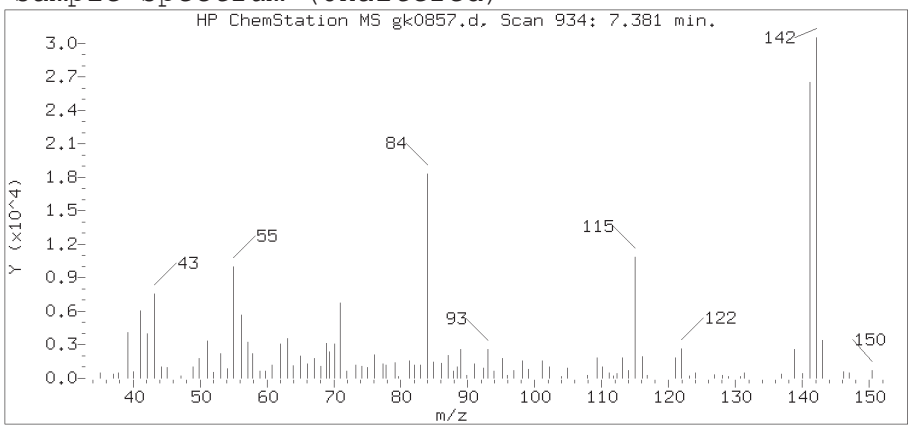


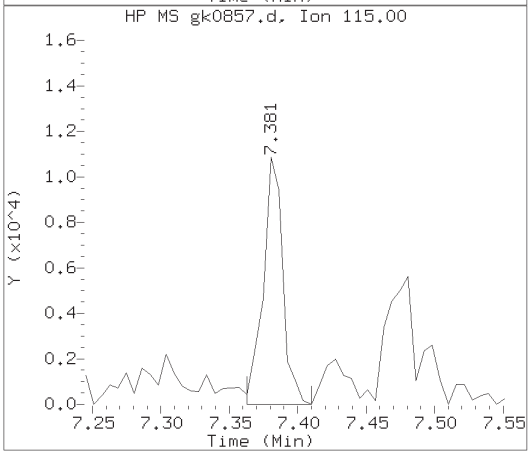
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/18nov16.b/gk0857.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:28 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 83
Compound Name	: 2-Methylnaphthalene
Scan Number	: 934
Retention Time (minutes)	: 7.381
Relative Retention Time	: 0.00088
Quant Ion	: 142.00
Area (flag)	: 26858
On-column Amount (ng/ul)	: 0.8174

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

T1003 Lancaster Laboratories, Inc. 9867762
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP23262.i/18nov11.b/pk0372.d Injection date and time: **11-NOV-2018 23:55**
Data file Sample Info. Line: T1003;9867762;2;0;SAMPLE;;DOD26;T1 Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 13-NOV-2018 11:28
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.43 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.501	(0.000)	590	152	167613	(13)	20.00	
65) Naphthalene-d8	6.731	(0.000)	799	136	728879	(13)	20.00	
113) Acenaphthene-d10	8.442	(0.000)	1090	164	428623	(13)	20.00	
153) Phenanthrene-d10	9.889	(0.000)	1336	188	871841	(0)	20.00	
175) Pyrene-d10	11.277	(0.000)	1572	212	784289	(-13)	20.00	
213) Perylene-d12	13.907	(0.000)	2019	264	629212	(-20)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.225	(-0.001)	112	2090188	162.894	81%		35 - 115
17) Phenol-d6	(1)	5.178	(-0.002)	99	3267511	161.609	81%		47 - 120
44) Nitrobenzene-d5	(2)	6.037	(0.000)	82	1540504	81.523	82%		37 - 122
93) 2-Fluorobiphenyl	(3)	7.795	(0.000)	172	2857225	86.515	87%		44 - 115
135) 2,4,6-Tribromophenol	(3)	9.213	(0.000)	330	657693	153.438	77%		39 - 132
179) Terphenyl-d14	(5)	11.466	(-0.001)	244	3135859	93.735	94%		54 - 127

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)				Not Detected					2
18) Phenol	(1)				Not Detected					0.7
19) Aniline	(1)				Not Detected					5
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.7
23) 2-Chlorophenol	(1)				Not Detected					0.5
24) 1,3-Dichlorobenzene	(1)				Not Detected					0.5
26) 1,4-Dichlorobenzene	(1)	5.513	(0.001)	146	19913	1.545	50.78			0.5
27) Benzyl alcohol	(1)				Not Detected					5
28) 1,2-Dichlorobenzene	(1)				Not Detected					0.6
31) 2-Methylphenol	(1)				Not Detected					0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.5
37) 4-Methylphenol	(1)				Not Detected					0.6
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.6
43) Hexachloroethane	(1)				Not Detected					1
45) Nitrobenzene	(2)				Not Detected					0.8
50) Isophorone	(2)				Not Detected					0.5
51) 2-Nitrophenol	(2)				Not Detected					0.5
53) 2,4-Dimethylphenol	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.5
60) 2,4-Dichlorophenol	(2)				Not Detected					0.5
62) 1,2,4-Trichlorobenzene	(2)				Not Detected					0.5
67) 4-Chloroaniline	(2)				Not Detected					1
71) Hexachlorobutadiene	(2)				Not Detected					0.6
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)	7.431	(-0.000)	142	57203M	2.012	66.12	12.196	B	0.3
85) Hexachlorocyclopentadiene	(3)				Not Detected					5
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.6

B = Compound detected in referenced method blank. M = Compound was manually integrated.

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44. Target 3.5 esignature user ID: lmh00956

Data file: /chem/HP23262.i/18nov11.b/pk0372.d Injection date and time: **11-NOV-2018 23:55**
Data file Sample Info. Line: T1003;9867762;2;0;SAMPLE;;DOD26;T1 Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 13-NOV-2018 11:28
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.43 g

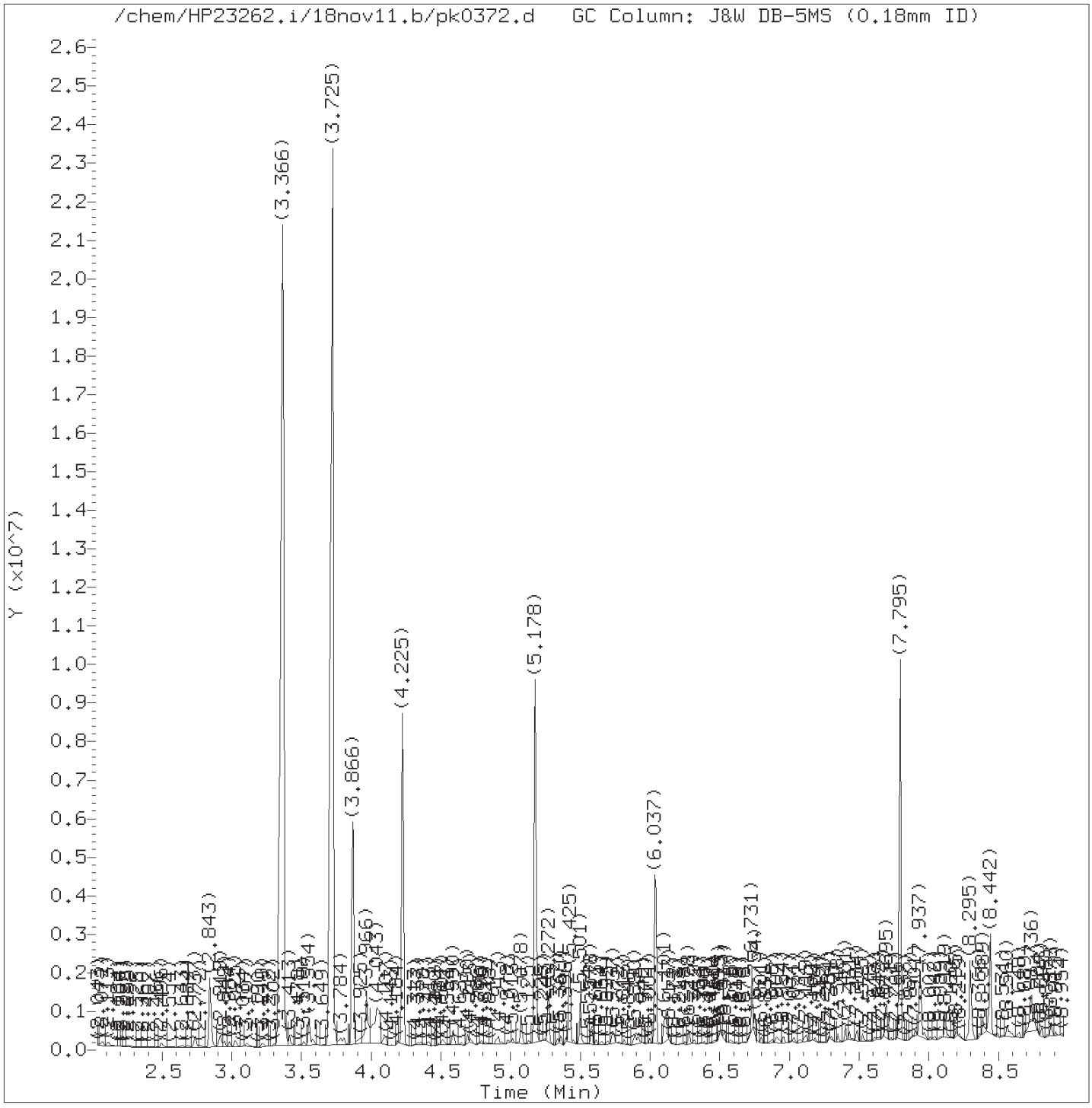
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.6
96) 2-Chloronaphthalene	(3)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.6
106) Dimethylphthalate	(3)				Not Detected					2
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.6
112) 3-Nitroaniline	(3)				Not Detected					2
115) 2,4-Dinitrophenol	(3)				Not Detected					11
116) 4-Nitrophenol	(3)				Not Detected					5
118) 2,4-Dinitrotoluene	(3)				Not Detected					2
119) Dibenzofuran	(3)	8.642	(0.000)	168	36090	0.803	26.38		J	0.5
124) Diethylphthalate	(3)				Not Detected					2
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.5
129) 4-Nitroaniline	(3)				Not Detected					2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					5
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.5
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.6
145) Hexachlorobenzene	(4)				Not Detected					0.1
149) Pentachlorophenol	(4)				Not Detected					1
163) Carbazole	(4)	10.125	(0.000)	167	36386M	0.788	25.90		J	0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
205) Di-n-octylphthalate	(6)				Not Detected					2

M = Compound was manually integrated.

Total number of targets = 48

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

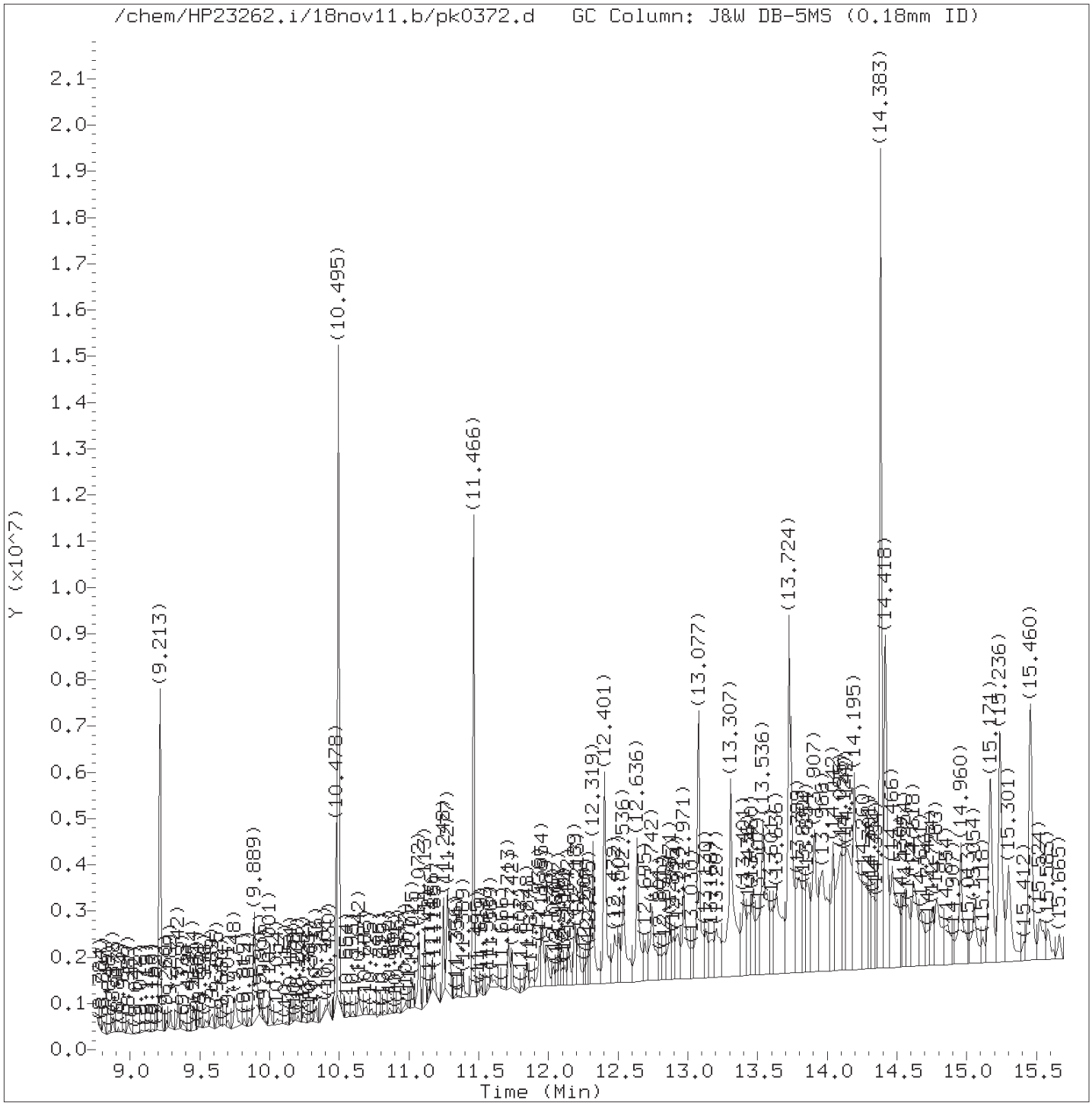
Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0372.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:55 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003 Lab Sample ID: 9867762

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0372.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:55 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003 Lab Sample ID: 9867762

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0372.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:55 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

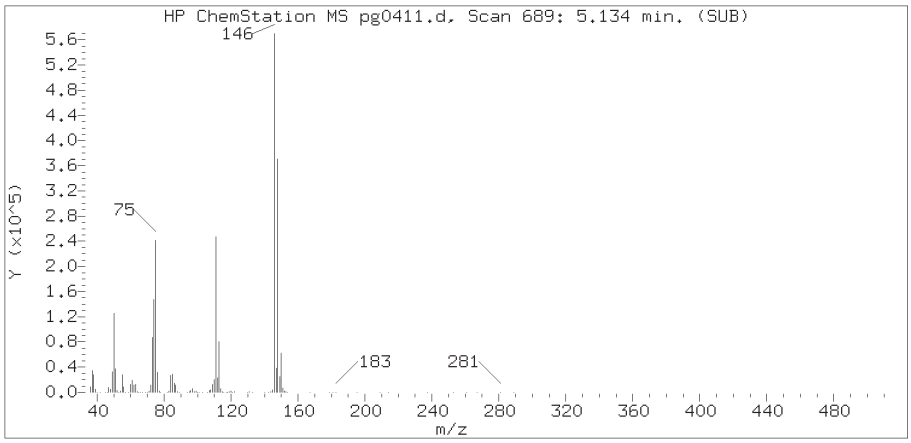
Sample Name: T1003 Lab Sample ID: 9867762

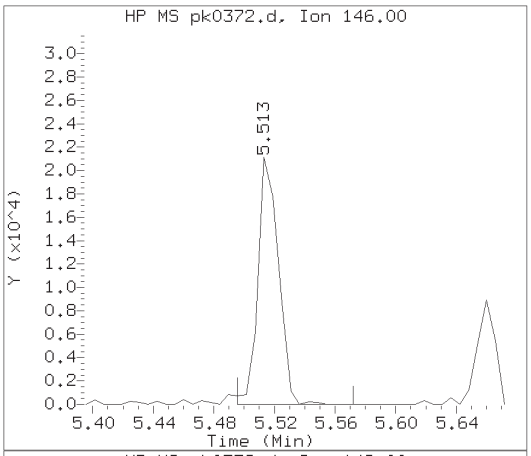
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.225	112	2090188	162.894
17)$Phenol-d6	(1)	5.178	99	3267511	161.609
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	167613	20.000
26) 1,4-Dichlorobenzene	(1)	5.513	146	19913	1.545
44)$Nitrobenzene-d5	(2)	6.037	82	1540504	81.523
65)*Naphthalene-d8	(2)	6.731	136	728879	20.000
83) 2-Methylnaphthalene	(2)	7.431	142	57203M	2.012
93)$2-Fluorobiphenyl	(3)	7.795	172	2857225	86.515
113)*Acenaphthene-d10	(3)	8.442	164	428623	20.000
119) Dibenzofuran	(3)	8.642	168	36090	0.803
135)$2,4,6-Tribromophenol	(3)	9.213	330	657693	153.438
153)*Phenanthrene-d10	(4)	9.889	188	871841	20.000
163) Carbazole	(4)	10.125	167	36386M	0.788
175)*Pyrene-d10	(5)	11.277	212	784289	20.000
179)$Terphenyl-d14	(5)	11.466	244	3135859	93.735
213)*Perylene-d12	(6)	13.907	264	629212	20.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

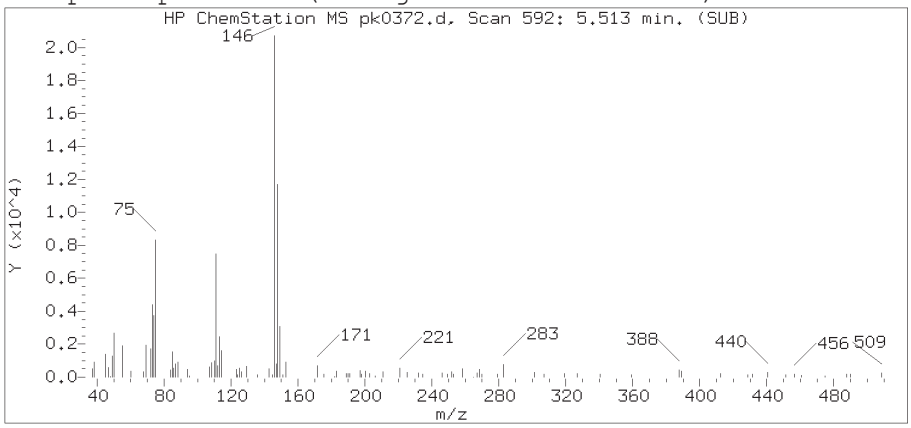
Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

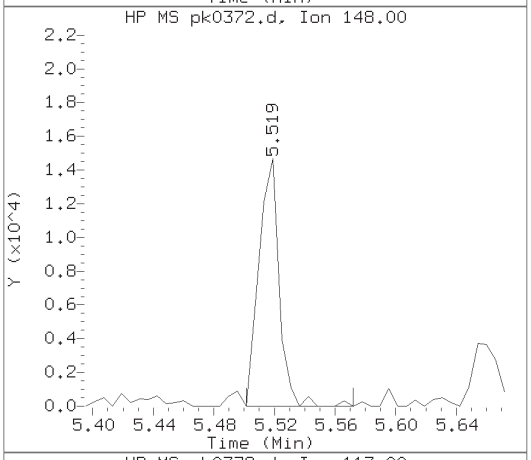
Reference Standard Spectrum for 1,4-Dichlorobenzene



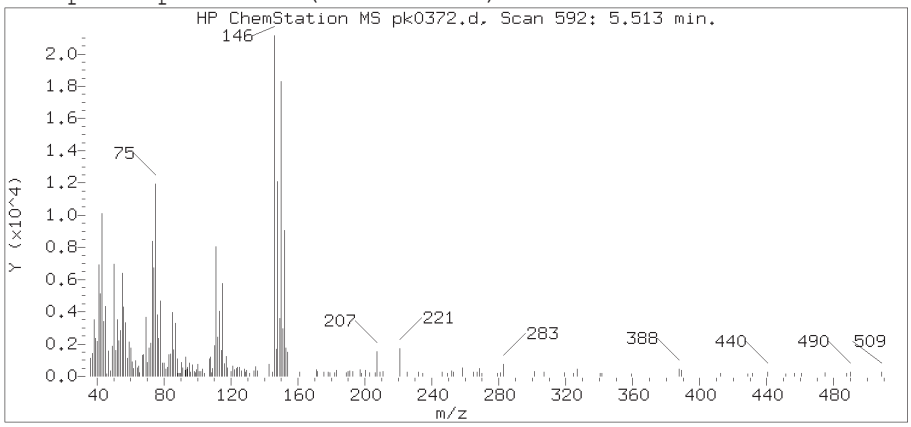


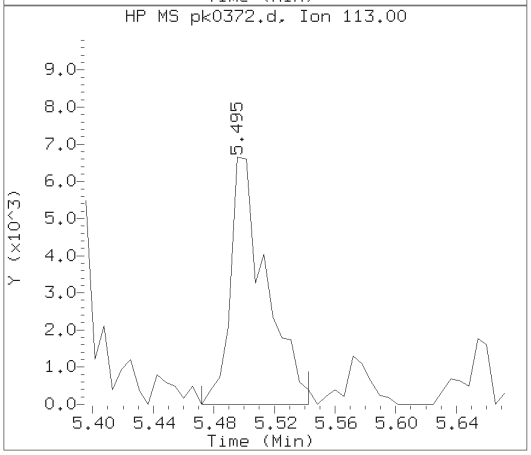
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23262.i/18nov11.b/pk0372.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:55 Analyst ID: apb10206

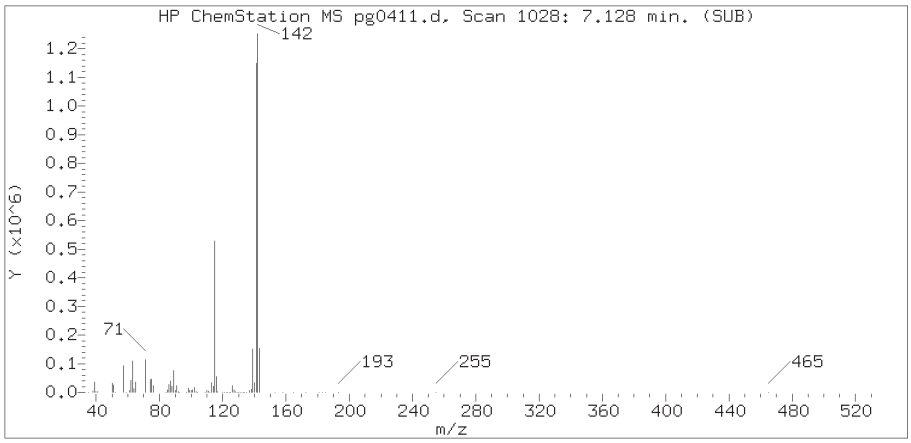
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

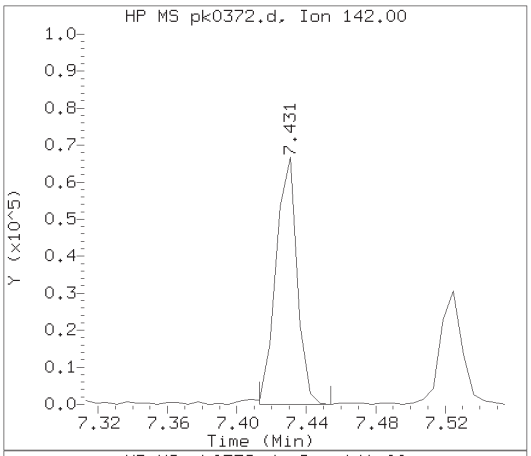
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 26
Compound Name	: 1,4-Dichlorobenzene
Scan Number	: 592
Retention Time (minutes)	: 5.513
Relative Retention Time	: 0.00107
Quant Ion	: 146.00
Area (flag)	: 19913
On-column Amount (ng/ul)	: 1.5453

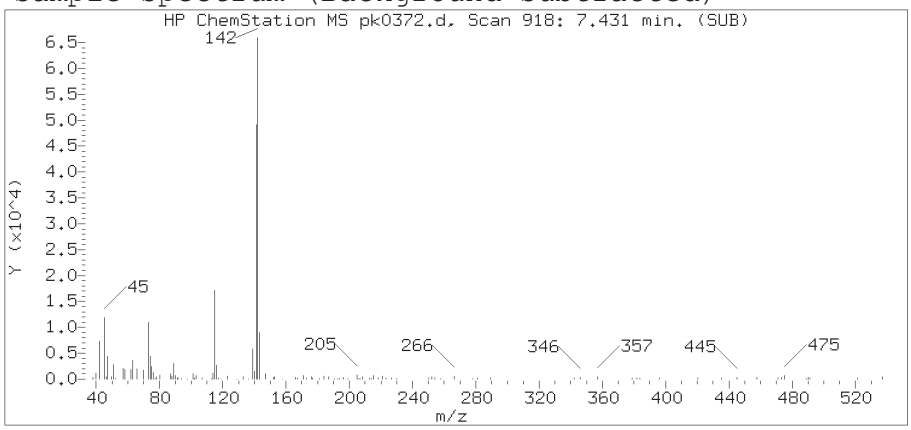
Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

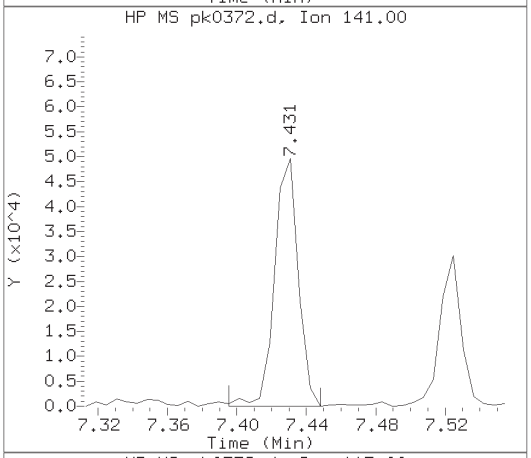
Reference Standard Spectrum for 2-Methylnaphthalene



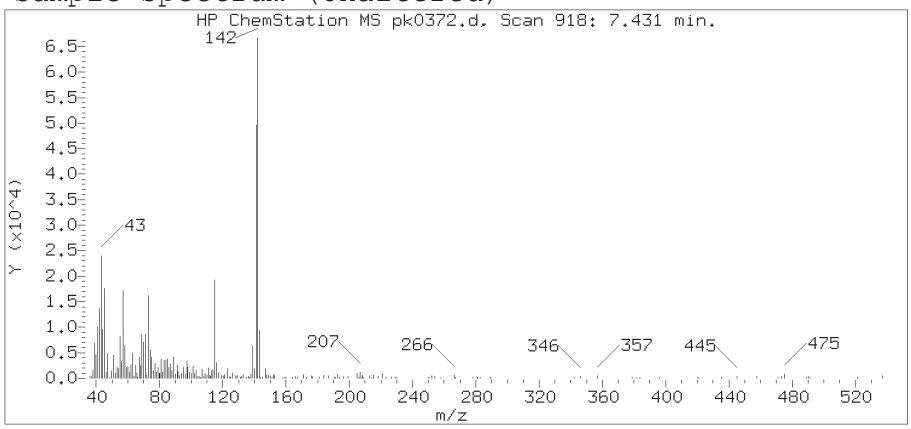


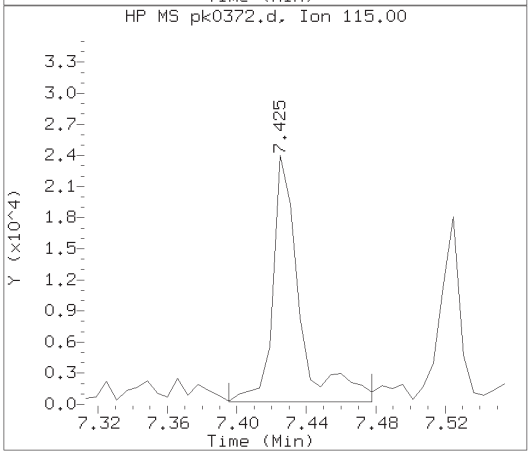
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23262.i/18nov11.b/pk0372.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:55 Analyst ID: apb10206

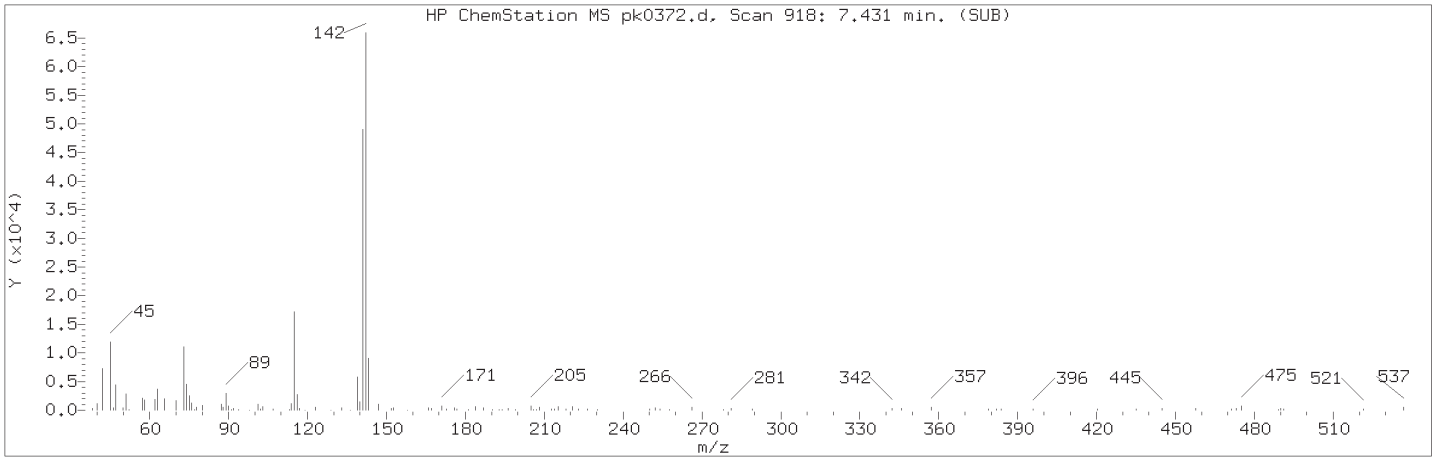
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003 Lab Sample ID: 9867762

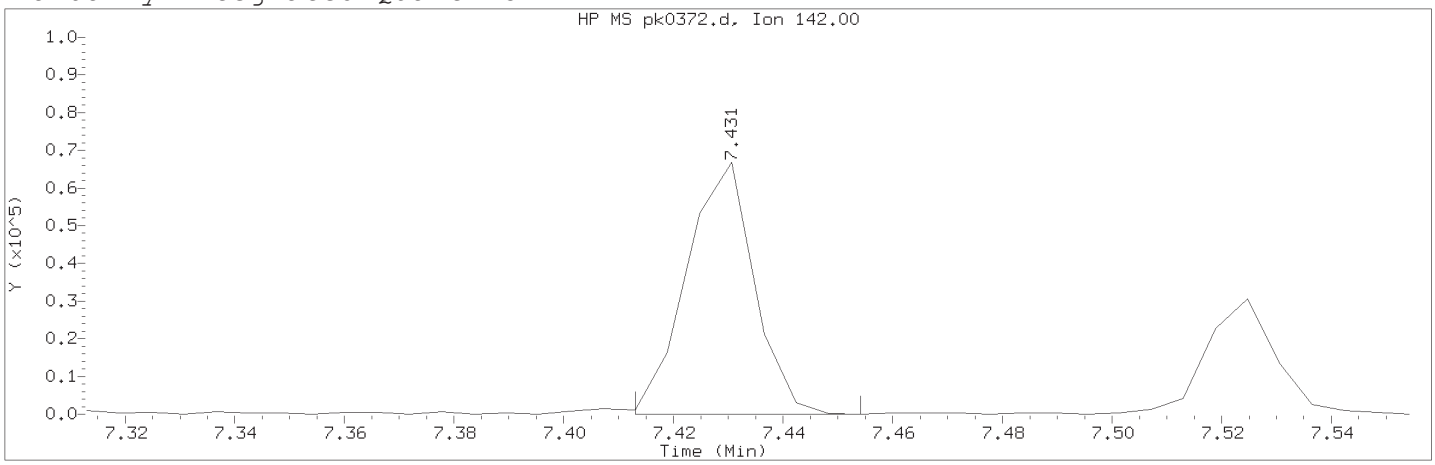
Compound Number	: 83
Compound Name	: 2-Methylnaphthalene
Scan Number	: 918
Retention Time (minutes)	: 7.431
Relative Retention Time	:-0.00000
Quant Ion	: 142.00
Area (flag)	: 57203M
On-column Amount (ng/ul)	: 2.0122

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0372.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:55 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003 Lab Sample ID: 9867762

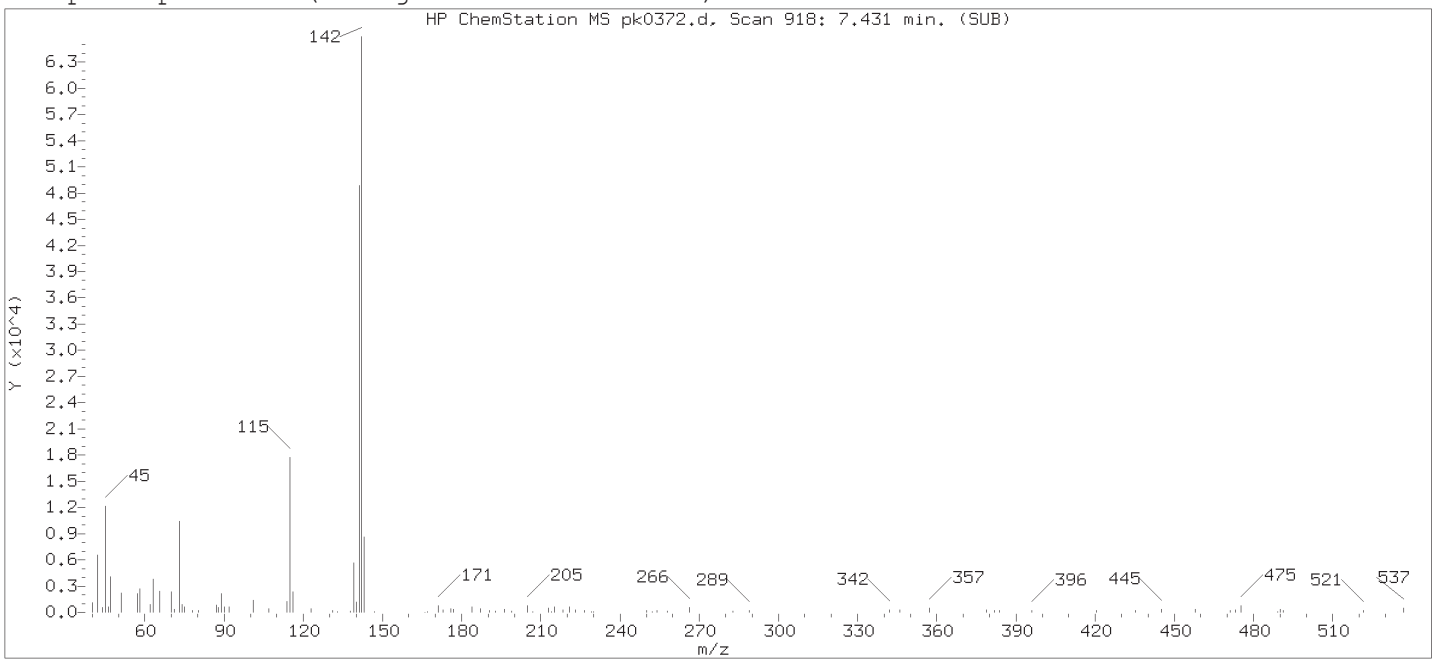
Compound Number : 83
Compound Name : 2-Methylnaphthalene
Scan Number : 918
Retention Time (minutes) : 7.431
Quant Ion : 142.00
Area (flag) : 57203M
On-column Amount (ng/ul) : 2.0122
Integration start scan : 914 Integration stop scan: 921
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

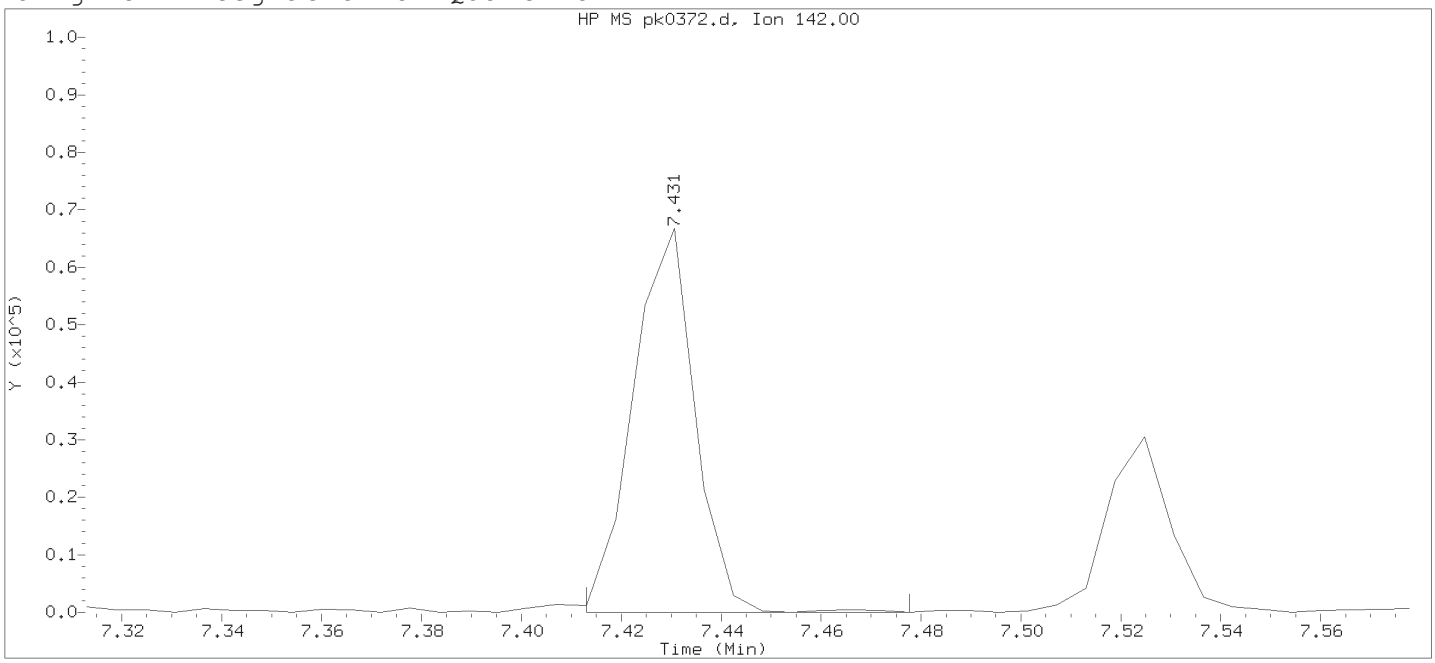
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0372.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:55 Analyst ID: apb10206

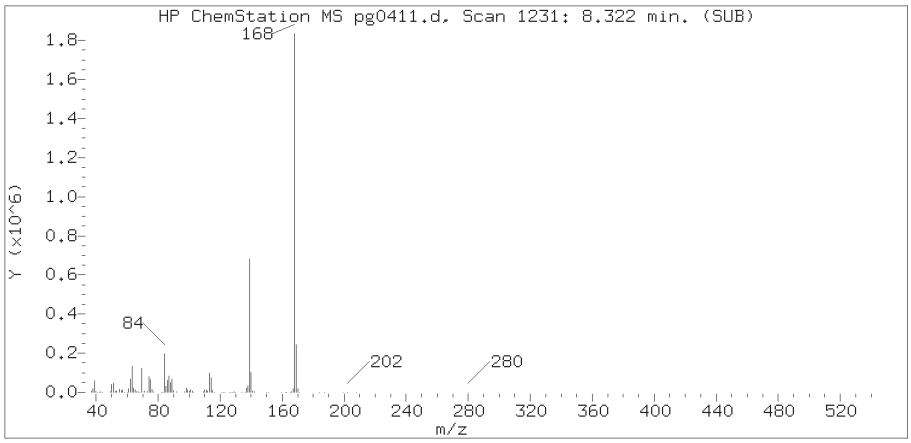
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 11-NOV-2018 22:43
Date, time and analyst ID of latest file update: 12-Nov-2018 00:16 Automation

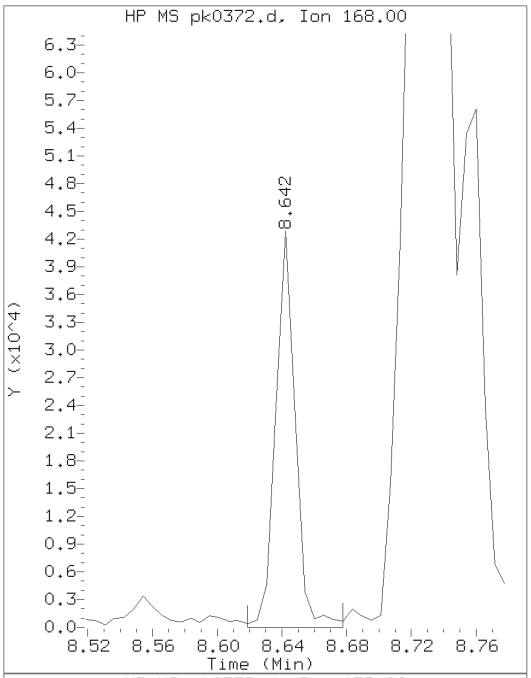
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 83		
Compound Name	: 2-Methylnaphthalene		
Scan Number	: 918		
Retention Time (minutes)	: 7.431		
Quant Ion	: 142.00		
Area	: 57355		
On-column Amount (ng/ul)	: 2.0175		
Integration start scan	: 914	Integration stop scan:	925
Y at integration start	: 0	Y at integration end:	0

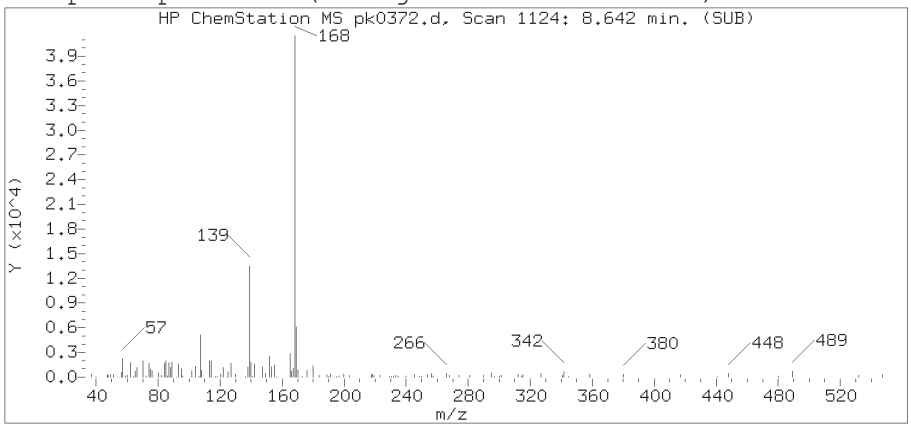
Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: [illegible]

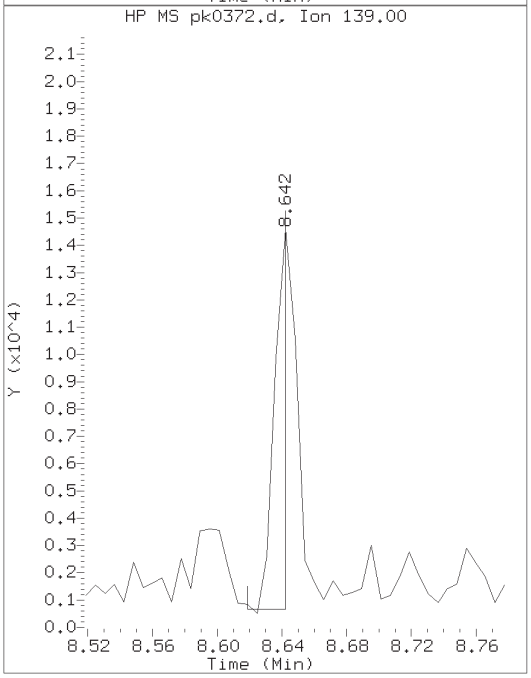
Reference Standard Spectrum for Dibenzofuran



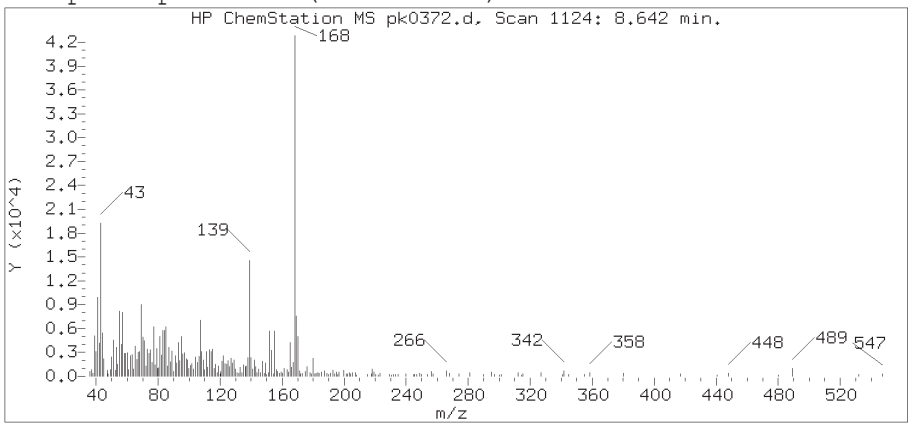


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP23262.i/18nov11.b/pk0372.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:55 Analyst ID: apb10206

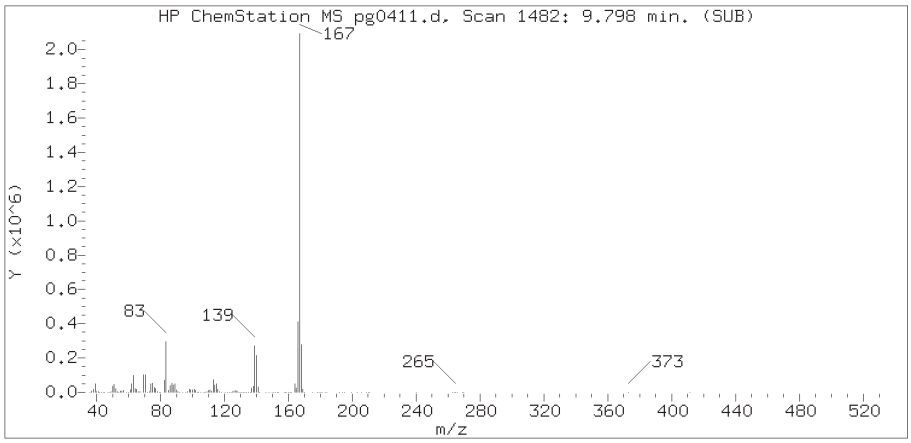
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

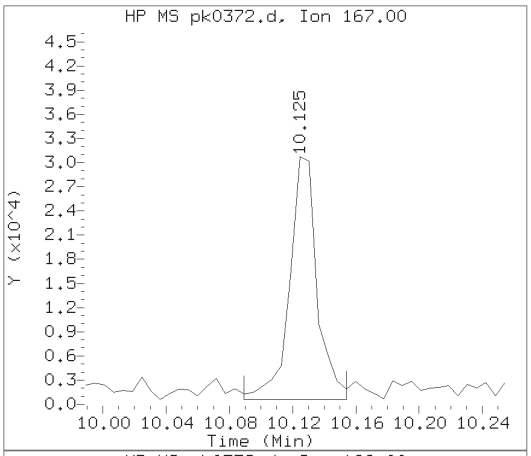
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 119
Compound Name	: Dibenzofuran
Scan Number	: 1124
Retention Time (minutes)	: 8.642
Relative Retention Time	: 0.00000
Quant Ion	: 168.00
Area (flag)	: 36090
On-column Amount (ng/ul)	: 0.8029

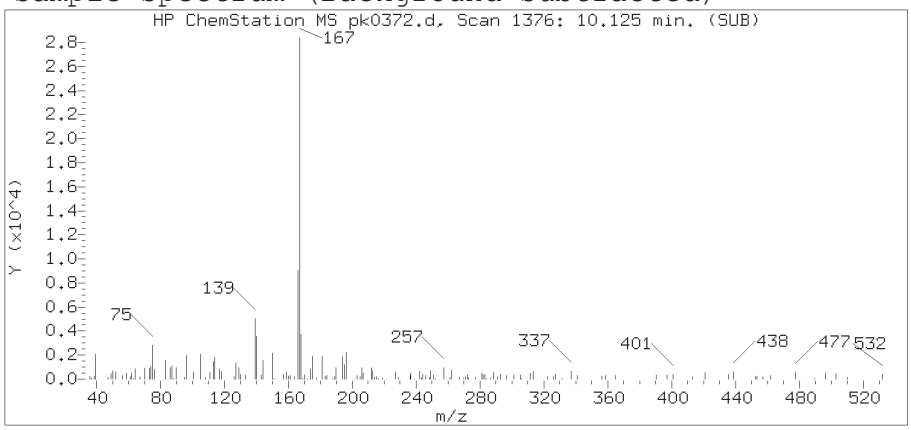
Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

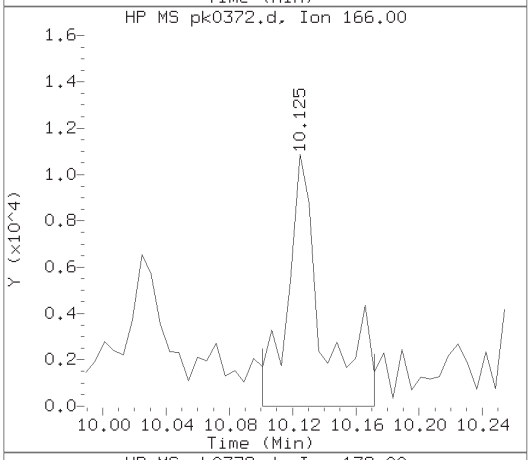
Reference Standard Spectrum for Carbazole



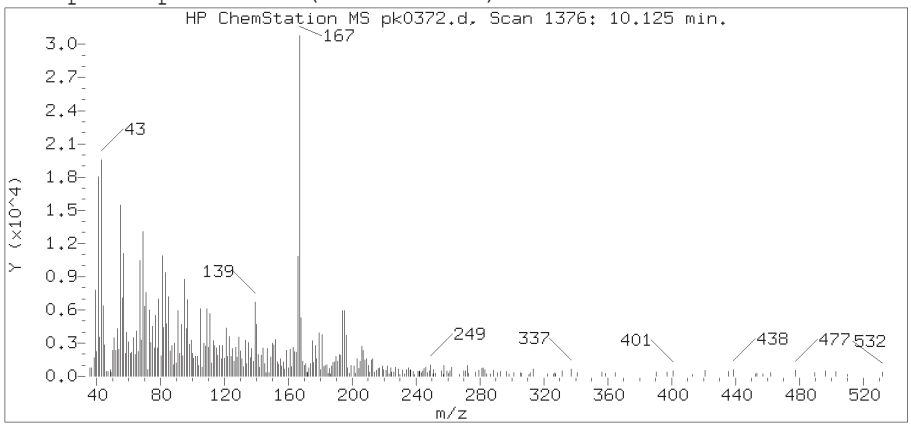


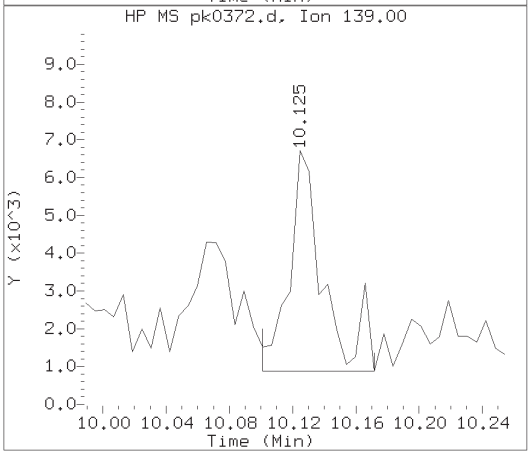
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23262.i/18nov11.b/pk0372.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:55 Analyst ID: apb10206

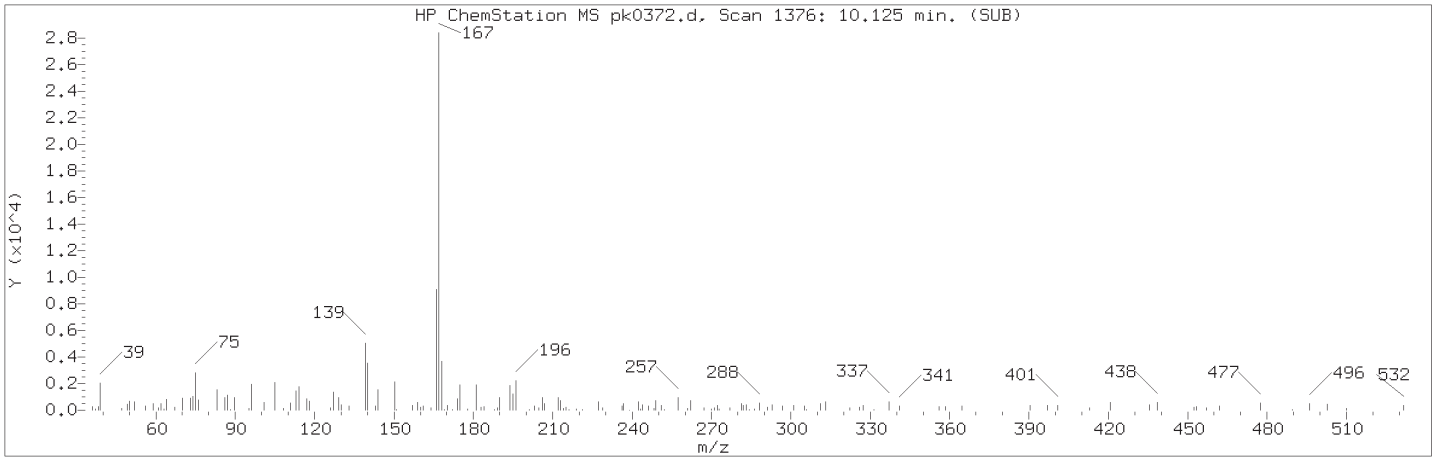
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003 Lab Sample ID: 9867762

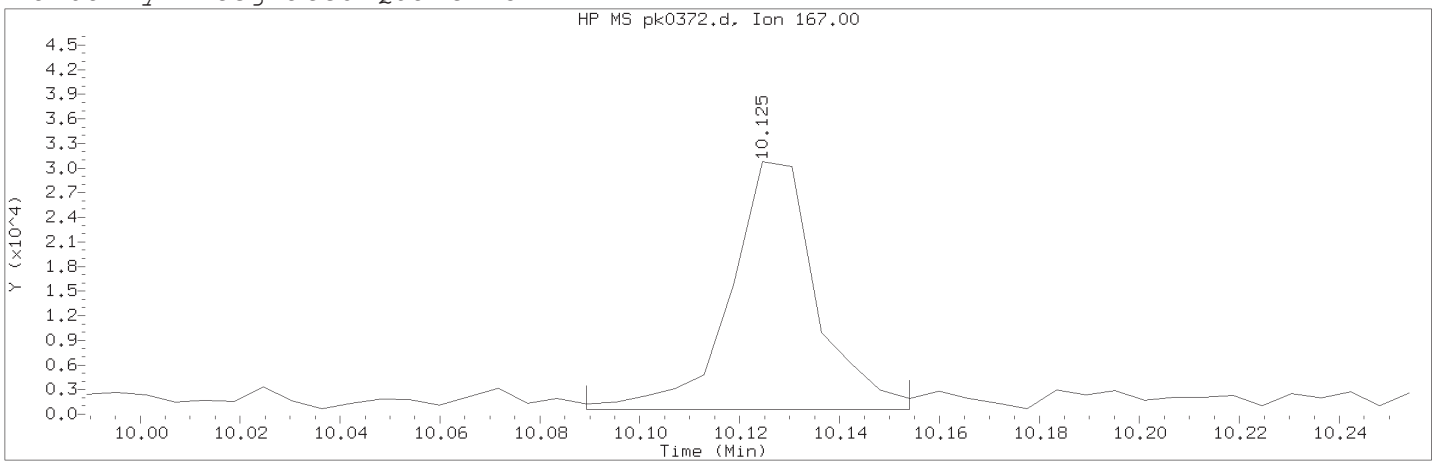
Compound Number	: 163
Compound Name	: Carbazole
Scan Number	: 1376
Retention Time (minutes)	: 10.125
Relative Retention Time	: 0.00060
Quant Ion	: 167.00
Area (flag)	: 36386M
On-column Amount (ng/ul)	: 0.7880

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0372.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:55 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003 Lab Sample ID: 9867762

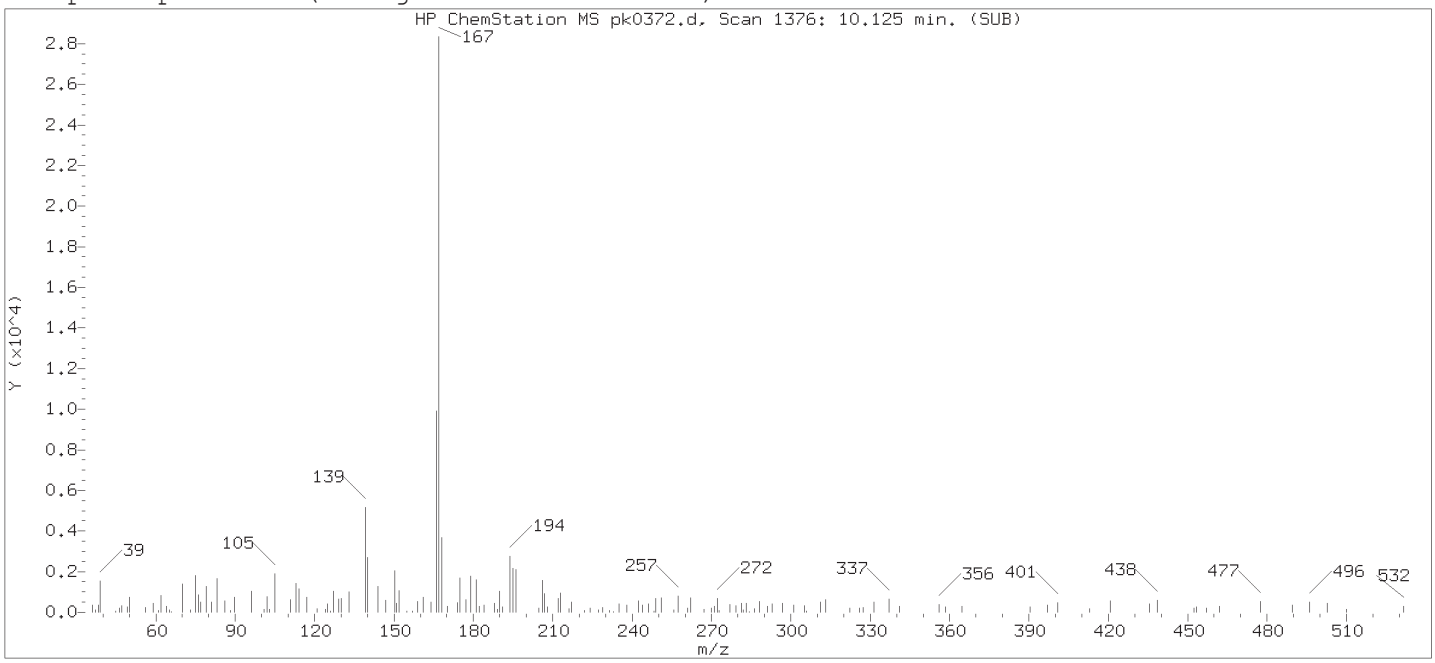
Compound Number : 163
Compound Name : Carbazole
Scan Number : 1376
Retention Time (minutes) : 10.125
Quant Ion : 167.00
Area (flag) : 36386M
On-column Amount (ng/ul) : 0.7880
Integration start scan : 1369 Integration stop scan: 1380
Y at integration start : 615 Y at integration end: 615

Reason for manual integration: improper integration

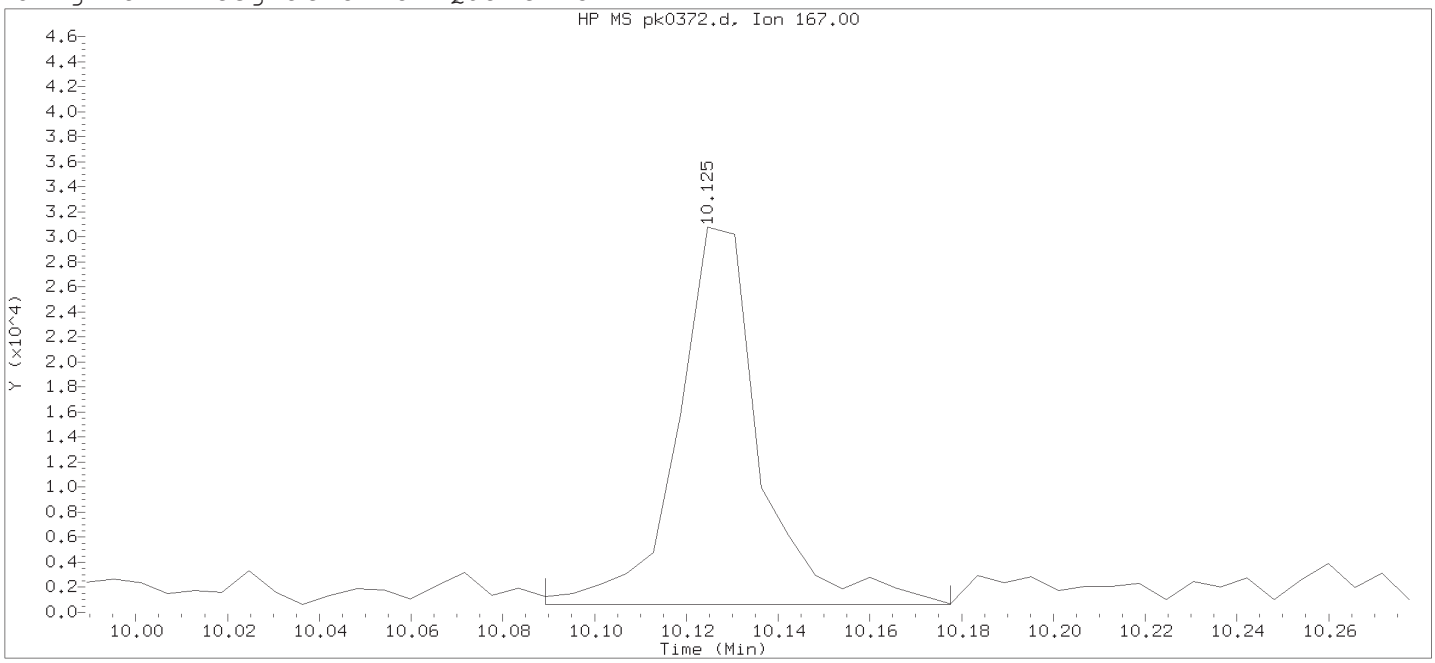
Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0372.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 23:55 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 11-NOV-2018 22:43
Date, time and analyst ID of latest file update: 12-Nov-2018 00:16 Automation

Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	:	163
Compound Name	:	Carbazole
Scan Number	:	1376
Retention Time (minutes)	:	10.125
Quant Ion	:	167.00
Area	:	37762
On-column Amount (ng/ul)	:	0.8179
Integration start scan	:	1369 Integration stop scan: 1384
Y at integration start	:	615 Y at integration end: 615

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lab0105

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP11165.i/18nov16.b/gk0858.d Injection date and time: **16-NOV-2018 16:53**
Data file Sample Info. Line: T1003RE;9867762RE;2;0;SAMPLE;;DOD26;T2 Instrument ID: **HP11165.i** Batch: **18317SLB**
Date, time and analyst ID of latest file update: 20-Nov-2018 13:43 knb25316

Blank Data file reference: **/chem/HP11165.i/18nov16.b/gk0854.d**

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 19-NOV-2018 19:11
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/18nov16.b/gk0851.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 20 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.451	(0.000)	606	152	176014	(17)	20.00	
65) Naphthalene-d8	6.687	(0.000)	816	136	773155	(16)	20.00	
113) Acenaphthene-d10	8.398	(0.000)	1107	164	448281	(11)	20.00	
153) Phenanthrene-d10	9.851	(0.000)	1354	188	879157	(7)	20.00	
175) Pyrene-d10	11.239	(0.000)	1590	212	747032	(-4)	20.00	
213) Perylene-d12	13.874	(0.000)	2038	264	606453	(-7)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.199	(0.000)	112	1891482	141.686	71%		35 - 115
17) Phenol-d6	(1)	5.163	(0.000)	99	2881154	139.373	70%		47 - 120
44) Nitrobenzene-d5	(2)	5.993	(0.000)	82	1332069	65.394	65%		37 - 122
93) 2-Fluorobiphenyl	(3)	7.751	(0.000)	172	2419982	66.697	67%		44 - 115
135) 2,4,6-Tribromophenol	(3)	9.175	(0.001)	330	590175	164.376	82%		39 - 132
179) Terphenyl-d14	(5)	11.433	(0.000)	244	2556048	70.758	71%		54 - 127

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)				Not Detected					2
18) Phenol	(1)				Not Detected					0.7
19) Aniline	(1)				Not Detected					5
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.7
23) 2-Chlorophenol	(1)				Not Detected					0.5
24) 1,3-Dichlorobenzene	(1)				Not Detected					0.5
26) 1,4-Dichlorobenzene	(1)	5.463	(0.001)	146	7522	0.504	25.21		J	0.5
27) Benzyl alcohol	(1)				Not Detected					5
28) 1,2-Dichlorobenzene	(1)				Not Detected					0.6
31) 2-Methylphenol	(1)				Not Detected					0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.5
37) 4-Methylphenol	(1)				Not Detected					0.6
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.6
43) Hexachloroethane	(1)				Not Detected					1
45) Nitrobenzene	(2)				Not Detected					0.8
50) Isophorone	(2)				Not Detected					0.5
51) 2-Nitrophenol	(2)				Not Detected					0.5
53) 2,4-Dimethylphenol	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.5
60) 2,4-Dichlorophenol	(2)				Not Detected					0.5
62) 1,2,4-Trichlorobenzene	(2)				Not Detected					0.5
67) 4-Chloroaniline	(2)				Not Detected					1
71) Hexachlorobutadiene	(2)				Not Detected					0.6
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)	7.381	(0.000)	142	32744	1.057	52.86			0.3
85) Hexachlorocyclopentadiene	(3)				Not Detected					5
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.6

Digitally signed by Kira N. Beck on 11/20/2018 at 13:44. Target 3.5 esignature user ID: knb25316

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP11165.i/18nov16.b/gk0858.d Injection date and time: **16-NOV-2018 16:53**
Data file Sample Info. Line: T1003RE;9867762RE;2;0;SAMPLE;;DOD26;T2 Instrument ID: **HP11165.i** Batch: **18317SLB**
Date, time and analyst ID of latest file update: 20-Nov-2018 13:43 knb25316

Blank Data file reference: **/chem/HP11165.i/18nov16.b/gk0854.d**

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 19-NOV-2018 19:11
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/18nov16.b/gk0851.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

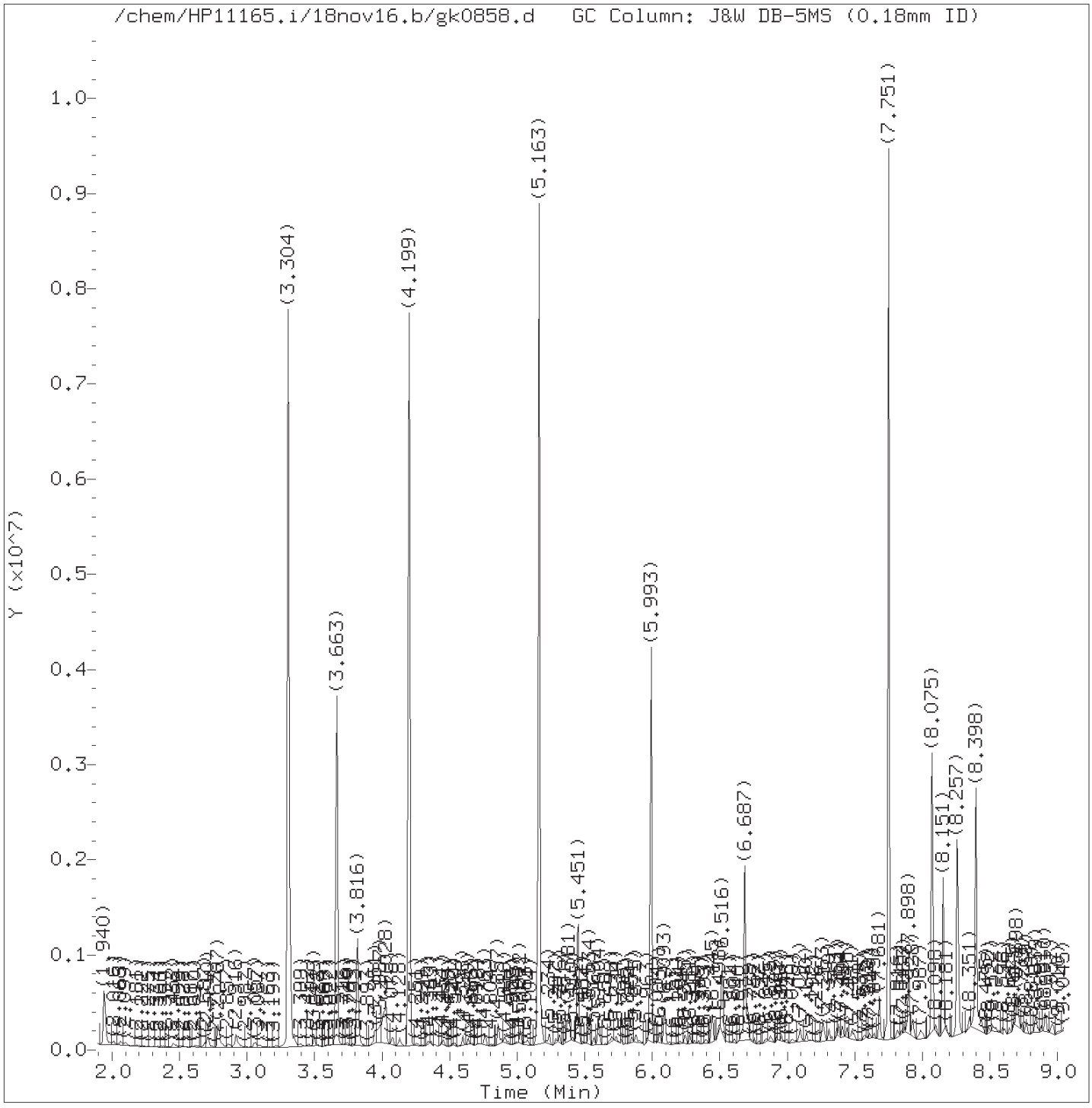
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 20 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.6
96) 2-Chloronaphthalene	(3)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.6
106) Dimethylphthalate	(3)				Not Detected					2
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.6
112) 3-Nitroaniline	(3)				Not Detected					2
115) 2,4-Dinitrophenol	(3)				Not Detected					11
116) 4-Nitrophenol	(3)				Not Detected					5
118) 2,4-Dinitrotoluene	(3)				Not Detected					2
119) Dibenzofuran	(3)				Not Detected					0.5
124) Diethylphthalate	(3)				Not Detected					2
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.5
129) 4-Nitroaniline	(3)				Not Detected					2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					5
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.5
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.6
145) Hexachlorobenzene	(4)				Not Detected					0.1
149) Pentachlorophenol	(4)				Not Detected					1
163) Carbazole	(4)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
205) Di-n-octylphthalate	(6)				Not Detected					2

Total number of targets = 48

Digitally signed by Kira N. Beck on 11/20/2018 at 13:44. Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 11/20/2018 at 13:50. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

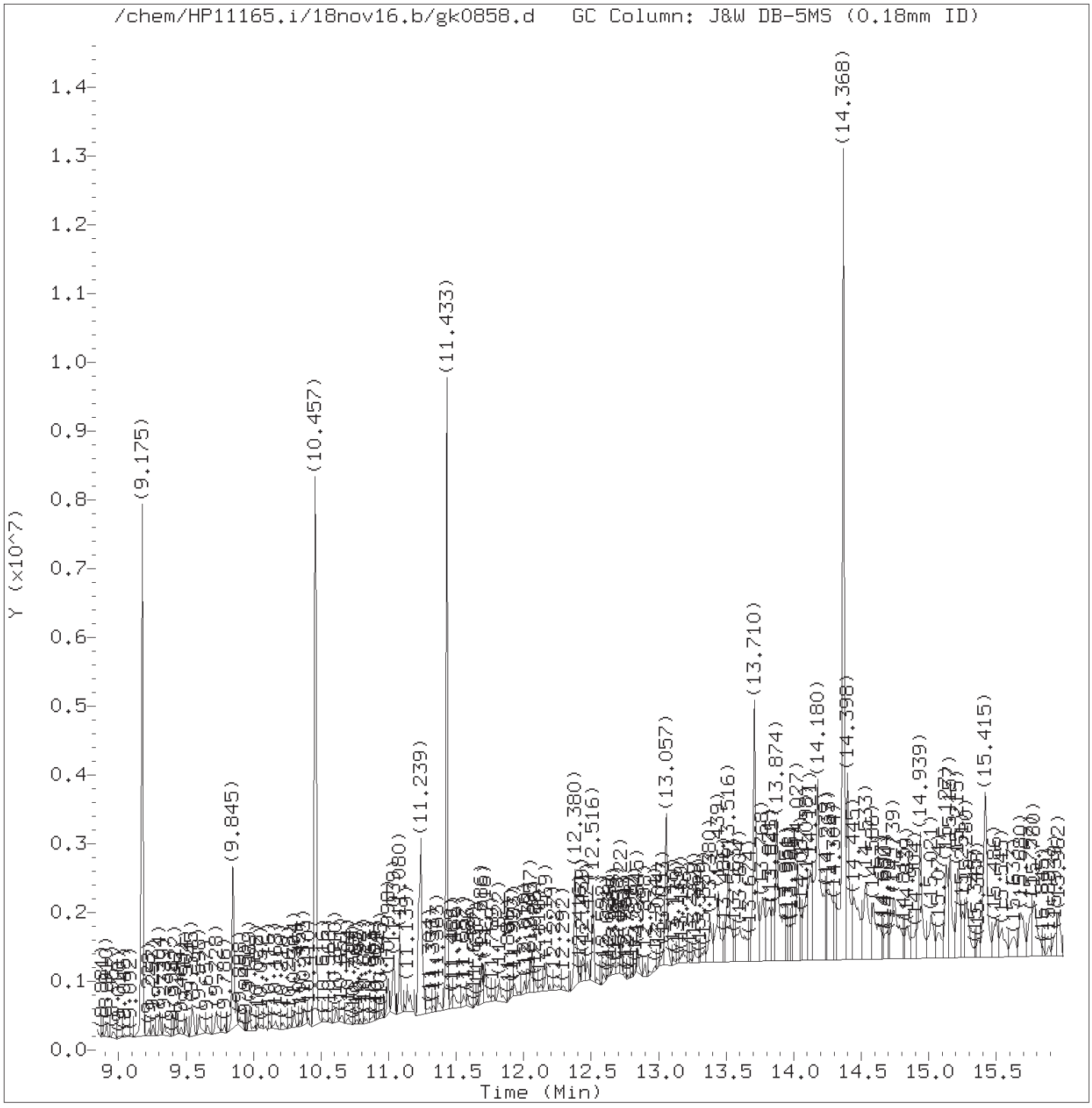
Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0858.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:53 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 20-Nov-2018 13:43 knb25316

Sample Name: T1003RE Lab Sample ID: 9867762RE

Digitally signed by Kira N. Beck
on 11/20/2018 at 13:44.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0858.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:53 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 20-Nov-2018 13:43 knb25316

Sample Name: T1003RE Lab Sample ID: 9867762RE

Digitally signed by Kira N. Beck
on 11/20/2018 at 13:44.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0858.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:53 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 20-Nov-2018 13:43 knb25316

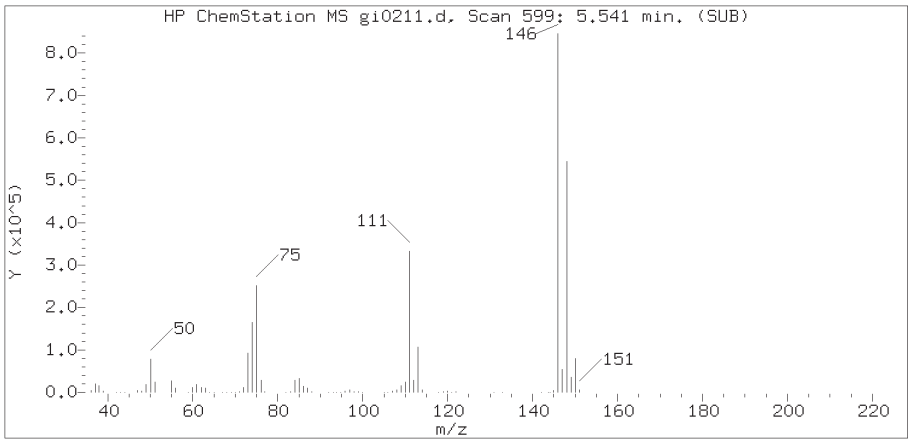
Sample Name: T1003RE Lab Sample ID: 9867762RE

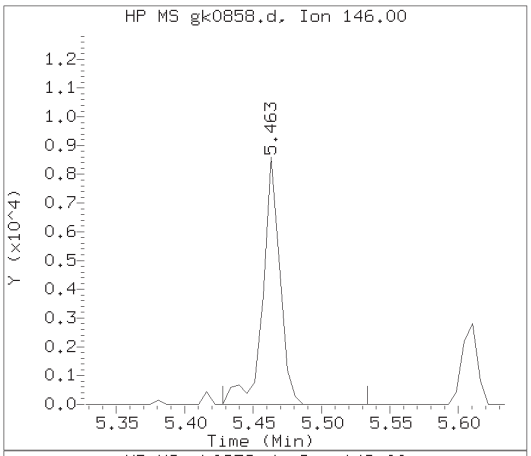
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.199	112	1891482	141.686
17)$Phenol-d6	(1)	5.163	99	2881154	139.373
25)*1,4-Dichlorobenzene-d4	(1)	5.451	152	176014	20.000
26) 1,4-Dichlorobenzene	(1)	5.463	146	7522	0.504
44)$Nitrobenzene-d5	(2)	5.993	82	1332069	65.394
65)*Naphthalene-d8	(2)	6.687	136	773155	20.000
83) 2-Methylnaphthalene	(2)	7.381	142	32744	1.057
93)$2-Fluorobiphenyl	(3)	7.751	172	2419982	66.697
113)*Acenaphthene-d10	(3)	8.398	164	448281	20.000
135)$2,4,6-Tribromophenol	(3)	9.175	330	590175	164.376
153)*Phenanthrene-d10	(4)	9.851	188	879157	20.000
175)*Pyrene-d10	(5)	11.239	212	747032	20.000
179)$Terphenyl-d14	(5)	11.433	244	2556048	70.758
213)*Perylene-d12	(6)	13.874	264	606453	20.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

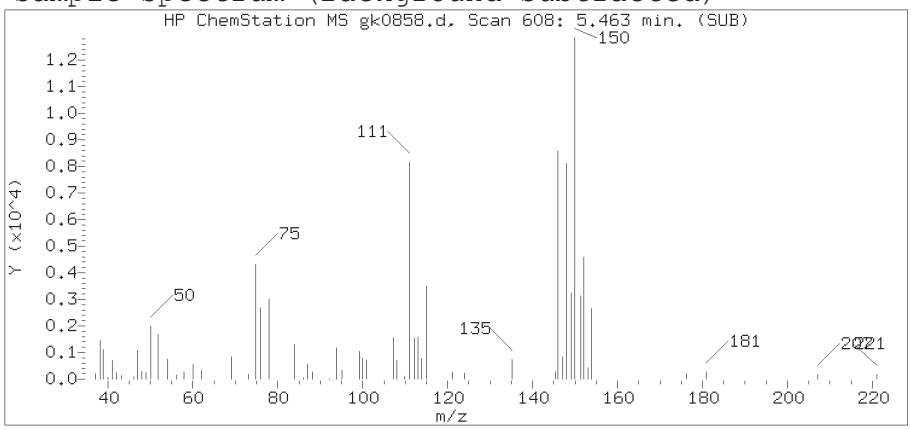
Digitally signed by Kira N. Beck
on 11/20/2018 at 13:44.
Target 3.5 esignature user ID: knb25316

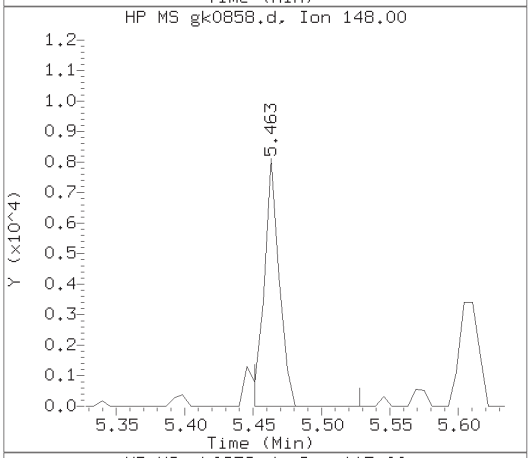
Reference Standard Spectrum for 1,4-Dichlorobenzene



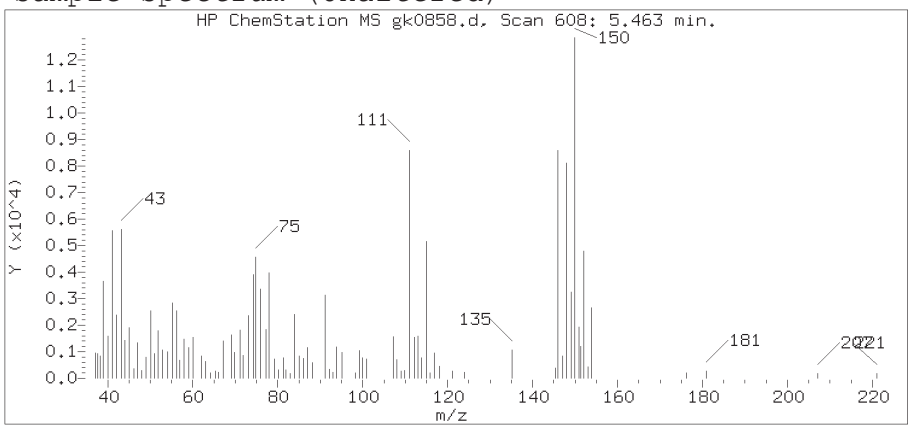


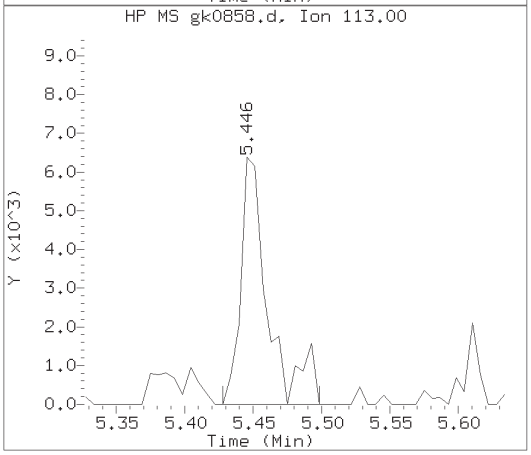
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/18nov16.b/gk0858.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:53 Analyst ID: whs02991

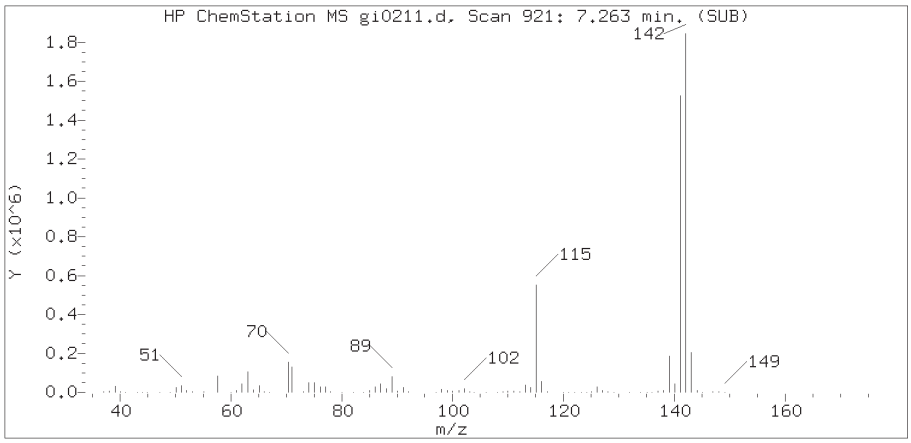
Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 20-Nov-2018 13:43 knb25316

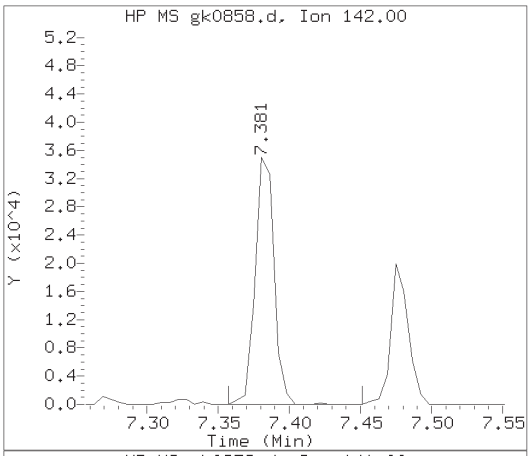
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 26
Compound Name	: 1,4-Dichlorobenzene
Scan Number	: 608
Retention Time (minutes)	: 5.463
Relative Retention Time	: 0.00108
Quant Ion	: 146.00
Area (flag)	: 7522
On-column Amount (ng/ul)	: 0.5043

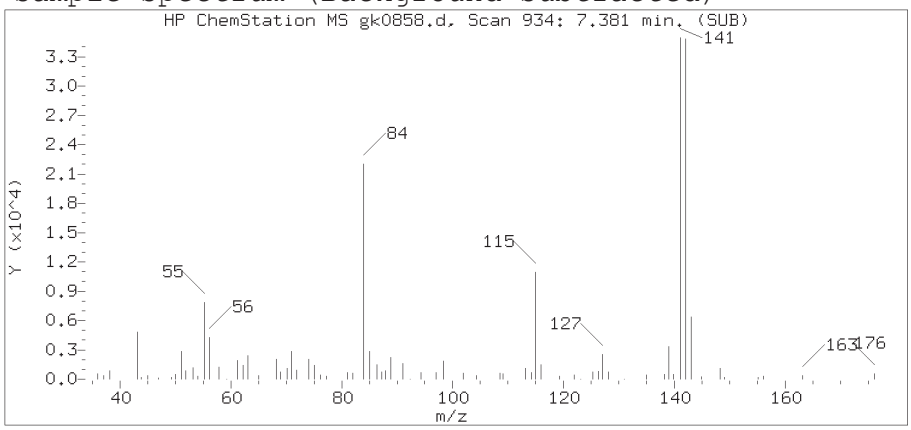
Digitally signed by Kira N. Beck on 11/20/2018 at 13:44.
Target 3.5 esignature user ID: knb25316

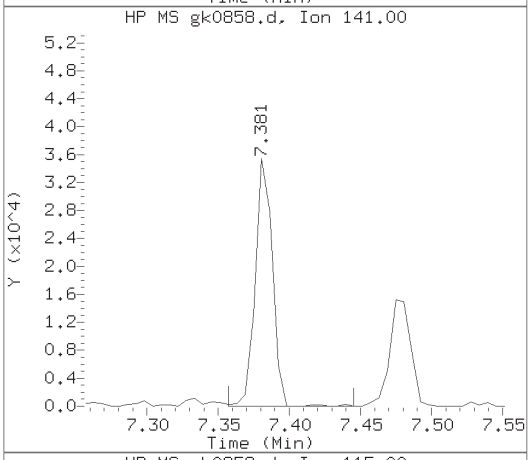
Reference Standard Spectrum for 2-Methylnaphthalene



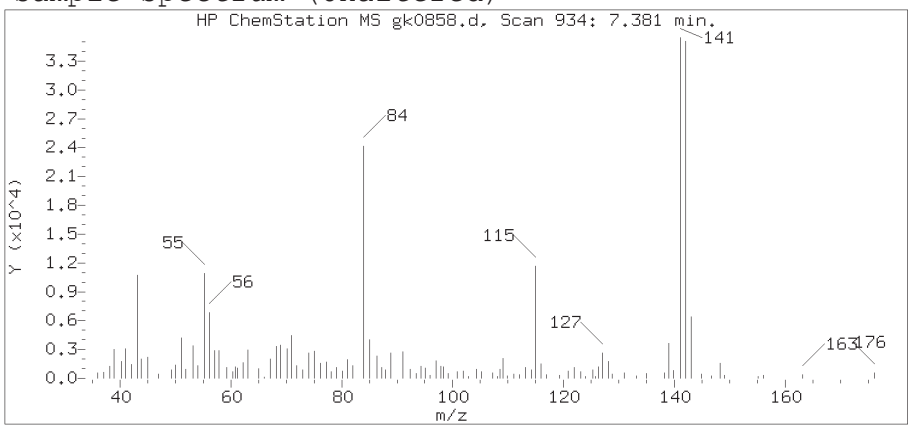


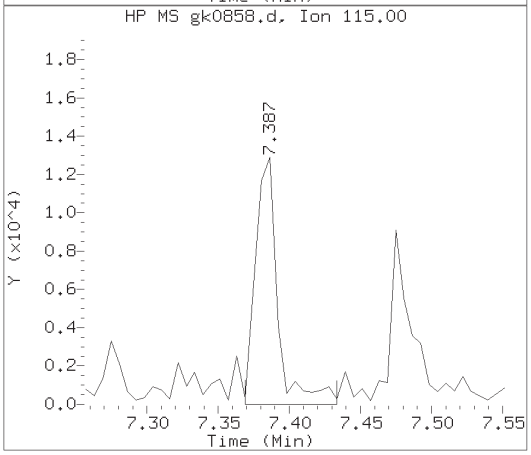
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/18nov16.b/gk0858.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:53 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 20-Nov-2018 13:43 knb25316

Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 83
Compound Name	: 2-Methylnaphthalene
Scan Number	: 934
Retention Time (minutes)	: 7.381
Relative Retention Time	: 0.00088
Quant Ion	: 142.00
Area (flag)	: 32744
On-column Amount (ng/ul)	: 1.0573

Digitally signed by Kira N. Beck on 11/20/2018 at 13:44.
Target 3.5 esignature user ID: knb25316

T1004 Lancaster Laboratories, Inc. 9867766
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP23262.i/18nov11.b/pk0375.d Injection date and time: **12-NOV-2018 01:05**
Data file Sample Info. Line: T1004;9867766;2;0;SAMPLE;;DOD26;T1 Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 13-NOV-2018 11:28
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.16 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.501	(0.000)	590	152	155162	(4)	20.00	
65) Naphthalene-d8	6.737	(-0.006)	800	136	703777	(9)	20.00	
113) Acenaphthene-d10	8.442	(0.000)	1090	164	419729	(10)	20.00	
153) Phenanthrene-d10	9.895	(-0.006)	1337	188	885277	(2)	20.00	
175) Pyrene-d10	11.277	(0.000)	1572	212	763288	(-15)	20.00	
213) Perylene-d12	13.913	(-0.006)	2020	264	604749	(-23)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.231	(-0.002)	112	1976341	166.381	83%		35 - 115
17) Phenol-d6	(1)	5.184	(-0.003)	99	3088828	165.031	83%		47 - 120
44) Nitrobenzene-d5	(2)	6.042	(0.000)	82	1421704	77.919	78%		37 - 122
93) 2-Fluorobiphenyl	(3)	7.795	(0.000)	172	2709451	83.779	84%		44 - 115
135) 2,4,6-Tribromophenol	(3)	9.219	(-0.001)	330	671976	160.092	80%		39 - 132
179) Terphenyl-d14	(5)	11.466	(-0.001)	244	3070790	94.316	94%		54 - 127

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)				Not Detected					2
18) Phenol	(1)				Not Detected					0.7
19) Aniline	(1)				Not Detected					5
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.7
23) 2-Chlorophenol	(1)				Not Detected					0.5
24) 1,3-Dichlorobenzene	(1)				Not Detected					0.5
26) 1,4-Dichlorobenzene	(1)	5.519	(-0.000)	146	6725M	0.564	18.69		J	0.5
27) Benzyl alcohol	(1)				Not Detected					5
28) 1,2-Dichlorobenzene	(1)				Not Detected					0.6
31) 2-Methylphenol	(1)				Not Detected					0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.5
37) 4-Methylphenol	(1)				Not Detected					0.6
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.6
43) Hexachloroethane	(1)				Not Detected					1
45) Nitrobenzene	(2)				Not Detected					0.8
50) Isophorone	(2)				Not Detected					0.5
51) 2-Nitrophenol	(2)				Not Detected					0.5
53) 2,4-Dimethylphenol	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.5
60) 2,4-Dichlorophenol	(2)				Not Detected					0.5
62) 1,2,4-Trichlorobenzene	(2)				Not Detected					0.5
67) 4-Chloroaniline	(2)				Not Detected					1
71) Hexachlorobutadiene	(2)				Not Detected					0.6
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)	7.431	(0.000)	142	17319M	0.631	20.92	12.196	B J	0.3
85) Hexachlorocyclopentadiene	(3)				Not Detected					5
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.6

M = Compound was manually integrated. B = Compound detected in referenced method blank.

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45. Target 3.5 esignature user ID: lmh00956

Data file: /chem/HP23262.i/18nov11.b/pk0375.d Injection date and time: **12-NOV-2018 01:05**
Data file Sample Info. Line: T1004;9867766;2;0;SAMPLE;;DOD26;T1 Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 13-NOV-2018 11:28
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

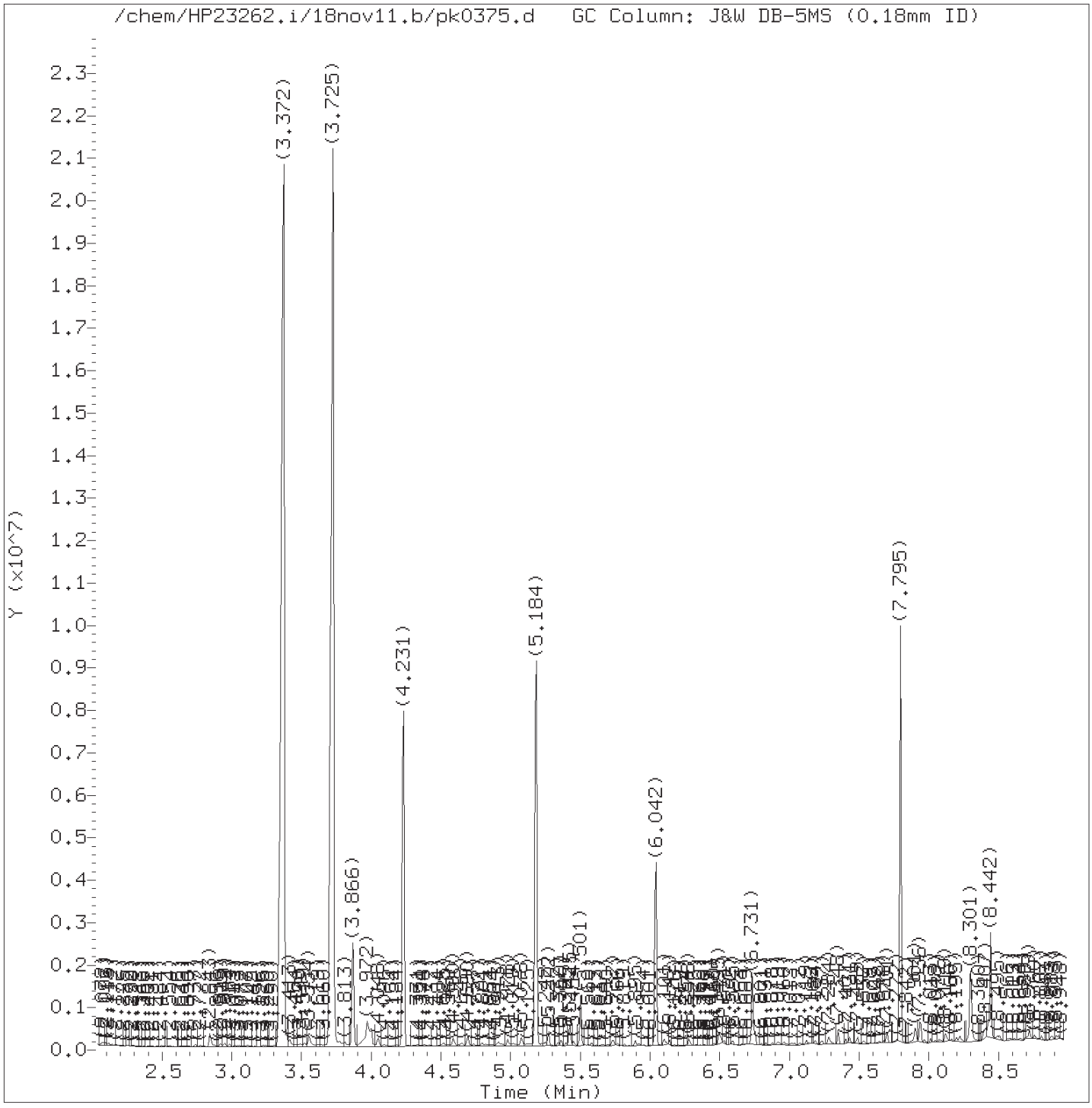
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.16 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.6
96) 2-Chloronaphthalene	(3)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.6
106) Dimethylphthalate	(3)				Not Detected					2
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.6
112) 3-Nitroaniline	(3)				Not Detected					2
115) 2,4-Dinitrophenol	(3)				Not Detected					11
116) 4-Nitrophenol	(3)				Not Detected					5
118) 2,4-Dinitrotoluene	(3)				Not Detected					2
119) Dibenzofuran	(3)				Not Detected					0.5
124) Diethylphthalate	(3)				Not Detected					2
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.5
129) 4-Nitroaniline	(3)				Not Detected					2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					5
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.5
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.6
145) Hexachlorobenzene	(4)				Not Detected					0.1
149) Pentachlorophenol	(4)				Not Detected					1
163) Carbazole	(4)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
205) Di-n-octylphthalate	(6)				Not Detected					2

Total number of targets = 48

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

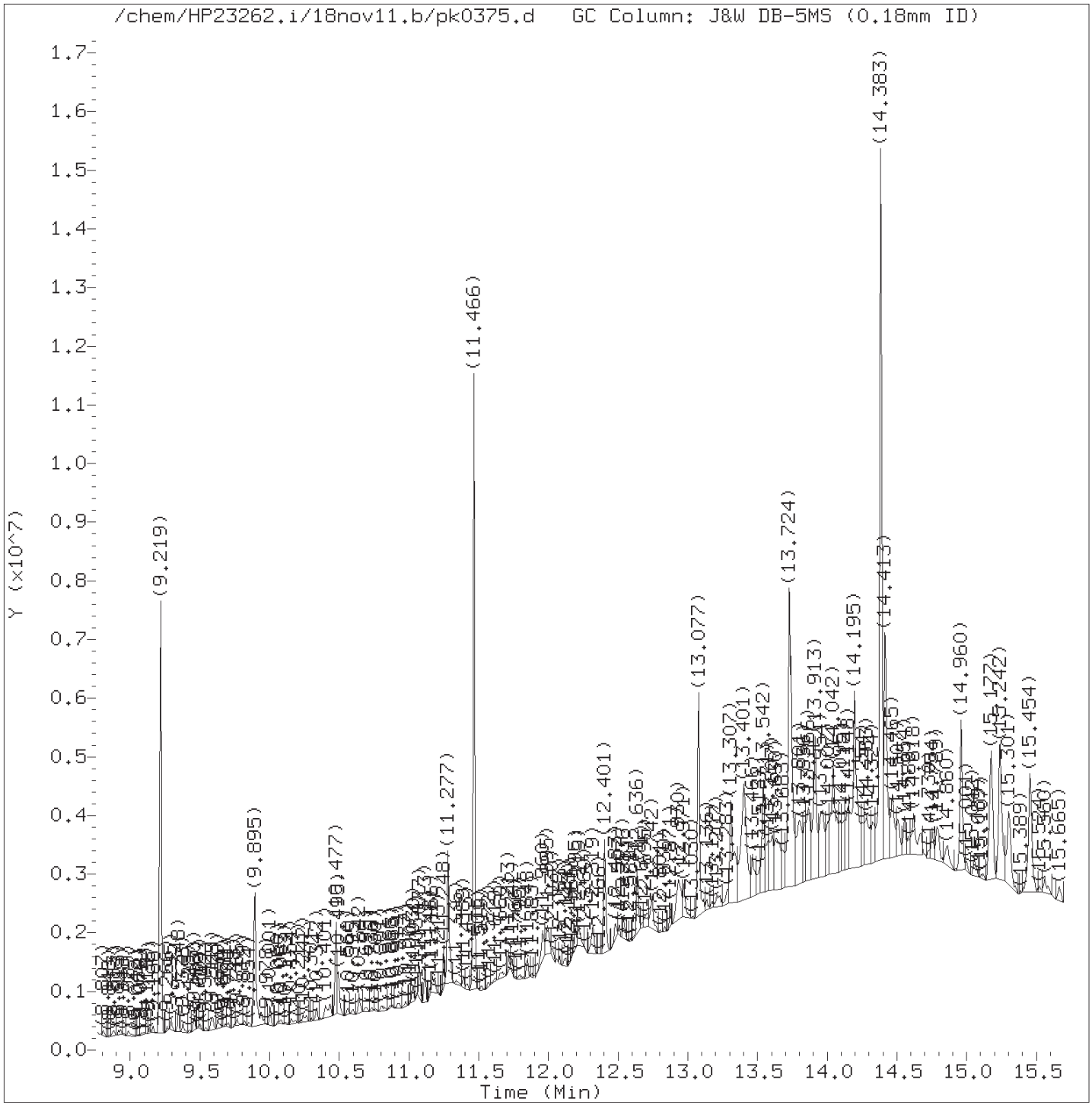
Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0375.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:05 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Sample Name: T1004 Lab Sample ID: 9867766

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0375.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:05 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Sample Name: T1004 Lab Sample ID: 9867766

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0375.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:05 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

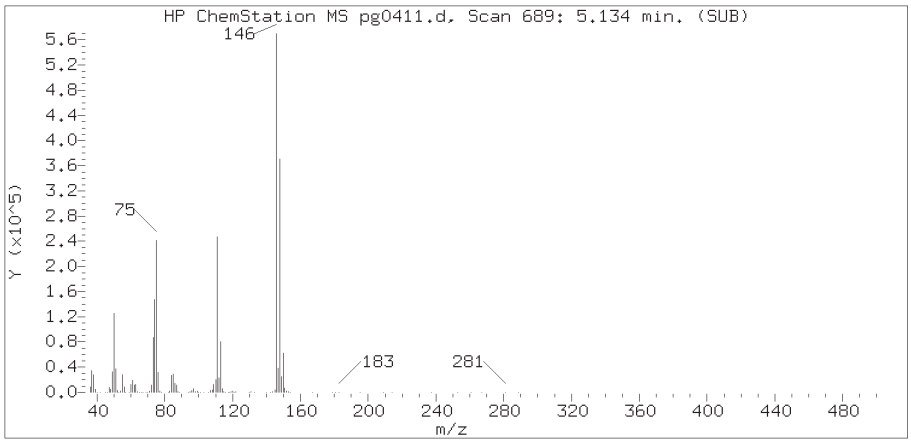
Sample Name: T1004 Lab Sample ID: 9867766

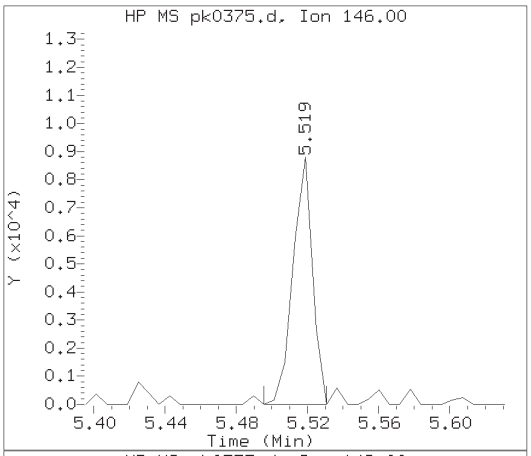
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.231	112	1976341	166.381
17)$Phenol-d6	(1)	5.184	99	3088828	165.031
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	155162	20.000
26) 1,4-Dichlorobenzene	(1)	5.519	146	6725M	0.564
44)$Nitrobenzene-d5	(2)	6.042	82	1421704	77.919
65)*Naphthalene-d8	(2)	6.737	136	703777	20.000
83) 2-Methylnaphthalene	(2)	7.431	142	17319M	0.631
93)$2-Fluorobiphenyl	(3)	7.795	172	2709451	83.779
113)*Acenaphthene-d10	(3)	8.442	164	419729	20.000
135)$2,4,6-Tribromophenol	(3)	9.219	330	671976	160.092
153)*Phenanthrene-d10	(4)	9.895	188	885277	20.000
175)*Pyrene-d10	(5)	11.277	212	763288	20.000
179)$Terphenyl-d14	(5)	11.466	244	3070790	94.316
213)*Perylene-d12	(6)	13.913	264	604749	20.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

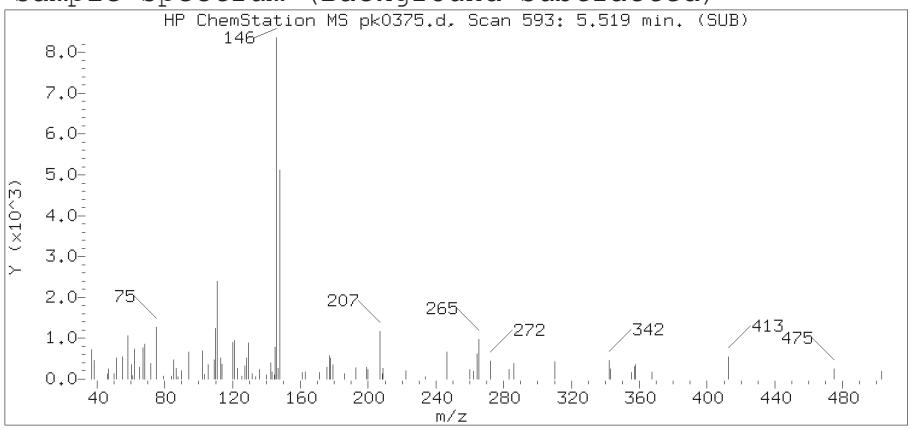
Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956

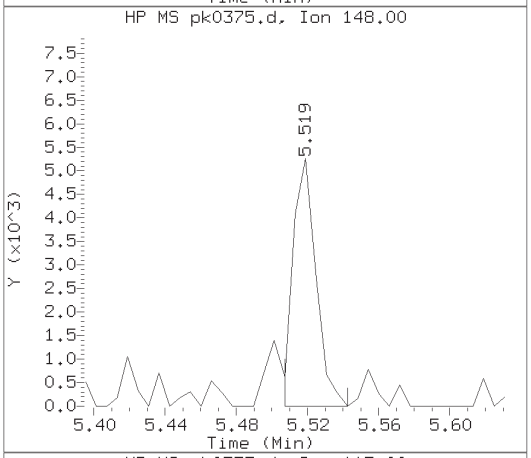
Reference Standard Spectrum for 1,4-Dichlorobenzene



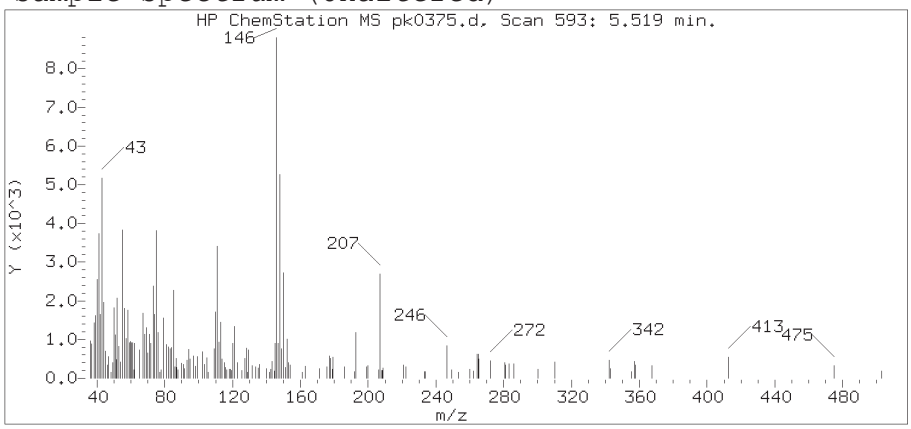


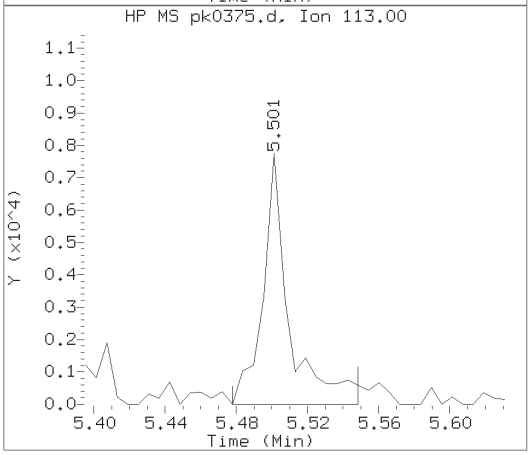
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23262.i/18nov11.b/pk0375.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:05 Analyst ID: apb10206

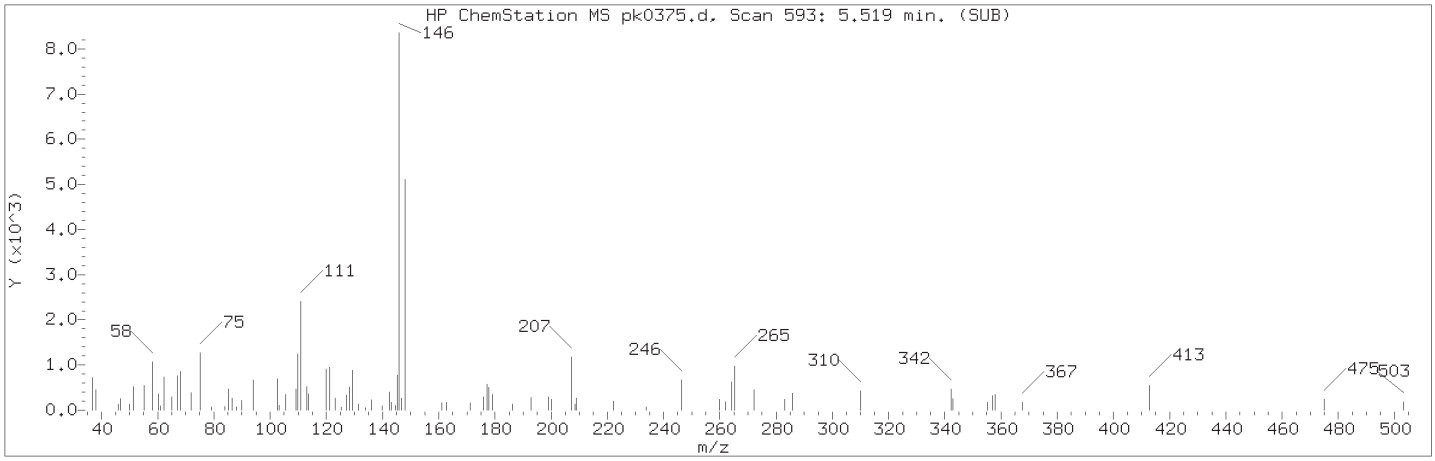
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Sample Name: T1004 Lab Sample ID: 9867766

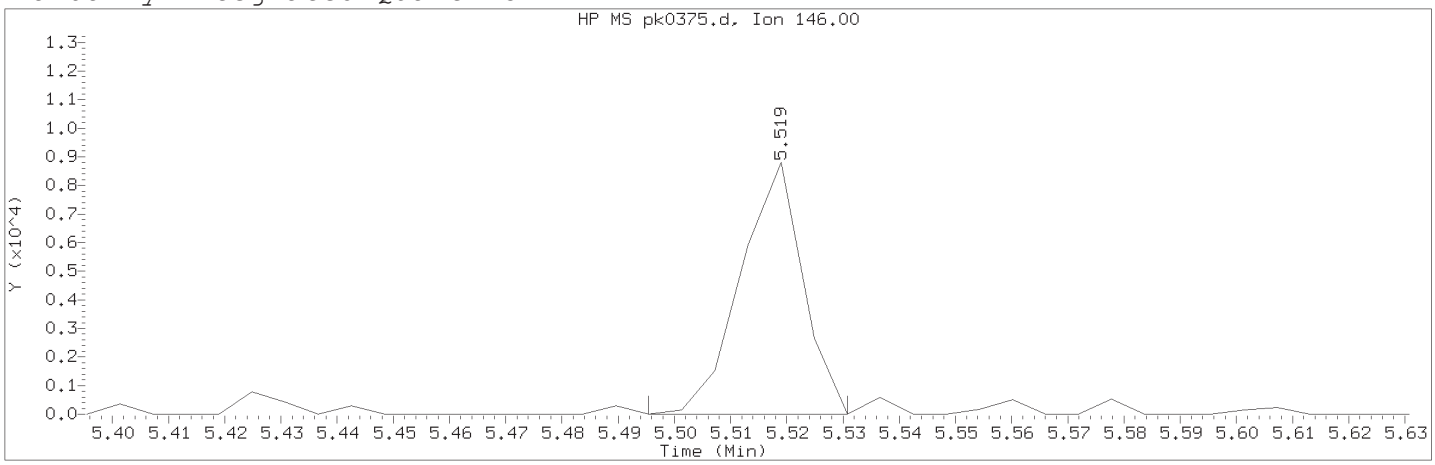
Compound Number	: 26
Compound Name	: 1,4-Dichlorobenzene
Scan Number	: 593
Retention Time (minutes)	: 5.519
Relative Retention Time	:-0.00000
Quant Ion	: 146.00
Area (flag)	: 6725M
On-column Amount (ng/ul)	: 0.5638

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0375.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:05 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Sample Name: T1004 Lab Sample ID: 9867766

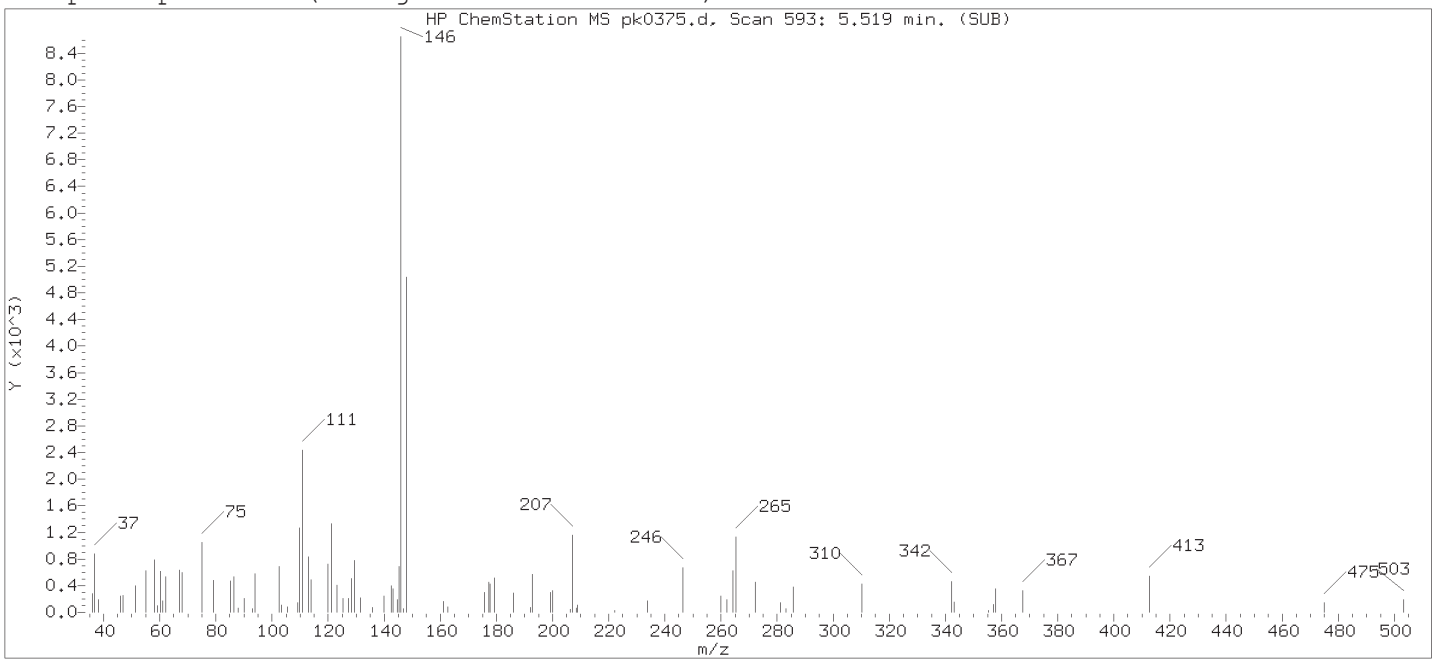
Compound Number : 26
Compound Name : 1,4-Dichlorobenzene
Scan Number : 593
Retention Time (minutes) : 5.519
Quant Ion : 146.00
Area (flag) : 6725M
On-column Amount (ng/ul) : 0.5638
Integration start scan : 588 Integration stop scan: 594
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

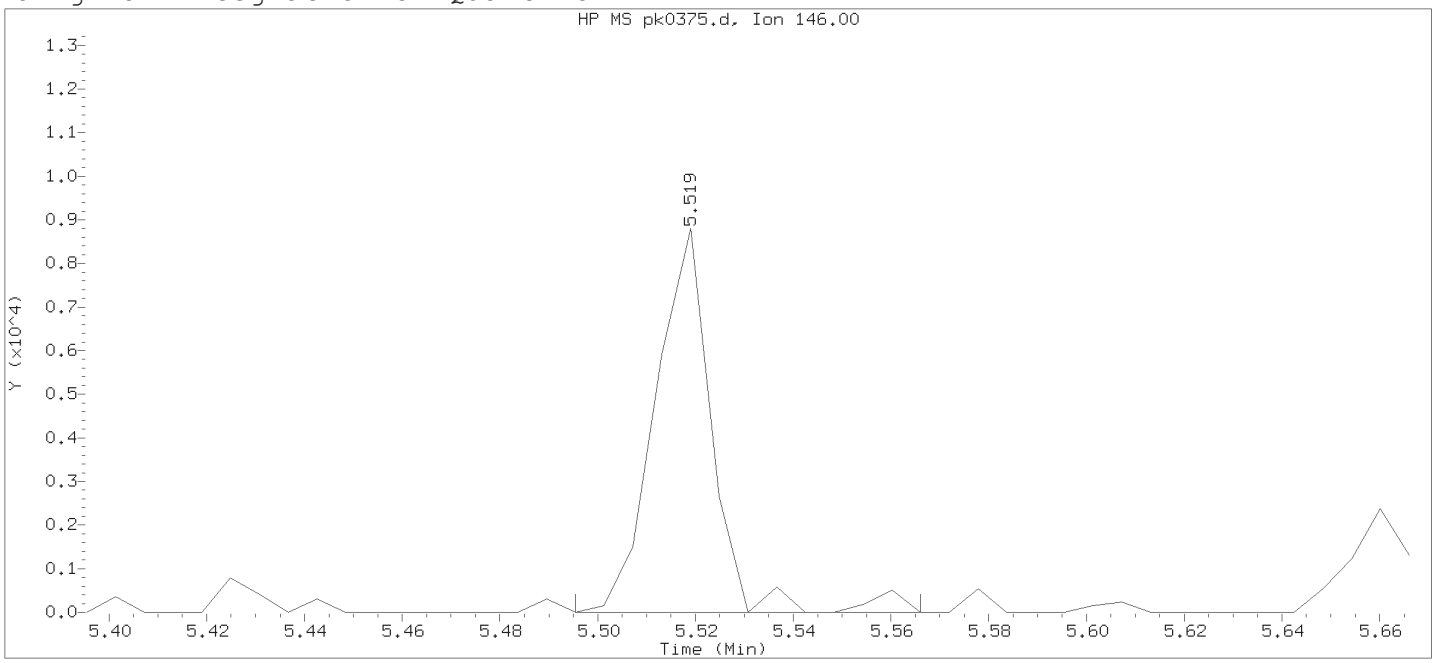
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0375.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:05 Analyst ID: apb10206

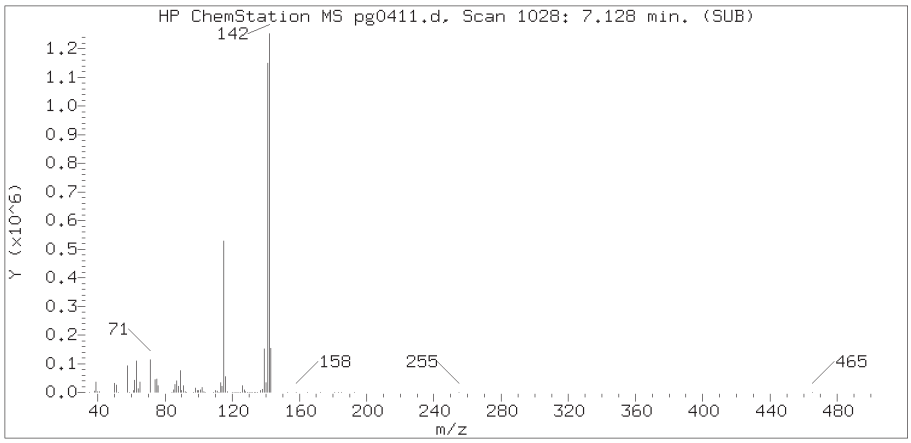
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:34
Date, time and analyst ID of latest file update: 12-Nov-2018 01:26 Automation

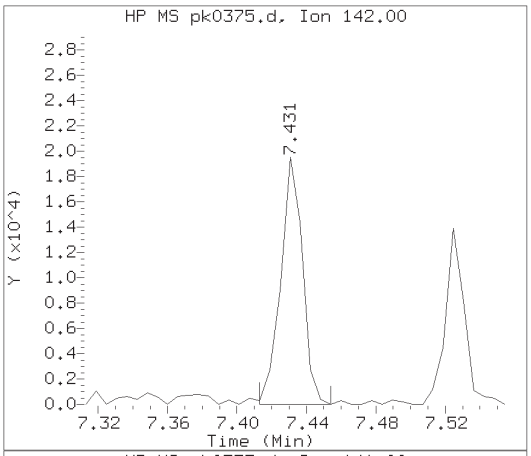
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 26		
Compound Name	: 1,4-Dichlorobenzene		
Scan Number	: 593		
Retention Time (minutes)	: 5.519		
Quant Ion	: 146.00		
Area	: 7174		
On-column Amount (ng/ul)	: 0.6315		
Integration start scan	: 588	Integration stop scan:	600
Y at integration start	: 0	Y at integration end:	0

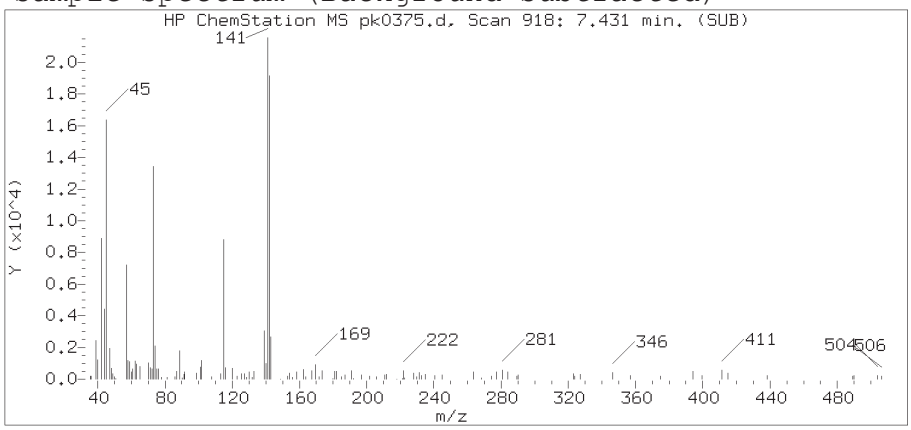
Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature used: D10 Page 1220

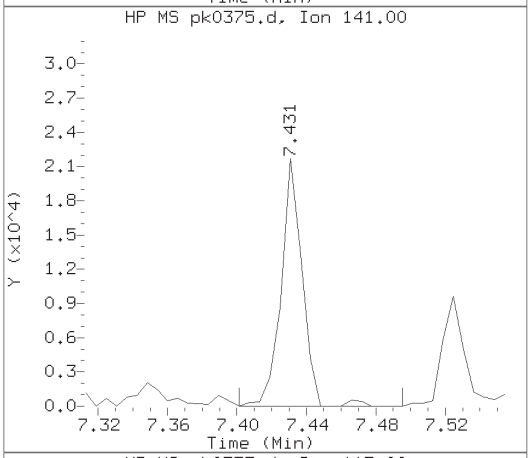
Reference Standard Spectrum for 2-Methylnaphthalene



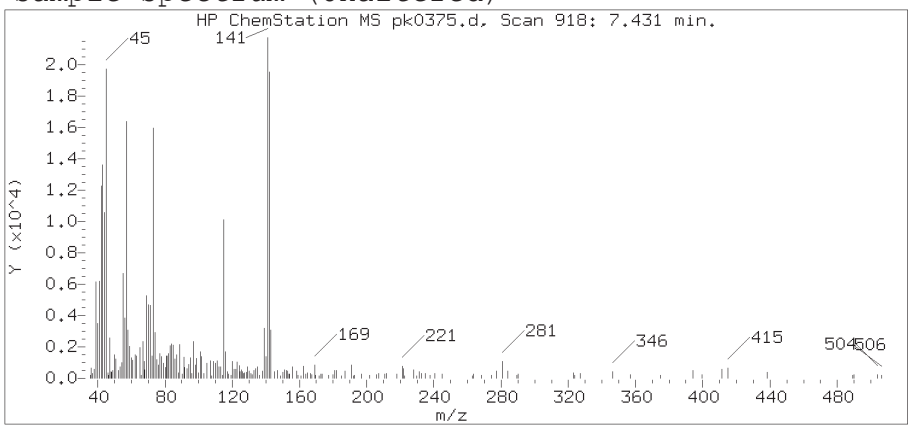


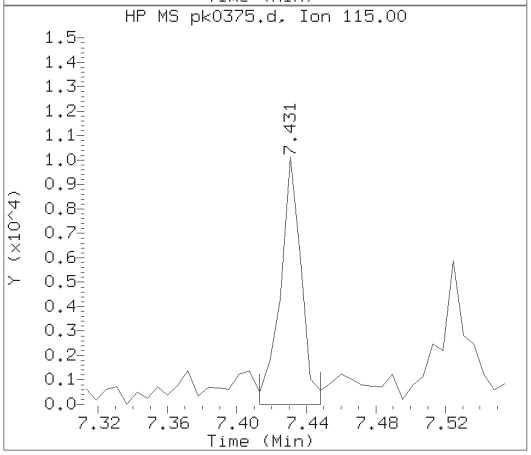
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23262.i/18nov11.b/pk0375.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:05 Analyst ID: apb10206

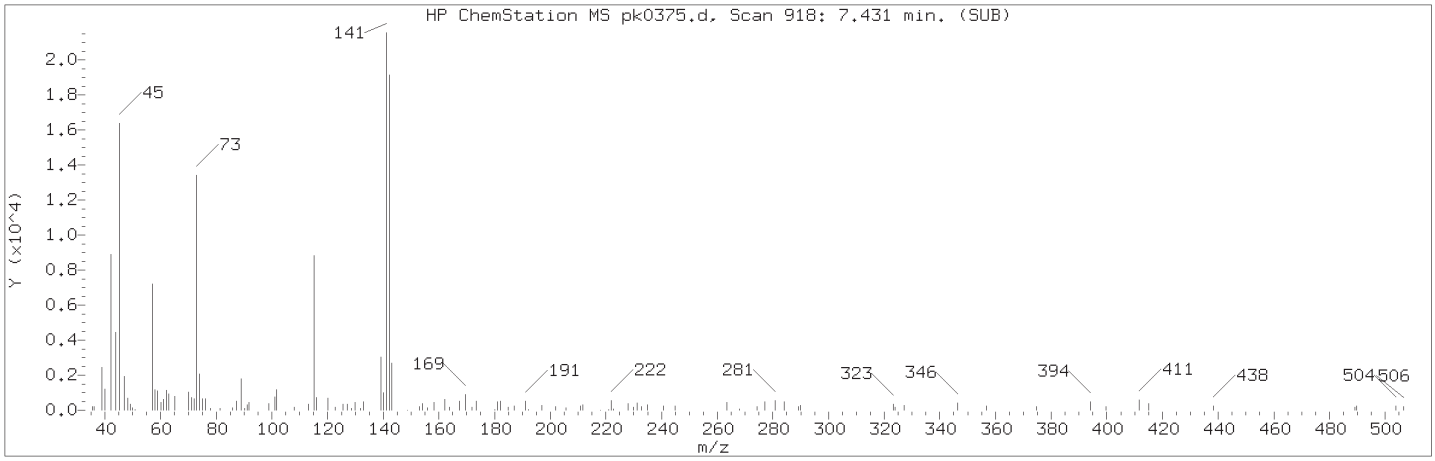
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Sample Name: T1004 Lab Sample ID: 9867766

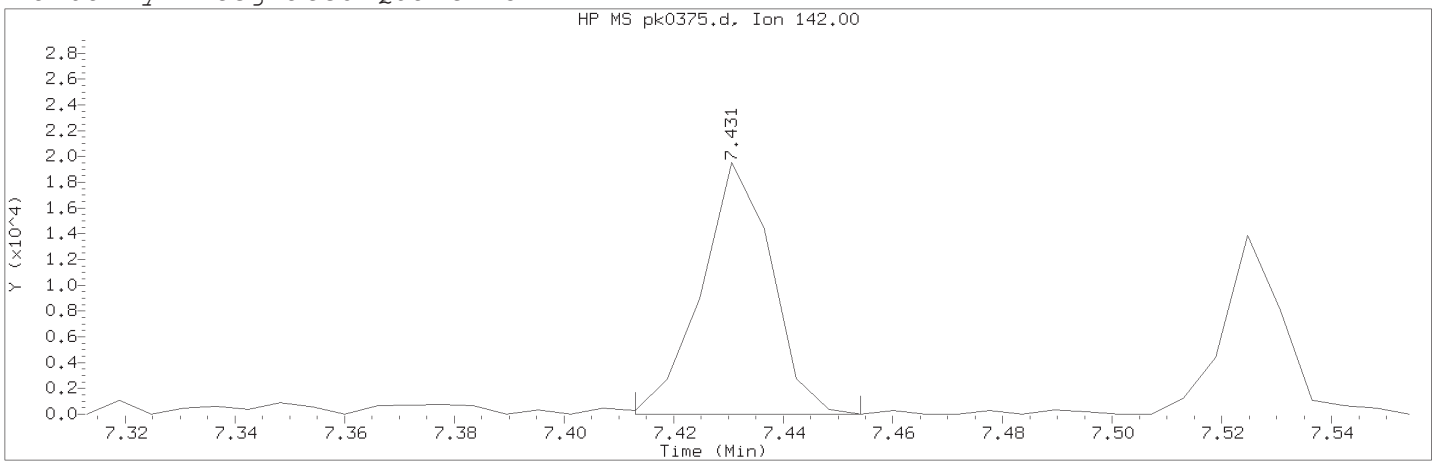
Compound Number	: 83
Compound Name	: 2-Methylnaphthalene
Scan Number	: 918
Retention Time (minutes)	: 7.431
Relative Retention Time	: 0.00096
Quant Ion	: 142.00
Area (flag)	: 17319M
On-column Amount (ng/ul)	: 0.6309

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0375.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:05 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Sample Name: T1004 Lab Sample ID: 9867766

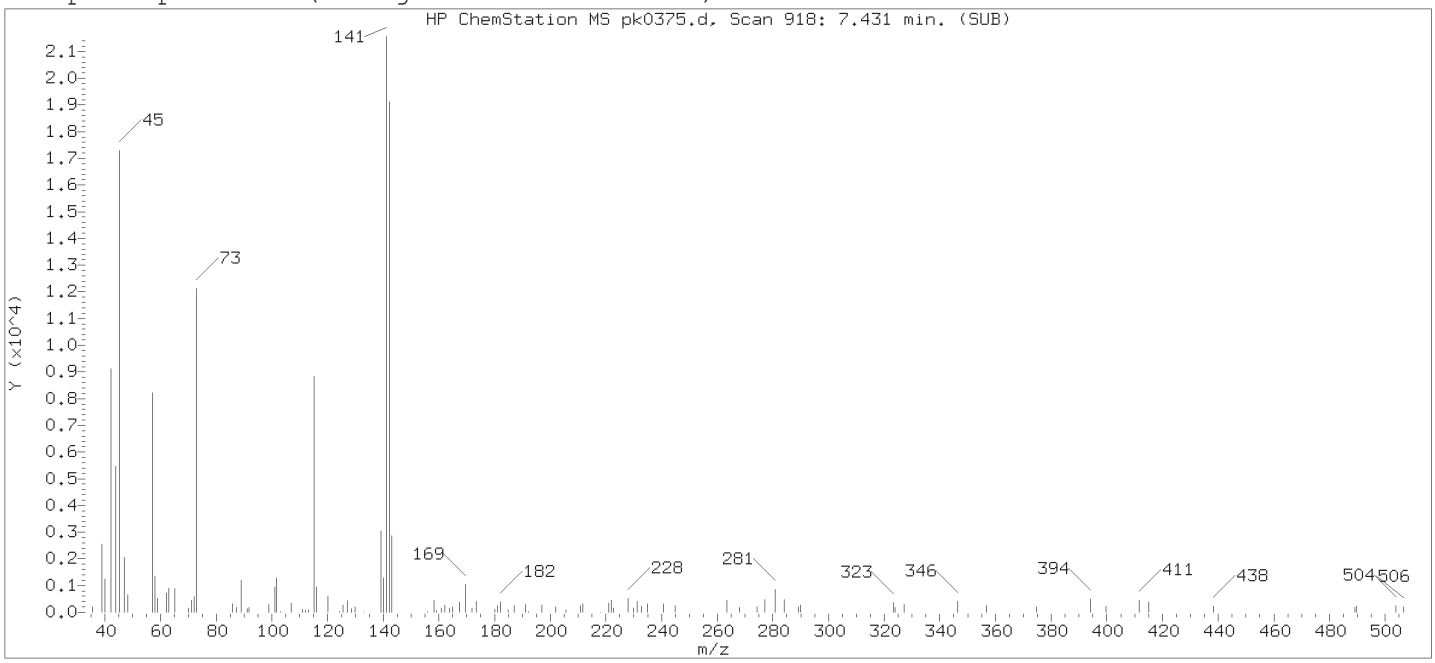
Compound Number	: 83		
Compound Name	: 2-Methylnaphthalene		
Scan Number	: 918		
Retention Time (minutes)	: 7.431		
Quant Ion	: 142.00		
Area (flag)	: 17319M		
On-column Amount (ng/ul)	: 0.6309		
Integration start scan	: 914	Integration stop scan:	921
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

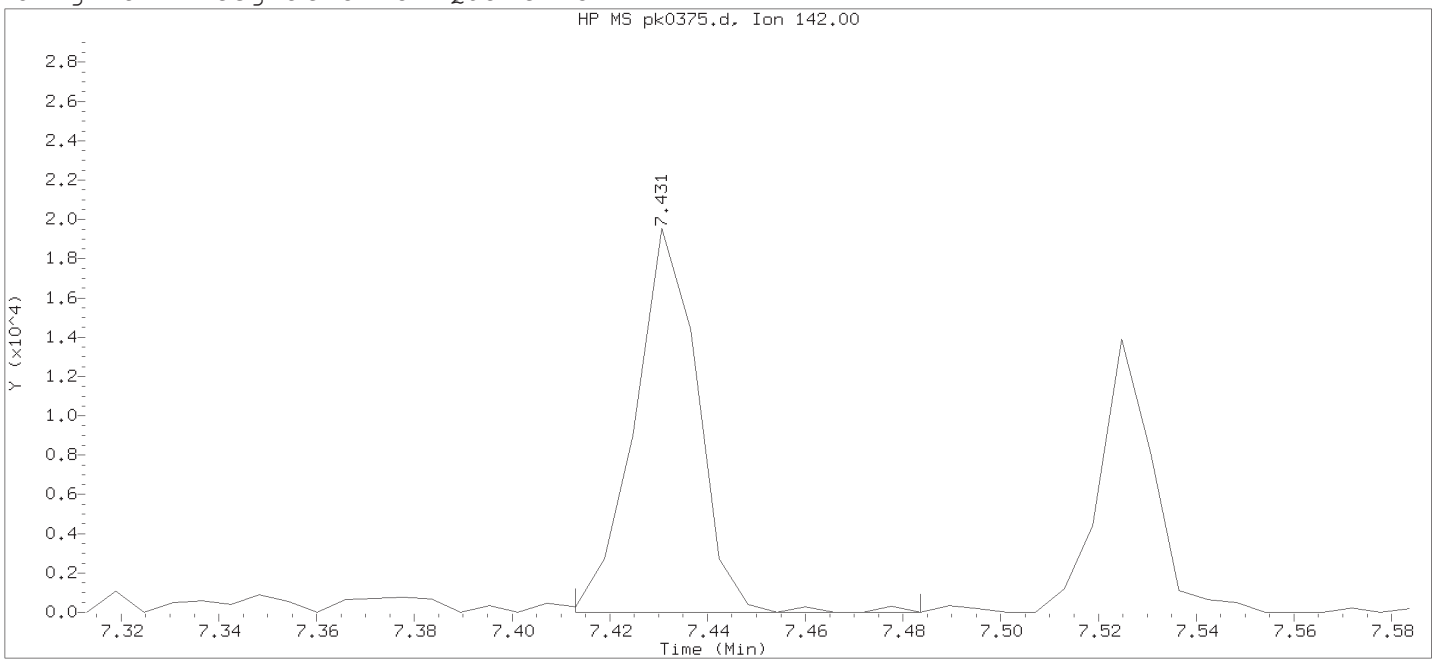
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0375.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:05 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:34
Date, time and analyst ID of latest file update: 12-Nov-2018 01:26 Automation

Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	:	83
Compound Name	:	2-Methylnaphthalene
Scan Number	:	918
Retention Time (minutes)	:	7.431
Quant Ion	:	142.00
Area	:	17479
On-column Amount (ng/ul)	:	0.6686
Integration start scan	:	914
Integration stop scan	:	926
Y at integration start	:	0
Y at integration end	:	0

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: 1010 [illegible]

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP11165.i/18nov16.b/gk0859.d Injection date and time: **16-NOV-2018 17:17**
Data file Sample Info. Line: T1004RE;9867766RE;2;0;SAMPLE;;DOD26;T2 Instrument ID: **HP11165.i** Batch: **18317SLB**
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Blank Data file reference: **/chem/HP11165.i/18nov16.b/gk0854.d**

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 19-NOV-2018 19:11
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/18nov16.b/gk0851.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.2 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.451	(0.000)	606	152	193131	(28)	20.00	
65) Naphthalene-d8	6.687	(0.000)	816	136	834468	(25)	20.00	
113) Acenaphthene-d10	8.398	(0.000)	1107	164	468348	(16)	20.00	
153) Phenanthrene-d10	9.851	(0.000)	1354	188	908503	(11)	20.00	
175) Pyrene-d10	11.239	(0.000)	1590	212	736933	(-6)	20.00	
213) Perylene-d12	13.880	(-0.006)	2039	264	615752	(-6)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.204	(-0.001)	112	2293340	156.562	78%		35 - 115
17) Phenol-d6	(1)	5.163	(0.000)	99	3394371	149.646	75%		47 - 120
44) Nitrobenzene-d5	(2)	5.992	(0.000)	82	1590031	72.322	72%		37 - 122
93) 2-Fluorobiphenyl	(3)	7.751	(0.000)	172	2893938	76.342	76%		44 - 115
135) 2,4,6-Tribromophenol	(3)	9.181	(0.000)	330	694483	185.140	93%		39 - 132
179) Terphenyl-d14	(5)	11.433	(0.000)	244	2831183	79.448	79%		54 - 127

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)				Not Detected					2
18) Phenol	(1)				Not Detected					0.7
19) Aniline	(1)				Not Detected					5
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.7
23) 2-Chlorophenol	(1)				Not Detected					0.5
24) 1,3-Dichlorobenzene	(1)				Not Detected					0.5
26) 1,4-Dichlorobenzene	(1)				Not Detected					0.5
27) Benzyl alcohol	(1)				Not Detected					5
28) 1,2-Dichlorobenzene	(1)				Not Detected					0.6
31) 2-Methylphenol	(1)				Not Detected					0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.5
37) 4-Methylphenol	(1)				Not Detected					0.6
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.6
43) Hexachloroethane	(1)				Not Detected					1
45) Nitrobenzene	(2)				Not Detected					0.8
50) Isophorone	(2)				Not Detected					0.5
51) 2-Nitrophenol	(2)				Not Detected					0.5
53) 2,4-Dimethylphenol	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.5
60) 2,4-Dichlorophenol	(2)				Not Detected					0.5
62) 1,2,4-Trichlorobenzene	(2)				Not Detected					0.5
67) 4-Chloroaniline	(2)				Not Detected					1
71) Hexachlorobutadiene	(2)				Not Detected					0.6
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)	7.381	(0.000)	142	21110	0.632	20.91		J	0.3
85) Hexachlorocyclopentadiene	(3)				Not Detected					5
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.6

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14. Target 3.5 esignature user ID: bkc25363

Data file: /chem/HP11165.i/18nov16.b/gk0859.d Injection date and time: **16-NOV-2018 17:17**
Data file Sample Info. Line: T1004RE;9867766RE;2;0;SAMPLE;;DOD26;T2 Instrument ID: **HP11165.i** Batch: **18317SLB**
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Blank Data file reference: **/chem/HP11165.i/18nov16.b/gk0854.d**

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 19-NOV-2018 19:11
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/18nov16.b/gk0851.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

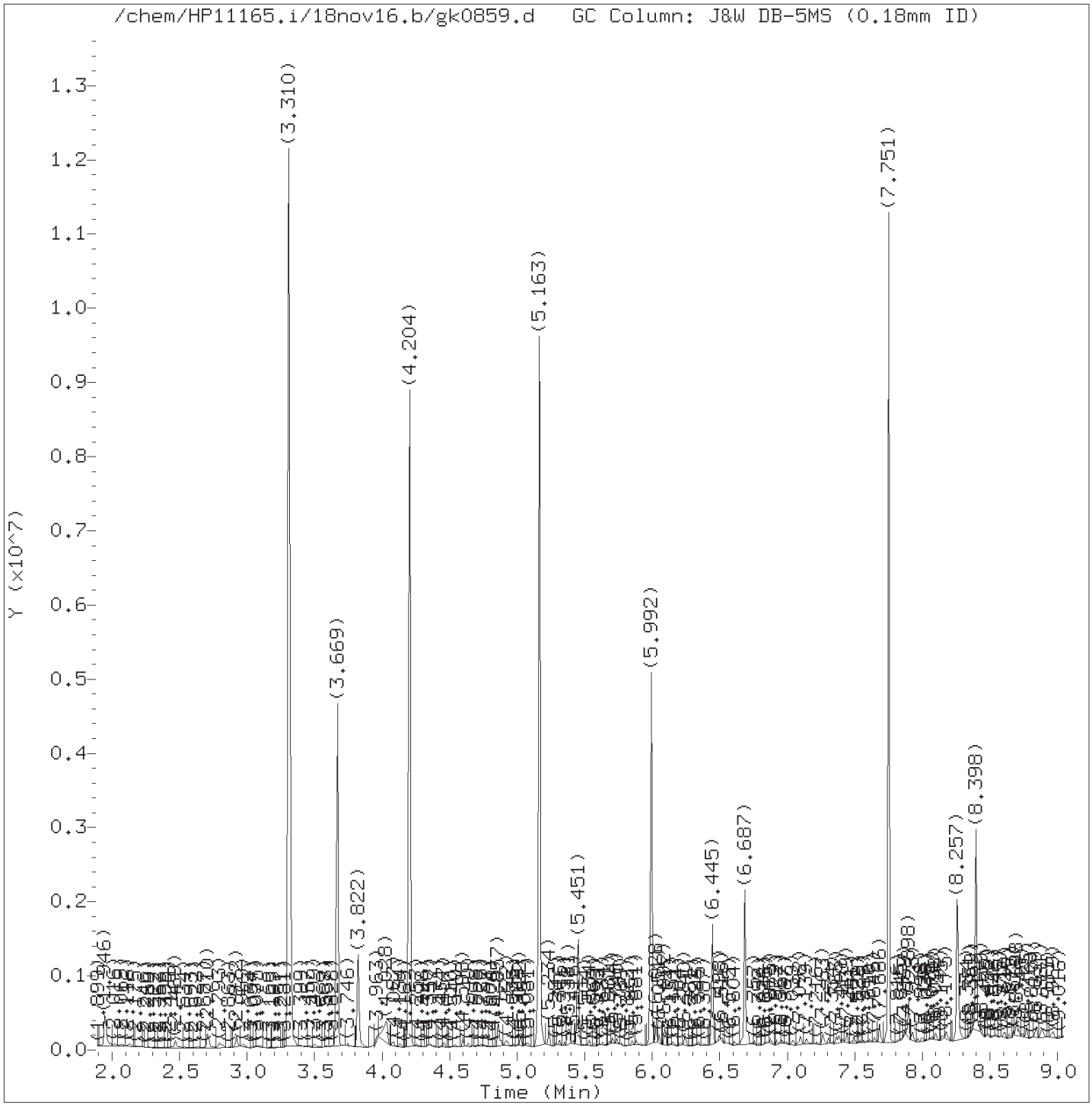
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.2 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.6
96) 2-Chloronaphthalene	(3)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.6
106) Dimethylphthalate	(3)				Not Detected					2
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.6
112) 3-Nitroaniline	(3)				Not Detected					2
115) 2,4-Dinitrophenol	(3)				Not Detected					11
116) 4-Nitrophenol	(3)				Not Detected					5
118) 2,4-Dinitrotoluene	(3)				Not Detected					2
119) Dibenzofuran	(3)				Not Detected					0.5
124) Diethylphthalate	(3)				Not Detected					2
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.5
129) 4-Nitroaniline	(3)				Not Detected					2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					5
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.5
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.6
145) Hexachlorobenzene	(4)				Not Detected					0.1
149) Pentachlorophenol	(4)				Not Detected					1
163) Carbazole	(4)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
205) Di-n-octylphthalate	(6)				Not Detected					2

Total number of targets = 48

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Chad A. Moline on 11/20/2018 at 12:59. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

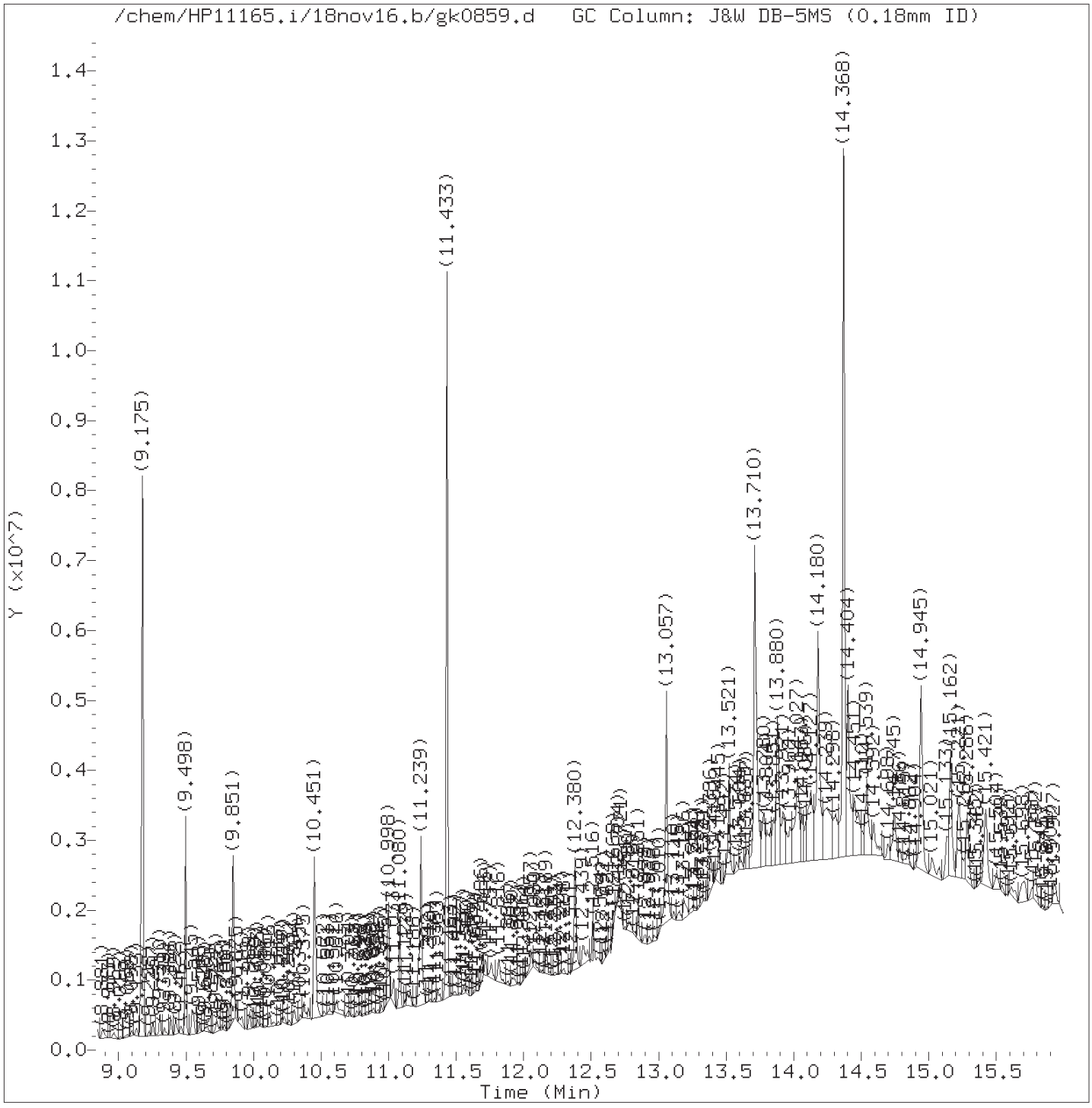
Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0859.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 17:17 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: T1004RE Lab Sample ID: 9867766RE

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0859.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 17:17 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: T1004RE Lab Sample ID: 9867766RE

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0859.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 17:17 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

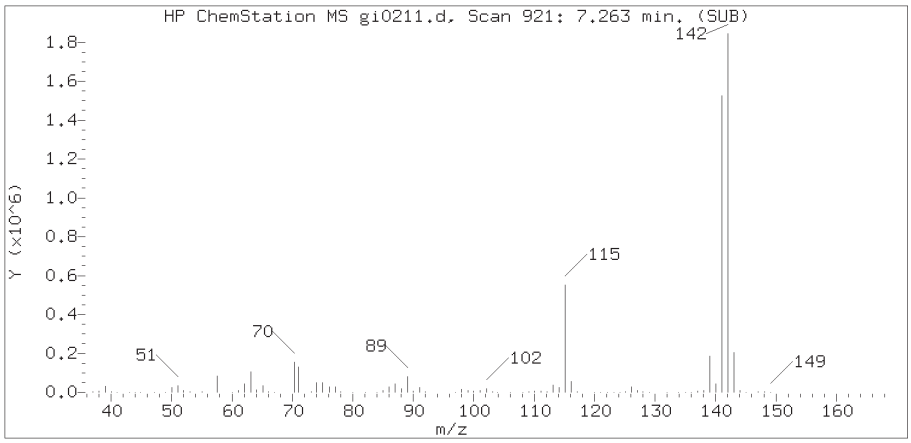
Sample Name: T1004RE Lab Sample ID: 9867766RE

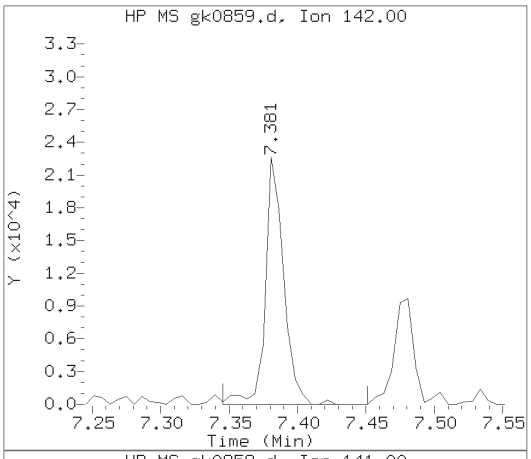
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.204	112	2293340	156.562
17)$Phenol-d6	(1)	5.163	99	3394371	149.646
25)*1,4-Dichlorobenzene-d4	(1)	5.451	152	193131	20.000
44)$Nitrobenzene-d5	(2)	5.992	82	1590031	72.322
65)*Naphthalene-d8	(2)	6.687	136	834468	20.000
83) 2-Methylnaphthalene	(2)	7.381	142	21110	0.632
93)$2-Fluorobiphenyl	(3)	7.751	172	2893938	76.342
113)*Acenaphthene-d10	(3)	8.398	164	468348	20.000
135)$2,4,6-Tribromophenol	(3)	9.181	330	694483	185.140
153)*Phenanthrene-d10	(4)	9.851	188	908503	20.000
175)*Pyrene-d10	(5)	11.239	212	736933	20.000
179)$Terphenyl-d14	(5)	11.433	244	2831183	79.448
213)*Perylene-d12	(6)	13.880	264	615752	20.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

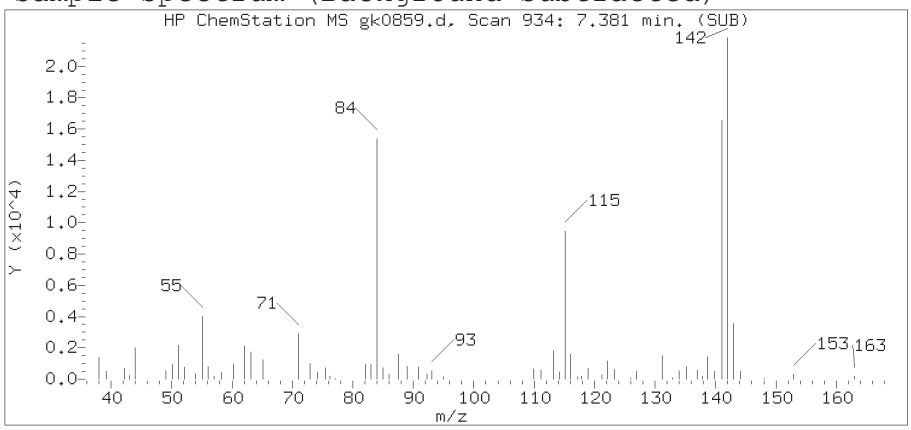
Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

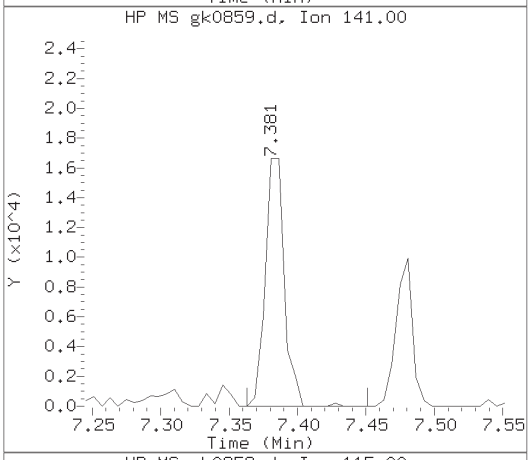
Reference Standard Spectrum for 2-Methylnaphthalene



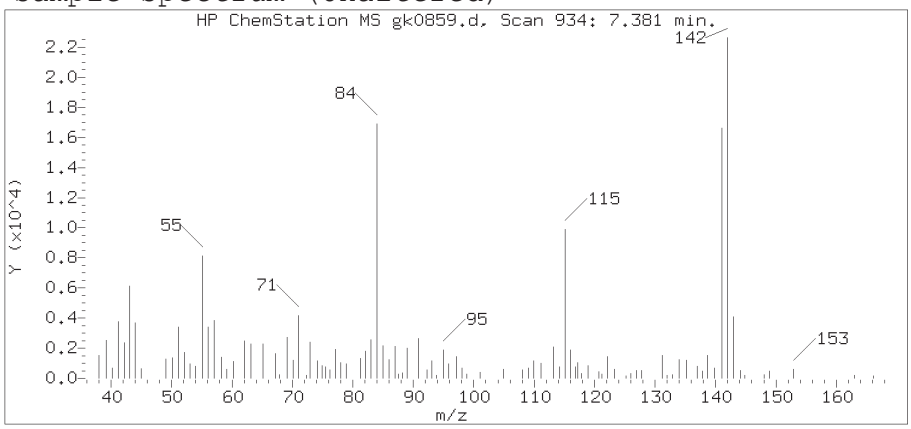


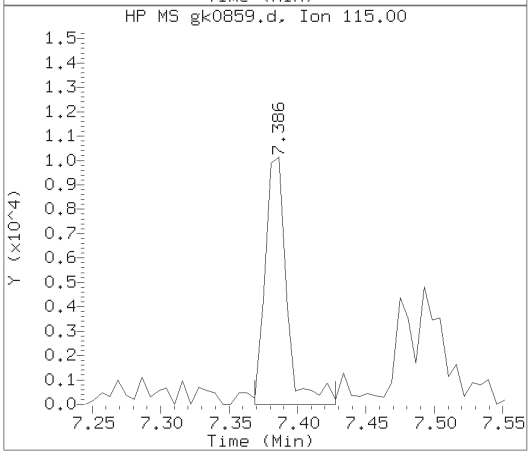
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/18nov16.b/gk0859.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 17:17 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 83
Compound Name	: 2-Methylnaphthalene
Scan Number	: 934
Retention Time (minutes)	: 7.381
Relative Retention Time	: 0.00088
Quant Ion	: 142.00
Area (flag)	: 21110
On-column Amount (ng/ul)	: 0.6316

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

T1005 Lancaster Laboratories, Inc. 9867767
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP23262.i/18nov11.b/pk0376.d Injection date and time: **12-NOV-2018 01:28**
Data file Sample Info. Line: T1005;9867767;2;0;SAMPLE;;DOD26;T1 Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 13-NOV-2018 11:28
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.39 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.501	(0.000)	590	152	154837	(4)	20.00	
65) Naphthalene-d8	6.736	(-0.006)	800	136	660821	(2)	20.00	
113) Acenaphthene-d10	8.442	(0.000)	1090	164	377399	(-1)	20.00	
153) Phenanthrene-d10	9.895	(-0.006)	1337	188	803266	(-7)	20.00	
175) Pyrene-d10	11.283	(-0.006)	1573	212	706851	(-21)	20.00	
213) Perylene-d12	13.924	(-0.018)	2022	264	605216	(-23)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.231	(-0.002)	112	1149630	96.986	48%		35 - 115
17) Phenol-d6	(1)	5.184	(-0.003)	99	1769542	94.742	47%		47 - 120
44) Nitrobenzene-d5	(2)	6.042	(0.000)	82	877263	51.206	51%		37 - 122
93) 2-Fluorobiphenyl	(3)	7.795	(0.000)	172	1597661	54.942	55%		44 - 115
135) 2,4,6-Tribromophenol	(3)	9.219	(-0.001)	330	375054	99.375	50%		39 - 132
179) Terphenyl-d14	(5)	11.471	(-0.001)	244	1731543	57.429	57%		54 - 127

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)				Not Detected					2
18) Phenol	(1)				Not Detected					0.7
19) Aniline	(1)				Not Detected					5
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.7
23) 2-Chlorophenol	(1)				Not Detected					0.5
24) 1,3-Dichlorobenzene	(1)				Not Detected					0.5
26) 1,4-Dichlorobenzene	(1)	5.519	(-0.000)	146	9342M	0.785	25.82		J	0.5
27) Benzyl alcohol	(1)				Not Detected					5
28) 1,2-Dichlorobenzene	(1)				Not Detected					0.6
31) 2-Methylphenol	(1)				Not Detected					0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.5
37) 4-Methylphenol	(1)				Not Detected					0.6
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.6
43) Hexachloroethane	(1)				Not Detected					1
45) Nitrobenzene	(2)				Not Detected					0.8
50) Isophorone	(2)				Not Detected					0.5
51) 2-Nitrophenol	(2)				Not Detected					0.5
53) 2,4-Dimethylphenol	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.5
60) 2,4-Dichlorophenol	(2)				Not Detected					0.5
62) 1,2,4-Trichlorobenzene	(2)				Not Detected					0.5
67) 4-Chloroaniline	(2)	6.825	(-0.000)	127	40945MA	2.698	88.77		J	1
71) Hexachlorobutadiene	(2)				Not Detected					0.6
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)	7.430	(0.000)	142	12319M	0.478	15.73	12.196	B J	0.3

M = Compound was manually integrated. A = User selected an alternate peak. B = Compound detected in referenced method blank.

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45. Target 3.5 esignature user ID: lmh00956

Data file: /chem/HP23262.i/18nov11.b/pk0376.d Injection date and time: **12-NOV-2018 01:28**
Data file Sample Info. Line: T1005;9867767;2;0;SAMPLE;;DOD26;T1 Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 13-NOV-2018 11:28
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

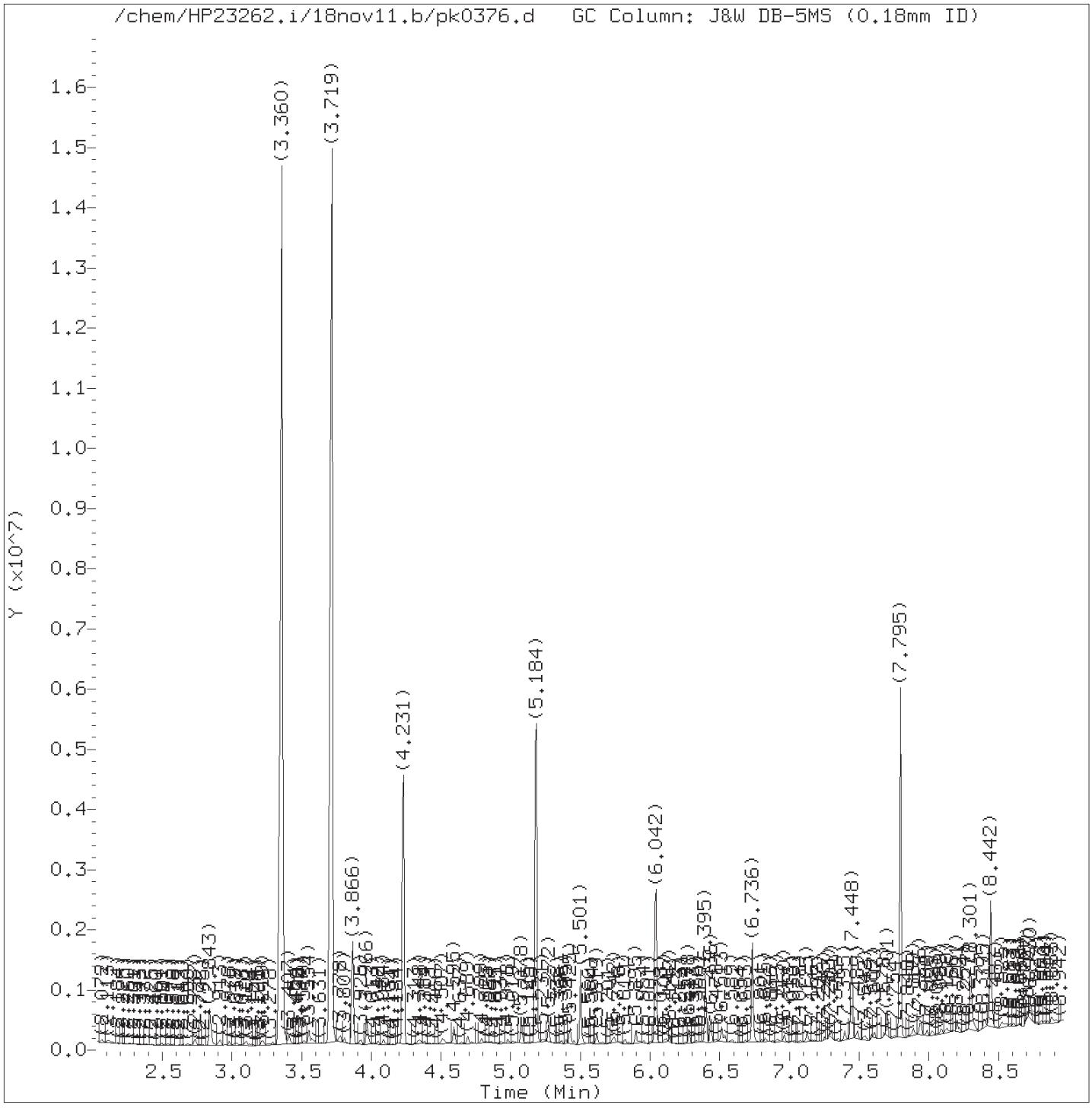
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.39 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
85) Hexachlorocyclopentadiene	(3)				Not Detected					5
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.6
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.6
96) 2-Chloronaphthalene	(3)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.6
106) Dimethylphthalate	(3)				Not Detected					2
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.6
112) 3-Nitroaniline	(3)				Not Detected					2
115) 2,4-Dinitrophenol	(3)				Not Detected					11
116) 4-Nitrophenol	(3)				Not Detected					5
118) 2,4-Dinitrotoluene	(3)				Not Detected					2
119) Dibenzofuran	(3)				Not Detected					0.5
124) Diethylphthalate	(3)				Not Detected					2
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.5
129) 4-Nitroaniline	(3)				Not Detected					2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					5
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.5
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.6
145) Hexachlorobenzene	(4)				Not Detected					0.1
149) Pentachlorophenol	(4)				Not Detected					1
163) Carbazole	(4)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
205) Di-n-octylphthalate	(6)				Not Detected					2

Total number of targets = 48

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

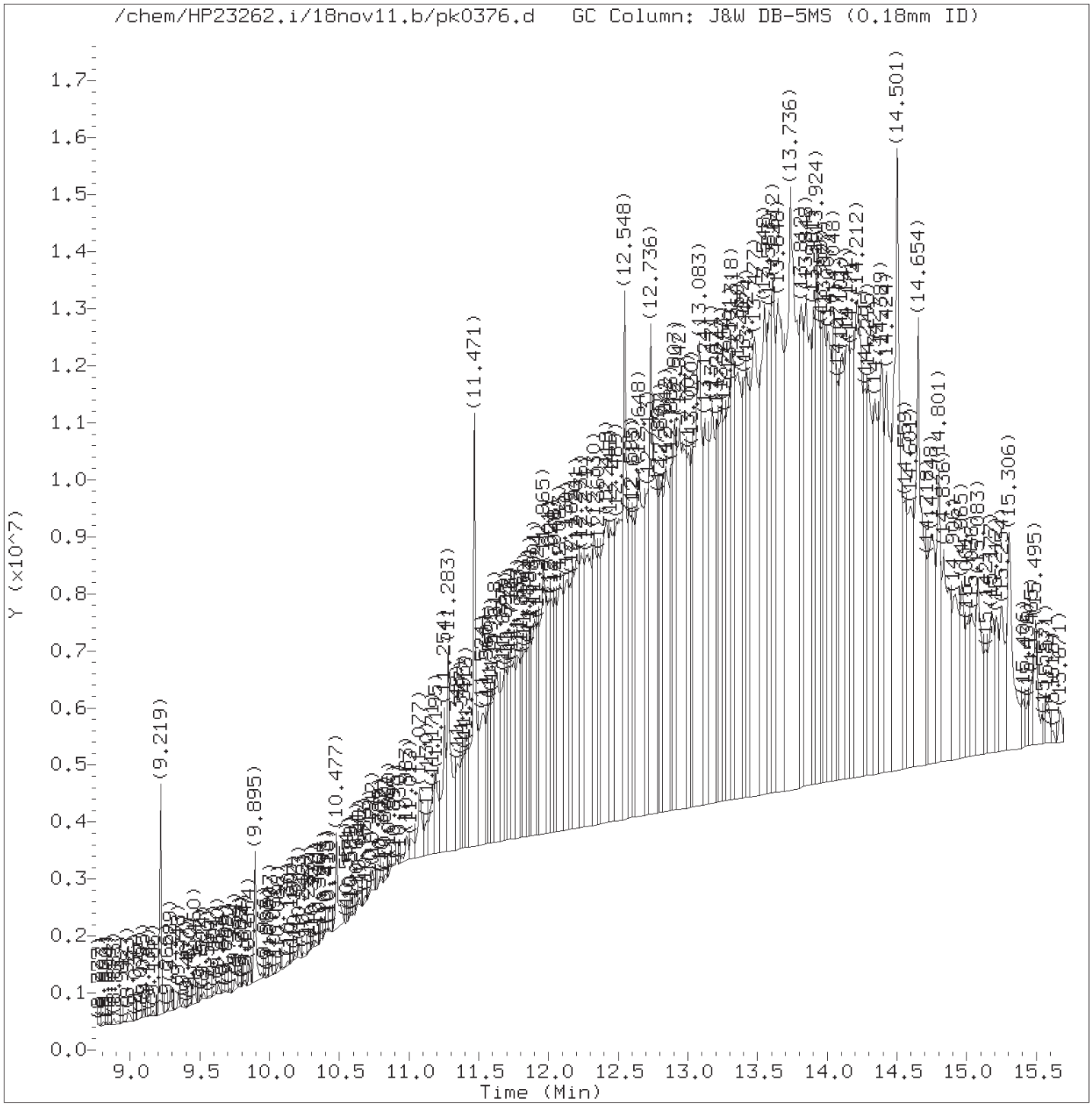
Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0376.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:28 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Sample Name: T1005 Lab Sample ID: 9867767

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0376.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:28 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Sample Name: T1005 Lab Sample ID: 9867767

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0376.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:28 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

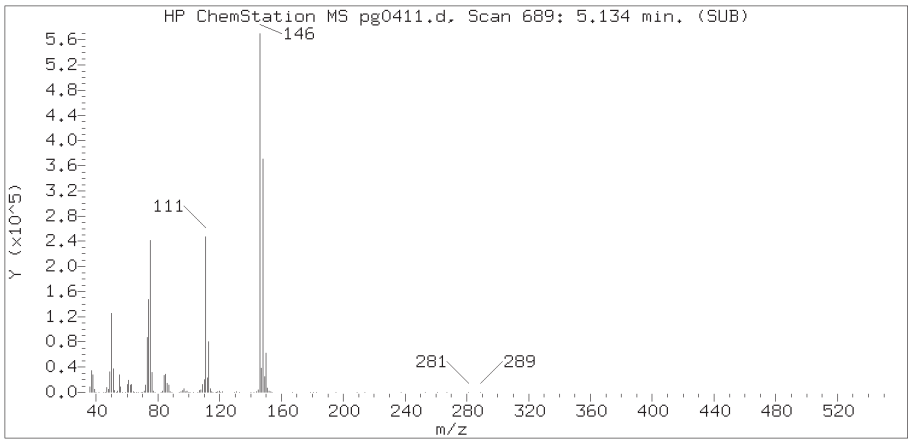
Sample Name: T1005 Lab Sample ID: 9867767

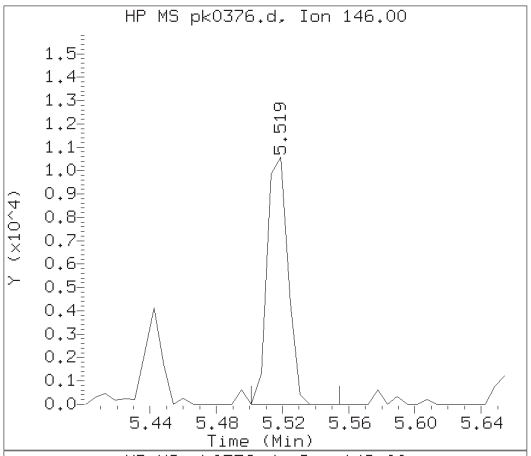
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.231	112	1149630	96.986
17)$Phenol-d6	(1)	5.184	99	1769542	94.742
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	154837	20.000
26) 1,4-Dichlorobenzene	(1)	5.519	146	9342M	0.785
44)$Nitrobenzene-d5	(2)	6.042	82	877263	51.206
65)*Naphthalene-d8	(2)	6.736	136	660821	20.000
67) 4-Chloroaniline	(2)	6.825	127	40945MA	2.698
83) 2-Methylnaphthalene	(2)	7.430	142	12319M	0.478
93)$2-Fluorobiphenyl	(3)	7.795	172	1597661	54.942
113)*Acenaphthene-d10	(3)	8.442	164	377399	20.000
135)$2,4,6-Tribromophenol	(3)	9.219	330	375054	99.375
153)*Phenanthrene-d10	(4)	9.895	188	803266	20.000
175)*Pyrene-d10	(5)	11.283	212	706851	20.000
179)$Terphenyl-d14	(5)	11.471	244	1731543	57.429
213)*Perylene-d12	(6)	13.924	264	605216	20.000

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

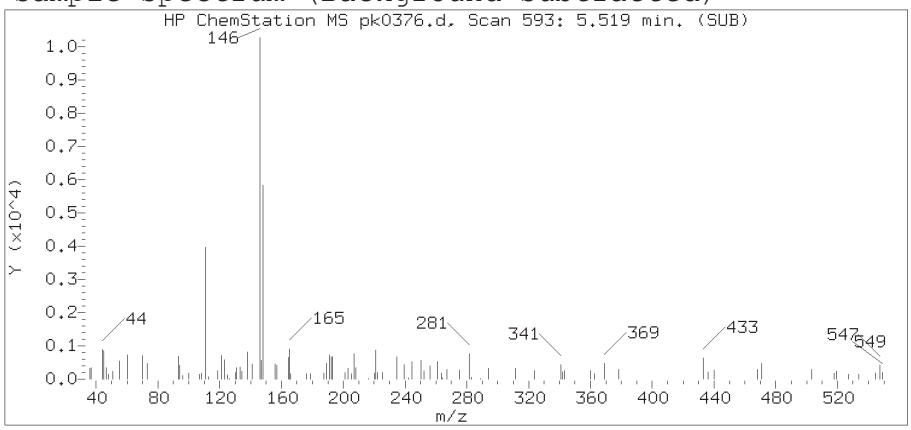
Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956

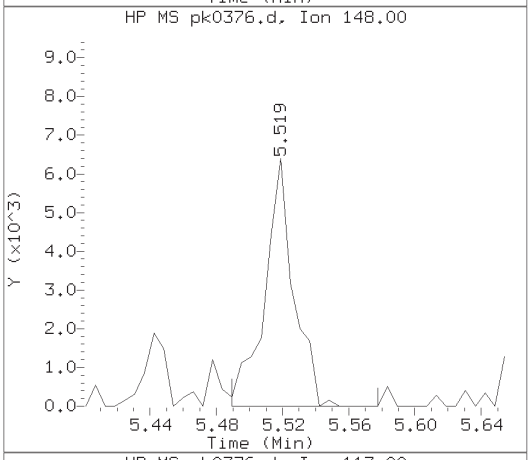
Reference Standard Spectrum for 1,4-Dichlorobenzene



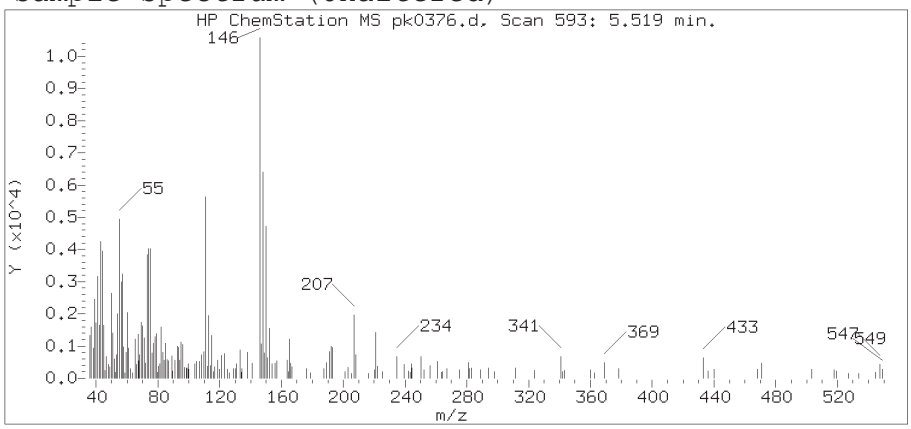


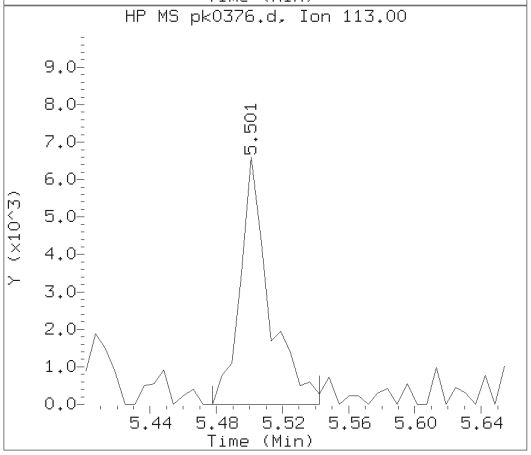
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23262.i/18nov11.b/pk0376.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:28 Analyst ID: apb10206

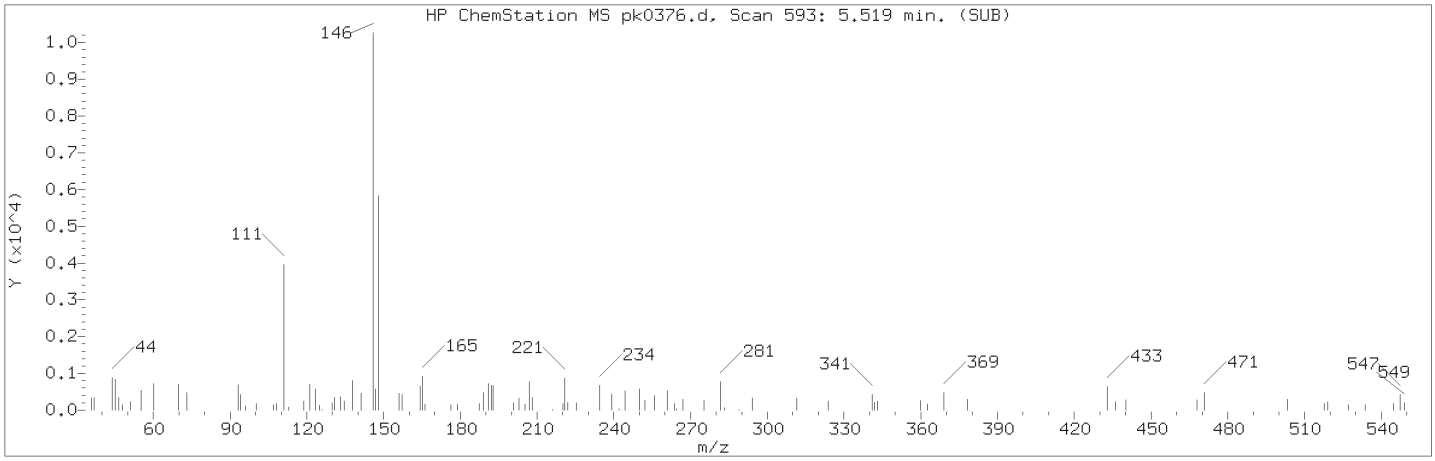
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Sample Name: T1005 Lab Sample ID: 9867767

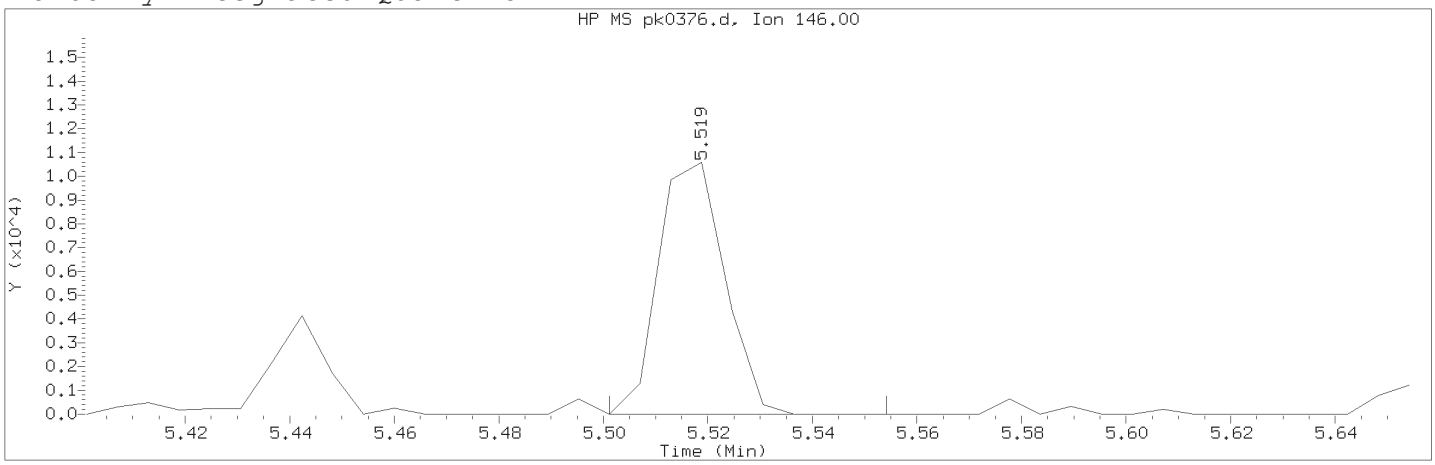
Compound Number	: 26
Compound Name	: 1,4-Dichlorobenzene
Scan Number	: 593
Retention Time (minutes)	: 5.519
Relative Retention Time	:-0.00000
Quant Ion	: 146.00
Area (flag)	: 9342M
On-column Amount (ng/ul)	: 0.7848

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0376.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:28 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Sample Name: T1005 Lab Sample ID: 9867767

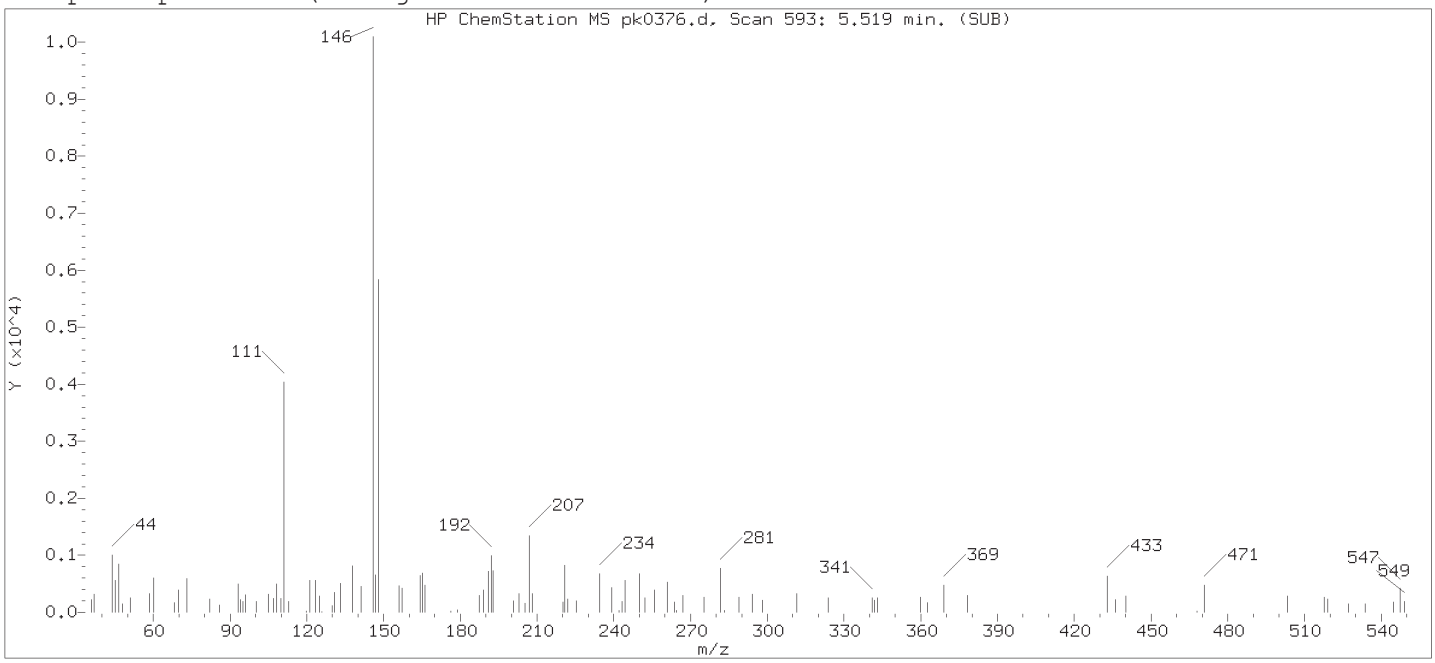
Compound Number : 26
Compound Name : 1,4-Dichlorobenzene
Scan Number : 593
Retention Time (minutes) : 5.519
Quant Ion : 146.00
Area (flag) : 9342M
On-column Amount (ng/ul) : 0.7848
Integration start scan : 589 Integration stop scan: 598
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

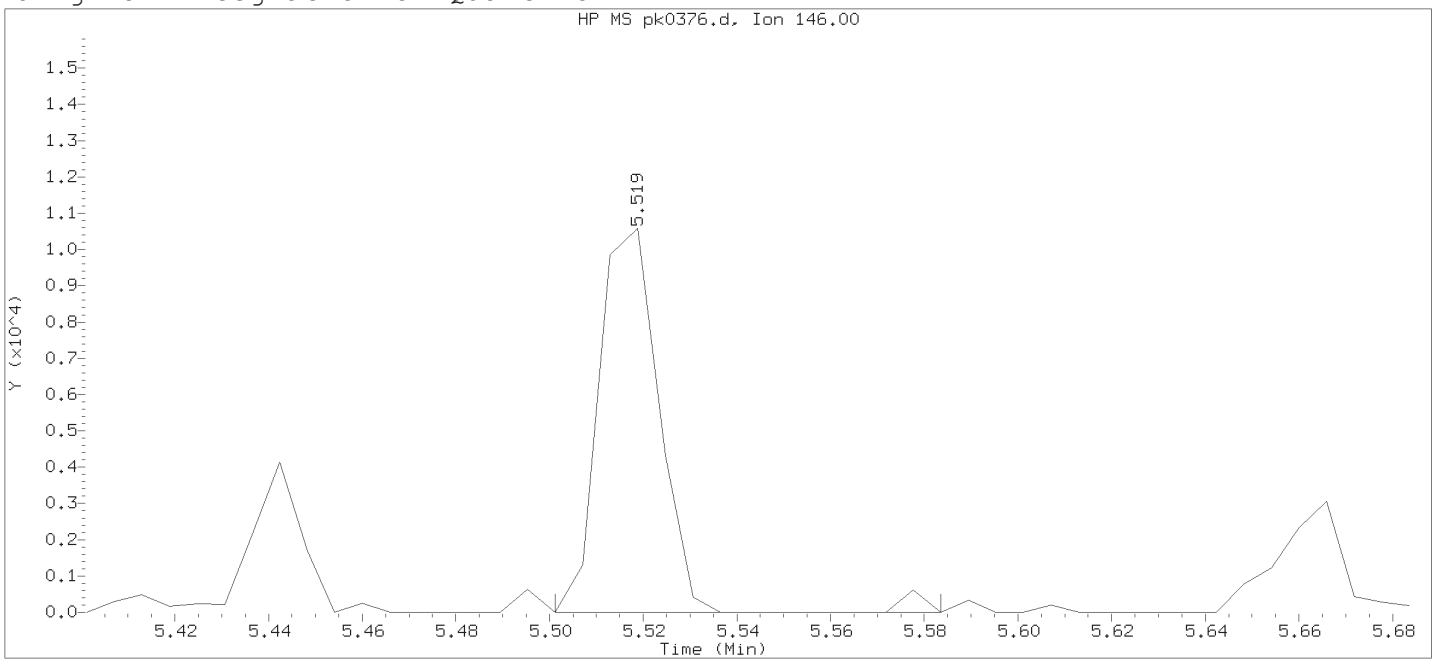
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0376.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:28 Analyst ID: apb10206

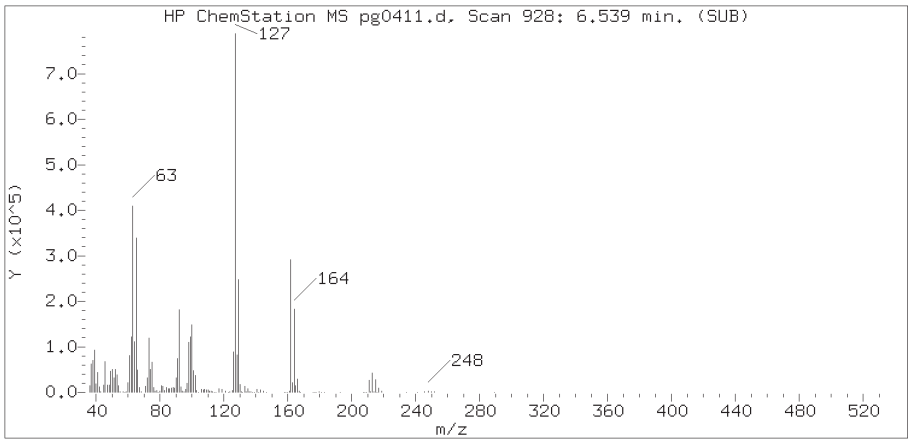
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:34
Date, time and analyst ID of latest file update: 12-Nov-2018 01:49 Automation

Sample Name: T1005 Lab Sample ID: 9867767

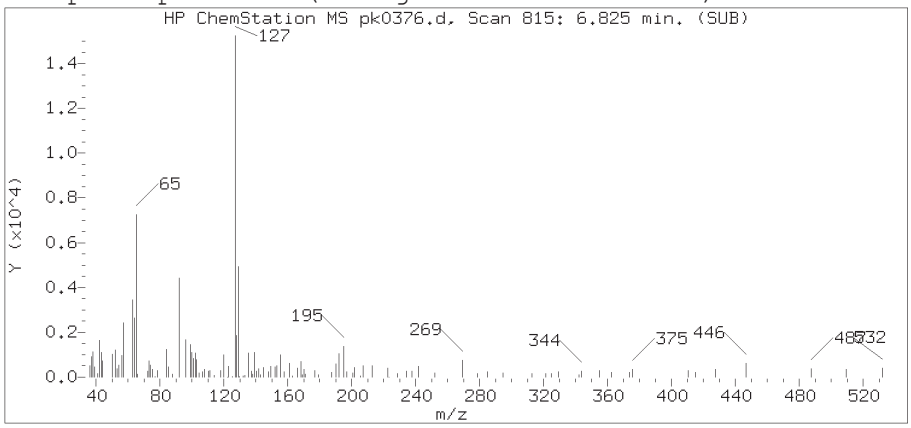
Compound Number	:	26
Compound Name	:	1,4-Dichlorobenzene
Scan Number	:	593
Retention Time (minutes)	:	5.519
Quant Ion	:	146.00
Area	:	9561
On-column Amount (ng/ul)	:	0.8434
Integration start scan	:	589 Integration stop scan: 603
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: 10 Page 0237

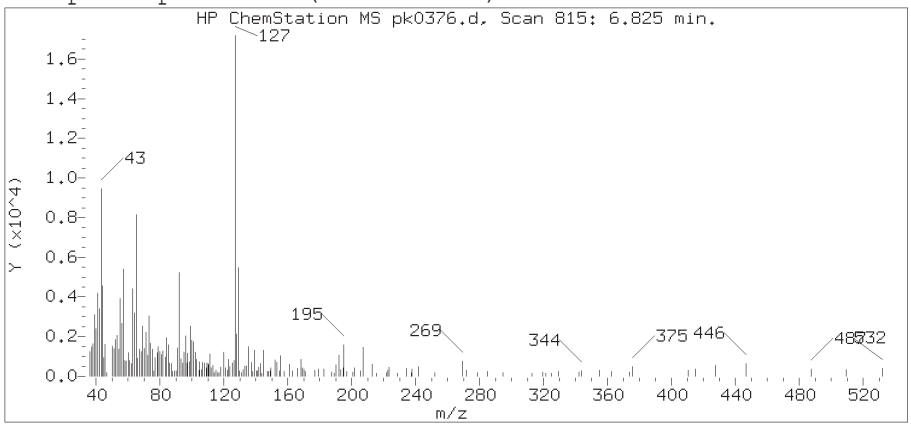
Reference Standard Spectrum for 4-Chloroaniline

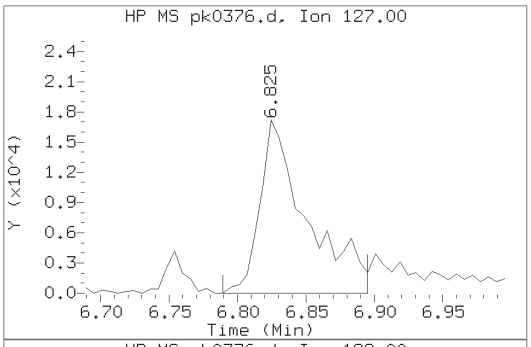


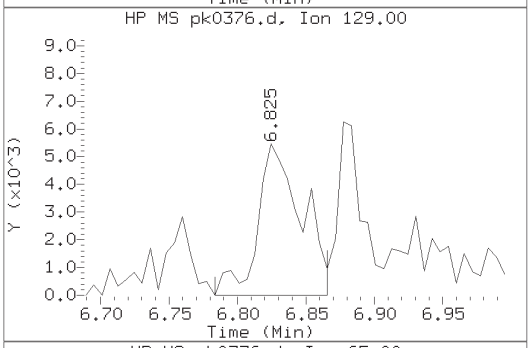
Sample Spectrum (Background Subtracted)

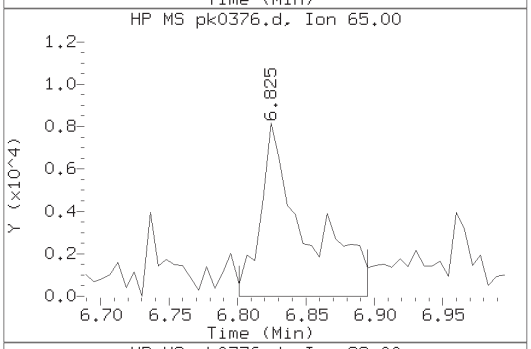


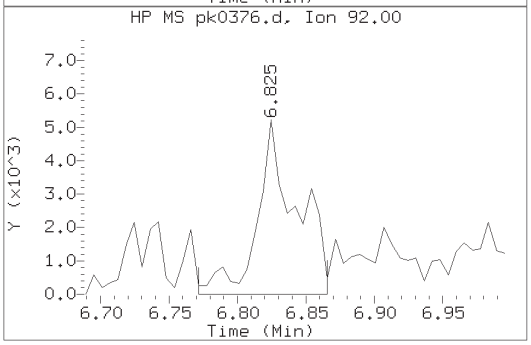
Sample Spectrum (Unaltered)











Data File: /chem/HP23262.i/18nov11.b/pk0376.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:28 Analyst ID: apb10206

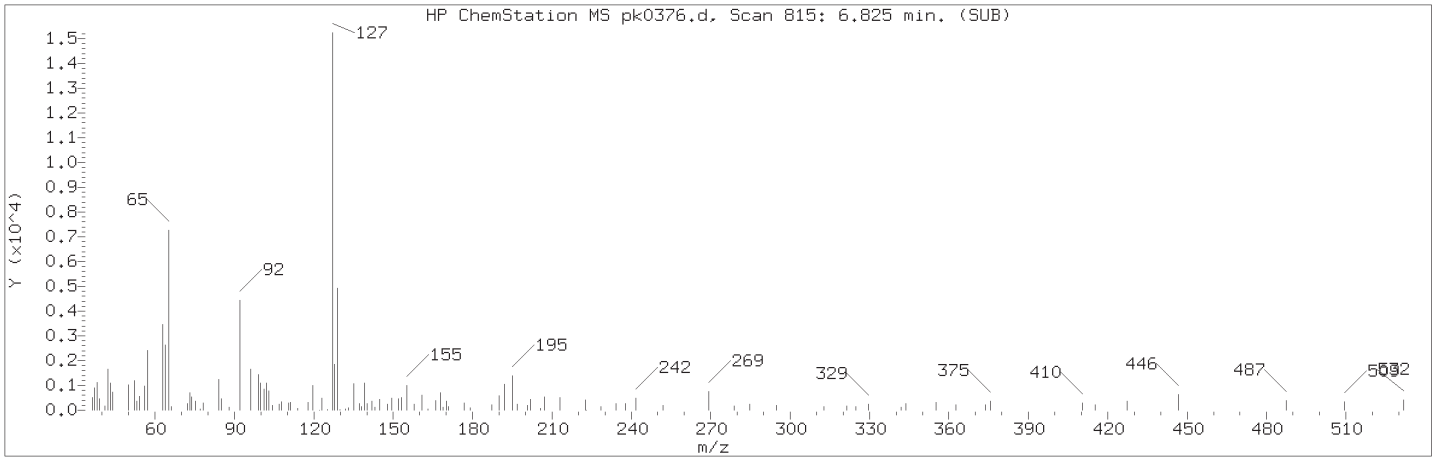
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Sample Name: T1005 Lab Sample ID: 9867767

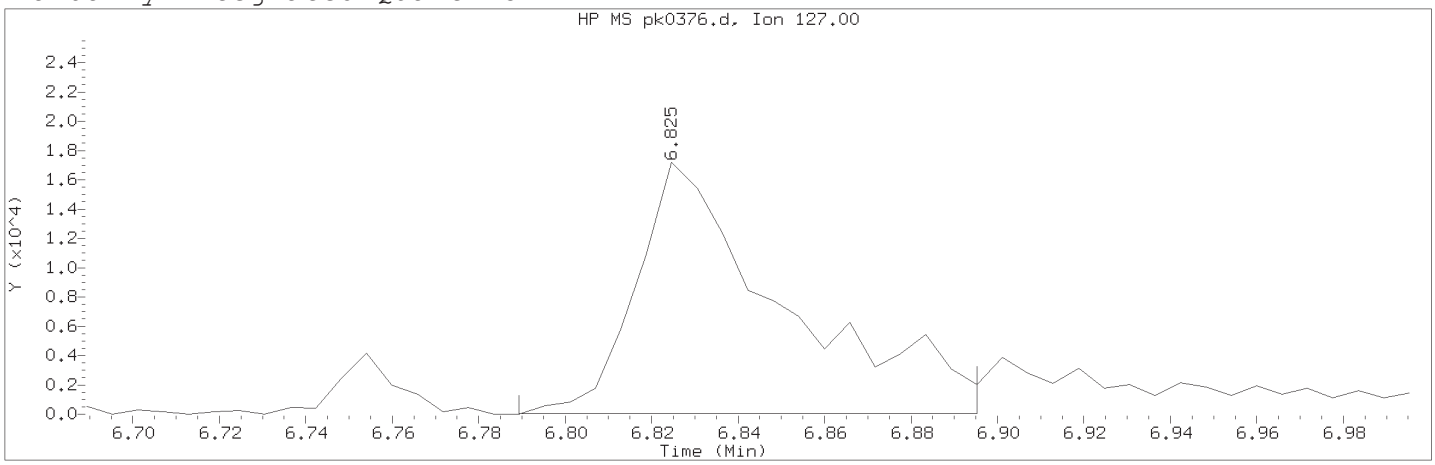
Compound Number	: 67
Compound Name	: 4-Chloroaniline
Scan Number	: 815
Retention Time (minutes)	: 6.825
Relative Retention Time	:-0.00086
Quant Ion	: 127.00
Area (flag)	: 40945AM
On-column Amount (ng/ul)	: 2.6978

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0376.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:28 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Sample Name: T1005 Lab Sample ID: 9867767

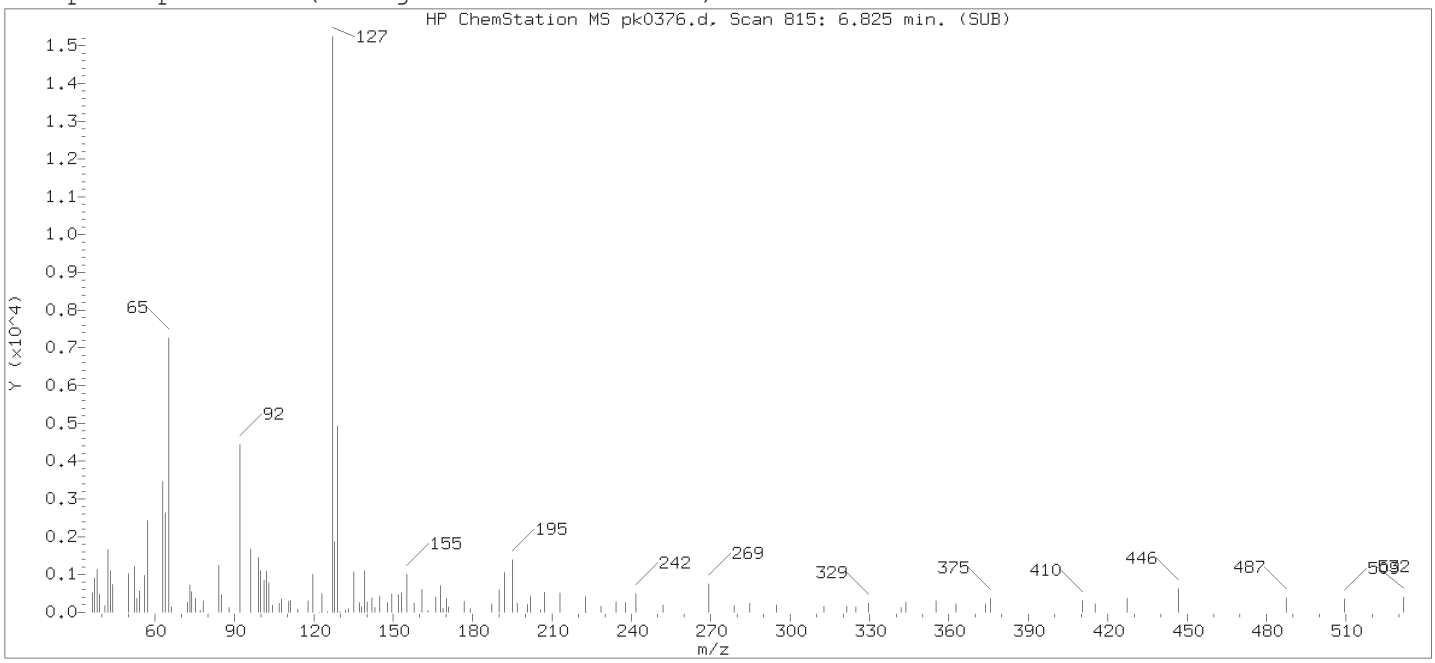
Compound Number	: 67		
Compound Name	: 4-Chloroaniline		
Scan Number	: 815		
Retention Time (minutes)	: 6.825		
Quant Ion	: 127.00		
Area (flag)	: 40945AM		
On-column Amount (ng/ul)	: 2.6978		
Integration start scan	: 808	Integration stop scan:	826
Y at integration start	: 21	Y at integration end:	21

Reason for manual integration: improper integration

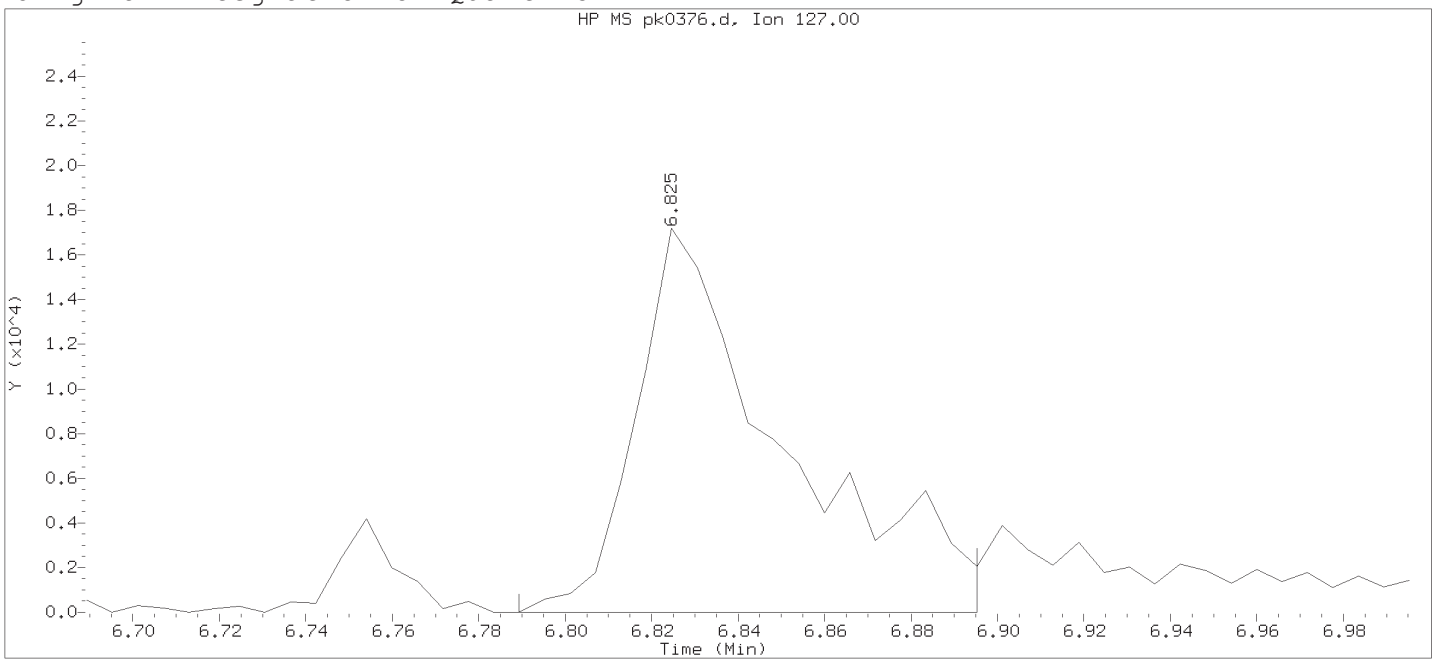
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0376.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:28 Analyst ID: apb10206

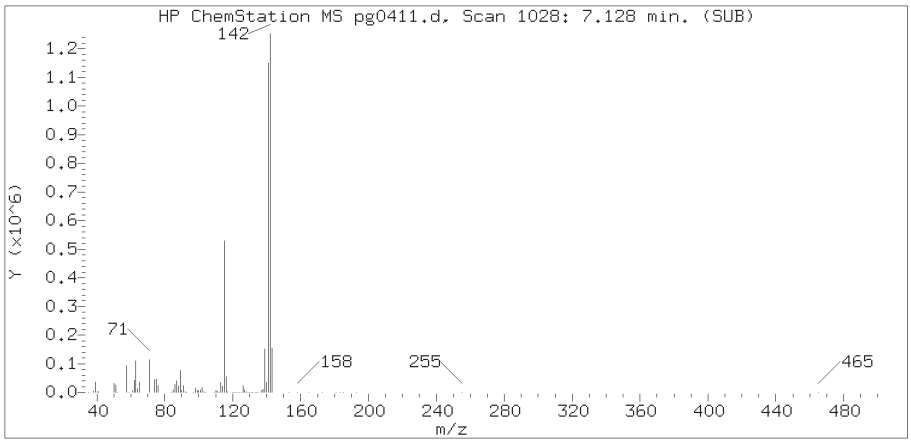
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:34
Date, time and analyst ID of latest file update: 12-Nov-2018 01:49 Automation

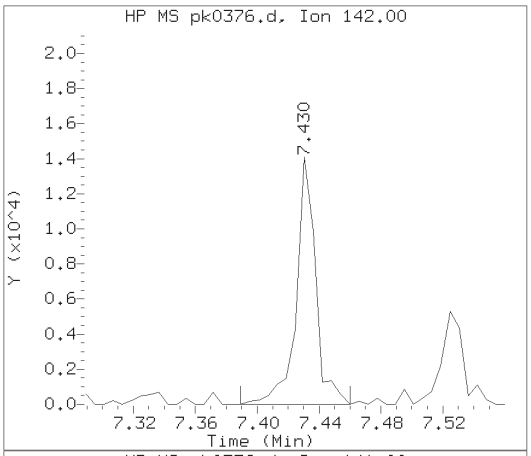
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number	:	67
Compound Name	:	4-Chloroaniline
Scan Number	:	815
Retention Time (minutes)	:	6.825
Quant Ion	:	127.00
Area	:	40726
On-column Amount (ng/ul)	:	2.8176
Integration start scan	:	808 Integration stop scan: 826
Y at integration start	:	0 Y at integration end: 0

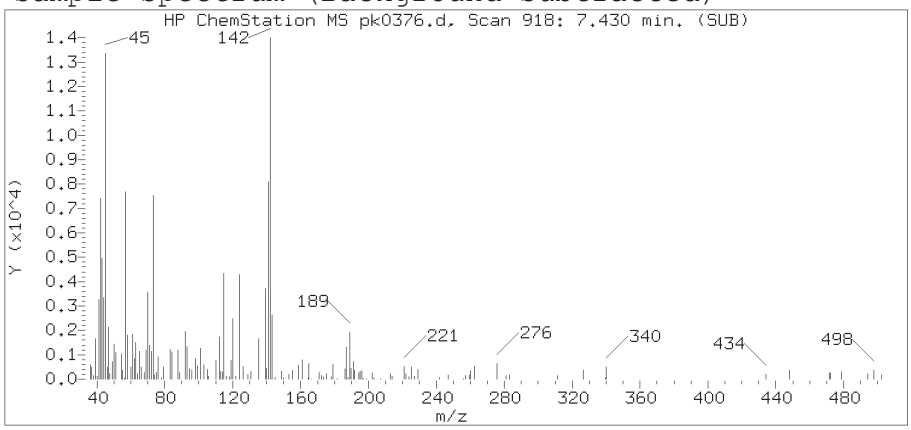
Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: 1010 Page 1240

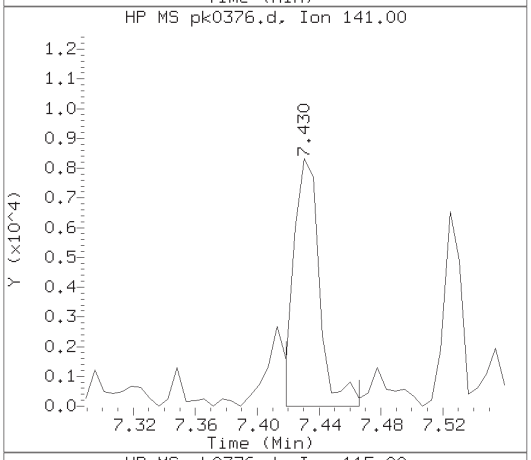
Reference Standard Spectrum for 2-Methylnaphthalene



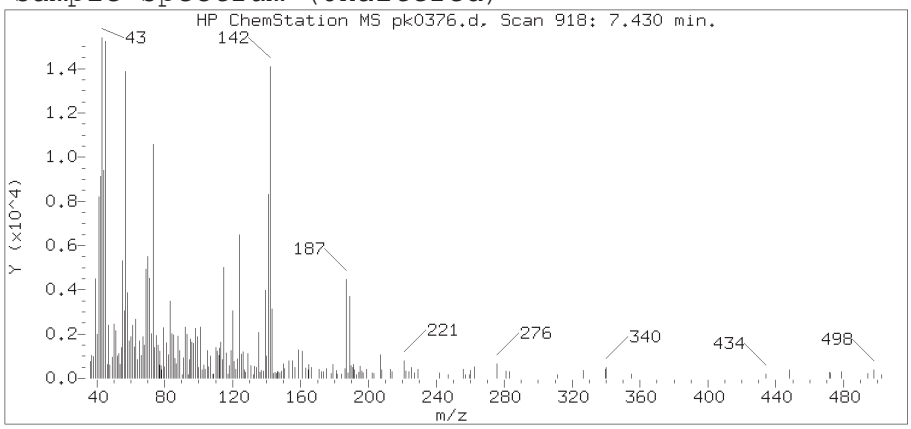


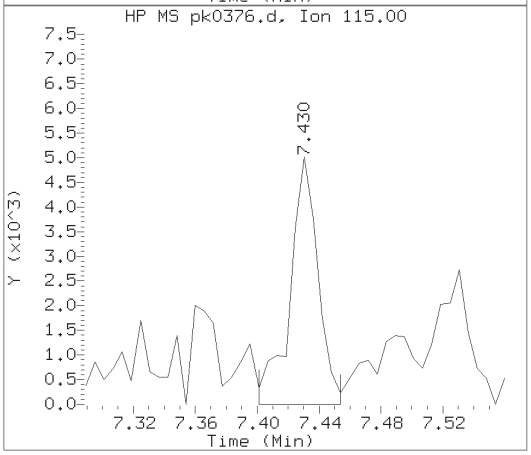
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23262.i/18nov11.b/pk0376.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:28 Analyst ID: apb10206

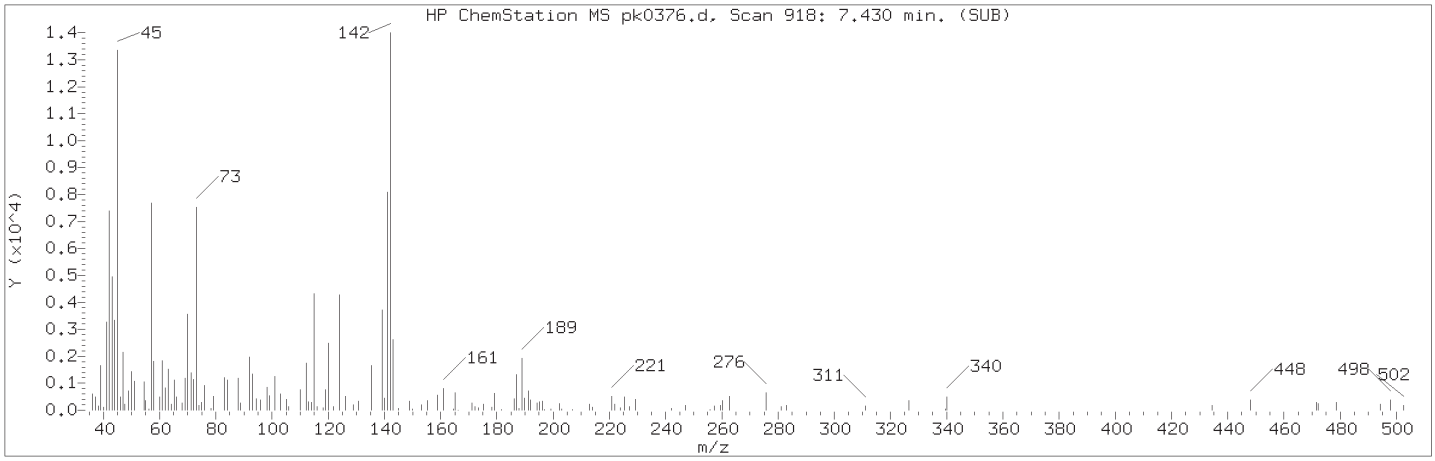
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Sample Name: T1005 Lab Sample ID: 9867767

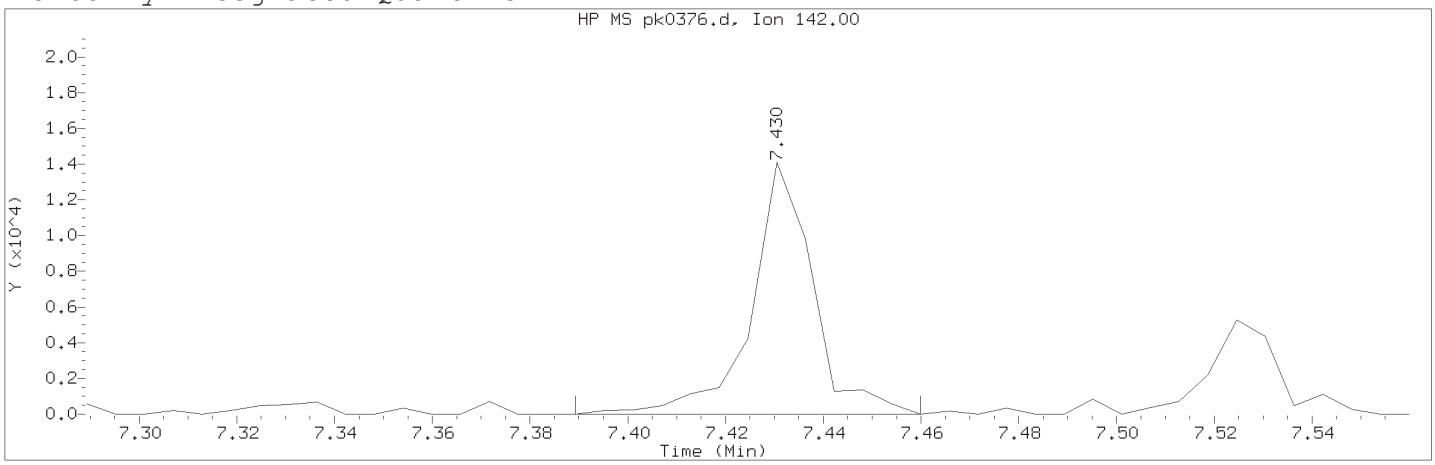
Compound Number	: 83
Compound Name	: 2-Methylnaphthalene
Scan Number	: 918
Retention Time (minutes)	: 7.430
Relative Retention Time	: 0.00096
Quant Ion	: 142.00
Area (flag)	: 12319M
On-column Amount (ng/ul)	: 0.4780

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0376.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:28 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:43 lmh00956

Sample Name: T1005 Lab Sample ID: 9867767

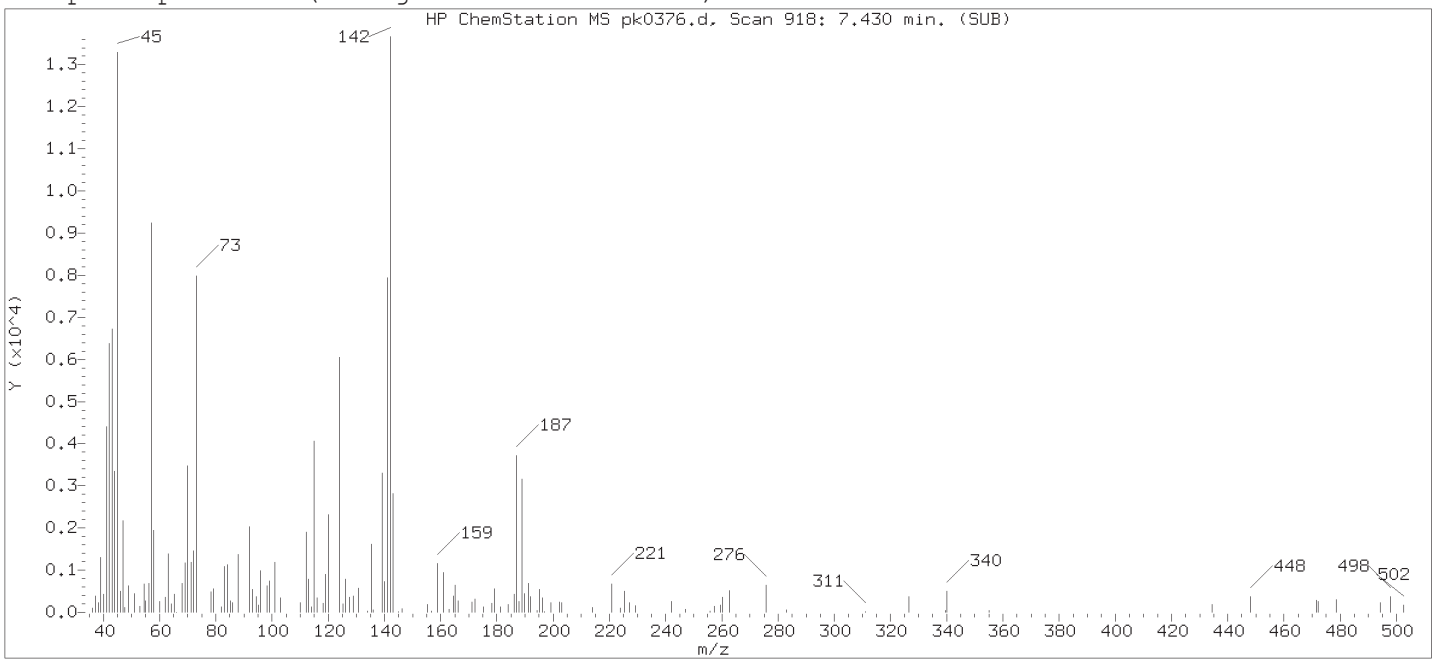
Compound Number : 83
Compound Name : 2-Methylnaphthalene
Scan Number : 918
Retention Time (minutes) : 7.430
Quant Ion : 142.00
Area (flag) : 12319M
On-column Amount (ng/ul) : 0.4780
Integration start scan : 910 Integration stop scan: 922
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

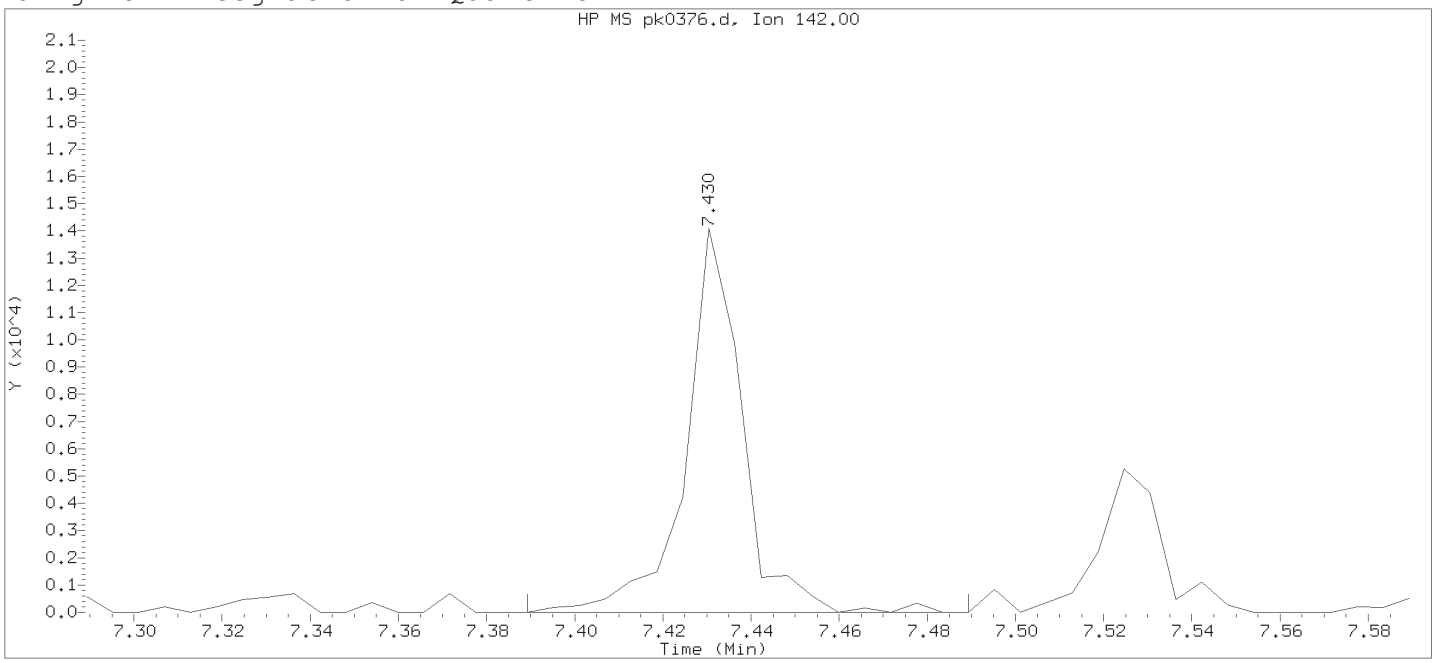
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0376.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 01:28 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:34
Date, time and analyst ID of latest file update: 12-Nov-2018 01:49 Automation

Sample Name: T1005 Lab Sample ID: 9867767

Compound Number	: 83		
Compound Name	: 2-Methylnaphthalene		
Scan Number	: 918		
Retention Time (minutes)	: 7.430		
Quant Ion	: 142.00		
Area	: 12495		
On-column Amount (ng/ul)	: 0.5091		
Integration start scan	: 910	Integration stop scan:	927
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:45.
Target 3.5 esignature used.

T1005RE

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

9867767RE

Data file: /chem/HP11165.i/18nov16.b/gk0860.d
Data file Sample Info. Line: T1005RE;9867767RE;2;0;SAMPLE;;DOD26;T2
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Injection date and time: **16-NOV-2018 17:42**
Instrument ID: **HP11165.i** Batch: **18317SLB**

Blank Data file reference: **/chem/HP11165.i/18nov16.b/gk0854.d**

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 19-NOV-2018 19:11
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/18nov16.b/gk0851.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.451	(0.000)	606	152	178695	(19)	20.00	
65) Naphthalene-d8	6.686	(0.000)	816	136	751693	(12)	20.00	
113) Acenaphthene-d10	8.398	(0.000)	1107	164	390259	(-4)	20.00	
153) Phenanthrene-d10	9.851	(0.000)	1354	188	722684	(-12)	20.00	
175) Pyrene-d10	11.245	(-0.006)	1591	212	629932	(-19)	20.00	
213) Perylene-d12	13.915	(-0.041)	2045	264	656198A	(0)	20.00	

A = User selected an alternate peak

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.210	(-0.002)	112	1771898	130.737	65%		35 - 115
17) Phenol-d6	(1)	5.169	(-0.001)	99	2562430	122.095	61%		47 - 120
44) Nitrobenzene-d5	(2)	5.992	(0.000)	82	1248562	63.044	63%		37 - 122
93) 2-Fluorobiphenyl	(3)	7.751	(0.000)	172	2146266	67.948	68%		44 - 115
135) 2,4,6-Tribromophenol	(3)	9.180	(0.000)	330	447287	143.101	72%		39 - 132
179) Terphenyl-d14	(5)	11.439	(0.000)	244	1997634	65.579	66%		54 - 127

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)				Not Detected					2
18) Phenol	(1)				Not Detected					0.7
19) Aniline	(1)				Not Detected					5
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.7
23) 2-Chlorophenol	(1)				Not Detected					0.5
24) 1,3-Dichlorobenzene	(1)				Not Detected					0.5
26) 1,4-Dichlorobenzene	(1)	5.469	(0.000)	146	22722	1.500	50.02			0.5
27) Benzyl alcohol	(1)				Not Detected					5
28) 1,2-Dichlorobenzene	(1)	5.610	(0.000)	146	9415	0.642	21.41		J	0.6
31) 2-Methylphenol	(1)				Not Detected					0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.5
37) 4-Methylphenol	(1)	5.904	(0.000)	108	19416	1.190	39.67		J	0.6
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.6
43) Hexachloroethane	(1)				Not Detected					1
45) Nitrobenzene	(2)				Not Detected					0.8
50) Isophorone	(2)				Not Detected					0.5
51) 2-Nitrophenol	(2)				Not Detected					0.5
53) 2,4-Dimethylphenol	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.5
60) 2,4-Dichlorophenol	(2)				Not Detected					0.5
62) 1,2,4-Trichlorobenzene	(2)				Not Detected					0.5
67) 4-Chloroaniline	(2)				Not Detected					1
71) Hexachlorobutadiene	(2)				Not Detected					0.6
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)	7.386	(-0.000)	142	36580	1.215	40.50			0.3
85) Hexachlorocyclopentadiene	(3)				Not Detected					5

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14. Target 3.5 esignature user ID: bkc25363

Data file: /chem/HP11165.i/18nov16.b/gk0860.d Injection date and time: **16-NOV-2018 17:42**
Data file Sample Info. Line: T1005RE;9867767RE;2;0;SAMPLE;;DOD26;T2 Instrument ID: **HP11165.i** Batch: **18317SLB**
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Blank Data file reference: **/chem/HP11165.i/18nov16.b/gk0854.d**

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 19-NOV-2018 19:11
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/18nov16.b/gk0851.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

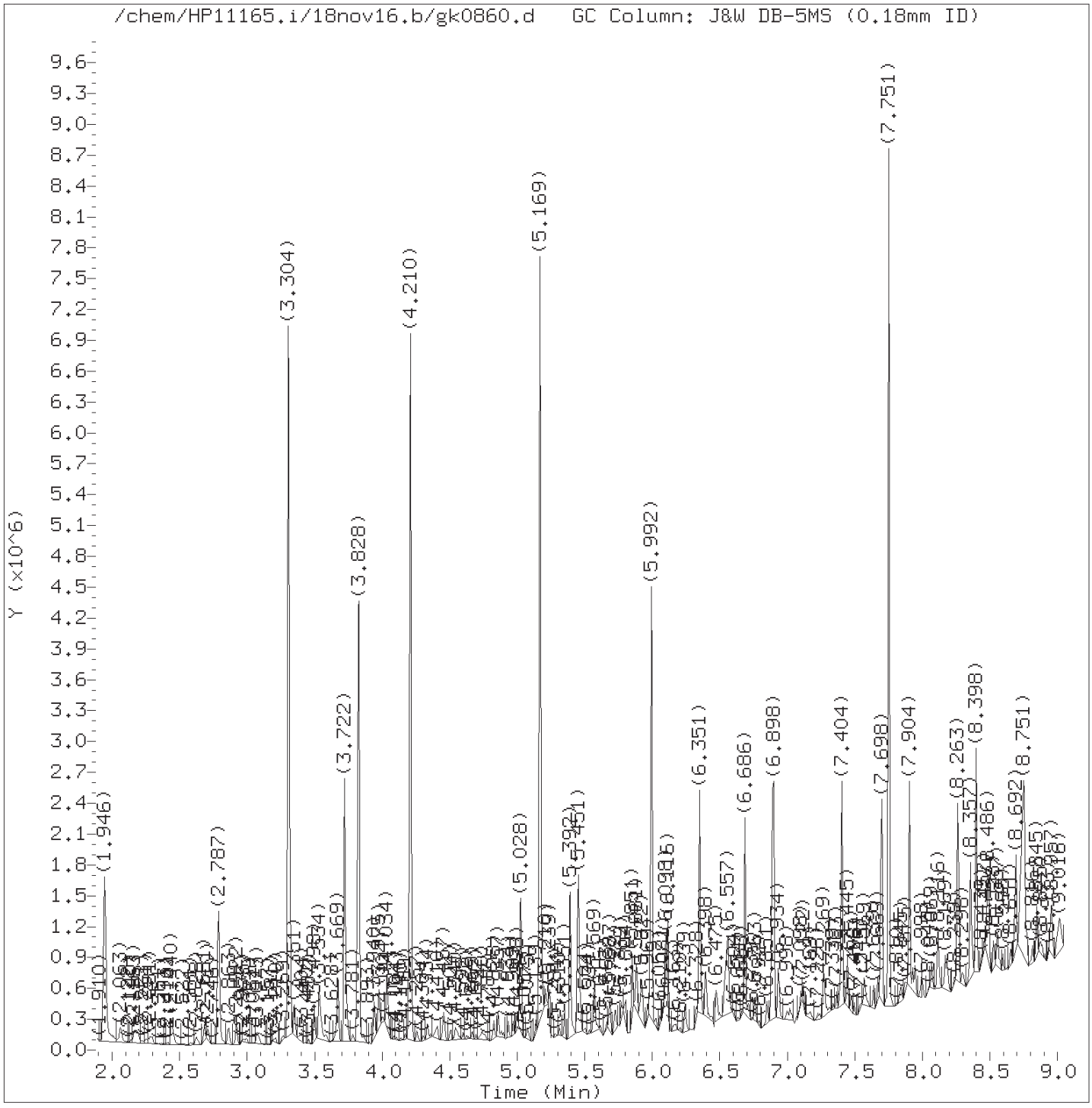
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.6
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.6
96) 2-Chloronaphthalene	(3)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.6
106) Dimethylphthalate	(3)				Not Detected					2
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.6
112) 3-Nitroaniline	(3)				Not Detected					2
115) 2,4-Dinitrophenol	(3)				Not Detected					11
116) 4-Nitrophenol	(3)				Not Detected					5
118) 2,4-Dinitrotoluene	(3)				Not Detected					2
119) Dibenzofuran	(3)				Not Detected					0.5
124) Diethylphthalate	(3)				Not Detected					2
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.5
129) 4-Nitroaniline	(3)				Not Detected					2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					5
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.5
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.6
145) Hexachlorobenzene	(4)				Not Detected					0.1
149) Pentachlorophenol	(4)				Not Detected					1
163) Carbazole	(4)	10.098	(-0.000)	167	20551	0.508	16.94		J	0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
205) Di-n-octylphthalate	(6)				Not Detected					2

Total number of targets = 48

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Chad A. Moline on 11/20/2018 at 12:59. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

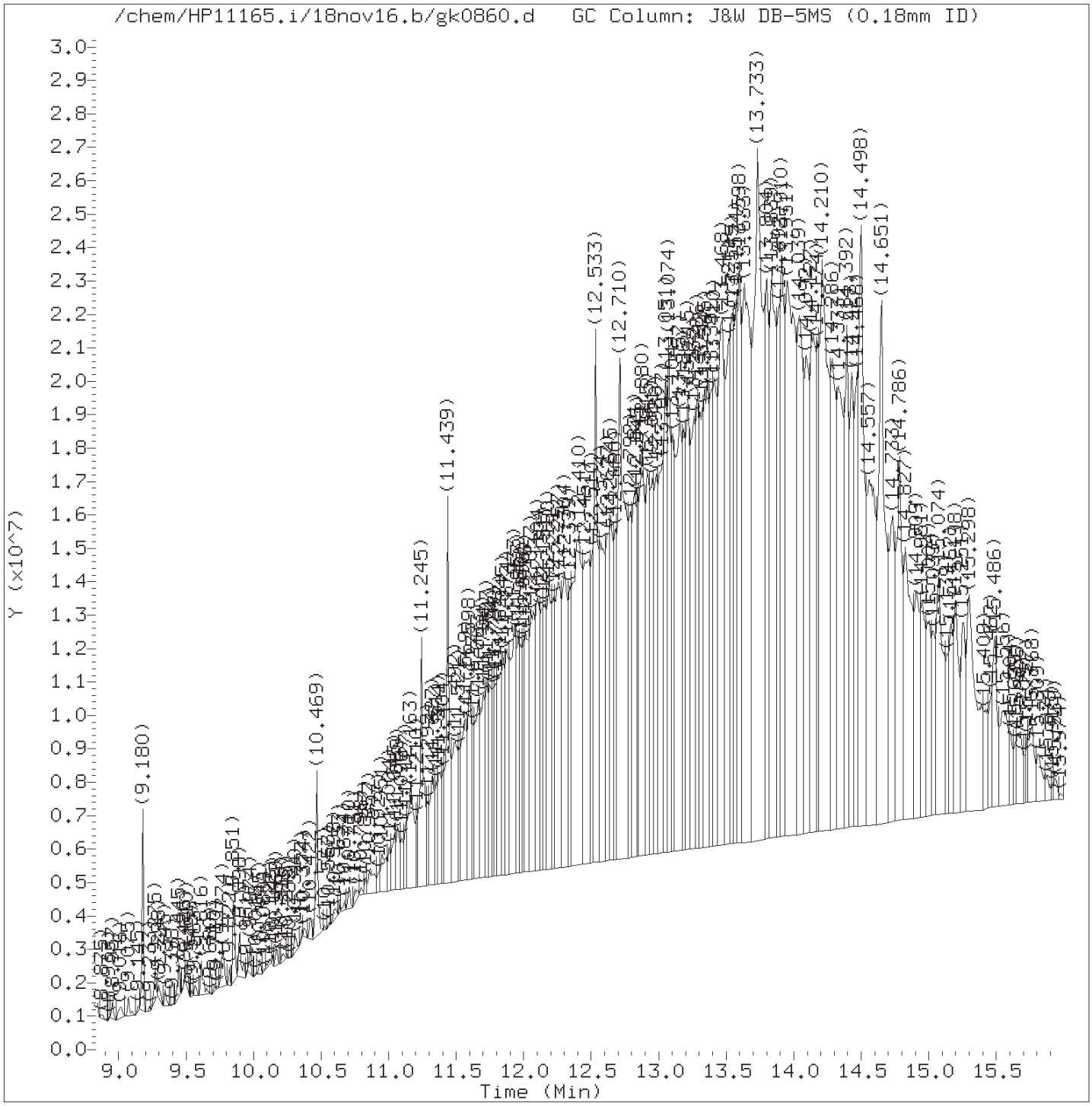
Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0860.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 17:42 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: T1005RE Lab Sample ID: 9867767RE

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0860.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 17:42 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: T1005RE Lab Sample ID: 9867767RE

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0860.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 17:42 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

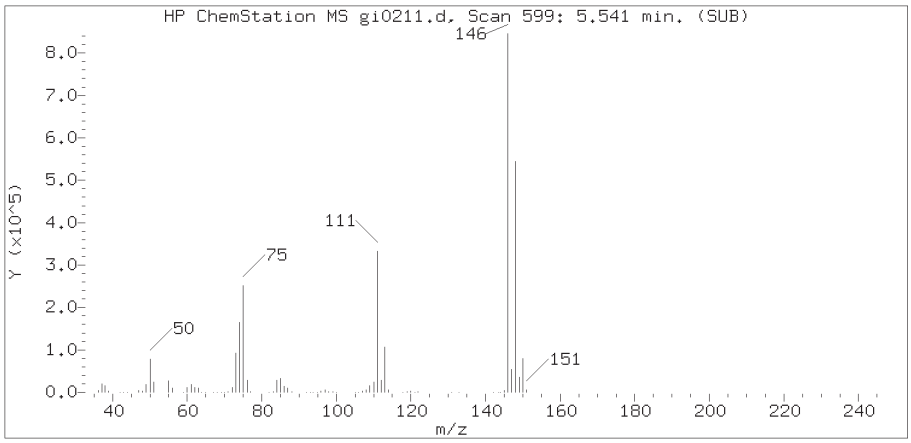
Sample Name: T1005RE Lab Sample ID: 9867767RE

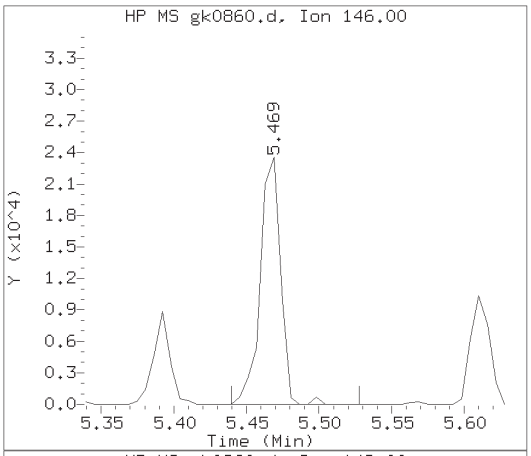
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.210	112	1771898	130.737
17)$Phenol-d6	(1)	5.169	99	2562430	122.095
25)*1,4-Dichlorobenzene-d4	(1)	5.451	152	178695	20.000
26) 1,4-Dichlorobenzene	(1)	5.469	146	22722	1.500
28) 1,2-Dichlorobenzene	(1)	5.610	146	9415	0.642
37) 4-Methylphenol	(1)	5.904	108	19416	1.190
44)$Nitrobenzene-d5	(2)	5.992	82	1248562	63.044
65)*Naphthalene-d8	(2)	6.686	136	751693	20.000
83) 2-Methylnaphthalene	(2)	7.386	142	36580	1.215
93)$2-Fluorobiphenyl	(3)	7.751	172	2146266	67.948
113)*Acenaphthene-d10	(3)	8.398	164	390259	20.000
135)$2,4,6-Tribromophenol	(3)	9.180	330	447287	143.101
153)*Phenanthrene-d10	(4)	9.851	188	722684	20.000
163) Carbazole	(4)	10.098	167	20551	0.508
175)*Pyrene-d10	(5)	11.245	212	629932	20.000
179)$Terphenyl-d14	(5)	11.439	244	1997634	65.579
213)*Perylene-d12	(6)	13.915	264	656198A	20.000

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

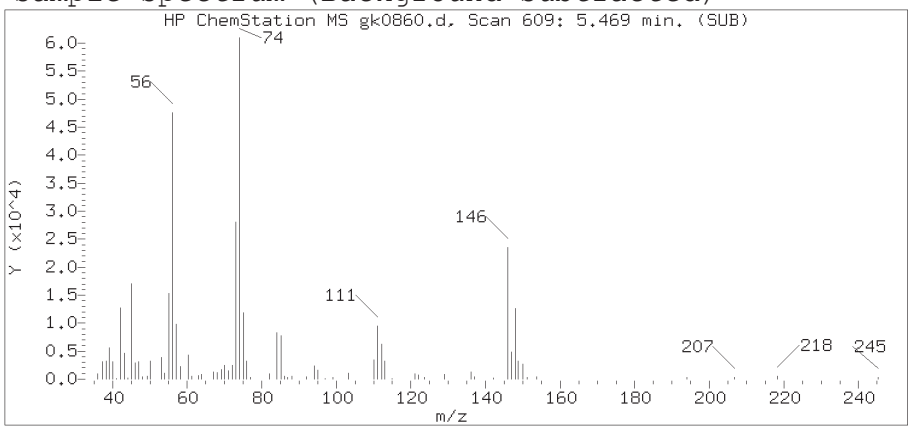
Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

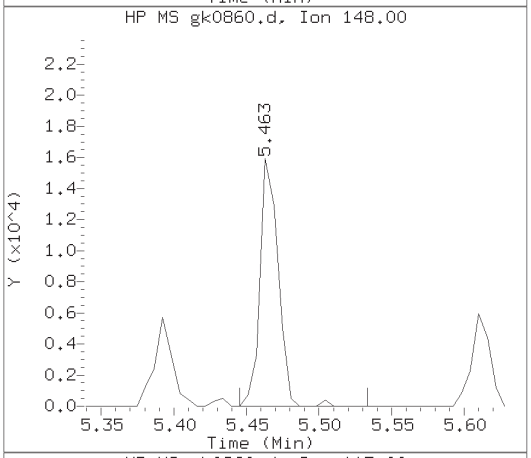
Reference Standard Spectrum for 1,4-Dichlorobenzene



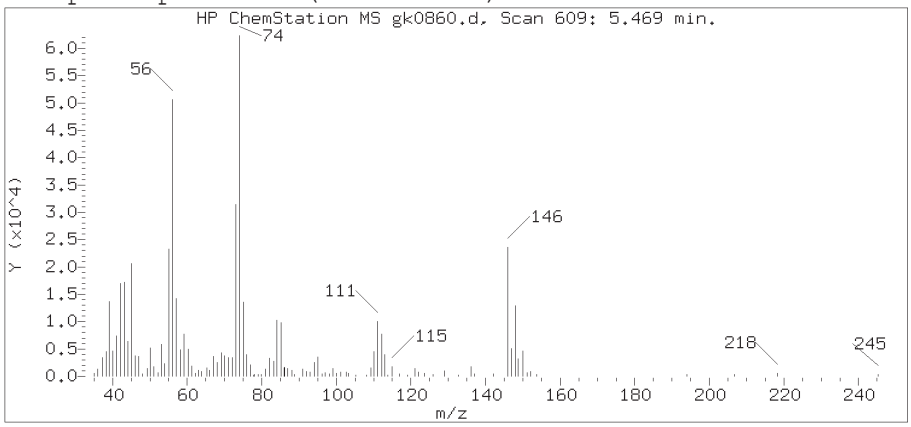


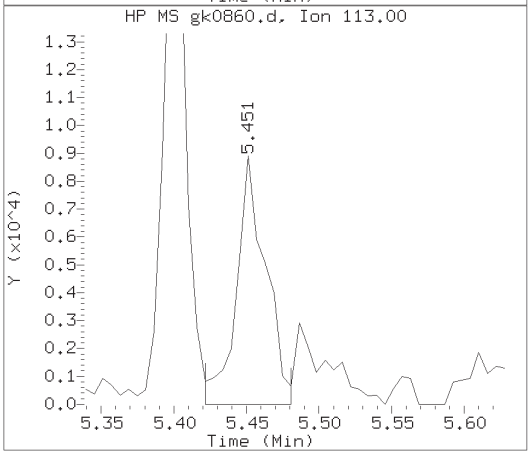
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/18nov16.b/gk0860.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 17:42 Analyst ID: whs02991

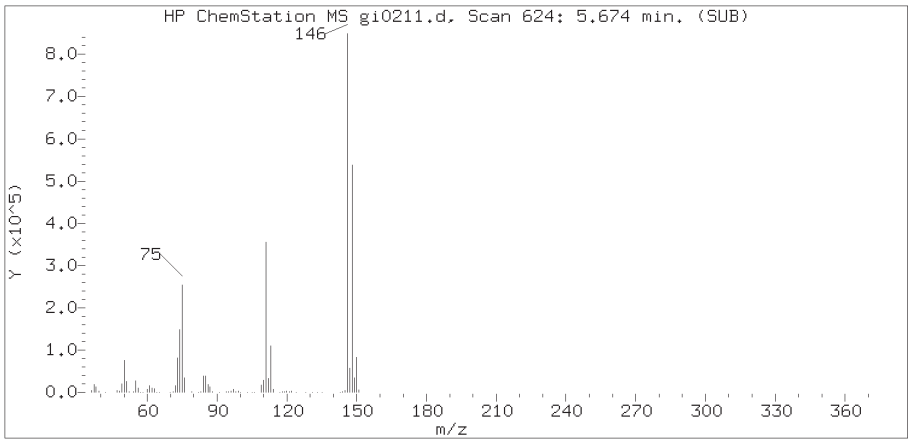
Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

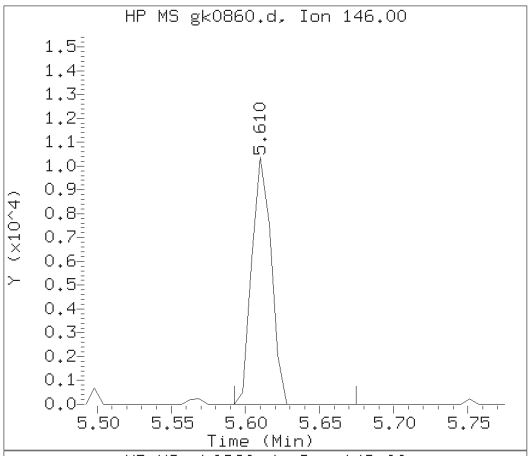
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	: 26
Compound Name	: 1,4-Dichlorobenzene
Scan Number	: 609
Retention Time (minutes)	: 5.469
Relative Retention Time	: 0.00000
Quant Ion	: 146.00
Area (flag)	: 22722
On-column Amount (ng/ul)	: 1.5005

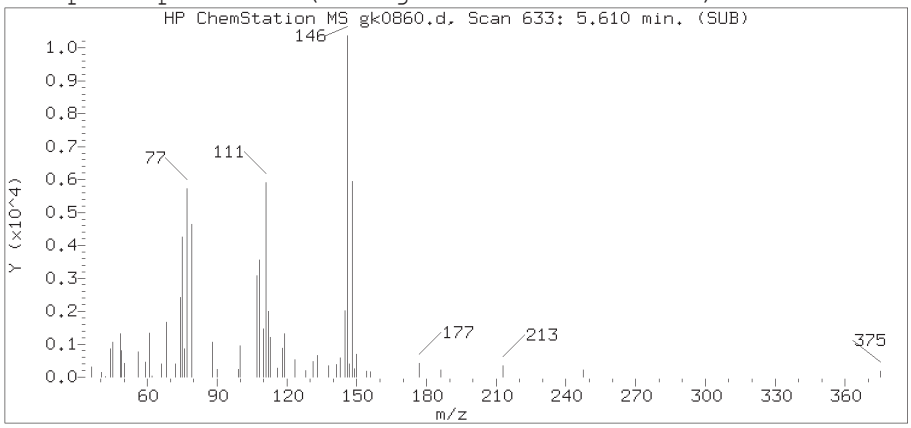
Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

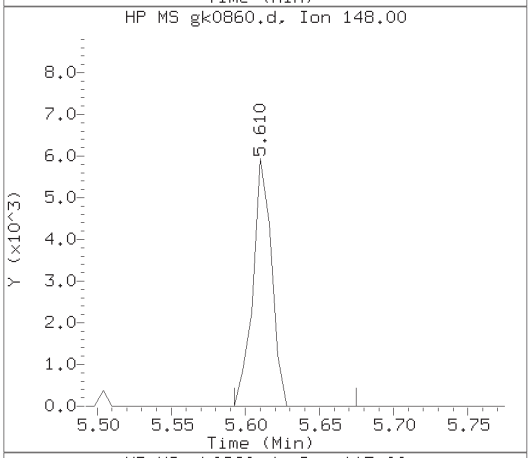
Reference Standard Spectrum for 1,2-Dichlorobenzene



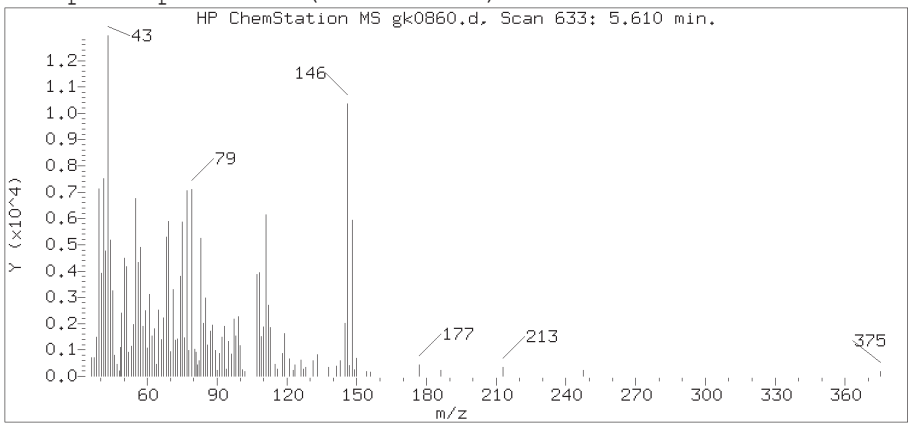


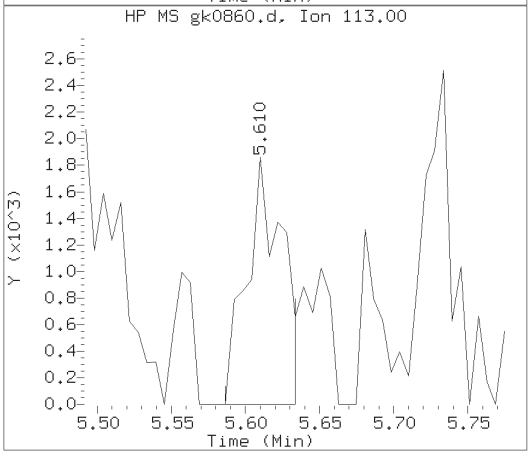
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/18nov16.b/gk0860.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 17:42 Analyst ID: whs02991

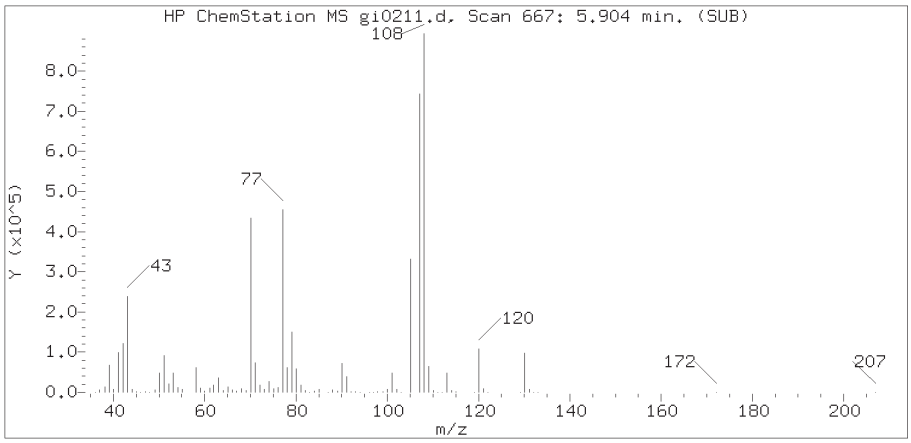
Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: T1005RE Lab Sample ID: 9867767RE

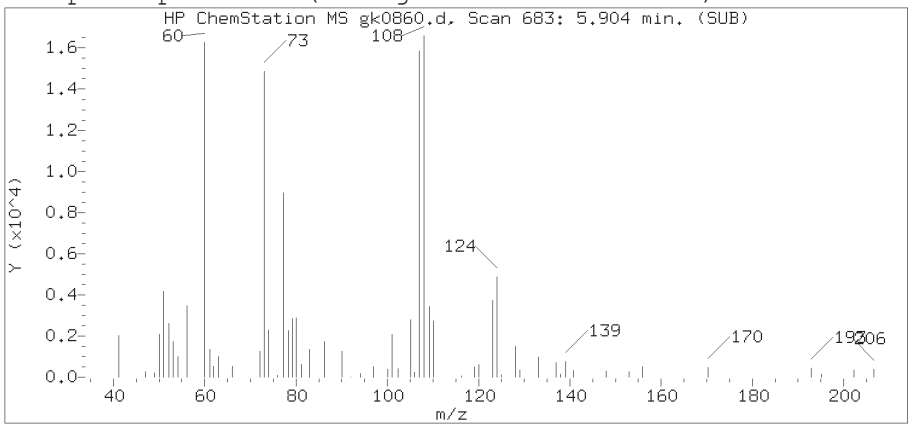
Compound Number	: 28
Compound Name	: 1,2-Dichlorobenzene
Scan Number	: 633
Retention Time (minutes)	: 5.610
Relative Retention Time	: 0.00000
Quant Ion	: 146.00
Area (flag)	: 9415
On-column Amount (ng/ul)	: 0.6424

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

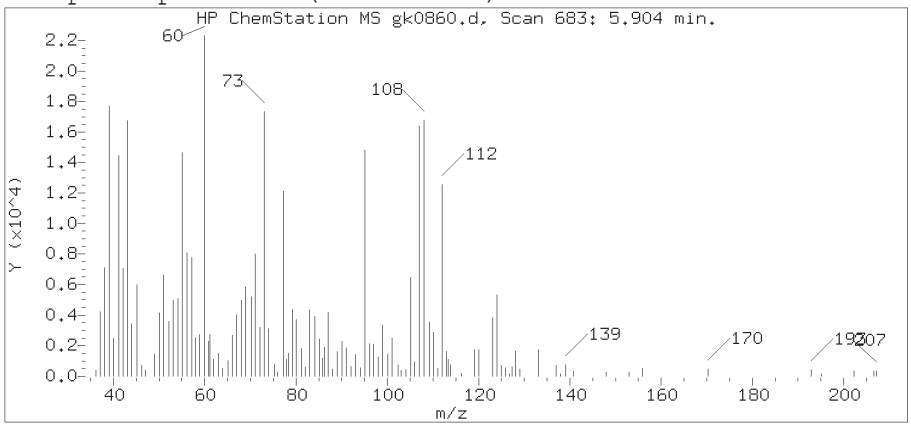
Reference Standard Spectrum for 4-Methylphenol

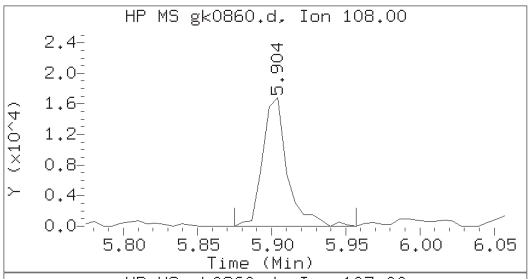


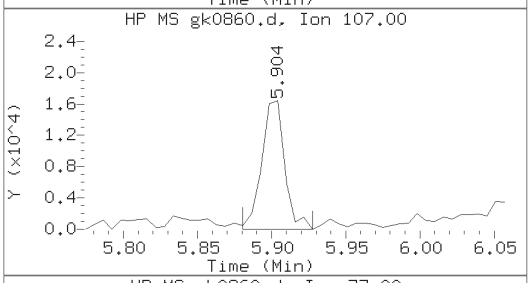
Sample Spectrum (Background Subtracted)

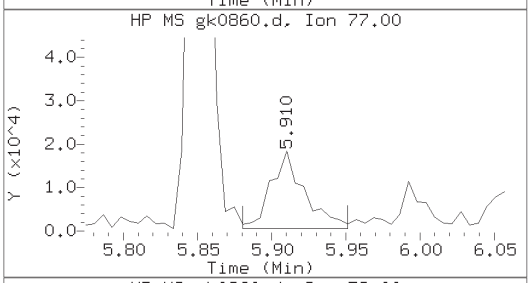


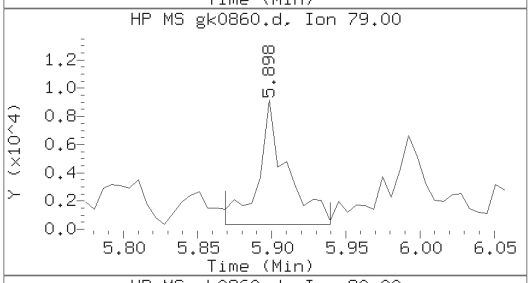
Sample Spectrum (Unaltered)

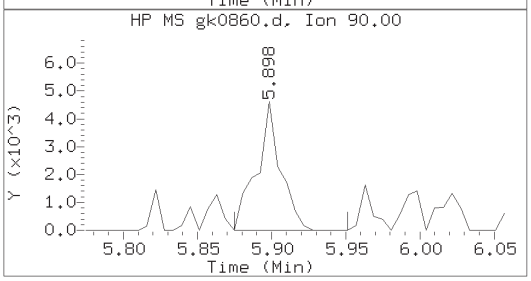












Data File: /chem/HP11165.i/18nov16.b/gk0860.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 17:42 Analyst ID: whs02991

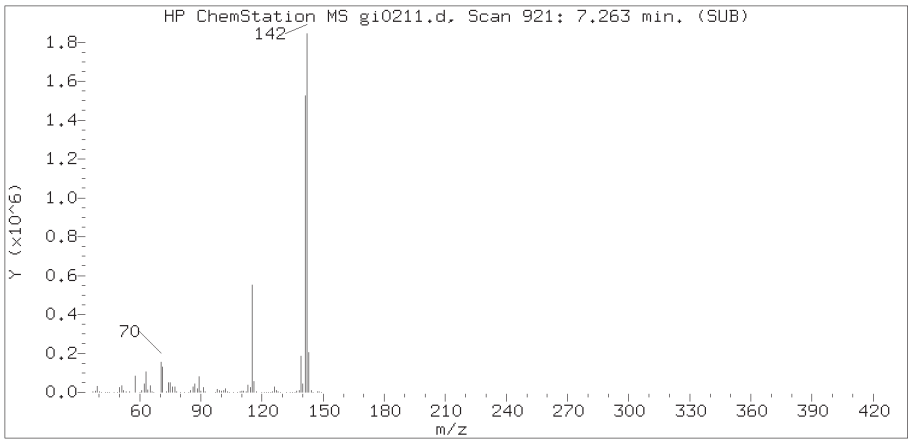
Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

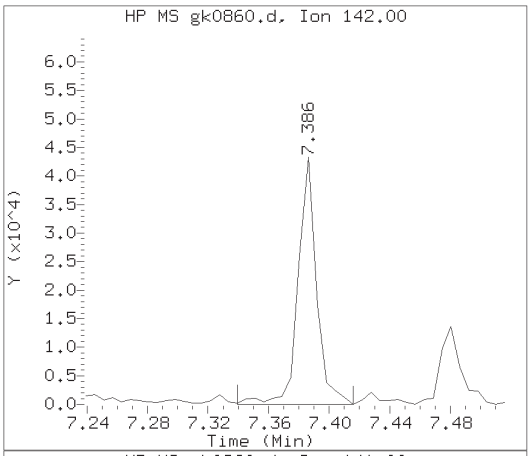
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	: 37
Compound Name	: 4-Methylphenol
Scan Number	: 683
Retention Time (minutes)	: 5.904
Relative Retention Time	: 0.00000
Quant Ion	: 108.00
Area (flag)	: 19416
On-column Amount (ng/ul)	: 1.1901

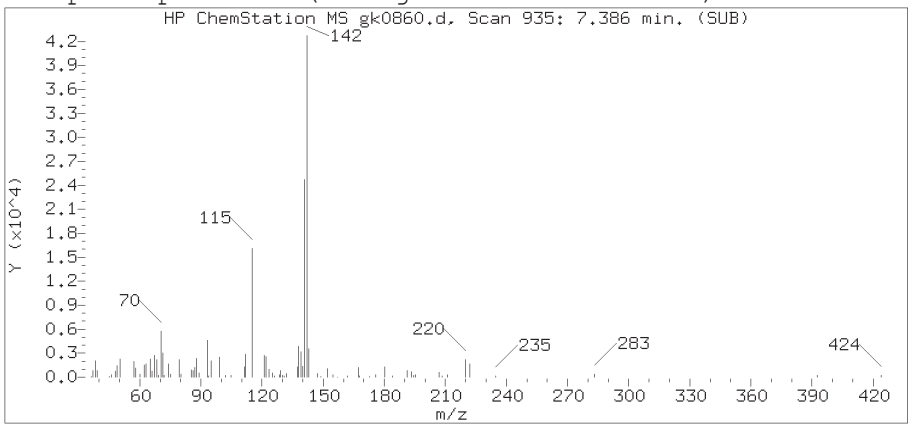
Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

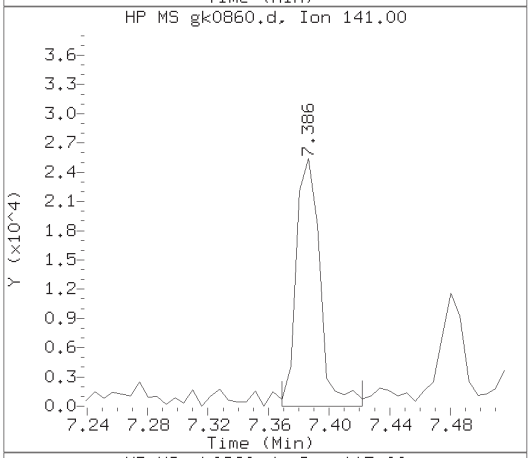
Reference Standard Spectrum for 2-Methylnaphthalene



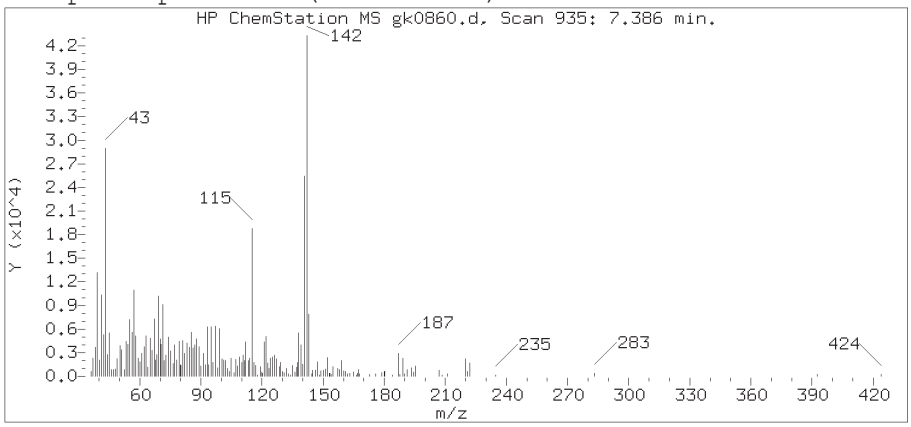


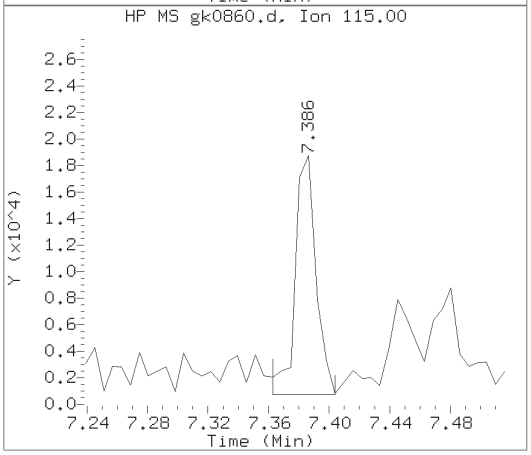
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/18nov16.b/gk0860.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 17:42 Analyst ID: whs02991

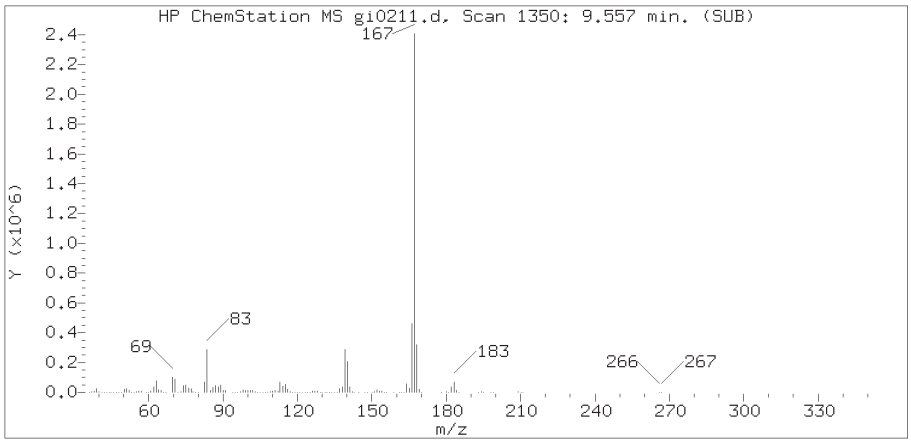
Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

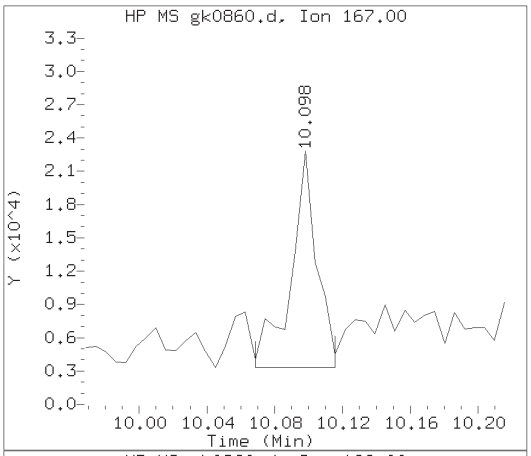
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	: 83
Compound Name	: 2-Methylnaphthalene
Scan Number	: 935
Retention Time (minutes)	: 7.386
Relative Retention Time	:-0.00000
Quant Ion	: 142.00
Area (flag)	: 36580
On-column Amount (ng/ul)	: 1.2149

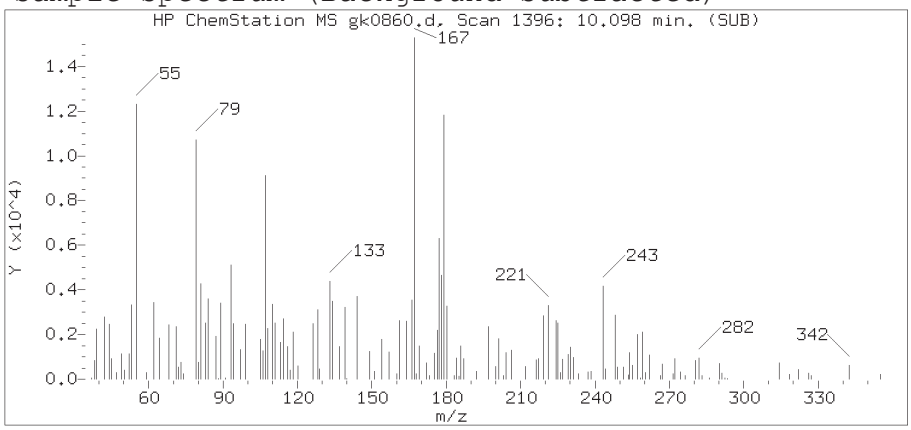
Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

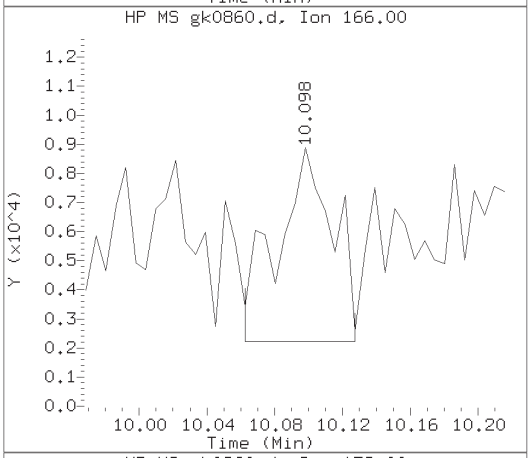
Reference Standard Spectrum for Carbazole



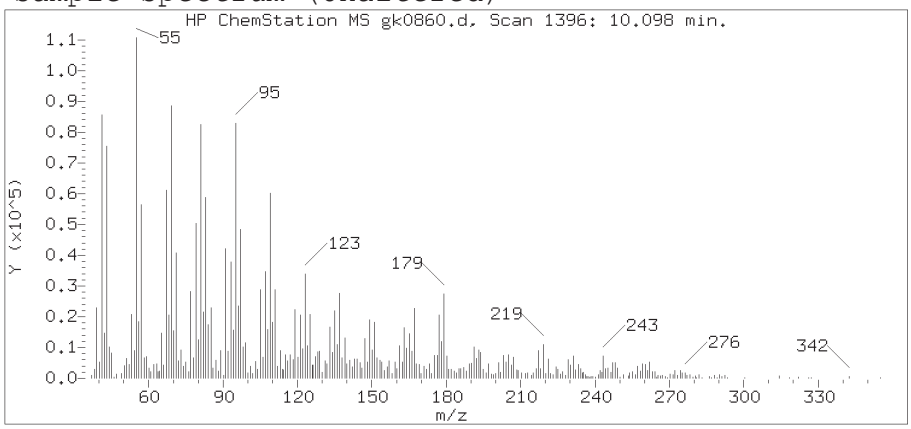


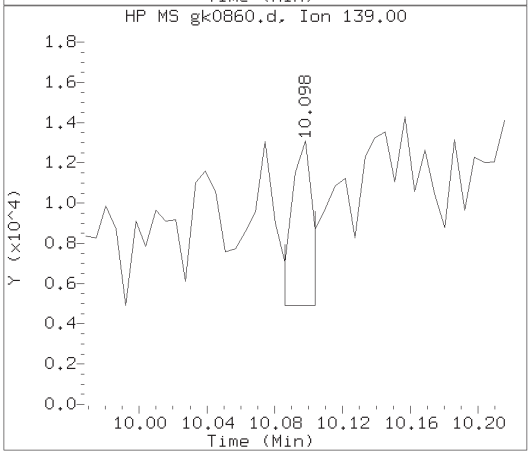
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/18nov16.b/gk0860.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 17:42 Analyst ID: whs02991

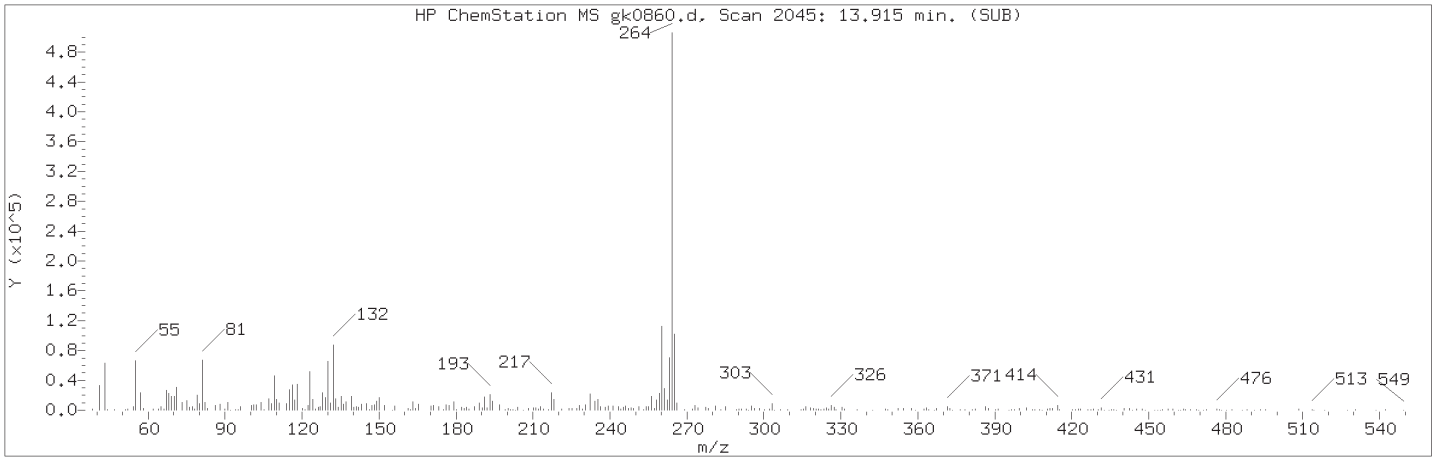
Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: T1005RE Lab Sample ID: 9867767RE

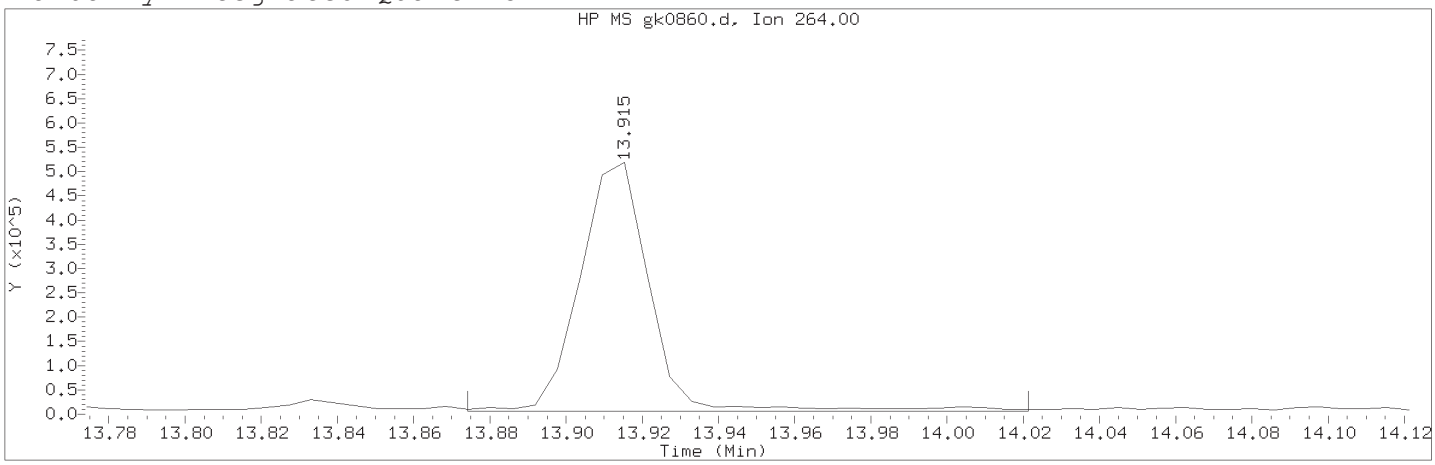
Compound Number	: 163
Compound Name	: Carbazole
Scan Number	: 1396
Retention Time (minutes)	: 10.098
Relative Retention Time	:-0.00060
Quant Ion	: 167.00
Area (flag)	: 20551
On-column Amount (ng/ul)	: 0.5081

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0860.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 17:42 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: T1005RE Lab Sample ID: 9867767RE

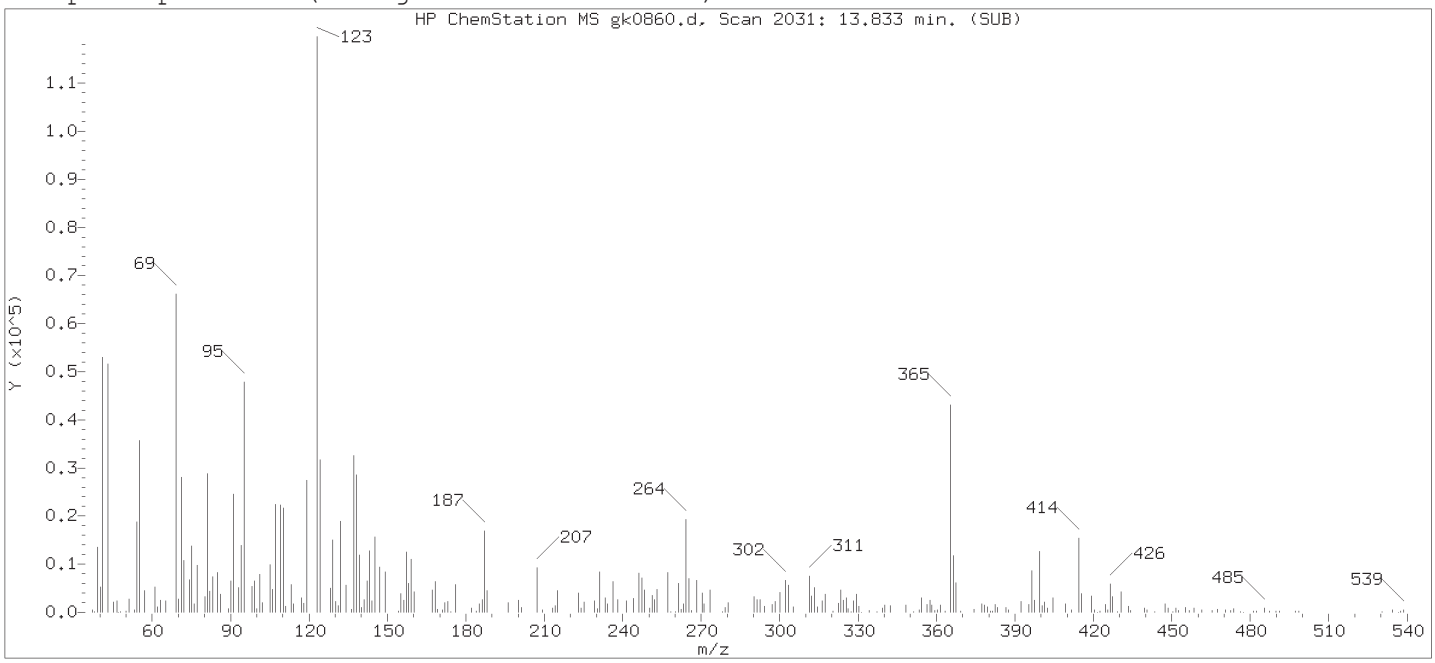
Compound Number : 213
Compound Name : Perylene-d12
Scan Number : 2045
Retention Time (minutes) : 13.915
Quant Ion : 264.00
Area (flag) : 656198A
On-column Amount (ng/ul) : 20.0000
Integration start scan : 2037 Integration stop scan: 2062
Y at integration start : 5885 Y at integration end: 5885

Reason for manual integration: improper integration

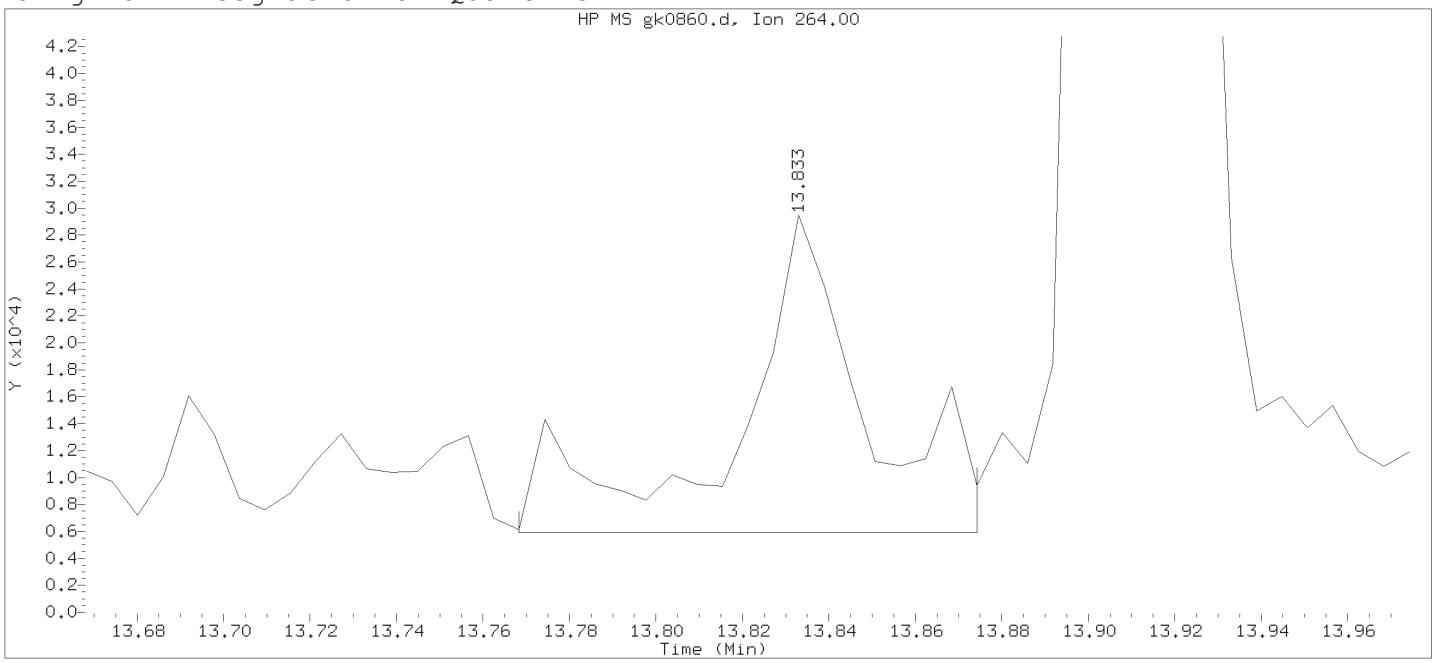
Analyst responsible for change: Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:14.
Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Chad A. Moline on 11/20/2018 at 12:59.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0860.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 17:42 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 16-NOV-2018 14:59
Date, time and analyst ID of latest file update: 16-Nov-2018 18:03 Automation

Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	: 213		
Compound Name	: Perylene-d12		
Scan Number	: 2031		
Retention Time (minutes)	: 13.833		
Quant Ion	: 264.00		
Area	: 48398		
On-column Amount (ng/ul)	: 20.0000		
Integration start scan	: 2019	Integration stop scan:	2037
Y at integration start	: 5885	Y at integration end:	5885

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:14.
Target 3.5 esignature used [illegible]

Standards Data

Semivolatiles by GC/MS

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP11165 **HP #07**

Data Directory Path is - D:\data\18nov11\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
em10340	GK0550.D	DFTPP2408	11/11/2018	09:38		
em10340	GK0550a.D	DFTPP2408	11/11/2018	09:53		
em10340	GK0550b.D	DFTPP2408	11/11/2018	10:08		
em10340	GK0550c.D	DFTPP2408	11/11/2018	10:20		
em10340	GK0551.D	STD2928	11/11/2018	10:36		
em10340	GK0552.D	STD2928	11/11/2018	12:07		
em10340	GK0553.D	STD2928	11/11/2018	12:31		
em10340	GK0554.D	STD2928	11/11/2018	12:55		
em10340	GK0555.D	STD2928	11/11/2018	13:20		
em10340	GK0556.D	STD2928	11/11/2018	13:44		
em10340	GK0557.D	STD2928	11/11/2018	14:08		
em10340	GK0558.D	STD2928	11/11/2018	14:32		
em10340	GK0559.D	MDL2928	11/11/2018	14:57		
em10340	GK0560.D	MDLPAH2928	11/11/2018	15:21		
em10340	GK0561.D	ICV2968	11/11/2018	15:45		
em10340	GK0562.D	BAS3108	11/11/2018	16:10		
em10340	GK0563.D	BAS3108	11/11/2018	16:34		
em10340	GK0564.D	BAS3108	11/11/2018	16:58		
em10340	GK0565.D	BAS3108	11/11/2018	17:22		
em10340	GK0566.D	BAS3108	11/11/2018	17:47		
em10340	GK0567.D	BAS3108	11/11/2018	18:11		
em10340	GK0568.D	BASMDL3108	11/11/2018	18:36		
em10340	GK0569.D	BASICV2578	11/11/2018	19:01		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP11165 **HP #07**

Data Directory Path is - D:\data\18nov16\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
lmh00956	GK0850.D	DFTPP3108	11/16/2018	09:46		
lmh00956	GK0851.D	STD2928	11/16/2018	10:04		
lmh00956	GK0852.D	BAS3108	11/16/2018	13:33		
lmh00956	GK0853.D	318LELCS	11/16/2018	13:57	18318SLE	
whs02991	GK0854.D	SBLKLB317	11/16/2018	14:51	18317SLB	
whs02991	GK0863.D	SBLKLE318	11/16/2018	15:15	18318SLE	
whs02991	GK0855.D	317LBLCS	11/16/2018	15:39	18317SLB	
whs02991	GK0856.D	317LBLCSD	11/16/2018	16:03	18317SLB	
whs02991	GK0857.D	9867761RE	11/16/2018	16:28	18317SLB	
whs02991	GK0858.D	9867762RE	11/16/2018	16:53	18317SLB	
whs02991	GK0859.D	9867766RE	11/16/2018	17:17	18317SLB	
whs02991	GK0860.D	9867767RE	11/16/2018	17:42	18317SLB	
whs02991	GK0861.D	9872065RE	11/16/2018	18:06	18317SLB	
whs02991	GK0862.D	STD2928	11/16/2018	18:30		
whs02991	GK0863a.D	BAS3108	11/16/2018	18:55		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP23262 **HP #16**

Data Directory Path is - D:\data\18nov09a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
lmh00956	PK0300.D	DFTPP2408	11/09/2018	14:11		
lmh00956	PK0300.D	DFTPP2408	11/09/2018	14:29		
lmh00956	PK0301.D	STD2928	11/09/2018	14:45		
lmh00956	PK0310.D	DFTPP2408	11/09/2018	15:24		
lmh00956	PK0311.D	STD2928	11/09/2018	15:38		
lmh00956	PK0312.D	STD2928	11/09/2018	16:05		
lmh00956	PK0313.D	STD292	11/09/2018	16:29		
lmh00956	PK0314.D	STD2928	11/09/2018	16:52		
lmh00956	PK0315.D	STD2928	11/09/2018	17:15		
lmh00956	PK0316.D	STD2928	11/09/2018	17:38		
lmh00956	PK0317.D	STD2928	11/09/2018	18:01		
lmh00956	PK0318.D	STD2928	11/09/2018	18:24		
lmh00956	PK0319.D	STD2928	11/09/2018	18:48		
lmh00956	PK0320.D	MDL2928	11/09/2018	19:11		
lmh00956	PK0321.D	PAHMDL2928	11/09/2018	19:34		
lmh00956	PK0322.D	ICV2968	11/09/2018	19:57		
lmh00956	PK0323.D	BASICV2578	11/09/2018	20:20		
lmh00956	PK0324.D	ICV2628	11/09/2018	20:43		
lmh00956	PK0325.D	ICV2338	11/09/2018	21:06		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP23262 **HP #16**

Data Directory Path is - D:\data\18nov11\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
apb10206	PK0350.D	DFTPP2408	11/11/2018	19:05		
apb10206	PK0351.D	STD2928	11/11/2018	19:20		
apb10206	PK0350.D	DFTPP2408	11/11/2018	19:43		
apb10206	PK0360.D	DFTPP2408	11/11/2018	19:55		
apb10206	PK0360a.D	DFTPP2408	11/11/2018	20:06		
apb10206	PK0360b.D	DFTPP2408	11/11/2018	20:21		
apb10206	PK0360c.D	DFTPP2408	11/11/2018	20:31		
apb10206	PK0360d.D	DFTPP2408	11/11/2018	20:44		
apb10206	PK0361.D	STD2928	11/11/2018	20:58		
apb10206	PK0362.D	BAS3108	11/11/2018	21:23		
apb10206	PK0363.D	SBLKLI302	11/11/2018	21:57	18302SLI	
apb10206	PK0367.D	SBLKLA311	11/11/2018	22:21	18311SLA	
apb10206	PK0364.D	302LILCS	11/11/2018	22:44	18302SLI	
apb10206	PK0368.D	311LALCS	11/11/2018	23:08	18311SLA	
apb10206	PK0371.D	9867761	11/11/2018	23:31	18302SLI	
apb10206	PK0372.D	9867762	11/11/2018	23:55	18302SLI	
apb10206	PK0373.D	9867763	11/12/2018	00:18	18302SLI	
apb10206	PK0374.D	9867764	11/12/2018	00:41	18302SLI	
apb10206	PK0375.D	9867766	11/12/2018	01:05	18302SLI	
apb10206	PK0376.D	9867767	11/12/2018	01:28	18302SLI	
apb10206	PK0377.D	9872064	11/12/2018	01:51	18302SLI	
apb10206	PK0378.D	9872065	11/12/2018	02:14	18302SLI	
apb10206	PK0392a.D	STD2928x	11/12/2018	02:38		
apb10206	PK0379.D	9884645	11/12/2018	03:01	18311SLA	
apb10206	PK0380.D	9884646	11/12/2018	03:24	18311SLA	
apb10206	PK0381.D	9884647	11/12/2018	03:48	18311SLA	5
apb10206	PK0382.D	9885261	11/12/2018	04:11	18311SLA	5
apb10206	PK0383.D	9884806	11/12/2018	04:34	18311SLA	5
apb10206	PK0384.D	9884807	11/12/2018	04:57	18311SLA	5
apb10206	PK0385.D	9884808	11/12/2018	05:20	18311SLA	5
apb10206	PK0386.D	9884809	11/12/2018	05:43	18311SLA	5
apb10206	PK0387.D	9884810	11/12/2018	06:06	18311SLA	5
apb10206	PK0388.D	9884811	11/12/2018	06:30	18311SLA	5
apb10206	PK0389.D	9884813	11/12/2018	06:53	18311SLA	5
apb10206	PK0390.D	9884814	11/12/2018	07:16	18311SLA	5
apb10206	PK0391.D	9884815	11/12/2018	07:40	18311SLA	5
apb10206	PK0392.D	STD2928	11/12/2018	08:03		
apb10206	PK0393.D	BAS3108	11/12/2018	08:26		

Data File: /chem/HP11165.i/18nov11.b/gk0550c.d

Date : 11-NOV-2018 10:20

Client ID: DFTPP

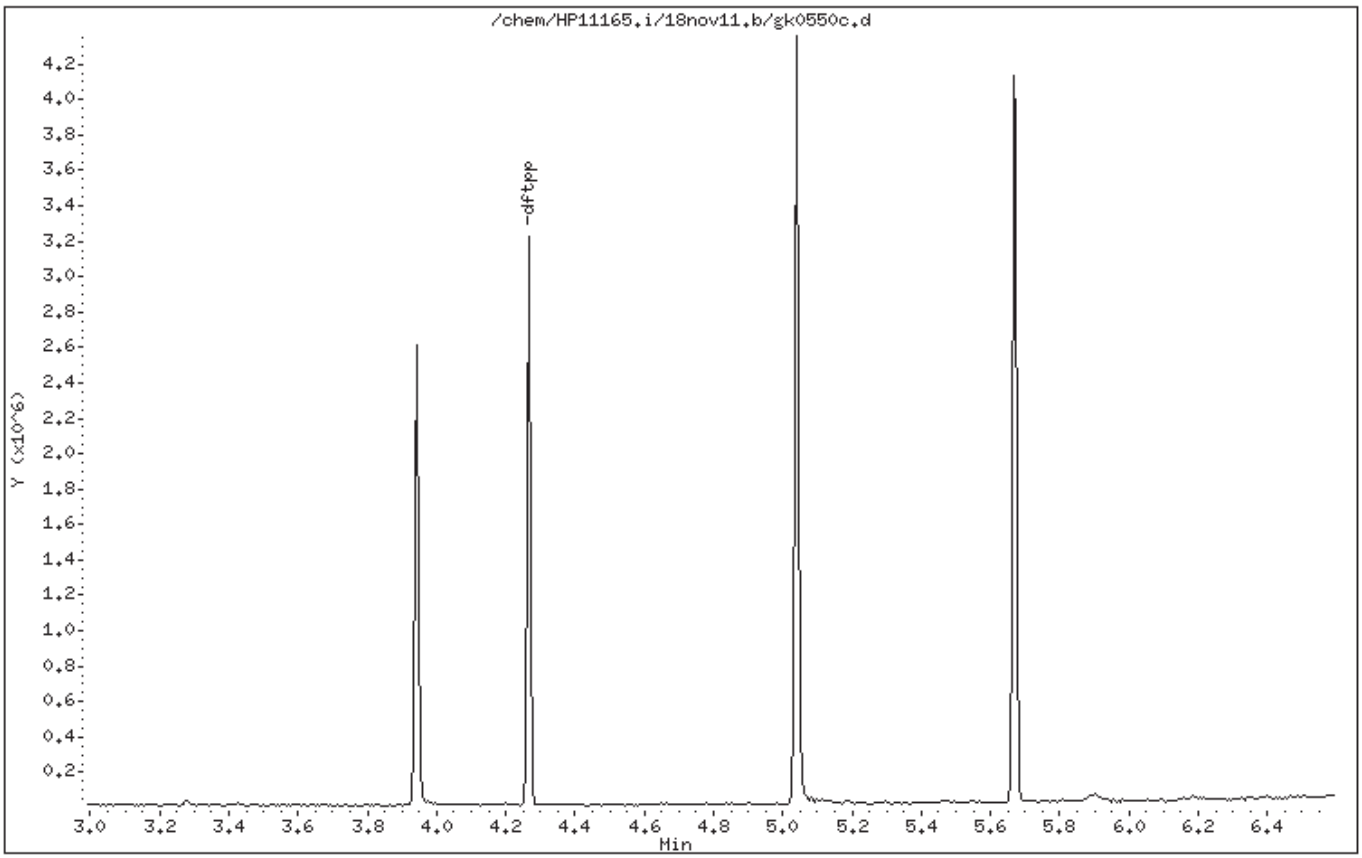
Instrument: HP11165.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Edward Monborne on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Data File: /chem/HP11165.i/18nov11.b/gk0550c.d

Date : 11-NOV-2018 10:20

Client ID: DFTPP

Instrument: HP11165.i

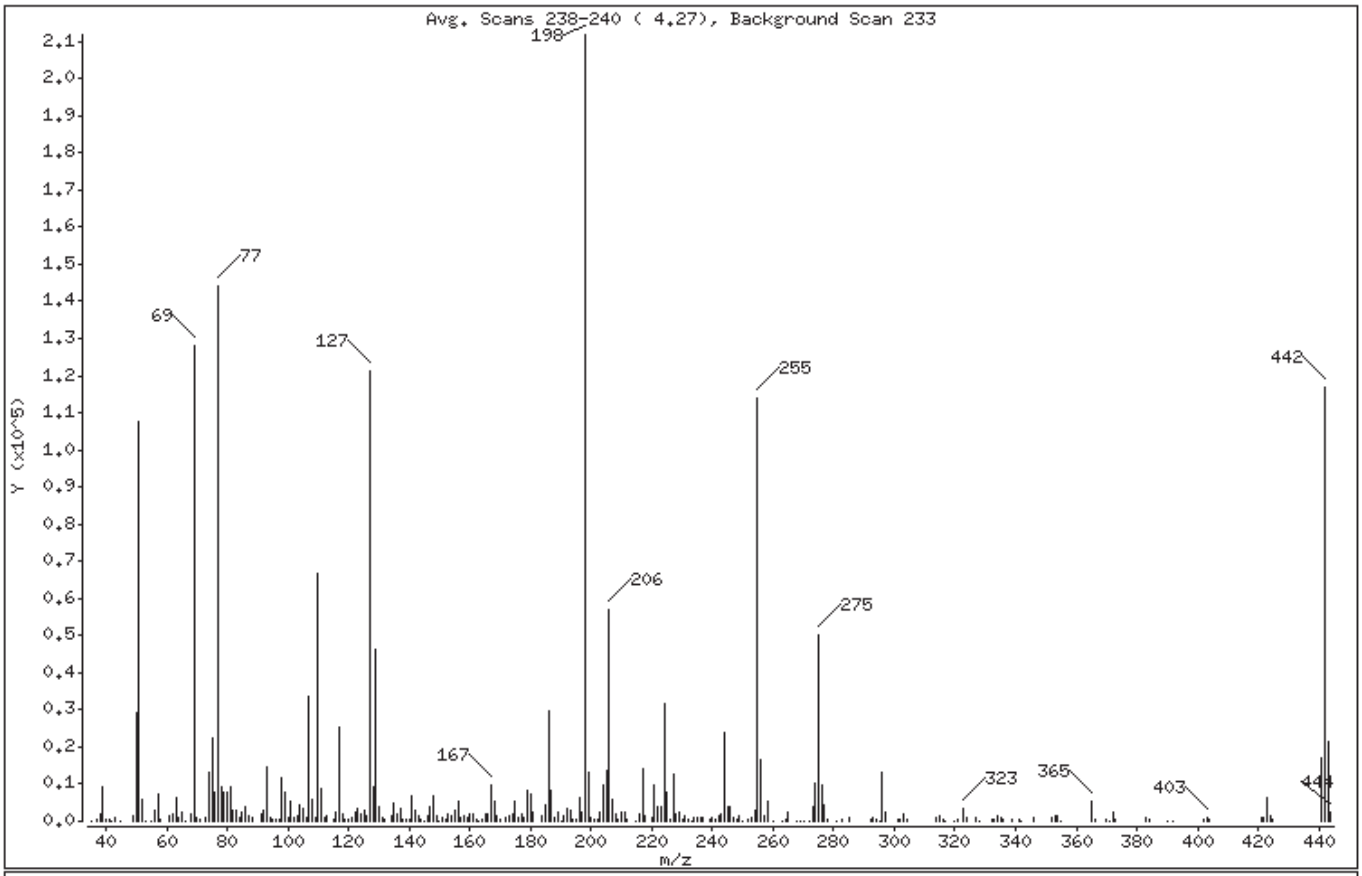
Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	50.81
68	Less than 2.00% of mass 69	0.83 (1.37)
69	Mass 69 relative abundance	60.47
70	Less than 2.00% of mass 69	0.51 (0.84)
127	10.00 - 80.00% of mass 198	57.18
197	Less than 2.00% of mass 198	1.25
199	5.00 - 9.00% of mass 198	6.26
275	10.00 - 60.00% of mass 198	23.77
365	Greater than 1.00% of mass 198	2.56
441	0.01 - 24.00% of mass 442	8.15 (14.75)
442	50.00 - 99.99% of mass 198	55.22
443	15.00 - 24.00% of mass 442	10.12 (18.32)

Digitally signed by Edward Monborne on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Date : 11-NOV-2018 10:20

Client ID: DFTPP Instrument: HP11165.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS Column diameter: 0.18

Data File: gk0550c.d
Spectrum: Avg. Scans 238-240 (4.27), Background Scan 233
Location of Maximum: 198.00
Number of points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	230	117.00	25488	190.00	134	269.00	59
37.00	548	118.00	2076	191.00	1357	270.00	67
38.00	2184	119.00	637	192.00	3597	272.00	200
39.00	9037	120.00	308	193.00	2779	273.00	4127
40.00	449	121.00	754	194.00	518	274.00	10303
41.00	292	122.00	2368	195.00	410	275.00	50352
42.00	123	123.00	3341	196.00	6474	276.00	9617
43.00	764	124.00	1910	197.00	2640	277.00	4560
45.00	183	125.00	2931	198.00	211776	278.00	659
49.00	1543	126.00	1499	199.00	13255	281.00	50
50.00	29088	127.00	121128	200.00	1022	283.00	655
51.00	107624	128.00	9097	201.00	363	285.00	741
52.00	6068	129.00	46216	202.00	270	292.00	542
53.00	90	130.00	4099	203.00	2621	293.00	994
55.00	60	131.00	993	204.00	9975	294.00	364
56.00	2836	132.00	580	205.00	13453	295.00	192
57.00	7114	134.00	1508	206.00	57040	296.00	13010
58.00	470	135.00	4633	207.00	5648	297.00	2249
61.00	1590	136.00	1889	208.00	1826	301.00	389
62.00	1784	137.00	3237	209.00	531	302.00	508
63.00	6414	138.00	297	210.00	2452	303.00	1747
64.00	1078	139.00	400	211.00	2560	304.00	600
65.00	2339	140.00	630	212.00	415	314.00	869
66.00	57	141.00	6864	215.00	80	315.00	1428
68.00	1752	142.00	2836	216.00	1730	316.00	637
69.00	128096	143.00	1539	217.00	14099	317.00	81
70.00	1071	144.00	348	218.00	1357	320.00	56
71.00	262	145.00	72	220.00	1132	321.00	437
73.00	886	146.00	1519	221.00	9896	323.00	3604
74.00	13038	147.00	3678	222.00	4093	324.00	1017
75.00	22408	148.00	6914	223.00	3986	327.00	927
76.00	7858	149.00	1482	224.00	31568	328.00	240
77.00	144064	150.00	166	225.00	8013	332.00	262
78.00	9365	151.00	996	226.00	685	333.00	410
79.00	7827	152.00	500	227.00	12777	334.00	1602

Digitally signed by Edward Monborne on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Date : 11-NOV-2018 10:20

Client ID: DFTPP Instrument: HP11165.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS Column diameter: 0.18

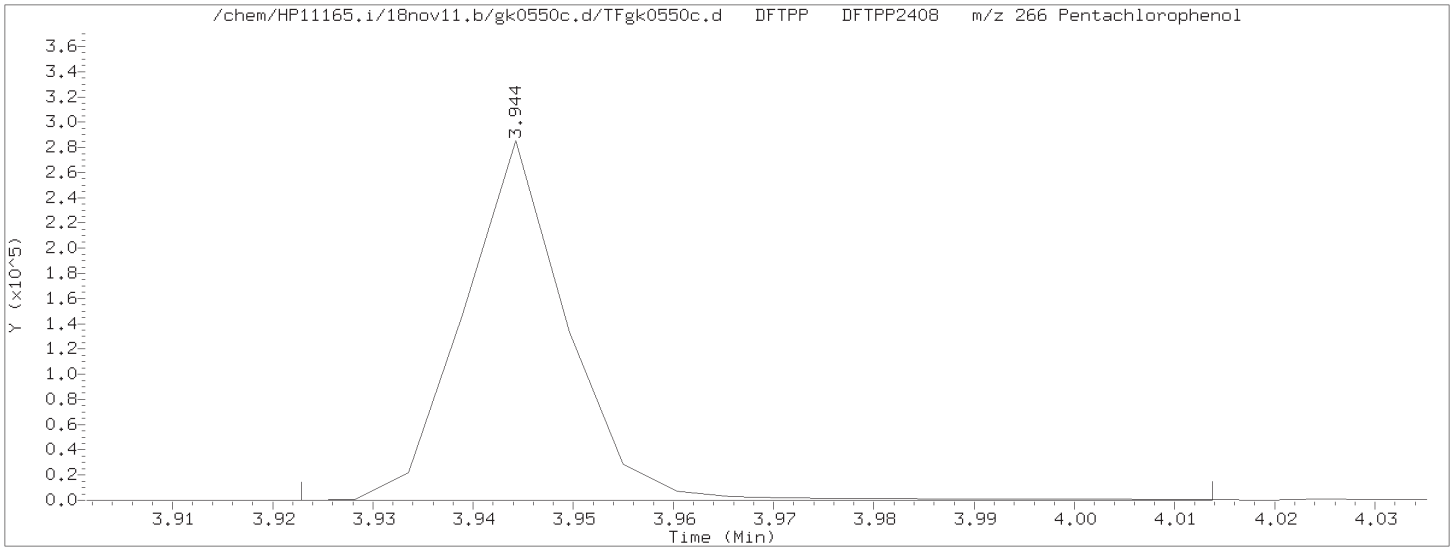
Data File: gk0550c.d
Spectrum: Avg. Scans 238-240 (4.27), Background Scan 233
Location of Maximum: 198.00
Number of points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	7573	153.00	1835	228.00	1763	335.00	828
81.00	9030	154.00	1336	229.00	2487	336.00	412
82.00	2689	155.00	3110	230.00	442	339.00	259
83.00	2887	156.00	5138	231.00	1248	341.00	543
84.00	762	157.00	950	232.00	282	342.00	101
85.00	2331	158.00	1629	233.00	186	346.00	737
86.00	4026	159.00	1058	234.00	986	352.00	1062
87.00	1651	160.00	1766	235.00	1039	353.00	1599
88.00	1031	161.00	2147	236.00	823	354.00	1322
91.00	2041	162.00	609	237.00	1083	355.00	71
92.00	2915	163.00	68	239.00	447	365.00	5415
93.00	14604	164.00	330	240.00	1129	366.00	630
94.00	1089	165.00	1828	241.00	641	370.00	300
95.00	622	166.00	1885	242.00	1493	371.00	237
96.00	300	167.00	9906	243.00	1725	372.00	2417
97.00	522	168.00	5262	244.00	23968	373.00	500
98.00	11848	169.00	1358	245.00	3805	383.00	745
99.00	7553	170.00	484	246.00	4121	384.00	358
100.00	1030	172.00	1184	247.00	886	390.00	131
101.00	5475	173.00	1438	248.00	552	392.00	228
102.00	908	174.00	1746	249.00	1402	402.00	713
103.00	1538	175.00	5126	250.00	236	403.00	1008
104.00	4240	176.00	1048	252.00	336	404.00	559
105.00	3167	177.00	2010	253.00	910	421.00	732
106.00	1125	178.00	985	254.00	2758	422.00	1094
107.00	33472	179.00	8196	255.00	114080	423.00	6298
108.00	5967	180.00	7281	256.00	16369	424.00	1560
109.00	1069	181.00	2601	257.00	1392	425.00	253
110.00	66680	184.00	1232	258.00	5233	441.00	17248
111.00	8608	185.00	4262	260.00	154	442.00	116976
112.00	911	186.00	29744	263.00	177	443.00	21432
113.00	1438	187.00	8196	264.00	498	444.00	2567
115.00	248	188.00	1135	265.00	2281		
116.00	2376	189.00	2571	268.00	144		

Digitally signed by Edward Monborne on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Assessment of GC Column Performance and Injection Port Inertness for

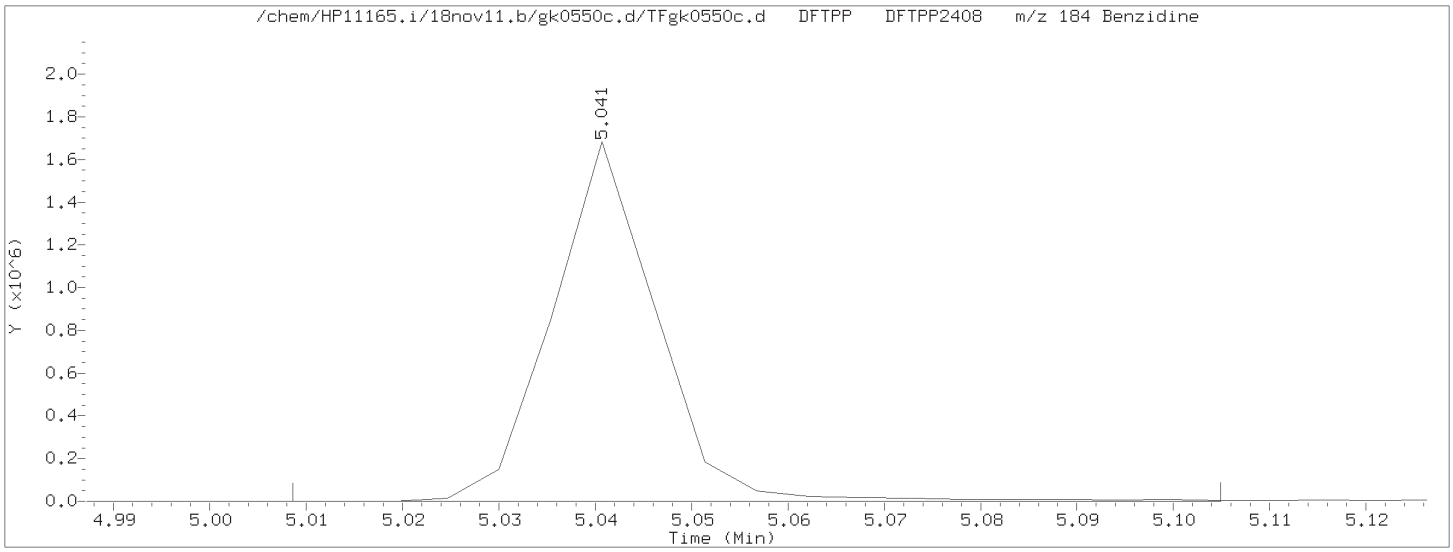
Instrument ID: HP11165.i Injection Date: 11-NOV-2018 10:20 Operator: em10340



Pentachlorophenol EICP peak height = 285376 EICP peak height at 10% = 28538 Pentachlorophenol EICP area = 204040

Pentachlorophenol EICP peak apex (min.) = 3.944
RT at 10% of front half of EICP (min.) = 3.934 'Front' peak width (min.) = 0.0104166667
RT at 10% of back half of EICP (min.) = 3.955 'Tailing' peak width (min.) = 0.0107666667

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0107666667}{0.0104166667} = 1.034$



Benzidine EICP peak height = 1684480 EICP peak height at 10% = 168448 Benzidine EICP area = 1268374

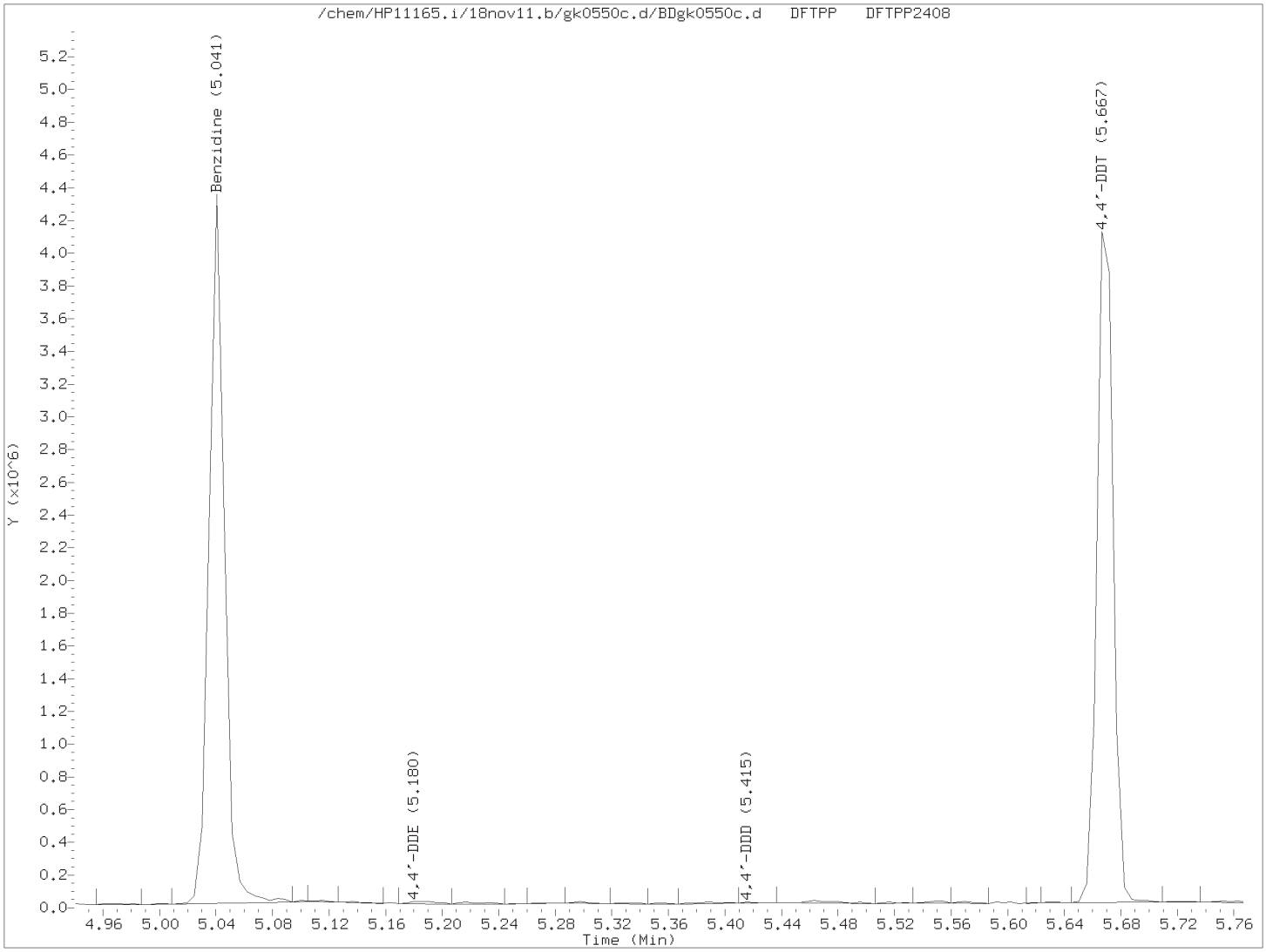
Benzidine EICP peak apex (min.) = 5.041
RT at 10% of front half of EICP (min.) = 5.030 'Front' peak width (min.) = 0.0105333333
RT at 10% of back half of EICP (min.) = 5.052 'Tailing' peak width (min.) = 0.0112333333

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0112333333}{0.0105333333} = 1.066$

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

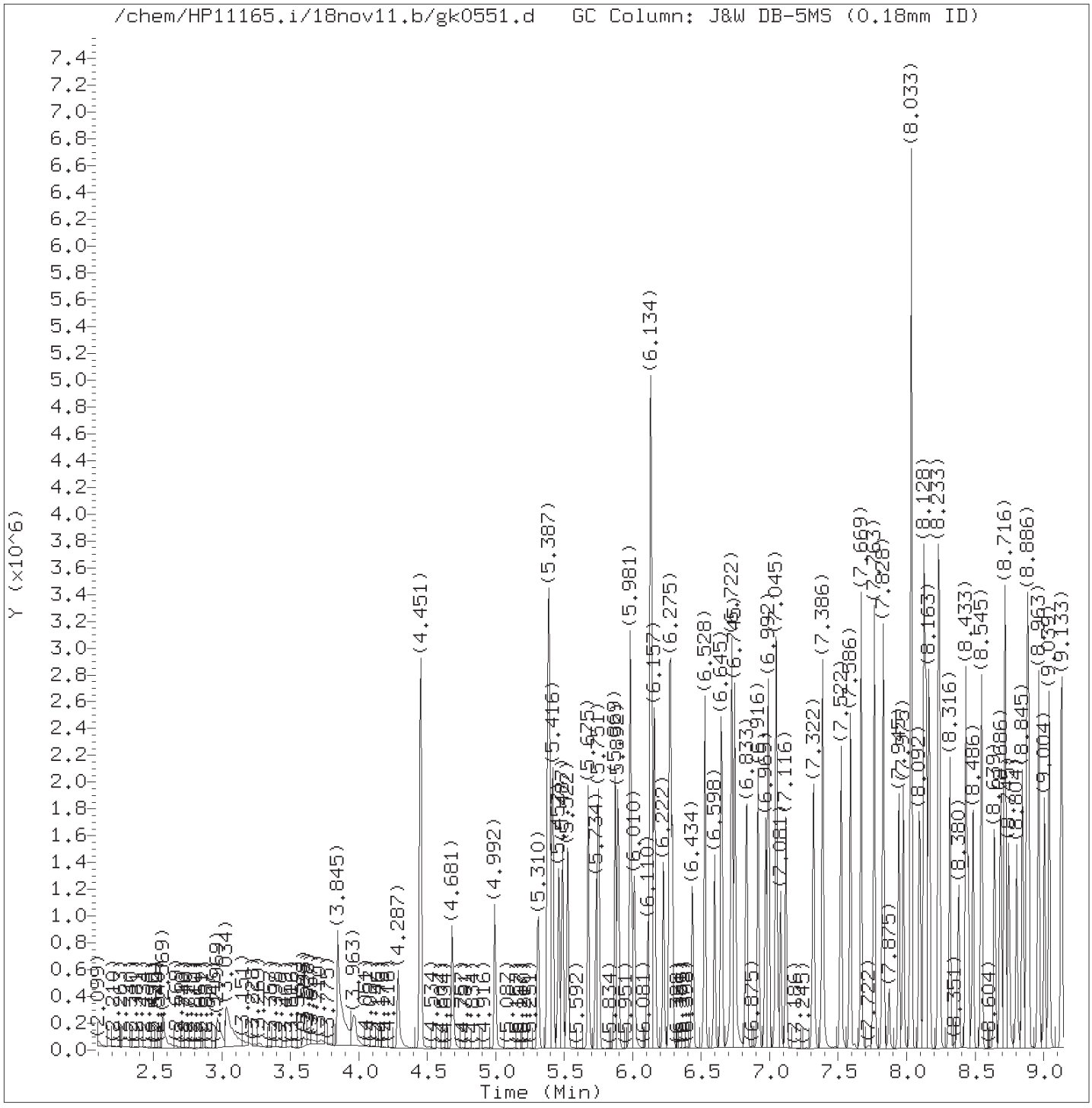
Instrument ID: HP11165.i Injection Date: 11-NOV-2018 10:20 Operator: em10340



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{21260 + 4754}{21260 + 4754 + 3323748} \times 100 = 0.8$$

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

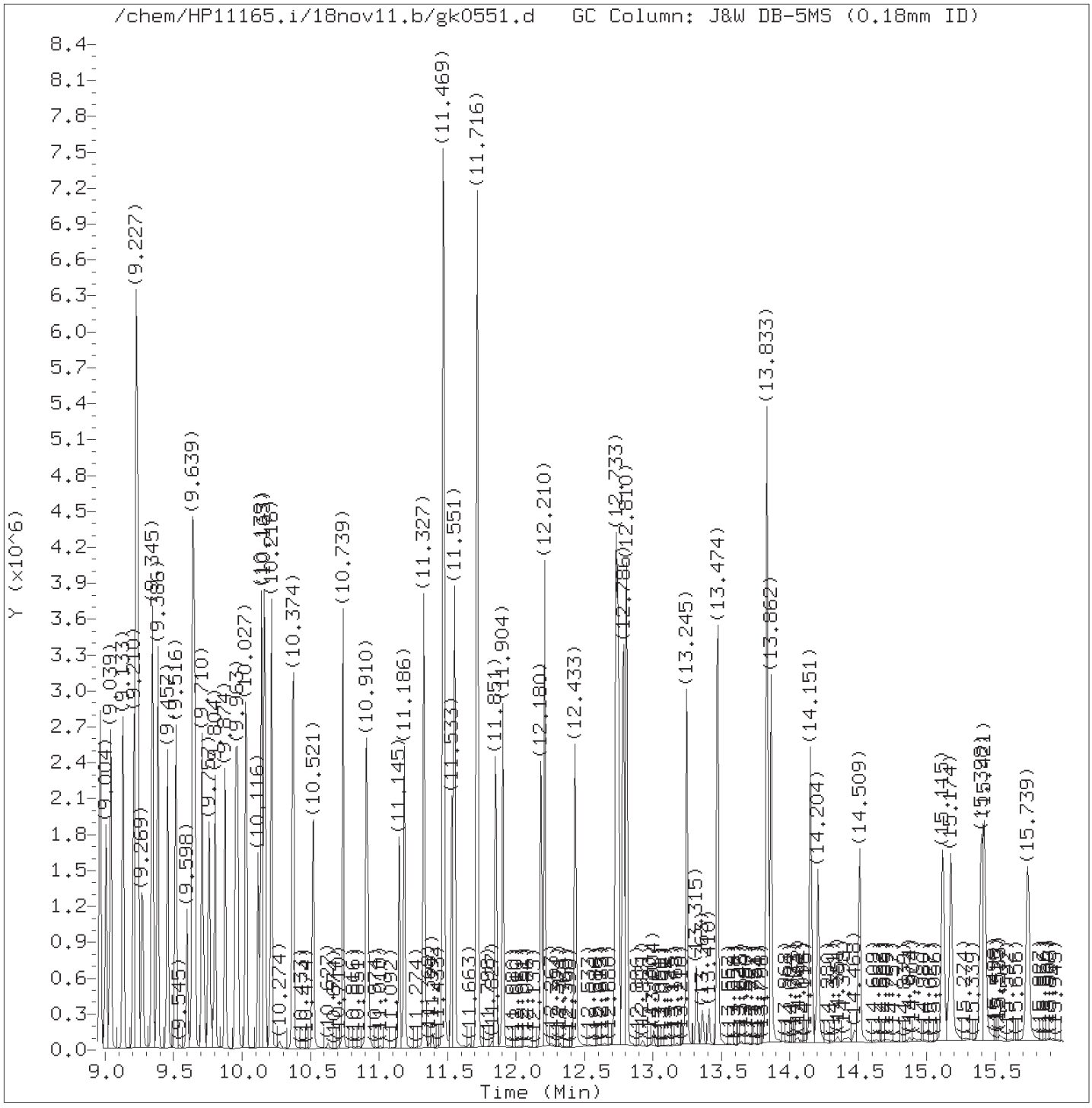
Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 10:36 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD030 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 10:36 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD030 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 10:36 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.569	88	183742	30.000
4) N-Nitrosodimethylamine	(1)	2.969	74	264398	30.000
5) Pyridine	(1)	3.028	79	436331	30.000
7) 2-Picoline	(1)	3.845	93	467073	30.000
8) N-Nitrosomethylethylamine	(1)	3.975	88	240361	30.000
9) Methyl methanesulfonate	(1)	4.287	80	253617	30.000
11)$2-Fluorophenol	(1)	4.451	112	740634	60.000
13) N-Nitrosodiethylamine	(1)	4.681	102	226661	30.000
15) Ethyl methanesulfonate	(1)	4.992	109	221550	30.000
17)$Phenol-d6	(1)	5.381	99	1163231	60.000
18) Phenol	(1)	5.392	94	667880	30.000
19) Aniline	(1)	5.416	93	769691	30.000
20) a-methylstyrene	(1)	5.463	118	36890	30.000
22) bis(2-Chloroethyl)ether	(1)	5.487	93	473095	30.000
23) 2-Chlorophenol	(1)	5.522	128	381346	30.000
42) Total Cresols	(1)			865551	60.000
24) 1,3-Dichlorobenzene	(1)	5.675	146	404570	30.000
25)*1,4-Dichlorobenzene-d4	(1)	5.734	152	157805	20.000
26) 1,4-Dichlorobenzene	(1)	5.751	146	405580	30.000
27) Benzyl alcohol	(1)	5.869	108	291082	30.000
28) 1,2-Dichlorobenzene	(1)	5.892	146	388901	30.000
30) Indene	(1)	5.981	115	442836	30.000
31) 2-Methylphenol	(1)	5.987	108	420540	30.000
33) 2,2'-oxybis(1-Chloropropane)	(1)	6.010	45	498629	30.000
34) bis(2-Chloroisopropyl)ether	(1)	6.010	45	498629	30.000
35) N-Nitrosopyrrolidine	(1)	6.110	100	233794	30.000
36) Acetophenone	(1)	6.128	105	616342	30.000
37) 4-Methylphenol	(1)	6.134	108	445011	30.000
38) N-Nitroso-di-n-propylamine	(1)	6.139	70	422629	30.000
39) N-Nitrosomorpholine	(1)	6.151	56	302838	30.000
40) o-Toluidine	(1)	6.163	106	708603	30.000
43) Hexachloroethane	(1)	6.222	117	162790	30.000
44)$Nitrobenzene-d5	(2)	6.275	82	1082706	60.000
45) Nitrobenzene	(2)	6.286	77	572145	30.000
48) N-Nitrosopiperidine	(2)	6.439	114	221206	30.000
50) Isophorone	(2)	6.528	82	1065469	30.000
51) 2-Nitrophenol	(2)	6.598	139	207067	30.000
53) 2,4-Dimethylphenol	(2)	6.645	107	463737	30.000
57) O,O,O-Triethylphosphorothioate	(2)	6.722	198	206887	30.000
55) bis(2-Chloroethoxy)methane	(2)	6.745	93	577480	30.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 10:36 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
56) Benzoic acid	(2)	6.745	105	459102	40.000
60) 2,4-Dichlorophenol	(2)	6.833	162	328468	30.000
62) 1,2,4-Trichlorobenzene	(2)	6.916	180	328310	30.000
65)*Naphthalene-d8	(2)	6.969	136	667588	20.000
66) Naphthalene	(2)	6.992	128	1154744	30.000
67) 4-Chloroaniline	(2)	7.045	127	475457	30.000
68) 2,6-Dichlorophenol	(2)	7.051	162	314306	30.000
69) Hexachloropropene	(2)	7.081	213	162089	30.000
71) Hexachlorobutadiene	(2)	7.116	225	181128	30.000
75) Quinoline	(2)	7.322	129	751999	30.000
97) Isosafrole	(3)			316940	30.000
77) N-Nitrosodi-n-butylamine	(2)	7.386	84	494609	30.000
76) Caprolactam	(2)	7.392	113	138629	30.000
80) 4-Chloro-3-methylphenol	(2)	7.522	107	416646	30.000
82) Safrole	(2)	7.586	162	312784	30.000
83) 2-Methylnaphthalene	(2)	7.669	142	795760	30.000
84) 1-Methylnaphthalene	(2)	7.763	142	783846	30.000
85) Hexachlorocyclopentadiene	(3)	7.828	237	169513	30.000
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.833	216	310209	30.000
88) cis-Isosafrole	(3)	7.875	162	57245	5.100
90) 2,4,6-Trichlorophenol	(3)	7.945	196	230332	30.000
92) 2,4,5-Trichlorophenol	(3)	7.975	196	242191	30.000
93)$2-Fluorobiphenyl	(3)	8.033	172	1777457	60.000
120) 2,4_2,6-Dinitrotoluenes	(3)			488423	60.000
94) trans-Isosafrole	(3)	8.092	162	259695	24.900
95) 1,1'-Biphenyl	(3)	8.128	154	974966	30.000
96) 2-Chloronaphthalene	(3)	8.145	162	697281	30.000
98) 1-Chloronaphthalene	(3)	8.163	162	777807	30.000
99) Diphenyl ether	(3)	8.233	170	538855	30.000
100) 2-Nitroaniline	(3)	8.245	138	248466	30.000
104) 1,4-Naphthoquinone	(3)	8.316	158	320495	30.000
105) 1,4-Dinitrobenzene	(3)	8.380	168	132836	30.000
106) Dimethylphthalate	(3)	8.433	163	886990	30.000
107) 1,3-Dinitrobenzene	(3)	8.451	168	147248	30.000
108) 2,6-Dinitrotoluene	(3)	8.486	165	216822	30.000
109) Acenaphthylene	(3)	8.545	152	1090421	30.000
112) 3-Nitroaniline	(3)	8.645	138	224155	30.000
113)*Acenaphthene-d10	(3)	8.686	164	367881	20.000
114) Acenaphthene	(3)	8.716	153	782043	30.000
115) 2,4-Dinitrophenol	(3)	8.745	184	178132	40.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 10:36 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Diallate trans/cis	(4)			548197	30.000
116) 4-Nitrophenol	(3)	8.804	109	152478	30.000
117) Pentachlorobenzene	(3)	8.845	250	285871	30.000
118) 2,4-Dinitrotoluene	(3)	8.875	165	271601	30.000
119) Dibenzofuran	(3)	8.886	168	1119198	30.000
121) 1-Naphthylamine	(3)	8.963	143	839702	30.000
122) 2,3,4,6-Tetrachlorophenol	(3)	9.004	232	200035	30.000
123) 2-Naphthylamine	(3)	9.039	143	835764	30.000
124) Diethylphthalate	(3)	9.133	149	912307	30.000
125) Thionazin	(3)	9.210	107	162905	30.000
126) Fluorene	(3)	9.222	166	922135	30.000
128) 5-Nitro-o-toluidine	(3)	9.233	152	261150	30.000
127) 4-Chlorophenyl-phenylether	(3)	9.233	204	430078	30.000
129) 4-Nitroaniline	(3)	9.239	138	261514	30.000
130) 4,6-Dinitro-2-methylphenol	(4)	9.275	198	163460	30.000
131) N-Nitrosodiphenylamine	(4)	9.345	169	806194	30.000
132) NDPA as diphenylamine	(4)	9.345	169	806194	30.000
134) 1,2-Diphenylhydrazine	(4)	9.386	77	1243997	30.000
135)$2,4,6-Tribromophenol	(3)	9.457	330	177342	60.000
137) Tetraethyldithiopyrophosphate	(4)	9.516	97	184692	30.000
139) 1,3,5-Trinitrobenzene	(4)	9.598	213	99495	30.000
140) Diallate (peak 1)	(4)	9.639	86	465138	24.900
141) Phorate	(4)	9.645	75	763848	30.000
142) Phenacetin	(4)	9.657	108	529312	30.000
143) 4-Bromophenyl-phenylether	(4)	9.710	248	236750	30.000
144) Diallate (peak 2)	(4)	9.722	86	83059	5.100
145) Hexachlorobenzene	(4)	9.763	284	216806	30.000
147) Dimethoate	(4)	9.804	87	436704	30.000
149) Pentachlorophenol	(4)	9.951	266	155785	30.000
150) 4-Aminobiphenyl	(4)	9.963	169	358715	30.000
151) Pentachloronitrobenzene	(4)	9.969	237	103680	30.000
152) Pronamide	(4)	10.027	173	398473	30.000
153)*Phenanthrene-d10	(4)	10.139	188	724156	20.000
154) Dinoseb	(4)	10.145	211	223711	30.000
155) Phenanthrene	(4)	10.163	178	1342962	30.000
157) Anthracene	(4)	10.216	178	1367270	30.000
163) Carbazole	(4)	10.374	167	1242682	30.000
164) Methyl parathion	(4)	10.516	109	329334	30.000
165) Di-n-butylphthalate	(4)	10.739	149	1560904	30.000
167) Parathion	(4)	10.904	109	210115	30.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 10:36 Analyst ID: em10340

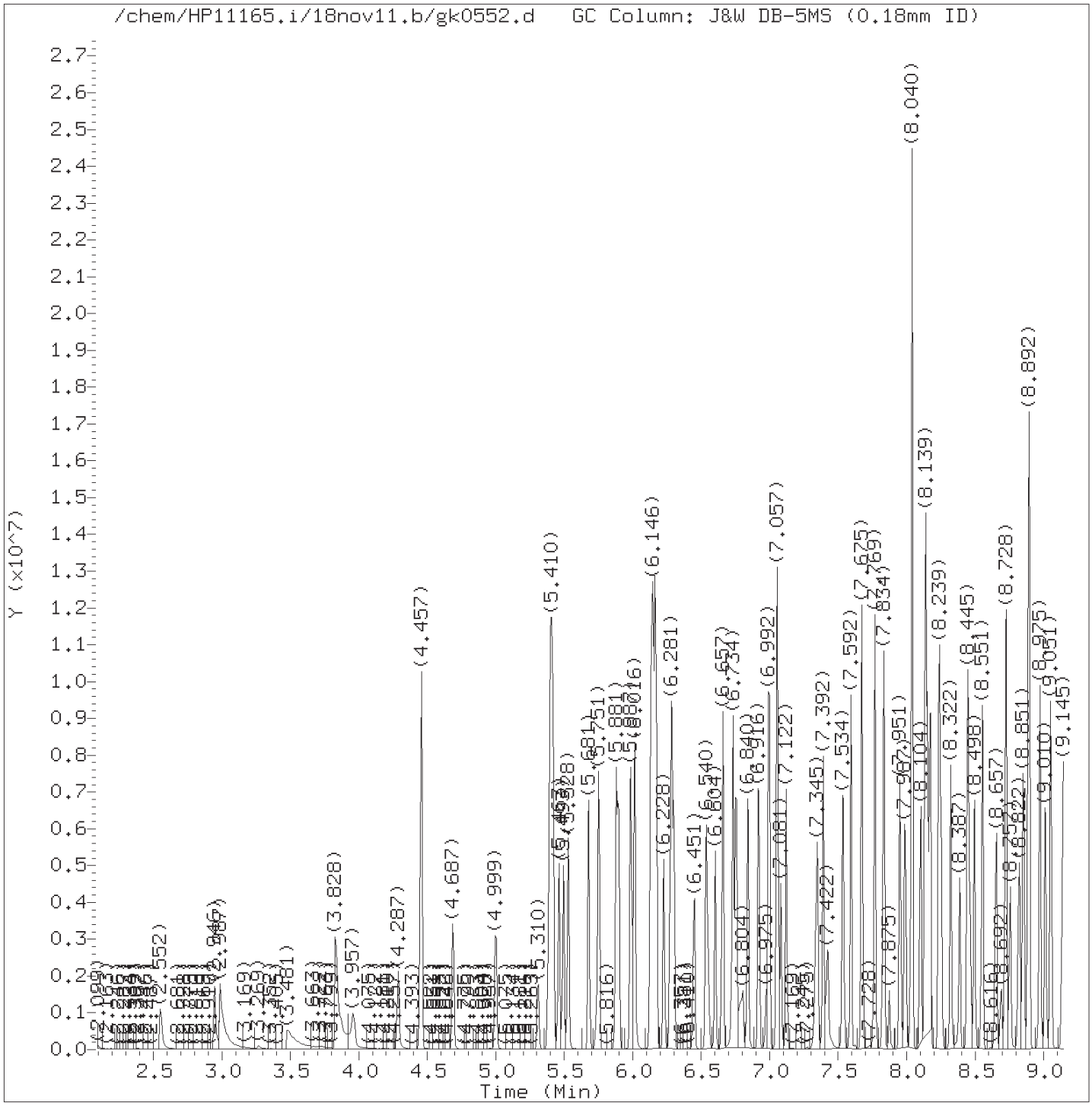
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
168) 4-Nitroquinoline-1-oxide	(4)	10.921	190	119515	30.000
169) Octachlorostyrene	(4)	11.151	308	90504	30.000
171) Isodrin	(4)	11.186	193	154680	30.000
173) Fluoranthene	(4)	11.327	202	1422482	30.000
174) Benzidine	(5)	11.469	184	2855311	90.000
175)*Pyrene-d10	(5)	11.533	212	669260	20.000
177) Pyrene	(5)	11.551	202	1441402	30.000
179)$Terphenyl-d14	(5)	11.716	244	1946386	60.000
182) p-Dimethylaminoazobenzene	(5)	11.851	225	239034	30.000
185) Chlorobenzilate	(5)	11.904	139	462421	30.000
187) 3,3'-Dimethylbenzidine	(5)	12.180	212	806631	30.000
188) Butylbenzylphthalate	(5)	12.210	149	684505	30.000
191) 2-Acetylaminofluorene	(5)	12.433	181	570490	30.000
193) 3,3'-Dichlorobenzidine	(5)	12.727	252	460617	30.000
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.733	231	258498	30.000
195) Benzo(a)anthracene	(5)	12.745	228	1346286	30.000
196) Chrysene	(5)	12.786	228	1284221	30.000
199) bis(2-Ethylhexyl)phthalate	(5)	12.810	149	926249	30.000
203) 6-Methylchrysene	(5)	13.245	242	860187	30.000
205) Di-n-octylphthalate	(6)	13.474	149	1504446	30.000
206) Benzo(b)fluoranthene	(6)	13.833	252	1229066	30.000
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.833	256	560529	30.000
208) Benzo(k)fluoranthene	(6)	13.862	252	1118427	30.000
211) Benzo(a)pyrene	(6)	14.151	252	1095031	30.000
213)*Perylene-d12	(6)	14.204	264	544347	20.000
215) 3-Methylcholanthrene	(6)	14.509	268	437549	30.000
222) Total PAHs	(6)			20160305	540.000
217) Dibenz(a,h)acridine	(6)	15.115	279	771611	30.000
218) Dibenz(a,j)acridine	(6)	15.174	279	839560	30.000
219) Indeno(1,2,3-cd)pyrene	(6)	15.398	276	1126988	30.000
220) Dibenz(a,h)anthracene	(6)	15.421	278	913229	30.000
221) Benzo(g,h,i)perylene	(6)	15.739	276	943992	30.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

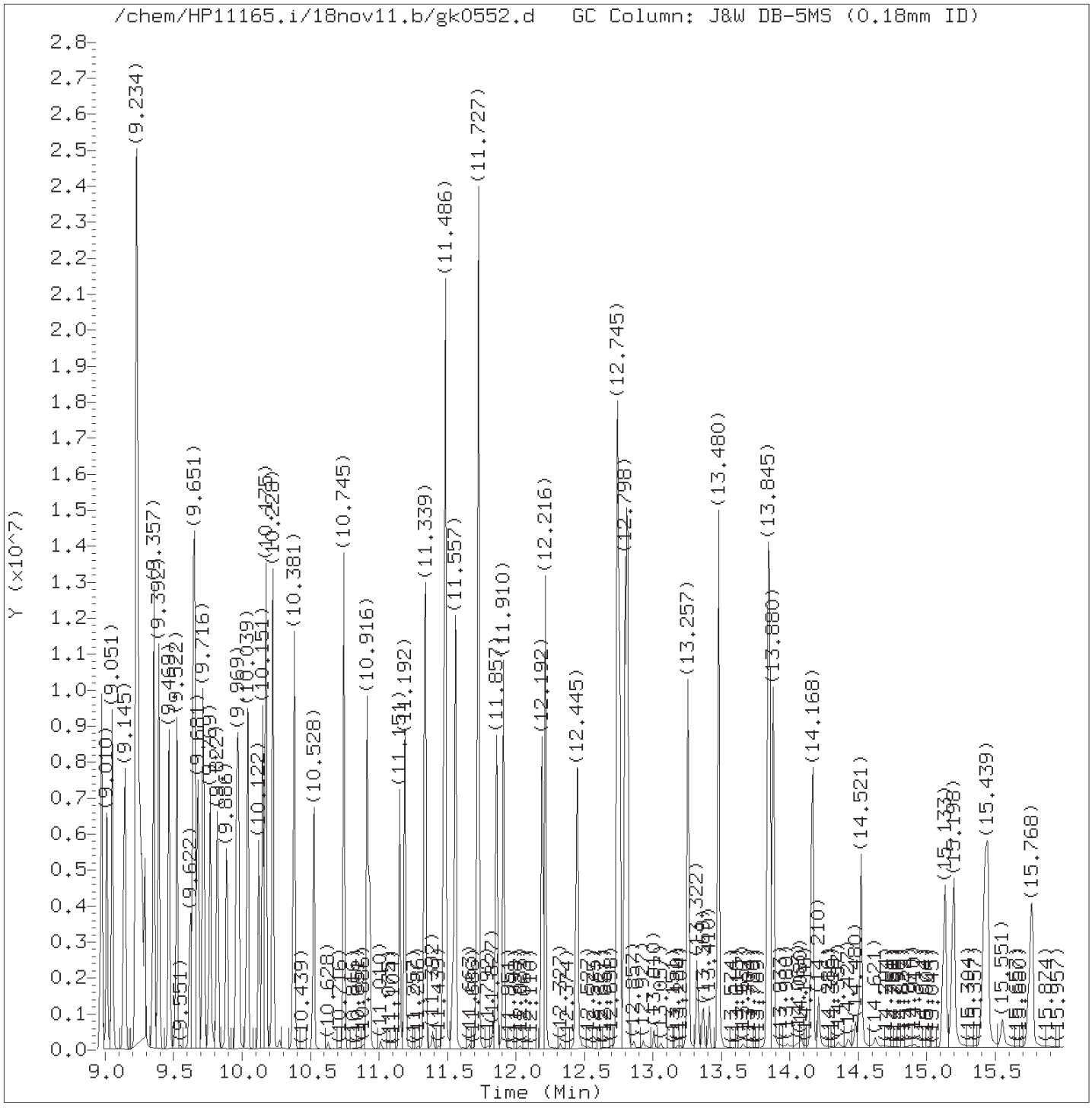
Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0552.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:07 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD120 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0552.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:07 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD120 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0552.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:07 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD120 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.552	88	621118	109.647
4) N-Nitrosodimethylamine	(1)	2.946	74	1063545	120.056
5) Pyridine	(1)	2.987	79	1705715	118.342
7) 2-Picoline	(1)	3.828	93	1799759	117.478
8) N-Nitrosomethylethylamine	(1)	3.957	88	845348	112.010
9) Methyl methanesulfonate	(1)	4.287	80	872491	110.692
11)$2-Fluorophenol	(1)	4.457	112	2823731	233.682
13) N-Nitrosodiethylamine	(1)	4.687	102	836129	114.865
15) Ethyl methanesulfonate	(1)	4.999	109	815601	114.742
17)$Phenol-d6	(1)	5.398	99	4380845	232.212
18) Phenol	(1)	5.410	94	2579839	117.625
19) Aniline	(1)	5.422	93	2837075	114.818
20) a-methylstyrene	(1)	5.463	118	130514	112.365
22) bis(2-Chloroethyl)ether	(1)	5.493	93	1709287	113.620
23) 2-Chlorophenol	(1)	5.528	128	1422262	115.522
42) Total Cresols	(1)			3465614	239.200
24) 1,3-Dichlorobenzene	(1)	5.681	146	1475336	114.176
25)*1,4-Dichlorobenzene-d4	(1)	5.734	152	158544	20.000
26) 1,4-Dichlorobenzene	(1)	5.751	146	1534307	116.374
27) Benzyl alcohol	(1)	5.881	108	1117450	117.254
28) 1,2-Dichlorobenzene	(1)	5.898	146	1465752	116.151
30) Indene	(1)	5.981	115	1588424	113.187
31) 2-Methylphenol	(1)	5.993	108	1590560	116.361
33) 2,2'-oxybis(1-Chloropropane)	(1)	6.016	45	1801247	113.610
34) bis(2-Chloroisopropyl)ether	(1)	6.016	45	1801247	113.610
35) N-Nitrosopyrrolidine	(1)	6.134	100	931206	119.464
36) Acetophenone	(1)	6.134	105	2246751	114.153
37) 4-Methylphenol	(1)	6.146	108	1875054	122.839
38) N-Nitroso-di-n-propylamine	(1)	6.163	70	1589731	116.033
40) o-Toluidine	(1)	6.169	106	2648637	115.654
39) N-Nitrosomorpholine	(1)	6.169	56	1139754	116.066
43) Hexachloroethane	(1)	6.228	117	596600	114.473
44)$Nitrobenzene-d5	(2)	6.281	82	4154792	238.691
45) Nitrobenzene	(2)	6.298	77	2168925	118.613
48) N-Nitrosopiperidine	(2)	6.451	114	864613	120.449
50) Isophorone	(2)	6.540	82	3875657	116.137
51) 2-Nitrophenol	(2)	6.604	139	818706	121.138
53) 2,4-Dimethylphenol	(2)	6.657	107	1768096	118.958
57) O,O,O-Triethylphosphorothioate	(2)	6.734	198	740041	115.132
55) bis(2-Chloroethoxy)methane	(2)	6.757	93	2211259	119.216

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0552.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:07 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD120 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
56) Benzoic acid	(2)	6.804	105	1442160	124.594
60) 2,4-Dichlorophenol	(2)	6.845	162	1276622	120.110
62) 1,2,4-Trichlorobenzene	(2)	6.922	180	1257168	119.217
65)*Naphthalene-d8	(2)	6.975	136	647478	20.000
66) Naphthalene	(2)	6.998	128	4413372	119.103
67) 4-Chloroaniline	(2)	7.057	127	1829989	119.525
68) 2,6-Dichlorophenol	(2)	7.057	162	1257028	121.826
69) Hexachloropropene	(2)	7.081	213	637421	120.815
71) Hexachlorobutadiene	(2)	7.122	225	678623	117.909
75) Quinoline	(2)	7.345	129	2816268	117.884
97) Isosafrole	(3)			1223348	121.447
77) N-Nitrosodi-n-butylamine	(2)	7.392	84	1465974	91.679
76) Caprolactam	(2)	7.428	113	534942	119.679
80) 4-Chloro-3-methylphenol	(2)	7.534	107	1550883	117.518
82) Safrole	(2)	7.592	162	1199877	119.325
83) 2-Methylnaphthalene	(2)	7.675	142	3102989	120.307
84) 1-Methylnaphthalene	(2)	7.769	142	2981145	118.809
85) Hexachlorocyclopentadiene	(3)	7.828	237	588740	115.093
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.840	216	1240270	123.536
88) cis-Isosafrole	(3)	7.875	162	210489	20.147
90) 2,4,6-Trichlorophenol	(3)	7.951	196	882358	120.971
92) 2,4,5-Trichlorophenol	(3)	7.992	196	919762	120.450
93)$2-Fluorobiphenyl	(3)	8.040	172	7033984	245.840
120) 2,4_2,6-Dinitrotoluenes	(3)			1895946	242.693
94) trans-Isosafrole	(3)	8.104	162	1012859	101.300
95) 1,1'-Biphenyl	(3)	8.139	154	3644990	119.509
96) 2-Chloronaphthalene	(3)	8.151	162	3124248	130.346
98) 1-Chloronaphthalene	(3)	8.175	162	2520781	110.954
99) Diphenyl ether	(3)	8.239	170	1999093	119.047
100) 2-Nitroaniline	(3)	8.251	138	978115	122.605
104) 1,4-Naphthoquinone	(3)	8.322	158	1183709	118.779
105) 1,4-Dinitrobenzene	(3)	8.387	168	551531	125.797
106) Dimethylphthalate	(3)	8.445	163	3421556	121.388
107) 1,3-Dinitrobenzene	(3)	8.463	168	596457	124.318
108) 2,6-Dinitrotoluene	(3)	8.498	165	794528	118.307
109) Acenaphthylene	(3)	8.551	152	4038196	118.941
112) 3-Nitroaniline	(3)	8.657	138	868072	121.623
113)*Acenaphthene-d10	(3)	8.692	164	346664	20.000
114) Acenaphthene	(3)	8.728	153	3047518	121.997
115) 2,4-Dinitrophenol	(3)	8.757	184	549549	125.239

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0552.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:07 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD120 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Diallate trans/cis	(4)			2129790	123.087
116) 4-Nitrophenol	(3)	8.822	109	602723	122.852
117) Pentachlorobenzene	(3)	8.851	250	1083187	120.314
118) 2,4-Dinitrotoluene	(3)	8.892	165	1101418	124.386
119) Dibenzofuran	(3)	8.892	168	4260970	120.600
121) 1-Naphthylamine	(3)	8.975	143	3190303	120.476
122) 2,3,4,6-Tetrachlorophenol	(3)	9.016	232	777782	121.864
123) 2-Naphthylamine	(3)	9.051	143	3056220	118.182
124) Diethylphthalate	(3)	9.145	149	3332548	118.118
125) Thionazin	(3)	9.228	107	652456	123.640
126) Fluorene	(3)	9.228	166	3688705	123.566
127) 4-Chlorophenyl-phenylether	(3)	9.234	204	1669840	121.777
128) 5-Nitro-o-toluidine	(3)	9.251	152	1018783	122.062
129) 4-Nitroaniline	(3)	9.269	138	911050A	115.276
130) 4,6-Dinitro-2-methylphenol	(4)	9.292	198	662253	125.782
131) N-Nitrosodiphenylamine	(4)	9.357	169	3054375	121.762
132) NDPA as diphenylamine	(4)	9.357	169	3054375	121.762
134) 1,2-Diphenylhydrazine	(4)	9.392	77	4688158	121.445
135)$2,4,6-Tribromophenol	(3)	9.469	330	711291	247.451
137) Tetraethyldithiopyrophosphate	(4)	9.522	97	691065	121.015
139) 1,3,5-Trinitrobenzene	(4)	9.622	213	418838	128.073
140) Diallate (peak 1)	(4)	9.645	86	1838024	103.158
141) Phorate	(4)	9.651	75	2955997	123.035
142) Phenacetin	(4)	9.681	108	2035137	122.646
143) 4-Bromophenyl-phenylether	(4)	9.716	248	892144	121.440
144) Diallate (peak 2)	(4)	9.728	86	291766	19.929
145) Hexachlorobenzene	(4)	9.769	284	827080	122.176
147) Dimethoate	(4)	9.822	87	1525485	116.892
149) Pentachlorophenol	(4)	9.963	266	593377	122.083
150) 4-Aminobiphenyl	(4)	9.969	169	1079919	98.197
151) Pentachloronitrobenzene	(4)	9.975	237	396775	122.366
152) Pronamide	(4)	10.045	173	1559452	123.708
153)*Phenanthrene-d10	(4)	10.145	188	666035	20.000
154) Dinoseb	(4)	10.151	211	959156	129.166
155) Phenanthrene	(4)	10.175	178	5006472	120.793
157) Anthracene	(4)	10.228	178	5207931	122.084
163) Carbazole	(4)	10.381	167	4671310	121.292
164) Methyl parathion	(4)	10.528	109	1154968	117.128
165) Di-n-butylphthalate	(4)	10.745	149	6044598	123.076
167) Parathion	(4)	10.916	109	836362	124.724

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0552.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:07 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

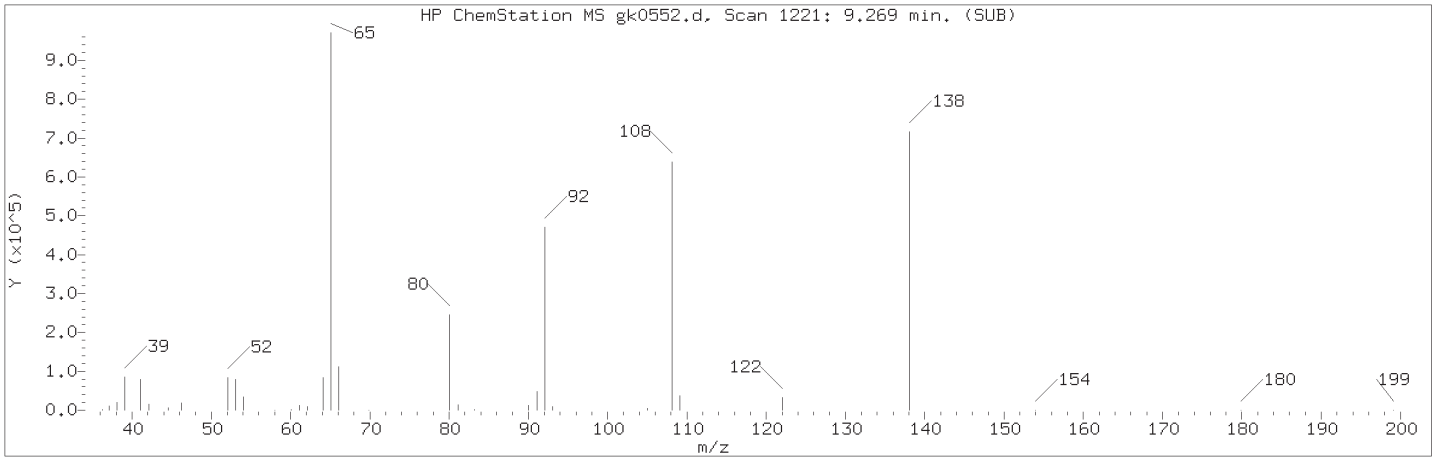
Sample Name: SSTD120 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
168) 4-Nitroquinoline-1-oxide	(4)	10.933	190	545195	132.855
169) Octachlorostyrene	(4)	11.151	308	330127	119.487
171) Isodrin	(4)	11.192	193	563228	119.382
173) Fluoranthene	(4)	11.339	202	5427349	122.185
174) Benzidine	(5)	11.486	184	9567590	347.646
175)*Pyrene-d10	(5)	11.539	212	600487	20.000
177) Pyrene	(5)	11.563	202	5240772	120.779
179)$Terphenyl-d14	(5)	11.727	244	7475564	248.133
182) p-Dimethylaminoazobenzene	(5)	11.863	225	931794	124.956
185) Chlorobenzilate	(5)	11.910	139	1728783	122.450
187) 3,3'-Dimethylbenzidine	(5)	12.192	212	2834669	118.737
188) Butylbenzylphthalate	(5)	12.216	149	2569389	122.691
191) 2-Acetylaminofluorene	(5)	12.445	181	2168092	123.434
193) 3,3'-Dichlorobenzidine	(5)	12.739	252	1776145	124.304
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.745	231	997571	124.352
195) Benzo(a)anthracene	(5)	12.757	228	4984587	121.868
196) Chrysene	(5)	12.798	228	4700209	121.175
199) bis(2-Ethylhexyl)phthalate	(5)	12.816	149	3565883	124.208
203) 6-Methylchrysene	(5)	13.257	242	3294283	123.895
205) Di-n-octylphthalate	(6)	13.480	149	5931849	128.256
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.845	256	2071292	124.375
206) Benzo(b)fluoranthene	(6)	13.851	252	4191544	119.563
208) Benzo(k)fluoranthene	(6)	13.880	252	4311924	126.914
211) Benzo(a)pyrene	(6)	14.168	252	3846412	121.336
213)*Perylene-d12	(6)	14.210	264	467493	20.000
215) 3-Methylcholanthrene	(6)	14.521	268	1495855	119.710
222) Total PAHs	(6)			74006767	2171.598
217) Dibenz(a,h)acridine	(6)	15.133	279	2622047	119.348
218) Dibenz(a,j)acridine	(6)	15.198	279	2796964	118.159
219) Indeno(1,2,3-cd)pyrene	(6)	15.421	276	3723431	117.661
220) Dibenz(a,h)anthracene	(6)	15.445	278	3059377	118.493
221) Benzo(g,h,i)perylene	(6)	15.768	276	3034834	116.024

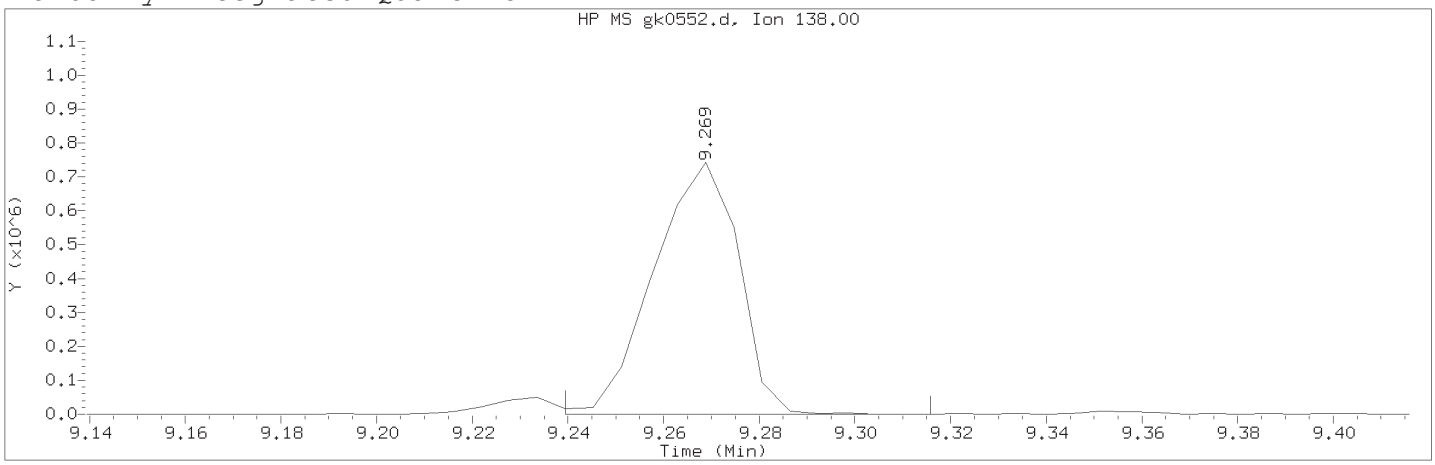
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0552.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:07 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD120 Lab Sample ID: STD2928

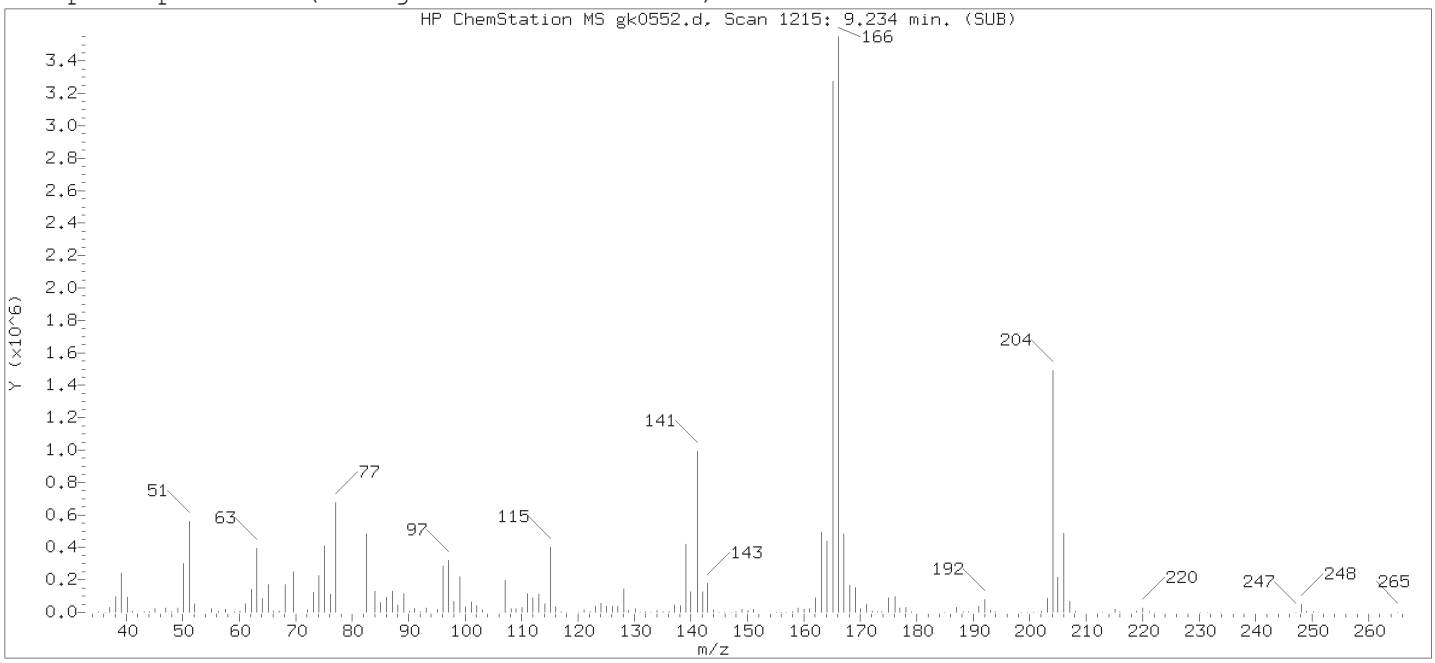
Compound Number : 129
Compound Name : 4-Nitroaniline
Scan Number : 1221
Retention Time (minutes) : 9.269
Quant Ion : 138.00
Area (flag) : 911050A
On-Column Amount (ng/ul) : 115.2756
Integration start scan : 1215 Integration stop scan: 1228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

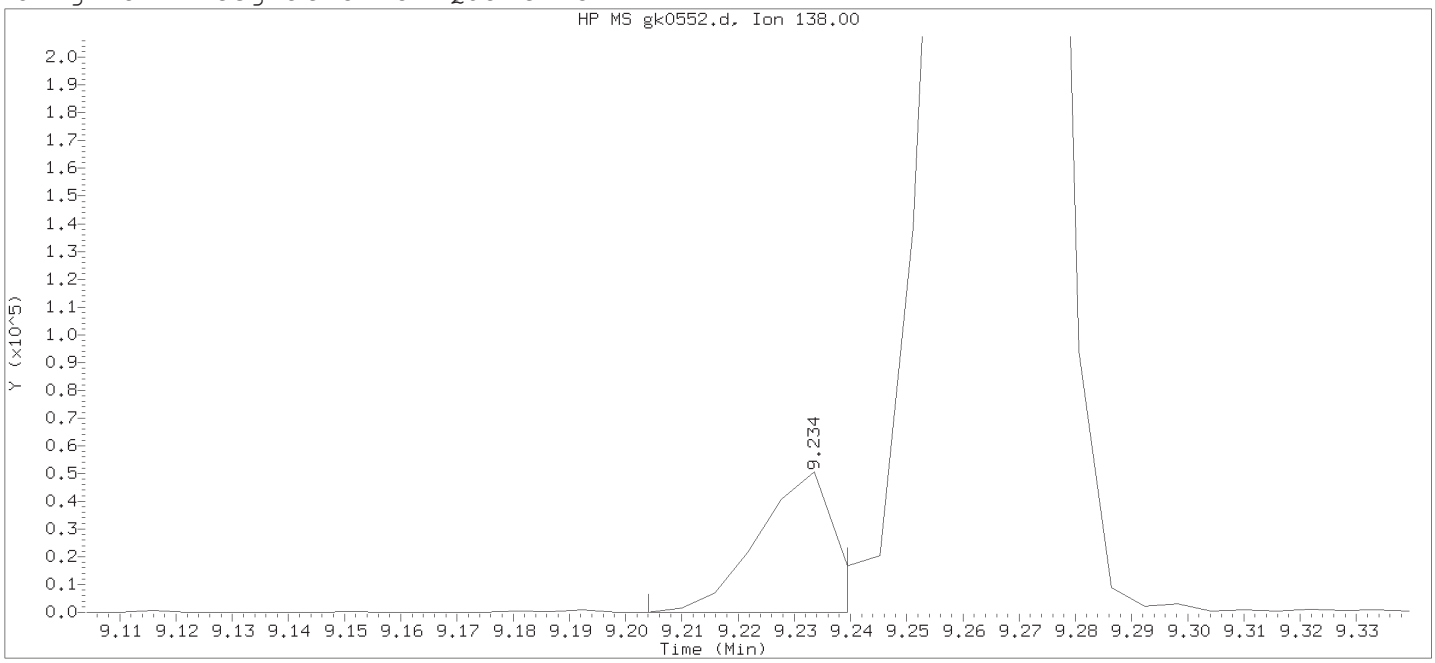
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



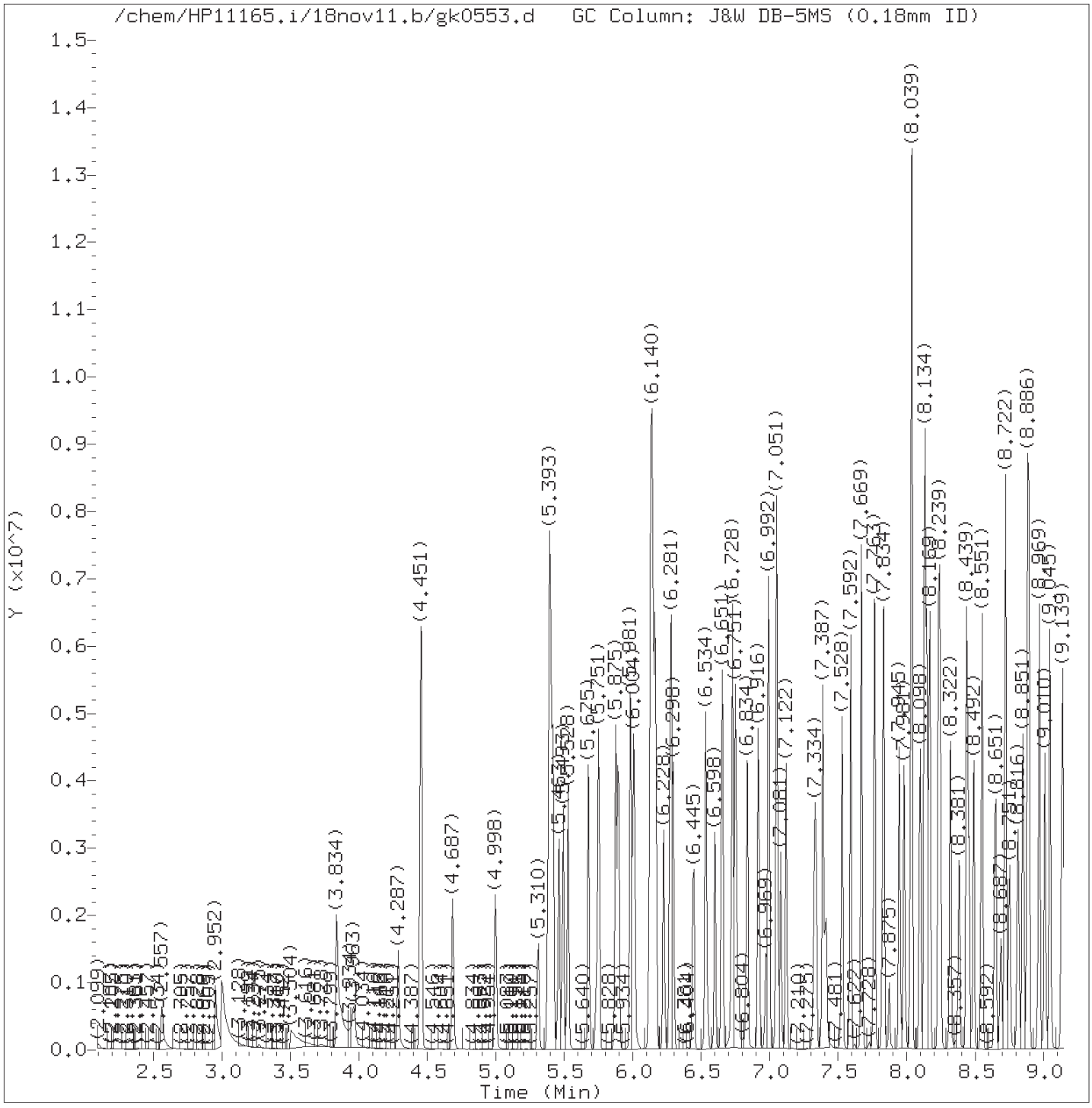
Data File: /chem/HP11165.i/18nov11.b/gk0552.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:07 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 12:28
Date, time and analyst ID of latest file update: 11-Nov-2018 12:28 Automation

Sample Name: SSTD120 Lab Sample ID: STD2928

Compound Number : 129
Compound Name : 4-Nitroaniline
Scan Number : 1215
Retention Time (minutes) : 9.234
Quant Ion : 138.00
Area : 45726
On-column Amount (ng/ul) : 6.5352
Integration start scan : 1209 Integration stop scan: 1215
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

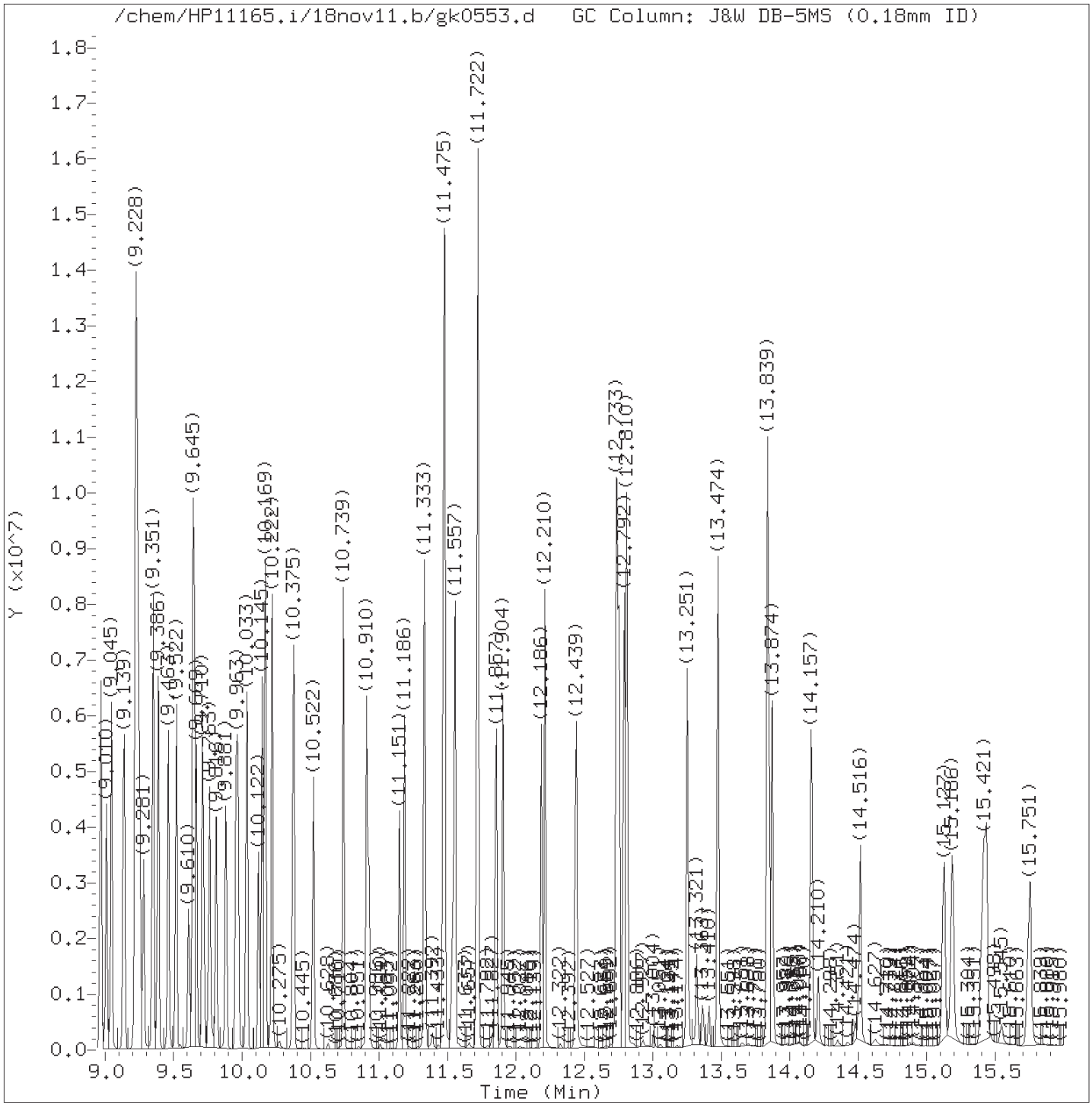
Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0553.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:31 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD080 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0553.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:31 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD080 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0553.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:31 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD080 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.557	88	415888	79.043
4) N-Nitrosodimethylamine	(1)	2.952	74	672955	80.862
5) Pyridine	(1)	2.999	79	1043708	78.314
7) 2-Picoline	(1)	3.834	93	1131224	79.347
8) N-Nitrosomethylethylamine	(1)	3.963	88	557263	79.346
9) Methyl methanesulfonate	(1)	4.287	80	586133	79.722
11)$2-Fluorophenol	(1)	4.457	112	1788129	158.910
13) N-Nitrosodiethylamine	(1)	4.687	102	540666	79.660
15) Ethyl methanesulfonate	(1)	4.998	109	514746	78.317
17)$Phenol-d6	(1)	5.393	99	2752633	157.414
18) Phenol	(1)	5.404	94	1613220	79.140
19) Aniline	(1)	5.416	93	1800538	78.645
20) a-methylstyrene	(1)	5.463	118	81441	76.623
22) bis(2-Chloroethyl)ether	(1)	5.493	93	1112242	79.414
23) 2-Chlorophenol	(1)	5.528	128	865158	76.739
42) Total Cresols	(1)			2157095	159.553
24) 1,3-Dichlorobenzene	(1)	5.675	146	925331	77.728
25)*1,4-Dichlorobenzene-d4	(1)	5.734	152	148142	20.000
26) 1,4-Dichlorobenzene	(1)	5.751	146	952946	78.216
27) Benzyl alcohol	(1)	5.875	108	703590	79.339
28) 1,2-Dichlorobenzene	(1)	5.893	146	912364	78.231
30) Indene	(1)	5.981	115	1023718	78.703
31) 2-Methylphenol	(1)	5.987	108	992866	78.476
33) 2,2'-oxybis(1-Chloropropane)	(1)	6.010	45	1146080	78.222
34) bis(2-Chloroisopropyl)ether	(1)	6.010	45	1146080	78.222
35) N-Nitrosopyrrolidine	(1)	6.122	100	571878	79.006
36) Acetophenone	(1)	6.134	105	1472438	80.043
37) 4-Methylphenol	(1)	6.140	108	1164229	81.077
38) N-Nitroso-di-n-propylamine	(1)	6.151	70	1016226	79.587
39) N-Nitrosomorpholine	(1)	6.157	56	751660	81.269
40) o-Toluidine	(1)	6.169	106	1676029	78.874
43) Hexachloroethane	(1)	6.228	117	378077	78.409
44)$Nitrobenzene-d5	(2)	6.281	82	2640330	161.165
45) Nitrobenzene	(2)	6.298	77	1376691	80.190
48) N-Nitrosopiperidine	(2)	6.445	114	547057	80.842
50) Isophorone	(2)	6.534	82	2524670	80.449
51) 2-Nitrophenol	(2)	6.604	139	521265	81.485
53) 2,4-Dimethylphenol	(2)	6.651	107	1110212	79.769
57) O,O,O-Triethylphosphorothioate	(2)	6.728	198	479867	79.740
55) bis(2-Chloroethoxy)methane	(2)	6.751	93	1333123	77.731

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0553.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:31 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD080 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
56) Benzoic acid	(2)	6.769	105	873829	80.336
60) 2,4-Dichlorophenol	(2)	6.840	162	765884	77.866
62) 1,2,4-Trichlorobenzene	(2)	6.916	180	798981	80.529
65)*Naphthalene-d8	(2)	6.975	136	607174	20.000
66) Naphthalene	(2)	6.992	128	2746715	79.361
67) 4-Chloroaniline	(2)	7.051	127	1121726	78.742
68) 2,6-Dichlorophenol	(2)	7.057	162	766786	79.496
69) Hexachloropropene	(2)	7.081	213	404753	81.196
71) Hexachlorobutadiene	(2)	7.122	225	433314	80.190
75) Quinoline	(2)	7.334	129	1800389	80.242
97) Isosafrole	(3)			756366	78.514
77) N-Nitrosodi-n-butylamine	(2)	7.387	84	1120935	77.288
76) Caprolactam	(2)	7.410	113	368118	85.051
80) 4-Chloro-3-methylphenol	(2)	7.528	107	957622	78.235
82) Safrole	(2)	7.592	162	761814	80.525
83) 2-Methylnaphthalene	(2)	7.669	142	1934887	79.999
84) 1-Methylnaphthalene	(2)	7.769	142	1862211	79.426
85) Hexachlorocyclopentadiene	(3)	7.828	237	393044	79.734
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.834	216	773562	79.882
88) cis-Isosafrole	(3)	7.875	162	124847	12.762
90) 2,4,6-Trichlorophenol	(3)	7.945	196	530321	76.820
92) 2,4,5-Trichlorophenol	(3)	7.981	196	582626	79.361
93)$2-Fluorobiphenyl	(3)	8.039	172	4292356	156.916
120) 2,4_2,6-Dinitrotoluenes	(3)			1190936	159.073
94) trans-Isosafrole	(3)	8.098	162	631519	65.753
95) 1,1'-Biphenyl	(3)	8.134	154	2332856	79.492
96) 2-Chloronaphthalene	(3)	8.145	162	1771489	77.679
98) 1-Chloronaphthalene	(3)	8.169	162	1730596	79.274
99) Diphenyl ether	(3)	8.234	170	1229525	77.187
100) 2-Nitroaniline	(3)	8.245	138	621195	80.444
104) 1,4-Naphthoquinone	(3)	8.322	158	768570	79.932
105) 1,4-Dinitrobenzene	(3)	8.387	168	328876	78.460
106) Dimethylphthalate	(3)	8.439	163	2106934	78.274
107) 1,3-Dinitrobenzene	(3)	8.457	168	374269	80.542
108) 2,6-Dinitrotoluene	(3)	8.492	165	517375	79.874
109) Acenaphthylene	(3)	8.551	152	2592366	79.400
112) 3-Nitroaniline	(3)	8.651	138	535632	78.483
113)*Acenaphthene-d10	(3)	8.687	164	334621	20.000
114) Acenaphthene	(3)	8.722	153	1850346	77.795
115) 2,4-Dinitrophenol	(3)	8.751	184	335632	79.492

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0553.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:31 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD080 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Diallate trans/cis	(4)			1316117	78.861
116) 4-Nitrophenol	(3)	8.816	109	383071	80.592
117) Pentachlorobenzene	(3)	8.851	250	676098	78.520
118) 2,4-Dinitrotoluene	(3)	8.886	165	673561	79.199
119) Dibenzofuran	(3)	8.892	168	2628772	78.030
121) 1-Naphthylamine	(3)	8.969	143	2003226	78.906
122) 2,3,4,6-Tetrachlorophenol	(3)	9.010	232	488992	79.581
123) 2-Naphthylamine	(3)	9.045	143	1971038	79.305
124) Diethylphthalate	(3)	9.139	149	2103802	78.145
125) Thionazin	(3)	9.216	107	443001	84.515
126) Fluorene	(3)	9.228	166	2217830	77.953
127) 4-Chlorophenyl-phenylether	(3)	9.234	204	1016578	77.841
128) 5-Nitro-o-toluidine	(3)	9.245	152	642495	79.833
129) 4-Nitroaniline	(3)	9.257	138	573769A	76.743
130) 4,6-Dinitro-2-methylphenol	(4)	9.281	198	411875	80.372
131) N-Nitrosodiphenylamine	(4)	9.351	169	1874212	77.935
132) NDPA as diphenylamine	(4)	9.351	169	1874212	77.935
134) 1,2-Diphenylhydrazine	(4)	9.386	77	2876439	77.792
135)$2,4,6-Tribromophenol	(3)	9.463	330	431044	156.872
137) Tetraethyldithiopyrophosphate	(4)	9.522	97	418986	76.982
139) 1,3,5-Trinitrobenzene	(4)	9.610	213	255170	80.234
140) Diallate (peak 1)	(4)	9.639	86	1136644	65.928
141) Phorate	(4)	9.651	75	1778156	77.437
142) Phenacetin	(4)	9.669	108	1292086	80.125
143) 4-Bromophenyl-phenylether	(4)	9.716	248	569132	79.853
144) Diallate (peak 2)	(4)	9.722	86	179473	12.933
145) Hexachlorobenzene	(4)	9.763	284	506907	78.051
147) Dimethoate	(4)	9.816	87	973349	77.842
149) Pentachlorophenol	(4)	9.957	266	382750	80.727
150) 4-Aminobiphenyl	(4)	9.963	169	712419	72.753
151) Pentachloronitrobenzene	(4)	9.975	237	254515	80.552
152) Pronamide	(4)	10.033	173	944884	78.104
153)*Phenanthrene-d10	(4)	10.145	188	646762	20.000
154) Dinoseb	(4)	10.145	211	605301	82.586
155) Phenanthrene	(4)	10.169	178	3131272	78.520
157) Anthracene	(4)	10.222	178	3239079	78.786
163) Carbazole	(4)	10.375	167	2896875	78.288
164) Methyl parathion	(4)	10.522	109	741470	78.272
165) Di-n-butylphthalate	(4)	10.739	149	3704642	78.437
167) Parathion	(4)	10.910	109	497468	77.561

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0553.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:31 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

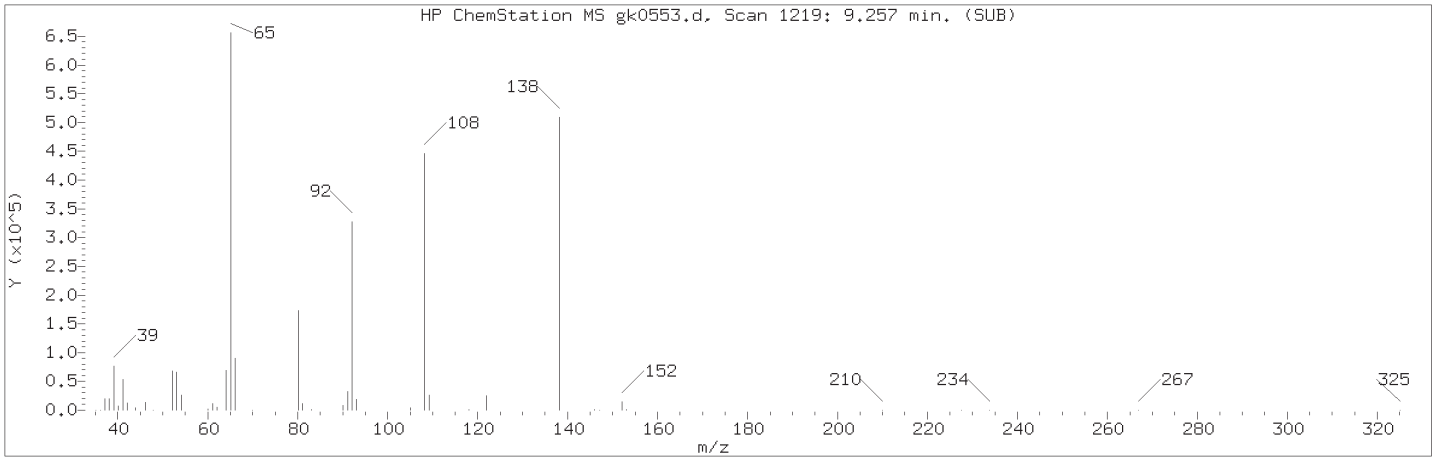
Sample Name: SSTD080 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
168) 4-Nitroquinoline-1-oxide	(4)	10.928	190	326276	81.242
169) Octachlorostyrene	(4)	11.151	308	207212	78.134
171) Isodrin	(4)	11.186	193	348254	77.299
173) Fluoranthene	(4)	11.333	202	3362978	78.633
174) Benzidine	(5)	11.480	184	6308690	240.182
175)*Pyrene-d10	(5)	11.533	212	572891	20.000
177) Pyrene	(5)	11.557	202	3340191	80.456
179)$Terphenyl-d14	(5)	11.722	244	4557996	159.050
182) p-Dimethylaminoazobenzene	(5)	11.857	225	565482	79.656
185) Chlorobenzilate	(5)	11.904	139	1099409	81.074
187) 3,3'-Dimethylbenzidine	(5)	12.186	212	1745390	77.722
188) Butylbenzylphthalate	(5)	12.210	149	1597592	79.974
191) 2-Acetylaminofluorene	(5)	12.439	181	1352496	80.471
193) 3,3'-Dichlorobenzidine	(5)	12.733	252	1091283	80.035
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.739	231	610965	79.886
195) Benzo(a)anthracene	(5)	12.751	228	3155207	80.570
196) Chrysene	(5)	12.792	228	3014136	80.961
199) bis(2-Ethylhexyl)phthalate	(5)	12.810	149	2184494	79.837
203) 6-Methylchrysene	(5)	13.251	242	2048540	80.501
205) Di-n-octylphthalate	(6)	13.474	149	3645531	77.975
206) Benzo(b)fluoranthene	(6)	13.839	252	2782649	78.343
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.839	256	1327284	78.558
208) Benzo(k)fluoranthene	(6)	13.874	252	2701922	78.444
211) Benzo(a)pyrene	(6)	14.157	252	2539540	78.830
213)*Perylene-d12	(6)	14.210	264	478558	20.000
215) 3-Methylcholanthrene	(6)	14.516	268	975687	77.479
222) Total PAHs	(6)			47252990	1426.020
217) Dibenz(a,h)acridine	(6)	15.127	279	1802178	80.089
218) Dibenz(a,j)acridine	(6)	15.186	279	1927465	79.696
219) Indeno(1,2,3-cd)pyrene	(6)	15.410	276	2544297	79.021
220) Dibenz(a,h)anthracene	(6)	15.433	278	2131946	80.441
221) Benzo(g,h,i)perylene	(6)	15.757	276	2105418	79.082

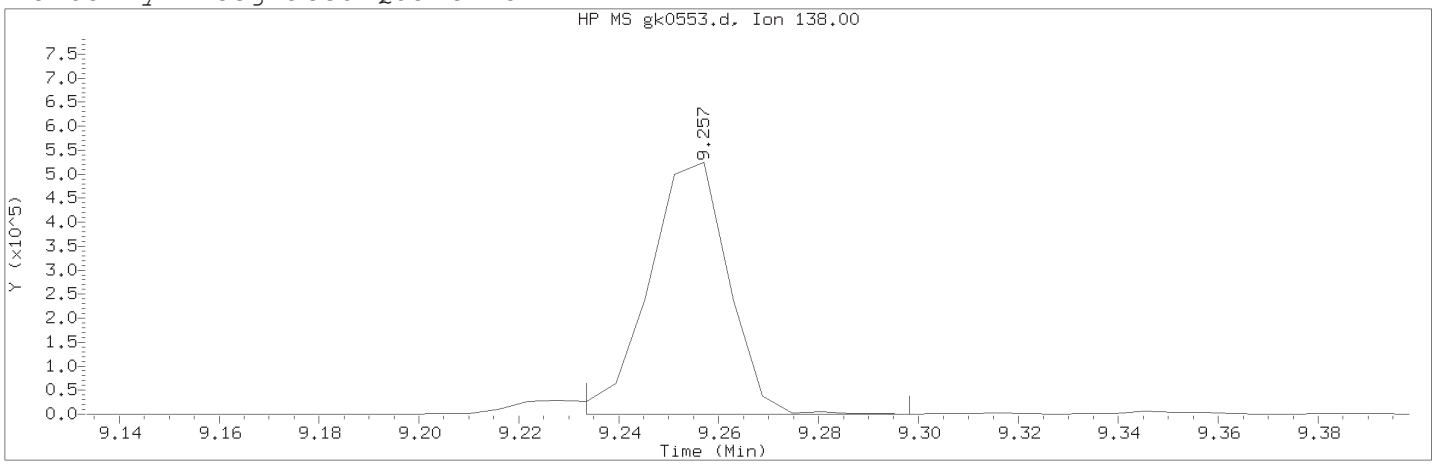
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0553.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:31 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD080 Lab Sample ID: STD2928

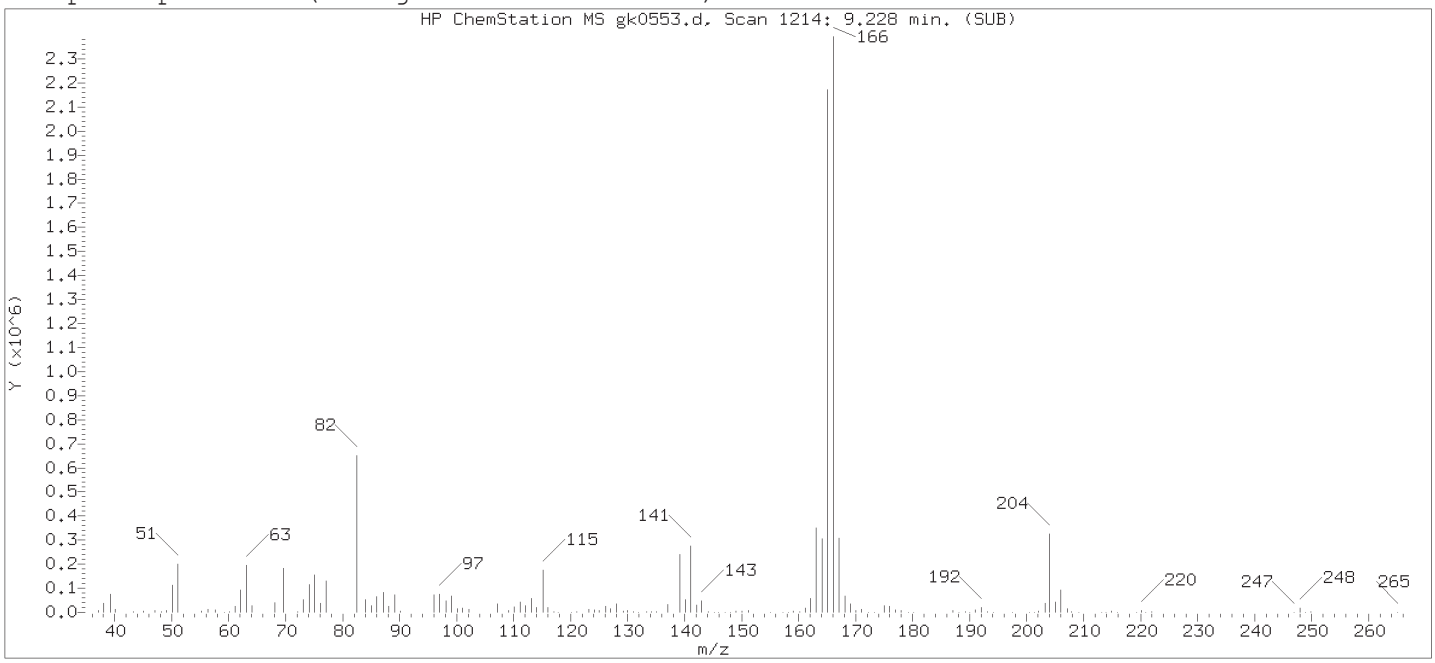
Compound Number : 129
Compound Name : 4-Nitroaniline
Scan Number : 1219
Retention Time (minutes) : 9.257
Quant Ion : 138.00
Area (flag) : 573769A
On-Column Amount (ng/ul) : 76.7431
Integration start scan : 1214 Integration stop scan: 1225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

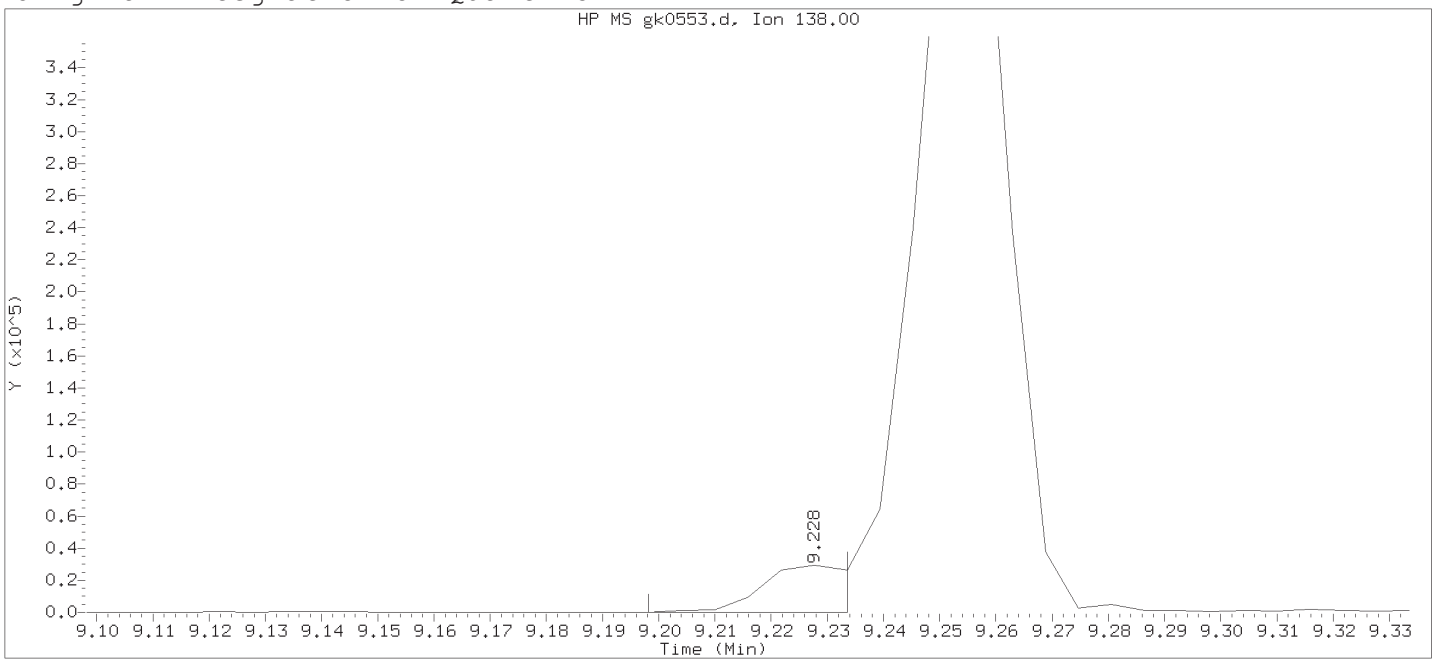
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



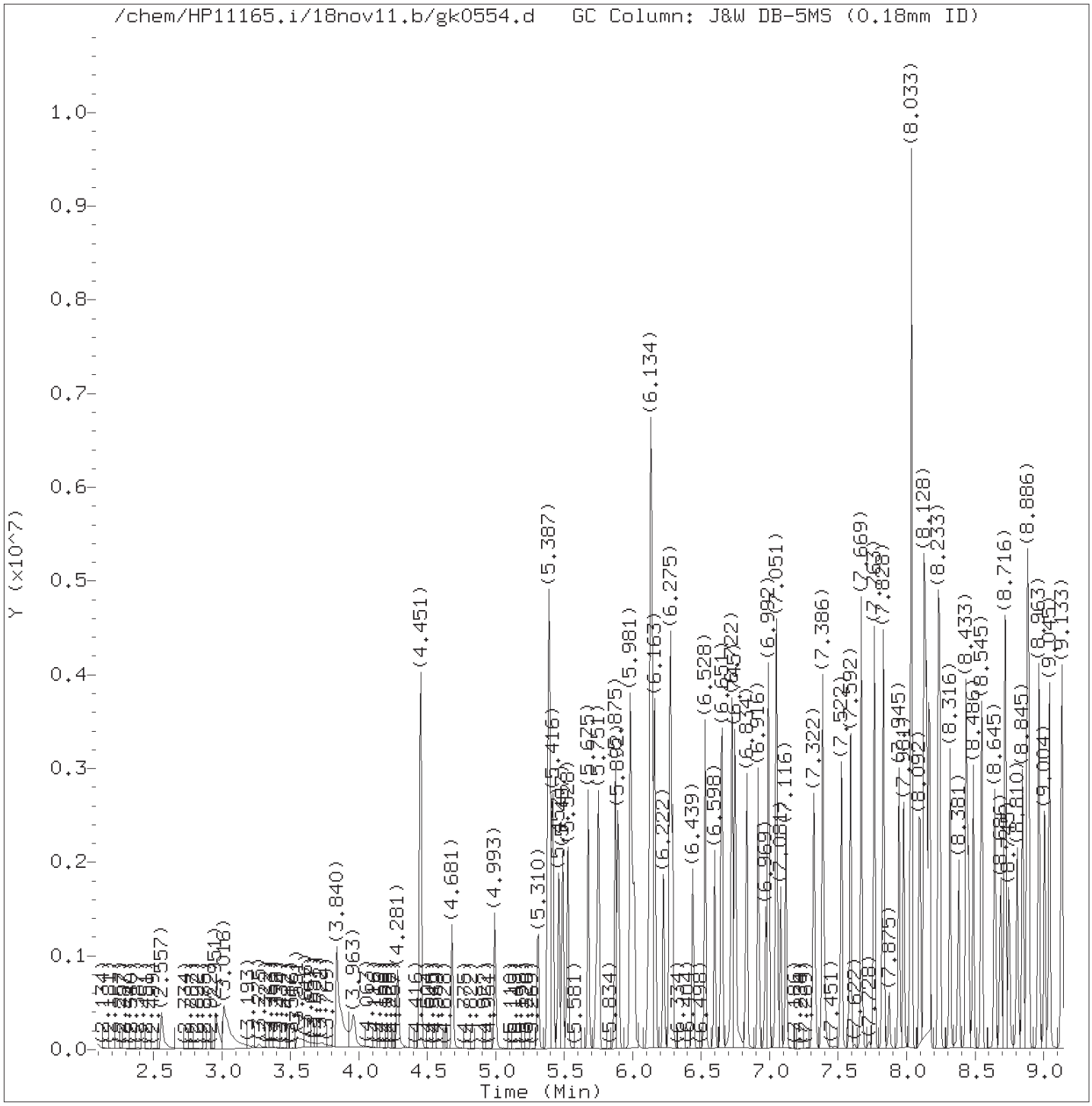
Data File: /chem/HP11165.i/18nov11.b/gk0553.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:31 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 12:52
Date, time and analyst ID of latest file update: 11-Nov-2018 12:53 Automation

Sample Name: SSTD080 Lab Sample ID: STD2928

Compound Number	: 129		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1214		
Retention Time (minutes)	: 9.228		
Quant Ion	: 138.00		
Area	: 28633		
On-column Amount (ng/ul)	: 4.2706		
Integration start scan	: 1208	Integration stop scan:	1214
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:22.
Target 3.5 esignature used: D10 Page 1288



Total Ion Chromatogram (TIC)

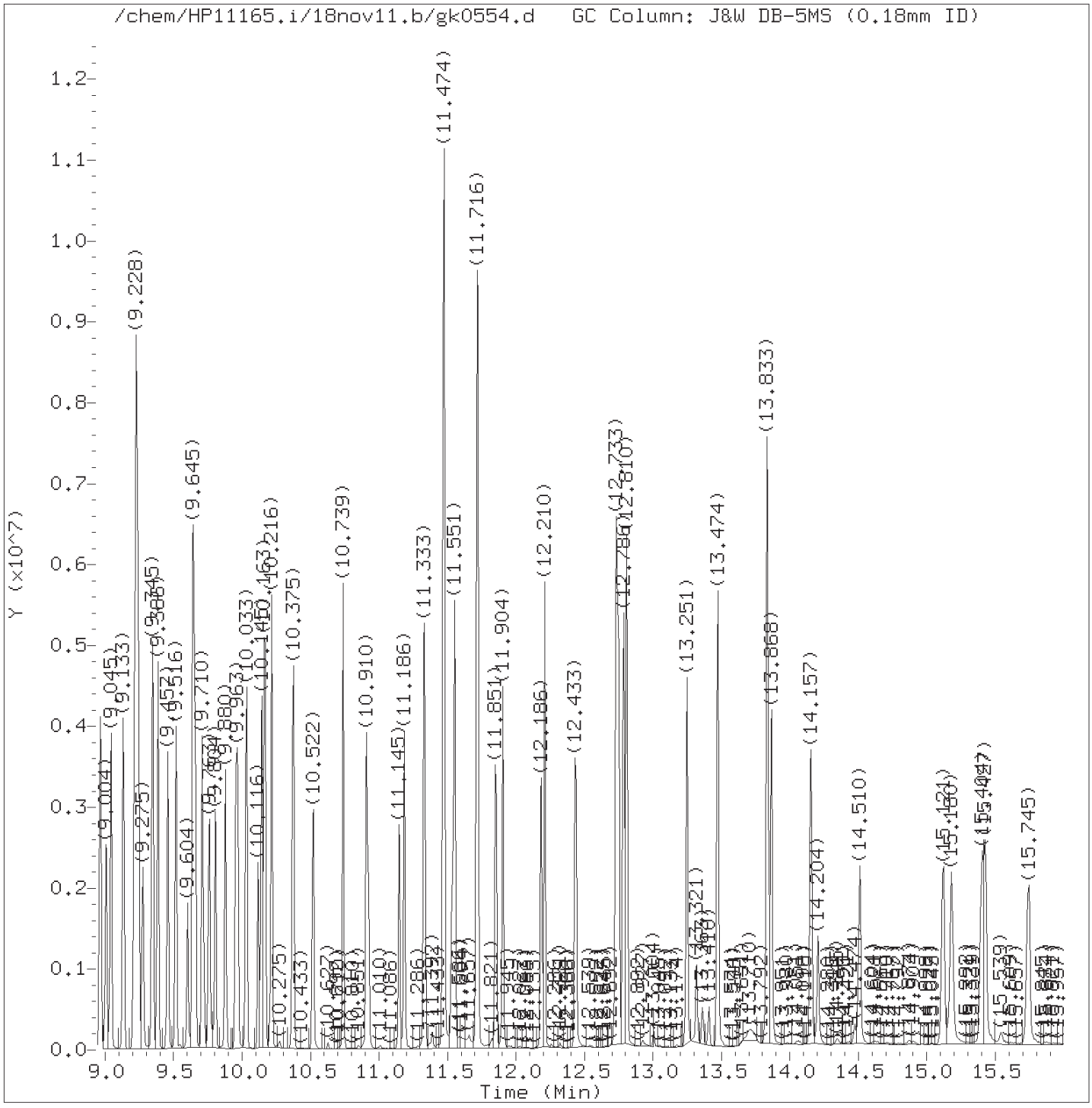
Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0554.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:55 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD050 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0554.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:55 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD050 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0554.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:55 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD050 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.557	88	223258	47.828
4) N-Nitrosodimethylamine	(1)	2.957	74	354020	47.920
5) Pyridine	(1)	3.016	79	633115	52.058
7) 2-Picoline	(1)	3.840	93	663908	51.295
8) N-Nitrosomethylethylamine	(1)	3.957	88	323269	50.852
9) Methyl methanesulfonate	(1)	4.281	80	348257	51.947
11)$2-Fluorophenol	(1)	4.451	112	1022996	100.757
13) N-Nitrosodiethylamine	(1)	4.681	102	310851	50.662
15) Ethyl methanesulfonate	(1)	4.993	109	306802	51.385
17)$Phenol-d6	(1)	5.387	99	1659422	104.024
18) Phenol	(1)	5.398	94	950498	51.344
19) Aniline	(1)	5.416	93	1067147	51.330
20) a-methylstyrene	(1)	5.469	118	51758	53.017
22) bis(2-Chloroethyl)ether	(1)	5.487	93	682160	53.025
23) 2-Chlorophenol	(1)	5.528	128	514584	50.533
42) Total Cresols	(1)			1241605	101.677
24) 1,3-Dichlorobenzene	(1)	5.675	146	552497	51.165
25)*1,4-Dichlorobenzene-d4	(1)	5.734	152	133331	20.000
26) 1,4-Dichlorobenzene	(1)	5.751	146	563750	51.051
27) Benzyl alcohol	(1)	5.875	108	425806	52.470
28) 1,2-Dichlorobenzene	(1)	5.892	146	532818	50.569
30) Indene	(1)	5.981	115	643310	53.624
31) 2-Methylphenol	(1)	5.992	108	592266	51.495
33) 2,2'-oxybis(1-Chloropropane)	(1)	6.010	45	686893	51.551
34) bis(2-Chloroisopropyl)ether	(1)	6.010	45	686893	51.551
35) N-Nitrosopyrrolidine	(1)	6.116	100	342938	51.954
36) Acetophenone	(1)	6.128	105	905941	53.457
37) 4-Methylphenol	(1)	6.134	108	649339	50.182
38) N-Nitroso-di-n-propylamine	(1)	6.139	70	586109	50.747
39) N-Nitrosomorpholine	(1)	6.151	56	446499	52.680
40) o-Toluidine	(1)	6.163	106	998469	51.638
43) Hexachloroethane	(1)	6.222	117	218993	50.346
44)$Nitrobenzene-d5	(2)	6.275	82	1577806	96.981
45) Nitrobenzene	(2)	6.292	77	836161	48.909
48) N-Nitrosopiperidine	(2)	6.439	114	320869	47.925
50) Isophorone	(2)	6.528	82	1516062	48.609
51) 2-Nitrophenol	(2)	6.598	139	311302	48.877
53) 2,4-Dimethylphenol	(2)	6.651	107	667209	48.326
57) O,O,O-Triethylphosphorothioate	(2)	6.728	198	269911	45.928
55) bis(2-Chloroethoxy)methane	(2)	6.745	93	859464	49.970

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0554.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:55 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD050 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
56) Benzoic acid	(2)	6.751	105	536138	49.352
60) 2,4-Dichlorophenol	(2)	6.834	162	482526	49.176
62) 1,2,4-Trichlorobenzene	(2)	6.916	180	468938	47.808
65)*Naphthalene-d8	(2)	6.969	136	609035	20.000
66) Naphthalene	(2)	6.992	128	1645099	48.014
67) 4-Chloroaniline	(2)	7.045	127	691052	48.761
68) 2,6-Dichlorophenol	(2)	7.051	162	472961	49.158
69) Hexachloropropene	(2)	7.081	213	247439	49.614
71) Hexachlorobutadiene	(2)	7.122	225	259305	48.363
75) Quinoline	(2)	7.322	129	1102530	49.238
97) Isosafrole	(3)			461164	49.566
77) N-Nitrosodi-n-butylamine	(2)	7.386	84	705971	49.009
76) Caprolactam	(2)	7.398	113	235356	53.093
80) 4-Chloro-3-methylphenol	(2)	7.522	107	586216	48.290
82) Safrole	(2)	7.592	162	461529	48.969
83) 2-Methylnaphthalene	(2)	7.669	142	1183299	49.075
84) 1-Methylnaphthalene	(2)	7.763	142	1130731	48.546
85) Hexachlorocyclopentadiene	(3)	7.828	237	239962	50.200
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.833	216	463722	49.585
88) cis-Isosafrole	(3)	7.875	162	80786	8.520
90) 2,4,6-Trichlorophenol	(3)	7.945	196	339164	50.548
92) 2,4,5-Trichlorophenol	(3)	7.981	196	365642	51.065
93)$2-Fluorobiphenyl	(3)	8.033	172	2597116	98.523
120) 2,4_2,6-Dinitrotoluenes	(3)			755302	102.835
94) trans-Isosafrole	(3)	8.098	162	380378	41.046
95) 1,1'-Biphenyl	(3)	8.128	154	1460583	51.037
96) 2-Chloronaphthalene	(3)	8.145	162	1309513M	56.661
98) 1-Chloronaphthalene	(3)	8.163	162	1055120M	49.931
99) Diphenyl ether	(3)	8.233	170	765576	49.721
100) 2-Nitroaniline	(3)	8.245	138	392031	51.796
104) 1,4-Naphthoquinone	(3)	8.316	158	476363	50.864
105) 1,4-Dinitrobenzene	(3)	8.381	168	205086	50.392
106) Dimethylphthalate	(3)	8.433	163	1313873	50.302
107) 1,3-Dinitrobenzene	(3)	8.451	168	226980	50.329
108) 2,6-Dinitrotoluene	(3)	8.486	165	318943	50.632
109) Acenaphthylene	(3)	8.545	152	1611821	50.730
112) 3-Nitroaniline	(3)	8.645	138	349767	52.160
113)*Acenaphthene-d10	(3)	8.686	164	324050	20.000
114) Acenaphthene	(3)	8.722	153	1148754	49.905
115) 2,4-Dinitrophenol	(3)	8.745	184	207602	50.578

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0554.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:55 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD050 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Diallate trans/cis	(4)			809709	48.355
116) 4-Nitrophenol	(3)	8.810	109	240826	51.719
117) Pentachlorobenzene	(3)	8.845	250	402866	48.724
118) 2,4-Dinitrotoluene	(3)	8.880	165	436359	52.204
119) Dibenzofuran	(3)	8.886	168	1625523	49.868
121) 1-Naphthylamine	(3)	8.963	143	1290817	51.854
122) 2,3,4,6-Tetrachlorophenol	(3)	9.010	232	304751	50.905
123) 2-Naphthylamine	(3)	9.045	143	1240249	51.138
124) Diethylphthalate	(3)	9.133	149	1329845	50.752
125) Thionazin	(3)	9.210	107	243092	48.400
126) Fluorene	(3)	9.222	166	1382132	50.123
127) 4-Chlorophenyl-phenylether	(3)	9.233	204	625012	49.563
128) 5-Nitro-o-toluidine	(3)	9.239	152	410534	51.979
129) 4-Nitroaniline	(3)	9.245	138	391694	53.013
130) 4,6-Dinitro-2-methylphenol	(4)	9.275	198	273014	51.849
131) N-Nitrosodiphenylamine	(4)	9.345	169	1193166	49.163
132) NDPA as diphenylamine	(4)	9.345	169	1193166	49.163
134) 1,2-Diphenylhydrazine	(4)	9.386	77	1833912	49.150
135)$2,4,6-Tribromophenol	(3)	9.457	330	277843	103.275
137) Tetraethyldithiopyrophosphate	(4)	9.516	97	262758	48.156
139) 1,3,5-Trinitrobenzene	(4)	9.604	213	164917	50.819
140) Diallate (peak 1)	(4)	9.639	86	697646	40.268
141) Phorate	(4)	9.645	75	1123384	48.643
142) Phenacetin	(4)	9.657	108	800123	49.164
143) 4-Bromophenyl-phenylether	(4)	9.710	248	365372	50.385
144) Diallate (peak 2)	(4)	9.722	86	112063	8.087
145) Hexachlorobenzene	(4)	9.763	284	329844	50.034
147) Dimethoate	(4)	9.804	87	635360	50.052
149) Pentachlorophenol	(4)	9.957	266	243431	50.443
150) 4-Aminobiphenyl	(4)	9.963	169	487230	49.349
151) Pentachloronitrobenzene	(4)	9.969	237	161265	50.220
152) Pronamide	(4)	10.033	173	593836	48.767
153)*Phenanthrene-d10	(4)	10.139	188	656356	20.000
154) Dinoseb	(4)	10.145	211	348413	47.593
155) Phenanthrene	(4)	10.169	178	1977859	49.149
157) Anthracene	(4)	10.216	178	2032220	49.025
163) Carbazole	(4)	10.375	167	1861511	49.678
164) Methyl parathion	(4)	10.522	109	494867	51.099
165) Di-n-butylphthalate	(4)	10.739	149	2348582	49.246
167) Parathion	(4)	10.904	109	320883	49.472

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0554.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:55 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

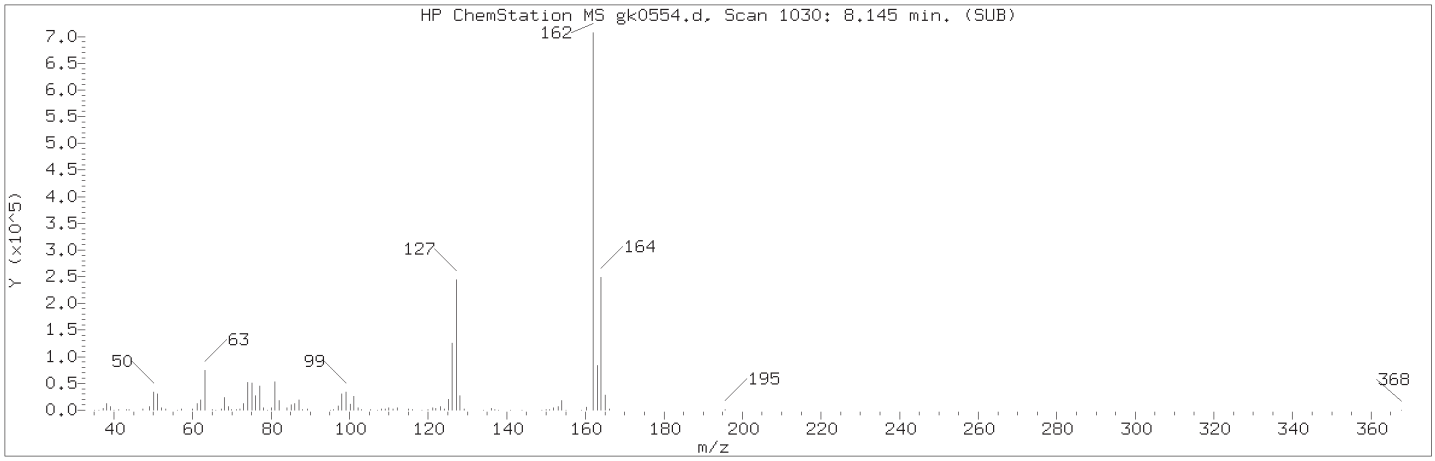
Sample Name: SSTD050 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
168) 4-Nitroquinoline-1-oxide	(4)	10.922	190	216131	52.238
169) Octachlorostyrene	(4)	11.151	308	132732	49.487
171) Isodrin	(4)	11.186	193	231024	50.396
173) Fluoranthene	(4)	11.333	202	2151948	49.685
174) Benzidine	(5)	11.474	184	4184254	151.067
175)*Pyrene-d10	(5)	11.533	212	602684	20.000
177) Pyrene	(5)	11.551	202	2097960	48.513
179)$Terphenyl-d14	(5)	11.716	244	2892489	96.926
182) p-Dimethylaminoazobenzene	(5)	11.857	225	367085	49.362
185) Chlorobenzilate	(5)	11.904	139	676859	48.060
187) 3,3'-Dimethylbenzidine	(5)	12.186	212	1094471	47.194
188) Butylbenzylphthalate	(5)	12.210	149	1041061	49.653
191) 2-Acetylaminofluorene	(5)	12.433	181	868421	49.334
193) 3,3'-Dichlorobenzidine	(5)	12.727	252	686018	48.351
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.733	231	380023	47.896
195) Benzo(a)anthracene	(5)	12.751	228	2031531	49.482
196) Chrysene	(5)	12.786	228	1905330	48.979
199) bis(2-Ethylhexyl)phthalate	(5)	12.810	149	1420170	49.502
203) 6-Methylchrysene	(5)	13.251	242	1344692	50.172
205) Di-n-octylphthalate	(6)	13.474	149	2340922	48.908
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.833	256	847269	48.965
206) Benzo(b)fluoranthene	(6)	13.839	252	1774760	48.831
208) Benzo(k)fluoranthene	(6)	13.868	252	1772473	49.926
211) Benzo(a)pyrene	(6)	14.157	252	1644036	49.615
213)*Perylene-d12	(6)	14.204	264	493502	20.000
215) 3-Methylcholanthrene	(6)	14.510	268	638856	49.394
222) Total PAHs	(6)			29794438	887.208
217) Dibenz(a,h)acridine	(6)	15.121	279	1170200	50.321
218) Dibenz(a,j)acridine	(6)	15.180	279	1223401	49.286
219) Indeno(1,2,3-cd)pyrene	(6)	15.404	276	1612997	48.927
220) Dibenz(a,h)anthracene	(6)	15.427	278	1367524	50.027
221) Benzo(g,h,i)perylene	(6)	15.745	276	1323964	48.656

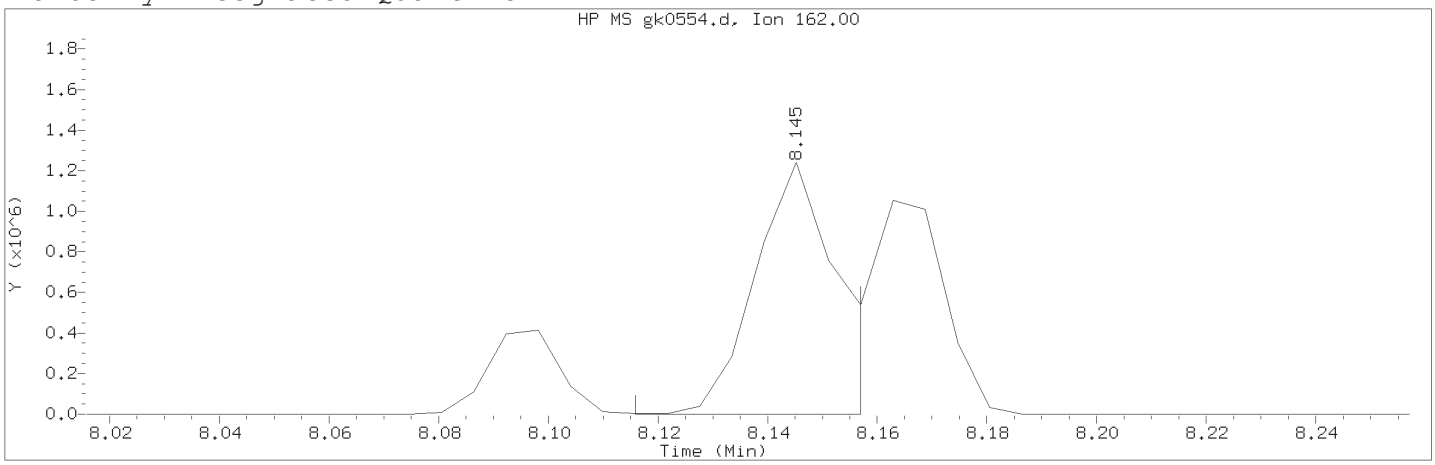
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0554.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:55 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD050 Lab Sample ID: STD2928

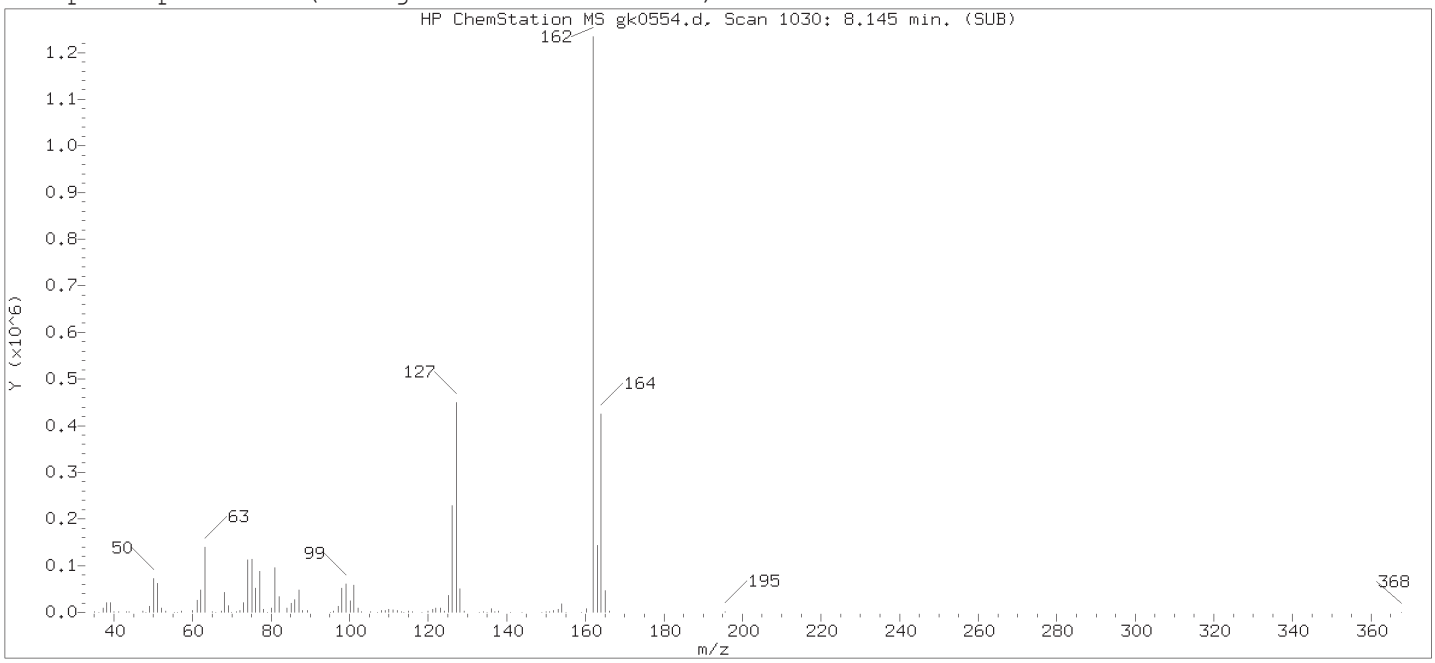
Compound Number : 96
Compound Name : 2-Chloronaphthalene
Scan Number : 1030
Retention Time (minutes) : 8.145
Quant Ion : 162.00
Area (flag) : 1309513M
On-Column Amount (ng/ul) : 56.6614
Integration start scan : 1024 Integration stop scan: 1031
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

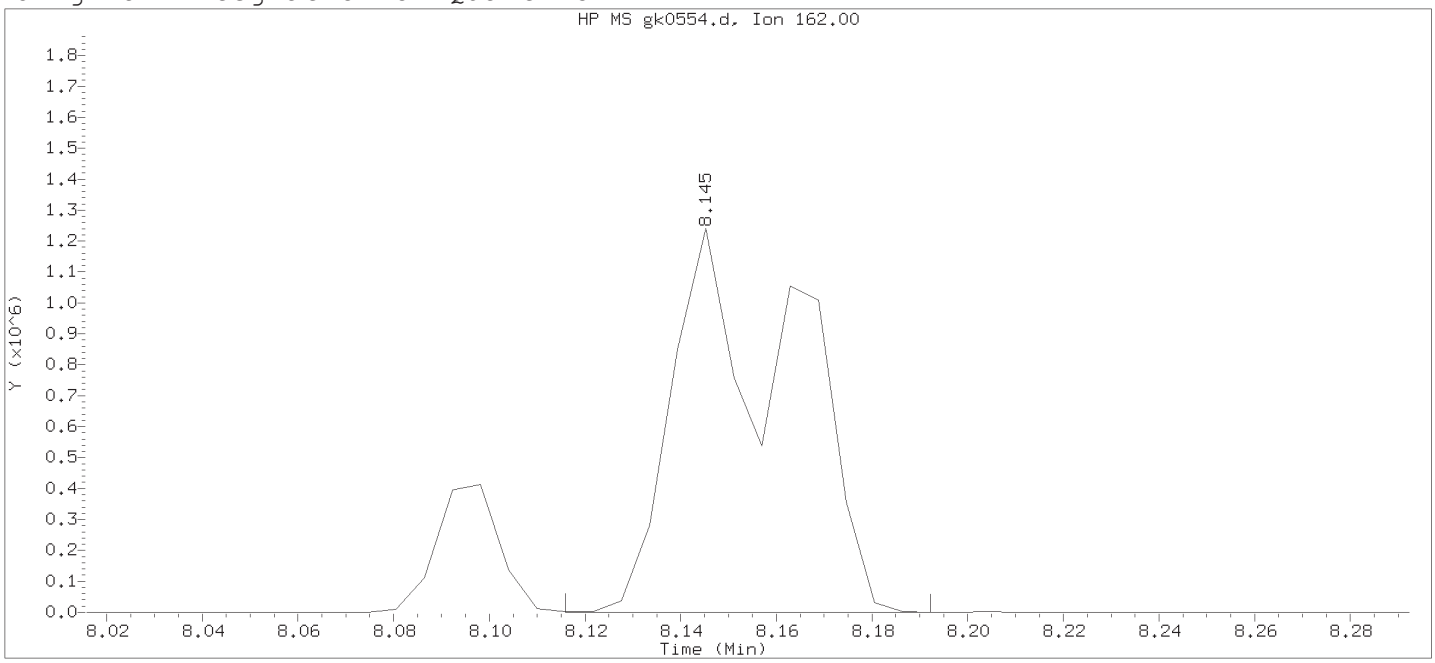
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0554.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:55 Analyst ID: em10340

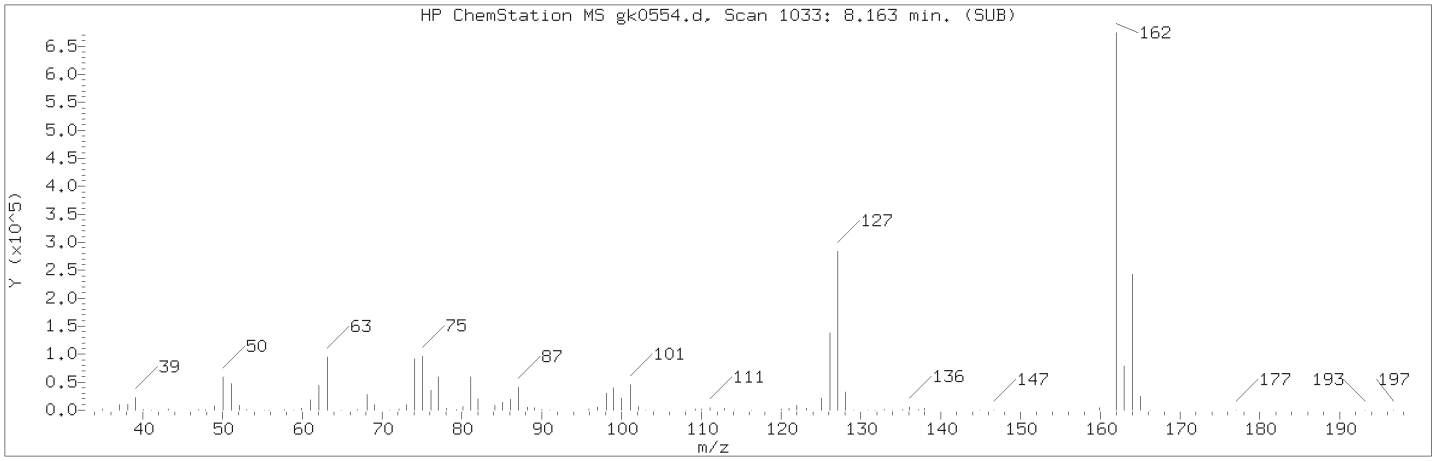
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 13:17
Date, time and analyst ID of latest file update: 11-Nov-2018 13:17 Automation

Sample Name: SSTD050 Lab Sample ID: STD2928

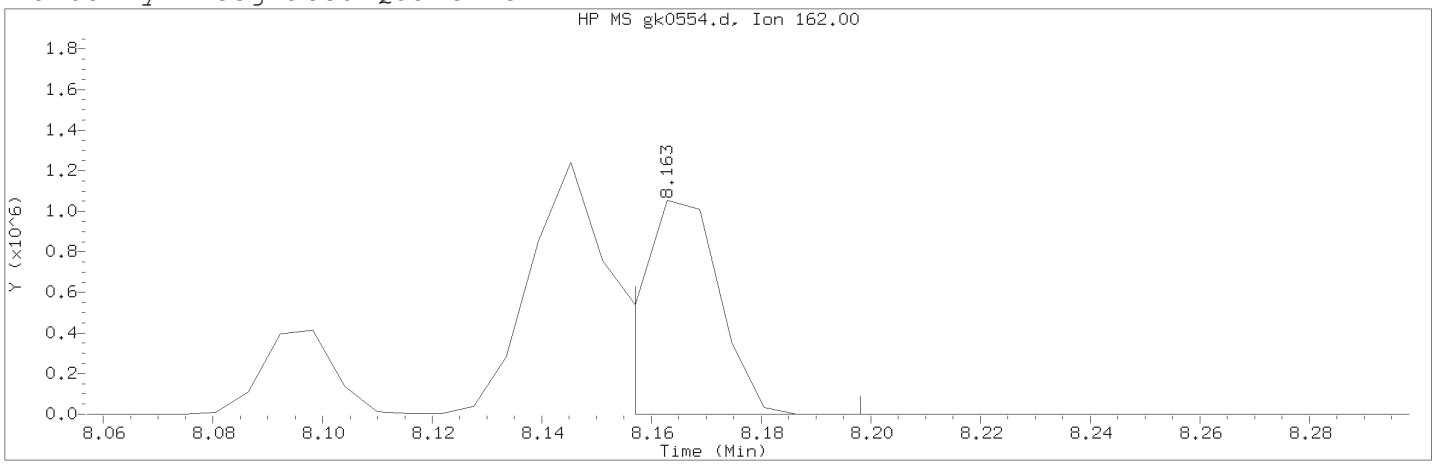
Compound Number	: 96		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 1030		
Retention Time (minutes)	: 8.145		
Quant Ion	: 162.00		
Area	: 2174367		
On-column Amount (ng/ul)	: 86.2766		
Integration start scan	: 1024	Integration stop scan:	1037
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:22.
Target 3.5 esignature used 21 CFR Part 11

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0554.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:55 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD050 Lab Sample ID: STD2928

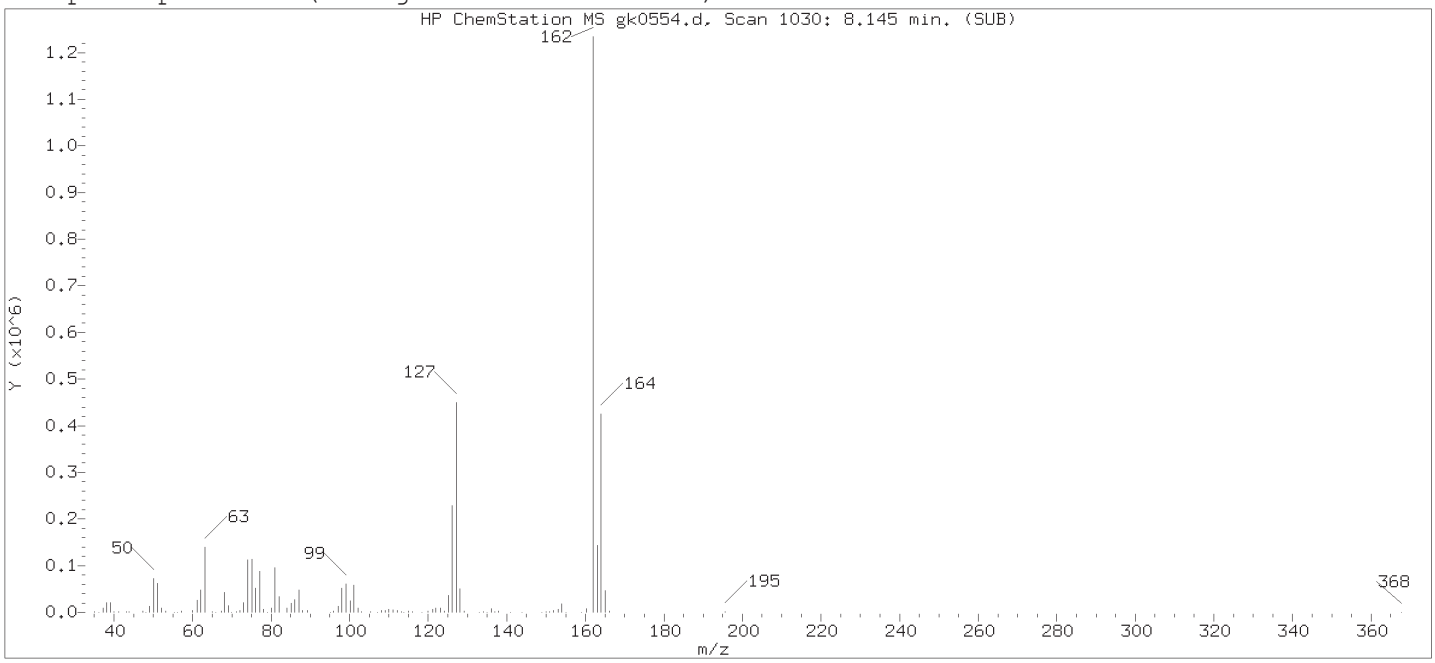
Compound Number : 98
Compound Name : 1-Chloronaphthalene
Scan Number : 1033
Retention Time (minutes) : 8.163
Quant Ion : 162.00
Area (flag) : 1055120M
On-Column Amount (ng/ul) : 49.9314
Integration start scan : 1031 Integration stop scan: 1038
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

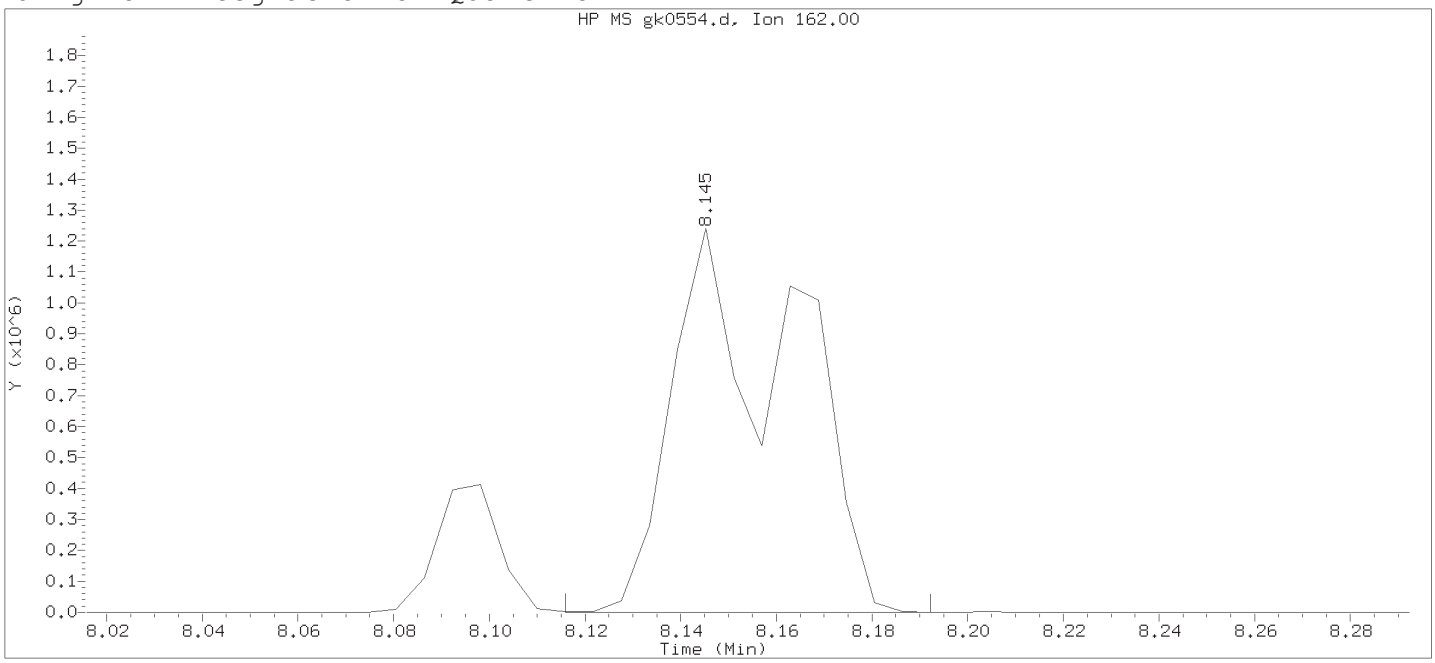
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:22.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



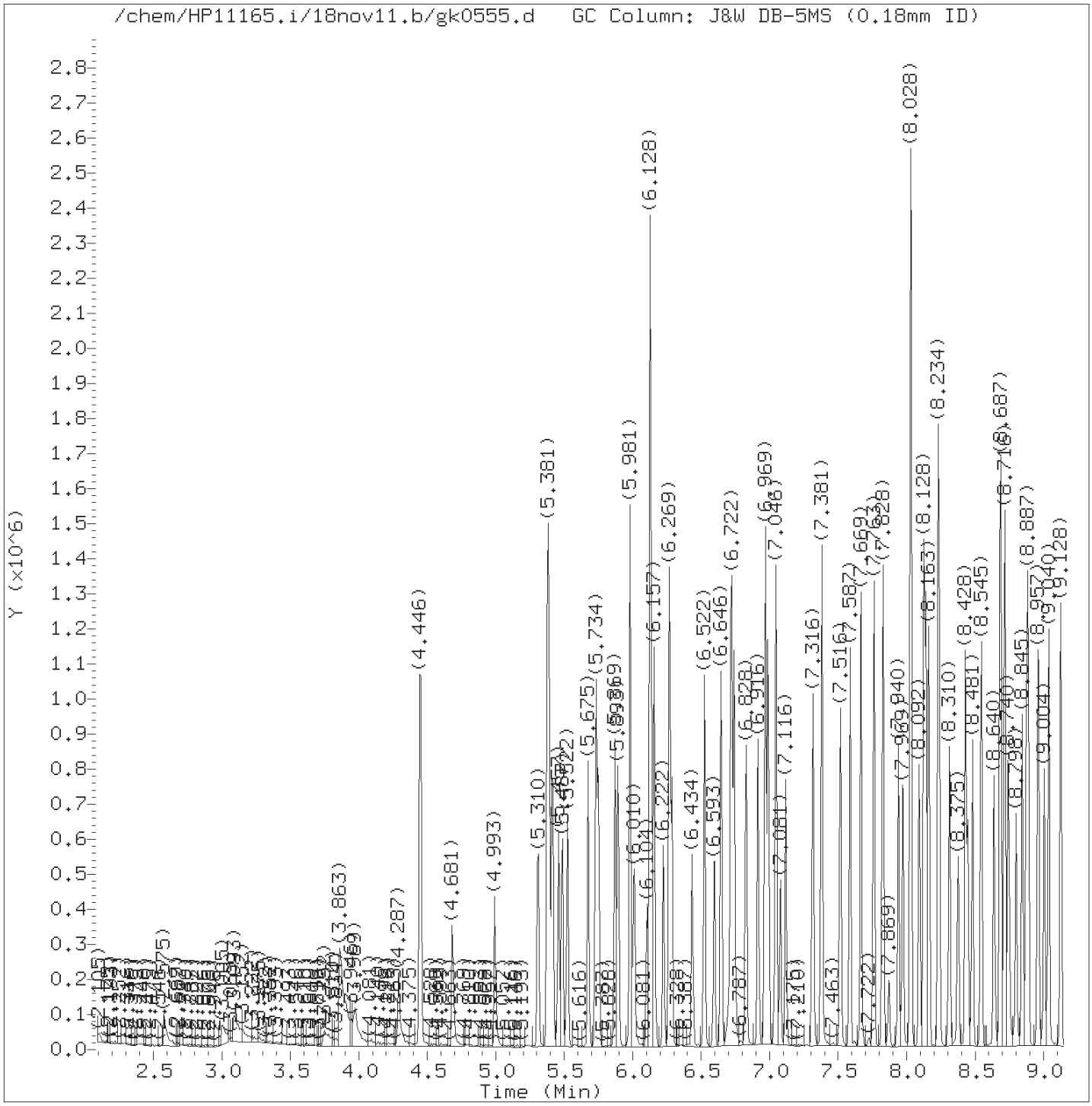
Data File: /chem/HP11165.i/18nov11.b/gk0554.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 12:55 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 13:17
Date, time and analyst ID of latest file update: 11-Nov-2018 13:17 Automation

Sample Name: SSTD050 Lab Sample ID: STD2928

Compound Number	: 98		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1030		
Retention Time (minutes)	: 8.145		
Quant Ion	: 162.00		
Area	: 2174361		
On-column Amount (ng/ul)	: 89.4207		
Integration start scan	: 1024	Integration stop scan:	1037
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:22.
Target 3.5 esignature used 21 CFR Part 11



Total Ion Chromatogram (TIC)

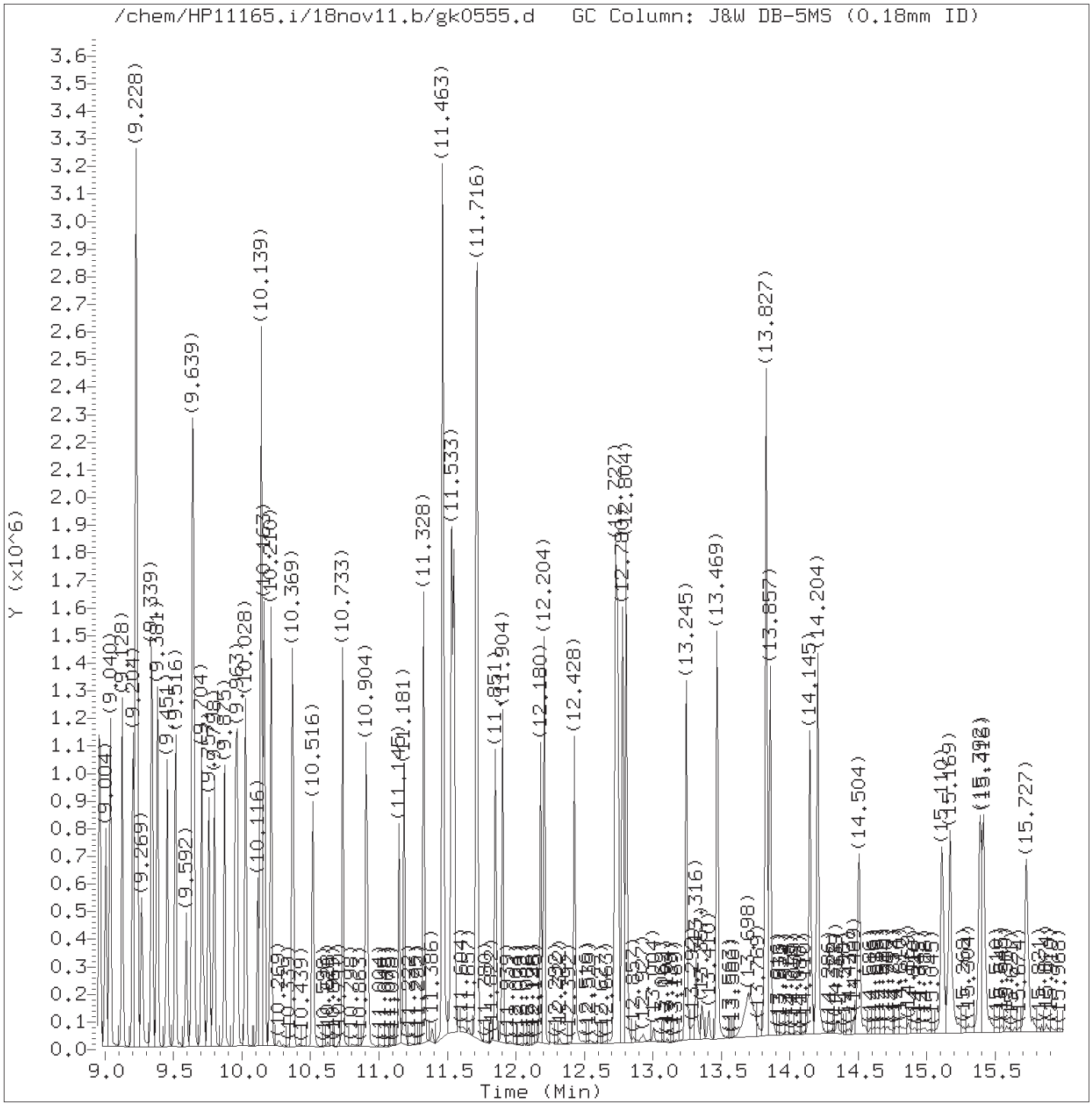
Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0555.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:20 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD015 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0555.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:20 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD015 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0555.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:20 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD015 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.575	88	65669	14.011
4) N-Nitrosodimethylamine	(1)	3.005	74	93225	12.815
5) Pyridine	(1)	3.099	79	176249M	14.353
7) 2-Picoline	(1)	3.863	93	203277M	15.309
8) N-Nitrosomethylethylamine	(1)	3.975	88	96205M	14.862
9) Methyl methanesulfonate	(1)	4.287	80	103775	15.133
11)$2-Fluorophenol	(1)	4.452	112	293363	28.633
13) N-Nitrosodiethylamine	(1)	4.681	102	86683	14.059
15) Ethyl methanesulfonate	(1)	4.993	109	87722	14.513
17)$Phenol-d6	(1)	5.381	99	457890	28.481
18) Phenol	(1)	5.393	94	284413	15.043
19) Aniline	(1)	5.416	93	320003	15.065
20) a-methylstyrene	(1)	5.463	118	16110	15.921
22) bis(2-Chloroethyl)ether	(1)	5.487	93	186473	14.355
23) 2-Chlorophenol	(1)	5.522	128	152491	14.737
42) Total Cresols	(1)			341668	27.918
24) 1,3-Dichlorobenzene	(1)	5.675	146	160305	14.634
25)*1,4-Dichlorobenzene-d4	(1)	5.734	152	136077	20.000
26) 1,4-Dichlorobenzene	(1)	5.751	146	167133	14.863
27) Benzyl alcohol	(1)	5.869	108	119015	14.492
28) 1,2-Dichlorobenzene	(1)	5.893	146	152205	14.316
31) 2-Methylphenol	(1)	5.981	108	166352	14.330
30) Indene	(1)	5.981	115	181089	14.832
33) 2,2'-oxybis(1-Chloropropane)	(1)	6.004	45	205889	15.112
34) bis(2-Chloroisopropyl)ether	(1)	6.004	45	205889	15.112
35) N-Nitrosopyrrolidine	(1)	6.104	100	98217	14.662
36) Acetophenone	(1)	6.128	105	234672	13.832
37) 4-Methylphenol	(1)	6.128	108	175316	13.588
38) N-Nitroso-di-n-propylamine	(1)	6.134	70	179389	15.174
39) N-Nitrosomorpholine	(1)	6.146	56	127904	14.828
40) o-Toluidine	(1)	6.157	106	297046	15.042
43) Hexachloroethane	(1)	6.222	117	61386	14.047
44)$Nitrobenzene-d5	(2)	6.269	82	442399	28.445
45) Nitrobenzene	(2)	6.287	77	237704	14.482
48) N-Nitrosopiperidine	(2)	6.434	114	91068	14.227
50) Isophorone	(2)	6.522	82	420664	14.130
51) 2-Nitrophenol	(2)	6.598	139	84924	13.999
53) 2,4-Dimethylphenol	(2)	6.646	107	191066	14.428
57) O,O,O-Triethylphosphorothioate	(2)	6.722	198	80218	14.268
56) Benzoic acid	(2)	6.734	105	296556	28.534

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0555.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:20 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD015 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) bis(2-Chloroethoxy)methane	(2)	6.746	93	245446	14.789
60) 2,4-Dichlorophenol	(2)	6.828	162	136338	14.474
62) 1,2,4-Trichlorobenzene	(2)	6.916	180	140764	14.856
65)*Naphthalene-d8	(2)	6.969	136	589762	20.000
66) Naphthalene	(2)	6.987	128	473424	14.409
67) 4-Chloroaniline	(2)	7.046	127	206400	15.032
68) 2,6-Dichlorophenol	(2)	7.051	162	135295	14.615
69) Hexachloropropene	(2)	7.081	213	69021	14.428
71) Hexachlorobutadiene	(2)	7.116	225	69647	13.704
75) Quinoline	(2)	7.316	129	324134	14.959
76) Caprolactam	(2)	7.375	113	60255	14.220
77) N-Nitrosodi-n-butylamine	(2)	7.381	84	209379	15.008
97) Isosafrole	(3)			131966	14.305
80) 4-Chloro-3-methylphenol	(2)	7.516	107	164216	14.164
82) Safrole	(2)	7.587	162	130281	14.414
83) 2-Methylnaphthalene	(2)	7.669	142	341949	14.715
84) 1-Methylnaphthalene	(2)	7.763	142	327472	14.613
85) Hexachlorocyclopentadiene	(3)	7.822	237	72629	15.120
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.828	216	136460	14.637
88) cis-Isosafrole	(3)	7.875	162	23413	2.479
90) 2,4,6-Trichlorophenol	(3)	7.940	196	94209	14.189
92) 2,4,5-Trichlorophenol	(3)	7.975	196	105769	14.782
93)$2-Fluorobiphenyl	(3)	8.028	172	752215	28.749
120) 2,4_2,6-Dinitrotoluenes	(3)			205338	28.336
94) trans-Isosafrole	(3)	8.092	162	108553	11.826
95) 1,1'-Biphenyl	(3)	8.128	154	388789	13.814
96) 2-Chloronaphthalene	(3)	8.140	162	318832	13.988
98) 1-Chloronaphthalene	(3)	8.163	162	308555	14.645
99) Diphenyl ether	(3)	8.234	170	224458	14.626
100) 2-Nitroaniline	(3)	8.240	138	107438	14.315
104) 1,4-Naphthoquinone	(3)	8.310	158	125969	13.701
105) 1,4-Dinitrobenzene	(3)	8.375	168	55476	13.851
106) Dimethylphthalate	(3)	8.428	163	396441	15.107
107) 1,3-Dinitrobenzene	(3)	8.445	168	63061	14.141
108) 2,6-Dinitrotoluene	(3)	8.481	165	88580	14.206
109) Acenaphthylene	(3)	8.545	152	450325	14.298
112) 3-Nitroaniline	(3)	8.640	138	98779	14.749
113)*Acenaphthene-d10	(3)	8.687	164	324996	20.000
114) Acenaphthene	(3)	8.716	153	327205	14.331
115) 2,4-Dinitrophenol	(3)	8.745	184	104315	26.153

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0555.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:20 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD015 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Diallate trans/cis	(4)			225958	14.016
116) 4-Nitrophenol	(3)	8.798	109	66501	14.386
117) Pentachlorobenzene	(3)	8.845	250	121781	14.748
118) 2,4-Dinitrotoluene	(3)	8.875	165	116758	14.130
119) Dibenzofuran	(3)	8.887	168	464975	14.372
121) 1-Naphthylamine	(3)	8.957	143	359013	14.500
122) 2,3,4,6-Tetrachlorophenol	(3)	9.004	232	87440	14.649
123) 2-Naphthylamine	(3)	9.040	143	360492	14.856
124) Diethylphthalate	(3)	9.128	149	395156	15.030
125) Thionazin	(3)	9.204	107	69732	14.060
126) Fluorene	(3)	9.222	166	388598	14.231
128) 5-Nitro-o-toluidine	(3)	9.228	152	109827	14.078
127) 4-Chlorophenyl-phenylether	(3)	9.228	204	171062	13.797
129) 4-Nitroaniline	(3)	9.234	138	109090	14.776
130) 4,6-Dinitro-2-methylphenol	(4)	9.269	198	64550	12.939
131) N-Nitrosodiphenylamine	(4)	9.339	169	342245	14.507
132) NDPA as diphenylamine	(4)	9.339	169	342245	14.507
134) 1,2-Diphenylhydrazine	(4)	9.381	77	511572	14.181
135)$2,4,6-Tribromophenol	(3)	9.457	330	78451	29.256
137) Tetraethyldithiopyrophosphate	(4)	9.516	97	74366	14.113
139) 1,3,5-Trinitrobenzene	(4)	9.592	213	37209	12.238
140) Diallate (peak 1)	(4)	9.634	86	193212	11.579
141) Phorate	(4)	9.639	75	314408	14.100
142) Phenacetin	(4)	9.645	108	220321	14.036
143) 4-Bromophenyl-phenylether	(4)	9.710	248	102862	14.576
144) Diallate (peak 2)	(4)	9.722	86	32746	2.438
145) Hexachlorobenzene	(4)	9.757	284	98861	15.241
147) Dimethoate	(4)	9.798	87	183745	14.815
149) Pentachlorophenol	(4)	9.951	266	63550	13.723
150) 4-Aminobiphenyl	(4)	9.957	169	153353	15.628
151) Pentachloronitrobenzene	(4)	9.963	237	45556	14.578
152) Pronamide	(4)	10.028	173	167711	14.233
153)*Phenanthrene-d10	(4)	10.139	188	643241	20.000
154) Dinoseb	(4)	10.139	211	91194	13.111
155) Phenanthrene	(4)	10.163	178	566225	14.482
157) Anthracene	(4)	10.210	178	571248	14.240
163) Carbazole	(4)	10.369	167	533035	14.610
164) Methyl parathion	(4)	10.516	109	128907	13.844
165) Di-n-butylphthalate	(4)	10.733	149	638890	13.916
167) Parathion	(4)	10.904	109	79141	12.888

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0555.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:20 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

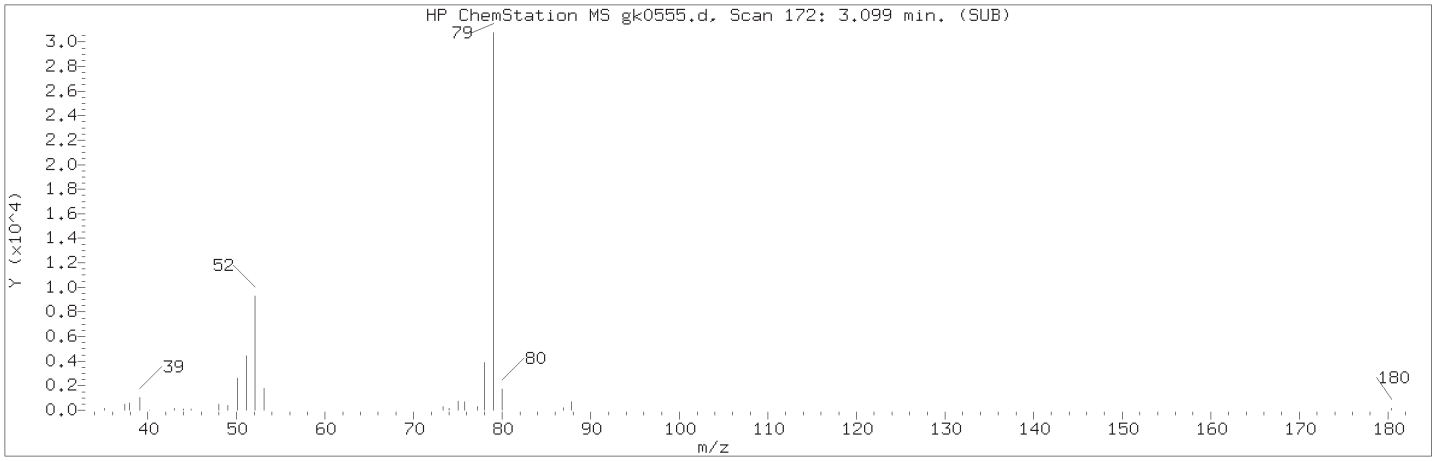
Sample Name: SSTD015 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
168) 4-Nitroquinoline-1-oxide	(4)	10.916	190	46189	11.967
169) Octachlorostyrene	(4)	11.145	308	35130	13.663
171) Isodrin	(4)	11.186	193	56974	13.086
173) Fluoranthene	(4)	11.328	202	606722	14.430
174) Benzidine	(5)	11.463	184	1179361	42.859
175)*Pyrene-d10	(5)	11.528	212	605873	20.000
177) Pyrene	(5)	11.545	202	609944	14.214
179)$Terphenyl-d14	(5)	11.716	244	829142	28.080
182) p-Dimethylaminoazobenzene	(5)	11.851	225	108035	14.558
185) Chlorobenzilate	(5)	11.904	139	189602	13.685
187) 3,3'-Dimethylbenzidine	(5)	12.180	212	309738	13.597
188) Butylbenzylphthalate	(5)	12.204	149	280394	13.611
191) 2-Acetylaminofluorene	(5)	12.428	181	230612	13.383
193) 3,3'-Dichlorobenzidine	(5)	12.722	252	198629	14.128
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.733	231	106568	13.659
195) Benzo(a)anthracene	(5)	12.745	228	578447	14.202
196) Chrysene	(5)	12.780	228	557554	14.400
199) bis(2-Ethylhexyl)phthalate	(5)	12.804	149	385710	13.670
203) 6-Methylchrysene	(5)	13.245	242	369940	13.967
205) Di-n-octylphthalate	(6)	13.469	149	619466	13.033
206) Benzo(b)fluoranthene	(6)	13.827	252	527370	14.311
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.827	256	242661	13.920
208) Benzo(k)fluoranthene	(6)	13.857	252	492353	13.794
211) Benzo(a)pyrene	(6)	14.145	252	479951	14.290
213)*Perylene-d12	(6)	14.204	264	506110	20.000
215) 3-Methylcholanthrene	(6)	14.504	268	182349	13.981
222) Total PAHs	(6)			8610432	258.997
217) Dibenz(a,h)acridine	(6)	15.110	279	341443	14.449
218) Dibenz(a,j)acridine	(6)	15.169	279	378149	14.883
219) Indeno(1,2,3-cd)pyrene	(6)	15.392	276	500524	14.843
220) Dibenz(a,h)anthracene	(6)	15.416	278	407031	14.613
221) Benzo(g,h,i)perylene	(6)	15.727	276	404090	14.581

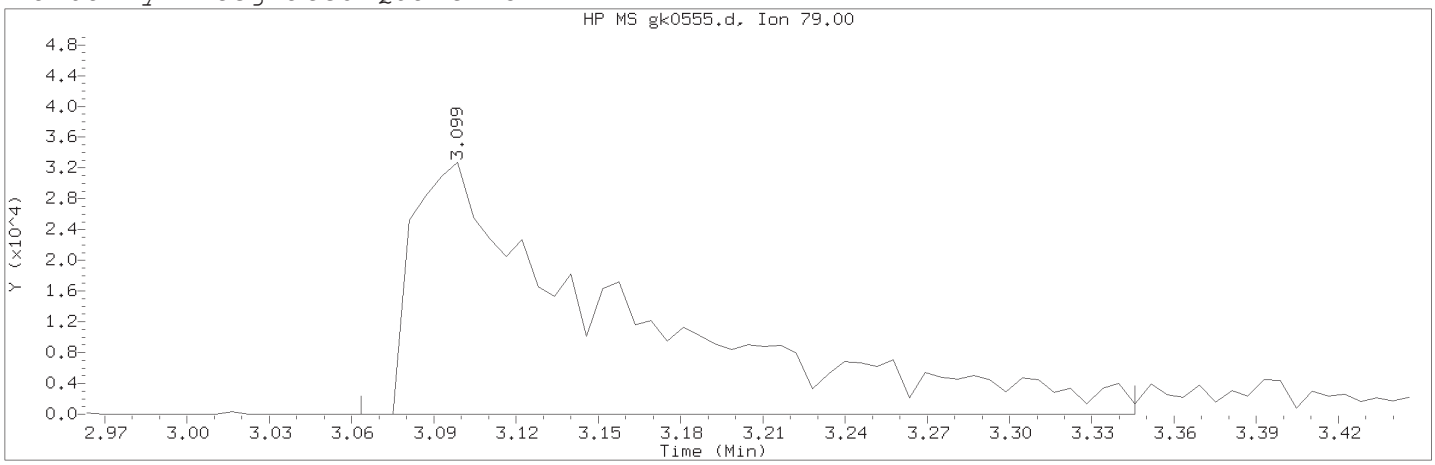
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0555.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:20 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD015 Lab Sample ID: STD2928

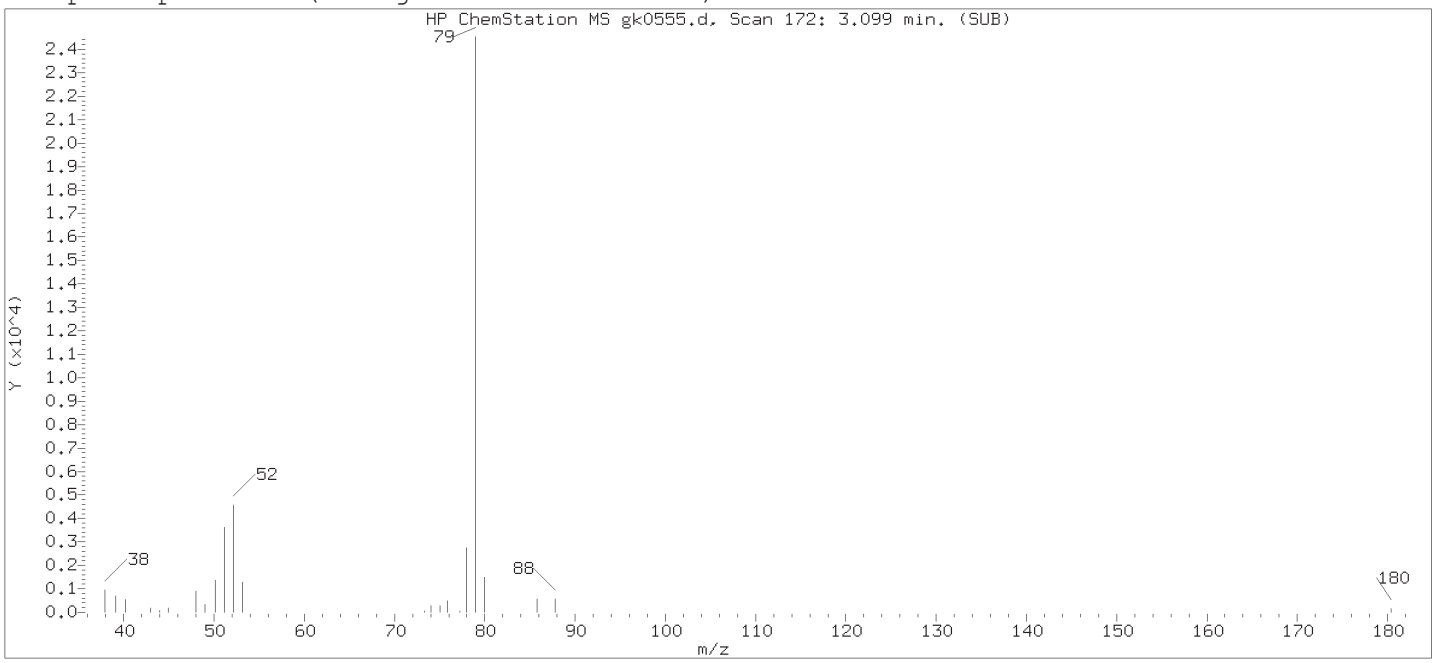
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 172		
Retention Time (minutes)	: 3.099		
Quant Ion	: 79.00		
Area (flag)	: 176249M		
On-Column Amount (ng/ul)	: 14.3528		
Integration start scan	: 165	Integration stop scan:	213
Y at integration start	: 2	Y at integration end:	2

Reason for manual integration: improper integration

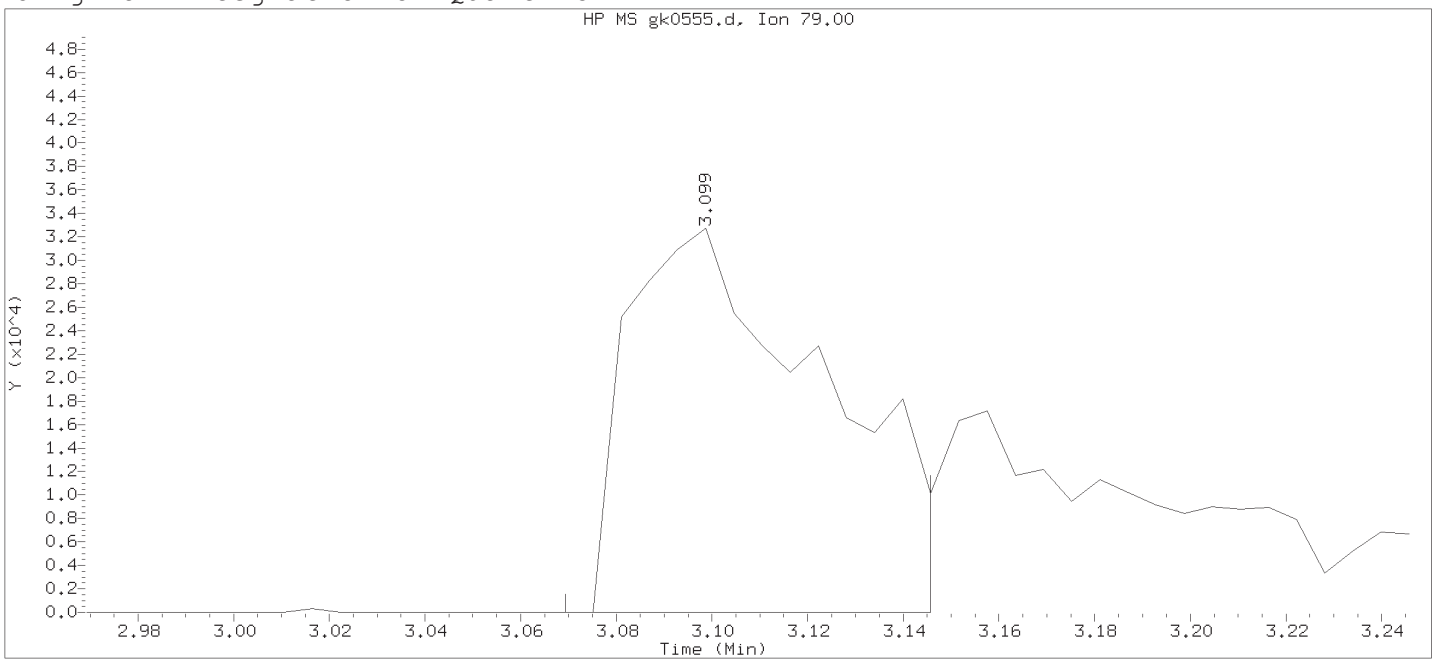
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0555.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:20 Analyst ID: em10340

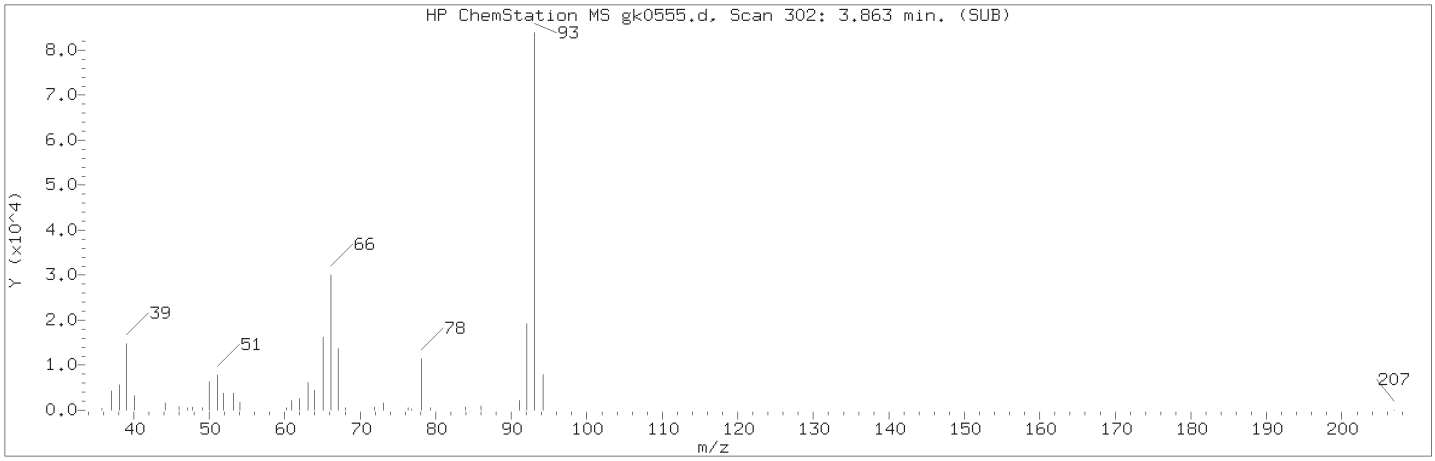
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 13:41
Date, time and analyst ID of latest file update: 11-Nov-2018 13:41 Automation

Sample Name: SSTD015 Lab Sample ID: STD2928

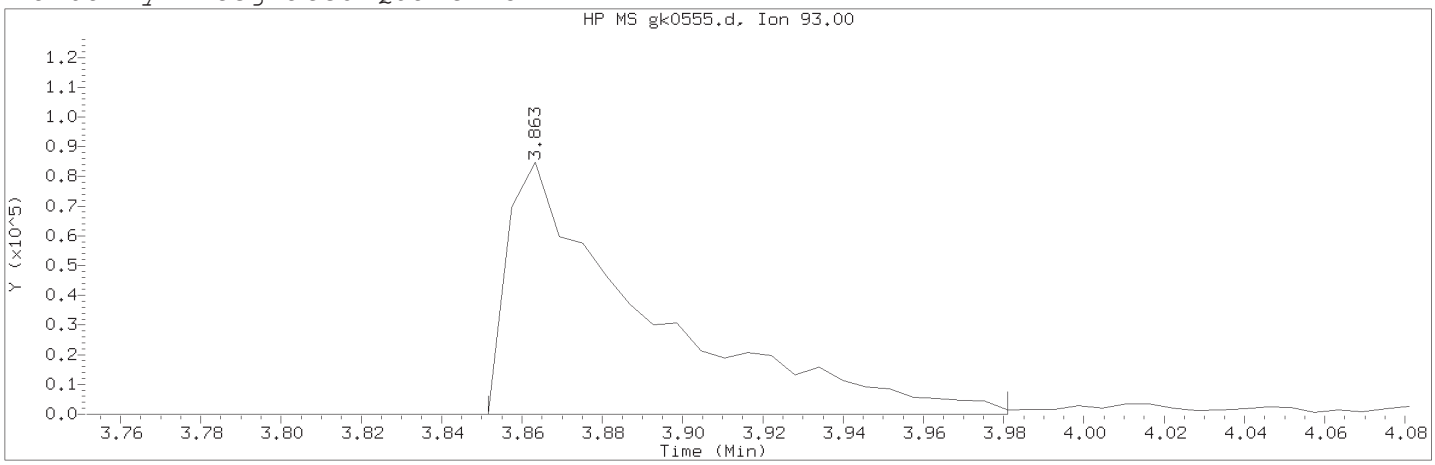
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 172		
Retention Time (minutes)	: 3.099		
Quant Ion	: 79.00		
Area	: 93084		
On-column Amount (ng/ul)	: 8.0796		
Integration start scan	: 166	Integration stop scan:	179
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0555.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:20 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD015 Lab Sample ID: STD2928

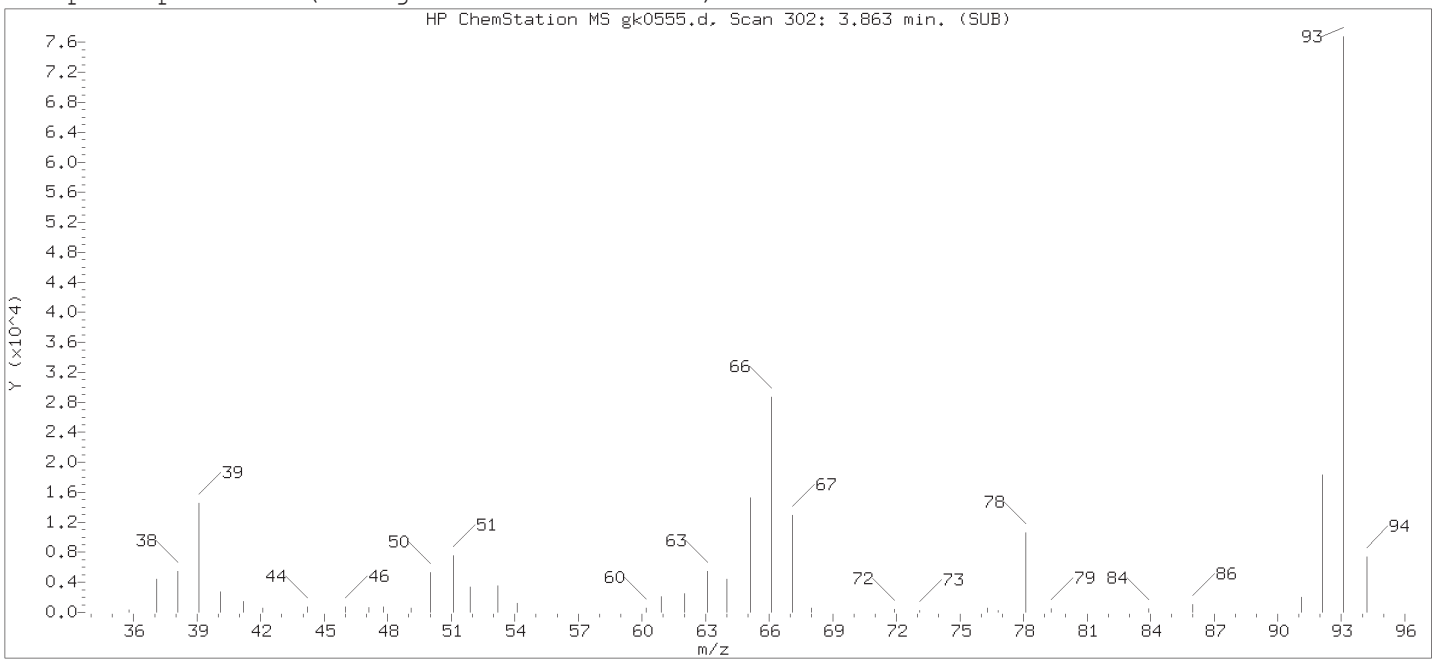
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 302		
Retention Time (minutes)	: 3.863		
Quant Ion	: 93.00		
Area (flag)	: 203277M		
On-Column Amount (ng/ul)	: 15.3093		
Integration start scan	: 299	Integration stop scan:	321
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

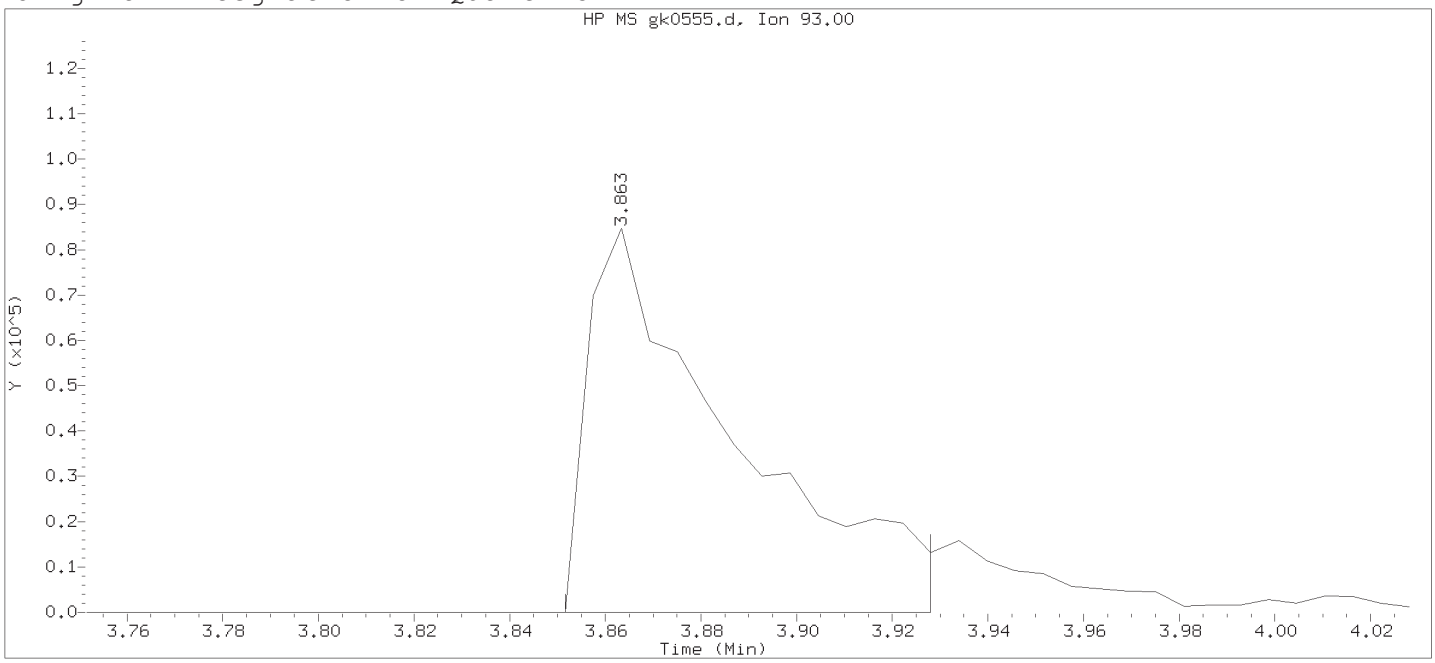
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0555.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:20 Analyst ID: em10340

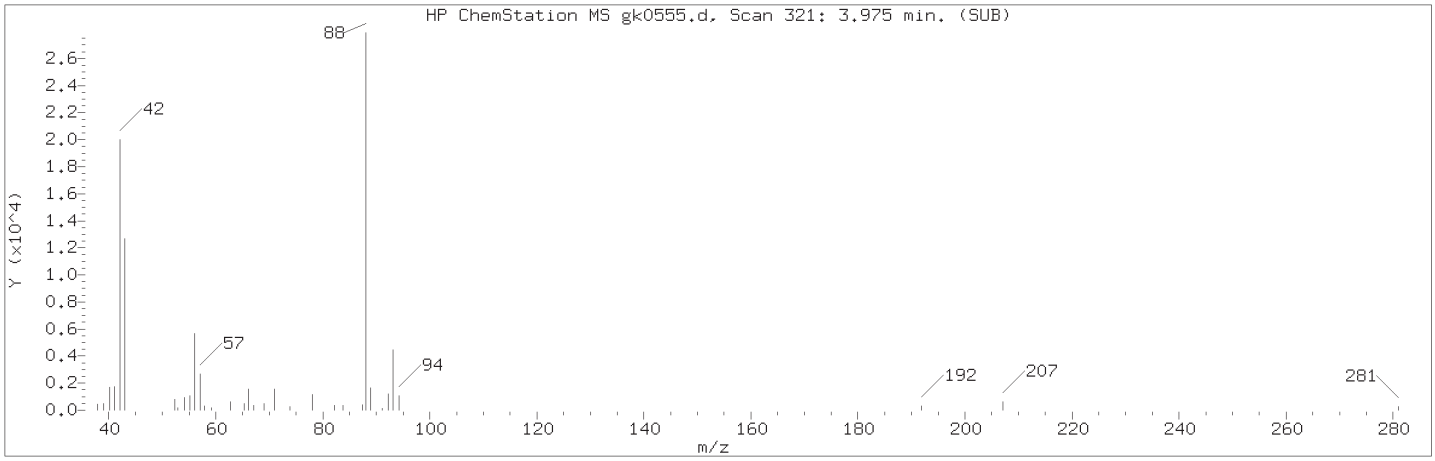
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 13:41
Date, time and analyst ID of latest file update: 11-Nov-2018 13:41 Automation

Sample Name: SSTD015 Lab Sample ID: STD2928

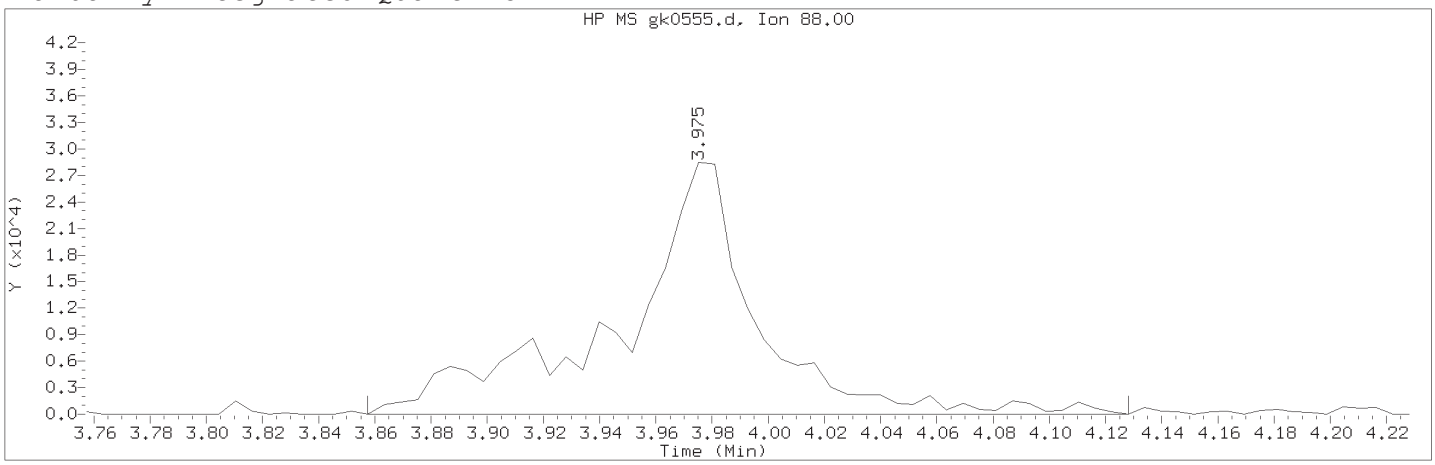
Compound Number	:	7
Compound Name	:	2-Picoline
Scan Number	:	302
Retention Time (minutes)	:	3.863
Quant Ion	:	93.00
Area	:	177596
On-column Amount (ng/ul)	:	13.7818
Integration start scan	:	299
Integration stop scan	:	312
Y at integration start	:	0
Y at integration end	:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0555.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:20 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD015 Lab Sample ID: STD2928

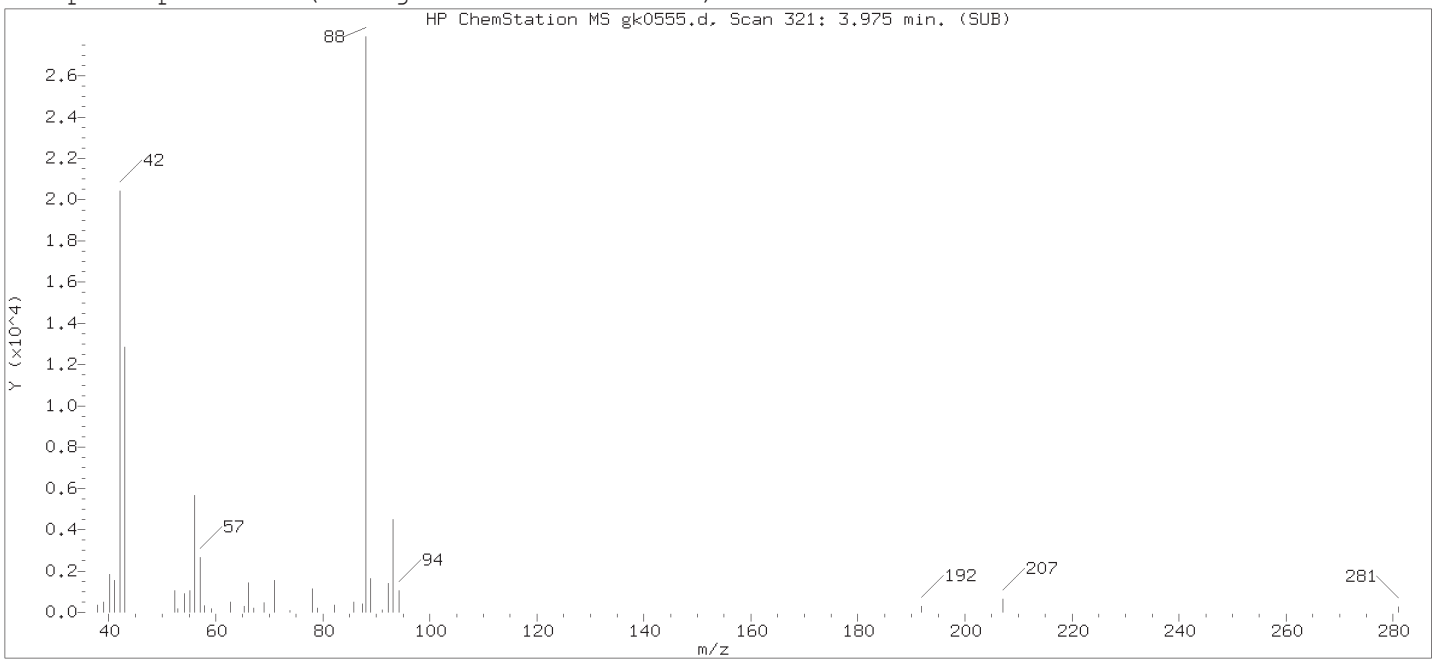
Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 321		
Retention Time (minutes)	: 3.975		
Quant Ion	: 88.00		
Area (flag)	: 96205M		
On-Column Amount (ng/ul)	: 14.8621		
Integration start scan	: 300	Integration stop scan:	346
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

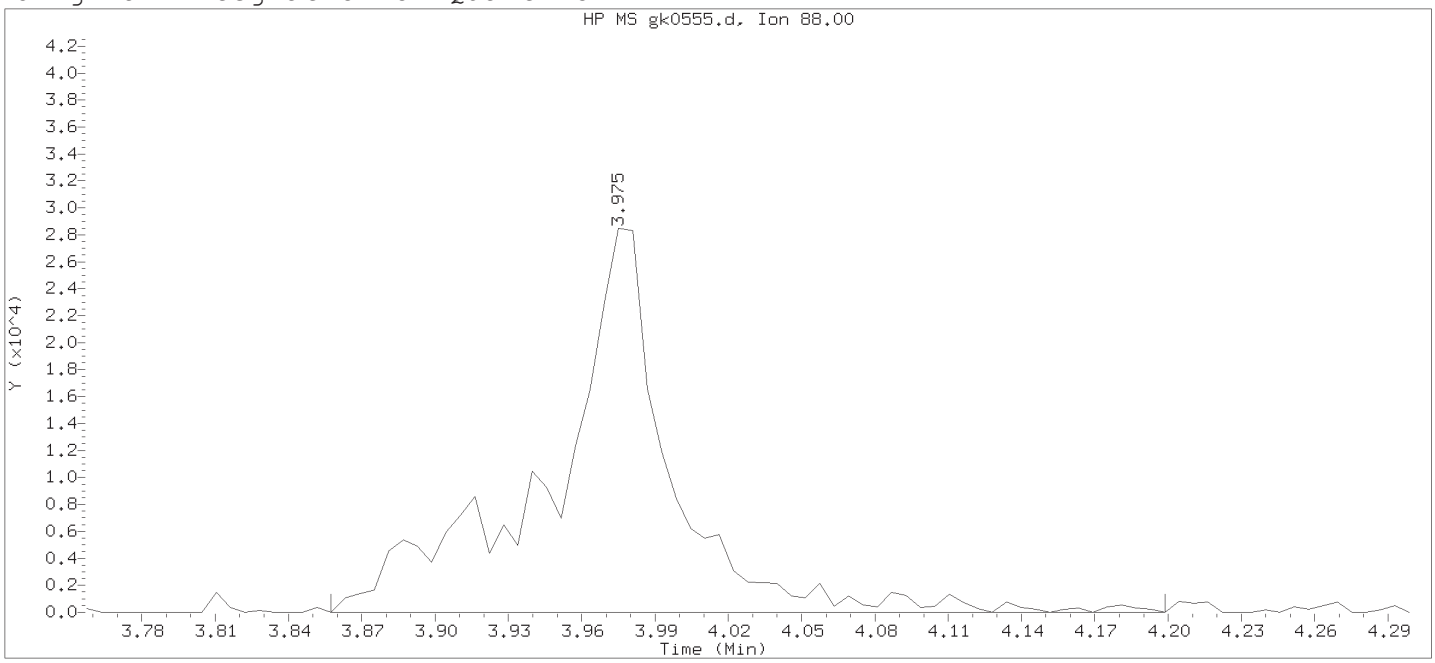
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



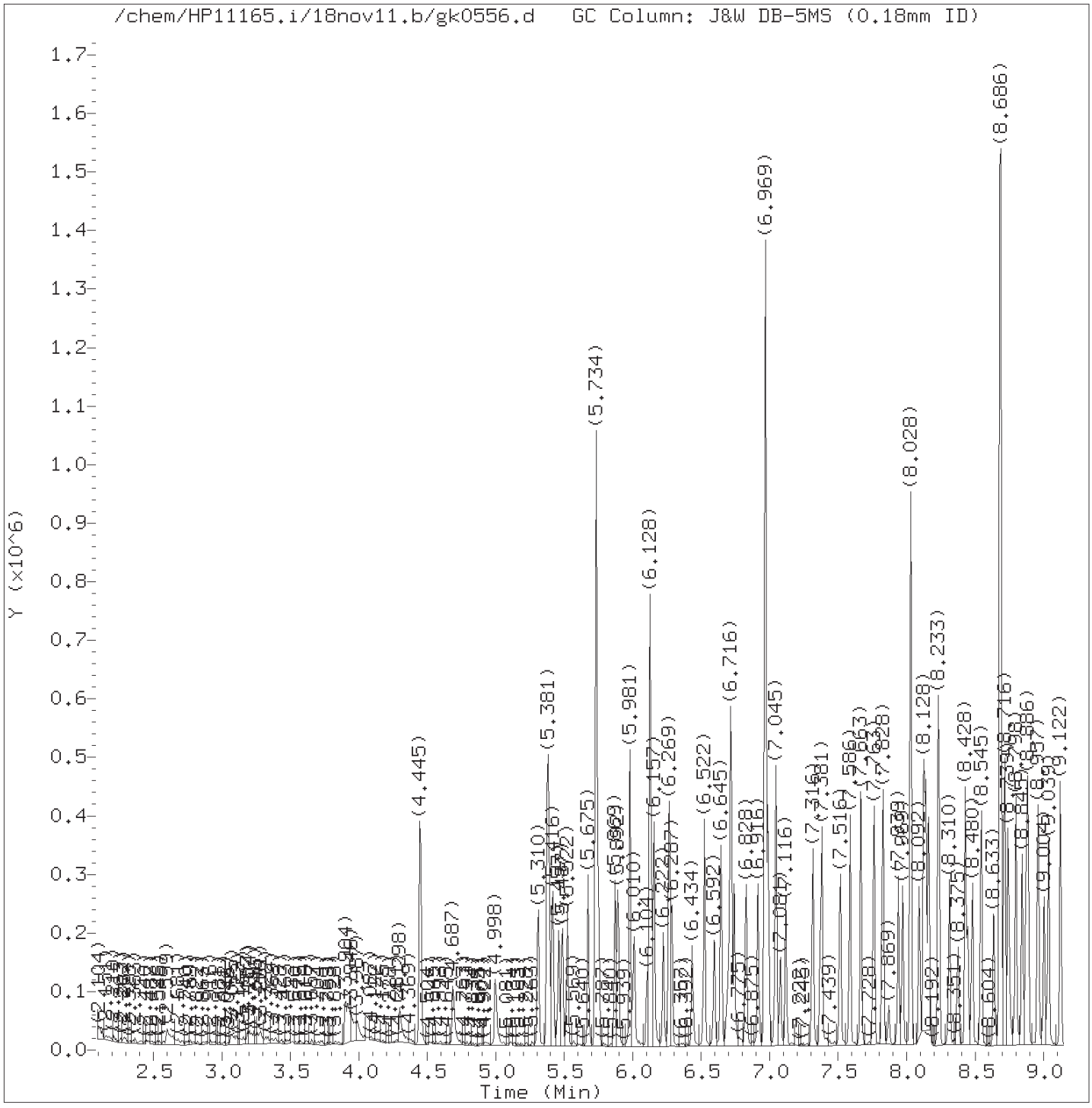
Data File: /chem/HP11165.i/18nov11.b/gk0555.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:20 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 13:41
Date, time and analyst ID of latest file update: 11-Nov-2018 13:41 Automation

Sample Name: SSTD015 Lab Sample ID: STD2928

Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 321		
Retention Time (minutes)	: 3.975		
Quant Ion	: 88.00		
Area	: 97400		
On-column Amount (ng/ul)	: 15.5651		
Integration start scan	: 300	Integration stop scan:	358
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

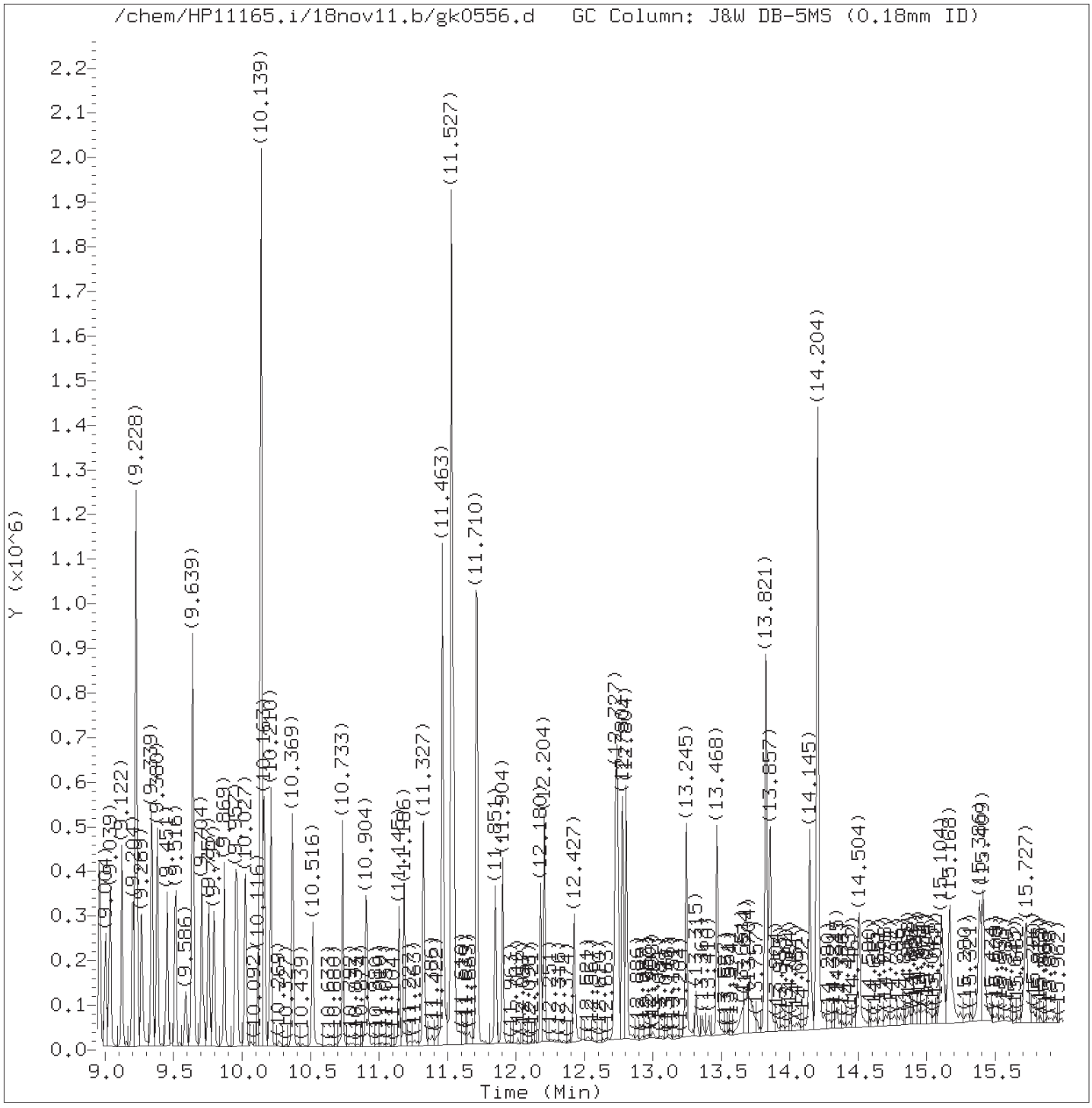
Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0556.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:44 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD005 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0556.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:44 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD005 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0556.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:44 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD005 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.599	88	26801	5.594
4) N-Nitrosodimethylamine	(1)	3.063	74	37020M	5.083
5) Pyridine	(1)	3.187	79	60845M	4.971
7) 2-Picoline	(1)	3.898	93	66479M	5.014
8) N-Nitrosomethylethylamine	(1)	3.987	88	34943M	5.337
9) Methyl methanesulfonate	(1)	4.298	80	34272	5.007
11)$2-Fluorophenol	(1)	4.445	112	106749	10.365
13) N-Nitrosodiethylamine	(1)	4.693	102	28646	4.710
15) Ethyl methanesulfonate	(1)	4.998	109	31769	5.220
17)$Phenol-d6	(1)	5.375	99	154719	9.701
18) Phenol	(1)	5.392	94	85811	4.618
19) Aniline	(1)	5.416	93	101075	4.806
20) a-methylstyrene	(1)	5.469	118	5708	5.532
22) bis(2-Chloroethyl)ether	(1)	5.487	93	68447	5.231
23) 2-Chlorophenol	(1)	5.522	128	48163	4.717
42) Total Cresols	(1)			116260	9.592
24) 1,3-Dichlorobenzene	(1)	5.675	146	55193	5.041
25)*1,4-Dichlorobenzene-d4	(1)	5.734	152	135792	20.000
26) 1,4-Dichlorobenzene	(1)	5.751	146	55167	4.930
27) Benzyl alcohol	(1)	5.869	108	38074	4.701
28) 1,2-Dichlorobenzene	(1)	5.892	146	58905	5.452
31) 2-Methylphenol	(1)	5.981	108	56115	4.869
30) Indene	(1)	5.981	115	63409	5.169
33) 2,2'-oxybis(1-Chloropropane)	(1)	6.010	45	66148	4.887
34) bis(2-Chloroisopropyl)ether	(1)	6.010	45	66148	4.887
35) N-Nitrosopyrrolidine	(1)	6.104	100	32977	4.944
36) Acetophenone	(1)	6.122	105	81604	4.849
37) 4-Methylphenol	(1)	6.128	108	60145	4.723
38) N-Nitroso-di-n-propylamine	(1)	6.128	70	59335	5.025
39) N-Nitrosomorpholine	(1)	6.145	56	41183	4.819
40) o-Toluidine	(1)	6.157	106	96255	4.903
43) Hexachloroethane	(1)	6.222	117	20922	4.830
44)$Nitrobenzene-d5	(2)	6.269	82	148258	9.953
45) Nitrobenzene	(2)	6.287	77	77913	4.960
48) N-Nitrosopiperidine	(2)	6.434	114	30639	4.994
50) Isophorone	(2)	6.522	82	148035	5.155
51) 2-Nitrophenol	(2)	6.598	139	26734	4.660
53) 2,4-Dimethylphenol	(2)	6.645	107	62681	4.947
56) Benzoic acid	(2)	6.710	105	117419	12.222
57) O,O,O-Triethylphosphorothioate	(2)	6.722	198	27601	5.100

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0556.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:44 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD005 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) bis(2-Chloroethoxy)methane	(2)	6.739	93	82387	5.147
60) 2,4-Dichlorophenol	(2)	6.828	162	41896	4.696
62) 1,2,4-Trichlorobenzene	(2)	6.916	180	45972	5.051
65)*Naphthalene-d8	(2)	6.969	136	565387	20.000
66) Naphthalene	(2)	6.986	128	161984	5.118
67) 4-Chloroaniline	(2)	7.045	127	67771	5.123
68) 2,6-Dichlorophenol	(2)	7.051	162	43485	4.916
69) Hexachloropropene	(2)	7.075	213	21968	4.824
71) Hexachlorobutadiene	(2)	7.116	225	25574	5.206
75) Quinoline	(2)	7.316	129	105249	5.055
76) Caprolactam	(2)	7.369	113	18677	4.660
77) N-Nitrosodi-n-butylamine	(2)	7.381	84	64466	4.855
97) Isosafrole	(3)			41002	4.571
80) 4-Chloro-3-methylphenol	(2)	7.516	107	51065	4.657
82) Safrole	(2)	7.586	162	45550	5.212
83) 2-Methylnaphthalene	(2)	7.669	142	116841	5.202
84) 1-Methylnaphthalene	(2)	7.763	142	105240	4.915
85) Hexachlorocyclopentadiene	(3)	7.822	237	23351	4.931
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.828	216	43776	4.790
88) cis-Isosafrole	(3)	7.875	162	7675	0.827
90) 2,4,6-Trichlorophenol	(3)	7.939	196	30373	4.685
92) 2,4,5-Trichlorophenol	(3)	7.969	196	36468	5.129
93)$2-Fluorobiphenyl	(3)	8.028	172	266979	10.266
120) 2,4_2,6-Dinitrotoluenes	(3)			69670	9.773
94) trans-Isosafrole	(3)	8.092	162	33327	3.744
95) 1,1'-Biphenyl	(3)	8.128	154	146464	5.218
96) 2-Chloronaphthalene	(3)	8.139	162	112080	4.978
98) 1-Chloronaphthalene	(3)	8.163	162	103713	4.983
99) Diphenyl ether	(3)	8.233	170	76436	5.032
100) 2-Nitroaniline	(3)	8.239	138	37454	5.040
104) 1,4-Naphthoquinone	(3)	8.310	158	46198	5.069
105) 1,4-Dinitrobenzene	(3)	8.375	168	15866	4.144
106) Dimethylphthalate	(3)	8.428	163	132611	5.092
107) 1,3-Dinitrobenzene	(3)	8.445	168	23076	5.194
108) 2,6-Dinitrotoluene	(3)	8.480	165	30143	4.908
109) Acenaphthylene	(3)	8.545	152	149525	4.834
112) 3-Nitroaniline	(3)	8.639	138	35118	5.251
113)*Acenaphthene-d10	(3)	8.686	164	321301	20.000
114) Acenaphthene	(3)	8.716	153	107629	4.805
115) 2,4-Dinitrophenol	(3)	8.745	184	45519	11.543

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0556.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:44 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD005 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Diallate trans/cis	(4)			73396	4.659
116) 4-Nitrophenol	(3)	8.798	109	44586	9.796
117) Pentachlorobenzene	(3)	8.845	250	41719	5.092
118) 2,4-Dinitrotoluene	(3)	8.869	165	39527	4.865
119) Dibenzofuran	(3)	8.886	168	160571	5.017
121) 1-Naphthylamine	(3)	8.957	143	125567	5.108
122) 2,3,4,6-Tetrachlorophenol	(3)	9.004	232	27512	4.715
123) 2-Naphthylamine	(3)	9.039	143	117702	4.922
124) Diethylphthalate	(3)	9.122	149	134351	5.140
125) Thionazin	(3)	9.198	107	26704	5.366
126) Fluorene	(3)	9.222	166	138690	5.114
129) 4-Nitroaniline	(3)	9.228	138	38324	5.207
128) 5-Nitro-o-toluidine	(3)	9.228	152	42290	5.396
127) 4-Chlorophenyl-phenylether	(3)	9.228	204	61796	5.034
130) 4,6-Dinitro-2-methylphenol	(4)	9.269	198	36399	7.671
131) N-Nitrosodiphenylamine	(4)	9.339	169	120892	5.123
132) NDPA as diphenylamine	(4)	9.339	169	120892	5.123
134) 1,2-Diphenylhydrazine	(4)	9.380	77	181427	5.044
135)$2,4,6-Tribromophenol	(3)	9.451	330	21850	8.491
137) Tetraethyldithiopyrophosphate	(4)	9.516	97	23075	4.489
139) 1,3,5-Trinitrobenzene	(4)	9.592	213	11858	3.918
140) Diallate (peak 1)	(4)	9.633	86	60847	3.736
141) Phorate	(4)	9.639	75	100469	4.599
142) Phenacetin	(4)	9.645	108	67678	4.430
143) 4-Bromophenyl-phenylether	(4)	9.710	248	35483	5.043
144) Diallate (peak 2)	(4)	9.722	86	12549	0.922
145) Hexachlorobenzene	(4)	9.757	284	34370	5.266
147) Dimethoate	(4)	9.792	87	56517	4.643
149) Pentachlorophenol	(4)	9.951	266	16238	3.705
150) 4-Aminobiphenyl	(4)	9.957	169	54081	5.420
151) Pentachloronitrobenzene	(4)	9.963	237	15867	5.084
152) Pronamide	(4)	10.027	173	55585	4.781
153)*Phenanthrene-d10	(4)	10.139	188	640283	20.000
154) Dinoseb	(4)	10.139	211	23126	3.340
155) Phenanthrene	(4)	10.163	178	211463	5.356
157) Anthracene	(4)	10.210	178	199827	5.004
163) Carbazole	(4)	10.369	167	184375	5.064
164) Methyl parathion	(4)	10.516	109	37738	4.202
165) Di-n-butylphthalate	(4)	10.733	149	198235	4.436
167) Parathion	(4)	10.904	109	23967	4.067

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0556.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:44 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

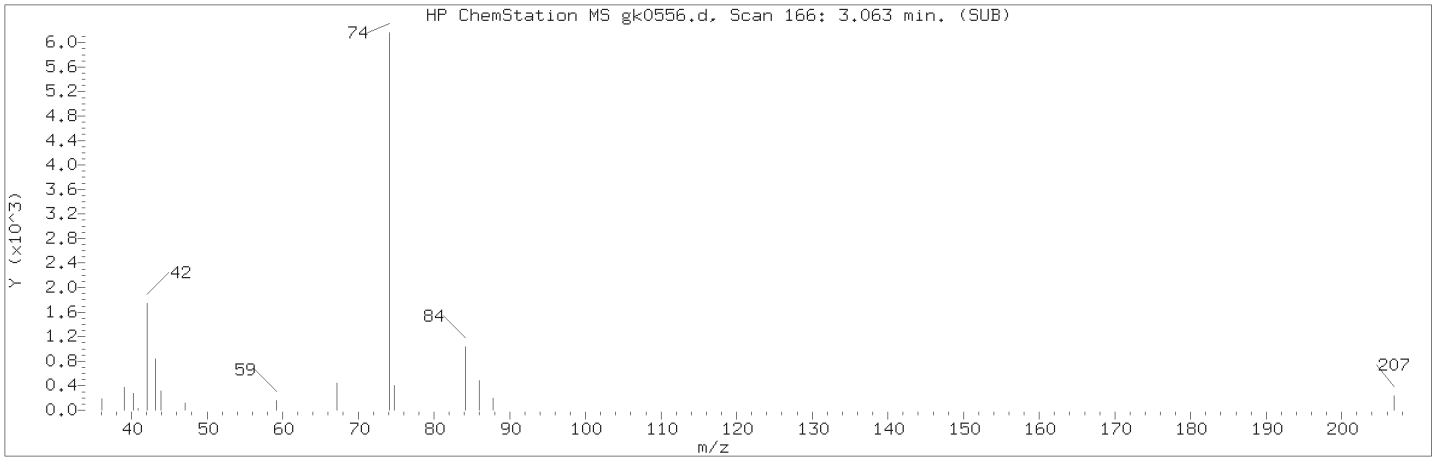
Sample Name: SSTD005 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
168) 4-Nitroquinoline-1-oxide	(4)	10.916	190	11098	2.889
169) Octachlorostyrene	(4)	11.145	308	12506	4.905
171) Isodrin	(4)	11.186	193	22734	5.203
173) Fluoranthene	(4)	11.327	202	208722	4.989
174) Benzidine	(5)	11.463	184	391159	13.929
175)*Pyrene-d10	(5)	11.527	212	627172	20.000
177) Pyrene	(5)	11.545	202	217492	4.913
179)$Terphenyl-d14	(5)	11.716	244	291386	9.608
182) p-Dimethylaminoazobenzene	(5)	11.851	225	31258	4.199
185) Chlorobenzilate	(5)	11.904	139	64704	4.586
187) 3,3'-Dimethylbenzidine	(5)	12.180	212	102407	4.440
188) Butylbenzylphthalate	(5)	12.210	149	98531	4.680
191) 2-Acetylaminofluorene	(5)	12.427	181	63205	3.724
193) 3,3'-Dichlorobenzidine	(5)	12.721	252	66206	4.619
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.733	231	31979	4.102
195) Benzo(a)anthracene	(5)	12.739	228	207467	4.934
196) Chrysene	(5)	12.780	228	195086	4.889
199) bis(2-Ethylhexyl)phthalate	(5)	12.804	149	125484	4.399
203) 6-Methylchrysene	(5)	13.245	242	130817	4.808
205) Di-n-octylphthalate	(6)	13.468	149	193075	3.931
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.821	256	83136	4.512
206) Benzo(b)fluoranthene	(6)	13.827	252	179864	4.602
208) Benzo(k)fluoranthene	(6)	13.857	252	198170	5.127
211) Benzo(a)pyrene	(6)	14.145	252	174056	4.840
213)*Perylene-d12	(6)	14.204	264	545328	20.000
215) 3-Methylcholanthrene	(6)	14.504	268	63162	4.571
222) Total PAHs	(6)			3043176	89.389
217) Dibenz(a,h)acridine	(6)	15.109	279	115415	4.604
218) Dibenz(a,j)acridine	(6)	15.168	279	123633	4.590
219) Indeno(1,2,3-cd)pyrene	(6)	15.386	276	176946	4.891
220) Dibenz(a,h)anthracene	(6)	15.409	278	147685	4.934
221) Benzo(g,h,i)perylene	(6)	15.721	276	146489	4.921

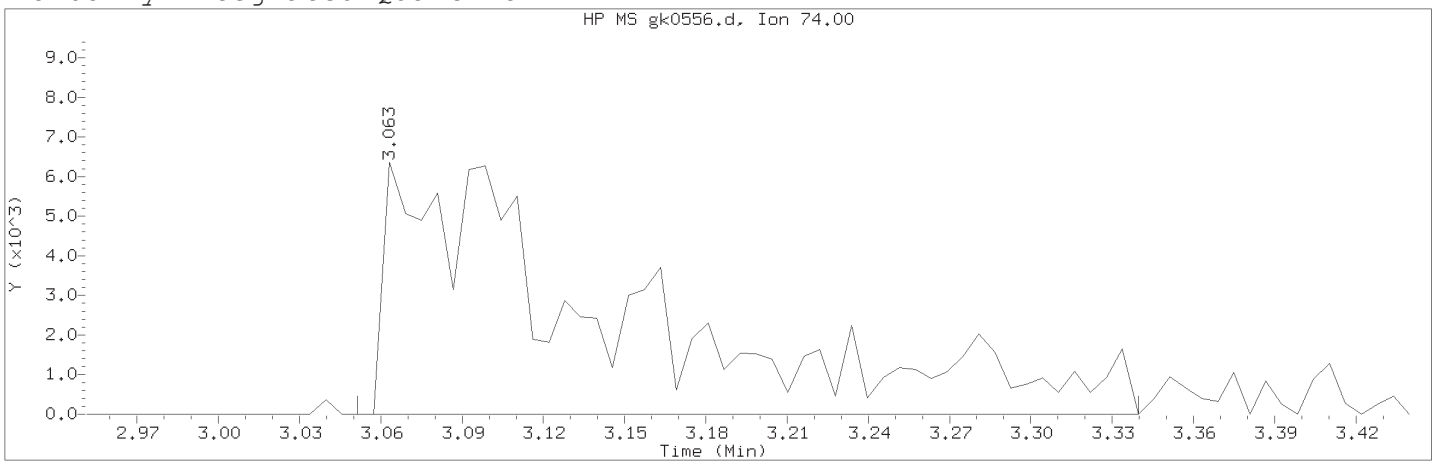
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0556.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:44 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD005 Lab Sample ID: STD2928

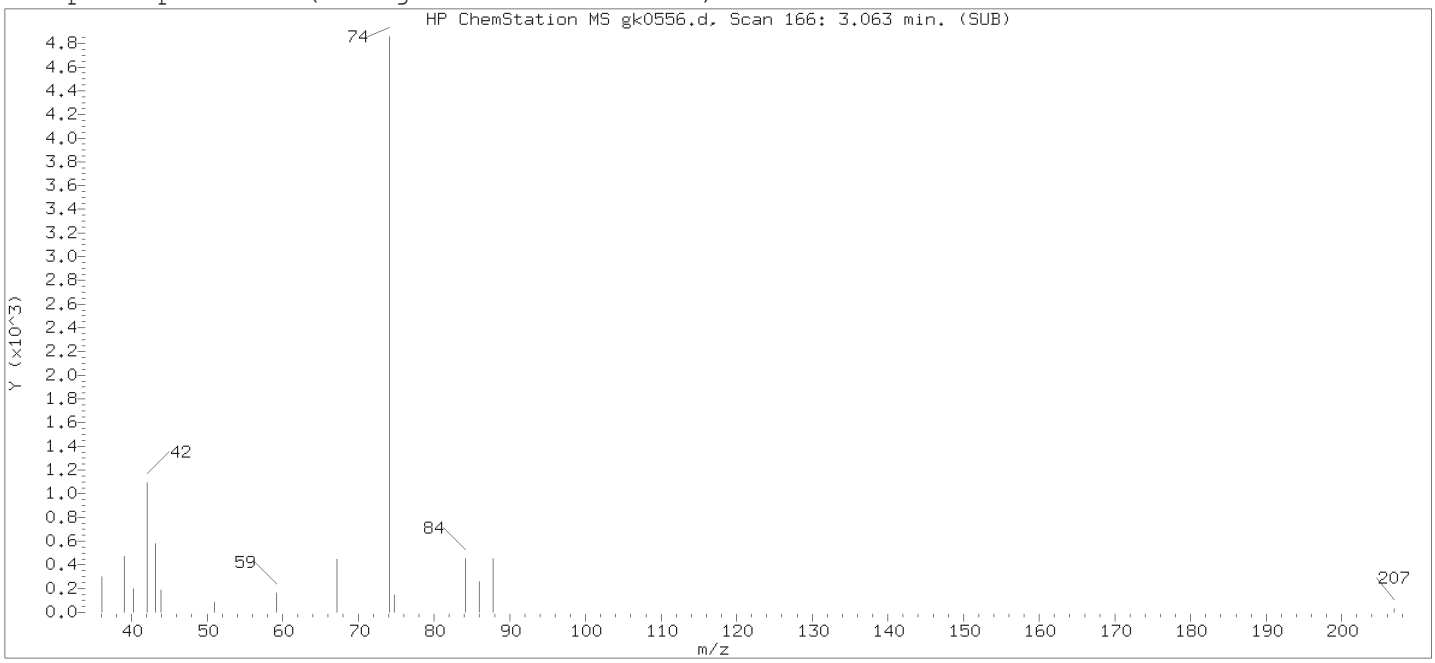
Compound Number : 4
Compound Name : N-Nitrosodimethylamine
Scan Number : 166
Retention Time (minutes) : 3.063
Quant Ion : 74.00
Area (flag) : 37020M
On-Column Amount (ng/ul) : 5.0825
Integration start scan : 163 Integration stop scan: 212
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

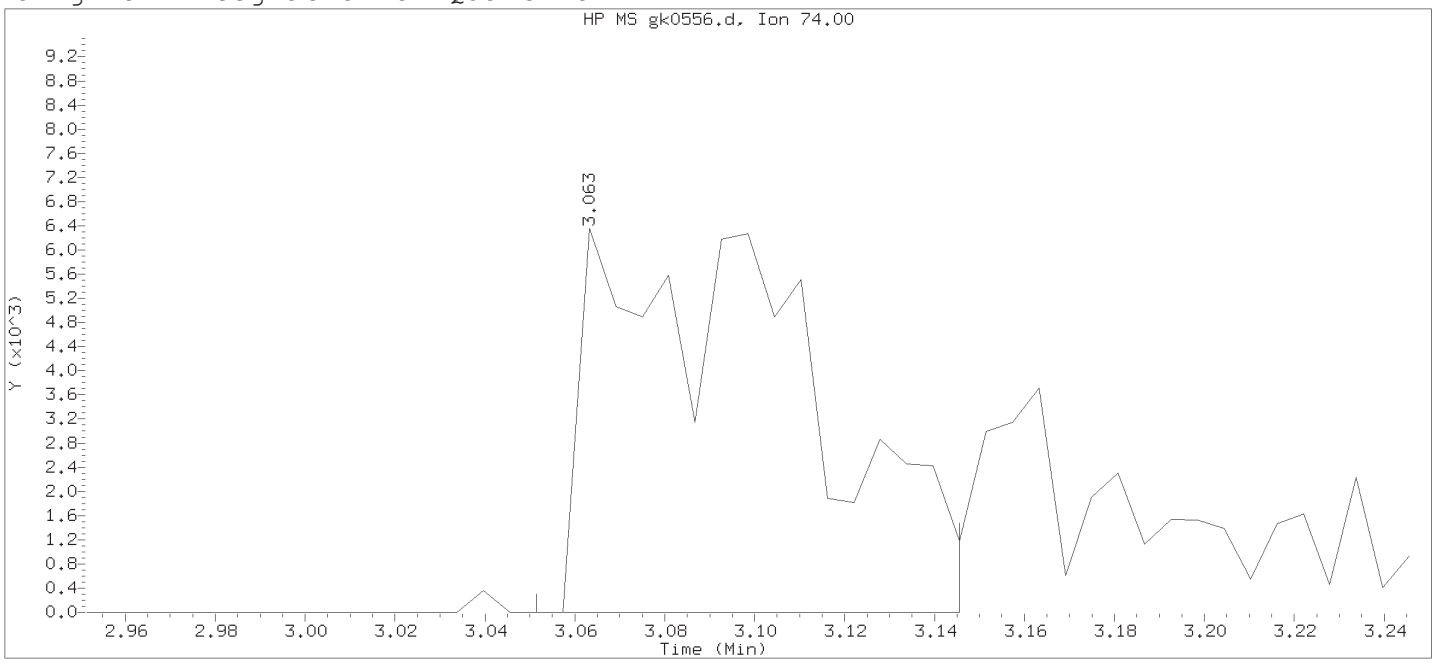
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0556.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:44 Analyst ID: em10340

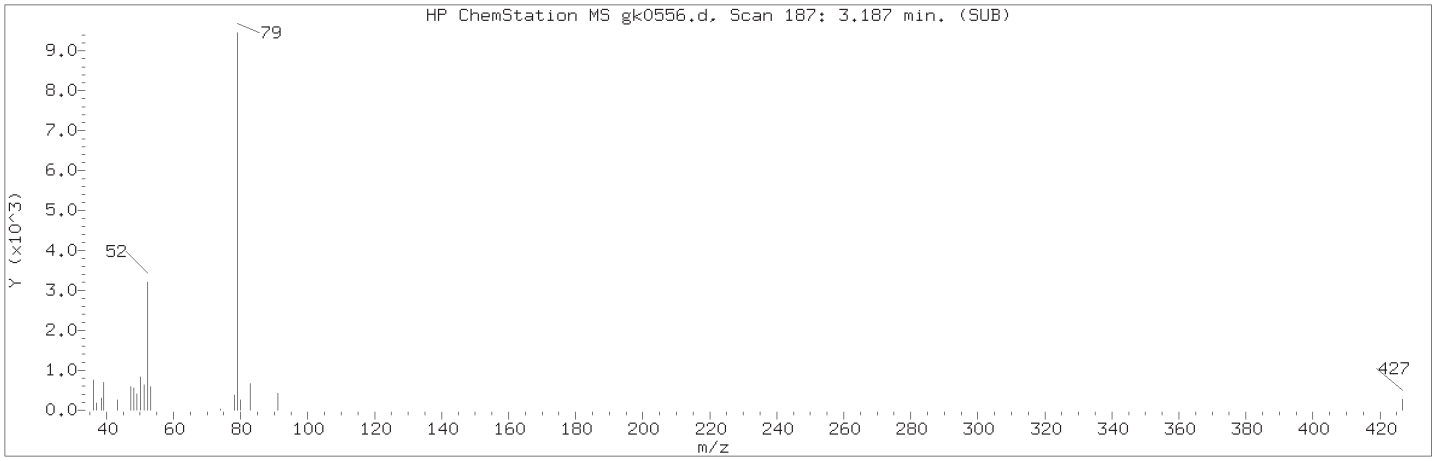
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:05
Date, time and analyst ID of latest file update: 11-Nov-2018 14:05 Automation

Sample Name: SSTD005 Lab Sample ID: STD2928

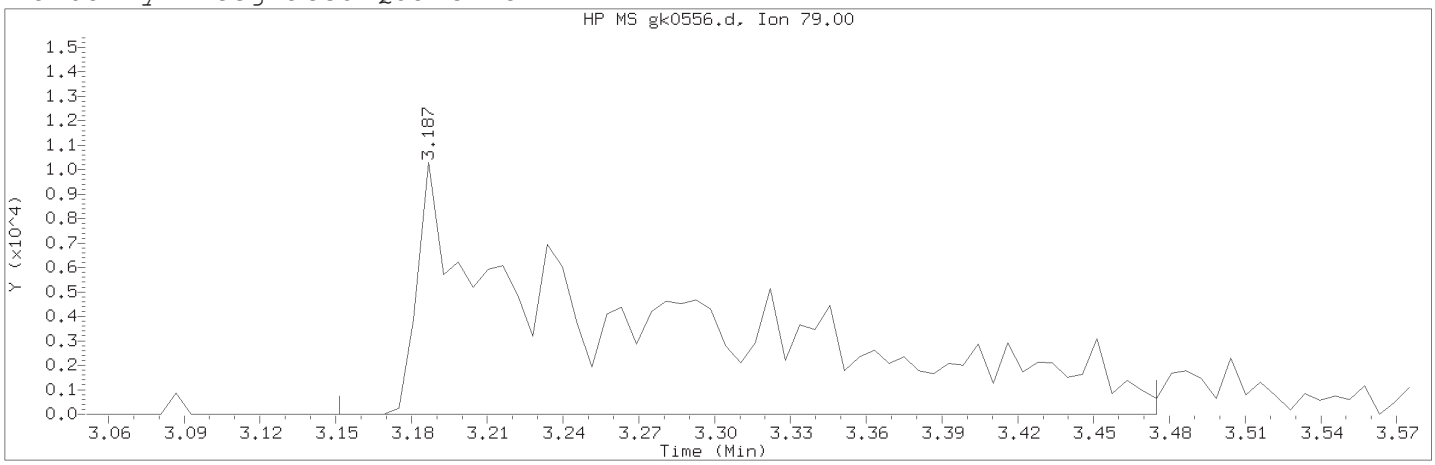
Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 166		
Retention Time (minutes)	: 3.063		
Quant Ion	: 74.00		
Area	: 21156		
On-column Amount (ng/ul)	: 3.1509		
Integration start scan	: 163	Integration stop scan:	179
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0556.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:44 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD005 Lab Sample ID: STD2928

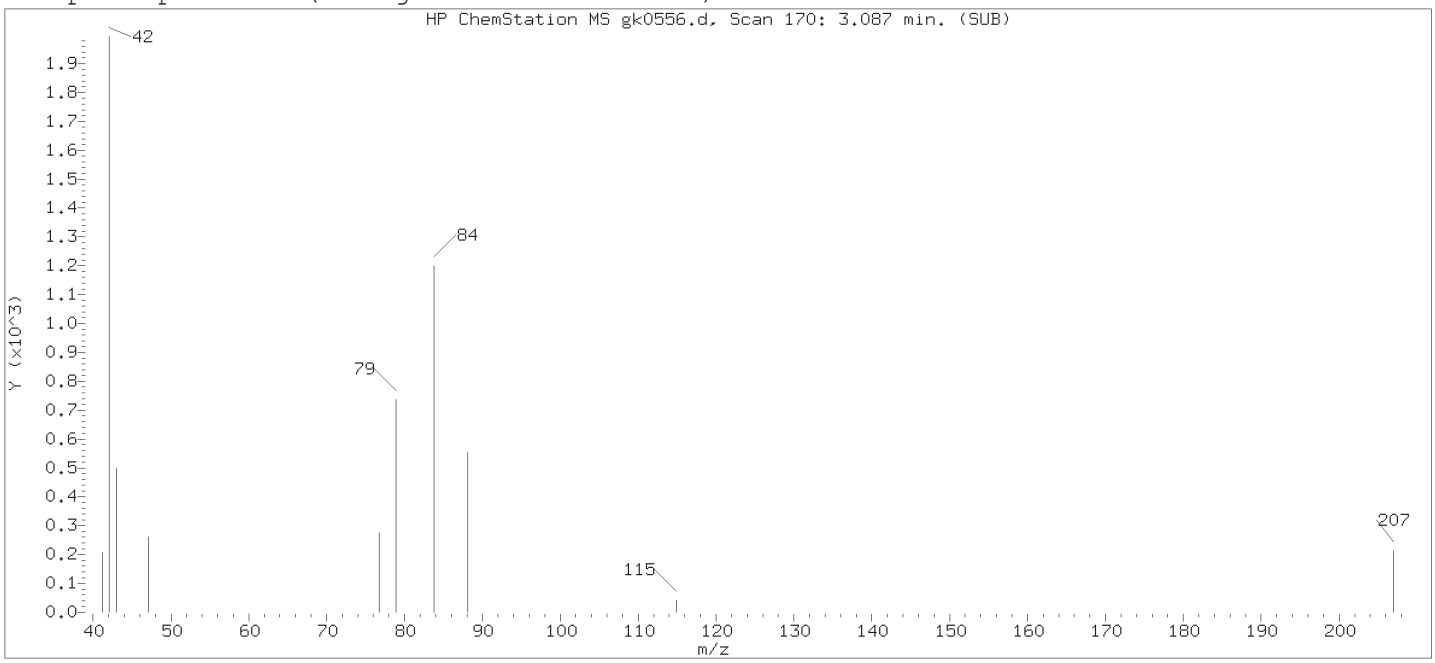
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 187		
Retention Time (minutes)	: 3.187		
Quant Ion	: 79.00		
Area (flag)	: 60845M		
On-Column Amount (ng/ul)	: 4.9711		
Integration start scan	: 180	Integration stop scan:	235
Y at integration start	: 1	Y at integration end:	1

Reason for manual integration: improper integration

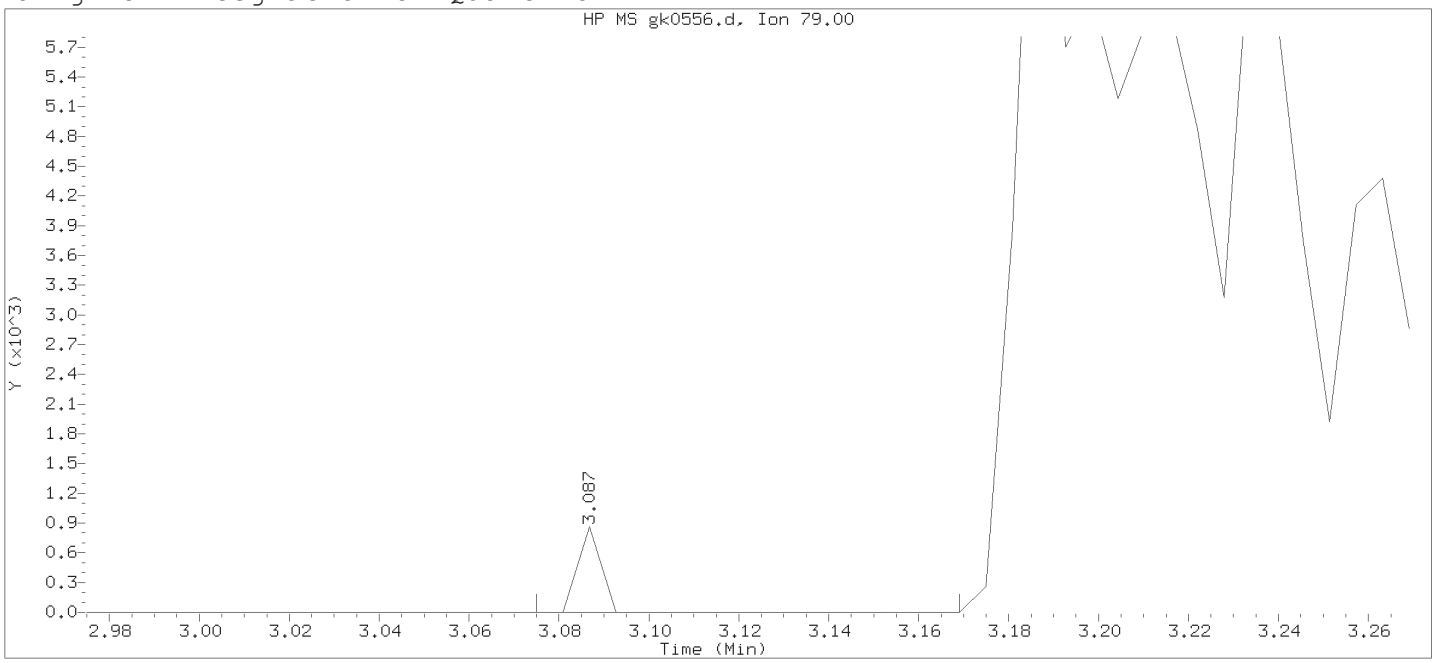
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0556.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:44 Analyst ID: em10340

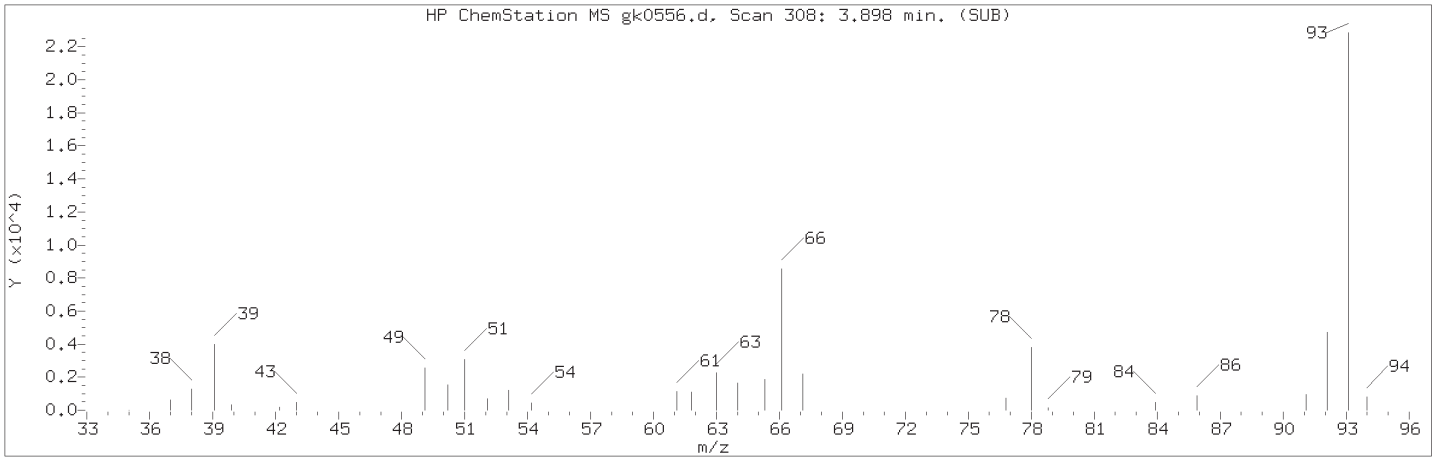
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:05
Date, time and analyst ID of latest file update: 11-Nov-2018 14:05 Automation

Sample Name: SSTD005 Lab Sample ID: STD2928

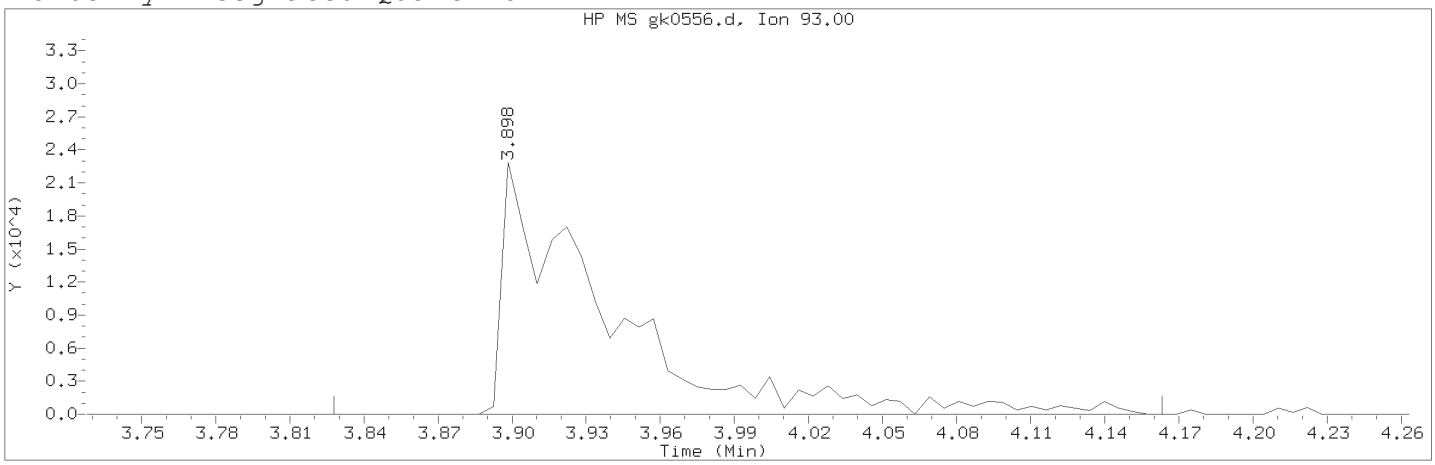
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 170		
Retention Time (minutes)	: 3.087		
Quant Ion	: 79.00		
Area	: 305		
On-column Amount (ng/ul)	: 0.0328		
Integration start scan	: 167	Integration stop scan:	183
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0556.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:44 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD005 Lab Sample ID: STD2928

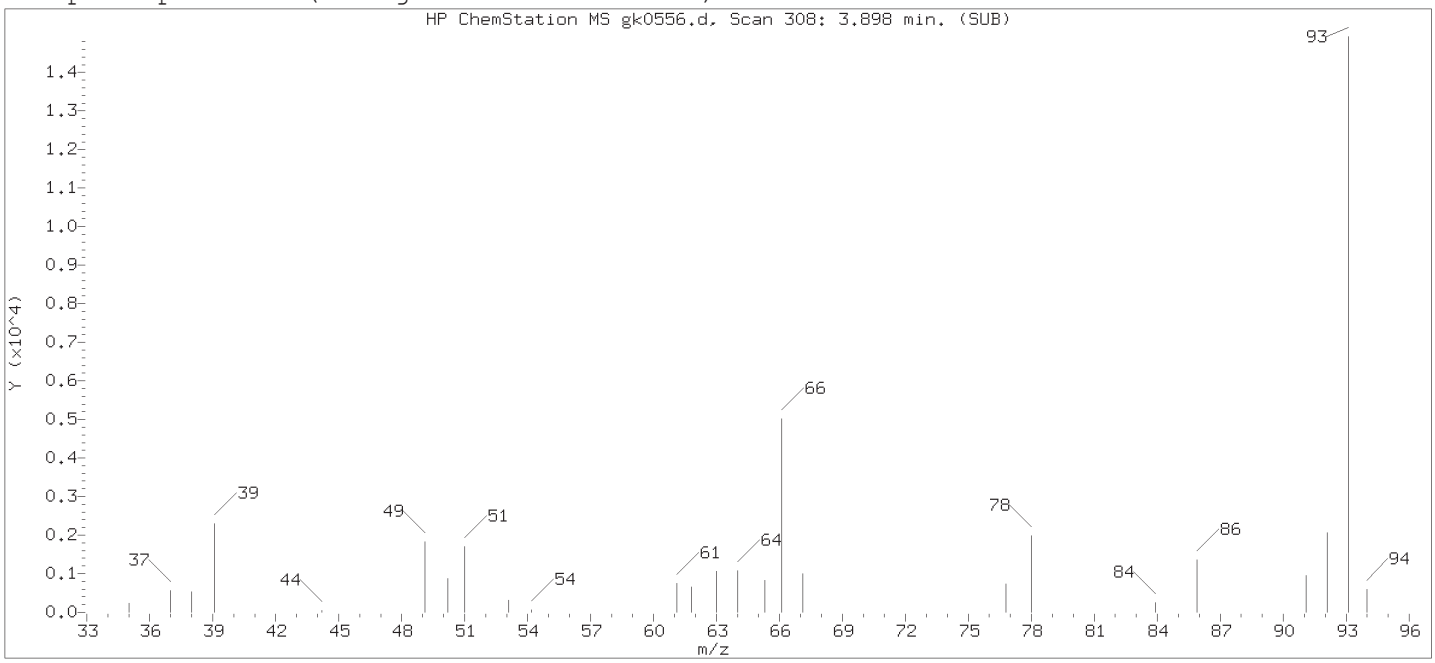
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 308		
Retention Time (minutes)	: 3.898		
Quant Ion	: 93.00		
Area (flag)	: 66479M		
On-Column Amount (ng/ul)	: 5.0143		
Integration start scan	: 295	Integration stop scan:	352
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

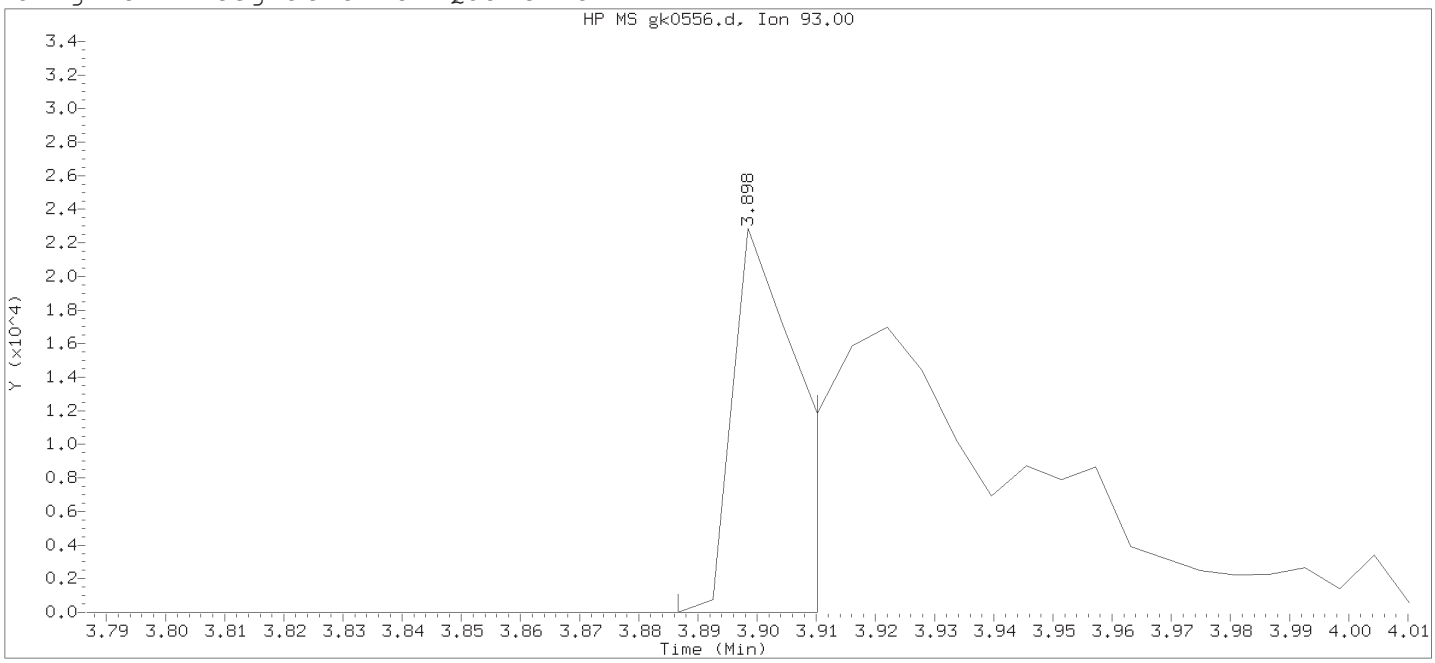
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0556.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:44 Analyst ID: em10340

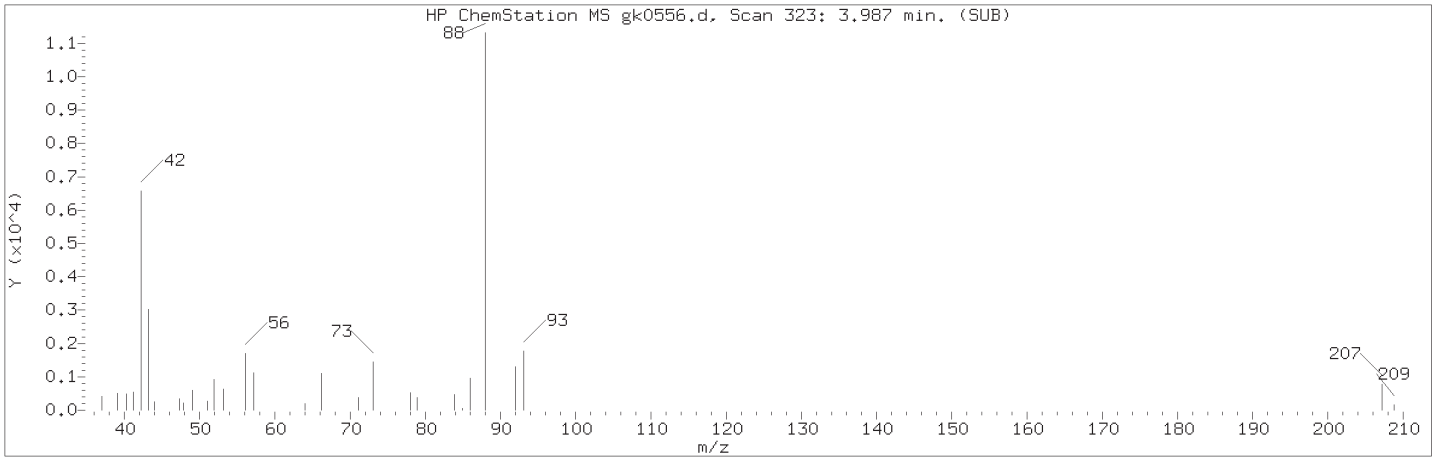
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:05
Date, time and analyst ID of latest file update: 11-Nov-2018 14:05 Automation

Sample Name: SSTD005 Lab Sample ID: STD2928

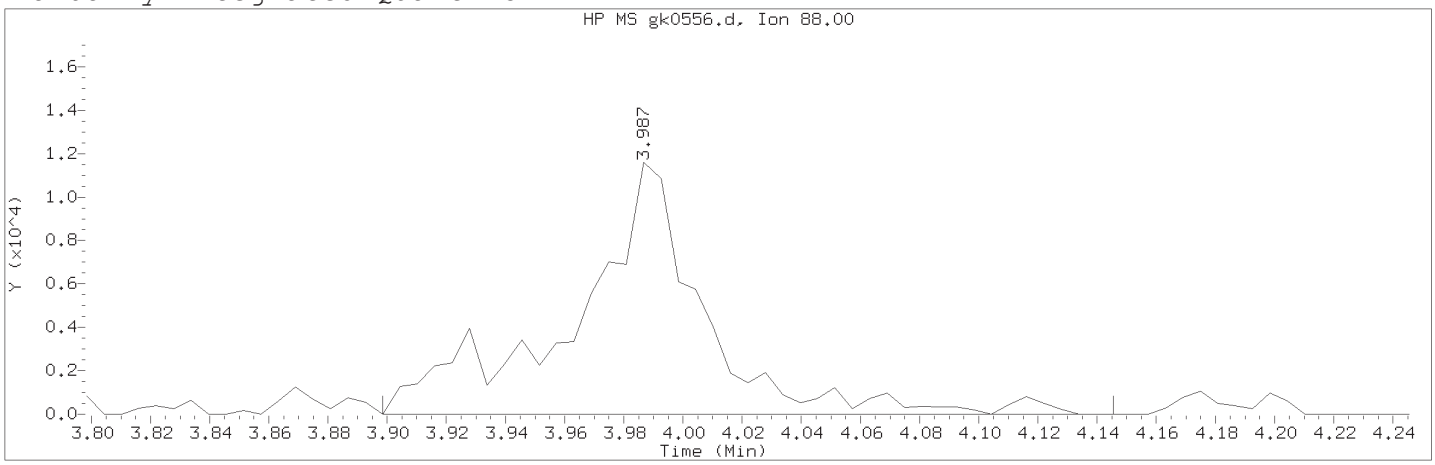
Compound Number : 7
Compound Name : 2-Picoline
Scan Number : 308
Retention Time (minutes) : 3.898
Quant Ion : 93.00
Area : 16449
On-column Amount (ng/ul) : 1.4645
Integration start scan : 305 Integration stop scan: 309
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0556.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:44 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD005 Lab Sample ID: STD2928

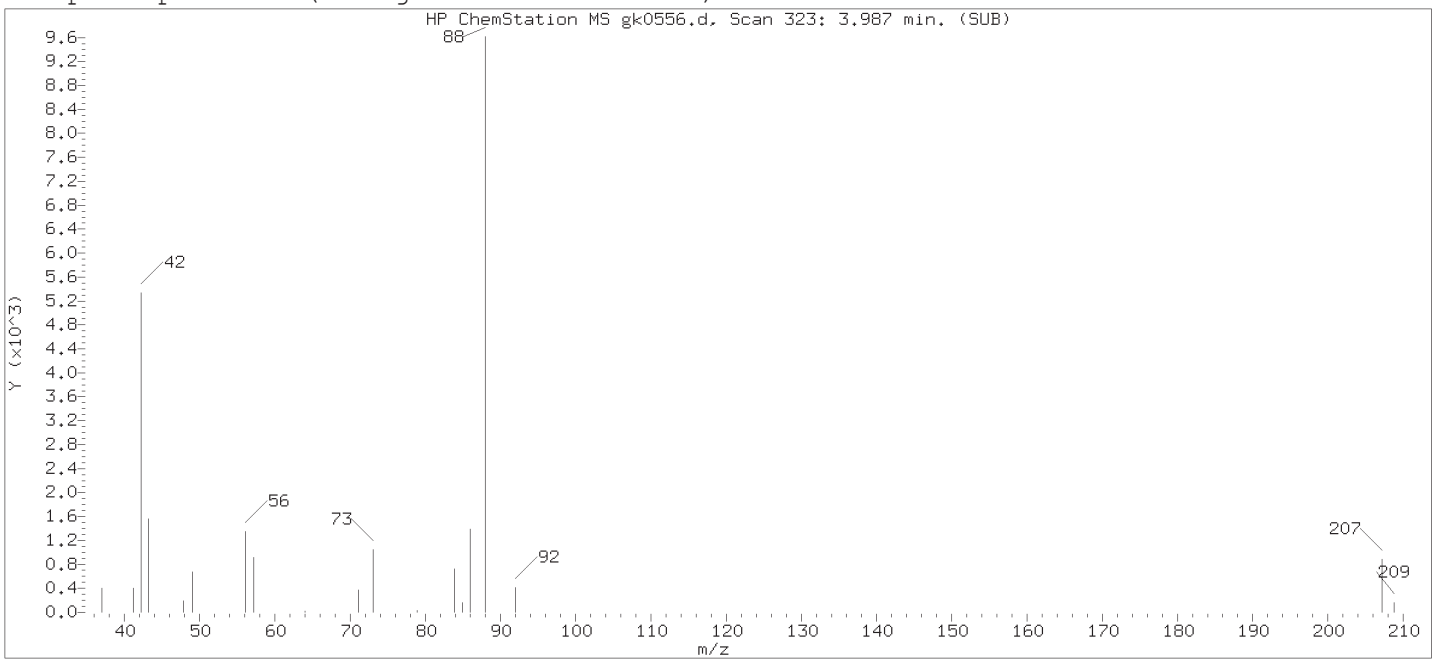
Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 323		
Retention Time (minutes)	: 3.987		
Quant Ion	: 88.00		
Area (flag)	: 34943M		
On-Column Amount (ng/ul)	: 5.3366		
Integration start scan	: 307	Integration stop scan:	349
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

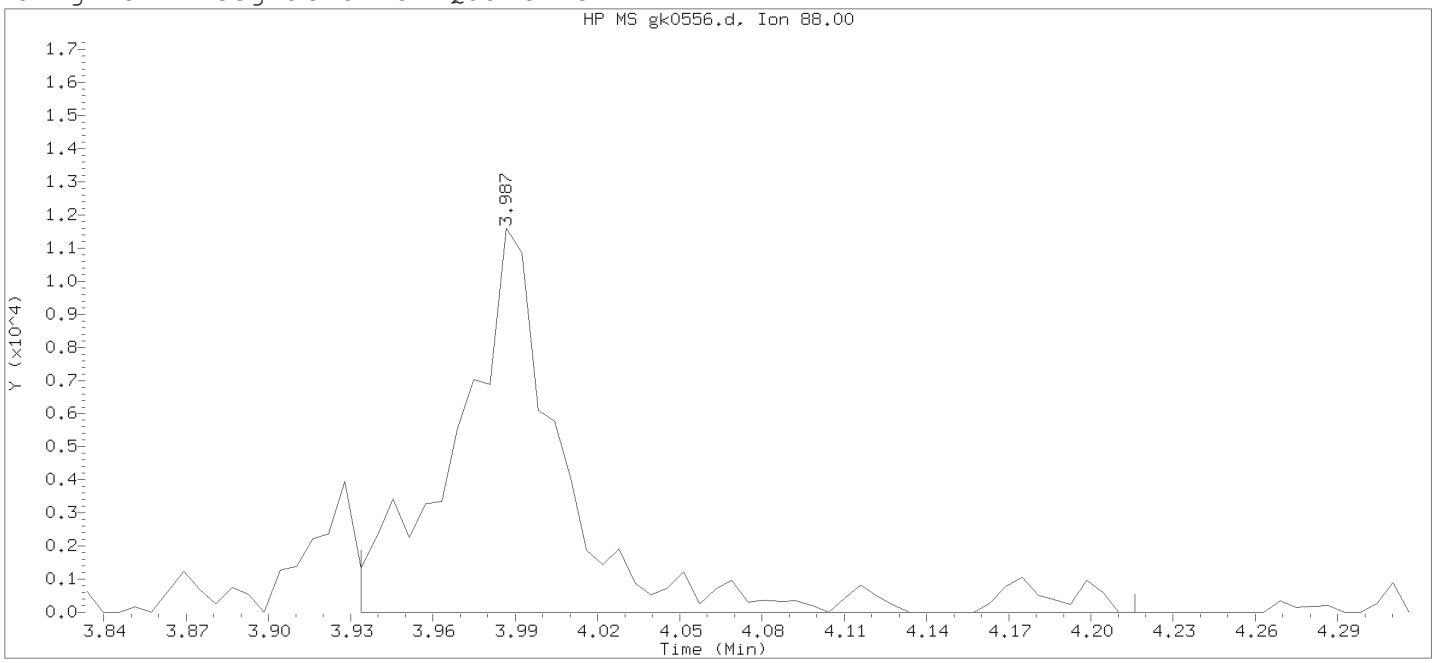
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



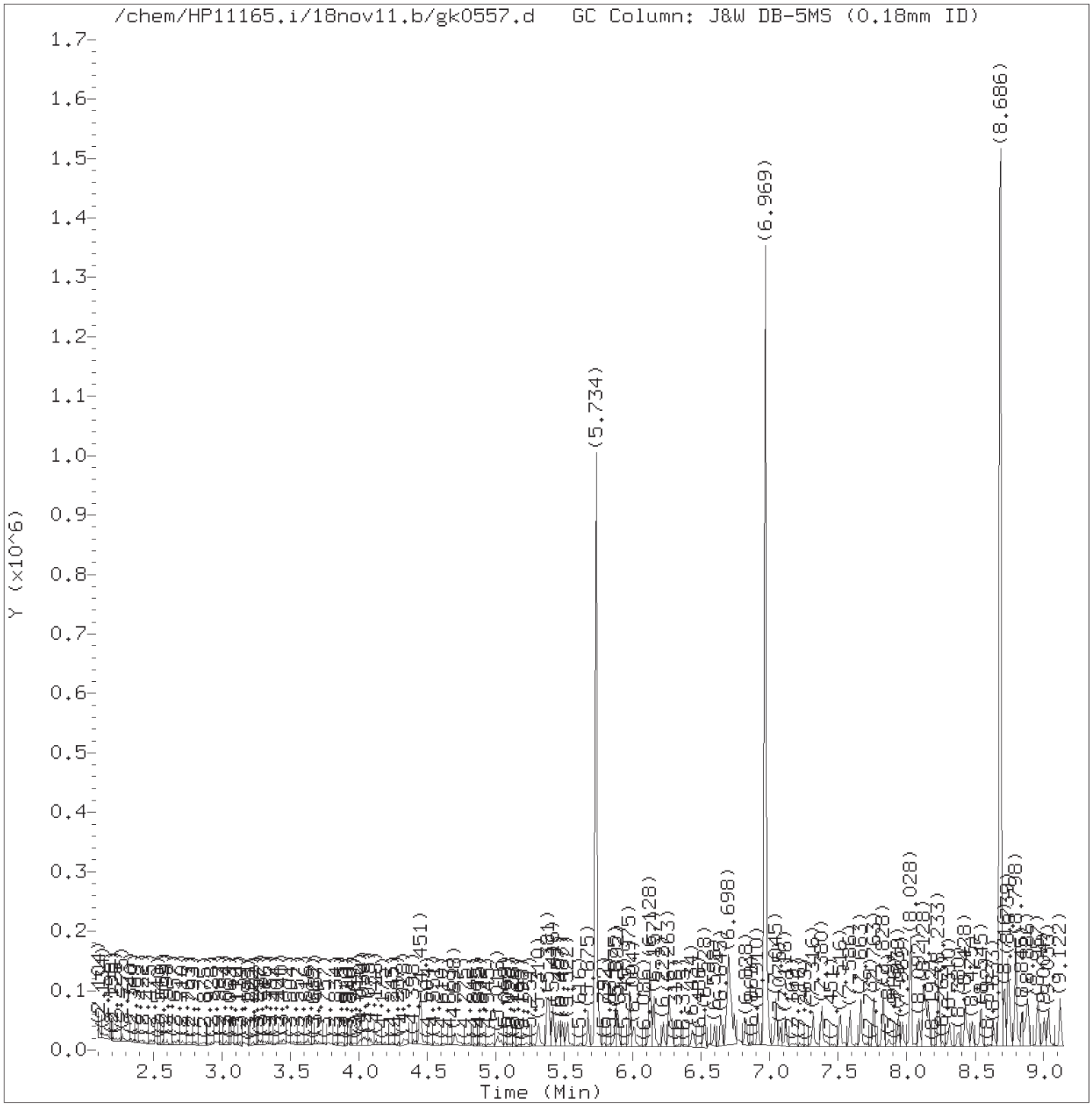
Data File: /chem/HP11165.i/18nov11.b/gk0556.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 13:44 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:05
Date, time and analyst ID of latest file update: 11-Nov-2018 14:05 Automation

Sample Name: SSTD005 Lab Sample ID: STD2928

Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Scan Number : 323
Retention Time (minutes) : 3.987
Quant Ion : 88.00
Area : 32455
On-column Amount (ng/ul) : 5.1475
Integration start scan : 313 Integration stop scan: 361
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

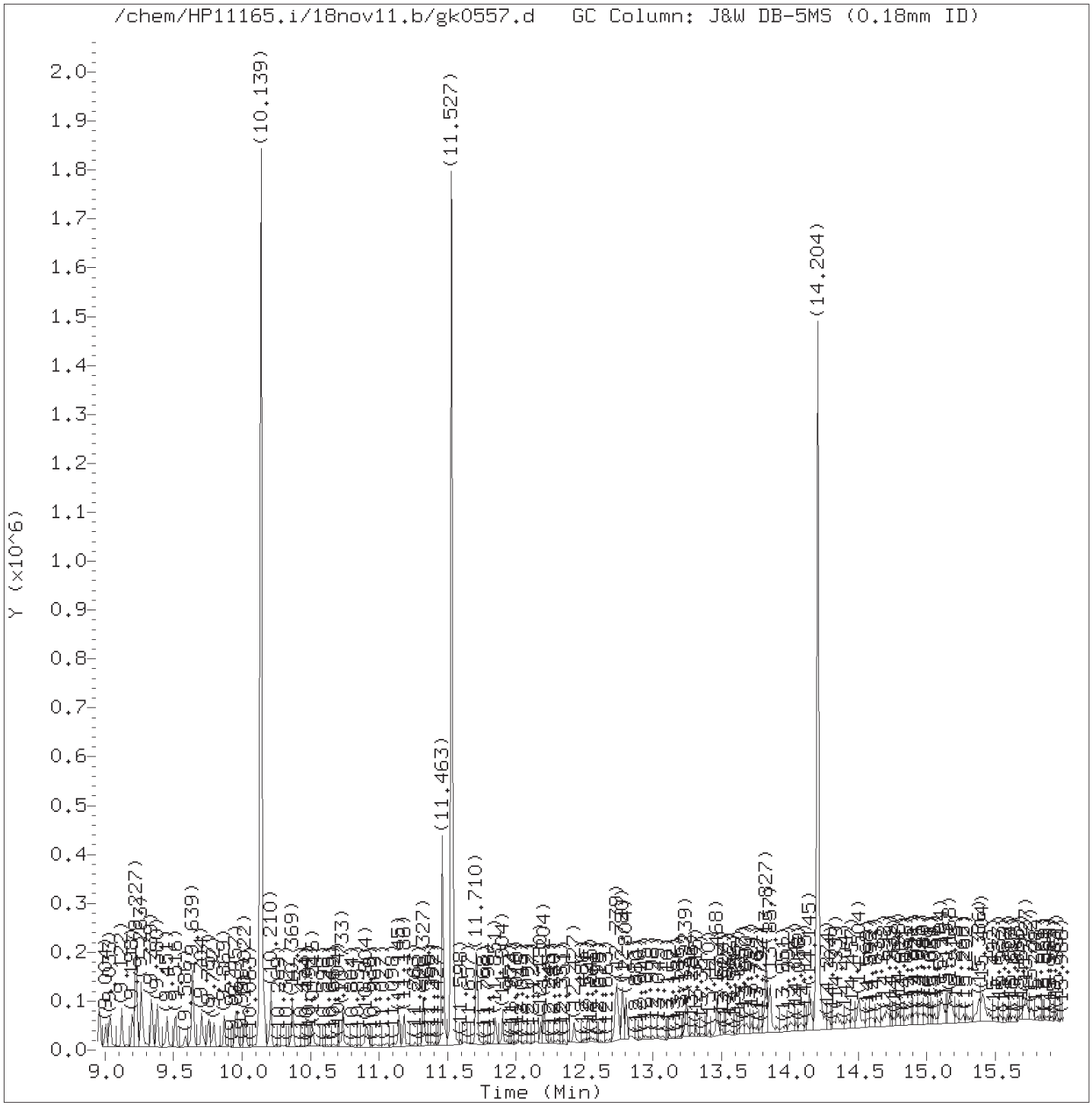
Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
4) N-Nitrosodimethylamine	(1)	3.310	74	6675M	0.935
5) Pyridine	(1)	3.428	79	15564M	1.297
7) 2-Picoline	(1)	4.022	93	14947M	1.150
8) N-Nitrosomethylethylamine	(1)	4.057	88	8929M	1.391
9) Methyl methanesulfonate	(1)	4.334	80	6843M	1.020
11)$2-Fluorophenol	(1)	4.451	112	20256	2.006
13) N-Nitrosodiethylamine	(1)	4.704	102	4502	0.782
15) Ethyl methanesulfonate	(1)	5.010	109	6920	1.134
17)$Phenol-d6	(1)	5.375	99	25800	1.650
18) Phenol	(1)	5.392	94	15302	0.859
19) Aniline	(1)	5.416	93	22501	1.077
20) a-methylstyrene	(1)	5.469	118	1464	1.447
22) bis(2-Chloroethyl)ether	(1)	5.487	93	12535	0.980
23) 2-Chlorophenol	(1)	5.528	128	8629	0.879
42) Total Cresols	(1)			21566	1.844
24) 1,3-Dichlorobenzene	(1)	5.675	146	11259	1.041
25)*1,4-Dichlorobenzene-d4	(1)	5.734	152	133153	20.000
26) 1,4-Dichlorobenzene	(1)	5.751	146	13154	1.166
27) Benzyl alcohol	(1)	5.869	108	7082	0.906
28) 1,2-Dichlorobenzene	(1)	5.892	146	12879	1.179
31) 2-Methylphenol	(1)	5.981	108	11387M	1.007
30) Indene	(1)	5.981	115	13656	1.135
33) 2,2'-oxybis(1-Chloropropane)	(1)	6.010	45	11217	0.864
34) bis(2-Chloroisopropyl)ether	(1)	6.010	45	11217	0.864
35) N-Nitrosopyrrolidine	(1)	6.110	100	5399	0.847
36) Acetophenone	(1)	6.128	105	14380	0.888
37) 4-Methylphenol	(1)	6.128	108	10179	0.837
38) N-Nitroso-di-n-propylamine	(1)	6.134	70	10620	0.928
39) N-Nitrosomorpholine	(1)	6.145	56	6303	0.752
40) o-Toluidine	(1)	6.157	106	17916	0.940
43) Hexachloroethane	(1)	6.222	117	4123	0.971
44)$Nitrobenzene-d5	(2)	6.263	82	25803	1.742
45) Nitrobenzene	(2)	6.286	77	14426	0.934
48) N-Nitrosopiperidine	(2)	6.439	114	5005	0.842
50) Isophorone	(2)	6.528	82	24125	0.864
51) 2-Nitrophenol	(2)	6.598	139	4734	0.850
53) 2,4-Dimethylphenol	(2)	6.639	107	11899	0.952
56) Benzoic acid	(2)	6.698	105	69813	7.308
57) O,O,O-Triethylphosphorothioate	(2)	6.722	198	5838	1.085
55) bis(2-Chloroethoxy)methane	(2)	6.739	93	13159	0.848

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.828	162	6850	0.798
62) 1,2,4-Trichlorobenzene	(2)	6.910	180	9061	1.001
65)*Naphthalene-d8	(2)	6.969	136	562185	20.000
66) Naphthalene	(2)	6.986	128	30909	0.985
67) 4-Chloroaniline	(2)	7.039	127	12588	0.963
68) 2,6-Dichlorophenol	(2)	7.051	162	7844	0.906
69) Hexachloropropene	(2)	7.081	213	4862	1.074
71) Hexachlorobutadiene	(2)	7.116	225	4044	0.849
75) Quinoline	(2)	7.316	129	20013	0.967
77) N-Nitrosodi-n-butylamine	(2)	7.380	84	14245	1.065
97) Isosafrole	(3)			9109	1.056
76) Caprolactam	(2)	7.386	113	3404	0.854
80) 4-Chloro-3-methylphenol	(2)	7.510	107	9569	0.893
82) Safrole	(2)	7.586	162	5666	0.652
83) 2-Methylnaphthalene	(2)	7.663	142	22587	1.010
84) 1-Methylnaphthalene	(2)	7.757	142	22730	1.057
85) Hexachlorocyclopentadiene	(3)	7.828	237	4136	0.909
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.828	216	10911	1.201
88) cis-Isosafrole	(3)	7.869	162	2057	0.231
90) 2,4,6-Trichlorophenol	(3)	7.939	196	5670	0.922
92) 2,4,5-Trichlorophenol	(3)	7.969	196	5890	0.880
93)$2-Fluorobiphenyl	(3)	8.028	172	45905	1.838
120) 2,4_2,6-Dinitrotoluenes	(3)			10189	1.501
94) trans-Isosafrole	(3)	8.092	162	7052	0.825
95) 1,1'-Biphenyl	(3)	8.122	154	28703	1.055
96) 2-Chloronaphthalene	(3)	8.139	162	19713	0.923
98) 1-Chloronaphthalene	(3)	8.163	162	18486	0.935
99) Diphenyl ether	(3)	8.233	170	14704	1.007
100) 2-Nitroaniline	(3)	8.233	138	3871	0.580
104) 1,4-Naphthoquinone	(3)	8.310	158	7037M	0.804
105) 1,4-Dinitrobenzene	(3)	8.375	168	2795	0.760
106) Dimethylphthalate	(3)	8.428	163	25837	1.033
107) 1,3-Dinitrobenzene	(3)	8.445	168	2586	0.606
108) 2,6-Dinitrotoluene	(3)	8.475	165	3921	0.698
109) Acenaphthylene	(3)	8.545	152	25593	0.879
112) 3-Nitroaniline	(3)	8.639	138	5535	0.879
113)*Acenaphthene-d10	(3)	8.686	164	308573	20.000
114) Acenaphthene	(3)	8.716	153	22366	1.034
115) 2,4-Dinitrophenol	(3)	8.739	184	18290M	4.829
146) Diallate trans/cis	(4)			18452	1.198

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
116) 4-Nitrophenol	(3)	8.798	109	16282M	3.725
117) Pentachlorobenzene	(3)	8.839	250	7282	0.935
118) 2,4-Dinitrotoluene	(3)	8.869	165	6268	0.803
119) Dibenzofuran	(3)	8.886	168	27690	0.914
121) 1-Naphthylamine	(3)	8.957	143	23899	1.012
122) 2,3,4,6-Tetrachlorophenol	(3)	9.004	232	4129	0.766
123) 2-Naphthylamine	(3)	9.039	143	20760	0.904
124) Diethylphthalate	(3)	9.122	149	24395	0.972
125) Thionazin	(3)	9.198	107	5061	1.059
126) Fluorene	(3)	9.222	166	21160	0.835
129) 4-Nitroaniline	(3)	9.227	138	5603	0.817
128) 5-Nitro-o-toluidine	(3)	9.227	152	7990	1.052
127) 4-Chlorophenyl-phenylether	(3)	9.227	204	11693	0.993
130) 4,6-Dinitro-2-methylphenol	(4)	9.263	198	13181	2.826
131) N-Nitrosodiphenylamine	(4)	9.339	169	19443	0.858
132) NDPA as diphenylamine	(4)	9.339	169	19443	0.858
134) 1,2-Diphenylhydrazine	(4)	9.380	77	28908	0.839
135)$2,4,6-Tribromophenol	(3)	9.457	330	4884	1.976
137) Tetraethyldithiopyrophosphate	(4)	9.516	97	5186	1.026
139) 1,3,5-Trinitrobenzene	(4)	9.592	213	909M	0.306
140) Diallate (peak 1)	(4)	9.633	86	14794	0.924
141) Phorate	(4)	9.639	75	16745	0.805
142) Phenacetin	(4)	9.639	108	12046	0.826
143) 4-Bromophenyl-phenylether	(4)	9.704	248	7451	1.077
144) Diallate (peak 2)	(4)	9.722	86	3658	0.274
145) Hexachlorobenzene	(4)	9.751	284	5481	0.873
147) Dimethoate	(4)	9.798	87	10272	0.859
149) Pentachlorophenol	(4)	9.945	266	2676	0.621
150) 4-Aminobiphenyl	(4)	9.957	169	11153	1.112
151) Pentachloronitrobenzene	(4)	9.963	237	2319	0.756
152) Pronamide	(4)	10.022	173	9922	0.885
153)*Phenanthrene-d10	(4)	10.139	188	629388	20.000
154) Dinoseb	(4)	10.145	211	3753	0.551
155) Phenanthrene	(4)	10.157	178	41181	1.052
157) Anthracene	(4)	10.210	178	39416	1.003
163) Carbazole	(4)	10.369	167	31846	0.904
164) Methyl parathion	(4)	10.516	109	5447	0.617
165) Di-n-butylphthalate	(4)	10.733	149	32563	0.741
167) Parathion	(4)	10.904	109	1927	0.333
168) 4-Nitroquinoline-1-oxide	(4)	10.916	190	1367	0.362

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

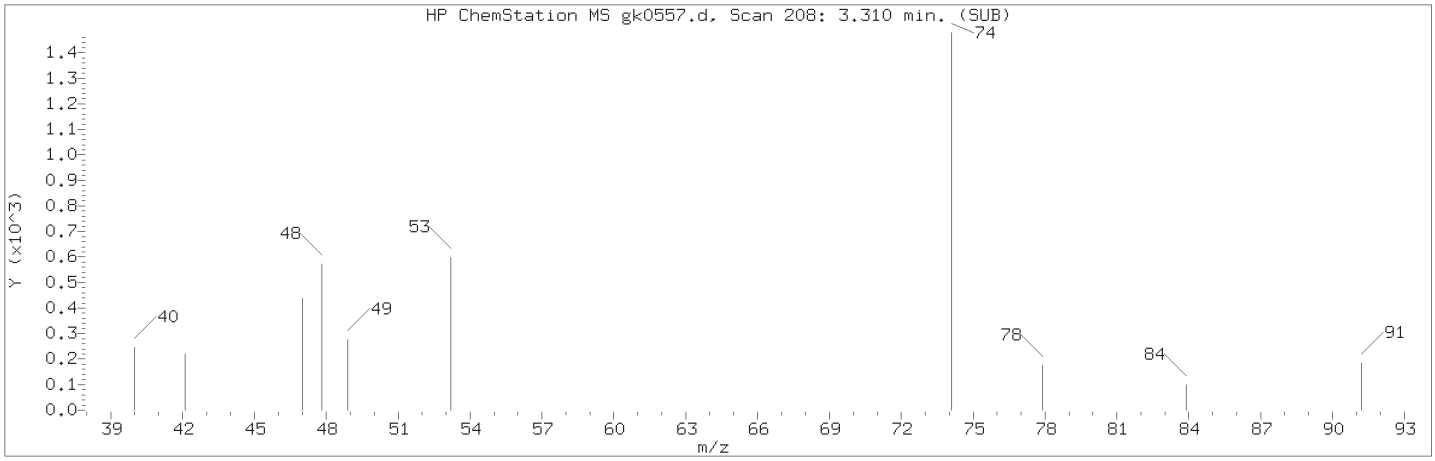
Sample Name: SSTD001 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
169) Octachlorostyrene	(4)	11.151	308	2413	0.963
171) Isodrin	(4)	11.180	193	5093	1.155
173) Fluoranthene	(4)	11.327	202	41000	0.997
174) Benzidine	(5)	11.463	184	150359	5.570
175)*Pyrene-d10	(5)	11.527	212	602904	20.000
177) Pyrene	(5)	11.545	202	41111	0.971
179)$Terphenyl-d14	(5)	11.710	244	56077	1.923
182) p-Dimethylaminoazobenzene	(5)	11.851	225	3634	0.546
185) Chlorobenzilate	(5)	11.904	139	8877	0.689
187) 3,3'-Dimethylbenzidine	(5)	12.180	212	13903	0.627
188) Butylbenzylphthalate	(5)	12.204	149	16393	0.810
191) 2-Acetylaminofluorene	(5)	12.427	181	9617	0.589
193) 3,3'-Dichlorobenzidine	(5)	12.727	252	8539	0.620
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.733	231	5284	0.705
195) Benzo(a)anthracene	(5)	12.739	228	33472	0.849
196) Chrysene	(5)	12.780	228	37096	0.972
199) bis(2-Ethylhexyl)phthalate	(5)	12.804	149	15824	0.577
203) 6-Methylchrysene	(5)	13.245	242	25008	0.956
205) Di-n-octylphthalate	(6)	13.468	149	25169	0.509
206) Benzo(b)fluoranthene	(6)	13.827	252	34854	0.901
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.827	256	13734	0.769
208) Benzo(k)fluoranthene	(6)	13.857	252	33393	0.876
211) Benzo(a)pyrene	(6)	14.145	252	27392M	0.784
213)*Perylene-d12	(6)	14.204	264	548893	20.000
215) 3-Methylcholanthrene	(6)	14.504	268	9788M	0.735
222) Total PAHs	(6)			552659	16.715
217) Dibenz(a,h)acridine	(6)	15.104	279	18181	0.721
218) Dibenz(a,j)acridine	(6)	15.168	279	22317M	0.823
219) Indeno(1,2,3-cd)pyrene	(6)	15.380	276	28363M	0.804
220) Dibenz(a,h)anthracene	(6)	15.409	278	25230M	0.857
221) Benzo(g,h,i)perylene	(6)	15.721	276	24806M	0.849

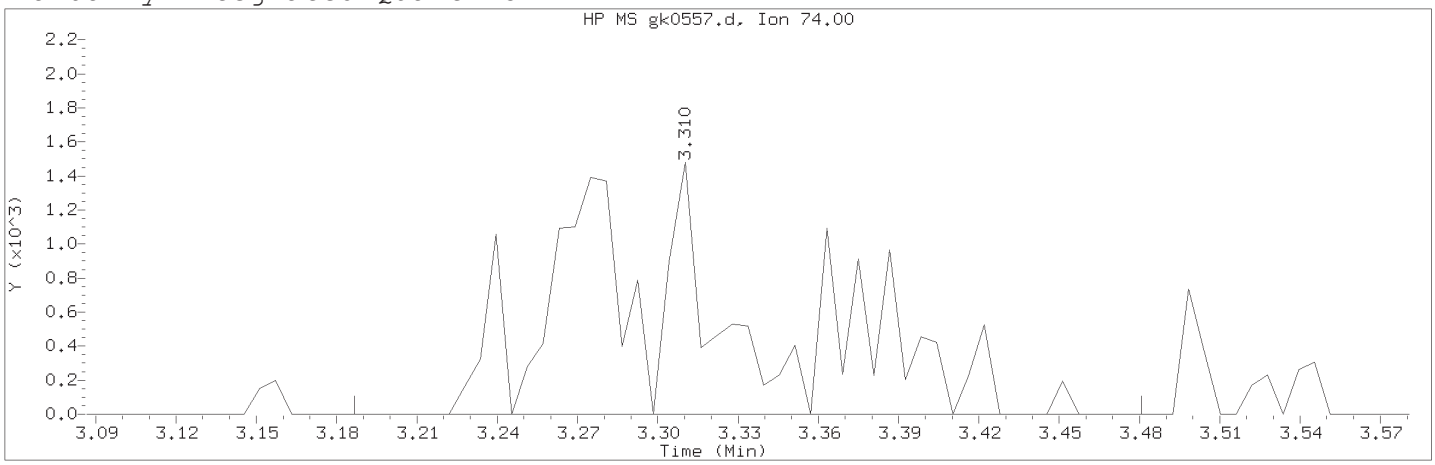
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

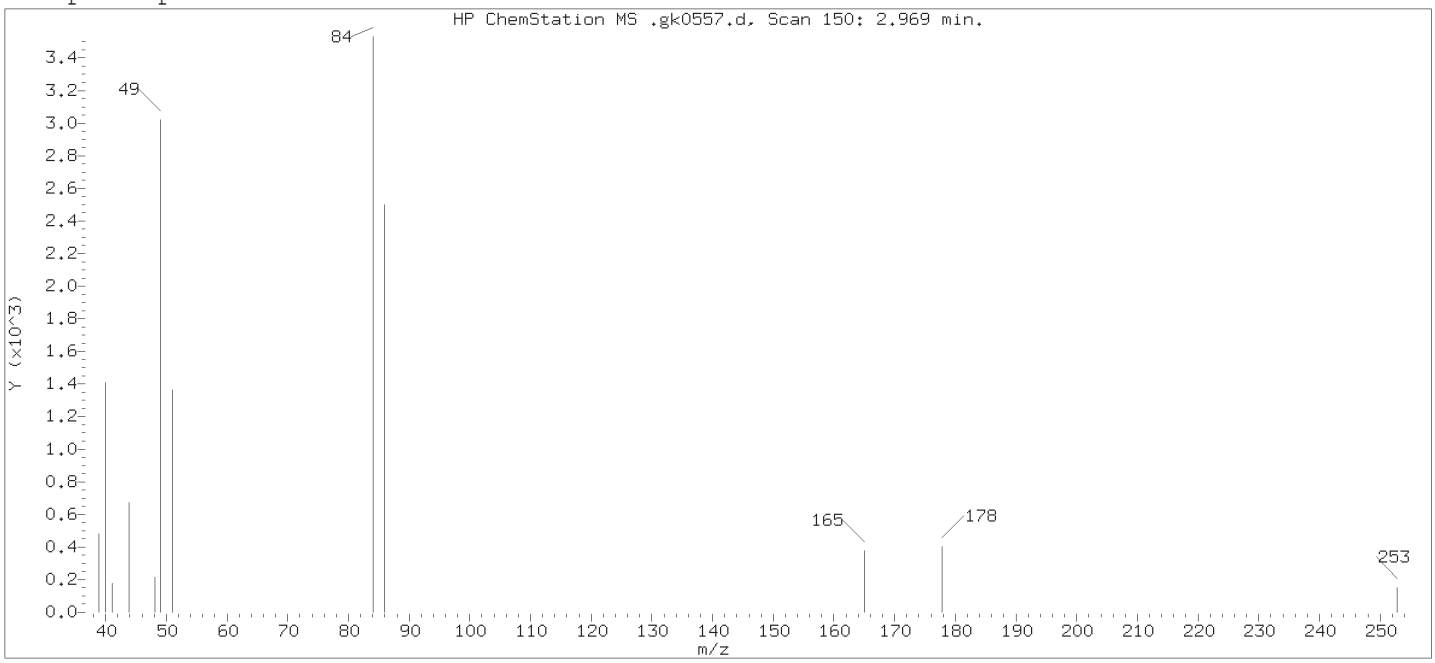
Compound Number : 4
Compound Name : N-Nitrosodimethylamine
Scan Number : 208
Retention Time (minutes) : 3.310
Quant Ion : 74.00
Area (flag) : 6675M
On-Column Amount (ng/ul) : 0.9346
Integration start scan : 186 Integration stop scan: 236
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

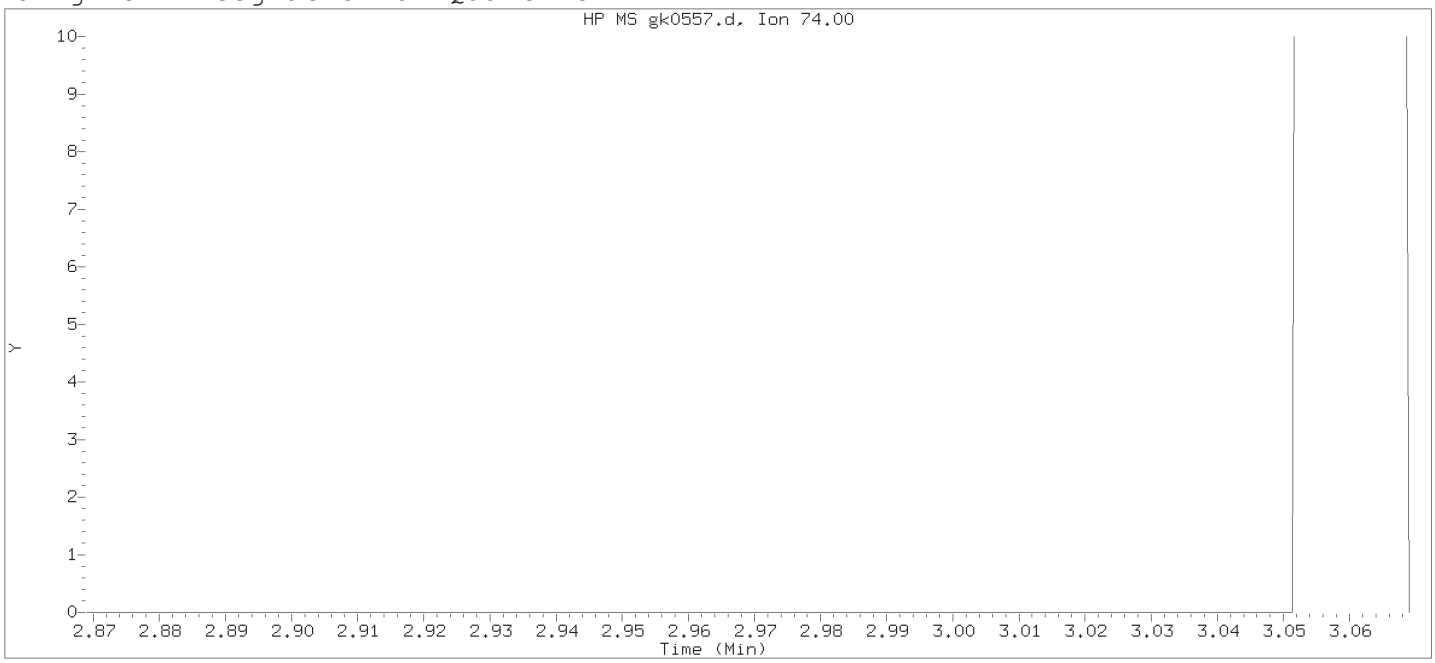
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

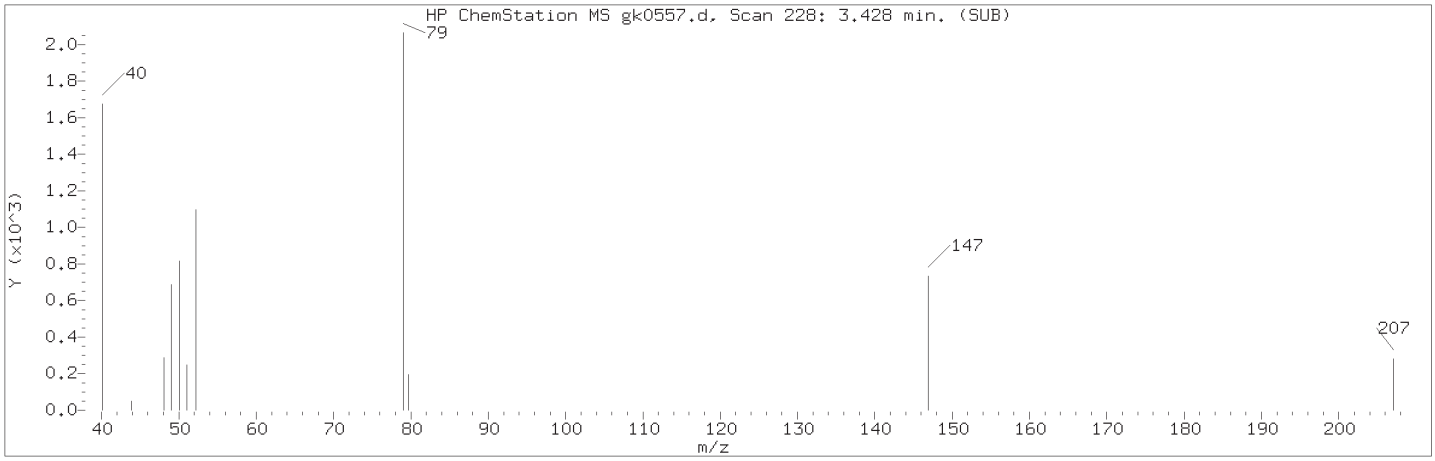
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

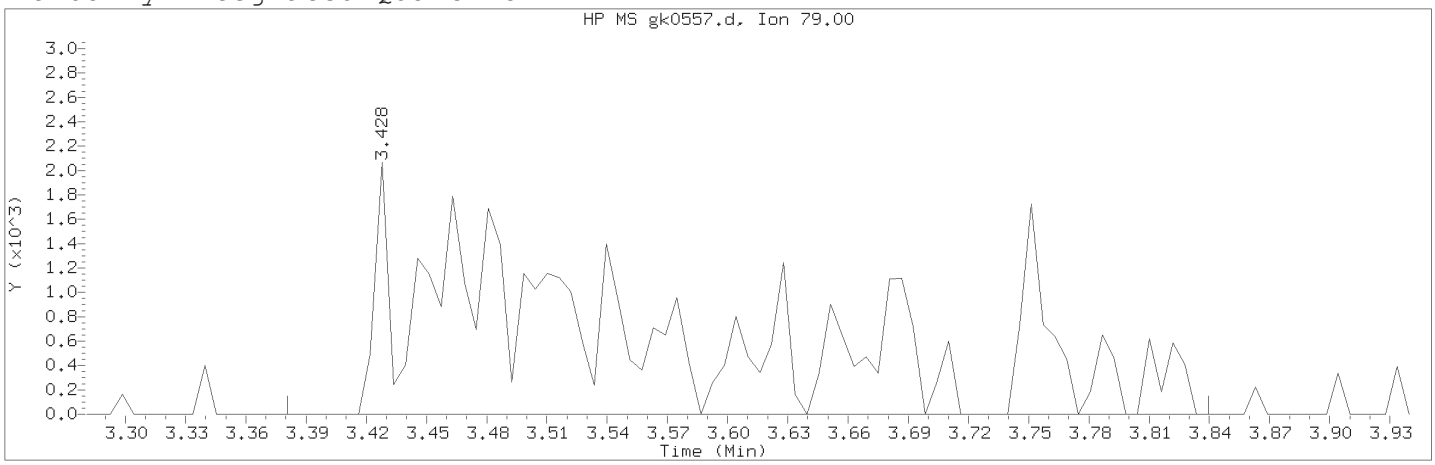
Compound Number : 4
Compound Name : N-Nitrosodimethylamine
Expected RT (minutes) : 2.969
Quant Ion : 74.00

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

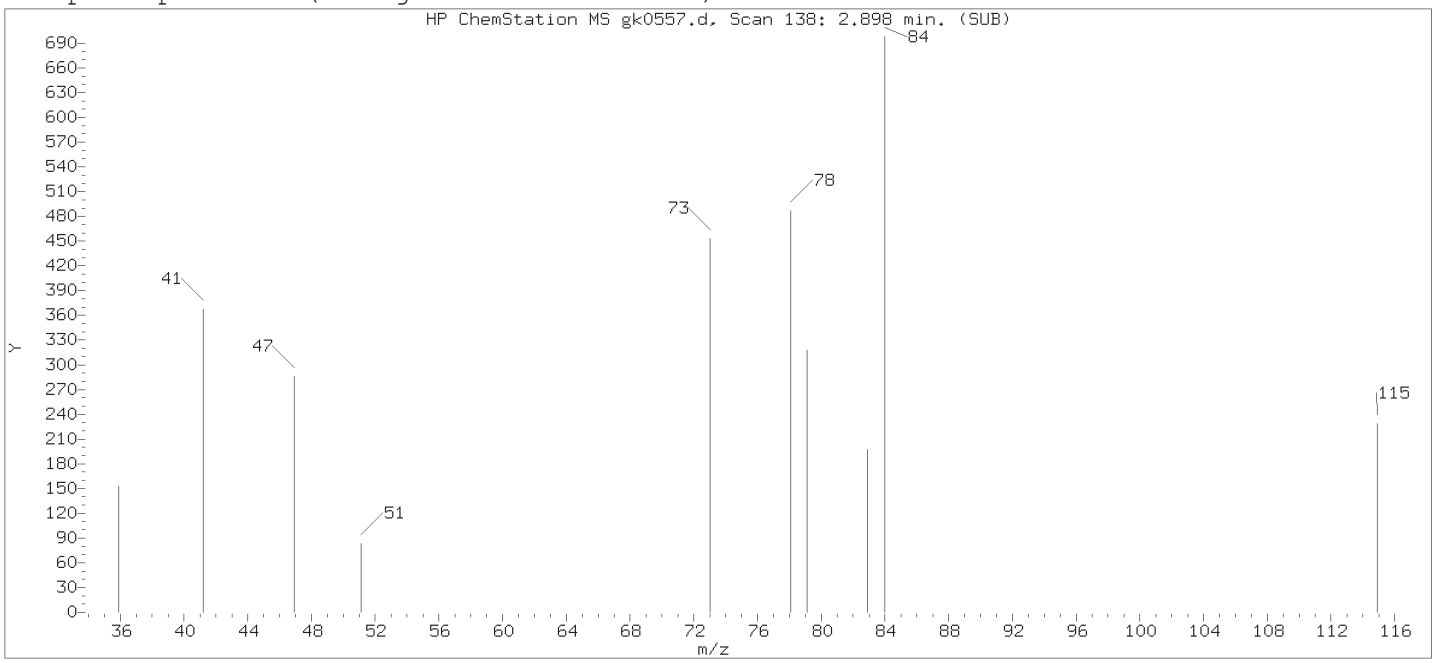
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 228		
Retention Time (minutes)	: 3.428		
Quant Ion	: 79.00		
Area (flag)	: 15564M		
On-Column Amount (ng/ul)	: 1.2968		
Integration start scan	: 219	Integration stop scan:	297
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

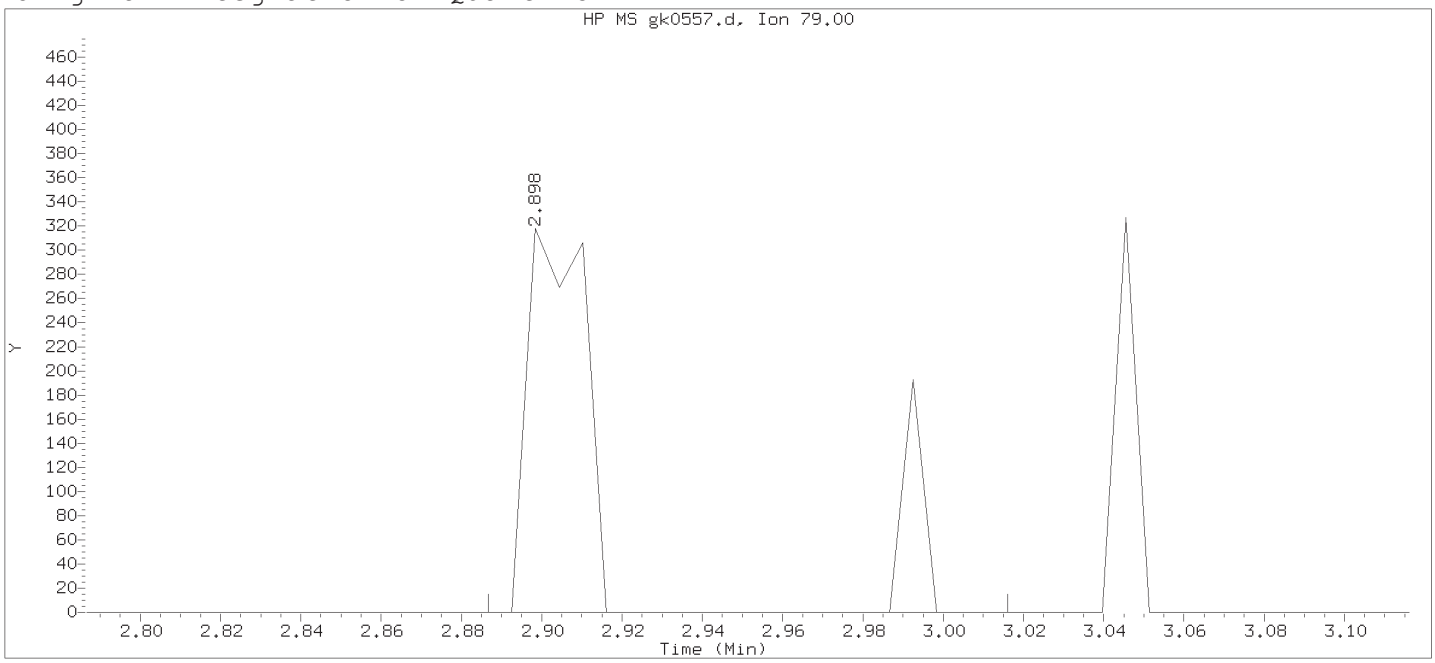
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

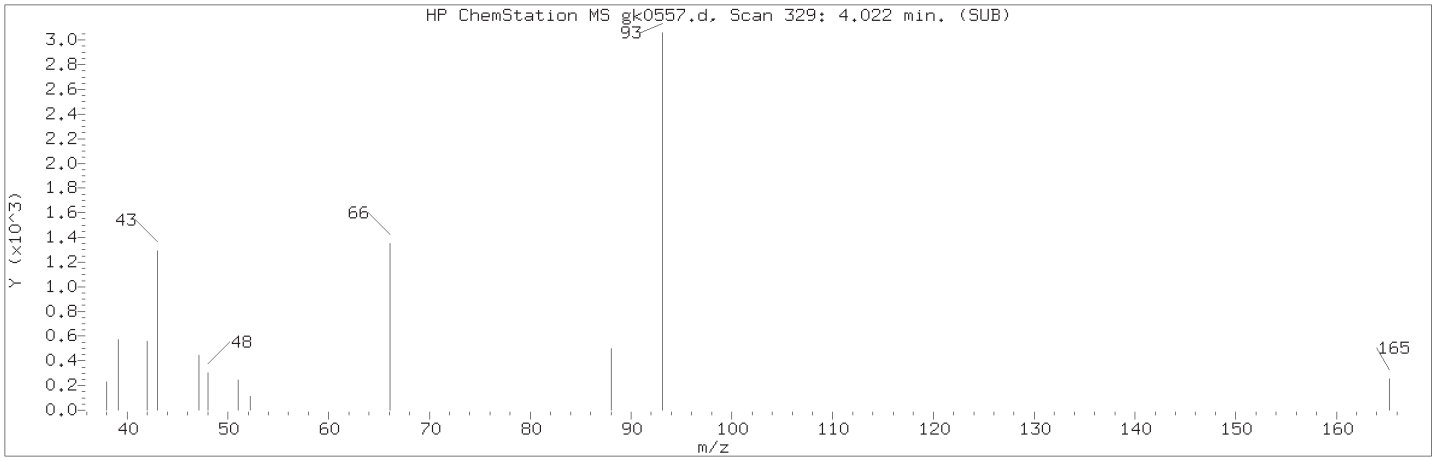
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

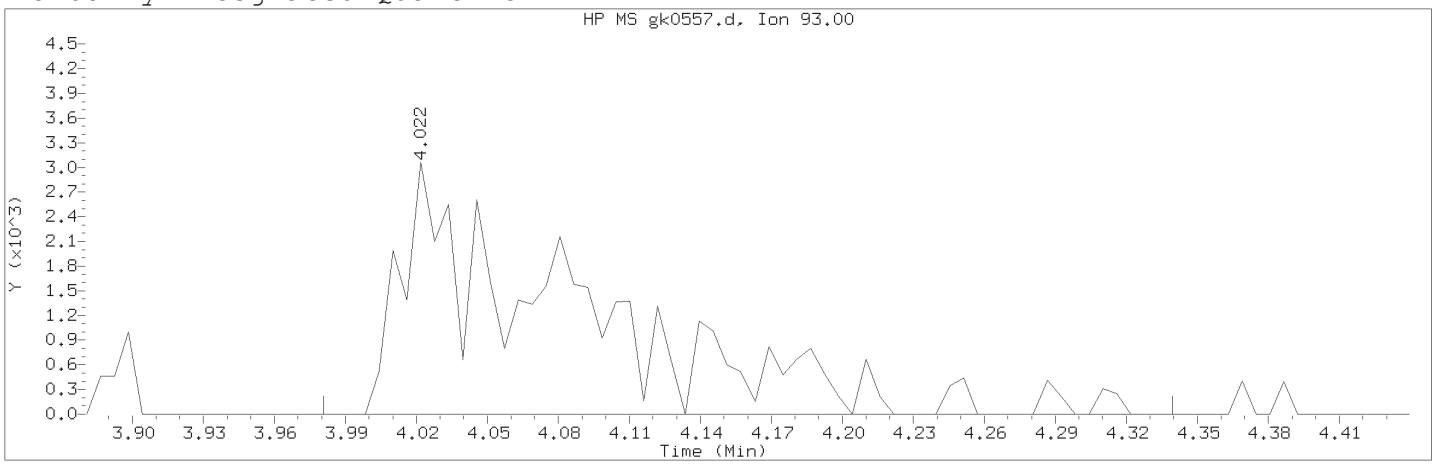
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 138		
Retention Time (minutes)	: 2.898		
Quant Ion	: 79.00		
Area	: 383		
On-column Amount (ng/ul)	: 0.0420		
Integration start scan	: 135	Integration stop scan:	157
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature used: D10

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

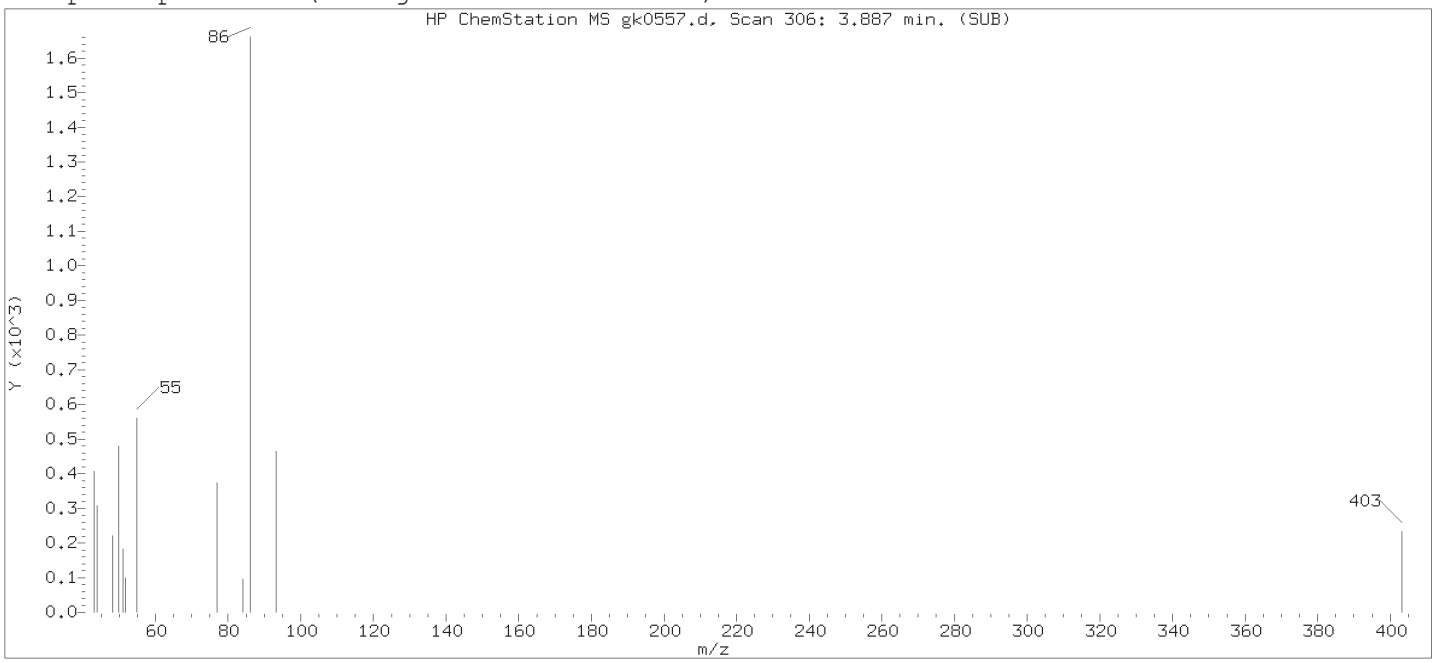
Compound Number : 7
Compound Name : 2-Picoline
Scan Number : 329
Retention Time (minutes) : 4.022
Quant Ion : 93.00
Area (flag) : 14947M
On-Column Amount (ng/ul) : 1.1498
Integration start scan : 321 Integration stop scan: 382
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

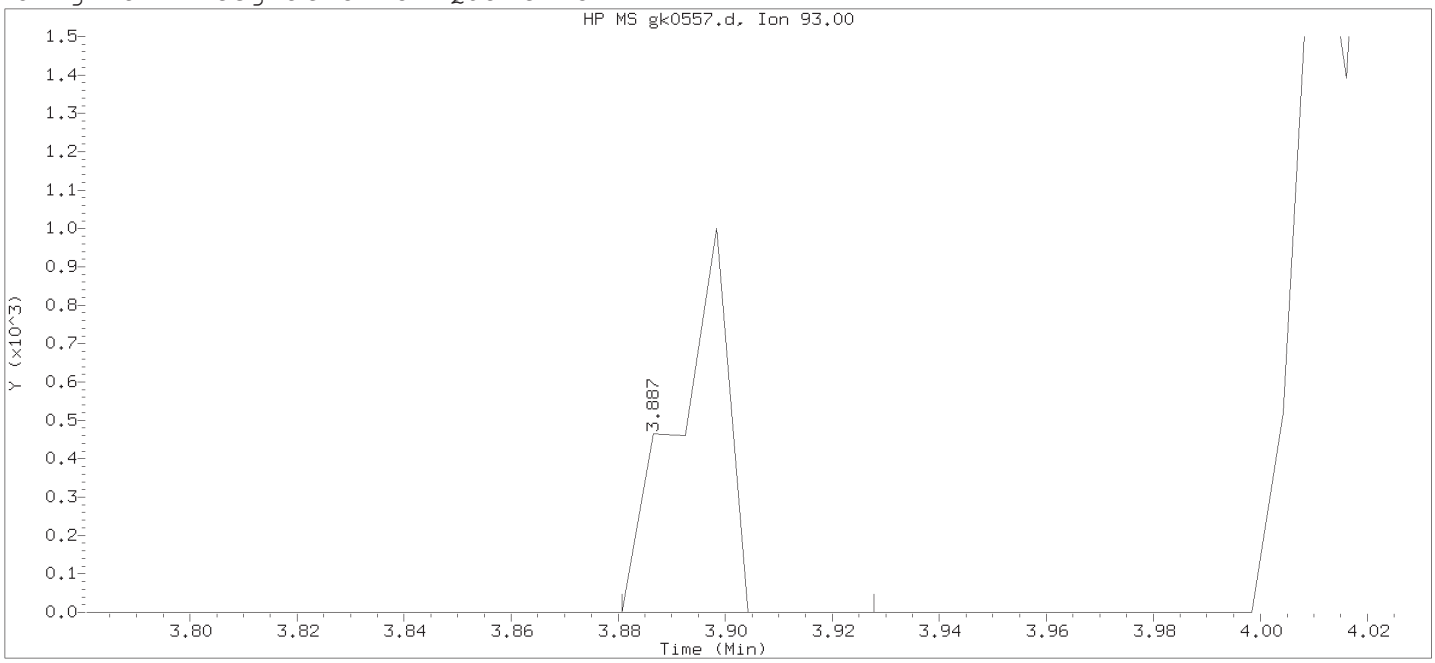
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

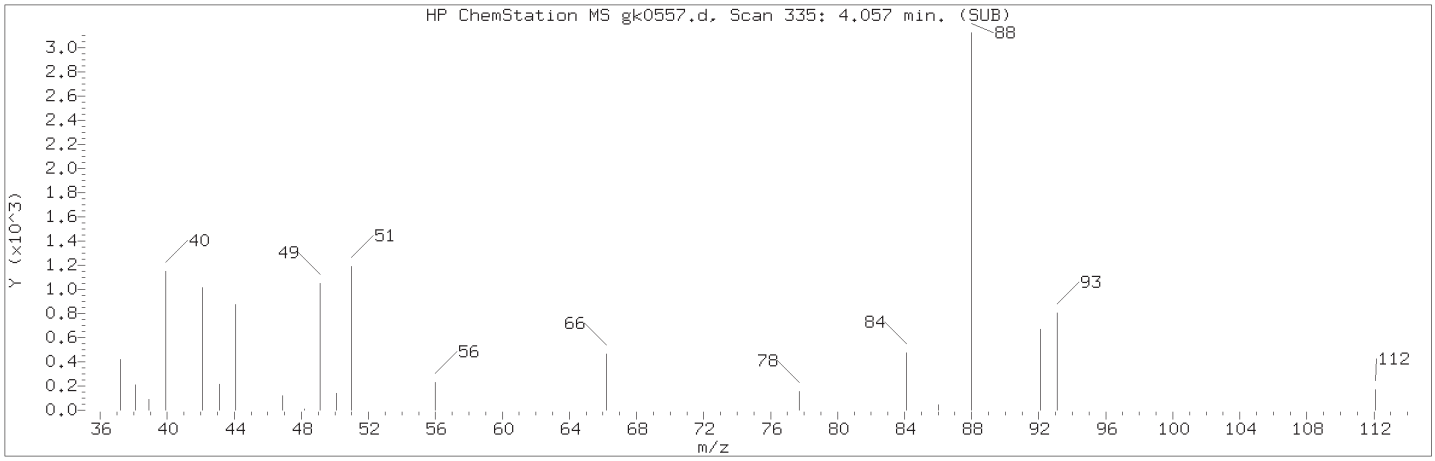
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

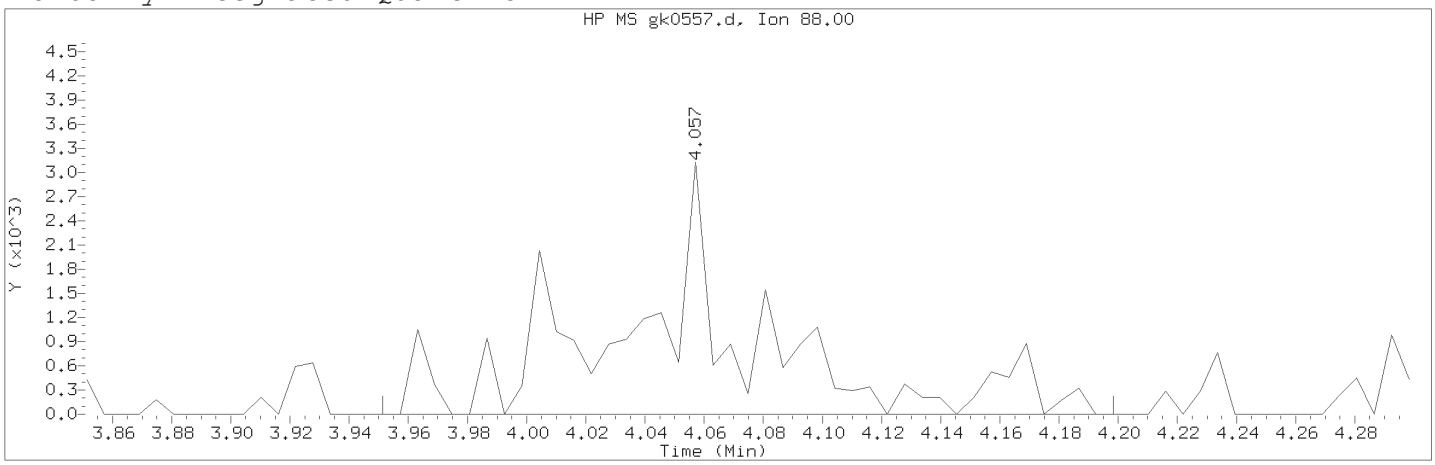
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 306		
Retention Time (minutes)	: 3.887		
Quant Ion	: 93.00		
Area	: 679		
On-column Amount (ng/ul)	: 0.0617		
Integration start scan	: 304	Integration stop scan:	312
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature used 21 CFR Part 11

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

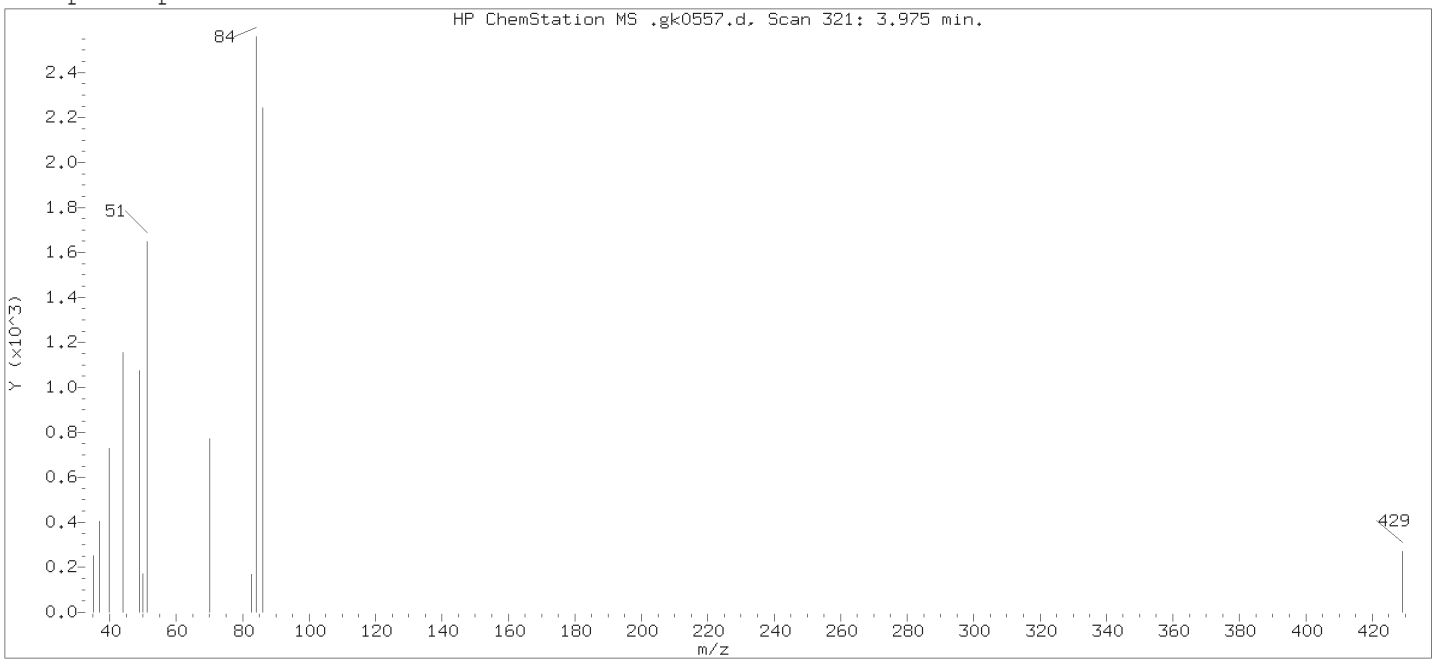
Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 335		
Retention Time (minutes)	: 4.057		
Quant Ion	: 88.00		
Area (flag)	: 8929M		
On-Column Amount (ng/ul)	: 1.3907		
Integration start scan	: 316	Integration stop scan:	358
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

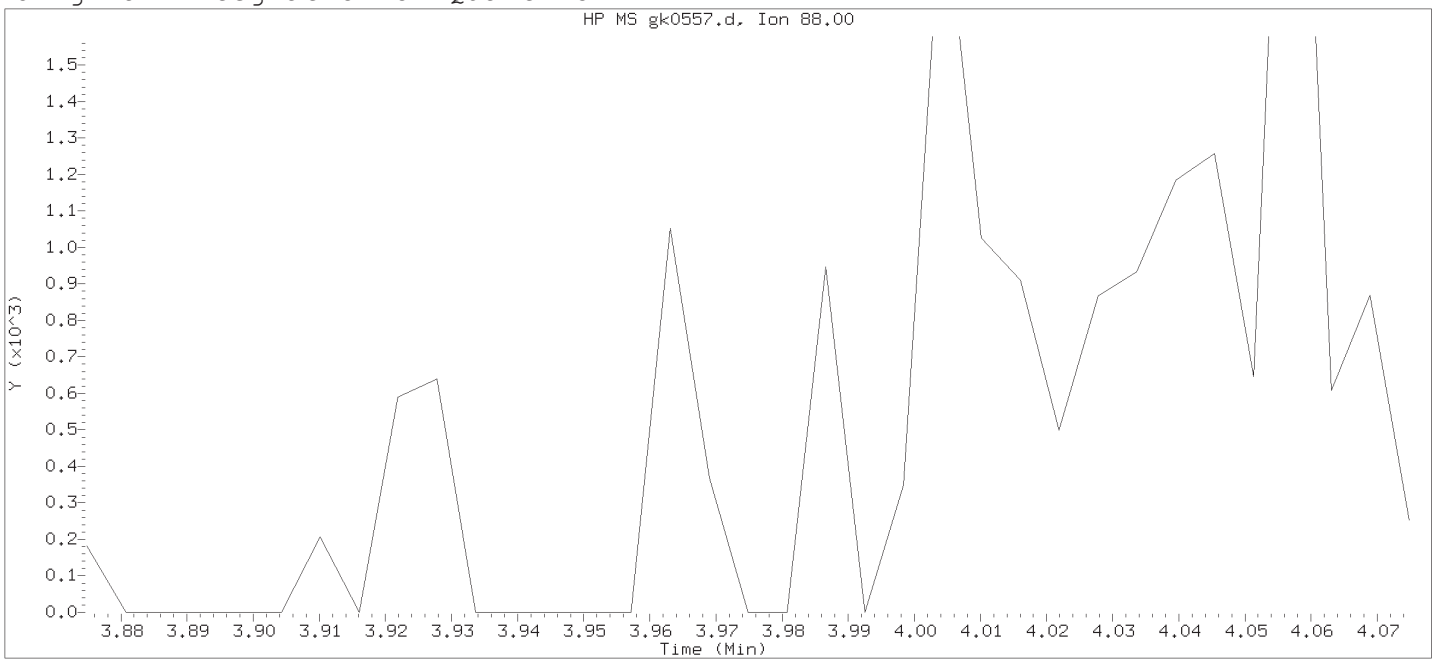
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

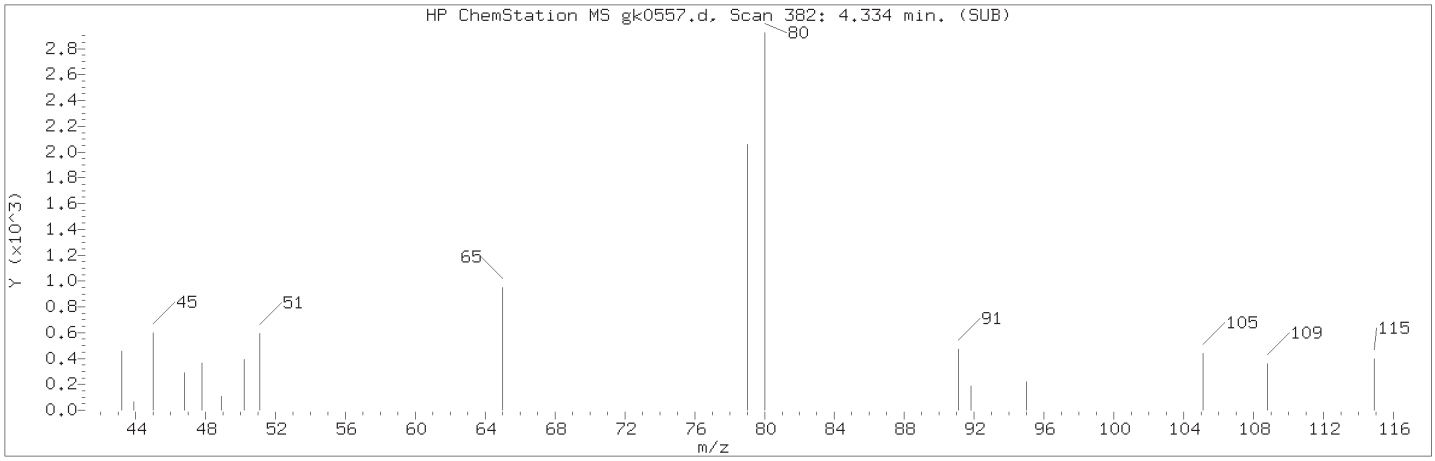
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

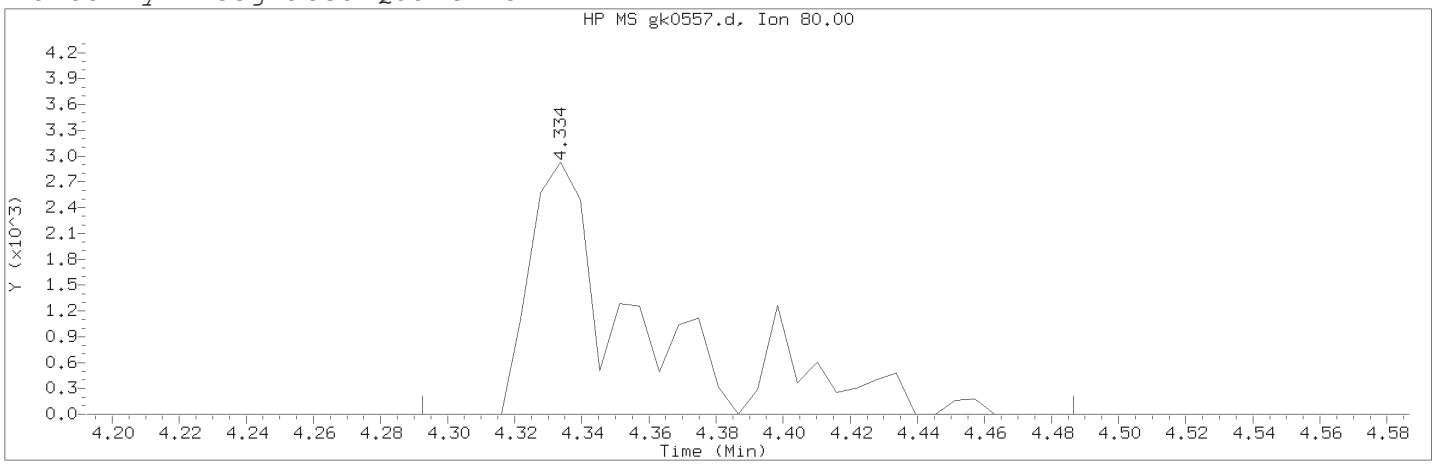
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 3.975
Quant Ion : 88.00

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature used for TID10

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

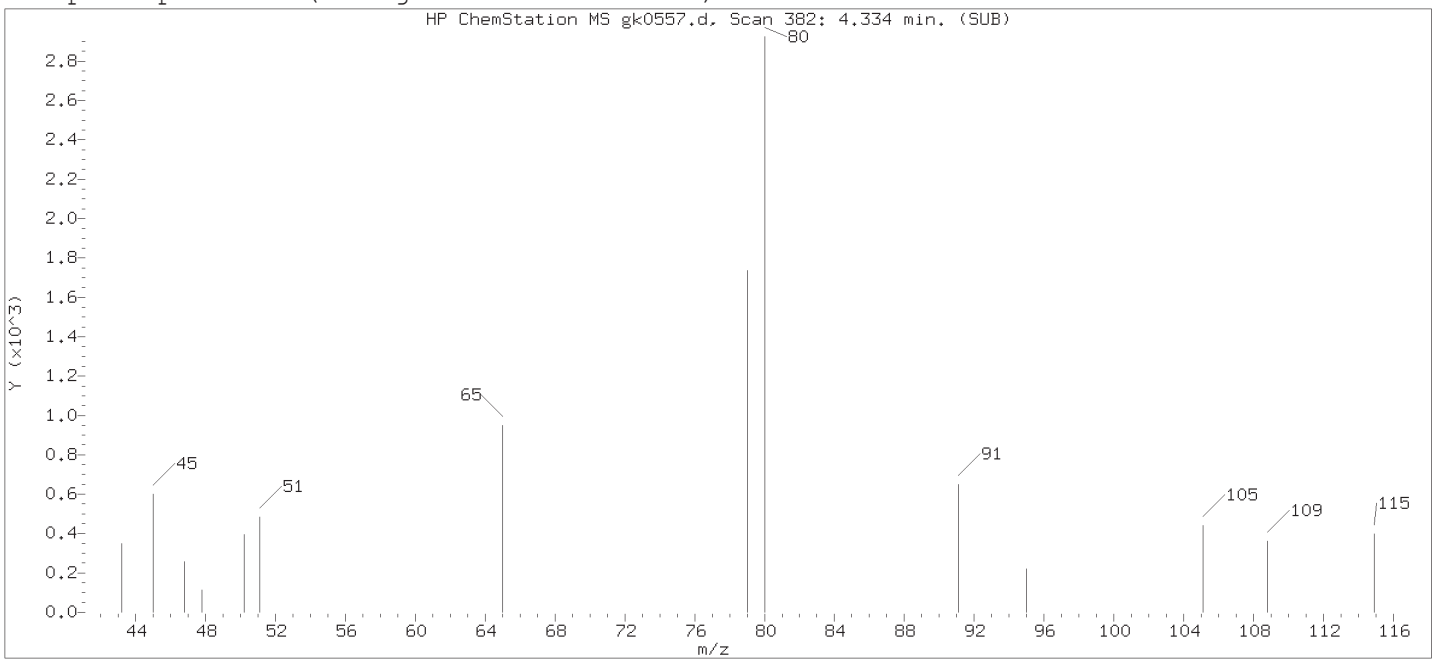
Compound Number : 9
Compound Name : Methyl methanesulfonate
Scan Number : 382
Retention Time (minutes) : 4.334
Quant Ion : 80.00
Area (flag) : 6843M
On-Column Amount (ng/ul) : 1.0195
Integration start scan : 374 Integration stop scan: 407
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

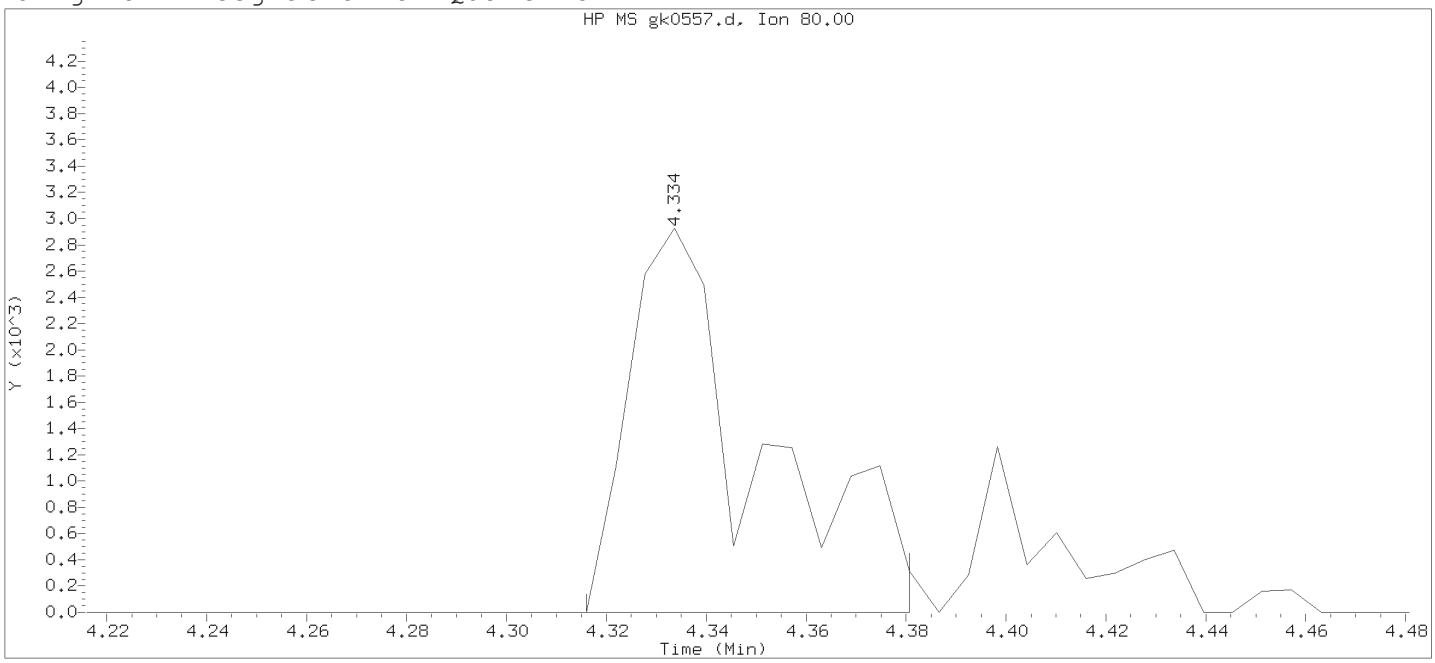
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

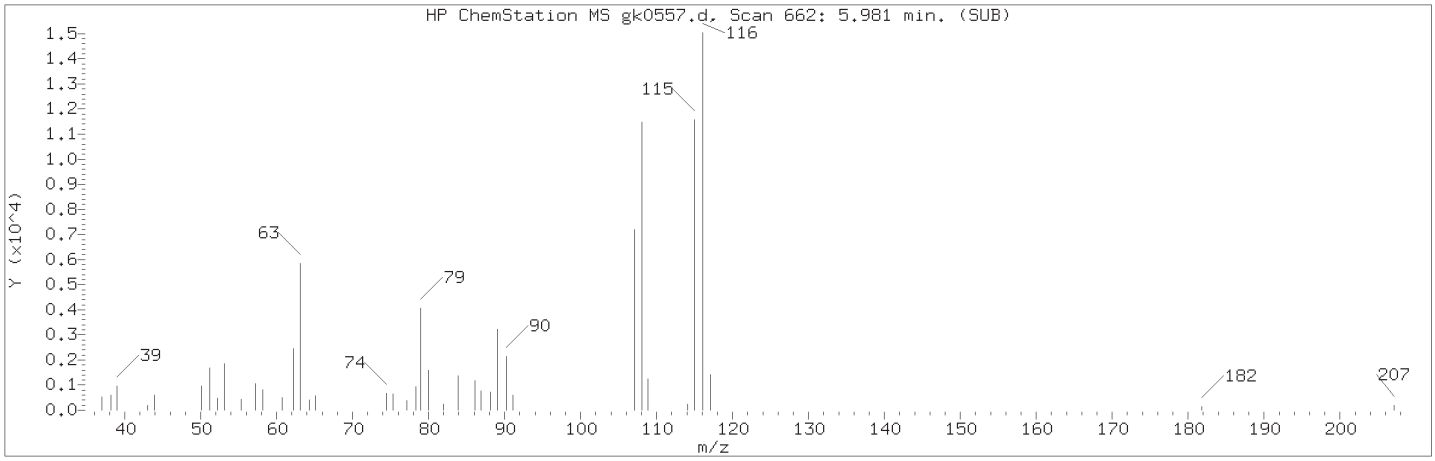
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

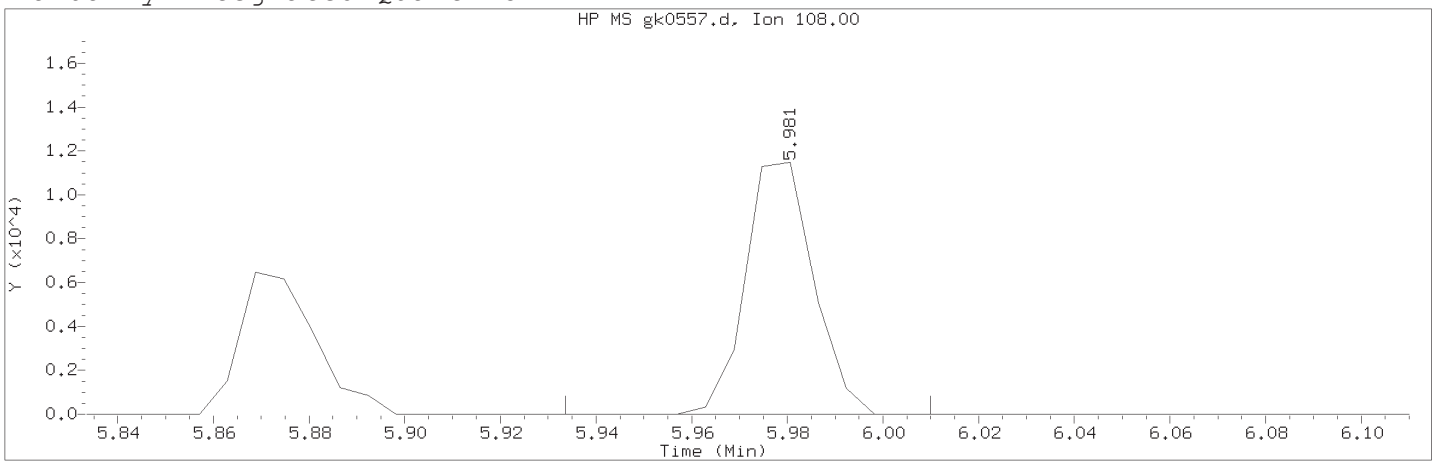
Compound Number	:	9
Compound Name	:	Methyl methanesulfonate
Scan Number	:	382
Retention Time (minutes)	:	4.334
Quant Ion	:	80.00
Area	:	5277
On-column Amount (ng/ul)	:	0.8011
Integration start scan	:	378 Integration stop scan: 389
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

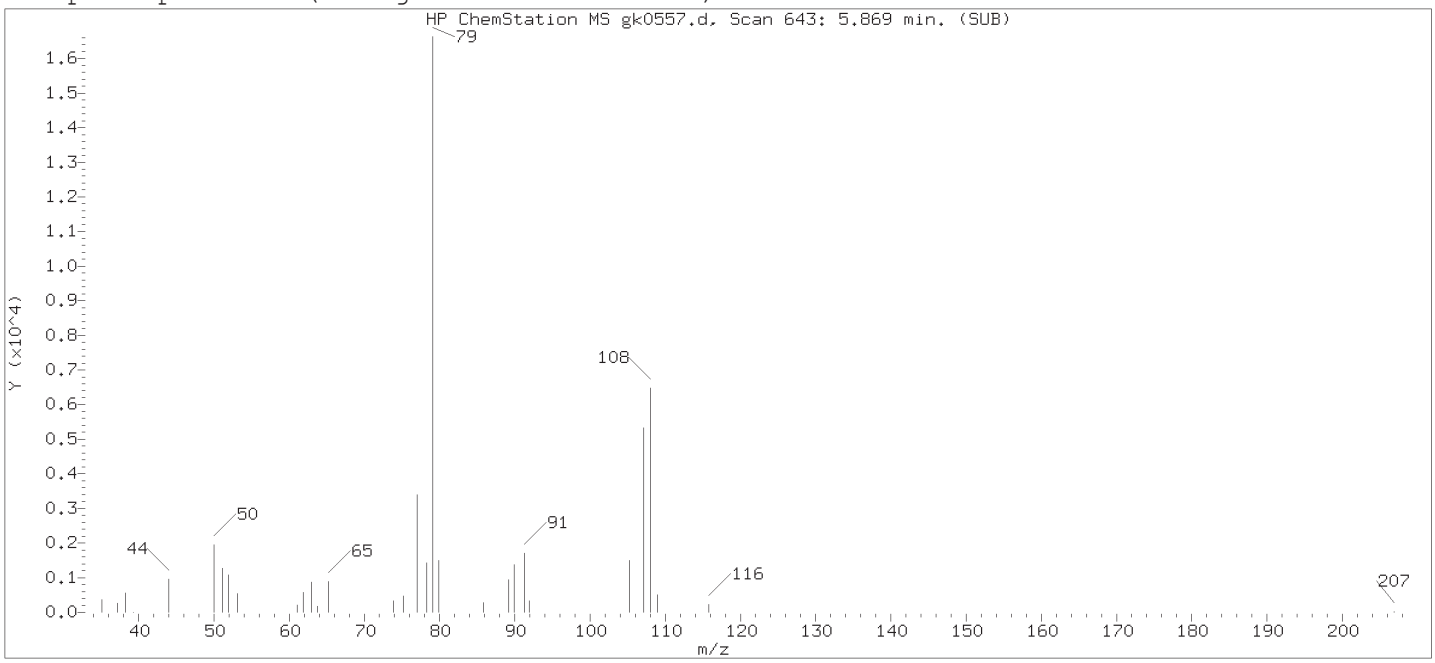
Compound Number	: 31		
Compound Name	: 2-Methylphenol		
Scan Number	: 662		
Retention Time (minutes)	: 5.981		
Quant Ion	: 108.00		
Area (flag)	: 11387M		
On-Column Amount (ng/ul)	: 1.0066		
Integration start scan	: 653	Integration stop scan:	666
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

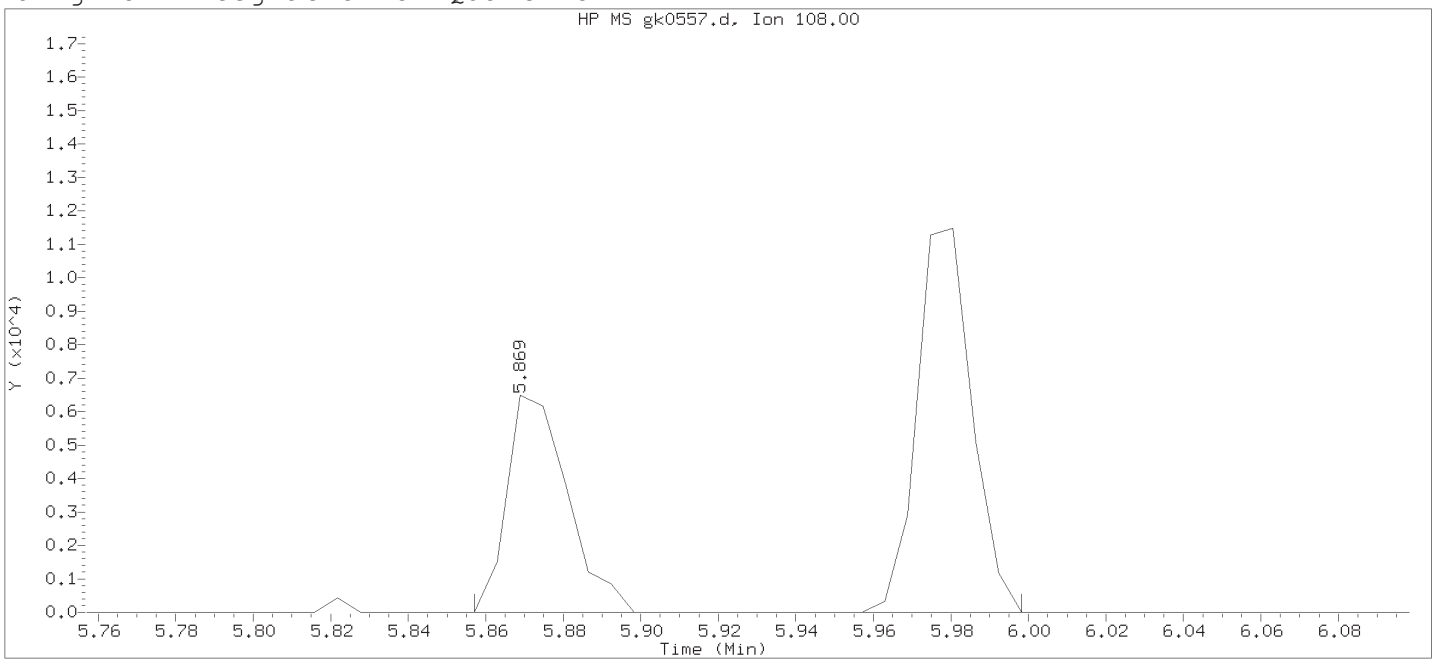
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

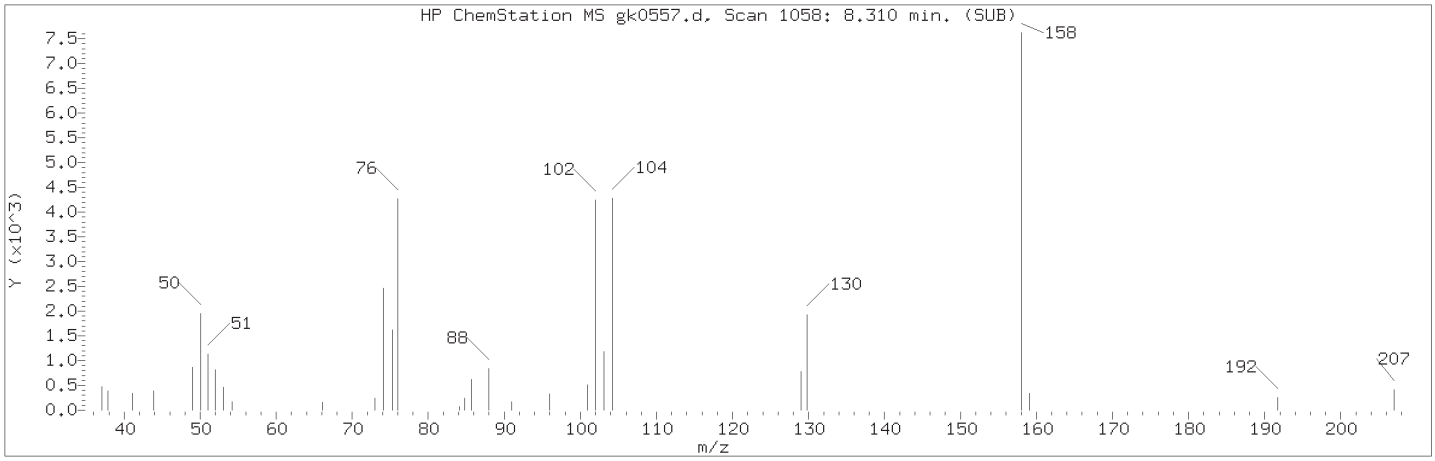
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

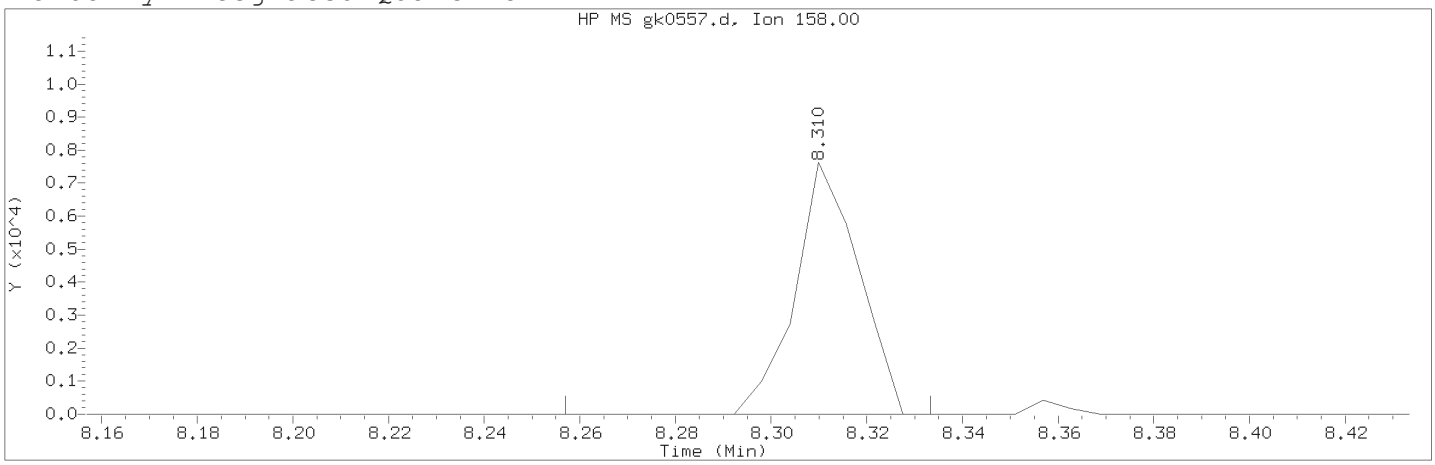
Compound Number	: 31		
Compound Name	: 2-Methylphenol		
Scan Number	: 643		
Retention Time (minutes)	: 5.869		
Quant Ion	: 108.00		
Area	: 18470		
On-column Amount (ng/ul)	: 1.5508		
Integration start scan	: 640	Integration stop scan:	664
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: 10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

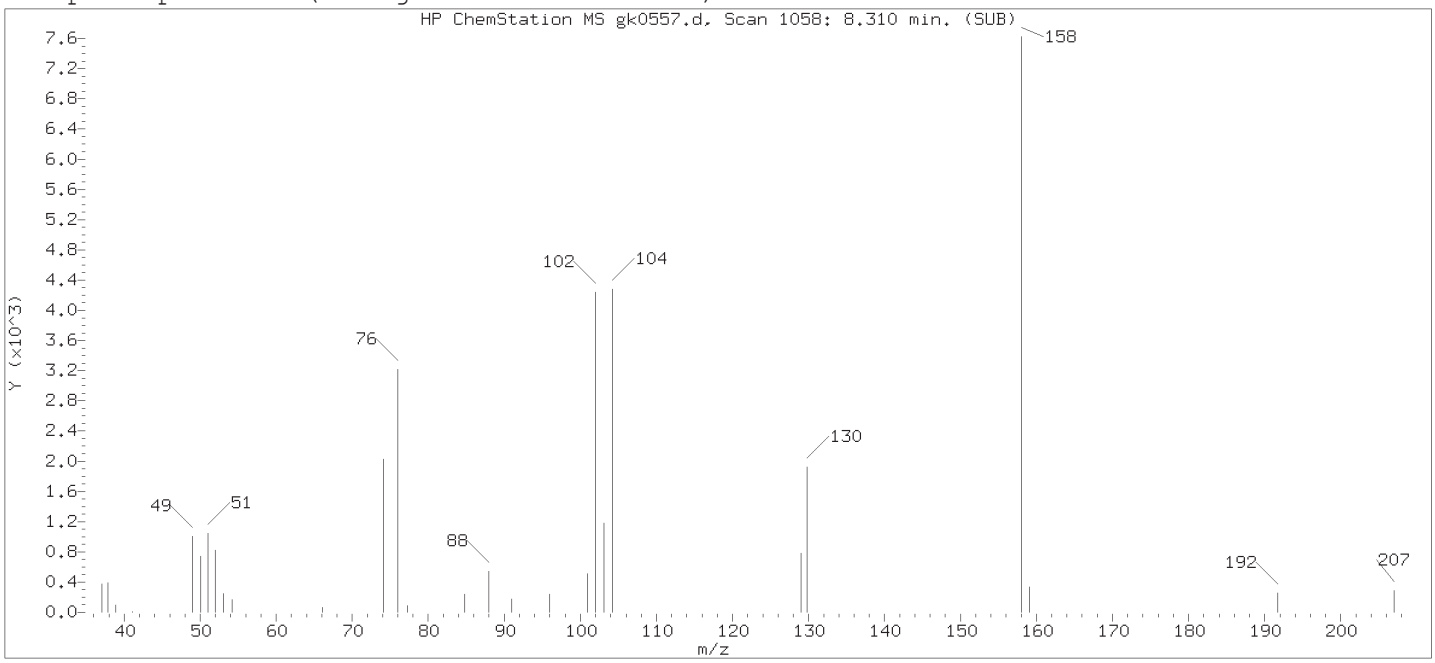
Compound Number : 104
Compound Name : 1,4-Naphthoquinone
Scan Number : 1058
Retention Time (minutes) : 8.310
Quant Ion : 158.00
Area (flag) : 7037M
On-Column Amount (ng/ul) : 0.8039
Integration start scan : 1048 Integration stop scan: 1061
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

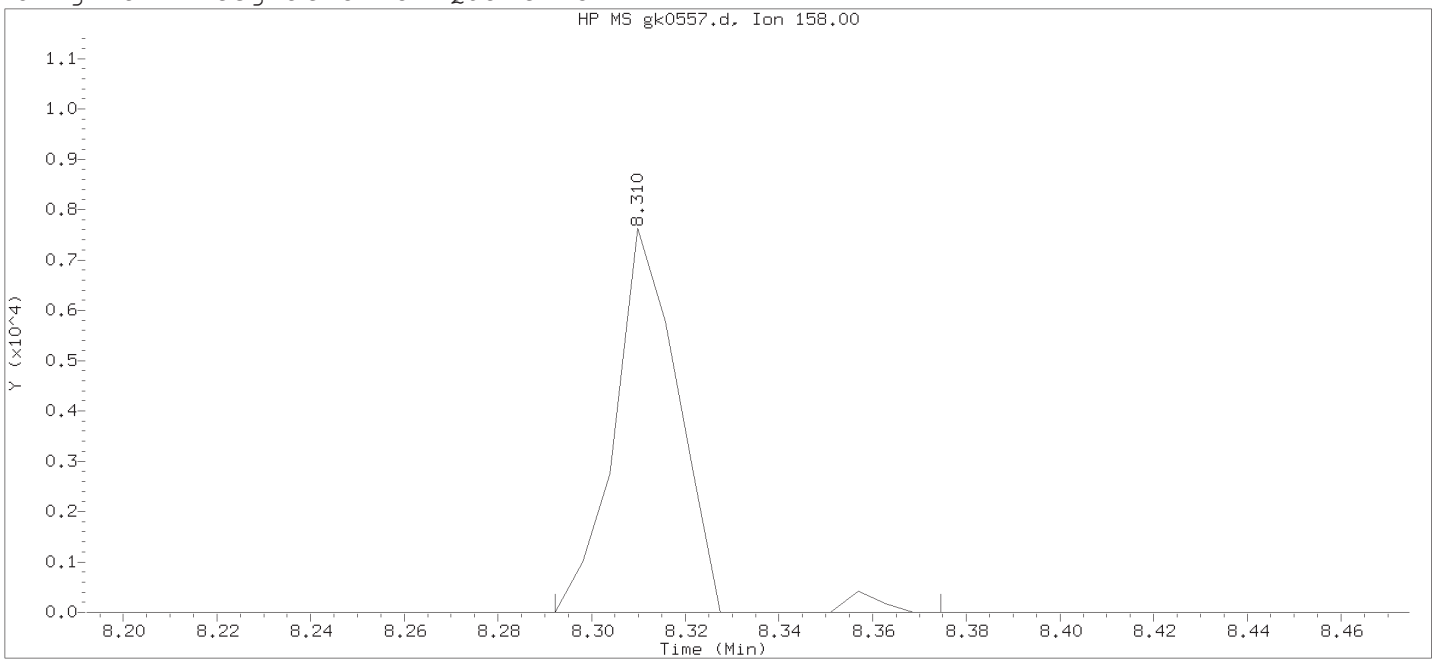
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

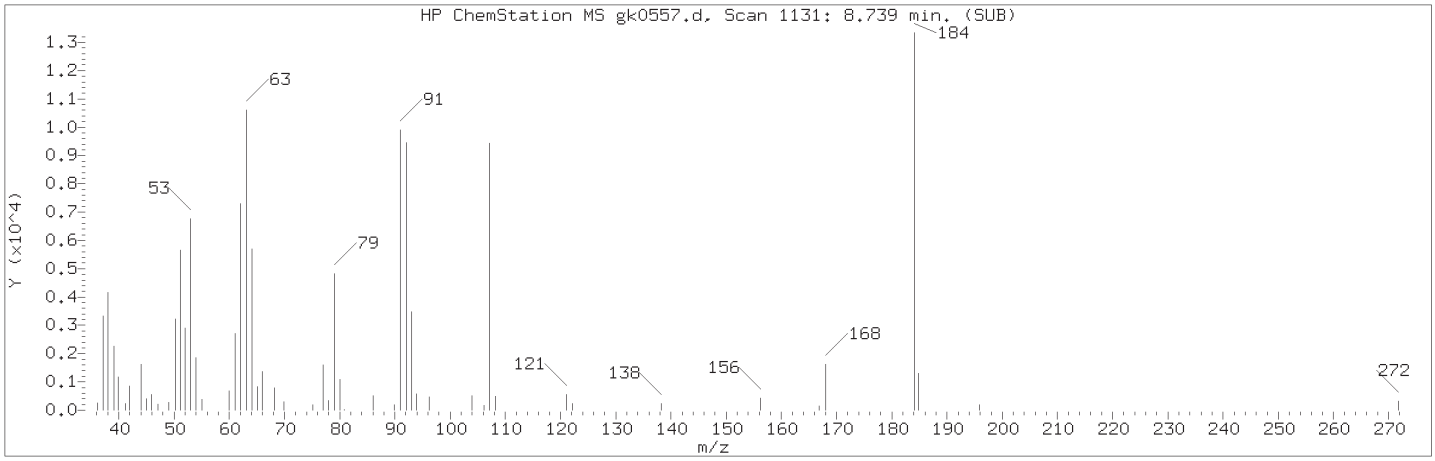
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

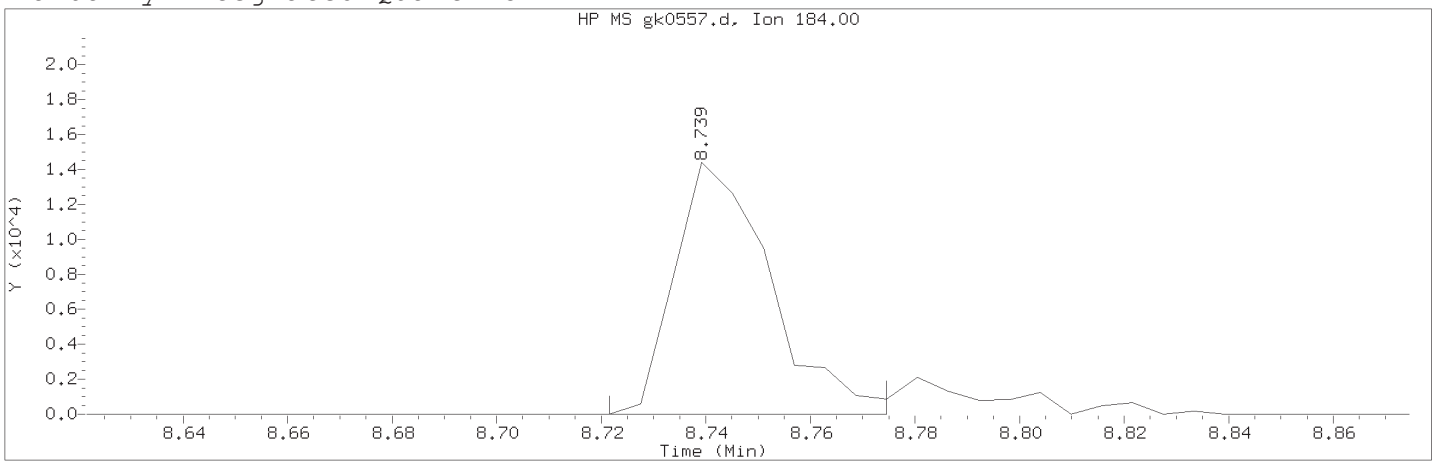
Compound Number : 104
Compound Name : 1,4-Naphthoquinone
Scan Number : 1058
Retention Time (minutes) : 8.310
Quant Ion : 158.00
Area : 7242
On-column Amount (ng/ul) : 0.8162
Integration start scan : 1054 Integration stop scan: 1068
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

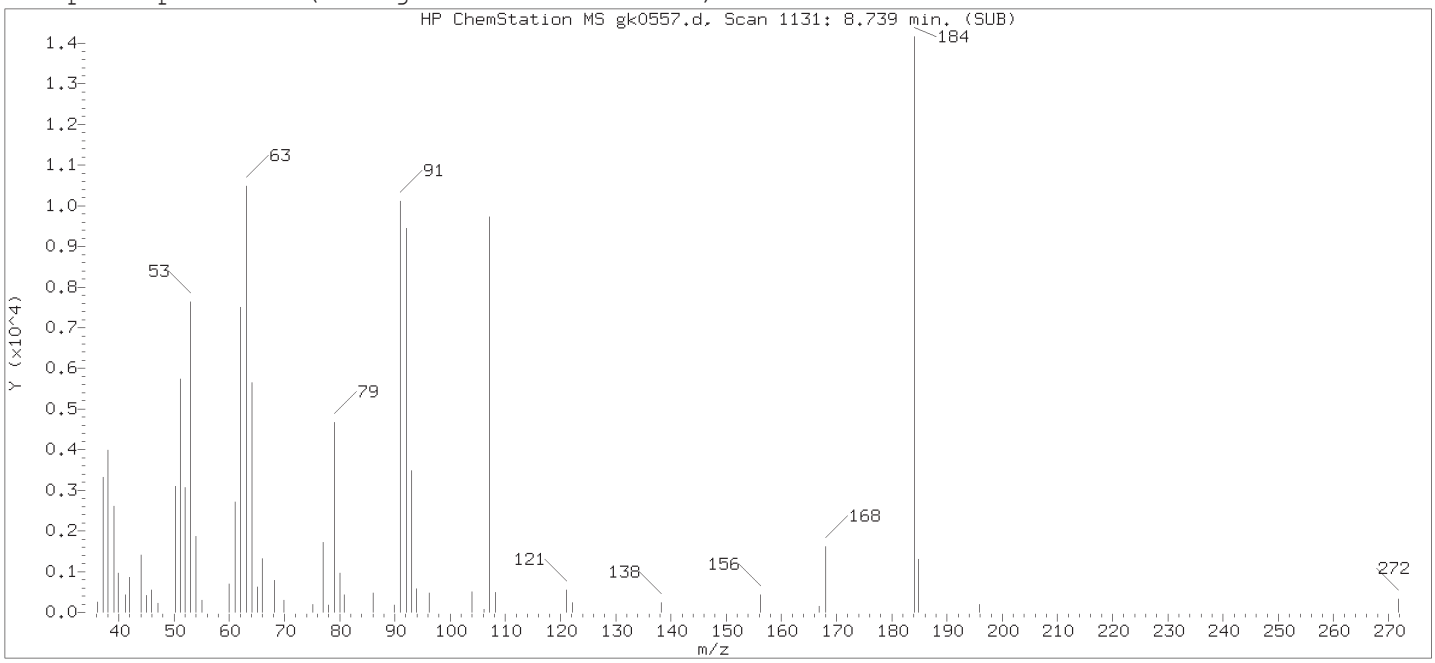
Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1131
Retention Time (minutes) : 8.739
Quant Ion : 184.00
Area (flag) : 18290M
On-Column Amount (ng/ul) : 4.8295
Integration start scan : 1127 Integration stop scan: 1136
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

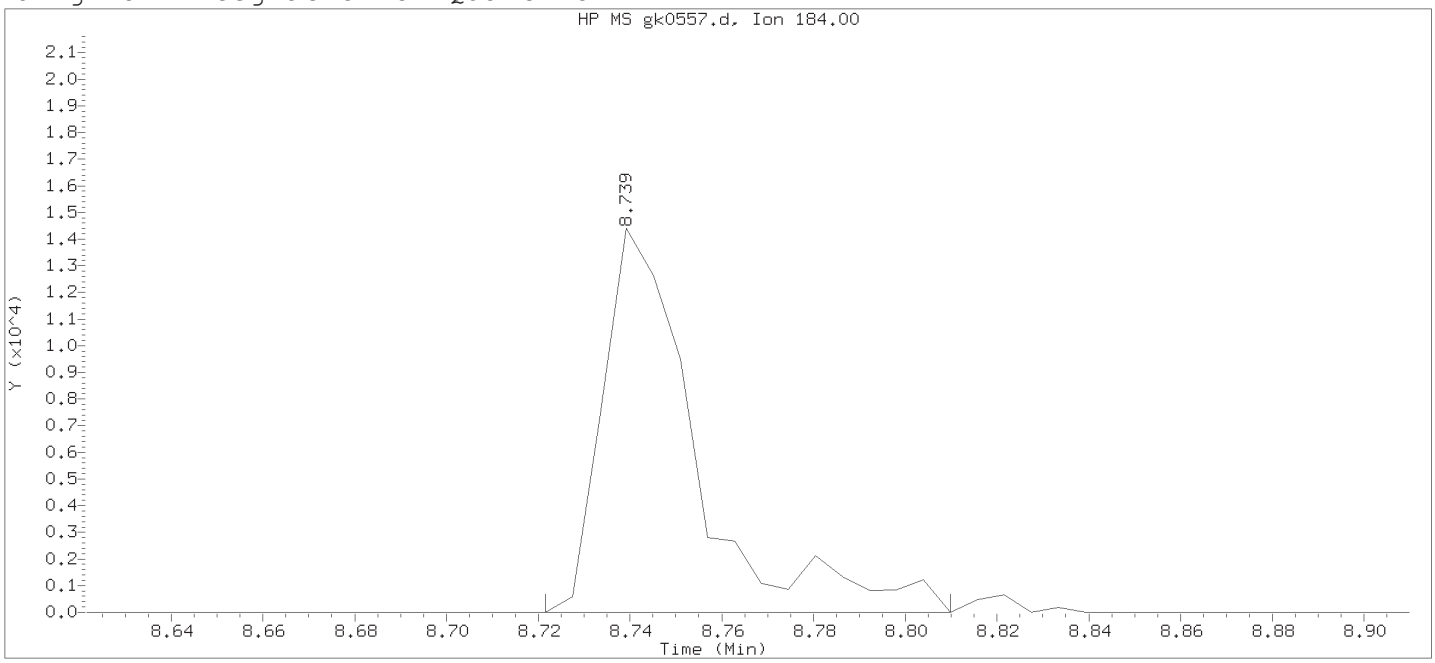
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

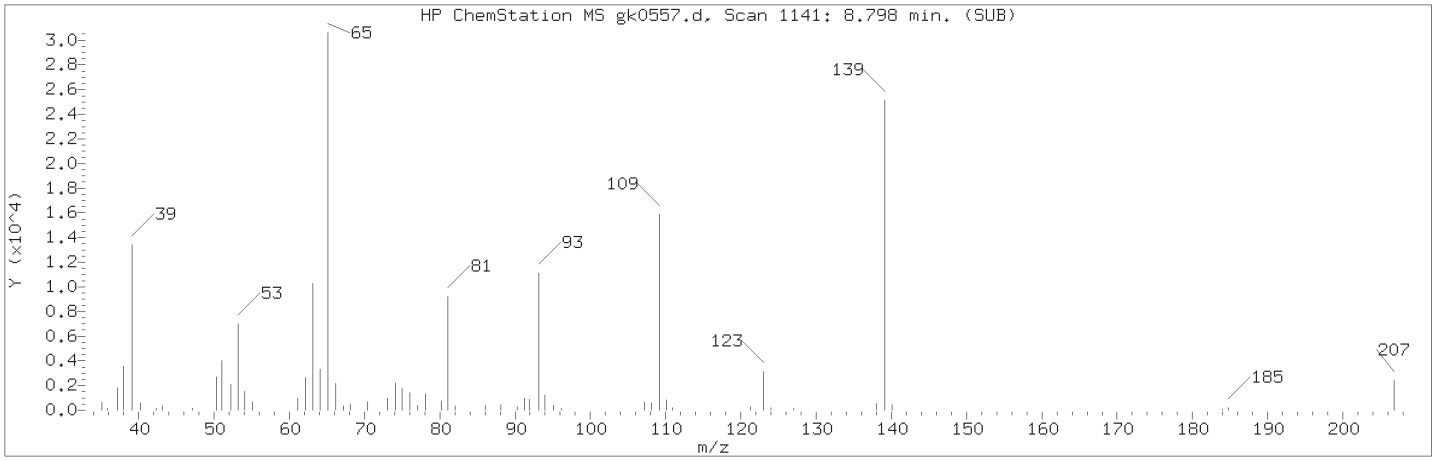
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

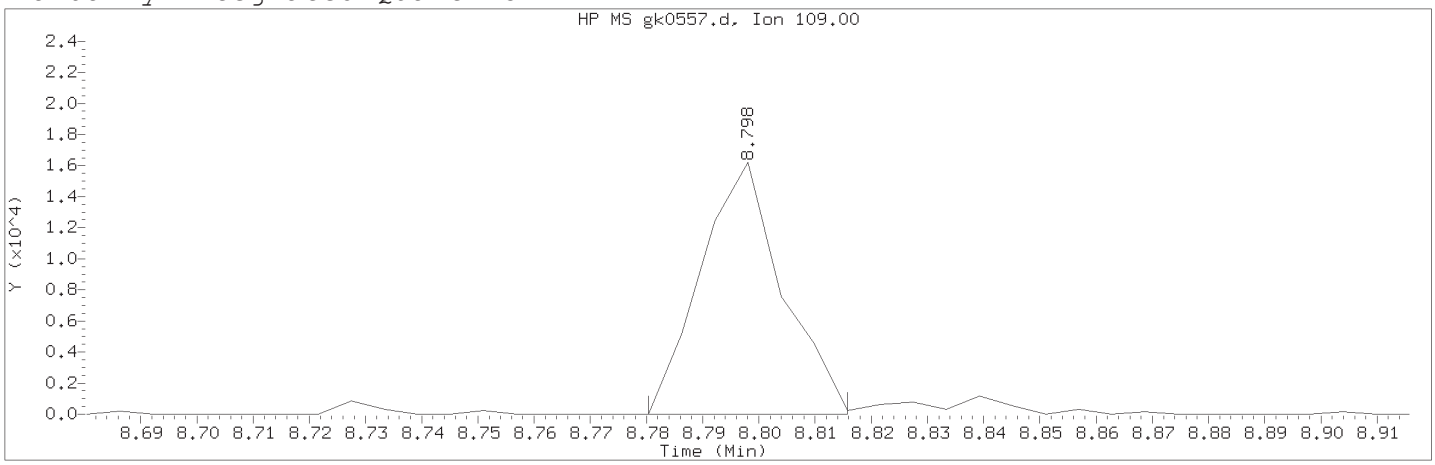
Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1131
Retention Time (minutes) : 8.739
Quant Ion : 184.00
Area : 20518
On-column Amount (ng/ul) : 5.5751
Integration start scan : 1127 Integration stop scan: 1142
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

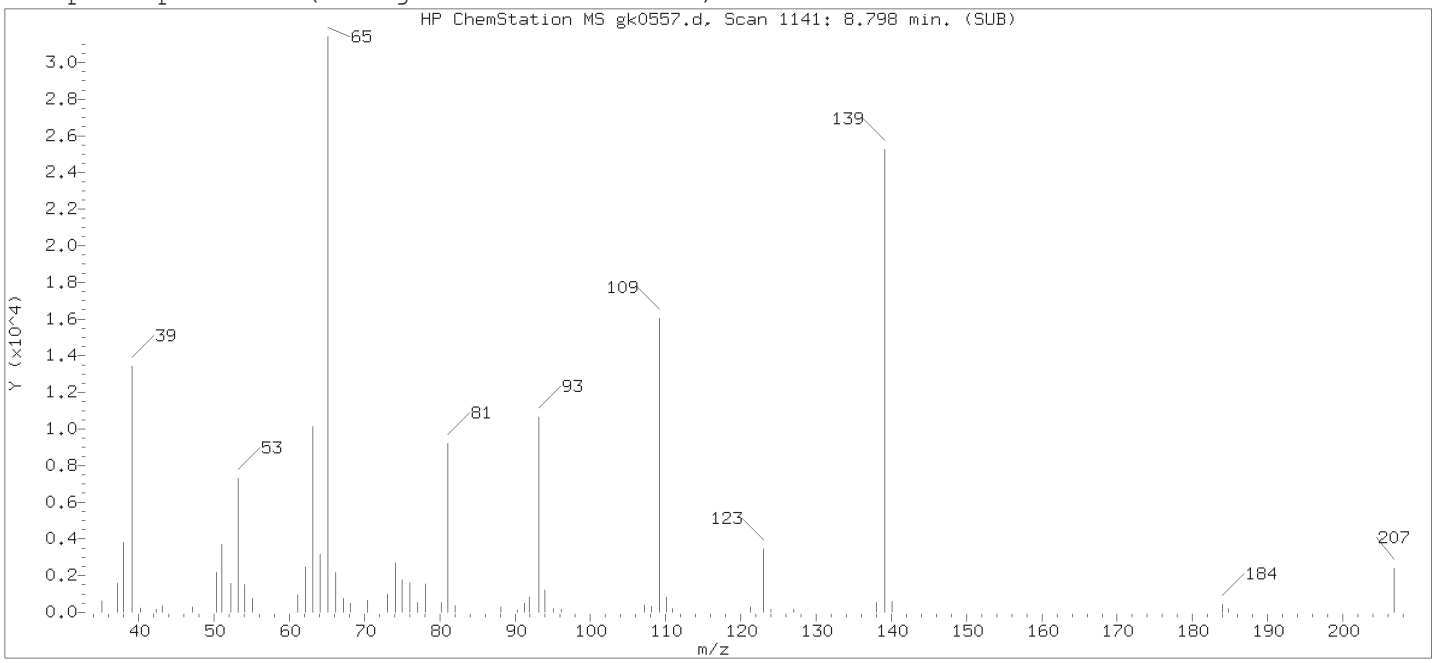
Compound Number : 116
Compound Name : 4-Nitrophenol
Scan Number : 1141
Retention Time (minutes) : 8.798
Quant Ion : 109.00
Area (flag) : 16282M
On-Column Amount (ng/ul) : 3.7248
Integration start scan : 1137 Integration stop scan: 1143
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

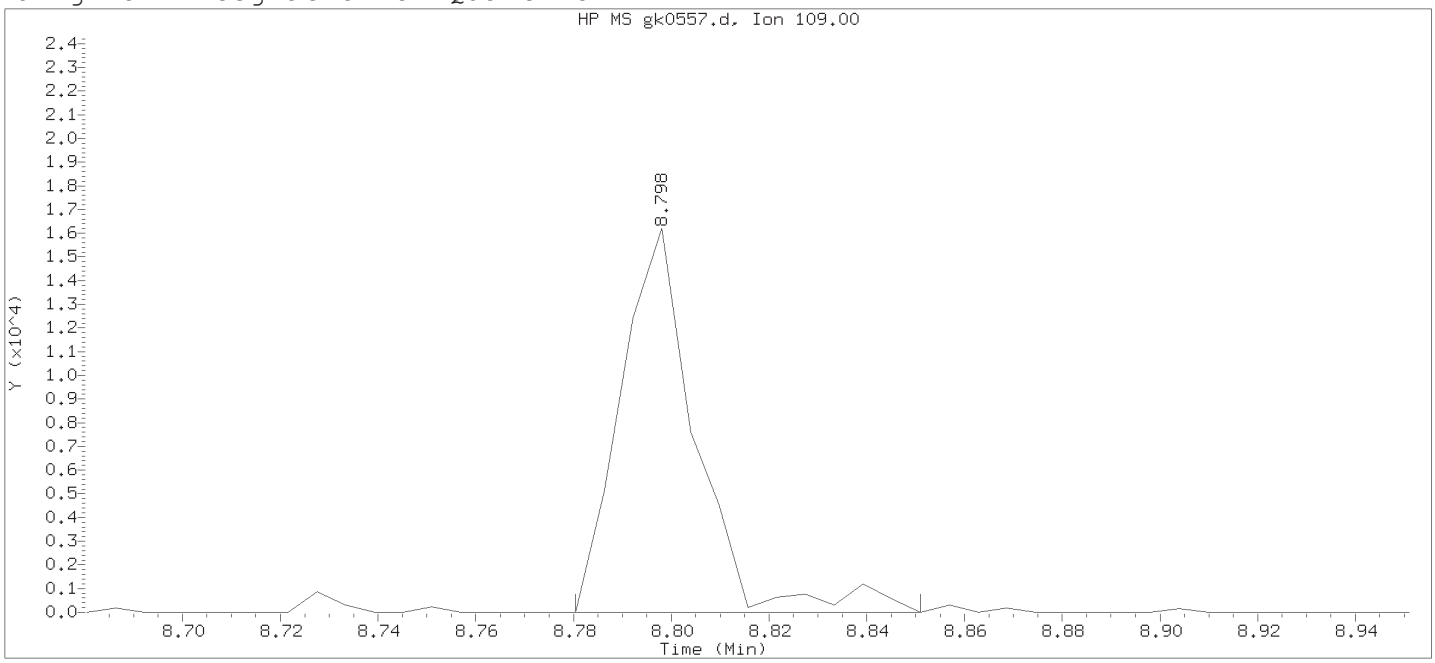
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

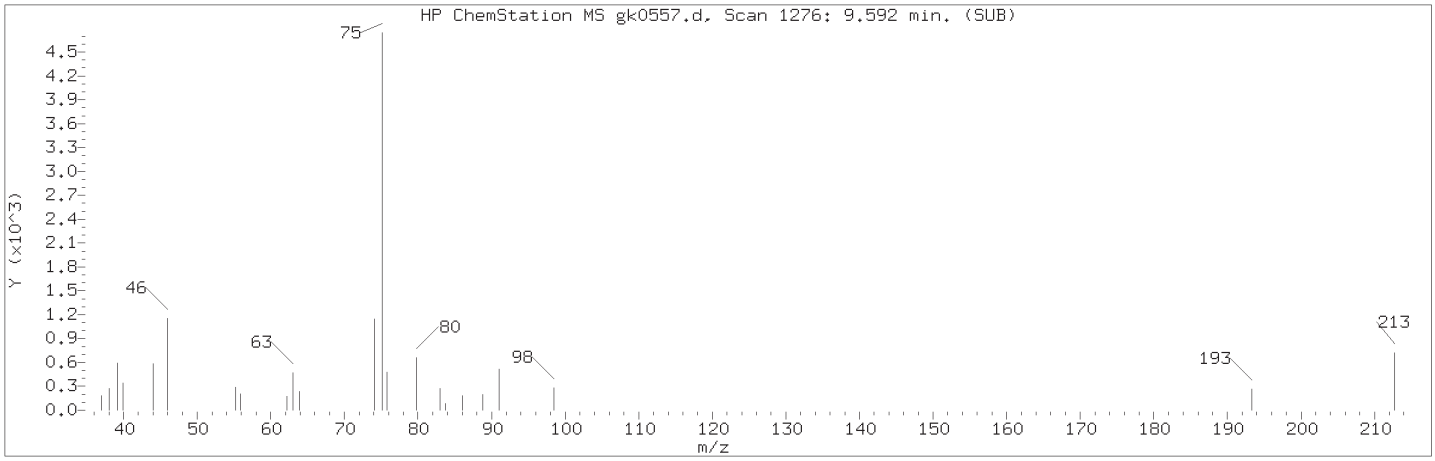
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

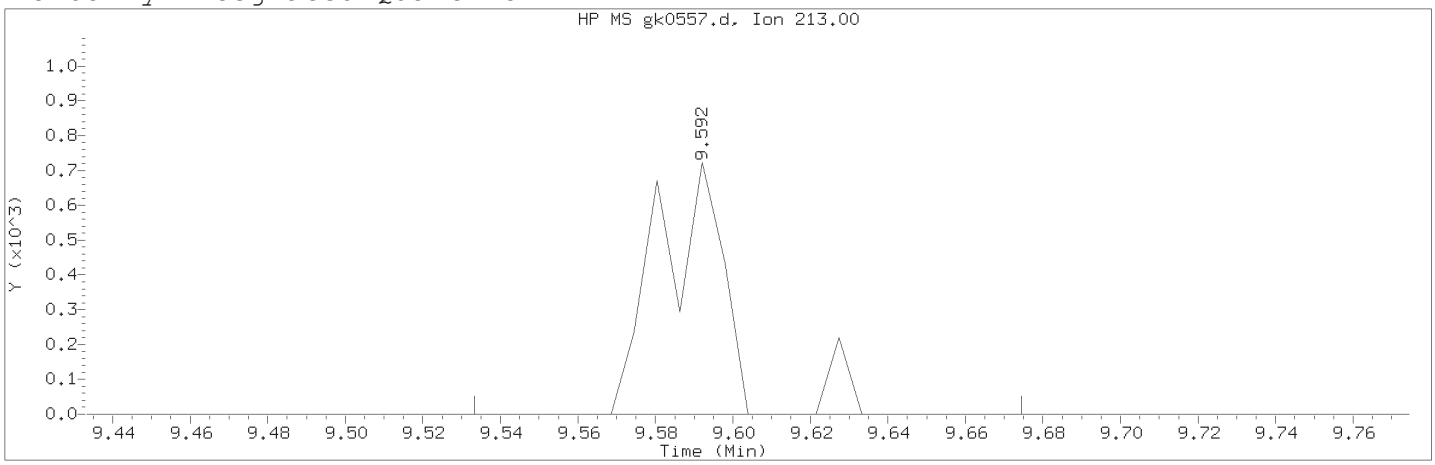
Compound Number : 116
Compound Name : 4-Nitrophenol
Scan Number : 1141
Retention Time (minutes) : 8.798
Quant Ion : 109.00
Area : 17500
On-column Amount (ng/ul) : 3.9962
Integration start scan : 1137 Integration stop scan: 1149
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

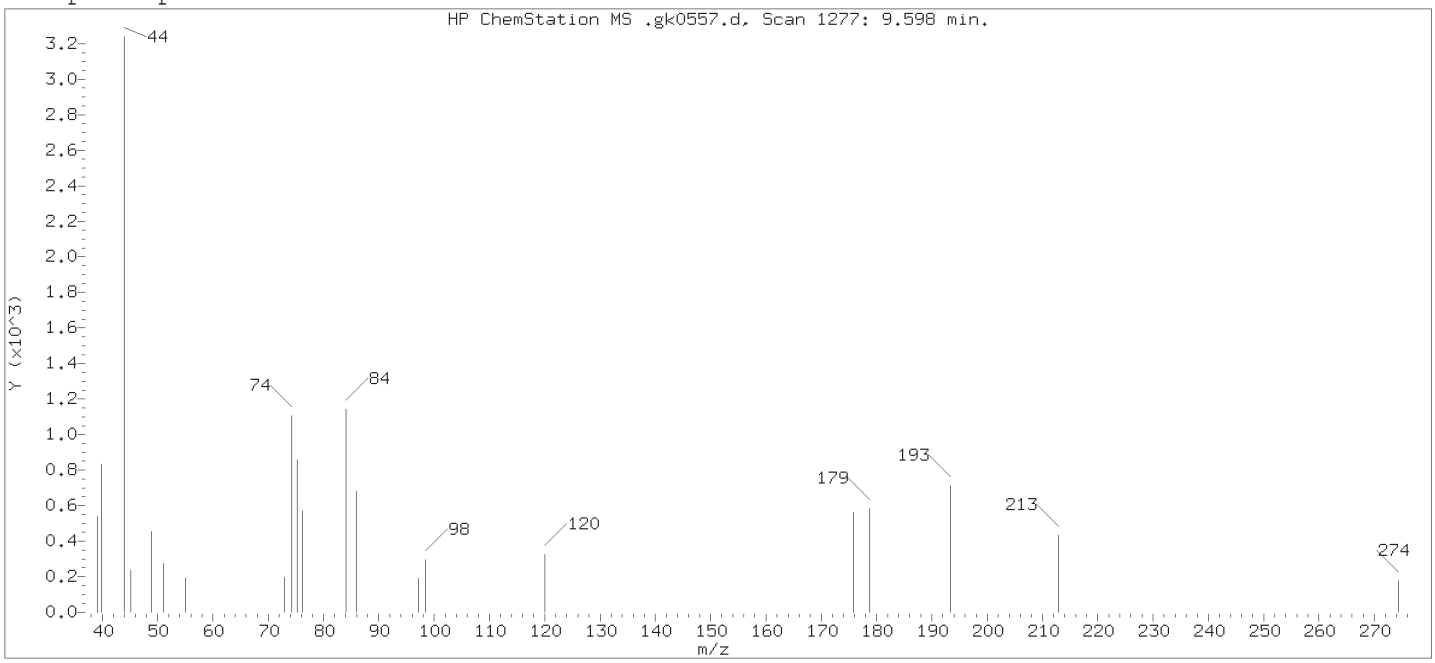
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 1276
Retention Time (minutes) : 9.592
Quant Ion : 213.00
Area (flag) : 909M
On-Column Amount (ng/ul) : 0.3056
Integration start scan : 1265 Integration stop scan: 1289
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

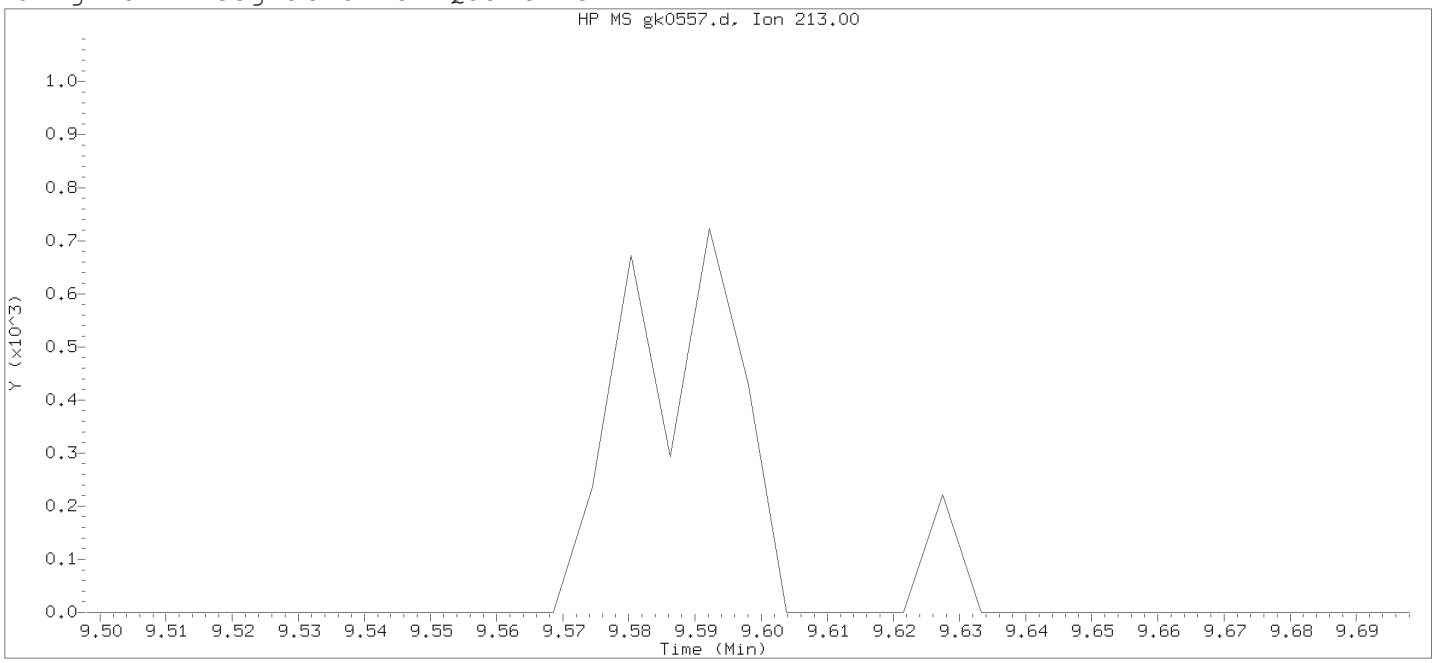
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

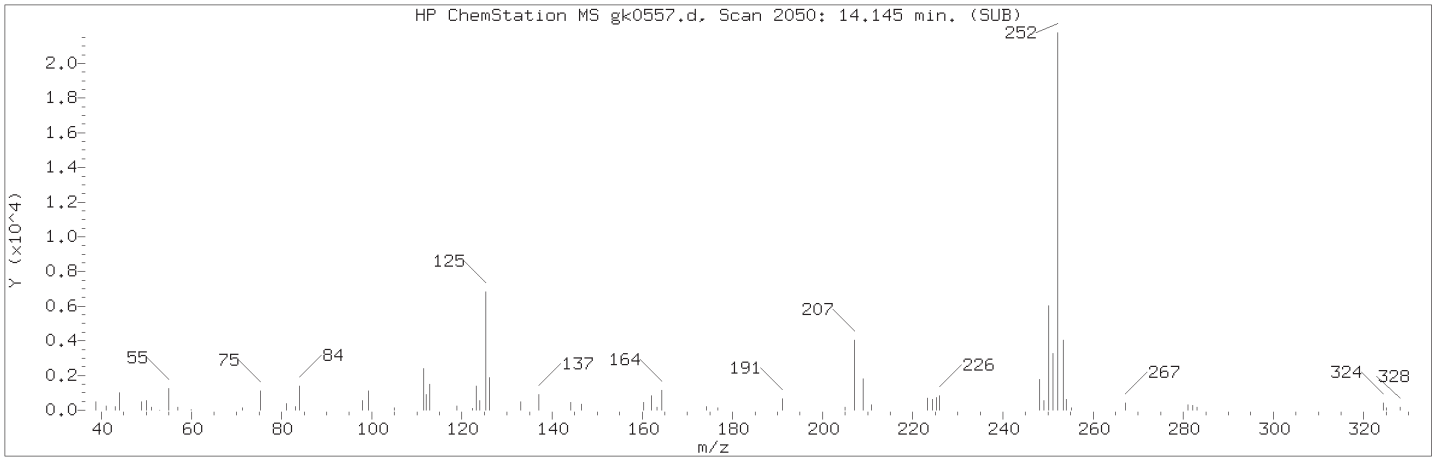
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

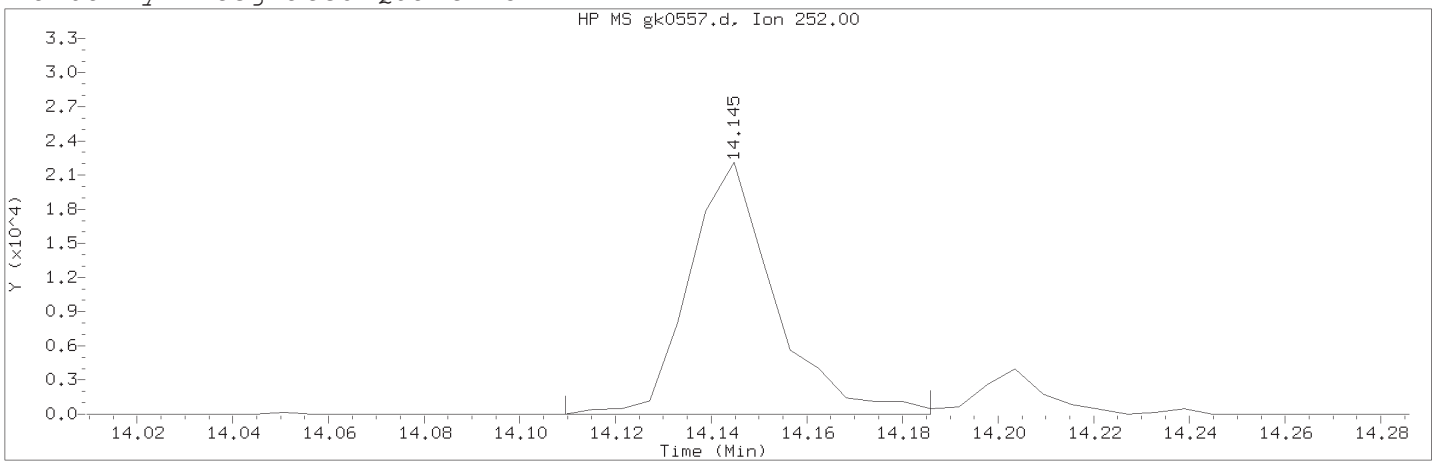
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 9.598
Quant Ion : 213.00

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

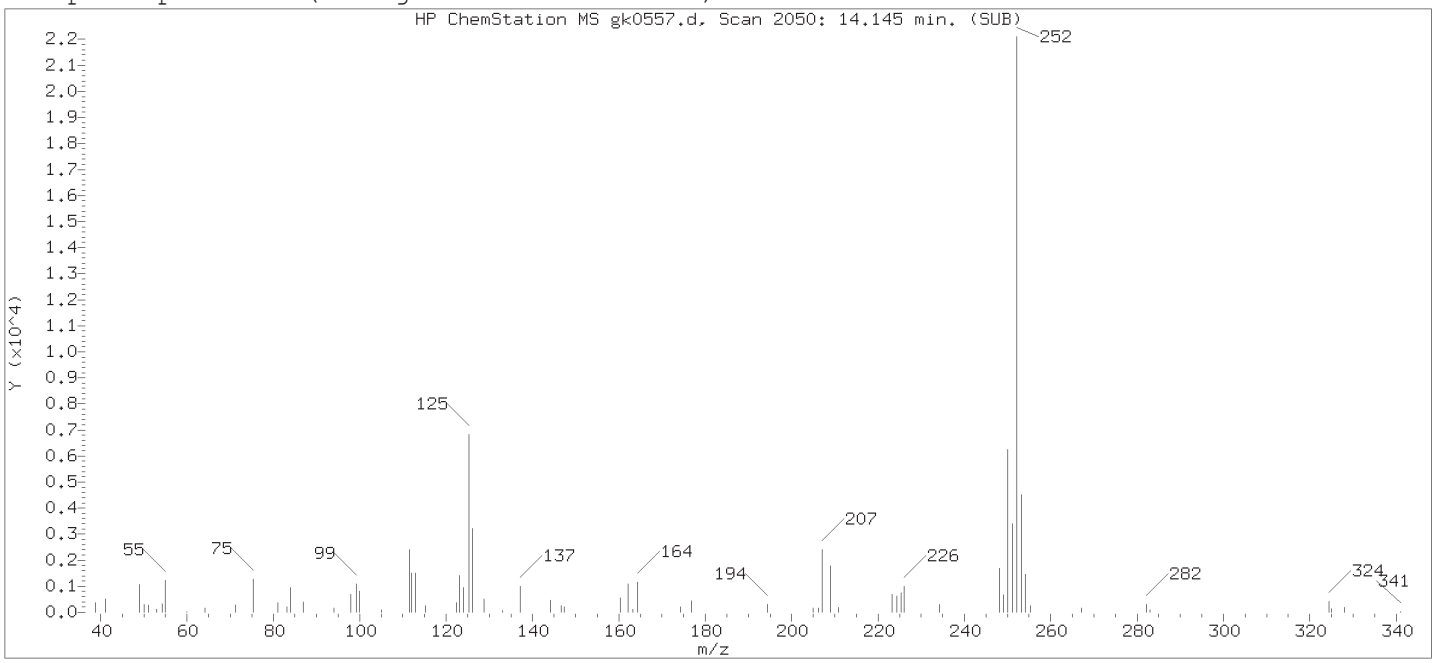
Compound Number : 211
Compound Name : Benzo(a)pyrene
Scan Number : 2050
Retention Time (minutes) : 14.145
Quant Ion : 252.00
Area (flag) : 27392M
On-Column Amount (ng/ul) : 0.7841
Integration start scan : 2043 Integration stop scan: 2056
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

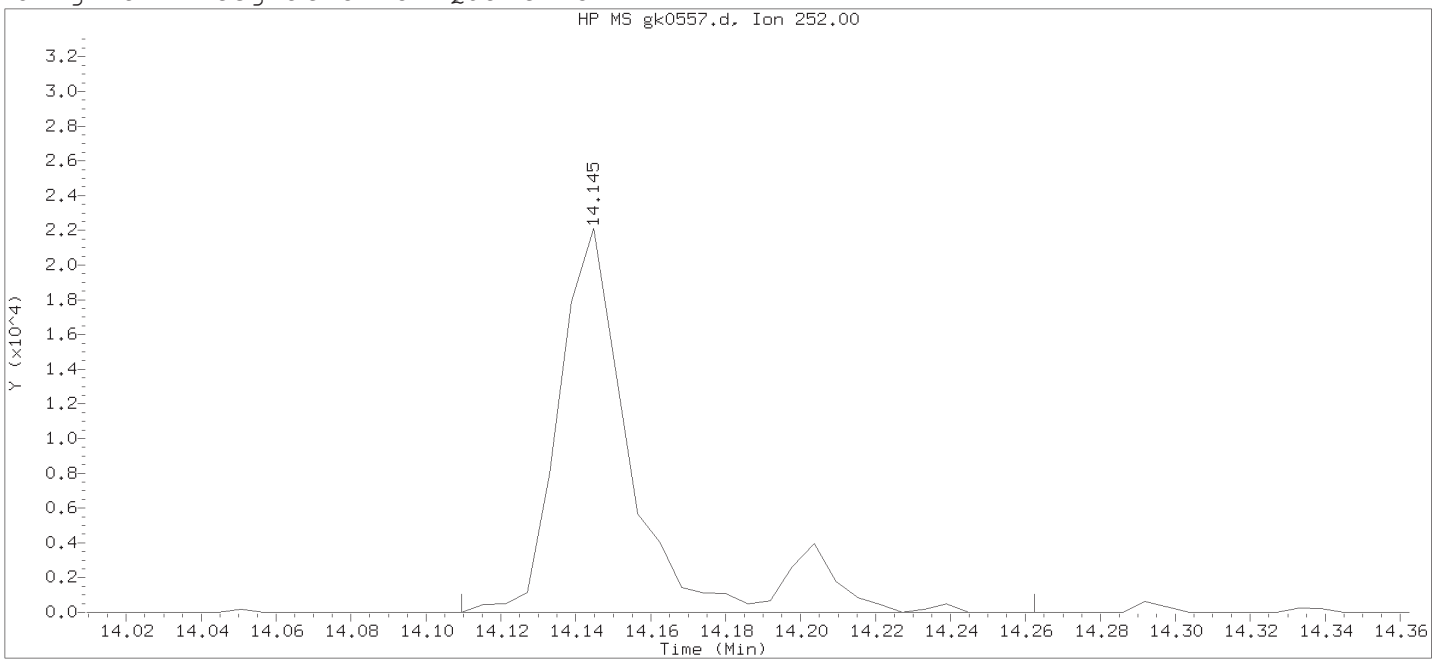
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

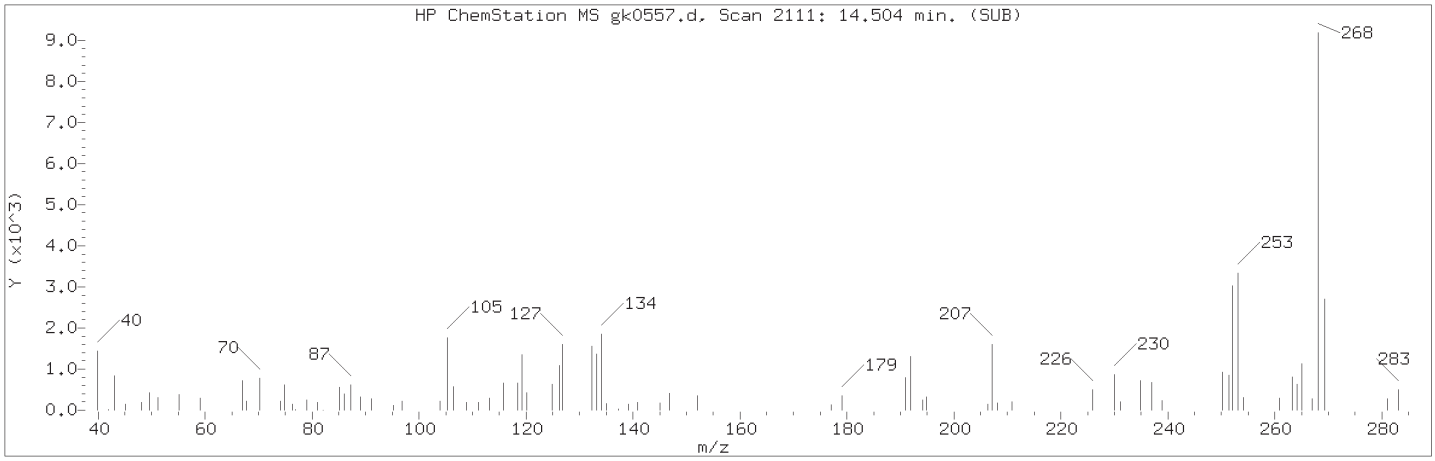
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

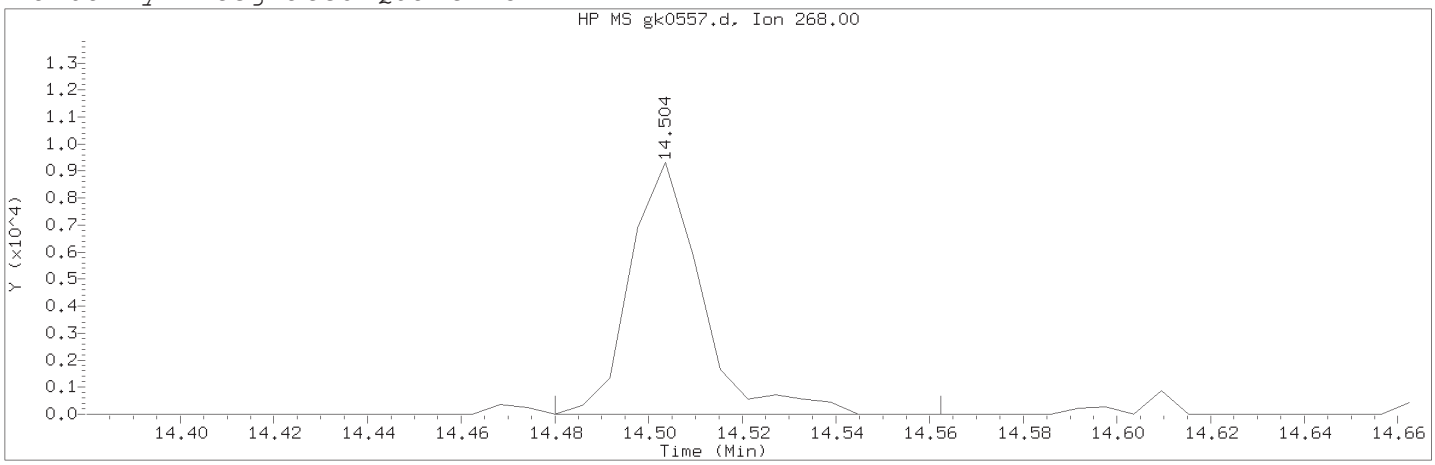
Compound Number	:	211
Compound Name	:	Benzo(a)pyrene
Scan Number	:	2050
Retention Time (minutes)	:	14.145
Quant Ion	:	252.00
Area	:	31266
On-column Amount (ng/ul)	:	0.9186
Integration start scan	:	2043 Integration stop scan: 2069
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

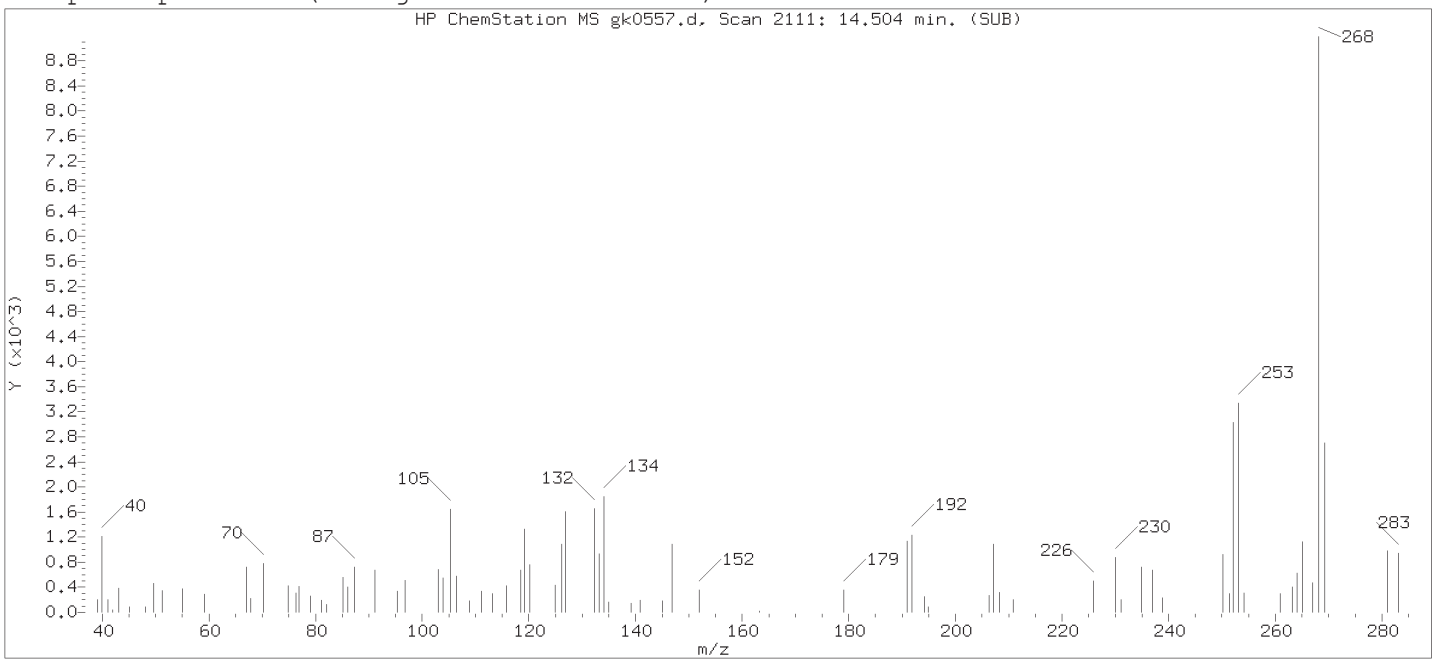
Compound Number : 215
Compound Name : 3-Methylcholanthrene
Scan Number : 2111
Retention Time (minutes) : 14.504
Quant Ion : 268.00
Area (flag) : 9788M
On-Column Amount (ng/ul) : 0.7349
Integration start scan : 2106 Integration stop scan: 2120
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

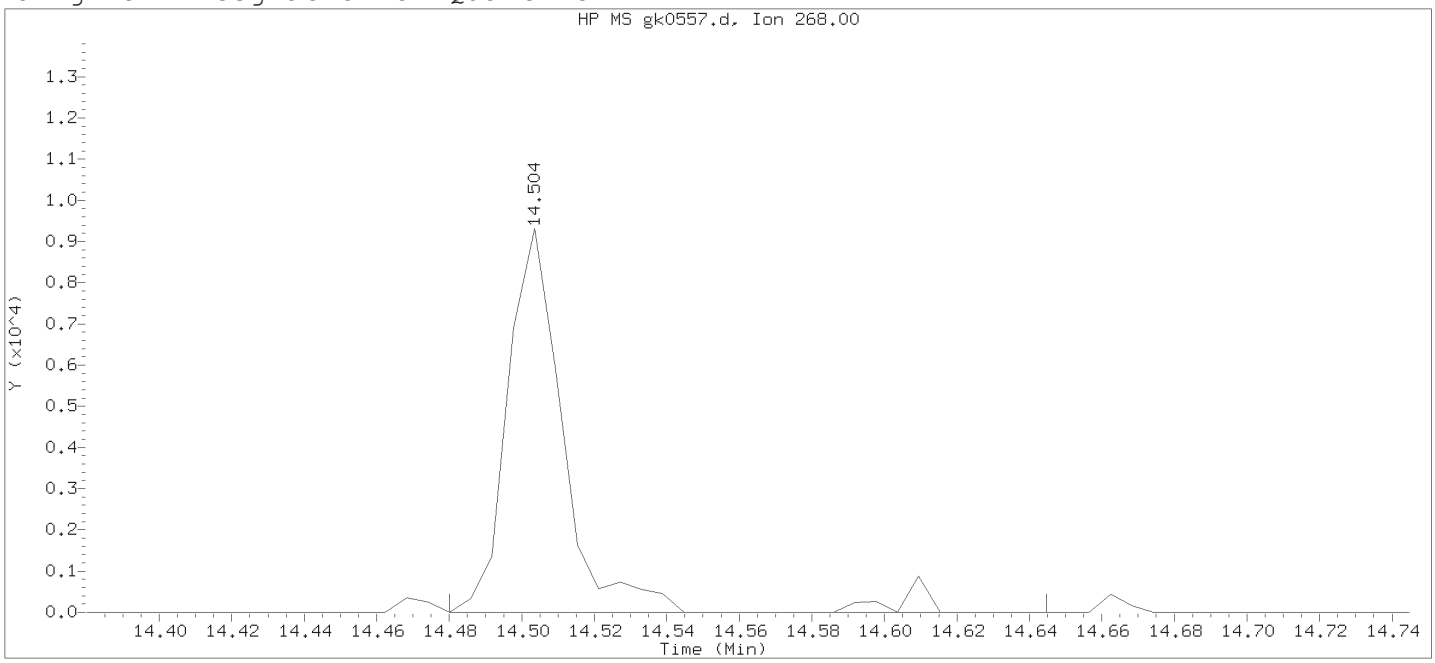
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

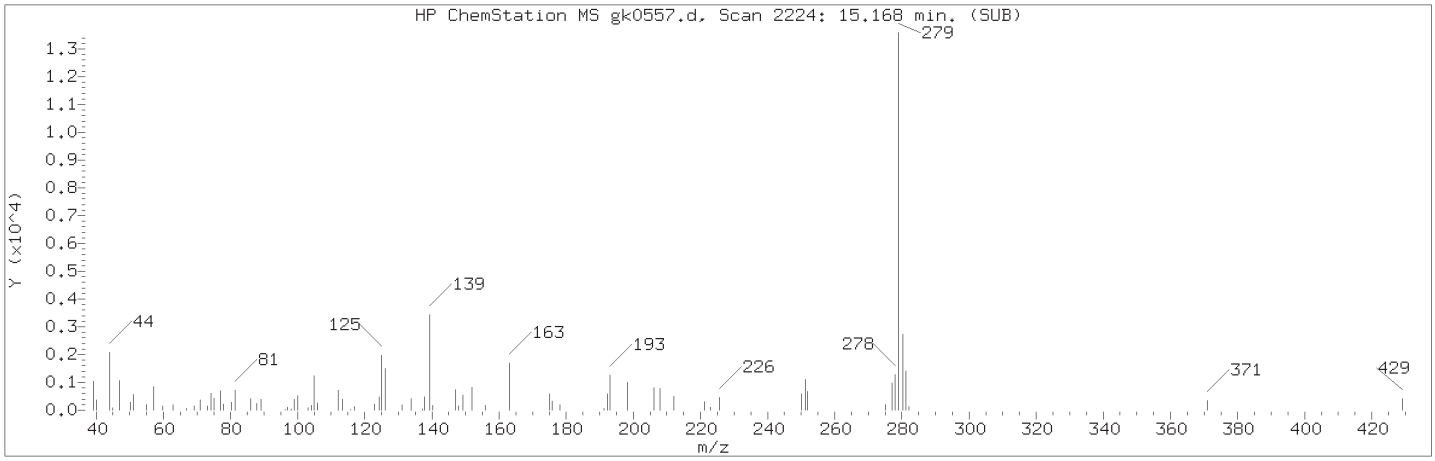
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

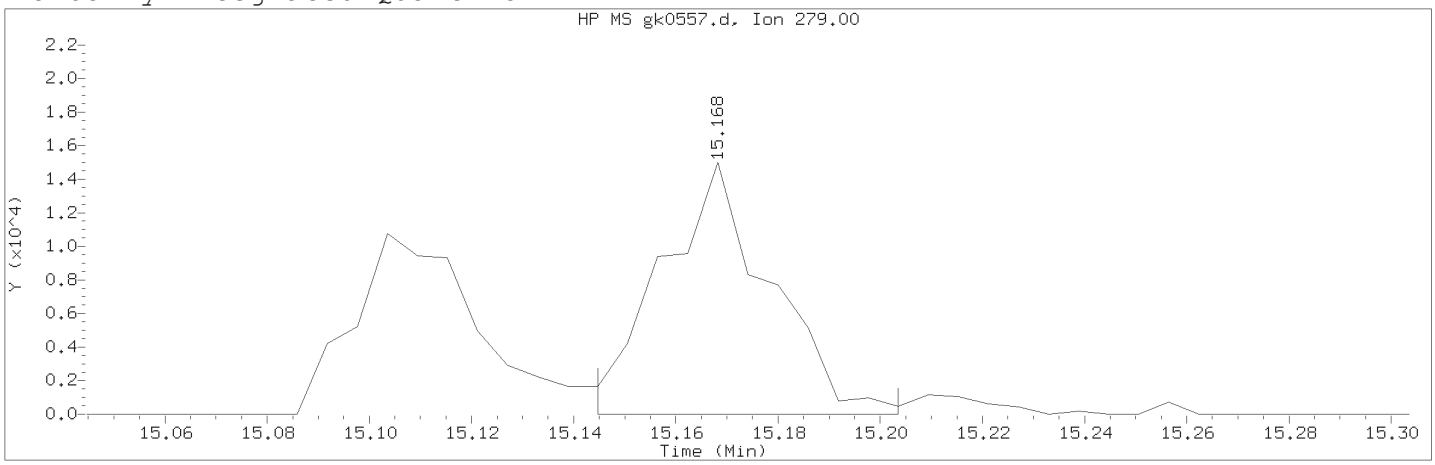
Compound Number : 215
Compound Name : 3-Methylcholanthrene
Scan Number : 2111
Retention Time (minutes) : 14.504
Quant Ion : 268.00
Area : 10273
On-column Amount (ng/ul) : 0.7734
Integration start scan : 2106 Integration stop scan: 2134
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

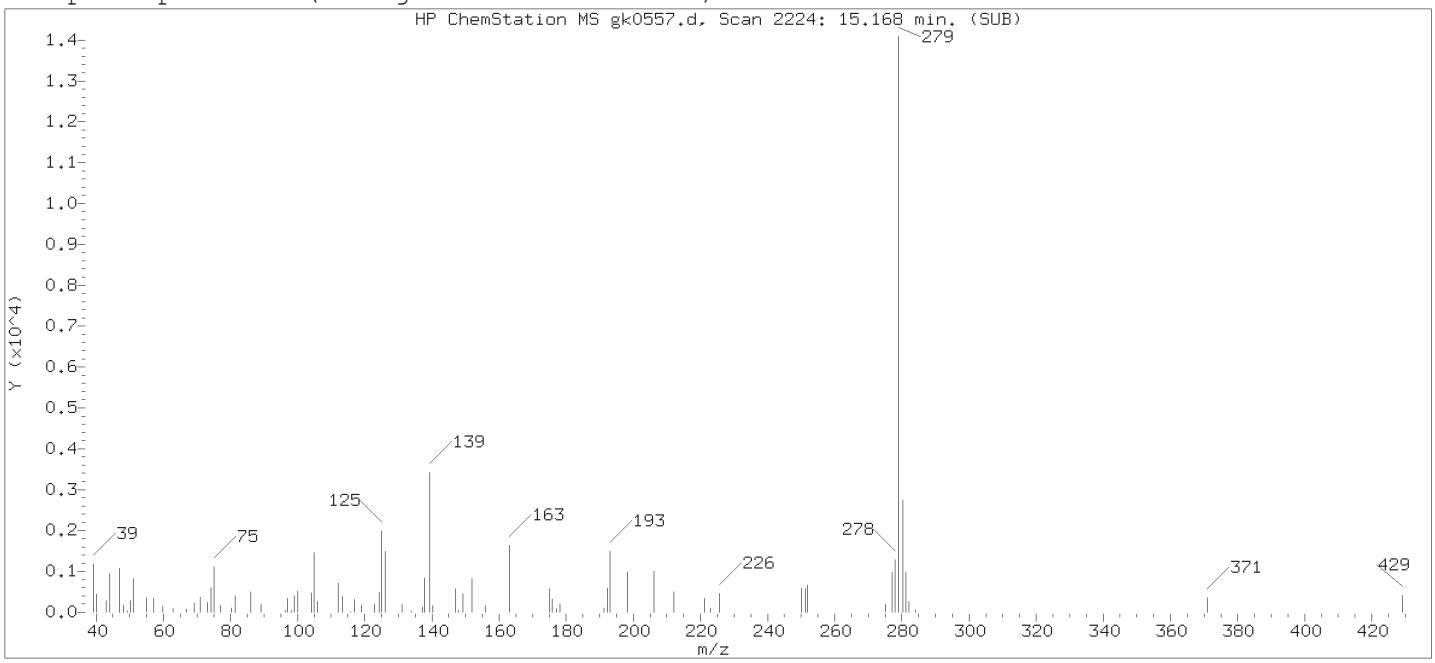
Compound Number : 218
Compound Name : Dibenz(a,j)acridine
Scan Number : 2224
Retention Time (minutes) : 15.168
Quant Ion : 279.00
Area (flag) : 22317M
On-Column Amount (ng/ul) : 0.8232
Integration start scan : 2219 Integration stop scan: 2229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

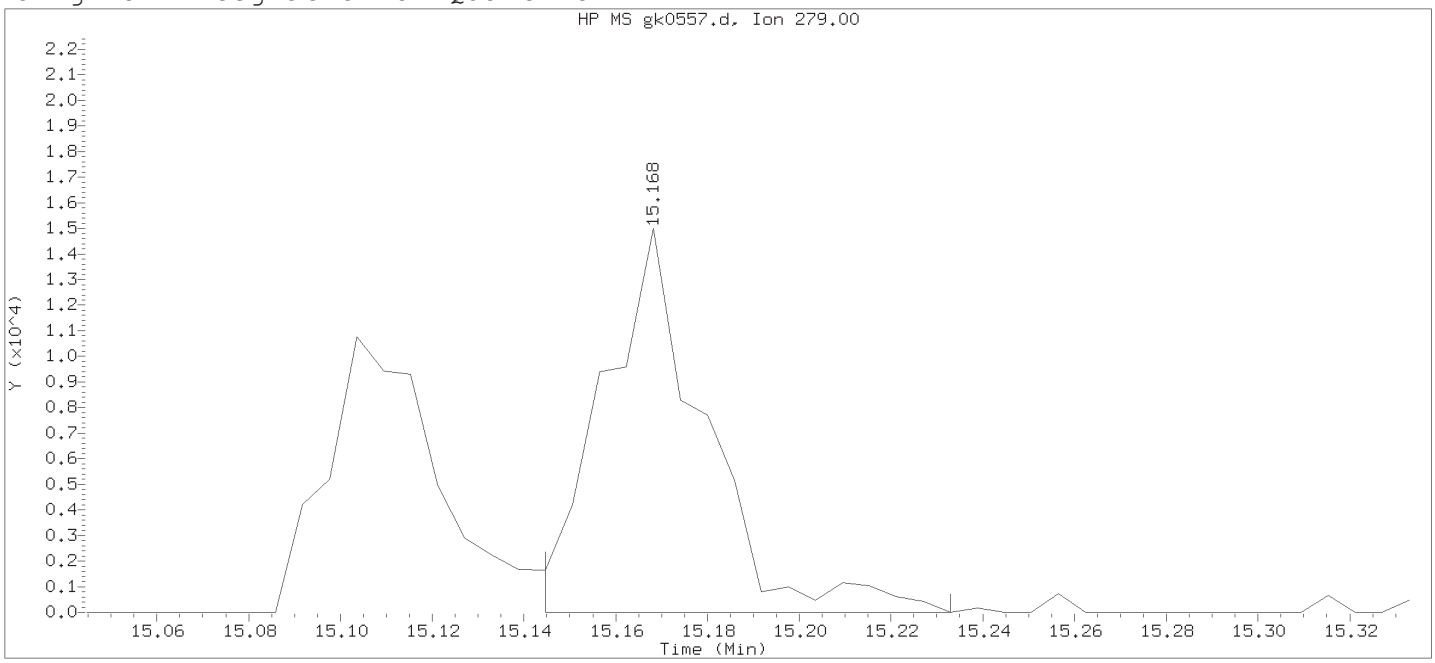
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

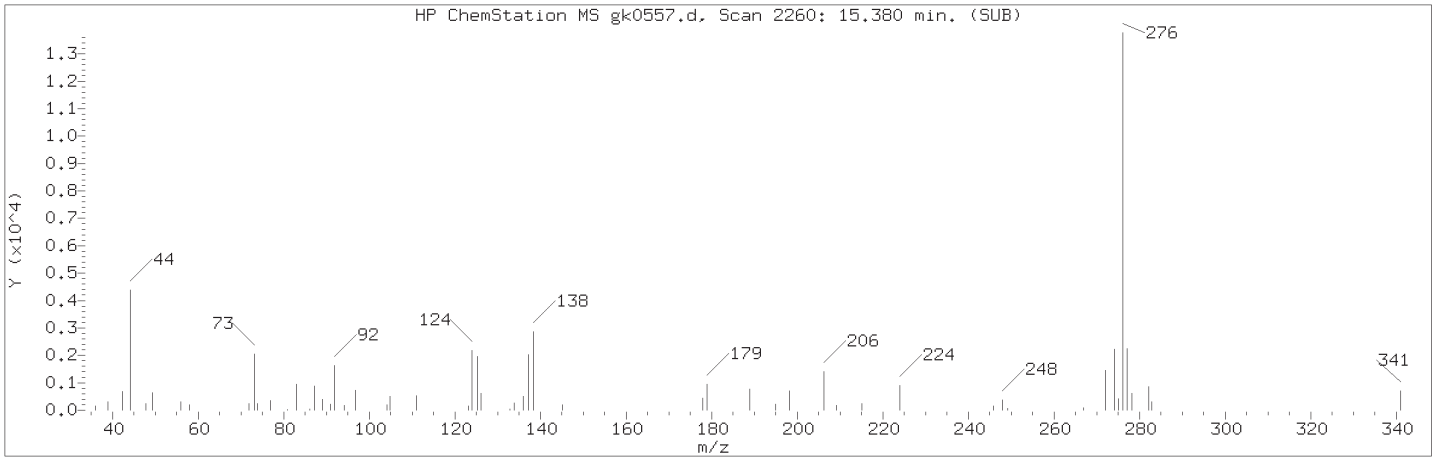
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

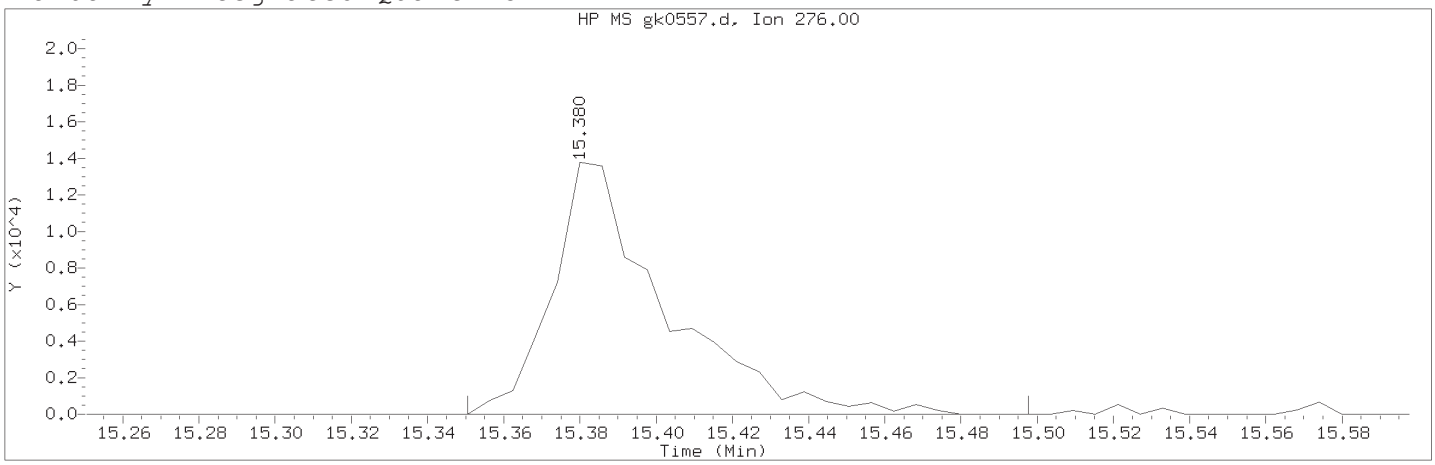
Compound Number	: 218		
Compound Name	: Dibenz(a,j)acridine		
Scan Number	: 2224		
Retention Time (minutes)	: 15.168		
Quant Ion	: 279.00		
Area	: 23163		
On-column Amount (ng/ul)	: 0.8539		
Integration start scan	: 2219	Integration stop scan:	2234
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature used 21 CFR Part 11

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

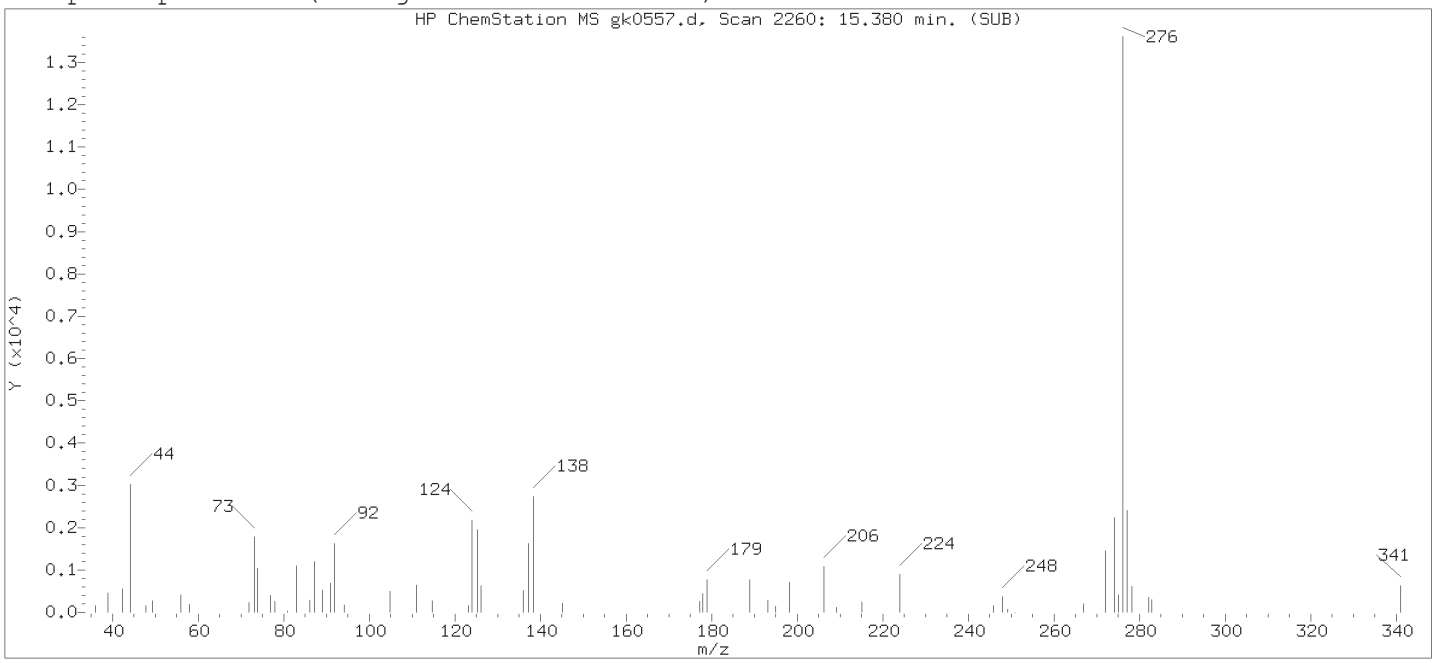
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2260		
Retention Time (minutes)	: 15.380		
Quant Ion	: 276.00		
Area (flag)	: 28363M		
On-Column Amount (ng/ul)	: 0.8043		
Integration start scan	: 2254	Integration stop scan:	2279
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

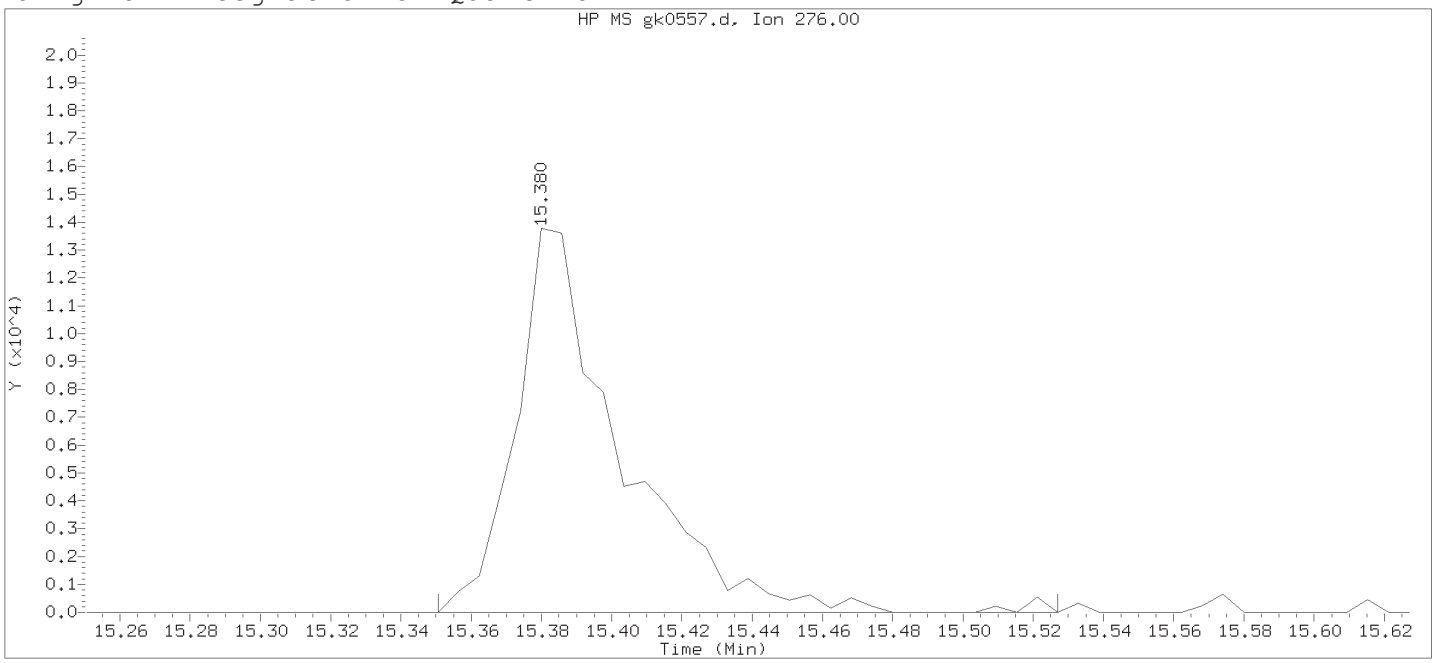
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

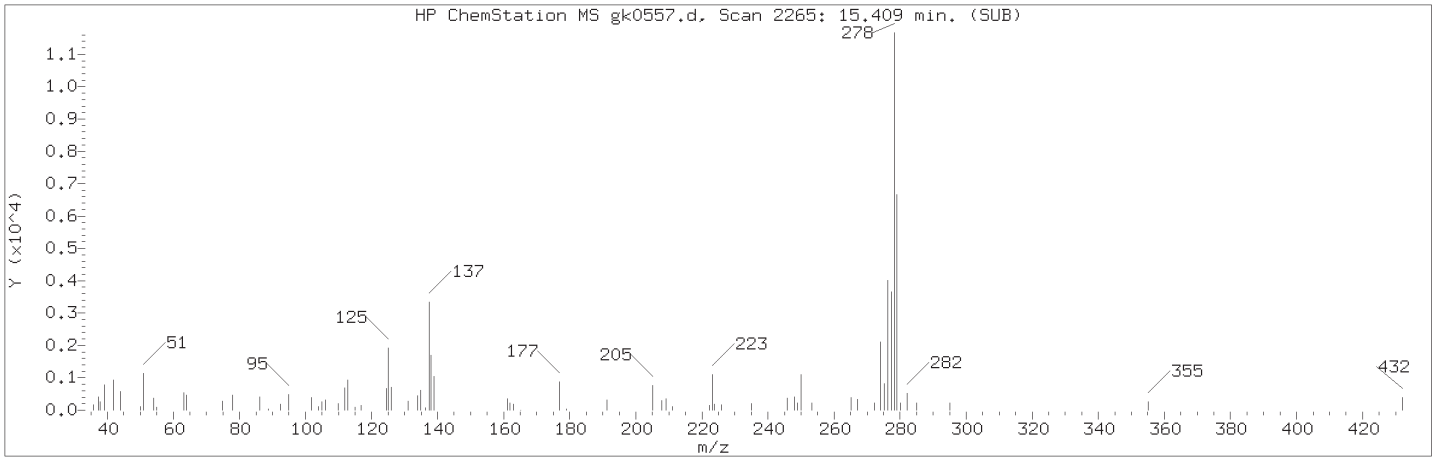
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

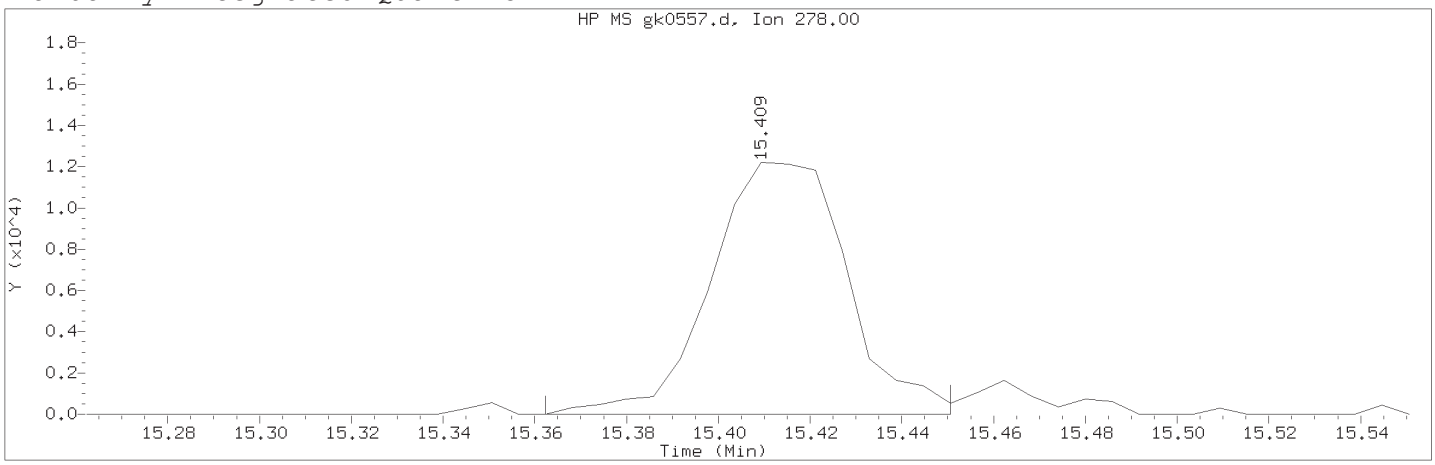
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2260		
Retention Time (minutes)	: 15.380		
Quant Ion	: 276.00		
Area	: 28627		
On-column Amount (ng/ul)	: 0.8268		
Integration start scan	: 2254	Integration stop scan:	2284
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature used: D10 Page 1358

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

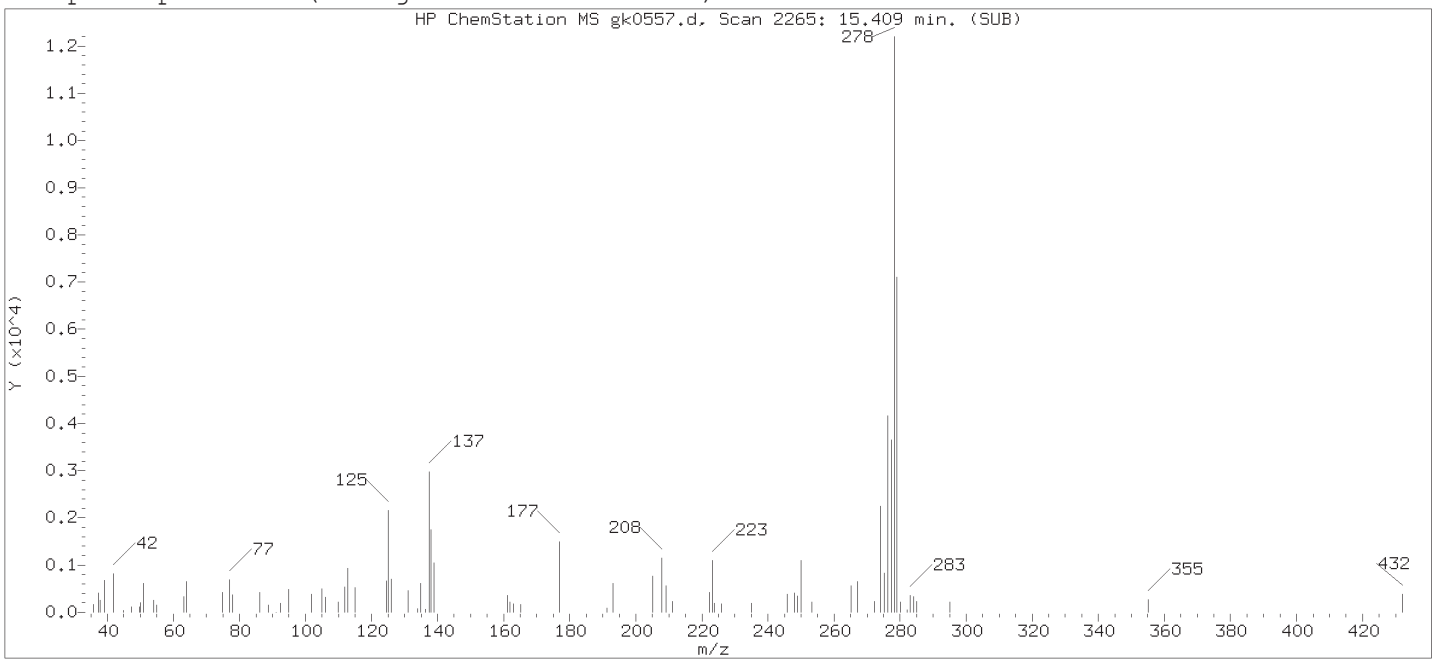
Compound Number	: 220		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 2265		
Retention Time (minutes)	: 15.409		
Quant Ion	: 278.00		
Area (flag)	: 25230M		
On-Column Amount (ng/ul)	: 0.8573		
Integration start scan	: 2256	Integration stop scan:	2271
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

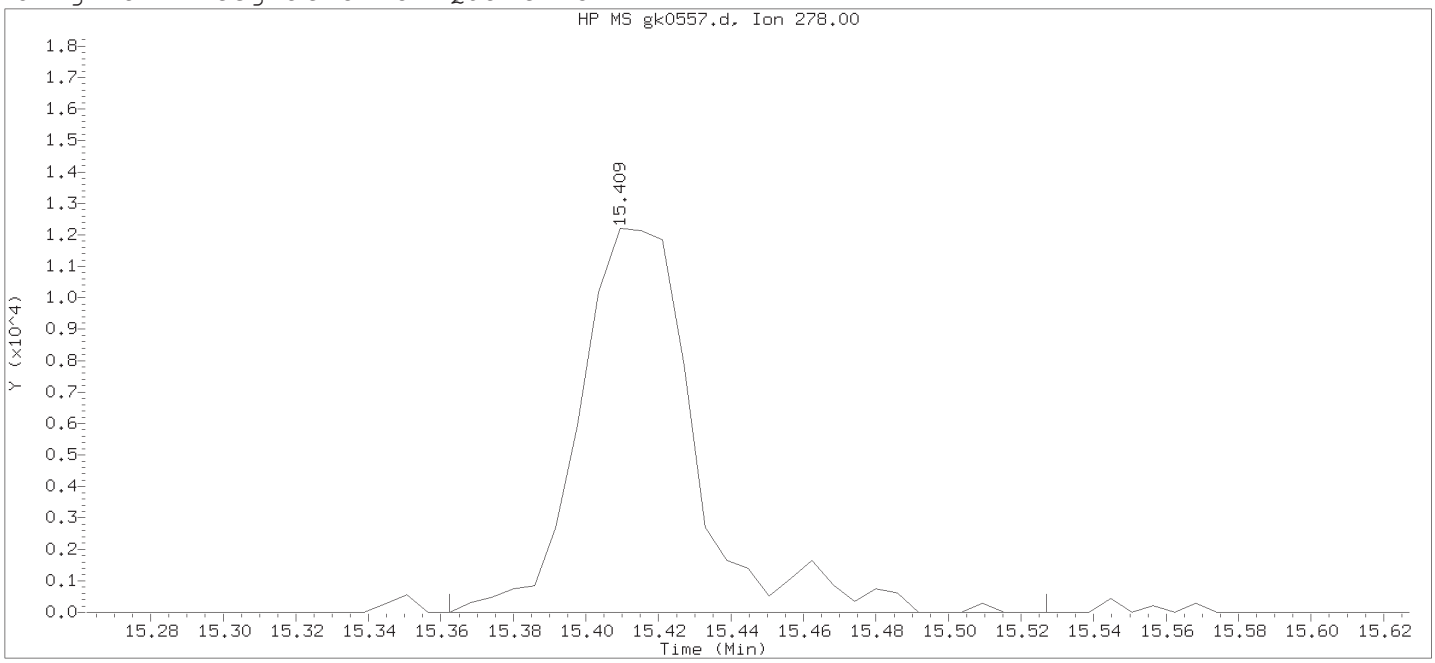
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

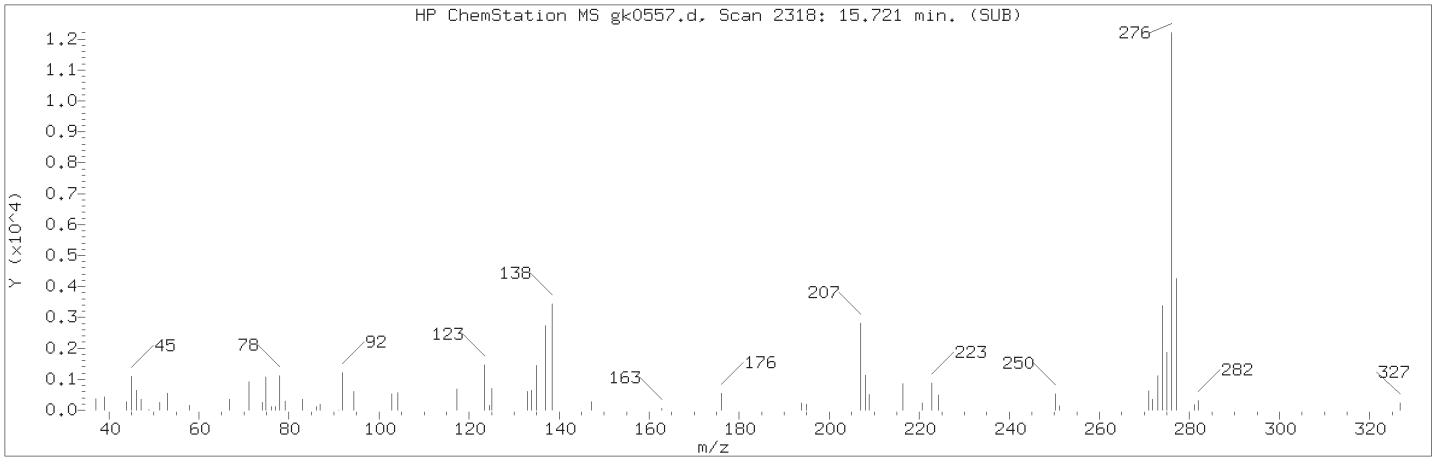
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

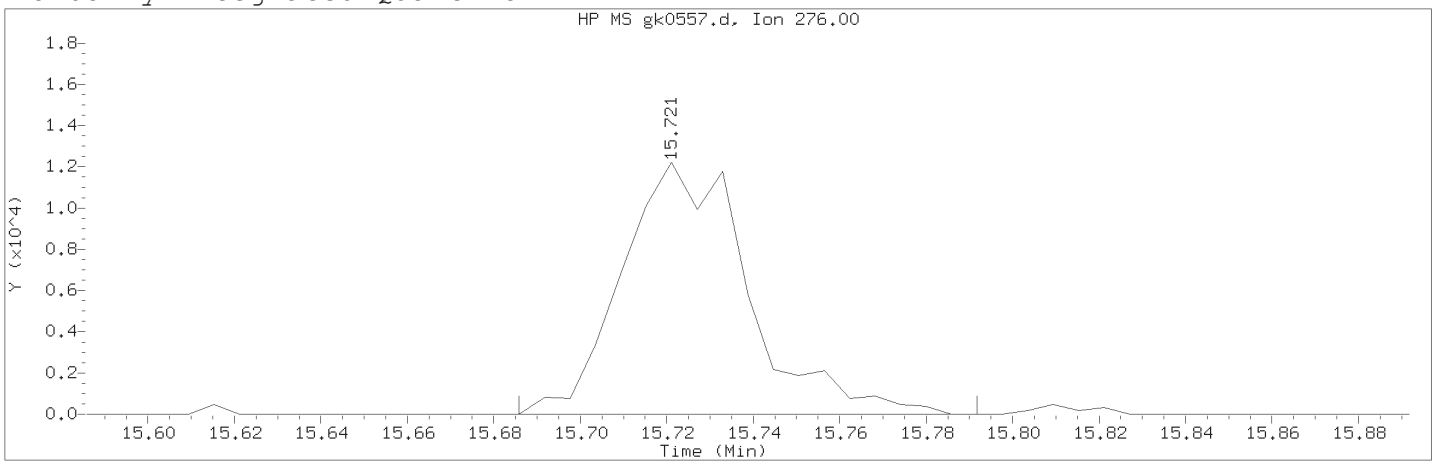
Compound Number : 220
Compound Name : Dibenz(a,h)anthracene
Scan Number : 2265
Retention Time (minutes) : 15.409
Quant Ion : 278.00
Area : 27193
On-column Amount (ng/ul) : 0.9224
Integration start scan : 2256 Integration stop scan: 2284
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD001 Lab Sample ID: STD2928

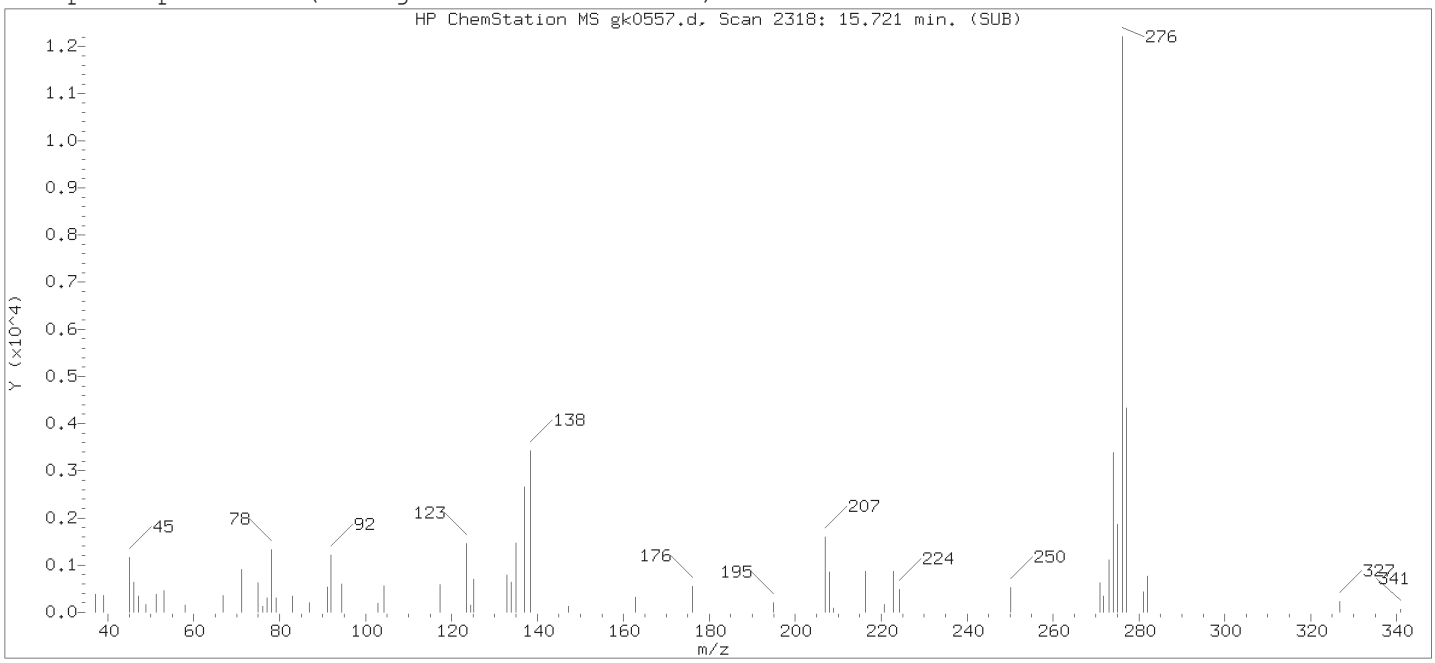
Compound Number	: 221		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2318		
Retention Time (minutes)	: 15.721		
Quant Ion	: 276.00		
Area (flag)	: 24806M		
On-Column Amount (ng/ul)	: 0.8488		
Integration start scan	: 2311	Integration stop scan:	2329
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

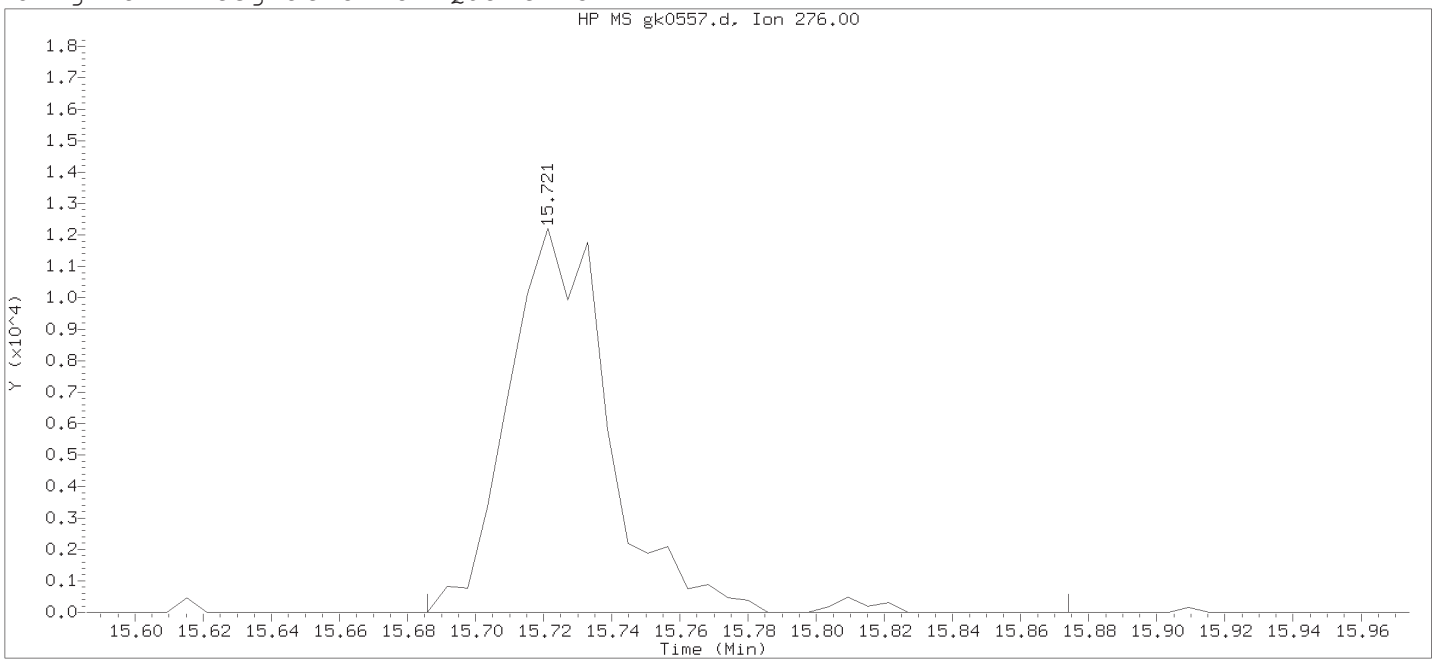
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



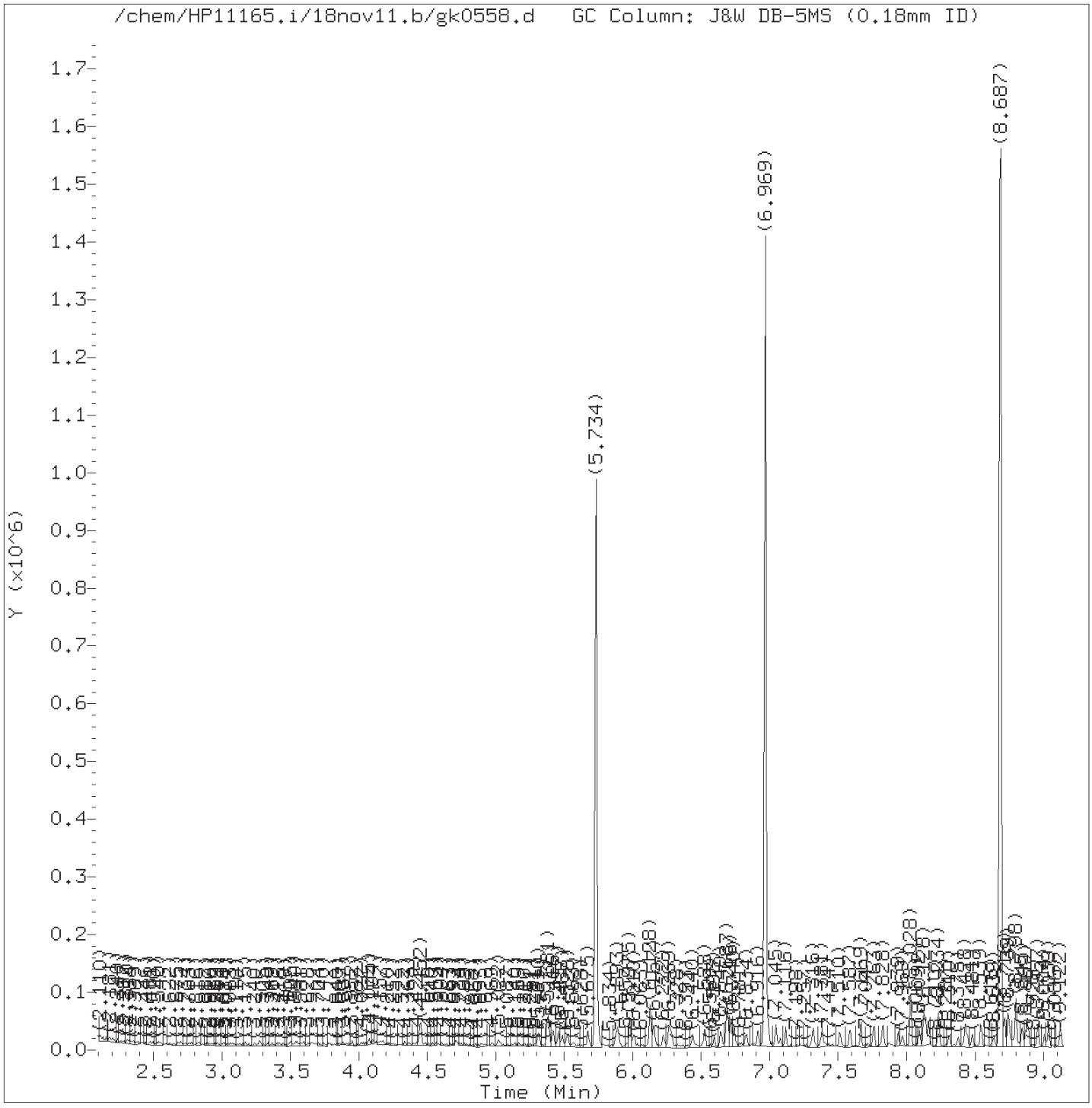
Data File: /chem/HP11165.i/18nov11.b/gk0557.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:08 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:29
Date, time and analyst ID of latest file update: 11-Nov-2018 14:29 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

Compound Number	: 221		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2318		
Retention Time (minutes)	: 15.721		
Quant Ion	: 276.00		
Area	: 25209		
On-column Amount (ng/ul)	: 0.8746		
Integration start scan	: 2311	Integration stop scan:	2343
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature used: D10 Page 1362



Total Ion Chromatogram (TIC)

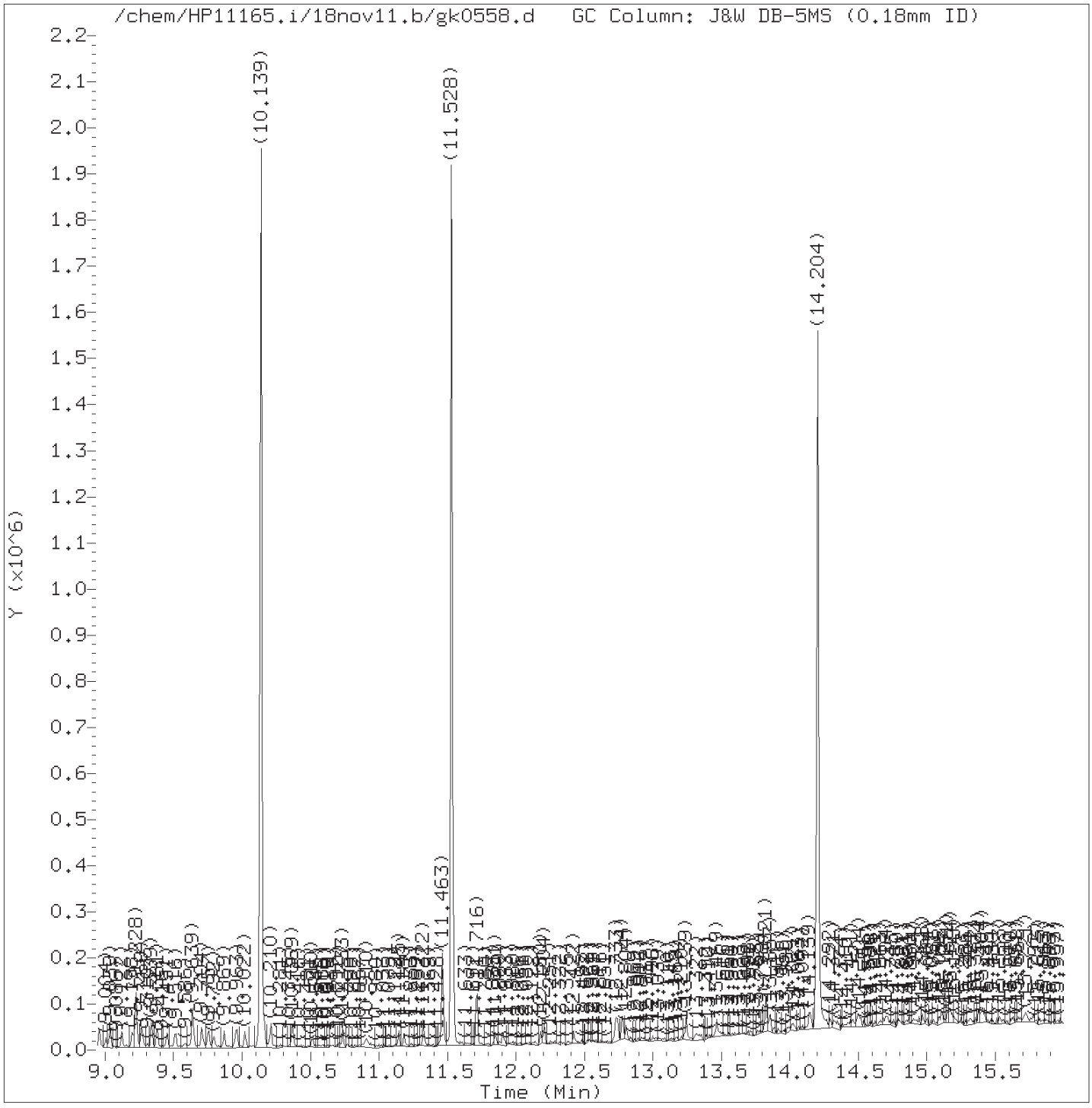
Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) Pyridine	(1)	3.052	79	401	0.032
7) 2-Picoline	(1)	3.816	93	542	0.040
11)$2-Fluorophenol	(1)	4.452	112	9546	0.911
13) N-Nitrosodiethylamine	(1)	4.704	102	2756	0.461
15) Ethyl methanesulfonate	(1)	5.016	109	2858	0.451
17)$Phenol-d6	(1)	5.381	99	11284	0.695
18) Phenol	(1)	5.393	94	7101	0.384
19) Aniline	(1)	5.416	93	10155	0.468
22) bis(2-Chloroethyl)ether	(1)	5.487	93	6130	0.462
23) 2-Chlorophenol	(1)	5.522	128	5112	0.502
42) Total Cresols	(1)			14702	1.174
24) 1,3-Dichlorobenzene	(1)	5.675	146	5569	0.496
25)*1,4-Dichlorobenzene-d4	(1)	5.734	152	138219	20.000
26) 1,4-Dichlorobenzene	(1)	5.751	146	6542	0.559
31) 2-Methylphenol	(1)	5.881	108	8743	0.702
27) Benzyl alcohol	(1)	5.881	108	3728	0.459
28) 1,2-Dichlorobenzene	(1)	5.893	146	6042	0.533
30) Indene	(1)	5.981	115	8193	0.656
33) 2,2'-oxybis(1-Chloropropane)	(1)	6.010	45	7012	0.520
34) bis(2-Chloroisopropyl)ether	(1)	6.010	45	7012	0.520
35) N-Nitrosopyrrolidine	(1)	6.122	100	2150	0.325
36) Acetophenone	(1)	6.128	105	7842	0.466
38) N-Nitroso-di-n-propylamine	(1)	6.128	70	4023	0.339
37) 4-Methylphenol	(1)	6.134	108	5959	0.472
39) N-Nitrosomorpholine	(1)	6.151	56	3951	0.454
40) o-Toluidine	(1)	6.157	106	8271	0.418
43) Hexachloroethane	(1)	6.187	117	2036	0.462
44)$Nitrobenzene-d5	(2)	6.269	82	12600	0.854
45) Nitrobenzene	(2)	6.281	77	8277	0.538
48) N-Nitrosopiperidine	(2)	6.440	114	2368	0.400
50) Isophorone	(2)	6.528	82	10221	0.367
51) 2-Nitrophenol	(2)	6.593	139	1973	0.356
53) 2,4-Dimethylphenol	(2)	6.645	107	5437	0.444
56) Benzoic acid	(2)	6.687	105	27492	2.888
57) O,O,O-Triethylphosphorothioate	(2)	6.716	198	2926	0.546
55) bis(2-Chloroethoxy)methane	(2)	6.740	93	10241	0.662
60) 2,4-Dichlorophenol	(2)	6.828	162	3736	0.437
62) 1,2,4-Trichlorobenzene	(2)	6.916	180	4285	0.475
65)*Naphthalene-d8	(2)	6.969	136	560145	20.000
66) Naphthalene	(2)	6.987	128	17099	0.540

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
67) 4-Chloroaniline	(2)	7.040	127	5580	0.428
68) 2,6-Dichlorophenol	(2)	7.045	162	2753	0.319
69) Hexachloropropene	(2)	7.075	213	1792	0.397
71) Hexachlorobutadiene	(2)	7.116	225	2740	0.566
75) Quinoline	(2)	7.316	129	8831	0.428
77) N-Nitrosodi-n-butylamine	(2)	7.381	84	6714	0.504
97) Isosafrole	(3)			5426	0.615
76) Caprolactam	(2)	7.410	113	1193	0.300
80) 4-Chloro-3-methylphenol	(2)	7.510	107	4627	0.434
82) Safrole	(2)	7.587	162	3418	0.395
83) 2-Methylnaphthalene	(2)	7.669	142	11742	0.523
84) 1-Methylnaphthalene	(2)	7.763	142	10603	0.496
85) Hexachlorocyclopentadiene	(3)	7.822	237	1668	0.358
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.828	216	4289	0.460
88) cis-Isosafrole	(3)	7.869	162	847	0.093
90) 2,4,6-Trichlorophenol	(3)	7.939	196	2613	0.414
92) 2,4,5-Trichlorophenol	(3)	7.963	196	3162	0.460
93)$2-Fluorobiphenyl	(3)	8.034	172	23333	0.911
120) 2,4_2,6-Dinitrotoluenes	(3)			4875	0.735
94) trans-Isosafrole	(3)	8.092	162	4579	0.522
95) 1,1'-Biphenyl	(3)	8.128	154	16938	0.607
98) 1-Chloronaphthalene	(3)	8.139	162	21385	1.054
96) 2-Chloronaphthalene	(3)	8.139	162	21385	0.976
99) Diphenyl ether	(3)	8.234	170	7578	0.506
100) 2-Nitroaniline	(3)	8.234	138	3325	0.486
104) 1,4-Naphthoquinone	(3)	8.310	158	3185	0.355
106) Dimethylphthalate	(3)	8.428	163	13273	0.517
105) 1,4-Dinitrobenzene	(3)	8.445	168	920	0.244
107) 1,3-Dinitrobenzene	(3)	8.445	168	920	0.210
108) 2,6-Dinitrotoluene	(3)	8.481	165	2583	0.448
109) Acenaphthylene	(3)	8.539	152	16279	0.539
112) 3-Nitroaniline	(3)	8.639	138	1953	0.302
113)*Acenaphthene-d10	(3)	8.687	164	316541	20.000
114) Acenaphthene	(3)	8.716	153	11642M	0.521
115) 2,4-Dinitrophenol	(3)	8.745	184	7177	1.847
146) Diallate trans/cis	(4)			9820	0.605
116) 4-Nitrophenol	(3)	8.798	109	8787M	1.960
117) Pentachlorobenzene	(3)	8.845	250	4366	0.547
118) 2,4-Dinitrotoluene	(3)	8.863	165	2292	0.286
119) Dibenzofuran	(3)	8.886	168	12549	0.404

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
121) 1-Naphthylamine	(3)	8.957	143	9753	0.403
122) 2,3,4,6-Tetrachlorophenol	(3)	9.004	232	2226	0.402
123) 2-Naphthylamine	(3)	9.039	143	11183	0.475
124) Diethylphthalate	(3)	9.128	149	12167	0.472
125) Thionazin	(3)	9.204	107	2083	0.425
126) Fluorene	(3)	9.222	166	12929	0.498
128) 5-Nitro-o-toluidine	(3)	9.228	152	2955	0.379
127) 4-Chlorophenyl-phenylether	(3)	9.228	204	6470	0.536
129) 4-Nitroaniline	(3)	9.234	138	2543	0.361
130) 4,6-Dinitro-2-methylphenol	(4)	9.269	198	4053M	0.824
131) N-Nitrosodiphenylamine	(4)	9.339	169	10022	0.428
132) NDPA as diphenylamine	(4)	9.339	169	10022	0.428
134) 1,2-Diphenylhydrazine	(4)	9.381	77	13440M	0.370
135)$2,4,6-Tribromophenol	(3)	9.451	330	2231	0.880
137) Tetraethyldithiopyrophosphate	(4)	9.510	97	3164	0.594
139) 1,3,5-Trinitrobenzene	(4)	9.581	213	235M	0.075
140) Diallate (peak 1)	(4)	9.634	86	7809	0.462
141) Phorate	(4)	9.639	75	10555	0.481
142) Phenacetin	(4)	9.639	108	5162	0.335
143) 4-Bromophenyl-phenylether	(4)	9.710	248	4107	0.563
144) Diallate (peak 2)	(4)	9.710	86	2011	0.143
145) Hexachlorobenzene	(4)	9.757	284	4029	0.592
147) Dimethoate	(4)	9.792	87	5453	0.432
150) 4-Aminobiphenyl	(4)	9.957	169	6478	0.612
149) Pentachlorophenol	(4)	9.957	266	1464	0.322
151) Pentachloronitrobenzene	(4)	9.963	237	601M	0.186
152) Pronamide	(4)	10.022	173	3999	0.338
153)*Phenanthrene-d10	(4)	10.139	188	663990	20.000
154) Dinoseb	(4)	10.139	211	1550	0.216
155) Phenanthrene	(4)	10.163	178	21431	0.516
157) Anthracene	(4)	10.210	178	18849	0.460
163) Carbazole	(4)	10.369	167	16204	0.436
164) Methyl parathion	(4)	10.510	109	2952	0.317
165) Di-n-butylphthalate	(4)	10.733	149	16143	0.348
167) Parathion	(4)	10.904	109	2119	0.347
168) 4-Nitroquinoline-1-oxide	(4)	10.910	190	832	0.209
169) Octachlorostyrene	(4)	11.151	308	2858	1.081
171) Isodrin	(4)	11.186	193	2059	0.443
173) Fluoranthene	(4)	11.322	202	19165	0.448
174) Benzidine	(5)	11.463	184	68999	2.477

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

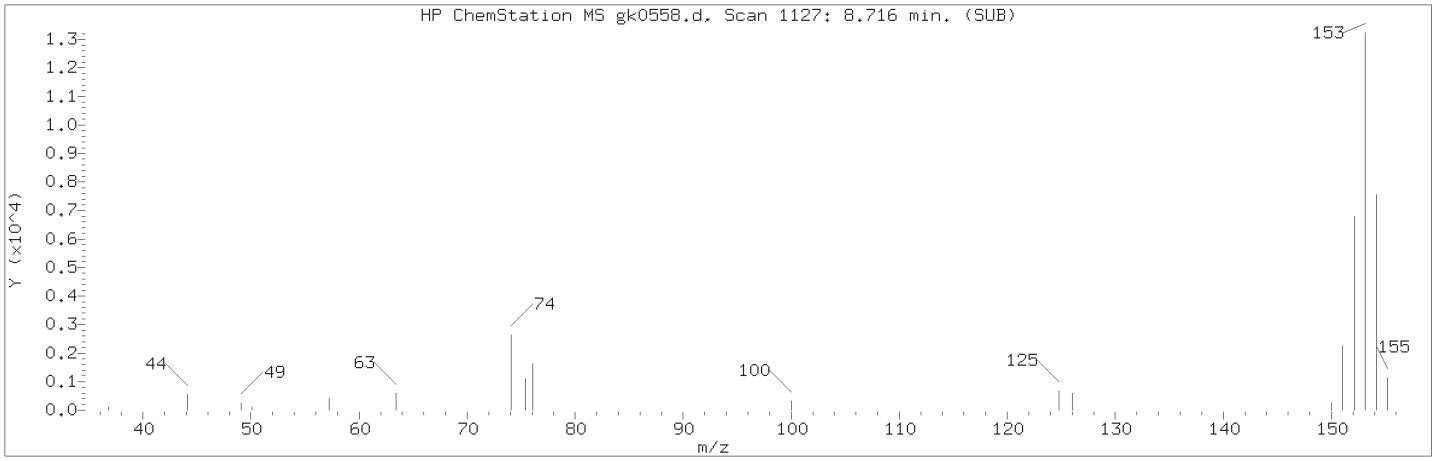
Sample Name: SSTD0.50 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
175)*Pyrene-d10	(5)	11.528	212	622130	20.000
177) Pyrene	(5)	11.545	202	26638	0.593
179)$Terphenyl-d14	(5)	11.710	244	29831	0.992
182) p-Dimethylaminoazobenzene	(5)	11.845	225	2865	0.417
185) Chlorobenzilate	(5)	11.904	139	4557	0.343
187) 3,3'-Dimethylbenzidine	(5)	12.180	212	8569	0.375
188) Butylbenzylphthalate	(5)	12.204	149	7299	0.349
191) 2-Acetylaminofluorene	(5)	12.422	181	4784	0.284
193) 3,3'-Dichlorobenzidine	(5)	12.710	252	4821	0.339
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.722	231	3762	0.486
195) Benzo(a)anthracene	(5)	12.745	228	21852	0.532
196) Chrysene	(5)	12.780	228	20098	0.509
199) bis(2-Ethylhexyl)phthalate	(5)	12.804	149	6366	0.225
203) 6-Methylchrysene	(5)	13.239	242	12968	0.480
205) Di-n-octylphthalate	(6)	13.469	149	11349	0.216
206) Benzo(b)fluoranthene	(6)	13.827	252	22762M	0.546
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.827	256	6324	0.333
208) Benzo(k)fluoranthene	(6)	13.851	252	16409M	0.414
211) Benzo(a)pyrene	(6)	14.145	252	15053M	0.415
213)*Perylene-d12	(6)	14.204	264	584152	20.000
215) 3-Methylcholanthrene	(6)	14.504	268	5879M	0.415
222) Total PAHs	(6)			305099	8.854
217) Dibenz(a,h)acridine	(6)	15.116	279	9662	0.360
218) Dibenz(a,j)acridine	(6)	15.151	279	13100	0.454
219) Indeno(1,2,3-cd)pyrene	(6)	15.386	276	15339M	0.418
220) Dibenz(a,h)anthracene	(6)	15.410	278	11464M	0.379
221) Benzo(g,h,i)perylene	(6)	15.727	276	15745	0.505

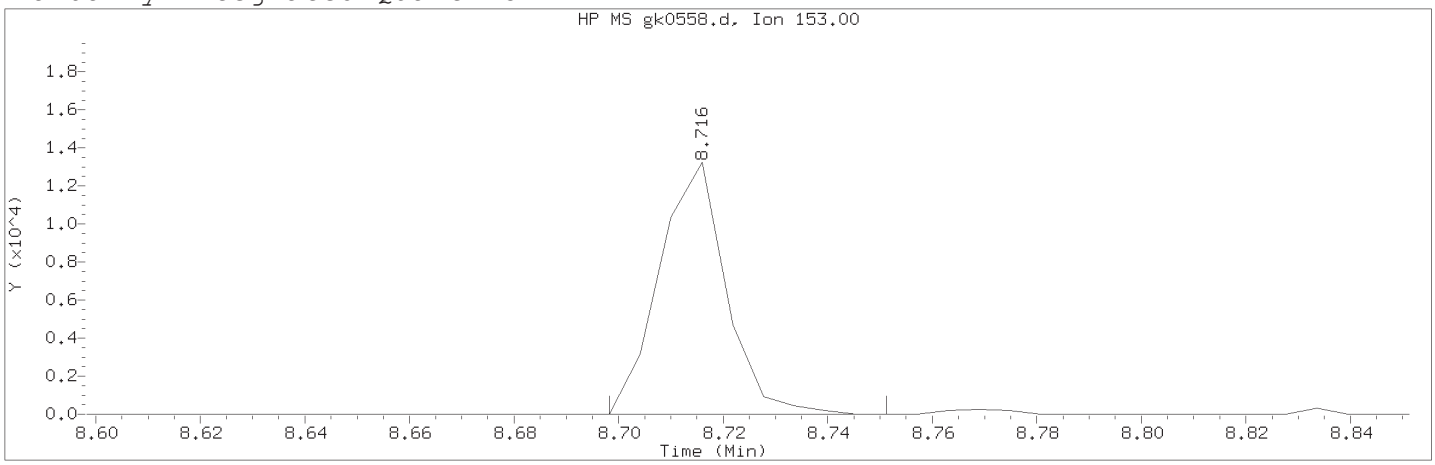
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

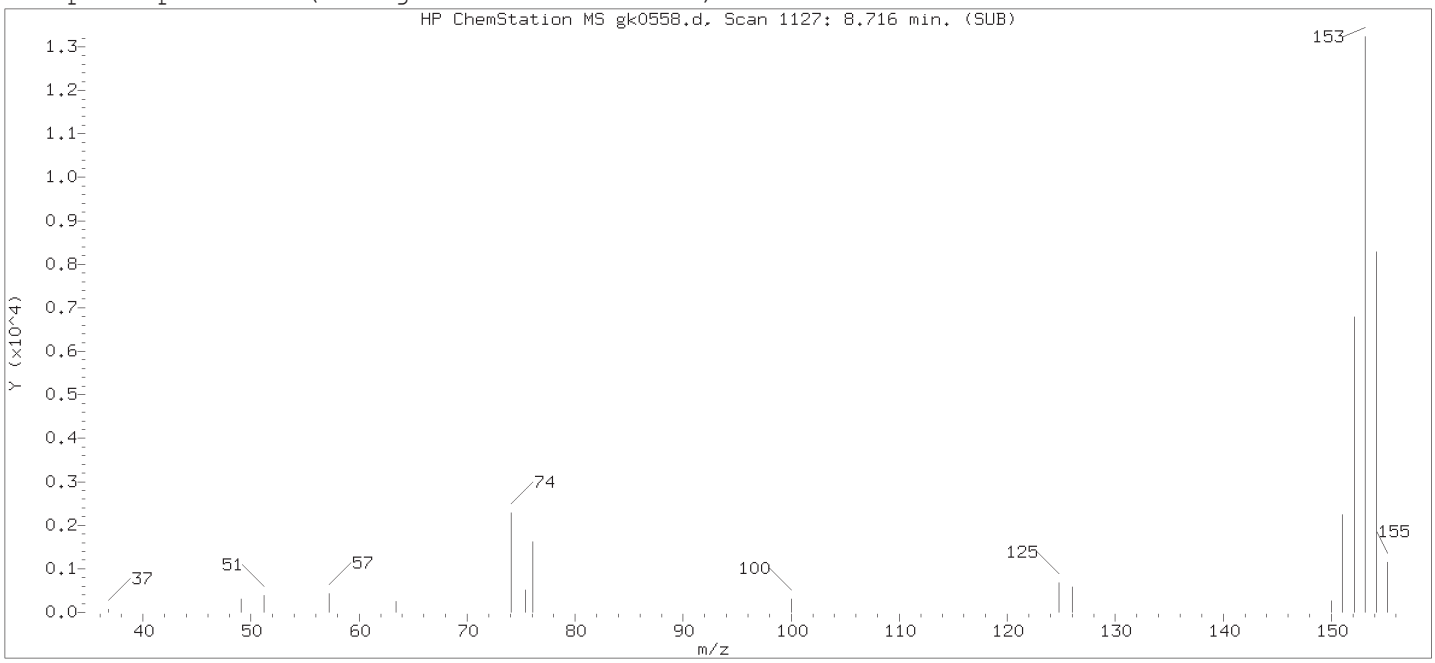
Compound Number	: 114		
Compound Name	: Acenaphthene		
Scan Number	: 1127		
Retention Time (minutes)	: 8.716		
Quant Ion	: 153.00		
Area (flag)	: 11642M		
On-Column Amount (ng/ul)	: 0.5214		
Integration start scan	: 1123	Integration stop scan:	1132
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

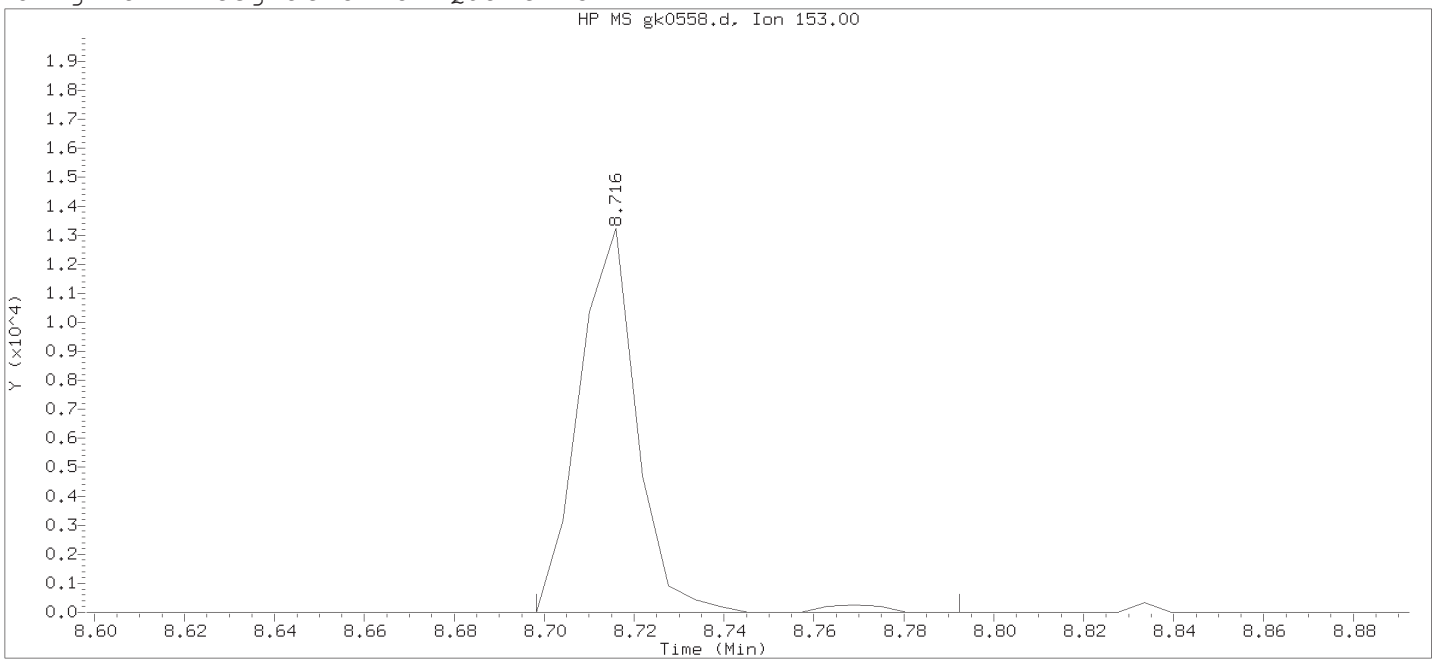
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

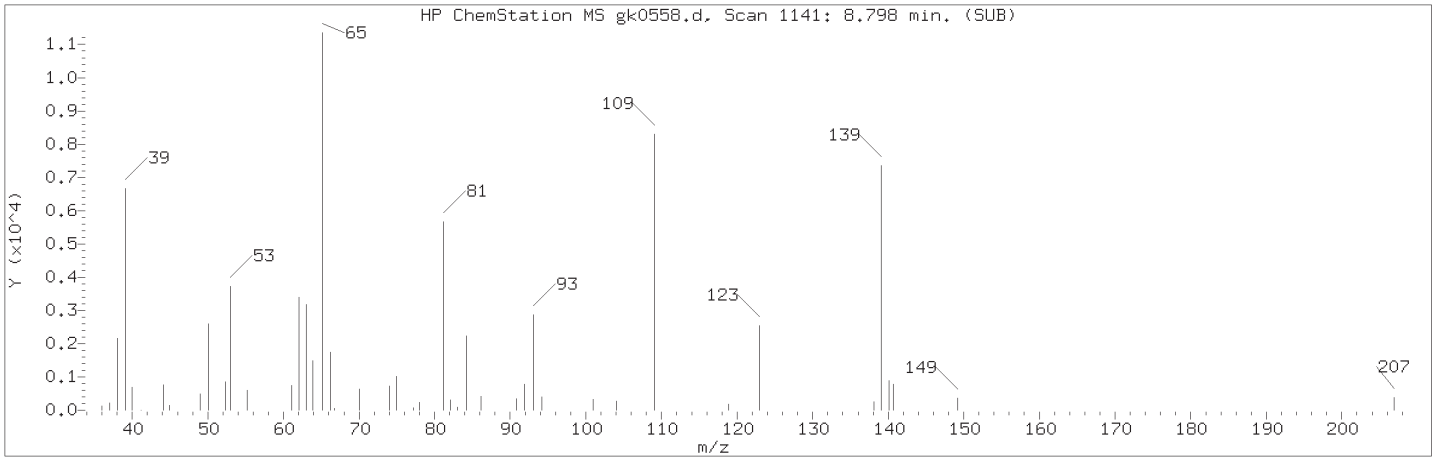
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 14:54 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD2928

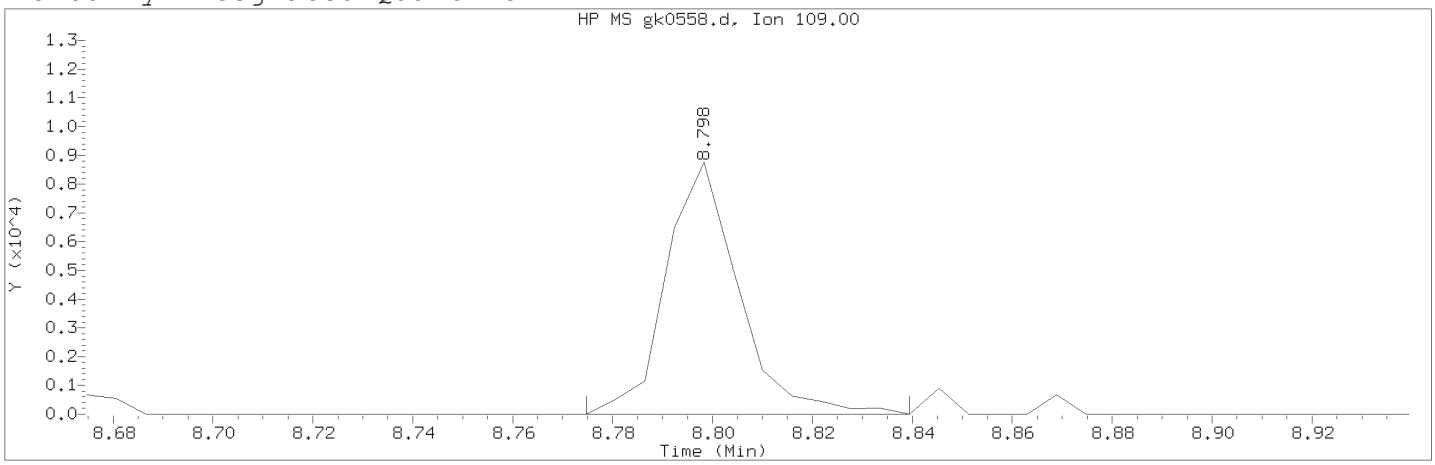
Compound Number : 114
Compound Name : Acenaphthene
Scan Number : 1127
Retention Time (minutes) : 8.716
Quant Ion : 153.00
Area : 11871
On-column Amount (ng/ul) : 0.5256
Integration start scan : 1123 Integration stop scan: 1139
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

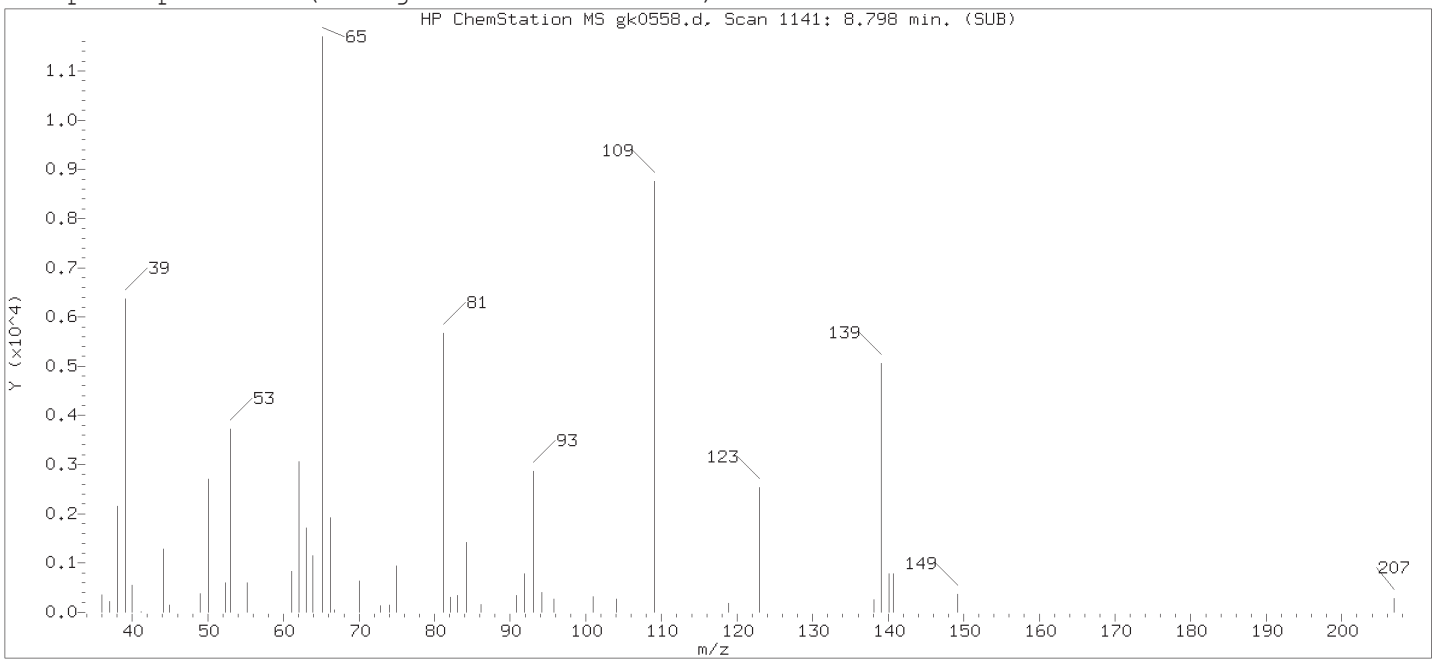
Compound Number : 116
Compound Name : 4-Nitrophenol
Scan Number : 1141
Retention Time (minutes) : 8.798
Quant Ion : 109.00
Area (flag) : 8787M
On-Column Amount (ng/ul) : 1.9596
Integration start scan : 1136 Integration stop scan: 1147
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

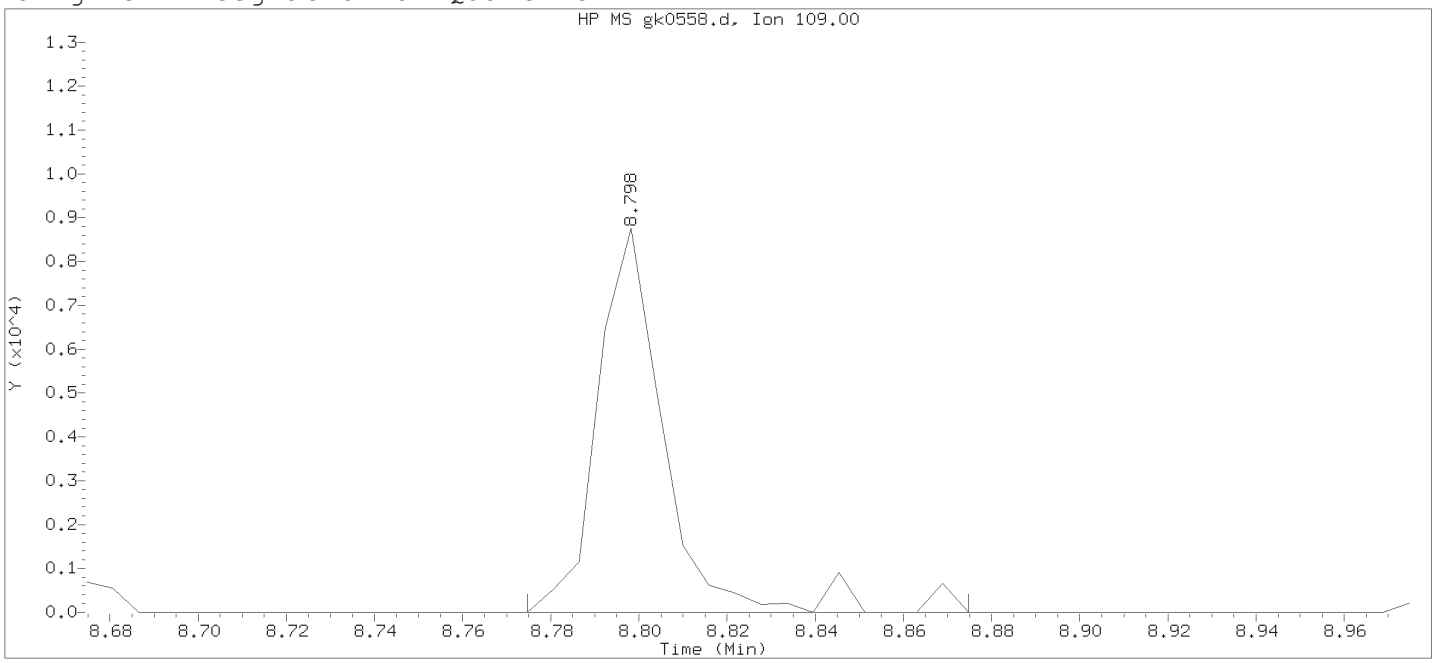
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

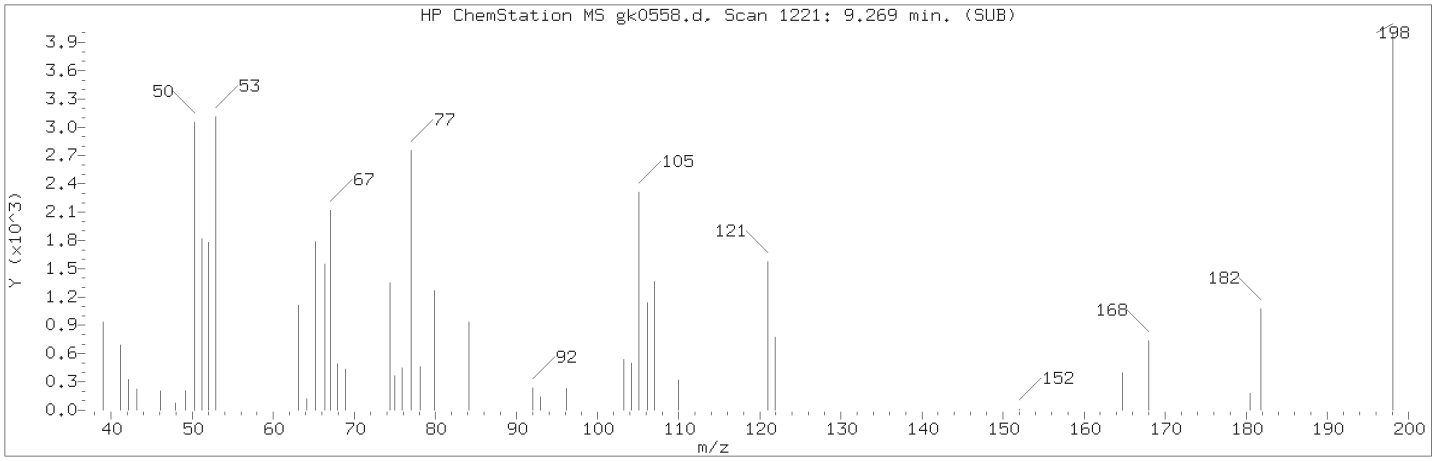
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 14:54 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD2928

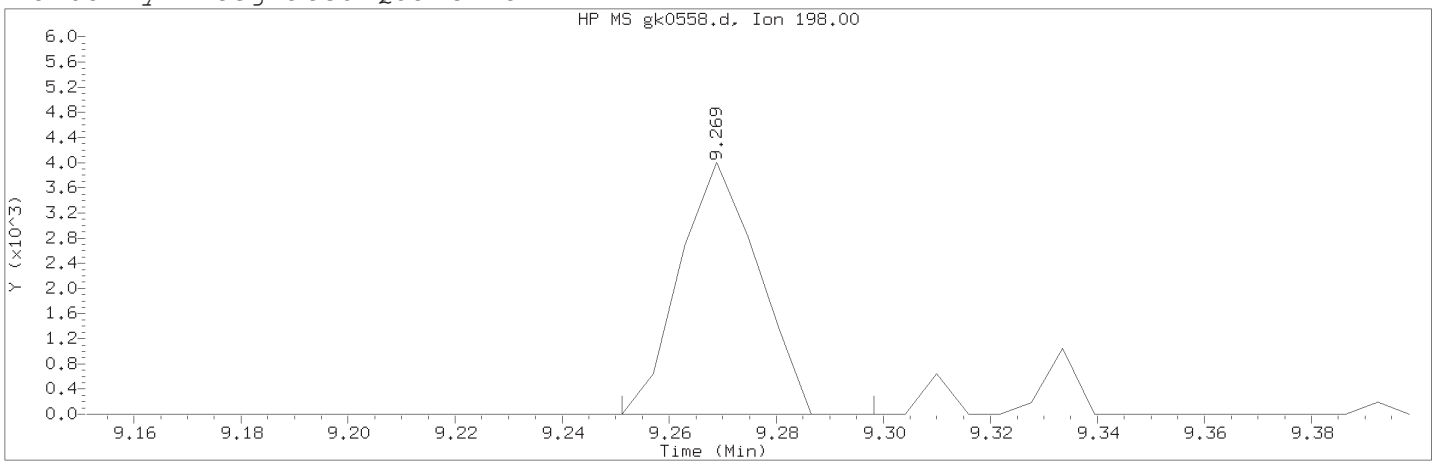
Compound Number : 116
Compound Name : 4-Nitrophenol
Scan Number : 1141
Retention Time (minutes) : 8.798
Quant Ion : 109.00
Area : 9342
On-column Amount (ng/ul) : 2.0795
Integration start scan : 1136 Integration stop scan: 1153
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

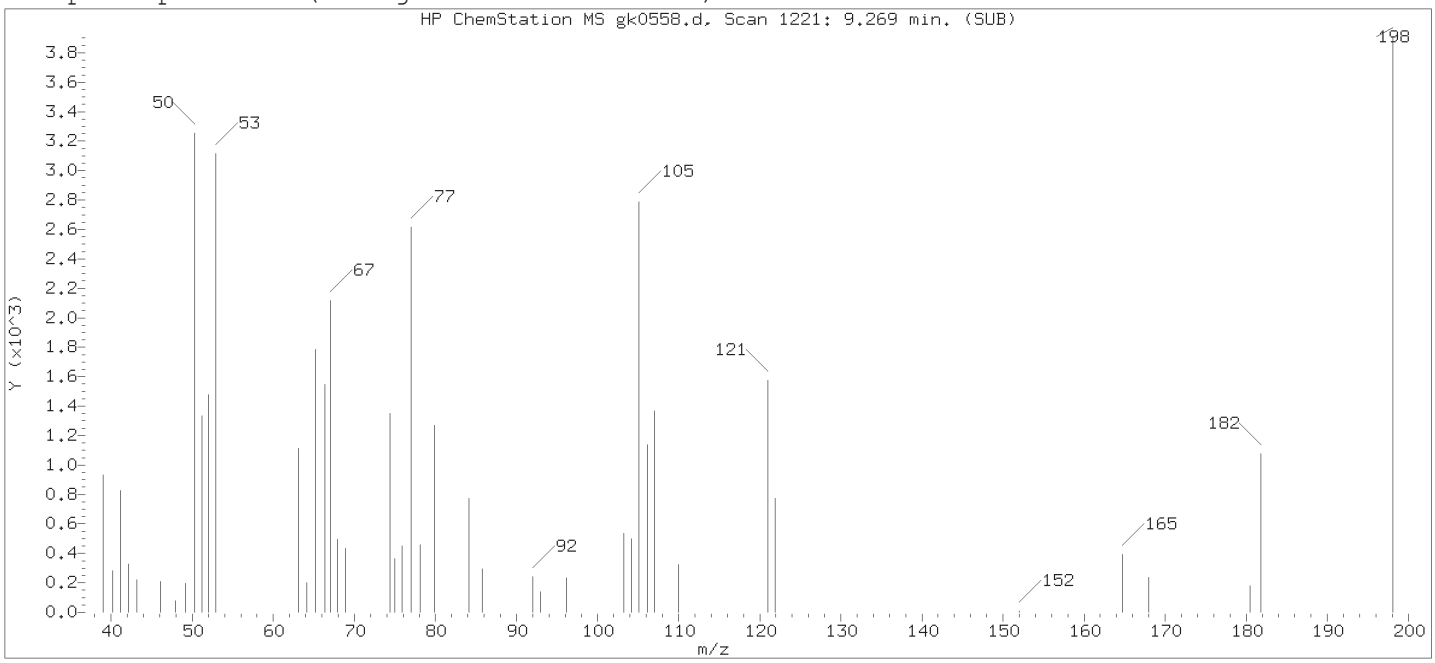
Compound Number : 130
Compound Name : 4,6-Dinitro-2-methylphenol
Scan Number : 1221
Retention Time (minutes) : 9.269
Quant Ion : 198.00
Area (flag) : 4053M
On-Column Amount (ng/ul) : 0.8237
Integration start scan : 1217 Integration stop scan: 1225
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

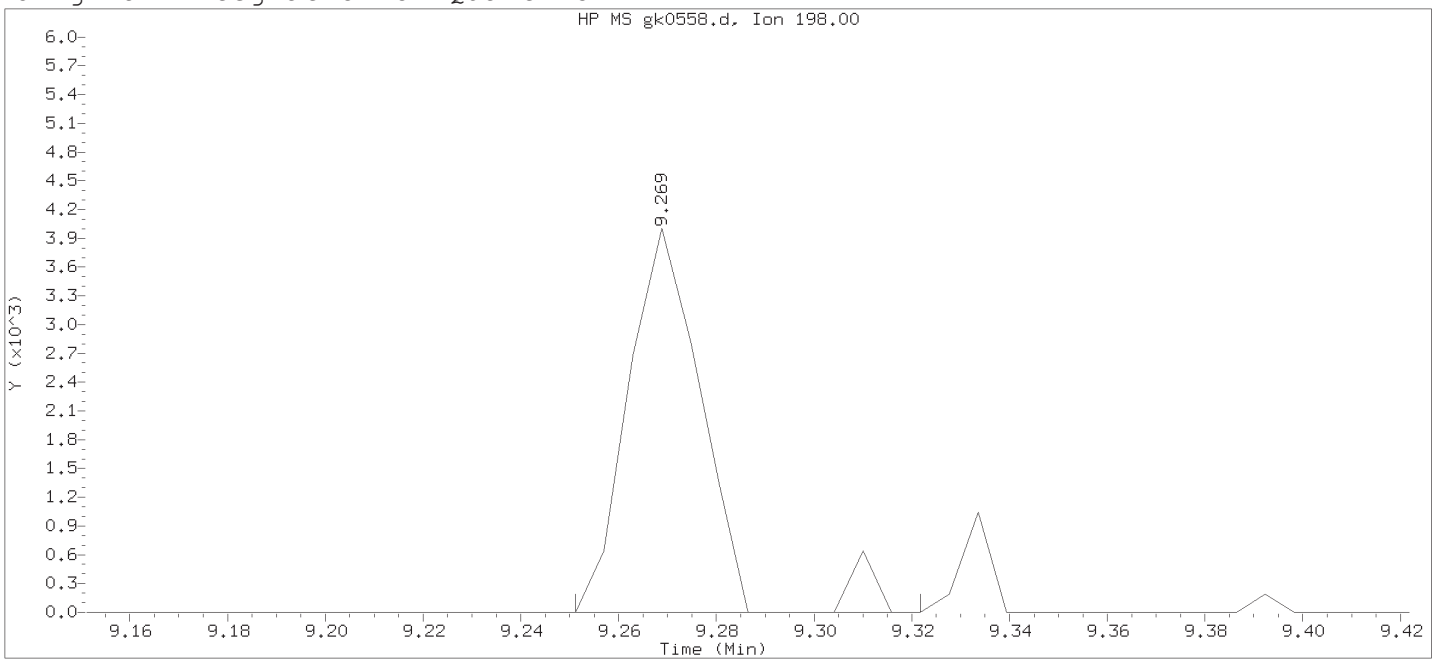
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

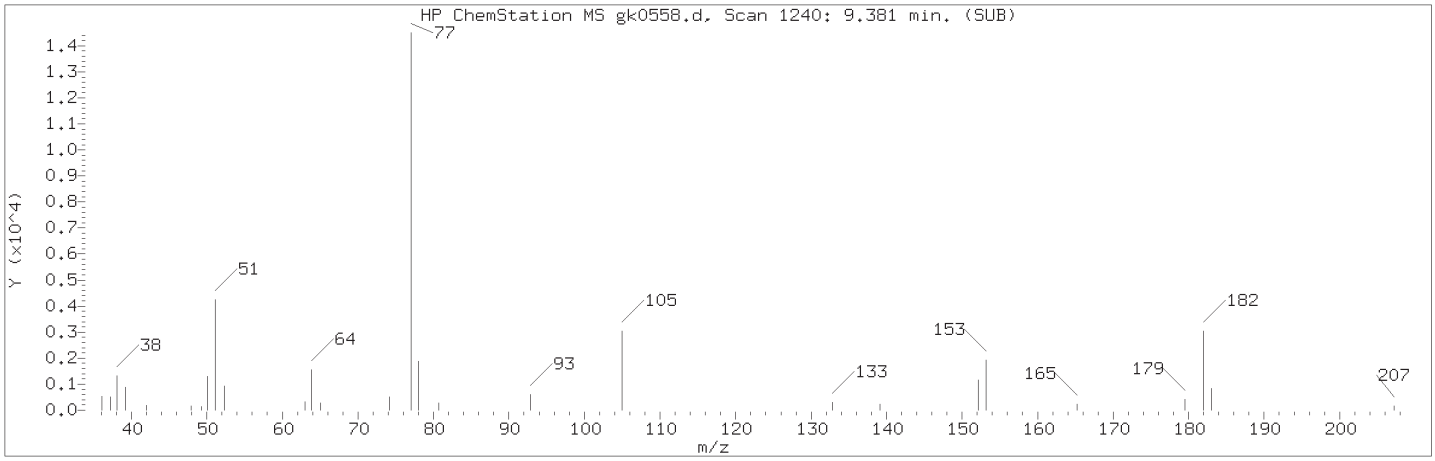
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 14:54 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD2928

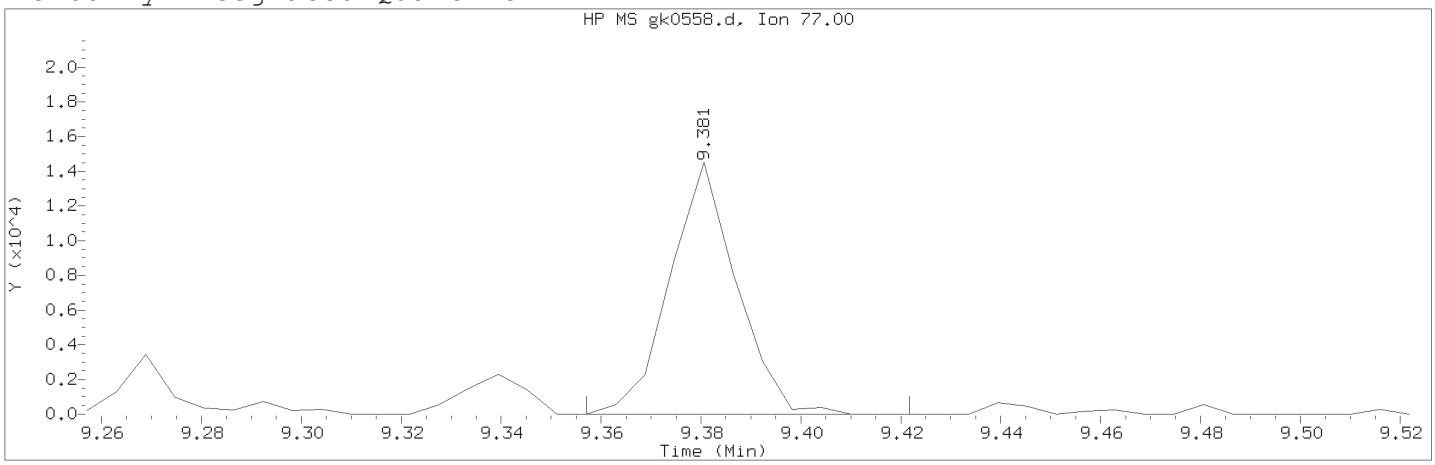
Compound Number : 130
Compound Name : 4,6-Dinitro-2-methylphenol
Scan Number : 1221
Retention Time (minutes) : 9.269
Quant Ion : 198.00
Area : 4280
On-column Amount (ng/ul) : 0.8862
Integration start scan : 1217 Integration stop scan: 1229
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

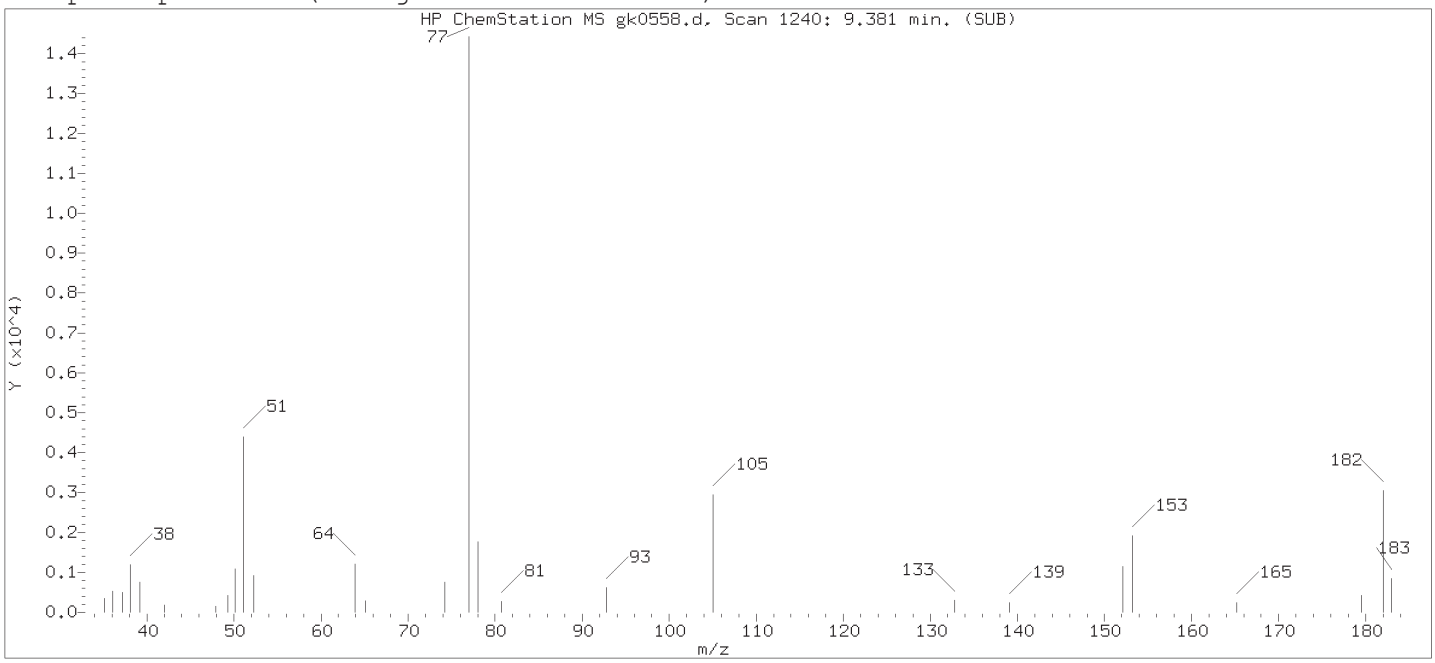
Compound Number : 134
Compound Name : 1,2-Diphenylhydrazine
Scan Number : 1240
Retention Time (minutes) : 9.381
Quant Ion : 77.00
Area (flag) : 13440M
On-Column Amount (ng/ul) : 0.3699
Integration start scan : 1235 Integration stop scan: 1246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

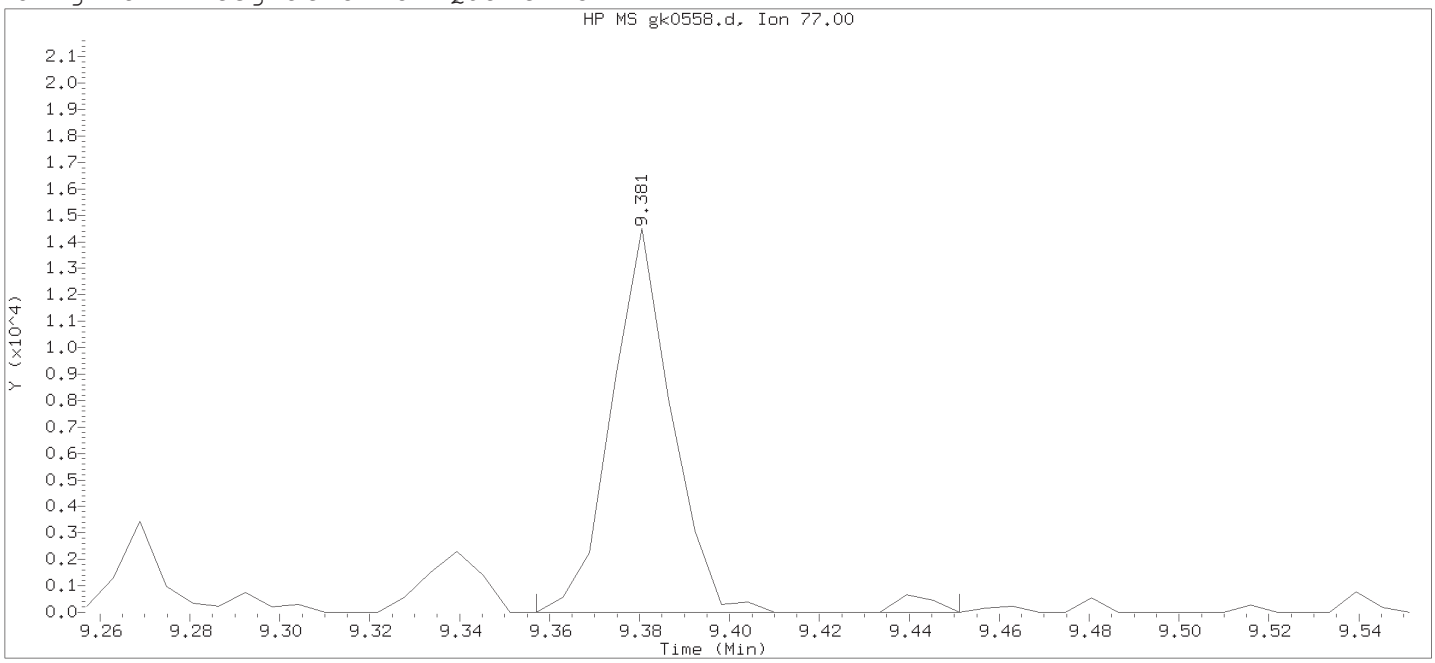
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

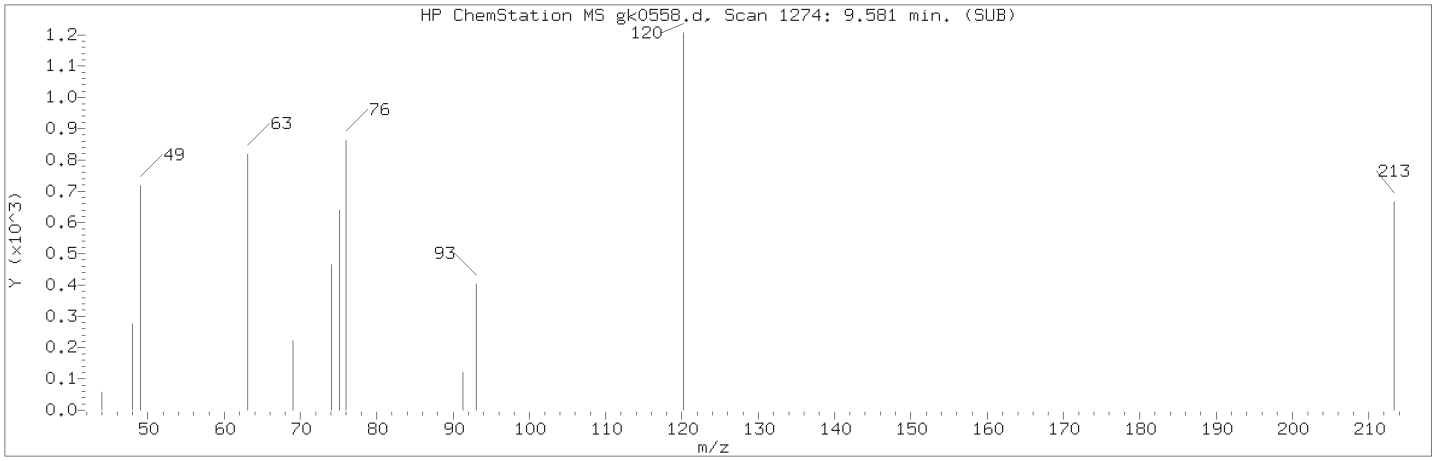
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 14:54 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD2928

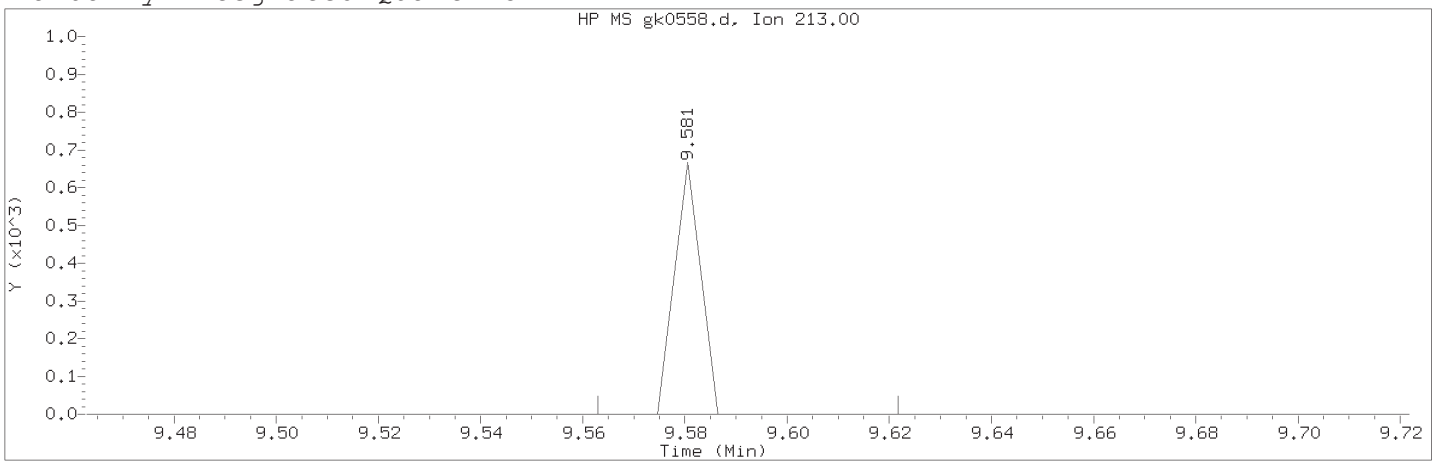
Compound Number : 134
Compound Name : 1,2-Diphenylhydrazine
Scan Number : 1240
Retention Time (minutes) : 9.381
Quant Ion : 77.00
Area : 13833
On-column Amount (ng/ul) : 0.3824
Integration start scan : 1235 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

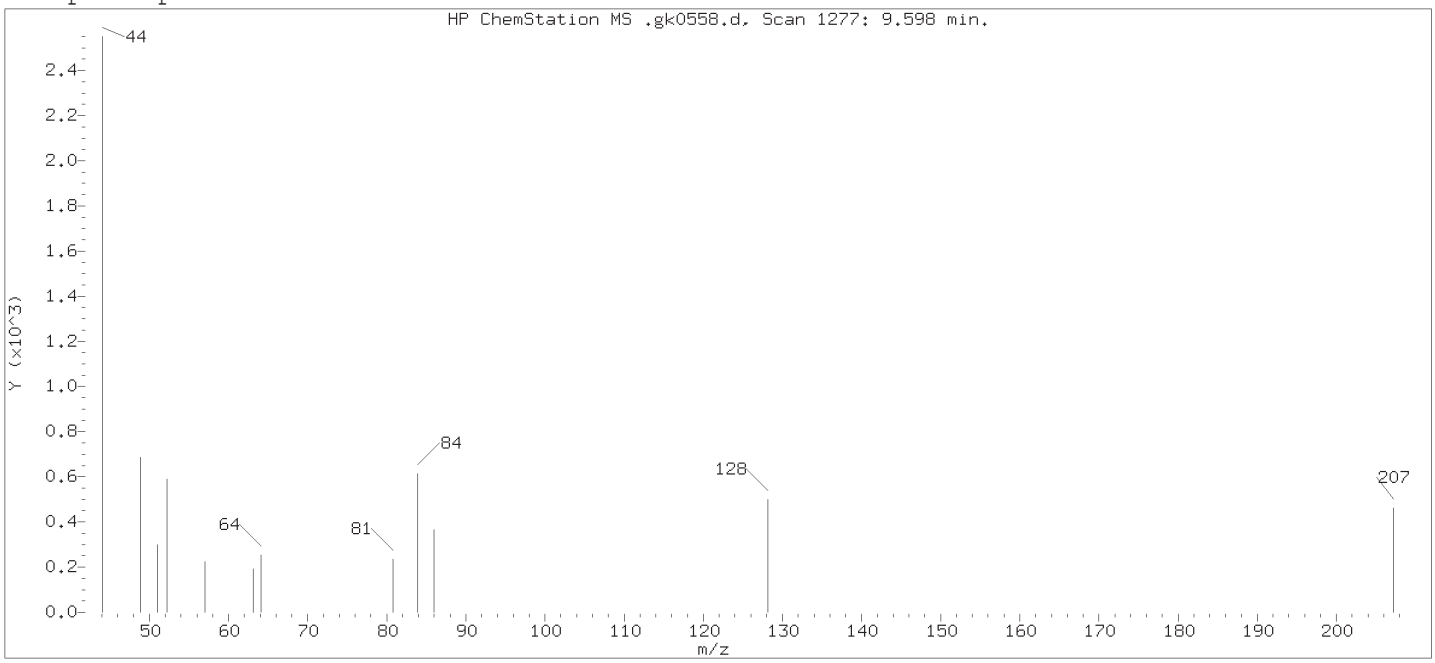
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 1274
Retention Time (minutes) : 9.581
Quant Ion : 213.00
Area (flag) : 235M
On-Column Amount (ng/ul) : 0.0749
Integration start scan : 1270 Integration stop scan: 1280
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

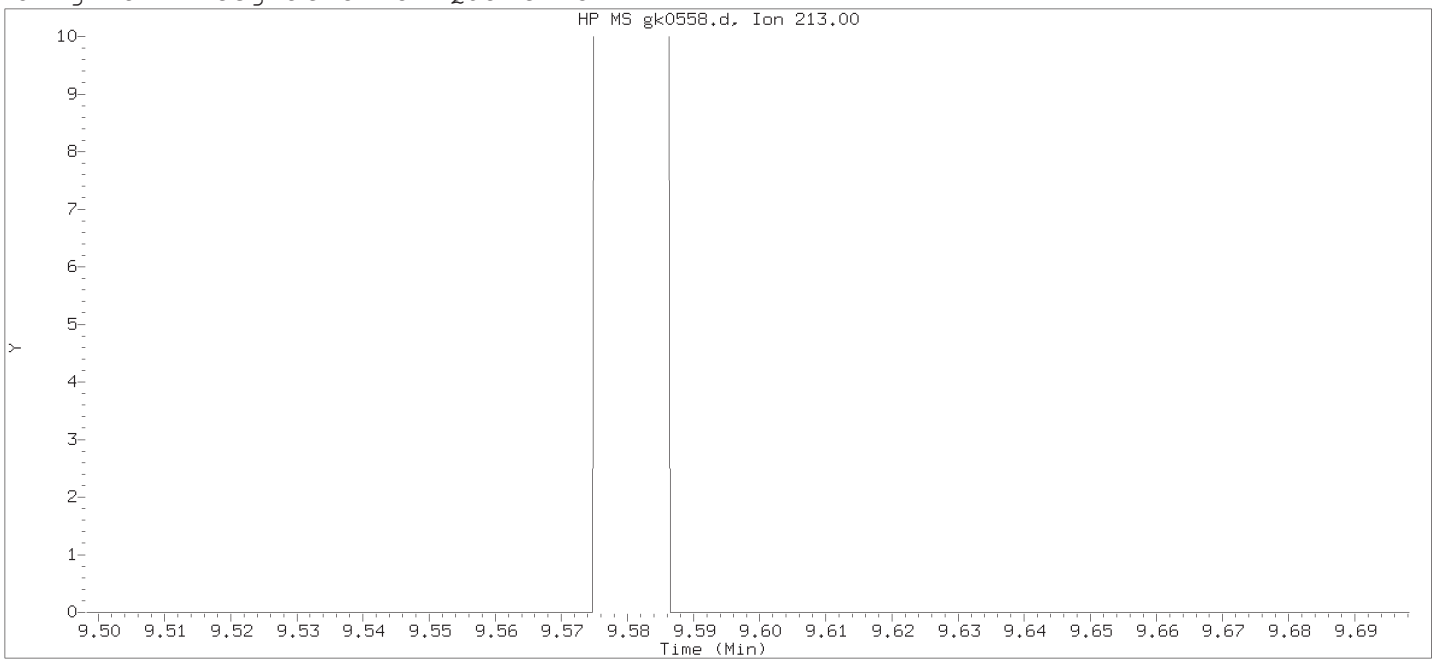
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

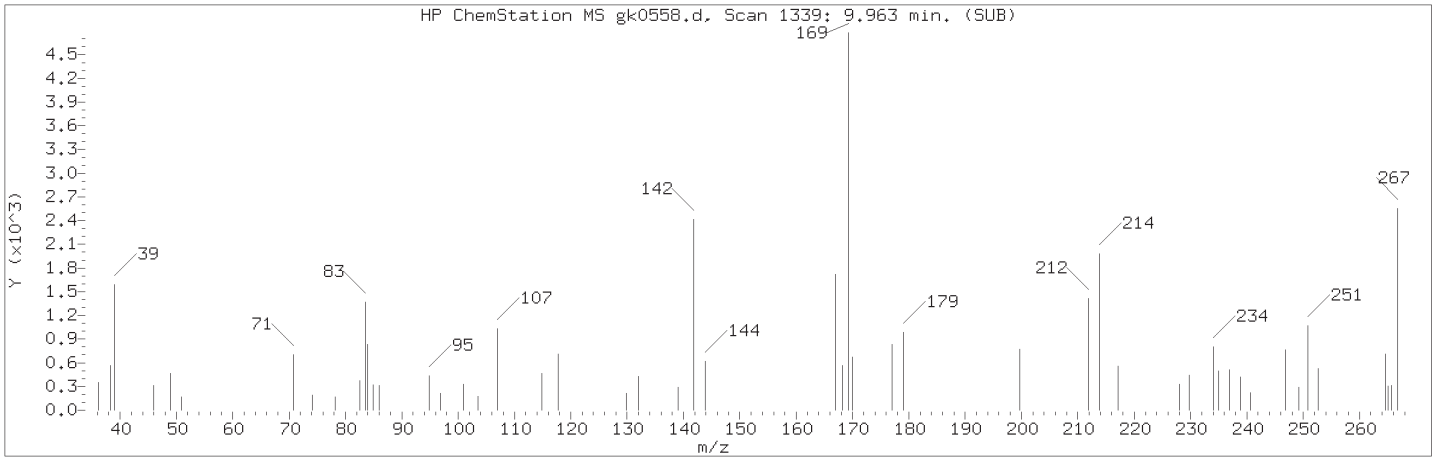
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 14:54 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD2928

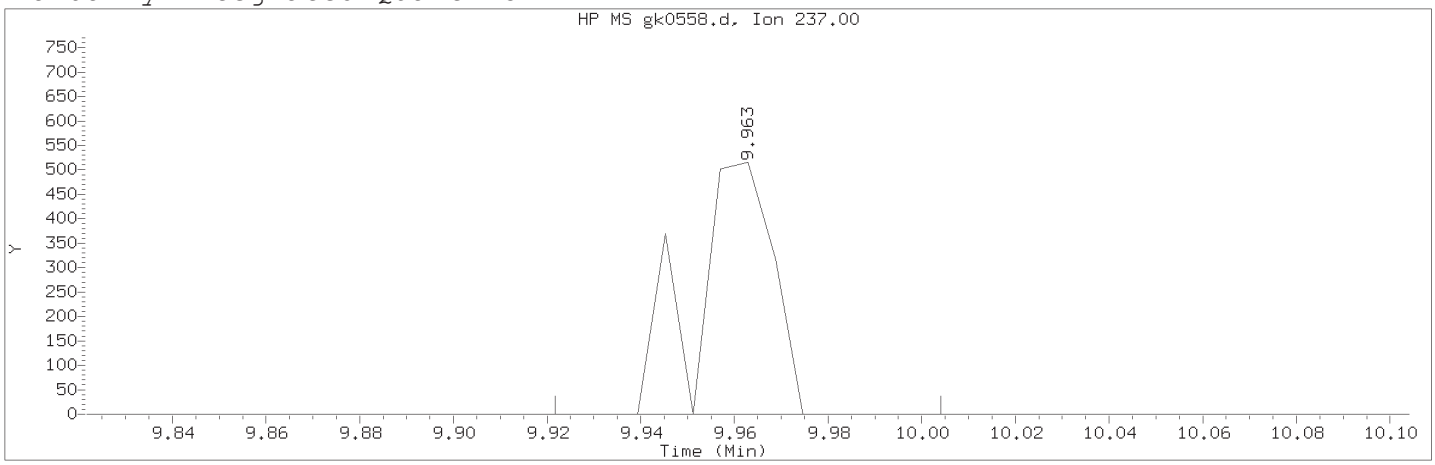
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 9.598
Quant Ion : 213.00

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

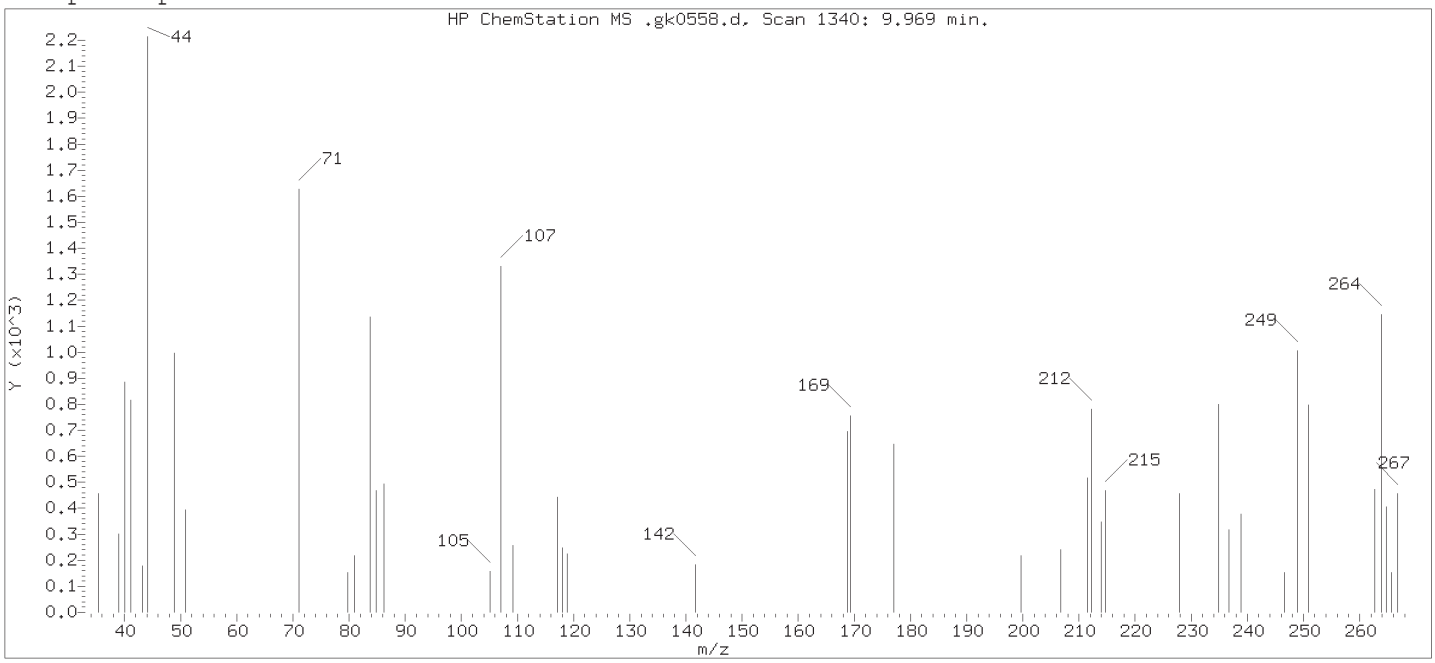
Compound Number	: 151		
Compound Name	: Pentachloronitrobenzene		
Scan Number	: 1339		
Retention Time (minutes)	: 9.963		
Quant Ion	: 237.00		
Area (flag)	: 601M		
On-Column Amount (ng/ul)	: 0.1857		
Integration start scan	: 1331	Integration stop scan:	1345
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

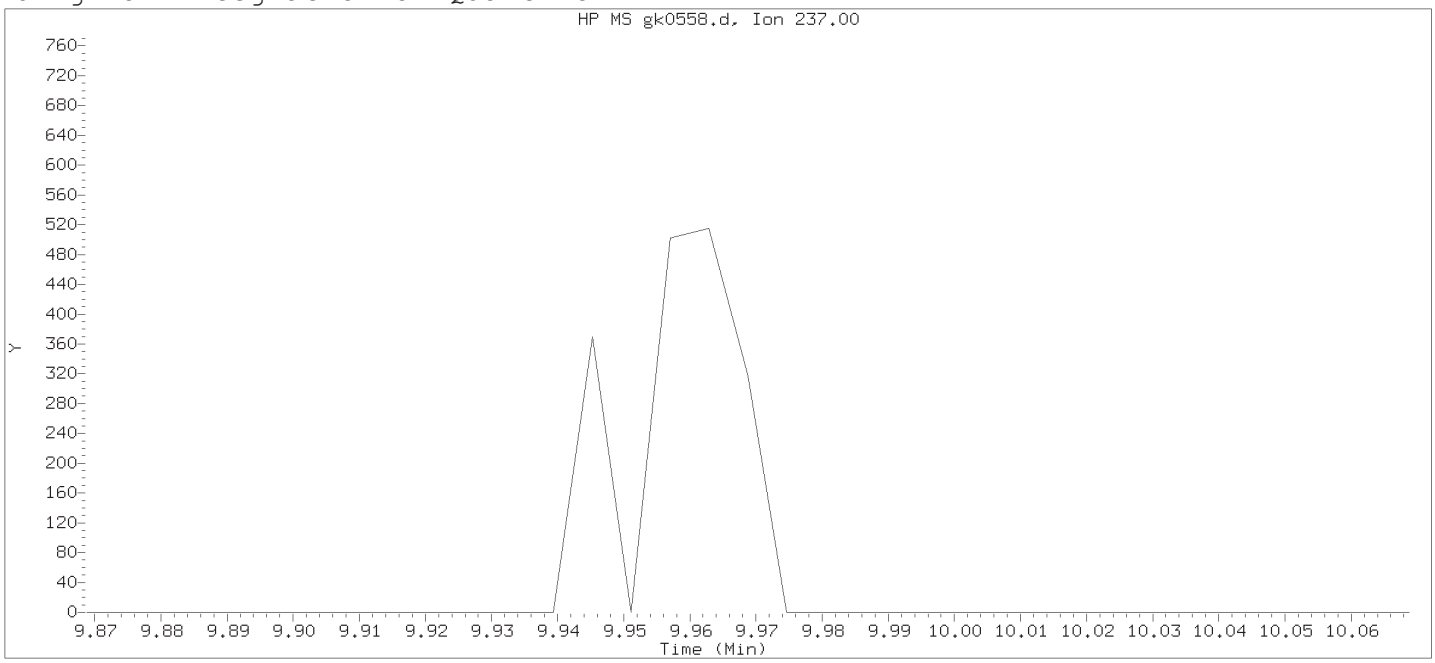
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

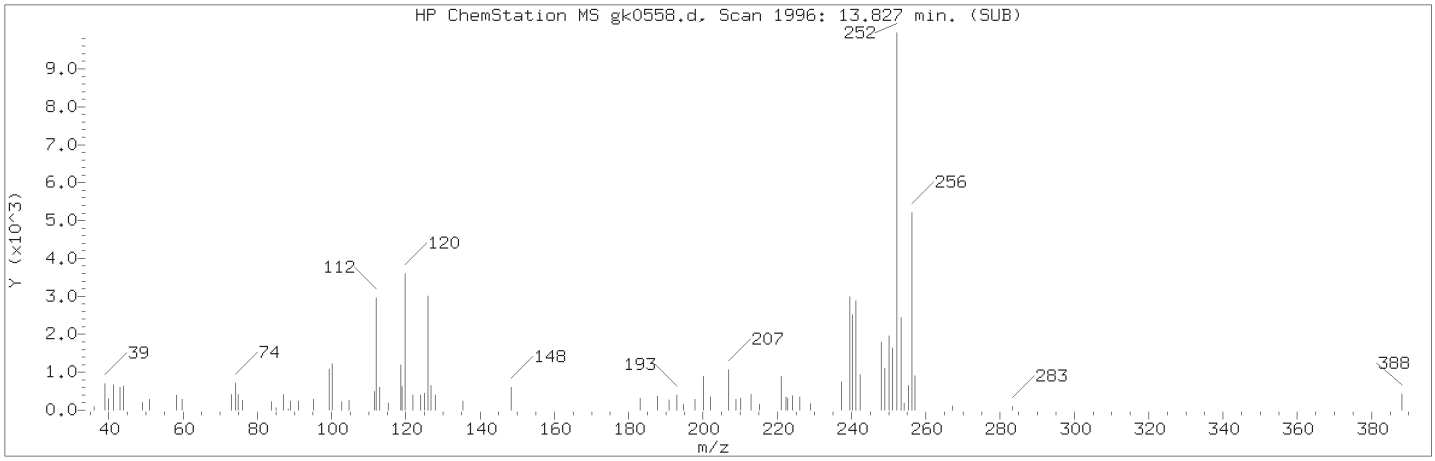
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 14:54 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD2928

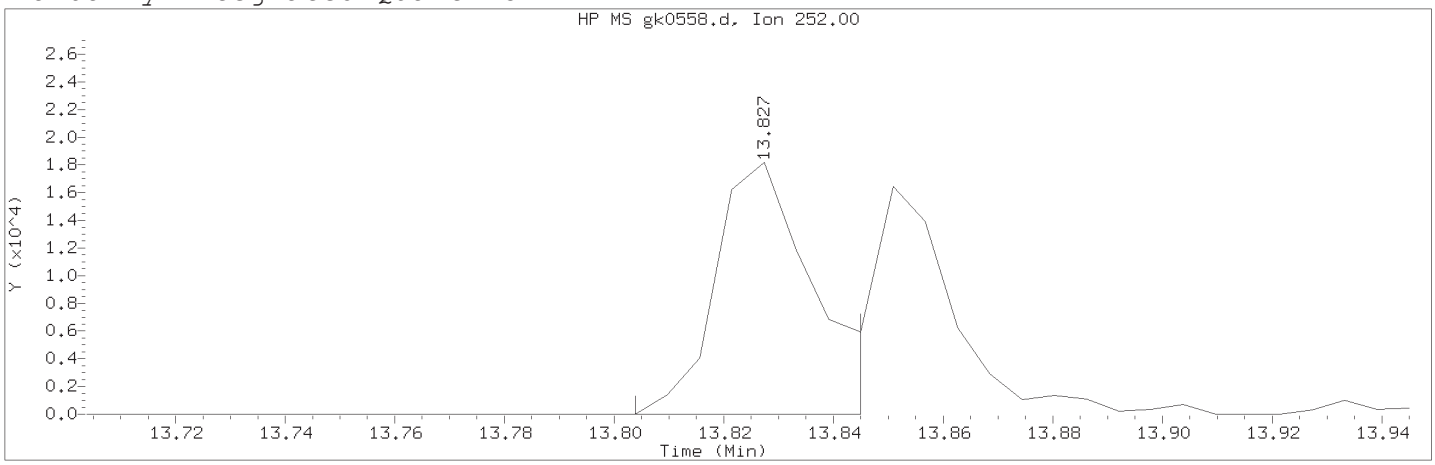
Compound Number : 151
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 9.969
Quant Ion : 237.00

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

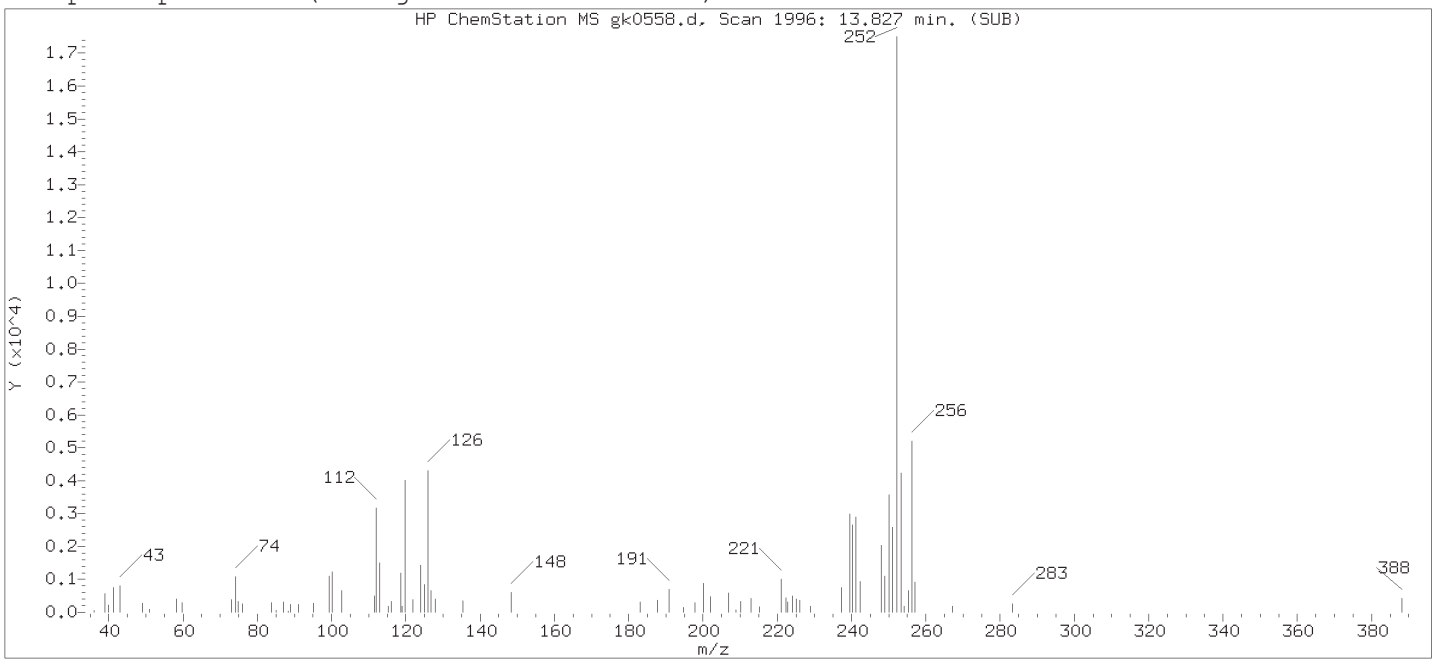
Compound Number : 206
Compound Name : Benzo(b)fluoranthene
Scan Number : 1996
Retention Time (minutes) : 13.827
Quant Ion : 252.00
Area (flag) : 22762M
On-Column Amount (ng/ul) : 0.5455
Integration start scan : 1991 Integration stop scan: 1998
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

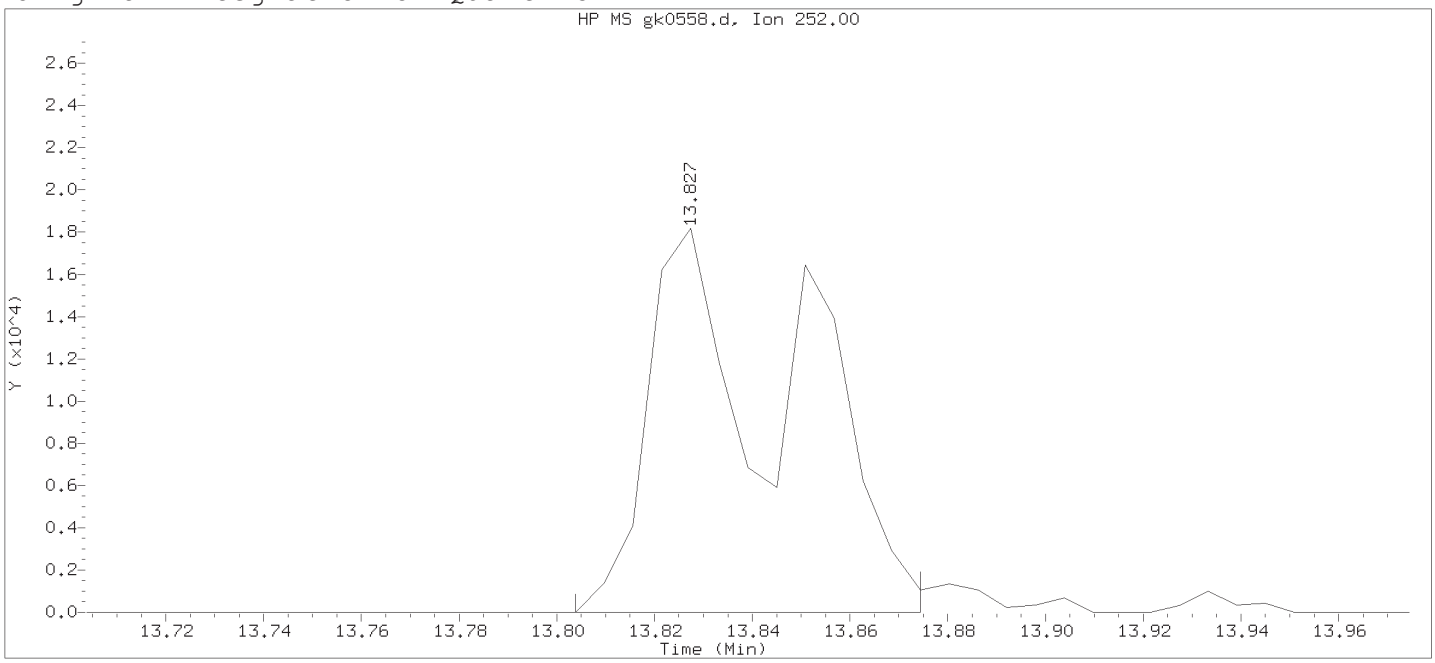
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

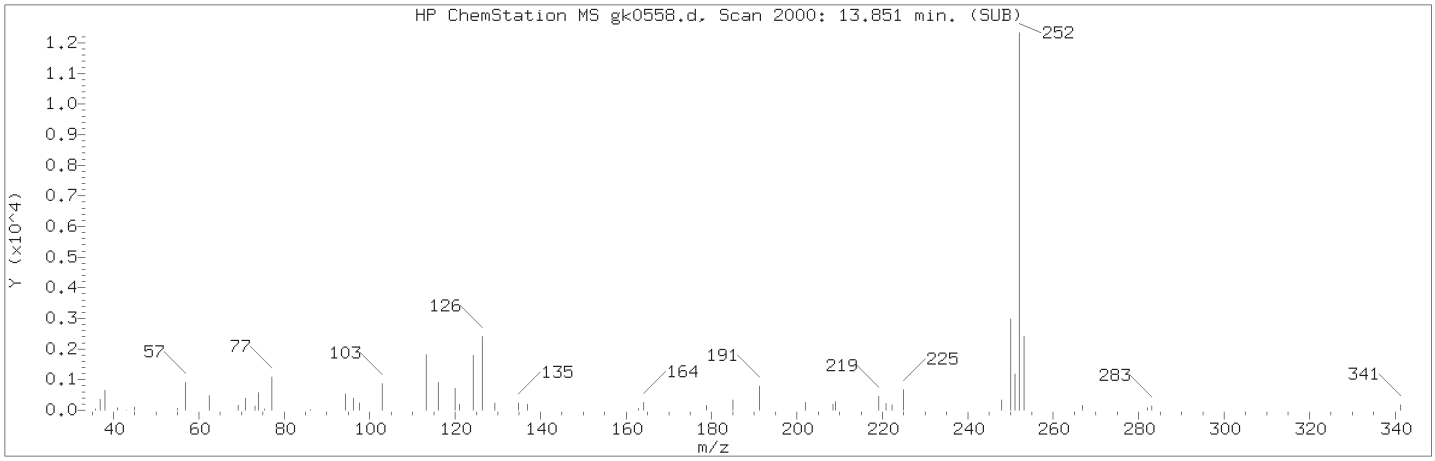
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 14:54 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD2928

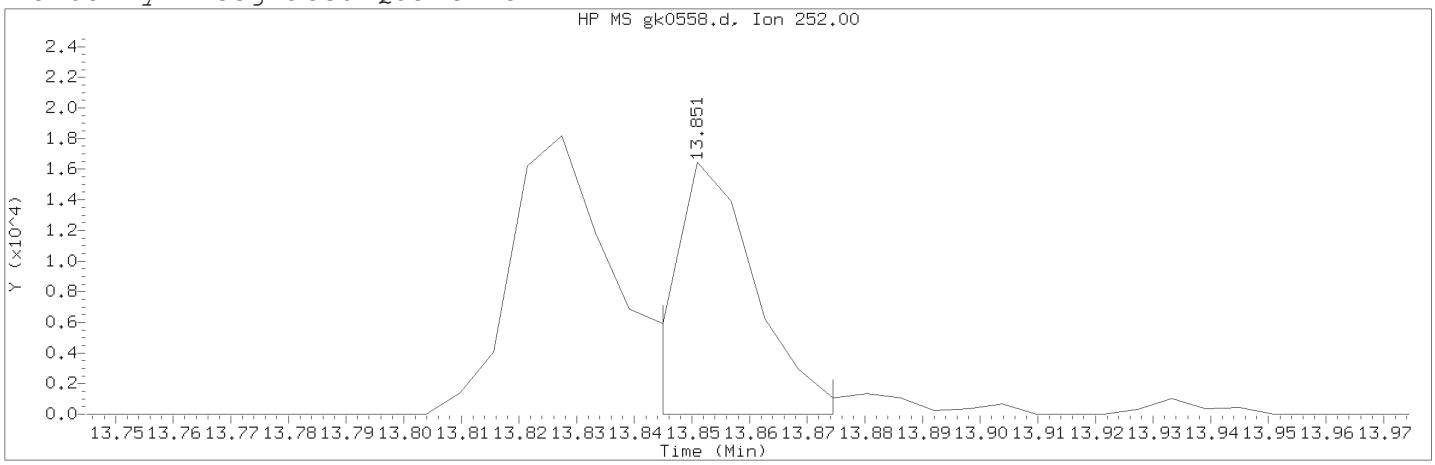
Compound Number : 206
Compound Name : Benzo(b)fluoranthene
Scan Number : 1996
Retention Time (minutes) : 13.827
Quant Ion : 252.00
Area : 36902
On-column Amount (ng/ul) : 0.8235
Integration start scan : 1991 Integration stop scan: 2003
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

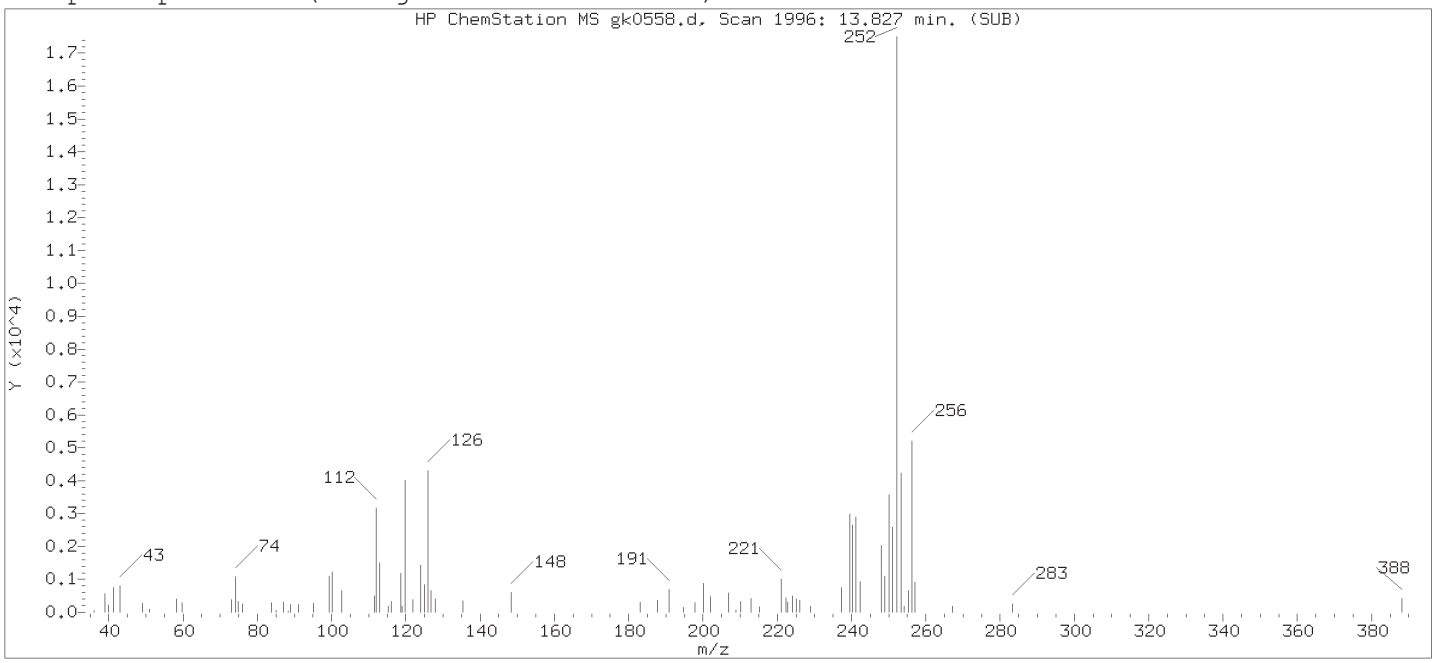
Compound Number : 208
Compound Name : Benzo(k)fluoranthene
Scan Number : 2000
Retention Time (minutes) : 13.851
Quant Ion : 252.00
Area (flag) : 16409M
On-Column Amount (ng/ul) : 0.4144
Integration start scan : 1998 Integration stop scan: 2003
Y at integration start : 3 Y at integration end: 3

Reason for manual integration: improper integration

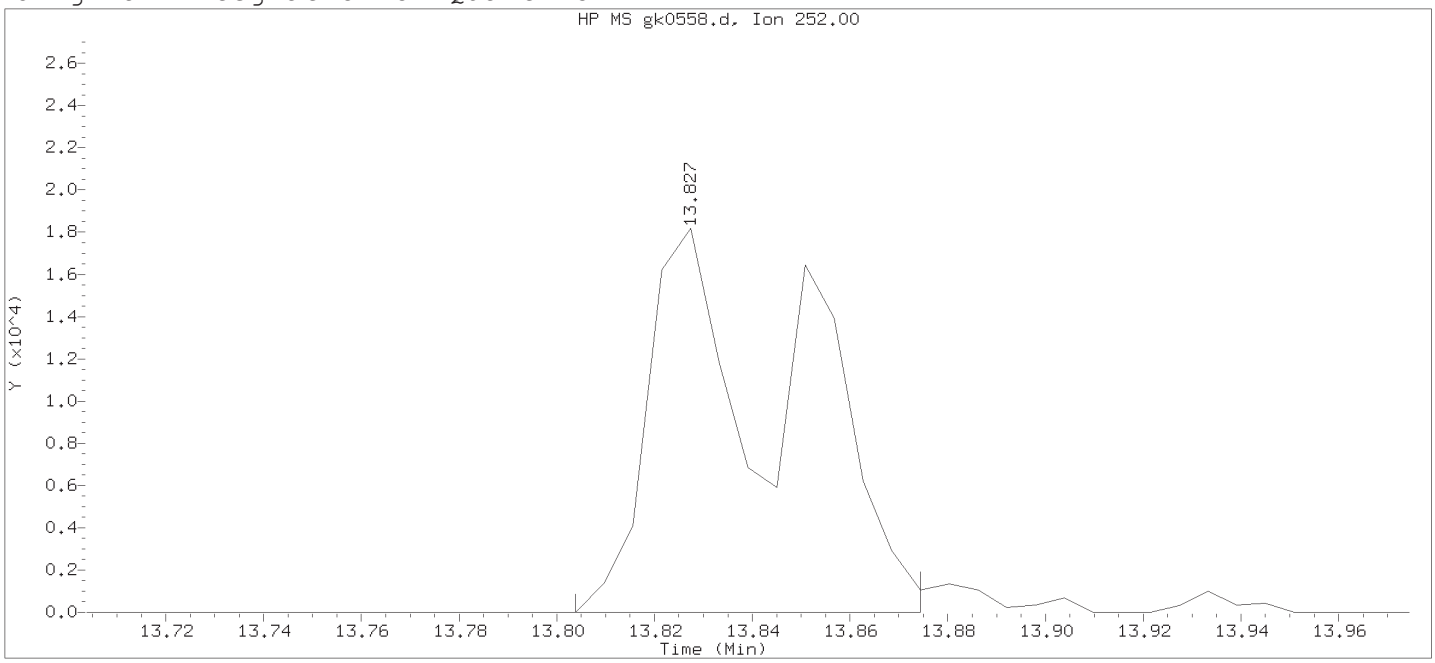
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

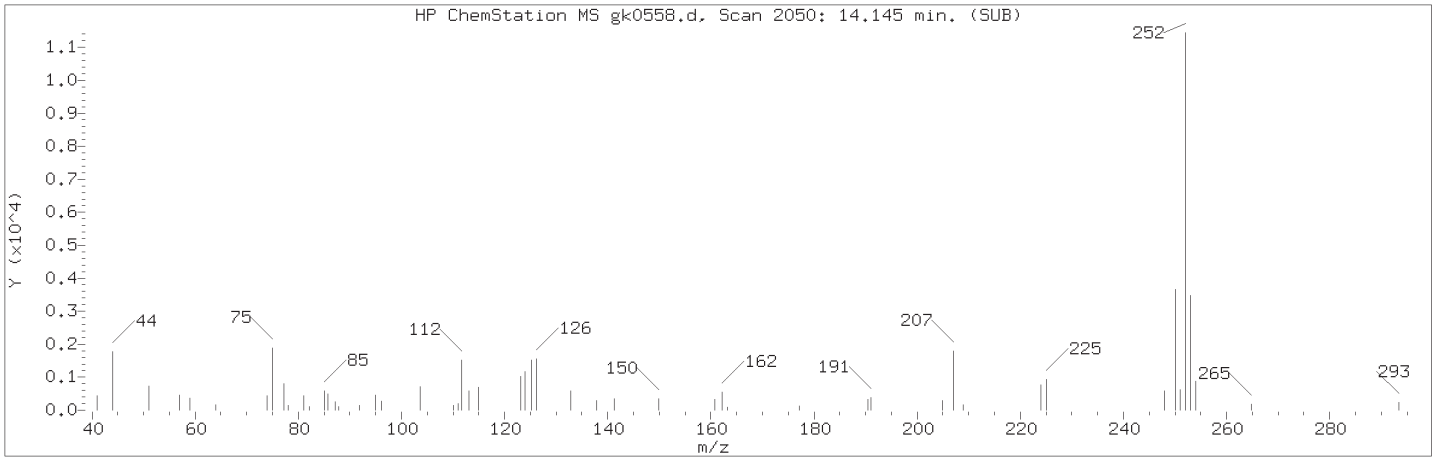
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 14:54 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD2928

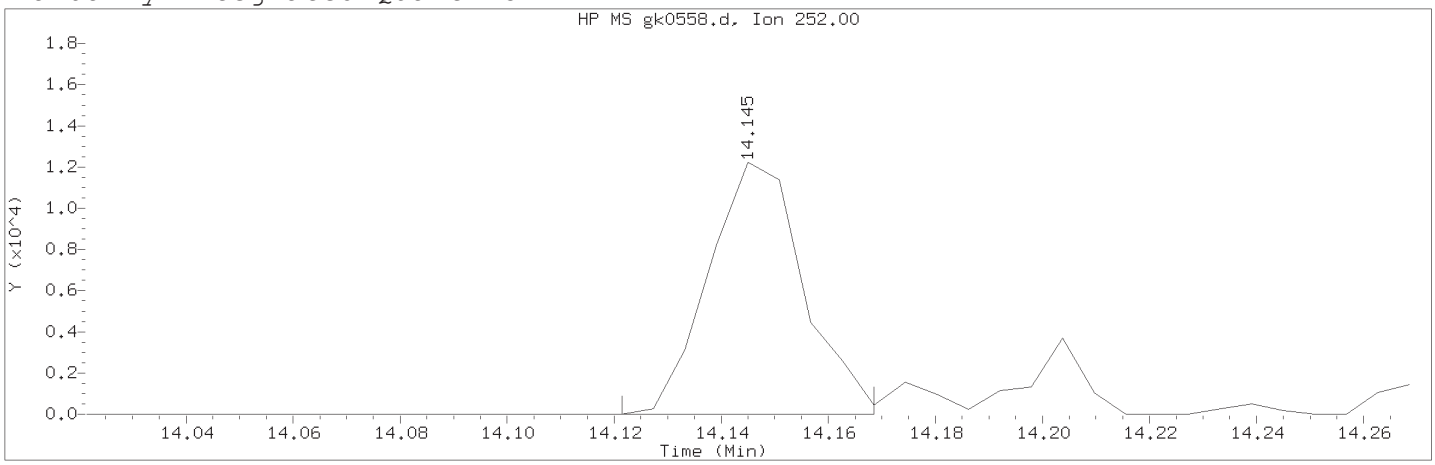
Compound Number : 208
Compound Name : Benzo(k)fluoranthene
Scan Number : 1996
Retention Time (minutes) : 13.827
Quant Ion : 252.00
Area : 36902
On-column Amount (ng/ul) : 0.8224
Integration start scan : 1991 Integration stop scan: 2003
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

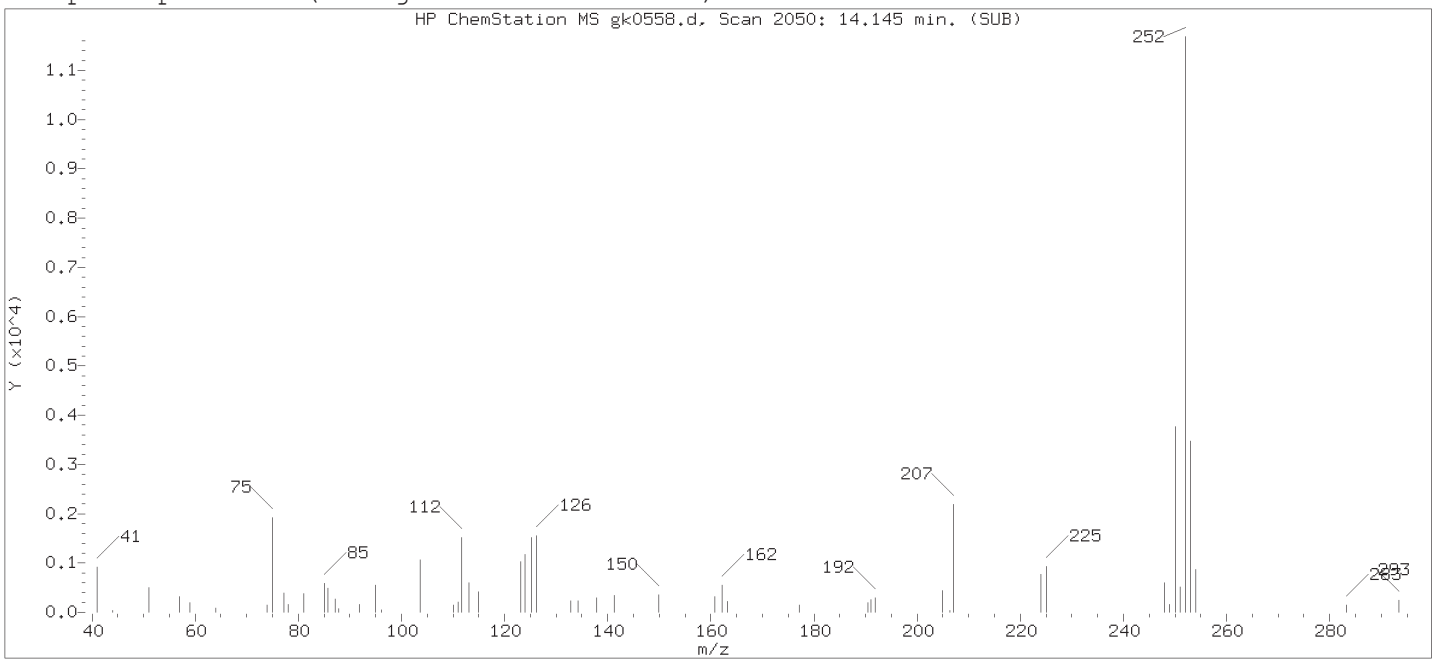
Compound Number : 211
Compound Name : Benzo(a)pyrene
Scan Number : 2050
Retention Time (minutes) : 14.145
Quant Ion : 252.00
Area (flag) : 15053M
On-Column Amount (ng/ul) : 0.4147
Integration start scan : 2045 Integration stop scan: 2053
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

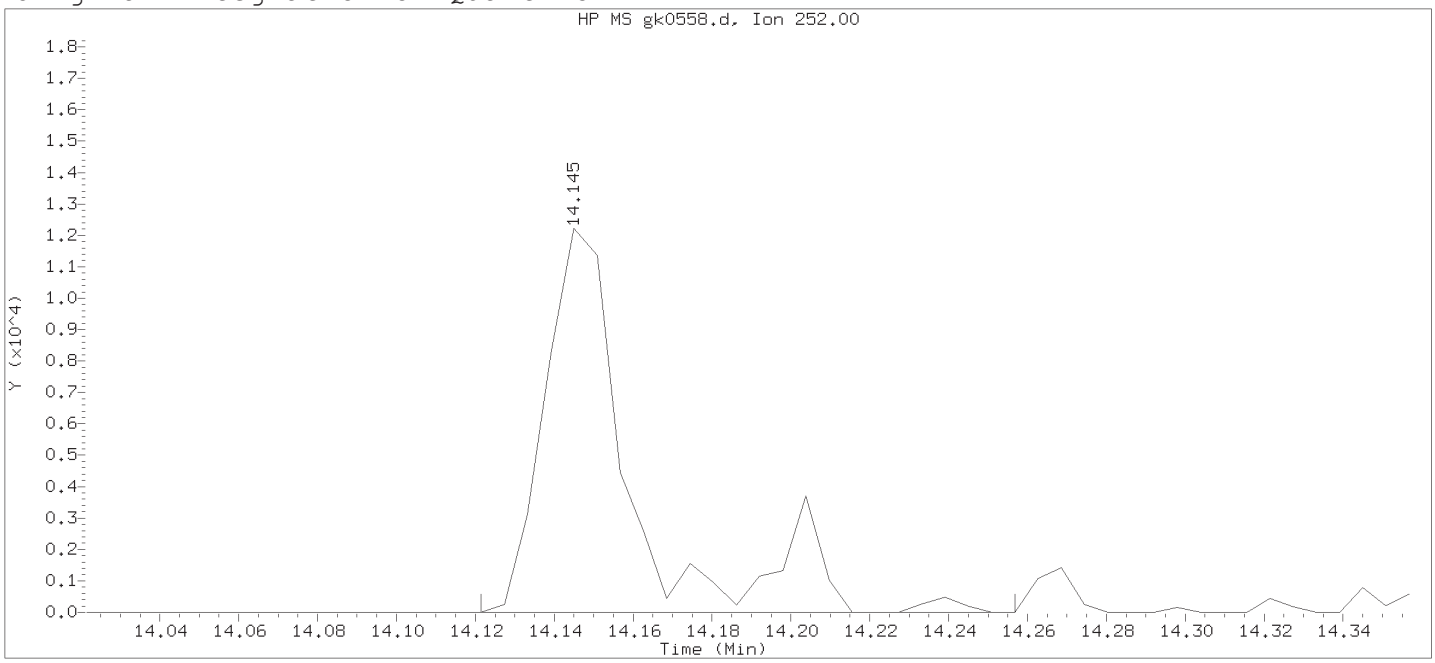
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

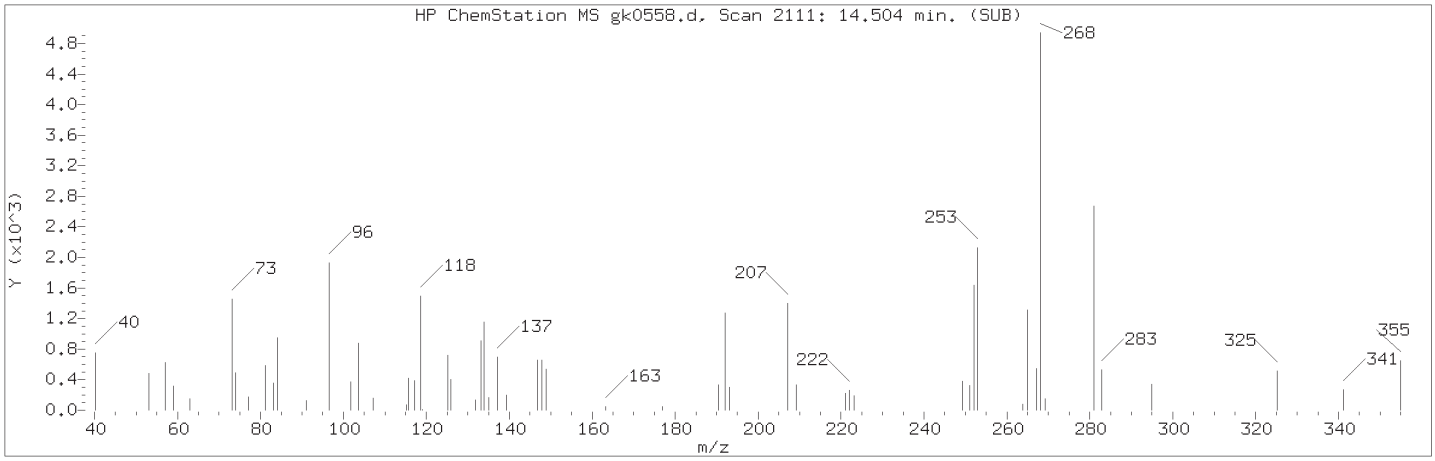
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 14:54 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD2928

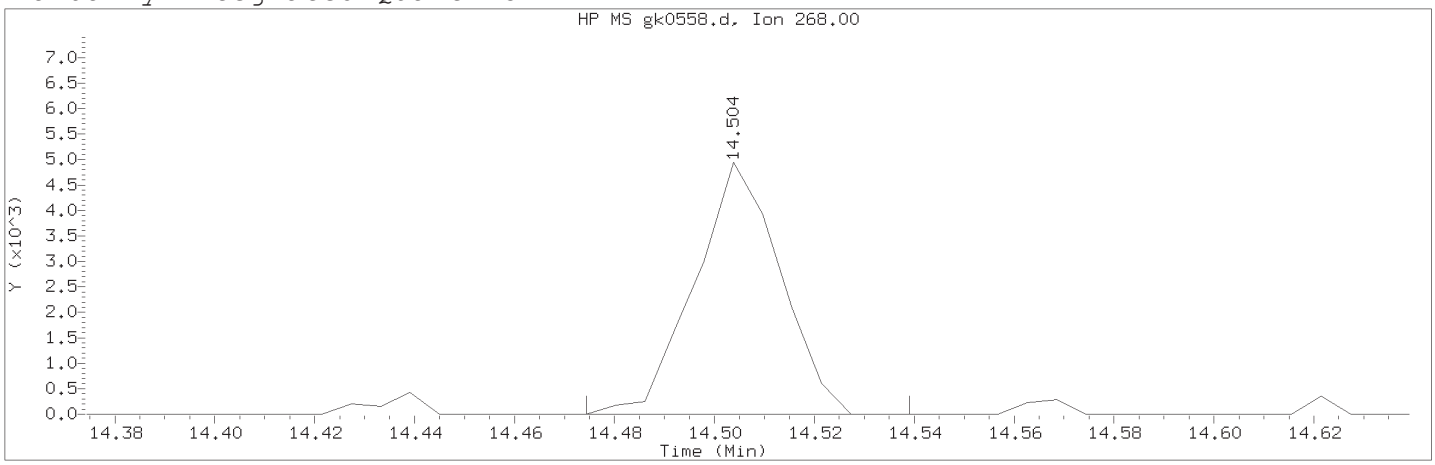
Compound Number	: 211		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 2050		
Retention Time (minutes)	: 14.145		
Quant Ion	: 252.00		
Area	: 18901		
On-column Amount (ng/ul)	: 0.5051		
Integration start scan	: 2045	Integration stop scan:	2068
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature used: D10 Page 1386

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

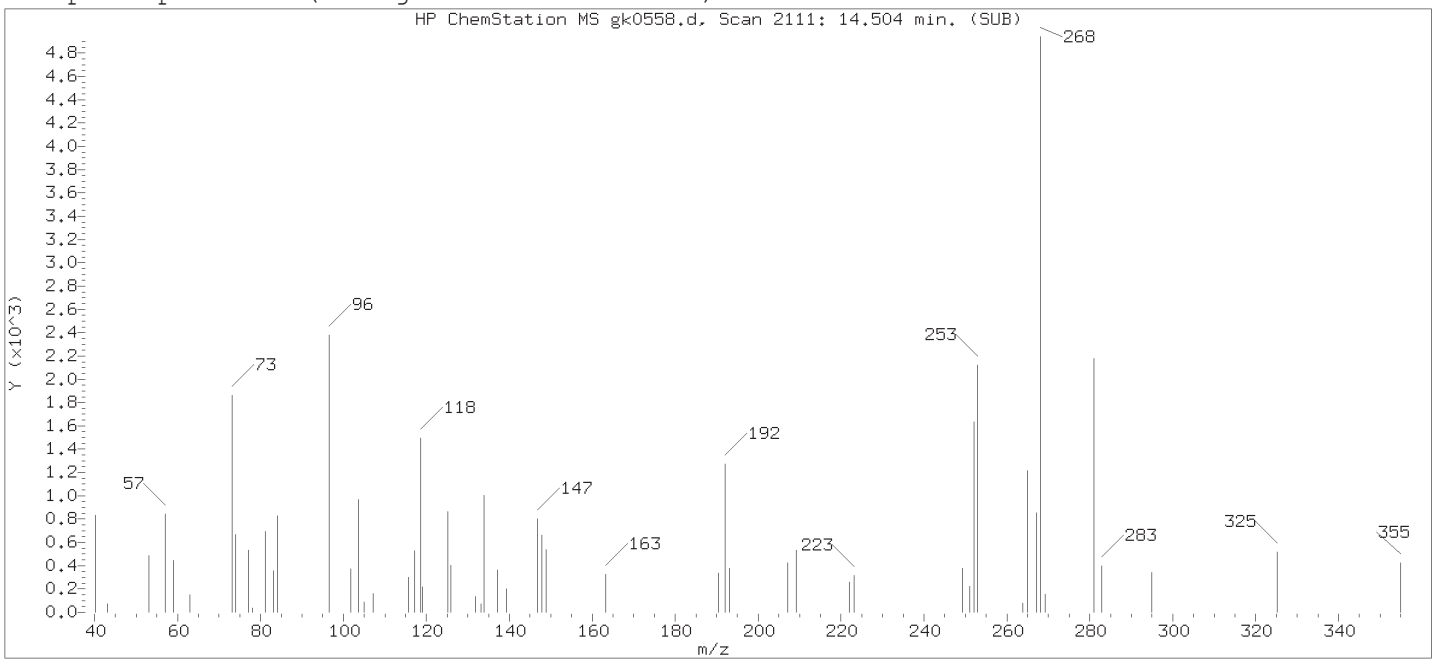
Compound Number : 215
Compound Name : 3-Methylcholanthrene
Scan Number : 2111
Retention Time (minutes) : 14.504
Quant Ion : 268.00
Area (flag) : 5879M
On-Column Amount (ng/ul) : 0.4148
Integration start scan : 2105 Integration stop scan: 2116
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

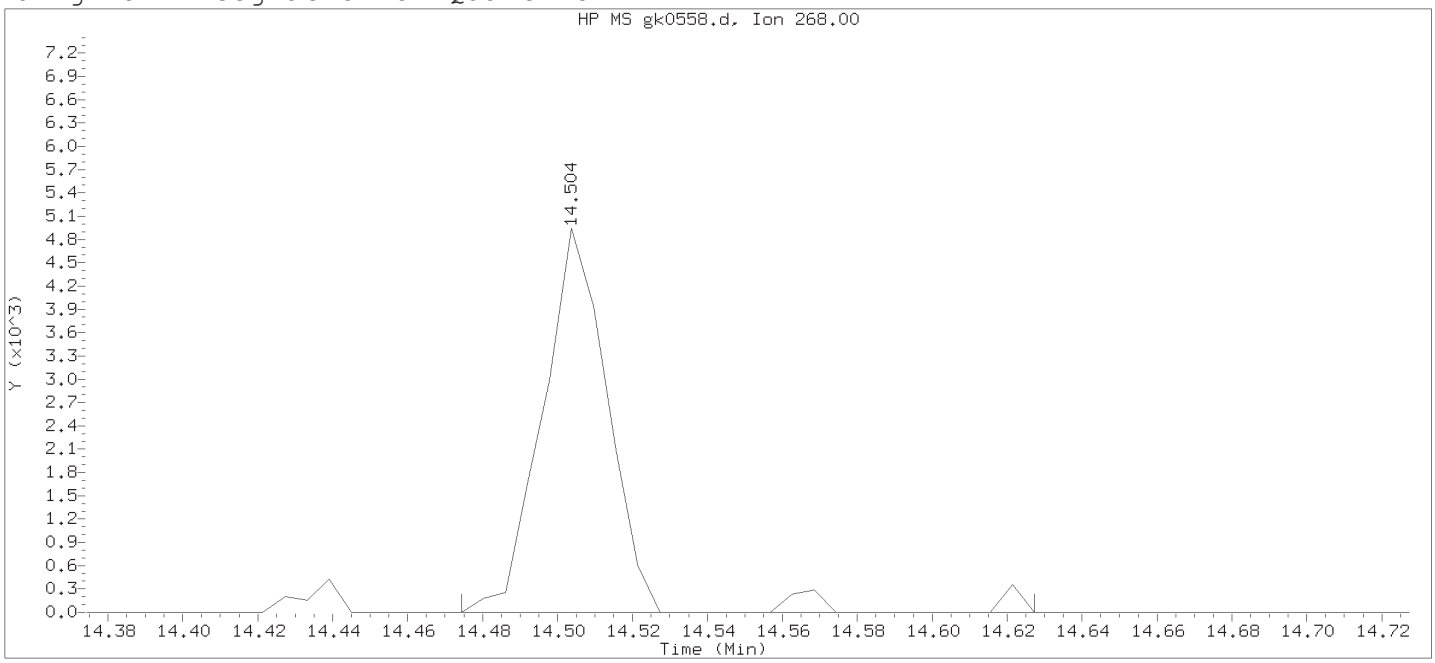
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

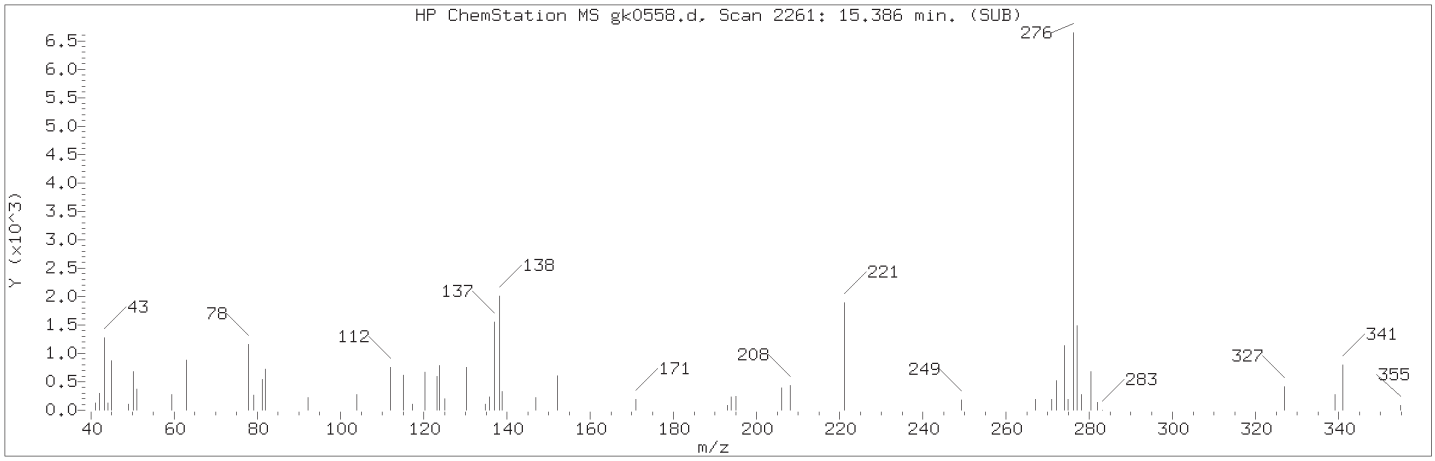
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 14:54 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD2928

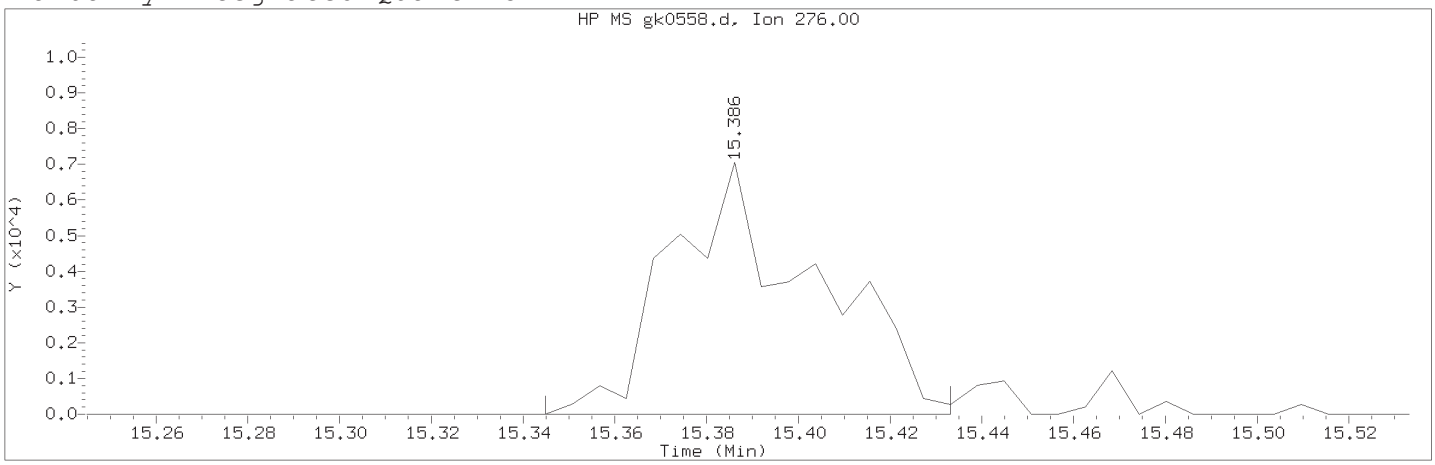
Compound Number : 215
Compound Name : 3-Methylcholanthrene
Scan Number : 2111
Retention Time (minutes) : 14.504
Quant Ion : 268.00
Area : 6186
On-column Amount (ng/ul) : 0.4376
Integration start scan : 2105 Integration stop scan: 2131
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

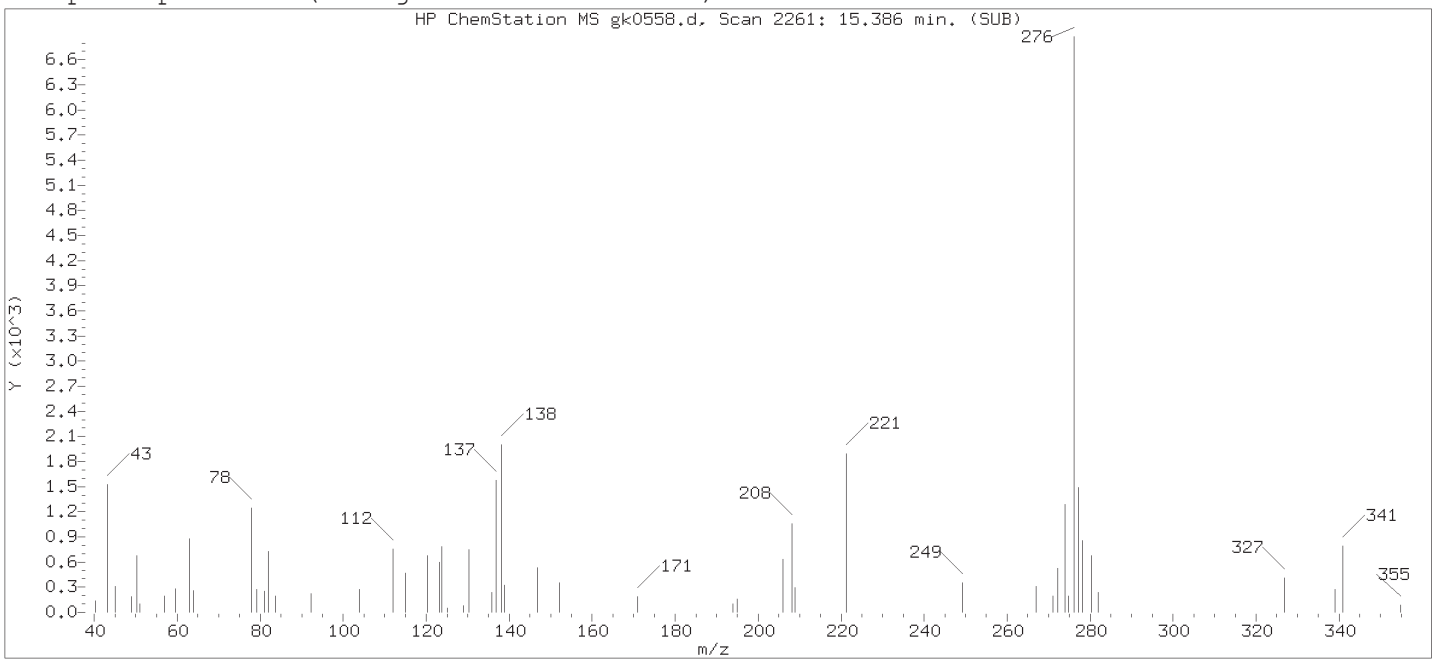
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2261		
Retention Time (minutes)	: 15.386		
Quant Ion	: 276.00		
Area (flag)	: 15339M		
On-Column Amount (ng/ul)	: 0.4183		
Integration start scan	: 2253	Integration stop scan:	2268
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

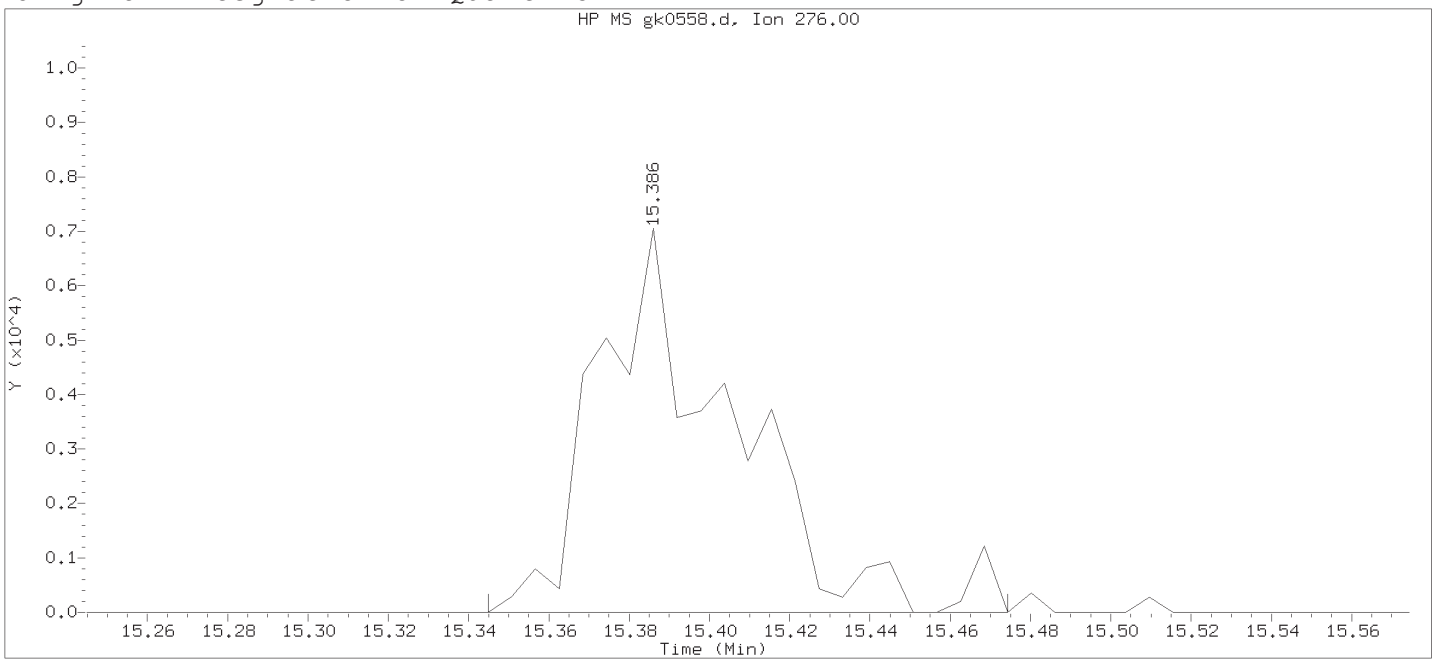
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

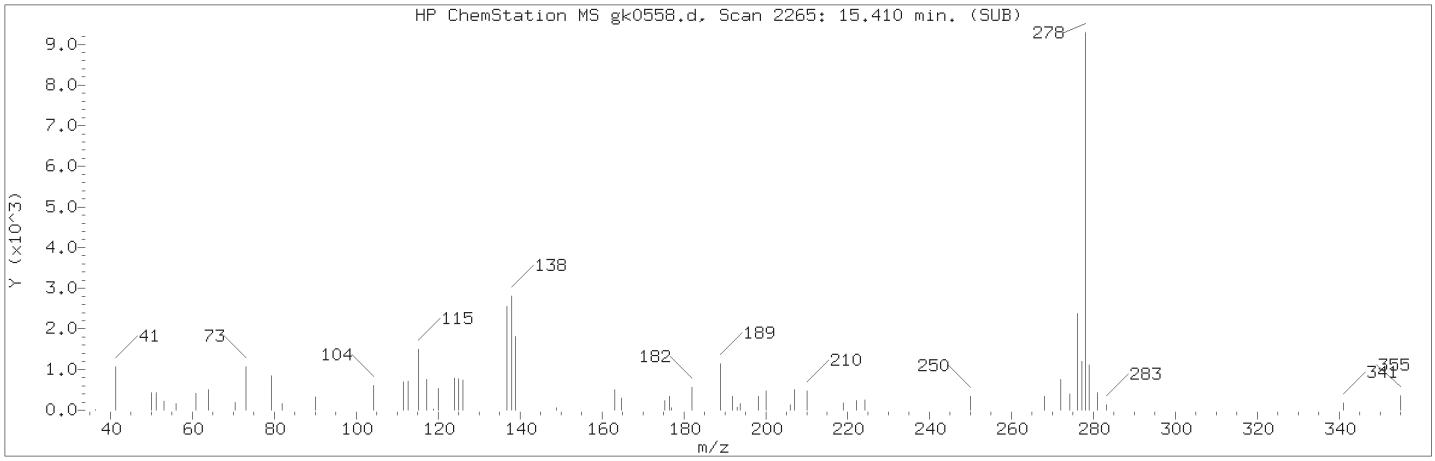
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 14:54 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD2928

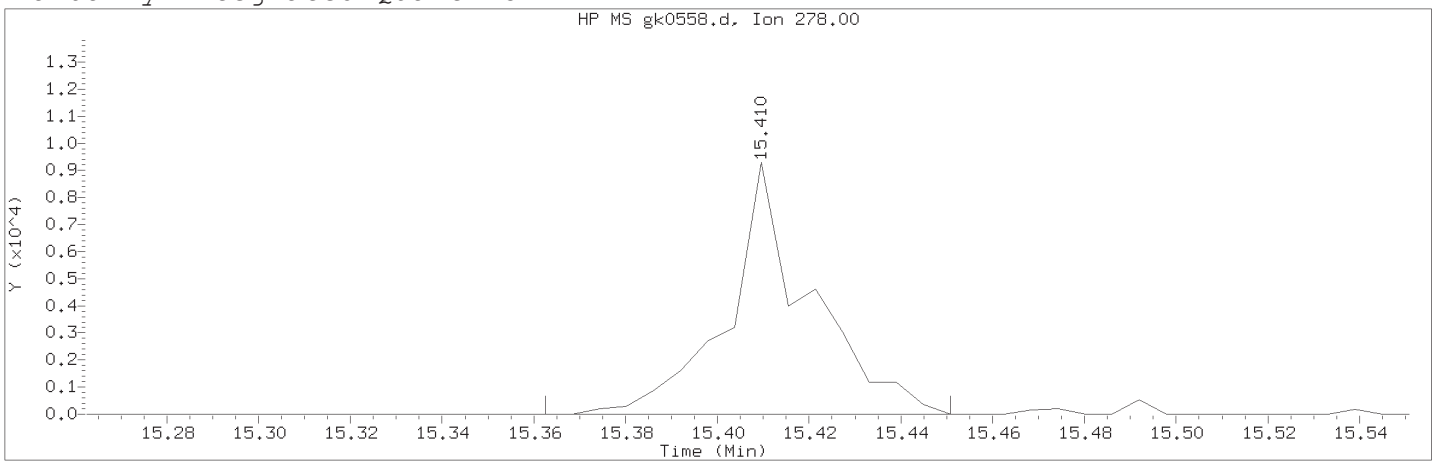
Compound Number	:	219
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	2261
Retention Time (minutes)	:	15.386
Quant Ion	:	276.00
Area	:	16456
On-column Amount (ng/ul)	:	0.4455
Integration start scan	:	2253 Integration stop scan: 2275
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 12-NOV-2018 07:47
Date, time and analyst ID of latest file update: 12-Nov-2018 07:47 em10340

Sample Name: SSTD0.50 Lab Sample ID: STD2928

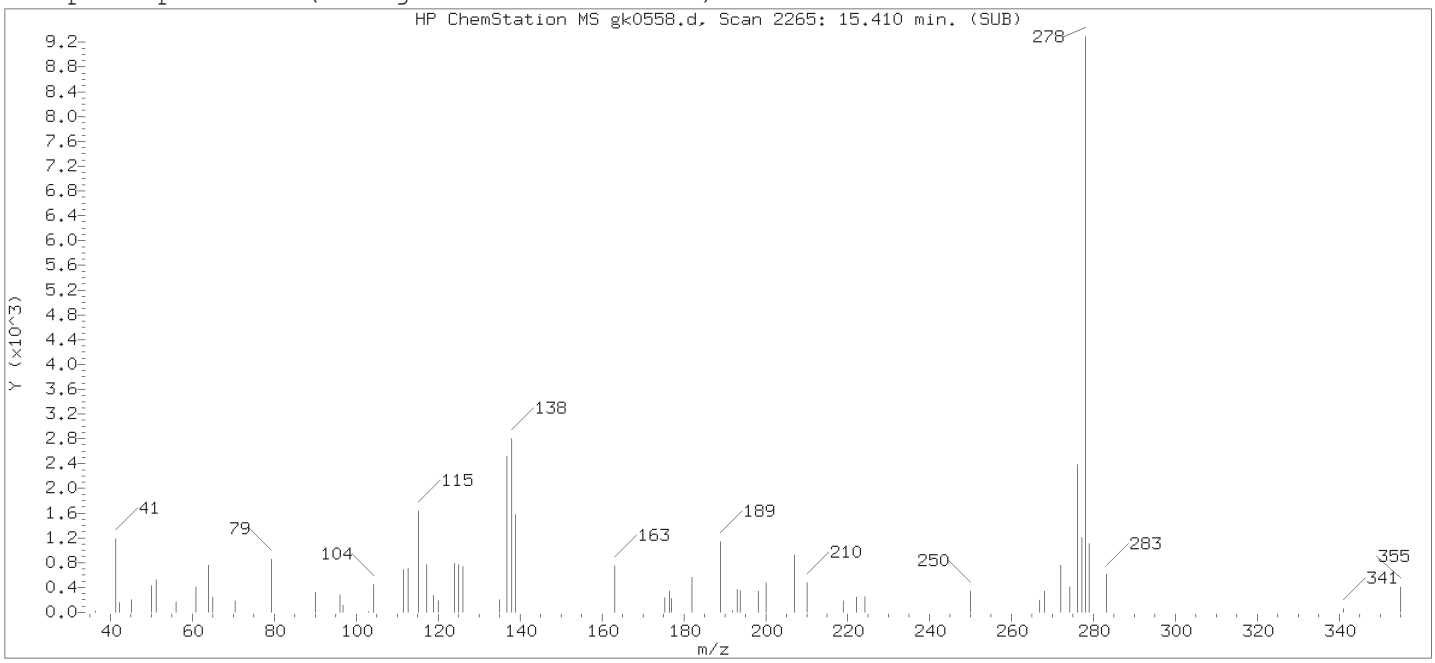
Compound Number	: 220		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 2265		
Retention Time (minutes)	: 15.410		
Quant Ion	: 278.00		
Area (flag)	: 11464M		
On-Column Amount (ng/ul)	: 0.3787		
Integration start scan	: 2256	Integration stop scan:	2271
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

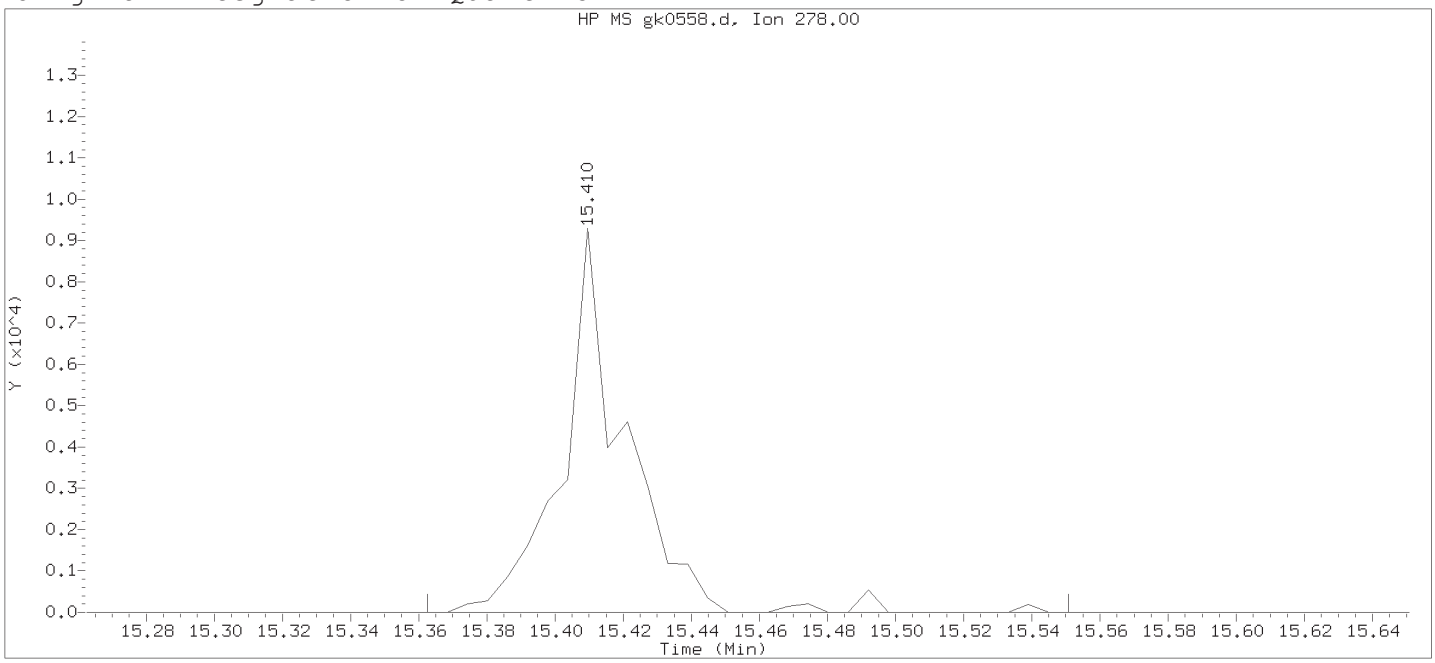
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



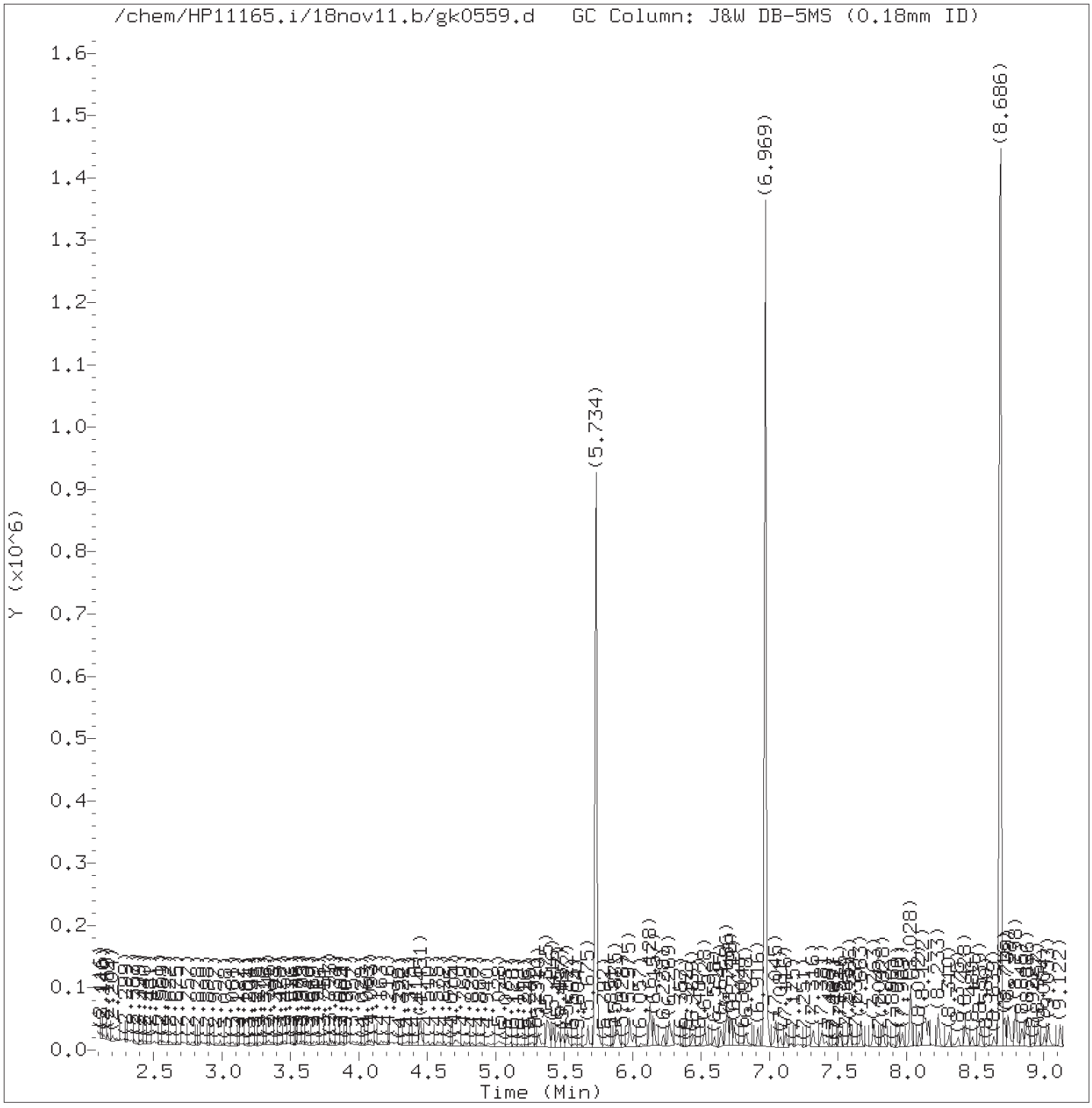
Data File: /chem/HP11165.i/18nov11.b/gk0558.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:32 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 14:54 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD2928

Compound Number : 220
Compound Name : Dibenz(a,h)anthracene
Scan Number : 2265
Retention Time (minutes) : 15.410
Quant Ion : 278.00
Area : 11848
On-column Amount (ng/ul) : 0.3855
Integration start scan : 2256 Integration stop scan: 2288
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:23.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

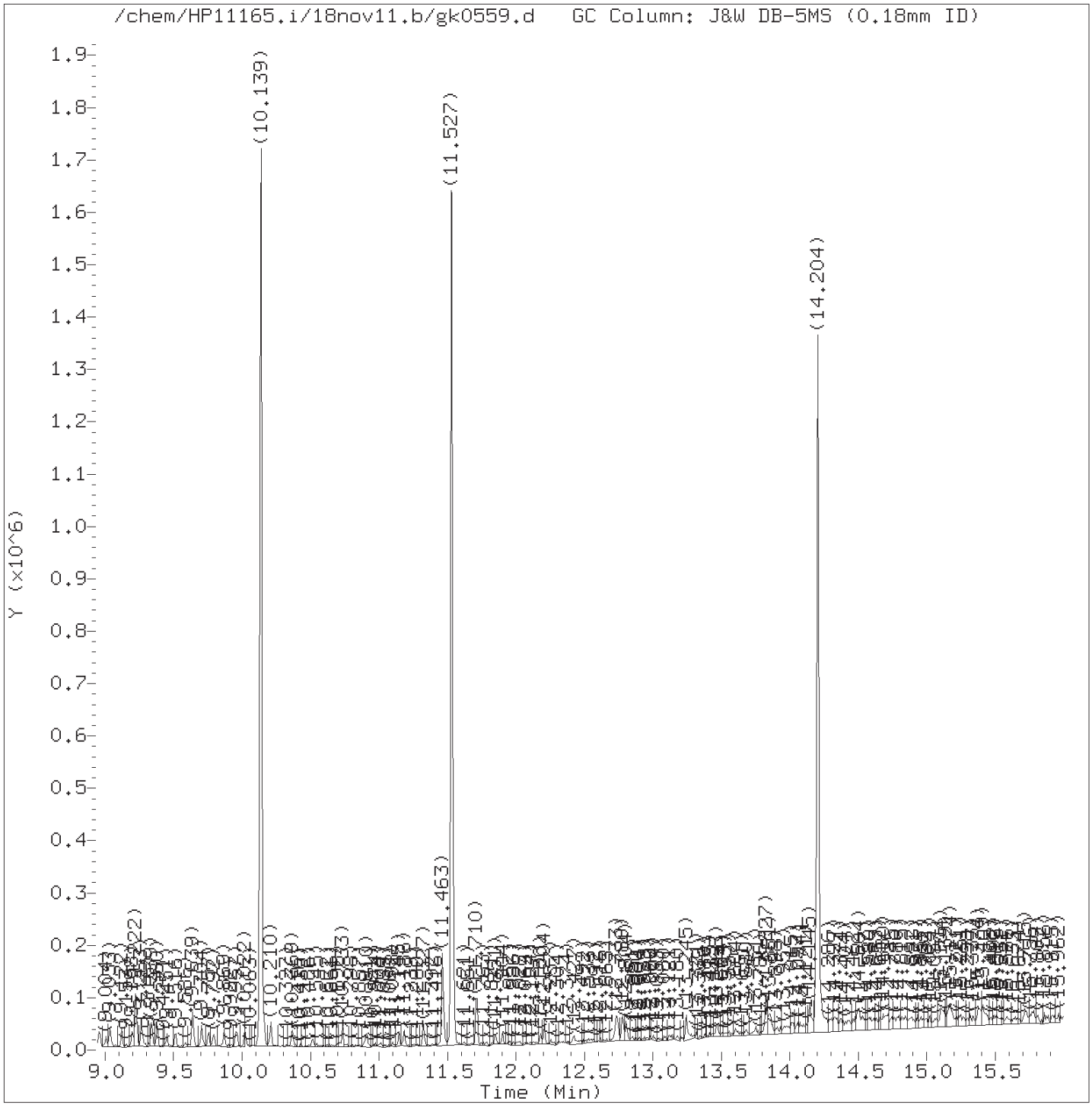
Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) Pyridine	(1)	3.593	79	8319M	0.683
8) N-Nitrosomethylethylamine	(1)	4.063	88	3499M	0.537
7) 2-Picoline	(1)	4.087	93	5136M	0.389
9) Methyl methanesulfonate	(1)	4.357	80	3236M	0.475
11)$2-Fluorophenol	(1)	4.451	112	10749	1.048
13) N-Nitrosodiethylamine	(1)	4.716	102	1499	0.257
15) Ethyl methanesulfonate	(1)	5.022	109	2310	0.373
17)$Phenol-d6	(1)	5.375	99	15055	0.948
18) Phenol	(1)	5.392	94	8819	0.488
19) Aniline	(1)	5.416	93	10213	0.482
22) bis(2-Chloroethyl)ether	(1)	5.487	93	6398	0.493
23) 2-Chlorophenol	(1)	5.522	128	4715	0.473
42) Total Cresols	(1)			11555	0.942
24) 1,3-Dichlorobenzene	(1)	5.675	146	5803	0.529
25)*1,4-Dichlorobenzene-d4	(1)	5.734	152	135168	20.000
26) 1,4-Dichlorobenzene	(1)	5.751	146	6050	0.528
27) Benzyl alcohol	(1)	5.875	108	3278	0.413
28) 1,2-Dichlorobenzene	(1)	5.892	146	6226	0.562
31) 2-Methylphenol	(1)	5.975	108	5484	0.450
30) Indene	(1)	5.981	115	5498	0.450
34) bis(2-Chloroisopropyl)ether	(1)	6.004	45	6014	0.456
33) 2,2'-oxybis(1-Chloropropane)	(1)	6.004	45	6014	0.456
35) N-Nitrosopyrrolidine	(1)	6.122	100	1894M	0.293
36) Acetophenone	(1)	6.122	105	6937	0.422
37) 4-Methylphenol	(1)	6.128	108	6071	0.492
38) N-Nitroso-di-n-propylamine	(1)	6.134	70	4872	0.419
39) N-Nitrosomorpholine	(1)	6.151	56	3062	0.360
40) o-Toluidine	(1)	6.157	106	10226	0.529
43) Hexachloroethane	(1)	6.222	117	1490	0.346
44)$Nitrobenzene-d5	(2)	6.263	82	11115	0.763
45) Nitrobenzene	(2)	6.287	77	6176	0.406
48) N-Nitrosopiperidine	(2)	6.439	114	2066	0.353
50) Isophorone	(2)	6.528	82	12289	0.447
51) 2-Nitrophenol	(2)	6.598	139	2314	0.423
53) 2,4-Dimethylphenol	(2)	6.639	107	4995	0.413
56) Benzoic acid	(2)	6.686	105	22404	2.384
57) O,O,O-Triethylphosphorothioate	(2)	6.722	198	3087	0.583
55) bis(2-Chloroethoxy)methane	(2)	6.739	93	9237	0.605
60) 2,4-Dichlorophenol	(2)	6.828	162	3293	0.390
62) 1,2,4-Trichlorobenzene	(2)	6.916	180	4836	0.543

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
65)*Naphthalene-d8	(2)	6.969	136	552957	20.000
67) 4-Chloroaniline	(2)	7.039	127	5877	0.457
68) 2,6-Dichlorophenol	(2)	7.045	162	3074	0.361
69) Hexachloropropene	(2)	7.081	213	2126M	0.477
71) Hexachlorobutadiene	(2)	7.116	225	1742	0.365
75) Quinoline	(2)	7.316	129	9179	0.451
77) N-Nitrosodi-n-butylamine	(2)	7.381	84	5098M	0.387
97) Isosafrole	(3)			4058	0.494
76) Caprolactam	(2)	7.392	113	1177	0.300
80) 4-Chloro-3-methylphenol	(2)	7.516	107	3588M	0.341
82) Safrole	(2)	7.586	162	3613	0.423
85) Hexachlorocyclopentadiene	(3)	7.822	237	2114	0.487
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.833	216	3759	0.434
88) cis-Isosafrole	(3)	7.875	162	711	0.084
90) 2,4,6-Trichlorophenol	(3)	7.939	196	3510	0.599
92) 2,4,5-Trichlorophenol	(3)	7.969	196	3055	0.479
93)$2-Fluorobiphenyl	(3)	8.028	172	24159	1.014
120) 2,4_2,6-Dinitrotoluenes	(3)			4750	0.721
94) trans-Isosafrole	(3)	8.092	162	3347	0.411
95) 1,1'-Biphenyl	(3)	8.122	154	14020	0.540
96) 2-Chloronaphthalene	(3)	8.139	162	13051	0.641
98) 1-Chloronaphthalene	(3)	8.163	162	9318	0.494
99) Diphenyl ether	(3)	8.228	170	6800	0.488
100) 2-Nitroaniline	(3)	8.239	138	2687	0.422
104) 1,4-Naphthoquinone	(3)	8.310	158	2666	0.319
105) 1,4-Dinitrobenzene	(3)	8.369	168	1158M	0.330
106) Dimethylphthalate	(3)	8.428	163	13632	0.572
107) 1,3-Dinitrobenzene	(3)	8.439	168	1533	0.377
108) 2,6-Dinitrotoluene	(3)	8.475	165	1579	0.295
112) 3-Nitroaniline	(3)	8.622	138	1257	0.209
113)*Acenaphthene-d10	(3)	8.686	164	294239	20.000
115) 2,4-Dinitrophenol	(3)	8.745	184	5341	1.479
146) Diallate trans/cis	(4)			11107	0.758
116) 4-Nitrophenol	(3)	8.798	109	7972	1.913
117) Pentachlorobenzene	(3)	8.839	250	4492	0.605
118) 2,4-Dinitrotoluene	(3)	8.869	165	3171	0.426
119) Dibenzofuran	(3)	8.886	168	16180	0.560
121) 1-Naphthylamine	(3)	8.957	143	10202	0.453
122) 2,3,4,6-Tetrachlorophenol	(3)	9.004	232	1248M	0.243
123) 2-Naphthylamine	(3)	9.033	143	10327	0.472

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
124) Diethylphthalate	(3)	9.122	149	10901	0.455
125) Thionazin	(3)	9.198	107	1748M	0.384
128) 5-Nitro-o-toluidine	(3)	9.222	152	2794	0.386
127) 4-Chlorophenyl-phenylether	(3)	9.233	204	6478	0.577
129) 4-Nitroaniline	(3)	9.233	138	3192	0.488
130) 4,6-Dinitro-2-methylphenol	(4)	9.269	198	5560	1.234
131) N-Nitrosodiphenylamine	(4)	9.339	169	9981	0.465
132) NDPA as diphenylamine	(4)	9.339	169	9981	0.465
134) 1,2-Diphenylhydrazine	(4)	9.380	77	12418	0.373
135)$2,4,6-Tribromophenol	(3)	9.457	330	1748	0.742
137) Tetraethyldithiopyrophosphate	(4)	9.516	97	1865	0.382
139) 1,3,5-Trinitrobenzene	(4)	9.586	213	198M	0.069
140) Diallate (peak 1)	(4)	9.633	86	7954	0.514
141) Phorate	(4)	9.639	75	7748	0.386
142) Phenacetin	(4)	9.645	108	4302	0.305
143) 4-Bromophenyl-phenylether	(4)	9.710	248	3418M	0.512
144) Diallate (peak 2)	(4)	9.727	86	3153	0.244
147) Dimethoate	(4)	9.798	87	4218	0.365
149) Pentachlorophenol	(4)	9.945	266	1242	0.298
150) 4-Aminobiphenyl	(4)	9.951	169	4900	0.506
151) Pentachloronitrobenzene	(4)	9.963	237	1185M	0.400
152) Pronamide	(4)	10.022	173	5227	0.482
153)*Phenanthrene-d10	(4)	10.139	188	608065	20.000
154) Dinoseb	(4)	10.163	211	1630M	0.248
163) Carbazole	(4)	10.369	167	14271	0.419
164) Methyl parathion	(4)	10.516	109	3917	0.459
165) Di-n-butylphthalate	(4)	10.733	149	14297	0.337
167) Parathion	(4)	10.898	109	1896	0.339
168) 4-Nitroquinoline-1-oxide	(4)	10.910	190	960	0.263
169) Octachlorostyrene	(4)	11.145	308	1580	0.653
171) Isodrin	(4)	11.180	193	2006	0.471
174) Benzidine	(5)	11.463	184	57043	2.171
175)*Pyrene-d10	(5)	11.527	212	586830	20.000
179)$Terphenyl-d14	(5)	11.710	244	26269	0.926
182) p-Dimethylaminoazobenzene	(5)	11.851	225	2471	1.964
185) Chlorobenzilate	(5)	11.904	139	4644	0.370
187) 3,3'-Dimethylbenzidine	(5)	12.180	212	8737	0.405
188) Butylbenzylphthalate	(5)	12.204	149	6203	0.315
191) 2-Acetylaminofluorene	(5)	12.416	181	3409	0.215
193) 3,3'-Dichlorobenzidine	(5)	12.727	252	3685	0.275

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

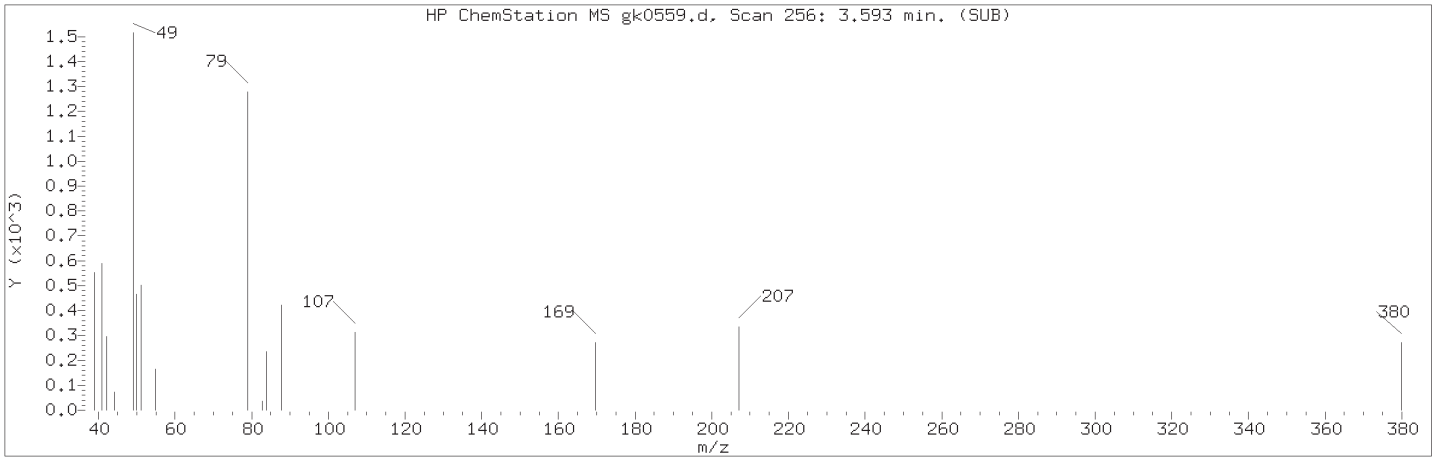
Sample Name: SSTD0.50 Lab Sample ID: MDL2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.733	231	2741	0.376
199) bis(2-Ethylhexyl)phthalate	(5)	12.804	149	6119	0.229
203) 6-Methylchrysene	(5)	13.245	242	10913	0.429
205) Di-n-octylphthalate	(6)	13.463	149	10062	0.217
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.821	256	7369	0.439
213)*Perylene-d12	(6)	14.204	264	515577	20.000
215) 3-Methylcholanthrene	(6)	14.498	268	5699	0.456
217) Dibenz(a,h)acridine	(6)	15.109	279	9384	0.396
218) Dibenz(a,j)acridine	(6)	15.168	279	9430	0.370

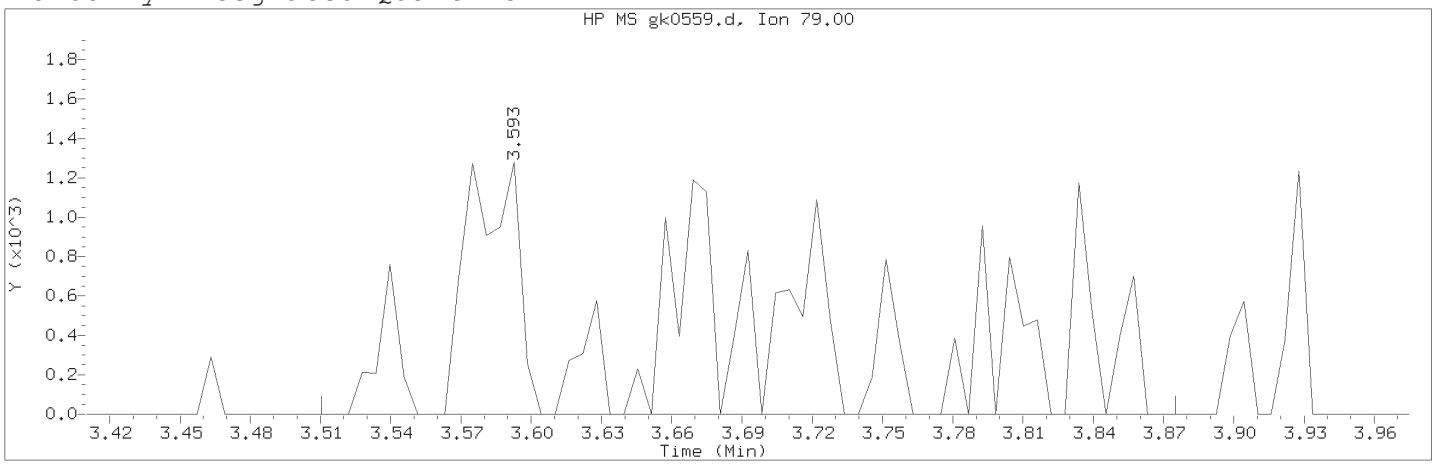
* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

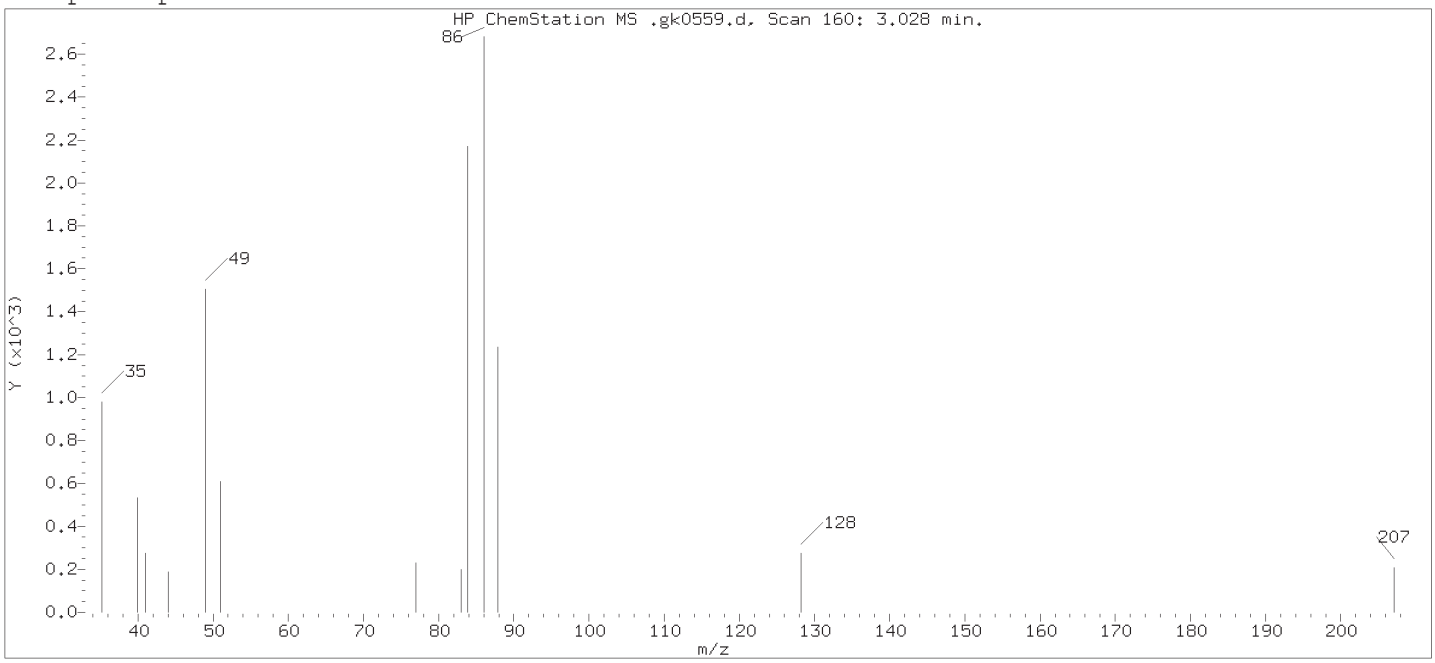
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 256		
Retention Time (minutes)	: 3.593		
Quant Ion	: 79.00		
Area (flag)	: 8319M		
On-Column Amount (ng/ul)	: 0.6828		
Integration start scan	: 241	Integration stop scan:	303
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

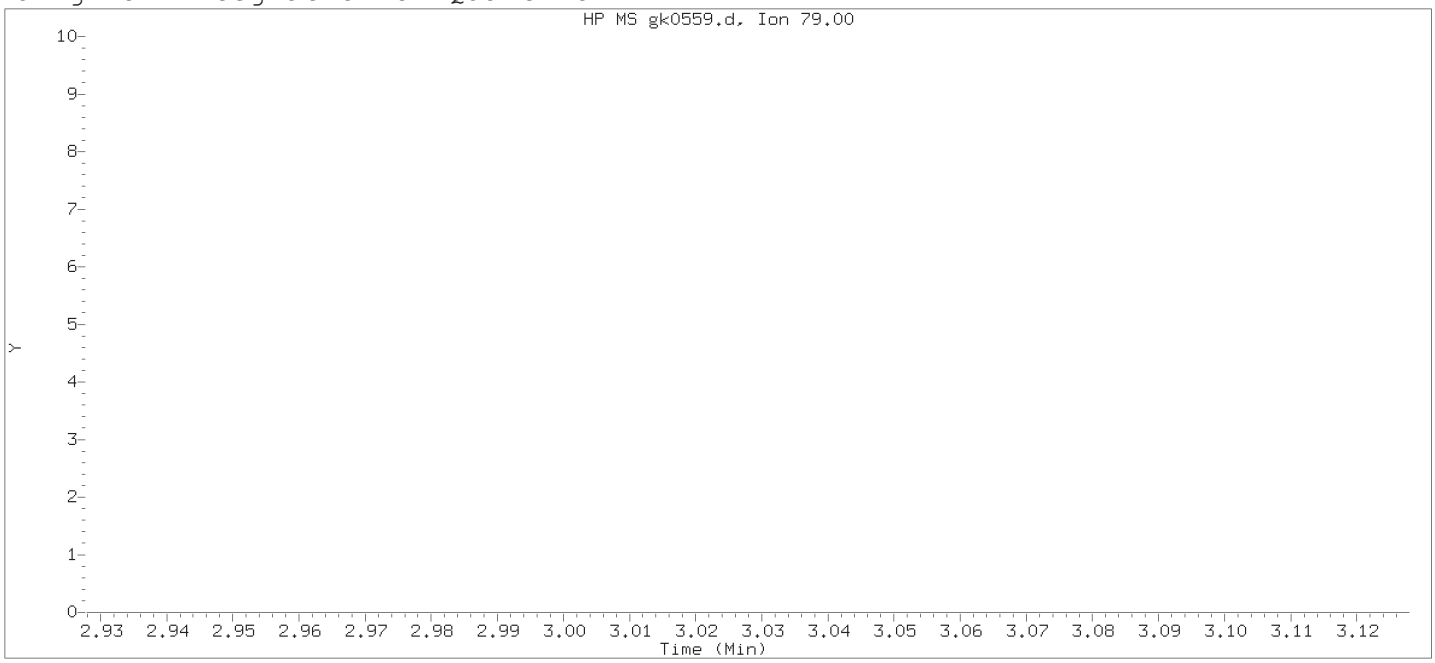
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

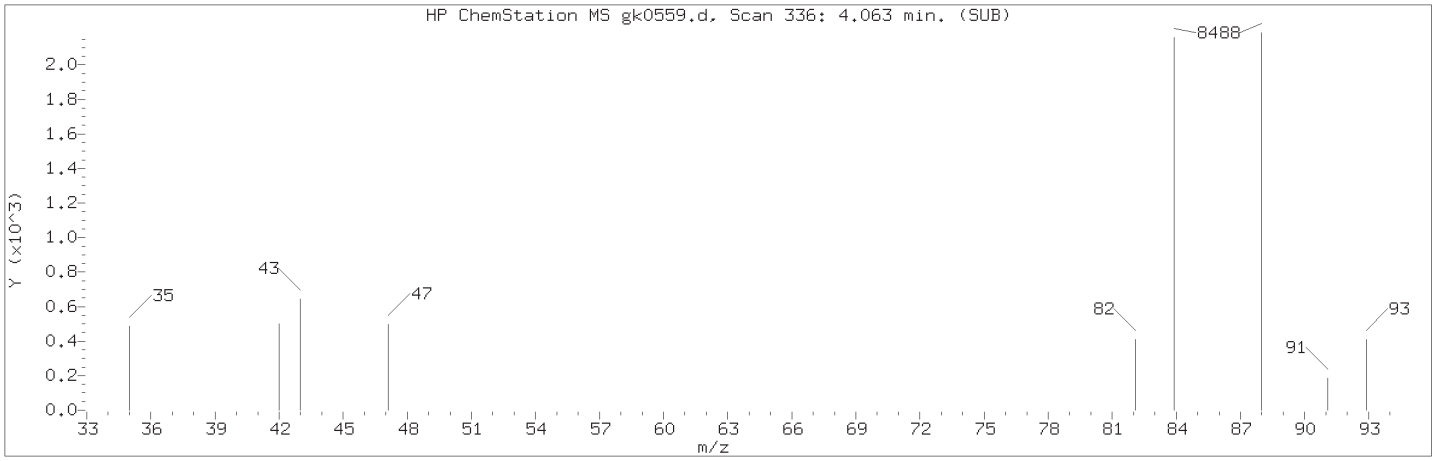
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

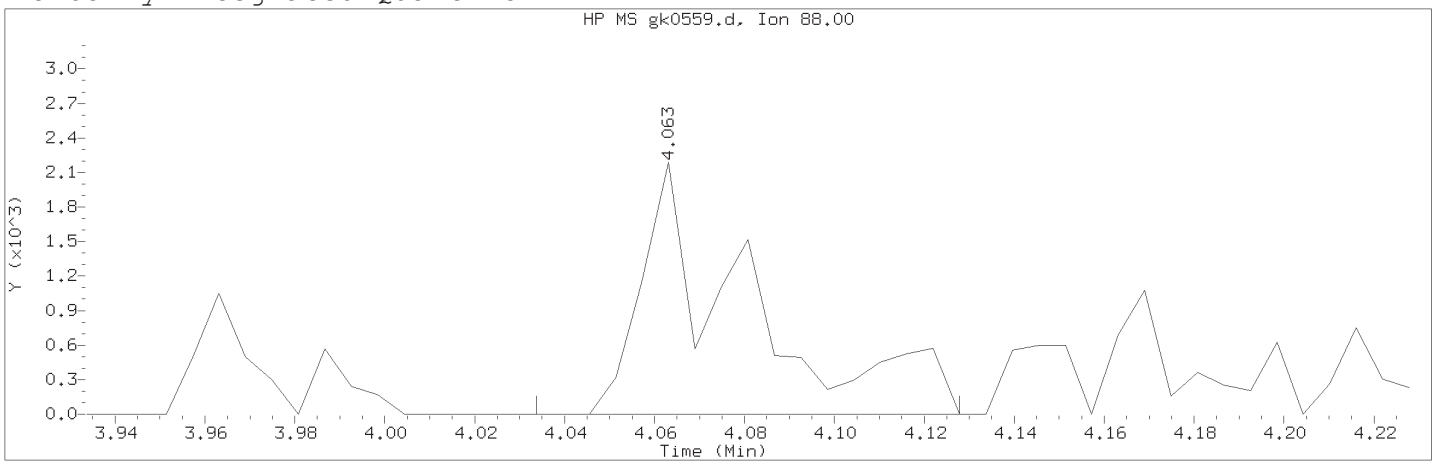
Compound Number : 5
Compound Name : Pyridine
Expected RT (minutes) : 3.028
Quant Ion : 79.00

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

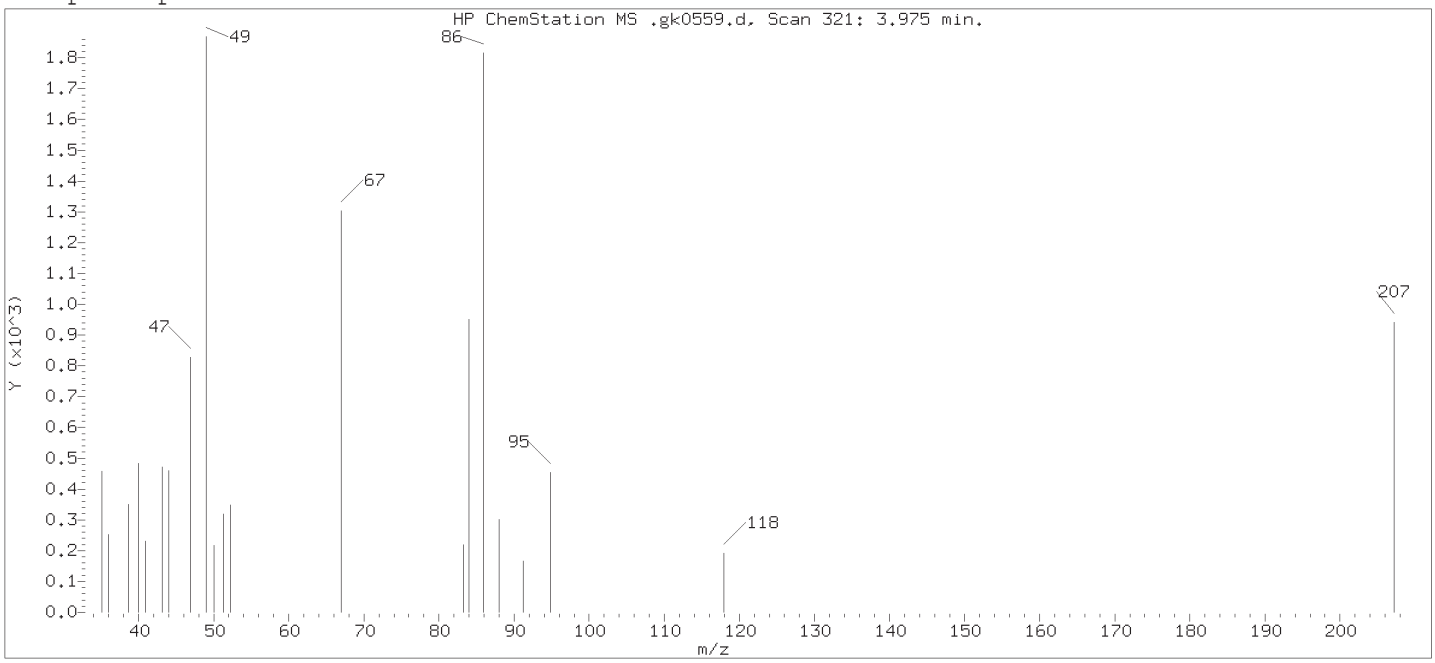
Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 336		
Retention Time (minutes)	: 4.063		
Quant Ion	: 88.00		
Area (flag)	: 3499M		
On-Column Amount (ng/ul)	: 0.5369		
Integration start scan	: 330	Integration stop scan:	346
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

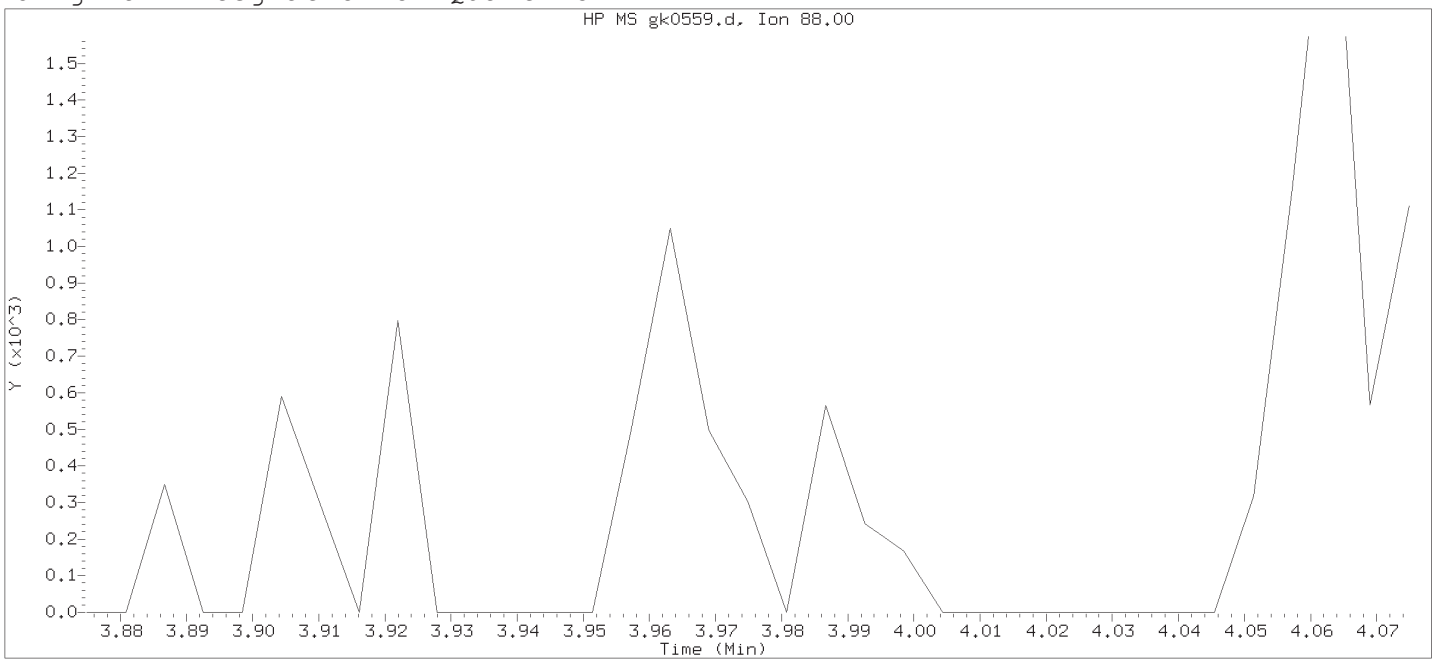
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

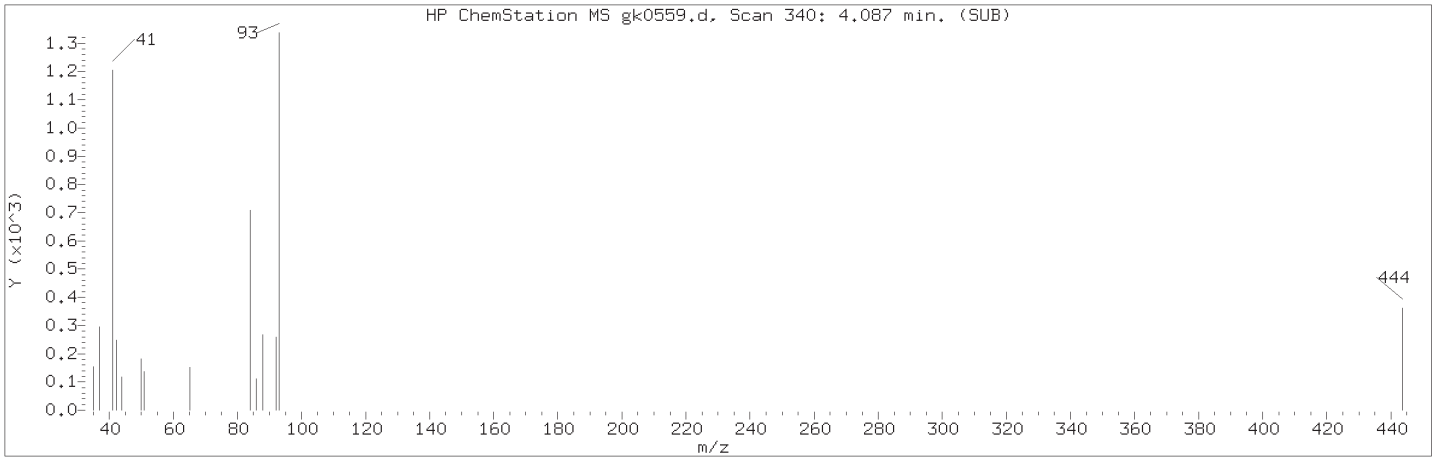
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

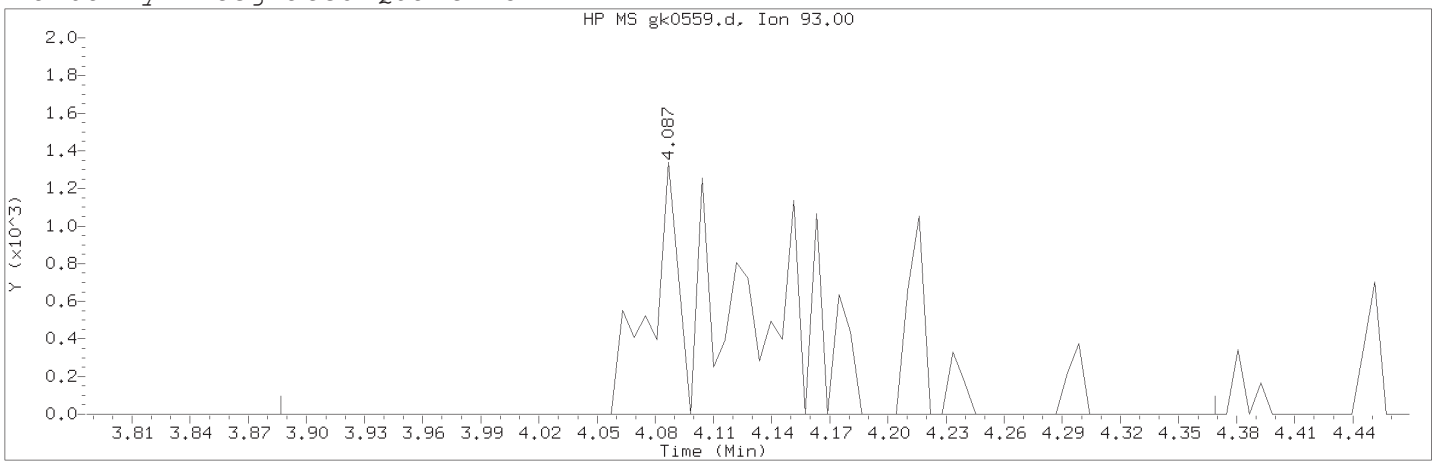
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 3.975
Quant Ion : 88.00

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

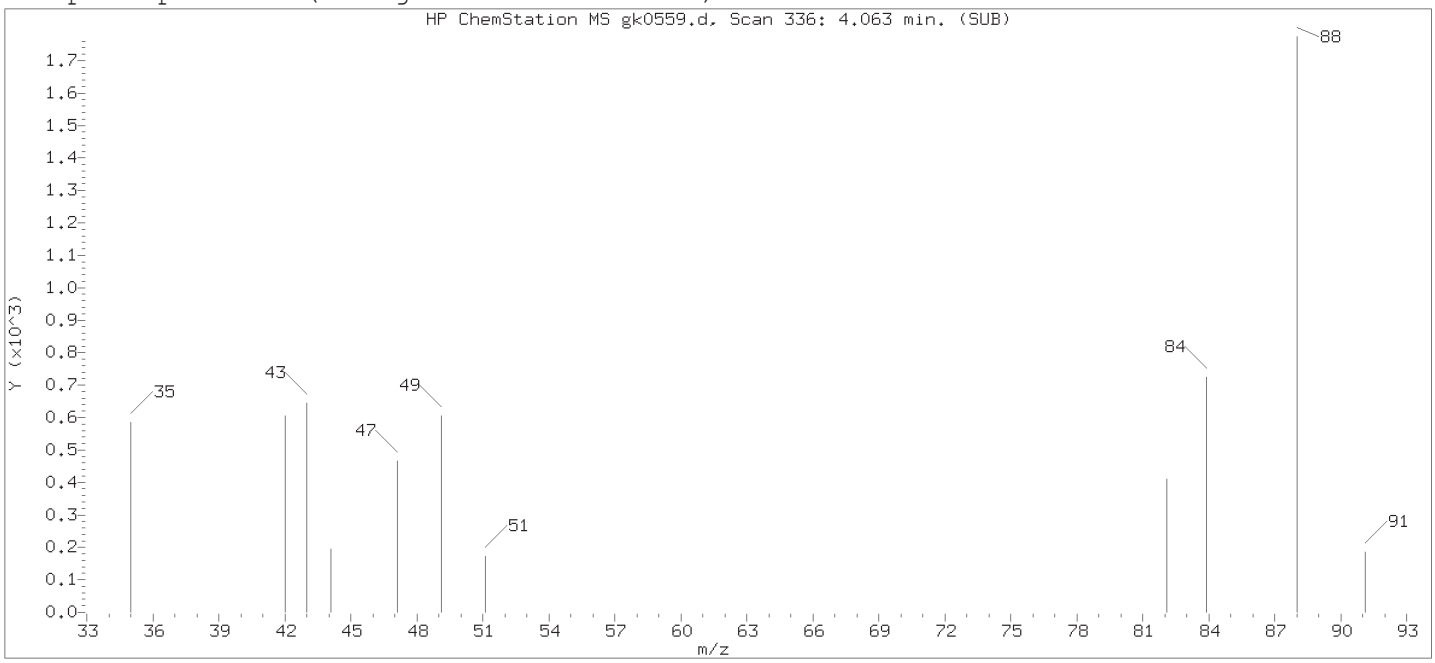
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 340		
Retention Time (minutes)	: 4.087		
Quant Ion	: 93.00		
Area (flag)	: 5136M		
On-Column Amount (ng/ul)	: 0.3892		
Integration start scan	: 305	Integration stop scan:	387
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

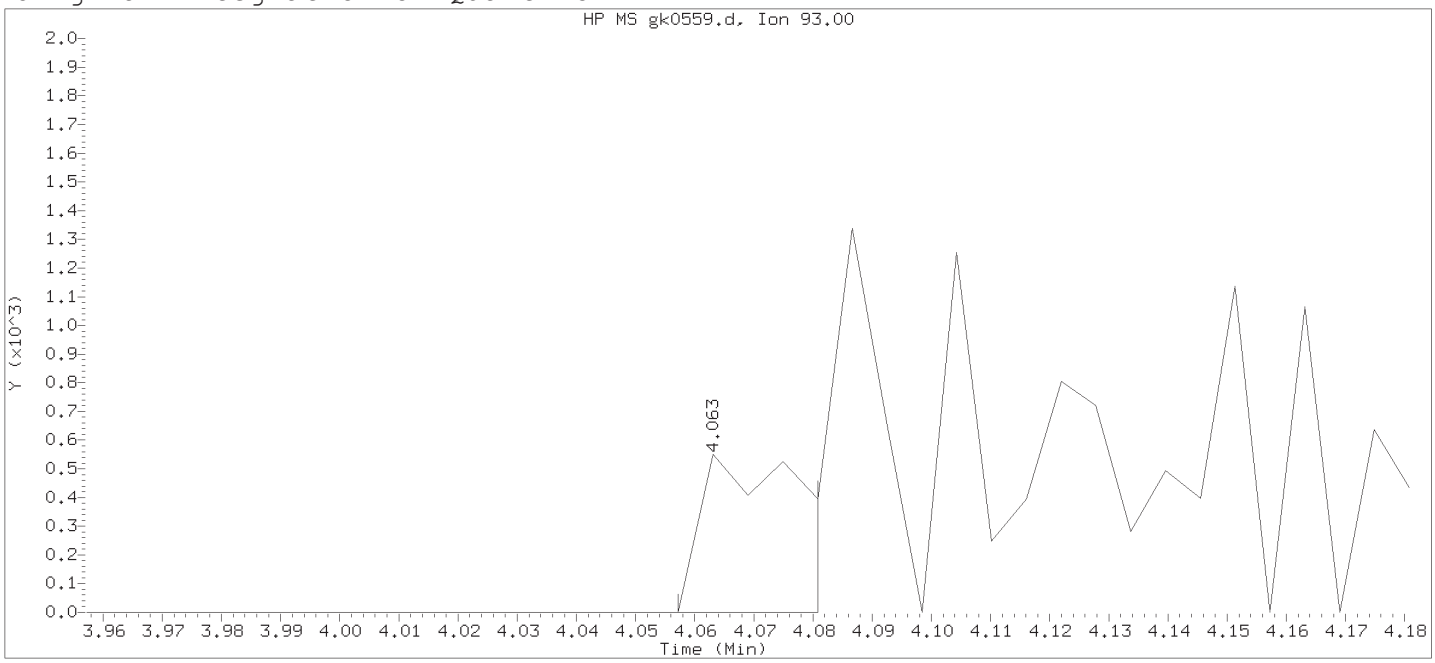
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

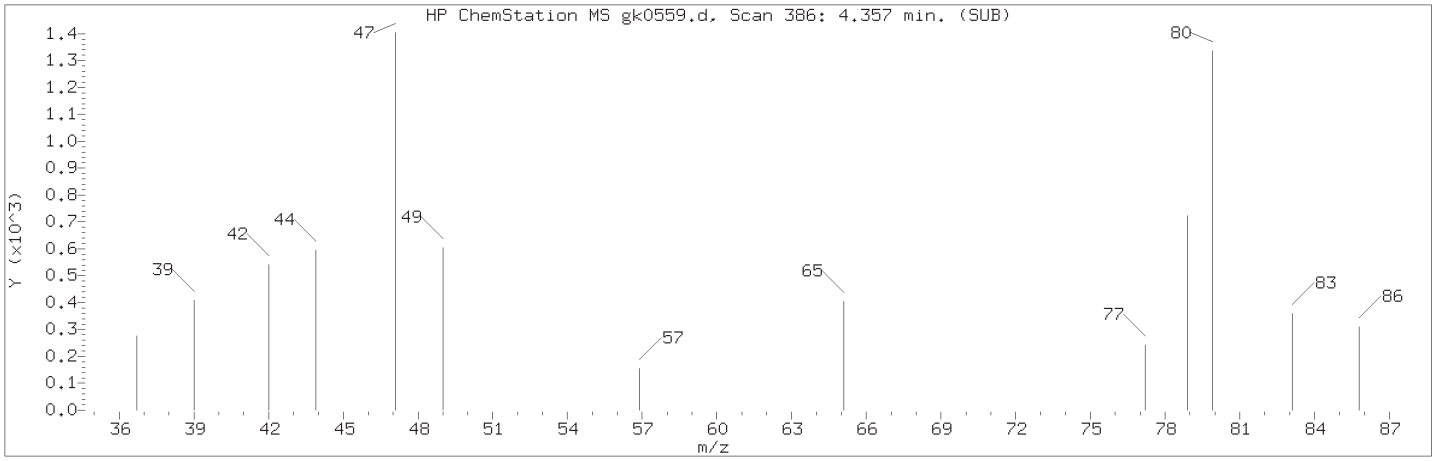
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

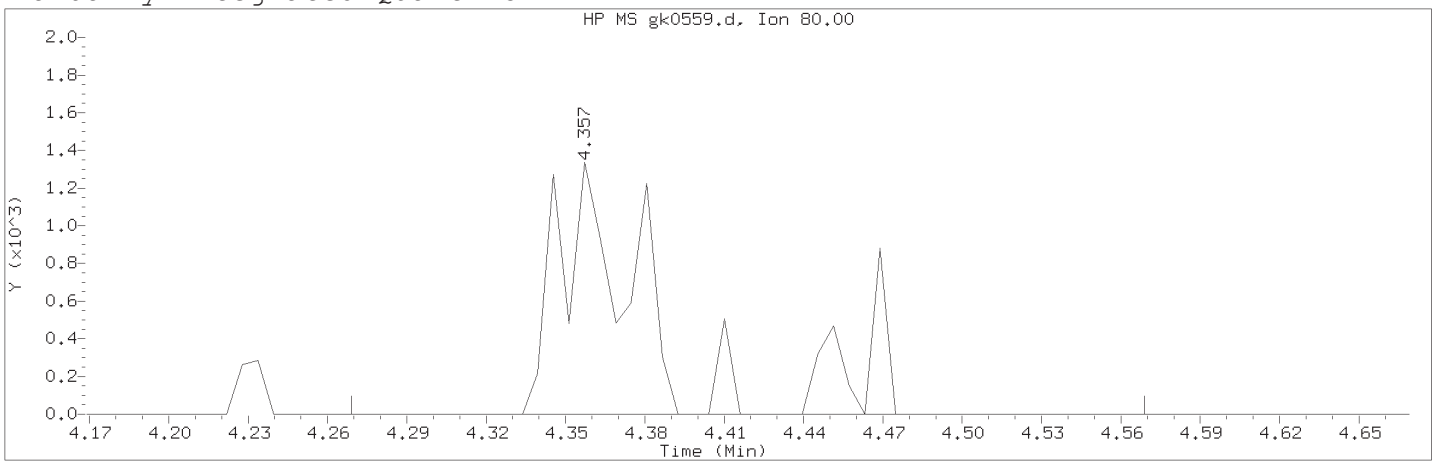
Compound Number : 7
Compound Name : 2-Picoline
Scan Number : 336
Retention Time (minutes) : 4.063
Quant Ion : 93.00
Area : 593
On-column Amount (ng/ul) : 0.0531
Integration start scan : 334 Integration stop scan: 338
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

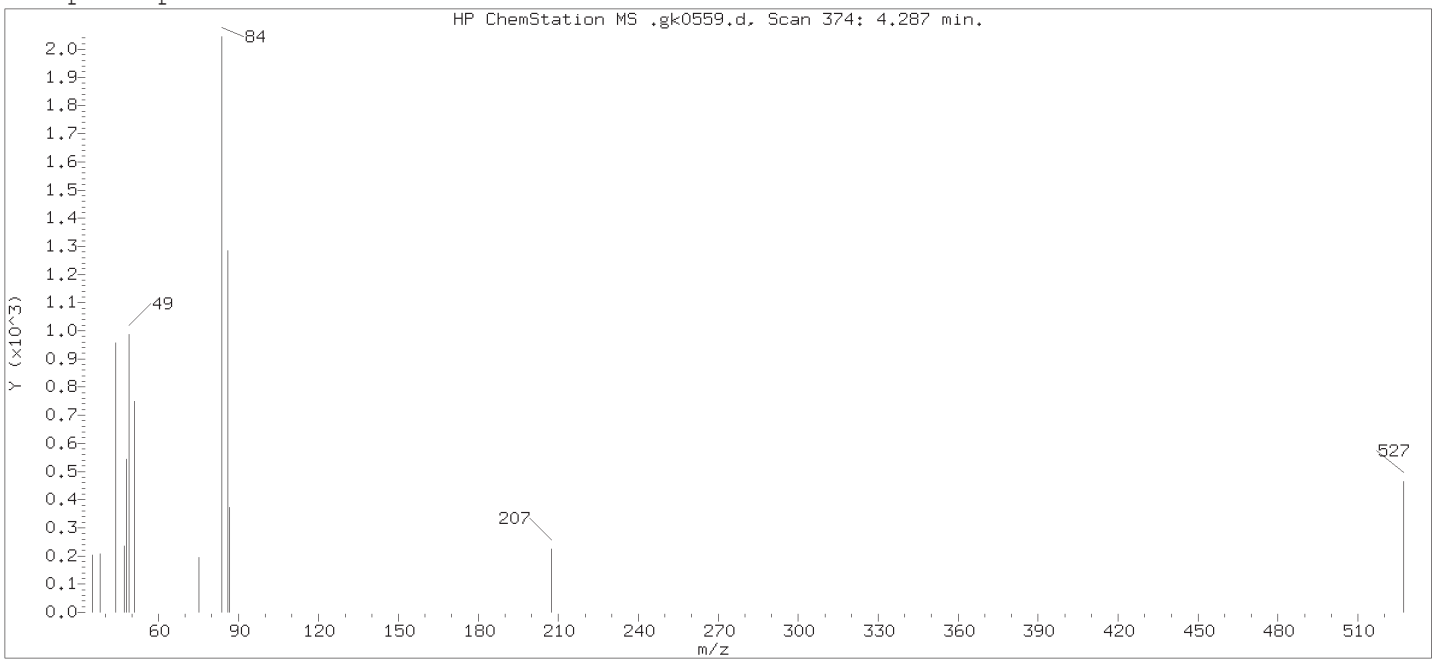
Compound Number	: 9		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 386		
Retention Time (minutes)	: 4.357		
Quant Ion	: 80.00		
Area (flag)	: 3236M		
On-Column Amount (ng/ul)	: 0.4750		
Integration start scan	: 370	Integration stop scan:	421
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

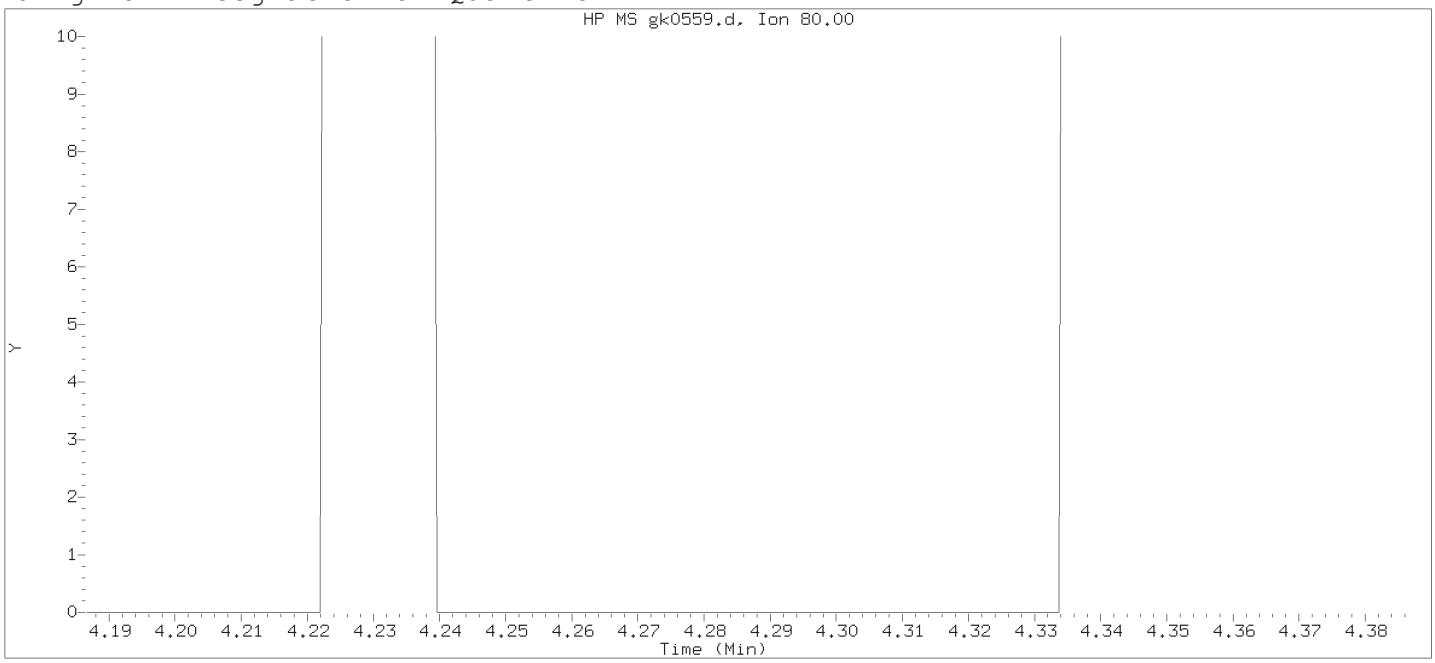
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

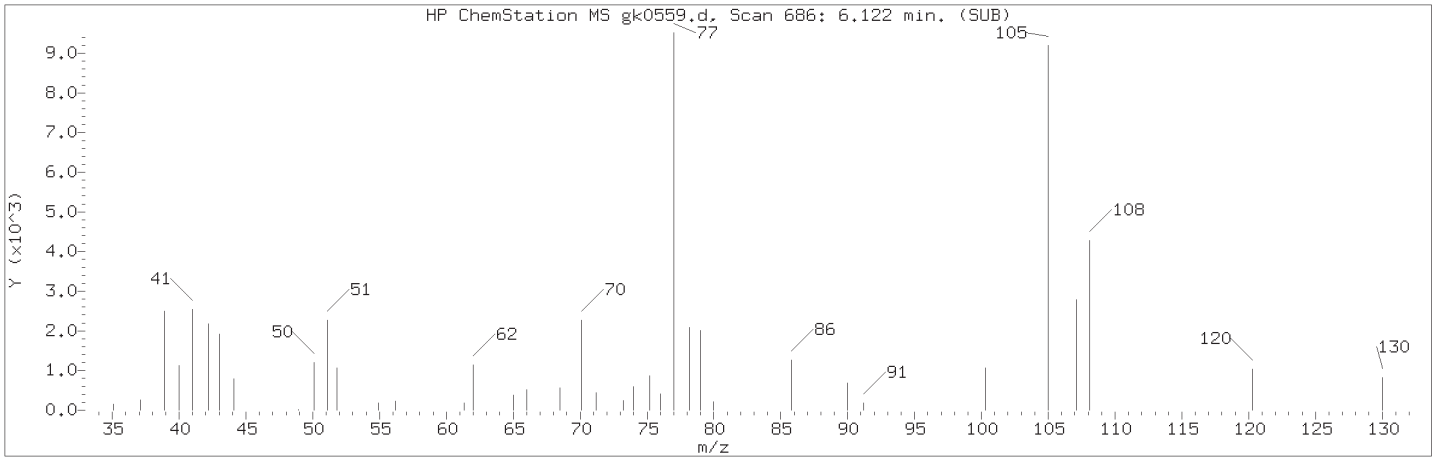
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

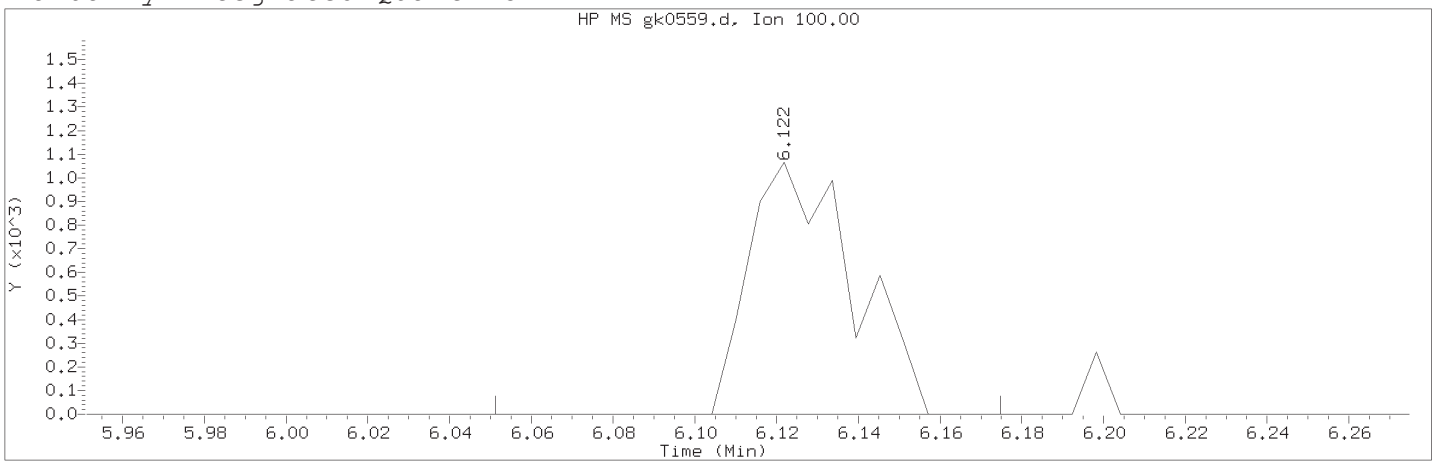
Compound Number : 9
Compound Name : Methyl methanesulfonate
Expected RT (minutes) : 4.287
Quant Ion : 80.00

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

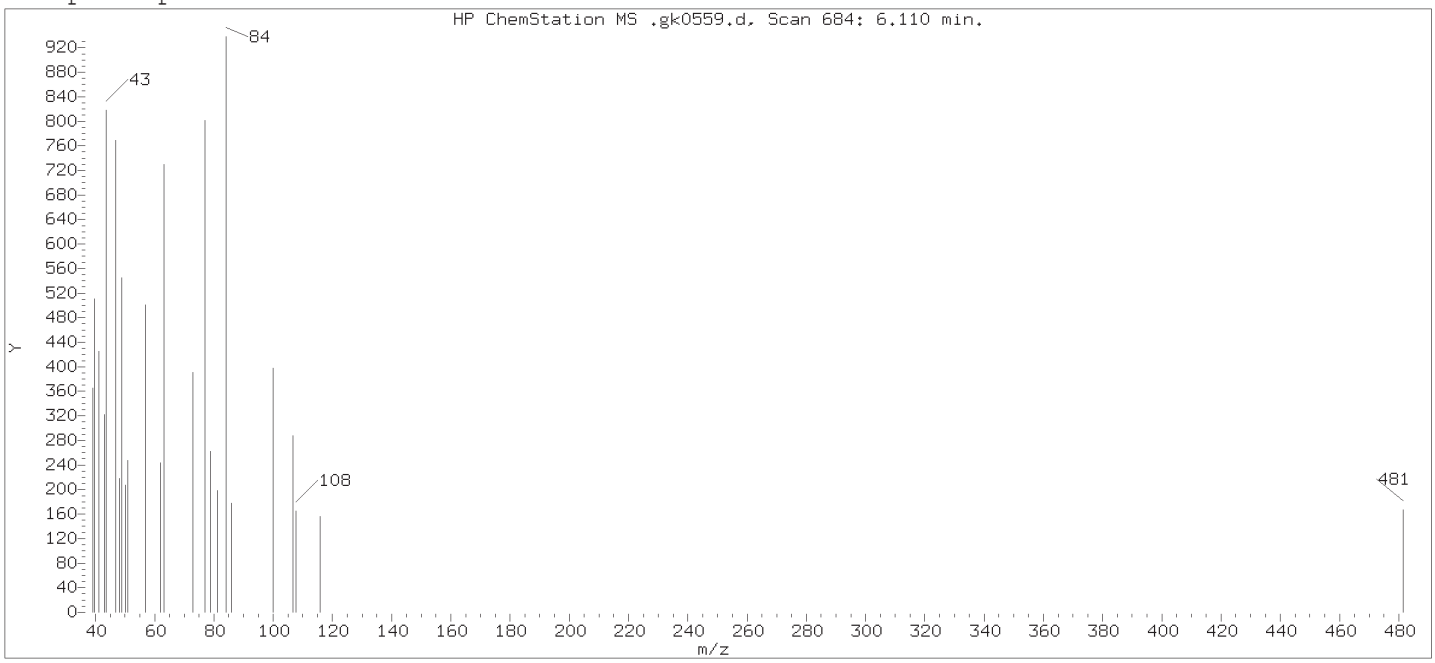
Compound Number	: 35		
Compound Name	: N-Nitrosopyrrolidine		
Scan Number	: 686		
Retention Time (minutes)	: 6.122		
Quant Ion	: 100.00		
Area (flag)	: 1894M		
On-Column Amount (ng/ul)	: 0.2927		
Integration start scan	: 673	Integration stop scan:	694
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

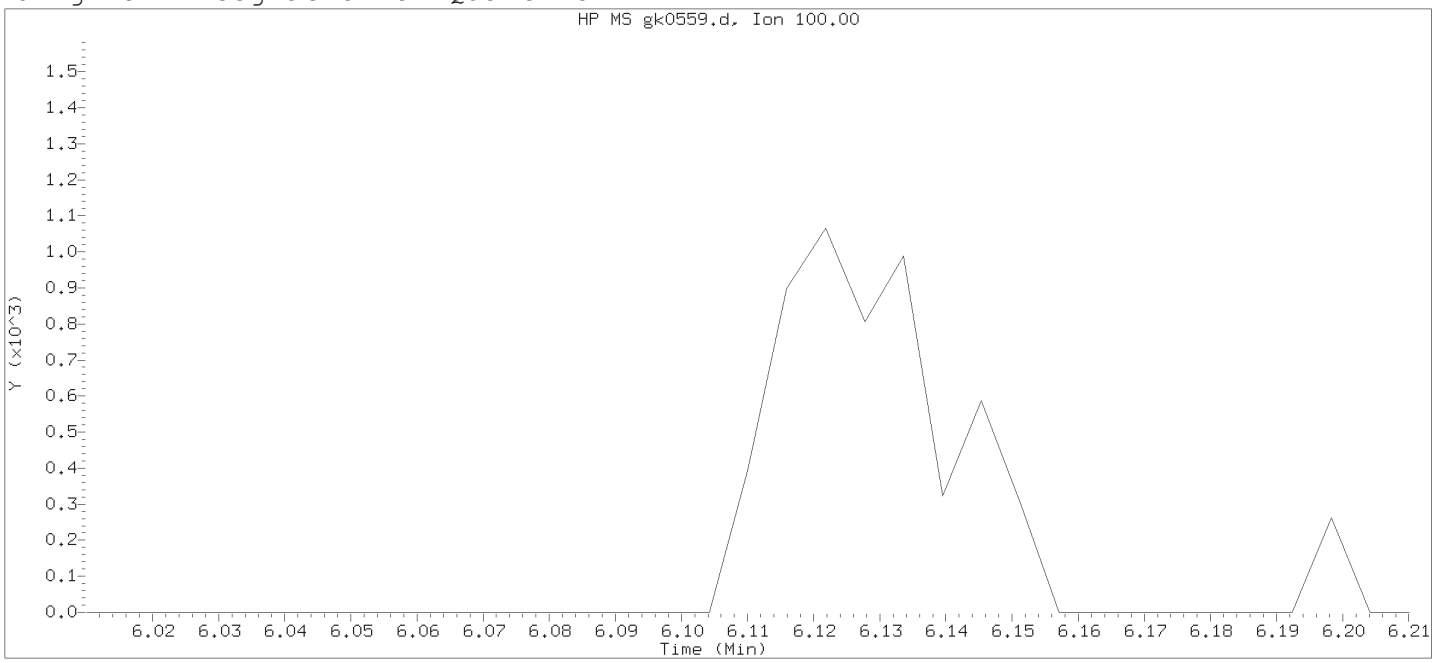
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

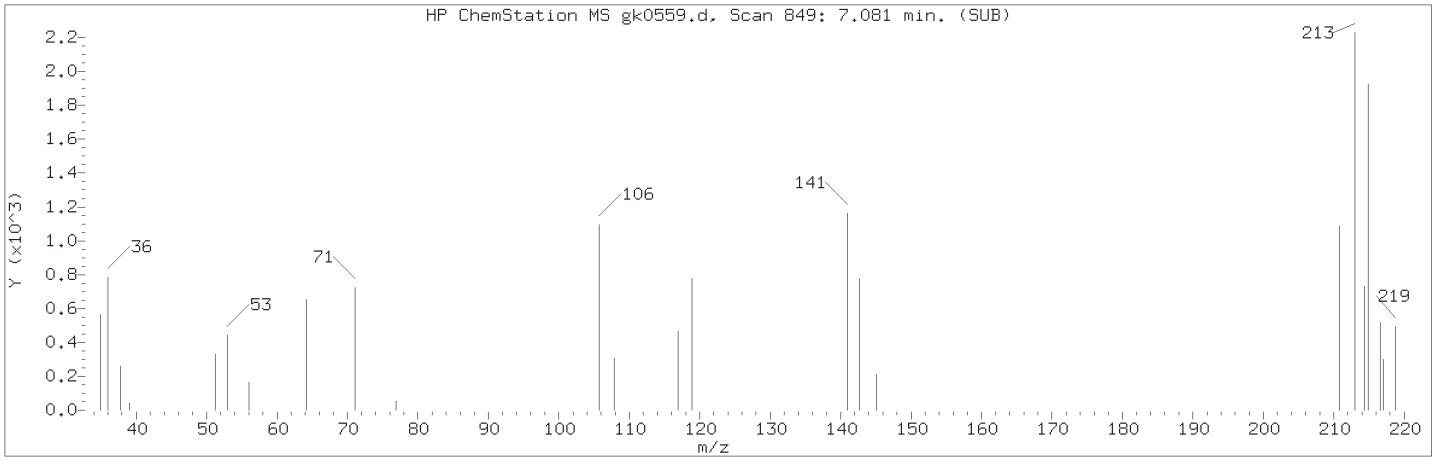
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

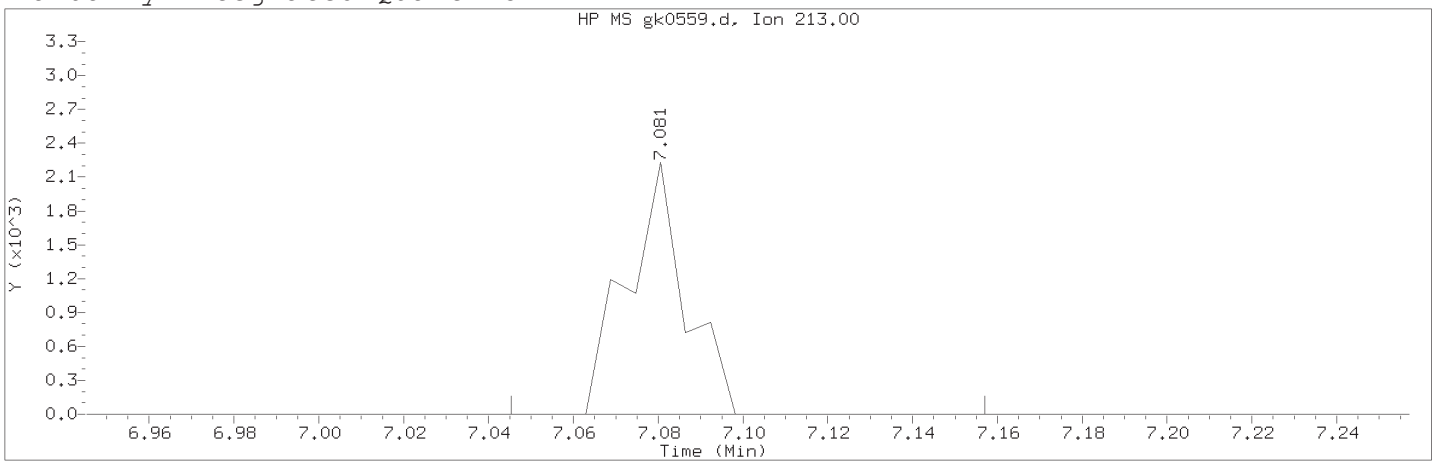
Compound Number : 35
Compound Name : N-Nitrosopyrrolidine
Expected RT (minutes) : 6.110
Quant Ion : 100.00

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

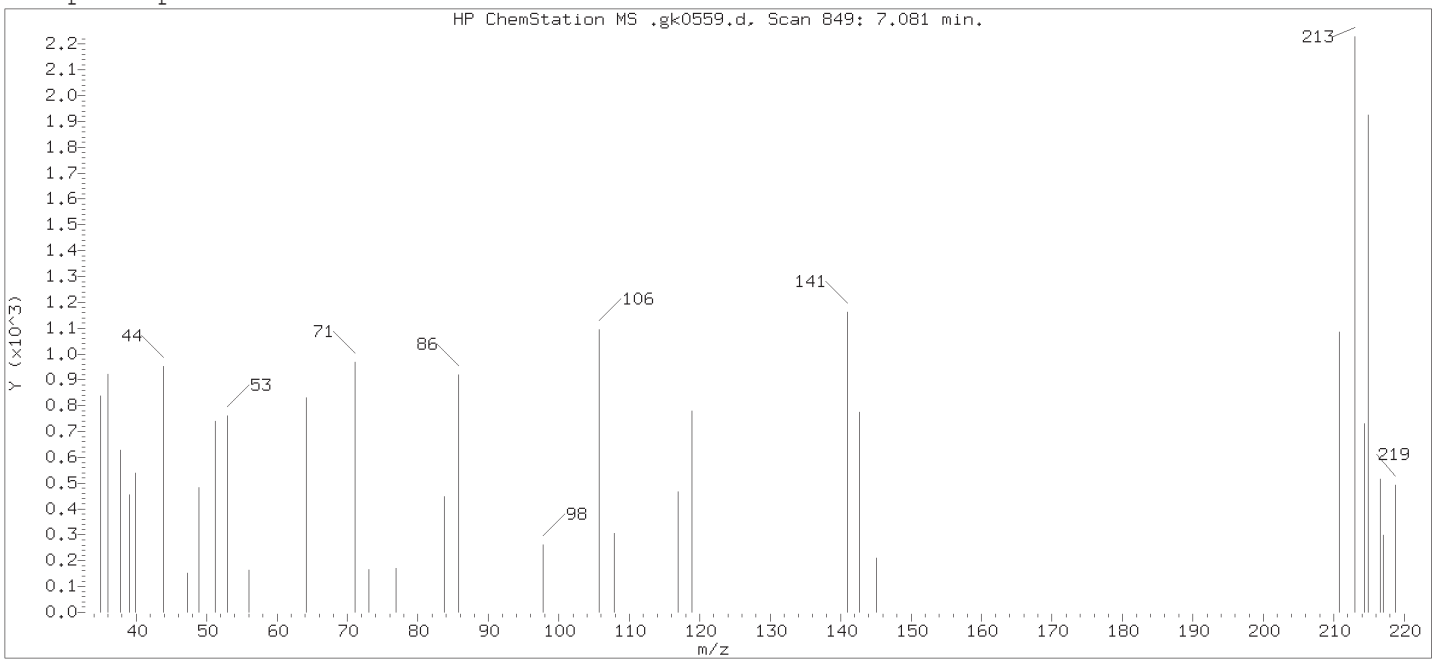
Compound Number	: 69		
Compound Name	: Hexachloropropene		
Scan Number	: 849		
Retention Time (minutes)	: 7.081		
Quant Ion	: 213.00		
Area (flag)	: 2126M		
On-Column Amount (ng/ul)	: 0.4775		
Integration start scan	: 842	Integration stop scan:	861
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

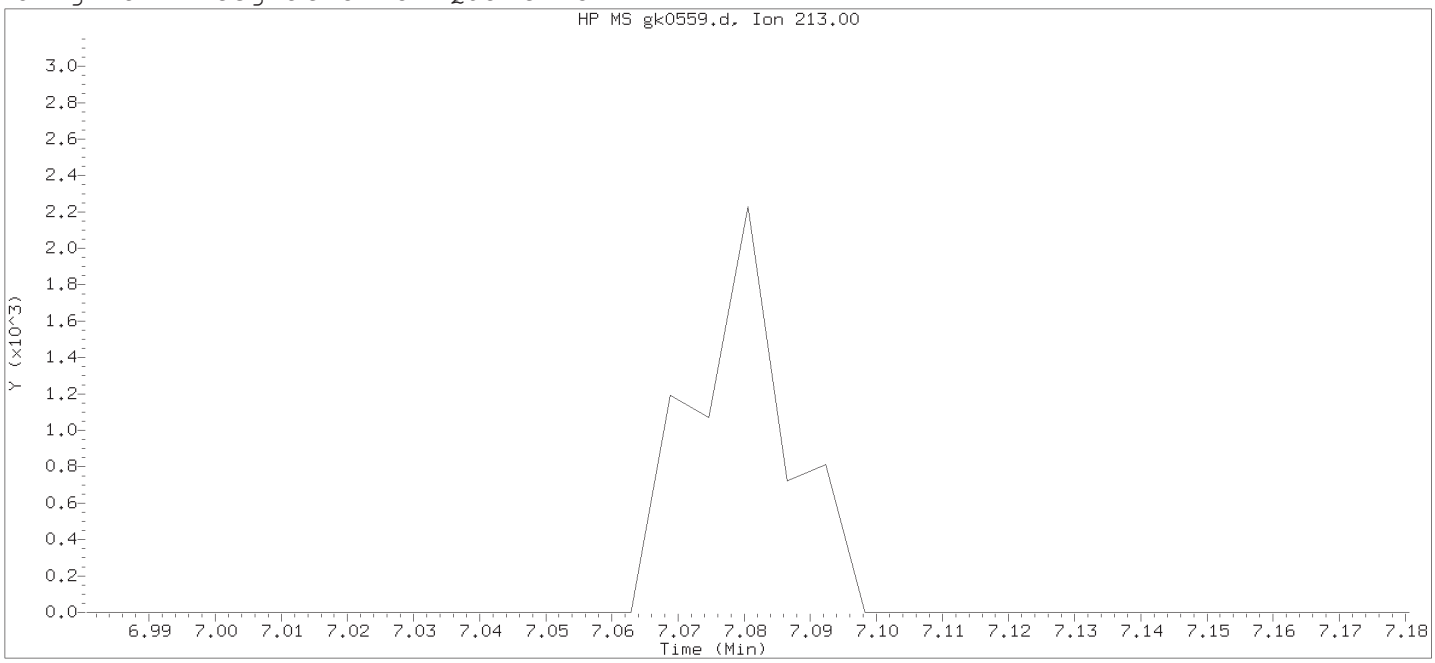
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

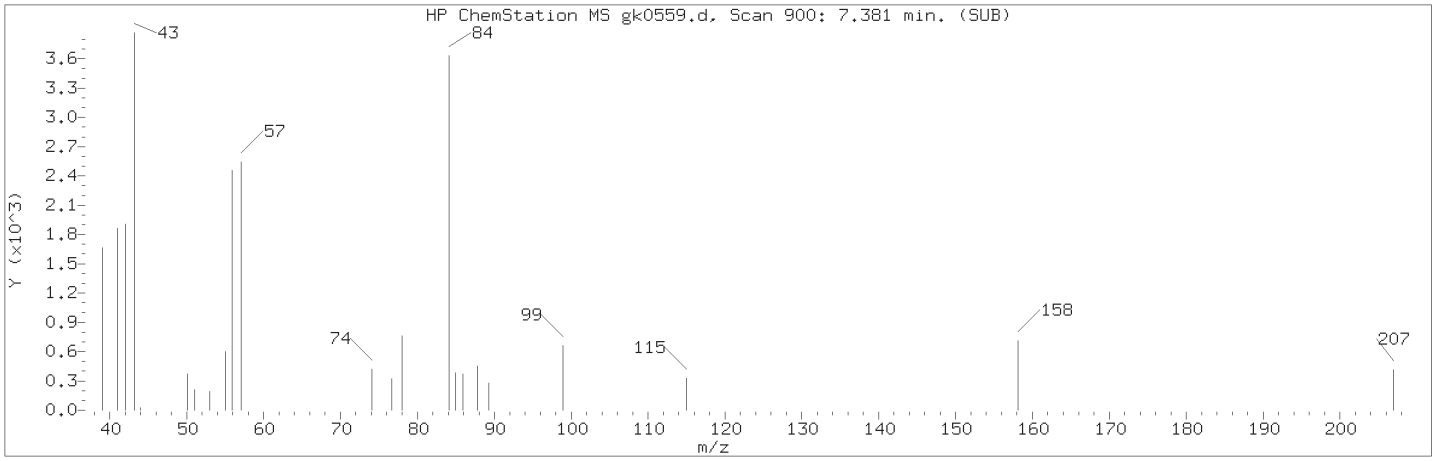
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

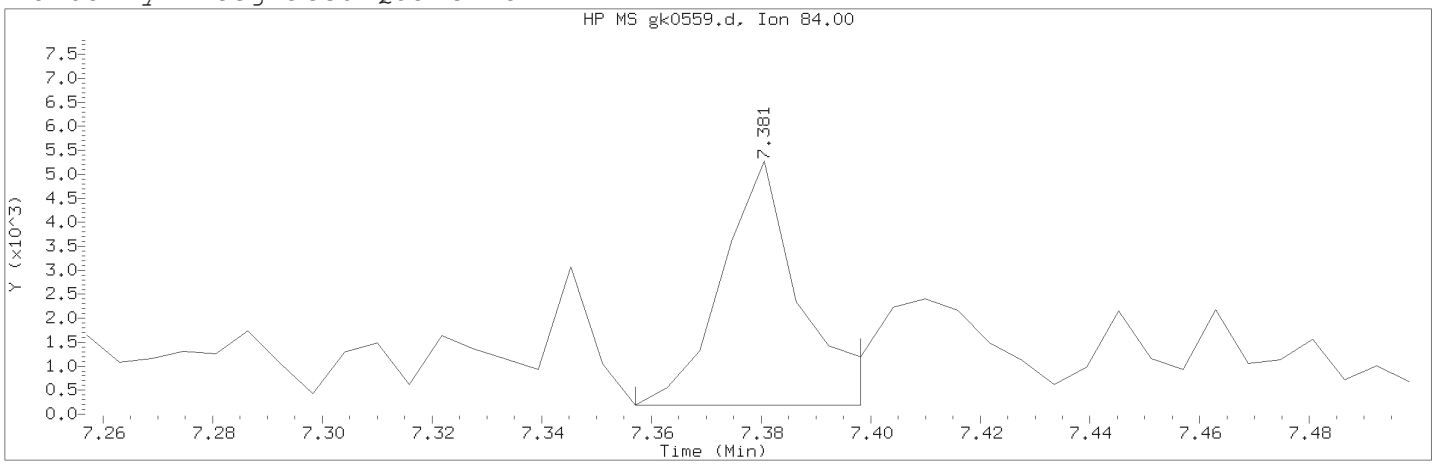
Compound Number : 69
Compound Name : Hexachloropropene
Expected RT (minutes) : 7.081
Quant Ion : 213.00

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

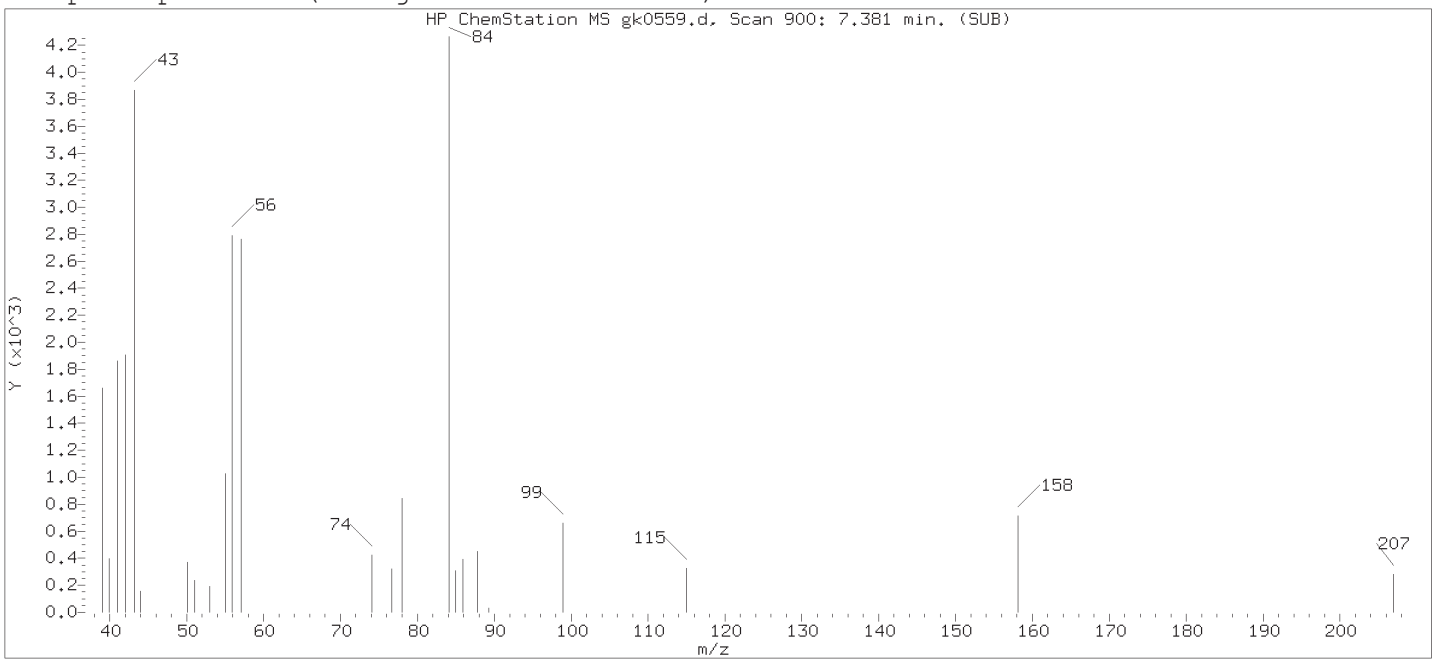
Compound Number	: 77		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 900		
Retention Time (minutes)	: 7.381		
Quant Ion	: 84.00		
Area (flag)	: 5098M		
On-Column Amount (ng/ul)	: 0.3875		
Integration start scan	: 895	Integration stop scan:	902
Y at integration start	: 183	Y at integration end:	183

Reason for manual integration: improper integration

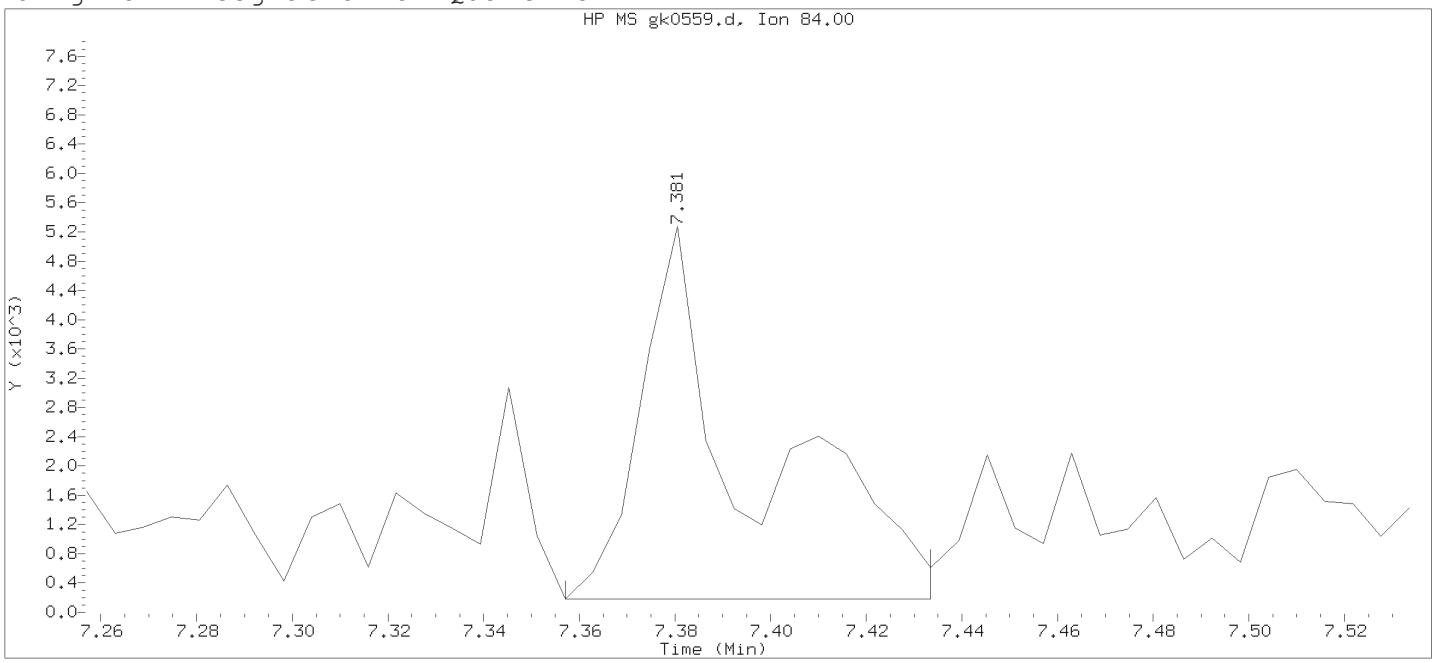
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

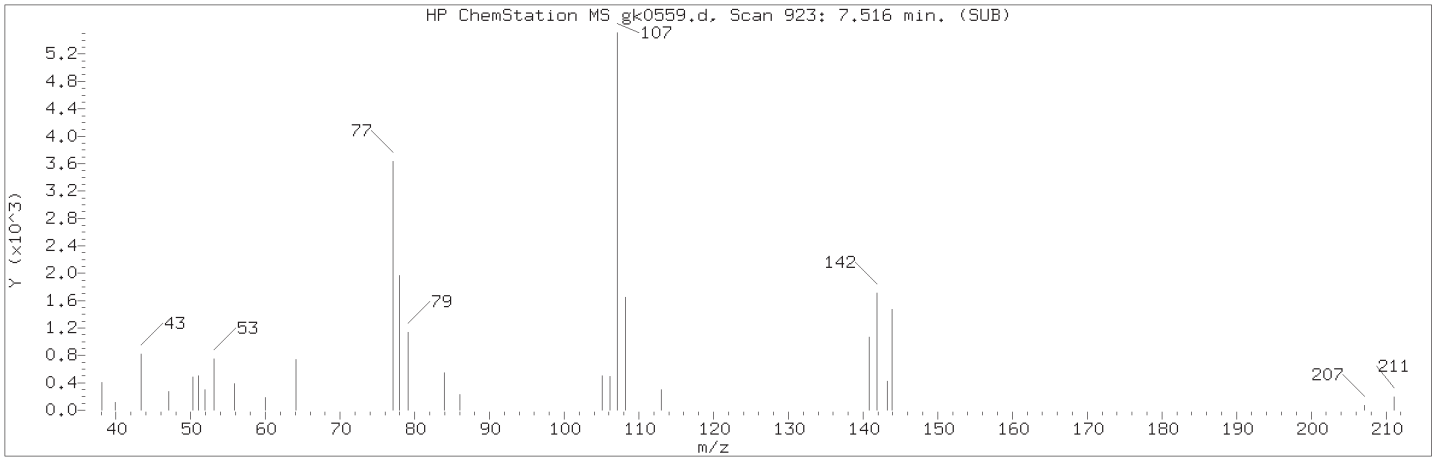
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

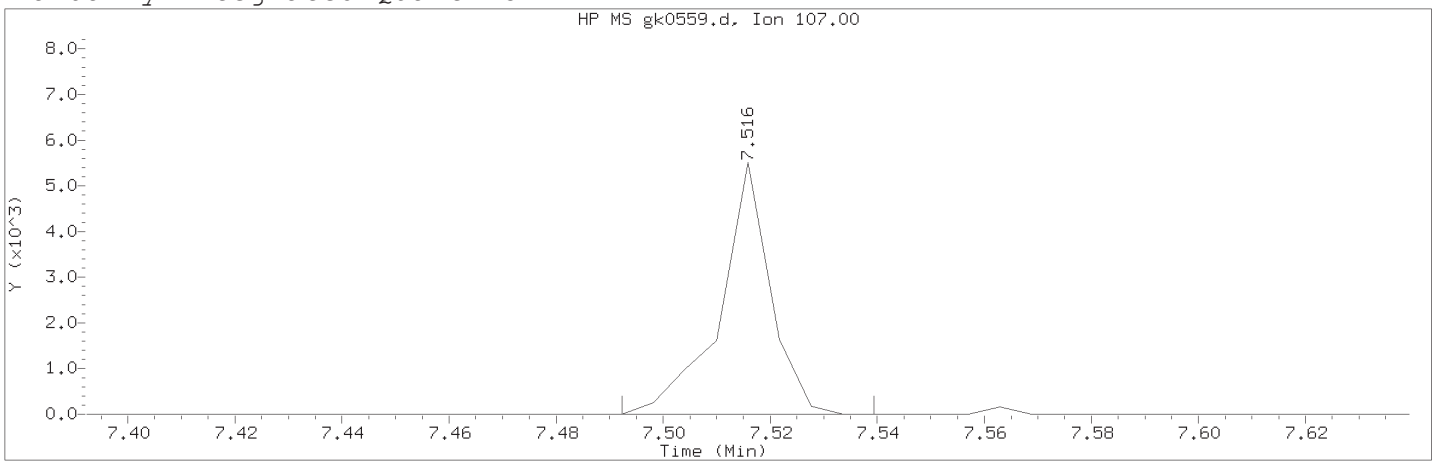
Compound Number	: 77		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 900		
Retention Time (minutes)	: 7.381		
Quant Ion	: 84.00		
Area	: 8176		
On-column Amount (ng/ul)	: 0.6386		
Integration start scan	: 895	Integration stop scan:	908
Y at integration start	: 183	Y at integration end:	183

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

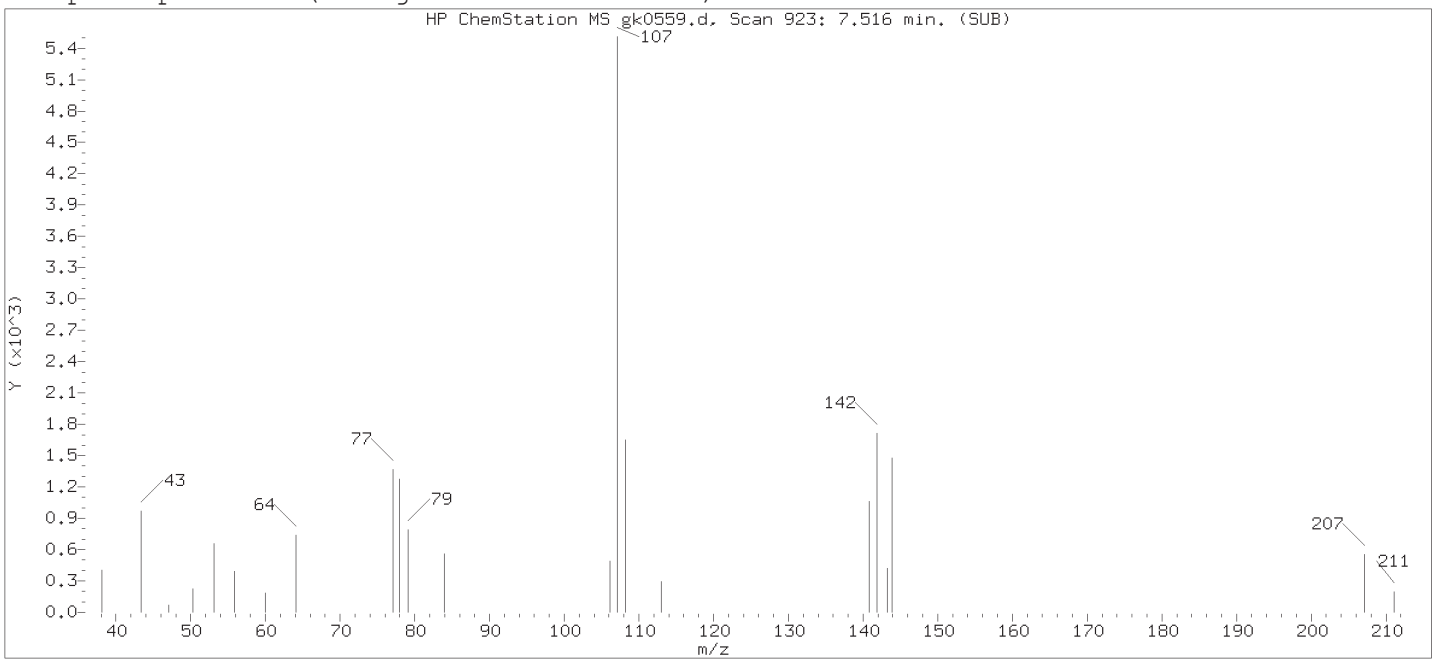
Compound Number	: 80		
Compound Name	: 4-Chloro-3-methylphenol		
Scan Number	: 923		
Retention Time (minutes)	: 7.516		
Quant Ion	: 107.00		
Area (flag)	: 3588M		
On-Column Amount (ng/ul)	: 0.3406		
Integration start scan	: 918	Integration stop scan:	926
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

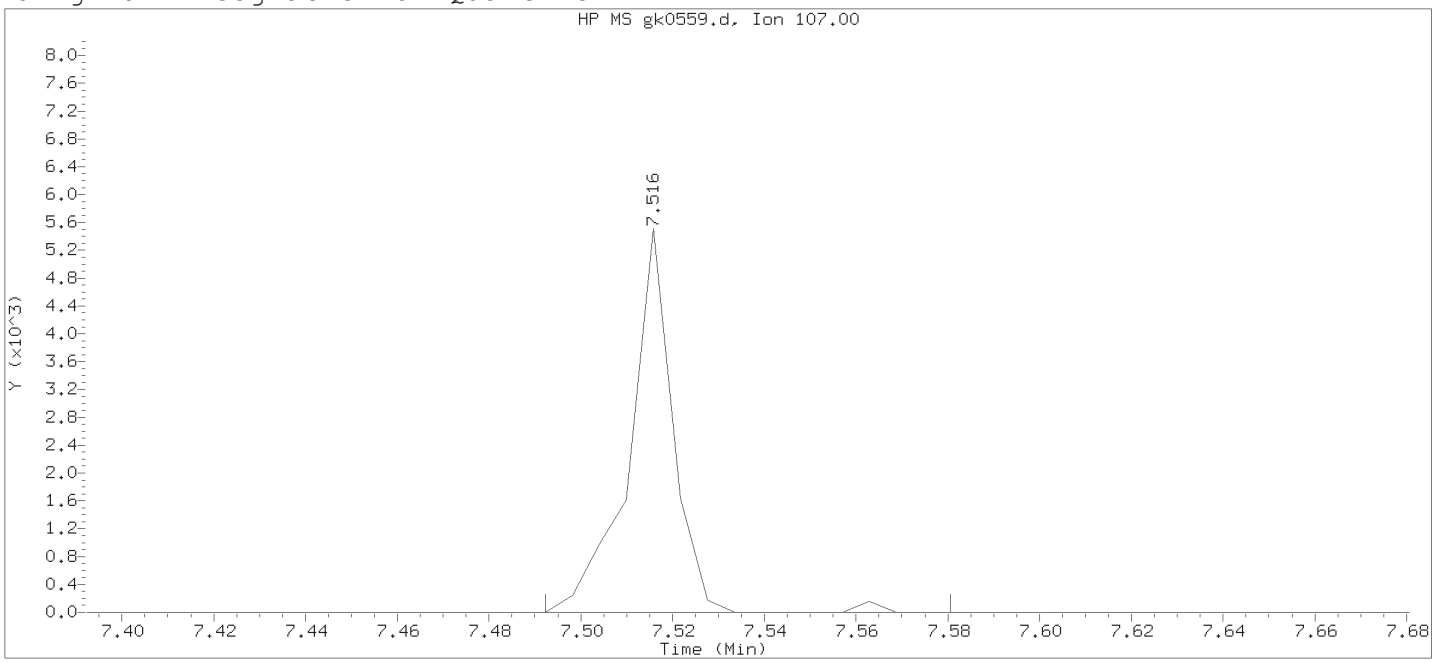
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

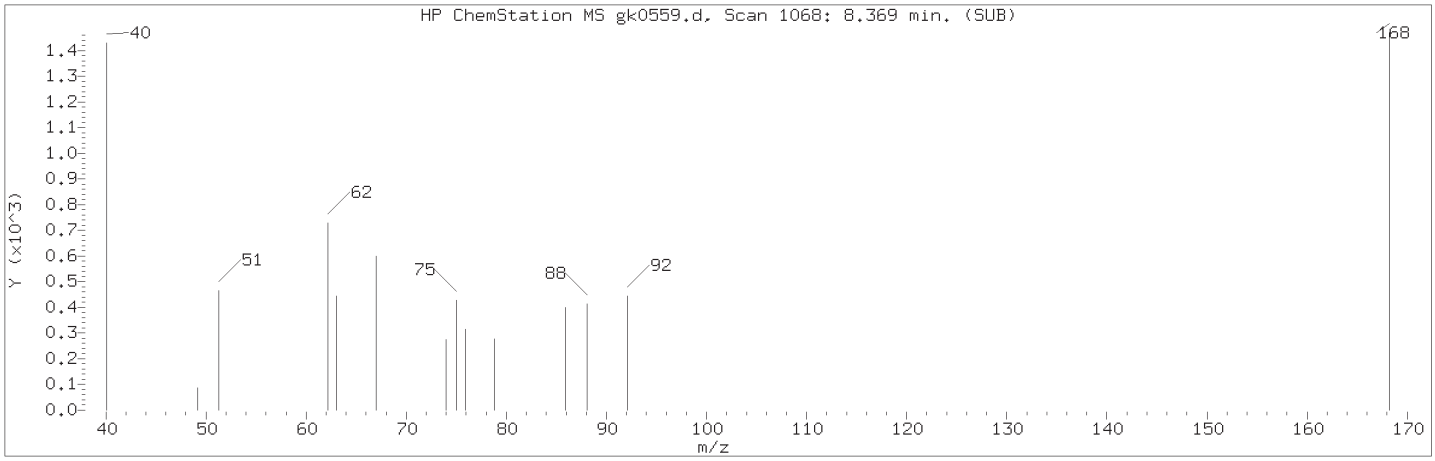
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

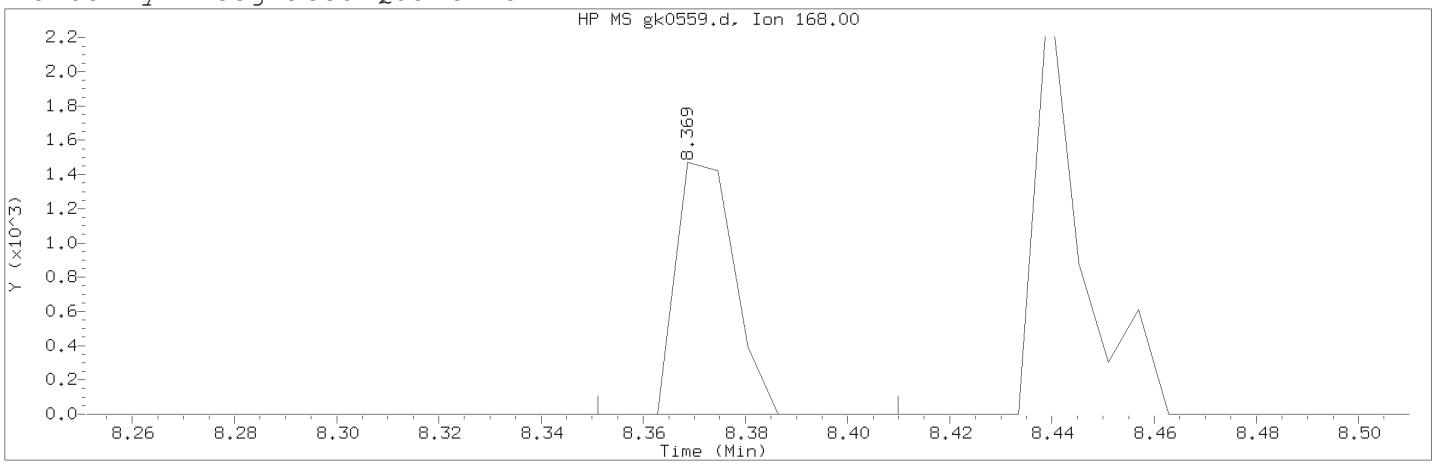
Compound Number	:	80
Compound Name	:	4-Chloro-3-methylphenol
Scan Number	:	923
Retention Time (minutes)	:	7.516
Quant Ion	:	107.00
Area	:	3644
On-column Amount (ng/ul)	:	0.3510
Integration start scan	:	918 Integration stop scan: 933
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

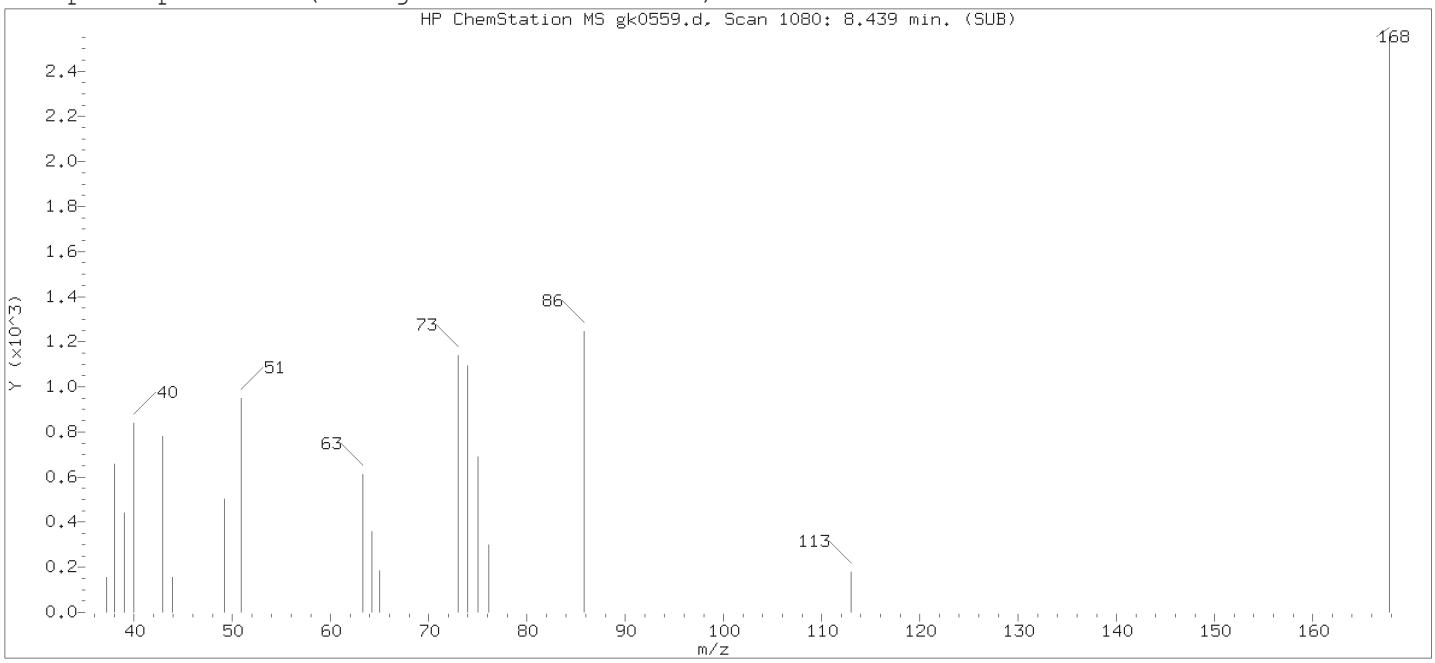
Compound Number : 105
Compound Name : 1,4-Dinitrobenzene
Scan Number : 1068
Retention Time (minutes) : 8.369
Quant Ion : 168.00
Area (flag) : 1158M
On-Column Amount (ng/ul) : 0.3304
Integration start scan : 1064 Integration stop scan: 1074
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

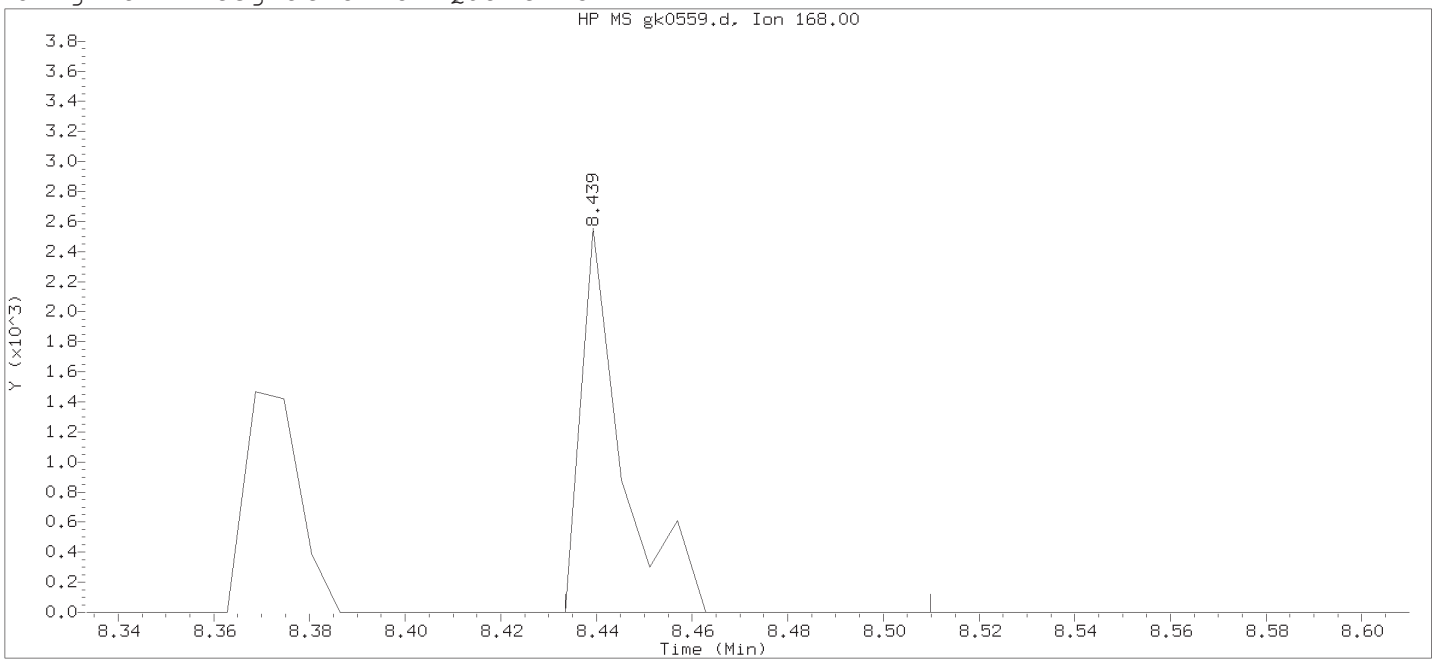
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

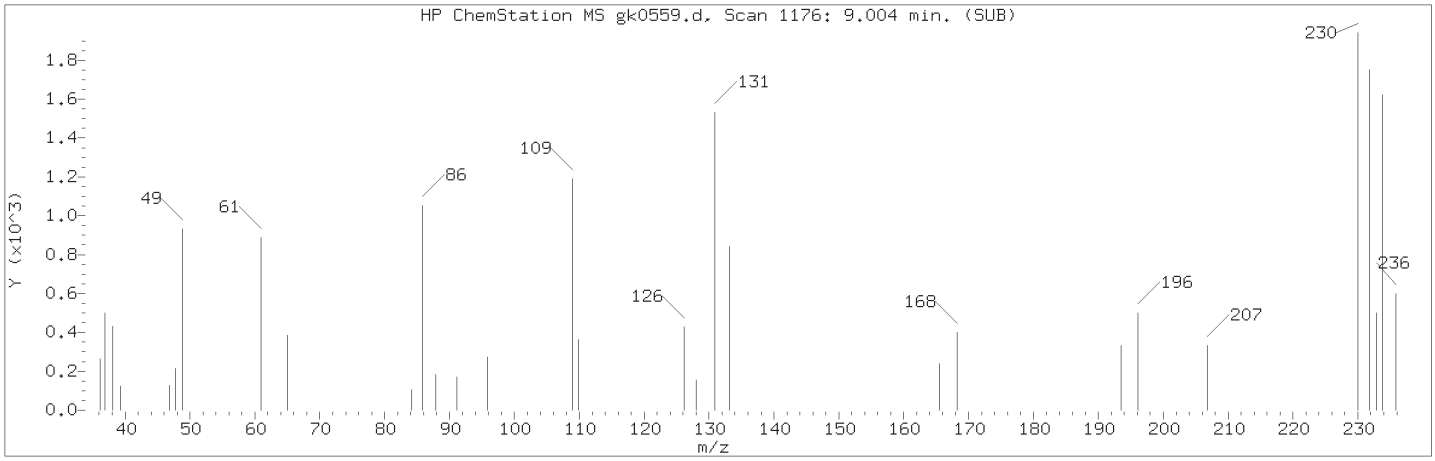
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

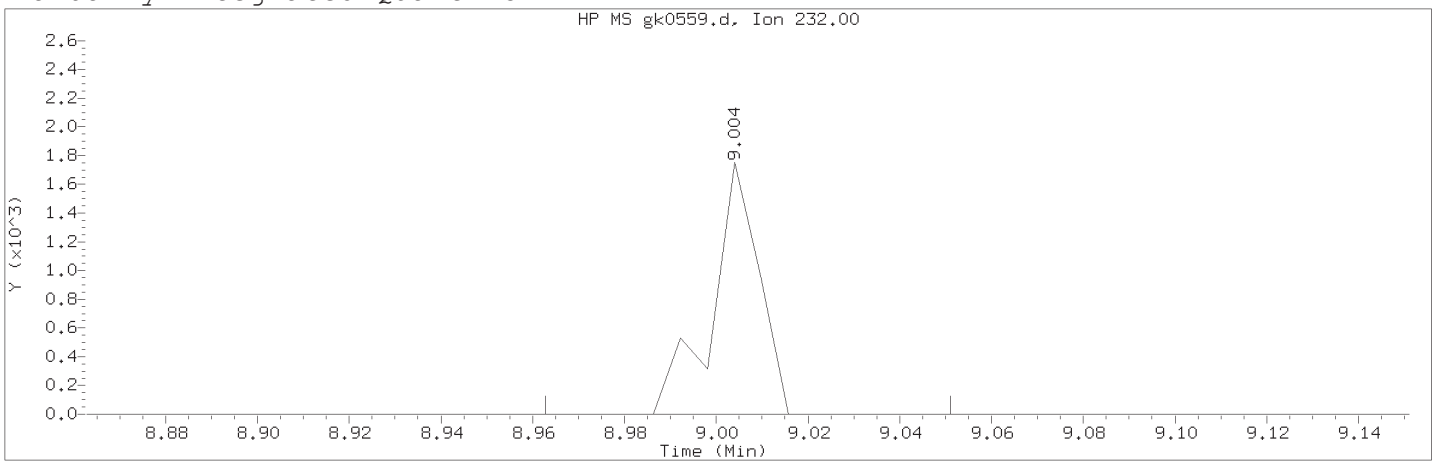
Compound Number : 105
Compound Name : 1,4-Dinitrobenzene
Scan Number : 1080
Retention Time (minutes) : 8.439
Quant Ion : 168.00
Area : 1533
On-column Amount (ng/ul) : 0.4387
Integration start scan : 1078 Integration stop scan: 1091
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

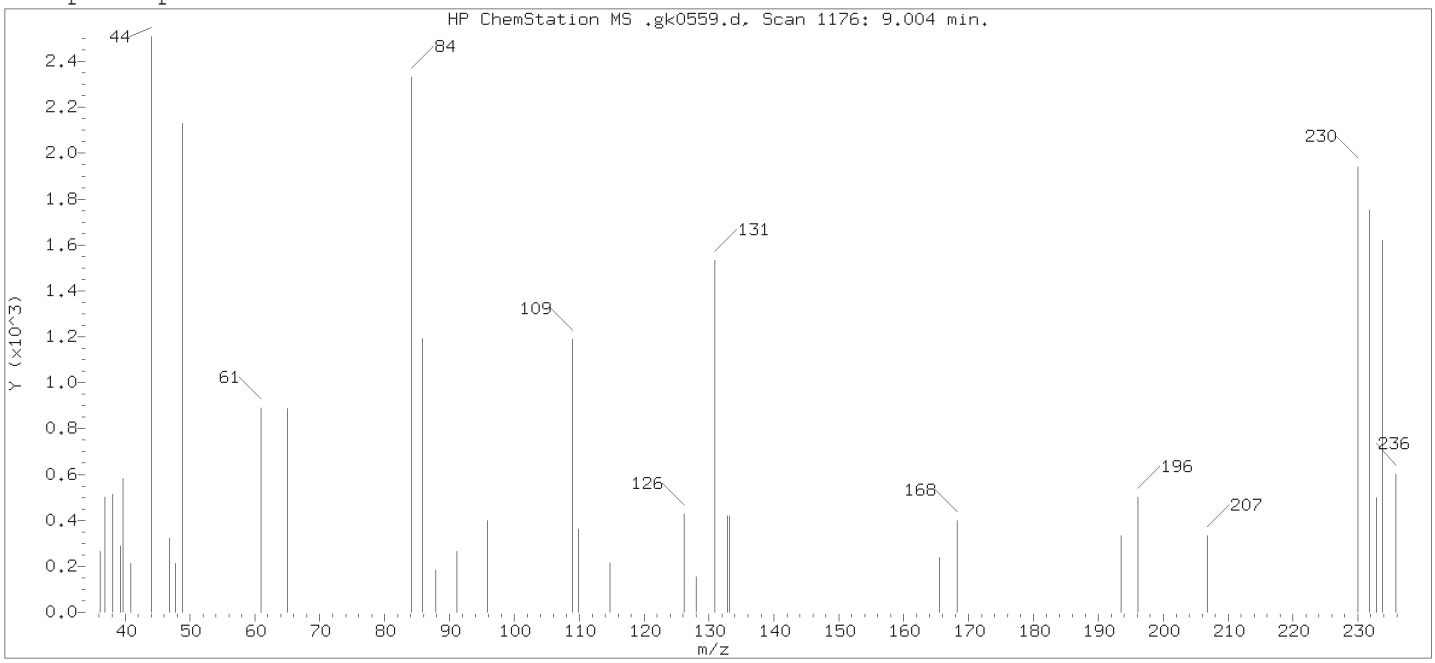
Compound Number : 122
Compound Name : 2,3,4,6-Tetrachlorophenol
Scan Number : 1176
Retention Time (minutes) : 9.004
Quant Ion : 232.00
Area (flag) : 1248M
On-Column Amount (ng/ul) : 0.2427
Integration start scan : 1168 Integration stop scan: 1183
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

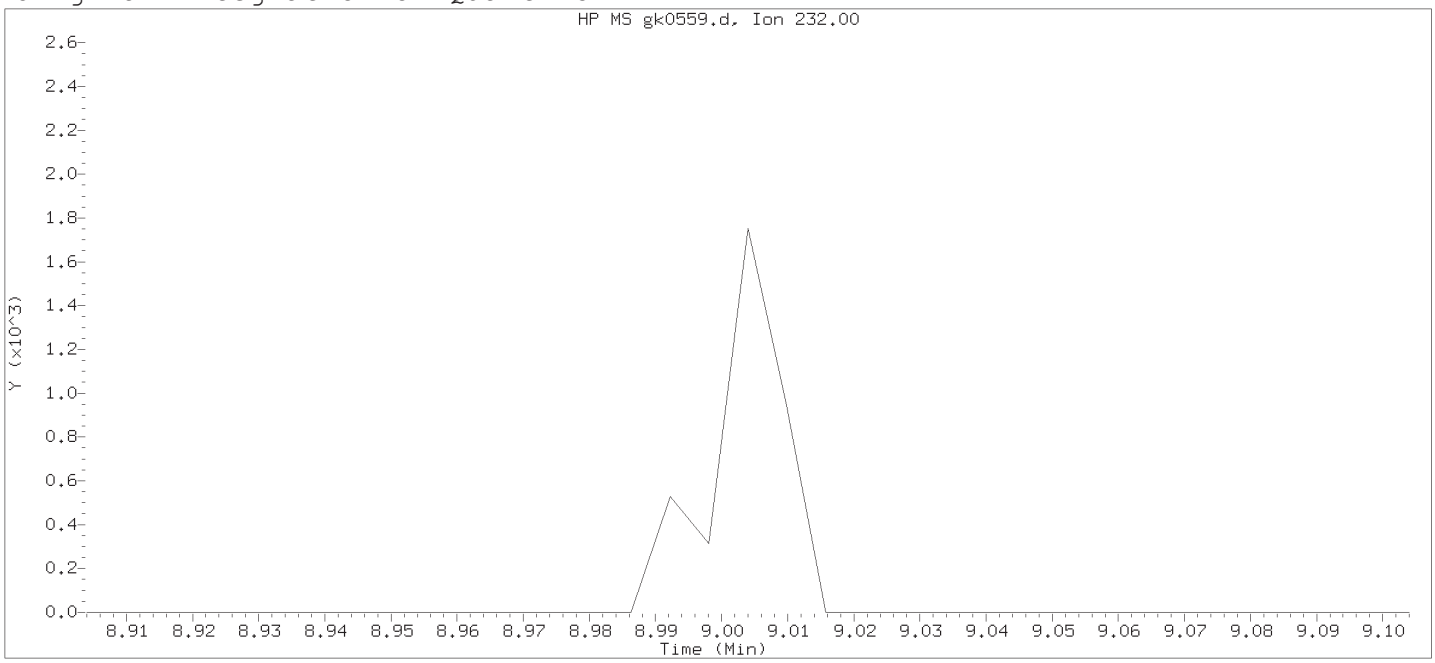
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

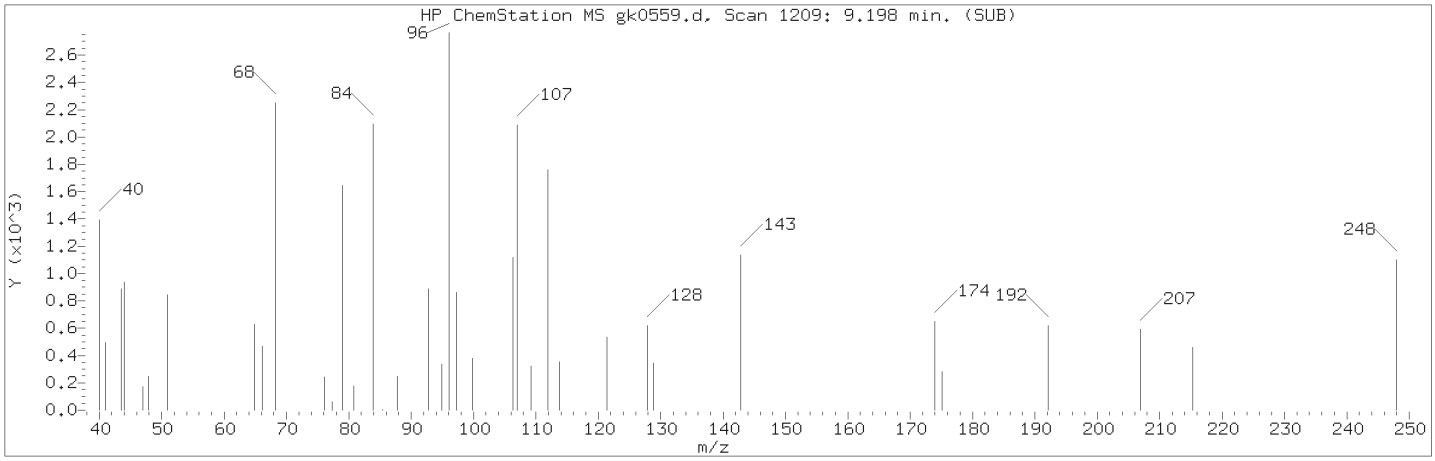
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

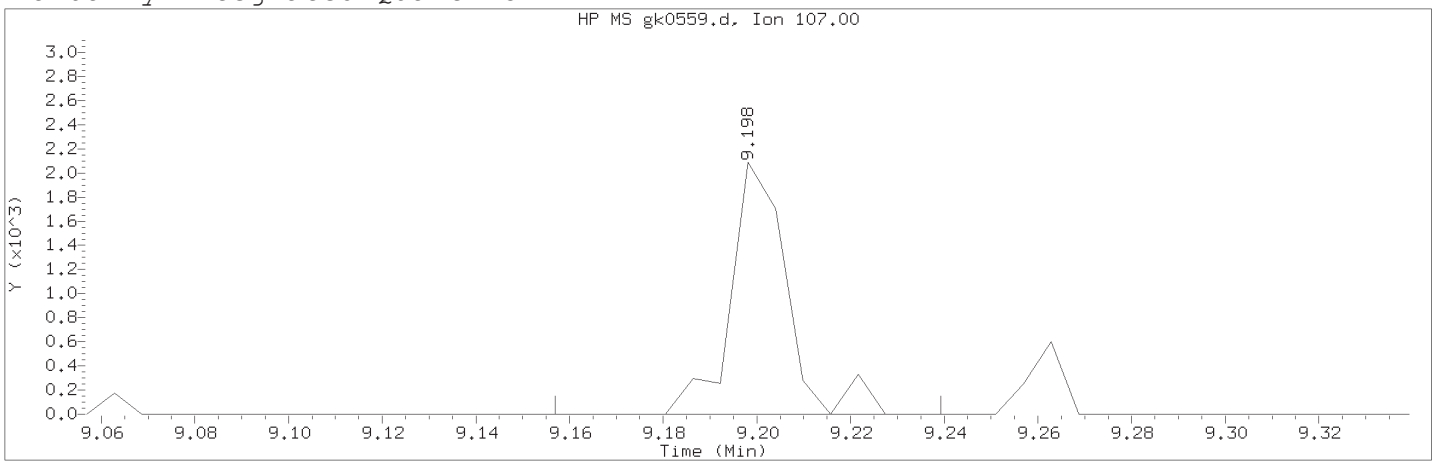
Compound Number : 122
Compound Name : 2,3,4,6-Tetrachlorophenol
Expected RT (minutes) : 9.004
Quant Ion : 232.00

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

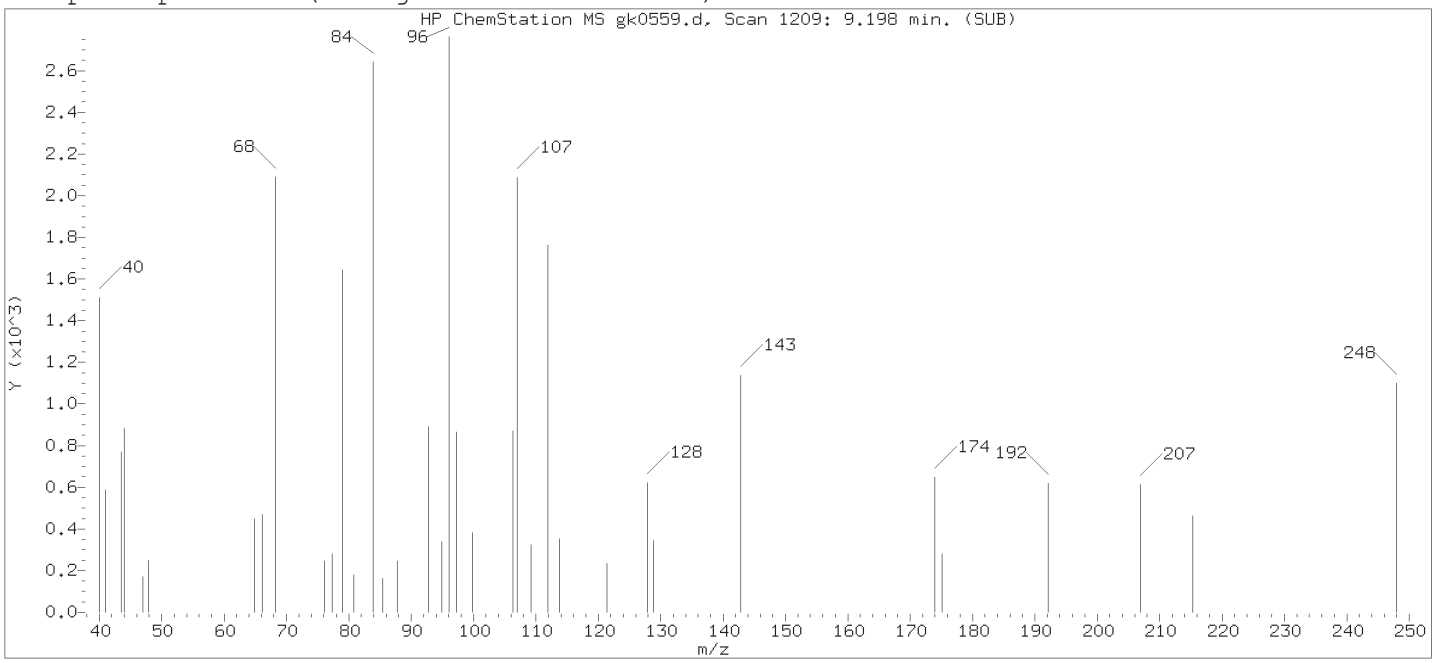
Compound Number	: 125		
Compound Name	: Thionazin		
Scan Number	: 1209		
Retention Time (minutes)	: 9.198		
Quant Ion	: 107.00		
Area (flag)	: 1748M		
On-Column Amount (ng/ul)	: 0.3837		
Integration start scan	: 1201	Integration stop scan:	1215
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

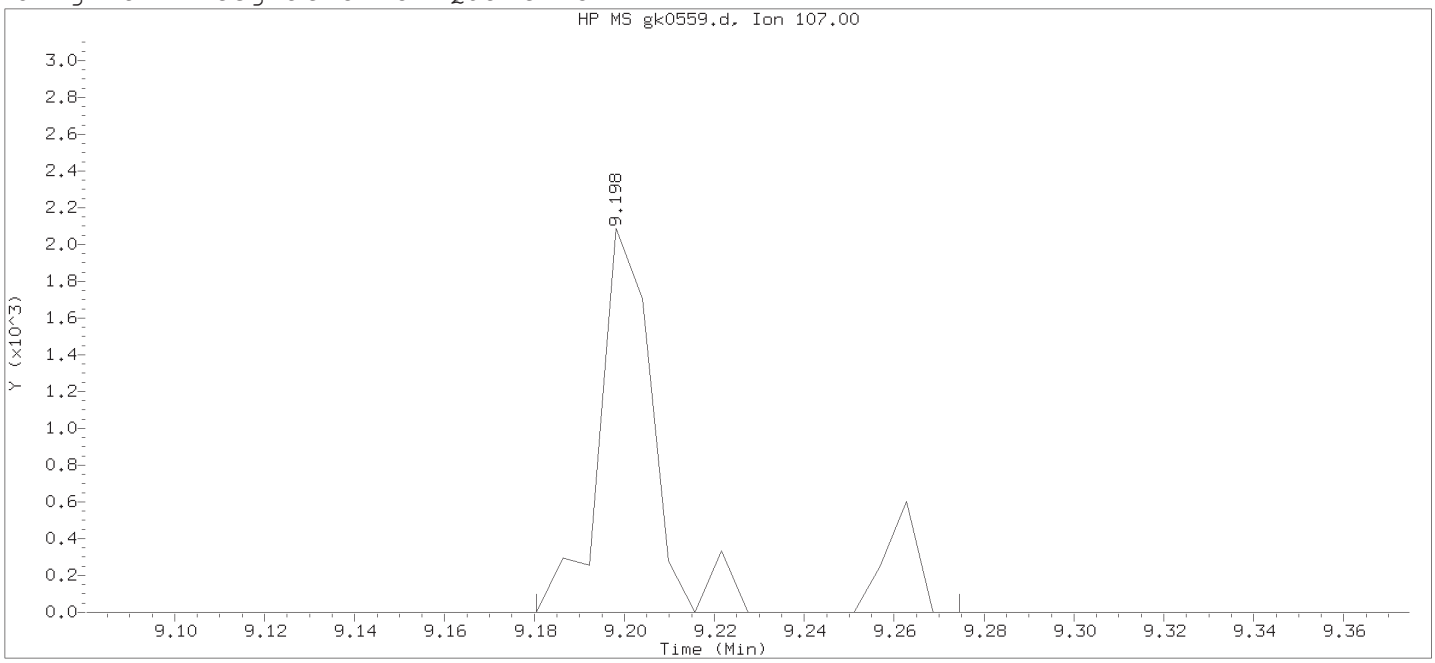
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

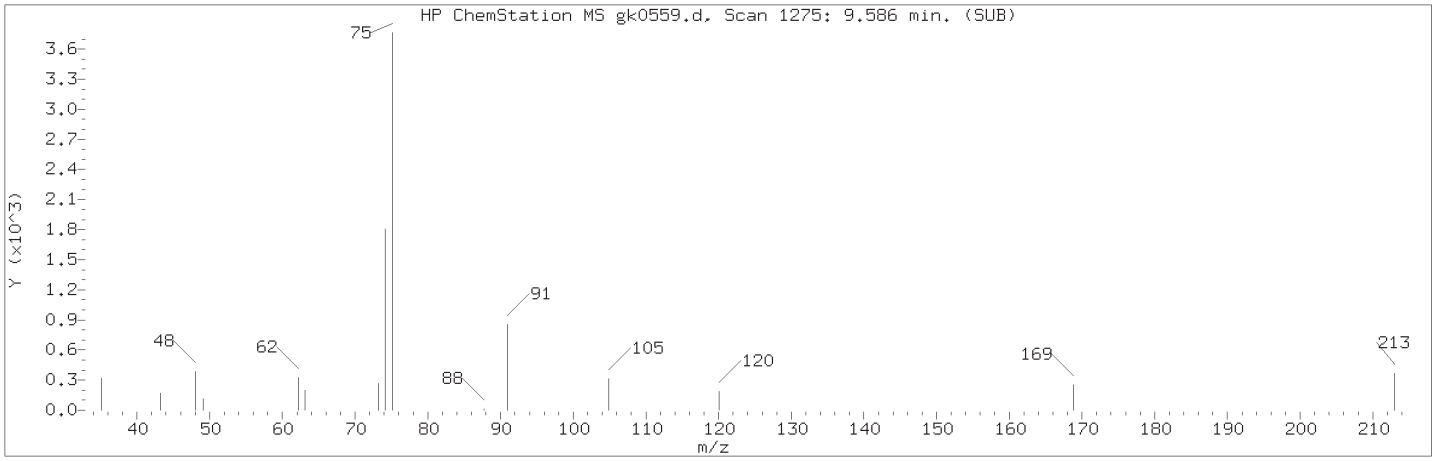
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

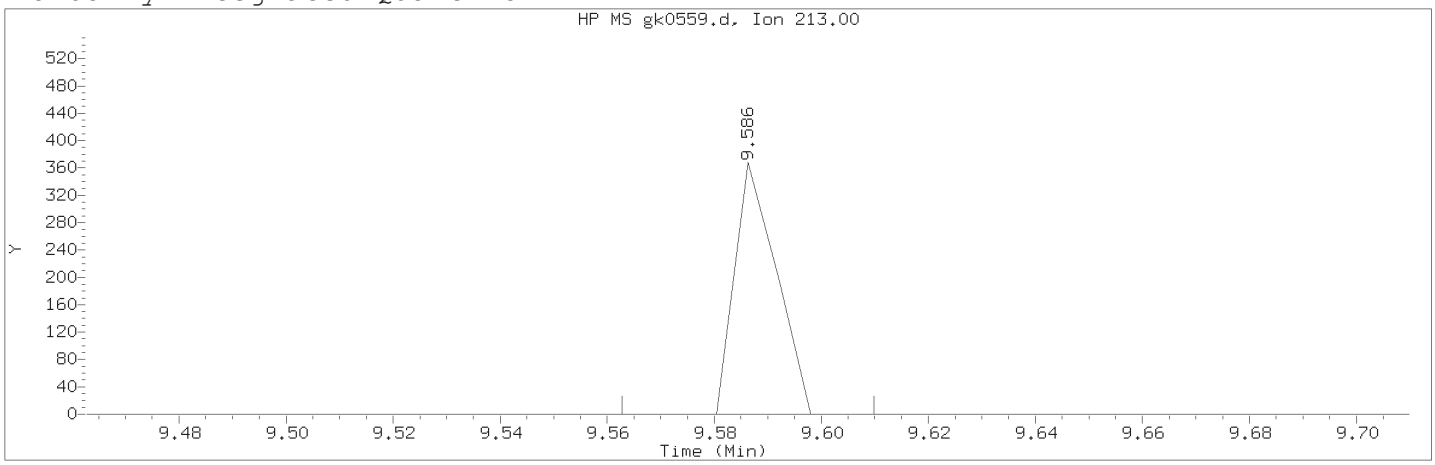
Compound Number	:	125
Compound Name	:	Thionazin
Scan Number	:	1209
Retention Time (minutes)	:	9.198
Quant Ion	:	107.00
Area	:	2049
On-column Amount (ng/ul)	:	0.4512
Integration start scan	:	1205 Integration stop scan: 1221
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

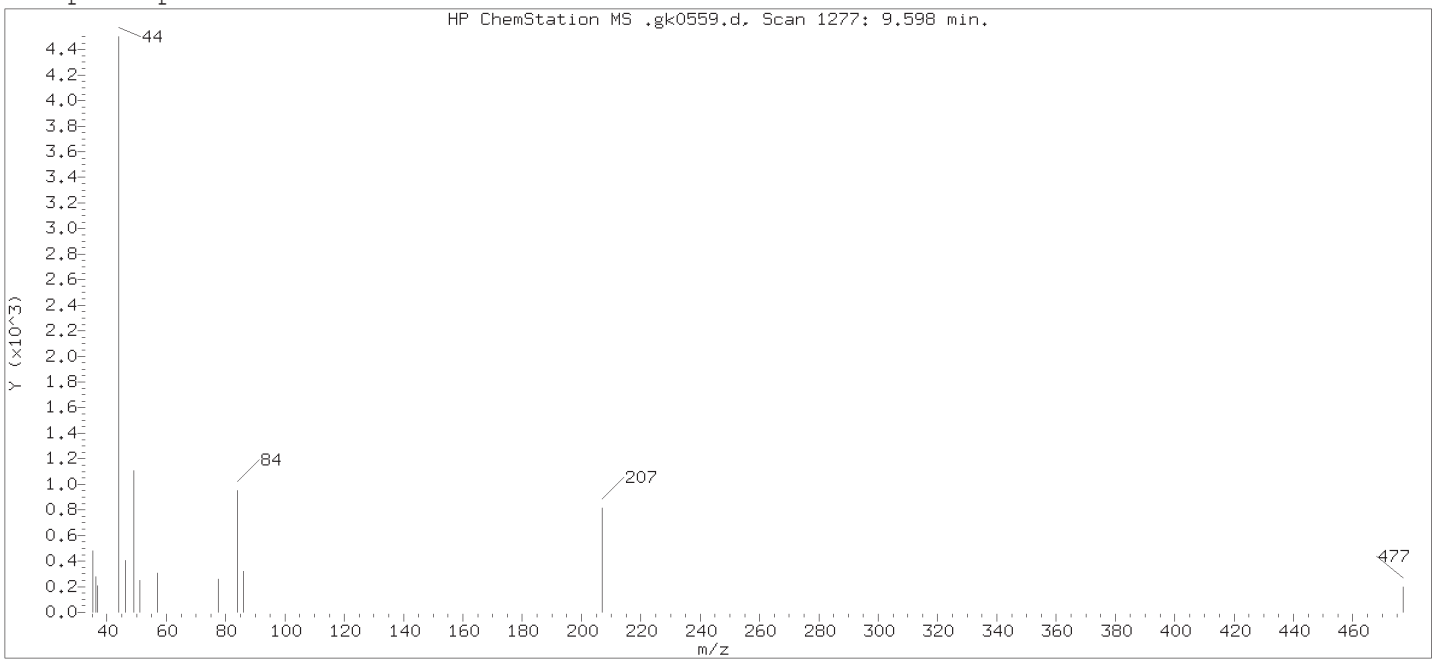
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 1275
Retention Time (minutes) : 9.586
Quant Ion : 213.00
Area (flag) : 198M
On-Column Amount (ng/ul) : 0.0691
Integration start scan : 1270 Integration stop scan: 1278
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

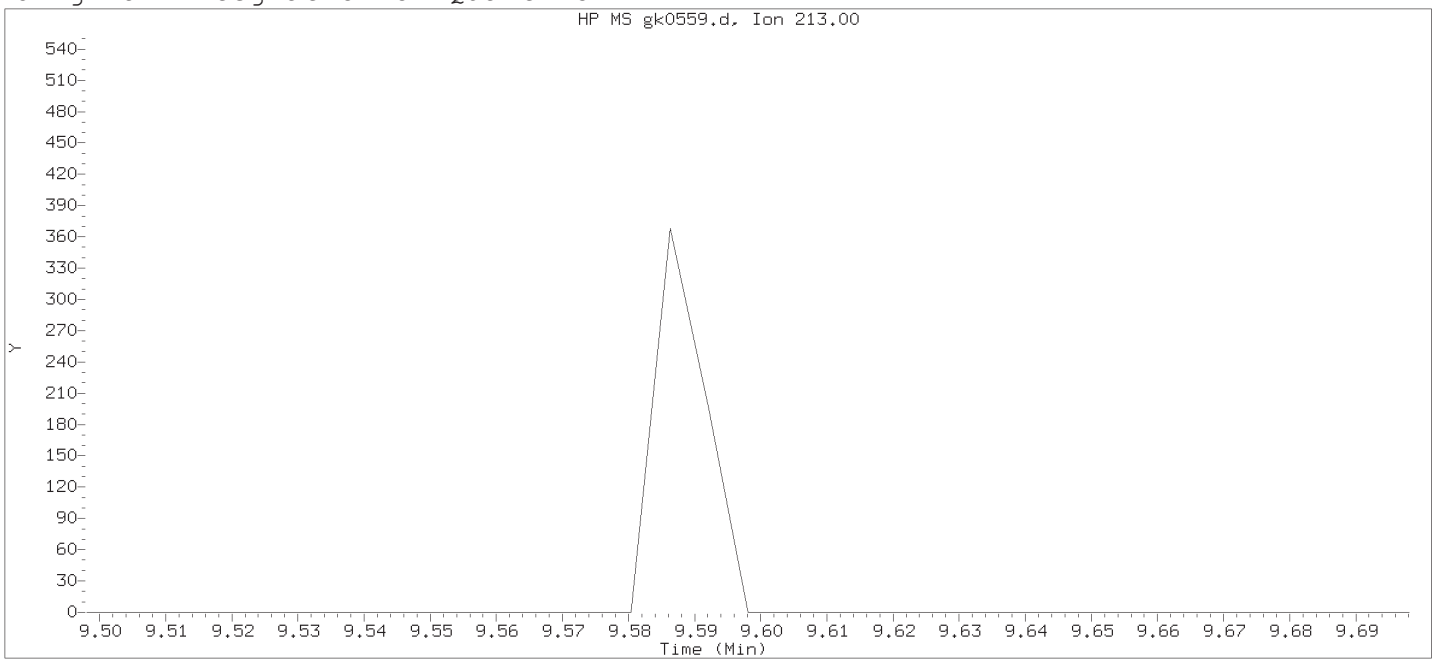
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

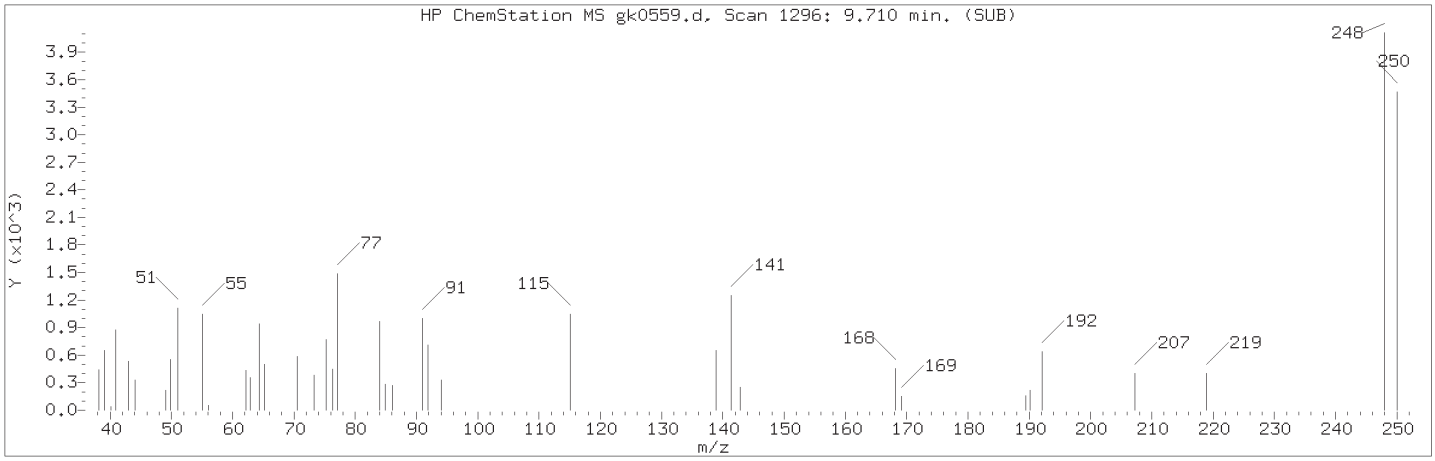
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

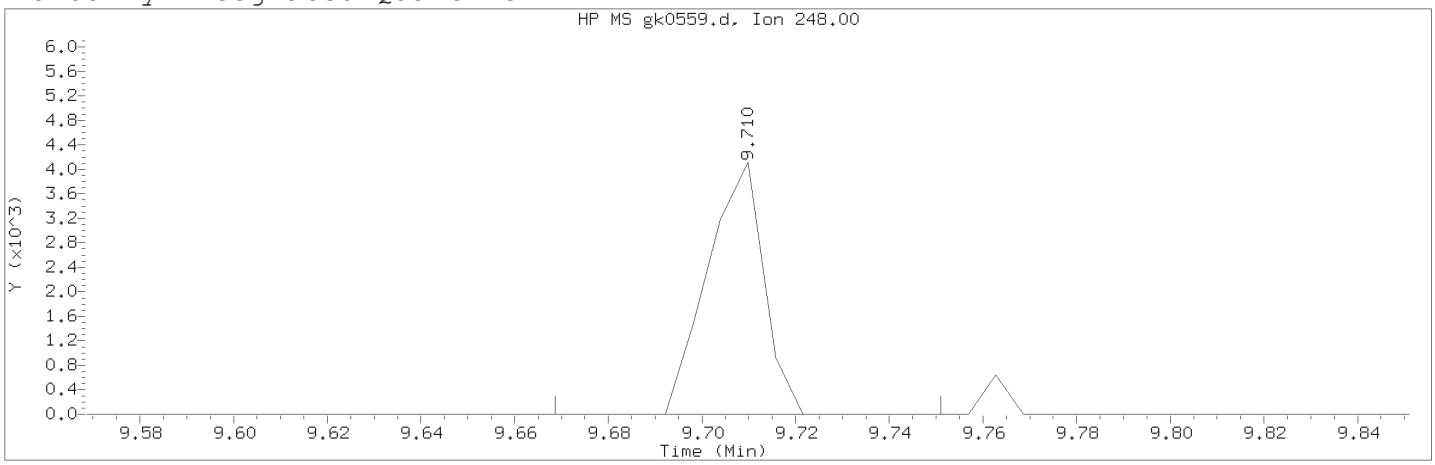
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 9.598
Quant Ion : 213.00

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

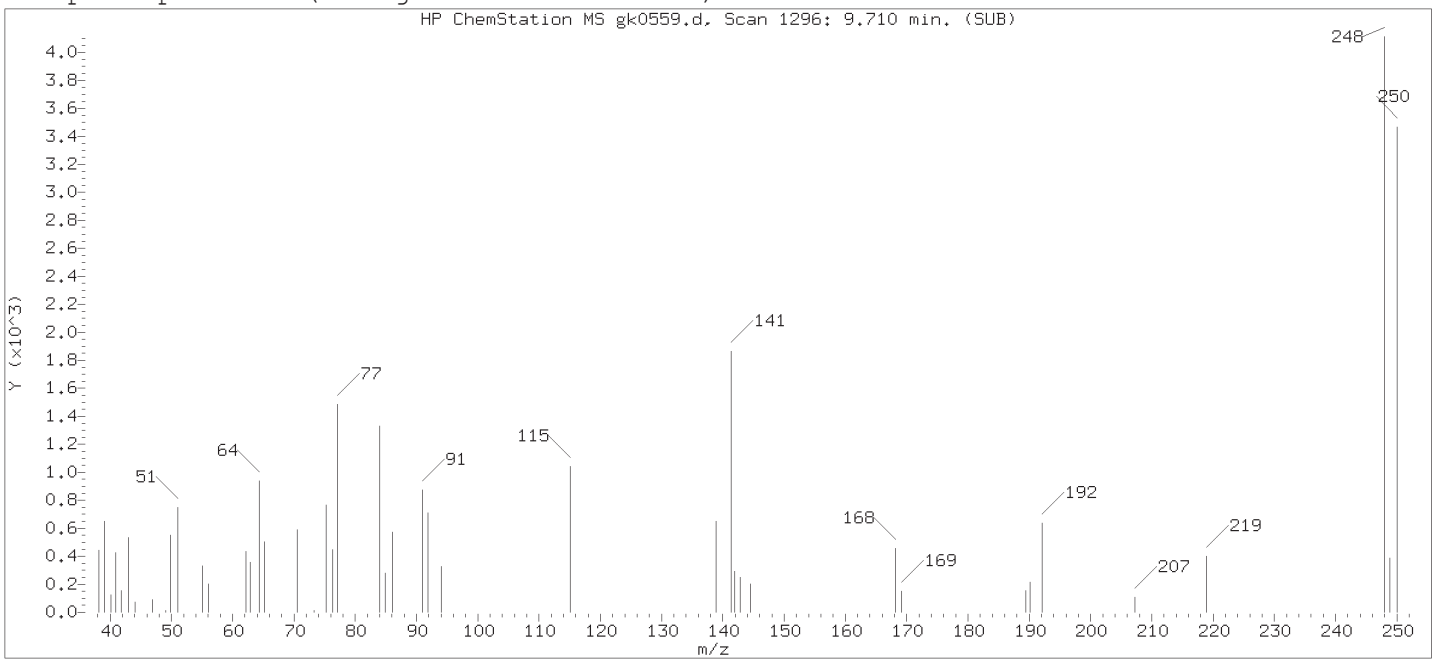
Compound Number : 143
Compound Name : 4-Bromophenyl-phenylether
Scan Number : 1296
Retention Time (minutes) : 9.710
Quant Ion : 248.00
Area (flag) : 3418M
On-Column Amount (ng/ul) : 0.5116
Integration start scan : 1288 Integration stop scan: 1302
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

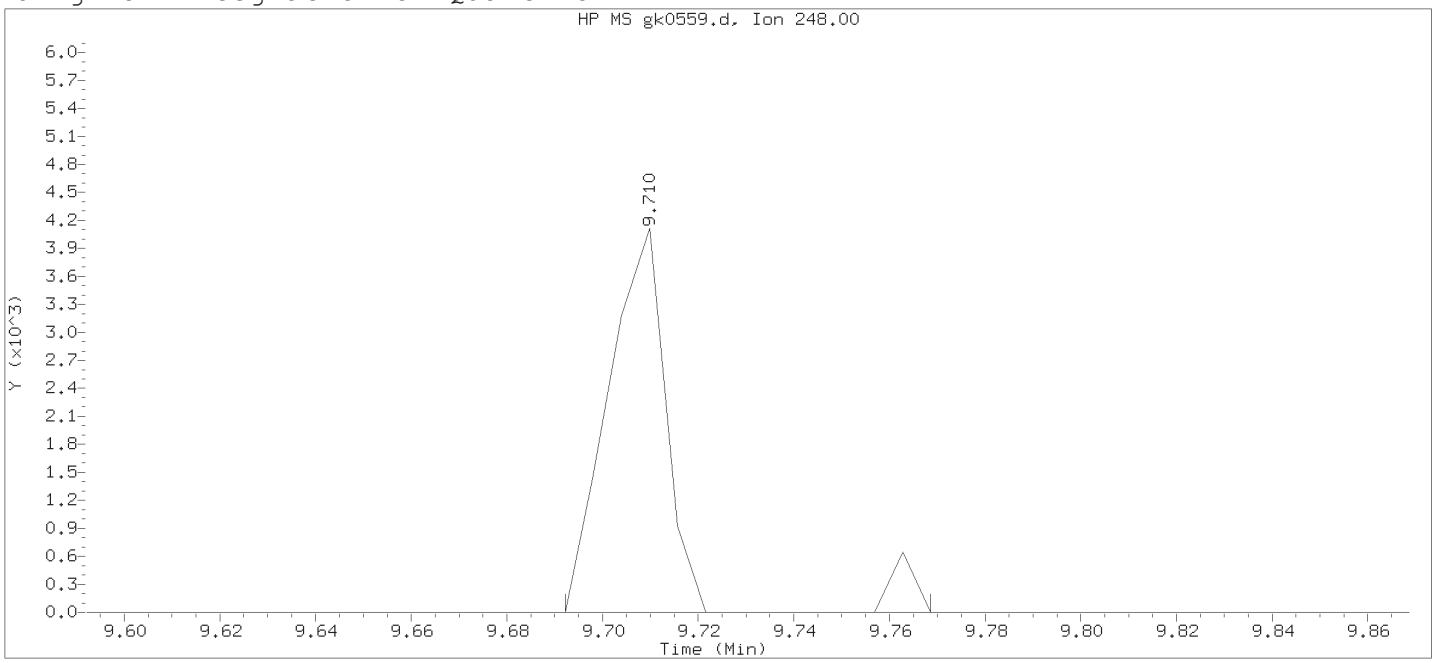
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

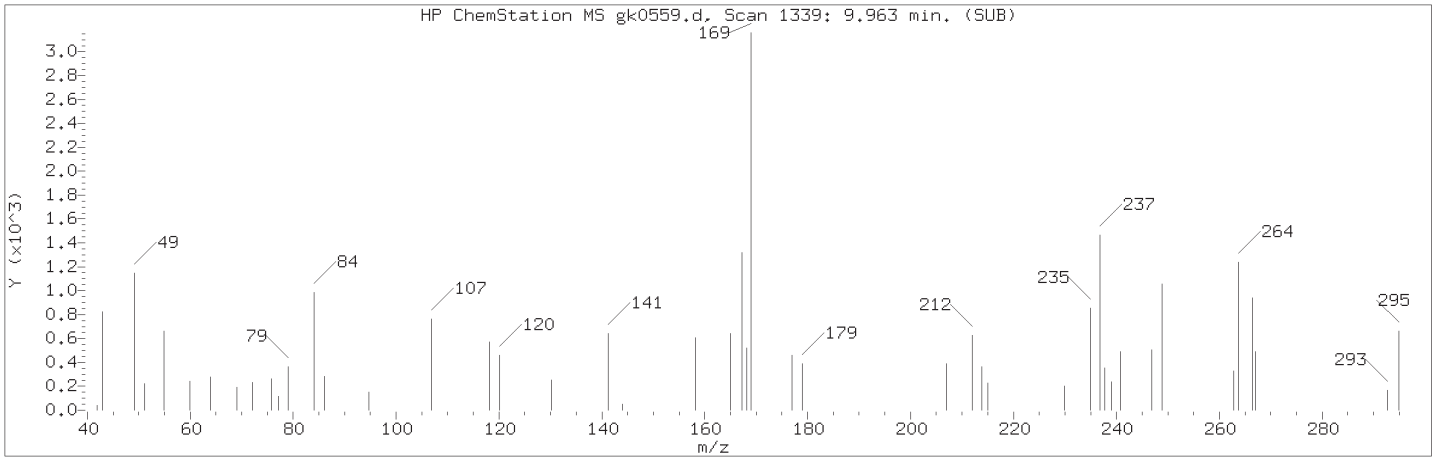
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

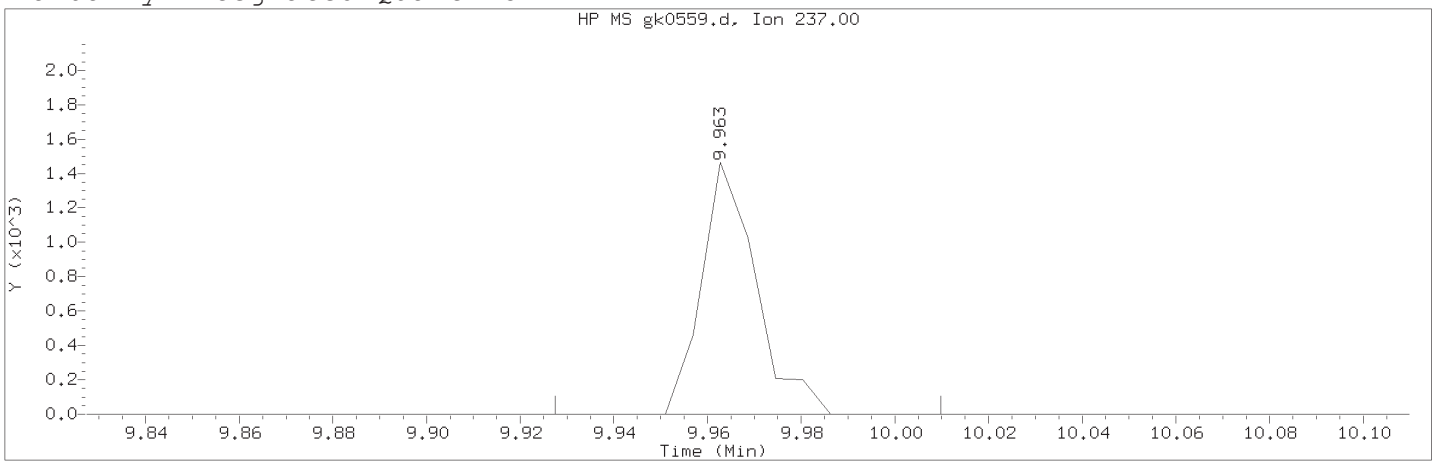
Compound Number : 143
Compound Name : 4-Bromophenyl-phenylether
Scan Number : 1296
Retention Time (minutes) : 9.710
Quant Ion : 248.00
Area : 3646
On-column Amount (ng/ul) : 0.5394
Integration start scan : 1292 Integration stop scan: 1305
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

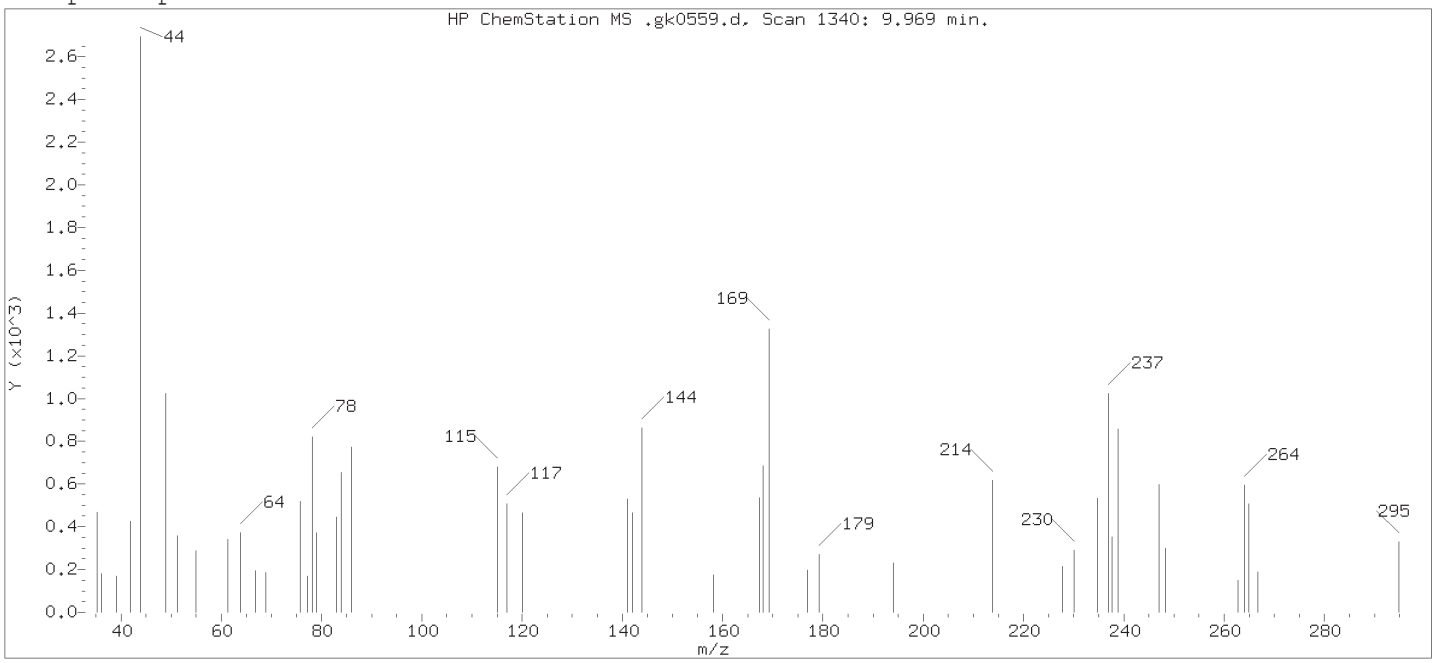
Compound Number	: 151		
Compound Name	: Pentachloronitrobenzene		
Scan Number	: 1339		
Retention Time (minutes)	: 9.963		
Quant Ion	: 237.00		
Area (flag)	: 1185M		
On-Column Amount (ng/ul)	: 0.3998		
Integration start scan	: 1332	Integration stop scan:	1346
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

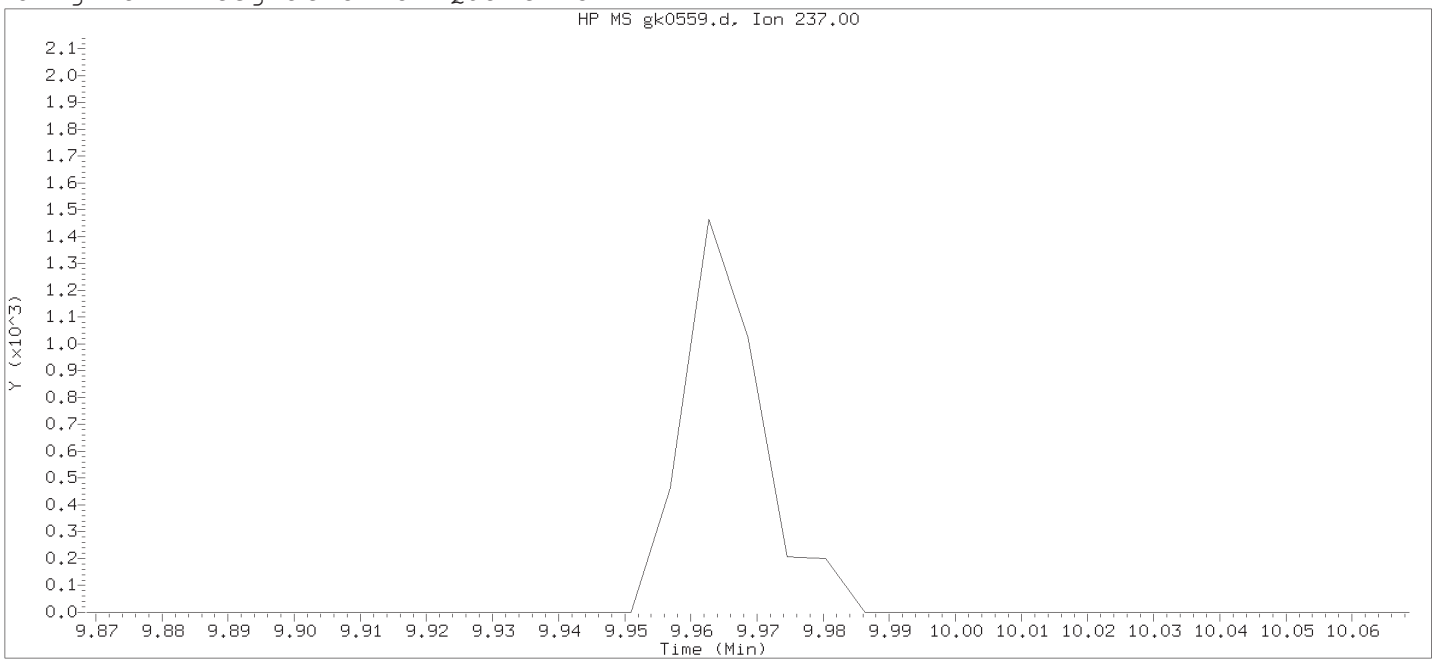
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

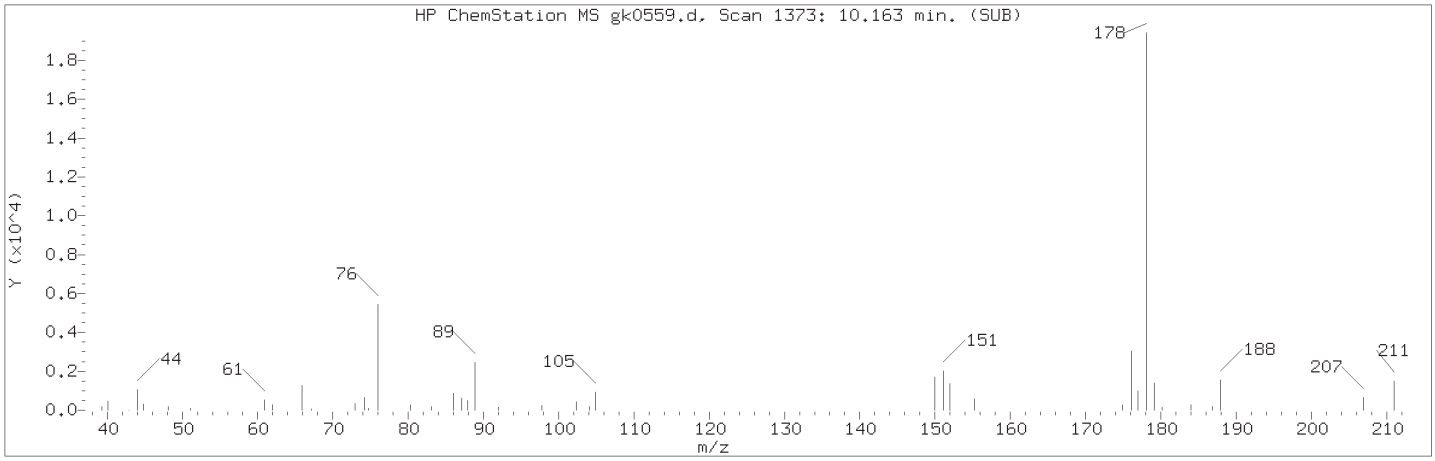
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

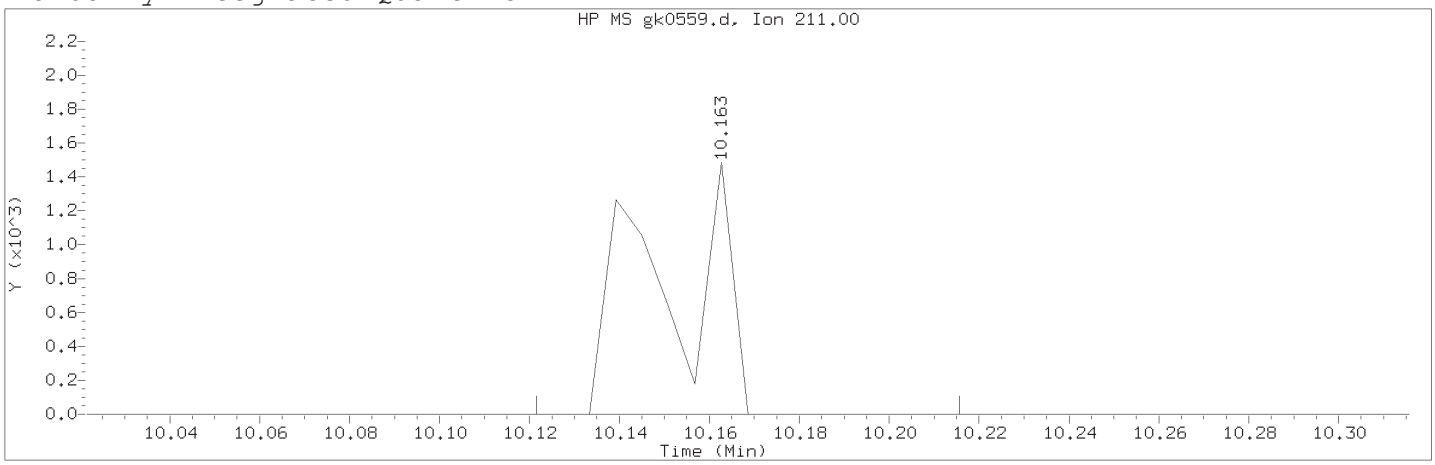
Compound Number : 151
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 9.969
Quant Ion : 237.00

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:05 em10340

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

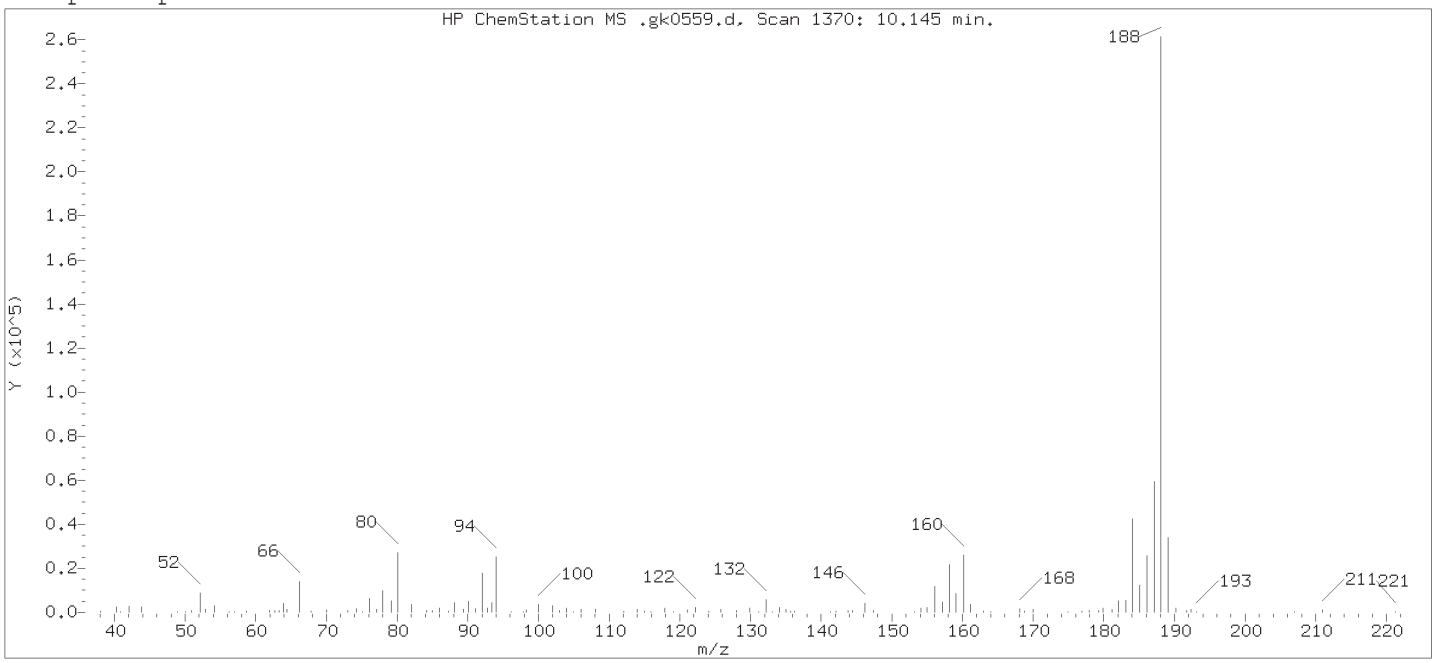
Compound Number	: 154		
Compound Name	: Dinoseb		
Scan Number	: 1373		
Retention Time (minutes)	: 10.163		
Quant Ion	: 211.00		
Area (flag)	: 1630M		
On-Column Amount (ng/ul)	: 0.2480		
Integration start scan	: 1365	Integration stop scan:	1381
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

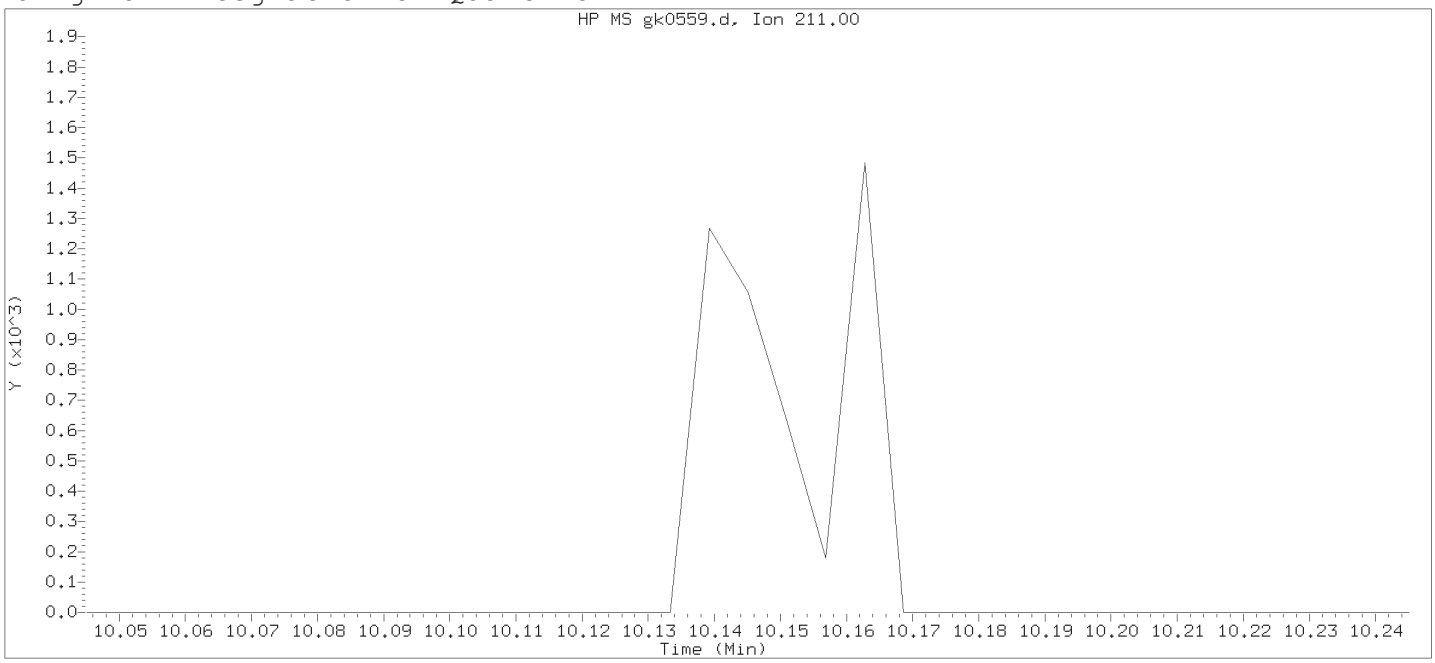
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



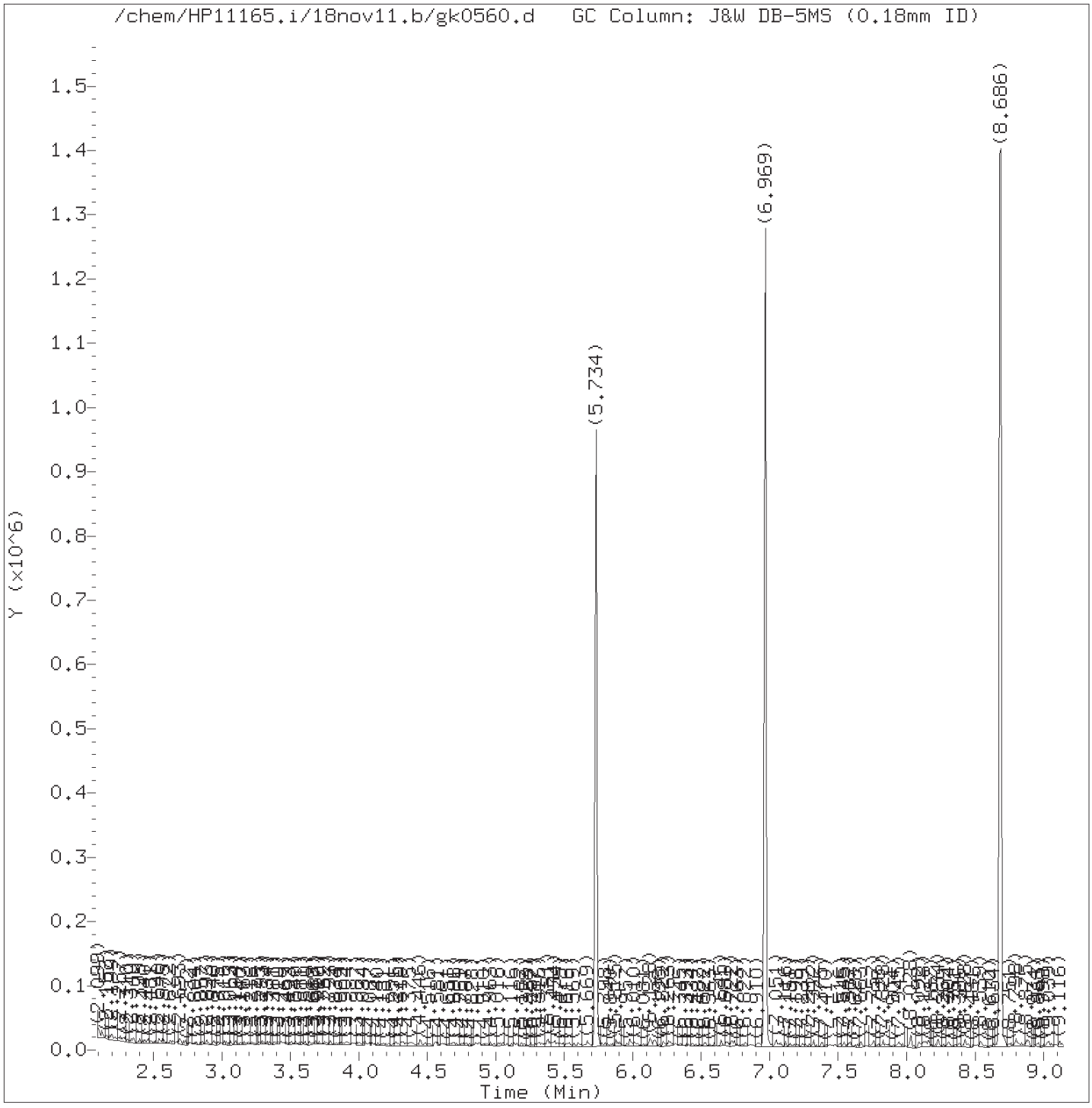
Data File: /chem/HP11165.i/18nov11.b/gk0559.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 14:57 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: mdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:18 Automation

Sample Name: SSTD0.50 Lab Sample ID: MDL2928

Compound Number : 154
Compound Name : Dinoseb
Expected RT (minutes) : 10.145
Quant Ion : 211.00

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

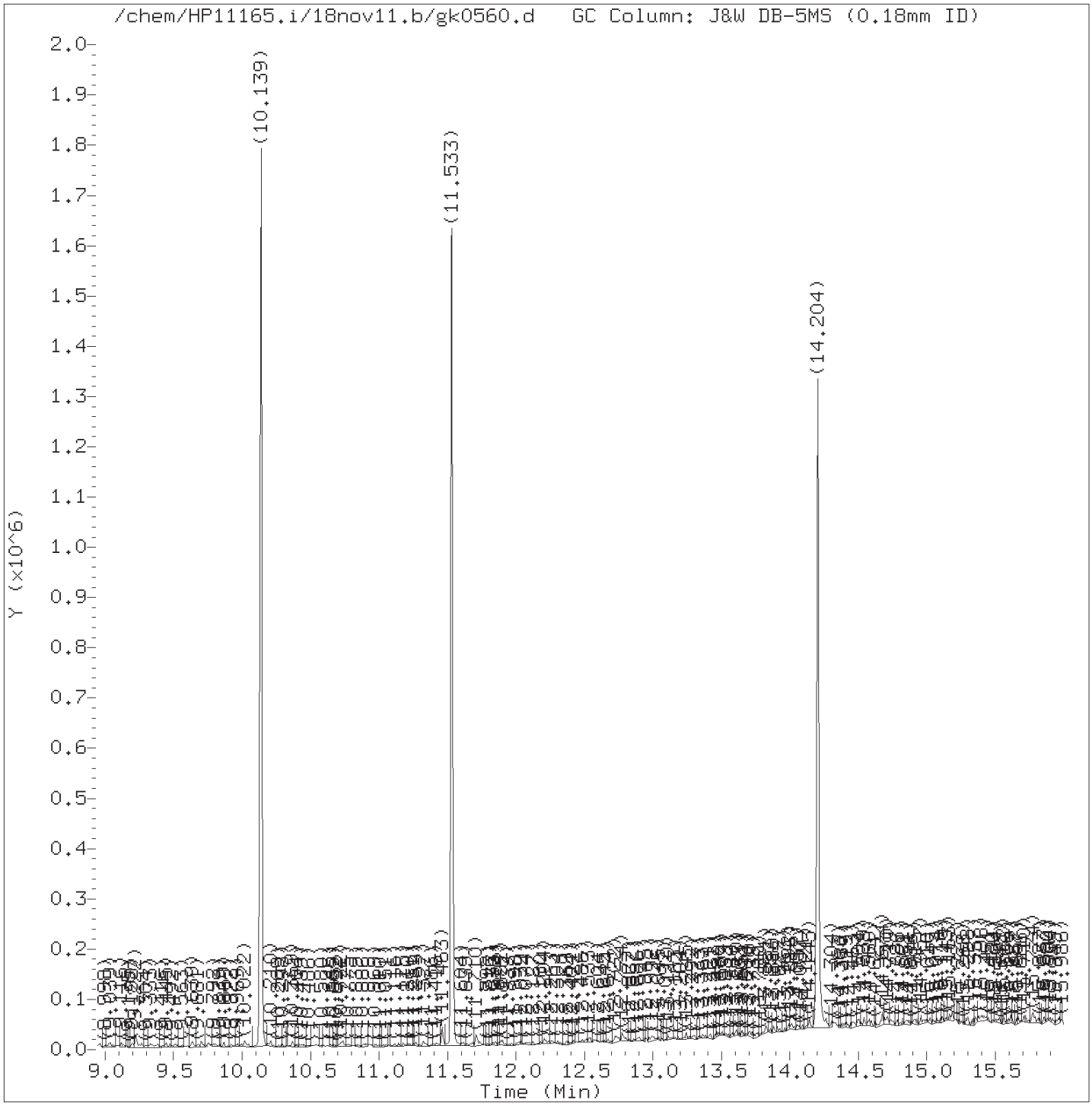
Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0560.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:21 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:11 em10340

Sample Name: SSTD0.10 Lab Sample ID: MDLPAH2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0560.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:21 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:11 em10340

Sample Name: SSTD0.10 Lab Sample ID: MDLPAH2928

Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0560.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:21 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:11 em10340

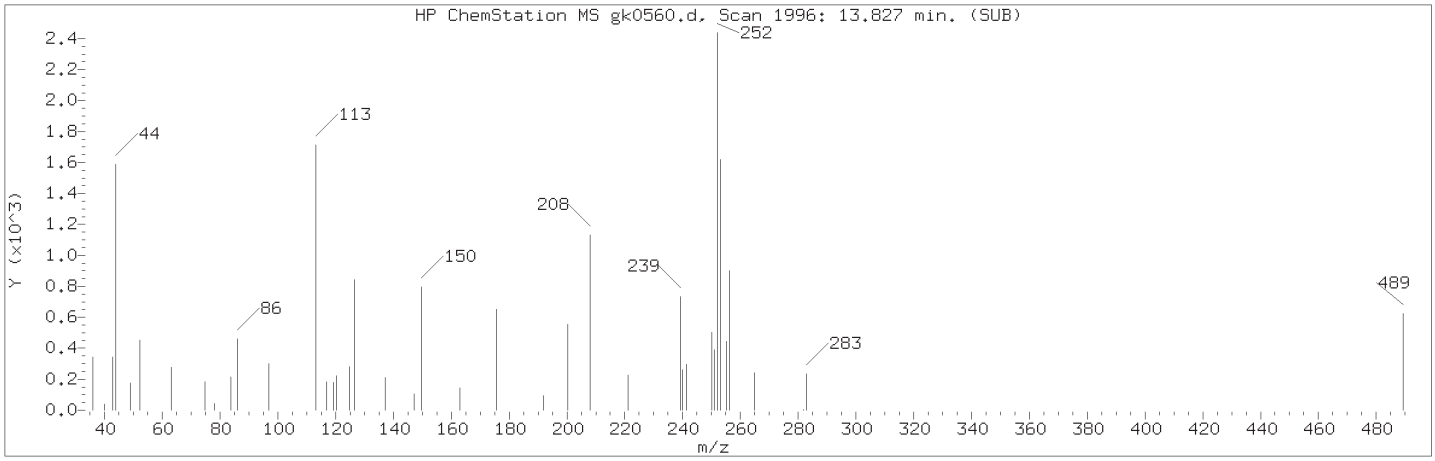
Sample Name: SSTD0.10 Lab Sample ID: MDLPAH2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	5.734	152	143791	20.000
44)$Nitrobenzene-d5	(2)	6.263	82	2727	0.194
65)*Naphthalene-d8	(2)	6.969	136	532753	20.000
66) Naphthalene	(2)	6.987	128	3807	0.127
83) 2-Methylnaphthalene	(2)	7.669	142	2472	0.116
84) 1-Methylnaphthalene	(2)	7.757	142	3028	0.149
93)$2-Fluorobiphenyl	(3)	8.028	172	4748	0.205
109) Acenaphthylene	(3)	8.545	152	3102	0.114
113)*Acenaphthene-d10	(3)	8.686	164	286234	20.000
114) Acenaphthene	(3)	8.698	153	2517	0.125
126) Fluorene	(3)	9.222	166	1947	0.083
145) Hexachlorobenzene	(4)	9.757	284	1085	0.176
153)*Phenanthrene-d10	(4)	10.139	188	600709	20.000
155) Phenanthrene	(4)	10.163	178	3760	0.100
157) Anthracene	(4)	10.204	178	3702	0.100
173) Fluoranthene	(4)	11.322	202	4693	0.121
175)*Pyrene-d10	(5)	11.533	212	561243	20.000
177) Pyrene	(5)	11.545	202	7540	0.186
179)$Terphenyl-d14	(5)	11.710	244	5649	0.208
195) Benzo(a)anthracene	(5)	12.751	228	4403	0.119
196) Chrysene	(5)	12.780	228	4698	0.132
206) Benzo(b)fluoranthene	(6)	13.827	252	4273M	0.117
208) Benzo(k)fluoranthene	(6)	13.863	252	4094M	0.118
211) Benzo(a)pyrene	(6)	14.139	252	3988M	0.125
213)*Perylene-d12	(6)	14.204	264	513006	20.000
222) Total PAHs	(6)			68486	2.190
219) Indeno(1,2,3-cd)pyrene	(6)	15.374	276	4655M	0.145
220) Dibenz(a,h)anthracene	(6)	15.410	278	2695	0.101
221) Benzo(g,h,i)perylene	(6)	15.727	276	3112	0.114

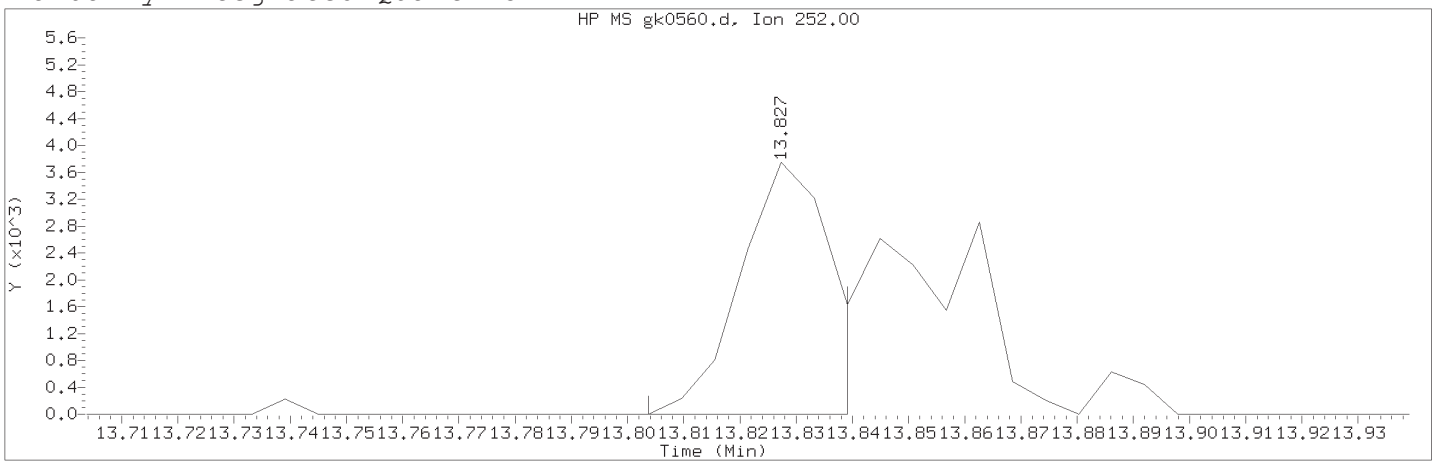
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0560.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:21 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:11 em10340

Sample Name: SSTD0.10 Lab Sample ID: MDLPAH2928

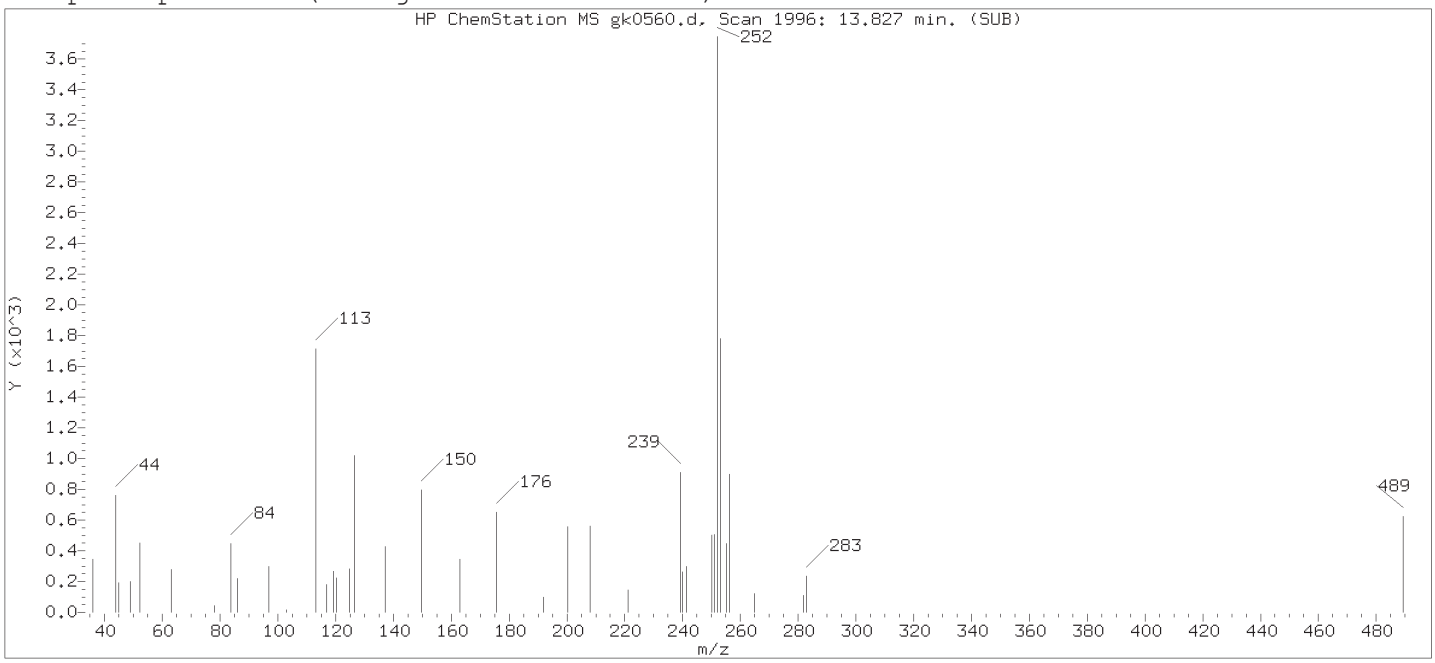
Compound Number : 206
Compound Name : Benzo(b)fluoranthene
Scan Number : 1996
Retention Time (minutes) : 13.827
Quant Ion : 252.00
Area (flag) : 4273M
On-Column Amount (ng/ul) : 0.1166
Integration start scan : 1991 Integration stop scan: 1997
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

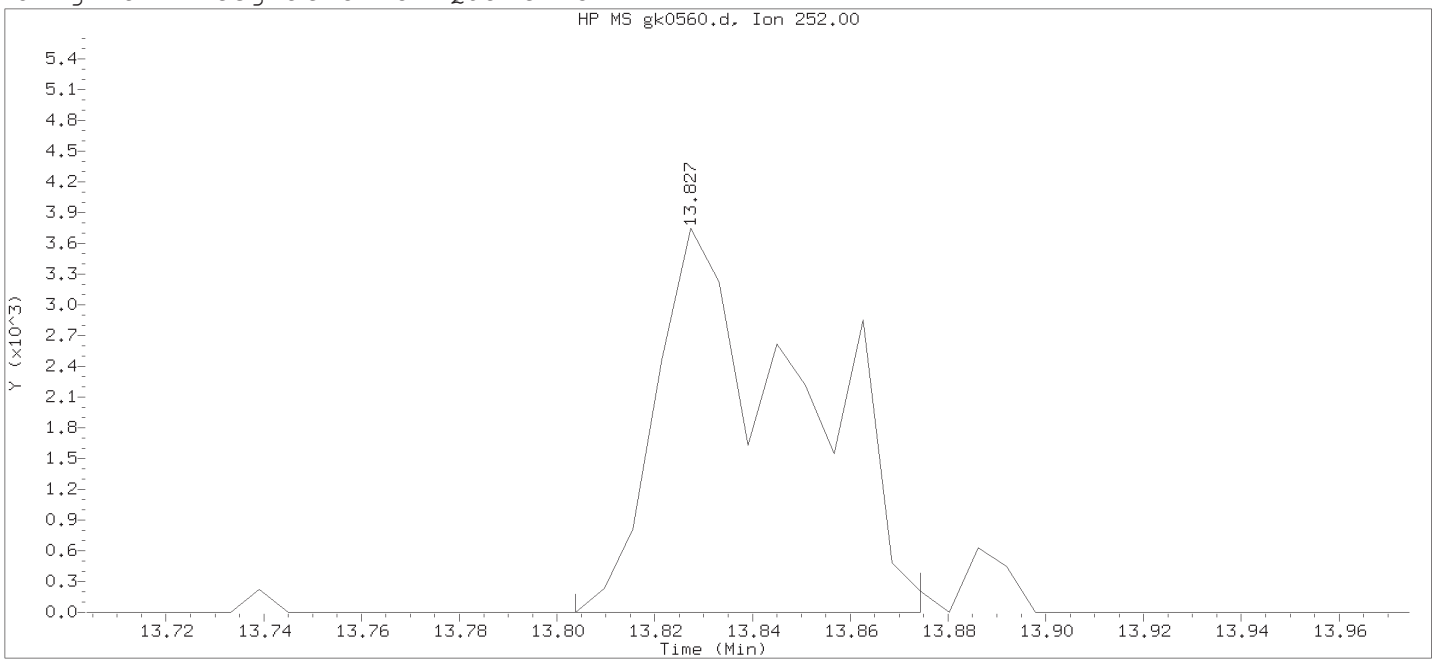
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0560.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:21 Analyst ID: em10340

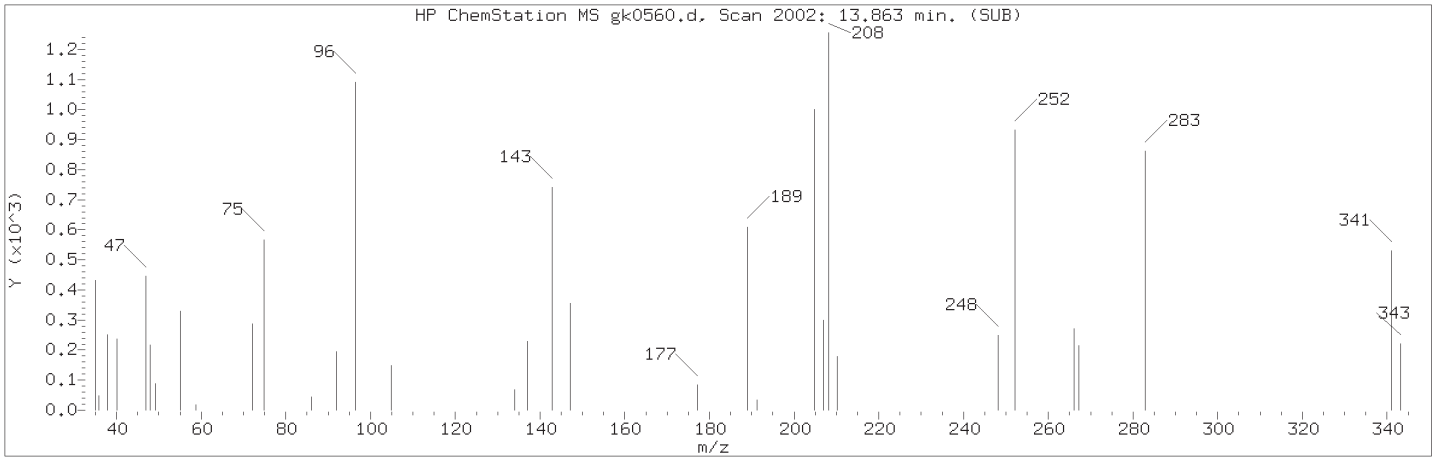
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:42 Automation

Sample Name: SSTD0.10 Lab Sample ID: MDLPAH2928

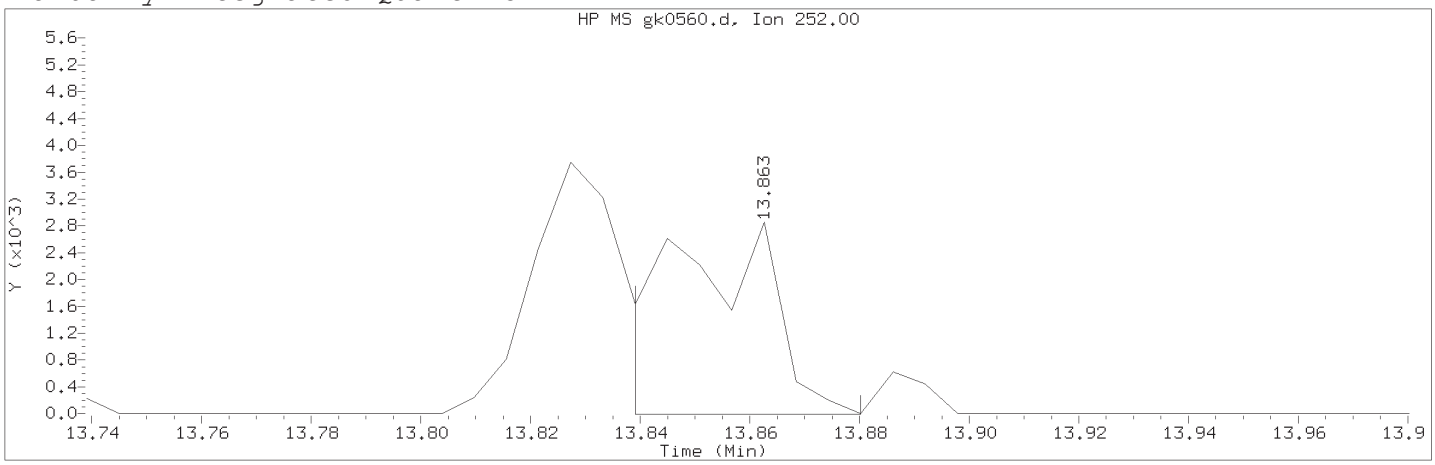
Compound Number : 206
Compound Name : Benzo(b)fluoranthene
Scan Number : 1996
Retention Time (minutes) : 13.827
Quant Ion : 252.00
Area : 7739
On-column Amount (ng/ul) : 0.1967
Integration start scan : 1991 Integration stop scan: 2003
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0560.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:21 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:11 em10340

Sample Name: SSTD0.10 Lab Sample ID: MDLPAH2928

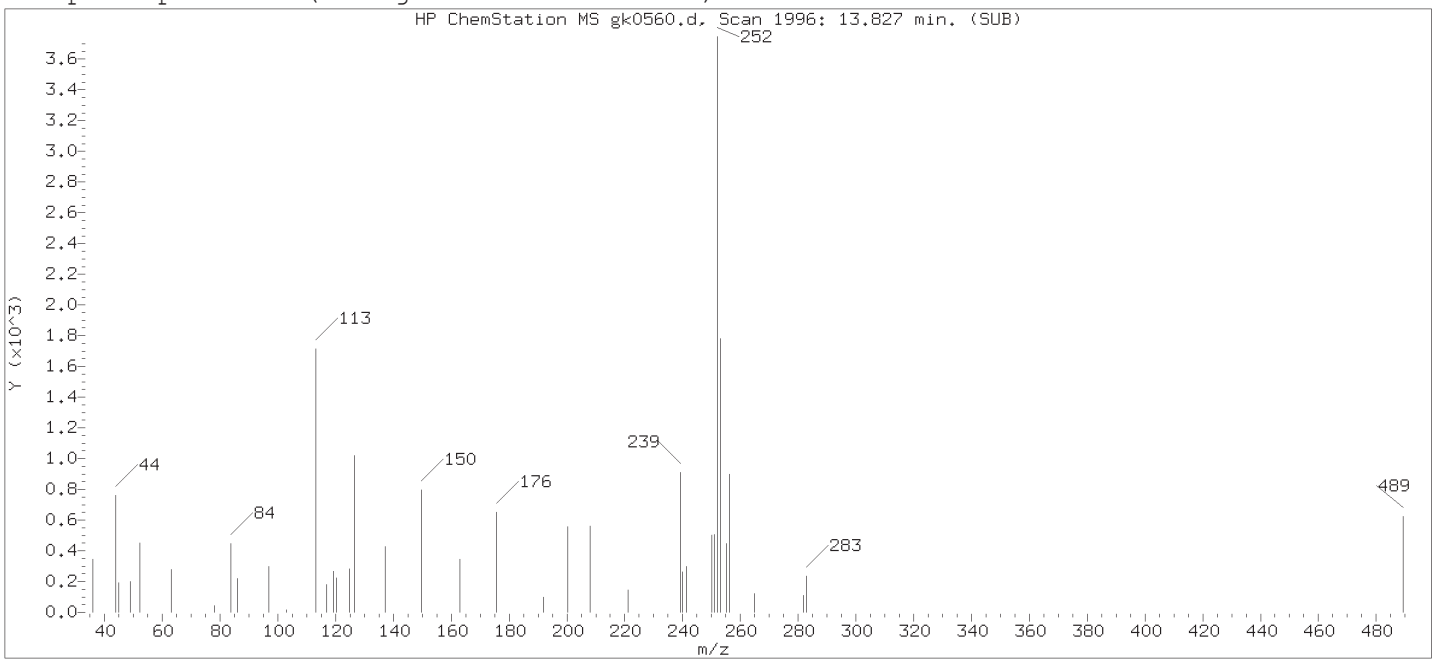
Compound Number : 208
Compound Name : Benzo(k)fluoranthene
Scan Number : 2002
Retention Time (minutes) : 13.863
Quant Ion : 252.00
Area (flag) : 4094M
On-Column Amount (ng/ul) : 0.1177
Integration start scan : 1997 Integration stop scan: 2004
Y at integration start : -6 Y at integration end: -6

Reason for manual integration: improper integration

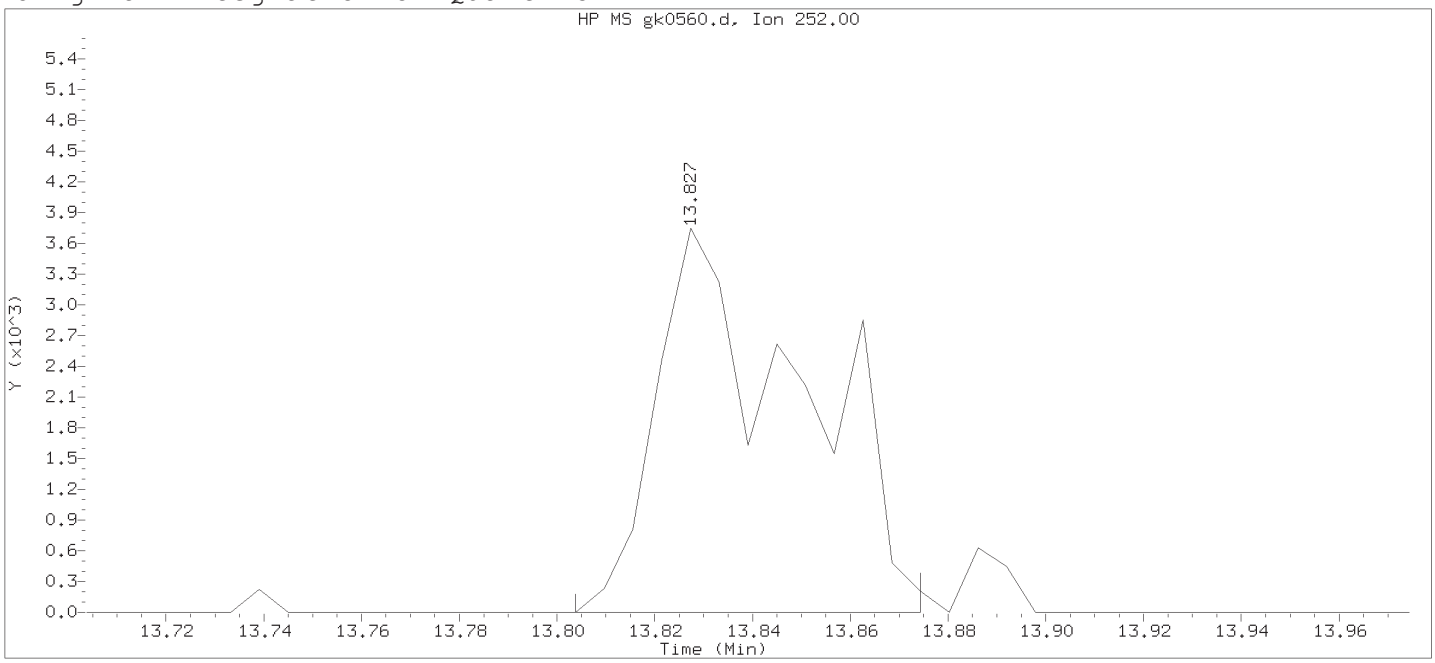
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0560.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:21 Analyst ID: em10340

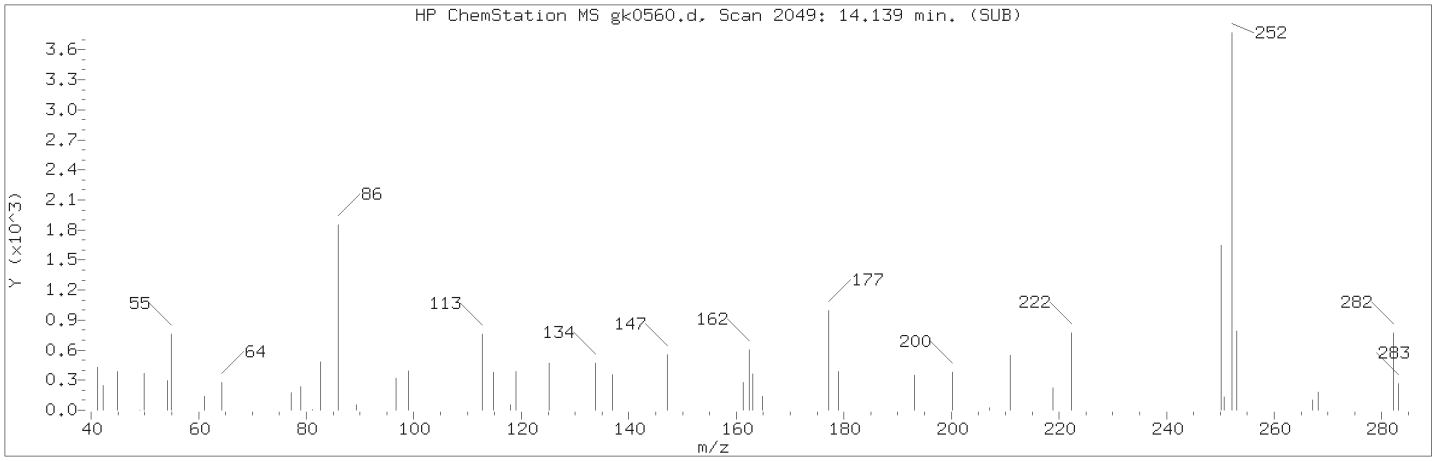
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:42 Automation

Sample Name: SSTD0.10 Lab Sample ID: MDLPAH2928

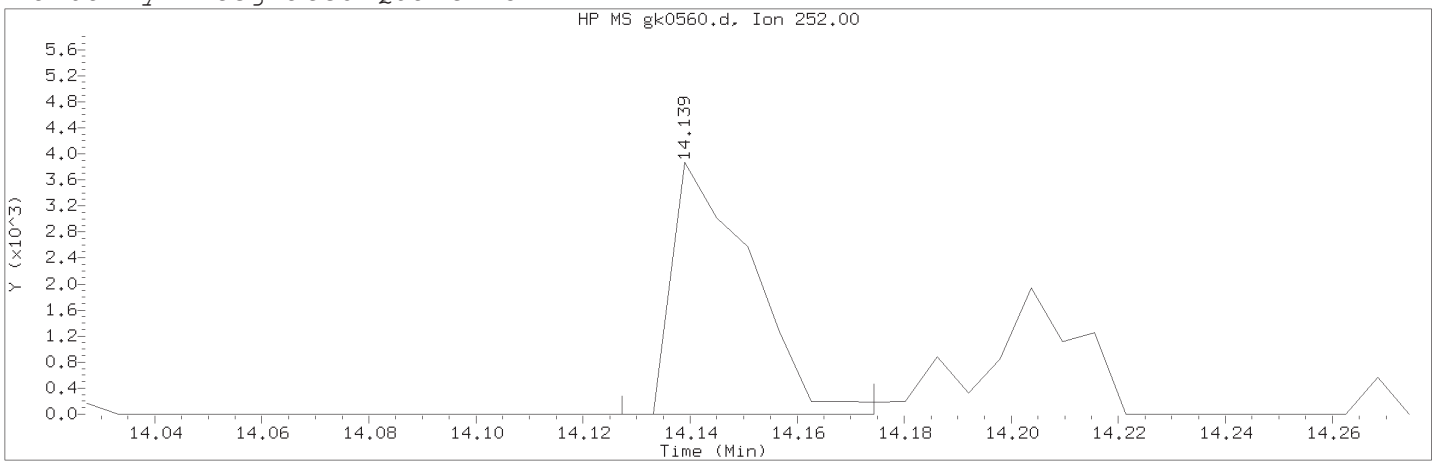
Compound Number : 208
Compound Name : Benzo(k)fluoranthene
Scan Number : 1996
Retention Time (minutes) : 13.827
Quant Ion : 252.00
Area : 7739
On-column Amount (ng/ul) : 0.1964
Integration start scan : 1991 Integration stop scan: 2003
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0560.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:21 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:11 em10340

Sample Name: SSTD0.10 Lab Sample ID: MDLPAH2928

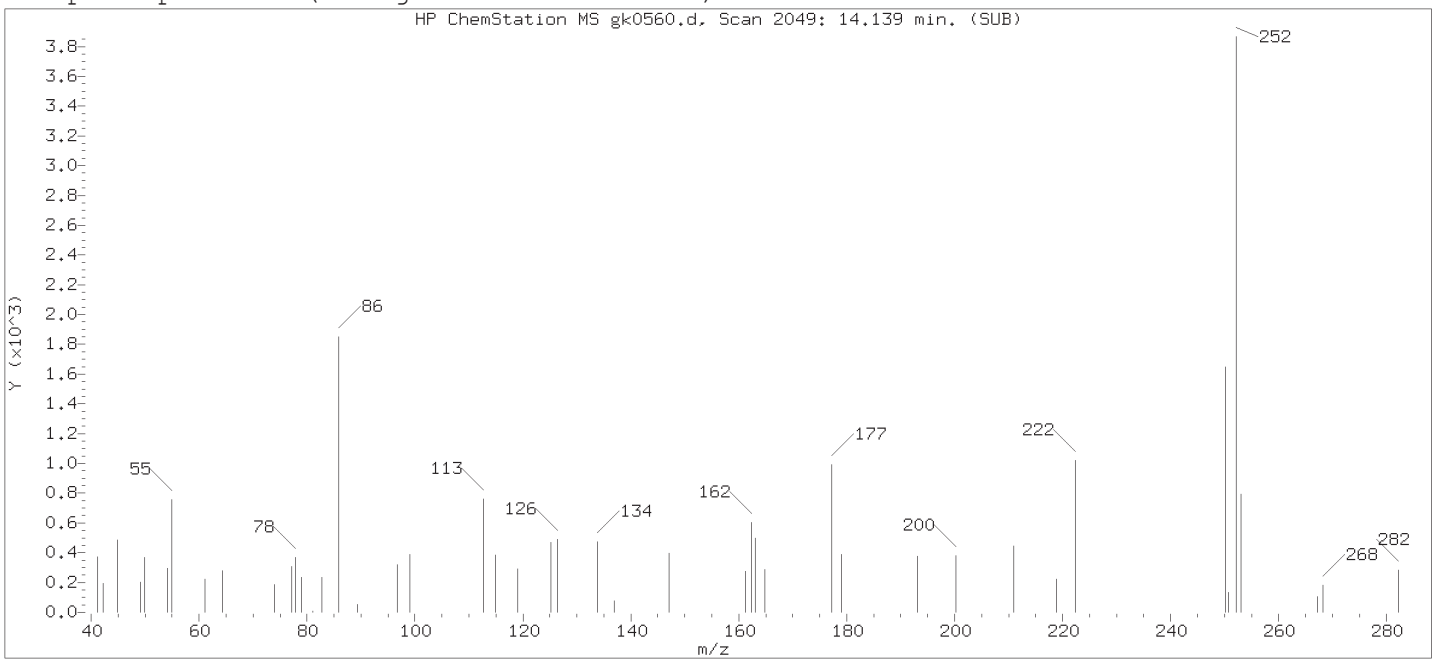
Compound Number	: 211		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 2049		
Retention Time (minutes)	: 14.139		
Quant Ion	: 252.00		
Area (flag)	: 3988M		
On-Column Amount (ng/ul)	: 0.1251		
Integration start scan	: 2046	Integration stop scan:	2054
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

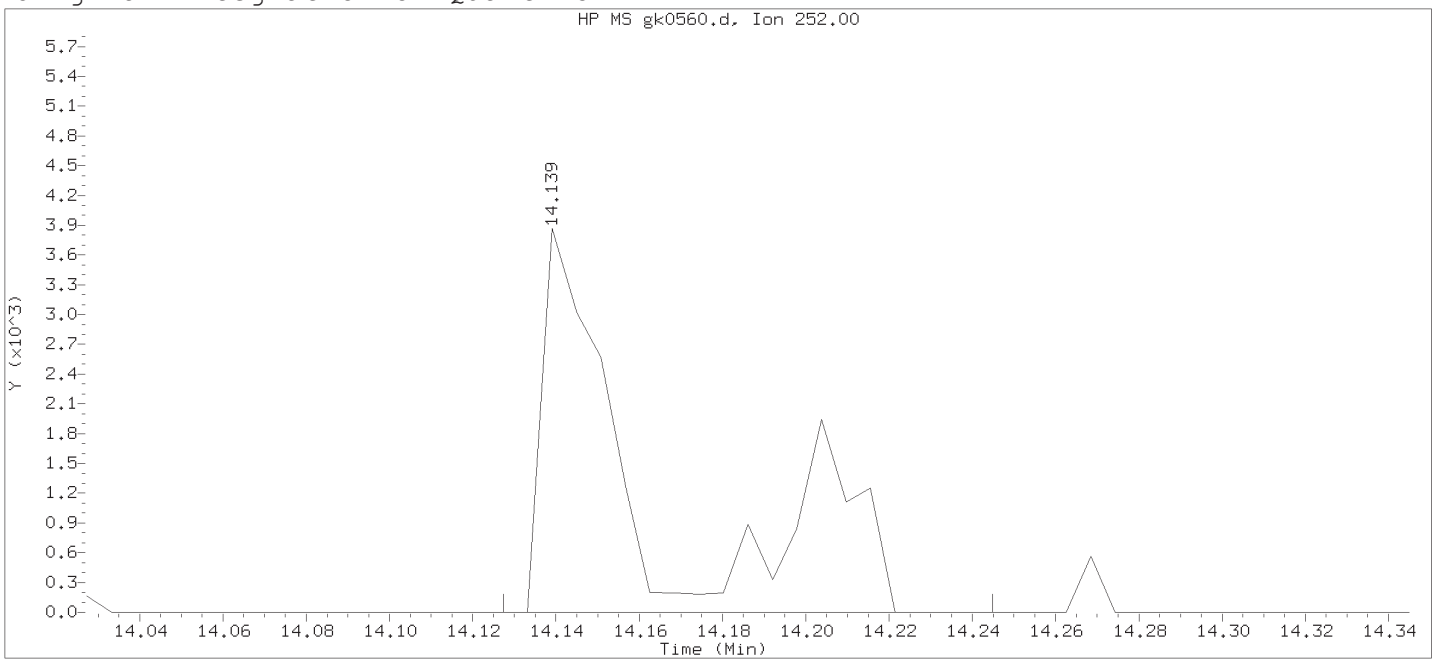
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0560.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:21 Analyst ID: em10340

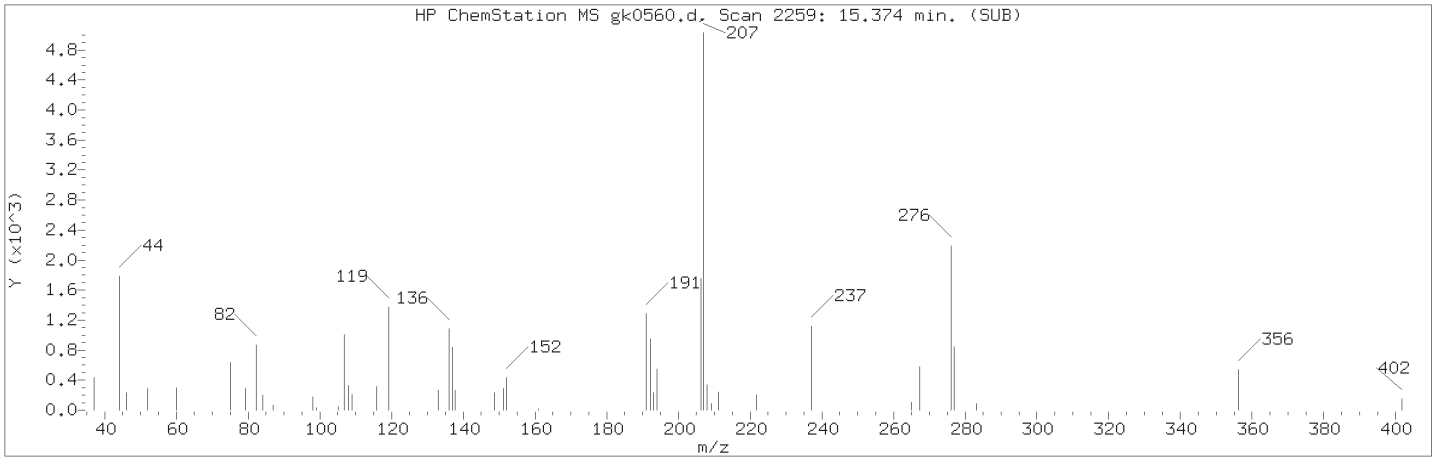
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:42 Automation

Sample Name: SSTD0.10 Lab Sample ID: MDLPAH2928

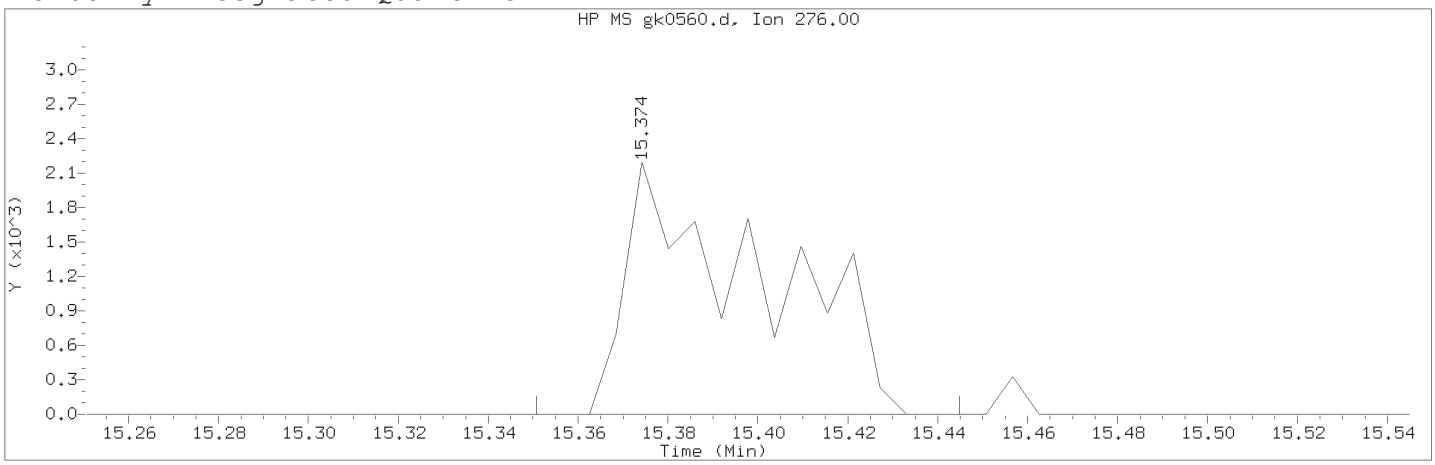
Compound Number	:	211
Compound Name	:	Benzo(a)pyrene
Scan Number	:	2049
Retention Time (minutes)	:	14.139
Quant Ion	:	252.00
Area	:	6299
On-column Amount (ng/ul)	:	0.1917
Integration start scan	:	2046 Integration stop scan: 2066
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0560.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:21 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 12-Nov-2018 08:11 em10340

Sample Name: SSTD0.10 Lab Sample ID: MDLPAH2928

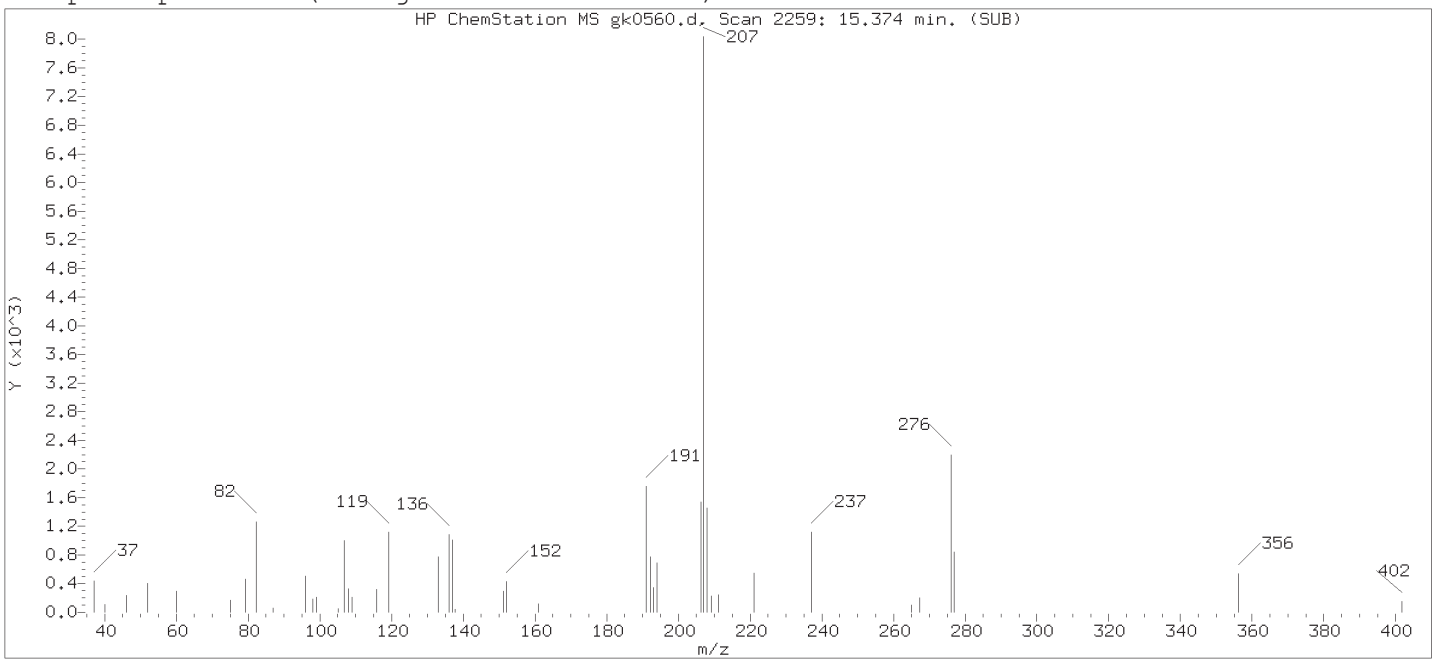
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2259
Retention Time (minutes) : 15.374
Quant Ion : 276.00
Area (flag) : 4655M
On-Column Amount (ng/ul) : 0.1446
Integration start scan : 2254 Integration stop scan: 2270
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

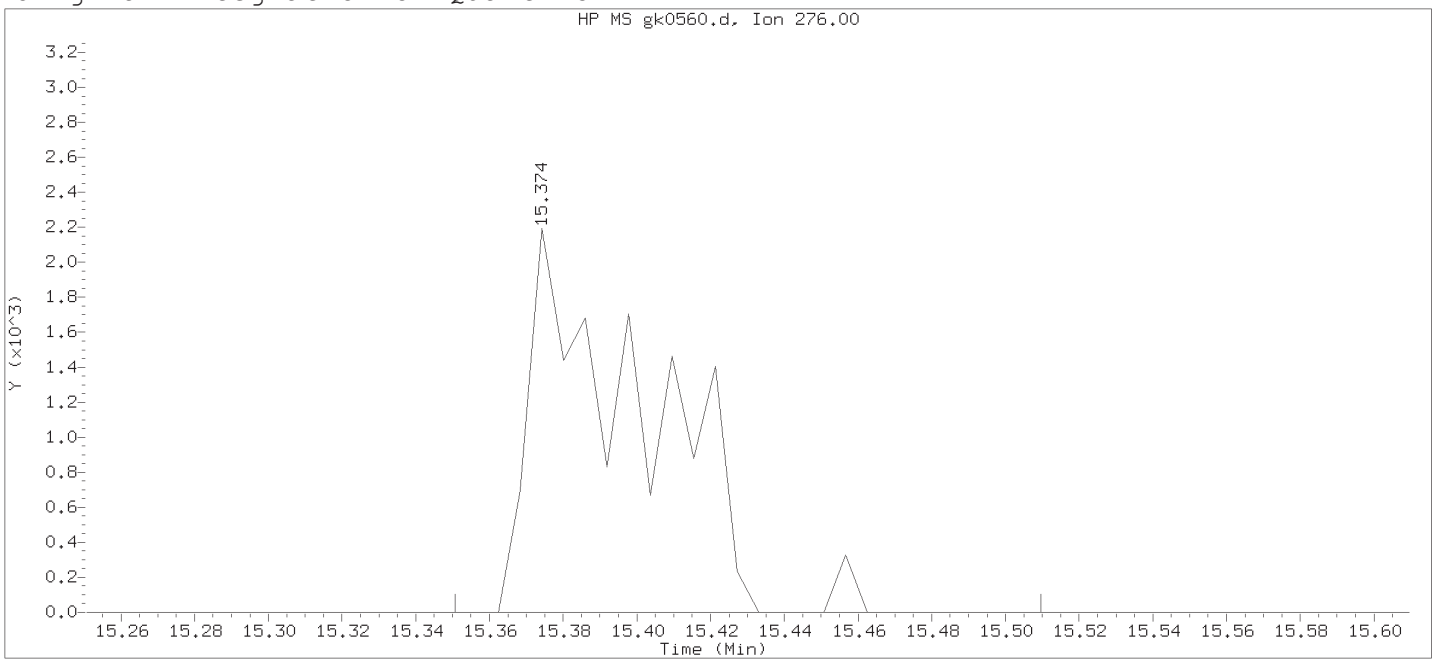
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



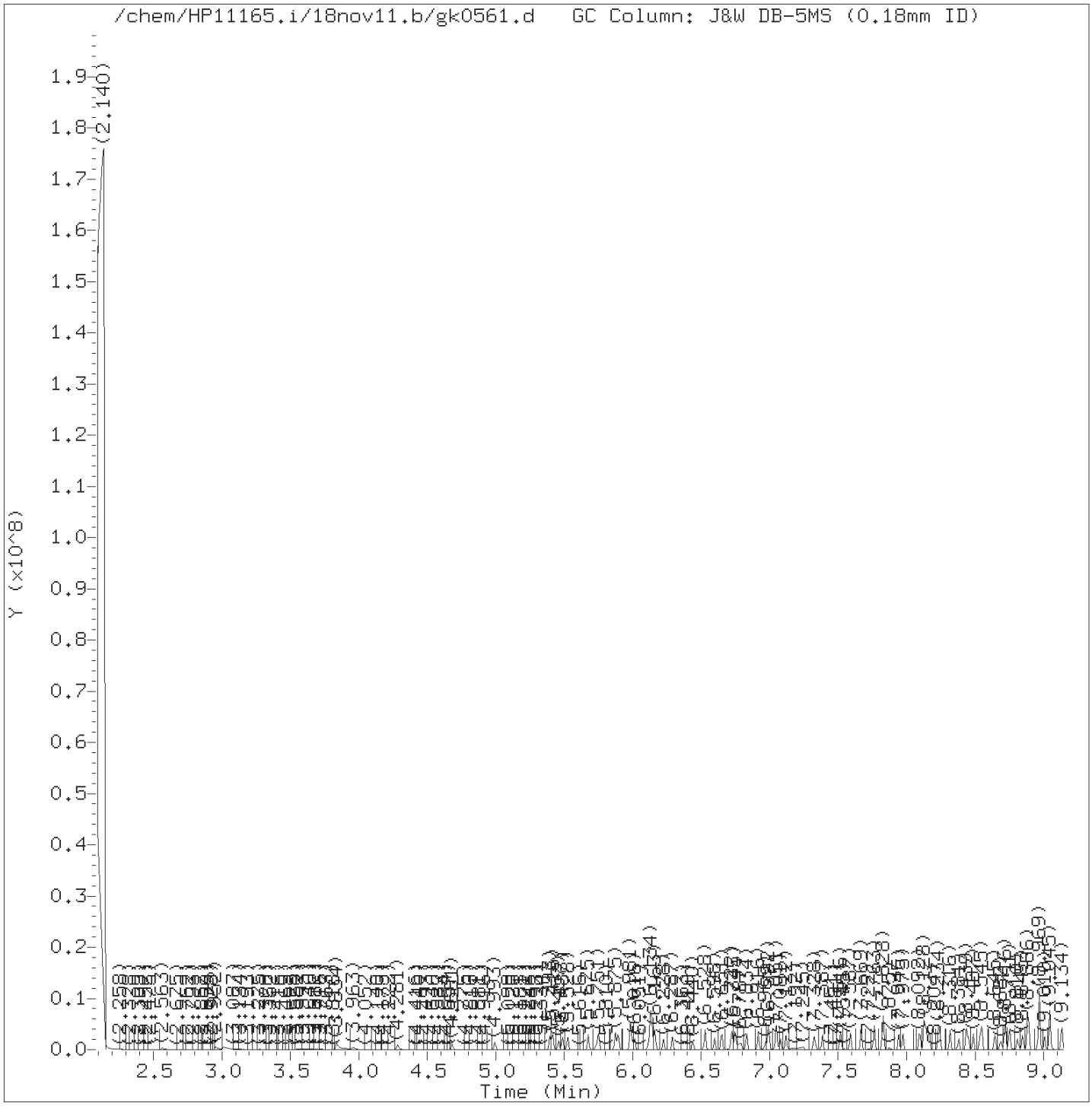
Data File: /chem/HP11165.i/18nov11.b/gk0560.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:21 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 15:42 Automation

Sample Name: SSTD0.10 Lab Sample ID: MDLPAH2928

Compound Number	:	219
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	2259
Retention Time (minutes)	:	15.374
Quant Ion	:	276.00
Area	:	4770
On-column Amount (ng/ul)	:	0.1471
Integration start scan	:	2254 Integration stop scan: 2281
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:24.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

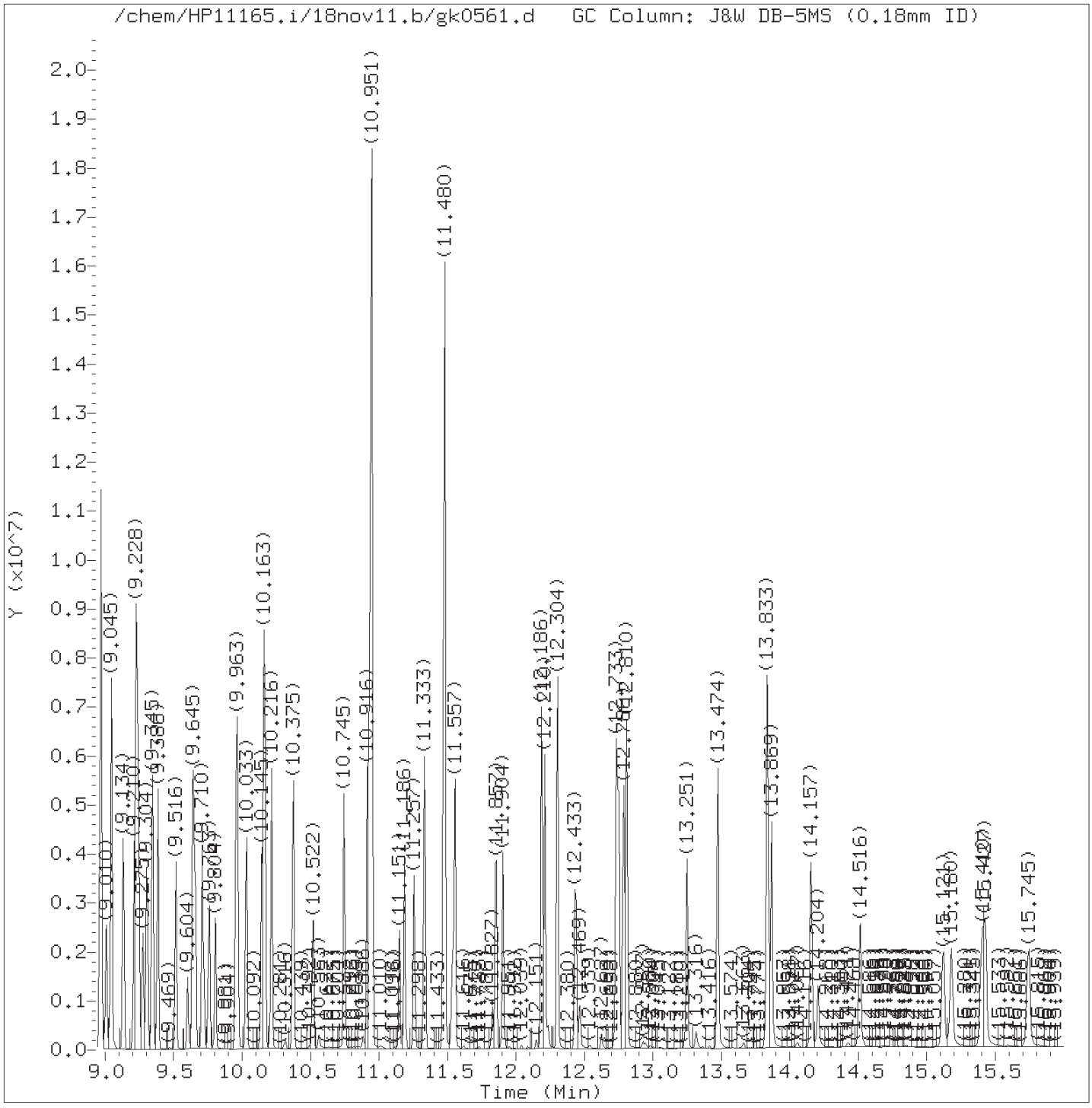
Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0561.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:45 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: icvall1
Calibration date and time: 12-NOV-2018 07:52
Date, time and analyst ID of latest file update: 12-Nov-2018 08:15 em10340

Sample Name: SSTD050 Lab Sample ID: ICV2968

Digitally signed by Edward Monborne
on 11/12/2018 at 08:25.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0561.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:45 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: icvall1
Calibration date and time: 12-NOV-2018 07:52
Date, time and analyst ID of latest file update: 12-Nov-2018 08:15 em10340

Sample Name: SSTD050 Lab Sample ID: ICV2968

Digitally signed by Edward Monborne
on 11/12/2018 at 08:25.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0561.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:45 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: icvall1
Calibration date and time: 12-NOV-2018 07:52
Date, time and analyst ID of latest file update: 12-Nov-2018 08:15 em10340

Sample Name: SSTD050 Lab Sample ID: ICV2968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.563	88	234813	47.715
4) N-Nitrosodimethylamine	(1)	2.952	74	435176	58.165
5) Pyridine	(1)	3.010	79	647520	51.503
7) 2-Picoline	(1)	3.834	93	722450	53.050
8) N-Nitrosomethylethylamine	(1)	3.963	88	301877	44.884
9) Methyl methanesulfonate	(1)	4.281	80	383021	54.476
13) N-Nitrosodiethylamine	(1)	4.681	102	297233	49.304
15) Ethyl methanesulfonate	(1)	4.993	109	290658	45.461
18) Phenol	(1)	5.393	94	997428	53.478
19) Aniline	(1)	5.416	93	1096689	50.110
22) bis(2-Chloroethyl)ether	(1)	5.487	93	729804	54.481
23) 2-Chlorophenol	(1)	5.528	128	581595	56.571
42) Total Cresols	(1)	5.660	100	1344304	106.204
24) 1,3-Dichlorobenzene	(1)	5.675	146	608823	53.760
25)*1,4-Dichlorobenzene-d4	(1)	5.734	152	139483	20.000
26) 1,4-Dichlorobenzene	(1)	5.751	146	632867	53.540
27) Benzyl alcohol	(1)	5.875	108	479116	58.498
28) 1,2-Dichlorobenzene	(1)	5.893	146	591211	51.677
30) Indene	(1)	5.981	115	973387	77.250
31) 2-Methylphenol	(1)	5.987	108	644813	51.278
34) bis(2-Chloroisopropyl)ether	(1)	6.016	45	705572	51.899
33) 2,2'-oxybis(1-Chloropropane)	(1)	6.016	45	705572	51.899
35) N-Nitrosopyrrolidine	(1)	6.116	100	317531	47.531
36) Acetophenone	(1)	6.128	105	976275	57.534
37) 4-Methylphenol	(1)	6.134	108	699491	54.926
38) N-Nitroso-di-n-propylamine	(1)	6.140	70	657870	54.886
39) N-Nitrosomorpholine	(1)	6.151	56	414012	47.165
40) o-Toluidine	(1)	6.163	106	1066129	53.401
43) Hexachloroethane	(1)	6.222	117	244898	55.044
45) Nitrobenzene	(2)	6.287	77	869762	54.515
48) N-Nitrosopiperidine	(2)	6.440	114	291092	47.426
50) Isophorone	(2)	6.528	82	1595535	55.335
51) 2-Nitrophenol	(2)	6.598	139	320518	55.762
57) O,O,O-Triethylphosphorothioate	(2)	6.722	198	257453	46.332
55) bis(2-Chloroethoxy)methane	(2)	6.745	93	913702	57.007
56) Benzoic acid	(2)	6.793	105	1038508	105.272
60) 2,4-Dichlorophenol	(2)	6.834	162	485332	54.763
62) 1,2,4-Trichlorobenzene	(2)	6.916	180	503218	53.842
65)*Naphthalene-d8	(2)	6.969	136	580542	20.000
66) Naphthalene	(2)	6.992	128	1720384	52.464

* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:25.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0561.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:45 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: icvall1
Calibration date and time: 12-NOV-2018 07:52
Date, time and analyst ID of latest file update: 12-Nov-2018 08:15 em10340

Sample Name: SSTD050 Lab Sample ID: ICV2968

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
67)	4-Chloroaniline	(2)	7.045	127	738017	54.669
68)	2,6-Dichlorophenol	(2)	7.051	162	425828	47.622
69)	Hexachloropropene	(2)	7.081	213	293078	62.675
71)	Hexachlorobutadiene	(2)	7.122	225	284419	56.712
75)	Quinoline	(2)	7.328	129	1030569	48.209
97)	Isosafrole	(3)	7.383	162	510810	59.753
77)	N-Nitrosodi-n-butylamine	(2)	7.387	84	493952	35.758
80)	4-Chloro-3-methylphenol	(2)	7.516	107	621609	56.195
82)	Safrole	(2)	7.592	162	429288	47.841
83)	2-Methylnaphthalene	(2)	7.669	142	1225469	52.699
84)	1-Methylnaphthalene	(2)	7.763	142	1132605	51.087
85)	Hexachlorocyclopentadiene	(3)	7.828	237	538357	118.898
86)	1,2,4,5-Tetrachlorobenzene	(3)	7.834	216	496750	54.939
88)	cis-Isosafrole	(3)	7.875	162	56002	6.308
90)	2,4,6-Trichlorophenol	(3)	7.945	196	358676	58.619
92)	2,4,5-Trichlorophenol	(3)	7.975	196	388603	58.308
120)	2,4_2,6-Dinitrotoluenes	(3)	8.050	165	768533	115.304
94)	trans-Isosafrole	(3)	8.098	162	454808	53.445
95)	1,1'-Biphenyl	(3)	8.128	154	1510502	55.769
96)	2-Chloronaphthalene	(3)	8.145	162	1324832M	62.332
98)	1-Chloronaphthalene	(3)	8.163	162	934366M	47.462
99)	Diphenyl ether	(3)	8.234	170	700885	48.203
100)	2-Nitroaniline	(3)	8.245	138	405126	61.006
104)	1,4-Naphthoquinone	(3)	8.316	158	546545	62.720
105)	1,4-Dinitrobenzene	(3)	8.381	168	207112	56.583
106)	Dimethylphthalate	(3)	8.439	163	1394346	56.005
107)	1,3-Dinitrobenzene	(3)	8.451	168	242726	57.140
108)	2,6-Dinitrotoluene	(3)	8.487	165	326572	58.413
109)	Acenaphthylene	(3)	8.545	152	1833811	62.555
112)	3-Nitroaniline	(3)	8.645	138	355010	56.637
113)	*Acenaphthene-d10	(3)	8.687	164	307189	20.000
114)	Acenaphthene	(3)	8.722	153	1241829	57.311
115)	2,4-Dinitrophenol	(3)	8.751	184	453316	120.238
146)	Diallate trans/cis	(4)	8.775	86	735340	49.740
116)	4-Nitrophenol	(3)	8.810	109	246855	56.727
117)	Pentachlorobenzene	(3)	8.845	250	388366	50.109
118)	2,4-Dinitrotoluene	(3)	8.886	165	441961	56.891
119)	Dibenzofuran	(3)	8.892	168	1714417	56.830
121)	1-Naphthylamine	(3)	8.969	143	2537921	107.978
122)	2,3,4,6-Tetrachlorophenol	(3)	9.010	232	300347	55.943

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:25.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0561.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:45 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: icvall1
Calibration date and time: 12-NOV-2018 07:52
Date, time and analyst ID of latest file update: 12-Nov-2018 08:15 em10340

Sample Name: SSTD050 Lab Sample ID: ICV2968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
124) Diethylphthalate	(3)	9.134	149	1407495	56.320
125) Thionazin	(3)	9.210	107	234502	49.291
126) Fluorene	(3)	9.228	166	1422654	56.419
127) 4-Chlorophenyl-phenylether	(3)	9.234	204	661737	56.453
128) 5-Nitro-o-toluidine	(3)	9.239	152	371346	49.130
129) 4-Nitroaniline	(3)	9.245	138	400295	58.624
130) 4,6-Dinitro-2-methylphenol	(4)	9.275	198	270508	59.976
131) N-Nitrosodiphenylamine	(4)	9.345	169	1271758	59.234
132) NDPA as diphenylamine	(4)	9.345	169	1271758	59.234
134) 1,2-Diphenylhydrazine	(4)	9.386	77	1964813	59.001
137) Tetraethyldithiopyrophosphate	(4)	9.516	97	249155	50.995
139) 1,3,5-Trinitrobenzene	(4)	9.604	213	128992	44.840
140) Diallate (peak 1)	(4)	9.639	86	559681	36.155
141) Phorate	(4)	9.645	75	1042548	51.838
142) Phenacetin	(4)	9.657	108	746287	52.888
143) 4-Bromophenyl-phenylether	(4)	9.710	248	362872	54.254
144) Diallate (peak 2)	(4)	9.722	86	175659	13.585
145) Hexachlorobenzene	(4)	9.763	284	340105	54.518
147) Dimethoate	(4)	9.804	87	577175	49.888
149) Pentachlorophenol	(4)	9.951	266	268914	64.552
150) 4-Aminobiphenyl	(4)	9.963	169	1377978	142.049
151) Pentachloronitrobenzene	(4)	9.969	237	154985	52.241
152) Pronamide	(4)	10.033	173	551784	50.885
153)*Phenanthrene-d10	(4)	10.139	188	608613	20.000
154) Dinoseb	(4)	10.145	211	313970	47.709
155) Phenanthrene	(4)	10.169	178	2120474	55.750
157) Anthracene	(4)	10.216	178	2102100	55.974
163) Carbazole	(4)	10.375	167	1984738	58.264
164) Methyl parathion	(4)	10.516	109	470224	55.077
165) Di-n-butylphthalate	(4)	10.745	149	2472027	58.194
167) Parathion	(4)	10.916	109	294871	52.646
168) 4-Nitroquinoline-1-oxide	(4)	10.951	190	3141624	860.278
171) Isodrin	(4)	11.186	193	208595	48.927
173) Fluoranthene	(4)	11.333	202	2180689	55.670
174) Benzidine	(5)	11.480	184	6306183	245.584
175)*Pyrene-d10	(5)	11.533	212	573462	20.000
177) Pyrene	(5)	11.557	202	2192239	52.974
182) p-Dimethylaminoazobenzene	(5)	11.857	225	411390	57.186
185) Chlorobenzilate	(5)	11.904	139	671291	54.740
187) 3,3'-Dimethylbenzidine	(5)	12.186	212	2293029	108.728

* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:25.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov11.b/gk0561.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:45 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: icvall1
Calibration date and time: 12-NOV-2018 07:52
Date, time and analyst ID of latest file update: 12-Nov-2018 08:15 em10340

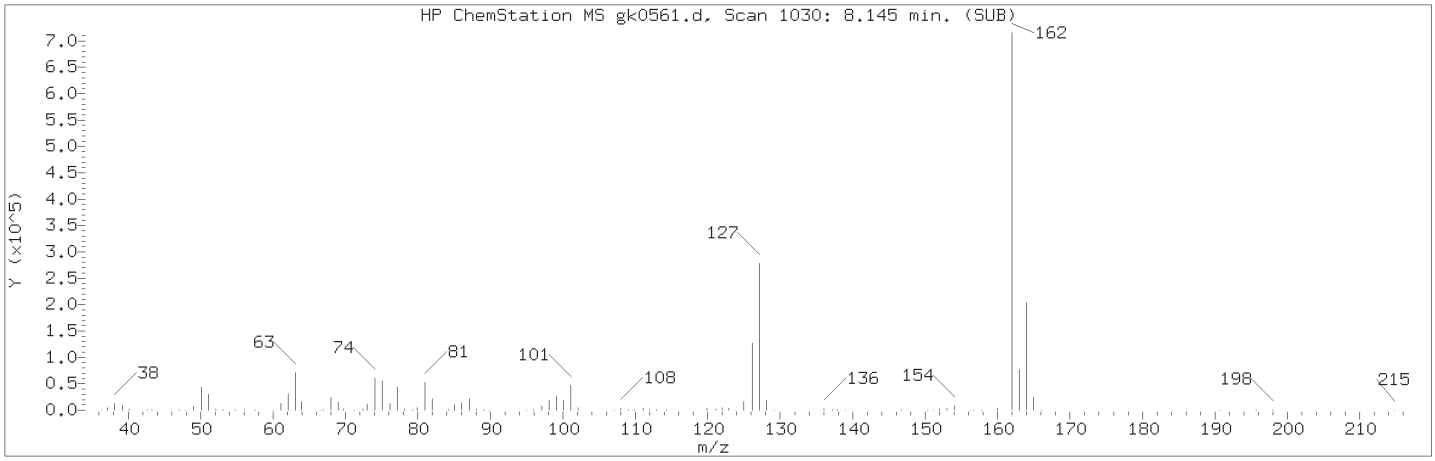
Sample Name: SSTD050 Lab Sample ID: ICV2968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
188) Butylbenzylphthalate	(5)	12.210	149	1099717	57.122
191) 2-Acetylaminofluorene	(5)	12.433	181	753075	48.529
193) 3,3'-Dichlorobenzidine	(5)	12.727	252	647302	49.386
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.739	231	363595	51.005
195) Benzo(a)anthracene	(5)	12.751	228	2073362	54.774
196) Chrysene	(5)	12.786	228	1949535	53.549
199) bis(2-Ethylhexyl)phthalate	(5)	12.810	149	1434889	55.019
203) 6-Methylchrysene	(5)	13.251	242	1183652	47.576
205) Di-n-octylphthalate	(6)	13.474	149	2398401	53.938
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.833	256	908382	56.553
206) Benzo(b)fluoranthene	(6)	13.839	252	1813139	51.410
208) Benzo(k)fluoranthene	(6)	13.869	252	1917011	57.276
211) Benzo(a)pyrene	(6)	14.157	252	1731604	56.444
213)*Perylene-d12	(6)	14.204	264	493736	20.000
215) 3-Methylcholanthrene	(6)	14.516	268	737414	61.553
222) Total PAHs	(6)	15.000	100	31163518	989.494
217) Dibenz(a,h)acridine	(6)	15.121	279	1029770	45.375
218) Dibenz(a,j)acridine	(6)	15.180	279	1128497	46.276
219) Indeno(1,2,3-cd)pyrene	(6)	15.404	276	1683278	54.306
220) Dibenz(a,h)anthracene	(6)	15.427	278	1448230	56.604
221) Benzo(g,h,i)perylene	(6)	15.745	276	1375105	52.228

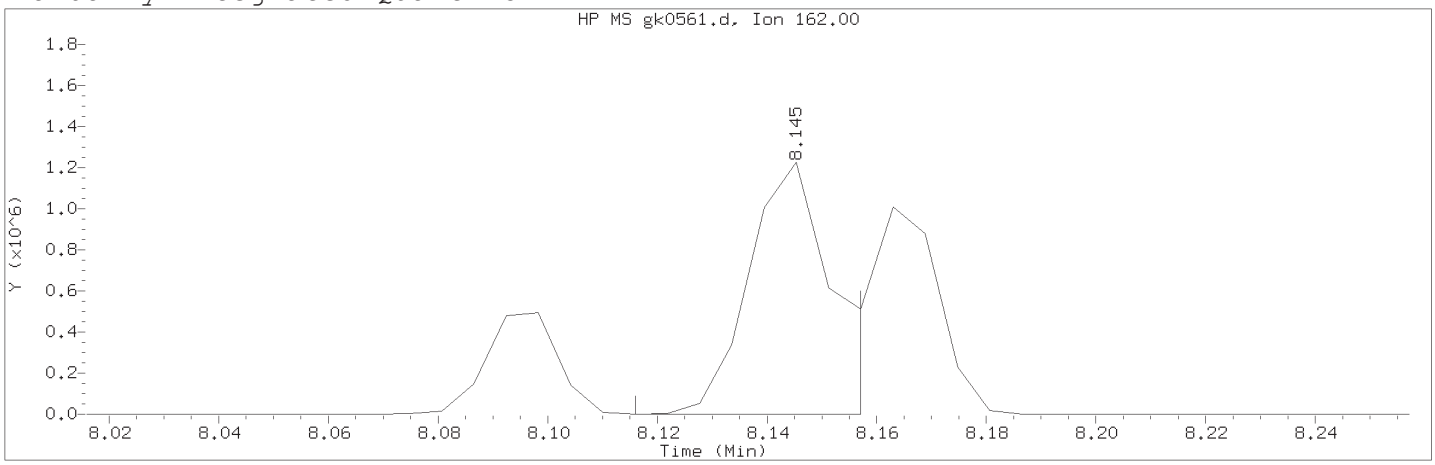
* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 11/12/2018 at 08:25.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0561.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:45 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: icvall1
Calibration date and time: 12-NOV-2018 07:52
Date, time and analyst ID of latest file update: 12-Nov-2018 08:15 em10340

Sample Name: SSTD050 Lab Sample ID: ICV2968

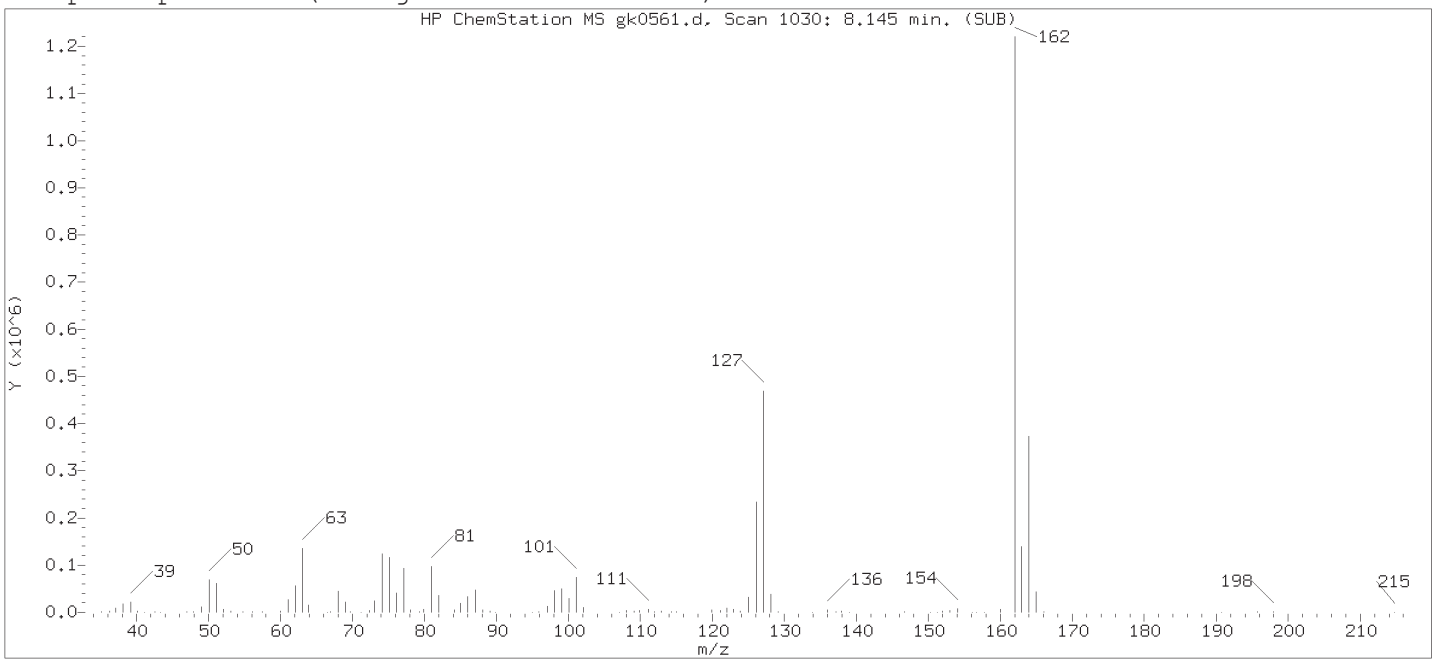
Compound Number : 96
Compound Name : 2-Chloronaphthalene
Scan Number : 1030
Retention Time (minutes) : 8.145
Quant Ion : 162.00
Area (flag) : 1324832M
On-Column Amount (ng/ul) : 62.3318
Integration start scan : 1024 Integration stop scan: 1031
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

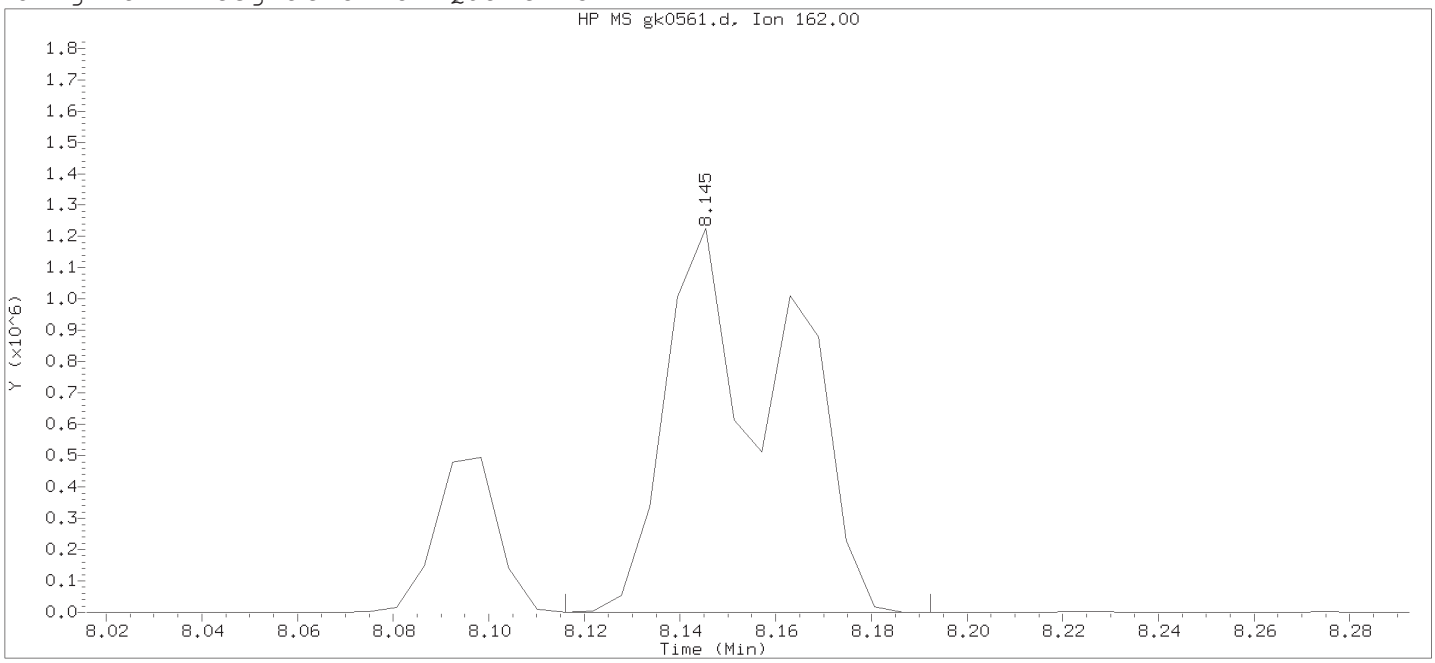
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:25.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0561.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:45 Analyst ID: em10340

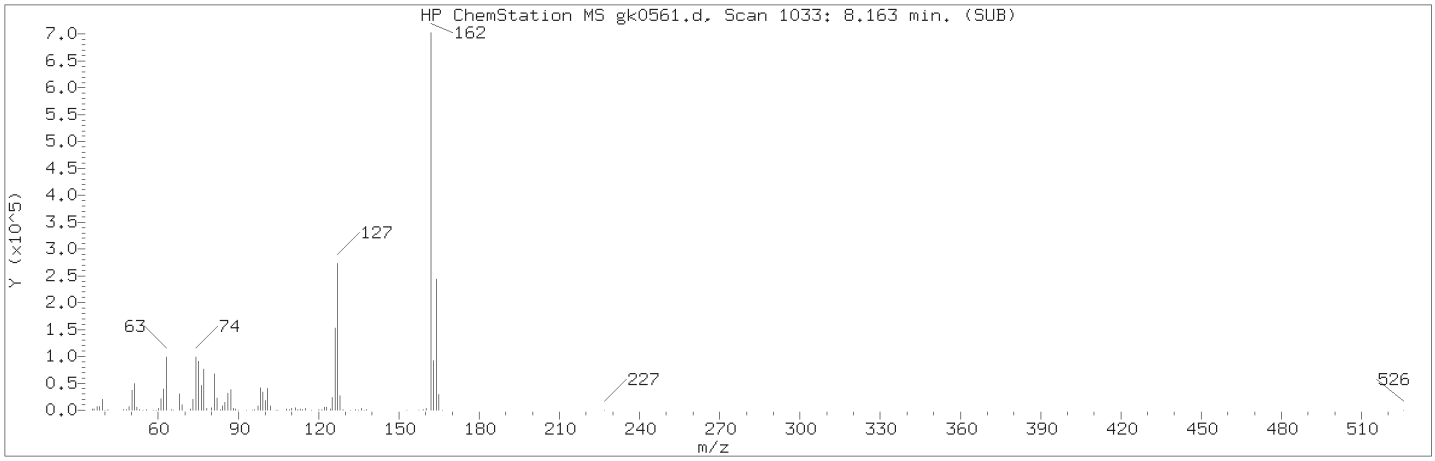
Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: icvall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 16:07 Automation

Sample Name: SSTD050 Lab Sample ID: ICV2968

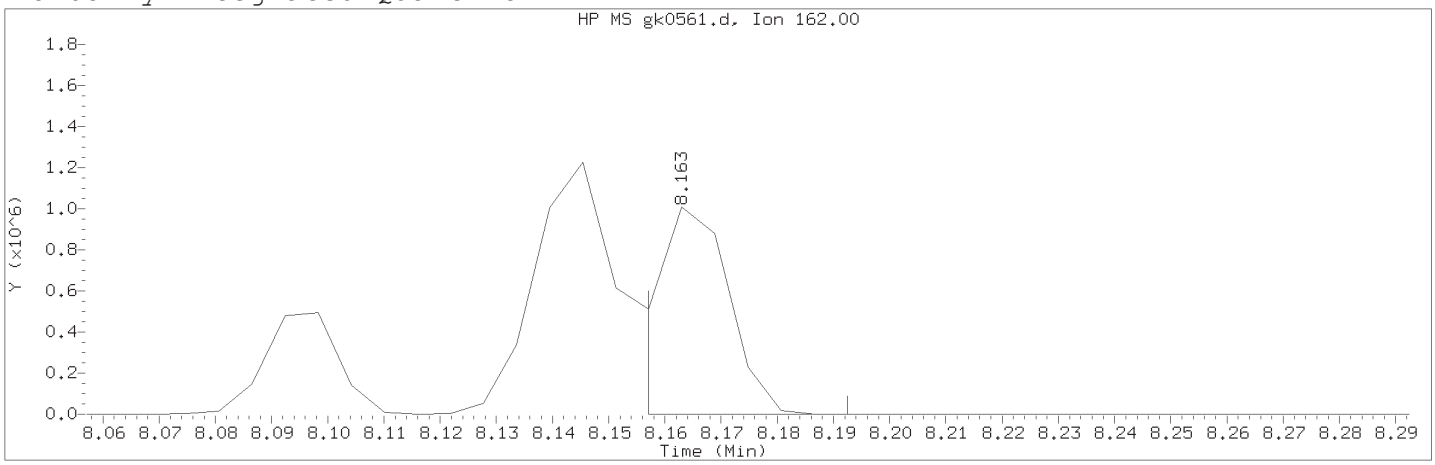
Compound Number	: 96		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 1030		
Retention Time (minutes)	: 8.145		
Quant Ion	: 162.00		
Area	: 2078237		
On-column Amount (ng/ul)	: 85.0385		
Integration start scan	: 1024	Integration stop scan:	1037
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 11/12/2018 at 08:25.
Target 3.5 esignature used 21 CFR Part 11

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0561.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:45 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: icvall1
Calibration date and time: 12-NOV-2018 07:52
Date, time and analyst ID of latest file update: 12-Nov-2018 08:15 em10340

Sample Name: SSTD050 Lab Sample ID: ICV2968

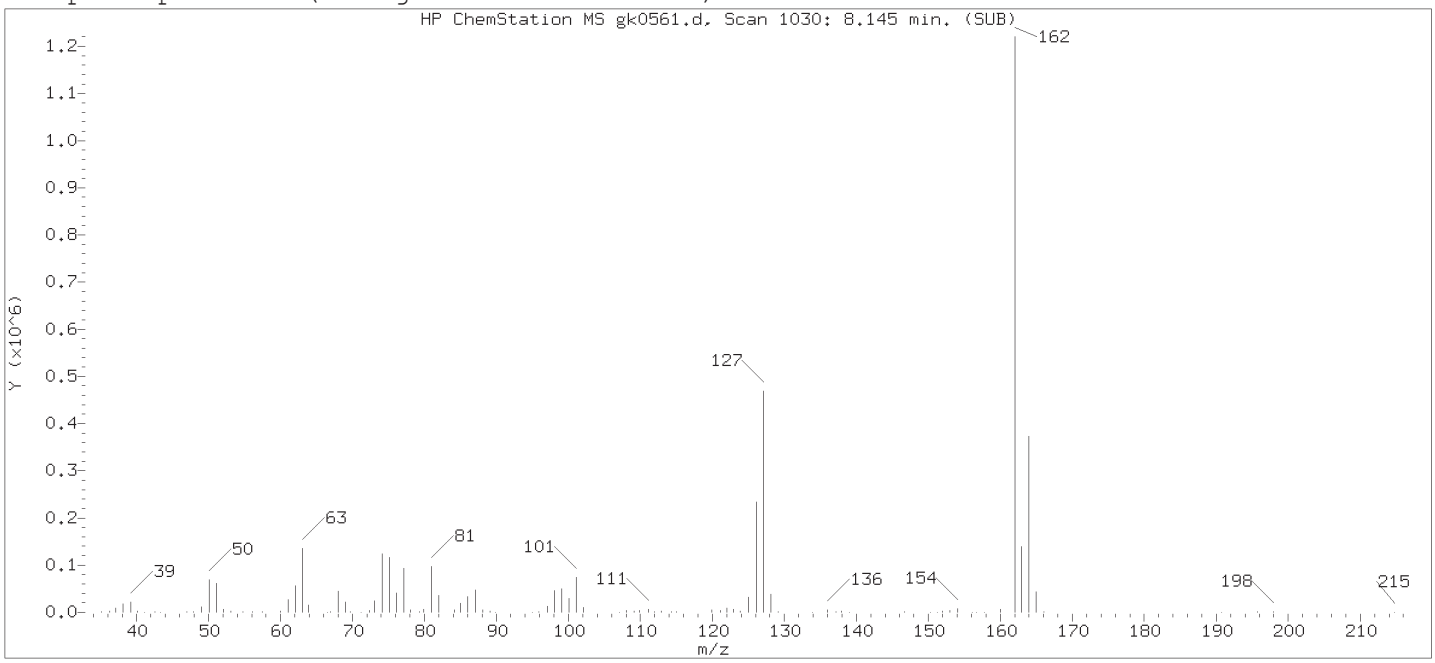
Compound Number	: 98		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1033		
Retention Time (minutes)	: 8.163		
Quant Ion	: 162.00		
Area (flag)	: 934366M		
On-Column Amount (ng/ul)	: 47.4623		
Integration start scan	: 1031	Integration stop scan:	1037
Y at integration start	: -8	Y at integration end:	-8

Reason for manual integration: improper integration

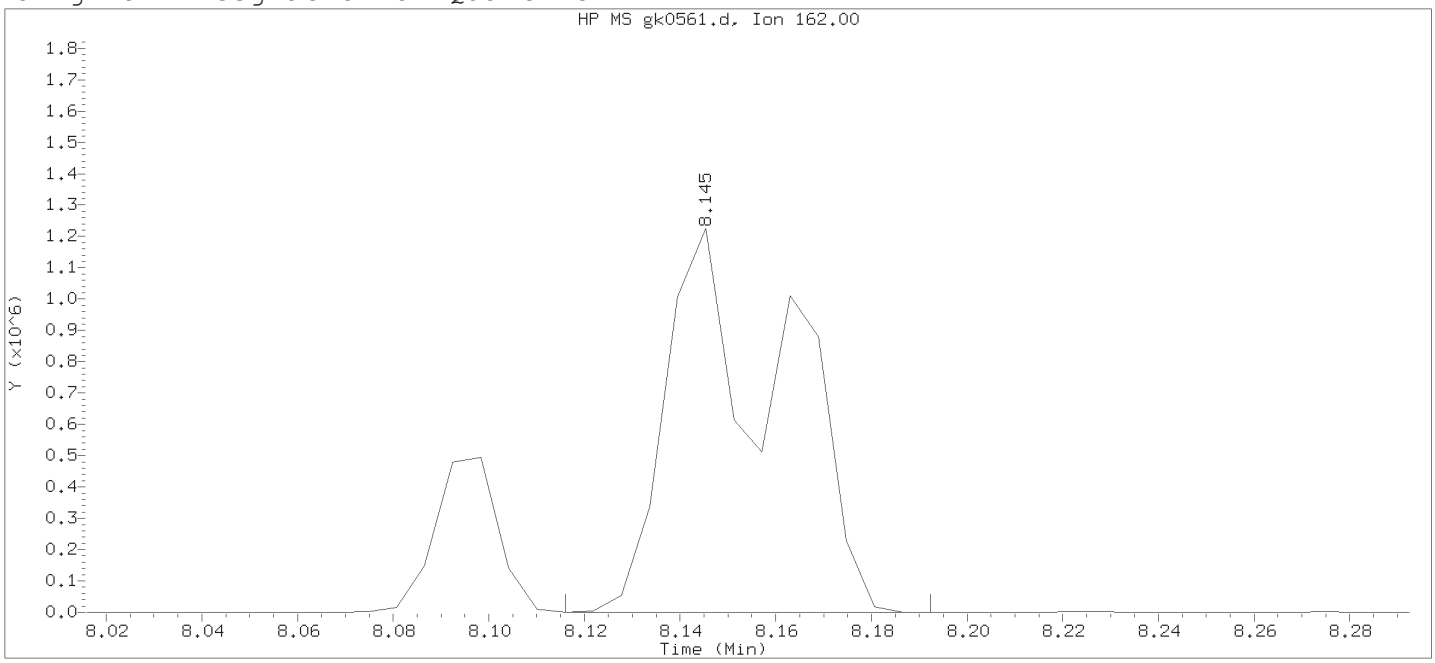
Analyst responsible for change: Digitally signed by Edward Monborne
on 11/12/2018 at 08:25.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov11.b/gk0561.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2018 15:45 Analyst ID: em10340

Method used: /chem/HP11165.i/18nov11.b/m8270d.m Sublist used: icvall1
Calibration date and time: 11-NOV-2018 14:53
Date, time and analyst ID of latest file update: 11-Nov-2018 16:07 Automation

Sample Name: SSTD050 Lab Sample ID: ICV2968

Compound Number : 98
Compound Name : 1-Chloronaphthalene
Scan Number : 1030
Retention Time (minutes) : 8.145
Quant Ion : 162.00
Area : 2078237
On-column Amount (ng/ul) : 91.8484
Integration start scan : 1024 Integration stop scan: 1037
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 11/12/2018 at 08:25.
Target 3.5 esignature user ID: em10340

Data File: /chem/HP11165.i/18nov16.b/gk0850.d

Date : 16-NOV-2018 09:46

Client ID: DFTPP50

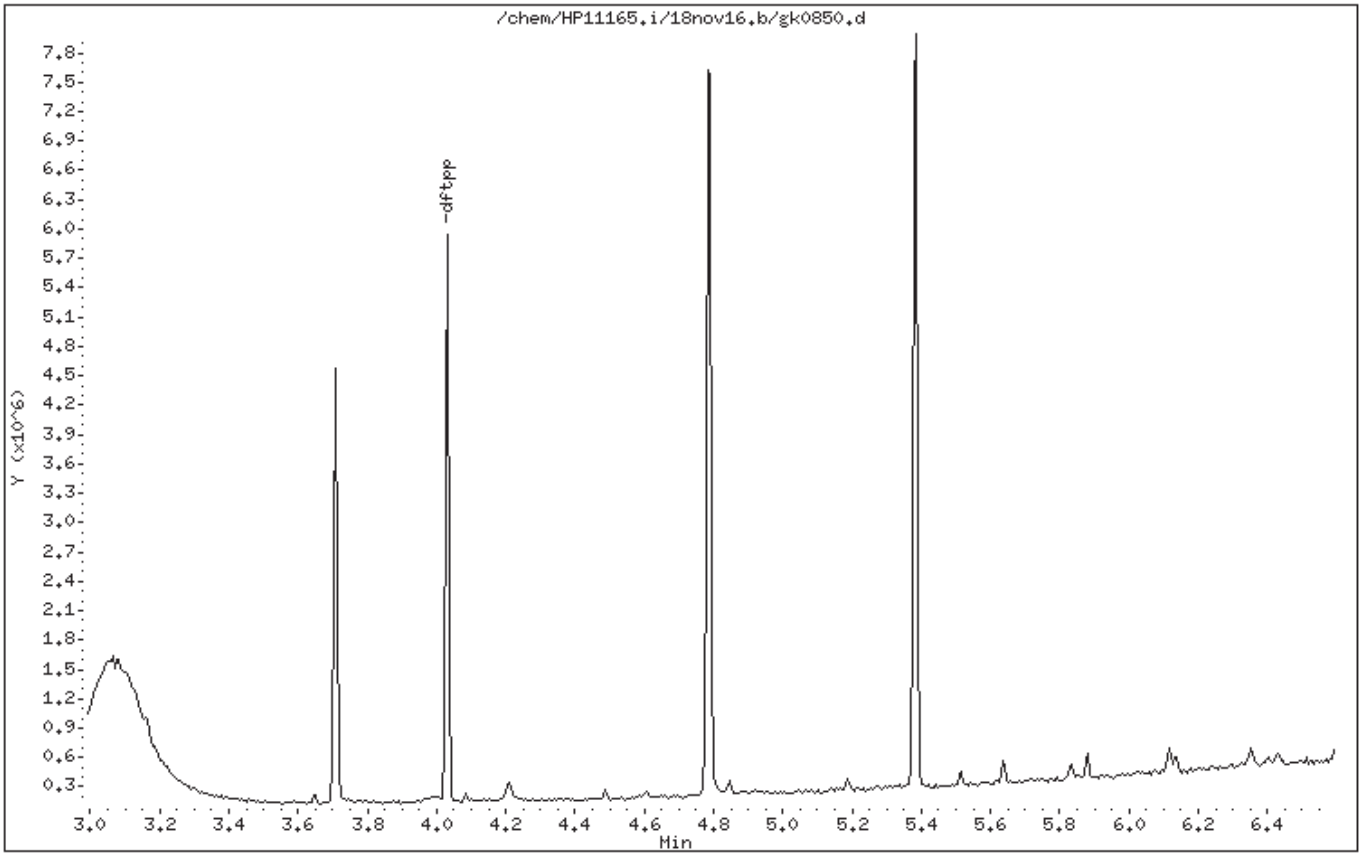
Instrument: HP11165.i

Sample Info: DFTPP50;DFTPP3108;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Chad A. Moline on 11/19/2018 at 10:50.
Target 3.5 esignature user ID: cam01237

Data File: /chem/HP11165.i/18nov16.b/gk0850.d

Date : 16-NOV-2018 09:46

Client ID: DFTPP50

Instrument: HP11165.i

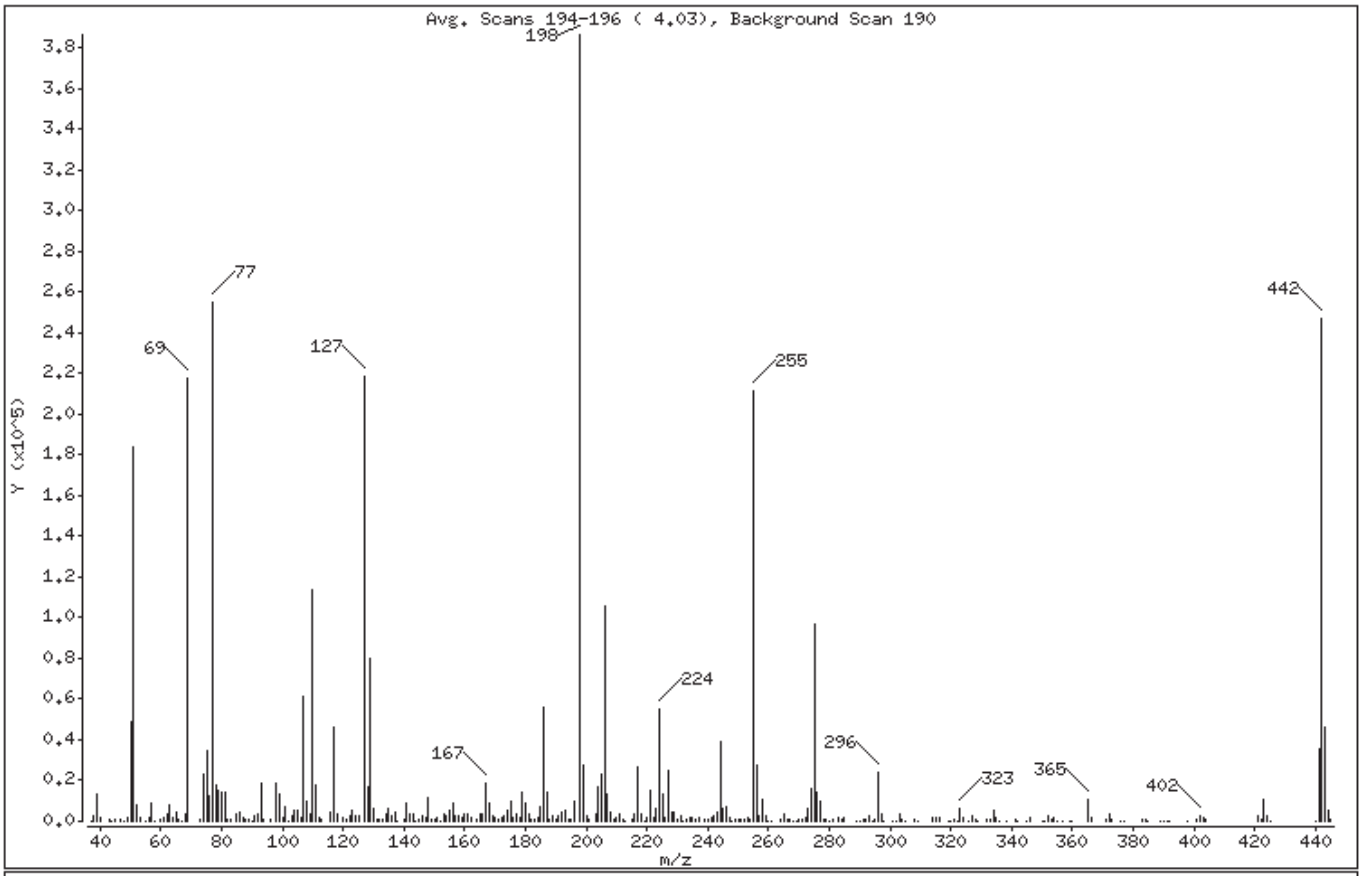
Sample Info: DFTPP50;DFTPP3108;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	47.57
68	Less than 2.00% of mass 69	0.86 (1.52)
69	Mass 69 relative abundance	56.36
70	Less than 2.00% of mass 69	0.00 (0.00)
127	10.00 - 80.00% of mass 198	56.60
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.11
275	10.00 - 60.00% of mass 198	25.01
365	Greater than 1.00% of mass 198	2.80
441	0.01 - 24.00% of mass 442	9.22 (14.42)
442	50.00 - 99.99% of mass 198	63.94
443	15.00 - 24.00% of mass 442	11.89 (18.59)

Digitally signed by Chad A. Moline on 11/19/2018 at 10:50.
Target 3.5 esignature user ID: cam01237

Date : 16-NOV-2018 09:46

Client ID: DFTPP50 Instrument: HP11165.i

Sample Info: DFTPP50;DFTPP3108;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5MS Column diameter: 0.18

Data File: gk0850.d
Spectrum: Avg. Scans 194-196 (4.03), Background Scan 190
Location of Maximum: 198.00
Number of points: 304

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	426	129.00	80192	210.00	1883	295.00	601
38.00	2527	130.00	6271	211.00	3655	296.00	23768
39.00	13405	131.00	1277	212.00	941	297.00	3806
40.00	1427	132.00	753	213.00	140	298.00	334
43.00	967	133.00	1252	215.00	1038	301.00	358
44.00	266	134.00	3669	216.00	3534	302.00	342
45.00	718	135.00	6468	217.00	26728	303.00	3564
47.00	472	136.00	2254	218.00	3796	304.00	1326
48.00	138	137.00	4094	219.00	123	305.00	56
49.00	1715	138.00	332	220.00	1404	308.00	669
50.00	48968	140.00	1150	221.00	15063	309.00	178
51.00	183744	141.00	8957	222.00	1930	314.00	1424
52.00	7651	142.00	3137	223.00	6515	315.00	2037
53.00	1614	143.00	3429	224.00	55208	316.00	2155
55.00	37	144.00	254	225.00	13457	319.00	246
56.00	1854	145.00	948	226.00	1934	320.00	69
57.00	8621	146.00	2618	227.00	24712	321.00	1038
58.00	230	147.00	2177	228.00	4023	322.00	200
60.00	1258	148.00	11365	229.00	4661	323.00	6539
61.00	2218	149.00	1197	230.00	1051	324.00	1673
62.00	3687	150.00	559	231.00	2303	326.00	86
63.00	8247	151.00	1698	232.00	404	327.00	2457
64.00	1808	152.00	281	233.00	837	328.00	1048
65.00	4464	153.00	3517	234.00	1998	329.00	427
66.00	721	154.00	2548	235.00	1553	332.00	874
67.00	190	155.00	5768	236.00	1215	333.00	651
68.00	3320	156.00	8827	237.00	1979	334.00	5170
69.00	217728	157.00	2445	239.00	496	335.00	1785
73.00	1073	158.00	2634	240.00	949	336.00	221
74.00	22896	159.00	1518	241.00	1849	338.00	180
75.00	34776	160.00	3331	242.00	2615	341.00	1304
76.00	12317	161.00	3871	243.00	4524	342.00	150
77.00	254528	162.00	2149	244.00	39008	345.00	119
78.00	17512	164.00	582	245.00	6006	346.00	1456
79.00	14931	165.00	3996	246.00	7233	350.00	51

Digitally signed by Chad A. Moline on 11/19/2018 at 10:50.
Target 3.5 esignature user ID: cam01237

Date : 16-NOV-2018 09:46

Client ID: DFTPP50 Instrument: HP11165.i

Sample Info: DFTPP50;DFTPP3108;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5MS Column diameter: 0.18

Data File: gk0850.d
Spectrum: Avg. Scans 194-196 (4.03), Background Scan 190
Location of Maximum: 198.00
Number of points: 304

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	14130	166.00	3238	247.00	1479	351.00	296
81.00	13871	167.00	18680	248.00	349	352.00	2467
82.00	1199	168.00	8571	249.00	1216	353.00	968
83.00	1317	169.00	2859	250.00	523	354.00	1933
85.00	3355	170.00	2030	251.00	741	355.00	191
86.00	4426	171.00	801	252.00	837	357.00	132
87.00	1922	172.00	1379	253.00	1548	359.00	206
88.00	889	173.00	2862	254.00	682	360.00	201
89.00	1035	174.00	5180	255.00	211456	365.00	10811
90.00	315	175.00	9422	256.00	27136	366.00	1664
91.00	2945	176.00	1686	257.00	2969	371.00	585
92.00	3906	177.00	3880	258.00	10786	372.00	3844
93.00	19056	178.00	1437	259.00	2507	373.00	1281
94.00	1284	179.00	14585	260.00	146	376.00	117
96.00	1198	180.00	8658	261.00	48	377.00	165
98.00	18800	181.00	3854	264.00	605	383.00	779
99.00	13119	182.00	956	265.00	3760	384.00	545
100.00	1739	183.00	608	266.00	548	385.00	214
101.00	7473	184.00	1472	267.00	679	389.00	56
102.00	394	185.00	6759	268.00	274	390.00	273
103.00	2942	186.00	55736	269.00	325	391.00	57
104.00	5237	187.00	14273	270.00	1141	392.00	370
105.00	5300	188.00	1083	271.00	610	398.00	147
106.00	1748	189.00	2849	272.00	1355	401.00	485
107.00	61432	190.00	934	273.00	6138	402.00	2711
108.00	9442	191.00	2907	274.00	15887	403.00	1512
109.00	3551	192.00	4803	275.00	96600	404.00	733
110.00	113400	193.00	5672	276.00	13832	421.00	2921
111.00	17416	194.00	1200	277.00	9663	422.00	1113
112.00	1942	195.00	777	278.00	957	423.00	10957
113.00	822	196.00	9451	279.00	551	424.00	2824
116.00	4349	198.00	386304	280.00	215	425.00	148
117.00	46616	199.00	27448	281.00	1076	440.00	99
118.00	3114	200.00	2234	283.00	1552	441.00	35632
120.00	1384	201.00	1131	284.00	447	442.00	246976

Digitally signed by Chad A. Moline on 11/19/2018 at 10:50.
Target 3.5 esignature user ID: cam01237

Date : 16-NOV-2018 09:46

Client ID: DFTPP50 Instrument: HP11165.i

Sample Info: DFTPP50;DFTPP3108;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5MS Column diameter: 0.18

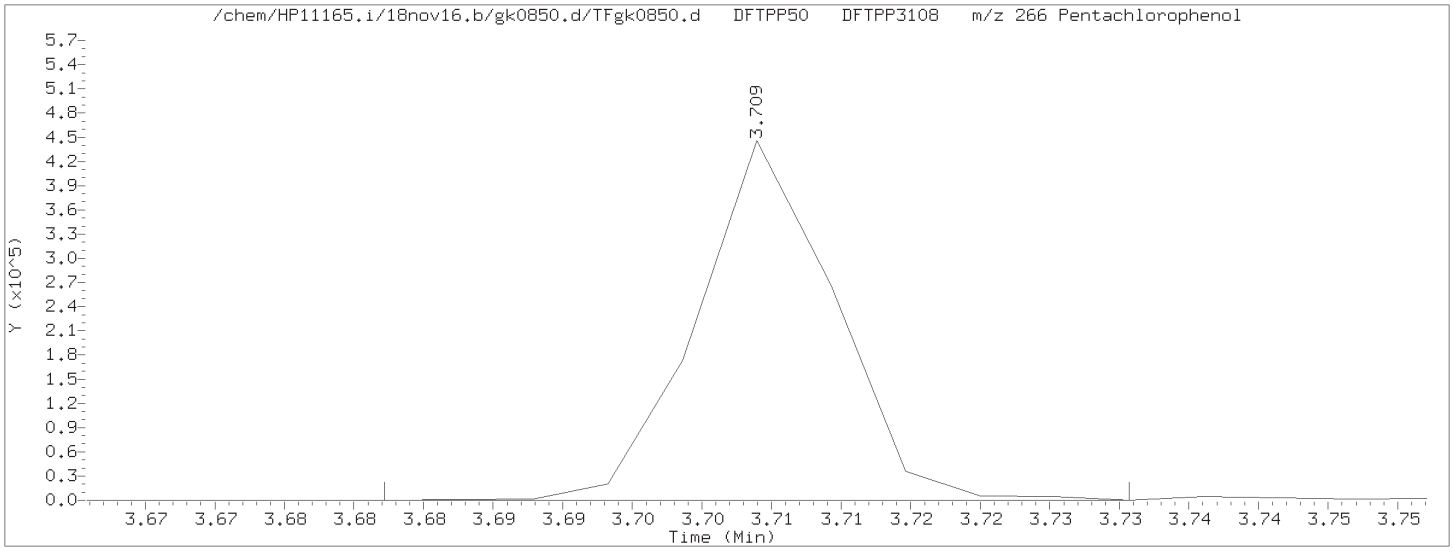
Data File: gk0850.d
Spectrum: Avg. Scans 194-196 (4.03), Background Scan 190
Location of Maximum: 198.00
Number of points: 304

m/z	Y	m/z	Y	m/z	Y	m/z	Y
121.00	535	203.00	3112	285.00	1567	443.00	45928
122.00	2912	204.00	16568	289.00	193	444.00	5331
123.00	5030	205.00	22776	290.00	130	445.00	690
124.00	2310	206.00	105944	291.00	500		
125.00	2221	207.00	13425	292.00	561		
127.00	218624	208.00	4830	293.00	2227		
128.00	16440	209.00	910	294.00	108		

Digitally signed by Chad A. Moline on 11/19/2018 at 10:50.
Target 3.5 esignature user ID: cam01237

Assessment of GC Column Performance and Injection Port Inertness for

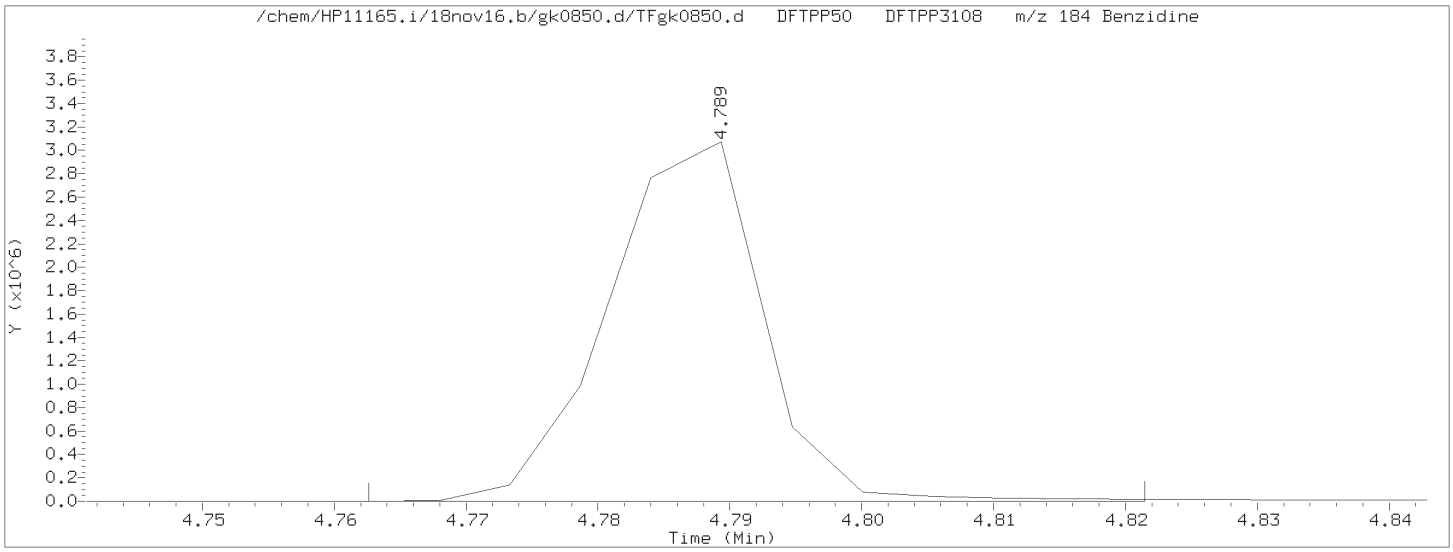
Instrument ID: HP11165.i Injection Date: 16-NOV-2018 09:46 Operator: lmh00956



Pentachlorophenol EICP peak height = 446016 EICP peak height at 10% = 44602 Pentachlorophenol EICP area = 306176

Pentachlorophenol EICP peak apex (min.) = 3.709
RT at 10% of front half of EICP (min.) = 3.699 'Front' peak width (min.) = 0.0098166667
RT at 10% of back half of EICP (min.) = 3.719 'Tailing' peak width (min.) = 0.0104833333

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0104833333}{0.0098166667} = 1.068$



Benzidine EICP peak height = 3075584 EICP peak height at 10% = 307558 Benzidine EICP area = 2493997

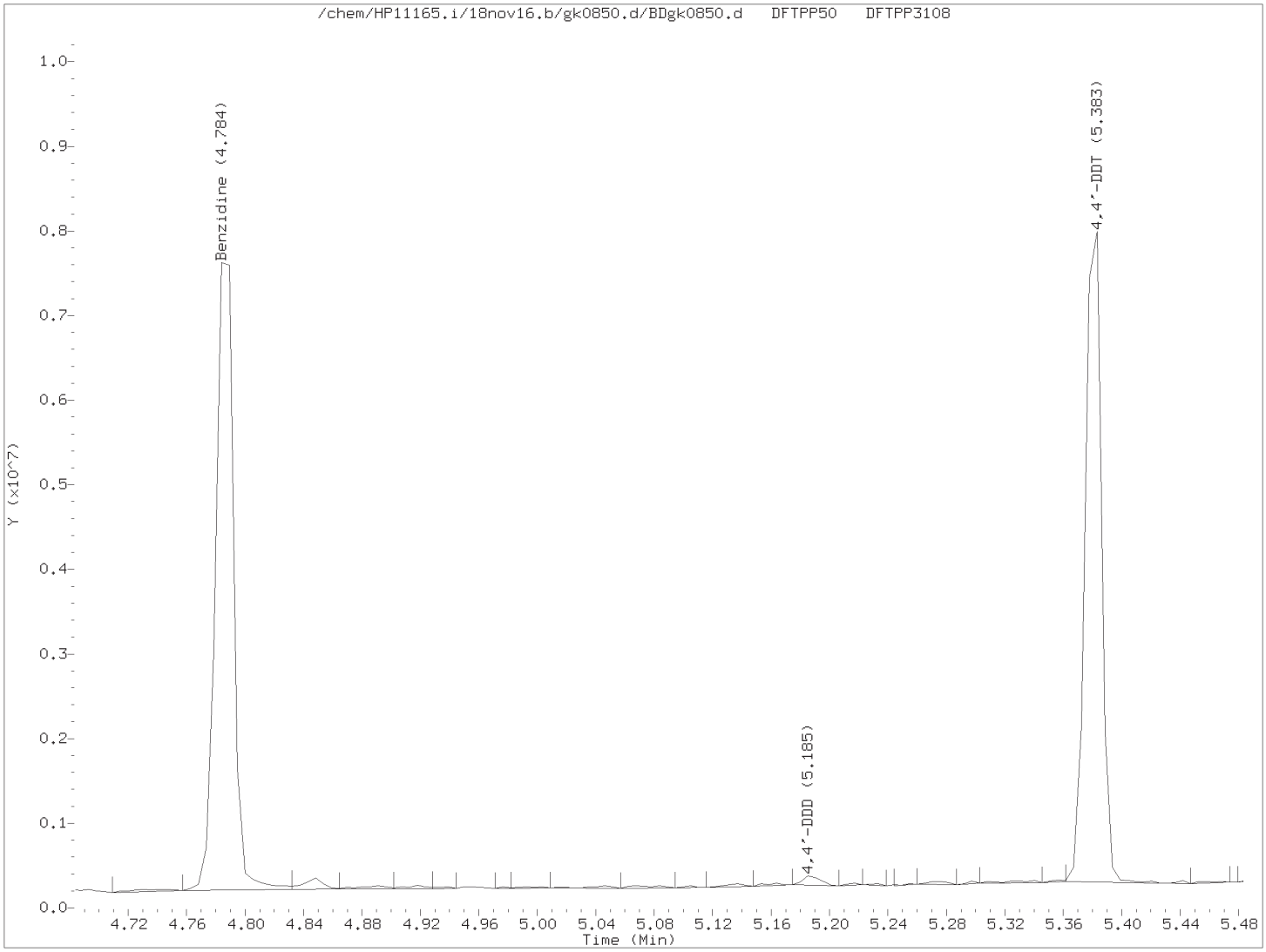
Benzidine EICP peak apex (min.) = 4.789
RT at 10% of front half of EICP (min.) = 4.774 'Front' peak width (min.) = 0.0149166667
RT at 10% of back half of EICP (min.) = 4.798 'Tailing' peak width (min.) = 0.0084166667

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0084166667}{0.0149166667} = 0.564$

Secondary review performed and digitally signed by Chad A. Moline on 11/19/2018 at 11:00. PARALLAX ID: cam01237

Assessment of GC Column Performance and Injection Port Inertness for

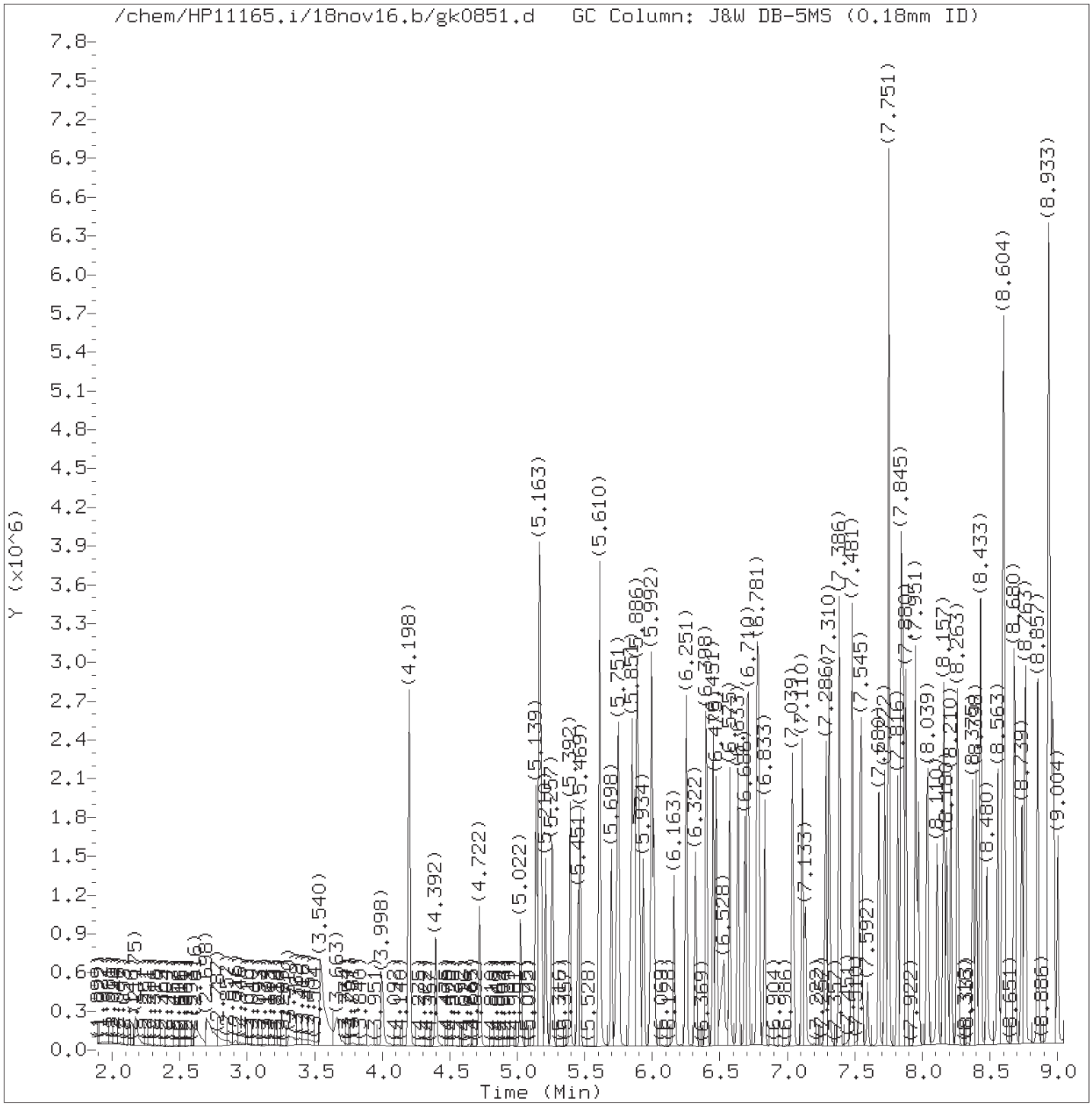
Instrument ID: HP11165.i Injection Date: 16-NOV-2018 09:46 Operator: lmh00956



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{0 + 90192}{0 + 90192 + 6079062} \times 100 = 1.5$$

Secondary review performed and digitally signed by Chad A. Moline on 11/19/2018 at 11:00. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

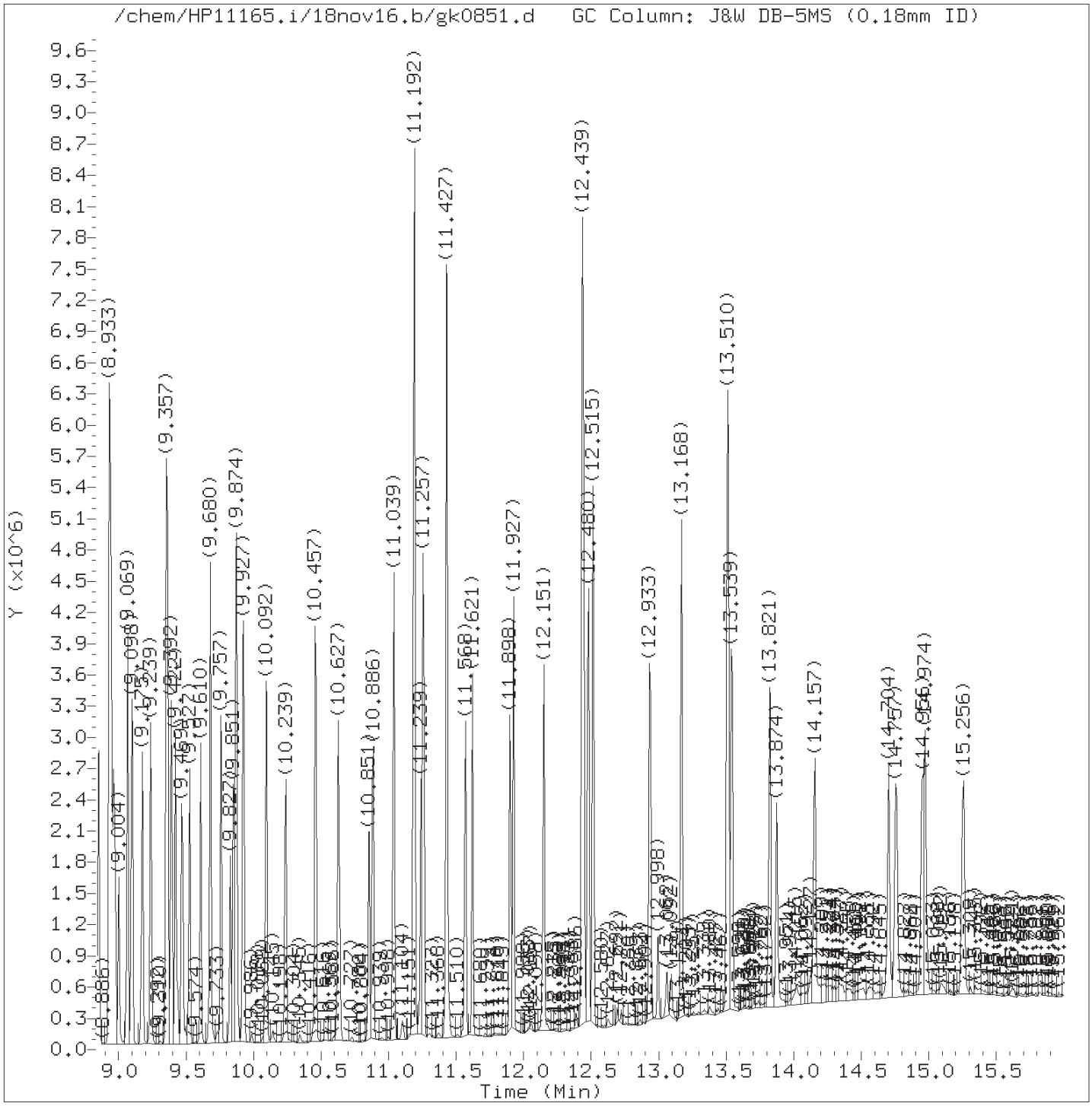
Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0851.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 10:04 Analyst ID: lmh00956

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: all1
Calibration date and time: 16-NOV-2018 11:10
Date, time and analyst ID of latest file update: 16-Nov-2018 11:10 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD2928

Digitally signed by William H Saadeh
on 11/16/2018 at 13:58.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0851.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 10:04 Analyst ID: lmh00956

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: all1
Calibration date and time: 16-NOV-2018 11:10
Date, time and analyst ID of latest file update: 16-Nov-2018 11:10 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD2928

Digitally signed by William H Saadeh
on 11/16/2018 at 13:58.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0851.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 10:04 Analyst ID: lmh00956

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: all1
Calibration date and time: 16-NOV-2018 11:10
Date, time and analyst ID of latest file update: 16-Nov-2018 11:10 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.175	88	150308	28.299
4) N-Nitrosodimethylamine	(1)	2.616	74	240947	29.838
5) Pyridine	(1)	2.698	79	357769	26.365
7) 2-Picoline	(1)	3.545	93	412431	28.060
8) N-Nitrosomethylethylamine	(1)	3.663	88	196997	27.138
9) Methyl methanesulfonate	(1)	3.998	80	230444	30.367
11)$2-Fluorophenol	(1)	4.198	112	696974	61.041
13) N-Nitrosodiethylamine	(1)	4.398	102	212903	32.721
15) Ethyl methanesulfonate	(1)	4.722	109	216188	31.329
19) Aniline	(1)	5.139	93	703624	29.788
17)$Phenol-d6	(1)	5.163	99	1147303	64.889
18) Phenol	(1)	5.175	94	601576	29.884
20) a-methylstyrene	(1)	5.181	118	35273	30.838
22) bis(2-Chloroethyl)ether	(1)	5.210	93	426069	29.470
23) 2-Chlorophenol	(1)	5.257	128	376301	33.913
24) 1,3-Dichlorobenzene	(1)	5.392	146	371999	30.434
25)*1,4-Dichlorobenzene-d4	(1)	5.451	152	150545	20.000
26) 1,4-Dichlorobenzene	(1)	5.469	146	388028	30.415
27) Benzyl alcohol	(1)	5.610	108	290204	32.829
28) 1,2-Dichlorobenzene	(1)	5.610	146	367411	29.755
42) Total Cresols	(1)			902617	66.063
30) Indene	(1)	5.698	115	431298	31.714
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.734	45	429533	29.273
34) bis(2-Chloroisopropyl)ether	(1)	5.734	45	429533	29.273
31) 2-Methylphenol	(1)	5.751	108	425528	31.353
35) N-Nitrosopyrrolidine	(1)	5.839	100	267324	37.075
36) Acetophenone	(1)	5.851	105	585978	31.996
38) N-Nitroso-di-n-propylamine	(1)	5.869	70	384910	29.753
39) N-Nitrosomorpholine	(1)	5.881	56	314358	33.181
40) o-Toluidine	(1)	5.886	106	689462	31.996
37) 4-Methylphenol	(1)	5.904	108	477089	34.710
43) Hexachloroethane	(1)	5.934	117	152124	31.679
44)$Nitrobenzene-d5	(2)	5.992	82	1053255	59.794
45) Nitrobenzene	(2)	6.010	77	546269	29.731
48) N-Nitrosopiperidine	(2)	6.163	114	233674	33.058
50) Isophorone	(2)	6.251	82	990163	29.818
51) 2-Nitrophenol	(2)	6.322	139	219604	33.174
53) 2,4-Dimethylphenol	(2)	6.398	107	465642	31.834
57) O,O,O-Triethylphosphorothioate	(2)	6.451	198	201423	31.476
55) bis(2-Chloroethoxy)methane	(2)	6.475	93	583709	31.623

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 11/16/2018 at 13:58.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0851.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 10:04 Analyst ID: lmh00956

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: all1
Calibration date and time: 16-NOV-2018 11:10
Date, time and analyst ID of latest file update: 16-Nov-2018 11:10 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
56) Benzoic acid	(2)	6.528	105	393895	34.671
60) 2,4-Dichlorophenol	(2)	6.575	162	331685	32.498
62) 1,2,4-Trichlorobenzene	(2)	6.633	180	325944	30.282
65)*Naphthalene-d8	(2)	6.686	136	668579	20.000
66) Naphthalene	(2)	6.710	128	1200133	31.779
67) 4-Chloroaniline	(2)	6.775	127	481352	30.961
68) 2,6-Dichlorophenol	(2)	6.786	162	326449	31.701
69) Hexachloropropene	(2)	6.792	213	184886	34.332
71) Hexachlorobutadiene	(2)	6.833	225	171696	29.727
75) Quinoline	(2)	7.039	129	823528	33.451
77) N-Nitrosodi-n-butylamine	(2)	7.110	84	504604	31.719
76) Caprolactam	(2)	7.133	113	166499	35.131
80) 4-Chloro-3-methylphenol	(2)	7.286	107	439863	34.529
82) Safrole	(2)	7.310	162	341925	33.087
97) Isosafrole	(3)			339800	30.050
83) 2-Methylnaphthalene	(2)	7.386	142	832458	31.084
84) 1-Methylnaphthalene	(2)	7.481	142	776939	30.430
85) Hexachlorocyclopentadiene	(3)	7.539	237	160269	26.823
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.551	216	338818	28.396
88) cis-Isosafrole	(3)	7.598	162	56692	4.839
90) 2,4,6-Trichlorophenol	(3)	7.680	196	245166	30.363
92) 2,4,5-Trichlorophenol	(3)	7.722	196	267893	30.460
93)$2-Fluorobiphenyl	(3)	7.751	172	1860731	56.712
94) trans-Isosafrole	(3)	7.816	162	283108	25.211
95) 1,1'-Biphenyl	(3)	7.845	154	975095	27.282
96) 2-Chloronaphthalene	(3)	7.857	162	779529	27.793
98) 1-Chloronaphthalene	(3)	7.880	162	730298	28.112
99) Diphenyl ether	(3)	7.951	170	543594	28.331
100) 2-Nitroaniline	(3)	7.969	138	277555	31.673
104) 1,4-Naphthoquinone	(3)	8.039	158	331755	28.850
120) 2,4_2,6-Dinitrotoluenes	(3)			556466	63.044
105) 1,4-Dinitrobenzene	(3)	8.110	168	152178	31.506
106) Dimethylphthalate	(3)	8.157	163	961644	29.270
107) 1,3-Dinitrobenzene	(3)	8.180	168	179487	32.019
108) 2,6-Dinitrotoluene	(3)	8.210	165	230587	31.255
109) Acenaphthylene	(3)	8.263	152	1158181	29.939
112) 3-Nitroaniline	(3)	8.375	138	249432	30.156
113)*Acenaphthene-d10	(3)	8.398	164	405368	20.000
114) Acenaphthene	(3)	8.433	153	845645	29.575
115) 2,4-Dinitrophenol	(3)	8.480	184	183744	36.933

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 11/16/2018 at 13:58.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0851.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 10:04 Analyst ID: lmh00956

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: all1
Calibration date and time: 16-NOV-2018 11:10
Date, time and analyst ID of latest file update: 16-Nov-2018 11:10 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
117) Pentachlorobenzene	(3)	8.563	250	303685	29.693
116) 4-Nitrophenol	(3)	8.592	109	181134A	31.543
118) 2,4-Dinitrotoluene	(3)	8.604	165	325879	31.789
119) Dibenzofuran	(3)	8.604	168	1211869	30.442
121) 1-Naphthylamine	(3)	8.680	143	916844	29.560
122) 2,3,4,6-Tetrachlorophenol	(3)	8.739	232	209174	29.525
123) 2-Naphthylamine	(3)	8.763	143	904082	29.964
146) Diallate trans/cis	(4)			592882	29.147
124) Diethylphthalate	(3)	8.857	149	988260	29.967
125) Thionazin	(3)	8.933	107	183798	29.276
126) Fluorene	(3)	8.939	166	1003027	30.144
127) 4-Chlorophenyl-phenylether	(3)	8.945	204	474784	30.694
128) 5-Nitro-o-toluidine	(3)	8.963	152	305753	30.654
129) 4-Nitroaniline	(3)	8.975	138	275590	30.585
130) 4,6-Dinitro-2-methylphenol	(4)	9.004	198	191197	31.408
131) N-Nitrosodiphenylamine	(4)	9.069	169	891084	30.750
132) NDPA as diphenylamine	(4)	9.069	169	891084	30.750
134) 1,2-Diphenylhydrazine	(4)	9.098	77	1283557	28.557
135)$2,4,6-Tribromophenol	(3)	9.180	330	228969	70.524
137) Tetraethyldithiopyrophosphate	(4)	9.239	97	201561	30.565
140) Diallate (peak 1)	(4)	9.351	86	511206	24.467
141) Phorate	(4)	9.363	75	1123847	41.402
139) 1,3,5-Trinitrobenzene	(4)	9.363	213	121482	31.288
142) Phenacetin	(4)	9.392	108	632242	33.197
143) 4-Bromophenyl-phenylether	(4)	9.422	248	257127	28.483
144) Diallate (peak 2)	(4)	9.439	86	81676	4.680
145) Hexachlorobenzene	(4)	9.469	284	249254	29.602
147) Dimethoate	(4)	9.527	87	511278	32.742
150) 4-Aminobiphenyl	(4)	9.680	169	369045	28.186
151) Pentachloronitrobenzene	(4)	9.680	237	118695	29.642
149) Pentachlorophenol	(4)	9.680	266	140794	25.041
152) Pronamide	(4)	9.763	173	475131	32.464
153)*Phenanthrene-d10	(4)	9.851	188	821448	20.000
154) Dinoseb	(4)	9.869	211	272515	30.681
155) Phenanthrene	(4)	9.874	178	1518803	29.585
157) Anthracene	(4)	9.927	178	1562022	30.816
163) Carbazole	(4)	10.092	167	1427855	31.056
164) Methyl parathion	(4)	10.239	109	396023	34.367
165) Di-n-butylphthalate	(4)	10.457	149	1763775	30.763
167) Parathion	(4)	10.627	109	257092	34.008

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 11/16/2018 at 13:58.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0851.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 10:04 Analyst ID: lmh00956

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: all1
Calibration date and time: 16-NOV-2018 11:10
Date, time and analyst ID of latest file update: 16-Nov-2018 11:10 lmh00956

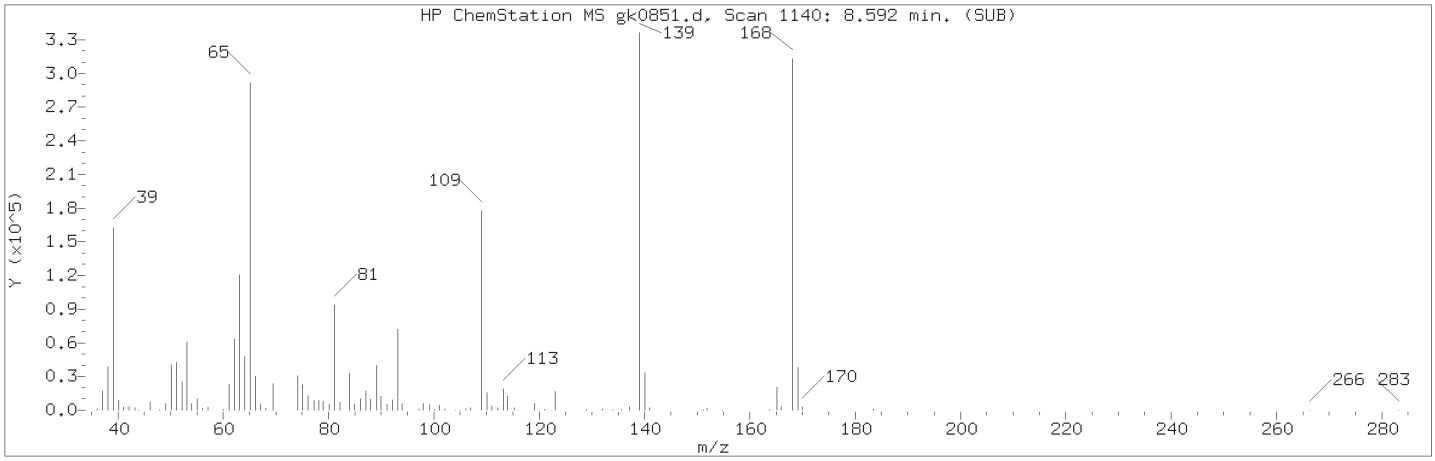
Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
168) 4-Nitroquinoline-1-oxide	(4)	10.639	190	122931	24.941
169) Octachlorostyrene	(4)	10.857	308	106877	32.673
171) Isodrin	(4)	10.886	193	167143	29.047
173) Fluoranthene	(4)	11.039	202	1647073	31.153
174) Benzidine	(5)	11.192	184	3298752	94.372
175)*Pyrene-d10	(5)	11.239	212	780631	20.000
177) Pyrene	(5)	11.257	202	1696956	30.123
179)$Terphenyl-d14	(5)	11.433	244	2210669	58.563
182) p-Dimethylaminoazobenzene	(5)	11.568	225	281327	29.543
185) Chlorobenzilate	(5)	11.621	139	535540	32.081
187) 3,3'-Dimethylbenzidine	(5)	11.898	212	997298	34.739
188) Butylbenzylphthalate	(5)	11.927	149	807705	30.820
191) 2-Acetylaminofluorene	(5)	12.151	181	742699	35.159
193) 3,3'-Dichlorobenzidine	(5)	12.433	252	556529	31.192
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.439	231	297709	30.680
195) Benzo(a)anthracene	(5)	12.445	228	1568649	30.443
196) Chrysene	(5)	12.480	228	1427189	28.798
199) bis(2-Ethylhexyl)phthalate	(5)	12.515	149	1089225	30.681
203) 6-Methylchrysene	(5)	12.933	242	1027574	30.342
205) Di-n-octylphthalate	(6)	13.168	149	1842287	31.287
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.510	256	681368	32.034
206) Benzo(b)fluoranthene	(6)	13.515	252	1382720	29.606
208) Benzo(k)fluoranthene	(6)	13.539	252	1373397	30.987
211) Benzo(a)pyrene	(6)	13.827	252	1281534	31.545
213)*Perylene-d12	(6)	13.874	264	653821	20.000
215) 3-Methylcholanthrene	(6)	14.157	268	553122	34.865
217) Dibenz(a,h)acridine	(6)	14.704	279	953178	31.716
218) Dibenz(a,j)acridine	(6)	14.757	279	1005753	31.145
219) Indeno(1,2,3-cd)pyrene	(6)	14.951	276	1328335	32.362
220) Dibenz(a,h)anthracene	(6)	14.974	278	1145618	33.813
222) Total PAHs	(6)			22858091	554.003
221) Benzo(g,h,i)perylene	(6)	15.256	276	1109412	31.820

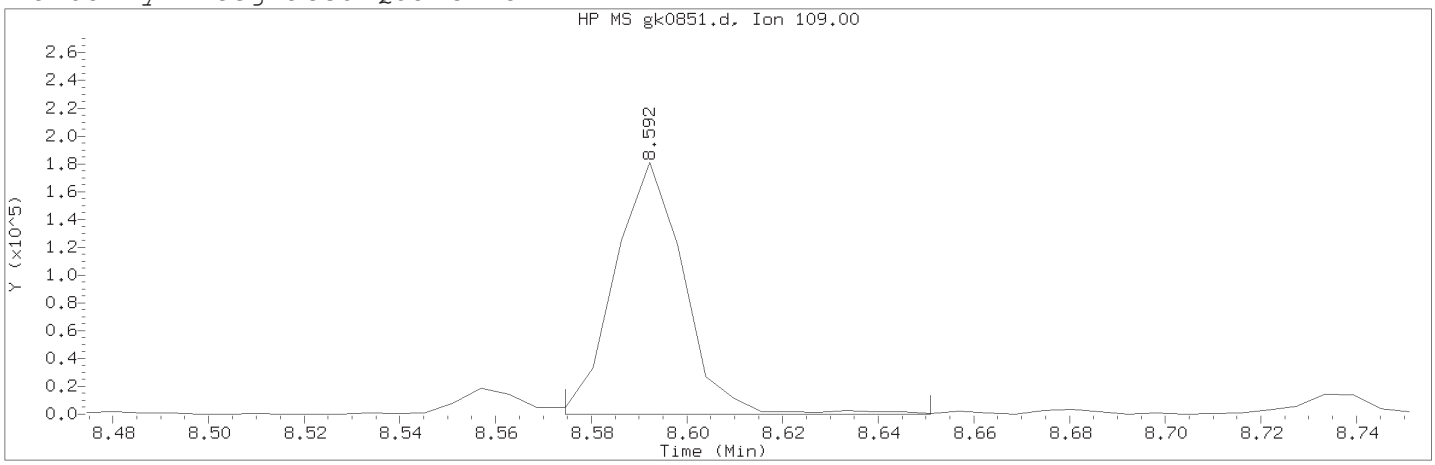
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 11/16/2018 at 13:58.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0851.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 10:04 Analyst ID: lmh00956

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: all1
Calibration date and time: 16-NOV-2018 11:10
Date, time and analyst ID of latest file update: 16-Nov-2018 11:10 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD2928

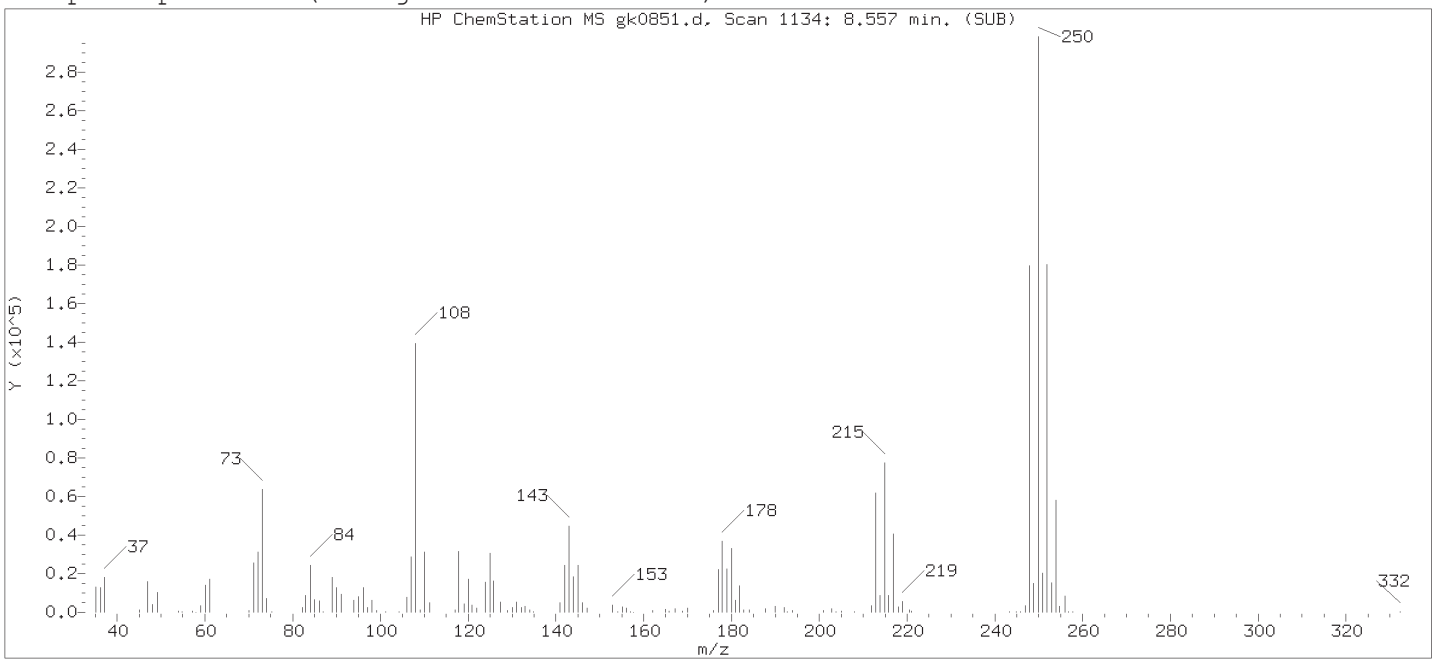
Compound Number : 116
Compound Name : 4-Nitrophenol
Scan Number : 1140
Retention Time (minutes) : 8.592
Quant Ion : 109.00
Area (flag) : 181134A
On-Column Amount (ng/ul) : 31.5430
Integration start scan : 1136 Integration stop scan: 1149
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

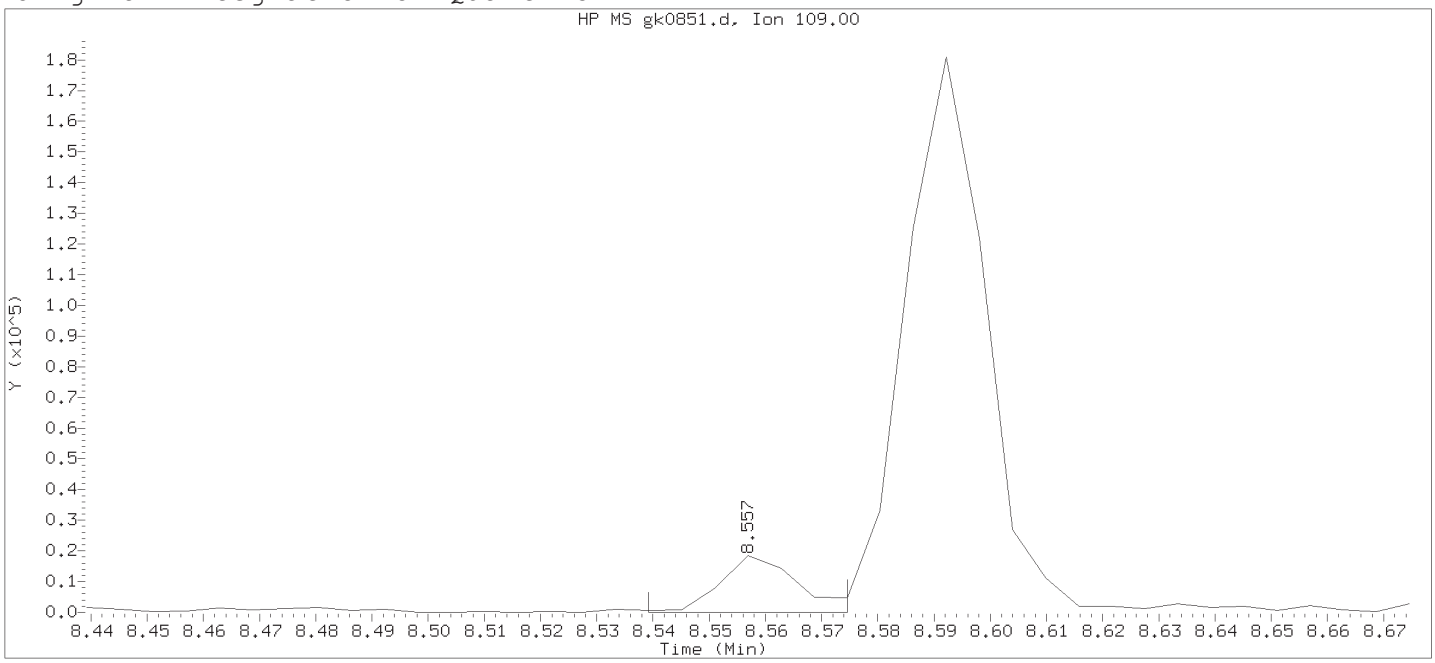
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 13:58.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/19/2018 at 11:00.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



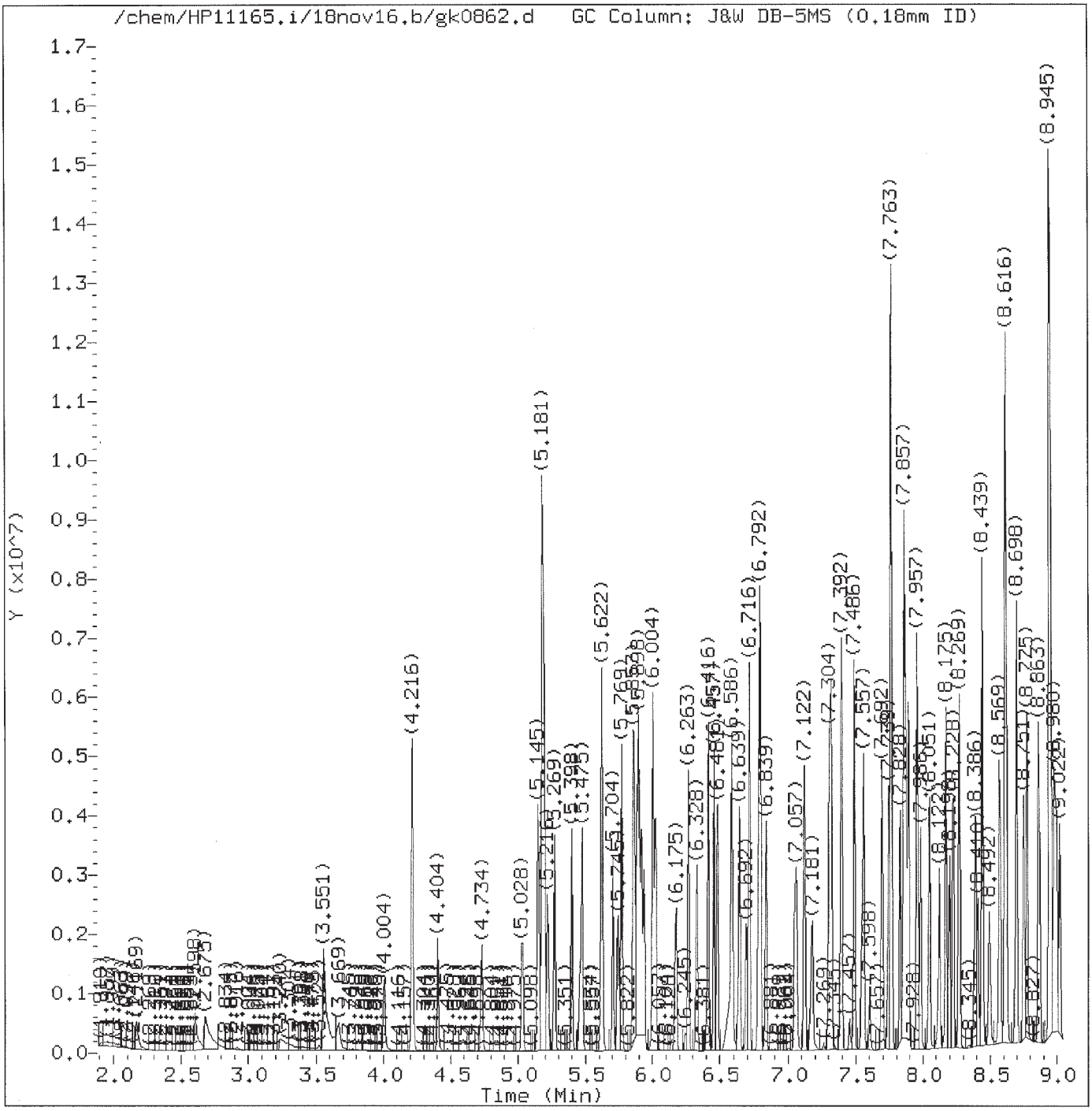
Data File: /chem/HP11165.i/18nov16.b/gk0851.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 10:04 Analyst ID: lmh00956

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: all1
Calibration date and time: 16-NOV-2018 10:26
Date, time and analyst ID of latest file update: 16-Nov-2018 10:26 Automation

Sample Name: SSTD030 Lab Sample ID: STD2928

Compound Number : 116
Compound Name : 4-Nitrophenol
Scan Number : 1134
Retention Time (minutes) : 8.557
Quant Ion : 109.00
Area : 17319
On-column Amount (ng/ul) : 3.0161
Integration start scan : 1130 Integration stop scan: 1136
Y at integration start : 0 Y at integration end: 0

Digitally signed by William H Saadeh on 11/16/2018 at 13:58.
Target 3.5 esignature user ID: [illegible]



Total Ion Chromatogram (TIC)

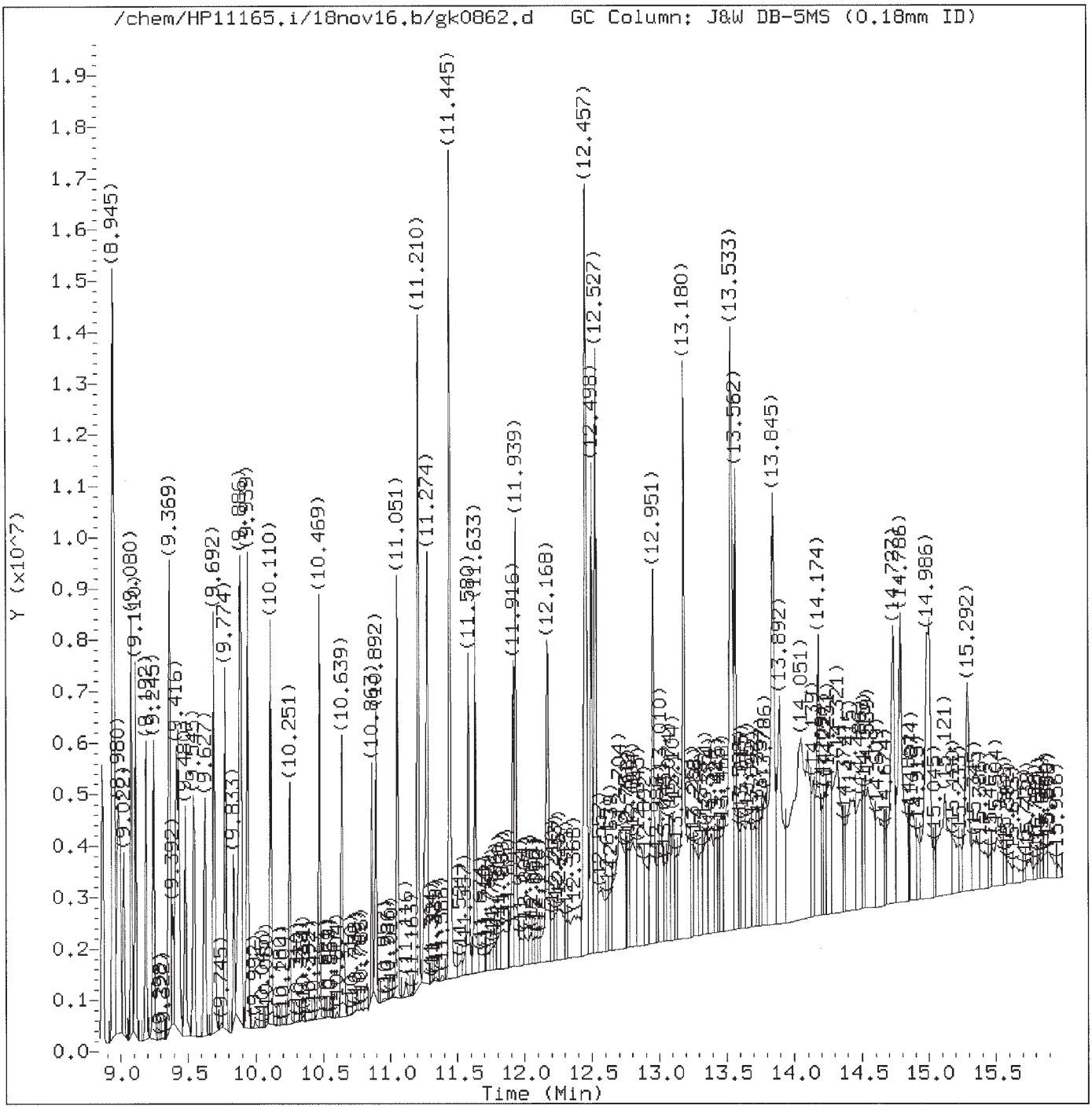
Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0862.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 18:30 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 18nov16
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: SECC50 Lab Sample ID: STD2928

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0862.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 18:30 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 18nov16
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: SECC50 Lab Sample ID: STD2928

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0862.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 18:30 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 18nov16
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: SECC50 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) Pyridine	(1)	2.681	79	855833M	50.675
11)$2-Fluorophenol	(1)	4.216	112	1430551	100.666
19) Aniline	(1)	5.145	93	1398533	47.571
17)$Phenol-d6	(1)	5.181	99	2346270	106.621
18) Phenol	(1)	5.192	94	1277087	50.973
22) bis(2-Chloroethyl)ether	(1)	5.216	93	885369	49.203
23) 2-Chlorophenol	(1)	5.269	128	751510	54.417
24) 1,3-Dichlorobenzene	(1)	5.398	146	738928	48.573
25)*1,4-Dichlorobenzene-d4	(1)	5.457	152	187367	20.000
26) 1,4-Dichlorobenzene	(1)	5.475	146	748737	47.155
28) 1,2-Dichlorobenzene	(1)	5.616	146	725286	47.194
27) Benzyl alcohol	(1)	5.622	108	624459	56.759
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.745	45	900801	49.326
31) 2-Methylphenol	(1)	5.769	108	859274	50.869
36) Acetophenone	(1)	5.863	105	1233636	54.121
38) N-Nitroso-di-n-propylamine	(1)	5.881	70	805927	50.054
37) 4-Methylphenol	(1)	5.922	108	997486	58.309
43) Hexachloroethane	(1)	5.939	117	307365	51.429
44)$Nitrobenzene-d5	(2)	6.004	82	2201555	98.680
45) Nitrobenzene	(2)	6.022	77	1130942	48.597
50) Isophorone	(2)	6.269	82	2077050	49.385
51) 2-Nitrophenol	(2)	6.328	139	446162	53.215
53) 2,4-Dimethylphenol	(2)	6.416	107	1001614	54.064
55) bis(2-Chloroethoxy)methane	(2)	6.481	93	1175675	50.288
60) 2,4-Dichlorophenol	(2)	6.586	162	692322	53.556
62) 1,2,4-Trichlorobenzene	(2)	6.645	180	677353	49.686
65)*Naphthalene-d8	(2)	6.692	136	846796	20.000
66) Naphthalene	(2)	6.716	128	2442397	51.063
67) 4-Chloroaniline	(2)	6.786	127	990118	50.283
71) Hexachlorobutadiene	(2)	6.839	225	347550	47.510
76) Caprolactam	(2)	7.181	113	362065A	60.317
80) 4-Chloro-3-methylphenol	(2)	7.304	107	932683	57.806
83) 2-Methylnaphthalene	(2)	7.392	142	1732086	51.065
84) 1-Methylnaphthalene	(2)	7.486	142	1638117	50.656
85) Hexachlorocyclopentadiene	(3)	7.545	237	235892	32.310
90) 2,4,6-Trichlorophenol	(3)	7.692	196	533996	54.123
92) 2,4,5-Trichlorophenol	(3)	7.739	196	590413	54.940
93)$2-Fluorobiphenyl	(3)	7.763	172	3886983	96.953
95) 1,1'-Biphenyl	(3)	7.857	154	2121237	48.571
96) 2-Chloronaphthalene	(3)	7.869	162	1911682M	55.780

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0862.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 18:30 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 18nov16
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: SECC50 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
100) 2-Nitroaniline	(3)	7.986	138	620116	57.912
106) Dimethylphthalate	(3)	8.175	163	2014966	50.192
108) 2,6-Dinitrotoluene	(3)	8.228	165	487646	54.094
109) Acenaphthylene	(3)	8.269	152	2385280	50.462
112) 3-Nitroaniline	(3)	8.392	138	537049	53.136
113)*Acenaphthene-d10	(3)	8.410	164	495328	20.000
114) Acenaphthene	(3)	8.439	153	1789205	51.210
115) 2,4-Dinitrophenol	(3)	8.492	184	313392	51.551
119) Dibenzofuran	(3)	8.610	168	2494662	51.285
116) 4-Nitrophenol	(3)	8.616	109	399544	56.941
118) 2,4-Dinitrotoluene	(3)	8.622	165	694935	55.478
124) Diethylphthalate	(3)	8.863	149	1985100	49.262
126) Fluorene	(3)	8.945	166	2165479	53.259
127) 4-Chlorophenyl-phenylether	(3)	8.951	204	1004354	53.138
129) 4-Nitroaniline	(3)	8.998	138	595798	54.114
130) 4,6-Dinitro-2-methylphenol	(4)	9.022	198	425896	57.573
131) N-Nitrosodiphenylamine	(4)	9.080	169	1874138	53.221
135)$2,4,6-Tribromophenol	(3)	9.192	330	481644	121.406
143) 4-Bromophenyl-phenylether	(4)	9.433	248	549499	50.091
145) Hexachlorobenzene	(4)	9.486	284	520973	50.916
149) Pentachlorophenol	(4)	9.698	266	283454	41.485
153)*Phenanthrene-d10	(4)	9.863	188	998220	20.000
155) Phenanthrene	(4)	9.886	178	3085866	49.465
157) Anthracene	(4)	9.939	178	3132809	50.860
163) Carbazole	(4)	10.110	167	2824736	50.558
165) Di-n-butylphthalate	(4)	10.469	149	3432086	49.260
173) Fluoranthene	(4)	11.051	202	3137248	48.830
175)*Pyrene-d10	(5)	11.251	212	912794	20.000
177) Pyrene	(5)	11.274	202	3112936	47.258
179)$Terphenyl-d14	(5)	11.445	244	4310186	97.649
188) Butylbenzylphthalate	(5)	11.939	149	1619344	52.844
193) 3,3'-Dichlorobenzidine	(5)	12.451	252	1098941	52.675
195) Benzo(a)anthracene	(5)	12.463	228	3057043	50.738
196) Chrysene	(5)	12.498	228	2722716	46.985
199) bis(2-Ethylhexyl)phthalate	(5)	12.527	149	2277182	54.856
205) Di-n-octylphthalate	(6)	13.180	149	3947423	55.906
206) Benzo(b)fluoranthene	(6)	13.539	252	2720045	48.570
208) Benzo(k)fluoranthene	(6)	13.562	252	2571718	48.389
211) Benzo(a)pyrene	(6)	13.845	252	2429136	49.865
213)*Perylene-d12	(6)	13.892	264	784007	20.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0862.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 18:30 Analyst ID: whs02991

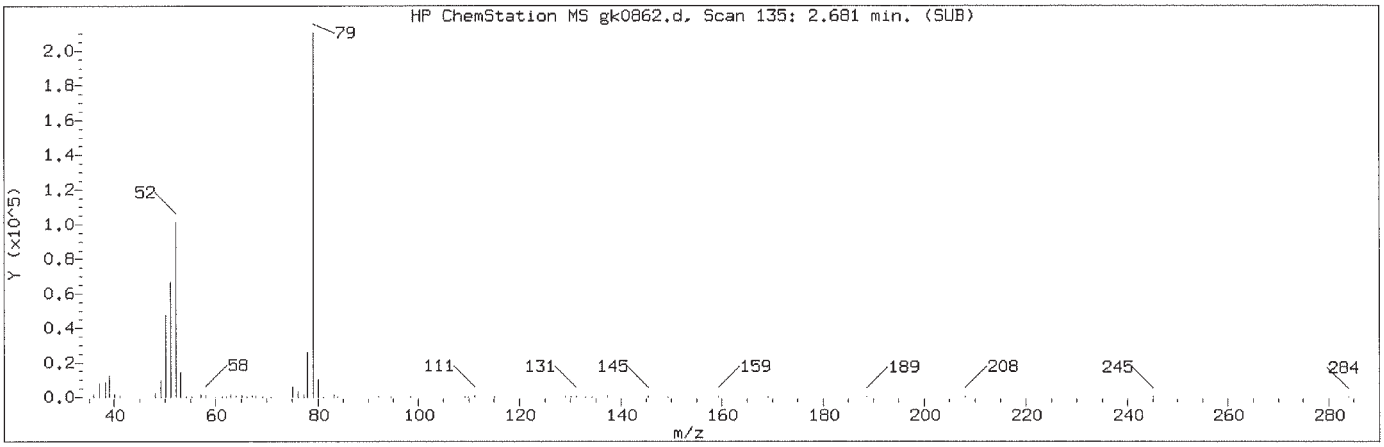
Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 18nov16
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: SECC50 Lab Sample ID: STD2928

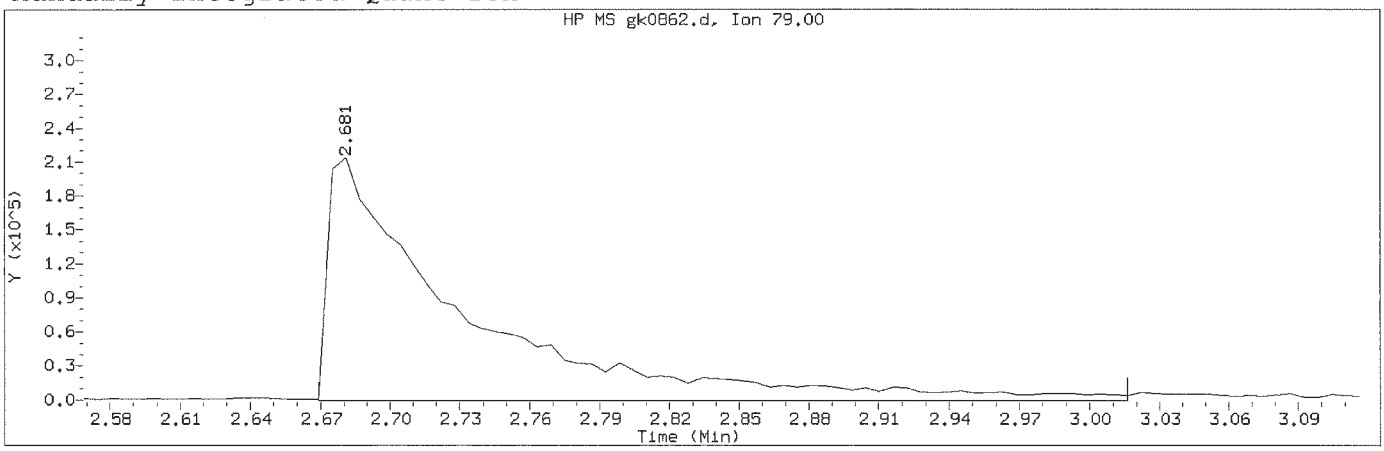
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
219) Indeno(1,2,3-cd)pyrene	(6)	14.986	276	2522289	51.247
220) Dibenz(a,h)anthracene	(6)	15.004	278	2174482	53.523
221) Benzo(g,h,i)perylene	(6)	15.292	276	2081921	49.797

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0862.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 18:30 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 18nov16
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: SECC50 Lab Sample ID: STD2928

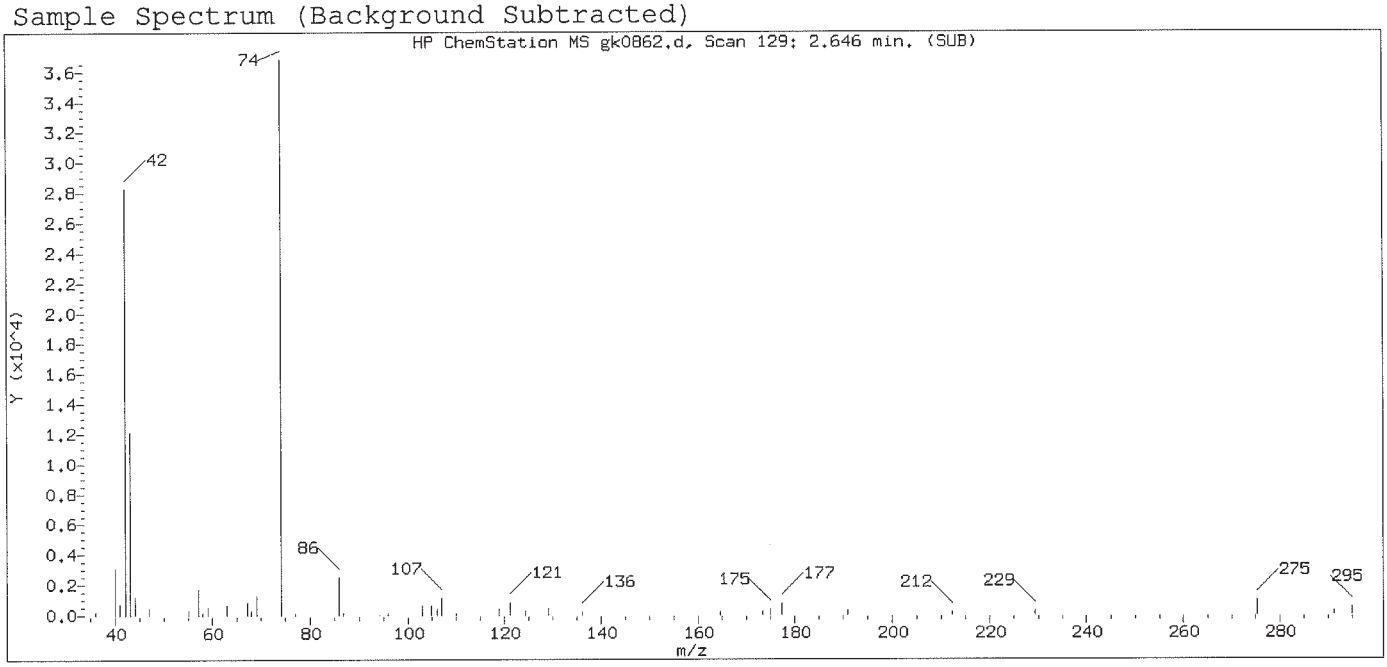
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 135		
Retention Time (minutes)	: 2.681		
Quant Ion	: 79.00		
Area (flag)	: 855833M		
On-Column Amount (ng/ul)	: 50.6751		
Integration start scan	: 132	Integration stop scan:	191
Y at integration start	: -675	Y at integration end:	-675

Reason for manual integration: improper integration

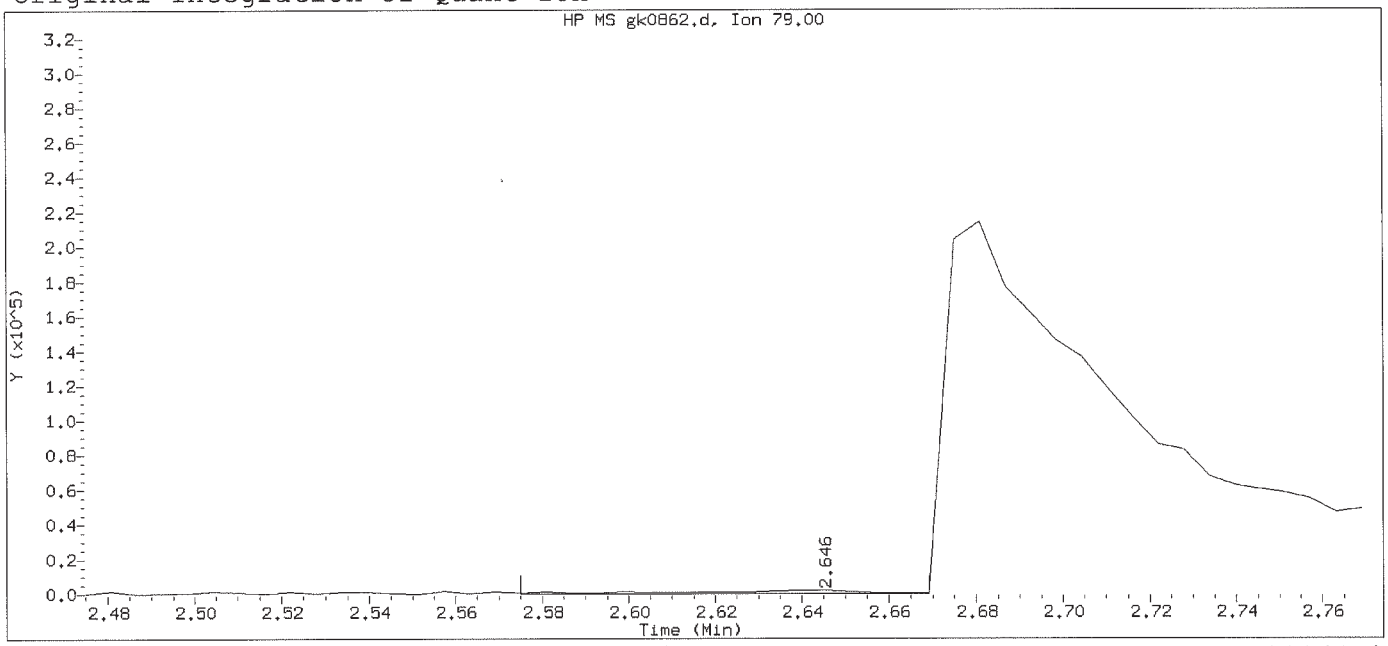
Analyst responsible for change: Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:13. Target 3.5 esignature user ID: bkc25363

GC/MS audit/management approval: CAM 1237 11-20-18

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0862.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 18:30 Analyst ID: whs02991

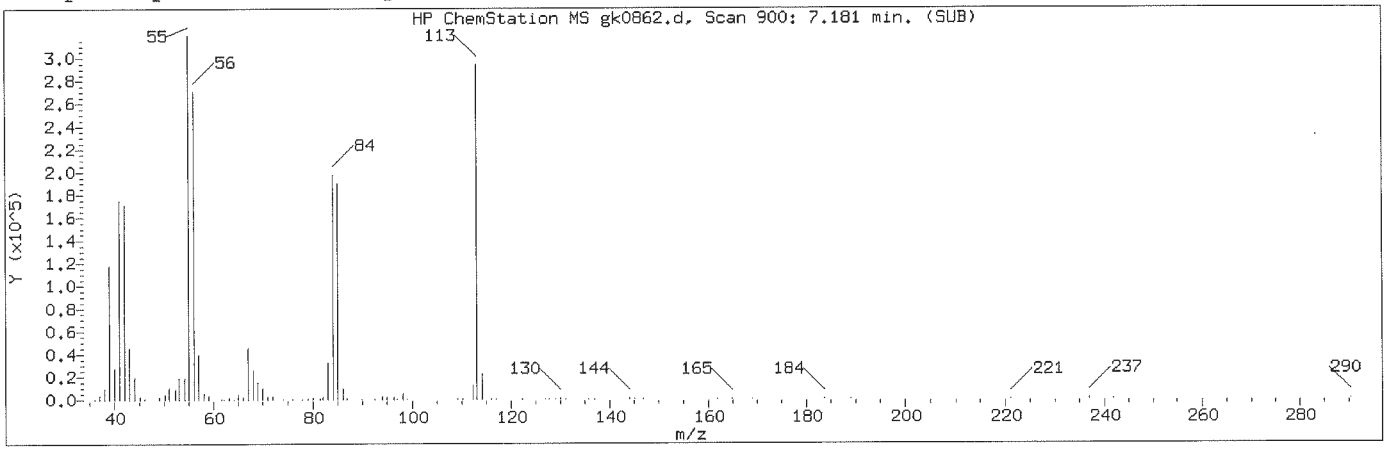
Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 18nov16
Calibration date and time: 16-NOV-2018 19:10
Date, time and analyst ID of latest file update: 16-Nov-2018 19:15 bkc25363

Sample Name: SECC50 Lab Sample ID: STD2928

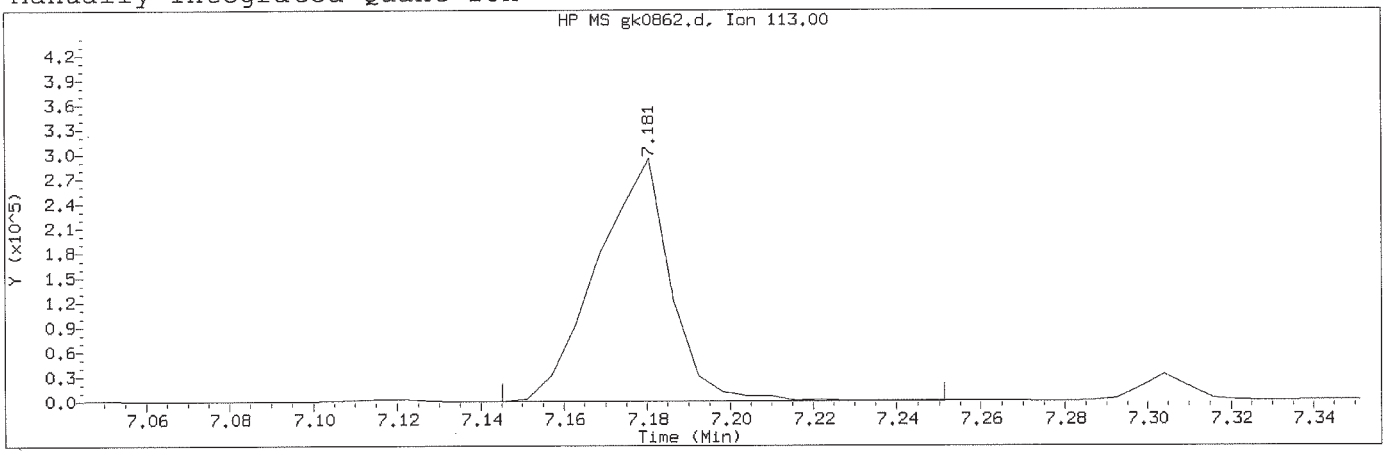
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 129		
Retention Time (minutes)	: 2.646		
Quant Ion	: 79.00		
Area	: 6248		
On-column Amount (ng/ul)	: 0.3885		
Integration start scan	: 116	Integration stop scan:	132
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0862.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 18:30 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 18nov16
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: SECC50 Lab Sample ID: STD2928

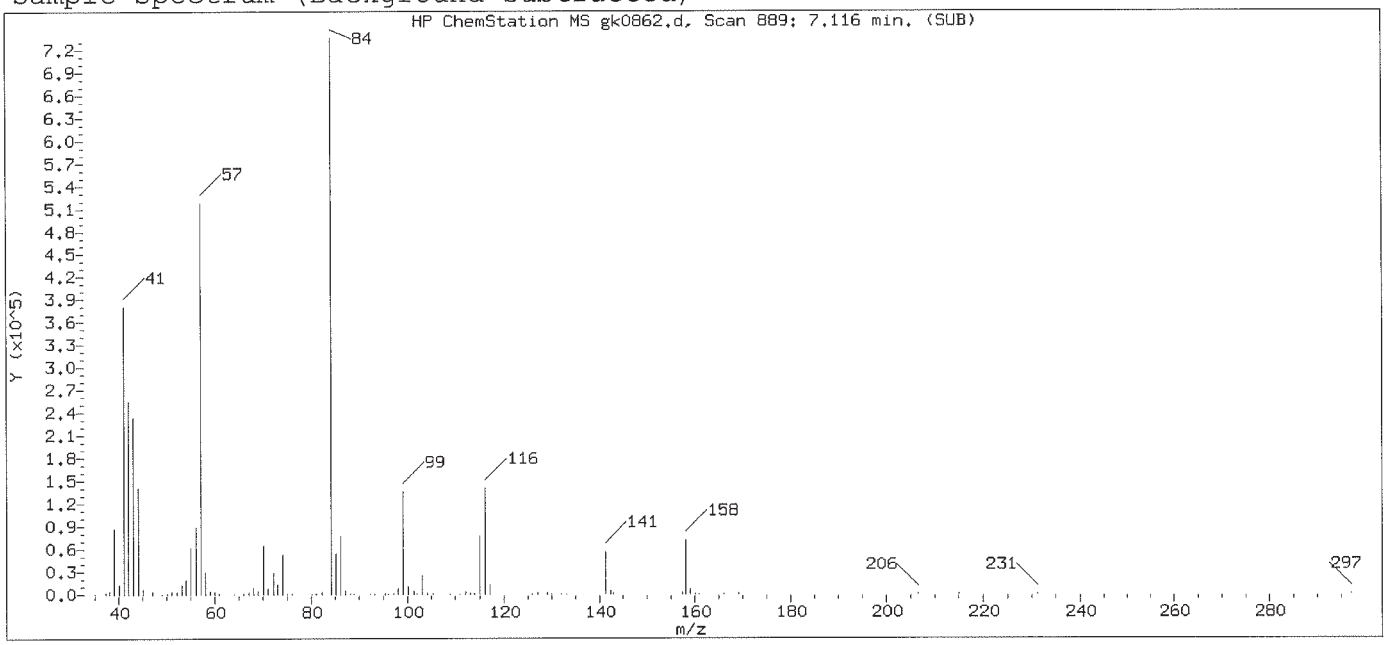
Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 900		
Retention Time (minutes)	: 7.181		
Quant Ion	: 113.00		
Area (flag)	: 362065A		
On-Column Amount (ng/ul)	: 60.3172		
Integration start scan	: 893	Integration stop scan:	911
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

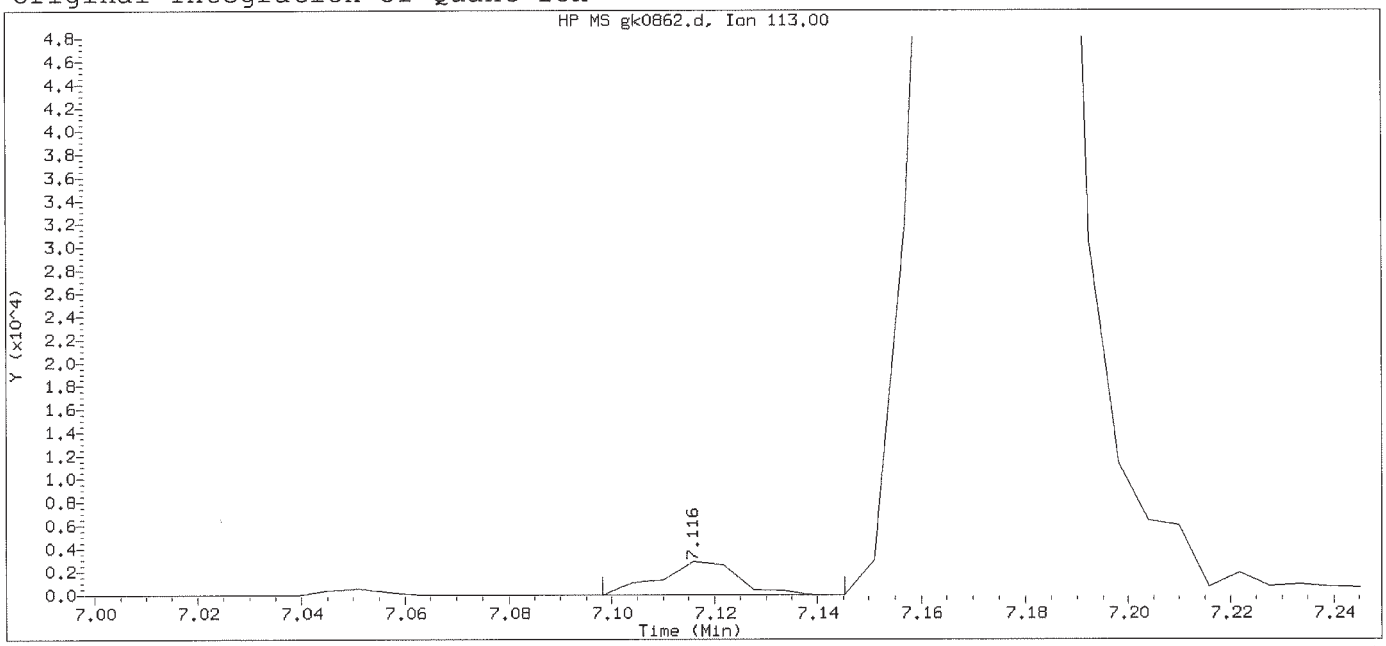
Analyst responsible for change: Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:13. Target 3.5 esignature user ID: bkc25363

GC/MS audit/management approval: CAM 1237 11-20-18

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0862.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 18:30 Analyst ID: whs02991

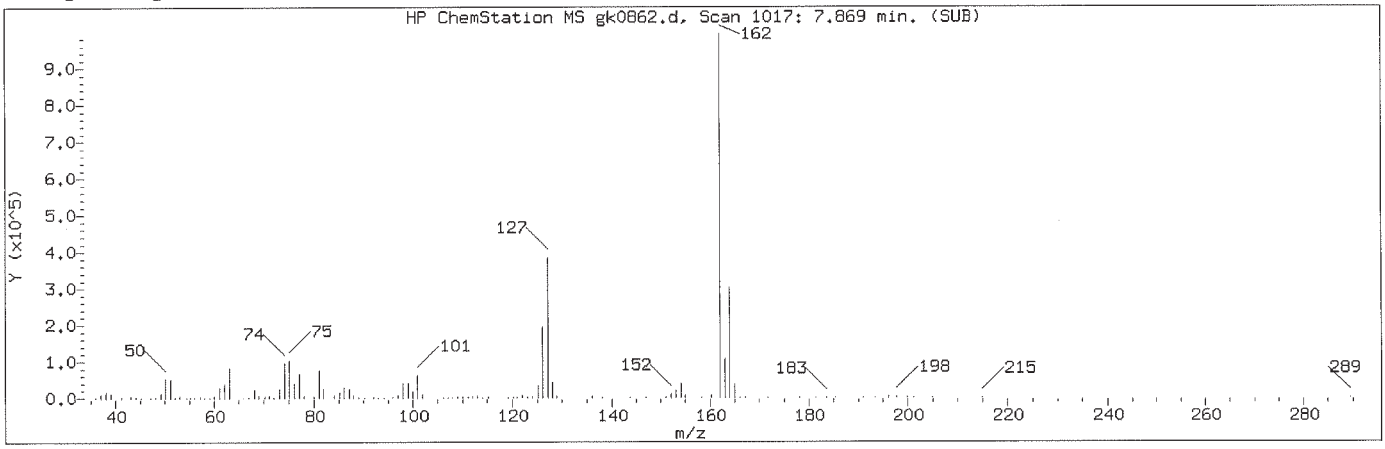
Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 18nov16
Calibration date and time: 16-NOV-2018 19:10
Date, time and analyst ID of latest file update: 16-Nov-2018 19:15 bkc25363

Sample Name: SECC50 Lab Sample ID: STD2928

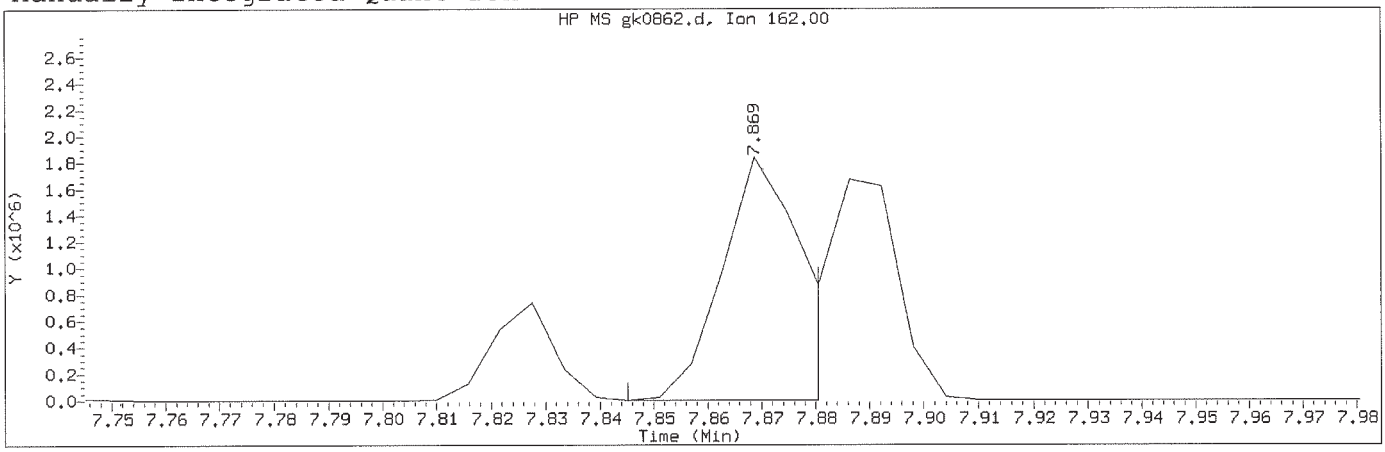
Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 889		
Retention Time (minutes)	: 7.116		
Quant Ion	: 113.00		
Area	: 3058		
On-column Amount (ng/ul)	: 0.5349		
Integration start scan	: 885	Integration stop scan:	893
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0862.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 18:30 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 18nov16
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:12 bkc25363

Sample Name: SECC50 Lab Sample ID: STD2928

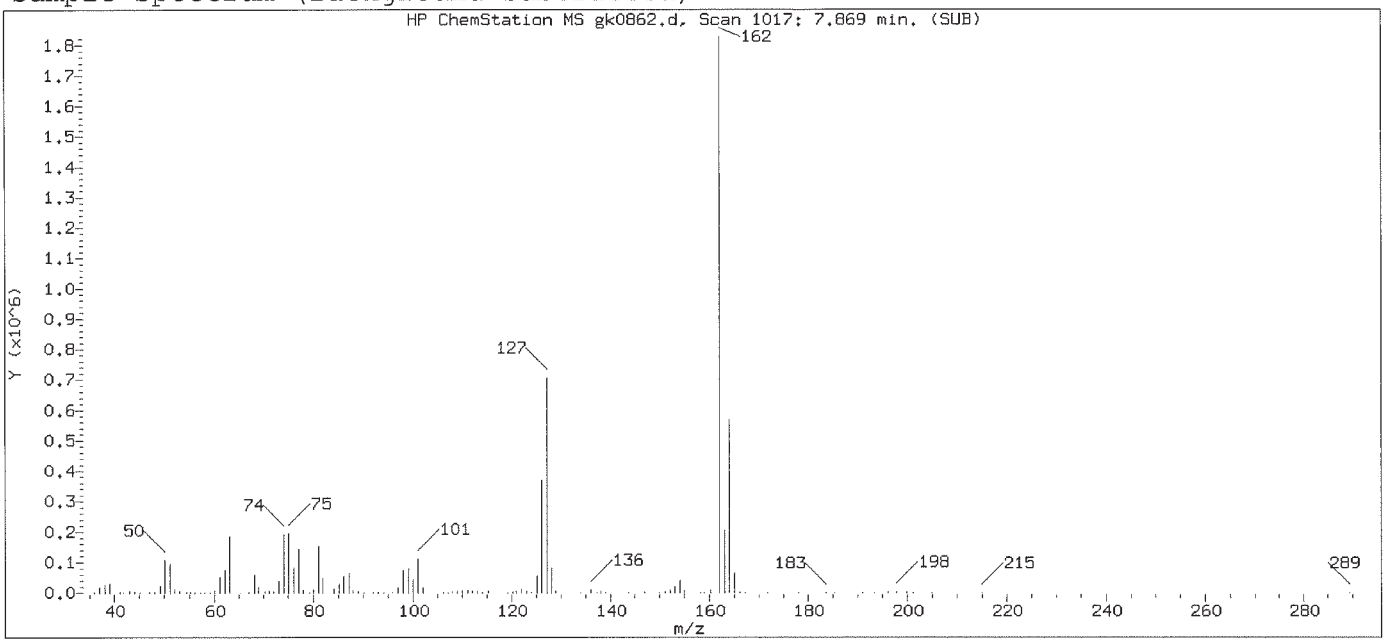
Compound Number	: 96		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 1017		
Retention Time (minutes)	: 7.869		
Quant Ion	: 162.00		
Area (flag)	: 1911682M		
On-Column Amount (ng/ul)	: 55.7798		
Integration start scan	: 1012	Integration stop scan:	1018
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

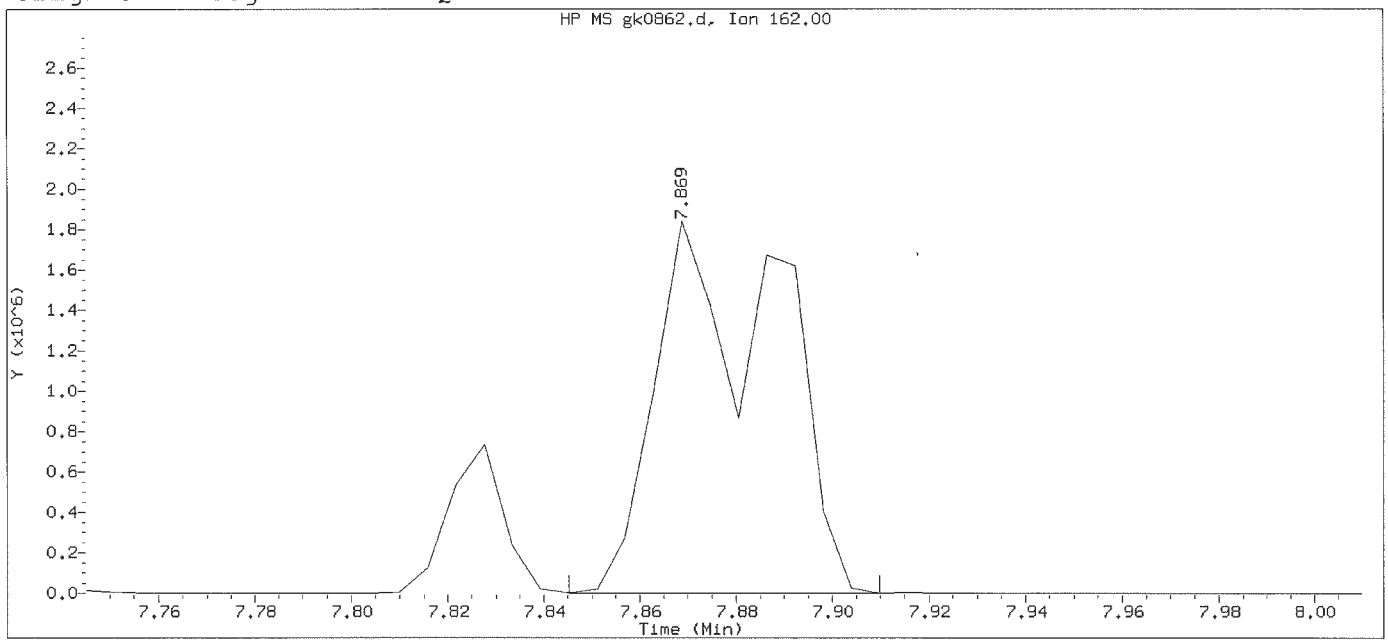
Analyst responsible for change: Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:13. Target 3.5 esignature user ID: bkc25363

GC/MS audit/management approval: CAM 1237 11-20-18

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0862.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 18:30 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 18nov16
Calibration date and time: 16-NOV-2018 19:10
Date, time and analyst ID of latest file update: 16-Nov-2018 19:15 bkc25363

Sample Name: SECC50 Lab Sample ID: STD2928

Compound Number	: 96		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 1017		
Retention Time (minutes)	: 7.869		
Quant Ion	: 162.00		
Area	: 3223220		
On-column Amount (ng/ul)	: 98.7508		
Integration start scan	: 1012	Integration stop scan:	1023
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Data File: /chem/HP23262.i/18nov09a.b/pk0310.d

Date : 09-NOV-2018 15:24

Client ID: DFTPP050

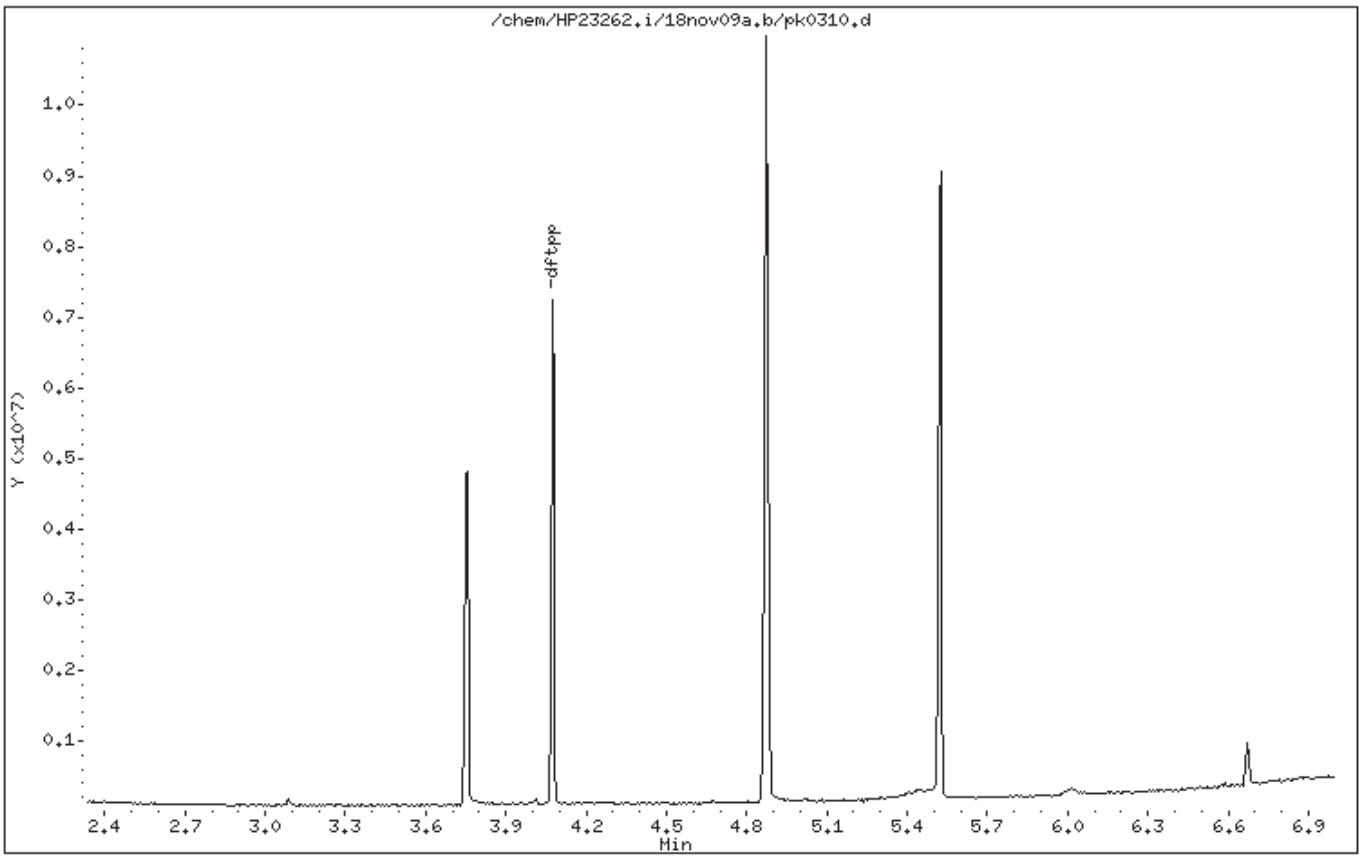
Instrument: HP23262.i

Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Data File: /chem/HP23262.i/18nov09a.b/pk0310.d

Date : 09-NOV-2018 15:24

Client ID: DFTPP050

Instrument: HP23262.i

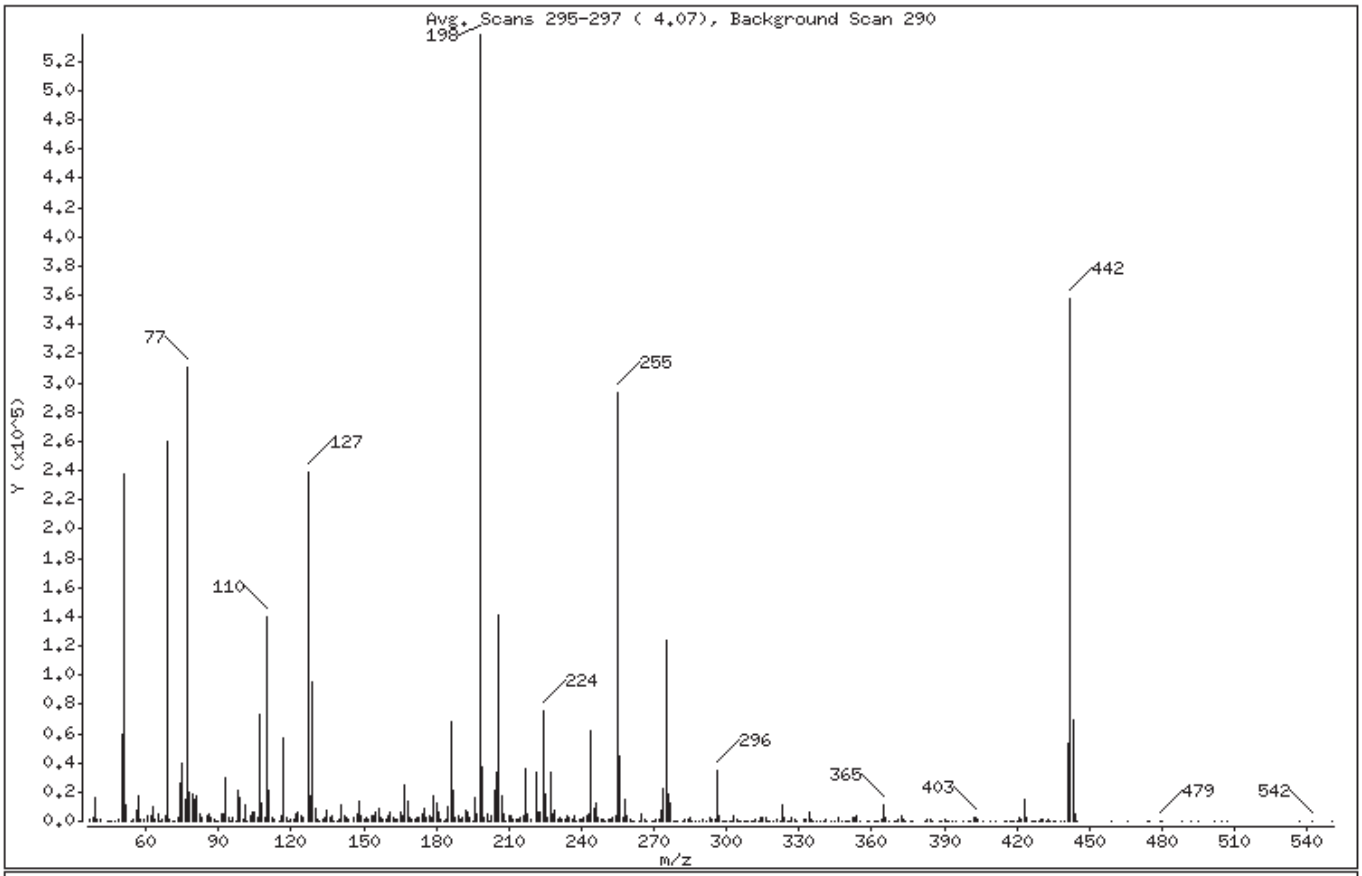
Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	44.08
68	Less than 2.00% of mass 69	0.70 (1.45)
69	Mass 69 relative abundance	48.28
70	Less than 2.00% of mass 69	0.26 (0.53)
127	10.00 - 80.00% of mass 198	44.37
197	Less than 2.00% of mass 198	1.02
199	5.00 - 9.00% of mass 198	6.88
275	10.00 - 60.00% of mass 198	23.09
365	Greater than 1.00% of mass 198	2.10
441	0.01 - 24.00% of mass 442	9.95 (14.95)
442	50.00 - 99.99% of mass 198	66.55
443	15.00 - 24.00% of mass 442	12.83 (19.28)

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Date : 09-NOV-2018 15:24

Client ID: DFTPP050 Instrument: HP23262.i

Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5MS Column diameter: 0.18

Data File: pk0310.d
Spectrum: Avg. Scans 295-297 (4.07), Background Scan 290
Location of Maximum: 198.00
Number of points: 377

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1457	140.00	1733	237.00	3438	341.00	1134
38.00	2653	141.00	11294	238.00	350	343.00	292
39.00	15668	142.00	3462	239.00	1504	345.00	113
40.00	1579	143.00	2751	240.00	1761	346.00	2161
41.00	1029	144.00	796	241.00	2059	348.00	58
44.00	161	146.00	2468	242.00	4282	349.00	295
45.00	159	147.00	4843	243.00	4836	350.00	387
46.00	139	148.00	13476	244.00	61648	351.00	374
47.00	215	149.00	3609	245.00	8504	352.00	2584
49.00	624	150.00	888	246.00	12316	353.00	2356
50.00	58824	151.00	1961	247.00	2676	354.00	3692
51.00	237248	152.00	1062	248.00	879	355.00	588
52.00	11095	153.00	4003	249.00	1589	358.00	198
54.00	574	154.00	3208	250.00	383	359.00	201
55.00	809	155.00	6228	251.00	1475	361.00	103
56.00	7883	156.00	9066	252.00	1539	362.00	76
57.00	17272	157.00	2370	253.00	1981	363.00	405
58.00	1144	158.00	1797	254.00	3617	364.00	624
59.00	910	159.00	1717	255.00	292992	365.00	11320
61.00	3126	160.00	4279	256.00	44864	366.00	2182
62.00	3340	161.00	5635	257.00	2693	367.00	132
63.00	9959	162.00	2034	258.00	15401	369.00	81
64.00	967	163.00	784	259.00	3529	370.00	520
65.00	4399	164.00	1394	260.00	960	371.00	848
66.00	517	165.00	6476	261.00	460	372.00	3819
67.00	867	166.00	3346	262.00	267	373.00	803
68.00	3770	167.00	24360	264.00	459	374.00	154
69.00	259840	168.00	13504	265.00	5358	376.00	73
70.00	1382	169.00	3027	266.00	988	377.00	61
71.00	312	170.00	1339	267.00	530	382.00	236
72.00	126	171.00	1594	269.00	41	383.00	1075
73.00	2982	172.00	1993	270.00	561	384.00	753
74.00	25928	173.00	2995	271.00	924	385.00	231
75.00	39448	174.00	4815	272.00	1089	388.00	260
76.00	14884	175.00	8425	273.00	7728	389.00	136

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Date : 09-NOV-2018 15:24

Client ID: DFTPP050 Instrument: HP23262.i

Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5MS Column diameter: 0.18

Data File: pk0310.d
Spectrum: Avg. Scans 295-297 (4.07), Background Scan 290
Location of Maximum: 198.00
Number of points: 377

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	310080	176.00	2566	274.00	22280	390.00	1252
78.00	19728	177.00	4307	275.00	124288	391.00	464
79.00	18304	178.00	2134	276.00	18000	392.00	490
80.00	14596	179.00	17024	277.00	12965	393.00	105
81.00	17616	180.00	12397	278.00	144	395.00	285
82.00	4500	181.00	5771	279.00	185	398.00	90
83.00	2749	182.00	1798	280.00	71	400.00	119
85.00	3786	183.00	309	282.00	10	401.00	367
86.00	4864	184.00	1475	283.00	1204	402.00	2074
87.00	2696	185.00	9804	284.00	793	403.00	2523
88.00	1289	186.00	68168	285.00	2058	404.00	867
89.00	432	187.00	21600	286.00	325	406.00	114
90.00	213	188.00	2166	287.00	132	409.00	135
91.00	5238	189.00	3435	289.00	67	411.00	320
92.00	4379	190.00	725	290.00	876	415.00	244
93.00	30216	191.00	2986	292.00	358	416.00	135
94.00	2173	192.00	7153	293.00	1893	417.00	79
95.00	512	193.00	6225	294.00	1039	418.00	176
96.00	2028	194.00	1881	295.00	1232	419.00	118
97.00	381	195.00	388	296.00	34328	420.00	453
98.00	21000	196.00	15719	297.00	3593	421.00	2202
99.00	16472	197.00	5515	298.00	135	422.00	1809
100.00	1721	198.00	538240	299.00	51	423.00	14830
101.00	11339	199.00	37016	300.00	420	424.00	2395
102.00	493	200.00	2708	301.00	171	426.00	163
103.00	3904	201.00	5506	302.00	123	427.00	151
104.00	5624	202.00	246	303.00	3601	428.00	346
105.00	5580	203.00	3515	304.00	1188	429.00	560
106.00	2001	204.00	21432	305.00	94	430.00	717
107.00	73520	205.00	32824	306.00	188	431.00	1065
108.00	12900	206.00	140608	307.00	388	432.00	244
109.00	2049	207.00	17656	308.00	143	433.00	905
110.00	139712	208.00	4565	309.00	414	434.00	349
111.00	21152	209.00	76	310.00	285	435.00	61
112.00	2962	210.00	4065	311.00	314	436.00	295

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Date : 09-NOV-2018 15:24

Client ID: DFTPP050 Instrument: HP23262.i

Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5MS Column diameter: 0.18

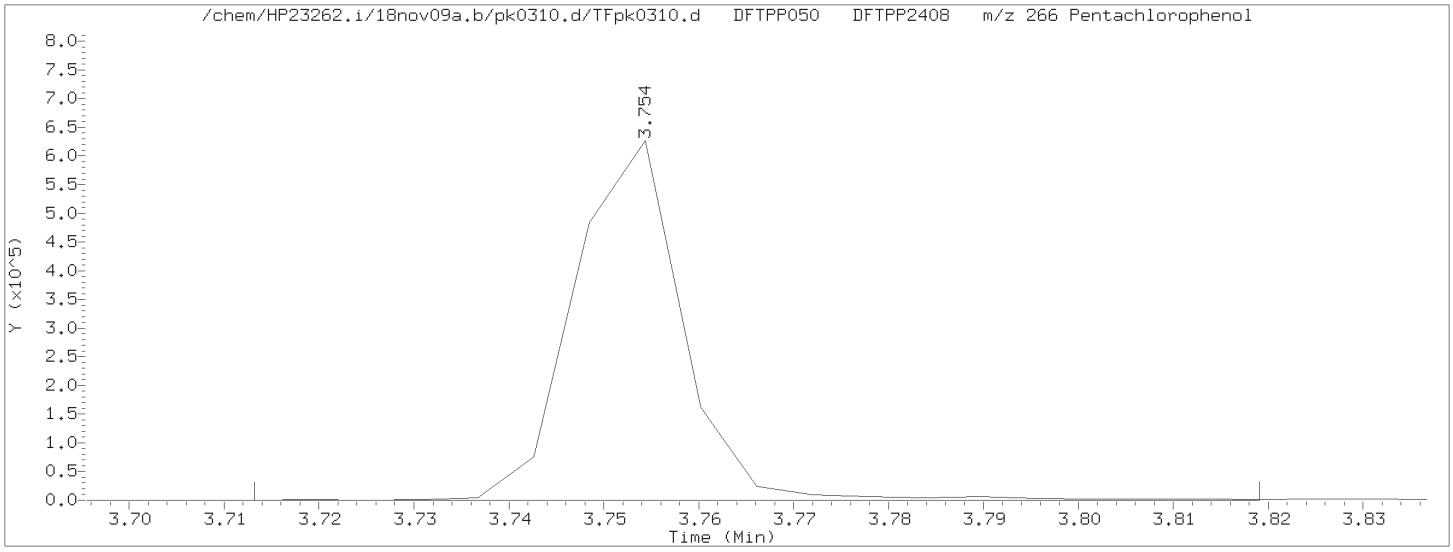
Data File: pk0310.d
Spectrum: Avg. Scans 295-297 (4.07), Background Scan 290
Location of Maximum: 198.00
Number of points: 377

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	1537	211.00	3719	312.00	623	438.00	528
115.00	56	212.00	623	313.00	165	440.00	152
116.00	4075	213.00	1029	314.00	1940	441.00	53560
117.00	57200	214.00	759	315.00	2812	442.00	358208
118.00	2776	215.00	2612	316.00	2198	443.00	69064
119.00	576	216.00	3159	317.00	490	444.00	4711
120.00	710	217.00	35528	318.00	141	445.00	454
121.00	945	218.00	4684	319.00	103	459.00	83
122.00	4907	219.00	762	321.00	1429	466.00	104
123.00	6260	221.00	33096	322.00	525	474.00	53
124.00	3342	222.00	5923	323.00	10796	475.00	103
125.00	2769	223.00	6680	324.00	2630	479.00	191
127.00	238784	224.00	76016	325.00	456	480.00	117
128.00	17624	225.00	18432	326.00	219	488.00	51
129.00	94968	226.00	2060	327.00	2634	492.00	82
130.00	8411	227.00	34008	328.00	805	495.00	64
131.00	1236	228.00	4856	329.00	153	502.00	145
132.00	265	229.00	7751	332.00	762	505.00	82
133.00	742	230.00	1795	333.00	775	507.00	90
134.00	2947	231.00	3077	334.00	5603	537.00	61
135.00	7565	232.00	1154	335.00	1708	542.00	144
136.00	2065	233.00	852	336.00	278	550.00	76
137.00	4137	234.00	3244	337.00	130		
138.00	517	235.00	2635	339.00	91		
139.00	287	236.00	1511	340.00	212		

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Assessment of GC Column Performance and Injection Port Inertness for

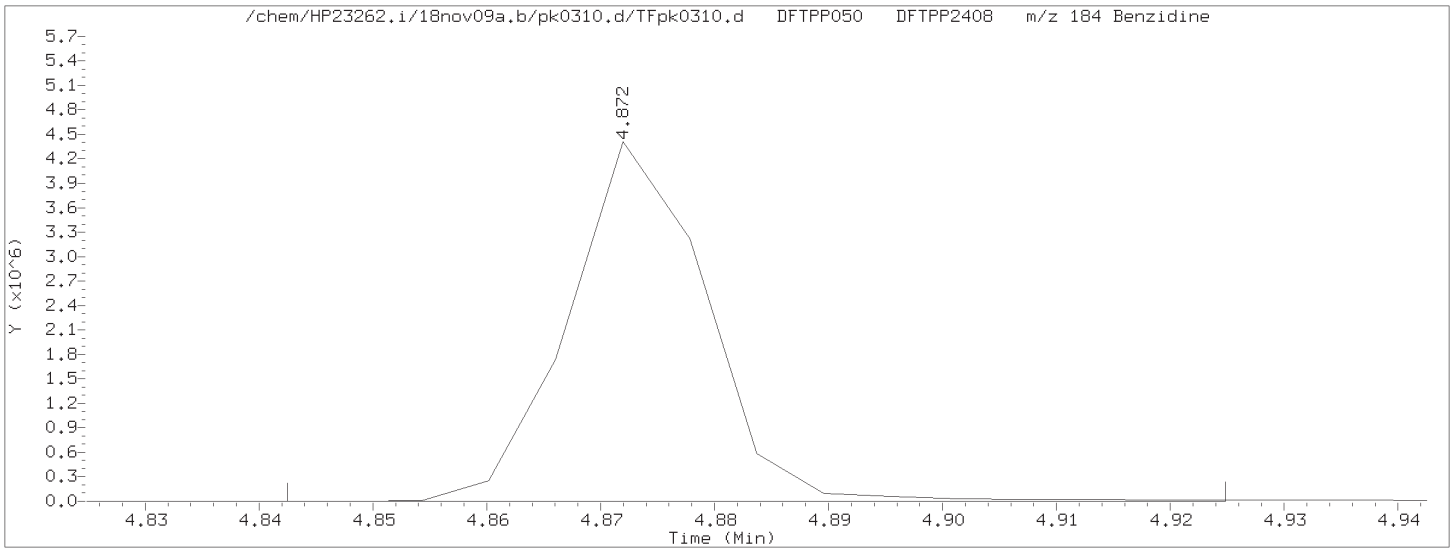
Instrument ID: HP23262.i Injection Date: 09-NOV-2018 15:24 Operator: lmh00956



Pentachlorophenol EICP peak height = 626944 EICP peak height at 10% = 62694 Pentachlorophenol EICP area = 498293

Pentachlorophenol EICP peak apex (min.) = 3.754
RT at 10% of front half of EICP (min.) = 3.742 'Front' peak width (min.) = 0.0127500000
RT at 10% of back half of EICP (min.) = 3.764 'Tailing' peak width (min.) = 0.0100666667

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0100666667}{0.0127500000} = 0.790$



Benzidine EICP peak height = 4411768 EICP peak height at 10% = 441177 Benzidine EICP area = 3692081

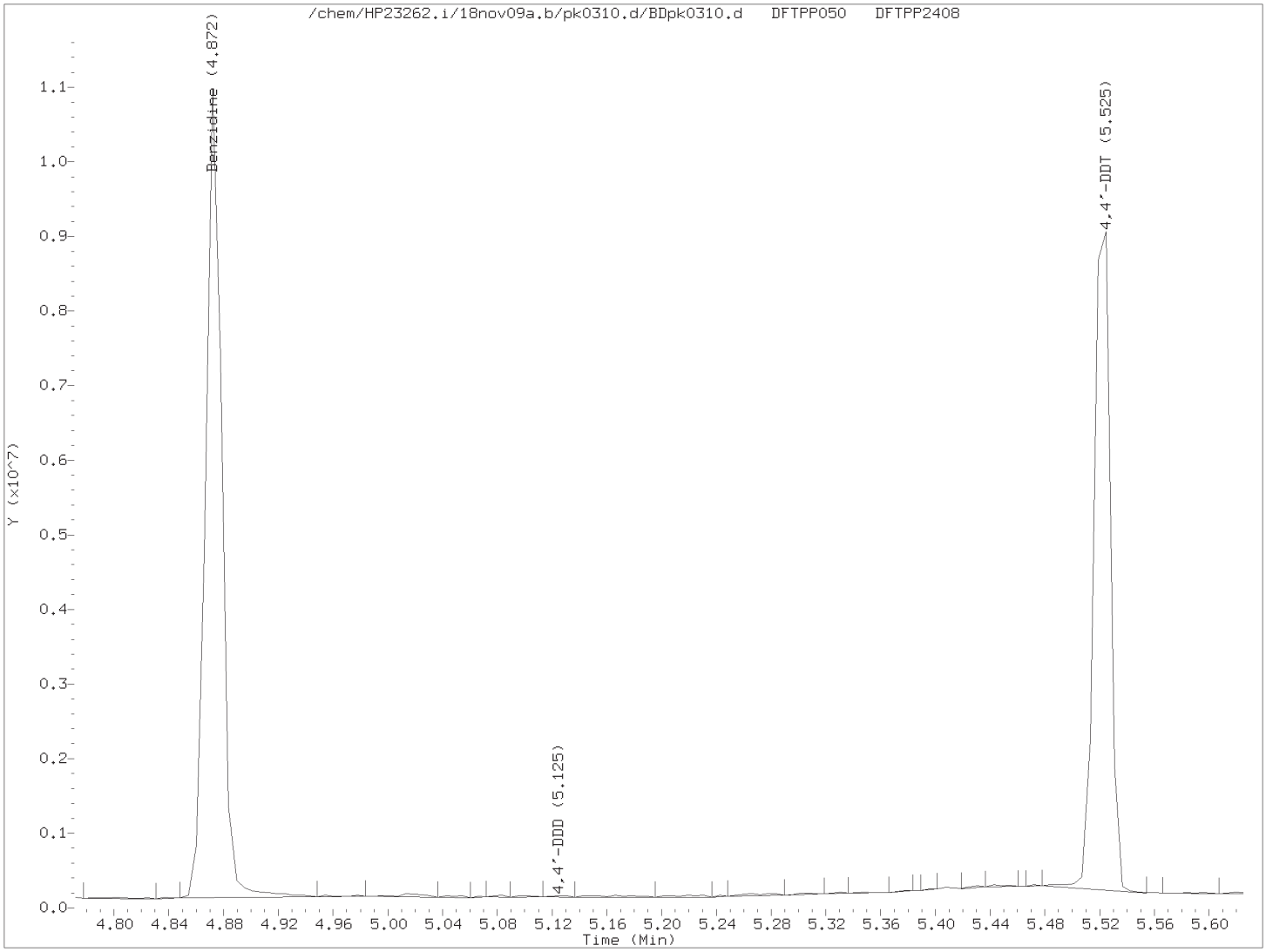
Benzidine EICP peak apex (min.) = 4.872
RT at 10% of front half of EICP (min.) = 4.861 'Front' peak width (min.) = 0.0109833333
RT at 10% of back half of EICP (min.) = 4.885 'Tailing' peak width (min.) = 0.0134166667

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0134166667}{0.0109833333} = 1.222$

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP23262.i Injection Date: 09-NOV-2018 15:24 Operator: lmh00956

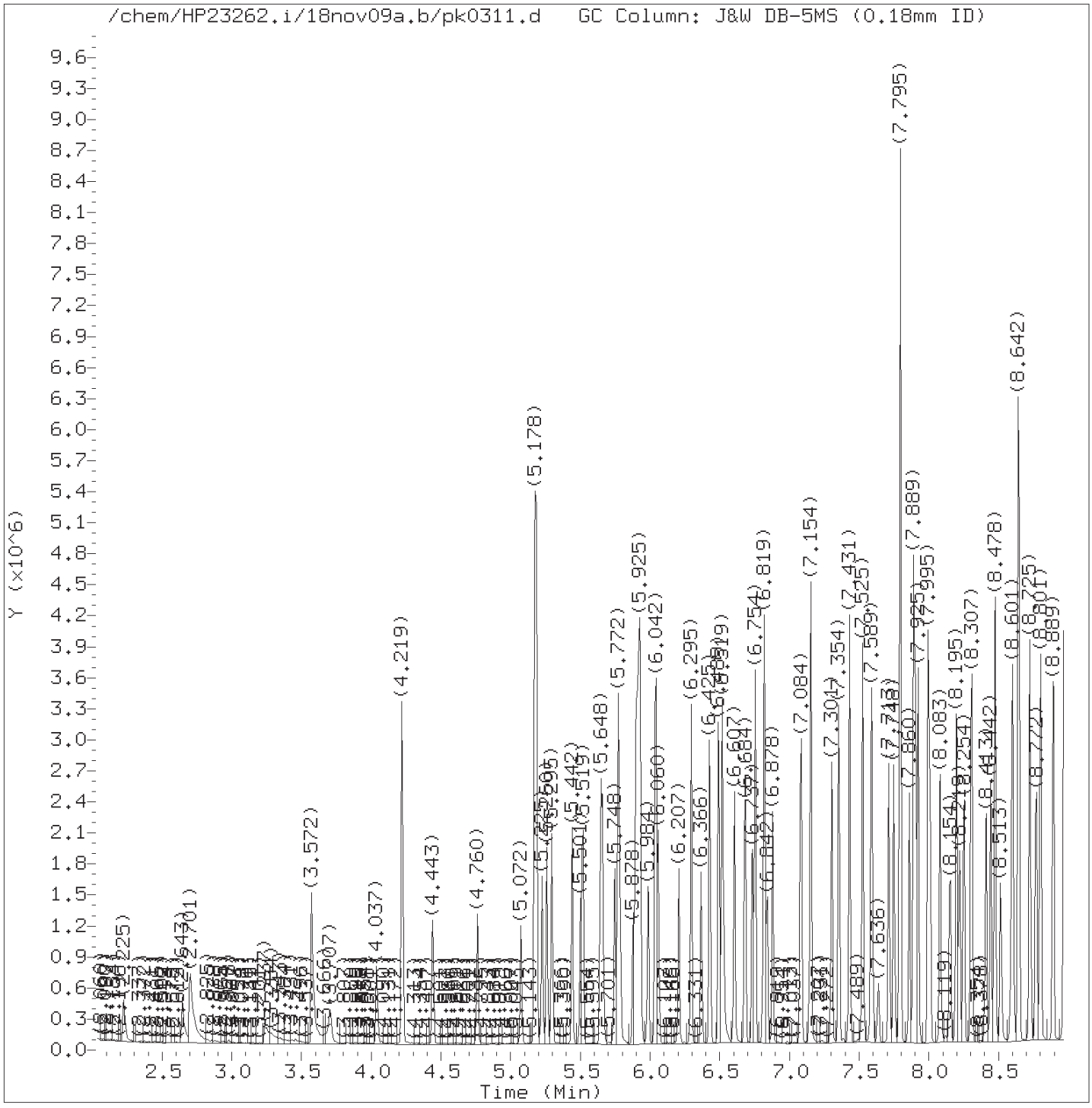


$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{0 + 13139}{0 + 13139 + 7541409} \times 100 = 0.2$$

printed on 11/09/2018 at 15:37

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

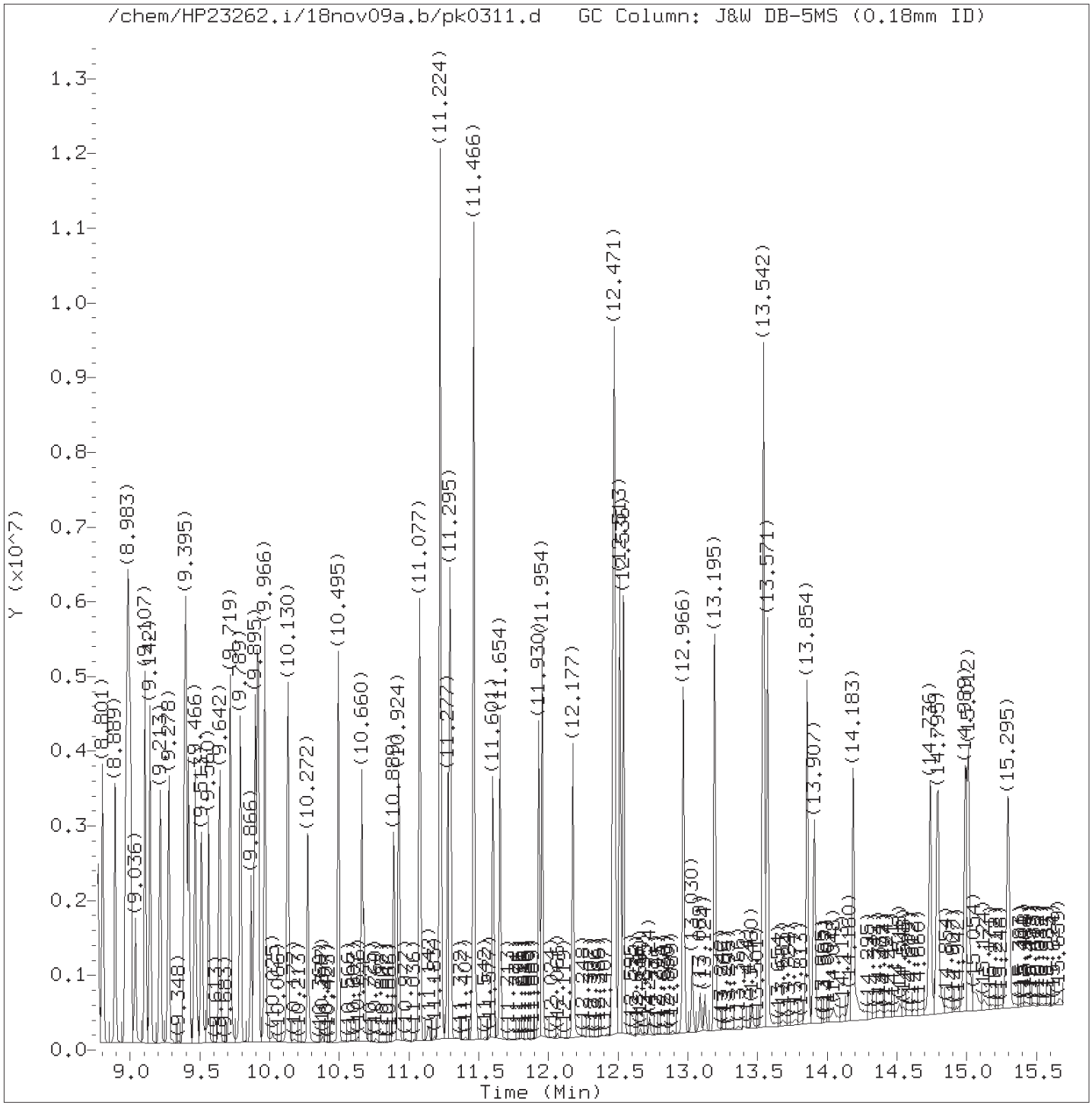
Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0311.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 15:38 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD030 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0311.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 15:38 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD030 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0311.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 15:38 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.225	88	196677	30.000
4) N-Nitrosodimethylamine	(1)	2.643	74	319557	30.000
5) Pyridine	(1)	2.701	79	581139	30.000
7) 2-Picoline	(1)	3.572	93	588478	30.000
8) N-Nitrosomethylethylamine	(1)	3.707	88	253835M	30.000
9) Methyl methanesulfonate	(1)	4.037	80	261457	30.000
11)$2-Fluorophenol	(1)	4.219	112	824638	60.000
13) N-Nitrosodiethylamine	(1)	4.443	102	245596	30.000
15) Ethyl methanesulfonate	(1)	4.760	109	241289	30.000
17)$Phenol-d6	(1)	5.172	99	1306084	60.000
18) Phenol	(1)	5.184	94	760511	30.000
19) Aniline	(1)	5.184	93	868199	30.000
22) bis(2-Chloroethyl)ether	(1)	5.260	93	559649	30.000
23) 2-Chlorophenol	(1)	5.295	128	418744	30.000
24) 1,3-Dichlorobenzene	(1)	5.442	146	416137	30.000
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	179919	20.000
26) 1,4-Dichlorobenzene	(1)	5.519	146	417661	30.000
27) Benzyl alcohol	(1)	5.648	108	341925	30.000
42) Total Cresols	(1)			1038868	60.000
28) 1,2-Dichlorobenzene	(1)	5.660	146	425381	30.000
30) Indene	(1)	5.748	115	500167	30.000
31) 2-Methylphenol	(1)	5.772	108	481241	30.000
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.784	45	812682	30.000
34) bis(2-Chloroisopropyl)ether	(1)	5.784	45	812682	30.000
35) N-Nitrosopyrrolidine	(1)	5.878	100	304803	30.000
36) Acetophenone	(1)	5.895	105	711454	30.000
38) N-Nitroso-di-n-propylamine	(1)	5.907	70	476638	30.000
39) N-Nitrosomorpholine	(1)	5.919	56	379712	30.000
37) 4-Methylphenol	(1)	5.919	108	557627	30.000
40) o-Toluidine	(1)	5.931	106	818334	30.000
43) Hexachloroethane	(1)	5.984	117	175910	30.000
44)$Nitrobenzene-d5	(2)	6.042	82	1241639	60.000
45) Nitrobenzene	(2)	6.060	77	664886	30.000
48) N-Nitrosopiperidine	(2)	6.207	114	277837	30.000
50) Isophorone	(2)	6.295	82	1268063	30.000
51) 2-Nitrophenol	(2)	6.366	139	246463	30.000
53) 2,4-Dimethylphenol	(2)	6.425	107	557305	30.000
57) O,O,O-Triethylphosphorothioate	(2)	6.495	198	271260	30.000
55) bis(2-Chloroethoxy)methane	(2)	6.519	93	742047	30.000
56) Benzoic acid	(2)	6.525	105	508334	40.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0311.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 15:38 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.607	162	411321	30.000
62) 1,2,4-Trichlorobenzene	(2)	6.684	180	413720	30.000
65)*Naphthalene-d8	(2)	6.737	136	781428	20.000
66) Naphthalene	(2)	6.754	128	1325369	30.000
67) 4-Chloroaniline	(2)	6.819	127	562355	30.000
68) 2,6-Dichlorophenol	(2)	6.825	162	382303	30.000
69) Hexachloropropene	(2)	6.842	213	249657	30.000
71) Hexachlorobutadiene	(2)	6.878	225	240179	30.000
75) Quinoline	(2)	7.084	129	946635	30.000
77) N-Nitrosodi-n-butylamine	(2)	7.154	84	627580	30.000
76) Caprolactam	(2)	7.154	113	196205	30.000
80) 4-Chloro-3-methylphenol	(2)	7.301	107	500918	30.000
82) Safrole	(2)	7.354	162	377721	30.000
97) Isosafrole	(3)			405892	30.000
83) 2-Methylnaphthalene	(2)	7.431	142	964430	30.000
84) 1-Methylnaphthalene	(2)	7.525	142	895221	30.000
85) Hexachlorocyclopentadiene	(3)	7.584	237	273009	30.000
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.595	216	488969	30.000
88) cis-Isosafrole	(3)	7.636	162	67927	5.100
90) 2,4,6-Trichlorophenol	(3)	7.713	196	338315	30.000
92) 2,4,5-Trichlorophenol	(3)	7.748	196	362325	30.000
93)$2-Fluorobiphenyl	(3)	7.795	172	2324787	60.000
94) trans-Isosafrole	(3)	7.860	162	337965	24.900
95) 1,1'-Biphenyl	(3)	7.889	154	1225862	30.000
96) 2-Chloronaphthalene	(3)	7.907	162	945236	30.000
98) 1-Chloronaphthalene	(3)	7.925	162	935217	30.000
99) Diphenyl ether	(3)	7.995	170	688302	30.000
100) 2-Nitroaniline	(3)	8.007	138	334991	30.000
120) 2,4_2,6-Dinitrotoluenes	(3)			678797	60.000
104) 1,4-Naphthoquinone	(3)	8.083	158	442589	30.000
105) 1,4-Dinitrobenzene	(3)	8.154	168	184895	30.000
106) Dimethylphthalate	(3)	8.201	163	1198373	30.000
107) 1,3-Dinitrobenzene	(3)	8.219	168	221017	30.000
108) 2,6-Dinitrotoluene	(3)	8.254	165	288664	30.000
109) Acenaphthylene	(3)	8.307	152	1423437	30.000
112) 3-Nitroaniline	(3)	8.413	138	297897	30.000
113)*Acenaphthene-d10	(3)	8.442	164	475081	20.000
114) Acenaphthene	(3)	8.478	153	1024170	30.000
115) 2,4-Dinitrophenol	(3)	8.513	184	207417	40.000
116) 4-Nitrophenol	(3)	8.595	109	211736	30.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0311.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 15:38 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
117) Pentachlorobenzene	(3)	8.601	250	447637	30.000
118) 2,4-Dinitrotoluene	(3)	8.642	165	390133	30.000
119) Dibenzofuran	(3)	8.648	168	1542676	30.000
121) 1-Naphthylamine	(3)	8.725	143	1114122	30.000
122) 2,3,4,6-Tetrachlorophenol	(3)	8.772	232	317971	30.000
146) Diallate trans/cis	(4)			748604	30.000
123) 2-Naphthylamine	(3)	8.801	143	1119950	30.000
124) Diethylphthalate	(3)	8.895	149	1239877	30.000
125) Thionazin	(3)	8.966	107	221804	30.000
126) Fluorene	(3)	8.978	166	1252273	30.000
127) 4-Chlorophenyl-phenylether	(3)	8.989	204	669592	30.000
128) 5-Nitro-o-toluidine	(3)	9.001	152	361292	30.000
129) 4-Nitroaniline	(3)	9.007	138	328380	30.000
130) 4,6-Dinitro-2-methylphenol	(4)	9.036	198	217040	30.000
132) NDPA as diphenylamine	(4)	9.107	169	1083973	30.000
131) N-Nitrosodiphenylamine	(4)	9.107	169	1083973	30.000
134) 1,2-Diphenylhydrazine	(4)	9.142	77	1659774	30.000
135)$2,4,6-Tribromophenol	(3)	9.213	330	303440	60.000
137) Tetraethyldithiopyrophosphate	(4)	9.272	97	236494	30.000
139) 1,3,5-Trinitrobenzene	(4)	9.383	213	157873	30.000
140) Diallate (peak 1)	(4)	9.395	86	644785	24.900
141) Phorate	(4)	9.401	75	1091259	30.000
142) Phenacetin	(4)	9.419	108	732720	30.000
143) 4-Bromophenyl-phenylether	(4)	9.466	248	380383	30.000
144) Diallate (peak 2)	(4)	9.478	86	103819	5.100
145) Hexachlorobenzene	(4)	9.513	284	356986	30.000
147) Dimethoate	(4)	9.560	87	665781	30.000
149) Pentachlorophenol	(4)	9.713	266	217812	30.000
150) 4-Aminobiphenyl	(4)	9.719	169	495490	30.000
151) Pentachloronitrobenzene	(4)	9.719	237	171772	30.000
152) Pronamide	(4)	9.789	173	586750	30.000
153)*Phenanthrene-d10	(4)	9.895	188	1108399	20.000
154) Dinoseb	(4)	9.901	211	333756	30.000
155) Phenanthrene	(4)	9.919	178	1935498	30.000
157) Anthracene	(4)	9.966	178	2007119	30.000
163) Carbazole	(4)	10.130	167	1781970	30.000
164) Methyl parathion	(4)	10.272	109	470672	30.000
165) Di-n-butylphthalate	(4)	10.495	149	2237426	30.000
167) Parathion	(4)	10.660	109	297608	30.000
168) 4-Nitroquinoline-1-oxide	(4)	10.677	190	180227	30.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0311.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 15:38 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

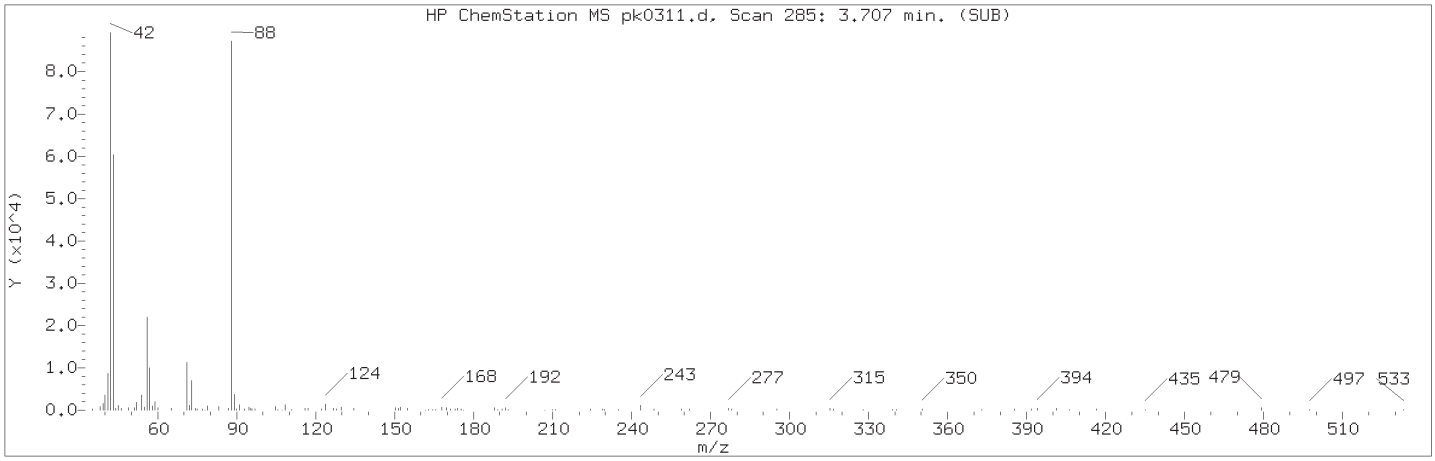
Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
169) Octachlorostyrene	(4)	10.895	308	140594	30.000
171) Isodrin	(4)	10.930	193	239570	30.000
173) Fluoranthene	(4)	11.077	202	2315151	30.000
174) Benzidine	(5)	11.224	184	4464539	90.000
175)*Pyrene-d10	(5)	11.277	212	1141913	20.000
177) Pyrene	(5)	11.295	202	2390474	30.000
179)$Terphenyl-d14	(5)	11.466	244	3132464	60.000
182) p-Dimethylaminoazobenzene	(5)	11.601	225	397317	30.000
185) Chlorobenzilate	(5)	11.654	139	610320	30.000
187) 3,3'-Dimethylbenzidine	(5)	11.930	212	1400441	30.000
188) Butylbenzylphthalate	(5)	11.954	149	995557	30.000
191) 2-Acetylaminofluorene	(5)	12.177	181	852133	30.000
193) 3,3'-Dichlorobenzidine	(5)	12.466	252	797476	30.000
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.471	231	420577	30.000
195) Benzo(a)anthracene	(5)	12.477	228	2256879	30.000
196) Chrysene	(5)	12.513	228	2127009	30.000
199) bis(2-Ethylhexyl)phthalate	(5)	12.542	149	1404784	30.000
203) 6-Methylchrysene	(5)	12.971	242	1417924	30.000
205) Di-n-octylphthalate	(6)	13.195	149	2394388	30.000
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.542	256	988103	30.000
206) Benzo(b)fluoranthene	(6)	13.548	252	2102356	30.000
208) Benzo(k)fluoranthene	(6)	13.571	252	2029770	30.000
211) Benzo(a)pyrene	(6)	13.854	252	1905665	30.000
213)*Perylene-d12	(6)	13.907	264	982327	20.000
215) 3-Methylcholanthrene	(6)	14.189	268	781736	30.000
217) Dibenz(a,h)acridine	(6)	14.736	279	1472023	30.000
218) Dibenz(a,j)acridine	(6)	14.795	279	1540975	30.000
219) Indeno(1,2,3-cd)pyrene	(6)	14.989	276	2011668	30.000
222) Total PAHs	(6)			31414584	540.000
220) Dibenz(a,h)anthracene	(6)	15.012	278	1737586	30.000
221) Benzo(g,h,i)perylene	(6)	15.301	276	1710509	30.000

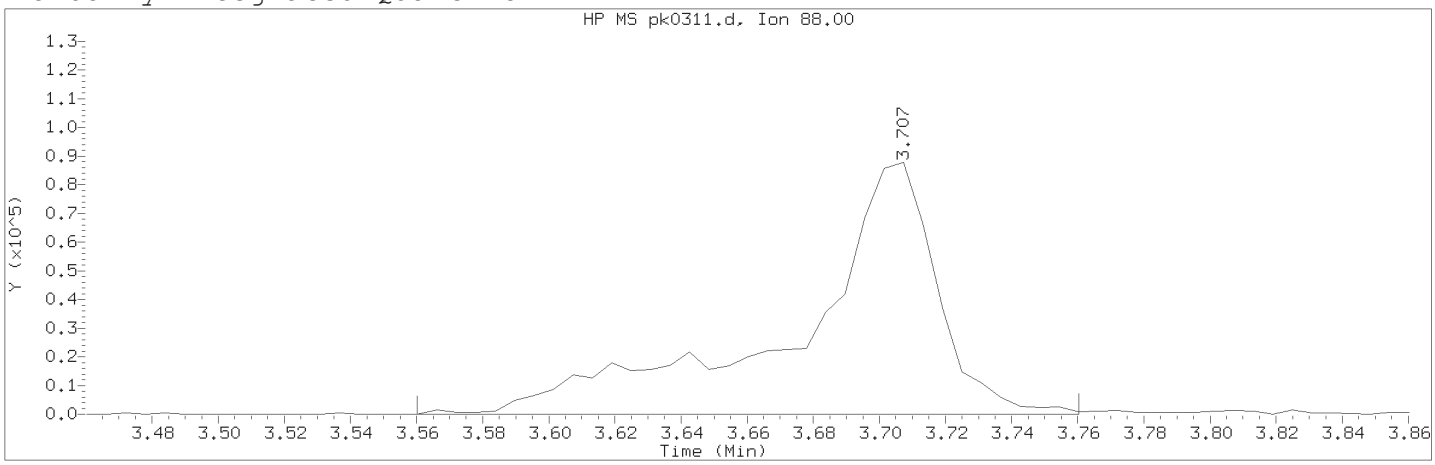
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0311.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 15:38 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD030 Lab Sample ID: STD2928

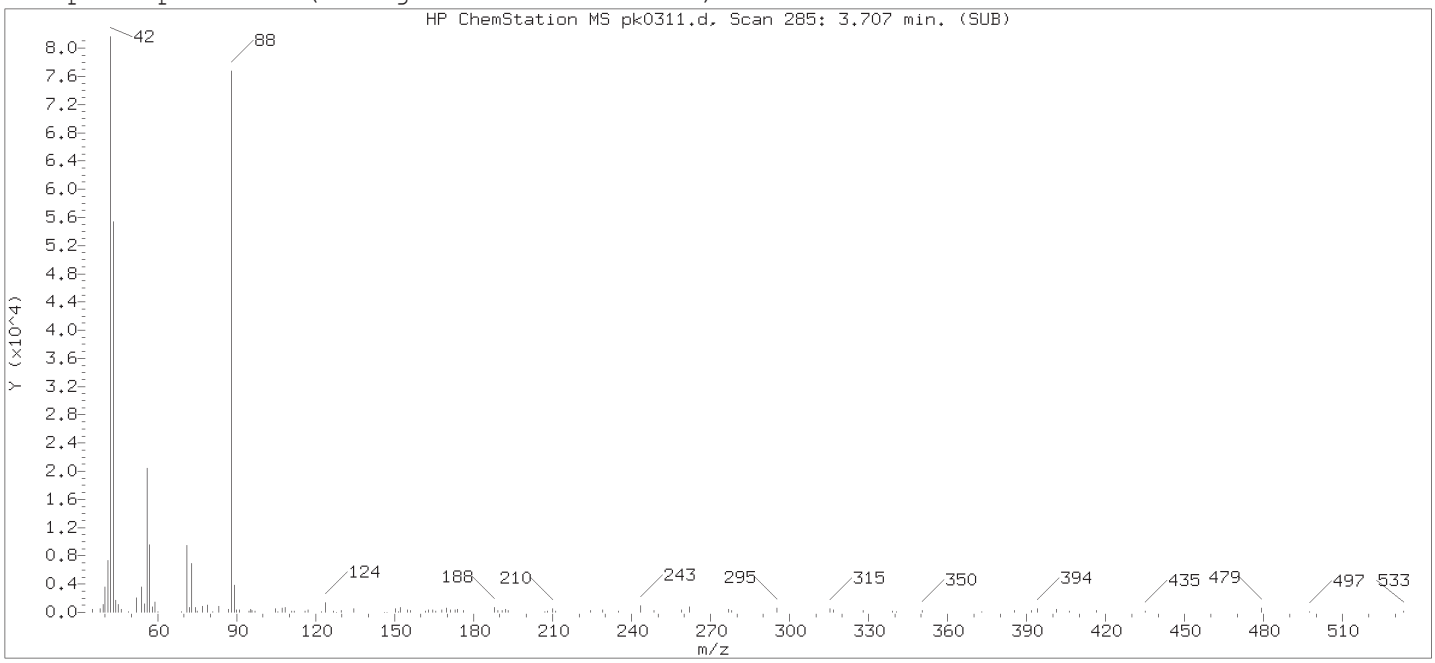
Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 285		
Retention Time (minutes)	: 3.707		
Quant Ion	: 88.00		
Area (flag)	: 253835M		
On-Column Amount (ng/ul)	: 30.0000		
Integration start scan	: 259	Integration stop scan:	293
Y at integration start	: 28	Y at integration end:	28

Reason for manual integration: improper integration

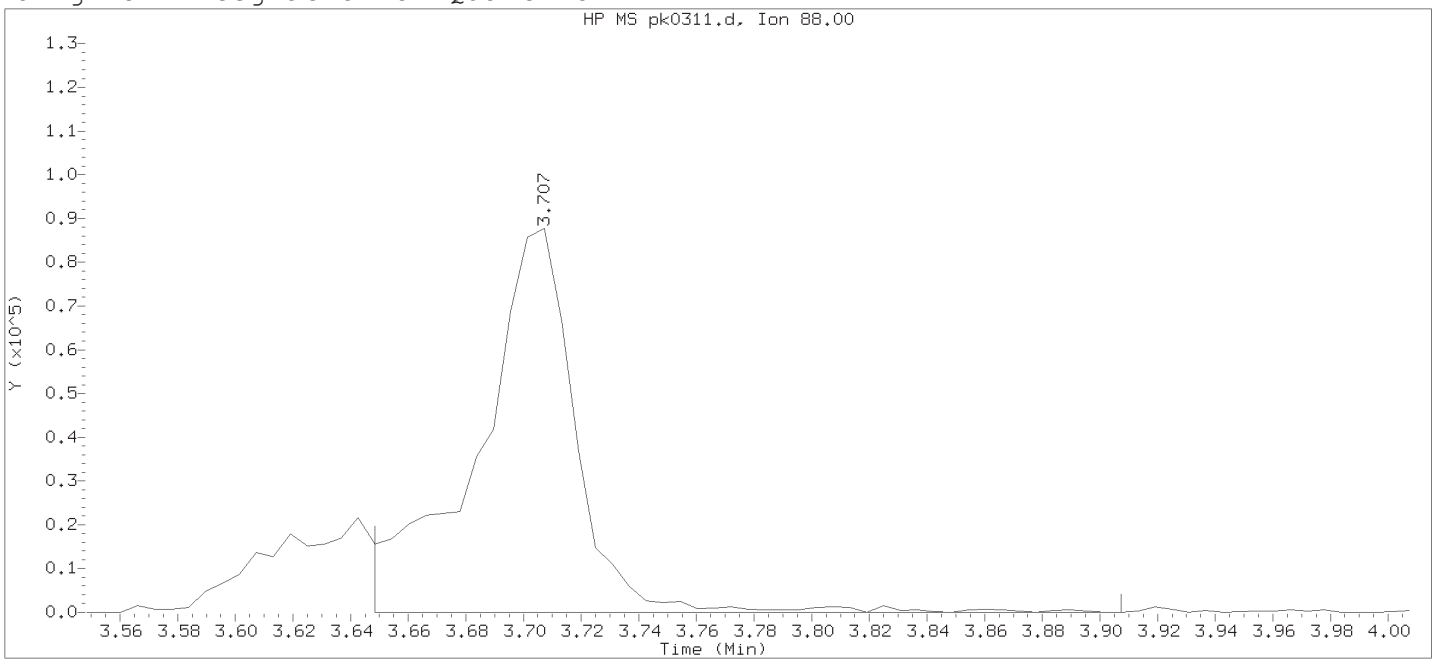
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



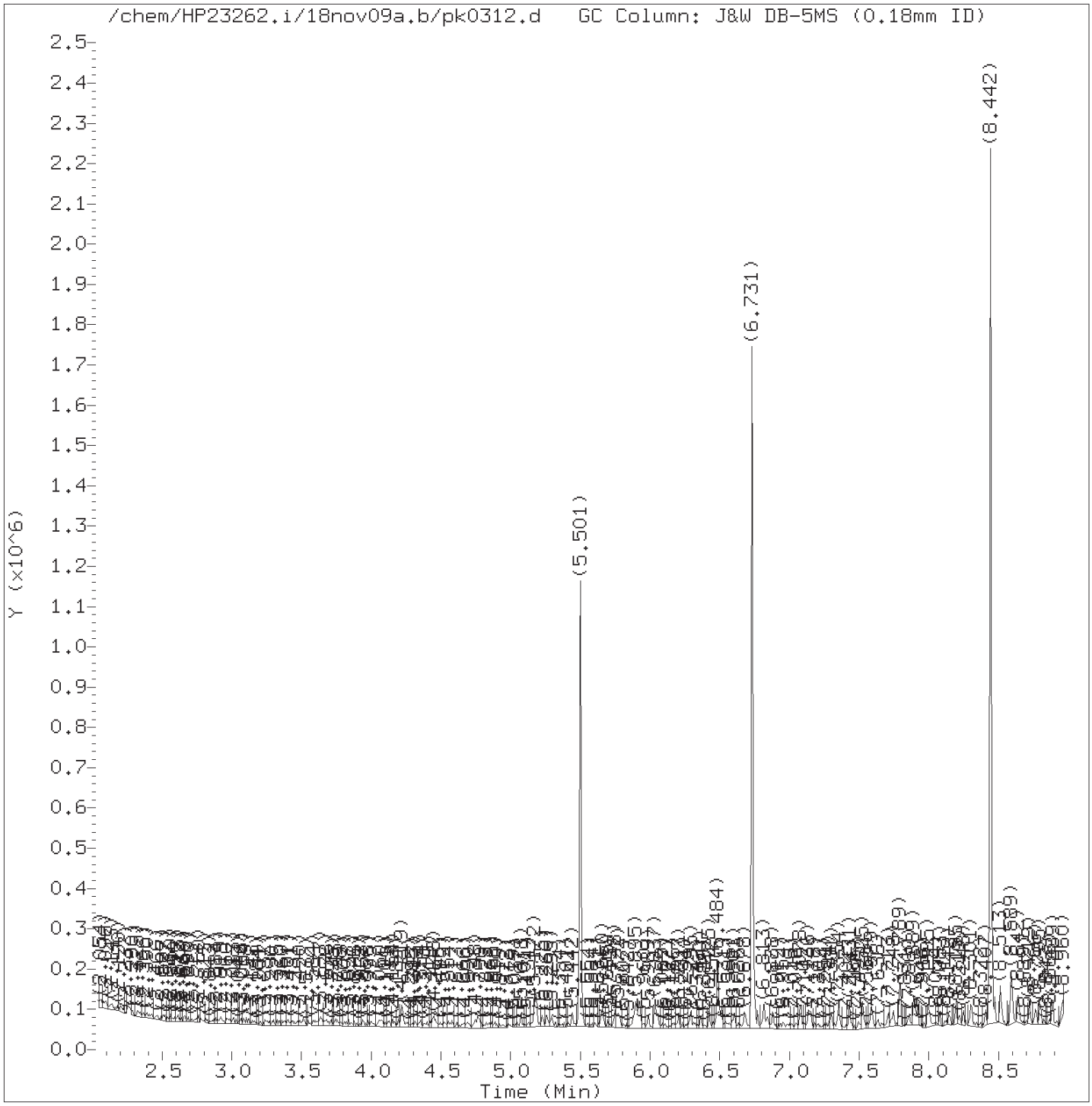
Data File: /chem/HP23262.i/18nov09a.b/pk0311.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 15:38 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 15:59
Date, time and analyst ID of latest file update: 09-Nov-2018 15:59 Automation

Sample Name: SSTD030 Lab Sample ID: STD2928

Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Scan Number : 285
Retention Time (minutes) : 3.707
Quant Ion : 88.00
Area : 207957
On-column Amount (ng/ul) : 21.8360
Integration start scan : 274 Integration stop scan: 318
Y at integration start : 0 Y at integration end: 0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10496



Total Ion Chromatogram (TIC)

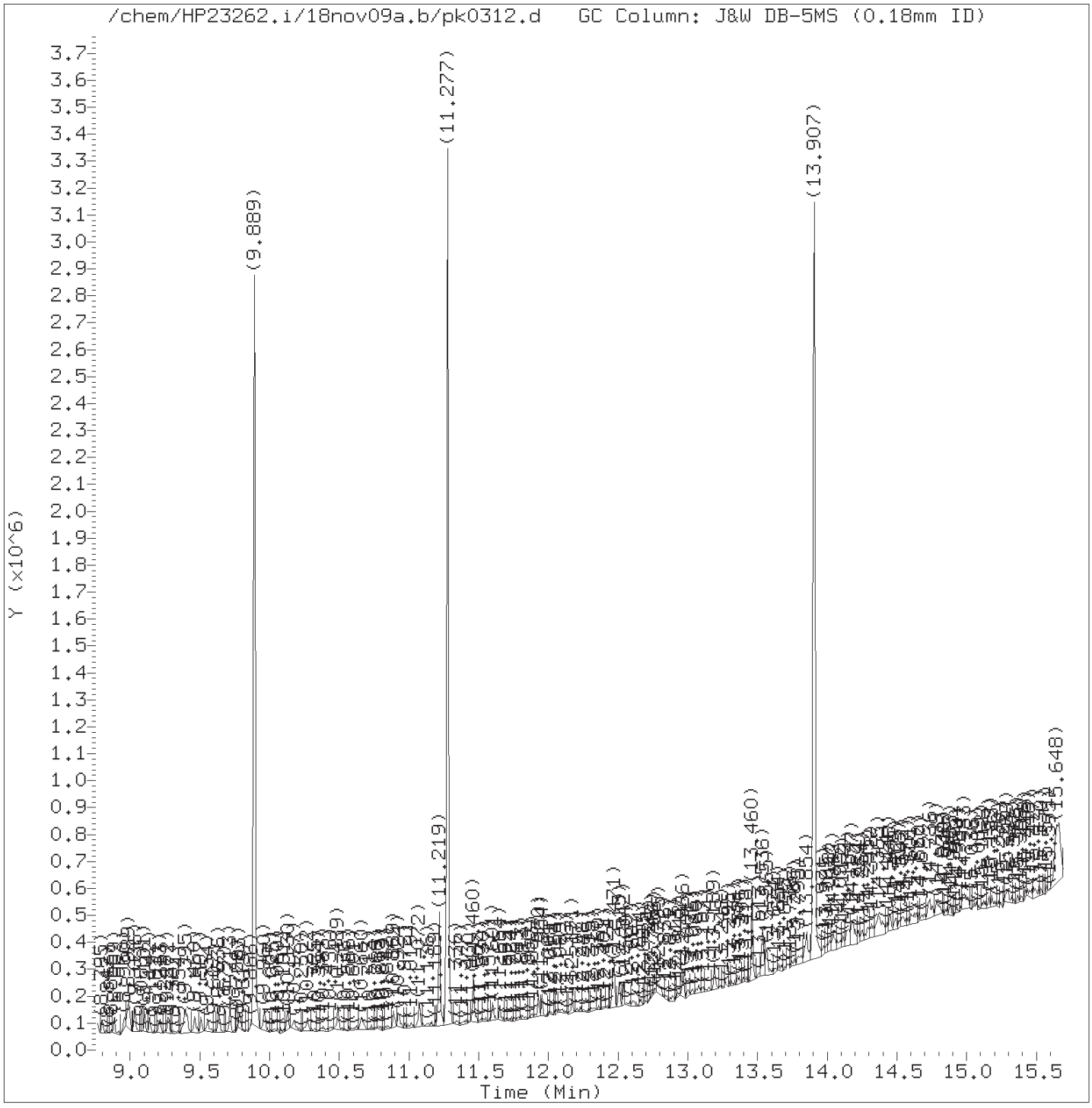
Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD0.5 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD0.5 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD0.5 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.260	88	4856	0.883
4) N-Nitrosodimethylamine	(1)	2.590	74	1408	0.158
5) Pyridine	(1)	2.684	79	4859	0.299
7) 2-Picoline	(1)	3.578	93	1488	0.090
9) Methyl methanesulfonate	(1)	4.060	80	2266	0.310
11)$2-Fluorophenol	(1)	4.219	112	13479	1.169
13) N-Nitrosodiethylamine	(1)	4.448	102	3984	0.580
15) Ethyl methanesulfonate	(1)	4.760	109	6335	0.939
17)$Phenol-d6	(1)	5.172	99	17941	0.982
18) Phenol	(1)	5.184	94	13726	0.645
19) Aniline	(1)	5.184	93	13466	0.555
22) bis(2-Chloroethyl)ether	(1)	5.260	93	10433	0.667
23) 2-Chlorophenol	(1)	5.295	128	6061	0.518
24) 1,3-Dichlorobenzene	(1)	5.442	146	5645	0.485
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	150966	20.000
26) 1,4-Dichlorobenzene	(1)	5.513	146	6628	0.567
27) Benzyl alcohol	(1)	5.648	108	5214	0.545
42) Total Cresols	(1)			14792	1.018
28) 1,2-Dichlorobenzene	(1)	5.660	146	6636	0.558
30) Indene	(1)	5.748	115	10913	0.780
31) 2-Methylphenol	(1)	5.760	108	5460	0.406
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.778	45	13657	0.601
34) bis(2-Chloroisopropyl)ether	(1)	5.778	45	13657	0.601
35) N-Nitrosopyrrolidine	(1)	5.878	100	4476	0.525
36) Acetophenone	(1)	5.895	105	11510	0.578
38) N-Nitroso-di-n-propylamine	(1)	5.901	70	10295	0.772
39) N-Nitrosomorpholine	(1)	5.919	56	11254	1.060
37) 4-Methylphenol	(1)	5.919	108	9332	0.598
40) o-Toluidine	(1)	5.925	106	12206	0.533
43) Hexachloroethane	(1)	5.984	117	4041	0.821
44)$Nitrobenzene-d5	(2)	6.037	82	19298	1.111
45) Nitrobenzene	(2)	6.054	77	11982	0.644
48) N-Nitrosopiperidine	(2)	6.207	114	4365	0.562
50) Isophorone	(2)	6.289	82	17619	0.497
51) 2-Nitrophenol	(2)	6.366	139	3540	0.513
53) 2,4-Dimethylphenol	(2)	6.425	107	7034	0.451
56) Benzoic acid	(2)	6.484	105	40513	3.799
57) O,O,O-Triethylphosphorothioate	(2)	6.489	198	4704	0.620
55) bis(2-Chloroethoxy)methane	(2)	6.513	93	9192	0.443
60) 2,4-Dichlorophenol	(2)	6.607	162	4556	0.396

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD0.5 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
62) 1,2,4-Trichlorobenzene	(2)	6.684	180	5502	0.475
65)*Naphthalene-d8	(2)	6.731	136	655810	20.000
66) Naphthalene	(2)	6.754	128	19118M	0.508
67) 4-Chloroaniline	(2)	6.813	127	7808	0.496
68) 2,6-Dichlorophenol	(2)	6.819	162	5386	0.504
69) Hexachloropropene	(2)	6.842	213	3658	0.524
71) Hexachlorobutadiene	(2)	6.878	225	3878	0.577
75) Quinoline	(2)	7.084	129	17299	0.653
76) Caprolactam	(2)	7.136	113	3041	0.554
77) N-Nitrosodi-n-butylamine	(2)	7.148	84	9812	0.559
80) 4-Chloro-3-methylphenol	(2)	7.301	107	7734	0.552
82) Safrole	(2)	7.354	162	5747	0.544
97) Isosafrole	(3)			6136	0.537
83) 2-Methylnaphthalene	(2)	7.431	142	12984	0.490
84) 1-Methylnaphthalene	(2)	7.525	142	12995M	0.509
85) Hexachlorocyclopentadiene	(3)	7.583	237	2325	0.303
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.589	216	7131	0.518
88) cis-Isosafrole	(3)	7.636	162	1674	0.149
90) 2,4,6-Trichlorophenol	(3)	7.713	196	3348	0.352
92) 2,4,5-Trichlorophenol	(3)	7.748	196	5416	0.531
93)$2-Fluorobiphenyl	(3)	7.795	172	31906	0.975
94) trans-Isosafrole	(3)	7.854	162	4462	0.389
95) 1,1'-Biphenyl	(3)	7.889	154	18862	0.547
98) 1-Chloronaphthalene	(3)	7.901	162	26196	0.995
96) 2-Chloronaphthalene	(3)	7.901	162	26196	0.985
99) Diphenyl ether	(3)	7.995	170	10721	0.553
100) 2-Nitroaniline	(3)	8.007	138	4799	0.509
120) 2,4_2,6-Dinitrotoluenes	(3)			10448	1.094
104) 1,4-Naphthoquinone	(3)	8.078	158	4899	0.393
105) 1,4-Dinitrobenzene	(3)	8.154	168	2883	0.554
106) Dimethylphthalate	(3)	8.195	163	16378	0.486
107) 1,3-Dinitrobenzene	(3)	8.225	168	2527	0.406
108) 2,6-Dinitrotoluene	(3)	8.248	165	4844	0.596
109) Acenaphthylene	(3)	8.301	152	20147	0.501
112) 3-Nitroaniline	(3)	8.413	138	3811	0.454
113)*Acenaphthene-d10	(3)	8.442	164	401180	20.000
114) Acenaphthene	(3)	8.472	153	12511	0.465
115) 2,4-Dinitrophenol	(3)	8.513	184	16490	3.766
116) 4-Nitrophenol	(3)	8.589	109	12724	2.135
117) Pentachlorobenzene	(3)	8.601	250	6874	0.546

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD0.5 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
118) 2,4-Dinitrotoluene	(3)	8.636	165	5604	0.510
119) Dibenzofuran	(3)	8.642	168	20600	0.474
121) 1-Naphthylamine	(3)	8.719	143	15308	0.488
122) 2,3,4,6-Tetrachlorophenol	(3)	8.766	232	4299	0.480
146) Diallate trans/cis	(4)			21730	0.994
123) 2-Naphthylamine	(3)	8.801	143	15837	0.502
124) Diethylphthalate	(3)	8.889	149	18164	0.520
125) Thionazin	(3)	8.966	107	4480	0.718
126) Fluorene	(3)	8.978	166	16129M	0.478
127) 4-Chlorophenyl-phenylether	(3)	8.989	204	9138	0.485
129) 4-Nitroaniline	(3)	8.995	138	5855	0.633
128) 5-Nitro-o-toluidine	(3)	8.995	152	6645	0.653
130) 4,6-Dinitro-2-methylphenol	(4)	9.030	198	13528	2.133
132) NDPA as diphenylamine	(4)	9.101	169	16414	0.518
131) N-Nitrosodiphenylamine	(4)	9.101	169	16414	0.518
134) 1,2-Diphenylhydrazine	(4)	9.142	77	21052	0.434
135)$2,4,6-Tribromophenol	(3)	9.201	330	2716	0.636
137) Tetraethyldithiopyrophosphate	(4)	9.272	97	5521	0.799
139) 1,3,5-Trinitrobenzene	(4)	9.383	213	3818	0.828
140) Diallate (peak 1)	(4)	9.389	86	10865	0.479
144) Diallate (peak 2)	(4)	9.389	86	10865	0.609
141) Phorate	(4)	9.395	75	16491	0.517
142) Phenacetin	(4)	9.413	108	11808	0.552
143) 4-Bromophenyl-phenylether	(4)	9.466	248	4979	0.448
145) Hexachlorobenzene	(4)	9.513	284	5072	0.493
147) Dimethoate	(4)	9.554	87	8762	0.450
150) 4-Aminobiphenyl	(4)	9.713	169	10821	0.748
149) Pentachlorophenol	(4)	9.713	266	3238	0.509
151) Pentachloronitrobenzene	(4)	9.719	237	2479	0.494
152) Pronamide	(4)	9.783	173	10503	0.613
153)*Phenanthrene-d10	(4)	9.889	188	971463	20.000
154) Dinoseb	(4)	9.901	211	3949	0.405
155) Phenanthrene	(4)	9.913	178	28909	0.506
157) Anthracene	(4)	9.960	178	27514	0.484
163) Carbazole	(4)	10.130	167	24743	0.475
164) Methyl parathion	(4)	10.272	109	6187	0.450
165) Di-n-butylphthalate	(4)	10.489	149	30400	0.465
167) Parathion	(4)	10.654	109	5031	0.579
168) 4-Nitroquinoline-1-oxide	(4)	10.677	190	2552	0.485
169) Octachlorostyrene	(4)	10.895	308	2434	0.593

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

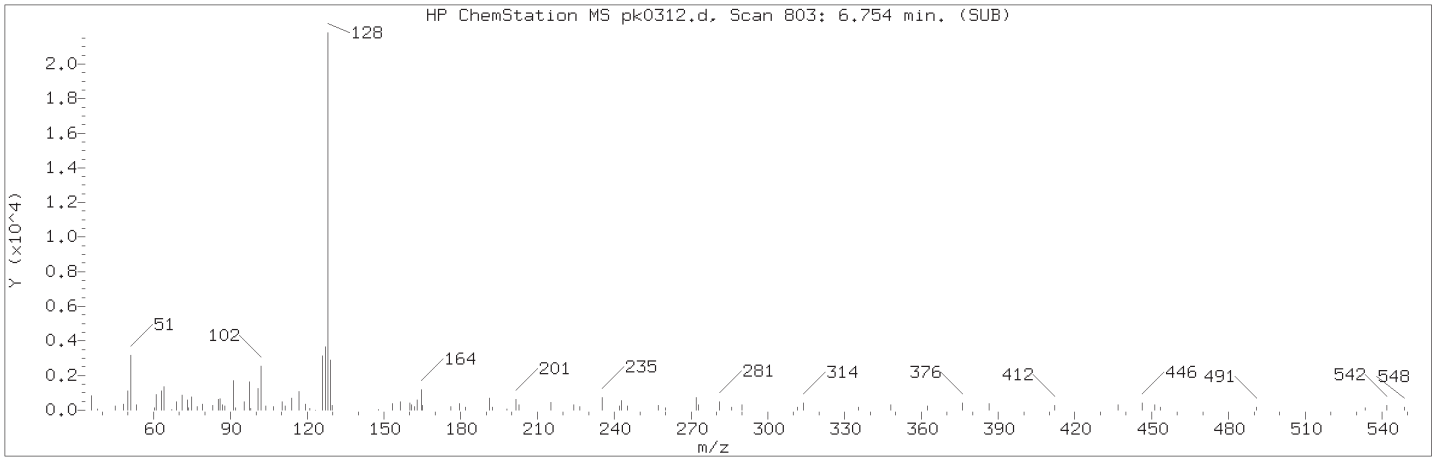
Sample Name: SSTD0.5 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
171) Isodrin	(4)	10.924	193	4112	0.588
173) Fluoranthene	(4)	11.072	202	30785M	0.477
174) Benzidine	(5)	11.219	184	158199	3.481
175)*Pyrene-d10	(5)	11.277	212	1046297	20.000
177) Pyrene	(5)	11.289	202	38563	0.514
179)$Terphenyl-d14	(5)	11.466	244	48435	1.013
182) p-Dimethylaminoazobenzene	(5)	11.601	225	5890	0.485
185) Chlorobenzilate	(5)	11.654	139	10136	0.544
187) 3,3'-Dimethylbenzidine	(5)	11.930	212	25427	0.594
188) Butylbenzylphthalate	(5)	11.954	149	15485	0.509
191) 2-Acetylaminofluorene	(5)	12.171	181	10744	0.413
193) 3,3'-Dichlorobenzidine	(5)	12.460	252	13138	0.539
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.471	231	7018	0.546
195) Benzo(a)anthracene	(5)	12.471	228	32290	0.484
196) Chrysene	(5)	12.513	228	28941	0.471
199) bis(2-Ethylhexyl)phthalate	(5)	12.536	149	20830	0.485
203) 6-Methylchrysene	(5)	12.966	242	26602	0.614
205) Di-n-octylphthalate	(6)	13.189	149	39241	0.483
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.536	256	14925	0.445
206) Benzo(b)fluoranthene	(6)	13.542	252	36696	0.507
208) Benzo(k)fluoranthene	(6)	13.565	252	37582	0.522
211) Benzo(a)pyrene	(6)	13.854	252	34524	0.516
213)*Perylene-d12	(6)	13.907	264	1000248	20.000
215) 3-Methylcholanthrene	(6)	14.183	268	15825	0.596
217) Dibenz(a,h)acridine	(6)	14.736	279	26019	0.521
218) Dibenz(a,j)acridine	(6)	14.783	279	23547	0.450
219) Indeno(1,2,3-cd)pyrene	(6)	14.983	276	32286M	0.486
222) Total PAHs	(6)			482857	8.555
220) Dibenz(a,h)anthracene	(6)	15.007	278	31747M	0.518
221) Benzo(g,h,i)perylene	(6)	15.289	276	29136M	0.501

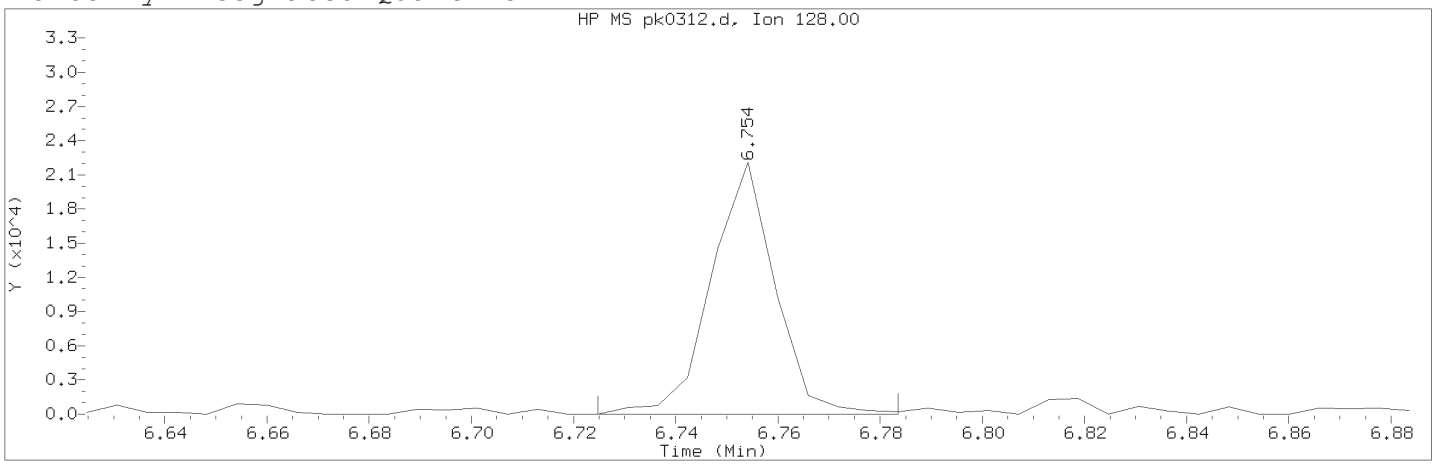
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD0.5 Lab Sample ID: STD2928

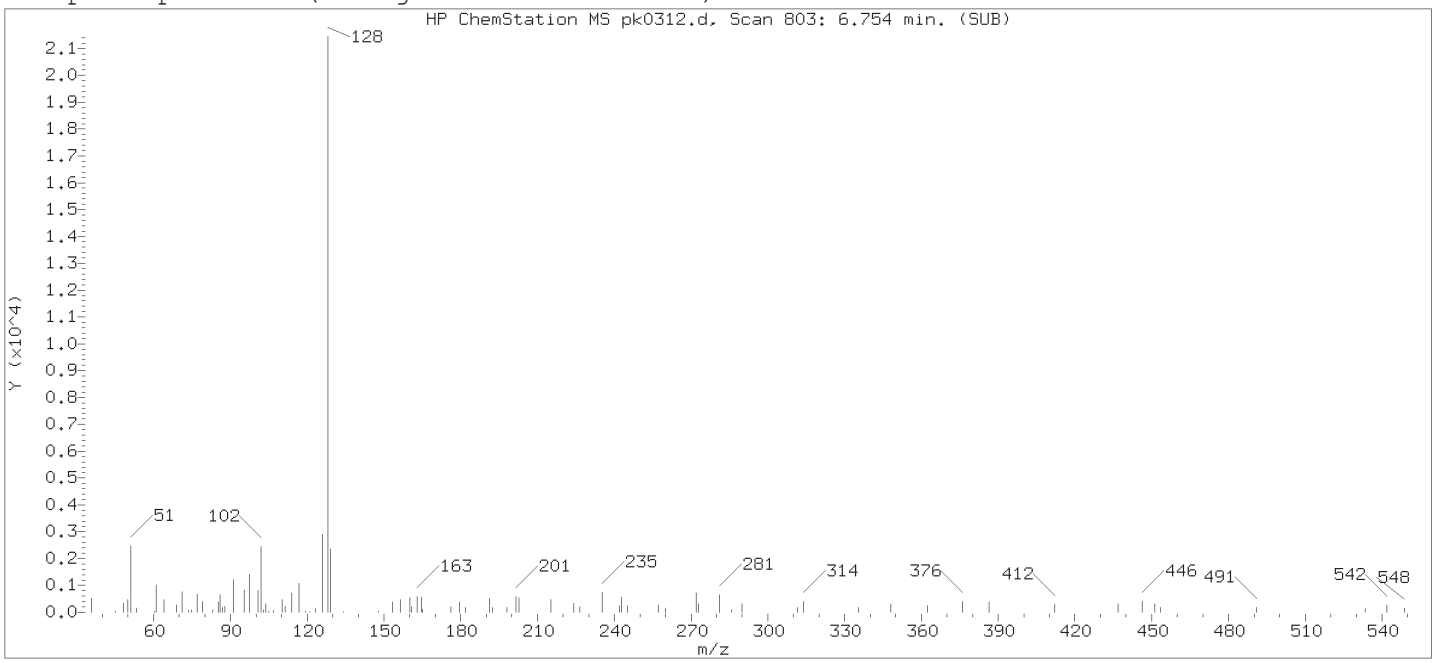
Compound Number	: 66		
Compound Name	: Naphthalene		
Scan Number	: 803		
Retention Time (minutes)	: 6.754		
Quant Ion	: 128.00		
Area (flag)	: 19118M		
On-Column Amount (ng/ul)	: 0.5077		
Integration start scan	: 797	Integration stop scan:	807
Y at integration start	: 2	Y at integration end:	2

Reason for manual integration: improper integration

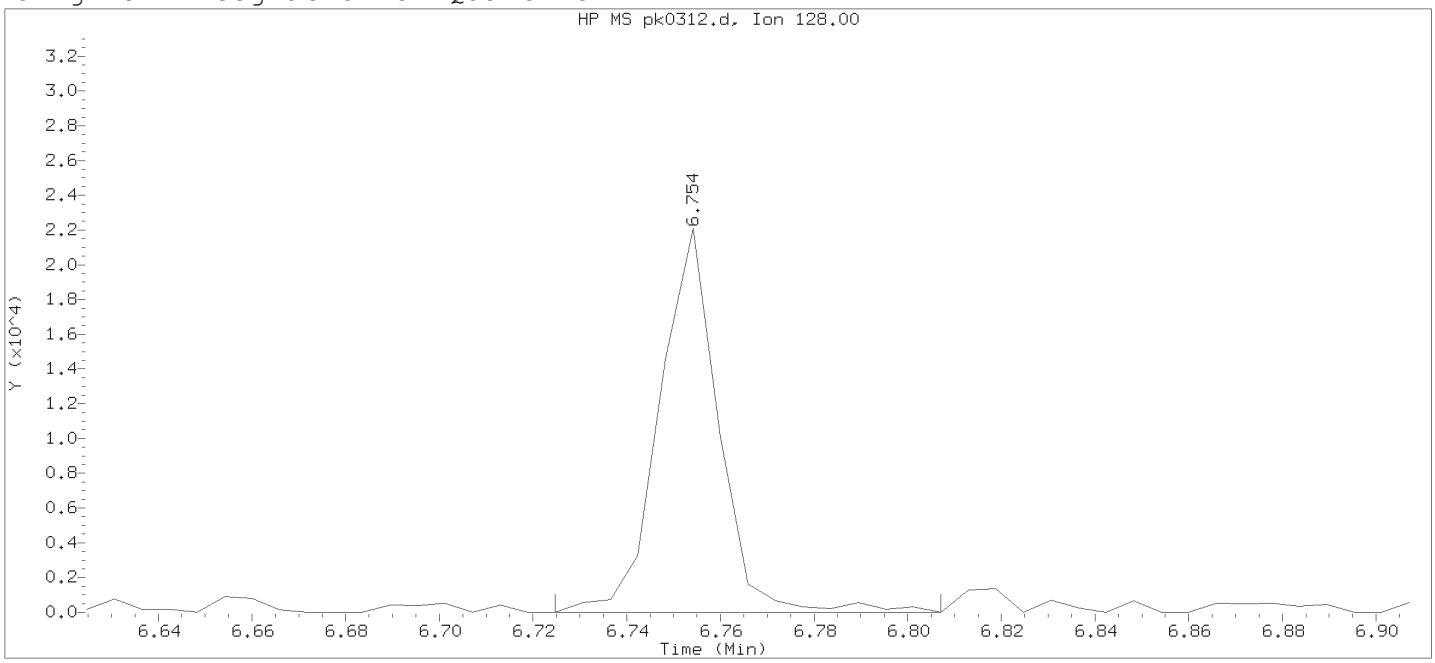
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

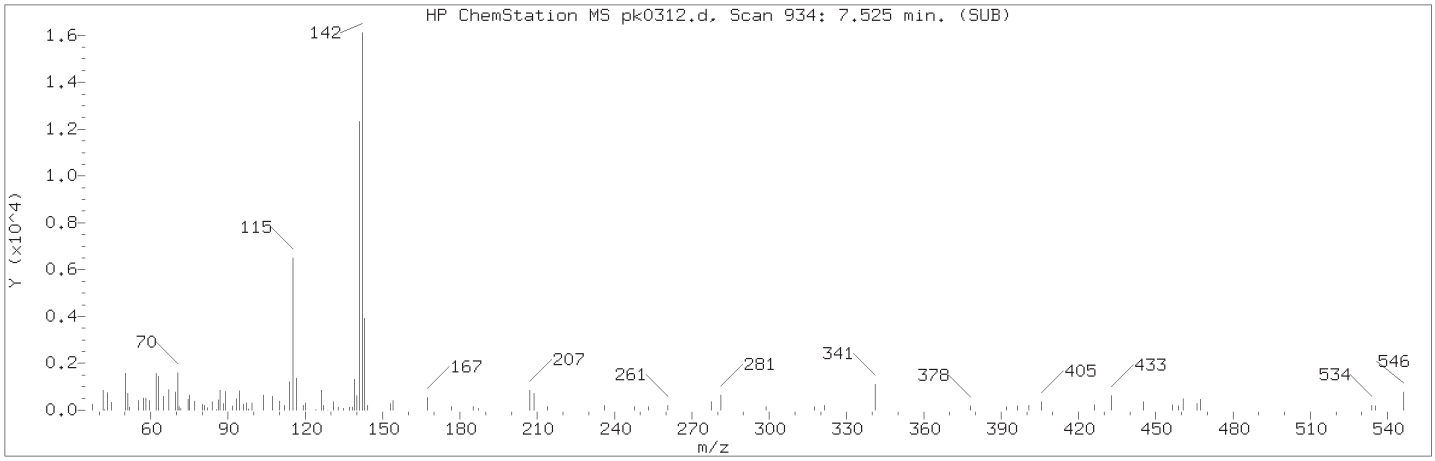
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 16:26
Date, time and analyst ID of latest file update: 09-Nov-2018 16:26 Automation

Sample Name: SSTD0.5 Lab Sample ID: STD2928

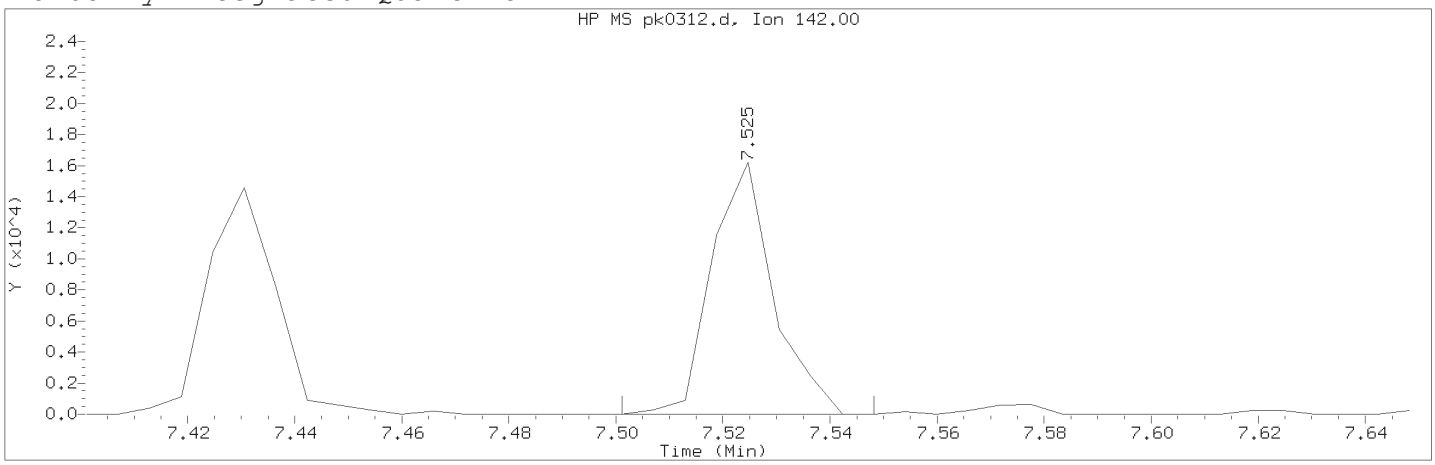
Compound Number	: 66		
Compound Name	: Naphthalene		
Scan Number	: 803		
Retention Time (minutes)	: 6.754		
Quant Ion	: 128.00		
Area	: 19488		
On-column Amount (ng/ul)	: 0.5268		
Integration start scan	: 797	Integration stop scan:	811
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature used 11/11/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD0.5 Lab Sample ID: STD2928

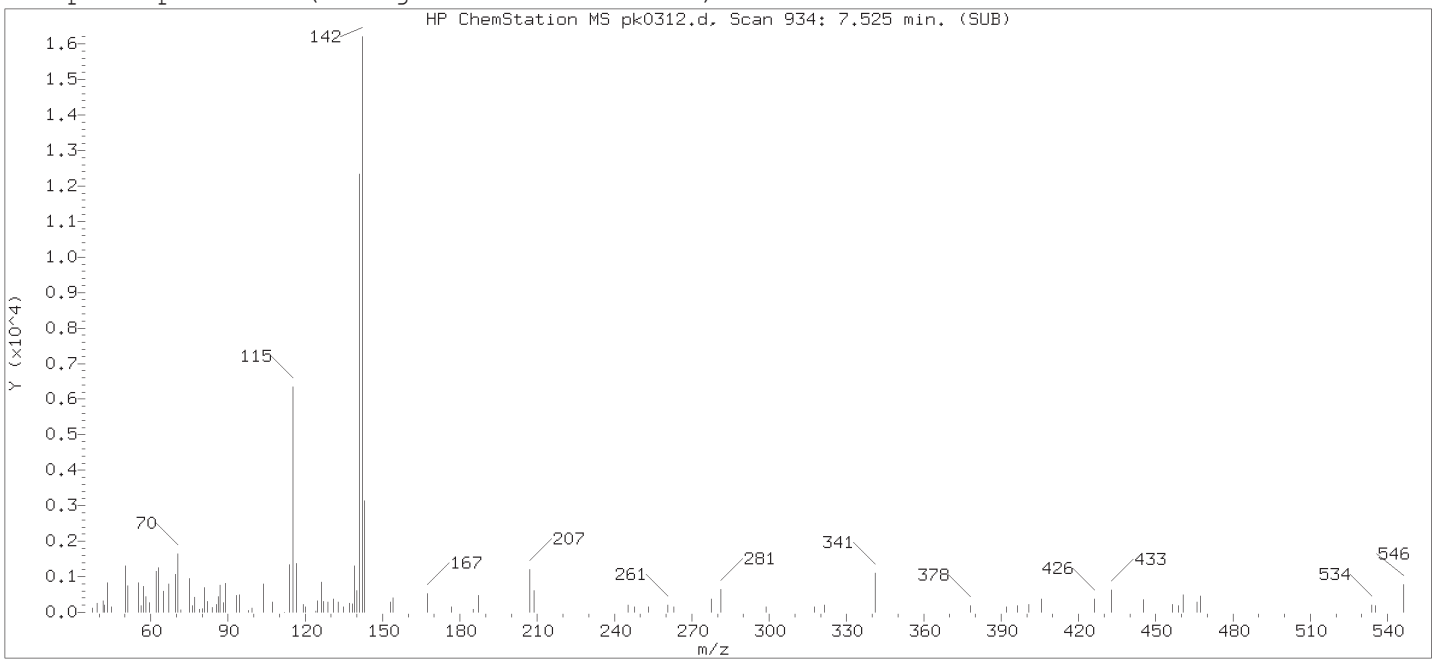
Compound Number	: 84		
Compound Name	: 1-Methylnaphthalene		
Scan Number	: 934		
Retention Time (minutes)	: 7.525		
Quant Ion	: 142.00		
Area (flag)	: 12995M		
On-Column Amount (ng/ul)	: 0.5093		
Integration start scan	: 929	Integration stop scan:	937
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

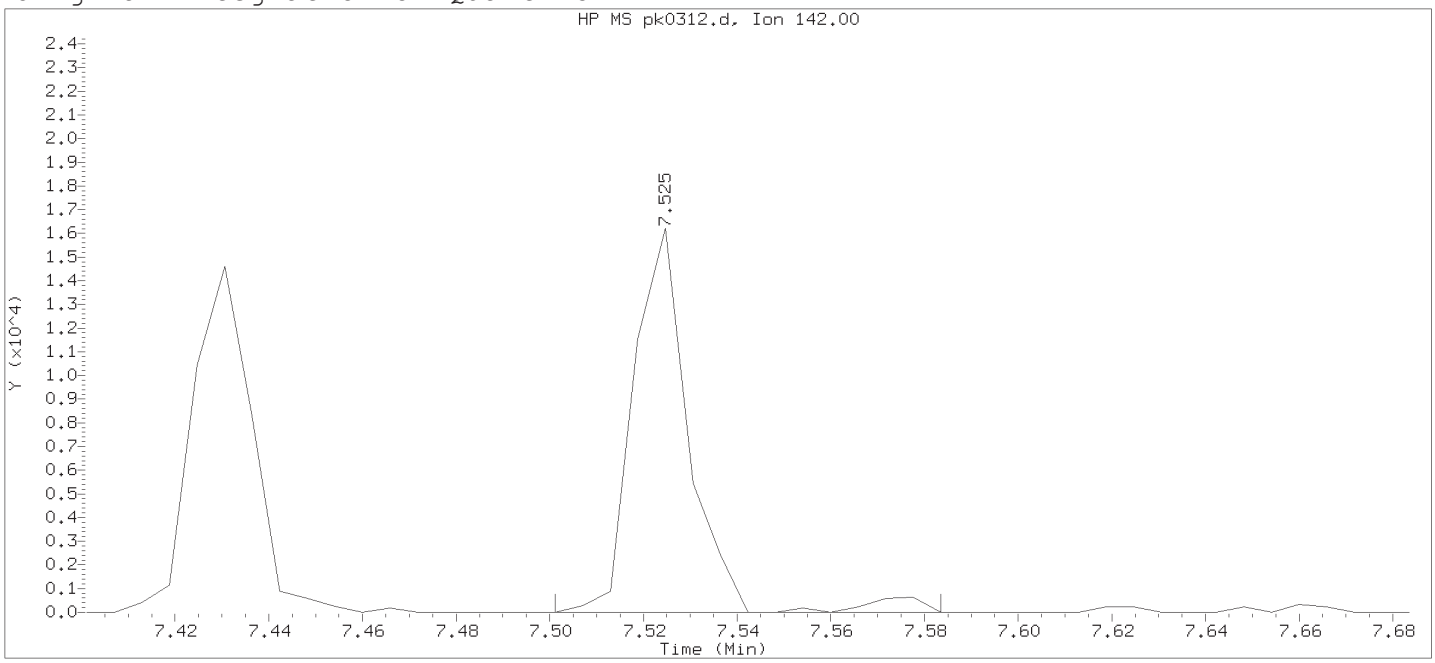
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

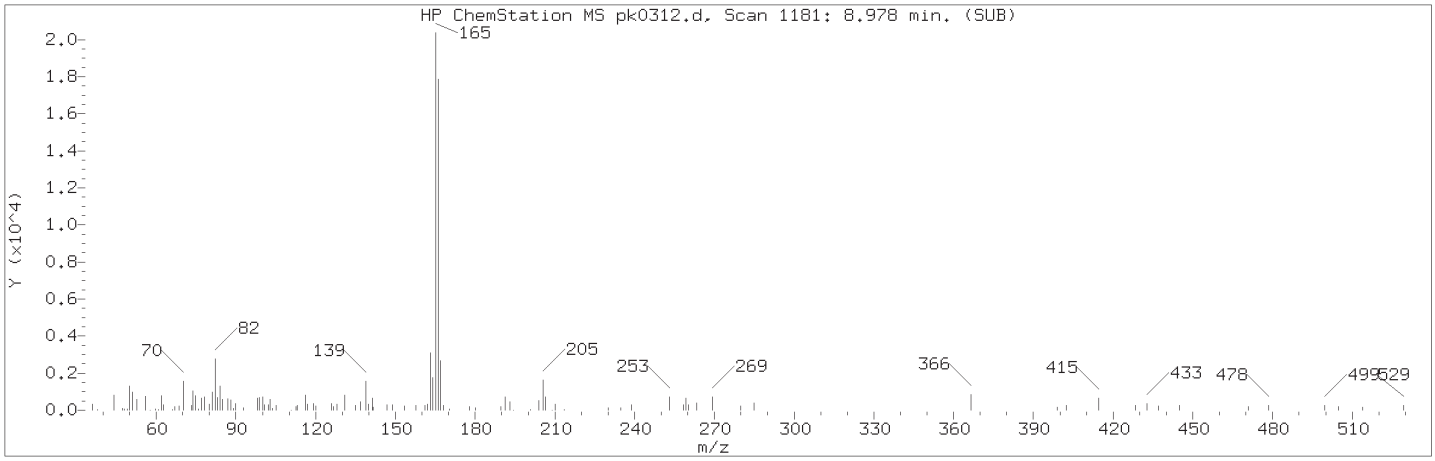
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 16:26
Date, time and analyst ID of latest file update: 09-Nov-2018 16:26 Automation

Sample Name: SSTD0.5 Lab Sample ID: STD2928

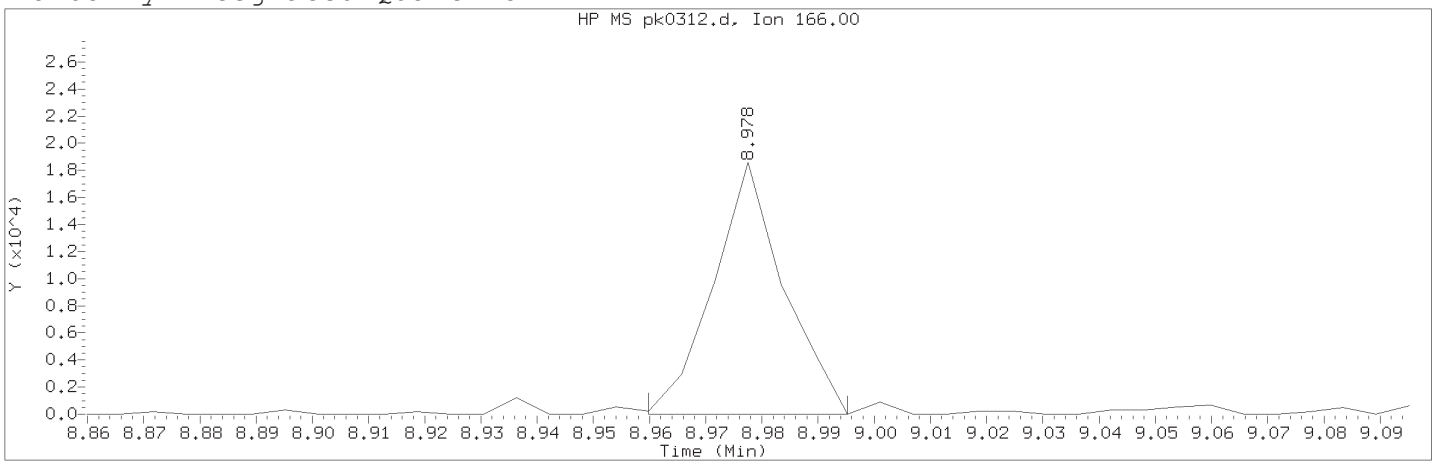
Compound Number : 84
Compound Name : 1-Methylnaphthalene
Scan Number : 934
Retention Time (minutes) : 7.525
Quant Ion : 142.00
Area : 13565
On-column Amount (ng/ul) : 0.5451
Integration start scan : 929 Integration stop scan: 943
Y at integration start : 0 Y at integration end: 0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD0.5 Lab Sample ID: STD2928

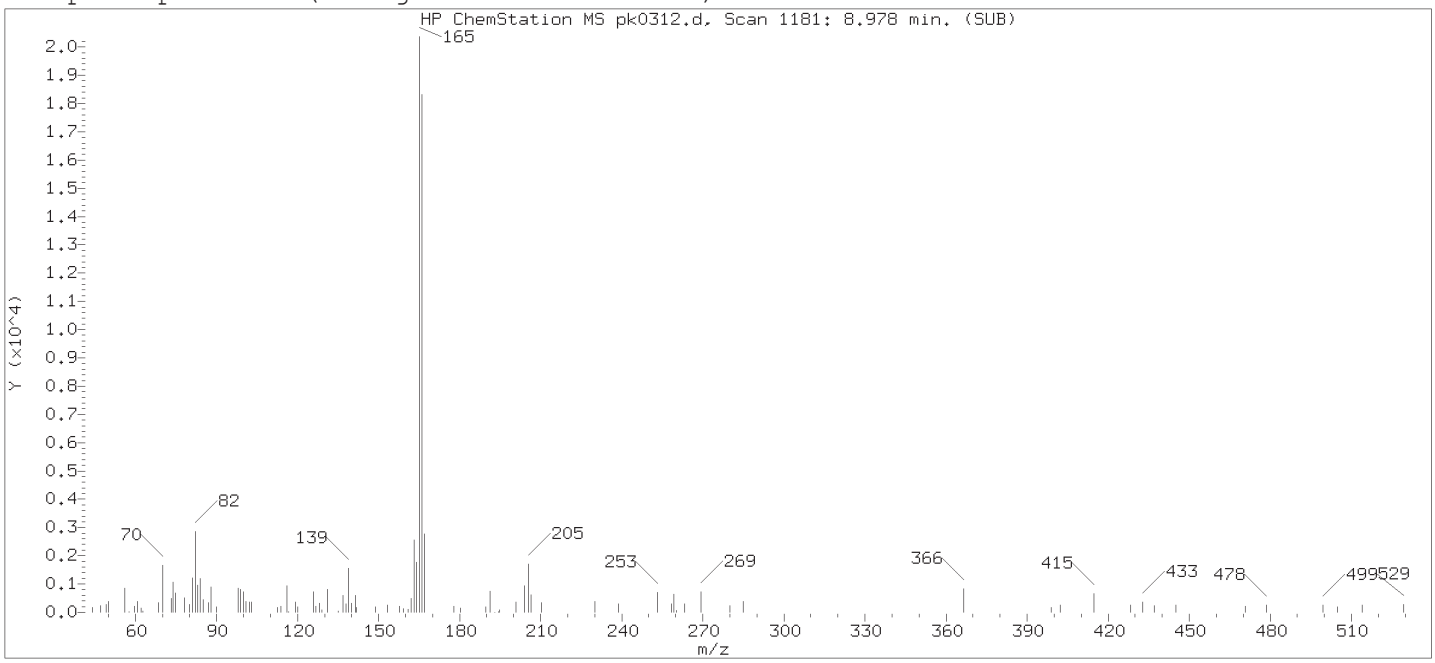
Compound Number : 126
Compound Name : Fluorene
Scan Number : 1181
Retention Time (minutes) : 8.978
Quant Ion : 166.00
Area (flag) : 16129M
On-Column Amount (ng/ul) : 0.4778
Integration start scan : 1177 Integration stop scan: 1183
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

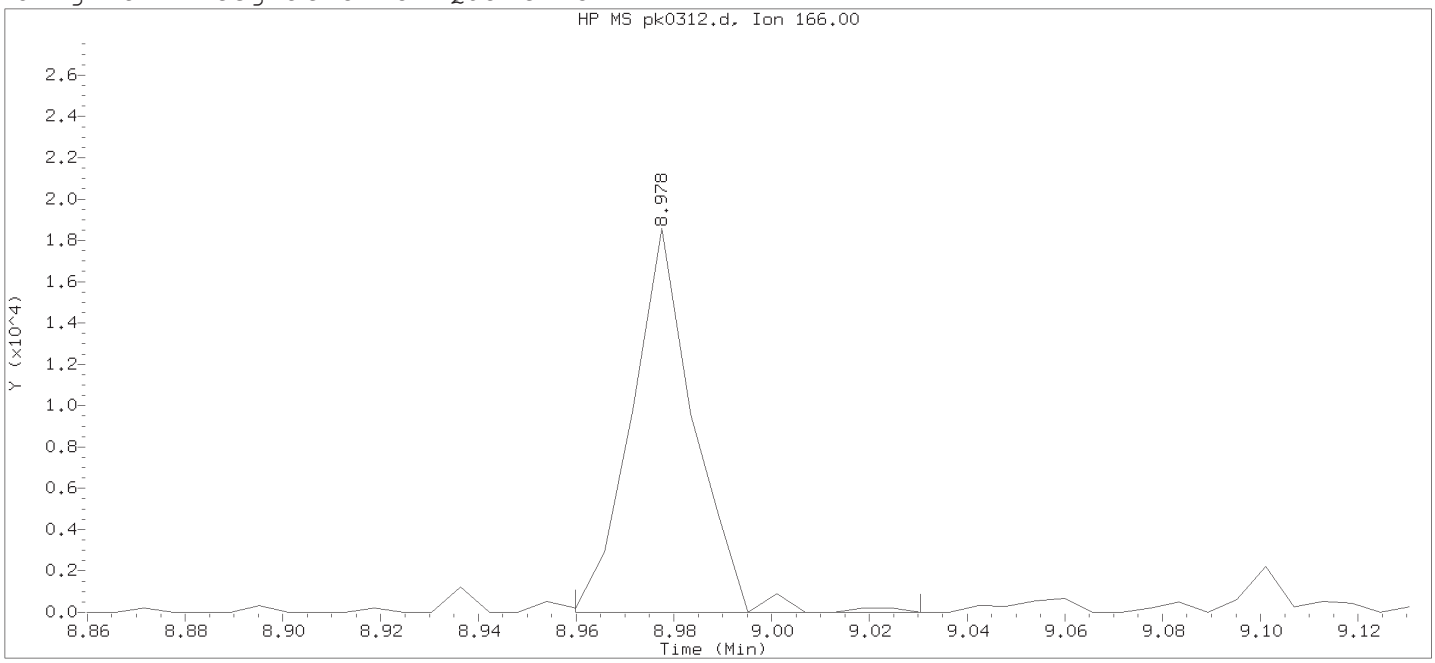
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

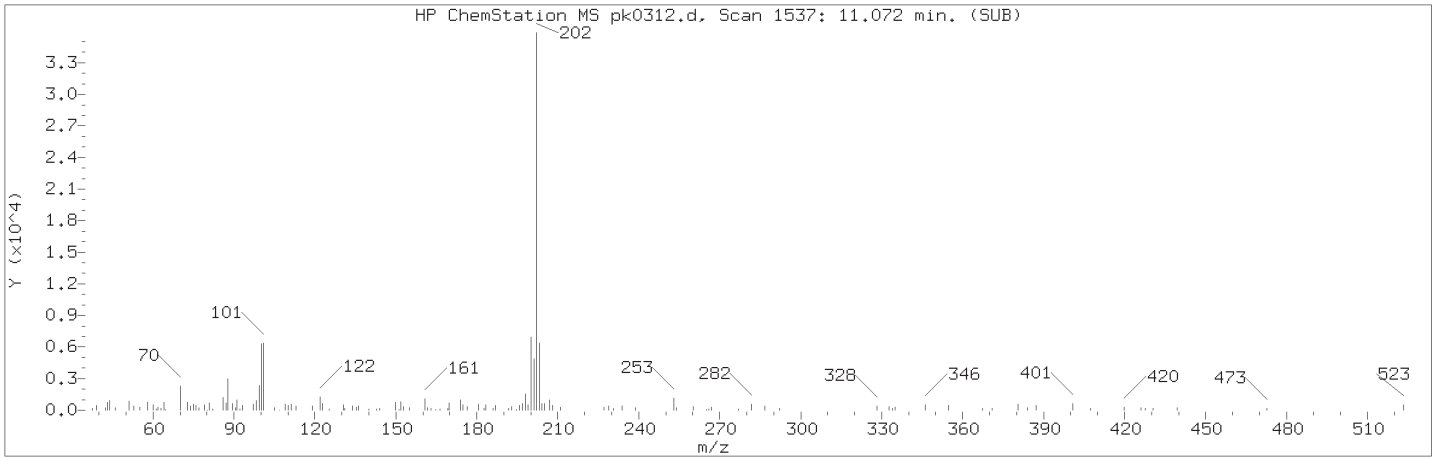
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 16:26
Date, time and analyst ID of latest file update: 09-Nov-2018 16:26 Automation

Sample Name: SSTD0.5 Lab Sample ID: STD2928

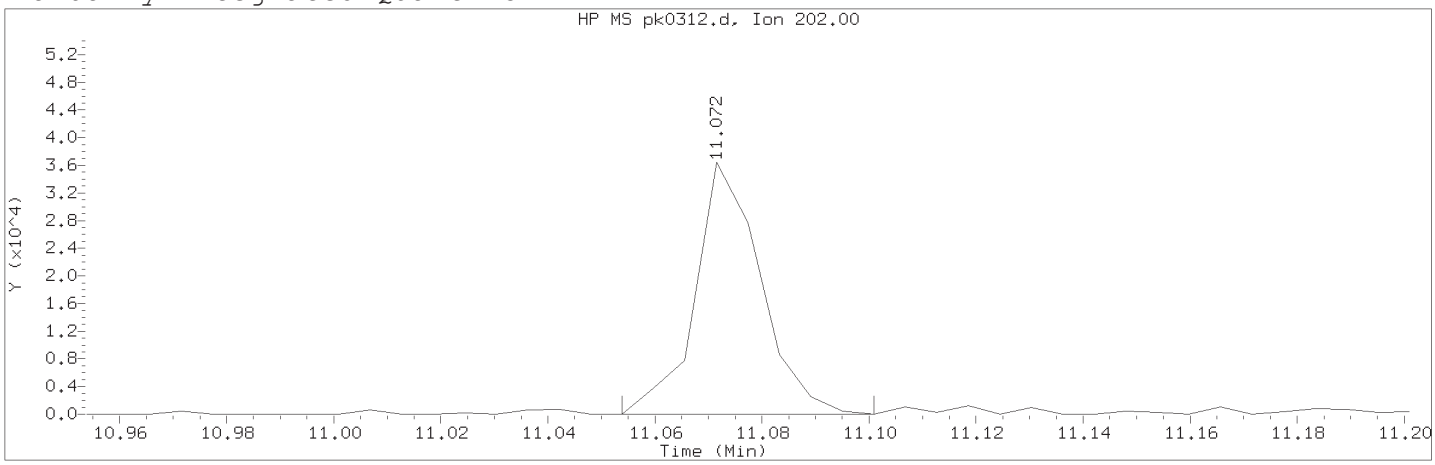
Compound Number	: 126		
Compound Name	: Fluorene		
Scan Number	: 1181		
Retention Time (minutes)	: 8.978		
Quant Ion	: 166.00		
Area	: 16567		
On-column Amount (ng/ul)	: 0.5125		
Integration start scan	: 1177	Integration stop scan:	1189
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature used 11/11/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD0.5 Lab Sample ID: STD2928

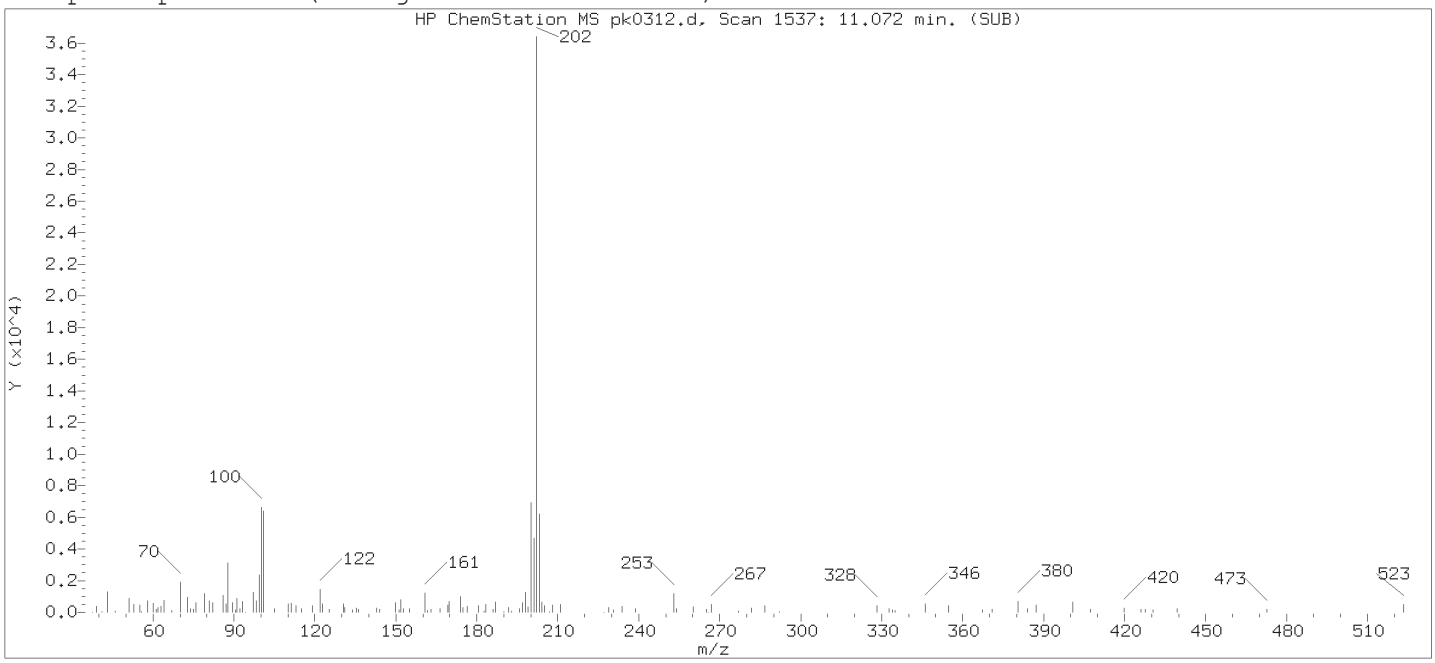
Compound Number	: 173		
Compound Name	: Fluoranthene		
Scan Number	: 1537		
Retention Time (minutes)	: 11.072		
Quant Ion	: 202.00		
Area (flag)	: 30785M		
On-Column Amount (ng/ul)	: 0.4765		
Integration start scan	: 1533	Integration stop scan:	1541
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

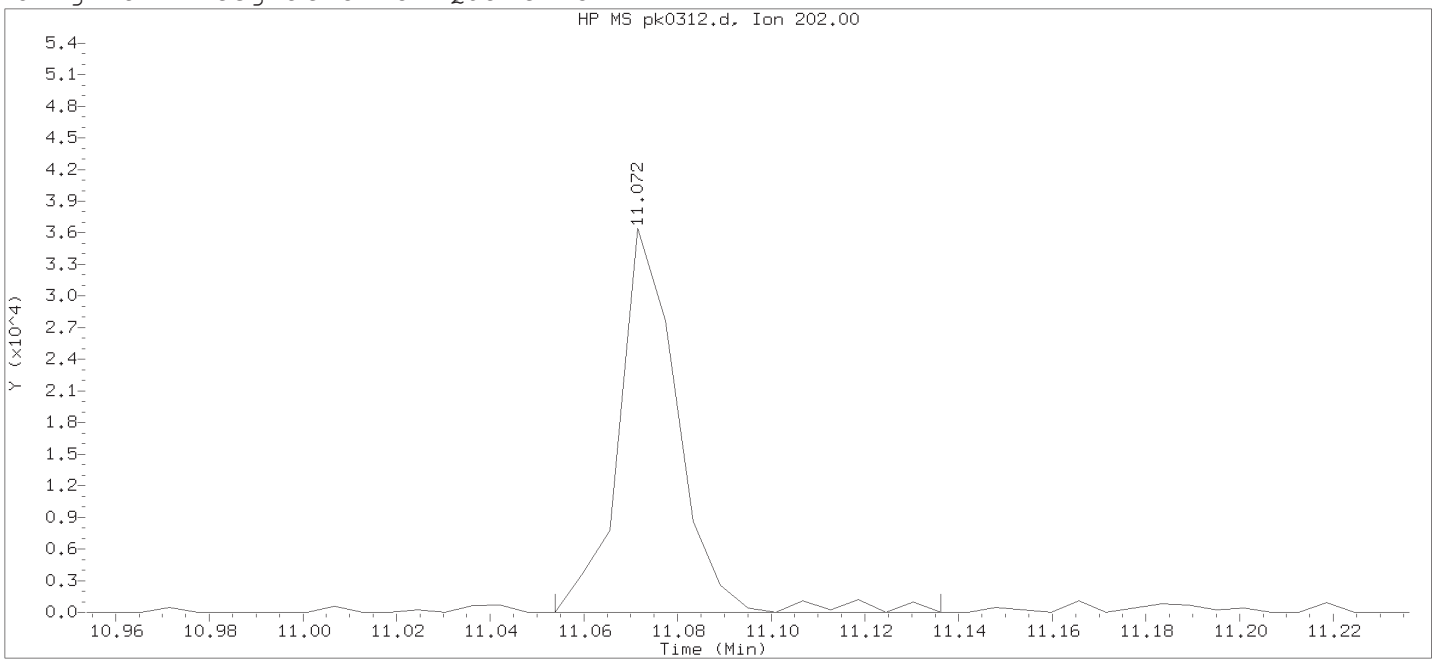
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

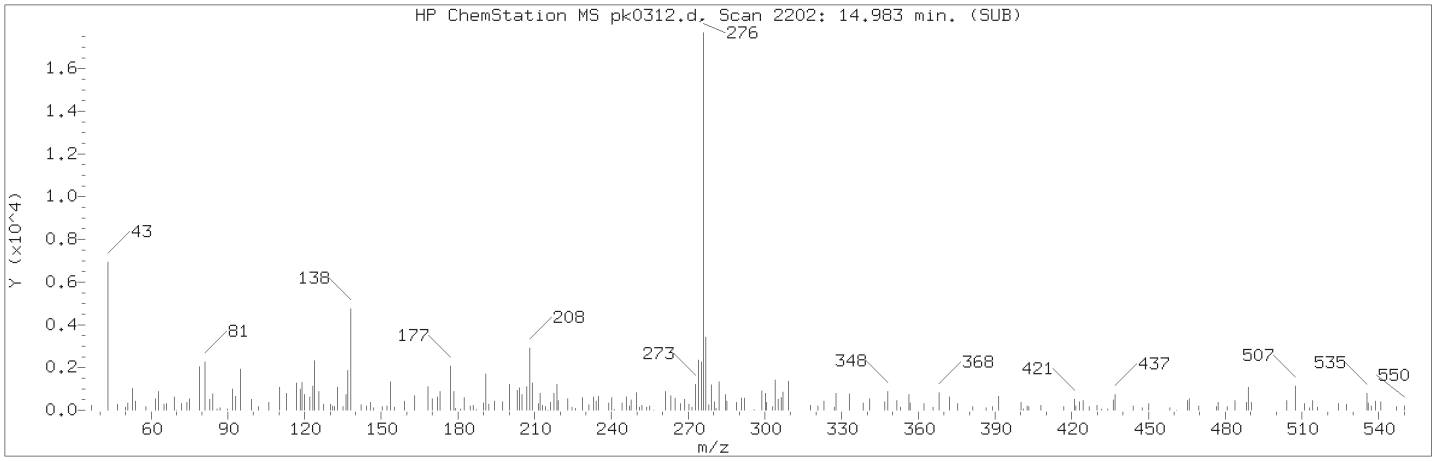
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 16:26
Date, time and analyst ID of latest file update: 09-Nov-2018 16:26 Automation

Sample Name: SSTD0.5 Lab Sample ID: STD2928

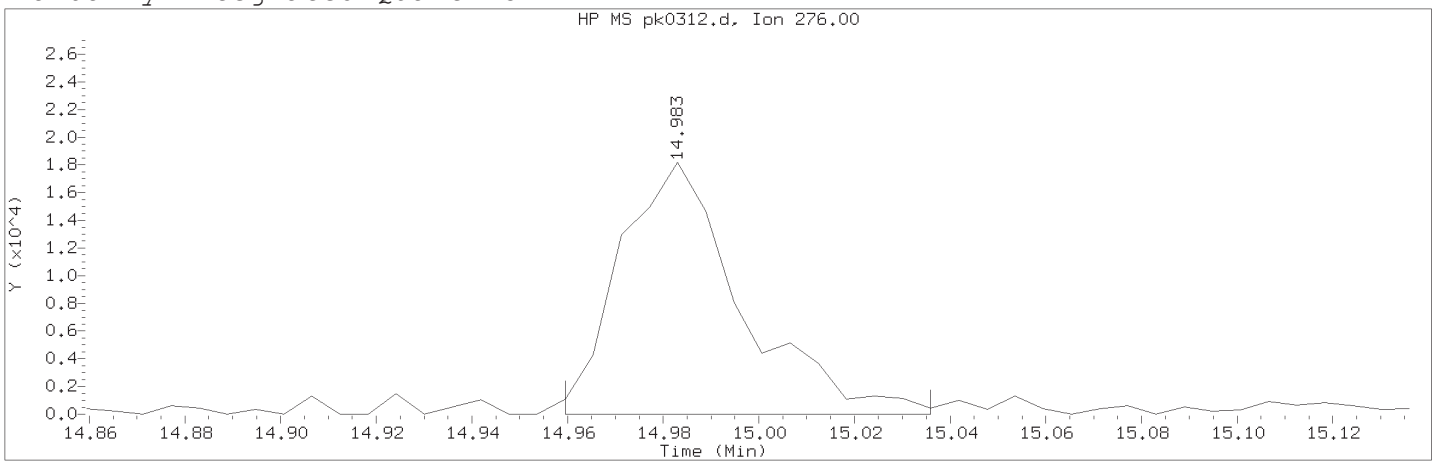
Compound Number : 173
Compound Name : Fluoranthene
Scan Number : 1537
Retention Time (minutes) : 11.072
Quant Ion : 202.00
Area : 32020
On-column Amount (ng/ul) : 0.4873
Integration start scan : 1533 Integration stop scan: 1547
Y at integration start : 0 Y at integration end: 0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb1504

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD0.5 Lab Sample ID: STD2928

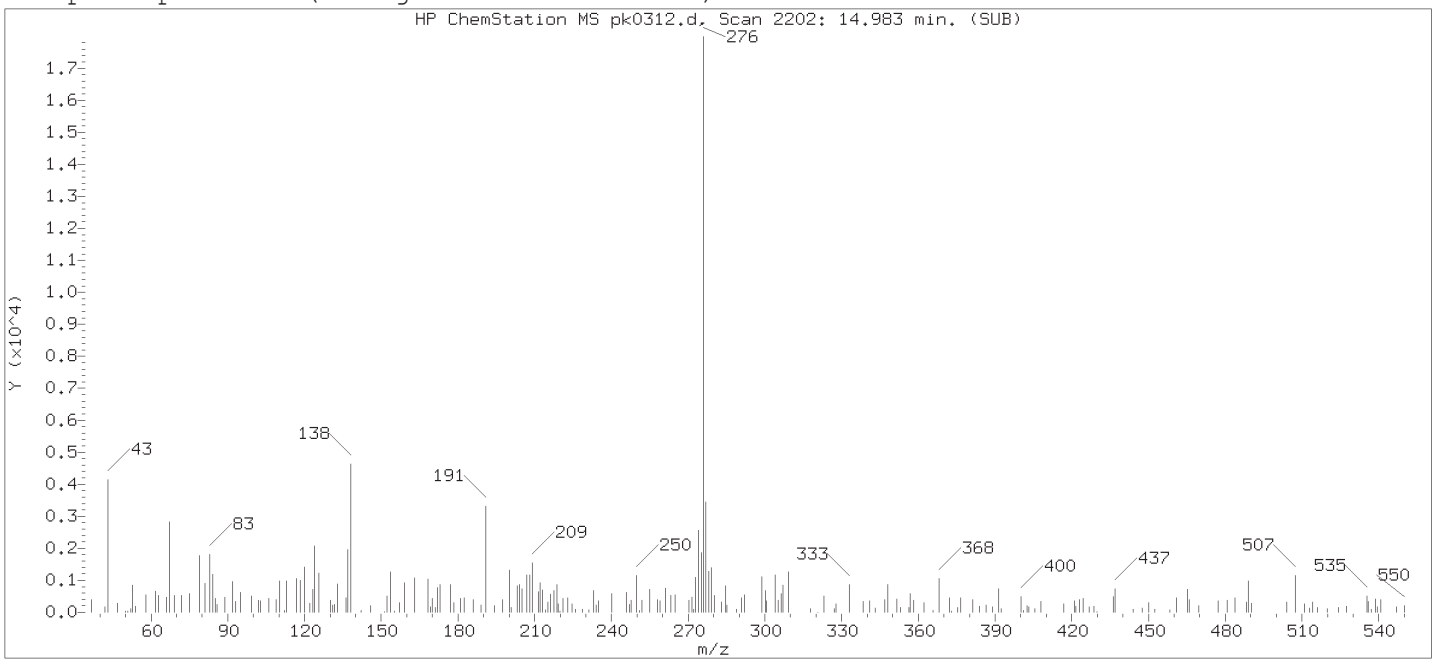
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2202
Retention Time (minutes) : 14.983
Quant Ion : 276.00
Area (flag) : 32286M
On-Column Amount (ng/ul) : 0.4860
Integration start scan : 2197 Integration stop scan: 2210
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

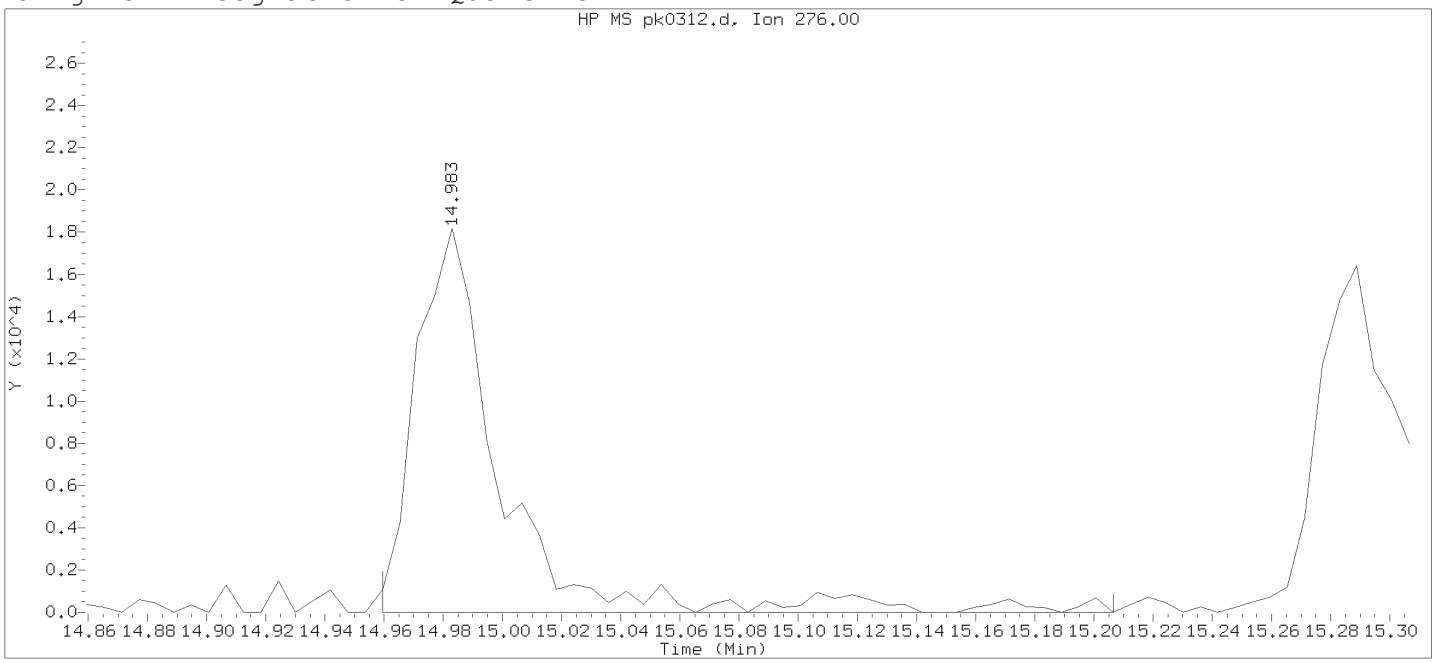
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

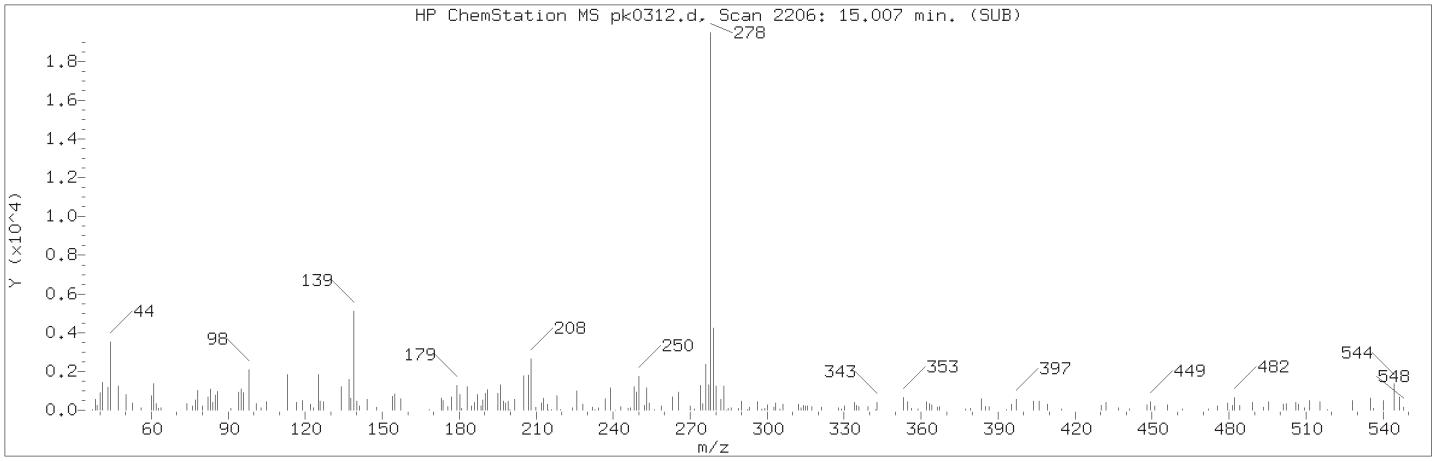
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 16:26
Date, time and analyst ID of latest file update: 09-Nov-2018 16:26 Automation

Sample Name: SSTD0.5 Lab Sample ID: STD2928

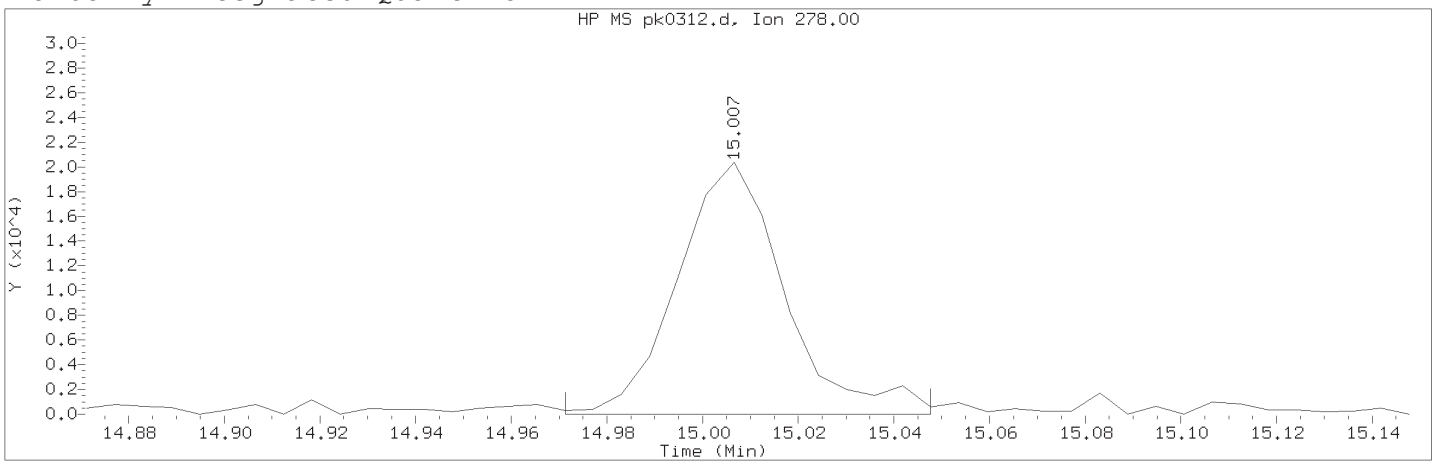
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2202		
Retention Time (minutes)	: 14.983		
Quant Ion	: 276.00		
Area	: 36152		
On-column Amount (ng/ul)	: 0.5377		
Integration start scan	: 2197	Integration stop scan:	2239
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: 10 Page 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD0.5 Lab Sample ID: STD2928

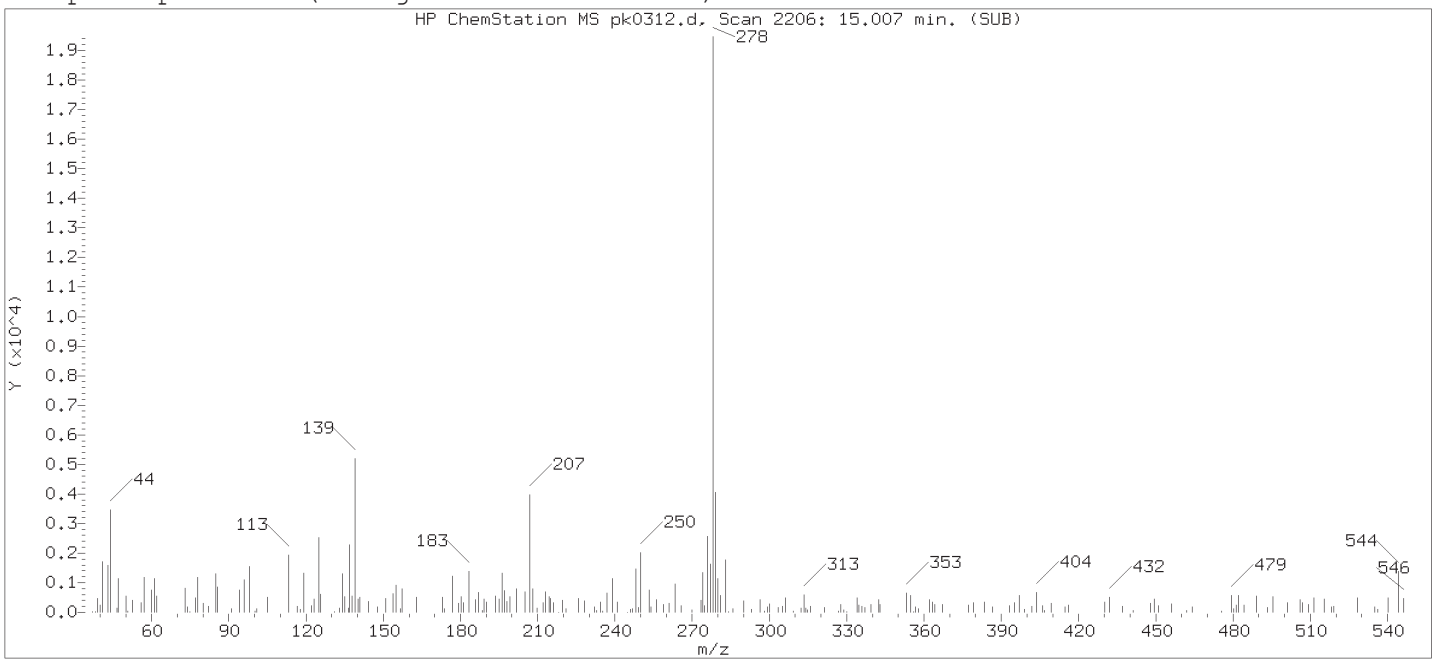
Compound Number : 220
Compound Name : Dibenz(a,h)anthracene
Scan Number : 2206
Retention Time (minutes) : 15.007
Quant Ion : 278.00
Area (flag) : 31747M
On-Column Amount (ng/ul) : 0.5184
Integration start scan : 2199 Integration stop scan: 2212
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

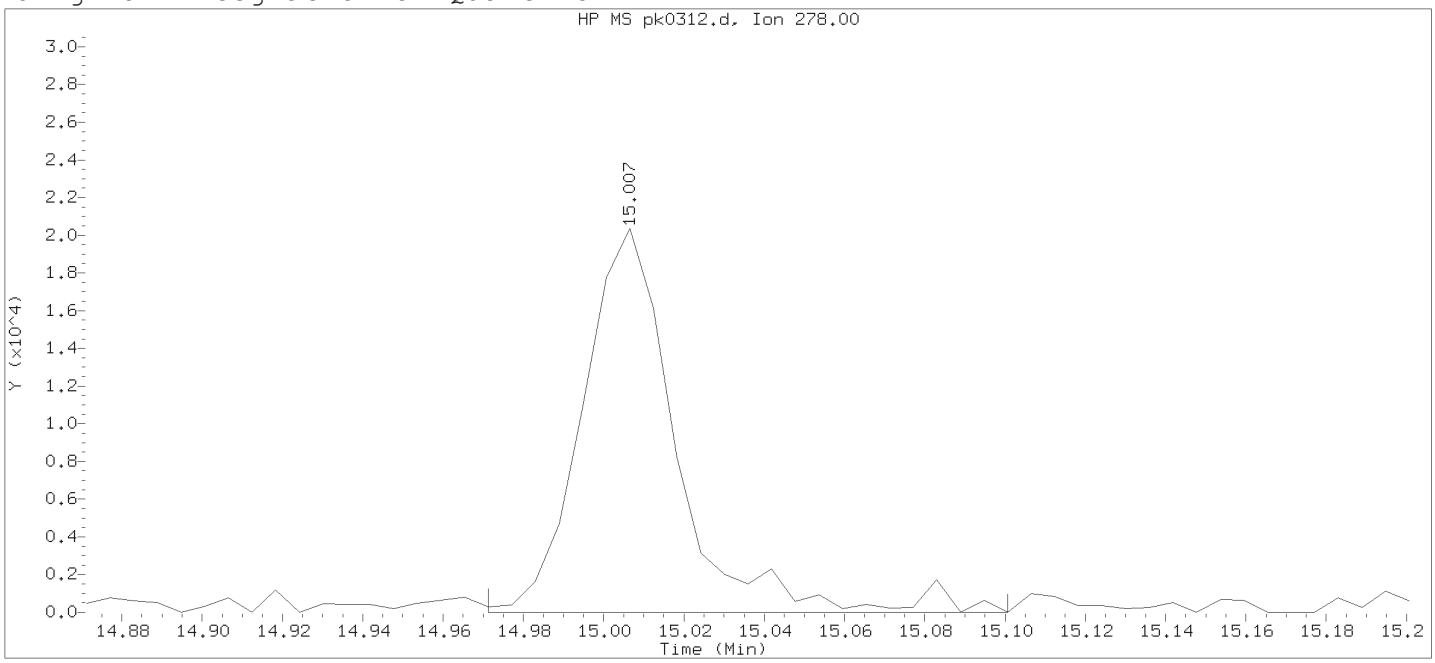
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

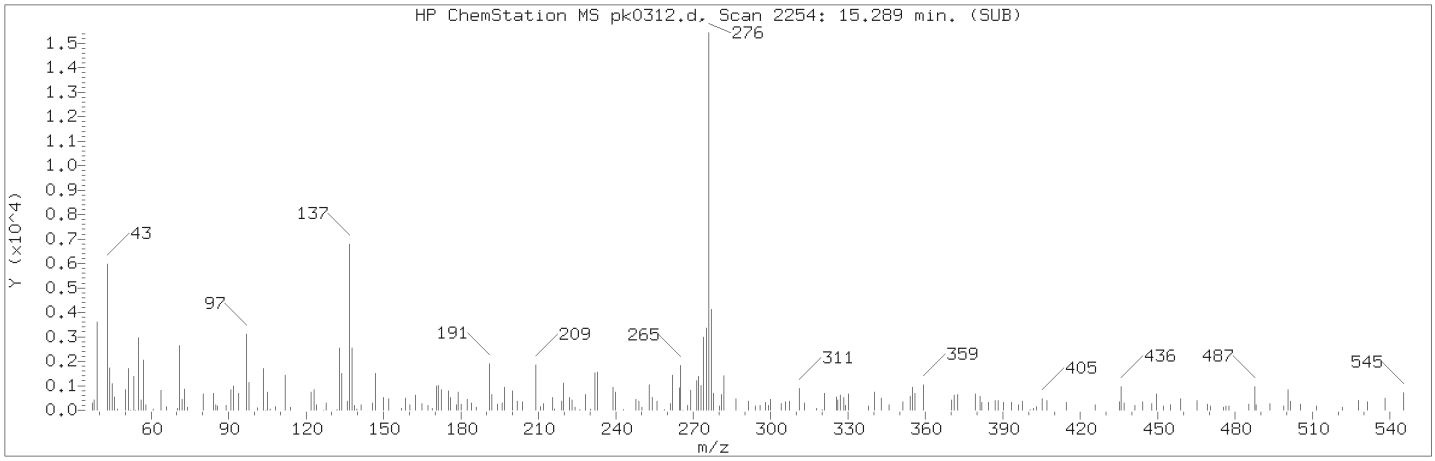
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 16:26
Date, time and analyst ID of latest file update: 09-Nov-2018 16:26 Automation

Sample Name: SSTD0.5 Lab Sample ID: STD2928

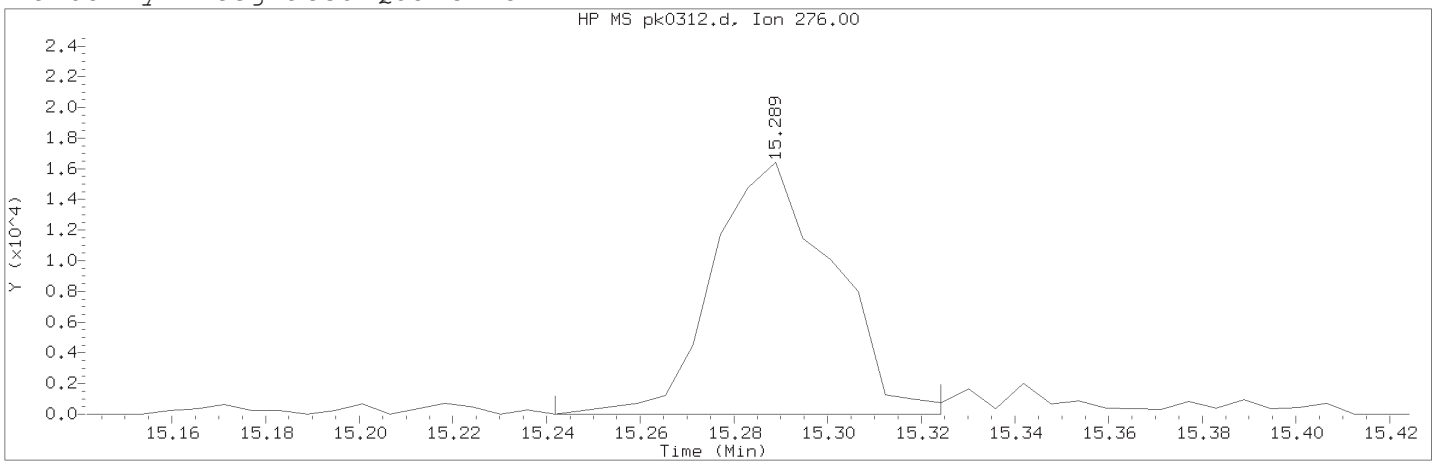
Compound Number	: 220		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 2206		
Retention Time (minutes)	: 15.007		
Quant Ion	: 278.00		
Area	: 33253		
On-column Amount (ng/ul)	: 0.6057		
Integration start scan	: 2199	Integration stop scan:	2221
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD0.5 Lab Sample ID: STD2928

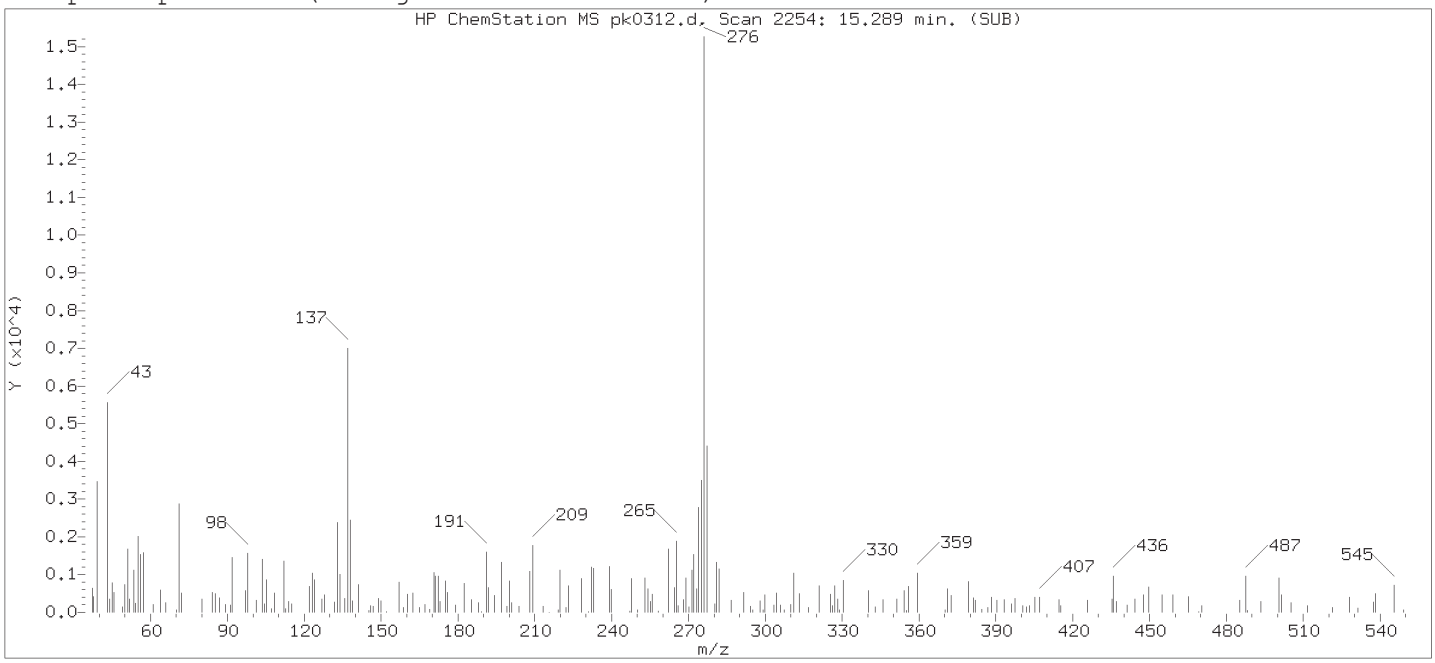
Compound Number	: 221		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2254		
Retention Time (minutes)	: 15.289		
Quant Ion	: 276.00		
Area (flag)	: 29136M		
On-Column Amount (ng/ul)	: 0.5009		
Integration start scan	: 2245	Integration stop scan:	2259
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

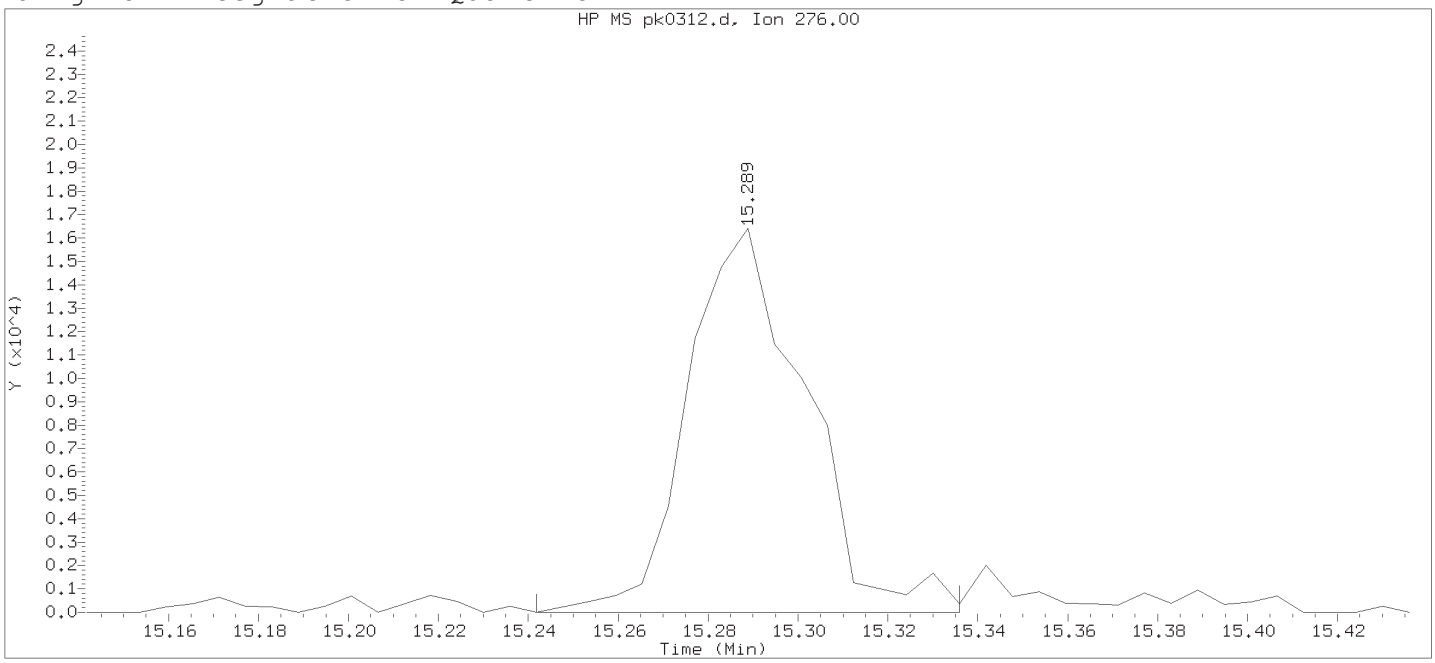
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



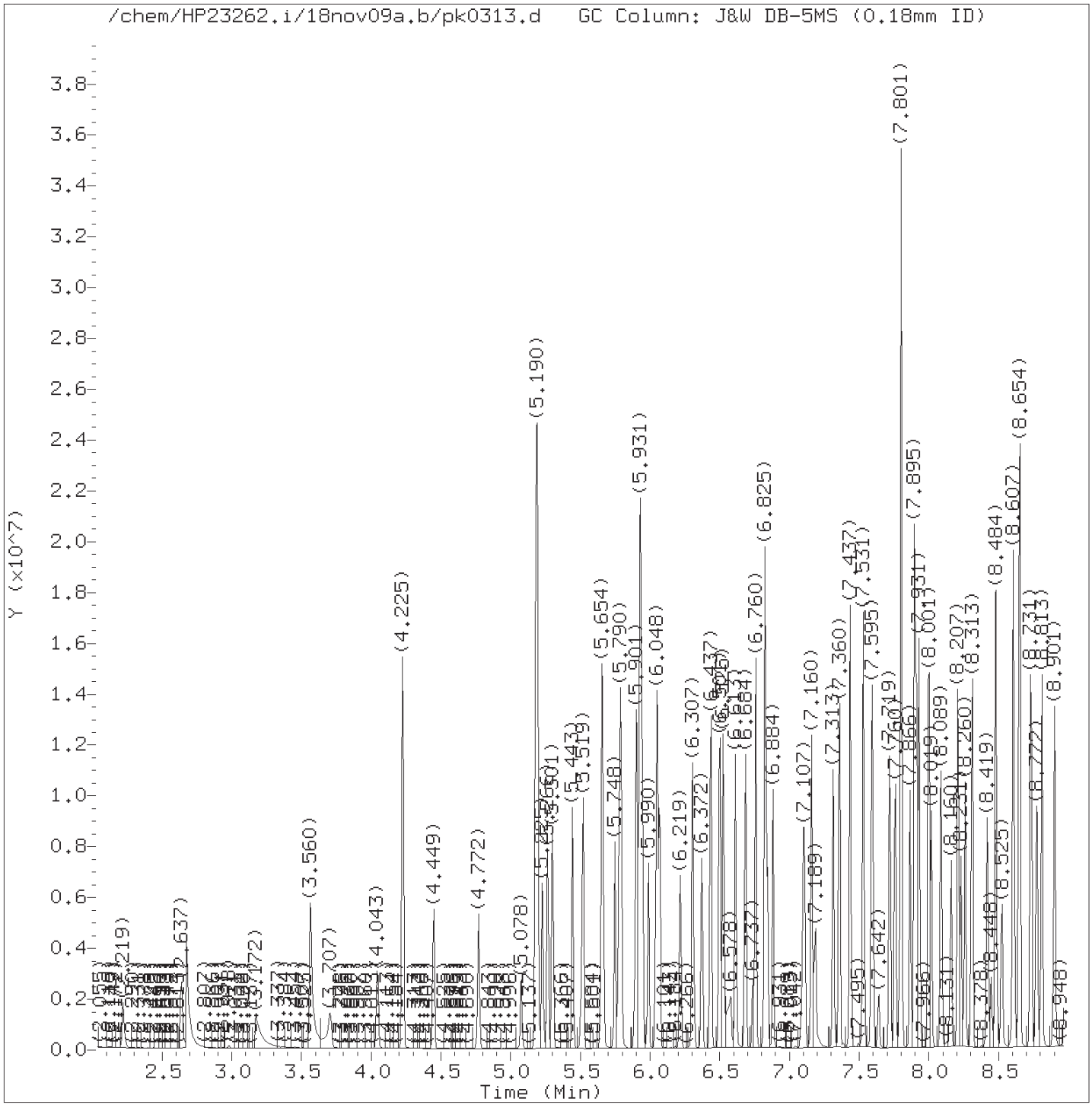
Data File: /chem/HP23262.i/18nov09a.b/pk0312.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:05 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 16:26
Date, time and analyst ID of latest file update: 09-Nov-2018 16:26 Automation

Sample Name: SSTD0.5 Lab Sample ID: STD2928

Compound Number : 221
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2254
Retention Time (minutes) : 15.289
Quant Ion : 276.00
Area : 29789
On-column Amount (ng/ul) : 0.5289
Integration start scan : 2245 Integration stop scan: 2261
Y at integration start : 0 Y at integration end: 0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb1516



Total Ion Chromatogram (TIC)

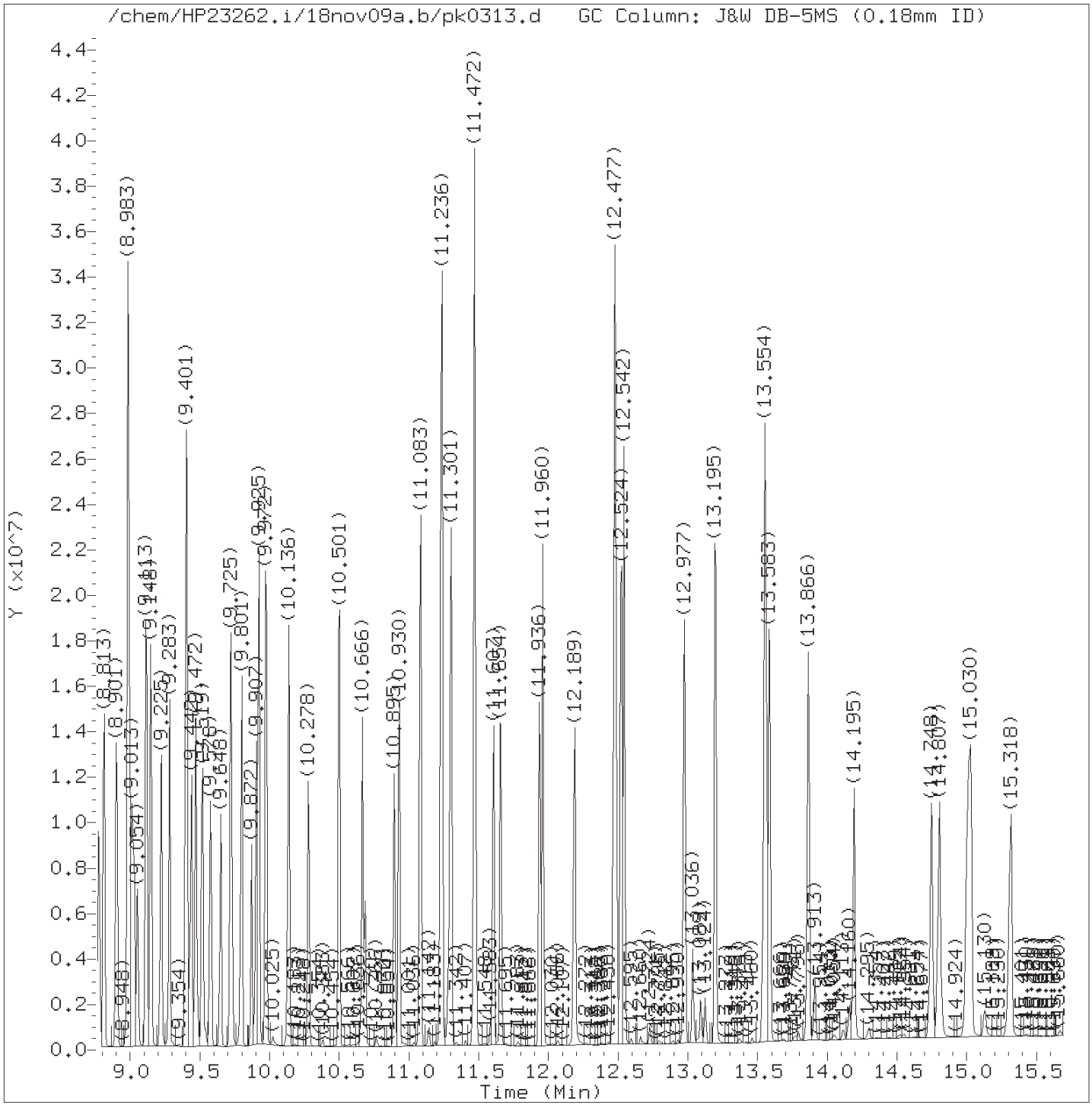
Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0313.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:29 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD120 Lab Sample ID: STD292

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0313.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:29 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD120 Lab Sample ID: STD292

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0313.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:29 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD120 Lab Sample ID: STD292

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.219	88	841563	117.436
4) N-Nitrosodimethylamine	(1)	2.637	74	1510164	123.395
5) Pyridine	(1)	2.672	79	2591290	119.909
7) 2-Picoline	(1)	3.560	93	2591928	119.171
8) N-Nitrosomethylethylamine	(1)	3.707	88	1176687	122.240
9) Methyl methanesulfonate	(1)	4.043	80	1156983	119.452
11)$2-Fluorophenol	(1)	4.225	112	3827605	244.633
13) N-Nitrosodiethylamine	(1)	4.449	102	1138123	122.220
15) Ethyl methanesulfonate	(1)	4.772	109	1098607	121.162
17)$Phenol-d6	(1)	5.184	99	6045304	244.297
19) Aniline	(1)	5.190	93	3917840	120.626
18) Phenol	(1)	5.196	94	3559233	122.812
22) bis(2-Chloroethyl)ether	(1)	5.266	93	2491260	119.808
23) 2-Chlorophenol	(1)	5.301	128	1924016	121.708
24) 1,3-Dichlorobenzene	(1)	5.443	146	1885932	120.884
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	200868	20.000
26) 1,4-Dichlorobenzene	(1)	5.519	146	1897598	121.034
27) Benzyl alcohol	(1)	5.654	108	1540746	120.540
42) Total Cresols	(1)			4778964	243.559
28) 1,2-Dichlorobenzene	(1)	5.660	146	1844248	118.224
30) Indene	(1)	5.748	115	2204133	119.203
34) bis(2-Chloroisopropyl)ether	(1)	5.784	45	3657979	120.473
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.784	45	3657979	120.473
31) 2-Methylphenol	(1)	5.790	108	2221890	121.998
35) N-Nitrosopyrrolidine	(1)	5.901	100	1398223	121.611
36) Acetophenone	(1)	5.907	105	3099629	118.518
38) N-Nitroso-di-n-propylamine	(1)	5.925	70	2144779	120.456
37) 4-Methylphenol	(1)	5.931	108	2557074	121.589
39) N-Nitrosomorpholine	(1)	5.937	56	1674155	119.233
40) o-Toluidine	(1)	5.943	106	3655260	120.013
43) Hexachloroethane	(1)	5.990	117	787887	120.177
44)$Nitrobenzene-d5	(2)	6.048	82	5679129	236.067
45) Nitrobenzene	(2)	6.066	77	2982262	116.862
48) N-Nitrosopiperidine	(2)	6.219	114	1224271	115.797
50) Isophorone	(2)	6.307	82	5753137	117.547
51) 2-Nitrophenol	(2)	6.372	139	1110109	117.112
53) 2,4-Dimethylphenol	(2)	6.437	107	2447596	115.599
57) O,O,O-Triethylphosphorothioate	(2)	6.501	198	1159484	113.976
55) bis(2-Chloroethoxy)methane	(2)	6.525	93	3355014	117.340
56) Benzoic acid	(2)	6.578	105	1777206	119.172

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0313.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:29 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD120 Lab Sample ID: STD292

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.613	162	1807227	115.624
62) 1,2,4-Trichlorobenzene	(2)	6.684	180	1889763	117.953
65)*Naphthalene-d8	(2)	6.737	136	923313	20.000
66) Naphthalene	(2)	6.760	128	6044216	115.937
68) 2,6-Dichlorophenol	(2)	6.825	162	1731198	117.433
67) 4-Chloroaniline	(2)	6.825	127	2523908	116.898
69) Hexachloropropene	(2)	6.842	213	1090705	115.284
71) Hexachlorobutadiene	(2)	6.884	225	1119296	119.156
75) Quinoline	(2)	7.107	129	4127459	115.164
77) N-Nitrosodi-n-butylamine	(2)	7.160	84	2107266	99.686
76) Caprolactam	(2)	7.189	113	798135	111.016
80) 4-Chloro-3-methylphenol	(2)	7.313	107	2221692	116.188
82) Safrole	(2)	7.360	162	1721206	117.809
97) Isosafrole	(3)			1775279	116.591
83) 2-Methylnaphthalene	(2)	7.437	142	4254963	116.041
84) 1-Methylnaphthalene	(2)	7.531	142	4093844	115.901
85) Hexachlorocyclopentadiene	(3)	7.589	237	1011335	106.679
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.595	216	2145488	116.783
88) cis-Isosafrole	(3)	7.642	162	300450	19.935
90) 2,4,6-Trichlorophenol	(3)	7.719	196	1452330	115.471
92) 2,4,5-Trichlorophenol	(3)	7.760	196	1558539	115.592
93)$2-Fluorobiphenyl	(3)	7.801	172	8915606	217.472
94) trans-Isosafrole	(3)	7.866	162	1474829	96.657
95) 1,1'-Biphenyl	(3)	7.895	154	5208187	114.851
96) 2-Chloronaphthalene	(3)	7.913	162	4038582	115.188
98) 1-Chloronaphthalene	(3)	7.931	162	4314597	119.791
99) Diphenyl ether	(3)	8.001	170	3067959	117.725
100) 2-Nitroaniline	(3)	8.019	138	1473032	116.912
120) 2,4_2,6-Dinitrotoluenes	(3)			2840309	227.877
104) 1,4-Naphthoquinone	(3)	8.089	158	1874658	114.668
105) 1,4-Dinitrobenzene	(3)	8.160	168	835041	118.514
106) Dimethylphthalate	(3)	8.207	163	5191114	116.013
107) 1,3-Dinitrobenzene	(3)	8.231	168	934504	114.563
108) 2,6-Dinitrotoluene	(3)	8.260	165	1221658	114.618
109) Acenaphthylene	(3)	8.313	152	6183825	114.746
112) 3-Nitroaniline	(3)	8.419	138	1258129	114.494
113)*Acenaphthene-d10	(3)	8.448	164	549853	20.000
114) Acenaphthene	(3)	8.484	153	4455922	120.496
115) 2,4-Dinitrophenol	(3)	8.525	184	758684	123.124
117) Pentachlorobenzene	(3)	8.607	250	1939937	116.040

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0313.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:29 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD120 Lab Sample ID: STD292

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
116) 4-Nitrophenol	(3)	8.607	109	836948	110.537
119) Dibenzofuran	(3)	8.648	168	6586126	115.142
118) 2,4-Dinitrotoluene	(3)	8.654	165	1618651	113.431
121) 1-Naphthylamine	(3)	8.731	143	4508972	111.945
146) Diallate trans/cis	(4)			3090958	118.998
122) 2,3,4,6-Tetrachlorophenol	(3)	8.778	232	1308252	112.930
123) 2-Naphthylamine	(3)	8.813	143	4299590	108.799
124) Diethylphthalate	(3)	8.901	149	5220664	114.313
125) Thionazin	(3)	8.978	107	924748	113.722
126) Fluorene	(3)	8.983	166	5283943	116.082
127) 4-Chlorophenyl-phenylether	(3)	8.995	204	2787113	113.624
128) 5-Nitro-o-toluidine	(3)	9.013	152	1534402	114.828
129) 4-Nitroaniline	(3)	9.025	138	1338326	112.363
130) 4,6-Dinitro-2-methylphenol	(4)	9.054	198	1005791A	125.918
132) NDPA as diphenylamine	(4)	9.113	169	4672595	121.581
131) N-Nitrosodiphenylamine	(4)	9.113	169	4672595	121.581
134) 1,2-Diphenylhydrazine	(4)	9.148	77	7104093	121.156
135)$2,4,6-Tribromophenol	(3)	9.225	330	1239050	224.955
137) Tetraethyldithiopyrophosphate	(4)	9.278	97	988664	119.742
140) Diallate (peak 1)	(4)	9.401	86	2628507	98.132
139) 1,3,5-Trinitrobenzene	(4)	9.401	213	691010	122.498
141) Phorate	(4)	9.407	75	6022821	157.746
142) Phenacetin	(4)	9.442	108	2926047	116.996
143) 4-Bromophenyl-phenylether	(4)	9.472	248	1568089	118.902
144) Diallate (peak 2)	(4)	9.478	86	462451	21.003
145) Hexachlorobenzene	(4)	9.519	284	1553755	124.015
147) Dimethoate	(4)	9.578	87	2465804	112.485
149) Pentachlorophenol	(4)	9.719	266	935579	121.368
150) 4-Aminobiphenyl	(4)	9.725	169	1743535	100.573
151) Pentachloronitrobenzene	(4)	9.725	237	699240	118.146
152) Pronamide	(4)	9.801	173	2440468	119.437
153)*Phenanthrene-d10	(4)	9.895	188	1163404	20.000
154) Dinoseb	(4)	9.907	211	1587715	127.485
155) Phenanthrene	(4)	9.925	178	7708315	114.937
157) Anthracene	(4)	9.972	178	8210067	120.417
163) Carbazole	(4)	10.136	167	7348945	118.927
164) Methyl parathion	(4)	10.278	109	1798387	114.350
165) Di-n-butylphthalate	(4)	10.501	149	7789853	108.799
167) Parathion	(4)	10.666	109	1229283	119.021
168) 4-Nitroquinoline-1-oxide	(4)	10.683	190	813553	124.346

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0313.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:29 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

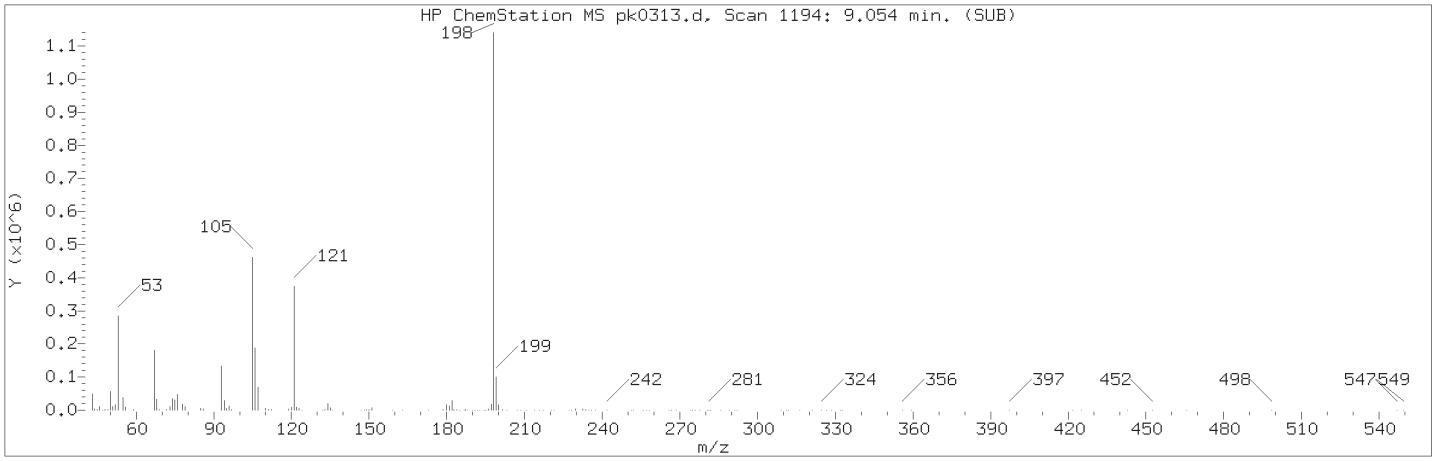
Sample Name: SSTD120 Lab Sample ID: STD292

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
169) Octachlorostyrene	(4)	10.895	308	564245	117.294
171) Isodrin	(4)	10.930	193	946467	116.351
173) Fluoranthene	(4)	11.083	202	8783402	115.606
174) Benzidine	(5)	11.236	184	12116699	285.915
175)*Pyrene-d10	(5)	11.283	212	1176300	20.000
177) Pyrene	(5)	11.301	202	8960206	110.411
179)$Terphenyl-d14	(5)	11.472	244	10261145	212.590
182) p-Dimethylaminoazobenzene	(5)	11.607	225	1683786	121.686
185) Chlorobenzilate	(5)	11.654	139	2427650	117.884
187) 3,3'-Dimethylbenzidine	(5)	11.936	212	5200603	113.767
188) Butylbenzylphthalate	(5)	11.960	149	4037022	119.040
191) 2-Acetylaminofluorene	(5)	12.189	181	3441980	118.806
193) 3,3'-Dichlorobenzidine	(5)	12.472	252	3147133	117.410
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.477	231	1633119	116.440
195) Benzo(a)anthracene	(5)	12.483	228	8663668	116.921
196) Chrysene	(5)	12.524	228	8428673	121.364
199) bis(2-Ethylhexyl)phthalate	(5)	12.542	149	5785972	119.975
203) 6-Methylchrysene	(5)	12.977	242	5868583	120.267
205) Di-n-octylphthalate	(6)	13.201	149	8394830	113.877
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.554	256	3807921	119.545
206) Benzo(b)fluoranthene	(6)	13.560	252	8131794	118.559
208) Benzo(k)fluoranthene	(6)	13.589	252	7750590	115.148
211) Benzo(a)pyrene	(6)	13.866	252	7497022	118.393
213)*Perylene-d12	(6)	13.913	264	953612	20.000
215) 3-Methylcholanthrene	(6)	14.195	268	2956203	118.411
217) Dibenz(a,h)acridine	(6)	14.748	279	5762500	120.486
218) Dibenz(a,j)acridine	(6)	14.807	279	5920421	119.362
222) Total PAHs	(6)			124772489	2263.255
219) Indeno(1,2,3-cd)pyrene	(6)	15.007	276	7500259M	118.952
220) Dibenz(a,h)anthracene	(6)	15.030	278	6527368	114.412
221) Benzo(g,h,i)perylene	(6)	15.318	276	6294412	115.594

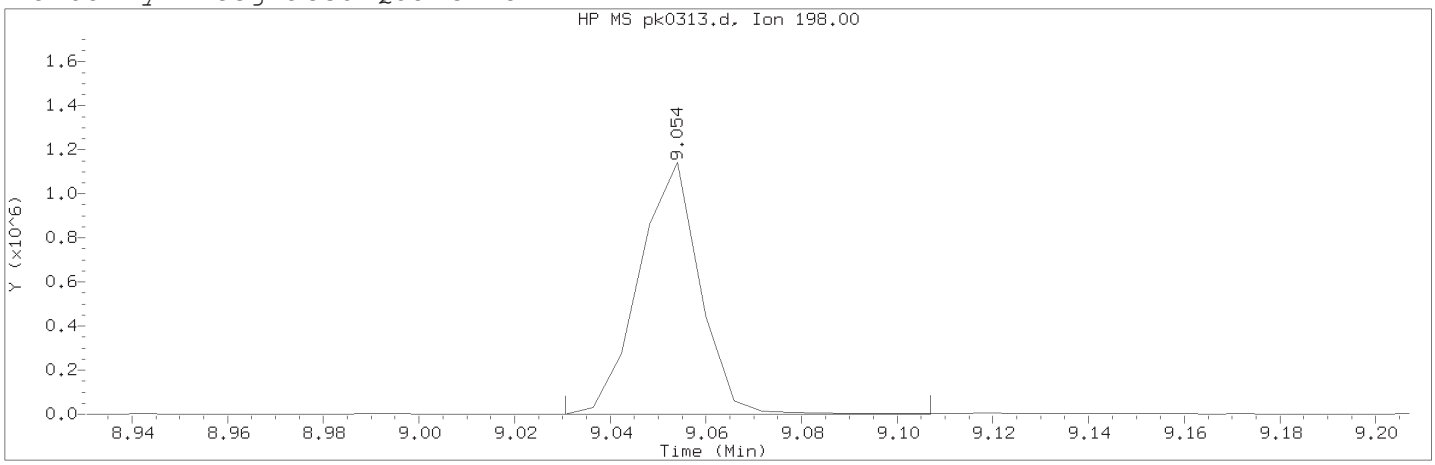
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0313.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:29 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD120 Lab Sample ID: STD292

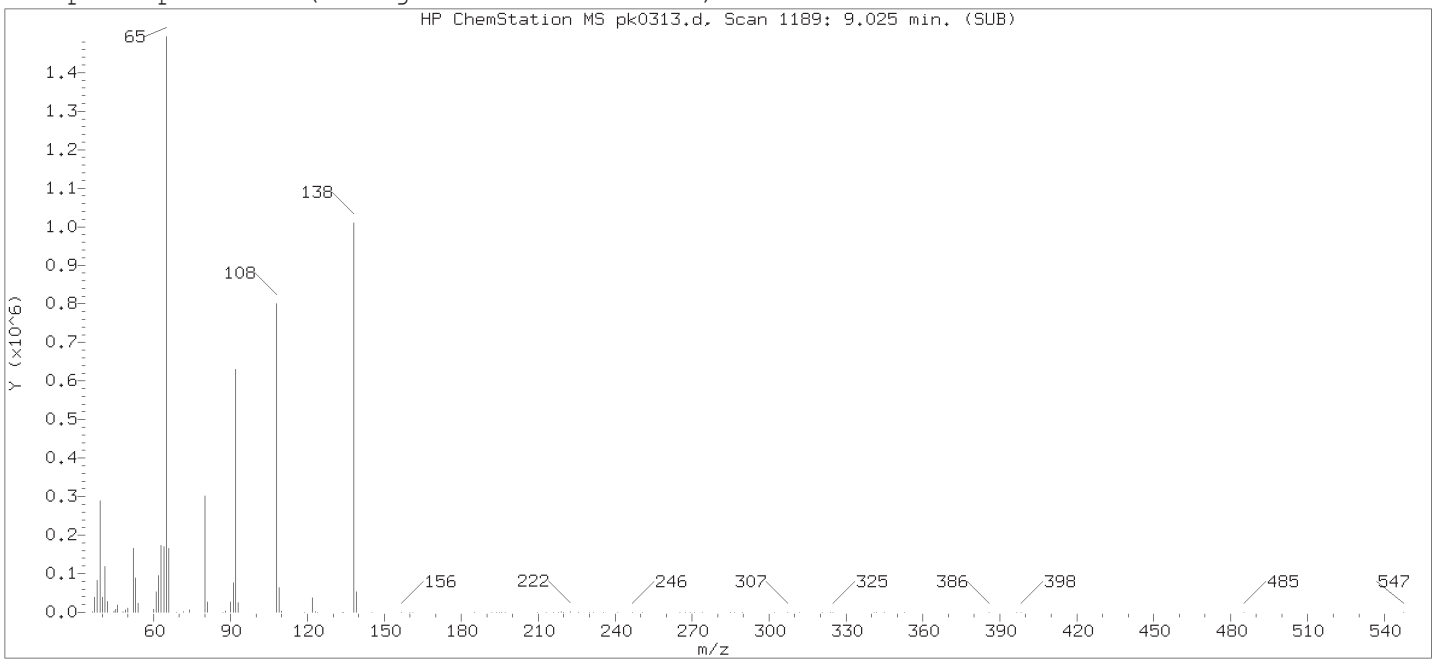
Compound Number : 130
Compound Name : 4,6-Dinitro-2-methylphenol
Scan Number : 1194
Retention Time (minutes) : 9.054
Quant Ion : 198.00
Area (flag) : 1005791A
On-Column Amount (ng/ul) : 125.9184
Integration start scan : 1189 Integration stop scan: 1202
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

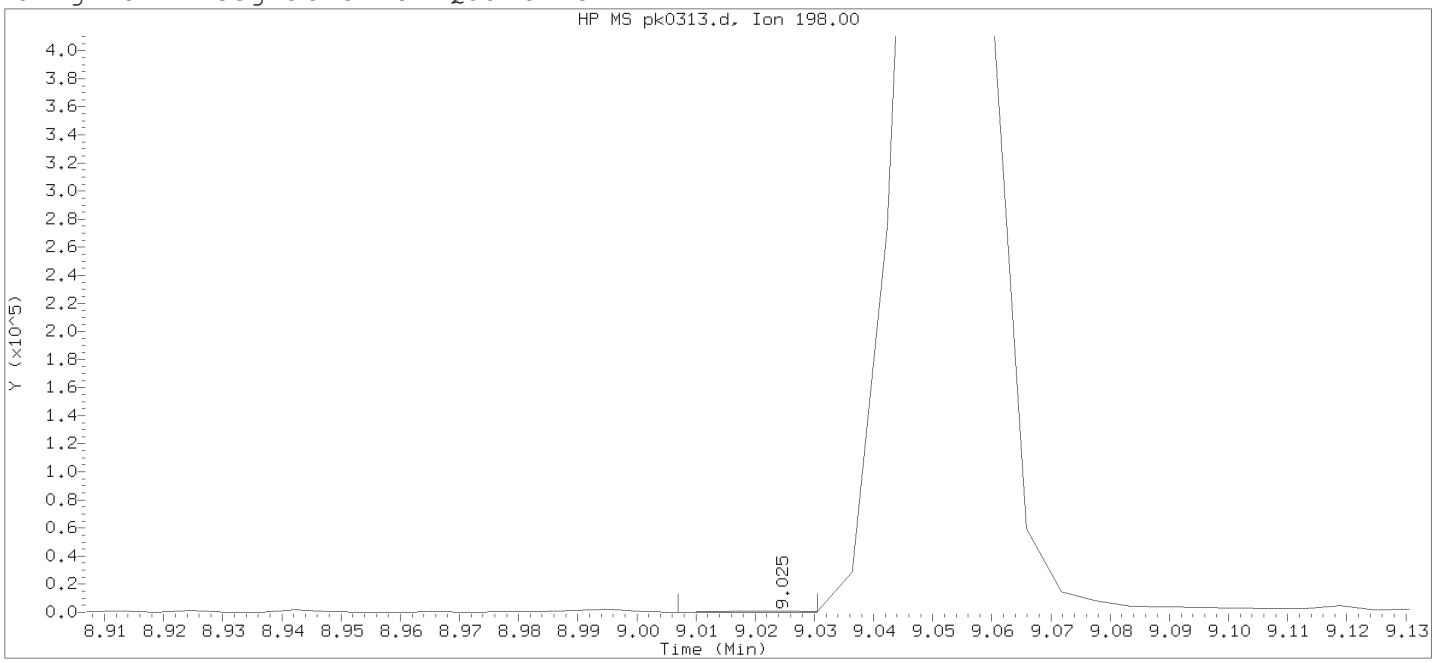
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0313.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:29 Analyst ID: lmh00956

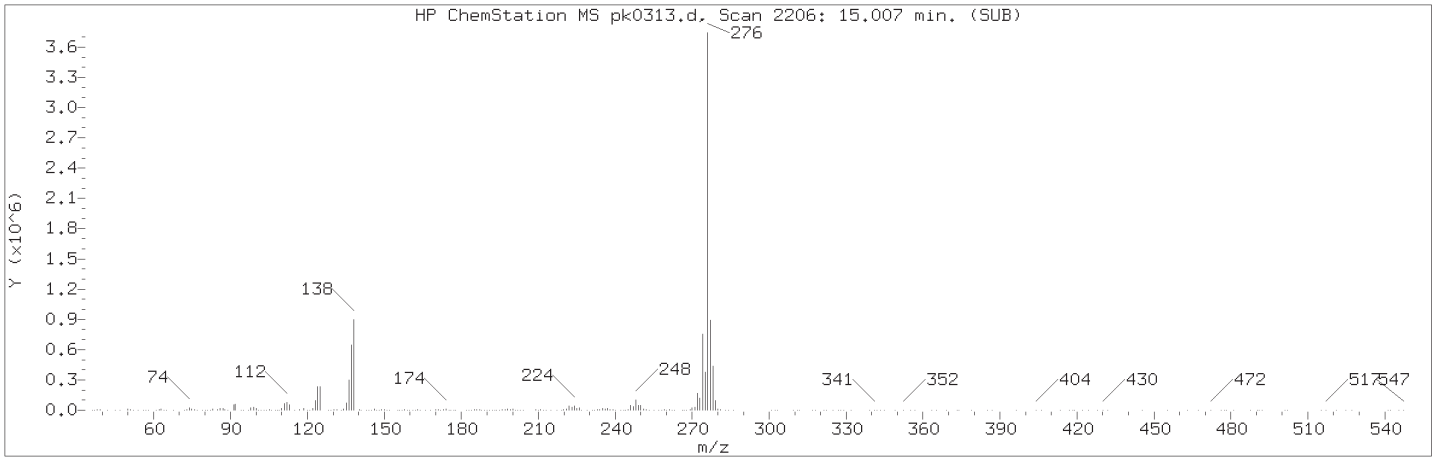
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 16:50
Date, time and analyst ID of latest file update: 09-Nov-2018 16:50 Automation

Sample Name: SSTD120 Lab Sample ID: STD292

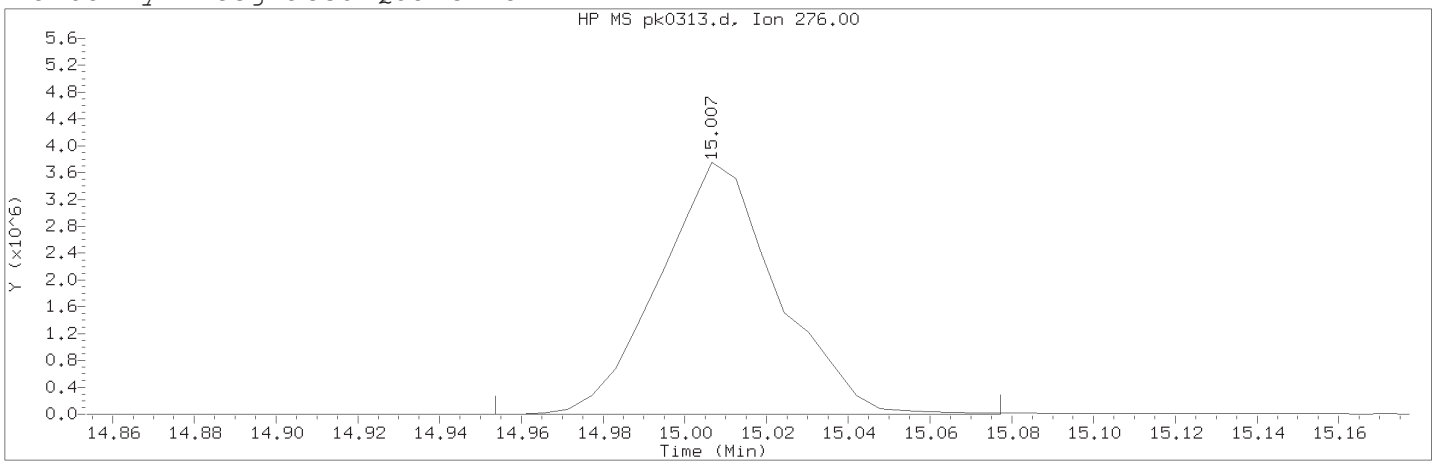
Compound Number : 130
Compound Name : 4,6-Dinitro-2-methylphenol
Scan Number : 1189
Retention Time (minutes) : 9.025
Quant Ion : 198.00
Area : 883
On-column Amount (ng/ul) : 0.2047
Integration start scan : 1185 Integration stop scan: 1189
Y at integration start : 0 Y at integration end: 0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb1518

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0313.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:29 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:58
Date, time and analyst ID of latest file update: 11-Nov-2018 17:58 apb10206

Sample Name: SSTD120 Lab Sample ID: STD292

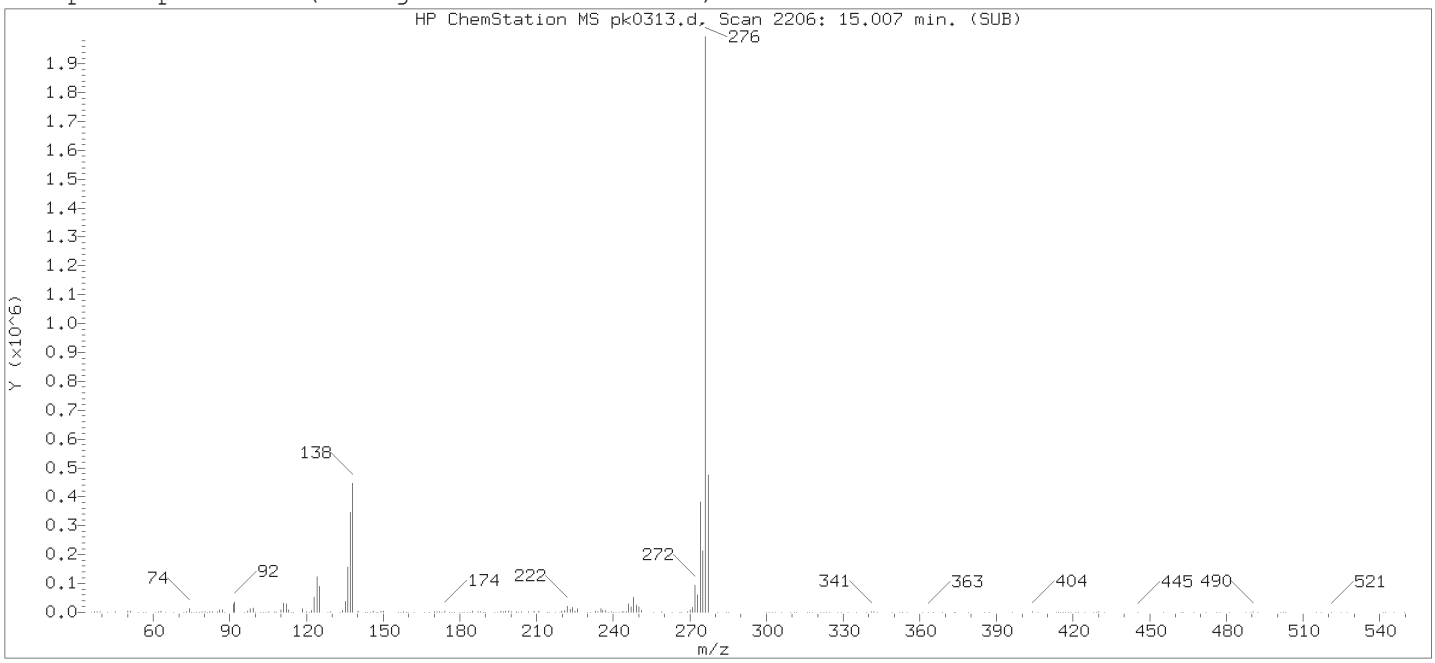
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2206
Retention Time (minutes) : 15.007
Quant Ion : 276.00
Area (flag) : 7500259M
On-Column Amount (ng/ul) : 118.9517
Integration start scan : 2196 Integration stop scan: 2217
Y at integration start : 478 Y at integration end: 478

Reason for manual integration: improper integration

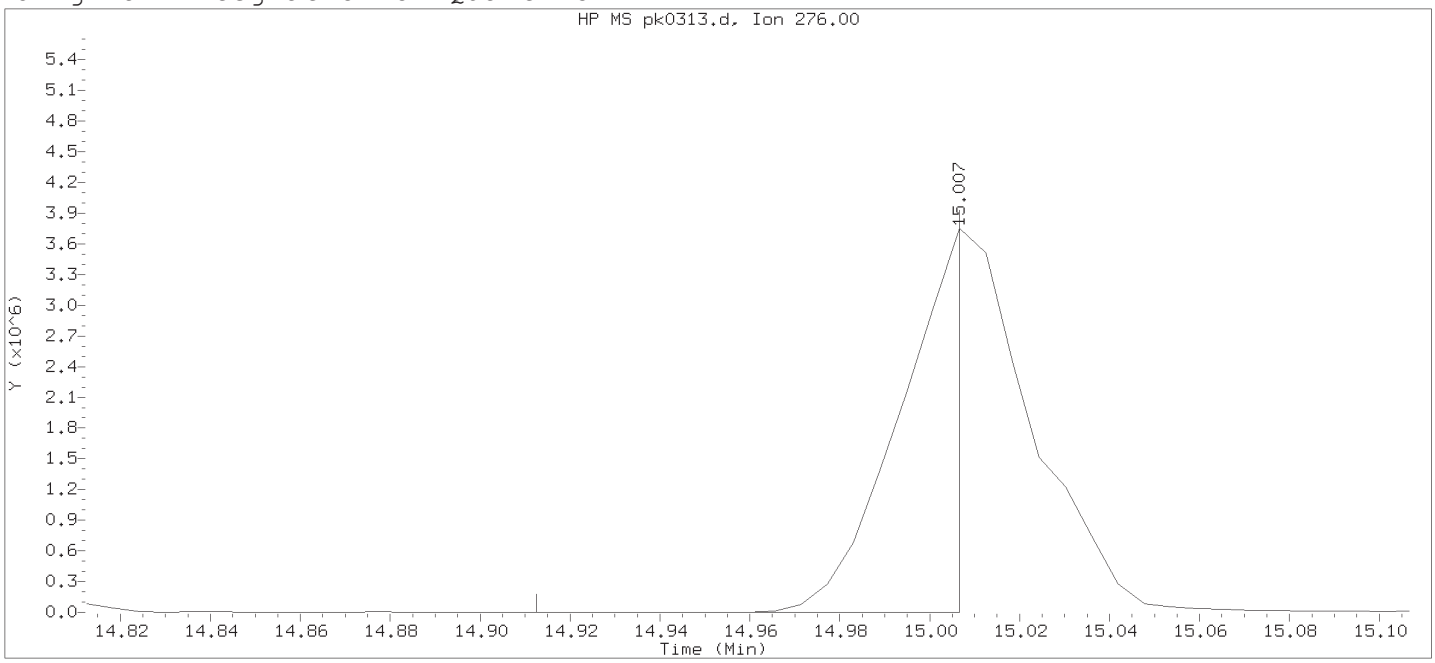
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



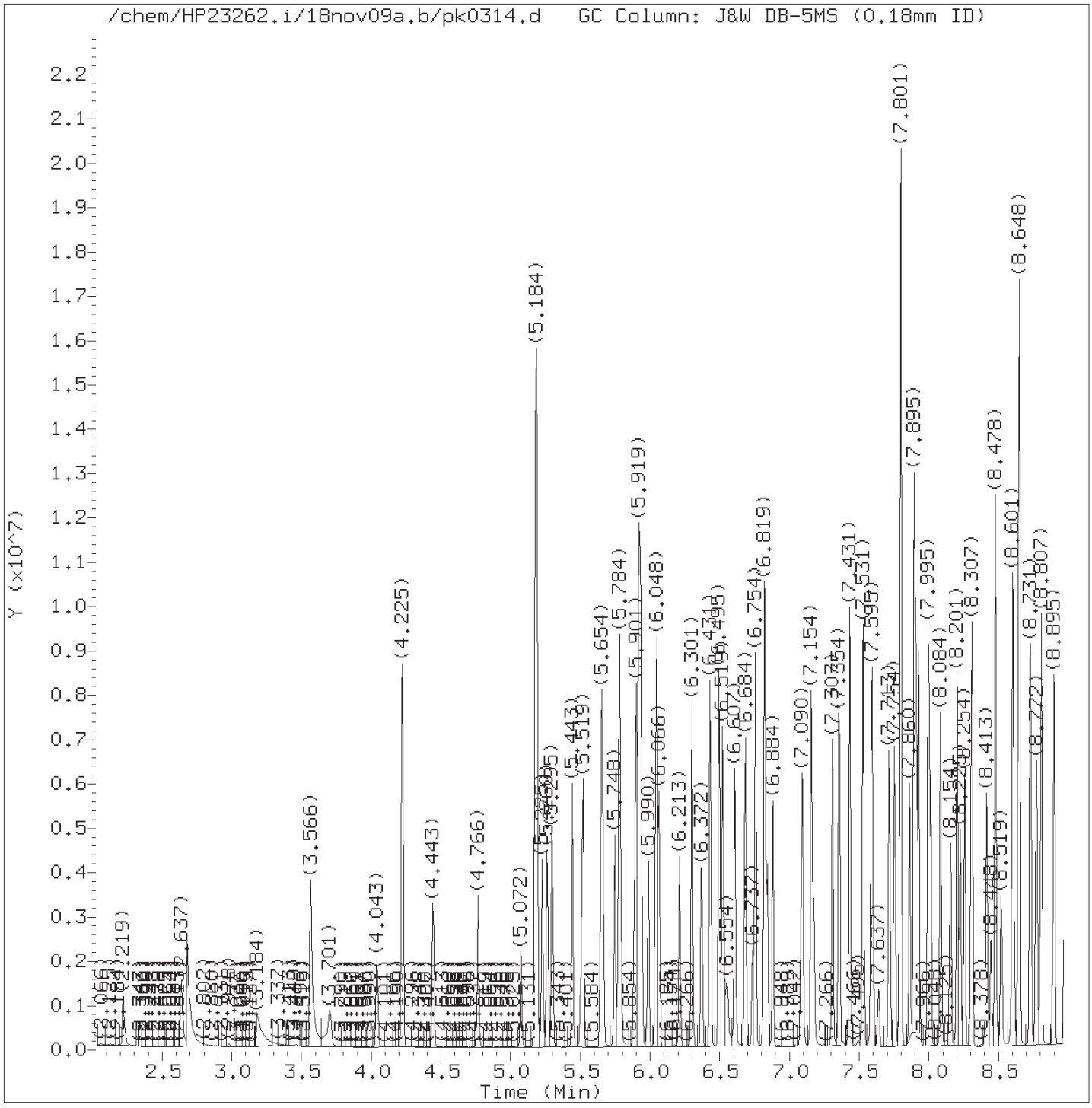
Data File: /chem/HP23262.i/18nov09a.b/pk0313.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:29 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 16:50
Date, time and analyst ID of latest file update: 09-Nov-2018 16:50 Automation

Sample Name: SSTD120 Lab Sample ID: STD292

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2206		
Retention Time (minutes)	: 15.007		
Quant Ion	: 276.00		
Area	: 3329257		
On-column Amount (ng/ul)	: 56.0507		
Integration start scan	: 2189	Integration stop scan:	2205
Y at integration start	: 488	Y at integration end:	488

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

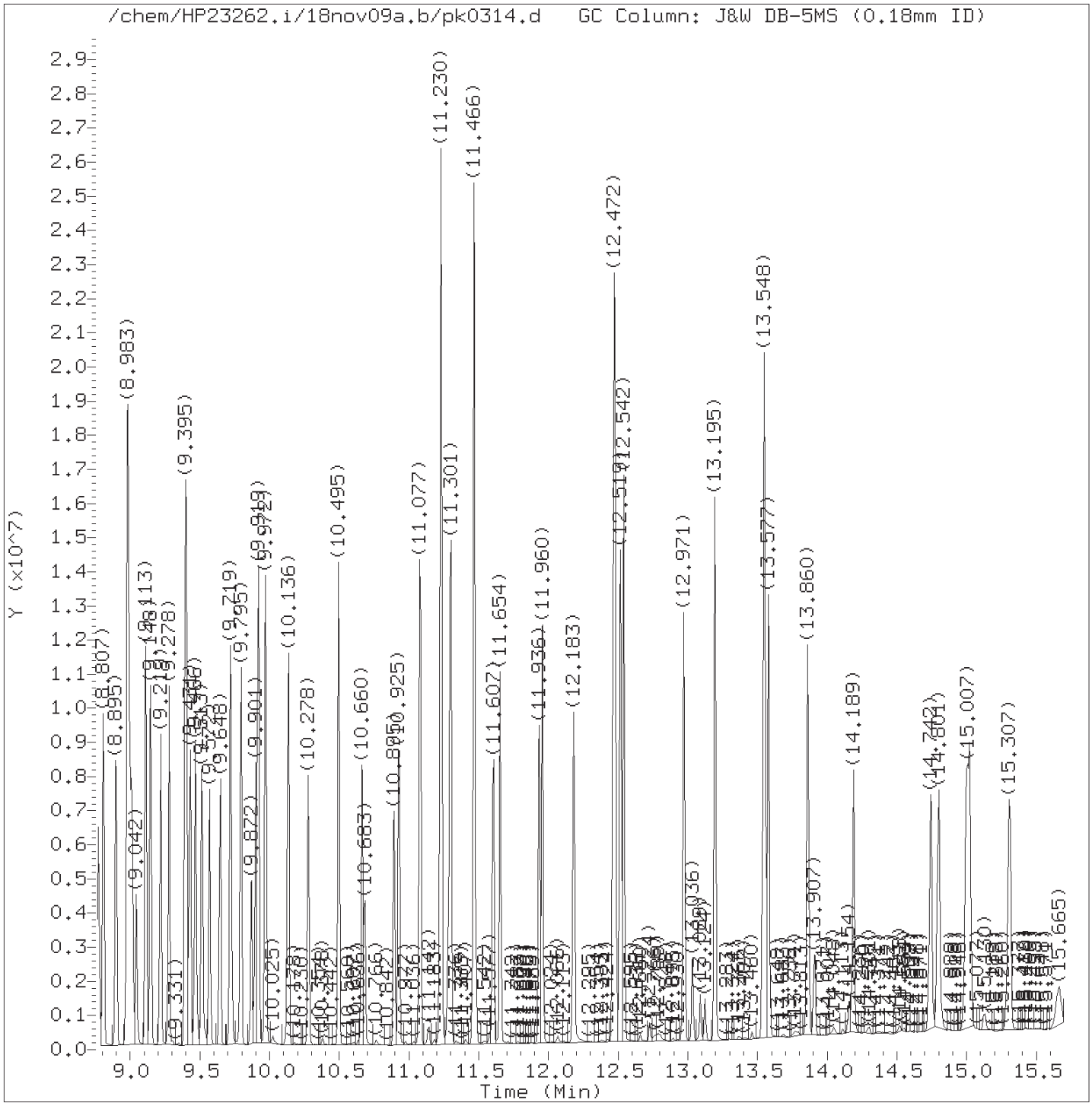
Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0314.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:52 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD080 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0314.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:52 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD080 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0314.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:52 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD080 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.219	88	506851	79.212
4) N-Nitrosodimethylamine	(1)	2.637	74	919676	82.460
5) Pyridine	(1)	2.678	79	1585509	81.168
7) 2-Picoline	(1)	3.566	93	1593400	81.089
8) N-Nitrosomethylethylamine	(1)	3.701	88	719582	82.176
9) Methyl methanesulfonate	(1)	4.043	80	702592	80.558
11)$2-Fluorophenol	(1)	4.225	112	2293804	162.239
13) N-Nitrosodiethylamine	(1)	4.443	102	662204	79.499
15) Ethyl methanesulfonate	(1)	4.766	109	668652	81.442
17)$Phenol-d6	(1)	5.178	99	3612066	161.772
19) Aniline	(1)	5.184	93	2348103	80.379
18) Phenol	(1)	5.190	94	2162875	82.087
22) bis(2-Chloroethyl)ether	(1)	5.260	93	1480643	79.569
23) 2-Chlorophenol	(1)	5.295	128	1119706	79.288
24) 1,3-Dichlorobenzene	(1)	5.443	146	1139982	80.949
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	180240	20.000
26) 1,4-Dichlorobenzene	(1)	5.519	146	1166007	81.899
27) Benzyl alcohol	(1)	5.648	108	909411	79.525
42) Total Cresols	(1)			2828146	160.421
28) 1,2-Dichlorobenzene	(1)	5.660	146	1124005	80.200
30) Indene	(1)	5.748	115	1340615	80.532
34) bis(2-Chloroisopropyl)ether	(1)	5.784	45	2188389	80.214
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.784	45	2188389	80.214
31) 2-Methylphenol	(1)	5.784	108	1308610	80.051
35) N-Nitrosopyrrolidine	(1)	5.890	100	865982	82.584
36) Acetophenone	(1)	5.901	105	1933961	81.591
38) N-Nitroso-di-n-propylamine	(1)	5.919	70	1284776	80.276
37) 4-Methylphenol	(1)	5.925	108	1519536	80.348
39) N-Nitrosomorpholine	(1)	5.931	56	1032584	81.294
40) o-Toluidine	(1)	5.937	106	2183297	79.925
43) Hexachloroethane	(1)	5.990	117	483110	81.403
44)$Nitrobenzene-d5	(2)	6.048	82	3420129	159.551
45) Nitrobenzene	(2)	6.066	77	1813140	79.750
48) N-Nitrosopiperidine	(2)	6.213	114	731188	78.321
50) Isophorone	(2)	6.301	82	3367765	78.054
51) 2-Nitrophenol	(2)	6.372	139	684141	80.589
53) 2,4-Dimethylphenol	(2)	6.431	107	1480971	78.918
57) O,O,O-Triethylphosphorothioate	(2)	6.495	198	693527	77.565
55) bis(2-Chloroethoxy)methane	(2)	6.519	93	1984858	78.519
56) Benzoic acid	(2)	6.554	105	1029994	78.250

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0314.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:52 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD080 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.607	162	1082537	78.397
62) 1,2,4-Trichlorobenzene	(2)	6.684	180	1120590	78.917
65)*Naphthalene-d8	(2)	6.737	136	823867	20.000
66) Naphthalene	(2)	6.754	128	3608253	78.160
67) 4-Chloroaniline	(2)	6.819	127	1503085	78.669
68) 2,6-Dichlorophenol	(2)	6.825	162	1040266	79.386
69) Hexachloropropene	(2)	6.842	213	636537	76.874
71) Hexachlorobutadiene	(2)	6.884	225	655923	78.829
75) Quinoline	(2)	7.090	129	2526547	79.334
77) N-Nitrosodi-n-butylamine	(2)	7.154	84	1655249	85.008
76) Caprolactam	(2)	7.172	113	504920	79.134
80) 4-Chloro-3-methylphenol	(2)	7.307	107	1356779	79.680
82) Safrole	(2)	7.360	162	1020287	78.834
97) Isosafrole	(3)			1071073	78.883
83) 2-Methylnaphthalene	(2)	7.431	142	2503806	77.366
84) 1-Methylnaphthalene	(2)	7.531	142	2438498	78.011
85) Hexachlorocyclopentadiene	(3)	7.584	237	635939	76.389
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.595	216	1300185	79.205
88) cis-Isosafrole	(3)	7.642	162	182049	13.501
90) 2,4,6-Trichlorophenol	(3)	7.719	196	882625	78.757
92) 2,4,5-Trichlorophenol	(3)	7.754	196	961920	79.632
93)$2-Fluorobiphenyl	(3)	7.801	172	6223364	165.923
94) trans-Isosafrole	(3)	7.860	162	889024	65.383
95) 1,1'-Biphenyl	(3)	7.895	154	3259034	80.023
96) 2-Chloronaphthalene	(3)	7.907	162	3014326M	89.850
98) 1-Chloronaphthalene	(3)	7.925	162	2524101M	78.684
99) Diphenyl ether	(3)	7.995	170	1856783	79.562
100) 2-Nitroaniline	(3)	8.013	138	891570	79.198
120) 2,4_2,6-Dinitrotoluenes	(3)			1746807	157.359
104) 1,4-Naphthoquinone	(3)	8.084	158	1163367	79.496
105) 1,4-Dinitrobenzene	(3)	8.154	168	498023	79.138
106) Dimethylphthalate	(3)	8.207	163	3166146	79.195
107) 1,3-Dinitrobenzene	(3)	8.225	168	598406	81.123
108) 2,6-Dinitrotoluene	(3)	8.260	165	742476	78.367
109) Acenaphthylene	(3)	8.307	152	3785417	78.660
112) 3-Nitroaniline	(3)	8.413	138	790116	80.049
113)*Acenaphthene-d10	(3)	8.448	164	493748	20.000
114) Acenaphthene	(3)	8.478	153	2700006	80.978
115) 2,4-Dinitrophenol	(3)	8.519	184	451604	81.071
116) 4-Nitrophenol	(3)	8.601	109	542099	79.821

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0314.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:52 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD080 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
117) Pentachlorobenzene	(3)	8.607	250	1207172	80.275
119) Dibenzofuran	(3)	8.648	168	4039538	79.092
118) 2,4-Dinitrotoluene	(3)	8.648	165	1004331	78.911
121) 1-Naphthylamine	(3)	8.731	143	2838376	78.978
122) 2,3,4,6-Tetrachlorophenol	(3)	8.772	232	804568	78.209
146) Diallate trans/cis	(4)			1925600	77.956
123) 2-Naphthylamine	(3)	8.807	143	2736414	78.051
124) Diethylphthalate	(3)	8.895	149	3206123	78.777
125) Thionazin	(3)	8.978	107	575371	79.194
126) Fluorene	(3)	8.983	166	3258964	79.798
127) 4-Chlorophenyl-phenylether	(3)	8.989	204	1744176	79.455
128) 5-Nitro-o-toluidine	(3)	9.007	152	937195	78.727
129) 4-Nitroaniline	(3)	9.019	138	820869	77.803
130) 4,6-Dinitro-2-methylphenol	(4)	9.042	198	617687	80.195
132) NDPA as diphenylamine	(4)	9.113	169	2835622	77.707
131) N-Nitrosodiphenylamine	(4)	9.113	169	2835622	77.707
134) 1,2-Diphenylhydrazine	(4)	9.148	77	4359993	78.115
135)$2,4,6-Tribromophenol	(3)	9.219	330	768502	156.889
137) Tetraethyldithiopyrophosphate	(4)	9.278	97	627920	79.307
140) Diallate (peak 1)	(4)	9.395	86	1639447	64.474
139) 1,3,5-Trinitrobenzene	(4)	9.395	213	444031	81.145
141) Phorate	(4)	9.401	75	3768868	89.861
142) Phenacetin	(4)	9.431	108	1848375	77.795
143) 4-Bromophenyl-phenylether	(4)	9.466	248	967515	77.408
144) Diallate (peak 2)	(4)	9.478	86	286153	13.529
145) Hexachlorobenzene	(4)	9.513	284	944108	78.674
147) Dimethoate	(4)	9.572	87	1639830	78.433
149) Pentachlorophenol	(4)	9.713	266	589583	79.608
150) 4-Aminobiphenyl	(4)	9.719	169	1173340	74.823
151) Pentachloronitrobenzene	(4)	9.725	237	455846	79.981
152) Pronamide	(4)	9.795	173	1531231	78.526
153)*Phenanthrene-d10	(4)	9.895	188	1120477	20.000
154) Dinoseb	(4)	9.901	211	961819	80.125
155) Phenanthrene	(4)	9.919	178	4975148	77.748
157) Anthracene	(4)	9.972	178	5158354	78.912
163) Carbazole	(4)	10.136	167	4673512	79.013
164) Methyl parathion	(4)	10.278	109	1205648	79.731
165) Di-n-butylphthalate	(4)	10.495	149	5739192	82.124
167) Parathion	(4)	10.660	109	799230	80.231
168) 4-Nitroquinoline-1-oxide	(4)	10.683	190	528119	82.502

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0314.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:52 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

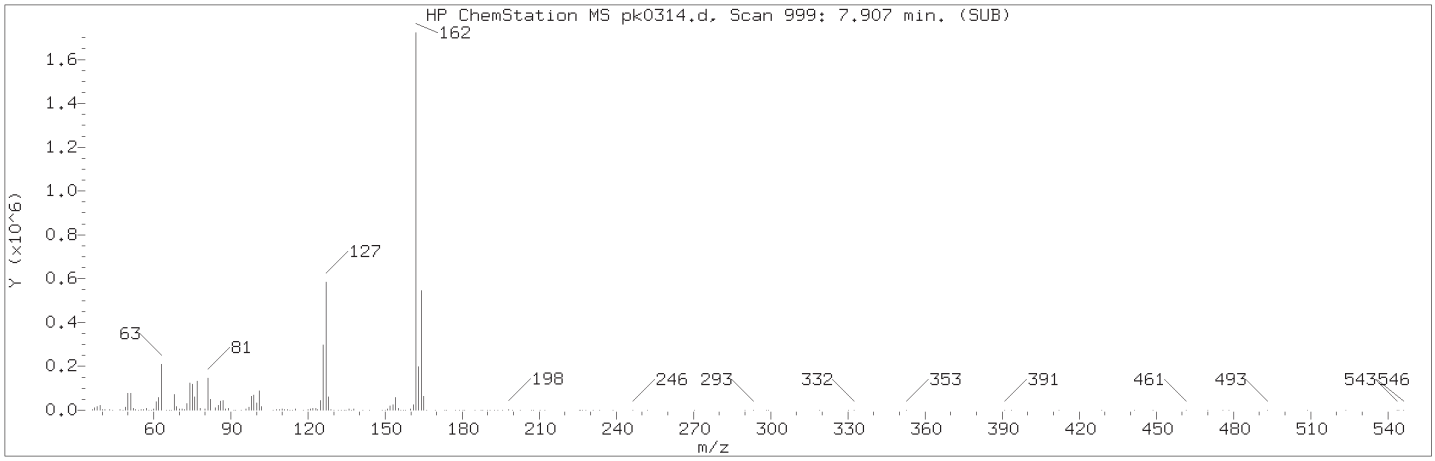
Sample Name: SSTD080 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
169) Octachlorostyrene	(4)	10.895	308	340721	75.575
171) Isodrin	(4)	10.930	193	597058	77.432
173) Fluoranthene	(4)	11.077	202	6024488	81.736
174) Benzidine	(5)	11.230	184	9421693	234.929
175)*Pyrene-d10	(5)	11.277	212	1124935	20.000
177) Pyrene	(5)	11.301	202	5983828	77.806
179)$Terphenyl-d14	(5)	11.466	244	7875903	166.929
182) p-Dimethylaminoazobenzene	(5)	11.607	225	1060203	80.079
185) Chlorobenzilate	(5)	11.654	139	1549853	79.126
187) 3,3'-Dimethylbenzidine	(5)	11.936	212	3319252	77.237
188) Butylbenzylphthalate	(5)	11.960	149	2593551	79.979
191) 2-Acetylaminofluorene	(5)	12.183	181	2219604	80.074
193) 3,3'-Dichlorobenzidine	(5)	12.466	252	2019878	79.194
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.472	231	1078027	80.248
195) Benzo(a)anthracene	(5)	12.477	228	5651742	79.817
196) Chrysene	(5)	12.519	228	5430375	81.314
199) bis(2-Ethylhexyl)phthalate	(5)	12.542	149	3666512	79.665
203) 6-Methylchrysene	(5)	12.971	242	3744106	80.155
205) Di-n-octylphthalate	(6)	13.195	149	6305822	85.281
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.548	256	2484101	80.269
206) Benzo(b)fluoranthene	(6)	13.554	252	5339857	80.201
208) Benzo(k)fluoranthene	(6)	13.577	252	5148387	79.142
211) Benzo(a)pyrene	(6)	13.860	252	4865130	79.408
213)*Perylene-d12	(6)	13.913	264	924931	20.000
215) 3-Methylcholanthrene	(6)	14.189	268	1952845	80.430
217) Dibenz(a,h)acridine	(6)	14.742	279	3845397	81.907
218) Dibenz(a,j)acridine	(6)	14.801	279	3916220	80.930
222) Total PAHs	(6)			80635267	1490.407
219) Indeno(1,2,3-cd)pyrene	(6)	15.001	276	5166628	83.315
220) Dibenz(a,h)anthracene	(6)	15.024	278	4338519	78.797
221) Benzo(g,h,i)perylene	(6)	15.307	276	4257867	80.463

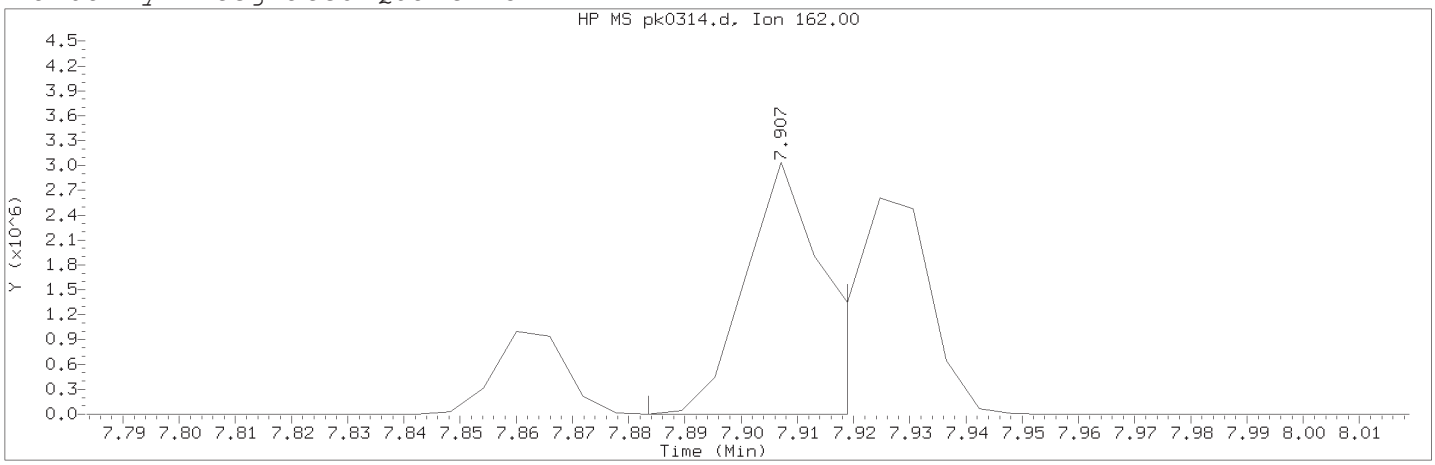
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0314.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:52 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD080 Lab Sample ID: STD2928

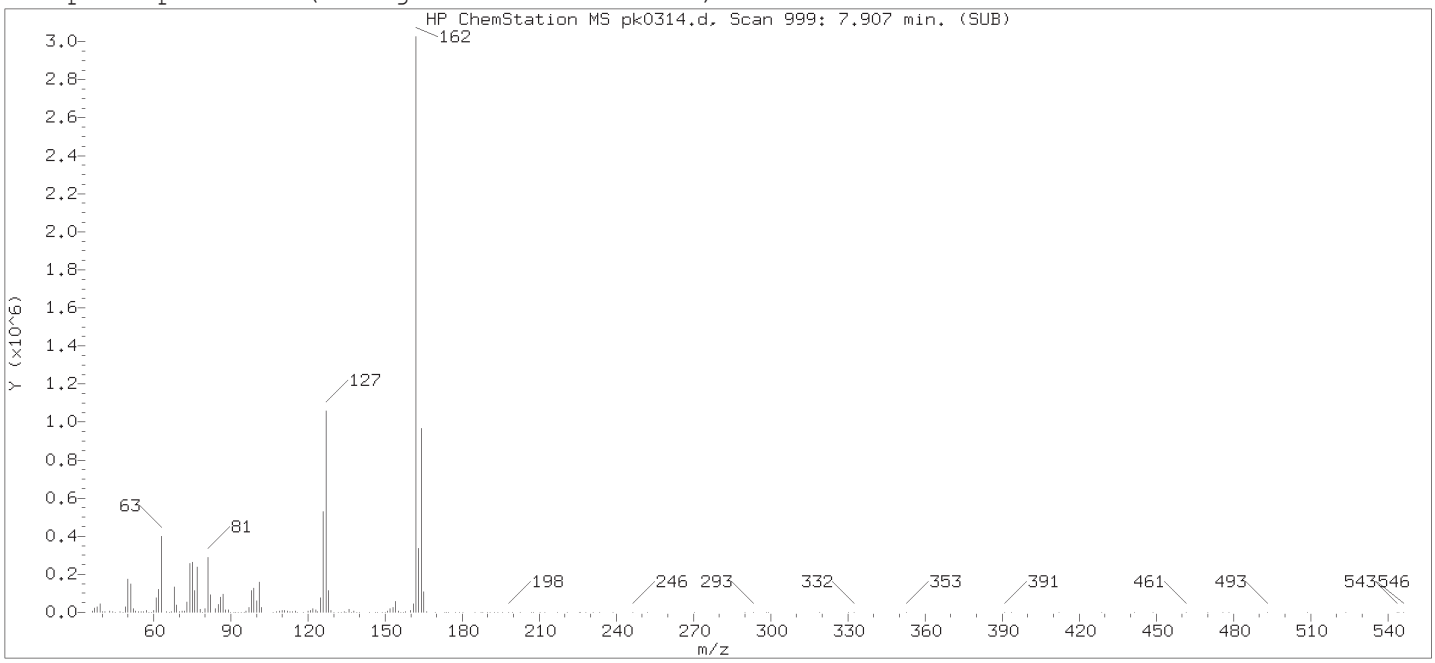
Compound Number	: 96		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 999		
Retention Time (minutes)	: 7.907		
Quant Ion	: 162.00		
Area (flag)	: 3014326M		
On-Column Amount (ng/ul)	: 89.8495		
Integration start scan	: 994	Integration stop scan:	1000
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

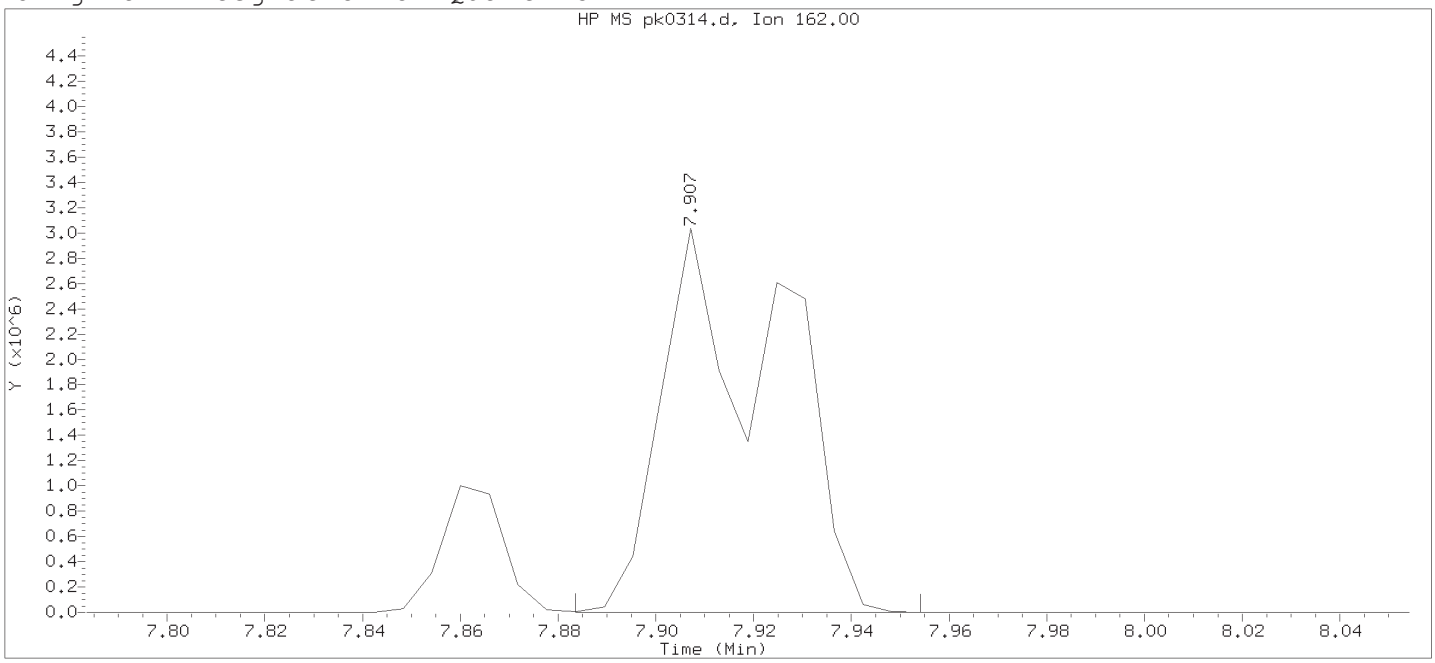
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0314.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:52 Analyst ID: lmh00956

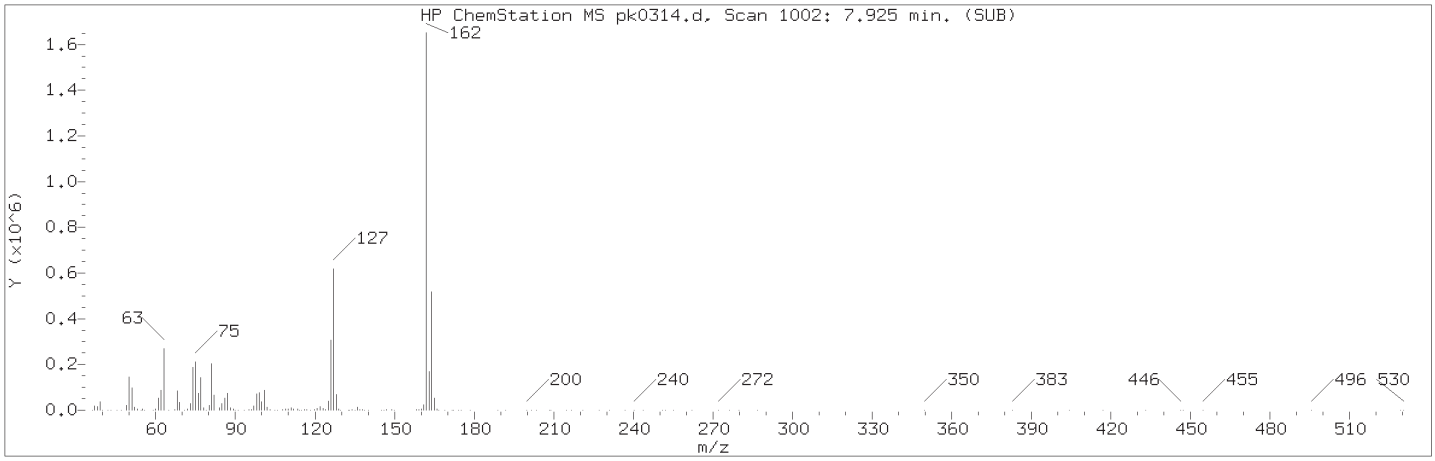
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 17:12
Date, time and analyst ID of latest file update: 09-Nov-2018 17:12 Automation

Sample Name: SSTD080 Lab Sample ID: STD2928

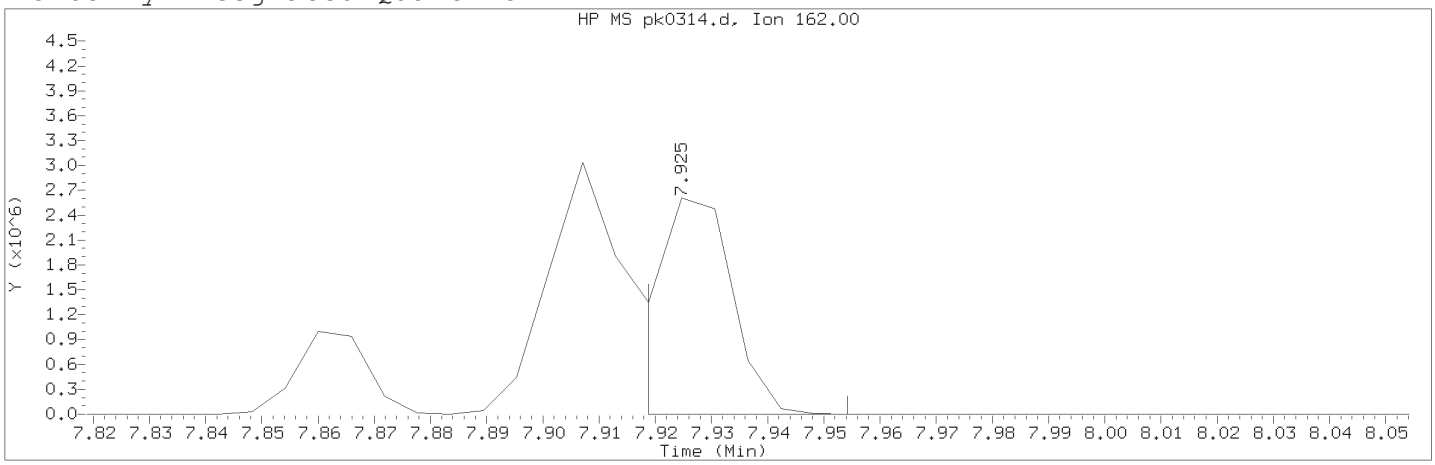
Compound Number	: 96		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 999		
Retention Time (minutes)	: 7.907		
Quant Ion	: 162.00		
Area	: 5061046		
On-column Amount (ng/ul)	: 137.2541		
Integration start scan	: 994	Integration stop scan:	1006
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0314.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:52 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD080 Lab Sample ID: STD2928

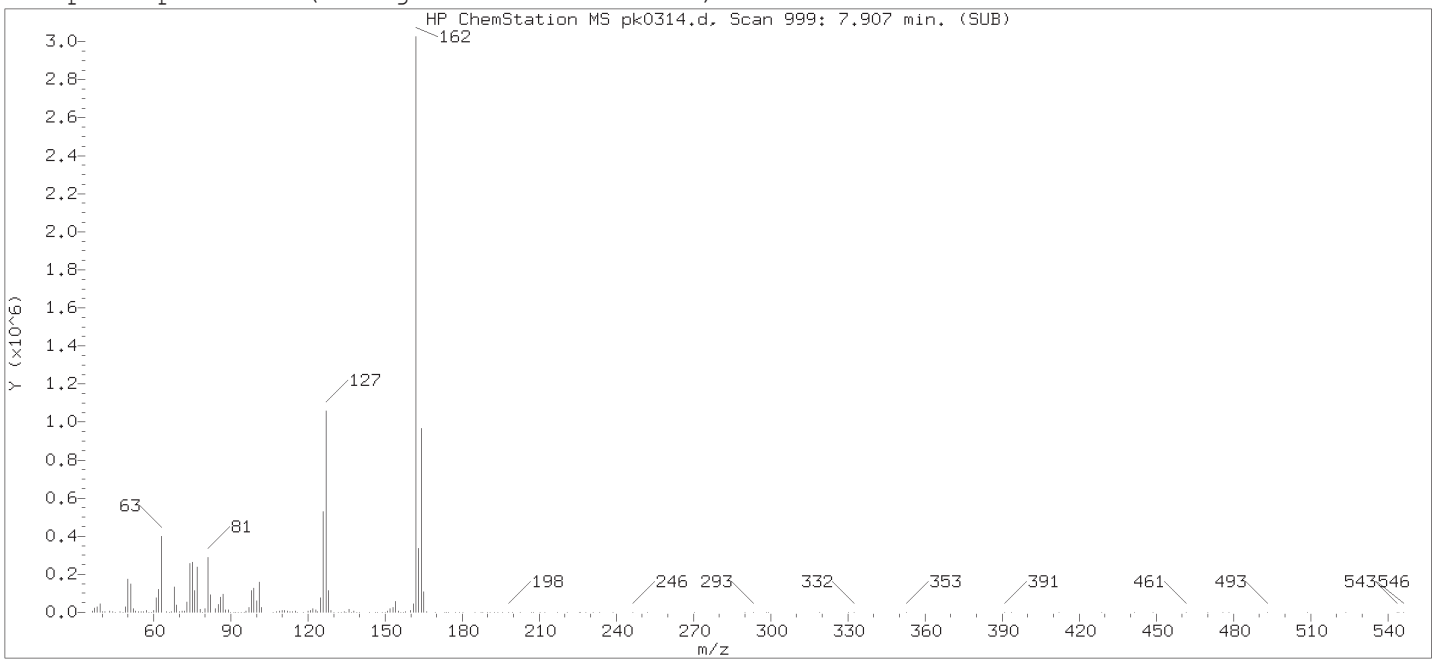
Compound Number : 98
Compound Name : 1-Chloronaphthalene
Scan Number : 1002
Retention Time (minutes) : 7.925
Quant Ion : 162.00
Area (flag) : 2524101M
On-Column Amount (ng/ul) : 78.6845
Integration start scan : 1000 Integration stop scan: 1006
Y at integration start : -203 Y at integration end: -203

Reason for manual integration: improper integration

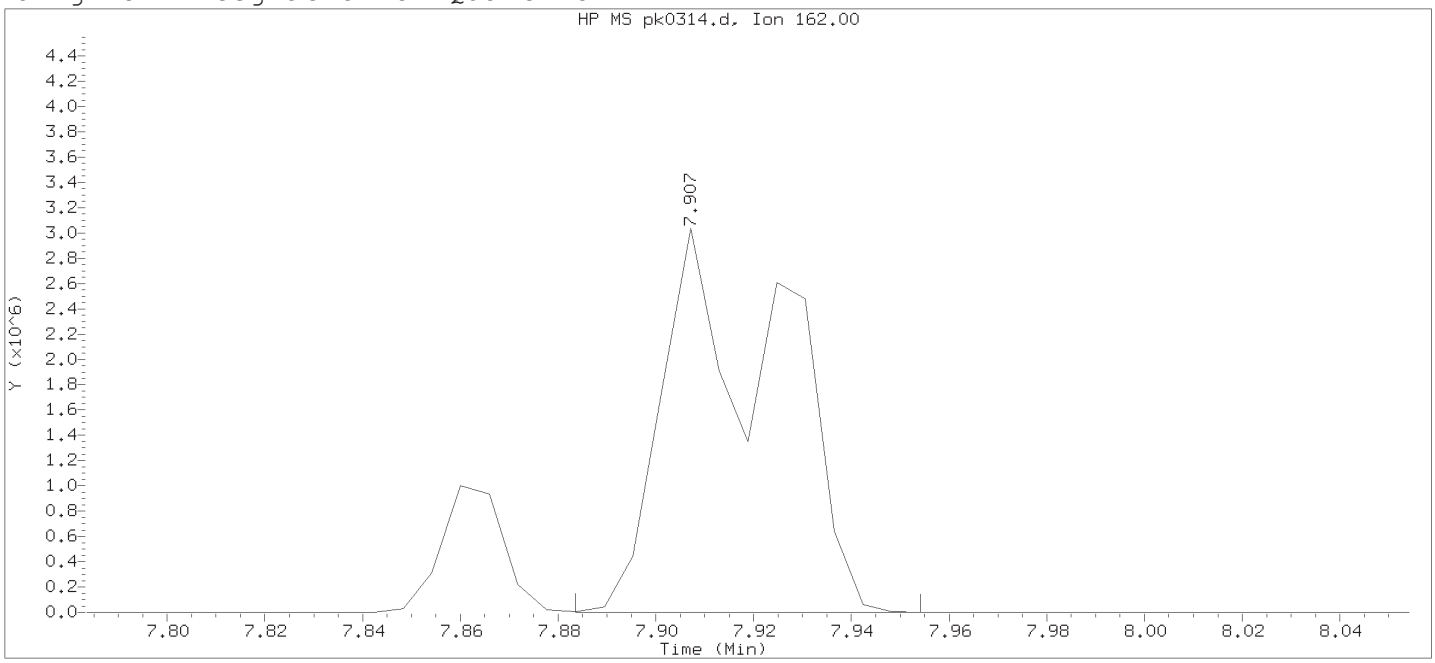
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



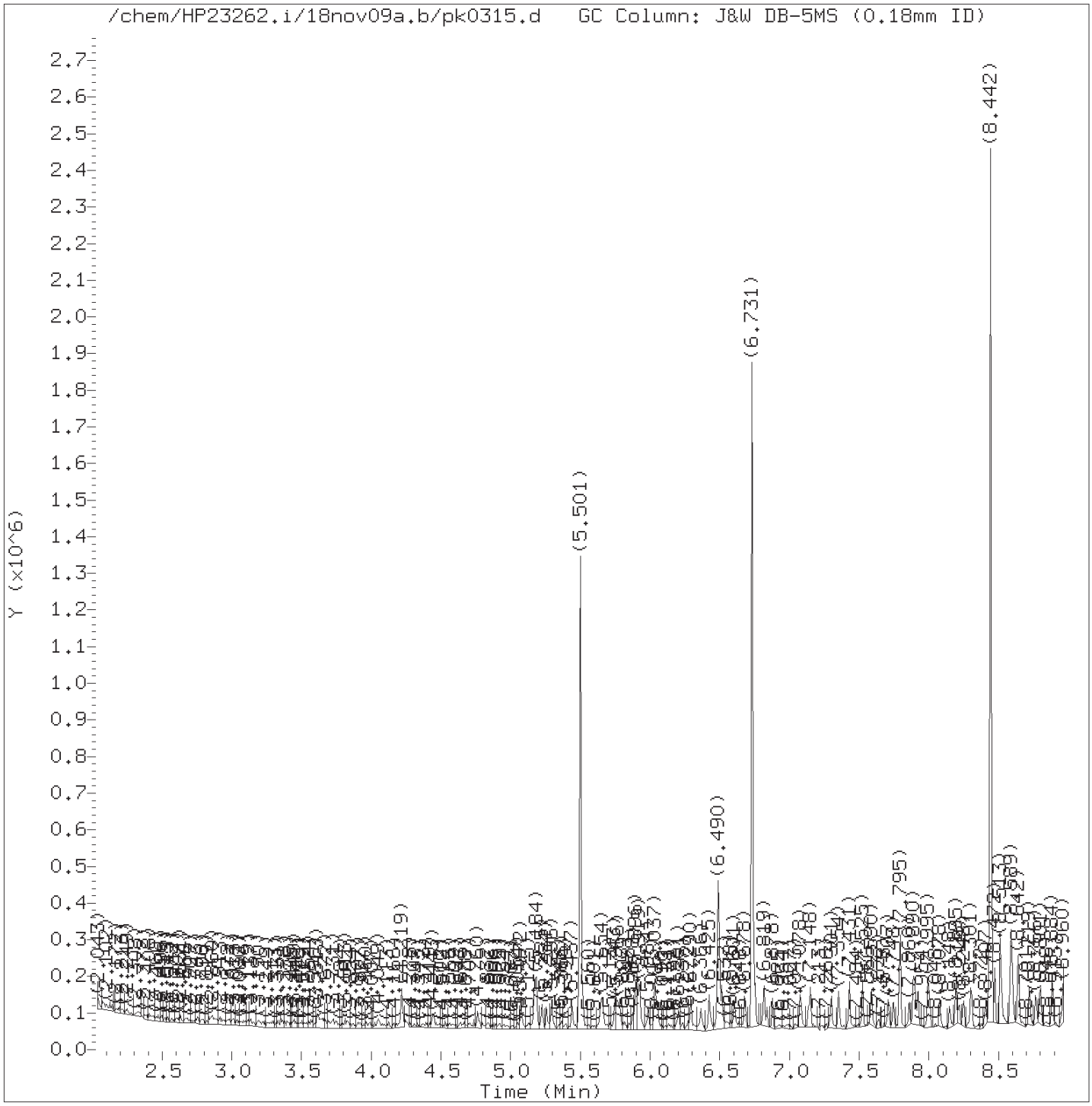
Data File: /chem/HP23262.i/18nov09a.b/pk0314.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 16:52 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 17:12
Date, time and analyst ID of latest file update: 09-Nov-2018 17:12 Automation

Sample Name: SSTD080 Lab Sample ID: STD2928

Compound Number : 98
Compound Name : 1-Chloronaphthalene
Scan Number : 999
Retention Time (minutes) : 7.907
Quant Ion : 162.00
Area : 5061046
On-column Amount (ng/ul) : 138.7976
Integration start scan : 994 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb1036



Total Ion Chromatogram (TIC)

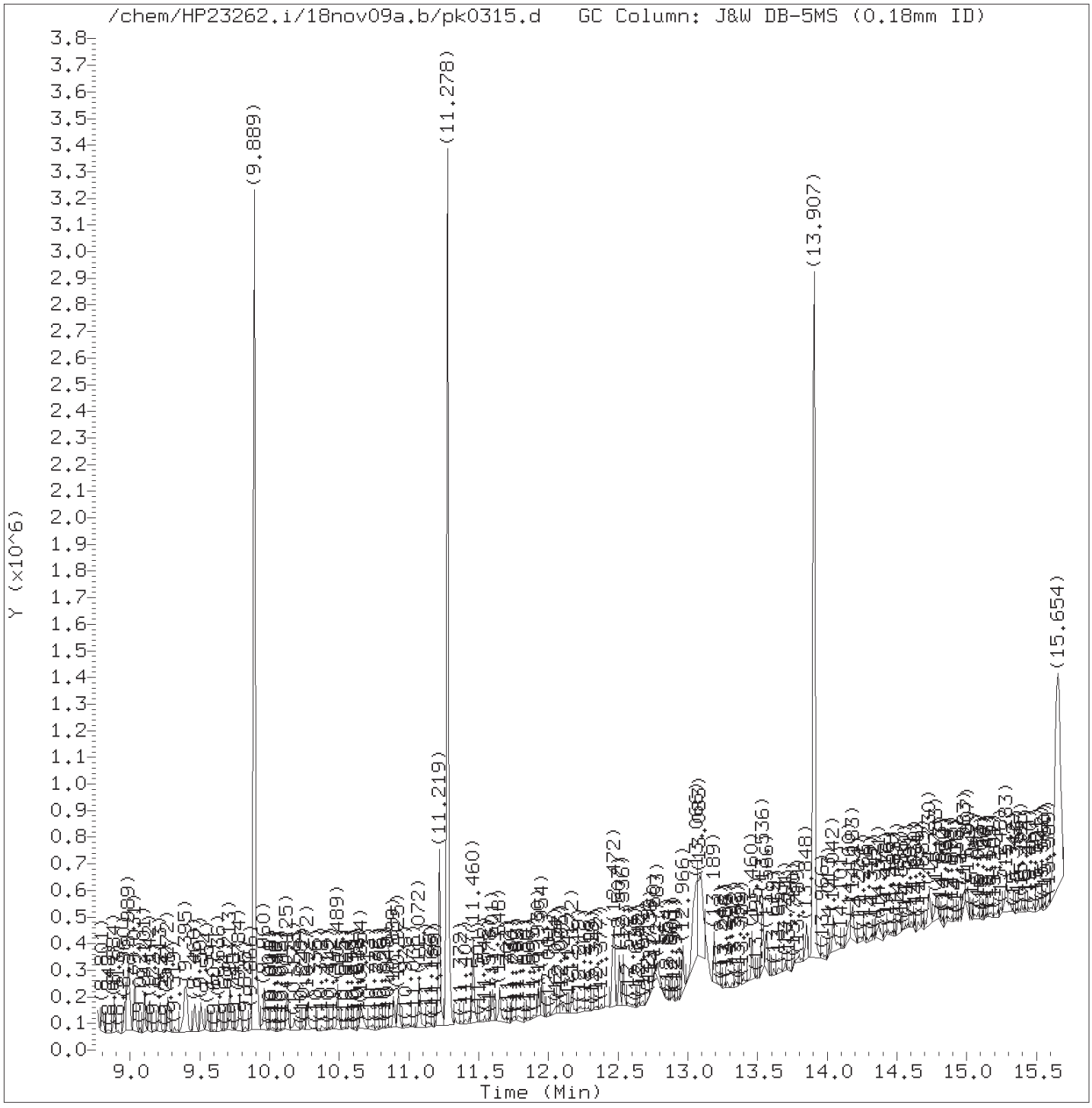
Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.255	88	9024	1.502
4) N-Nitrosodimethylamine	(1)	2.749	74	3880	0.371
5) Pyridine	(1)	2.755	79	4717	0.257
7) 2-Picoline	(1)	3.554	93	458	0.025
8) N-Nitrosomethylethylamine	(1)	3.719	88	9781	1.190
9) Methyl methanesulfonate	(1)	4.049	80	7802	0.953
11)$2-Fluorophenol	(1)	4.219	112	26399	1.989
13) N-Nitrosodiethylamine	(1)	4.443	102	7571	0.976
15) Ethyl methanesulfonate	(1)	4.760	109	8921	1.114
17)$Phenol-d6	(1)	5.172	99	35178	1.678
18) Phenol	(1)	5.184	94	24306	0.987
19) Aniline	(1)	5.184	93	28366	1.026
22) bis(2-Chloroethyl)ether	(1)	5.254	93	16690	0.966
23) 2-Chlorophenol	(1)	5.296	128	14113M	1.048
24) 1,3-Dichlorobenzene	(1)	5.443	146	13160	0.997
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	169195	20.000
26) 1,4-Dichlorobenzene	(1)	5.519	146	12047	0.924
27) Benzyl alcohol	(1)	5.648	108	9928M	0.925
42) Total Cresols	(1)			31629	1.933
28) 1,2-Dichlorobenzene	(1)	5.660	146	13404	1.014
30) Indene	(1)	5.748	115	15527	0.994
31) 2-Methylphenol	(1)	5.766	108	14469M	0.957
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.784	45	23673	0.942
34) bis(2-Chloroisopropyl)ether	(1)	5.784	45	23673	0.942
35) N-Nitrosopyrrolidine	(1)	5.878	100	9235	0.953
36) Acetophenone	(1)	5.896	105	24863	1.086
38) N-Nitroso-di-n-propylamine	(1)	5.901	70	14954	0.997
39) N-Nitrosomorpholine	(1)	5.919	56	14547	1.220
37) 4-Methylphenol	(1)	5.919	108	17160	0.975
40) o-Toluidine	(1)	5.925	106	24963	0.980
43) Hexachloroethane	(1)	5.990	117	7650M	1.373
44)$Nitrobenzene-d5	(2)	6.037	82	37790	2.082
45) Nitrobenzene	(2)	6.054	77	20113	1.033
48) N-Nitrosopiperidine	(2)	6.201	114	9540	1.147
50) Isophorone	(2)	6.295	82	34422	0.956
51) 2-Nitrophenol	(2)	6.366	139	6918	0.972
53) 2,4-Dimethylphenol	(2)	6.425	107	16504M	1.029
56) Benzoic acid	(2)	6.490	105	105206	9.439
57) O,O,O-Triethylphosphorothioate	(2)	6.490	198	8110	1.071
55) bis(2-Chloroethoxy)methane	(2)	6.513	93	22016	1.021

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.607	162	12458	1.048
62) 1,2,4-Trichlorobenzene	(2)	6.678	180	11770	0.979
65)*Naphthalene-d8	(2)	6.731	136	697610	20.000
66) Naphthalene	(2)	6.754	128	43668	1.092
67) 4-Chloroaniline	(2)	6.813	127	15304	0.959
68) 2,6-Dichlorophenol	(2)	6.819	162	12110	1.067
69) Hexachloropropene	(2)	6.843	213	5739	0.819
71) Hexachlorobutadiene	(2)	6.866	225	5602	0.838
75) Quinoline	(2)	7.078	129	28319	1.050
77) N-Nitrosodi-n-butylamine	(2)	7.137	84	20301	1.164
76) Caprolactam	(2)	7.137	113	6904	1.278
80) 4-Chloro-3-methylphenol	(2)	7.295	107	16106	1.085
82) Safrole	(2)	7.354	162	13519	1.234
97) Isosafrole	(3)			11746	1.032
83) 2-Methylnaphthalene	(2)	7.431	142	25924	0.956
84) 1-Methylnaphthalene	(2)	7.525	142	24870	0.951
85) Hexachlorocyclopentadiene	(3)	7.584	237	5596	0.802
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.590	216	14375	1.033
88) cis-Isosafrole	(3)	7.637	162	1999	0.177
90) 2,4,6-Trichlorophenol	(3)	7.707	196	8982	0.967
92) 2,4,5-Trichlorophenol	(3)	7.742	196	10699	1.042
93)$2-Fluorobiphenyl	(3)	7.795	172	68557	2.181
94) trans-Isosafrole	(3)	7.854	162	9747	0.855
95) 1,1'-Biphenyl	(3)	7.884	154	38838	1.100
96) 2-Chloronaphthalene	(3)	7.901	162	29913	1.047
98) 1-Chloronaphthalene	(3)	7.925	162	27630	1.021
99) Diphenyl ether	(3)	7.995	170	21964	1.090
100) 2-Nitroaniline	(3)	8.007	138	9813	1.030
120) 2,4_2,6-Dinitrotoluenes	(3)			19173	2.061
104) 1,4-Naphthoquinone	(3)	8.078	158	10139	0.827
105) 1,4-Dinitrobenzene	(3)	8.154	168	5261	0.998
106) Dimethylphthalate	(3)	8.195	163	34119	1.018
107) 1,3-Dinitrobenzene	(3)	8.219	168	6787	1.098
108) 2,6-Dinitrotoluene	(3)	8.248	165	8867	1.085
109) Acenaphthylene	(3)	8.301	152	39865	0.991
112) 3-Nitroaniline	(3)	8.413	138	8386	1.010
113)*Acenaphthene-d10	(3)	8.442	164	413747	20.000
114) Acenaphthene	(3)	8.472	153	30245	1.065
115) 2,4-Dinitrophenol	(3)	8.513	184	32597	6.983
116) 4-Nitrophenol	(3)	8.589	109	26888	4.725

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
117) Pentachlorobenzene	(3)	8.601	250	14143	1.089
119) Dibenzofuran	(3)	8.642	168	45011	1.038
118) 2,4-Dinitrotoluene	(3)	8.642	165	10306	0.966
121) 1-Naphthylamine	(3)	8.719	143	31289	1.039
122) 2,3,4,6-Tetrachlorophenol	(3)	8.772	232	9189	1.049
146) Diallate trans/cis	(4)			21178	0.927
123) 2-Naphthylamine	(3)	8.801	143	31192	1.062
124) Diethylphthalate	(3)	8.884	149	38397	1.126
125) Thionazin	(3)	8.960	107	9167	1.506
126) Fluorene	(3)	8.978	166	37530	1.076
128) 5-Nitro-o-toluidine	(3)	8.989	152	9533	0.966
127) 4-Chlorophenyl-phenylether	(3)	8.989	204	20447	1.081
129) 4-Nitroaniline	(3)	8.995	138	10993	1.172
130) 4,6-Dinitro-2-methylphenol	(4)	9.037	198	24182	3.393
132) NDPA as diphenylamine	(4)	9.101	169	33971	1.005
131) N-Nitrosodiphenylamine	(4)	9.101	169	33971	1.005
134) 1,2-Diphenylhydrazine	(4)	9.142	77	50220	0.979
135)$2,4,6-Tribromophenol	(3)	9.213	330	8514	2.074
137) Tetraethyldithiopyrophosphate	(4)	9.272	97	8009	1.093
139) 1,3,5-Trinitrobenzene	(4)	9.372	213	4472	0.883
140) Diallate (peak 1)	(4)	9.389	86	16927	0.719
141) Phorate	(4)	9.395	75	32548	0.886
142) Phenacetin	(4)	9.407	108	23997	1.067
143) 4-Bromophenyl-phenylether	(4)	9.460	248	10839	0.937
144) Diallate (peak 2)	(4)	9.478	86	4251	0.217
145) Hexachlorobenzene	(4)	9.513	284	8462	0.800
147) Dimethoate	(4)	9.554	87	21463	1.109
151) Pentachloronitrobenzene	(4)	9.713	237	4060	0.770
149) Pentachlorophenol	(4)	9.713	266	6221	0.908
150) 4-Aminobiphenyl	(4)	9.719	169	21721	1.284
152) Pronamide	(4)	9.789	173	17262	0.967
153)*Phenanthrene-d10	(4)	9.889	188	1036748	20.000
154) Dinoseb	(4)	9.901	211	6482	0.584
155) Phenanthrene	(4)	9.913	178	61439	1.030
157) Anthracene	(4)	9.966	178	57685	0.963
163) Carbazole	(4)	10.125	167	55239	1.007
164) Methyl parathion	(4)	10.272	109	12896	0.922
165) Di-n-butylphthalate	(4)	10.489	149	63972	0.989
167) Parathion	(4)	10.660	109	9607	1.042
168) 4-Nitroquinoline-1-oxide	(4)	10.678	190	2950	0.498

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

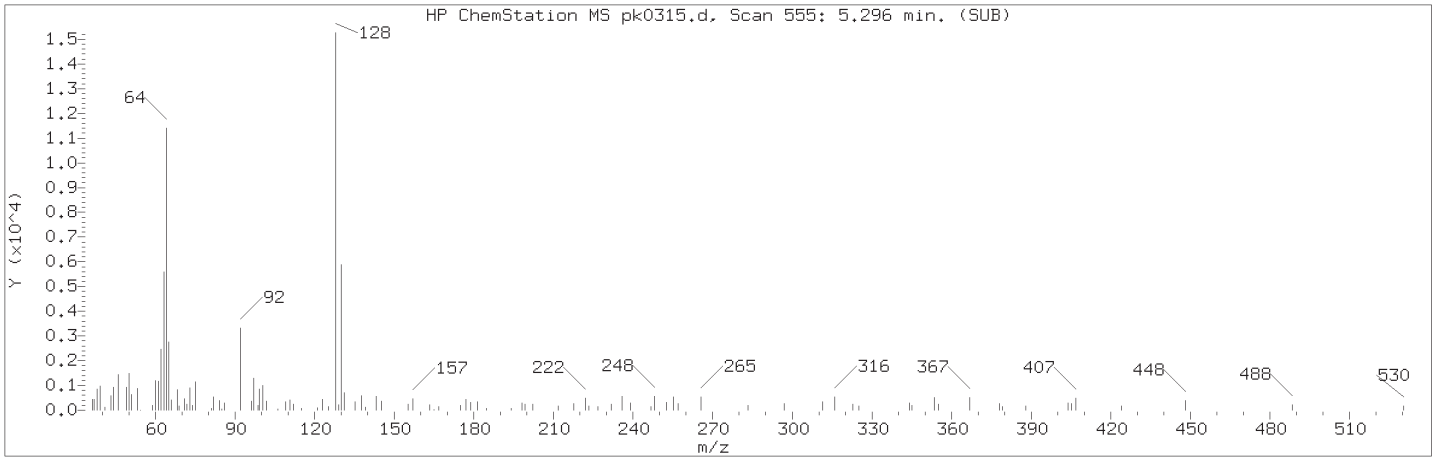
Sample Name: SSTD001 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
169) Octachlorostyrene	(4)	10.895	308	4443	1.065
171) Isodrin	(4)	10.925	193	8987	1.183
173) Fluoranthene	(4)	11.072	202	63109	0.939
174) Benzidine	(5)	11.219	184	241476	6.069
175)*Pyrene-d10	(5)	11.278	212	1116077	20.000
177) Pyrene	(5)	11.295	202	74545	0.982
179)$Terphenyl-d14	(5)	11.460	244	94567	2.020
182) p-Dimethylaminoazobenzene	(5)	11.601	225	13742	1.034
185) Chlorobenzilate	(5)	11.648	139	16731	0.892
187) 3,3'-Dimethylbenzidine	(5)	11.930	212	36763	0.862
188) Butylbenzylphthalate	(5)	11.954	149	29721	0.924
191) 2-Acetylaminofluorene	(5)	12.172	181	21241	0.772
193) 3,3'-Dichlorobenzidine	(5)	12.460	252	24335	0.962
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.472	231	16642	1.249
195) Benzo(a)anthracene	(5)	12.472	228	64986	0.939
196) Chrysene	(5)	12.507	228	65311	0.989
199) bis(2-Ethylhexyl)phthalate	(5)	12.536	149	45524	0.997
203) 6-Methylchrysene	(5)	12.966	242	45259	0.977
205) Di-n-octylphthalate	(6)	13.189	149	78452	1.012
206) Benzo(b)fluoranthene	(6)	13.536	252	69864	1.001
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.536	256	27676	0.886
208) Benzo(k)fluoranthene	(6)	13.566	252	60915	0.913
211) Benzo(a)pyrene	(6)	13.854	252	58771M	0.931
213)*Perylene-d12	(6)	13.907	264	969720	20.000
215) 3-Methylcholanthrene	(6)	14.183	268	24393M	0.968
217) Dibenz(a,h)acridine	(6)	14.730	279	44114	0.896
218) Dibenz(a,j)acridine	(6)	14.789	279	48013	0.946
219) Indeno(1,2,3-cd)pyrene	(6)	14.983	276	61153M	0.952
222) Total PAHs	(6)			943911	16.896
220) Dibenz(a,h)anthracene	(6)	15.007	278	51626M	0.914
221) Benzo(g,h,i)perylene	(6)	15.283	276	52405M	0.955

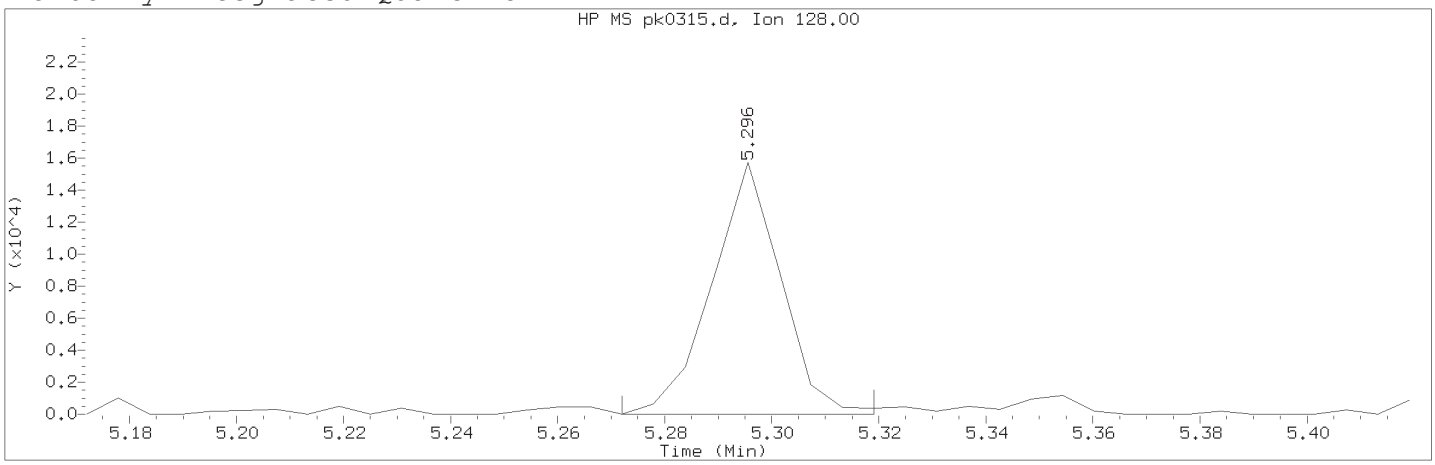
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

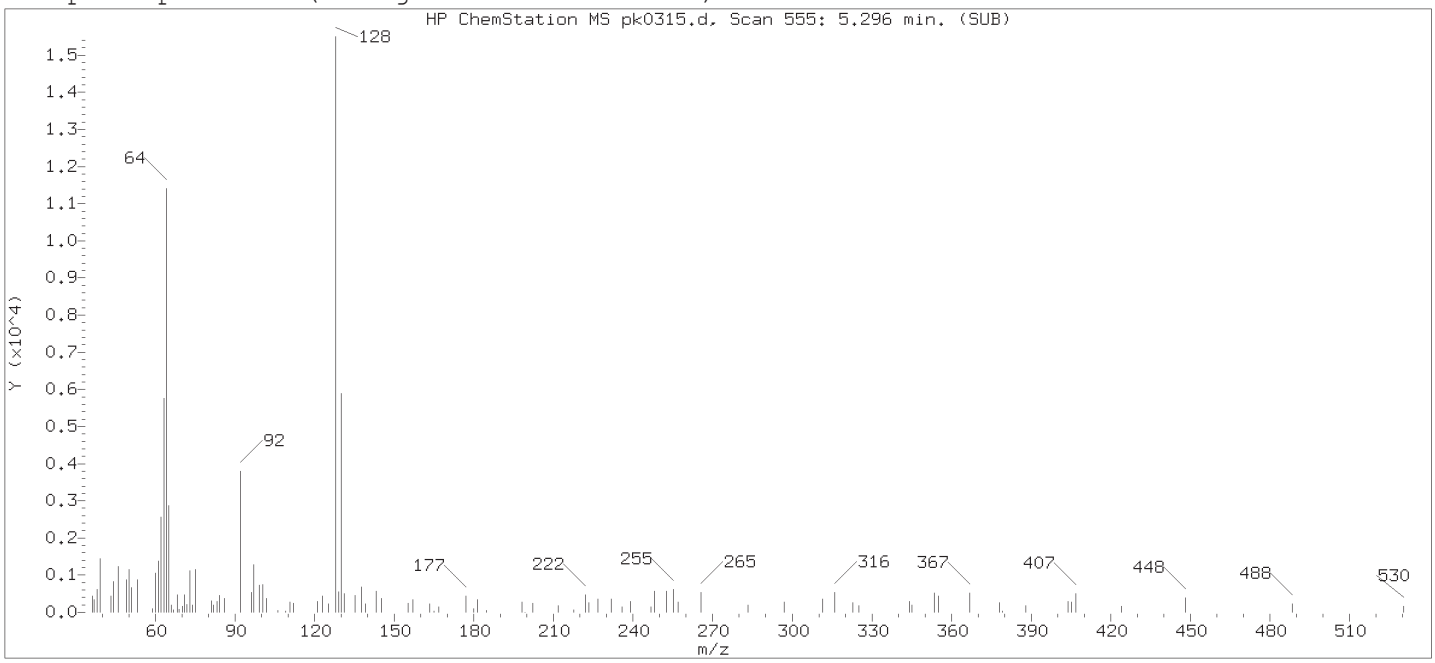
Compound Number : 23
Compound Name : 2-Chlorophenol
Scan Number : 555
Retention Time (minutes) : 5.296
Quant Ion : 128.00
Area (flag) : 14113M
On-Column Amount (ng/ul) : 1.0477
Integration start scan : 550 Integration stop scan: 558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

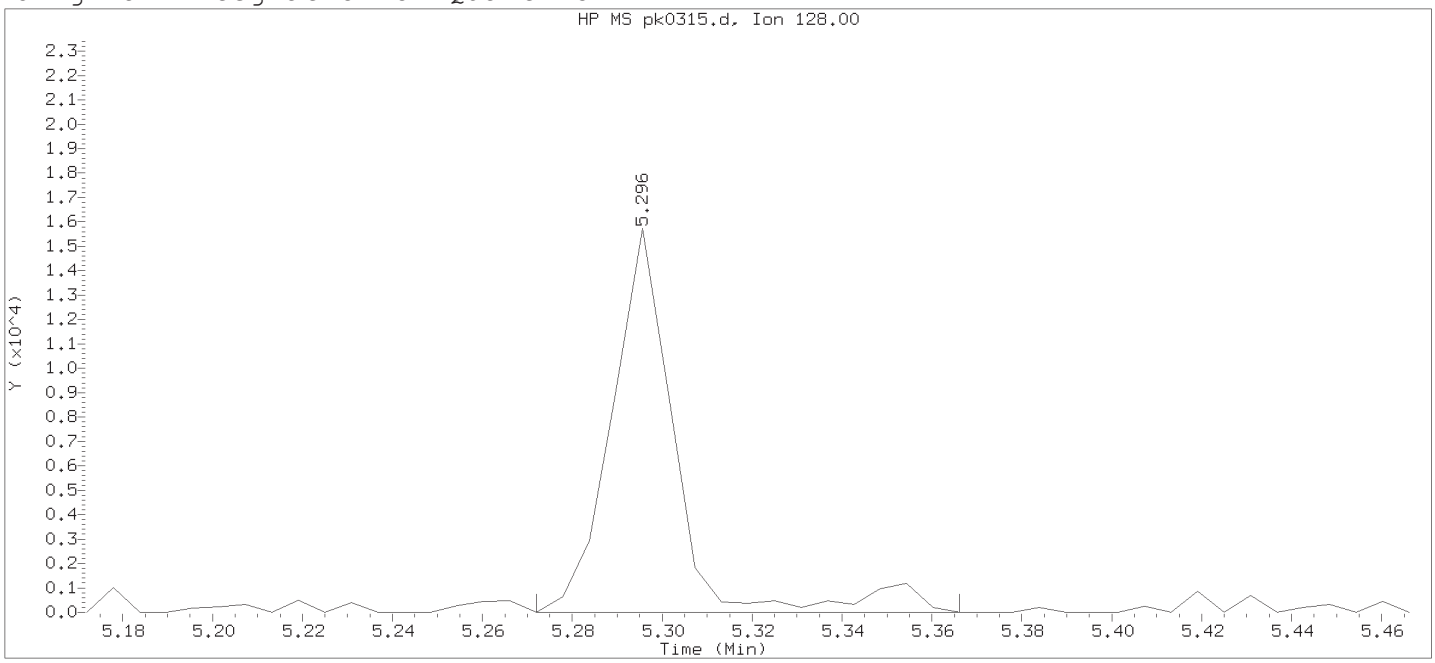
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

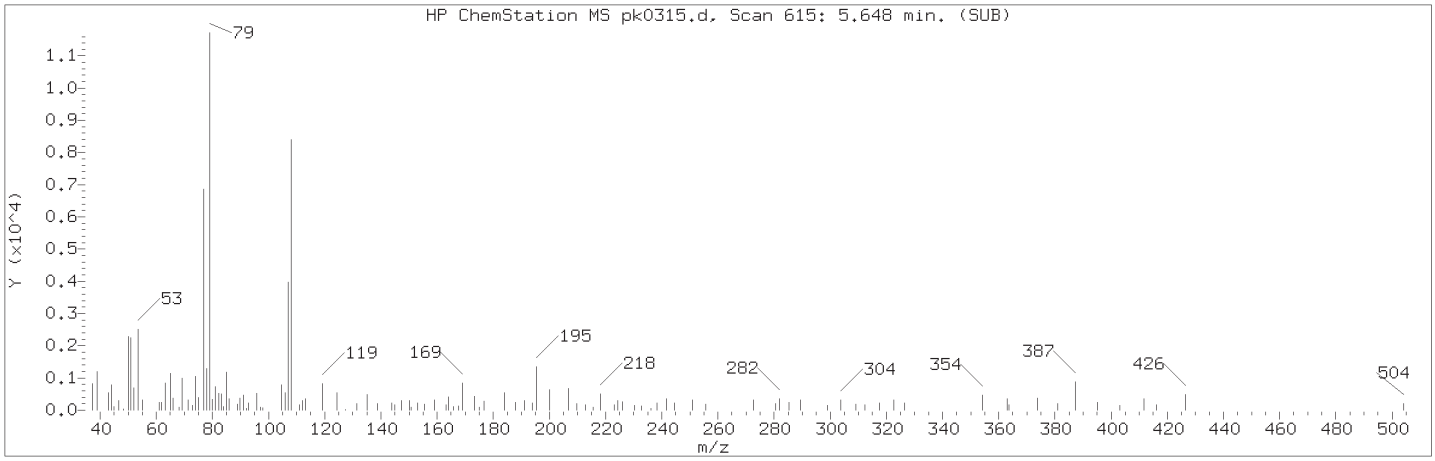
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 17:35
Date, time and analyst ID of latest file update: 09-Nov-2018 17:35 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

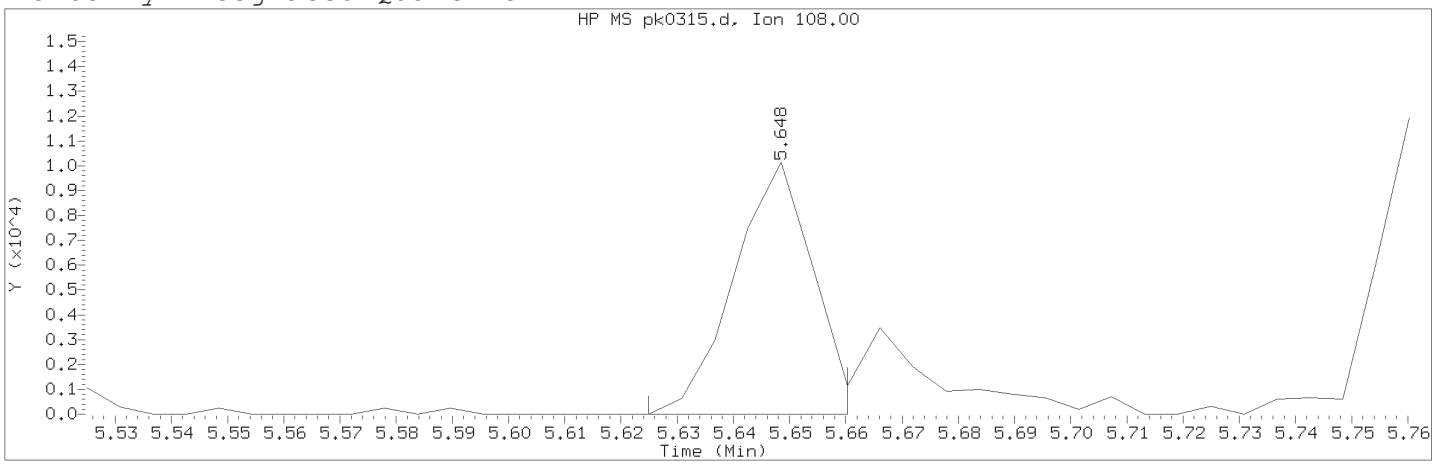
Compound Number	: 23		
Compound Name	: 2-Chlorophenol		
Scan Number	: 555		
Retention Time (minutes)	: 5.296		
Quant Ion	: 128.00		
Area	: 15449		
On-column Amount (ng/ul)	: 1.1481		
Integration start scan	: 550	Integration stop scan:	566
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature used. Page 1536

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

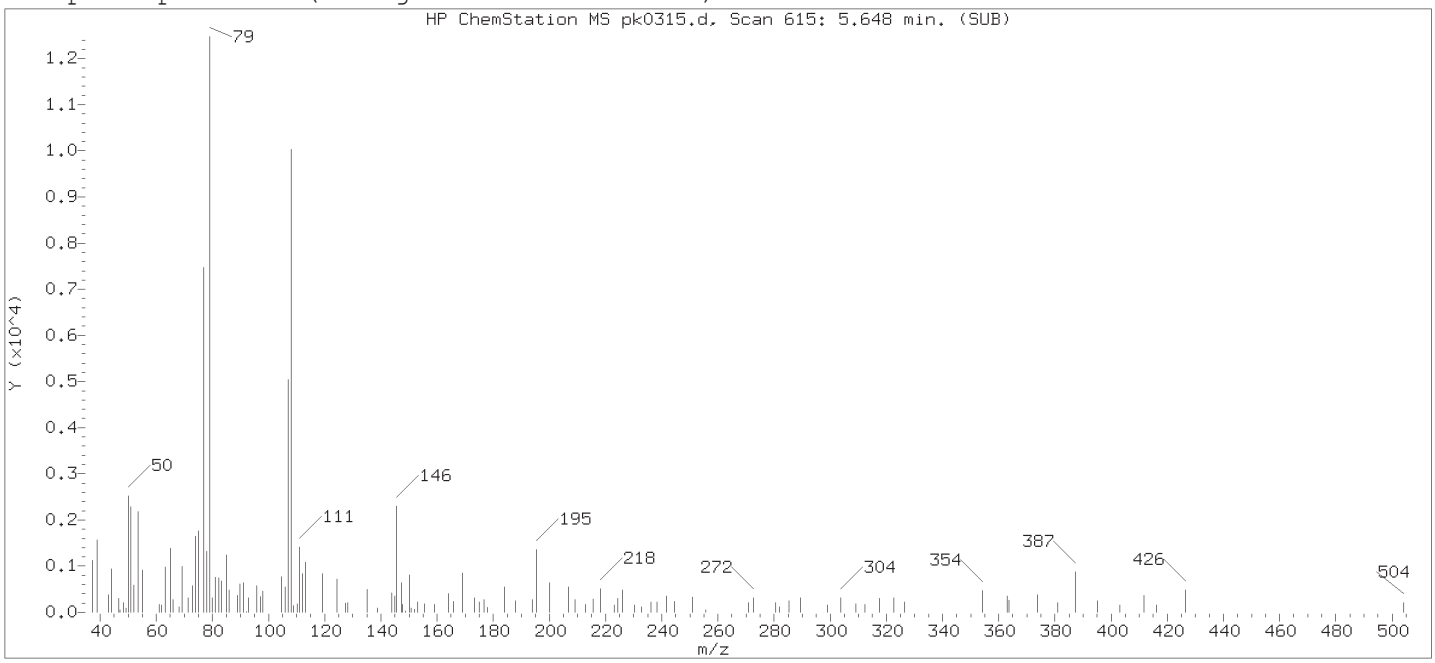
Compound Number : 27
Compound Name : Benzyl alcohol
Scan Number : 615
Retention Time (minutes) : 5.648
Quant Ion : 108.00
Area (flag) : 9928M
On-Column Amount (ng/ul) : 0.9248
Integration start scan : 610 Integration stop scan: 616
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

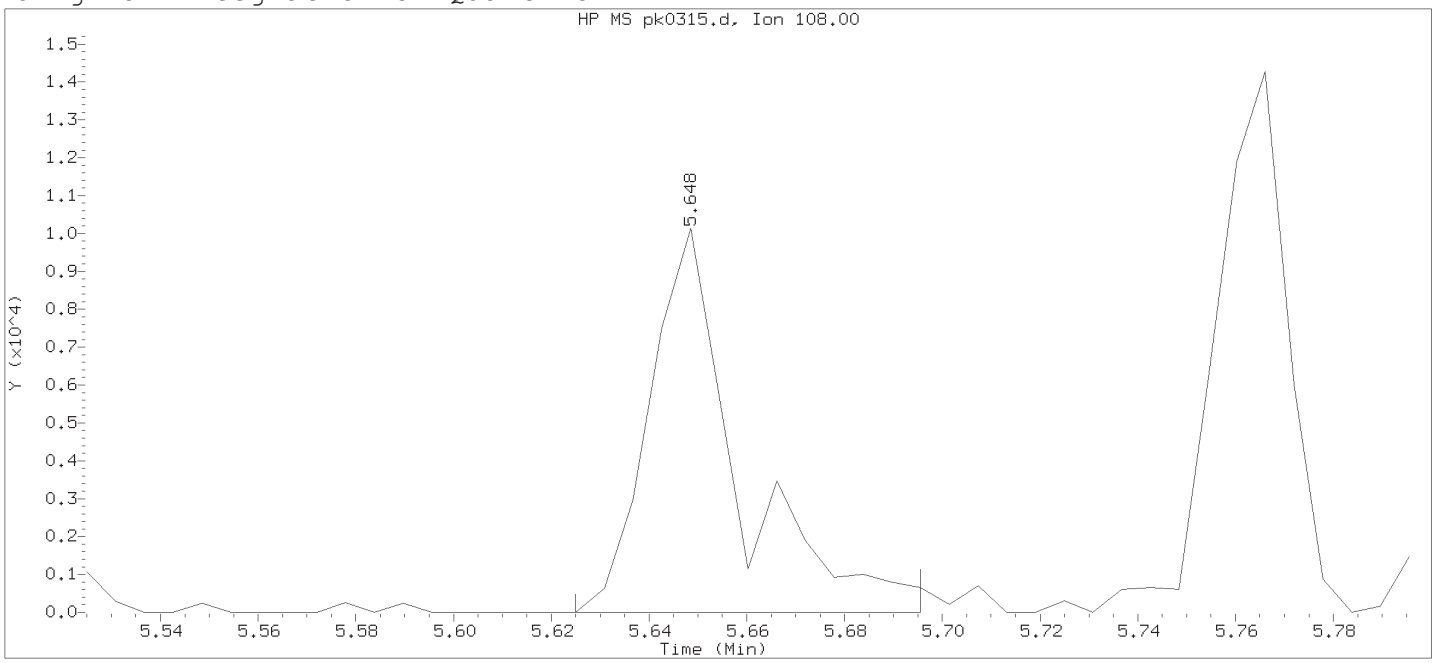
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

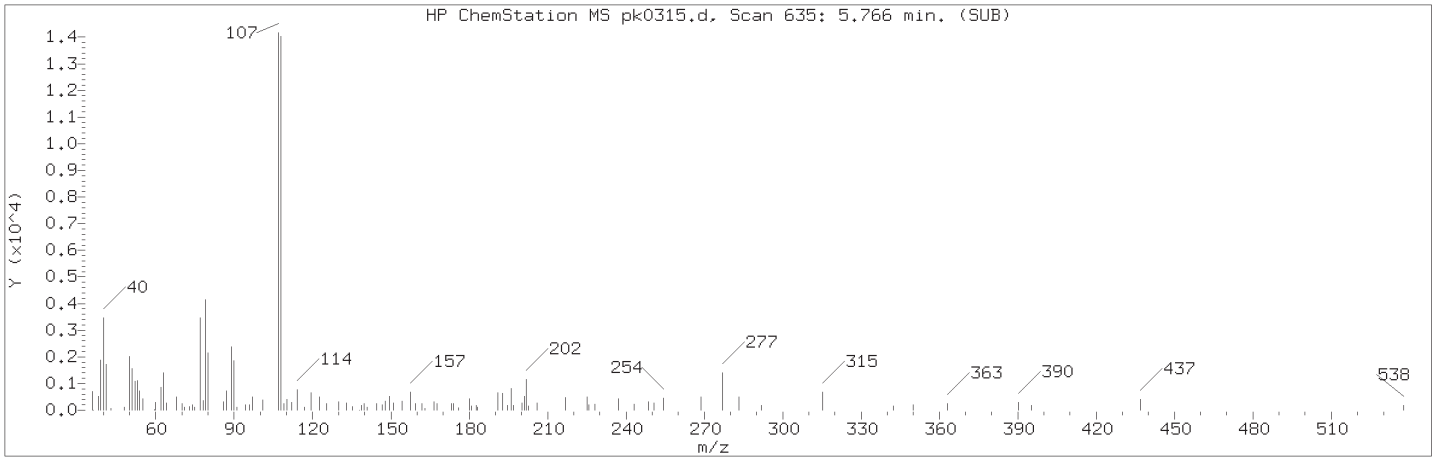
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 17:35
Date, time and analyst ID of latest file update: 09-Nov-2018 17:35 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

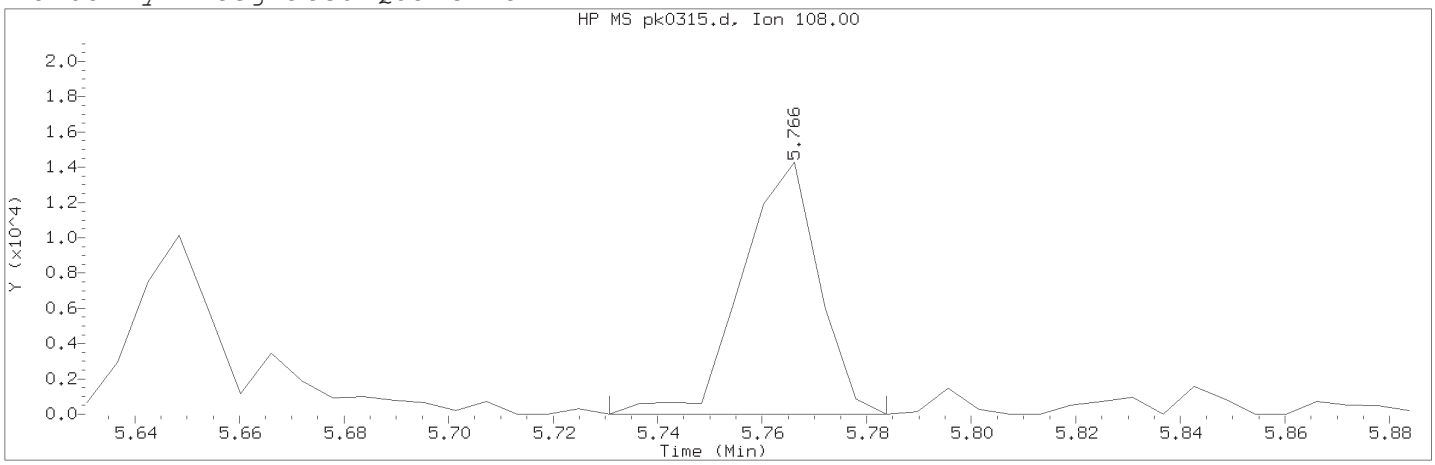
Compound Number	: 27		
Compound Name	: Benzyl alcohol		
Scan Number	: 615		
Retention Time (minutes)	: 5.648		
Quant Ion	: 108.00		
Area	: 12903		
On-column Amount (ng/ul)	: 1.1827		
Integration start scan	: 610	Integration stop scan:	622
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature used: D10 Page 1540

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

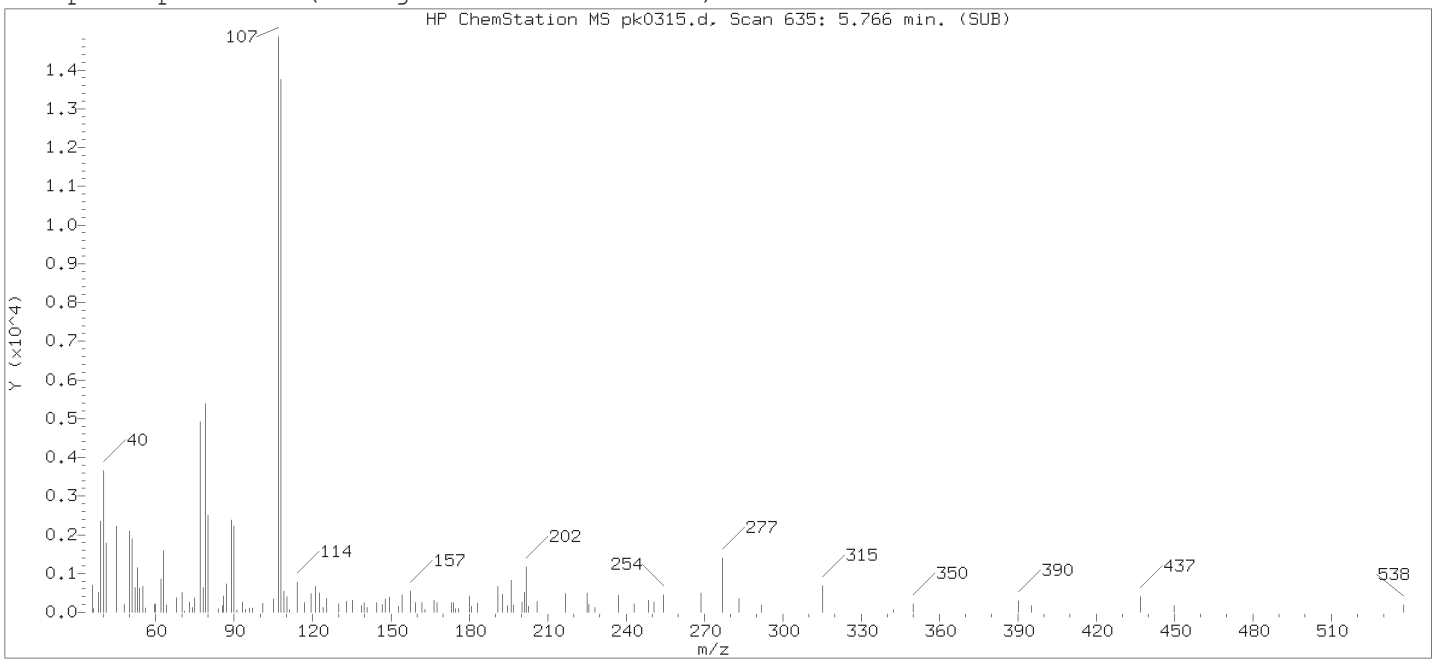
Compound Number	: 31		
Compound Name	: 2-Methylphenol		
Scan Number	: 635		
Retention Time (minutes)	: 5.766		
Quant Ion	: 108.00		
Area (flag)	: 14469M		
On-Column Amount (ng/ul)	: 0.9565		
Integration start scan	: 628	Integration stop scan:	637
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

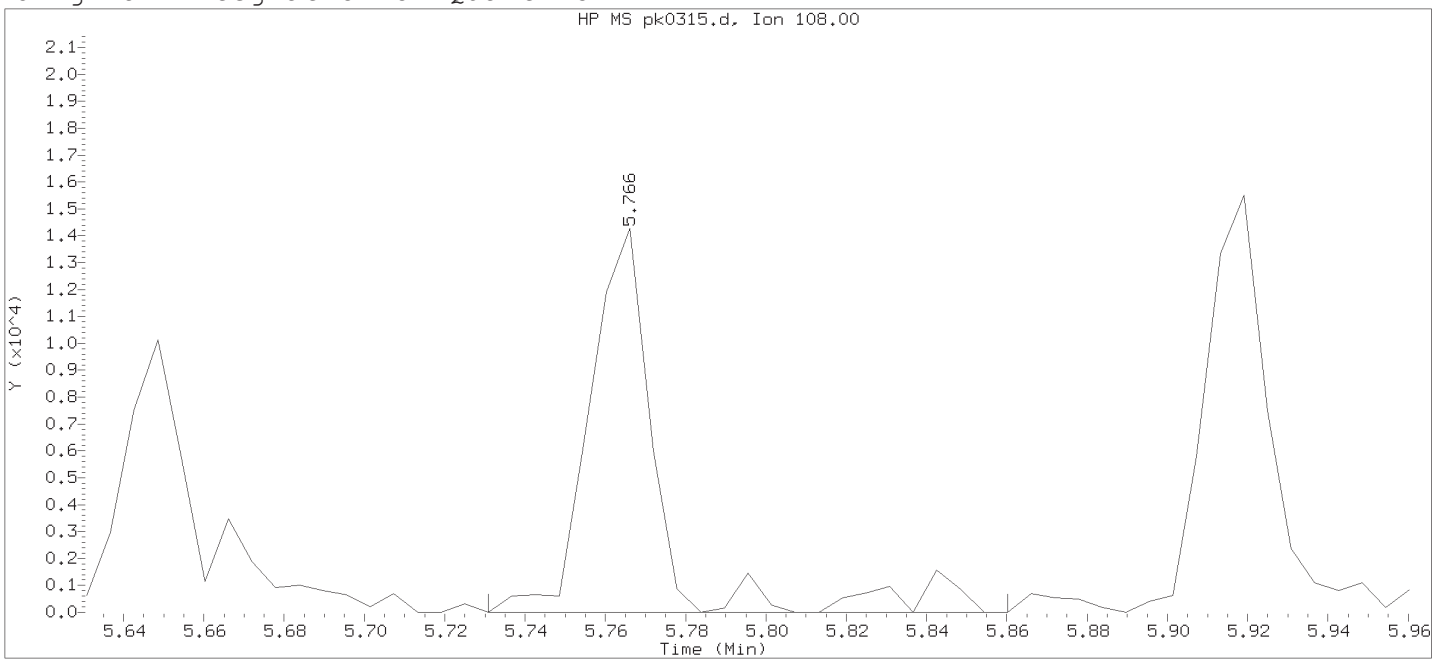
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

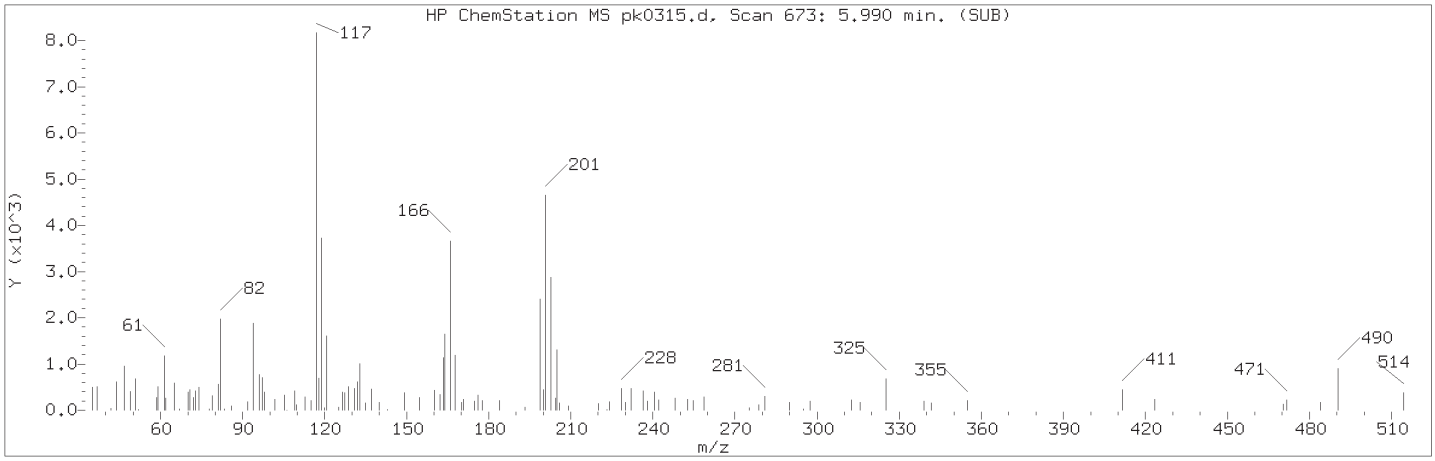
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 17:35
Date, time and analyst ID of latest file update: 09-Nov-2018 17:35 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

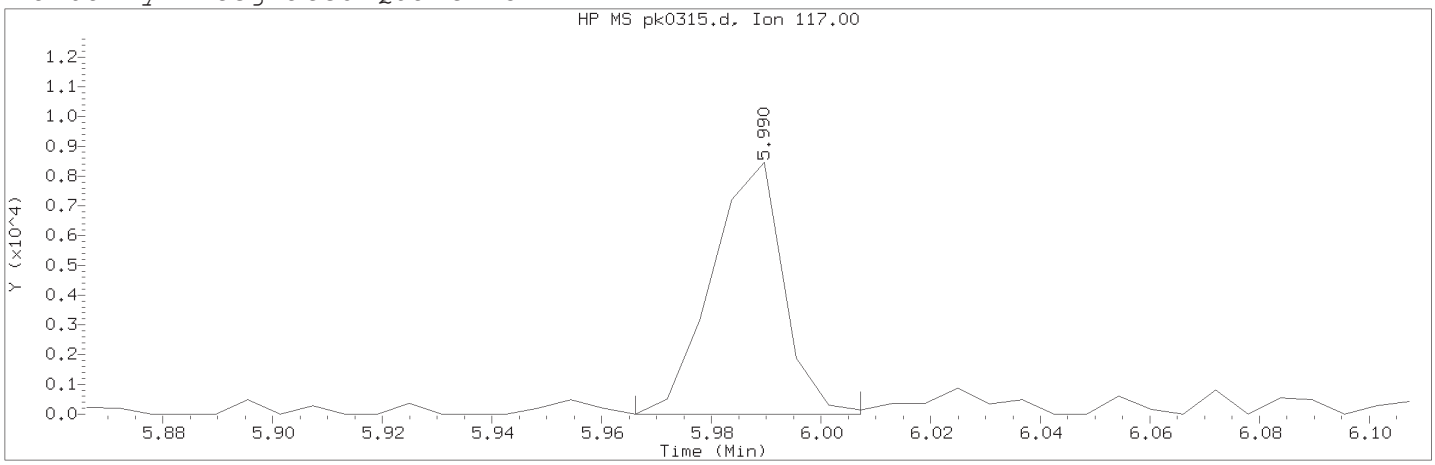
Compound Number	: 31		
Compound Name	: 2-Methylphenol		
Scan Number	: 635		
Retention Time (minutes)	: 5.766		
Quant Ion	: 108.00		
Area	: 16765		
On-column Amount (ng/ul)	: 1.0727		
Integration start scan	: 628	Integration stop scan:	650
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature used: D10 Page 1542

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

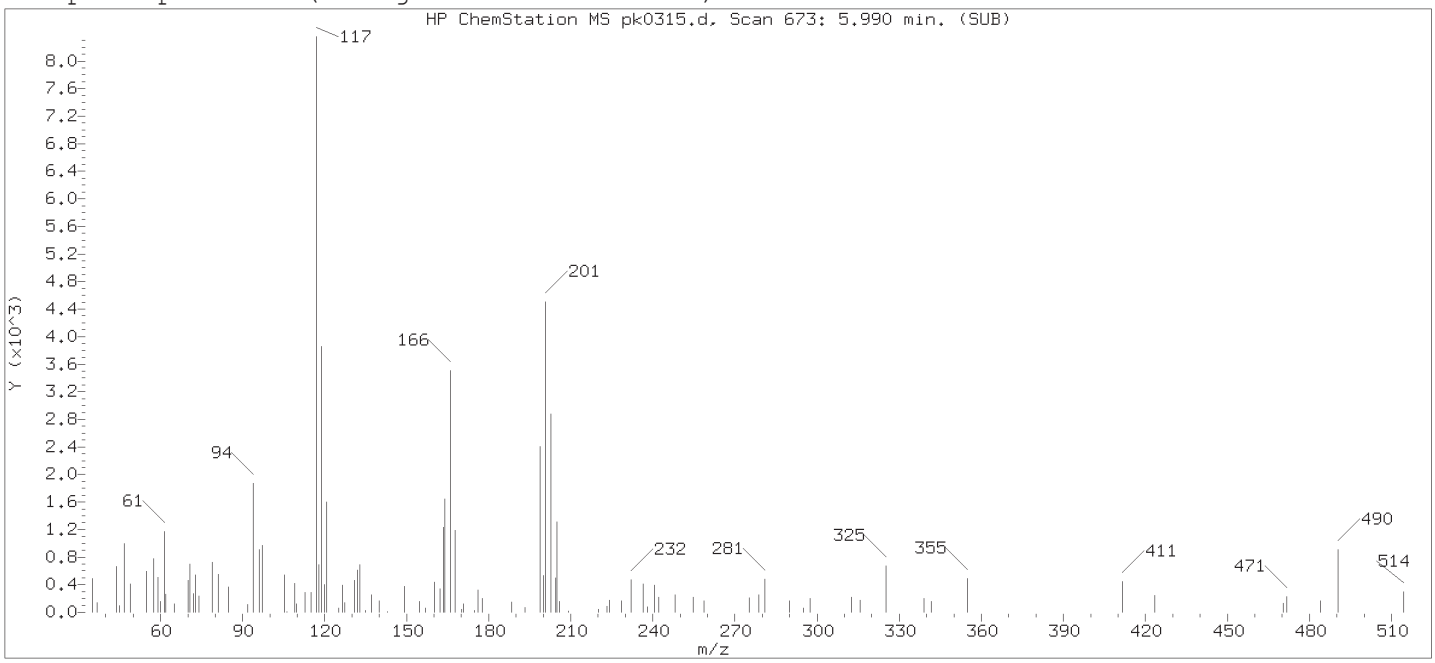
Compound Number : 43
Compound Name : Hexachloroethane
Scan Number : 673
Retention Time (minutes) : 5.990
Quant Ion : 117.00
Area (flag) : 7650M
On-Column Amount (ng/ul) : 1.3731
Integration start scan : 668 Integration stop scan: 675
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

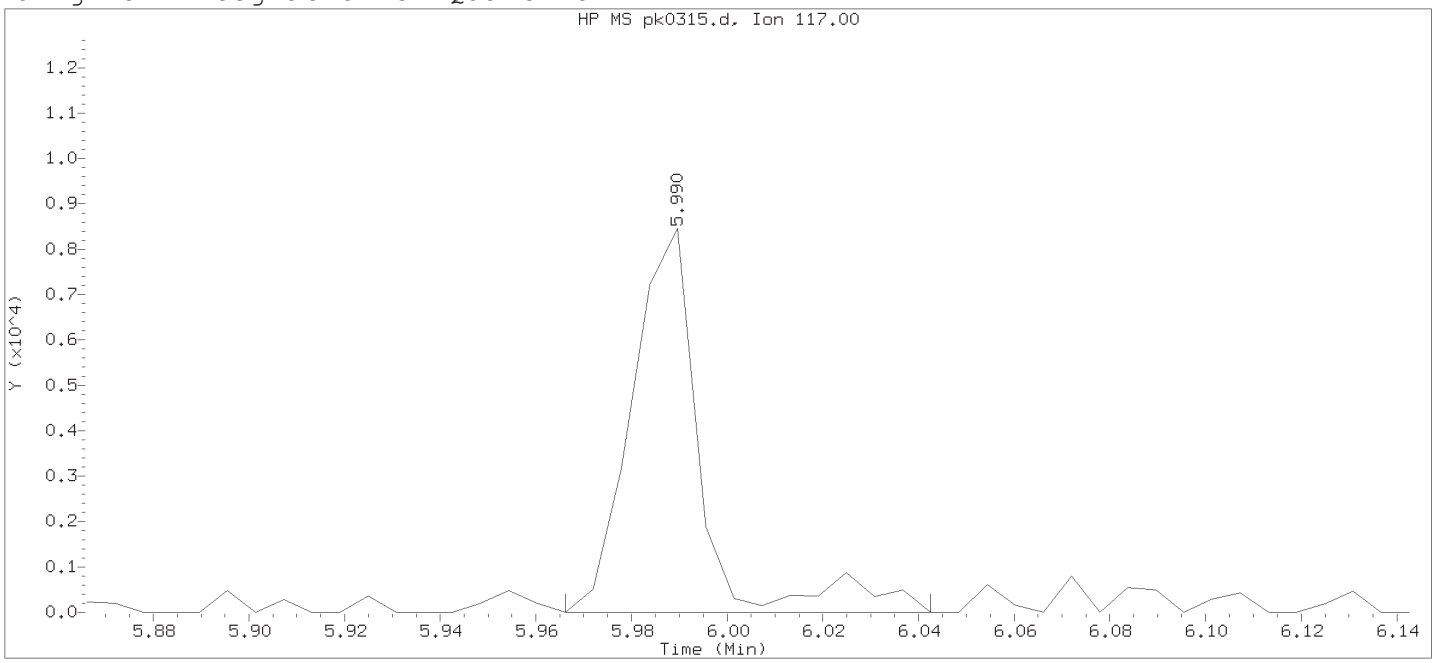
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

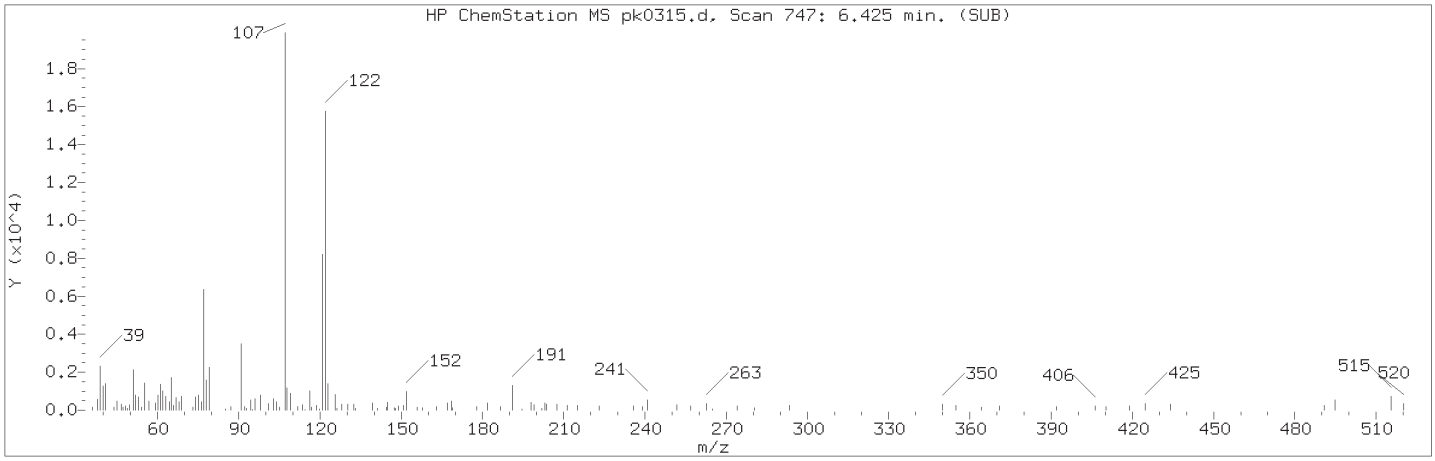
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 17:35
Date, time and analyst ID of latest file update: 09-Nov-2018 17:35 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

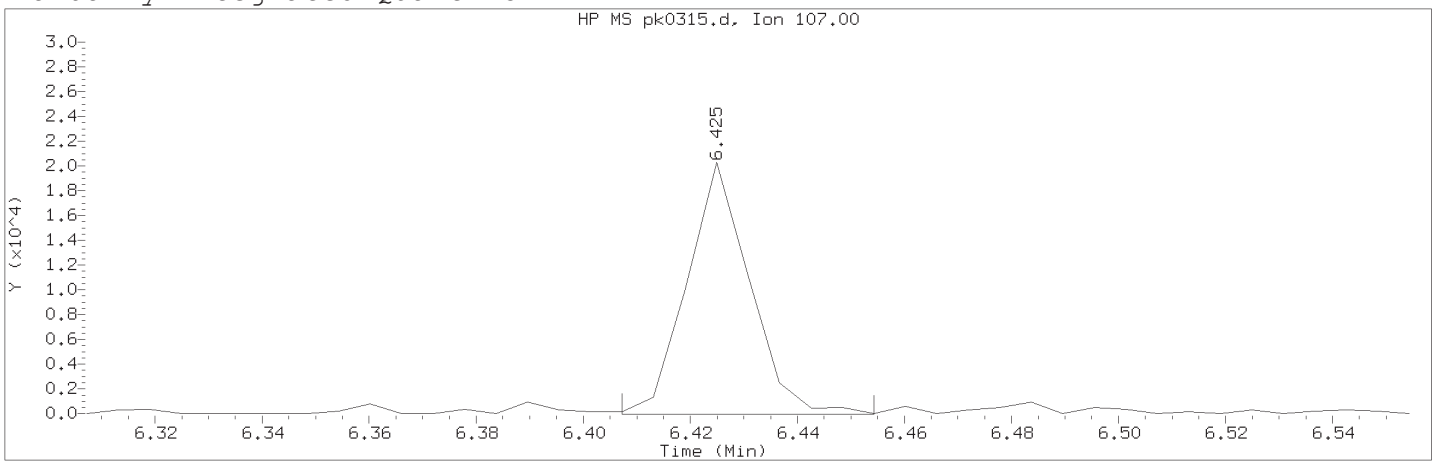
Compound Number	:	43
Compound Name	:	Hexachloroethane
Scan Number	:	673
Retention Time (minutes)	:	5.990
Quant Ion	:	117.00
Area	:	8515
On-column Amount (ng/ul)	:	1.5114
Integration start scan	:	668 Integration stop scan: 681
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10546

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

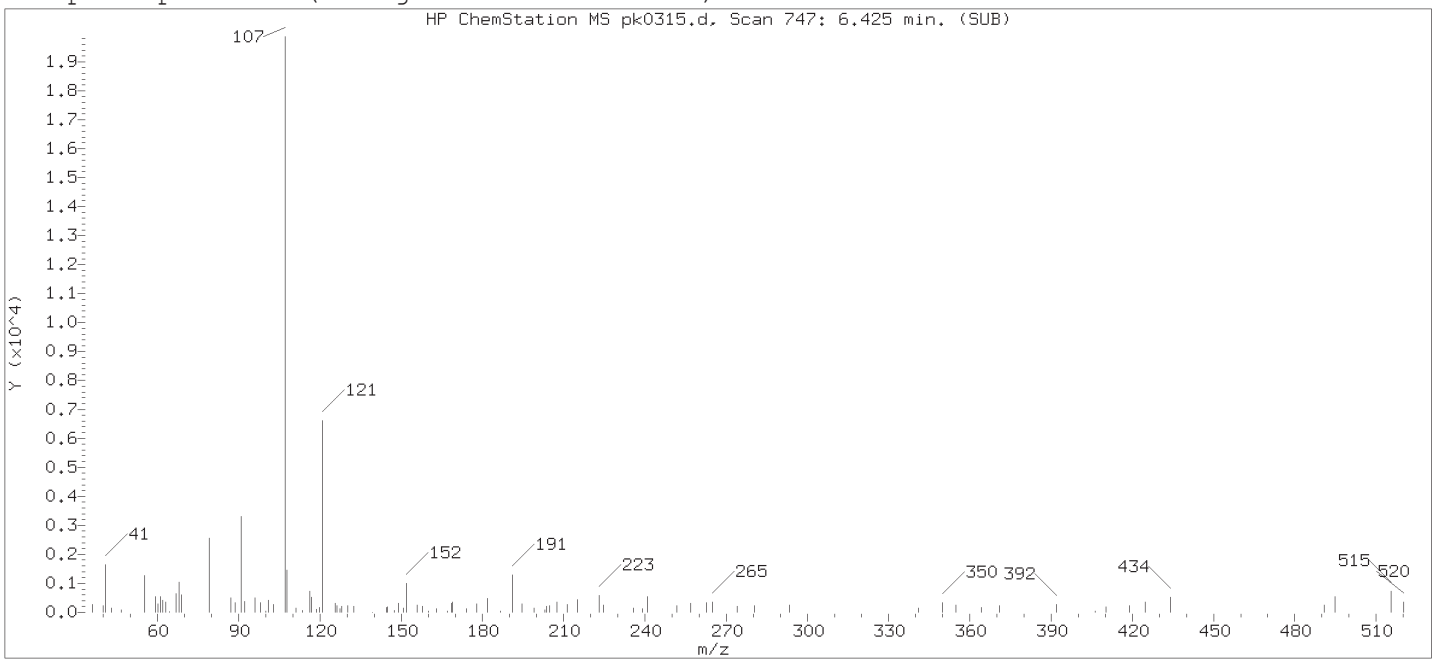
Compound Number	: 53		
Compound Name	: 2,4-Dimethylphenol		
Scan Number	: 747		
Retention Time (minutes)	: 6.425		
Quant Ion	: 107.00		
Area (flag)	: 16504M		
On-Column Amount (ng/ul)	: 1.0287		
Integration start scan	: 743	Integration stop scan:	751
Y at integration start	: -36	Y at integration end:	-36

Reason for manual integration: improper integration

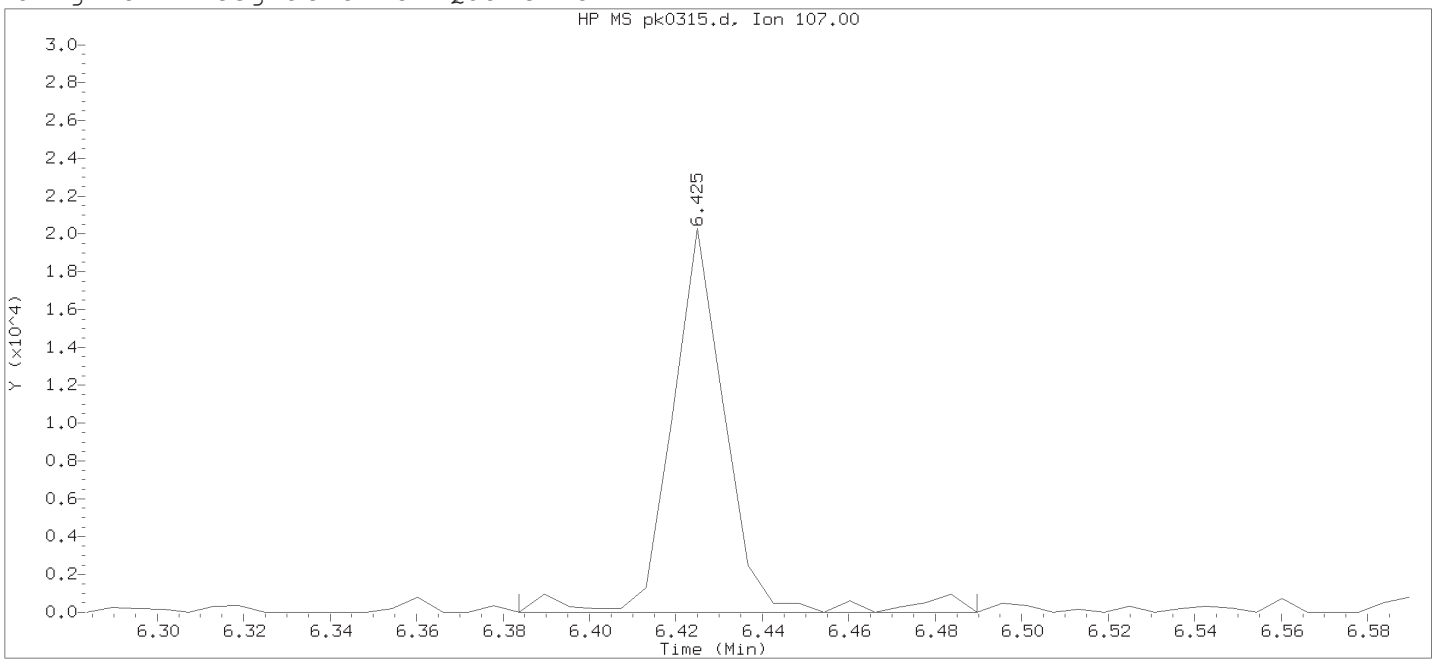
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

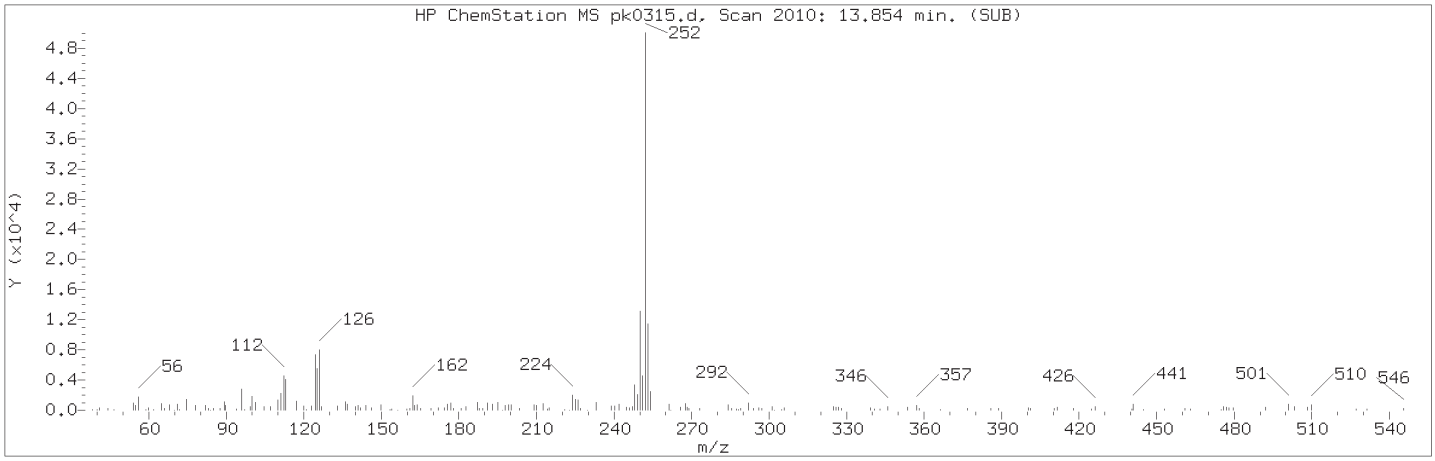
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 17:35
Date, time and analyst ID of latest file update: 09-Nov-2018 17:35 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

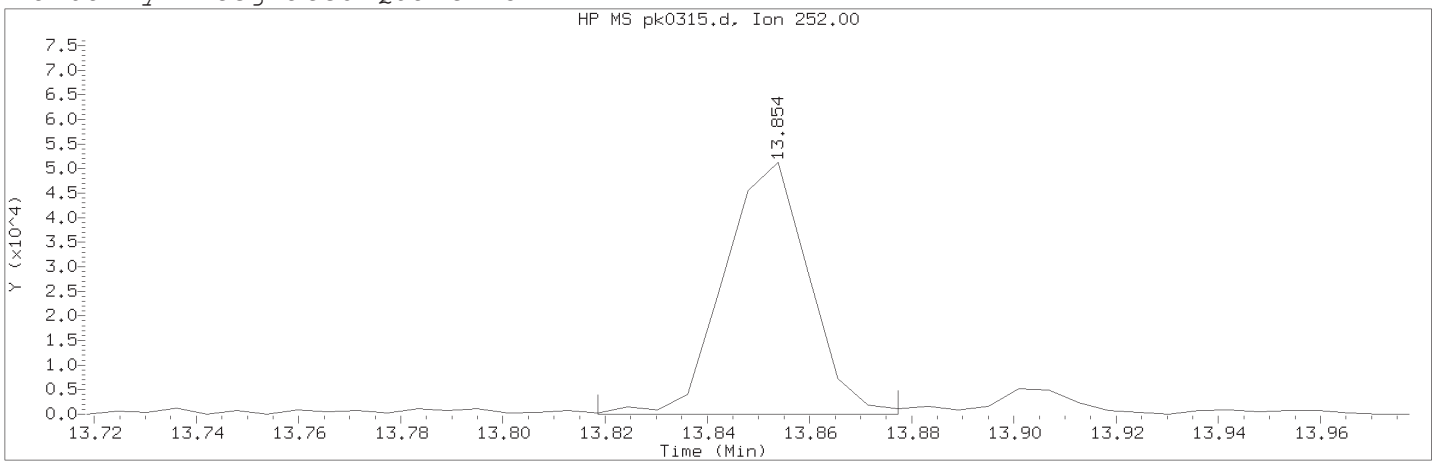
Compound Number	: 53		
Compound Name	: 2,4-Dimethylphenol		
Scan Number	: 747		
Retention Time (minutes)	: 6.425		
Quant Ion	: 107.00		
Area	: 17734		
On-column Amount (ng/ul)	: 1.0675		
Integration start scan	: 739	Integration stop scan:	757
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature used 21 CFR Part 11

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

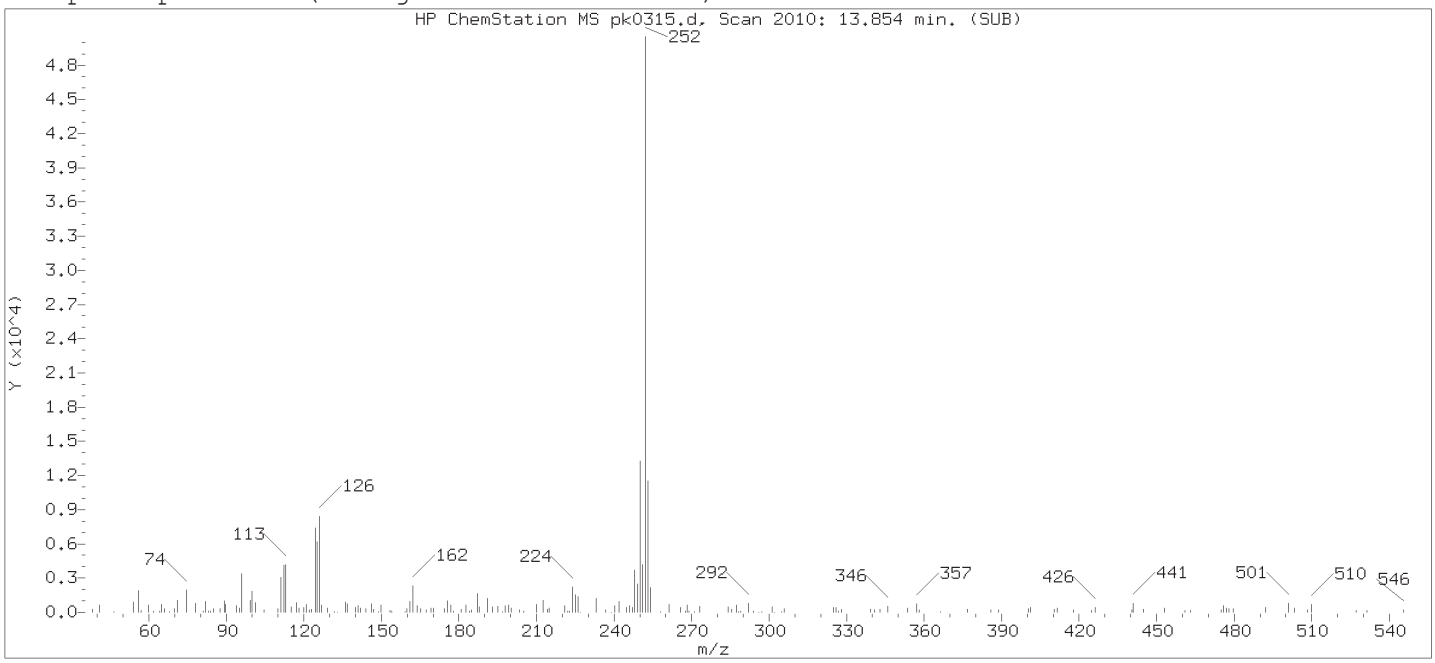
Compound Number	: 211		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 2010		
Retention Time (minutes)	: 13.854		
Quant Ion	: 252.00		
Area (flag)	: 58771M		
On-Column Amount (ng/ul)	: 0.9308		
Integration start scan	: 2003	Integration stop scan:	2013
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

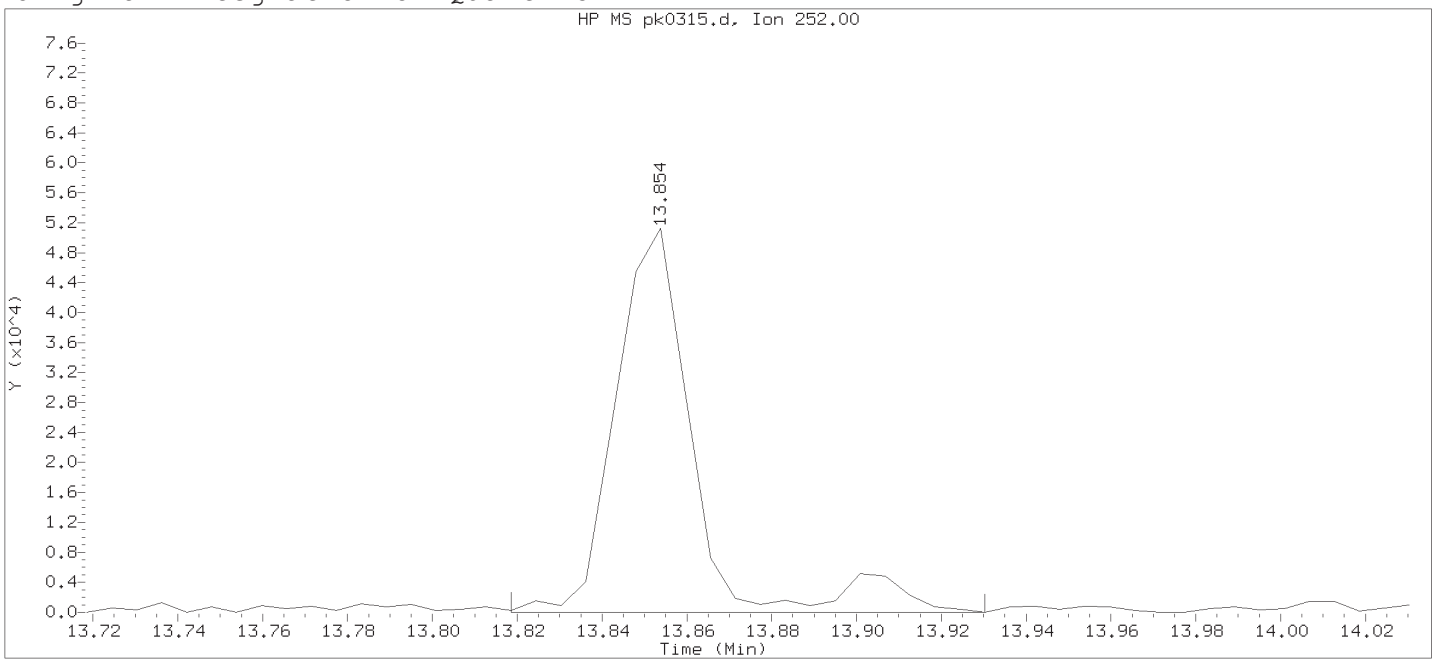
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

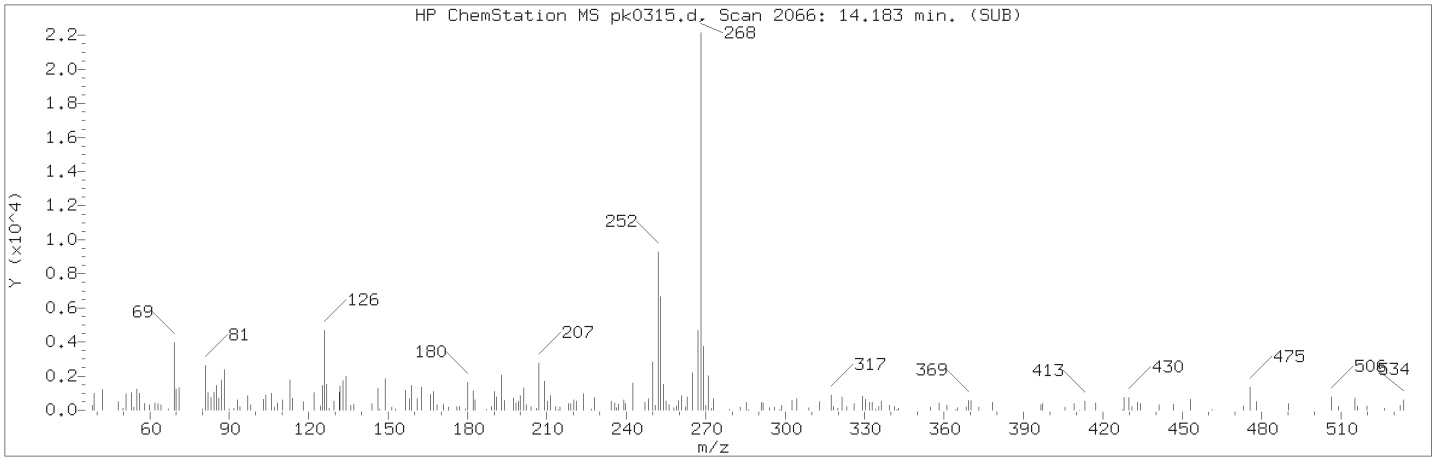
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 17:35
Date, time and analyst ID of latest file update: 09-Nov-2018 17:35 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

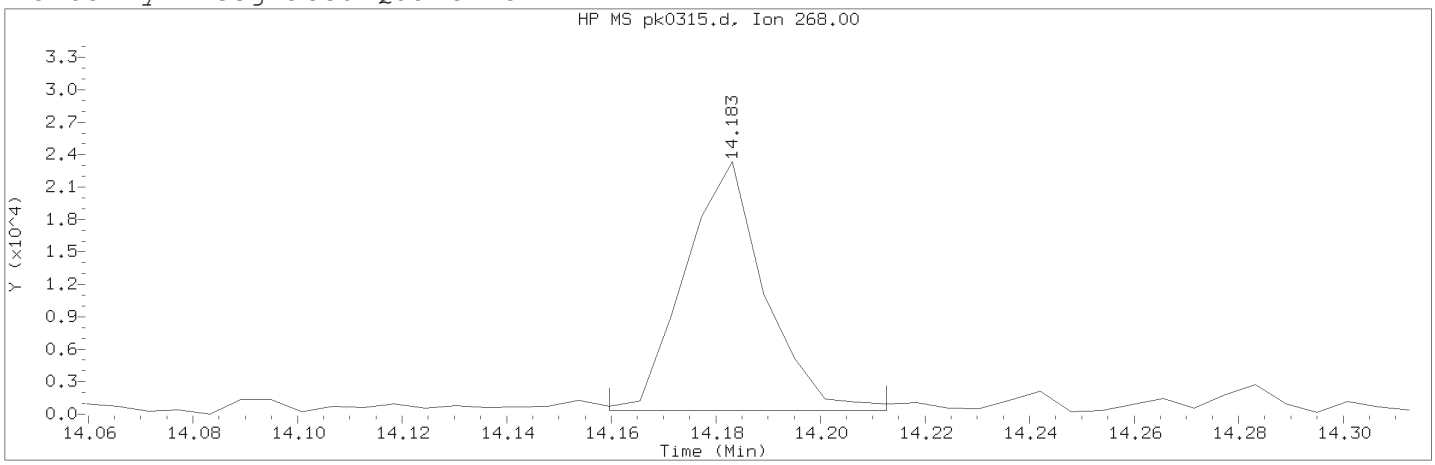
Compound Number	: 211		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 2010		
Retention Time (minutes)	: 13.854		
Quant Ion	: 252.00		
Area	: 64881		
On-column Amount (ng/ul)	: 1.0269		
Integration start scan	: 2003	Integration stop scan:	2022
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

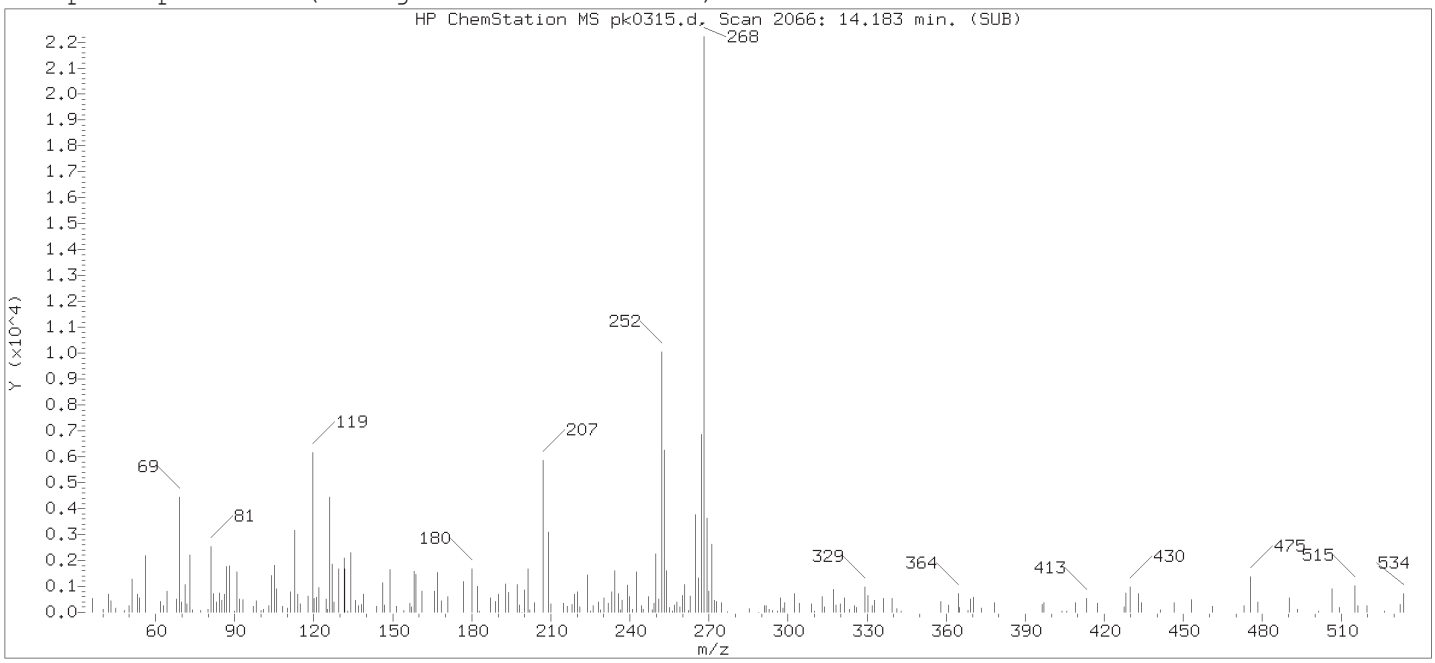
Compound Number : 215
Compound Name : 3-Methylcholanthrene
Scan Number : 2066
Retention Time (minutes) : 14.183
Quant Ion : 268.00
Area (flag) : 24393M
On-Column Amount (ng/ul) : 0.9684
Integration start scan : 2061 Integration stop scan: 2070
Y at integration start : 324 Y at integration end: 324

Reason for manual integration: improper integration

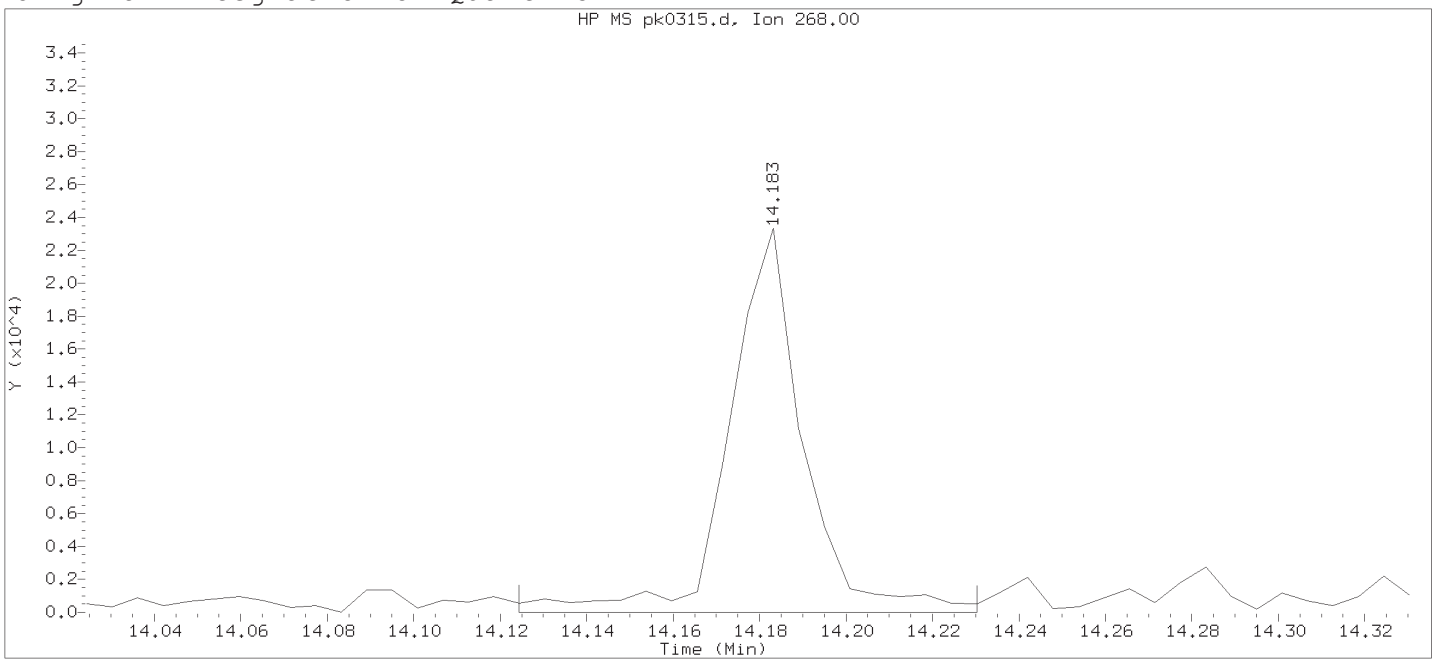
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

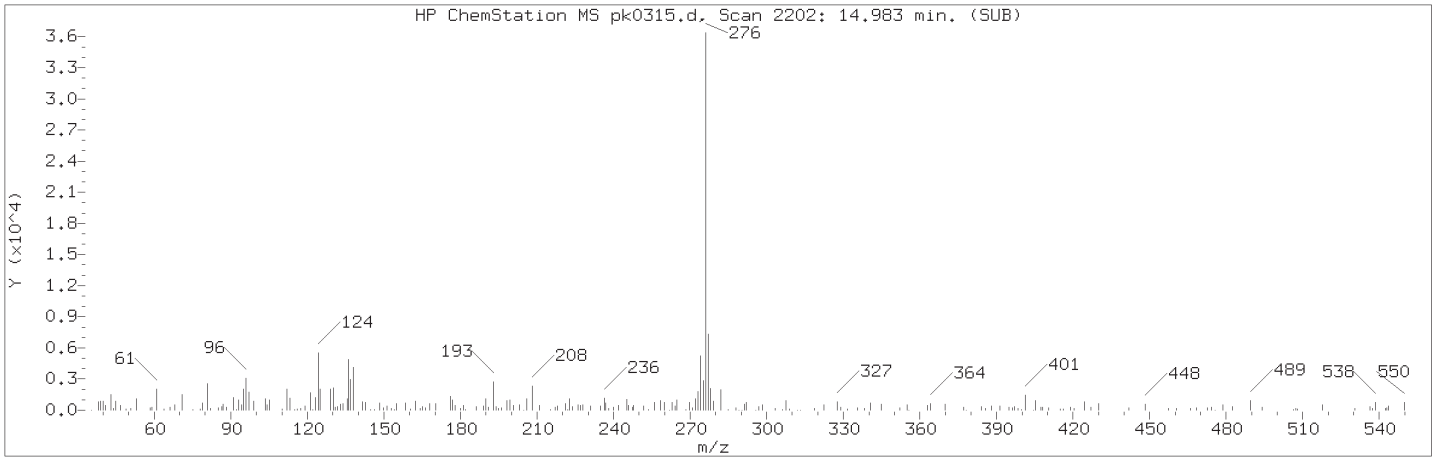
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 17:35
Date, time and analyst ID of latest file update: 09-Nov-2018 17:35 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

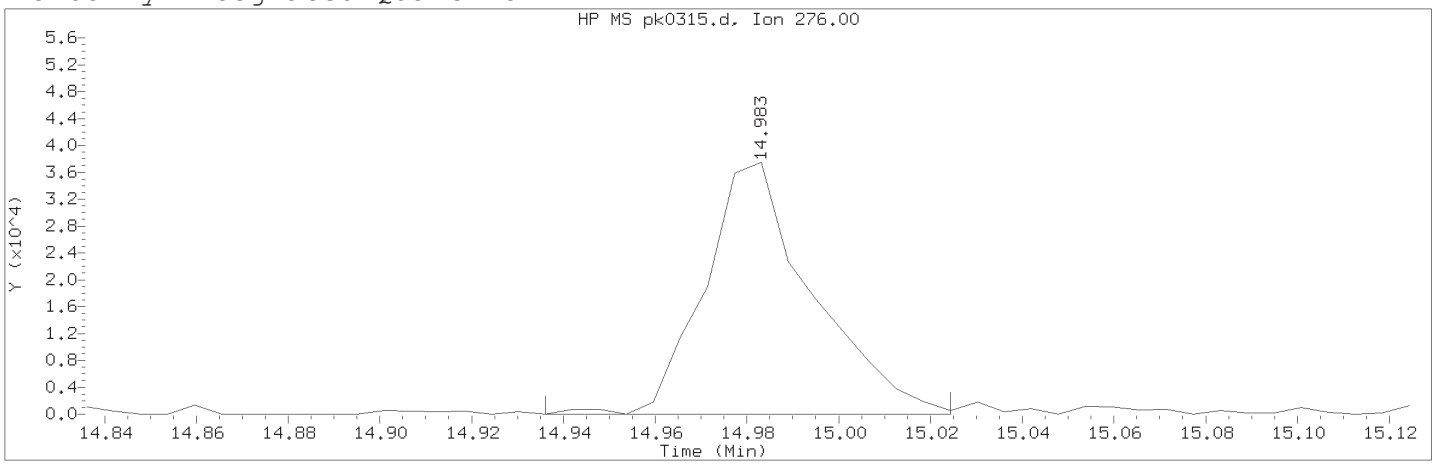
Compound Number	: 215		
Compound Name	: 3-Methylcholanthrene		
Scan Number	: 2066		
Retention Time (minutes)	: 14.183		
Quant Ion	: 268.00		
Area	: 27744		
On-column Amount (ng/ul)	: 1.1102		
Integration start scan	: 2055	Integration stop scan:	2073
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature used: D10 Page 1550

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

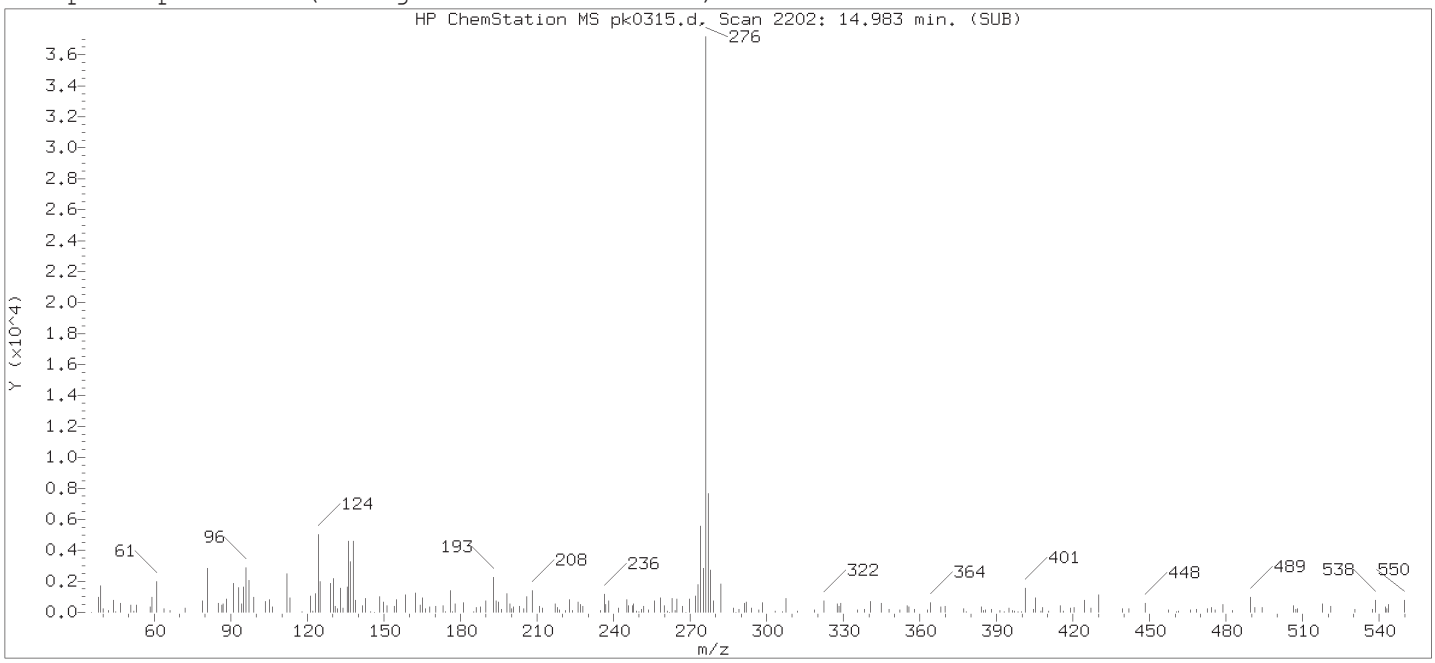
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2202
Retention Time (minutes) : 14.983
Quant Ion : 276.00
Area (flag) : 61153M
On-Column Amount (ng/ul) : 0.9519
Integration start scan : 2193 Integration stop scan: 2208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

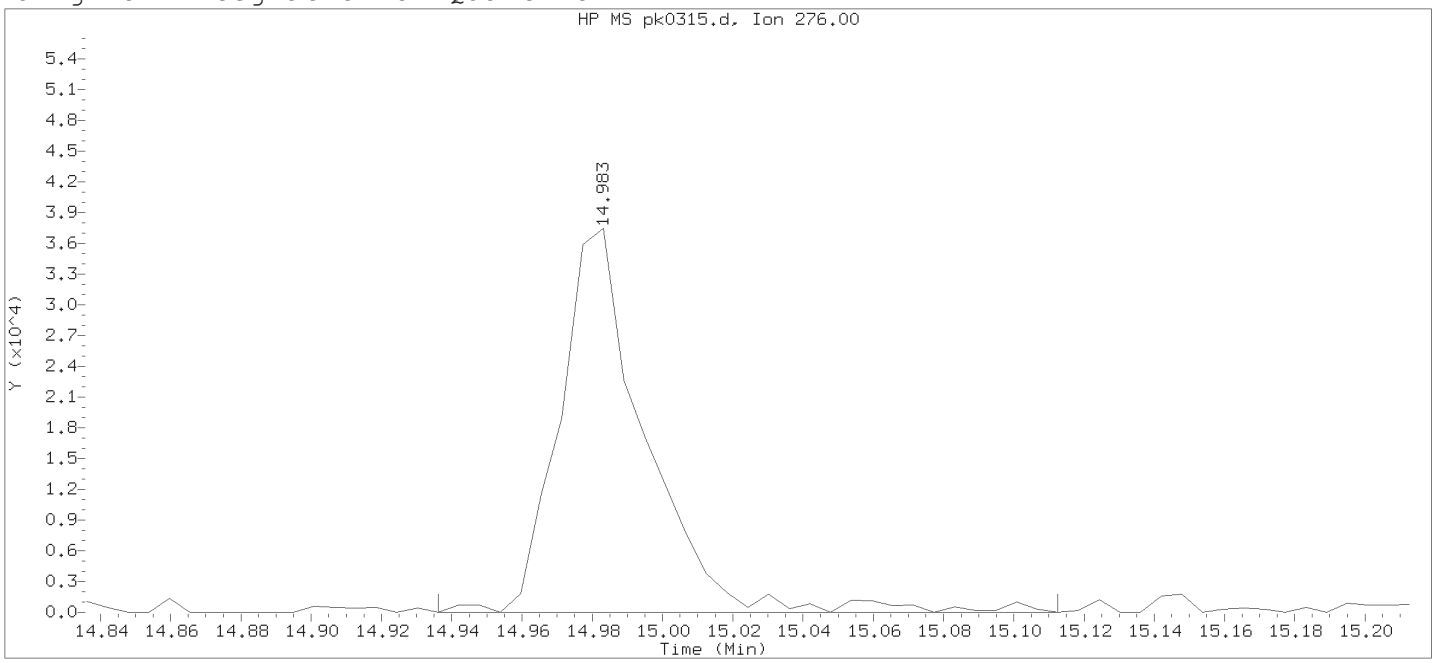
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

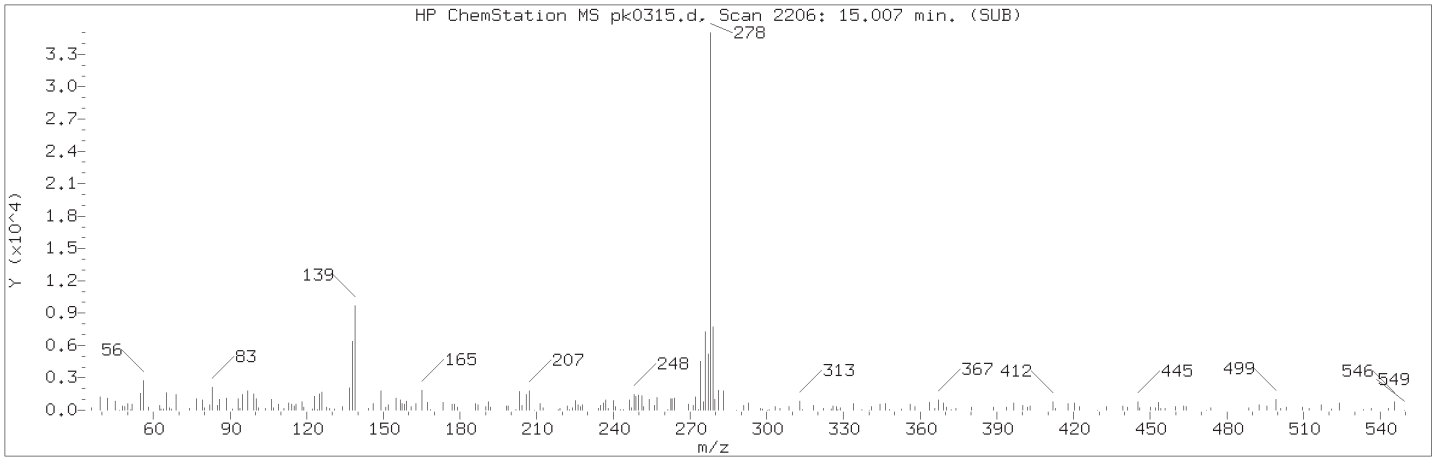
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 17:35
Date, time and analyst ID of latest file update: 09-Nov-2018 17:35 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

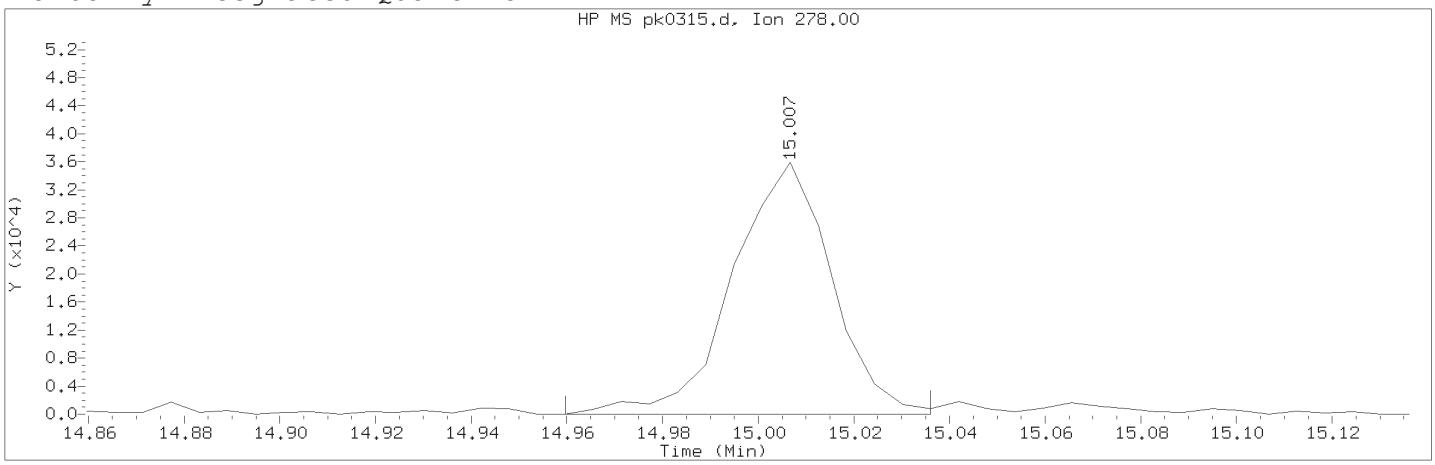
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2202		
Retention Time (minutes)	: 14.983		
Quant Ion	: 276.00		
Area	: 64248		
On-column Amount (ng/ul)	: 1.0458		
Integration start scan	: 2193	Integration stop scan:	2223
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature used: D10 Page 1552

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

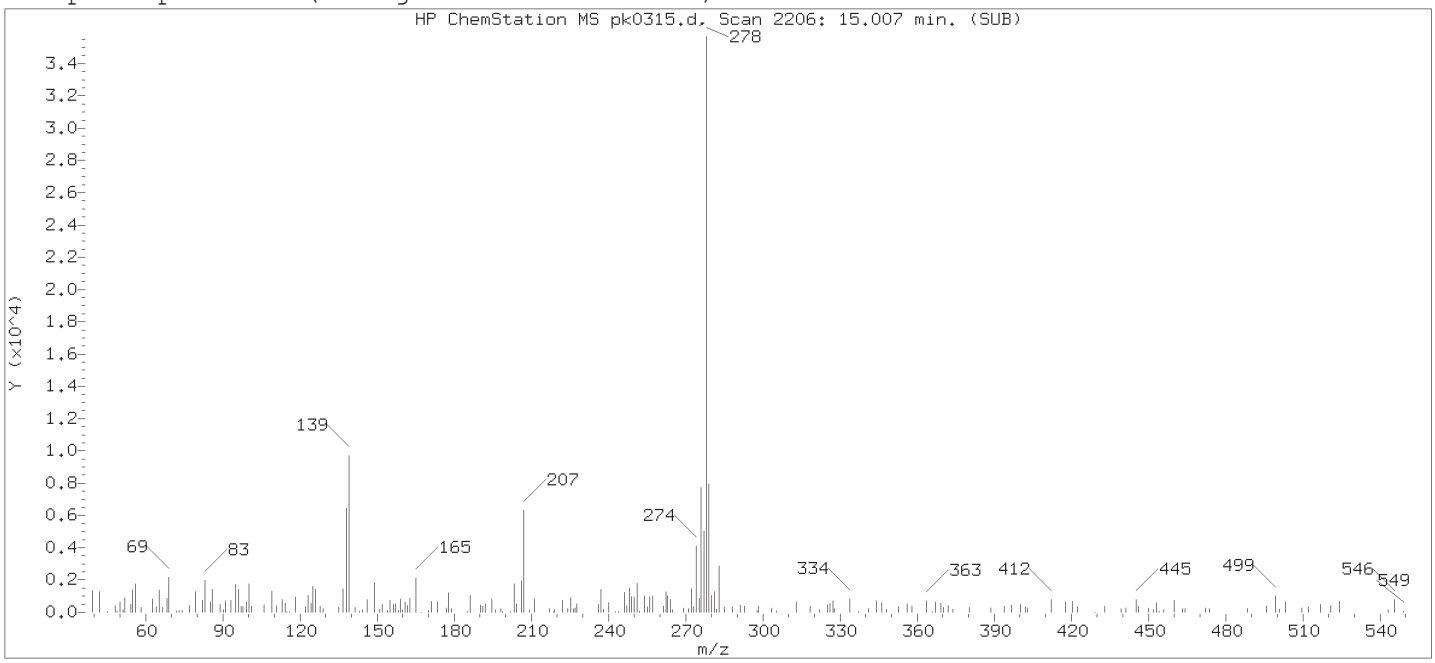
Compound Number	: 220		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 2206		
Retention Time (minutes)	: 15.007		
Quant Ion	: 278.00		
Area (flag)	: 51626M		
On-Column Amount (ng/ul)	: 0.9136		
Integration start scan	: 2197	Integration stop scan:	2210
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

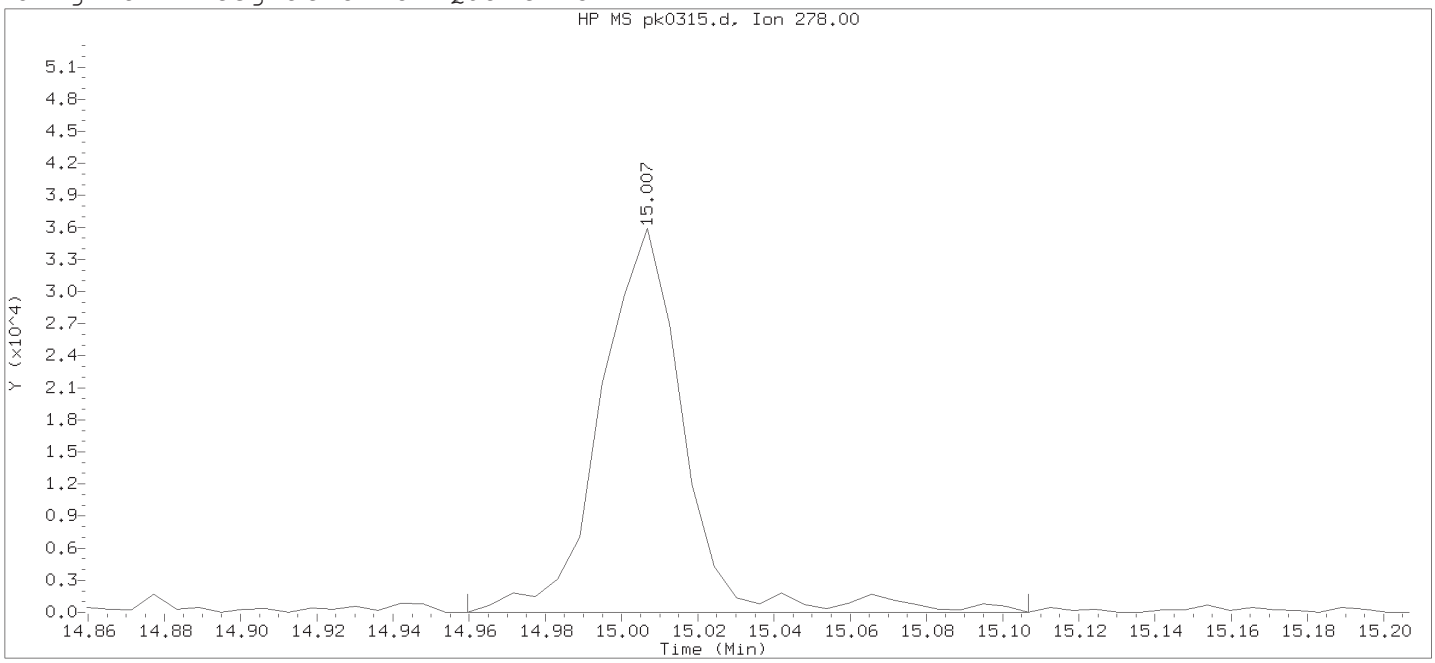
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

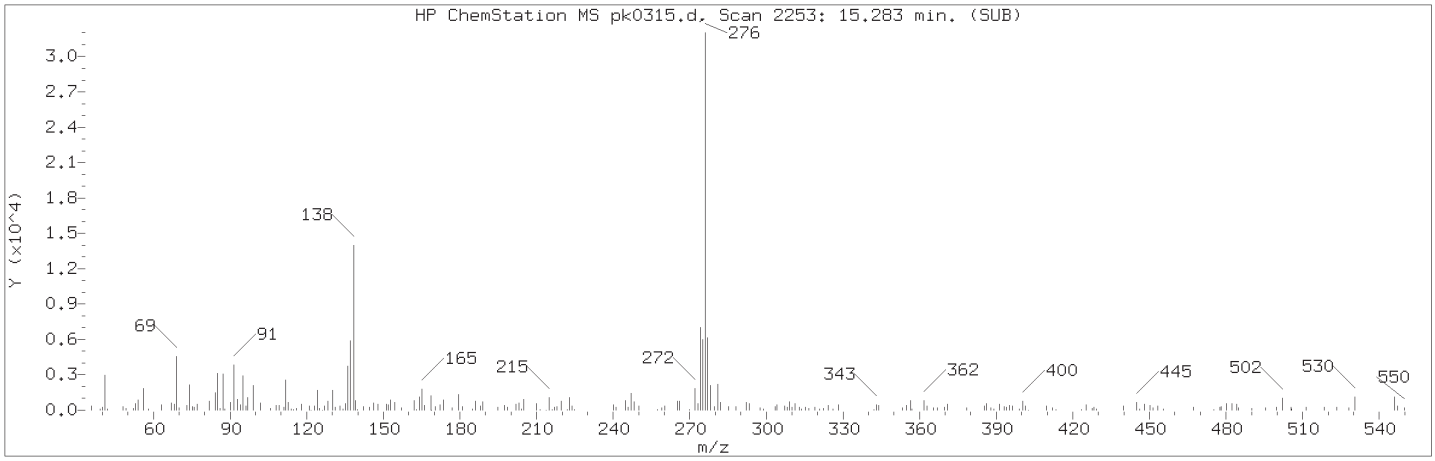
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 17:35
Date, time and analyst ID of latest file update: 09-Nov-2018 17:35 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

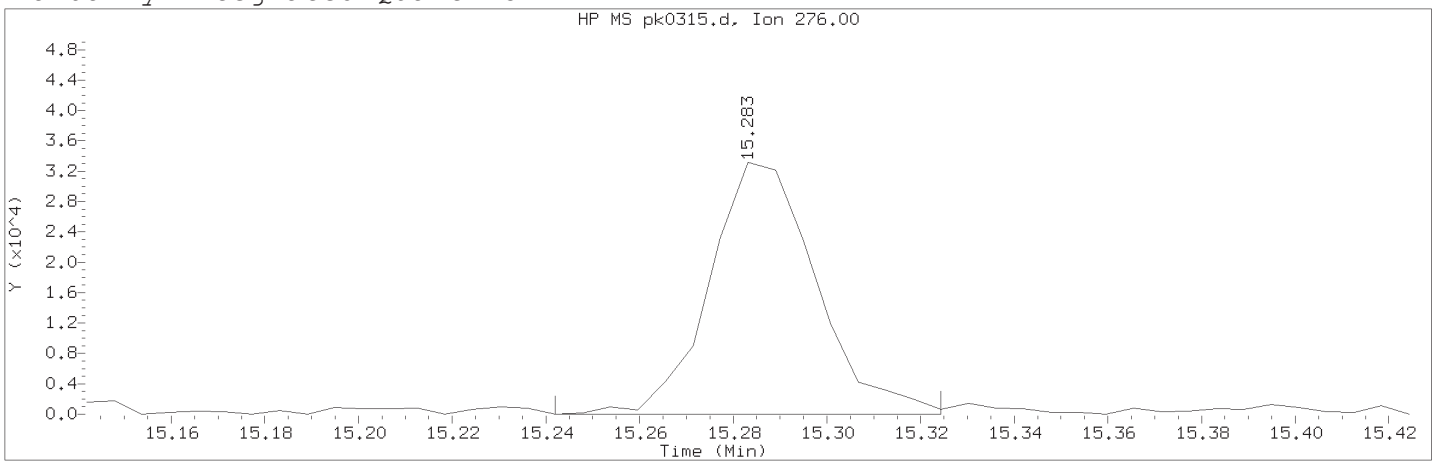
Compound Number	: 220		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 2206		
Retention Time (minutes)	: 15.007		
Quant Ion	: 278.00		
Area	: 54888		
On-column Amount (ng/ul)	: 1.0042		
Integration start scan	: 2197	Integration stop scan:	2222
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature used: D10 Page 1554

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD001 Lab Sample ID: STD2928

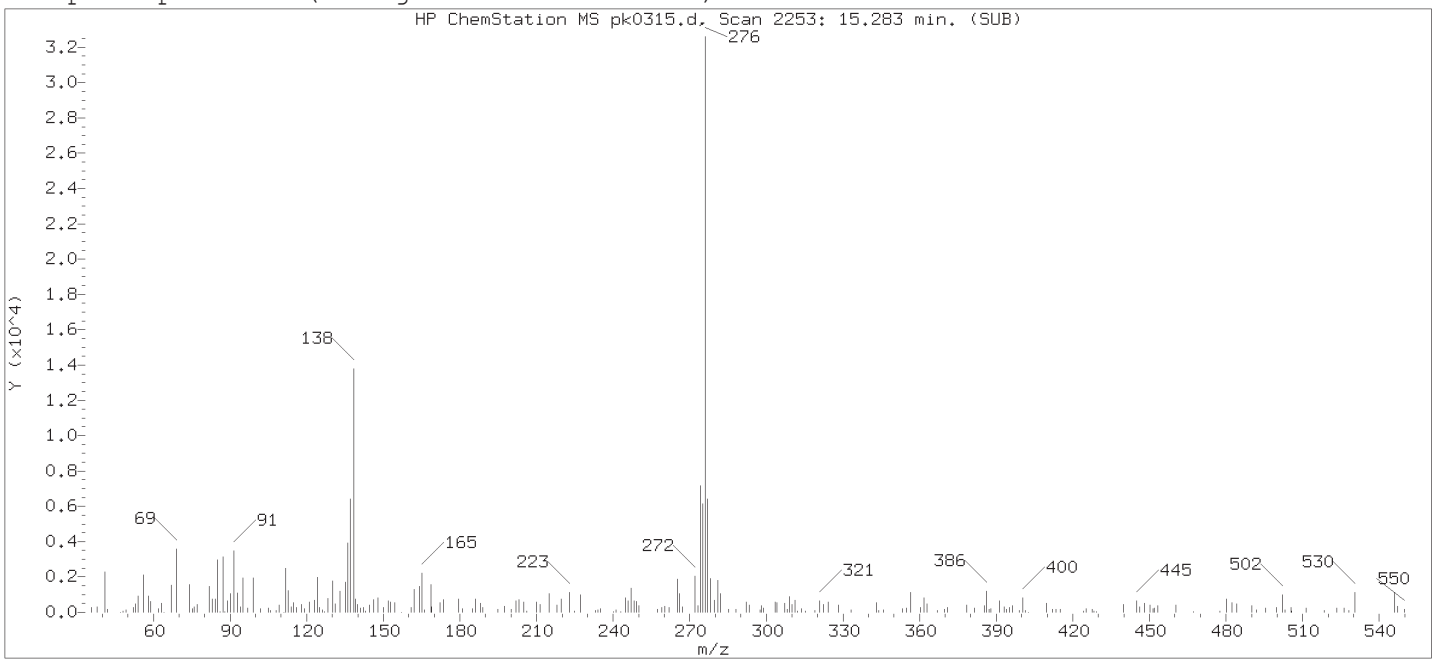
Compound Number	: 221		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2253		
Retention Time (minutes)	: 15.283		
Quant Ion	: 276.00		
Area (flag)	: 52405M		
On-Column Amount (ng/ul)	: 0.9552		
Integration start scan	: 2245	Integration stop scan:	2259
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

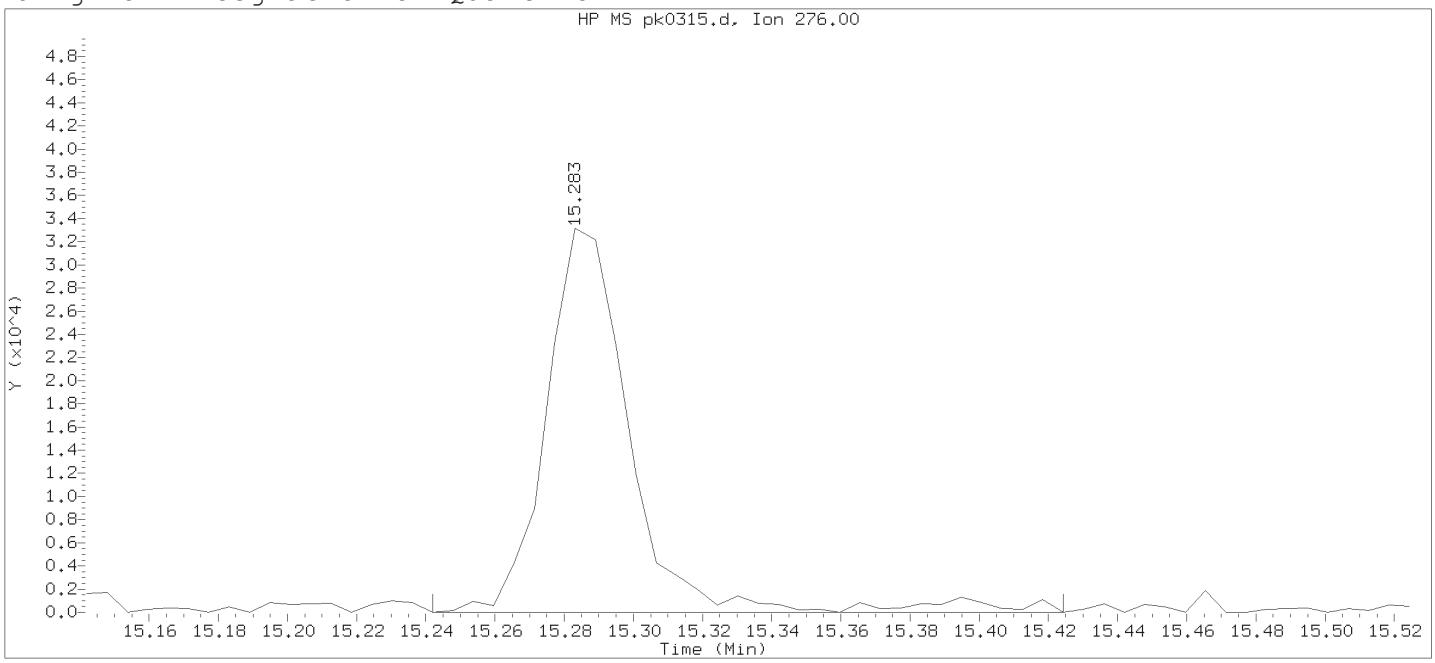
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



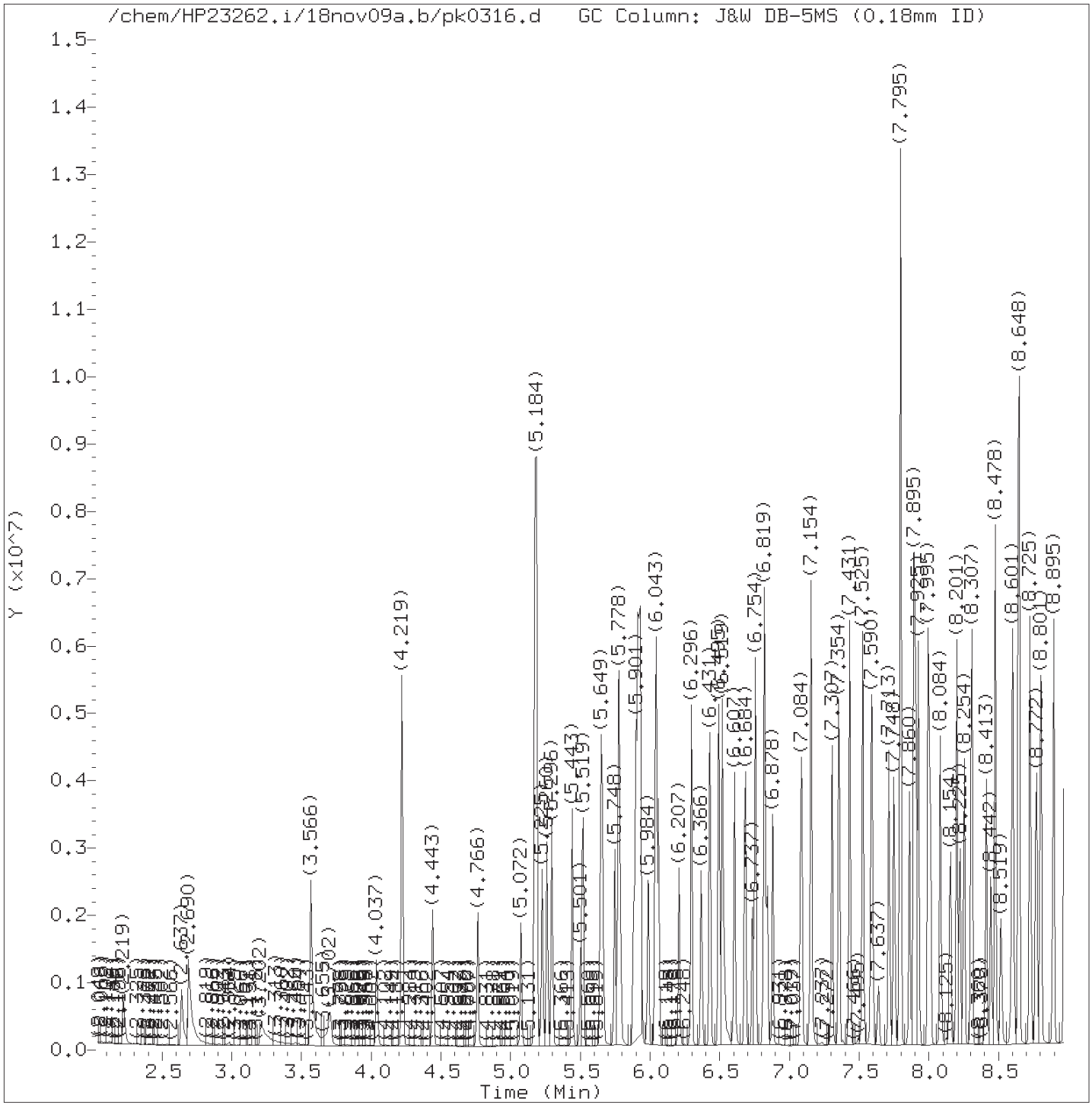
Data File: /chem/HP23262.i/18nov09a.b/pk0315.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:15 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 17:35
Date, time and analyst ID of latest file update: 09-Nov-2018 17:35 Automation

Sample Name: SSTD001 Lab Sample ID: STD2928

Compound Number	: 221		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2253		
Retention Time (minutes)	: 15.283		
Quant Ion	: 276.00		
Area	: 55957		
On-column Amount (ng/ul)	: 1.0215		
Integration start scan	: 2245	Integration stop scan:	2276
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: Page 1556



Total Ion Chromatogram (TIC)

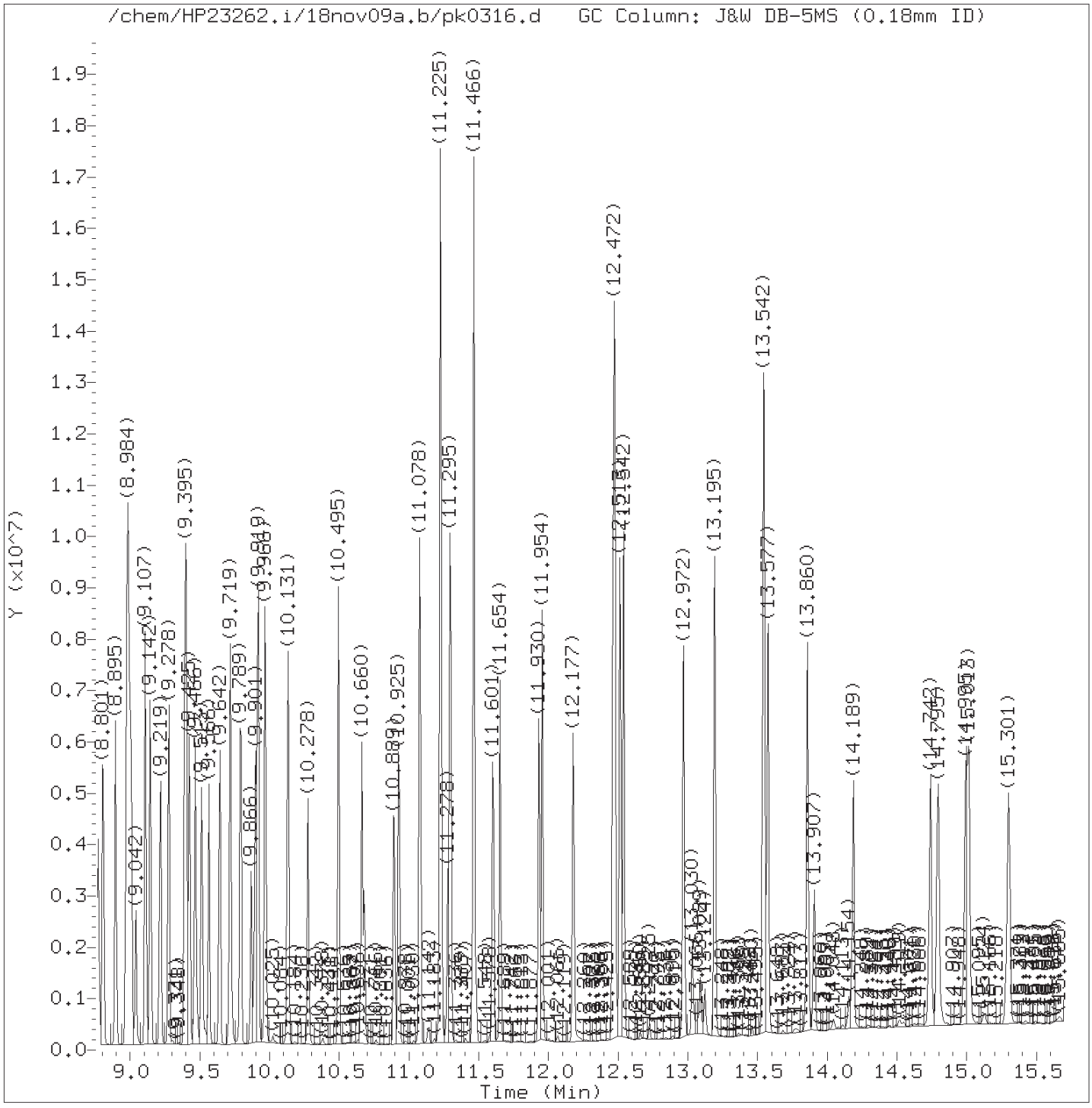
Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0316.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:38 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD050 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0316.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:38 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD050 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0316.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:38 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD050 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.219	88	323901	50.364
4) N-Nitrosodimethylamine	(1)	2.637	74	505495	46.315
5) Pyridine	(1)	2.690	79	858020	45.209
7) 2-Picoline	(1)	3.566	93	955823	48.878
8) N-Nitrosomethylethylamine	(1)	3.702	88	417660	48.156
9) Methyl methanesulfonate	(1)	4.037	80	418112	48.343
11)$2-Fluorophenol	(1)	4.219	112	1362735	97.071
13) N-Nitrosodiethylamine	(1)	4.443	102	411573	49.739
15) Ethyl methanesulfonate	(1)	4.766	109	397571	47.133
17)$Phenol-d6	(1)	5.172	99	2123489	96.090
18) Phenol	(1)	5.184	94	1267692	48.545
19) Aniline	(1)	5.184	93	1413042	48.250
22) bis(2-Chloroethyl)ether	(1)	5.260	93	902886	49.147
23) 2-Chlorophenol	(1)	5.296	128	680449	47.811
24) 1,3-Dichlorobenzene	(1)	5.443	146	685663	48.886
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	180715	20.000
26) 1,4-Dichlorobenzene	(1)	5.519	146	673372	48.683
27) Benzyl alcohol	(1)	5.649	108	565372	49.481
42) Total Cresols	(1)			1732085	99.271
28) 1,2-Dichlorobenzene	(1)	5.660	146	665541	47.686
30) Indene	(1)	5.748	115	843692	50.410
31) 2-Methylphenol	(1)	5.772	108	792529	49.240
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.784	45	1336562	49.843
34) bis(2-Chloroisopropyl)ether	(1)	5.784	45	1336562	49.843
35) N-Nitrosopyrrolidine	(1)	5.884	100	510455	49.449
36) Acetophenone	(1)	5.896	105	1196428	49.122
38) N-Nitroso-di-n-propylamine	(1)	5.913	70	781328	48.993
37) 4-Methylphenol	(1)	5.919	108	939556	49.974
39) N-Nitrosomorpholine	(1)	5.925	56	631873	49.711
40) o-Toluidine	(1)	5.931	106	1314434	48.640
43) Hexachloroethane	(1)	5.984	117	292062	49.309
44)$Nitrobenzene-d5	(2)	6.043	82	2031717	99.892
45) Nitrobenzene	(2)	6.060	77	1070953	49.260
48) N-Nitrosopiperidine	(2)	6.207	114	463485	49.786
50) Isophorone	(2)	6.296	82	2081946	51.258
51) 2-Nitrophenol	(2)	6.366	139	396070	49.696
53) 2,4-Dimethylphenol	(2)	6.431	107	886527	49.434
57) O,O,O-Triethylphosphorothioate	(2)	6.495	198	428630	50.378
55) bis(2-Chloroethoxy)methane	(2)	6.519	93	1238469	50.995
56) Benzoic acid	(2)	6.537	105	640383	50.936

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0316.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:38 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD050 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.607	162	652522	49.184
62) 1,2,4-Trichlorobenzene	(2)	6.684	180	662429	49.359
65)*Naphthalene-d8	(2)	6.737	136	781992	20.000
66) Naphthalene	(2)	6.754	128	2185798	48.947
67) 4-Chloroaniline	(2)	6.819	127	919165	51.096
68) 2,6-Dichlorophenol	(2)	6.825	162	642849	50.423
69) Hexachloropropene	(2)	6.843	213	381657	48.913
71) Hexachlorobutadiene	(2)	6.884	225	394051	52.048
75) Quinoline	(2)	7.084	129	1540213	50.711
77) N-Nitrosodi-n-butylamine	(2)	7.154	84	1011612	51.385
76) Caprolactam	(2)	7.160	113	327939	53.049
80) 4-Chloro-3-methylphenol	(2)	7.307	107	828975	49.866
82) Safrole	(2)	7.354	162	618592	50.267
97) Isosafrole	(3)			640656	48.413
83) 2-Methylnaphthalene	(2)	7.431	142	1548306	50.792
84) 1-Methylnaphthalene	(2)	7.525	142	1477269	50.332
85) Hexachlorocyclopentadiene	(3)	7.584	237	403258	49.384
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.595	216	789980	48.645
88) cis-Isosafrole	(3)	7.642	162	109495	8.307
90) 2,4,6-Trichlorophenol	(3)	7.713	196	540938	49.637
92) 2,4,5-Trichlorophenol	(3)	7.748	196	585256	48.794
93)$2-Fluorobiphenyl	(3)	7.795	172	3816945	102.473
94) trans-Isosafrole	(3)	7.860	162	531161	40.107
95) 1,1'-Biphenyl	(3)	7.890	154	2042245	49.371
96) 2-Chloronaphthalene	(3)	7.907	162	1449341	44.384
98) 1-Chloronaphthalene	(3)	7.925	162	1636908	51.155
99) Diphenyl ether	(3)	7.995	170	1138490	48.430
100) 2-Nitroaniline	(3)	8.013	138	535380	48.229
120) 2,4_2,6-Dinitrotoluenes	(3)			1070328	98.414
104) 1,4-Naphthoquinone	(3)	8.084	158	705042	49.182
105) 1,4-Dinitrobenzene	(3)	8.154	168	310193	50.035
106) Dimethylphthalate	(3)	8.201	163	1938448	49.420
107) 1,3-Dinitrobenzene	(3)	8.225	168	344113	47.997
108) 2,6-Dinitrotoluene	(3)	8.254	165	456646	48.019
109) Acenaphthylene	(3)	8.307	152	2332777	49.441
112) 3-Nitroaniline	(3)	8.413	138	488774	50.083
113)*Acenaphthene-d10	(3)	8.442	164	486294	20.000
114) Acenaphthene	(3)	8.478	153	1659242	49.755
115) 2,4-Dinitrophenol	(3)	8.519	184	270628	49.494
116) 4-Nitrophenol	(3)	8.595	109	314683	47.751

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0316.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:38 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD050 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
117) Pentachlorobenzene	(3)	8.607	250	753663	49.499
119) Dibenzofuran	(3)	8.648	168	2515080	49.487
118) 2,4-Dinitrotoluene	(3)	8.648	165	613682	49.213
121) 1-Naphthylamine	(3)	8.725	143	1733690	49.230
122) 2,3,4,6-Tetrachlorophenol	(3)	8.772	232	495744	48.496
146) Diallate trans/cis	(4)			1192481	48.768
123) 2-Naphthylamine	(3)	8.807	143	1734092	50.165
124) Diethylphthalate	(3)	8.895	149	2000949	49.939
125) Thionazin	(3)	8.972	107	376018	51.887
126) Fluorene	(3)	8.984	166	2066703	50.338
127) 4-Chlorophenyl-phenylether	(3)	8.989	204	1089255	49.208
128) 5-Nitro-o-toluidine	(3)	9.001	152	576818	49.799
129) 4-Nitroaniline	(3)	9.013	138	513791	47.249
130) 4,6-Dinitro-2-methylphenol	(4)	9.042	198	373181	48.901
132) NDPA as diphenylamine	(4)	9.107	169	1785992	49.168
131) N-Nitrosodiphenylamine	(4)	9.107	169	1785992	49.168
134) 1,2-Diphenylhydrazine	(4)	9.142	77	2707500	49.149
135)$2,4,6-Tribromophenol	(3)	9.219	330	478784	99.430
137) Tetraethyldithiopyrophosphate	(4)	9.278	97	388968	49.415
139) 1,3,5-Trinitrobenzene	(4)	9.389	213	266247	49.057
140) Diallate (peak 1)	(4)	9.395	86	1019327	40.490
141) Phorate	(4)	9.401	75	2311162	56.011
142) Phenacetin	(4)	9.425	108	1163118	48.348
143) 4-Bromophenyl-phenylether	(4)	9.466	248	604325	48.824
144) Diallate (peak 2)	(4)	9.478	86	173154	8.275
145) Hexachlorobenzene	(4)	9.513	284	582142	50.859
147) Dimethoate	(4)	9.566	87	1049586	50.224
149) Pentachlorophenol	(4)	9.713	266	354755	48.480
150) 4-Aminobiphenyl	(4)	9.719	169	797229	45.120
151) Pentachloronitrobenzene	(4)	9.719	237	278099	49.163
152) Pronamide	(4)	9.795	173	970268	50.320
153)*Phenanthrene-d10	(4)	9.895	188	1118293	20.000
154) Dinoseb	(4)	9.901	211	569496	48.128
155) Phenanthrene	(4)	9.919	178	3058317	47.923
157) Anthracene	(4)	9.966	178	3191925	49.484
163) Carbazole	(4)	10.131	167	2885558	49.008
164) Methyl parathion	(4)	10.278	109	770513	50.787
165) Di-n-butylphthalate	(4)	10.495	149	3608478	51.291
167) Parathion	(4)	10.660	109	494863	49.830
168) 4-Nitroquinoline-1-oxide	(4)	10.678	190	305032	48.289

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0316.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 17:38 Analyst ID: lmh00956

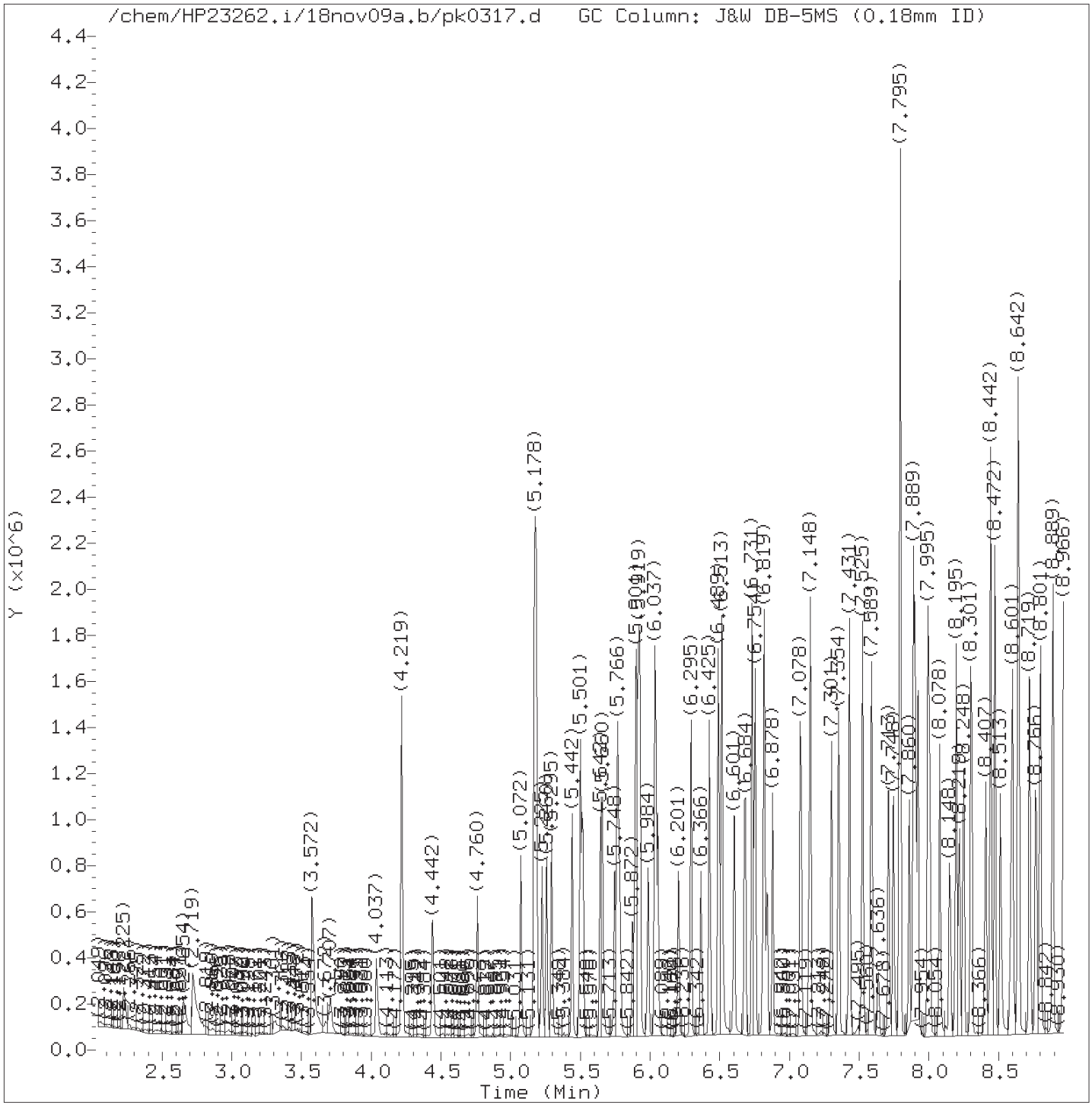
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD050 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
169) Octachlorostyrene	(4)	10.895	308	230143	50.856
171) Isodrin	(4)	10.925	193	380371	47.089
173) Fluoranthene	(4)	11.078	202	3741837	51.356
174) Benzidine	(5)	11.225	184	6869837	162.007
175)*Pyrene-d10	(5)	11.278	212	1157721	20.000
177) Pyrene	(5)	11.295	202	3787862	48.389
179)$Terphenyl-d14	(5)	11.466	244	4935256	101.225
182) p-Dimethylaminoazobenzene	(5)	11.601	225	685328	49.779
185) Chlorobenzilate	(5)	11.654	139	962013	49.553
187) 3,3'-Dimethylbenzidine	(5)	11.930	212	2209813	49.974
188) Butylbenzylphthalate	(5)	11.954	149	1656735	49.732
191) 2-Acetylaminofluorene	(5)	12.177	181	1388361	48.994
193) 3,3'-Dichlorobenzidine	(5)	12.466	252	1281274	49.104
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.472	231	692660	50.076
195) Benzo(a)anthracene	(5)	12.477	228	3588779	49.997
196) Chrysene	(5)	12.513	228	3474676	50.583
199) bis(2-Ethylhexyl)phthalate	(5)	12.542	149	2344473	49.622
203) 6-Methylchrysene	(5)	12.972	242	2350963	49.174
205) Di-n-octylphthalate	(6)	13.195	149	4066395	51.475
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.542	256	1551029	49.346
206) Benzo(b)fluoranthene	(6)	13.548	252	3278539	47.083
208) Benzo(k)fluoranthene	(6)	13.577	252	3415802	50.599
211) Benzo(a)pyrene	(6)	13.860	252	3110086	49.010
213)*Perylene-d12	(6)	13.907	264	978450	20.000
215) 3-Methylcholanthrene	(6)	14.189	268	1258244	49.603
217) Dibenz(a,h)acridine	(6)	14.742	279	2444010	49.405
218) Dibenz(a,j)acridine	(6)	14.795	279	2499341	49.113
219) Indeno(1,2,3-cd)pyrene	(6)	14.995	276	3299174	50.744
222) Total PAHs	(6)			50791343	900.875
220) Dibenz(a,h)anthracene	(6)	15.018	278	2823424	49.600
221) Benzo(g,h,i)perylene	(6)	15.301	276	2750827	49.742

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:07.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

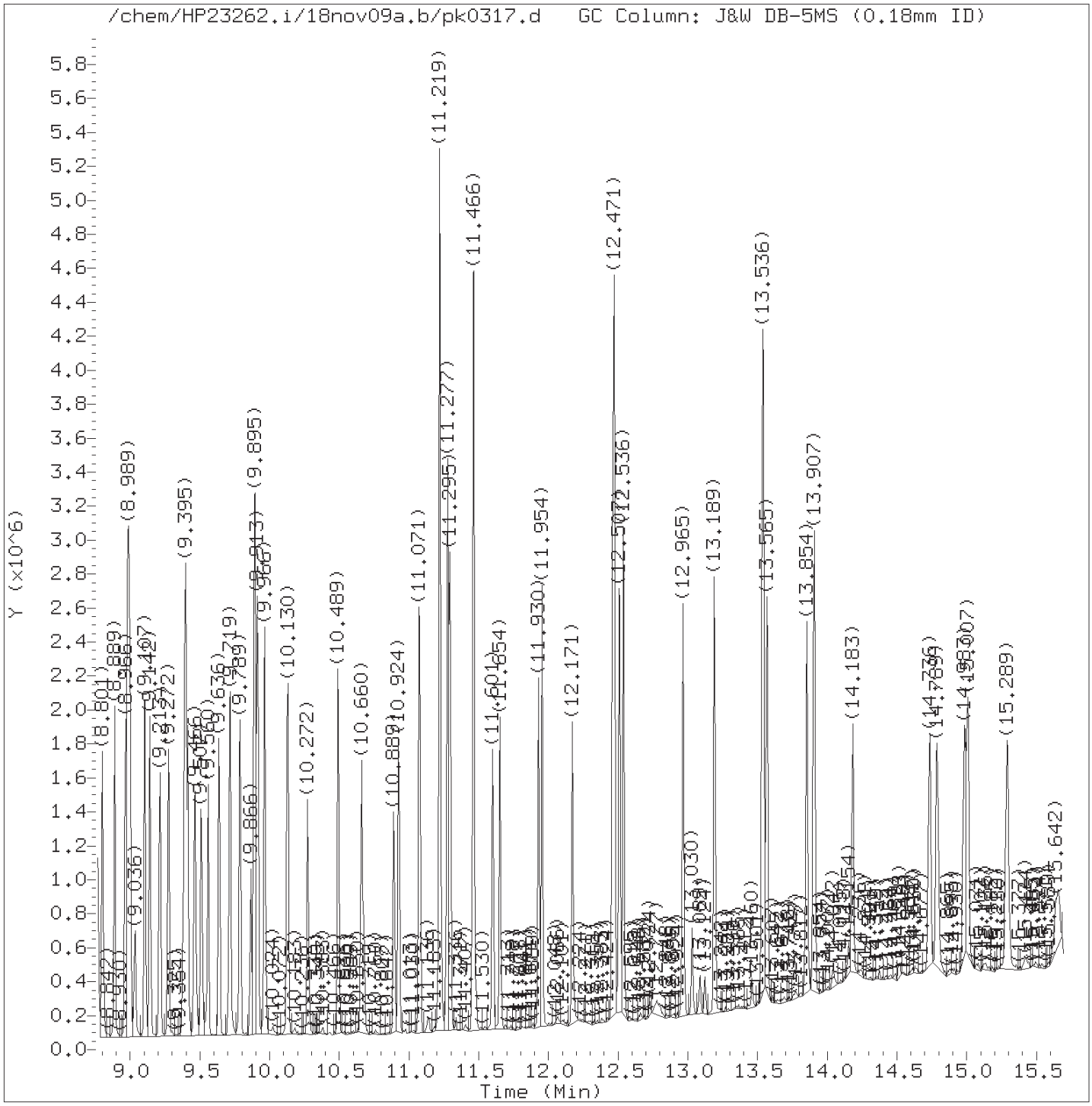
Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0317.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:01 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD015 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0317.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:01 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD015 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0317.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:01 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD015 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.225	88	96203	15.715
4) N-Nitrosodimethylamine	(1)	2.654	74	144335	14.239
5) Pyridine	(1)	2.725	79	248525	14.125
7) 2-Picoline	(1)	3.572	93	267089	14.615
8) N-Nitrosomethylethylamine	(1)	3.707	88	114920M	14.261
9) Methyl methanesulfonate	(1)	4.037	80	121112	14.910
11)$2-Fluorophenol	(1)	4.219	112	369749	28.381
13) N-Nitrosodiethylamine	(1)	4.442	102	118382	15.175
15) Ethyl methanesulfonate	(1)	4.760	109	108709	13.903
17)$Phenol-d6	(1)	5.172	99	584454	28.476
18) Phenol	(1)	5.184	94	347065	14.268
19) Aniline	(1)	5.184	93	387746	14.223
22) bis(2-Chloroethyl)ether	(1)	5.260	93	239654	14.046
23) 2-Chlorophenol	(1)	5.295	128	184194	13.952
24) 1,3-Dichlorobenzene	(1)	5.442	146	195243	14.833
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	169972	20.000
26) 1,4-Dichlorobenzene	(1)	5.519	146	189964	14.667
27) Benzyl alcohol	(1)	5.642	108	147472	13.960
42) Total Cresols	(1)			468695	28.790
28) 1,2-Dichlorobenzene	(1)	5.660	146	182709	14.088
30) Indene	(1)	5.742	115	215879	13.953
31) 2-Methylphenol	(1)	5.766	108	214840	14.320
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.778	45	366833	14.619
34) bis(2-Chloroisopropyl)ether	(1)	5.778	45	366833	14.619
35) N-Nitrosopyrrolidine	(1)	5.878	100	140851	14.587
36) Acetophenone	(1)	5.895	105	305955	13.604
38) N-Nitroso-di-n-propylamine	(1)	5.901	70	220986	14.777
39) N-Nitrosomorpholine	(1)	5.919	56	176380	14.802
37) 4-Methylphenol	(1)	5.919	108	253855	14.459
40) o-Toluidine	(1)	5.931	106	362455	14.379
43) Hexachloroethane	(1)	5.984	117	77891	14.174
44)$Nitrobenzene-d5	(2)	6.037	82	550888	28.889
45) Nitrobenzene	(2)	6.054	77	310398	15.073
48) N-Nitrosopiperidine	(2)	6.207	114	127442	14.553
50) Isophorone	(2)	6.295	82	575541	14.979
51) 2-Nitrophenol	(2)	6.366	139	105494	14.147
53) 2,4-Dimethylphenol	(2)	6.425	107	253238	14.936
57) O,O,O-Triethylphosphorothioate	(2)	6.489	198	120009	14.925
55) bis(2-Chloroethoxy)methane	(2)	6.513	93	335297	14.657
56) Benzoic acid	(2)	6.519	105	348852	29.457

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0317.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:01 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD015 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.601	162	175804	14.161
62) 1,2,4-Trichlorobenzene	(2)	6.684	180	186411	14.742
65)*Naphthalene-d8	(2)	6.731	136	739955	20.000
66) Naphthalene	(2)	6.754	128	603952	14.390
67) 4-Chloroaniline	(2)	6.813	127	247189	14.599
68) 2,6-Dichlorophenol	(2)	6.819	162	175061	14.591
69) Hexachloropropene	(2)	6.842	213	107482	14.644
71) Hexachlorobutadiene	(2)	6.878	225	110883	15.396
75) Quinoline	(2)	7.078	129	424049	14.803
76) Caprolactam	(2)	7.142	113	88176	15.059
77) N-Nitrosodi-n-butylamine	(2)	7.148	84	280513	15.048
80) 4-Chloro-3-methylphenol	(2)	7.301	107	228950	14.627
82) Safrole	(2)	7.354	162	171909	14.810
97) Isosafrole	(3)			185479	14.881
83) 2-Methylnaphthalene	(2)	7.431	142	433546	15.026
84) 1-Methylnaphthalene	(2)	7.525	142	422711	15.189
85) Hexachlorocyclopentadiene	(3)	7.583	237	111606	14.583
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.589	216	218462	14.374
88) cis-Isosafrole	(3)	7.636	162	32943	2.628
90) 2,4,6-Trichlorophenol	(3)	7.713	196	147818	14.474
92) 2,4,5-Trichlorophenol	(3)	7.748	196	158828	14.184
93)$2-Fluorobiphenyl	(3)	7.795	172	1054255	29.993
94) trans-Isosafrole	(3)	7.860	162	152536	12.253
95) 1,1'-Biphenyl	(3)	7.889	154	524152	13.666
96) 2-Chloronaphthalene	(3)	7.901	162	453629	14.766
98) 1-Chloronaphthalene	(3)	7.925	162	414194	13.914
99) Diphenyl ether	(3)	7.995	170	322062	14.595
100) 2-Nitroaniline	(3)	8.007	138	155909	14.902
120) 2,4_2,6-Dinitrotoluenes	(3)			291473	28.705
104) 1,4-Naphthoquinone	(3)	8.078	158	190222	14.239
105) 1,4-Dinitrobenzene	(3)	8.148	168	81346	14.110
106) Dimethylphthalate	(3)	8.195	163	551042	14.909
107) 1,3-Dinitrobenzene	(3)	8.219	168	92550	13.924
108) 2,6-Dinitrotoluene	(3)	8.248	165	122191	13.828
109) Acenaphthylene	(3)	8.301	152	649706	14.648
112) 3-Nitroaniline	(3)	8.407	138	139428	15.115
113)*Acenaphthene-d10	(3)	8.442	164	458927	20.000
114) Acenaphthene	(3)	8.472	153	458393	14.626
115) 2,4-Dinitrophenol	(3)	8.513	184	133148	26.546
116) 4-Nitrophenol	(3)	8.589	109	84652	13.868

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0317.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:01 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD015 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
117) Pentachlorobenzene	(3)	8.601	250	206001	14.443
119) Dibenzofuran	(3)	8.642	168	694566	14.565
118) 2,4-Dinitrotoluene	(3)	8.642	165	169282	14.504
121) 1-Naphthylamine	(3)	8.725	143	478037	14.503
122) 2,3,4,6-Tetrachlorophenol	(3)	8.772	232	133948	14.059
146) Diallate trans/cis	(4)			351338	15.114
123) 2-Naphthylamine	(3)	8.801	143	499030	15.237
124) Diethylphthalate	(3)	8.889	149	550578	14.646
125) Thionazin	(3)	8.966	107	105180	15.302
126) Fluorene	(3)	8.977	166	565225	14.645
127) 4-Chlorophenyl-phenylether	(3)	8.989	204	296357	14.316
128) 5-Nitro-o-toluidine	(3)	8.995	152	170403	15.487
129) 4-Nitroaniline	(3)	9.001	138	157395	15.280
130) 4,6-Dinitro-2-methylphenol	(4)	9.036	198	94035	13.345
132) NDPA as diphenylamine	(4)	9.107	169	490755	14.360
131) N-Nitrosodiphenylamine	(4)	9.107	169	490755	14.360
134) 1,2-Diphenylhydrazine	(4)	9.142	77	732171	14.164
135)$2,4,6-Tribromophenol	(3)	9.213	330	133852	29.562
137) Tetraethyldithiopyrophosphate	(4)	9.272	97	108507	14.620
139) 1,3,5-Trinitrobenzene	(4)	9.377	213	71441	14.085
140) Diallate (peak 1)	(4)	9.389	86	298314	12.481
141) Phorate	(4)	9.401	75	497270	13.103
142) Phenacetin	(4)	9.413	108	320942	14.208
143) 4-Bromophenyl-phenylether	(4)	9.466	248	160658	13.925
144) Diallate (peak 2)	(4)	9.477	86	53024	2.646
145) Hexachlorobenzene	(4)	9.513	284	171527	15.675
147) Dimethoate	(4)	9.560	87	299956	15.101
149) Pentachlorophenol	(4)	9.707	266	85526	12.775
150) 4-Aminobiphenyl	(4)	9.719	169	226536	13.786
151) Pentachloronitrobenzene	(4)	9.719	237	76472	14.392
152) Pronamide	(4)	9.789	173	262071	14.433
153)*Phenanthrene-d10	(4)	9.889	188	1061095	20.000
154) Dinoseb	(4)	9.901	211	139938	12.900
155) Phenanthrene	(4)	9.913	178	864085	14.370
157) Anthracene	(4)	9.966	178	894345	14.666
163) Carbazole	(4)	10.130	167	807183	14.537
164) Methyl parathion	(4)	10.272	109	215371	14.969
165) Di-n-butylphthalate	(4)	10.489	149	985458	14.809
167) Parathion	(4)	10.660	109	132584	14.247
168) 4-Nitroquinoline-1-oxide	(4)	10.677	190	74333	12.847

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0317.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:01 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

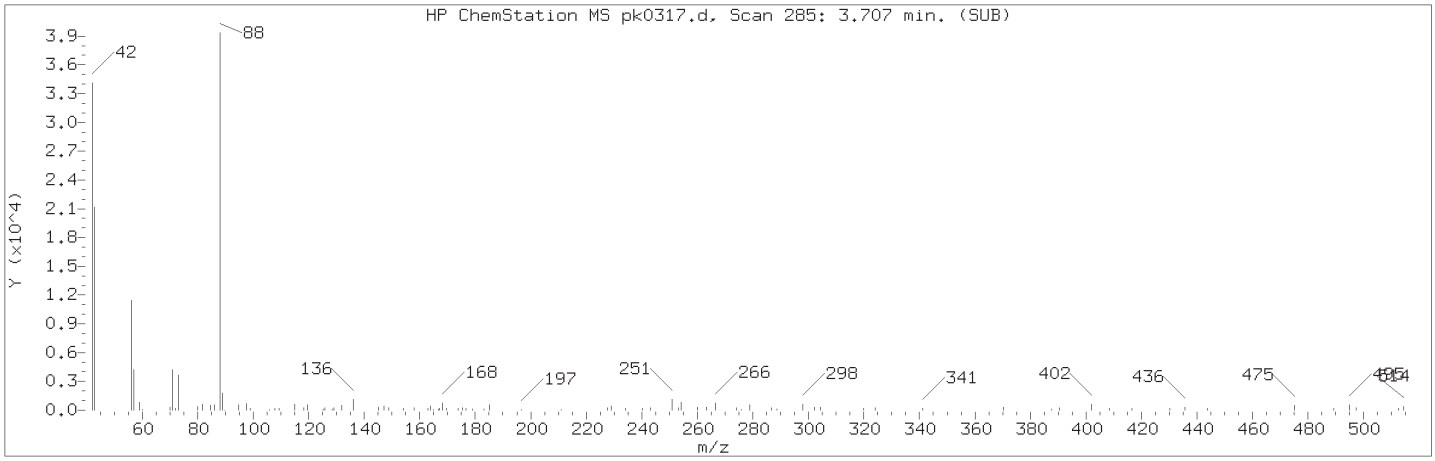
Sample Name: SSTD015 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
169) Octachlorostyrene	(4)	10.895	308	63641	14.857
171) Isodrin	(4)	10.924	193	100638	13.409
173) Fluoranthene	(4)	11.077	202	1025539	14.858
174) Benzidine	(5)	11.219	184	1980719	48.357
175)*Pyrene-d10	(5)	11.277	212	1097432	20.000
177) Pyrene	(5)	11.295	202	1064145	14.432
179)$Terphenyl-d14	(5)	11.466	244	1408803	30.385
182) p-Dimethylaminoazobenzene	(5)	11.601	225	184659	14.285
185) Chlorobenzilate	(5)	11.654	139	267482	14.610
187) 3,3'-Dimethylbenzidine	(5)	11.930	212	676983	15.907
188) Butylbenzylphthalate	(5)	11.954	149	449676	14.386
191) 2-Acetylaminofluorene	(5)	12.171	181	380070	14.312
193) 3,3'-Dichlorobenzidine	(5)	12.460	252	377416	15.206
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.471	231	204879	15.496
195) Benzo(a)anthracene	(5)	12.471	228	1013759	14.913
196) Chrysene	(5)	12.513	228	1009953	15.435
199) bis(2-Ethylhexyl)phthalate	(5)	12.536	149	639289	14.414
203) 6-Methylchrysene	(5)	12.965	242	677566	14.961
205) Di-n-octylphthalate	(6)	13.189	149	1090526	14.162
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.536	256	442206	14.356
206) Benzo(b)fluoranthene	(6)	13.542	252	950418	13.968
208) Benzo(k)fluoranthene	(6)	13.565	252	969444	14.594
211) Benzo(a)pyrene	(6)	13.854	252	883121	14.204
213)*Perylene-d12	(6)	13.907	264	967102	20.000
215) 3-Methylcholanthrene	(6)	14.183	268	362590	14.549
217) Dibenz(a,h)acridine	(6)	14.736	279	699624	14.442
218) Dibenz(a,j)acridine	(6)	14.789	279	724597	14.521
219) Indeno(1,2,3-cd)pyrene	(6)	14.983	276	972245	15.111
222) Total PAHs	(6)			14398101	259.972
220) Dibenz(a,h)anthracene	(6)	15.007	278	808055	14.450
221) Benzo(g,h,i)perylene	(6)	15.289	276	809459	14.836

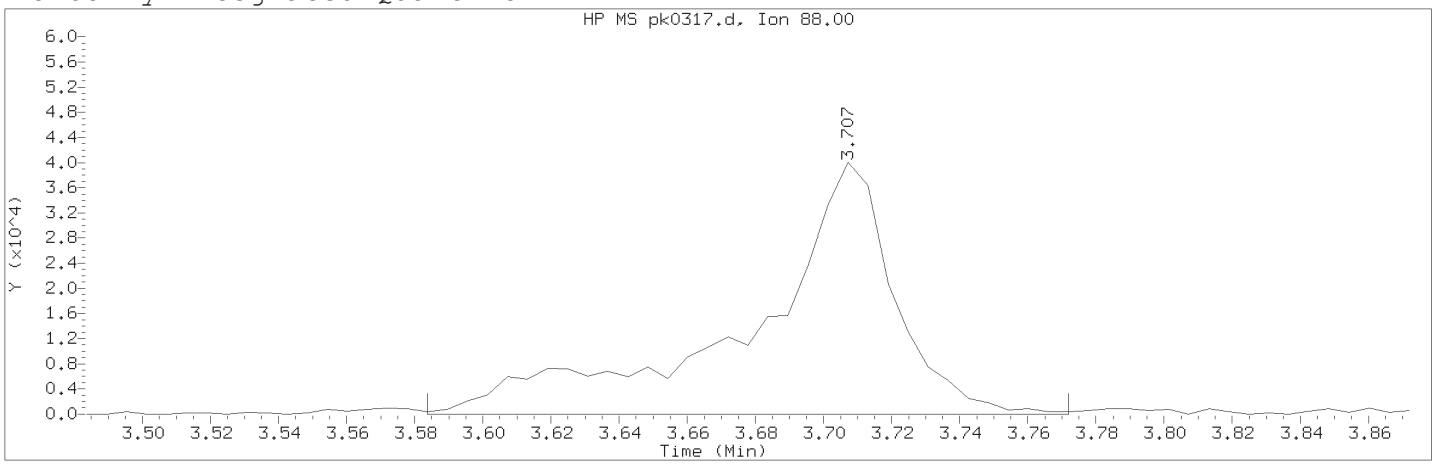
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0317.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:01 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD015 Lab Sample ID: STD2928

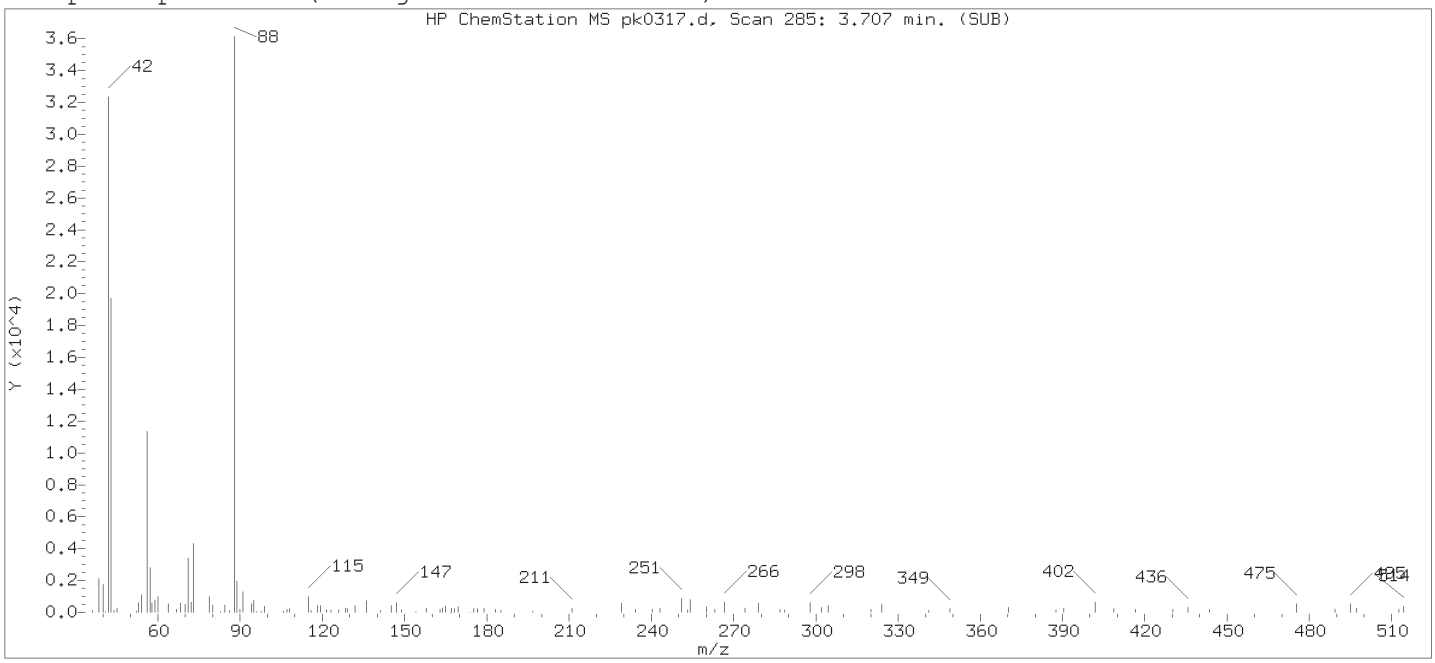
Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 285		
Retention Time (minutes)	: 3.707		
Quant Ion	: 88.00		
Area (flag)	: 114920M		
On-Column Amount (ng/ul)	: 14.2612		
Integration start scan	: 263	Integration stop scan:	295
Y at integration start	: -20	Y at integration end:	-20

Reason for manual integration: improper integration

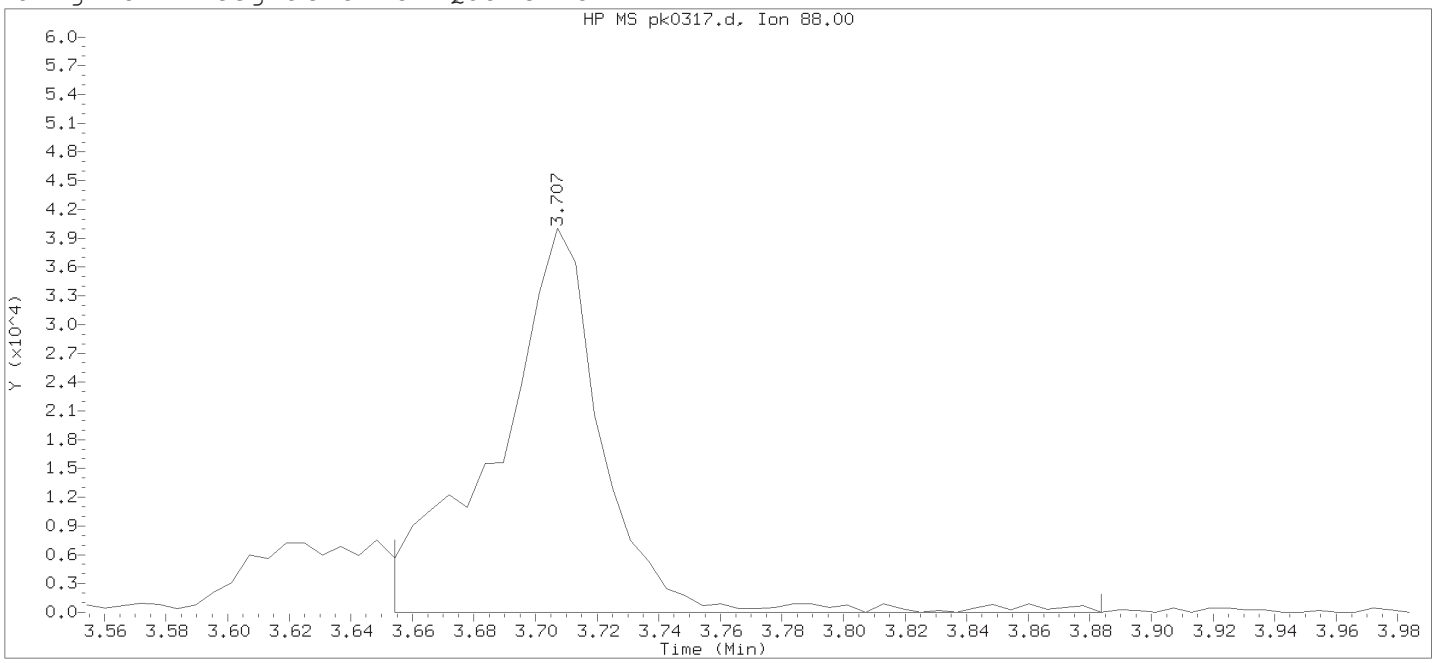
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



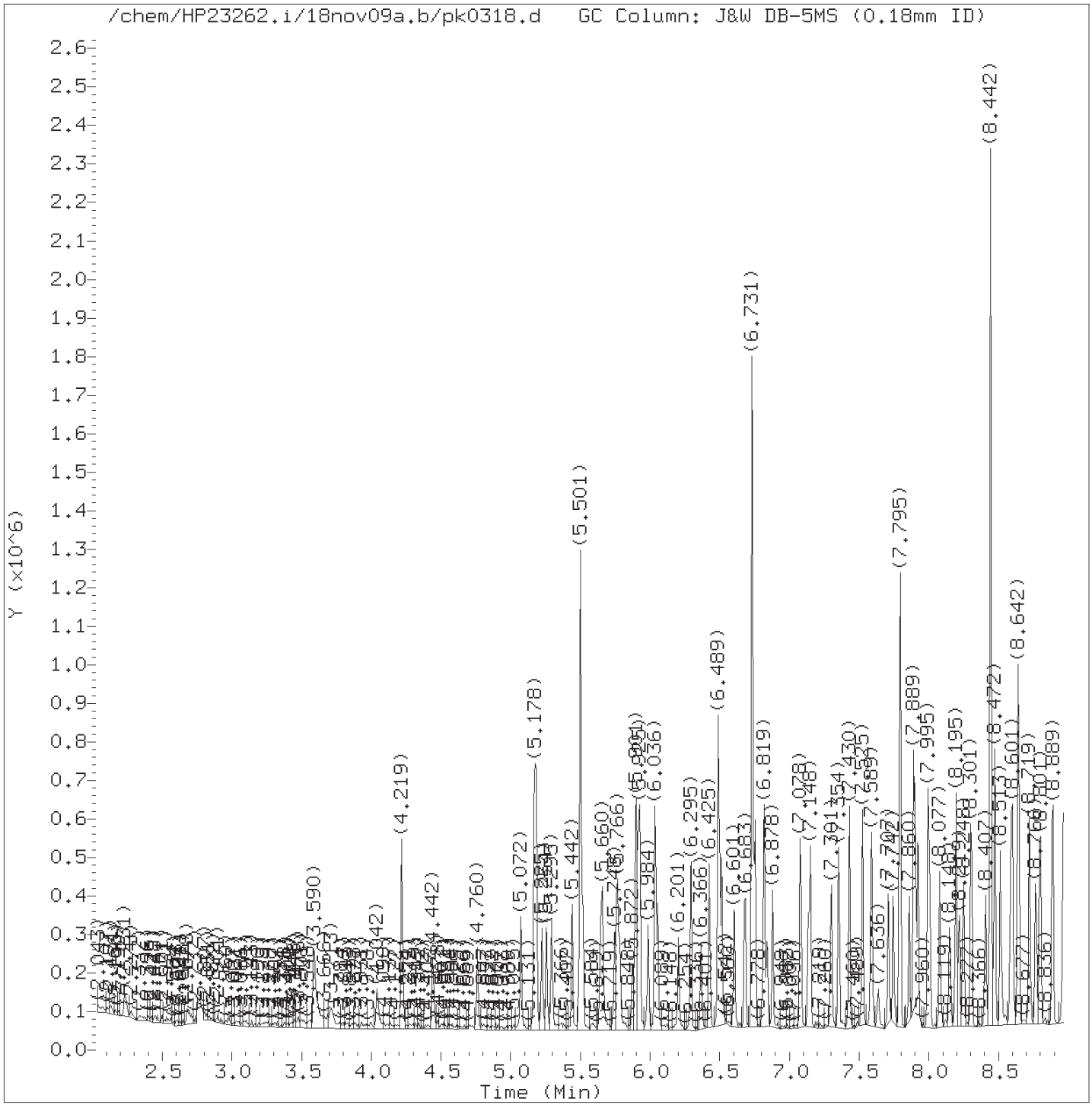
Data File: /chem/HP23262.i/18nov09a.b/pk0317.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:01 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 18:22
Date, time and analyst ID of latest file update: 09-Nov-2018 18:22 Automation

Sample Name: SSTD015 Lab Sample ID: STD2928

Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 285		
Retention Time (minutes)	: 3.707		
Quant Ion	: 88.00		
Area	: 96173		
On-column Amount (ng/ul)	: 11.4371		
Integration start scan	: 275	Integration stop scan:	314
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:08.
Target 3.5 esignature used. Page 1570



Total Ion Chromatogram (TIC)

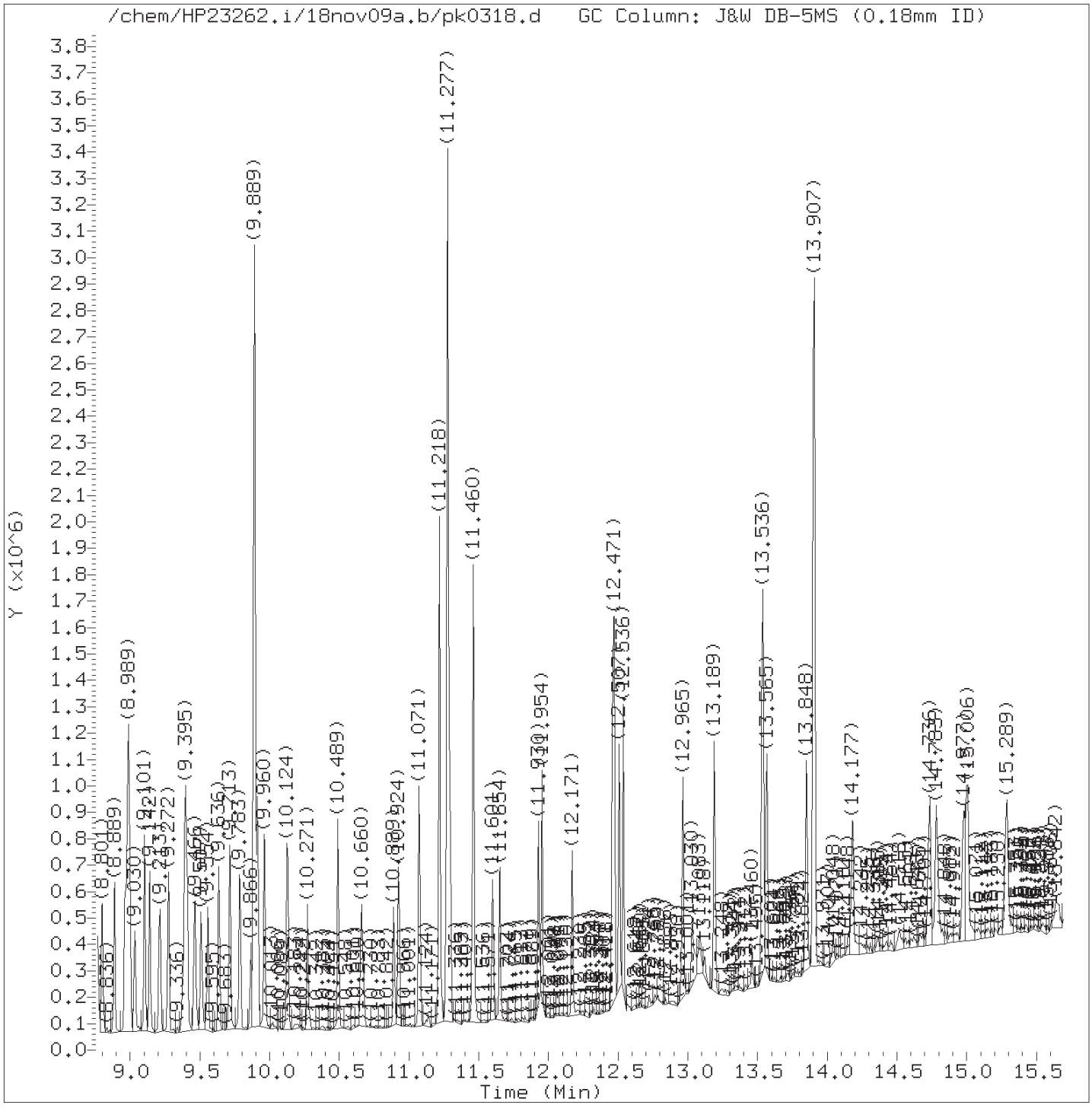
Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD005 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD005 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD005 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.231	88	31904	5.410
4) N-Nitrosodimethylamine	(1)	2.684	74	41804	4.449
5) Pyridine	(1)	2.760	79	87940M	5.227
7) 2-Picoline	(1)	3.590	93	85664	4.956
8) N-Nitrosomethylethylamine	(1)	3.713	88	38450M	5.030
9) Methyl methanesulfonate	(1)	4.042	80	36173	4.748
11)$2-Fluorophenol	(1)	4.219	112	122524	9.938
13) N-Nitrosodiethylamine	(1)	4.442	102	36475	4.944
15) Ethyl methanesulfonate	(1)	4.760	109	37888	5.098
17)$Phenol-d6	(1)	5.172	99	193248	9.948
18) Phenol	(1)	5.184	94	117139	5.071
19) Aniline	(1)	5.184	93	128191	4.968
22) bis(2-Chloroethyl)ether	(1)	5.254	93	86361	5.291
23) 2-Chlorophenol	(1)	5.295	128	60090	4.831
24) 1,3-Dichlorobenzene	(1)	5.442	146	61695	4.955
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	161042	20.000
26) 1,4-Dichlorobenzene	(1)	5.519	146	65179	5.265
27) Benzyl alcohol	(1)	5.642	108	51199	5.096
28) 1,2-Dichlorobenzene	(1)	5.660	146	64493	5.211
42) Total Cresols	(1)			151644	9.855
30) Indene	(1)	5.748	115	74218	5.052
31) 2-Methylphenol	(1)	5.760	108	68521	4.845
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.784	45	118932	5.002
34) bis(2-Chloroisopropyl)ether	(1)	5.784	45	118932	5.002
35) N-Nitrosopyrrolidine	(1)	5.872	100	48119	5.221
36) Acetophenone	(1)	5.895	105	103211	4.865
38) N-Nitroso-di-n-propylamine	(1)	5.901	70	70772	4.995
37) 4-Methylphenol	(1)	5.913	108	83123	4.998
39) N-Nitrosomorpholine	(1)	5.919	56	59008	5.187
40) o-Toluidine	(1)	5.931	106	118703	4.974
43) Hexachloroethane	(1)	5.984	117	28050	5.319
44)$Nitrobenzene-d5	(2)	6.036	82	185988	10.299
45) Nitrobenzene	(2)	6.054	77	101257	5.190
48) N-Nitrosopiperidine	(2)	6.201	114	40875	4.964
50) Isophorone	(2)	6.295	82	183849	5.071
51) 2-Nitrophenol	(2)	6.366	139	33392	4.790
53) 2,4-Dimethylphenol	(2)	6.425	107	79041	4.959
57) O,O,O-Triethylphosphorothioate	(2)	6.489	198	38267	5.046
56) Benzoic acid	(2)	6.495	105	153683M	13.973
55) bis(2-Chloroethoxy)methane	(2)	6.513	93	110209	5.100

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD005 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.607	162	55886	4.812
62) 1,2,4-Trichlorobenzene	(2)	6.683	180	63947	5.306
65)*Naphthalene-d8	(2)	6.731	136	696589	20.000
66) Naphthalene	(2)	6.754	128	209151	5.255
67) 4-Chloroaniline	(2)	6.813	127	81784	5.112
68) 2,6-Dichlorophenol	(2)	6.819	162	59639	5.238
69) Hexachloropropene	(2)	6.842	213	37474	5.348
71) Hexachlorobutadiene	(2)	6.878	225	37889	5.496
75) Quinoline	(2)	7.078	129	139980	5.158
76) Caprolactam	(2)	7.136	113	31982	5.651
77) N-Nitrosodi-n-butylamine	(2)	7.148	84	97309	5.460
80) 4-Chloro-3-methylphenol	(2)	7.301	107	77243	5.206
82) Safrole	(2)	7.354	162	53280	4.896
97) Isosafrole	(3)			60014	5.208
83) 2-Methylnaphthalene	(2)	7.430	142	136095	5.009
84) 1-Methylnaphthalene	(2)	7.525	142	136215	5.173
85) Hexachlorocyclopentadiene	(3)	7.583	237	38377	5.469
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.589	216	74007	5.264
88) cis-Isosafrole	(3)	7.636	162	10603	0.910
90) 2,4,6-Trichlorophenol	(3)	7.707	196	47031	5.020
92) 2,4,5-Trichlorophenol	(3)	7.742	196	51463	5.011
93)$2-Fluorobiphenyl	(3)	7.795	172	333853	10.298
94) trans-Isosafrole	(3)	7.860	162	49411	4.298
95) 1,1'-Biphenyl	(3)	7.889	154	178306	5.060
96) 2-Chloronaphthalene	(3)	7.901	162	155732M	5.447
98) 1-Chloronaphthalene	(3)	7.919	162	144806M	5.260
99) Diphenyl ether	(3)	7.995	170	105182	5.170
100) 2-Nitroaniline	(3)	8.007	138	47685	4.975
120) 2,4_2,6-Dinitrotoluenes	(3)			95399	10.205
104) 1,4-Naphthoquinone	(3)	8.077	158	58697	4.826
105) 1,4-Dinitrobenzene	(3)	8.148	168	24976	4.769
106) Dimethylphthalate	(3)	8.195	163	176052	5.162
107) 1,3-Dinitrobenzene	(3)	8.219	168	29880	4.919
108) 2,6-Dinitrotoluene	(3)	8.248	165	40930	5.045
109) Acenaphthylene	(3)	8.301	152	206530	5.069
112) 3-Nitroaniline	(3)	8.407	138	37727	4.531
113)*Acenaphthene-d10	(3)	8.442	164	420761	20.000
114) Acenaphthene	(3)	8.472	153	152825	5.276
115) 2,4-Dinitrophenol	(3)	8.513	184	54839	12.347
116) 4-Nitrophenol	(3)	8.589	109	53754	9.669

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD005 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
117) Pentachlorobenzene	(3)	8.601	250	66789	5.092
119) Dibenzofuran	(3)	8.642	168	232777	5.275
118) 2,4-Dinitrotoluene	(3)	8.642	165	54469	5.075
121) 1-Naphthylamine	(3)	8.719	143	156545	5.149
122) 2,3,4,6-Tetrachlorophenol	(3)	8.766	232	42959	4.930
146) Diallate trans/cis	(4)			107565	4.908
123) 2-Naphthylamine	(3)	8.801	143	164574	5.394
124) Diethylphthalate	(3)	8.889	149	189632	5.412
125) Thionazin	(3)	8.960	107	32813M	5.171
126) Fluorene	(3)	8.977	166	184897	5.196
128) 5-Nitro-o-toluidine	(3)	8.989	152	55019	5.384
127) 4-Chlorophenyl-phenylether	(3)	8.989	204	107815	5.572
129) 4-Nitroaniline	(3)	8.995	138	49707	5.224
130) 4,6-Dinitro-2-methylphenol	(4)	9.036	198	52089	8.107
132) NDPA as diphenylamine	(4)	9.101	169	160795	4.976
131) N-Nitrosodiphenylamine	(4)	9.101	169	160795	4.976
134) 1,2-Diphenylhydrazine	(4)	9.142	77	241692	4.949
135)$2,4,6-Tribromophenol	(3)	9.213	330	44904	10.672
137) Tetraethyldithiopyrophosphate	(4)	9.272	97	37552	5.286
139) 1,3,5-Trinitrobenzene	(4)	9.377	213	20945	4.458
140) Diallate (peak 1)	(4)	9.389	86	89593	3.991
141) Phorate	(4)	9.395	75	155827	4.437
142) Phenacetin	(4)	9.413	108	105093	4.928
143) 4-Bromophenyl-phenylether	(4)	9.466	248	57381	5.211
144) Diallate (peak 2)	(4)	9.472	86	17972	0.930
145) Hexachlorobenzene	(4)	9.513	284	58380	5.549
147) Dimethoate	(4)	9.554	87	98483	5.198
151) Pentachloronitrobenzene	(4)	9.701	237	24852	4.952
149) Pentachlorophenol	(4)	9.707	266	23810	3.920
150) 4-Aminobiphenyl	(4)	9.719	169	81557	5.202
152) Pronamide	(4)	9.789	173	83175	4.863
153)*Phenanthrene-d10	(4)	9.889	188	1004124	20.000
154) Dinoseb	(4)	9.901	211	37403	3.816
155) Phenanthrene	(4)	9.913	178	289122	5.071
157) Anthracene	(4)	9.966	178	289424	5.014
163) Carbazole	(4)	10.124	167	284932	5.358
164) Methyl parathion	(4)	10.271	109	70696	5.159
165) Di-n-butylphthalate	(4)	10.489	149	328965	5.185
167) Parathion	(4)	10.660	109	39449M	4.559
168) 4-Nitroquinoline-1-oxide	(4)	10.671	190	18648	3.406

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

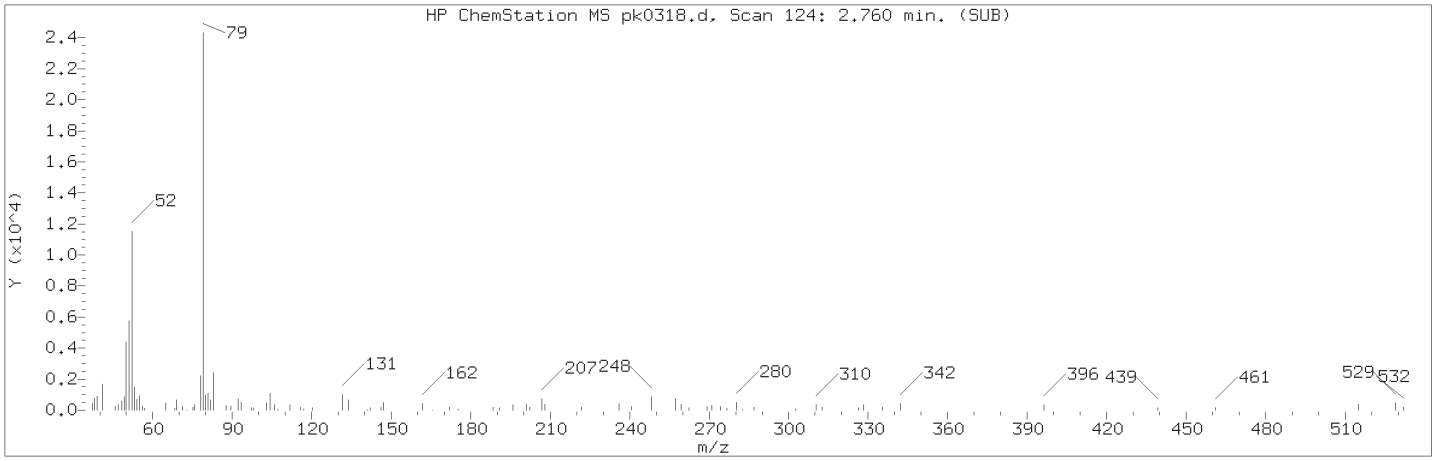
Sample Name: SSTD005 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
169) Octachlorostyrene	(4)	10.889	308	22700	5.490
171) Isodrin	(4)	10.924	193	35195	4.962
173) Fluoranthene	(4)	11.071	202	338233	5.155
174) Benzidine	(5)	11.218	184	676053	16.636
175)*Pyrene-d10	(5)	11.277	212	1065028	20.000
177) Pyrene	(5)	11.295	202	386702	5.350
179)$Terphenyl-d14	(5)	11.460	244	475964	10.477
182) p-Dimethylaminoazobenzene	(5)	11.601	225	62252	4.967
185) Chlorobenzilate	(5)	11.648	139	97397	5.407
187) 3,3'-Dimethylbenzidine	(5)	11.930	212	242534	5.706
188) Butylbenzylphthalate	(5)	11.954	149	160138	5.230
191) 2-Acetylaminofluorene	(5)	12.171	181	137969	5.291
193) 3,3'-Dichlorobenzidine	(5)	12.460	252	132549	5.412
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.465	231	73572	5.597
195) Benzo(a)anthracene	(5)	12.471	228	351606	5.286
196) Chrysene	(5)	12.507	228	336562	5.261
199) bis(2-Ethylhexyl)phthalate	(5)	12.536	149	223686	5.163
203) 6-Methylchrysene	(5)	12.965	242	229910	5.191
205) Di-n-octylphthalate	(6)	13.189	149	402911	5.027
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.536	256	155772	4.883
206) Benzo(b)fluoranthene	(6)	13.542	252	340769	4.839
208) Benzo(k)fluoranthene	(6)	13.565	252	341436	4.951
211) Benzo(a)pyrene	(6)	13.848	252	326283	5.042
213)*Perylene-d12	(6)	13.907	264	1005502	20.000
215) 3-Methylcholanthrene	(6)	14.183	268	131877	5.076
217) Dibenz(a,h)acridine	(6)	14.736	279	254983	5.052
218) Dibenz(a,j)acridine	(6)	14.783	279	267917	5.136
219) Indeno(1,2,3-cd)pyrene	(6)	14.977	276	335417	5.012
222) Total PAHs	(6)			4943119	86.343
220) Dibenz(a,h)anthracene	(6)	15.006	278	290748	5.001
221) Benzo(g,h,i)perylene	(6)	15.289	276	291104	5.115

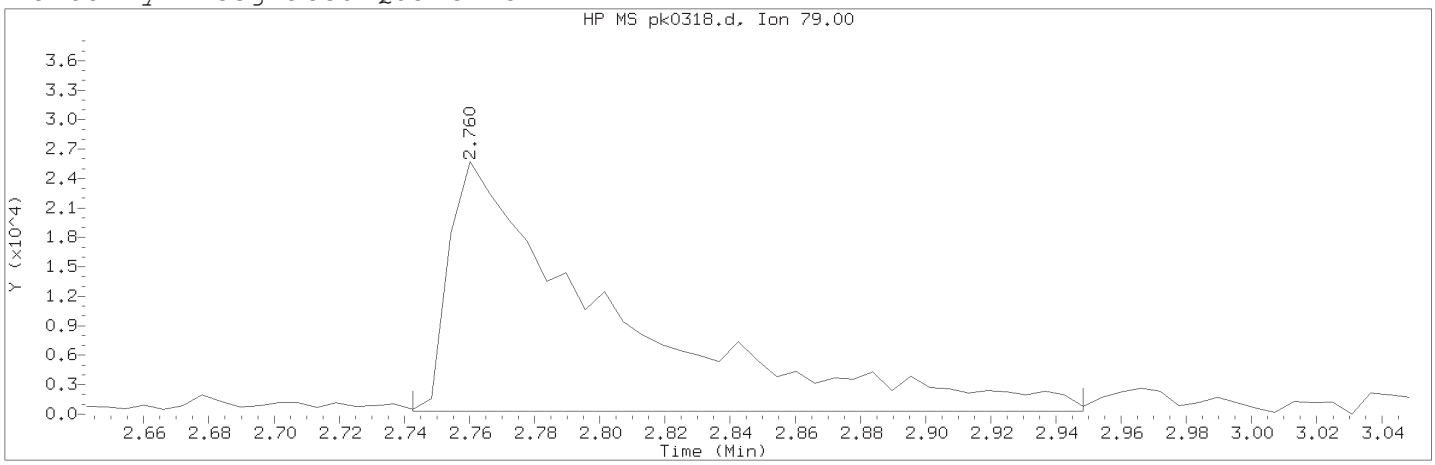
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD005 Lab Sample ID: STD2928

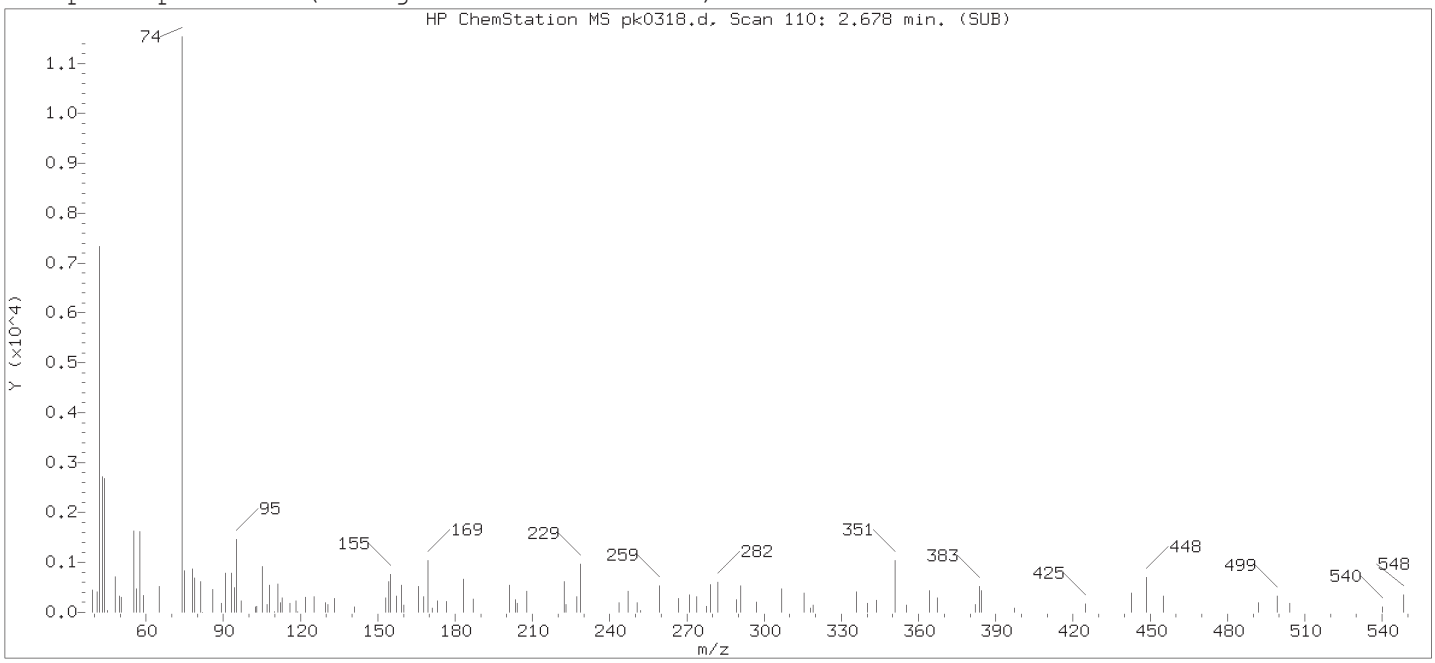
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 124		
Retention Time (minutes)	: 2.760		
Quant Ion	: 79.00		
Area (flag)	: 87940M		
On-Column Amount (ng/ul)	: 5.2274		
Integration start scan	: 120	Integration stop scan:	155
Y at integration start	: 325	Y at integration end:	325

Reason for manual integration: improper integration

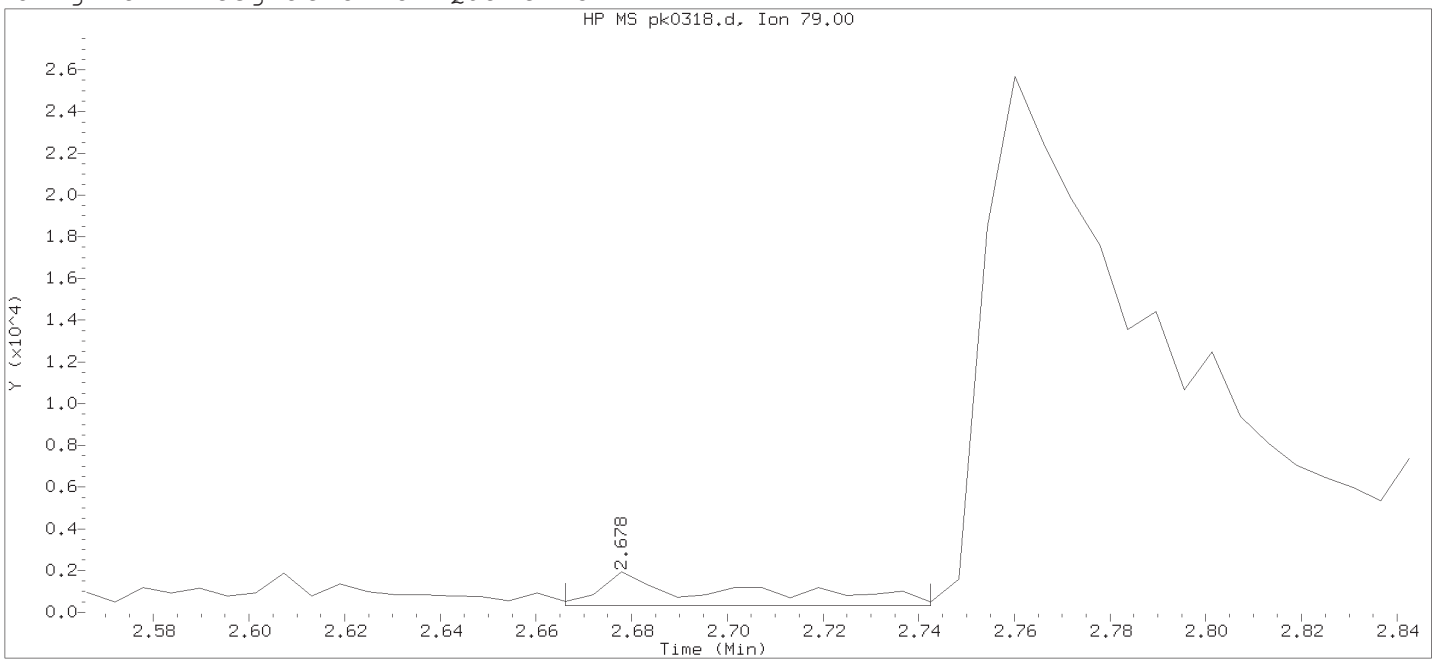
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

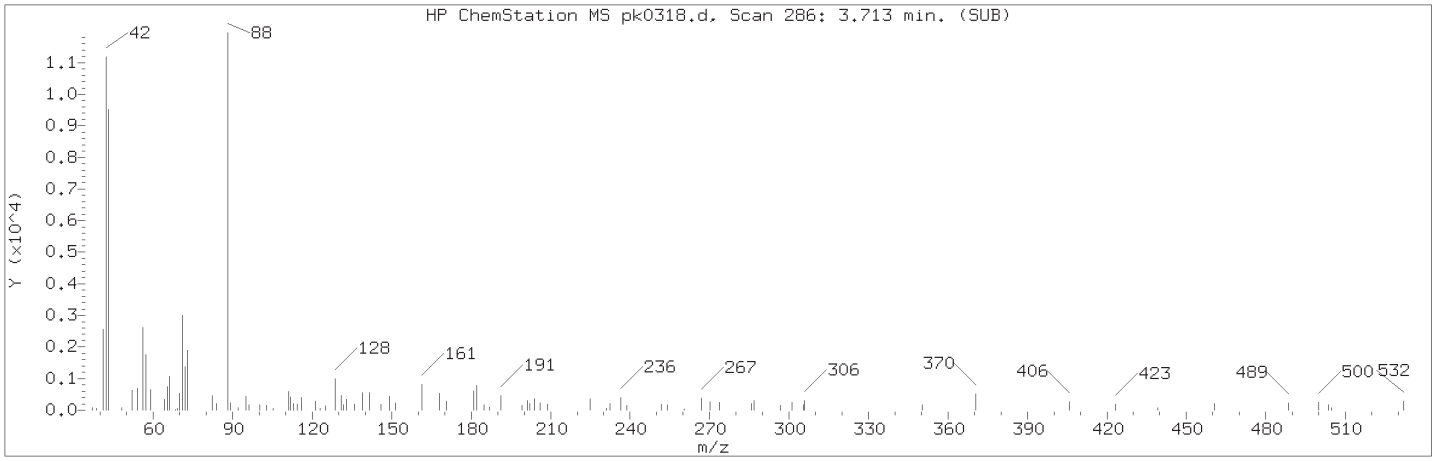
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 18:45
Date, time and analyst ID of latest file update: 09-Nov-2018 18:45 Automation

Sample Name: SSTD005 Lab Sample ID: STD2928

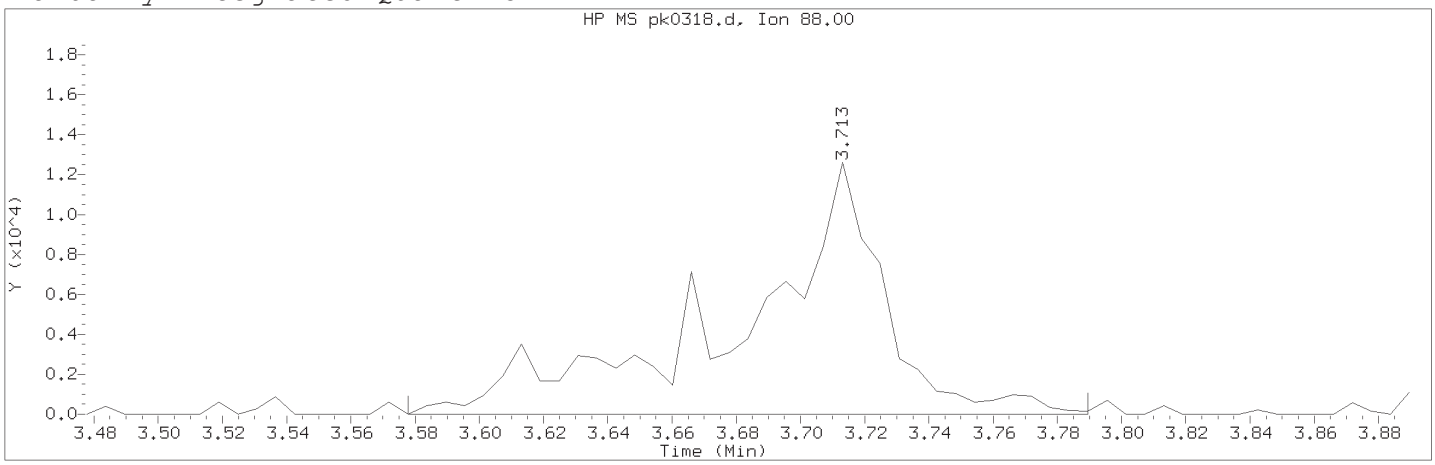
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 110		
Retention Time (minutes)	: 2.678		
Quant Ion	: 79.00		
Area	: 3150		
On-column Amount (ng/ul)	: 0.2253		
Integration start scan	: 107	Integration stop scan:	120
Y at integration start	: 316	Y at integration end:	316

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:08.
Target 3.5 esignature used 11/11/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD005 Lab Sample ID: STD2928

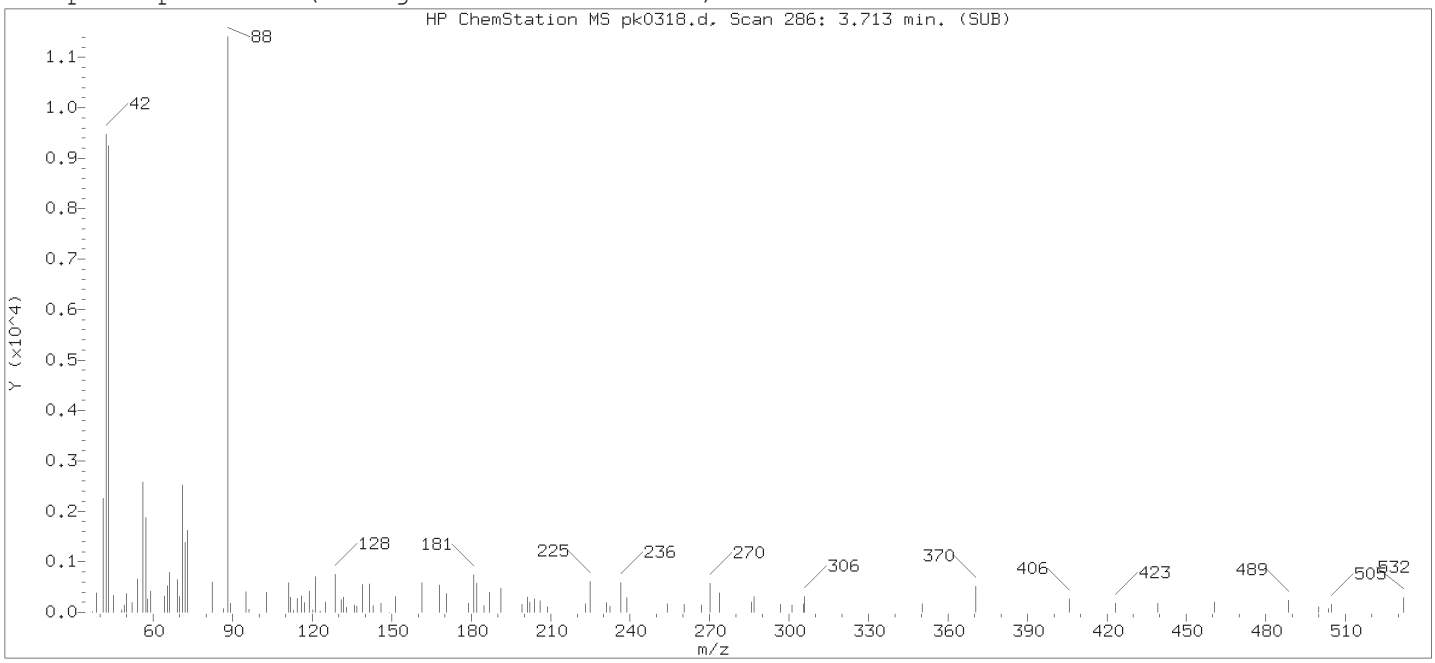
Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 286		
Retention Time (minutes)	: 3.713		
Quant Ion	: 88.00		
Area (flag)	: 38450M		
On-Column Amount (ng/ul)	: 5.0300		
Integration start scan	: 262	Integration stop scan:	298
Y at integration start	: 14	Y at integration end:	14

Reason for manual integration: improper integration

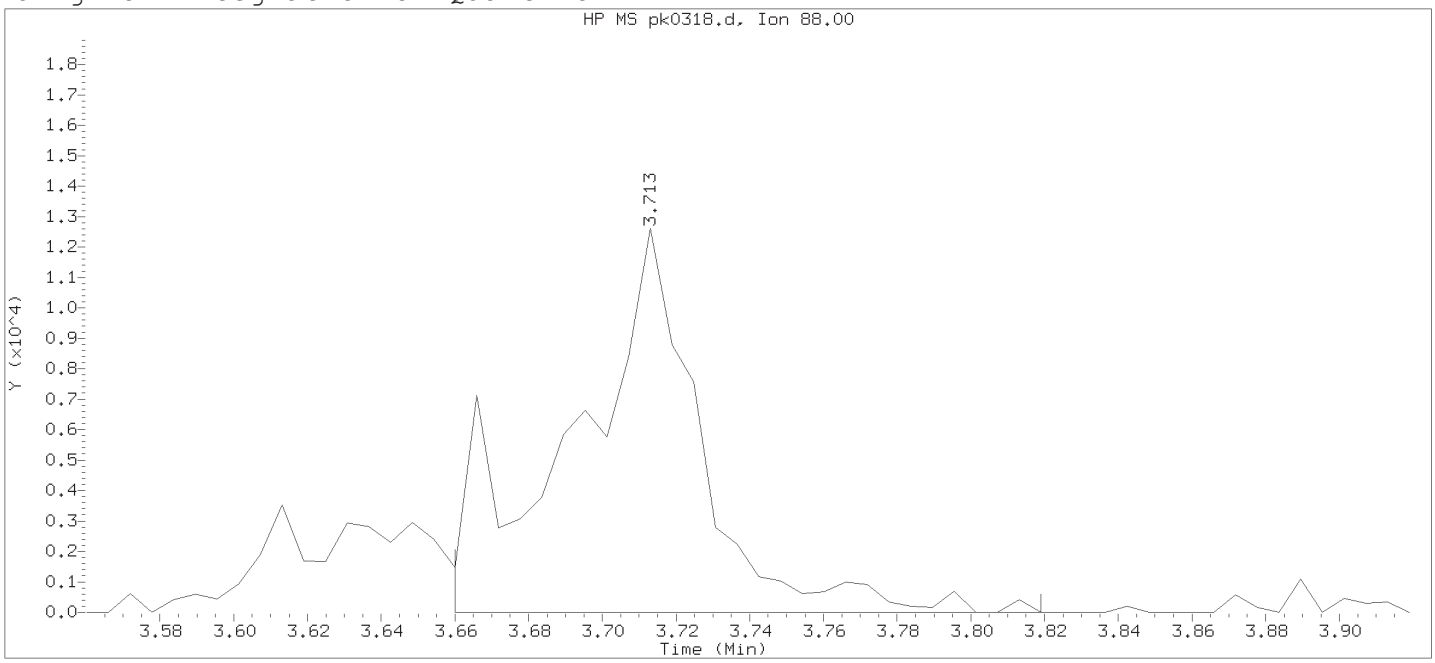
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

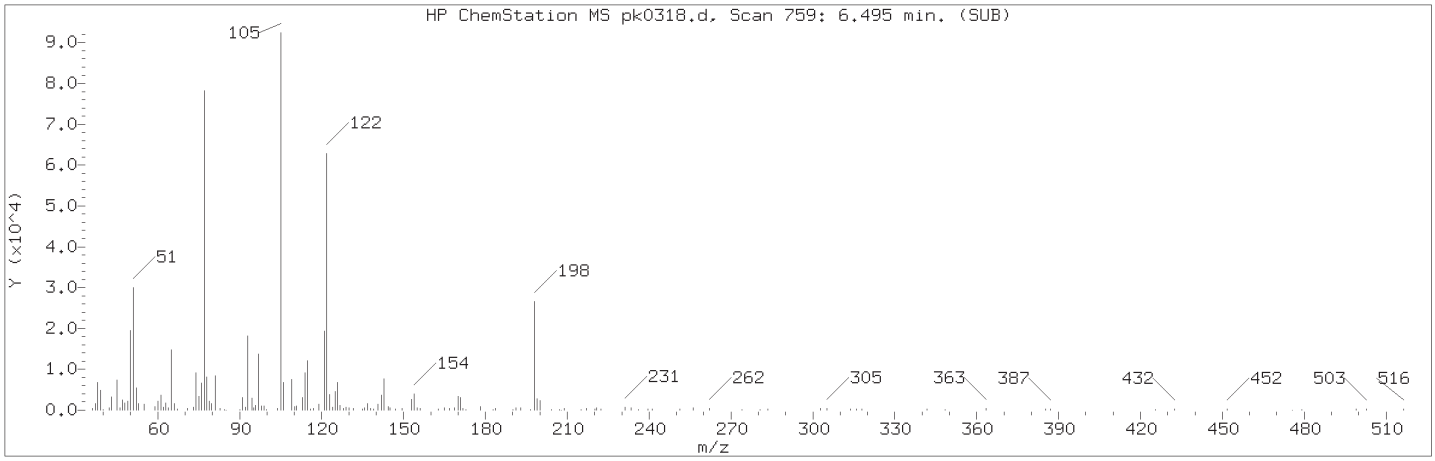
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 18:45
Date, time and analyst ID of latest file update: 09-Nov-2018 18:45 Automation

Sample Name: SSTD005 Lab Sample ID: STD2928

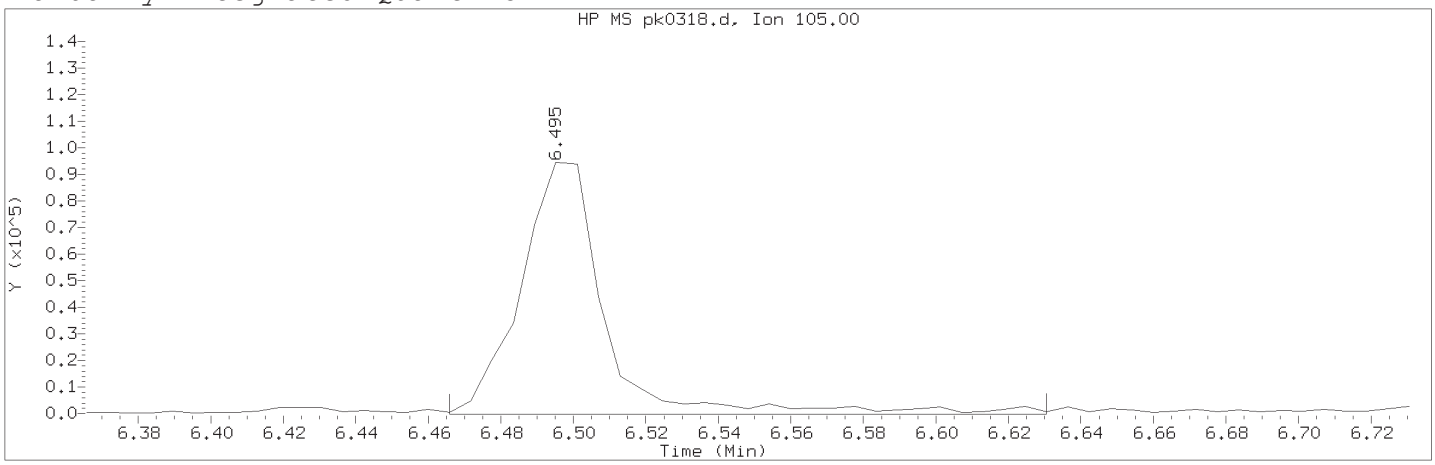
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Scan Number : 286
Retention Time (minutes) : 3.713
Quant Ion : 88.00
Area : 30116
On-column Amount (ng/ul) : 4.0989
Integration start scan : 276 Integration stop scan: 303
Y at integration start : 0 Y at integration end: 0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb1586

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD005 Lab Sample ID: STD2928

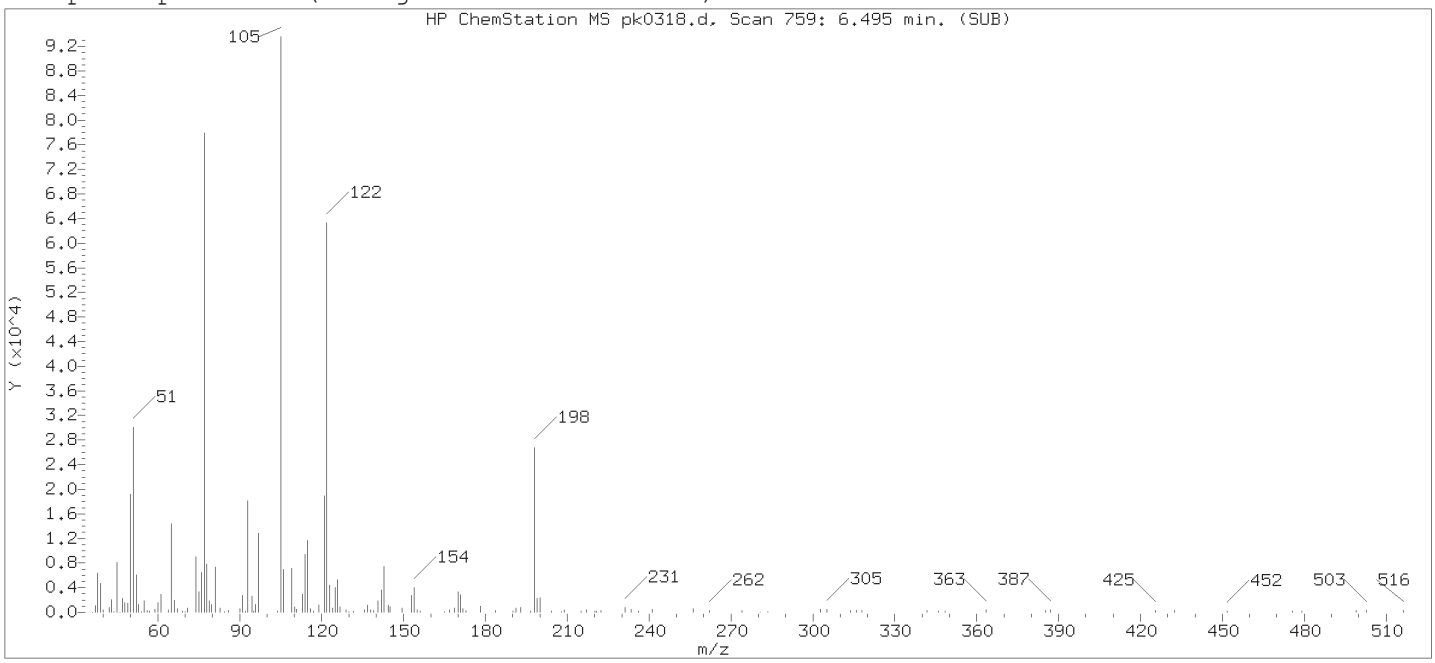
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 759		
Retention Time (minutes)	: 6.495		
Quant Ion	: 105.00		
Area (flag)	: 153683M		
On-Column Amount (ng/ul)	: 13.9735		
Integration start scan	: 753	Integration stop scan:	781
Y at integration start	: -172	Y at integration end:	-172

Reason for manual integration: improper integration

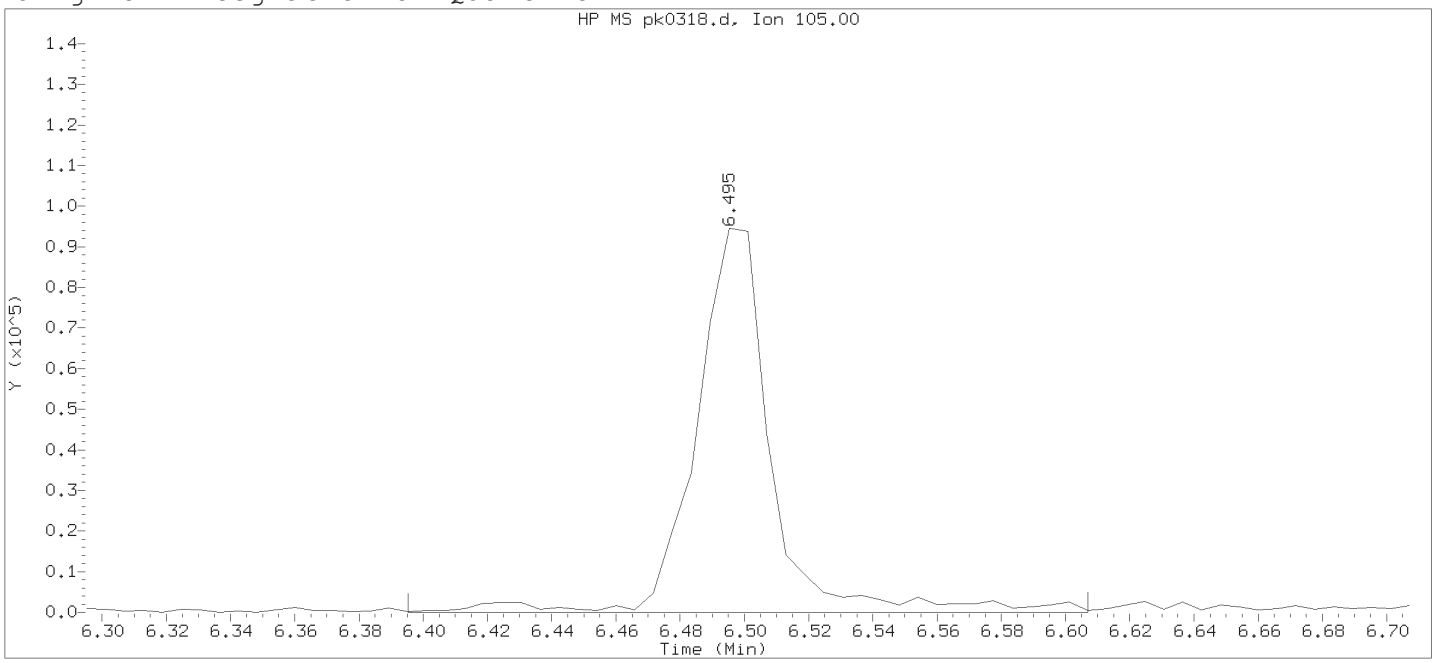
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

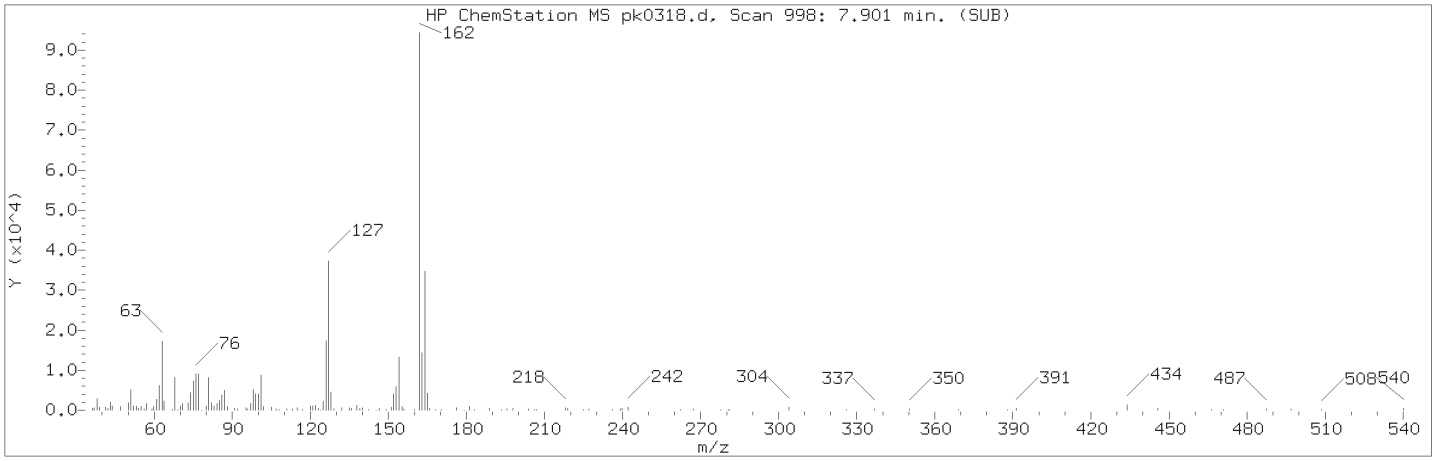
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 18:45
Date, time and analyst ID of latest file update: 09-Nov-2018 18:45 Automation

Sample Name: SSTD005 Lab Sample ID: STD2928

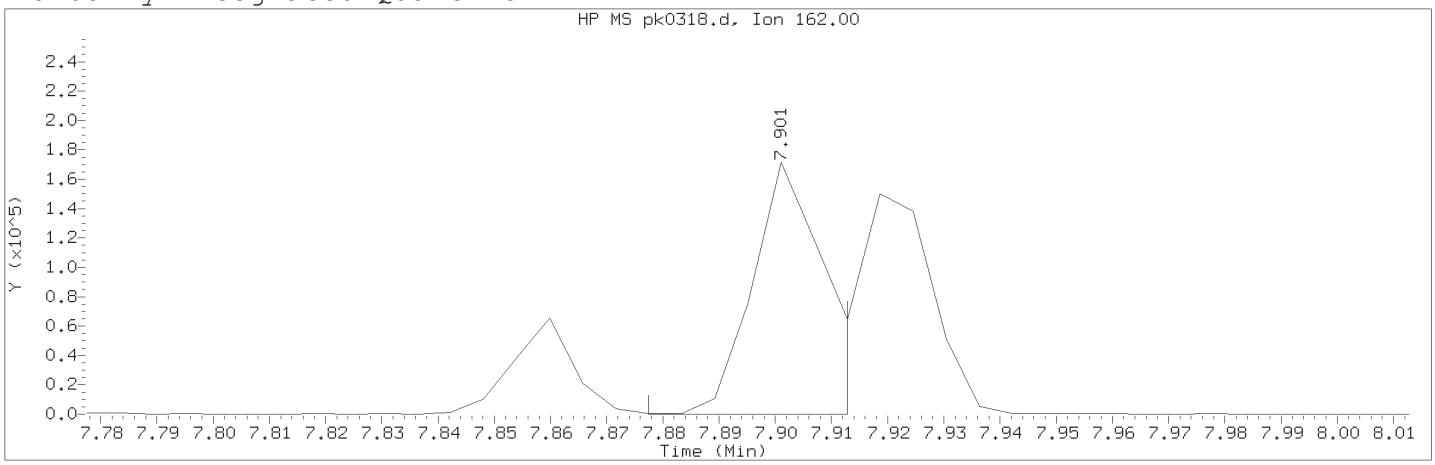
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 759		
Retention Time (minutes)	: 6.495		
Quant Ion	: 105.00		
Area	: 154567		
On-column Amount (ng/ul)	: 14.6771		
Integration start scan	: 741	Integration stop scan:	777
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:08.
Target 3.5 esignature used. Page 1582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD005 Lab Sample ID: STD2928

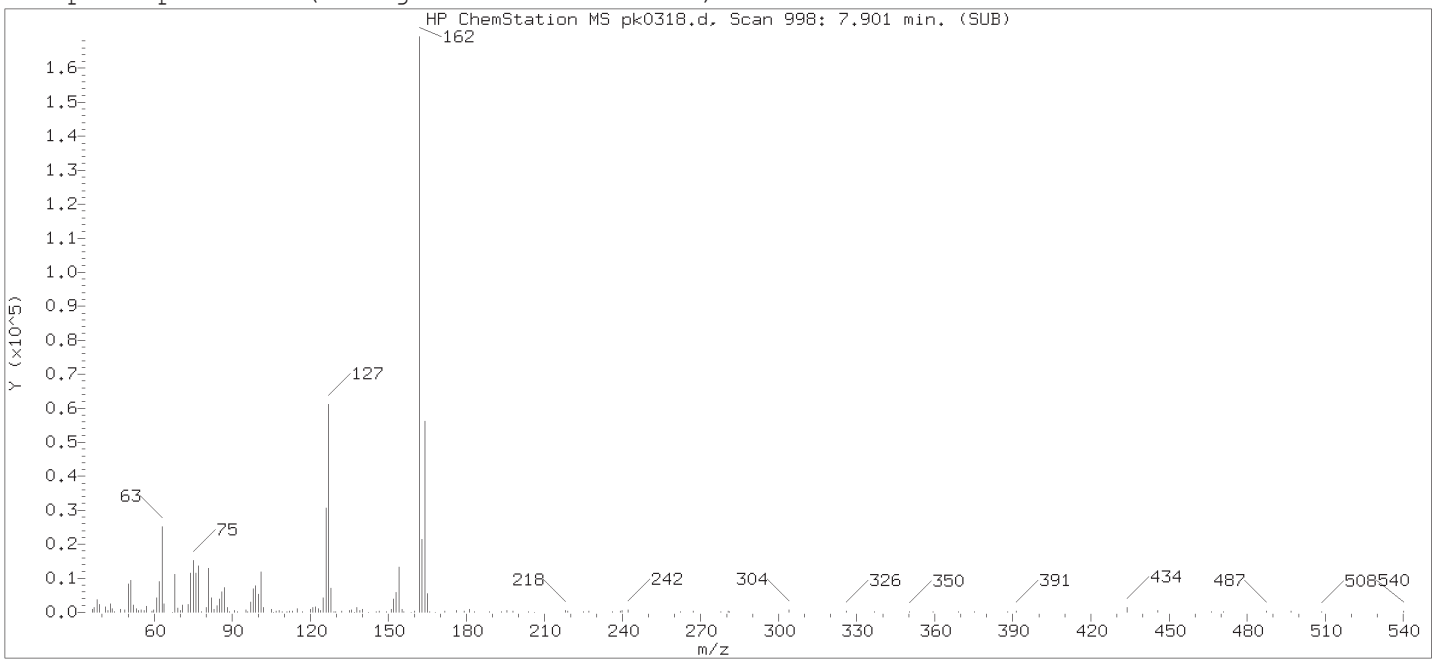
Compound Number	: 96		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 998		
Retention Time (minutes)	: 7.901		
Quant Ion	: 162.00		
Area (flag)	: 155732M		
On-Column Amount (ng/ul)	: 5.4468		
Integration start scan	: 993	Integration stop scan:	999
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

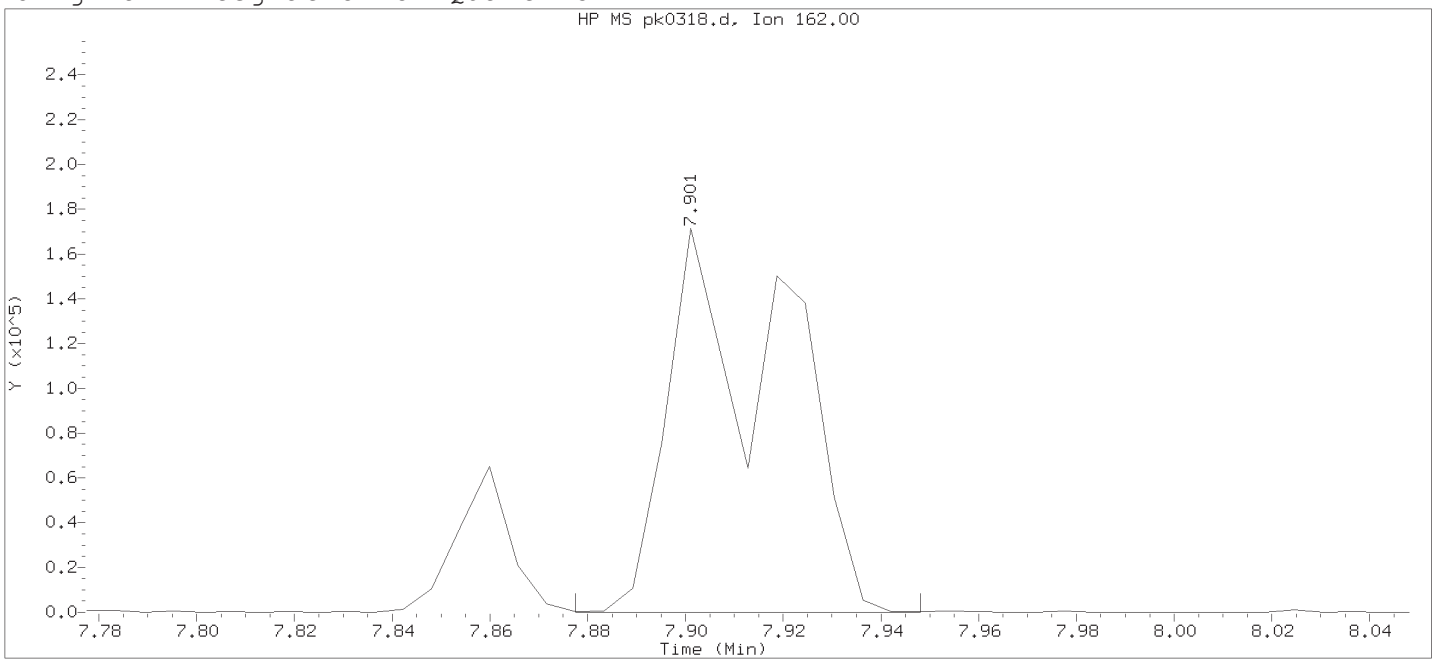
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

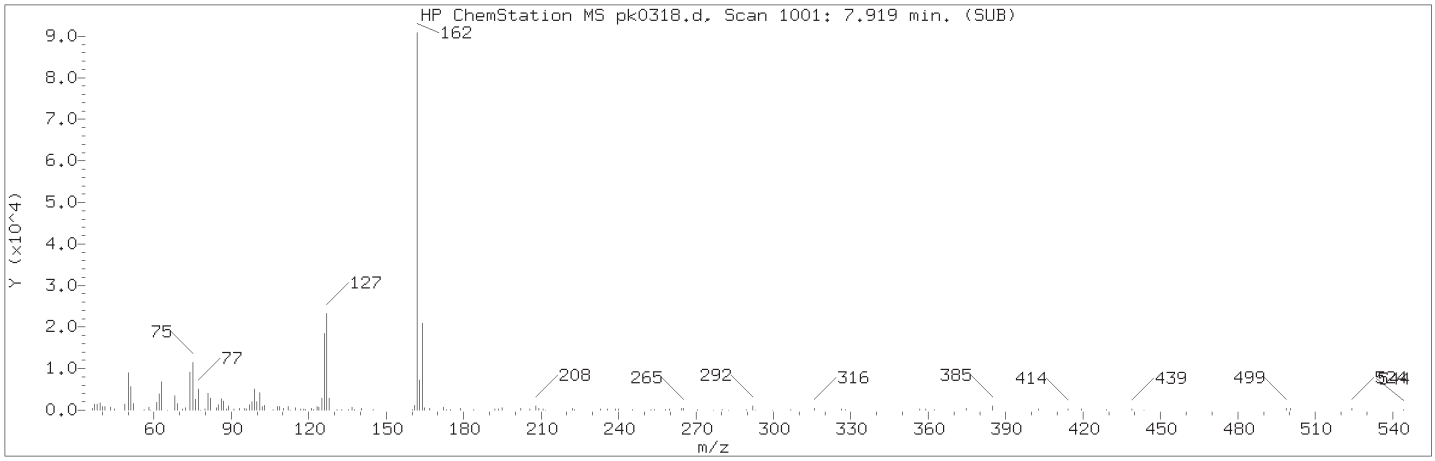
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 18:45
Date, time and analyst ID of latest file update: 09-Nov-2018 18:45 Automation

Sample Name: SSTD005 Lab Sample ID: STD2928

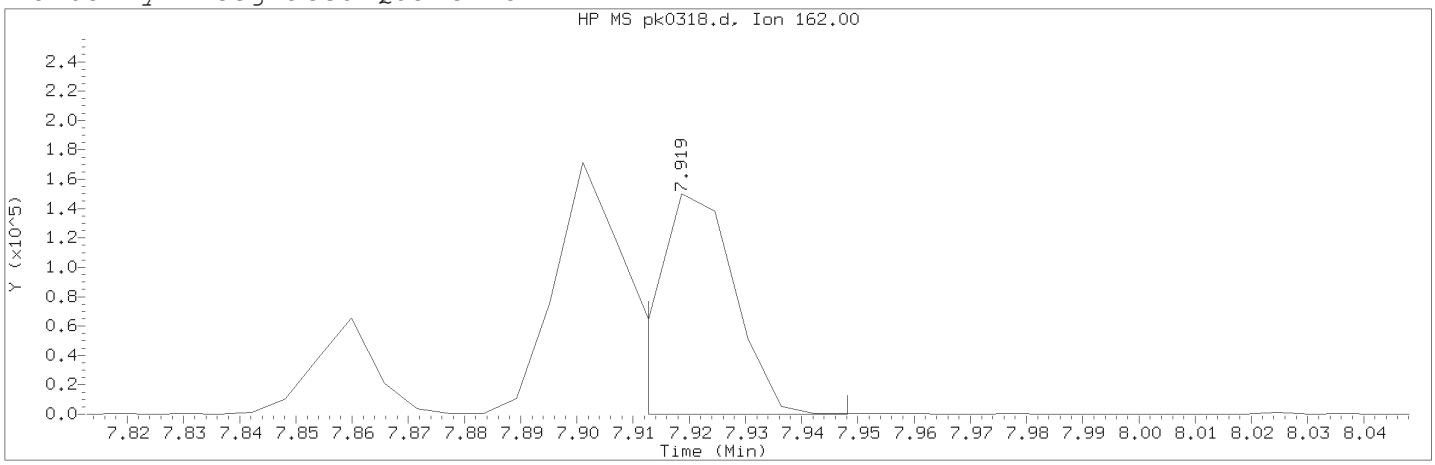
Compound Number	: 96		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 998		
Retention Time (minutes)	: 7.901		
Quant Ion	: 162.00		
Area	: 277717		
On-column Amount (ng/ul)	: 7.8225		
Integration start scan	: 993	Integration stop scan:	1005
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:08.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD005 Lab Sample ID: STD2928

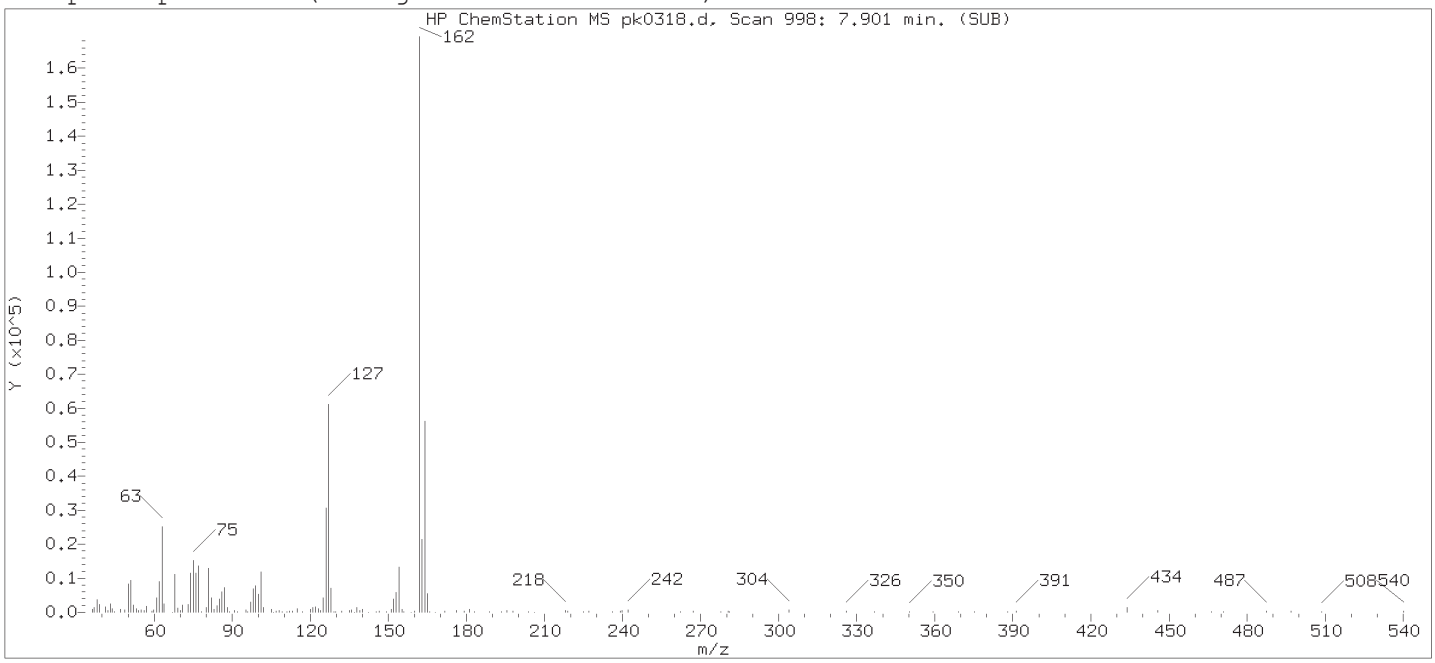
Compound Number : 98
Compound Name : 1-Chloronaphthalene
Scan Number : 1001
Retention Time (minutes) : 7.919
Quant Ion : 162.00
Area (flag) : 144806M
On-Column Amount (ng/ul) : 5.2599
Integration start scan : 999 Integration stop scan: 1005
Y at integration start : 2 Y at integration end: 2

Reason for manual integration: improper integration

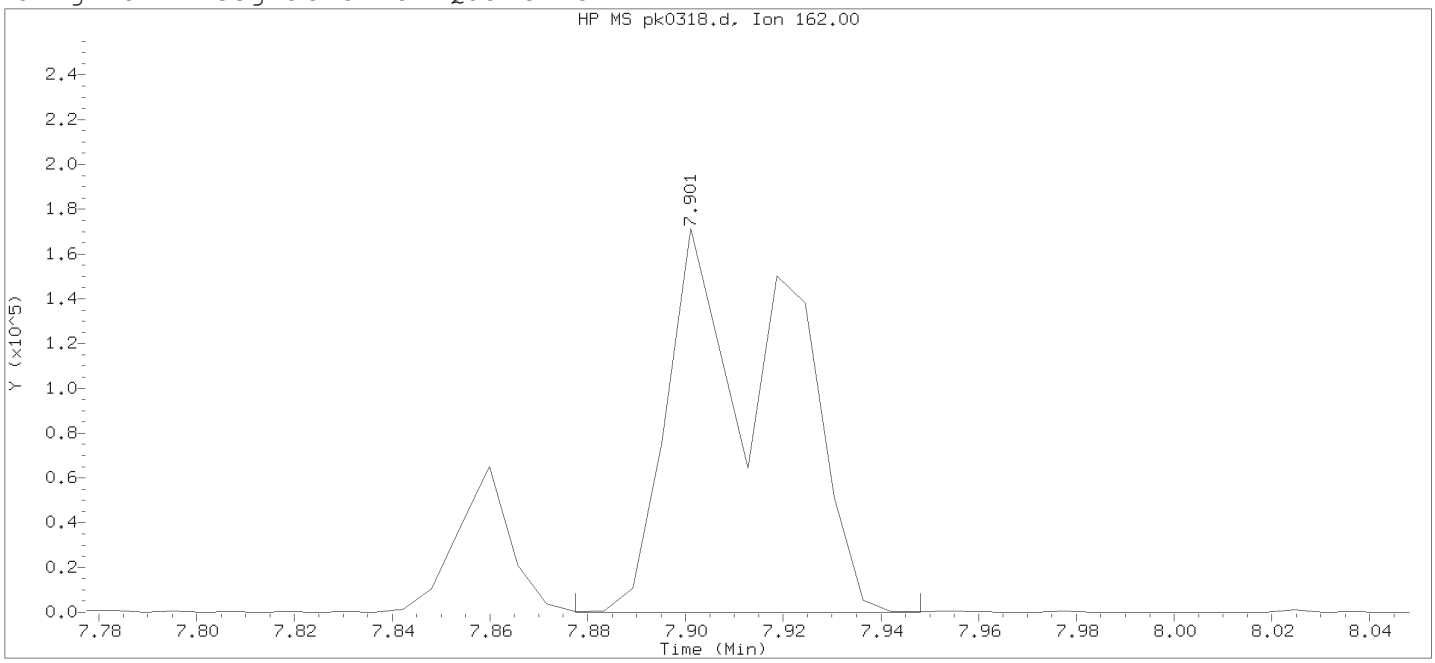
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

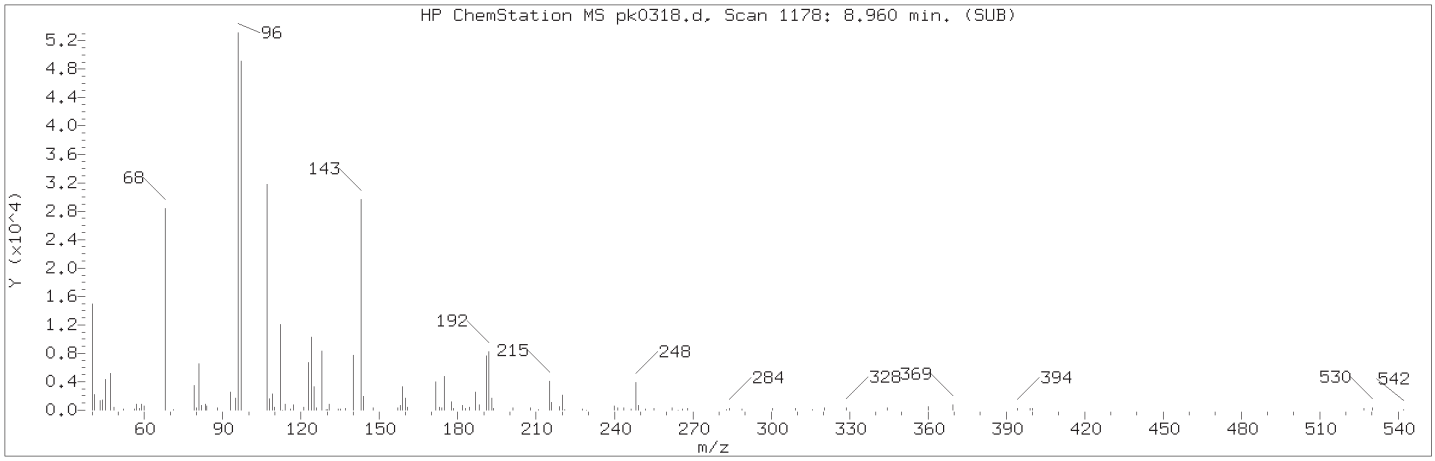
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 18:45
Date, time and analyst ID of latest file update: 09-Nov-2018 18:45 Automation

Sample Name: SSTD005 Lab Sample ID: STD2928

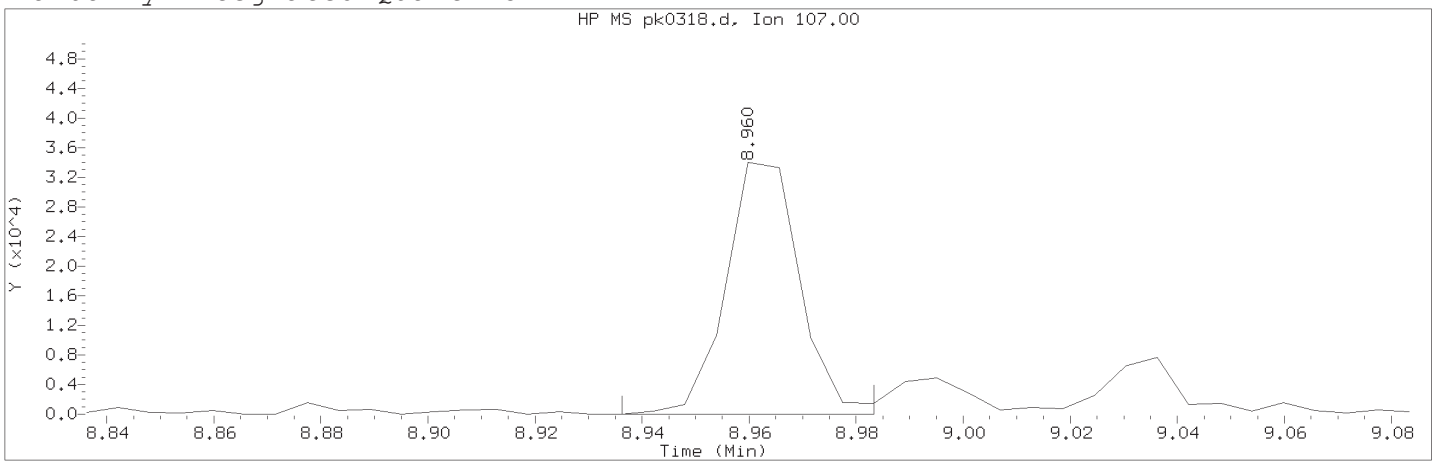
Compound Number	: 98		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 998		
Retention Time (minutes)	: 7.901		
Quant Ion	: 162.00		
Area	: 277717		
On-column Amount (ng/ul)	: 7.9429		
Integration start scan	: 993	Integration stop scan:	1005
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:08.
Target 3.5 esignature used. Page 1586

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD005 Lab Sample ID: STD2928

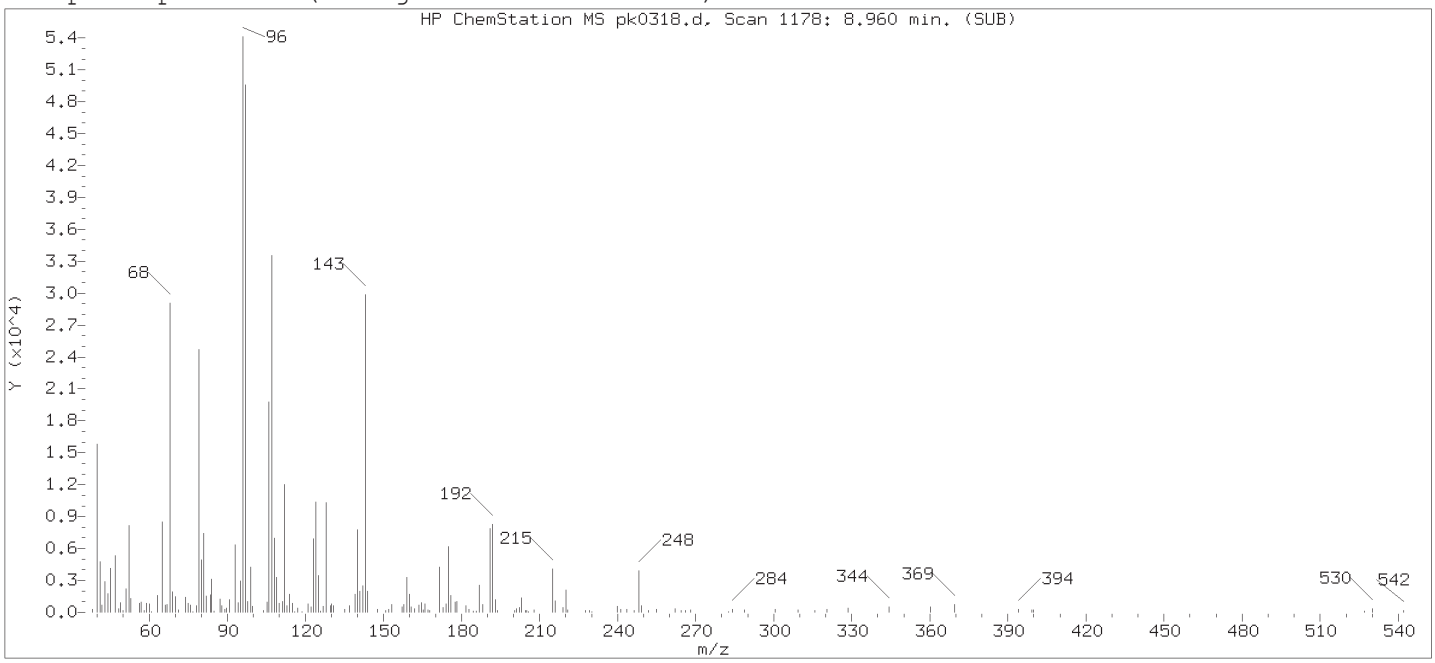
Compound Number : 125
Compound Name : Thionazin
Scan Number : 1178
Retention Time (minutes) : 8.960
Quant Ion : 107.00
Area (flag) : 32813M
On-Column Amount (ng/ul) : 5.1711
Integration start scan : 1173 Integration stop scan: 1181
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

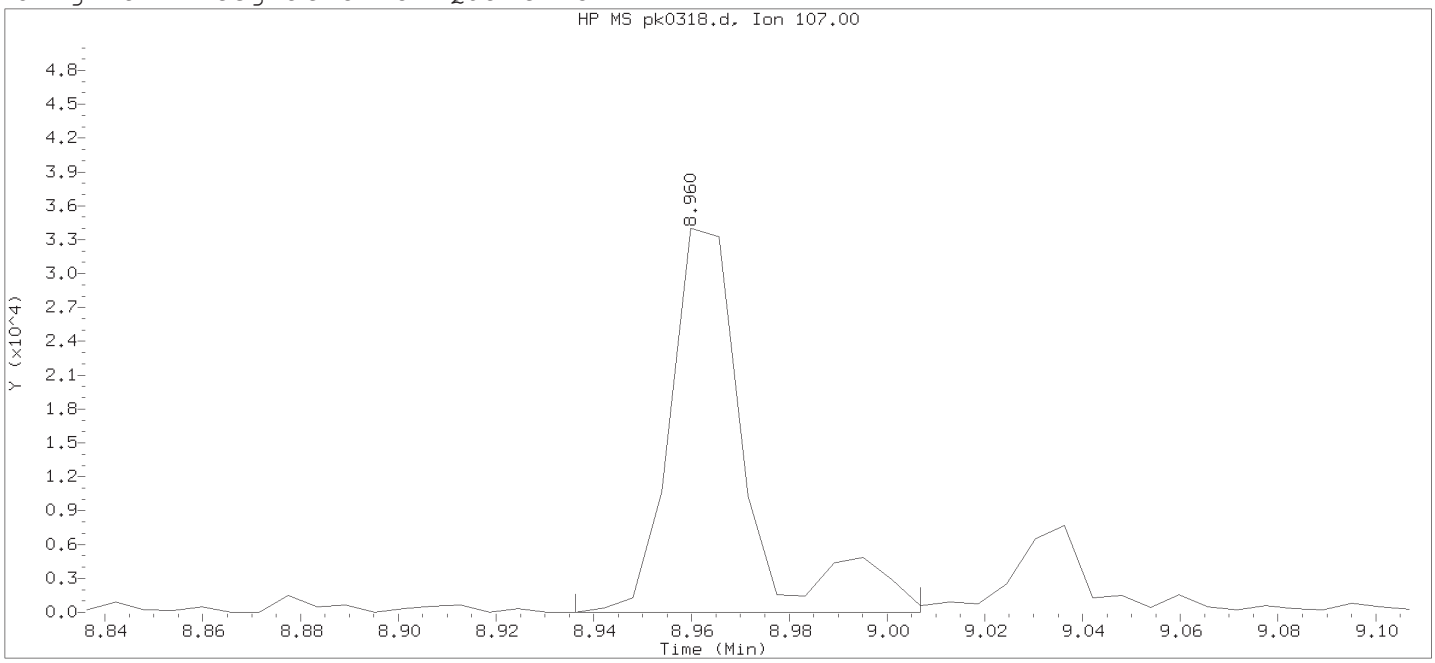
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

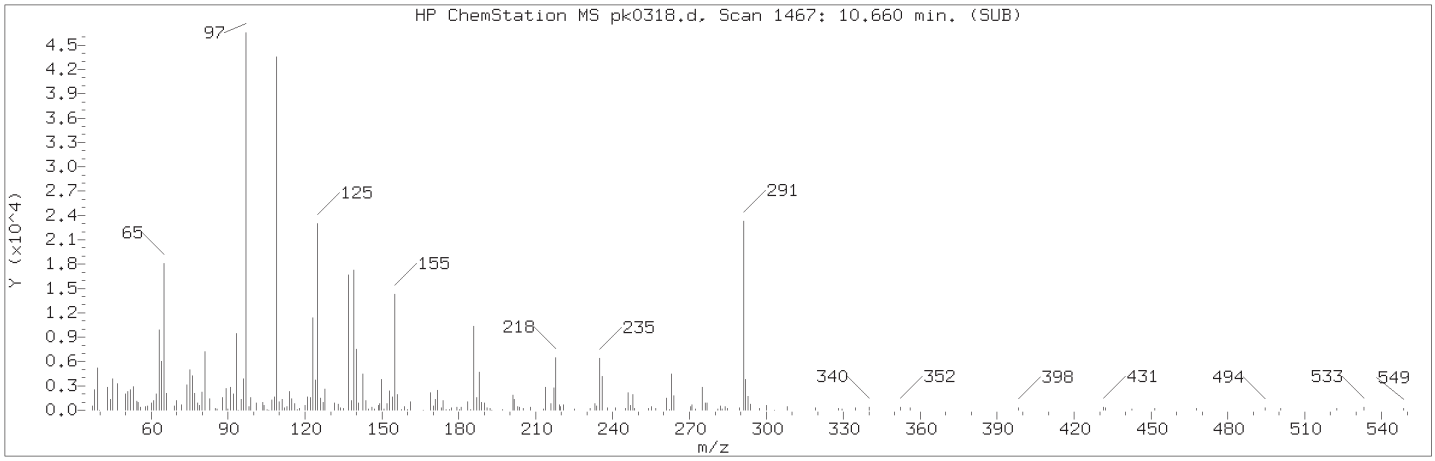
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 18:45
Date, time and analyst ID of latest file update: 09-Nov-2018 18:45 Automation

Sample Name: SSTD005 Lab Sample ID: STD2928

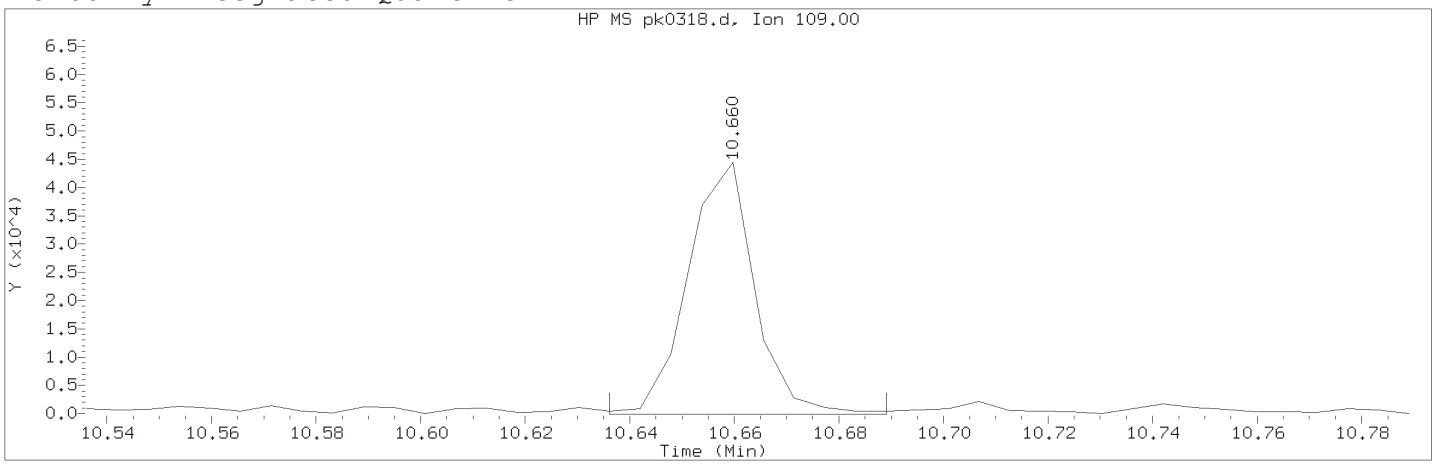
Compound Number	: 125		
Compound Name	: Thionazin		
Scan Number	: 1178		
Retention Time (minutes)	: 8.960		
Quant Ion	: 107.00		
Area	: 37187		
On-column Amount (ng/ul)	: 5.7107		
Integration start scan	: 1173	Integration stop scan:	1185
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:08.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 17:59
Date, time and analyst ID of latest file update: 11-Nov-2018 17:59 apb10206

Sample Name: SSTD005 Lab Sample ID: STD2928

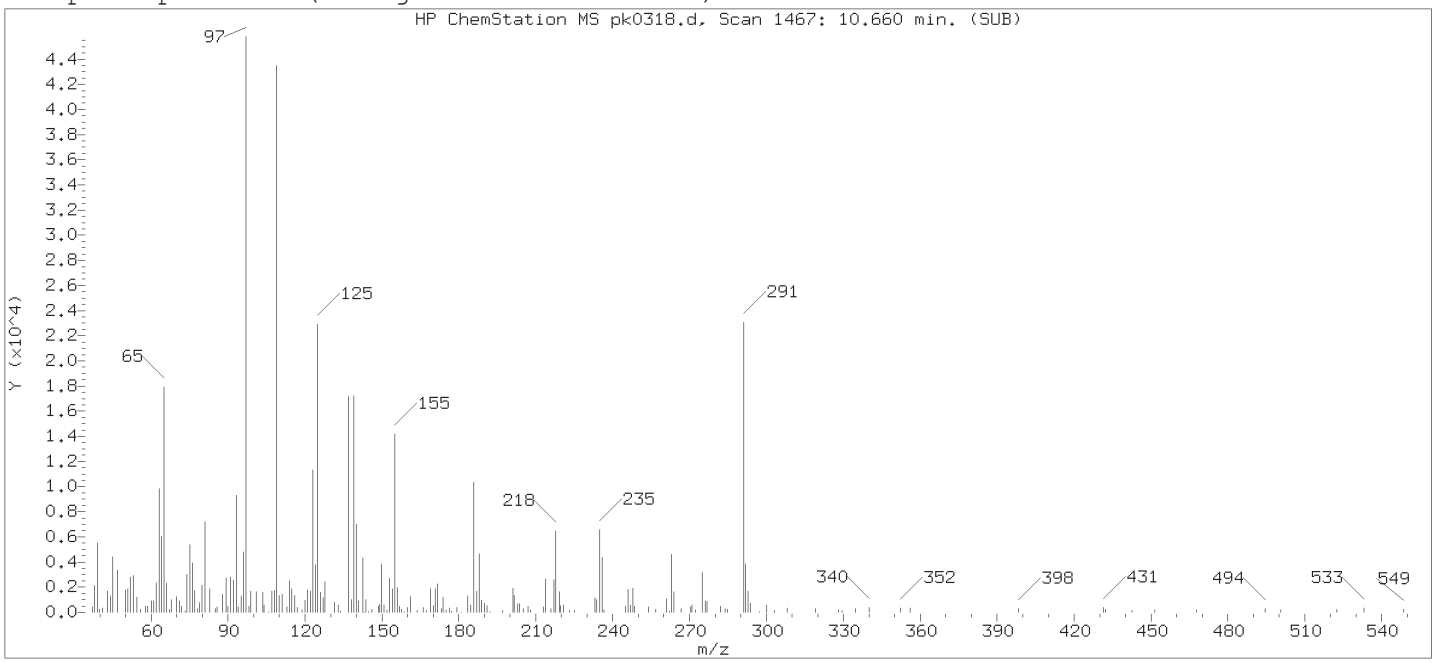
Compound Number : 167
Compound Name : Parathion
Scan Number : 1467
Retention Time (minutes) : 10.660
Quant Ion : 109.00
Area (flag) : 39449M
On-Column Amount (ng/ul) : 4.5586
Integration start scan : 1462 Integration stop scan: 1471
Y at integration start : -89 Y at integration end: -89

Reason for manual integration: improper integration

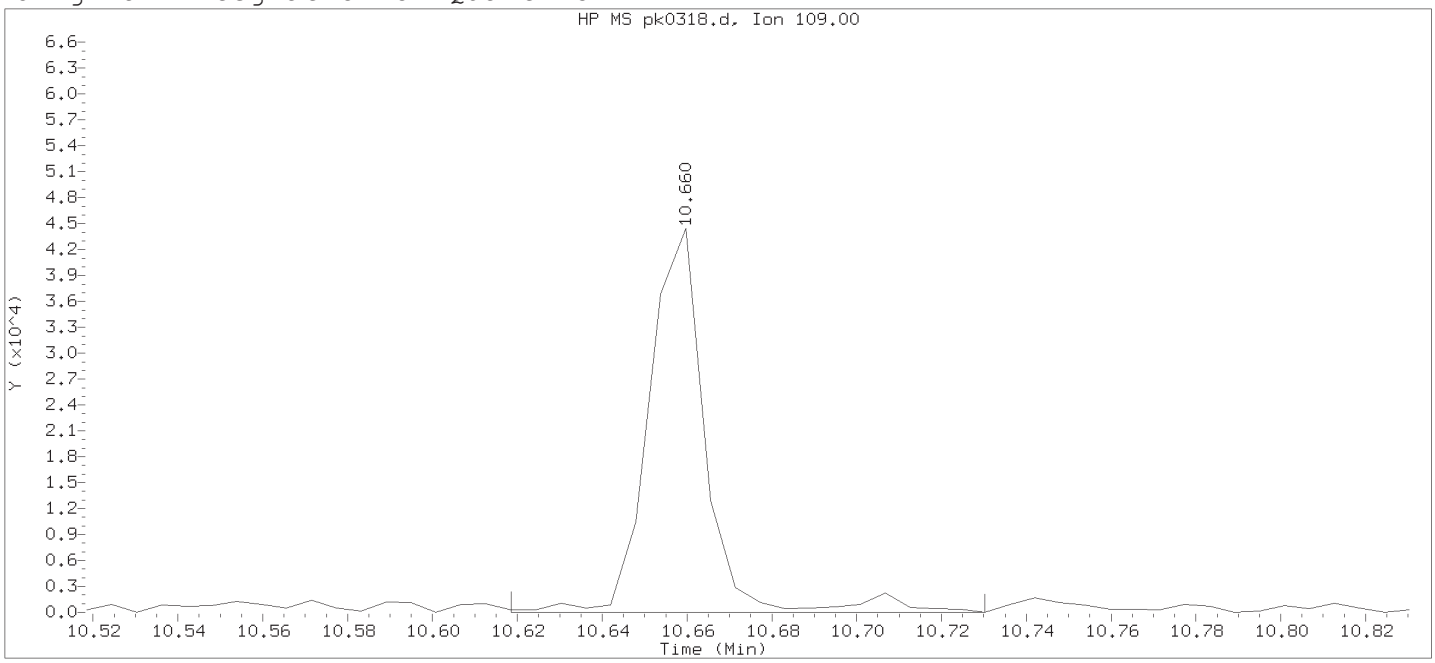
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



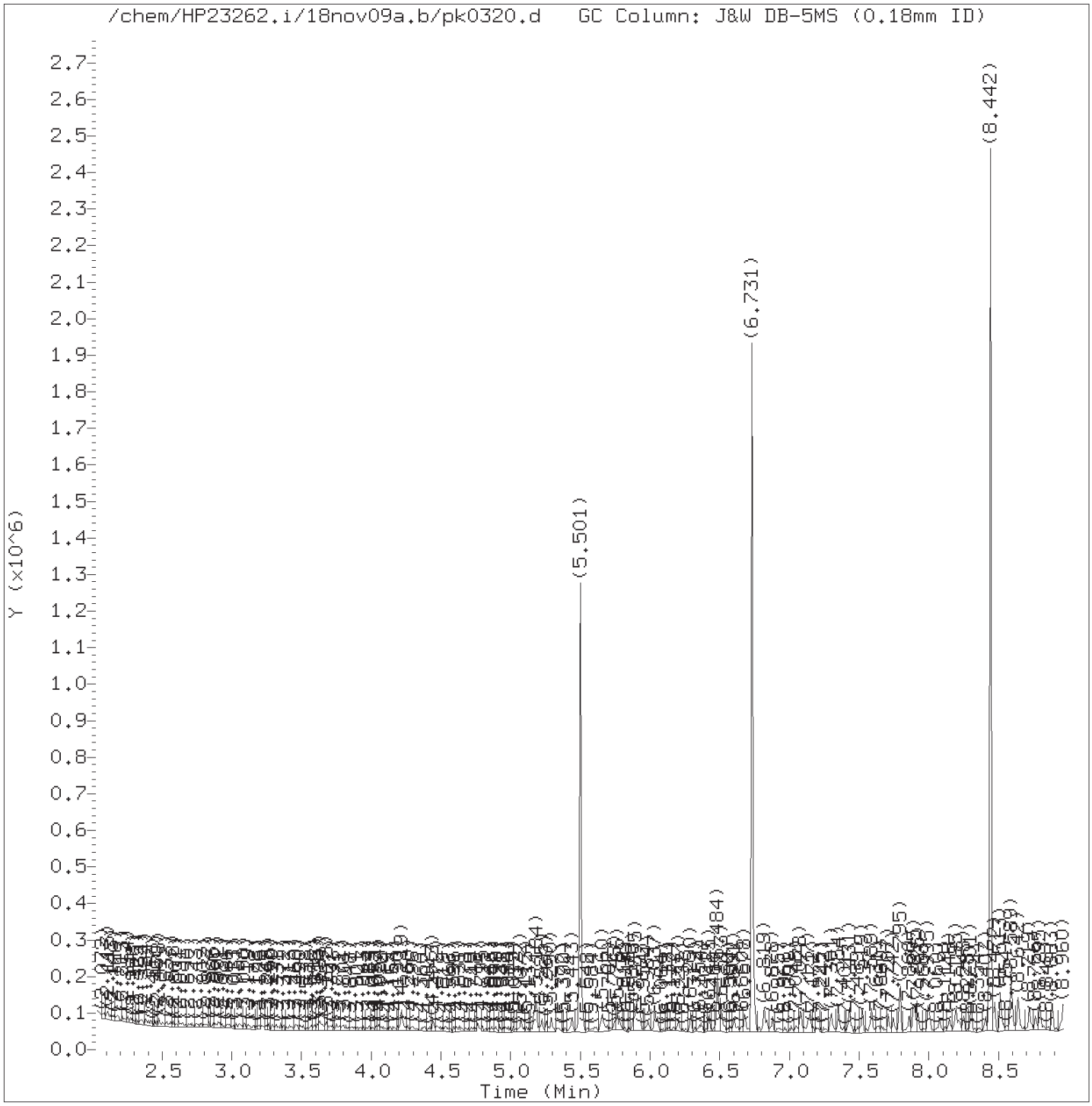
Data File: /chem/HP23262.i/18nov09a.b/pk0318.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 18:24 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: all1
Calibration date and time: 09-NOV-2018 18:45
Date, time and analyst ID of latest file update: 09-Nov-2018 18:45 Automation

Sample Name: SSTD005 Lab Sample ID: STD2928

Compound Number	: 167		
Compound Name	: Parathion		
Scan Number	: 1467		
Retention Time (minutes)	: 10.660		
Quant Ion	: 109.00		
Area	: 41463		
On-column Amount (ng/ul)	: 4.8642		
Integration start scan	: 1459	Integration stop scan:	1478
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:08.
Target 3.5 esignature used 11/11/2018



Total Ion Chromatogram (TIC)

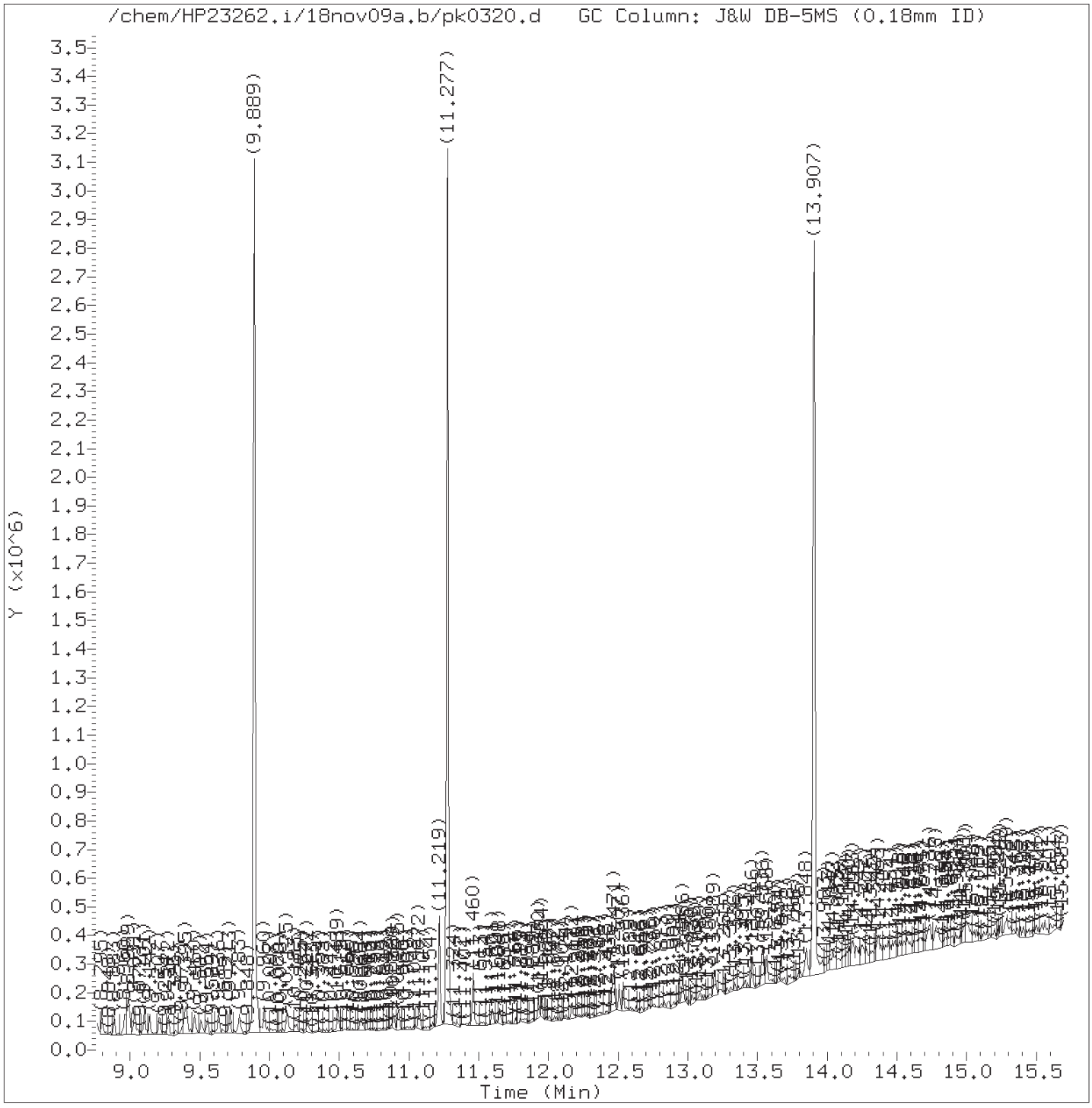
Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:03 apb10206

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:03 apb10206

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:03 apb10206

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7) 2-Picoline	(1)	3.631	93	7204A	0.426
9) Methyl methanesulfonate	(1)	4.054	80	5637	0.756
11)$2-Fluorophenol	(1)	4.219	112	13899	1.152
13) N-Nitrosodiethylamine	(1)	4.448	102	4171M	0.578
15) Ethyl methanesulfonate	(1)	4.766	109	4813	0.662
17)$Phenol-d6	(1)	5.166	99	21346	1.123
19) Aniline	(1)	5.184	93	13872	0.549
18) Phenol	(1)	5.184	94	11806	0.522
22) bis(2-Chloroethyl)ether	(1)	5.260	93	7095	0.444
23) 2-Chlorophenol	(1)	5.295	128	6226	0.511
24) 1,3-Dichlorobenzene	(1)	5.443	146	6416	0.526
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	157606	20.000
26) 1,4-Dichlorobenzene	(1)	5.513	146	7839	0.647
27) Benzyl alcohol	(1)	5.648	108	3981	0.405
42) Total Cresols	(1)			15736	1.042
28) 1,2-Dichlorobenzene	(1)	5.660	146	6906	0.570
30) Indene	(1)	5.742	115	8428	0.586
31) 2-Methylphenol	(1)	5.766	108	6917	0.500
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.778	45	14278M	0.614
34) bis(2-Chloroisopropyl)ether	(1)	5.778	45	14278M	0.614
35) N-Nitrosopyrrolidine	(1)	5.878	100	6111	0.678
36) Acetophenone	(1)	5.895	105	11981	0.577
38) N-Nitroso-di-n-propylamine	(1)	5.901	70	7106	0.513
37) 4-Methylphenol	(1)	5.919	108	8819	0.542
39) N-Nitrosomorpholine	(1)	5.919	56	7713	0.693
40) o-Toluidine	(1)	5.925	106	15089	0.646
43) Hexachloroethane	(1)	5.984	117	5100	0.988
44)$Nitrobenzene-d5	(2)	6.037	82	19238	1.057
45) Nitrobenzene	(2)	6.054	77	10744	0.546
48) N-Nitrosopiperidine	(2)	6.201	114	3095	0.373
50) Isophorone	(2)	6.290	82	17742	0.486
51) 2-Nitrophenol	(2)	6.366	139	3632	0.517
53) 2,4-Dimethylphenol	(2)	6.419	107	8711	0.542
56) Benzoic acid	(2)	6.484	105	39586	3.571
57) O,O,O-Triethylphosphorothioate	(2)	6.484	198	3686	0.482
55) bis(2-Chloroethoxy)methane	(2)	6.513	93	12472	0.573
60) 2,4-Dichlorophenol	(2)	6.601	162	5726	0.489
62) 1,2,4-Trichlorobenzene	(2)	6.678	180	7179	0.591
65)*Naphthalene-d8	(2)	6.731	136	702030	20.000
67) 4-Chloroaniline	(2)	6.813	127	7609	0.472

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:03 apb10206

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
68) 2,6-Dichlorophenol	(2)	6.819	162	6074	0.529
69) Hexachloropropene	(2)	6.837	213	3524	0.499
71) Hexachlorobutadiene	(2)	6.878	225	4927	0.709
75) Quinoline	(2)	7.078	129	14616	0.534
76) Caprolactam	(2)	7.131	113	3366	0.590
77) N-Nitrosodi-n-butylamine	(2)	7.137	84	8934	0.497
80) 4-Chloro-3-methylphenol	(2)	7.301	107	7669	0.513
82) Safrole	(2)	7.354	162	5526	0.504
97) Isosafrole	(3)			5118	0.430
85) Hexachlorocyclopentadiene	(3)	7.584	237	3082	0.426
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.589	216	7330	0.506
88) cis-Isosafrole	(3)	7.636	162	1125	0.094
90) 2,4,6-Trichlorophenol	(3)	7.707	196	4798	0.497
92) 2,4,5-Trichlorophenol	(3)	7.748	196	5554	0.524
93)$2-Fluorobiphenyl	(3)	7.789	172	32468	0.971
94) trans-Isosafrole	(3)	7.860	162	3993	0.337
95) 1,1'-Biphenyl	(3)	7.889	154	16337	0.450
98) 1-Chloronaphthalene	(3)	7.925	162	13712M	0.483
99) Diphenyl ether	(3)	7.995	170	11308	0.539
100) 2-Nitroaniline	(3)	8.007	138	4520	0.457
120) 2,4_2,6-Dinitrotoluenes	(3)			10139	1.030
104) 1,4-Naphthoquinone	(3)	8.078	158	5660	0.451
105) 1,4-Dinitrobenzene	(3)	8.148	168	2461	0.456
106) Dimethylphthalate	(3)	8.195	163	18318	0.521
107) 1,3-Dinitrobenzene	(3)	8.219	168	3794	0.606
108) 2,6-Dinitrotoluene	(3)	8.248	165	3893	0.465
112) 3-Nitroaniline	(3)	8.407	138	4662	0.543
113)*Acenaphthene-d10	(3)	8.442	164	433909	20.000
115) 2,4-Dinitrophenol	(3)	8.513	184	13488	2.945
116) 4-Nitrophenol	(3)	8.589	109	14113	2.462
117) Pentachlorobenzene	(3)	8.601	250	7955	0.588
118) 2,4-Dinitrotoluene	(3)	8.636	165	6246	0.564
119) Dibenzofuran	(3)	8.642	168	22938	0.504
121) 1-Naphthylamine	(3)	8.725	143	15955	0.509
122) 2,3,4,6-Tetrachlorophenol	(3)	8.766	232	5754	0.640
146) Diallate trans/cis	(4)			12029	0.551
123) 2-Naphthylamine	(3)	8.795	143	17038	0.542
124) Diethylphthalate	(3)	8.883	149	17760	0.491
125) Thionazin	(3)	8.960	107	5469	0.836
127) 4-Chlorophenyl-phenylether	(3)	8.989	204	11792	0.591

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:03 apb10206

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
128) 5-Nitro-o-toluidine	(3)	8.995	152	5383	0.511
129) 4-Nitroaniline	(3)	8.995	138	4636	0.472
130) 4,6-Dinitro-2-methylphenol	(4)	9.031	198	10655	1.644
131) N-Nitrosodiphenylamine	(4)	9.101	169	15964	0.490
132) NDPA as diphenylamine	(4)	9.101	169	15964	0.490
134) 1,2-Diphenylhydrazine	(4)	9.142	77	23909	0.485
135)$2,4,6-Tribromophenol	(3)	9.207	330	2911	0.671
137) Tetraethyldithiopyrophosphate	(4)	9.272	97	4008M	0.559
139) 1,3,5-Trinitrobenzene	(4)	9.378	213	1907M	0.402
140) Diallate (peak 1)	(4)	9.389	86	9268	0.409
141) Phorate	(4)	9.395	75	16665	0.455
142) Phenacetin	(4)	9.407	108	10931	0.508
143) 4-Bromophenyl-phenylether	(4)	9.460	248	5498	0.495
144) Diallate (peak 2)	(4)	9.478	86	2761	0.142
147) Dimethoate	(4)	9.554	87	11187	0.585
149) Pentachlorophenol	(4)	9.713	266	3652	0.596
150) 4-Aminobiphenyl	(4)	9.719	169	9559	0.622
151) Pentachloronitrobenzene	(4)	9.719	237	2752	0.544
152) Pronamide	(4)	9.783	173	7580	0.439
153)*Phenanthrene-d10	(4)	9.889	188	1012827	20.000
154) Dinoseb	(4)	9.895	211	2852	0.288
163) Carbazole	(4)	10.125	167	25165	0.469
164) Methyl parathion	(4)	10.272	109	5602	0.405
165) Di-n-butylphthalate	(4)	10.489	149	33312	0.521
167) Parathion	(4)	10.654	109	4013	0.460
168) 4-Nitroquinoline-1-oxide	(4)	10.666	190	1487	0.269
169) Octachlorostyrene	(4)	10.889	308	2646	0.634
171) Isodrin	(4)	10.925	193	5410	0.756
174) Benzidine	(5)	11.219	184	147862	3.551
175)*Pyrene-d10	(5)	11.277	212	1091415	20.000
179)$Terphenyl-d14	(5)	11.460	244	45583	0.979
182) p-Dimethylaminoazobenzene	(5)	11.601	225	6537	0.509
185) Chlorobenzilate	(5)	11.648	139	10760	0.583
187) 3,3'-Dimethylbenzidine	(5)	11.930	212	25894	0.594
188) Butylbenzylphthalate	(5)	11.954	149	13109	0.418
191) 2-Acetylaminofluorene	(5)	12.172	181	12507	0.468
193) 3,3'-Dichlorobenzidine	(5)	12.460	252	13102	0.522
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.471	231	7961	0.591
199) bis(2-Ethylhexyl)phthalate	(5)	12.536	149	21439	0.483
203) 6-Methylchrysene	(5)	12.966	242	17337	0.382

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:03 apb10206

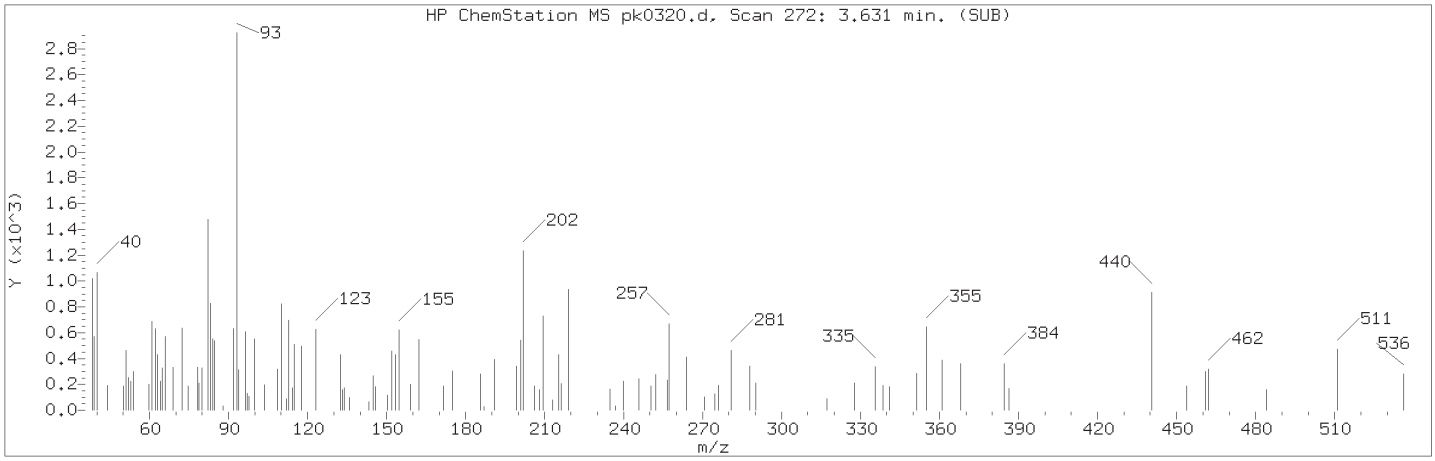
Sample Name: SSTD0.5 Lab Sample ID: MDL2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
205) Di-n-octylphthalate	(6)	13.189	149	38766	0.516
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.530	256	15031	0.503
213)*Perylene-d12	(6)	13.907	264	941667	20.000
215) 3-Methylcholanthrene	(6)	14.183	268	15380	0.632
217) Dibenz(a,h)acridine	(6)	14.736	279	23076	0.488
218) Dibenz(a,j)acridine	(6)	14.783	279	19234	0.394

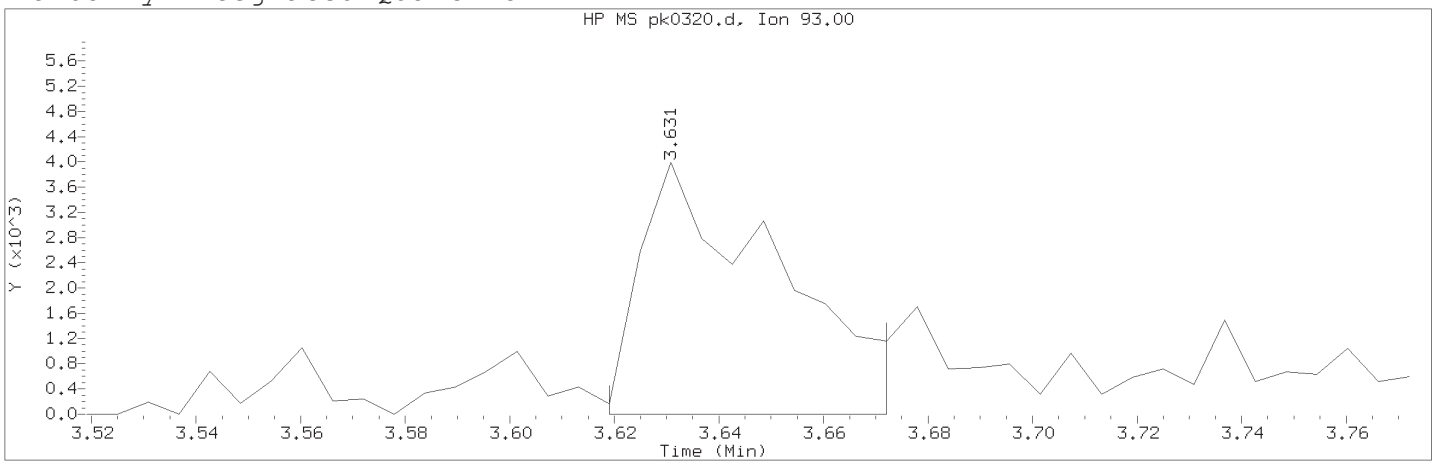
* = Compound is an internal standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:03 apb10206

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

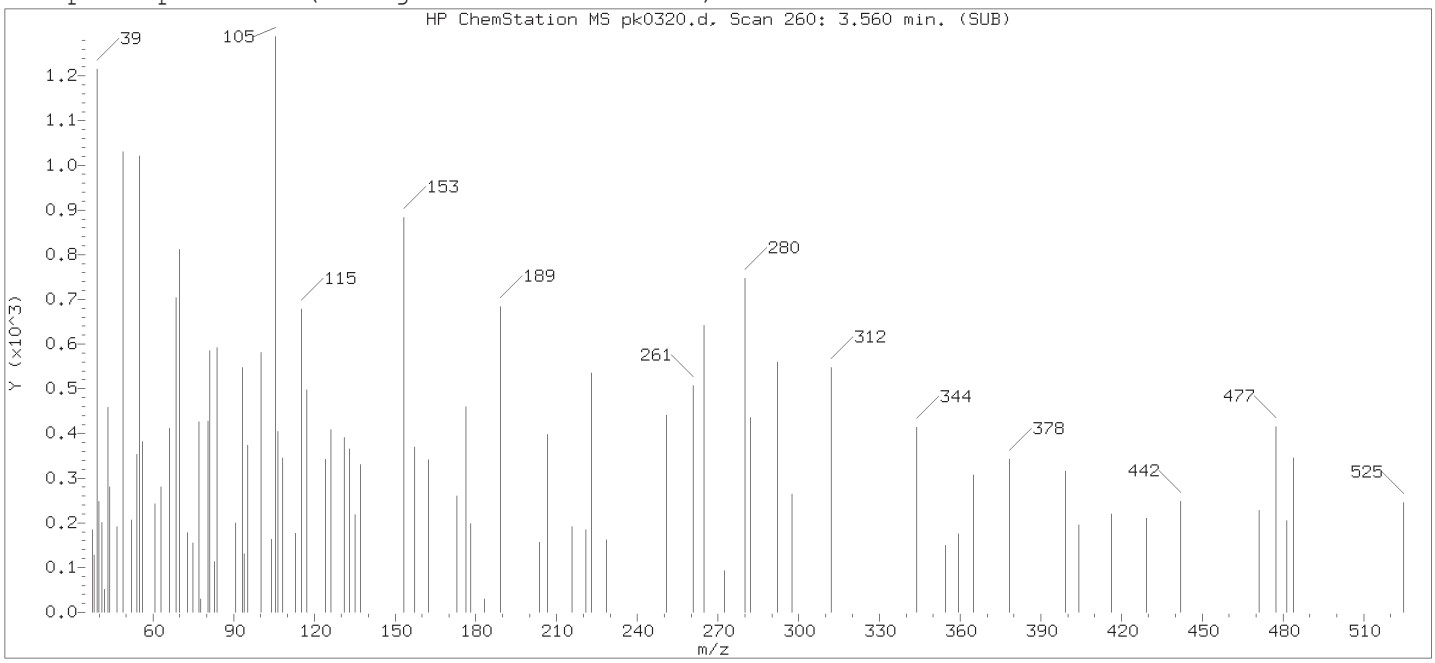
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 272		
Retention Time (minutes)	: 3.631		
Quant Ion	: 93.00		
Area (flag)	: 7204A		
On-Column Amount (ng/ul)	: 0.4259		
Integration start scan	: 269	Integration stop scan:	278
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

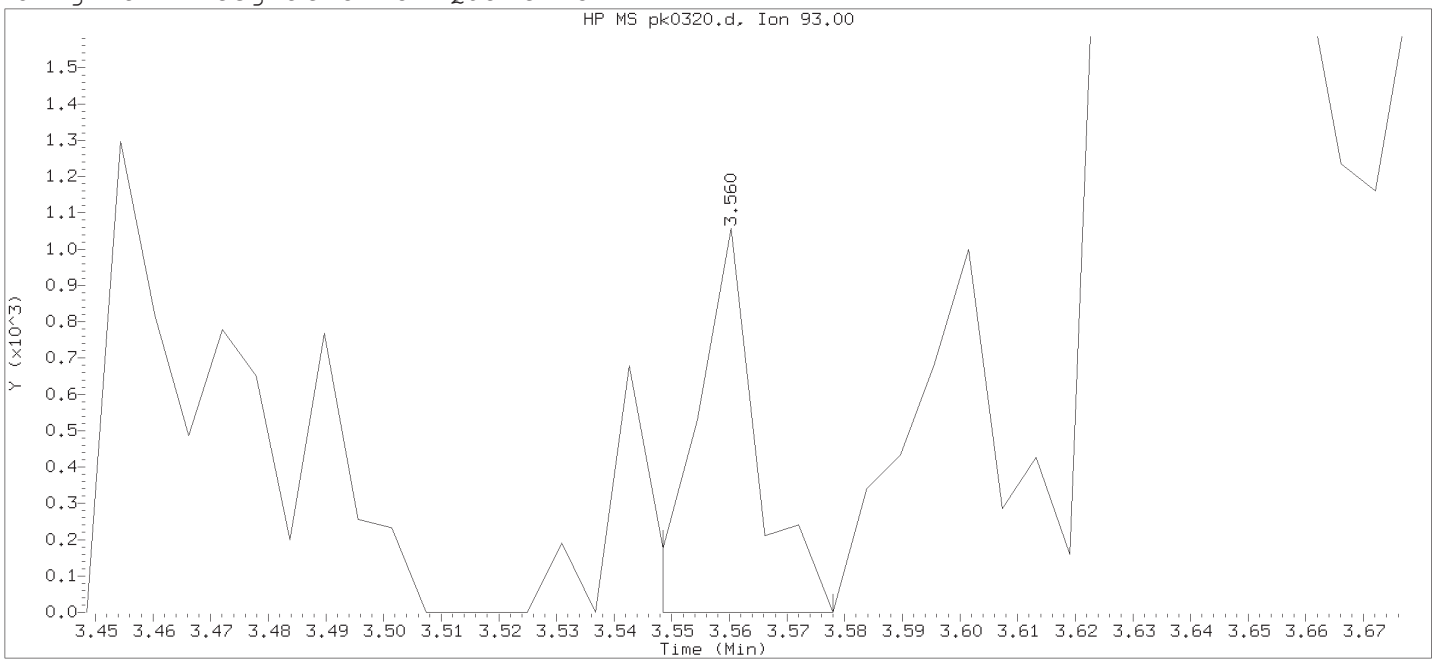
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

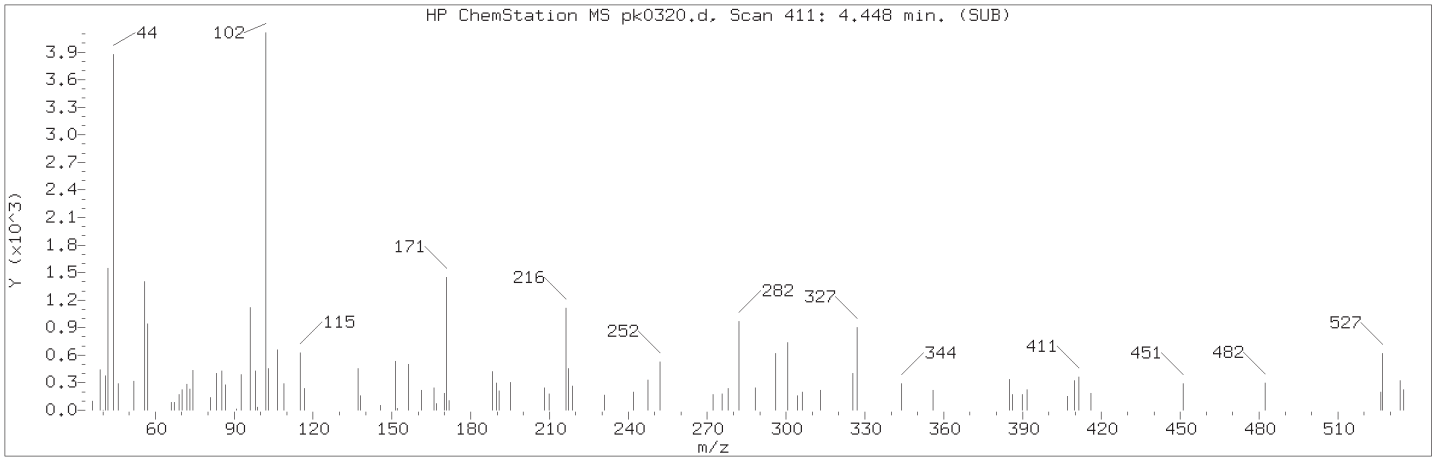
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 09-NOV-2018 19:09
Date, time and analyst ID of latest file update: 09-Nov-2018 19:32 Automation

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

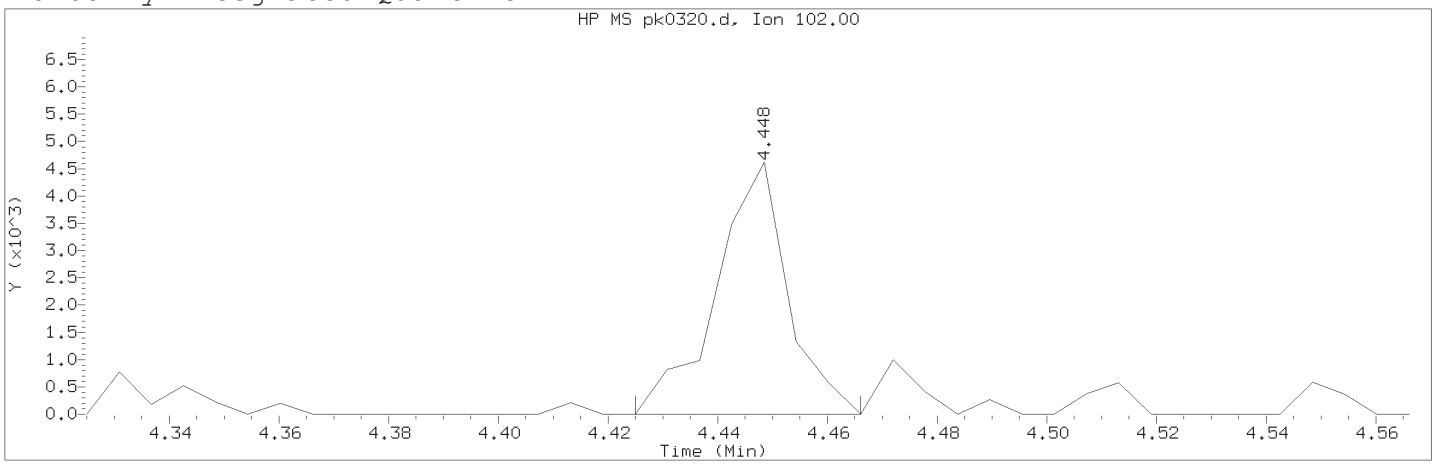
Compound Number	: 7
Compound Name	: 2-Picoline
Scan Number	: 260
Retention Time (minutes)	: 3.560
Quant Ion	: 93.00
Area	: 750
On-column Amount (ng/ul)	: 0.0437
Integration start scan	: 257 Integration stop scan: 262
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:12.
Target 3.5 esignature used in this report

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:03 apb10206

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

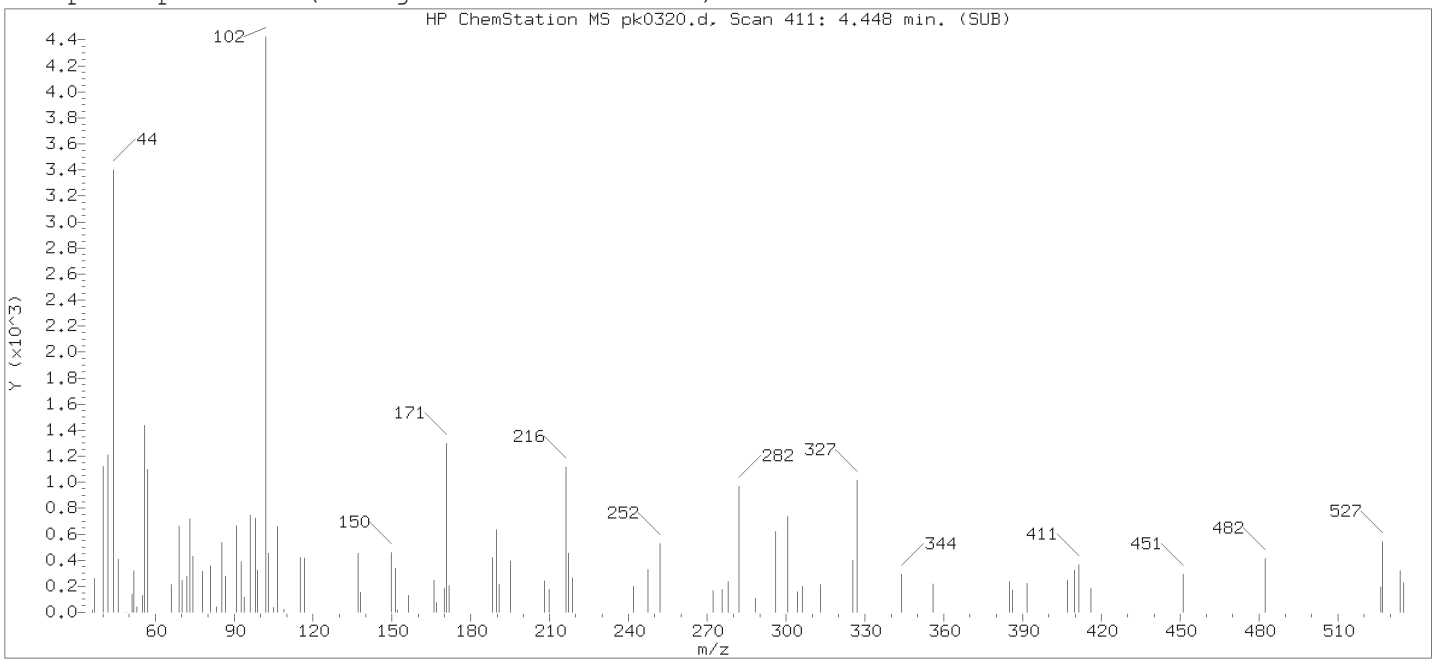
Compound Number : 13
Compound Name : N-Nitrosodiethylamine
Scan Number : 411
Retention Time (minutes) : 4.448
Quant Ion : 102.00
Area (flag) : 4171M
On-Column Amount (ng/ul) : 0.5777
Integration start scan : 406 Integration stop scan: 413
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

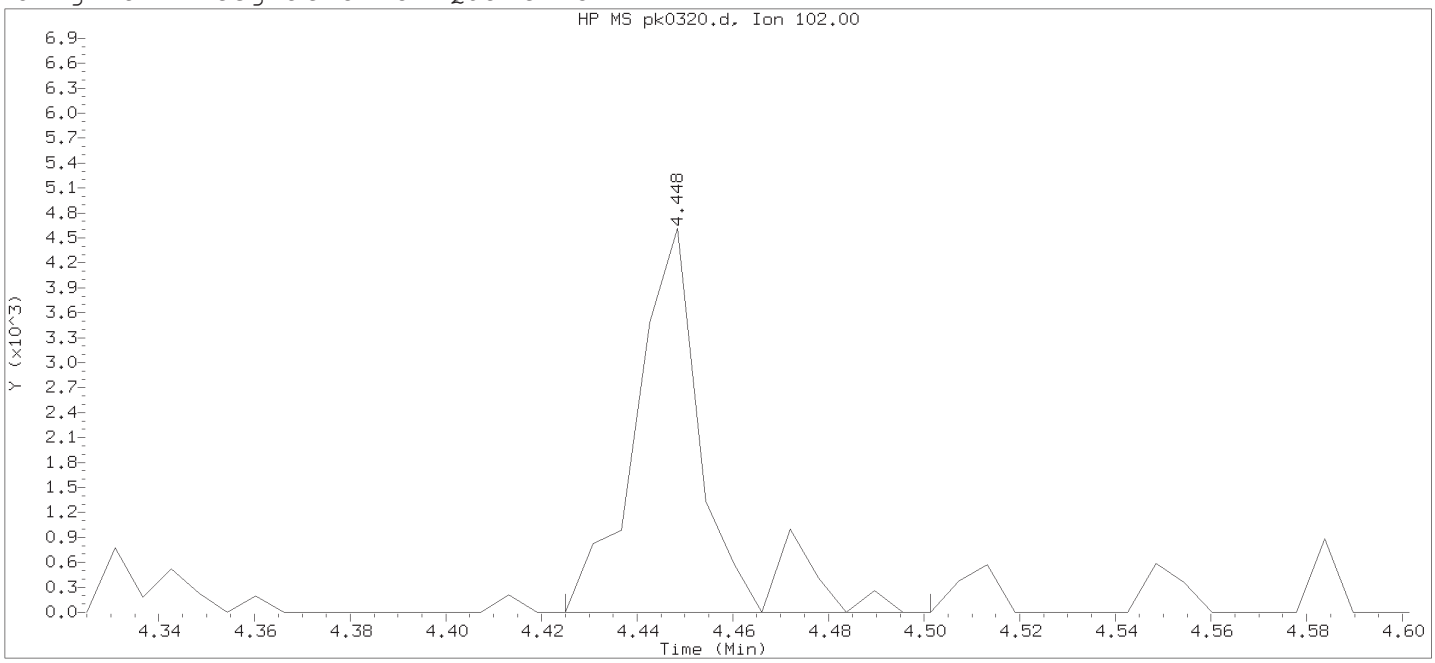
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

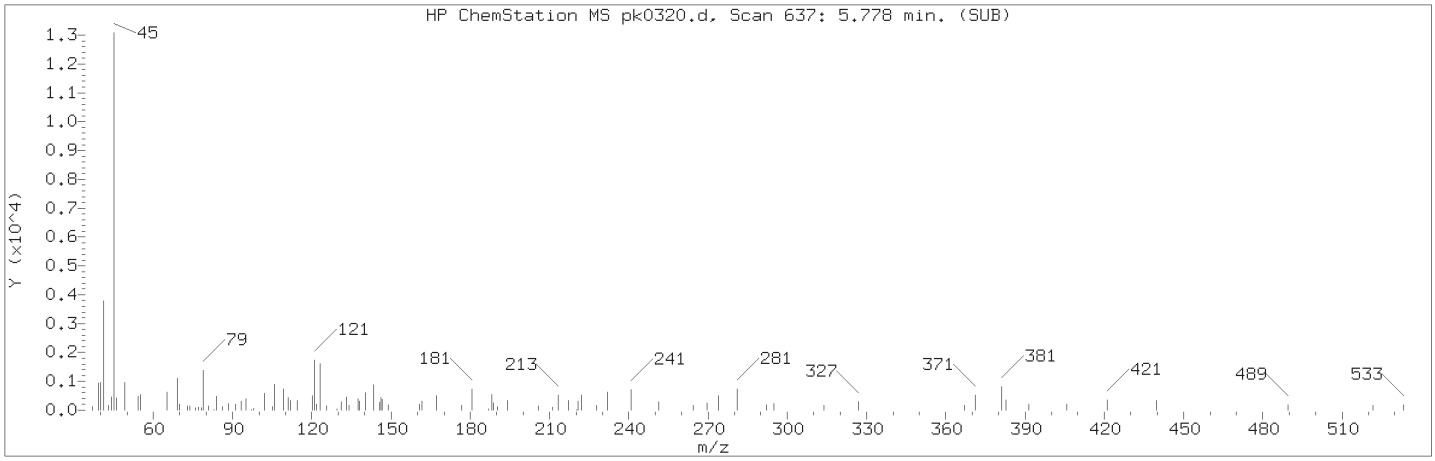
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 09-NOV-2018 19:09
Date, time and analyst ID of latest file update: 09-Nov-2018 19:32 Automation

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

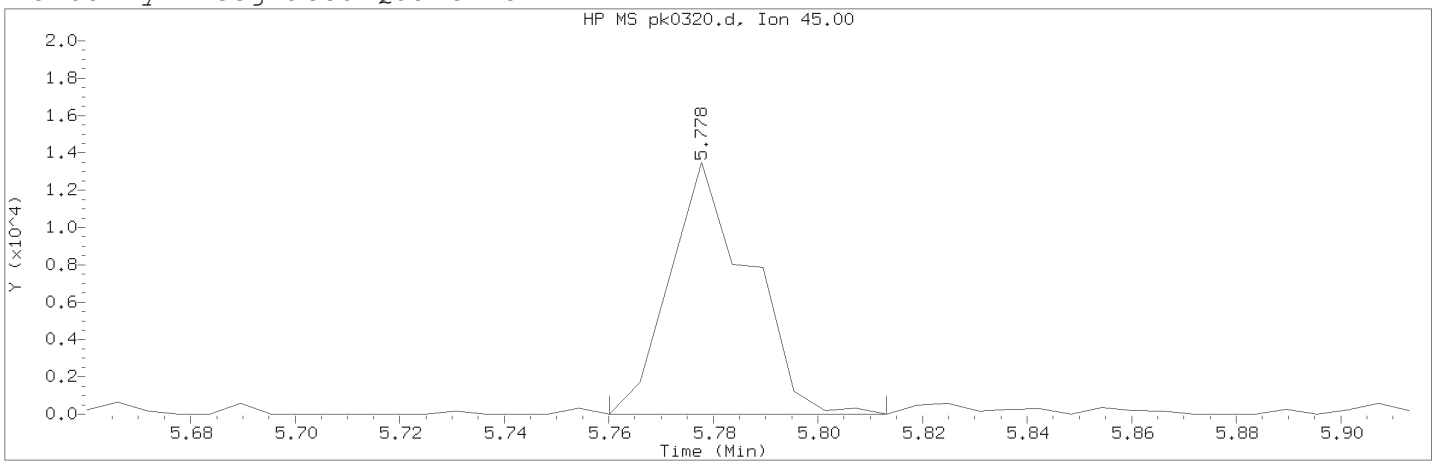
Compound Number	: 13		
Compound Name	: N-Nitrosodiethylamine		
Scan Number	: 411		
Retention Time (minutes)	: 4.448		
Quant Ion	: 102.00		
Area	: 4761		
On-column Amount (ng/ul)	: 0.6497		
Integration start scan	: 406	Integration stop scan:	419
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:12.
Target 3.5 esignature used: D10 Page 1606

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:03 apb10206

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

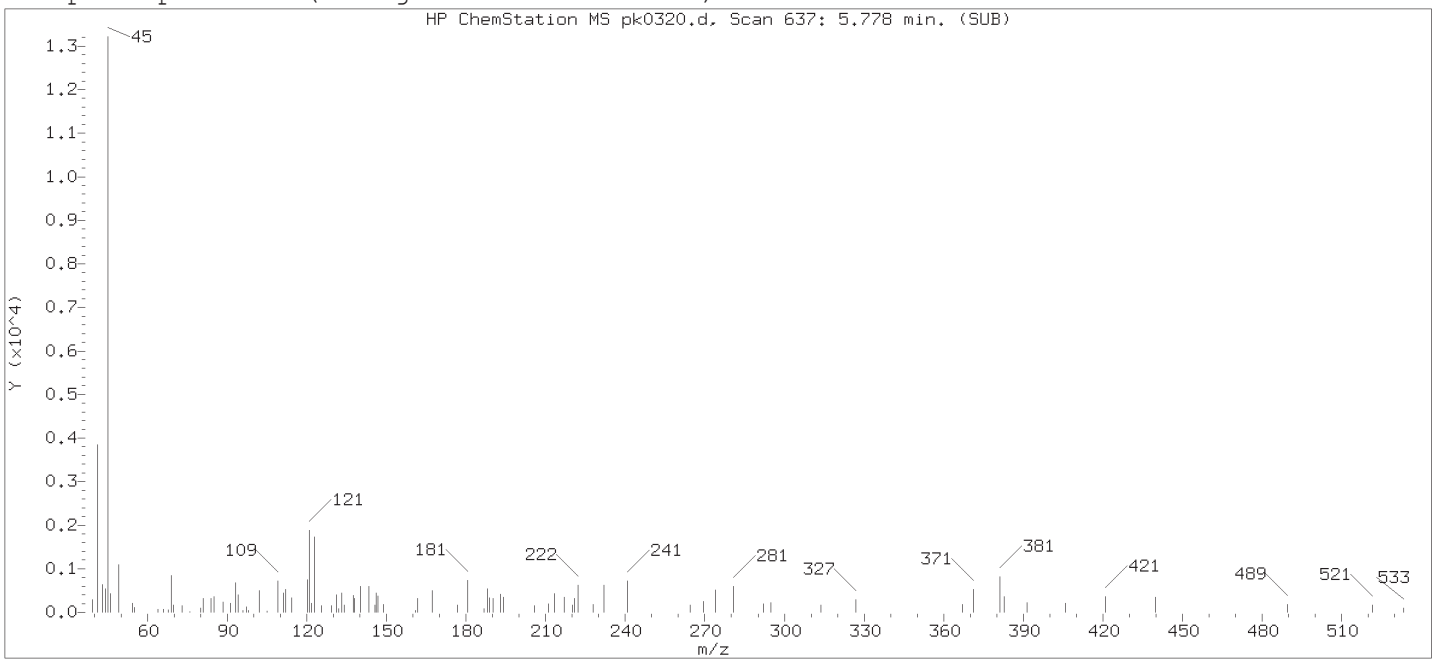
Compound Number : 33
Compound Name : 2,2'-oxybis(1-Chloropropane)
Scan Number : 637
Retention Time (minutes) : 5.778
Quant Ion : 45.00
Area (flag) : 14278M
On-Column Amount (ng/ul) : 0.6136
Integration start scan : 633 Integration stop scan: 642
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

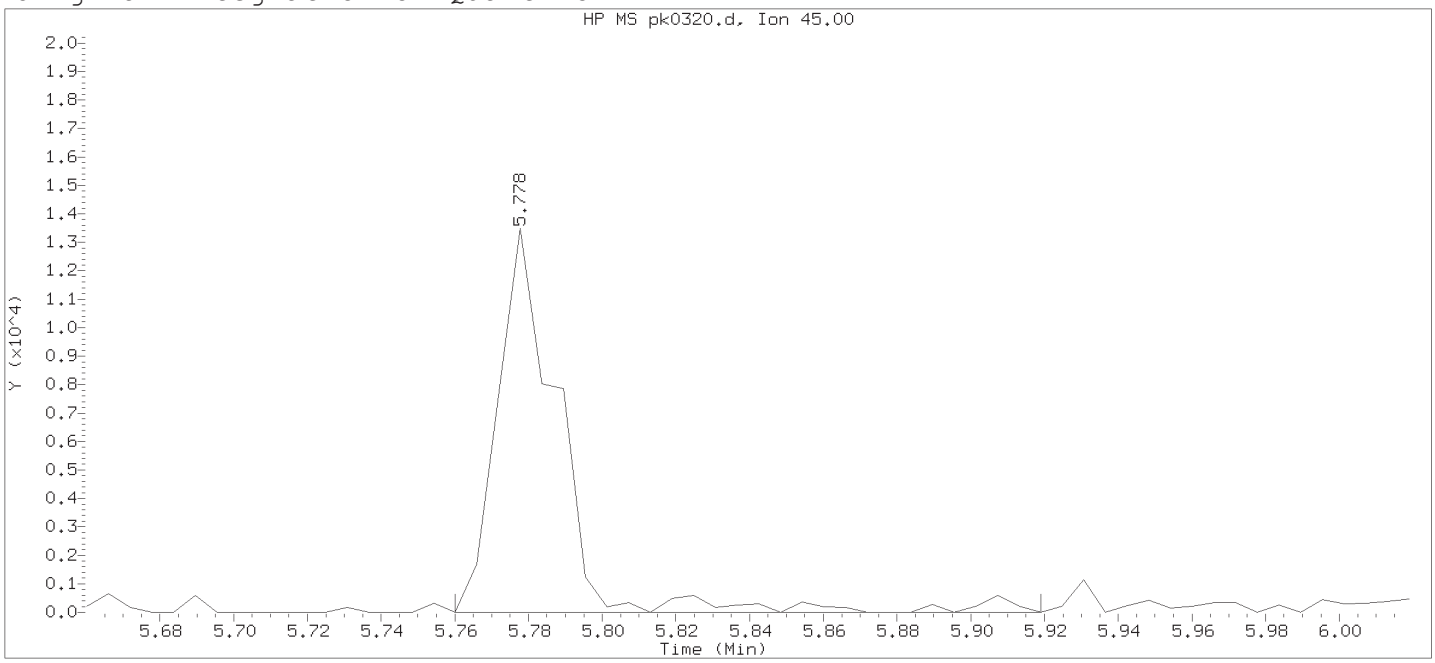
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

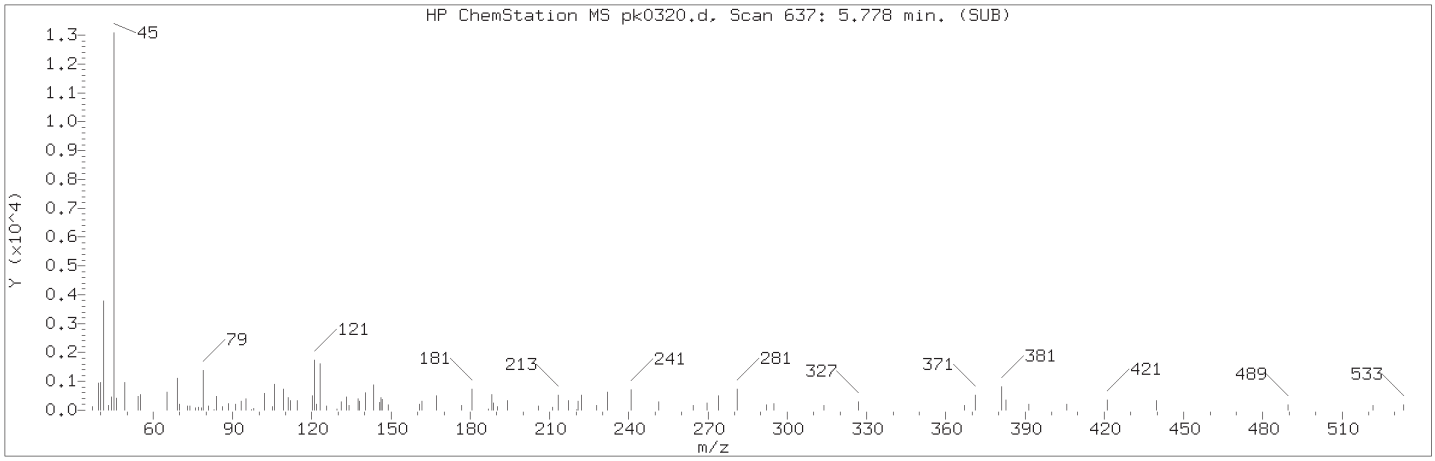
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 09-NOV-2018 19:09
Date, time and analyst ID of latest file update: 09-Nov-2018 19:32 Automation

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

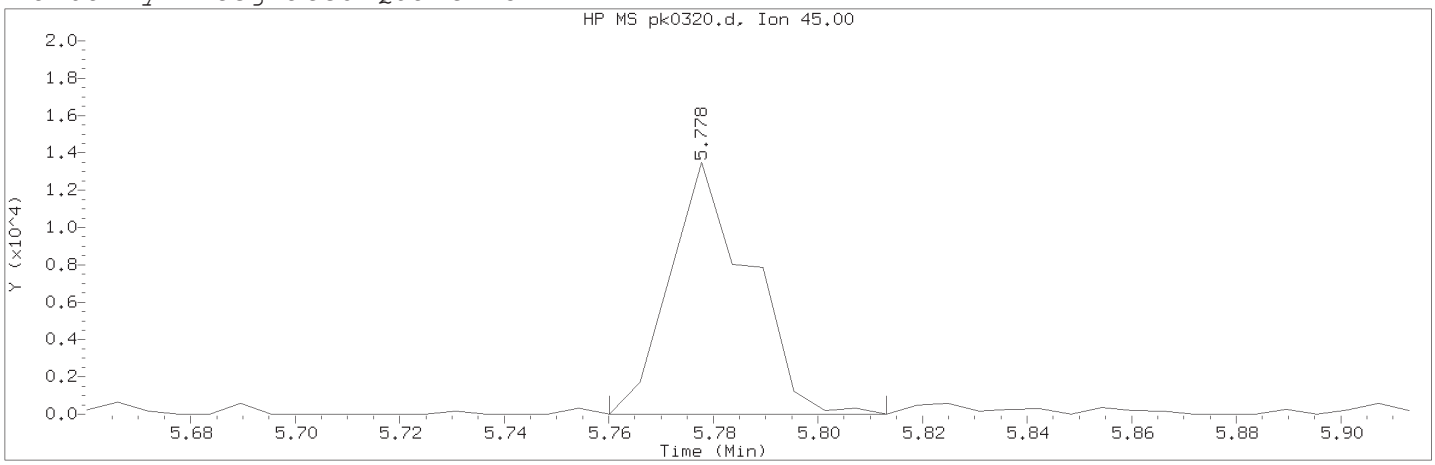
Compound Number	: 33		
Compound Name	: 2,2'-oxybis(1-Chloropropane)		
Scan Number	: 637		
Retention Time (minutes)	: 5.778		
Quant Ion	: 45.00		
Area	: 15613		
On-column Amount (ng/ul)	: 0.6790		
Integration start scan	: 633	Integration stop scan:	660
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:12.
Target 3.5 esignature used in this report

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:03 apb10206

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

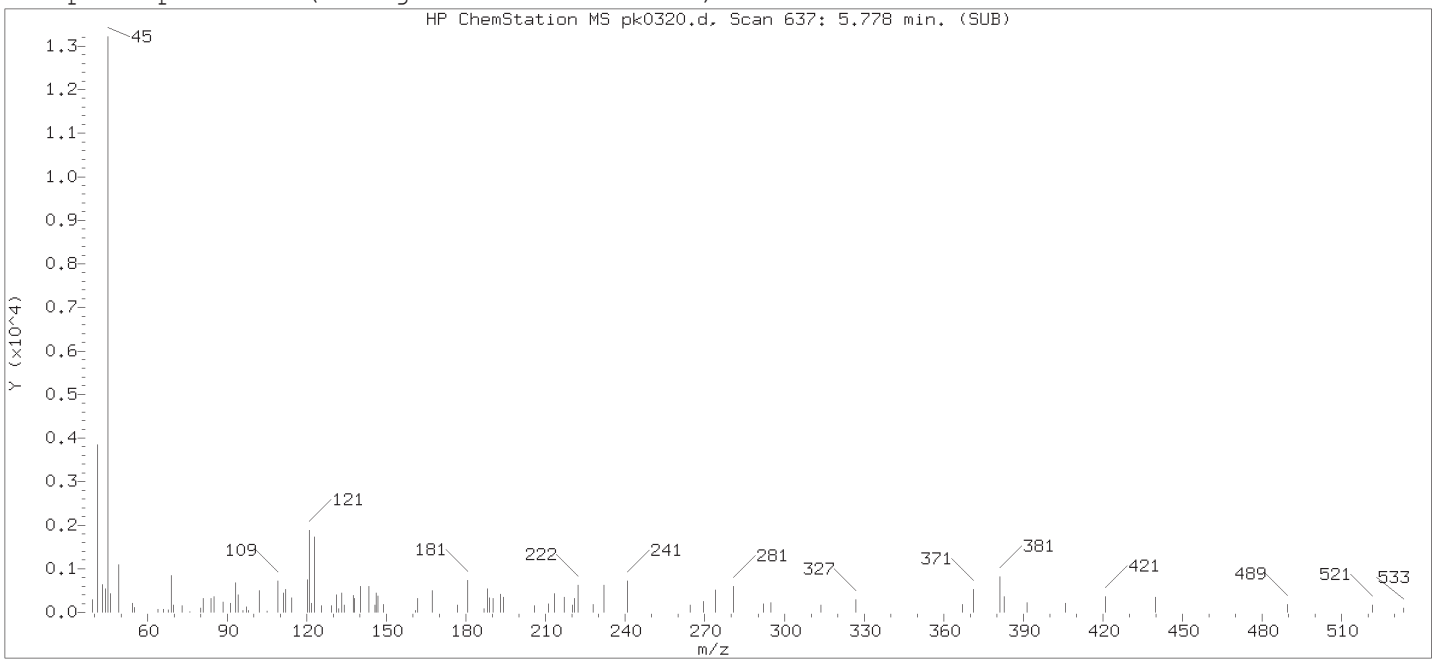
Compound Number : 34
Compound Name : bis(2-Chloroisopropyl)ether
Scan Number : 637
Retention Time (minutes) : 5.778
Quant Ion : 45.00
Area (flag) : 14278M
On-Column Amount (ng/ul) : 0.6136
Integration start scan : 633 Integration stop scan: 642
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

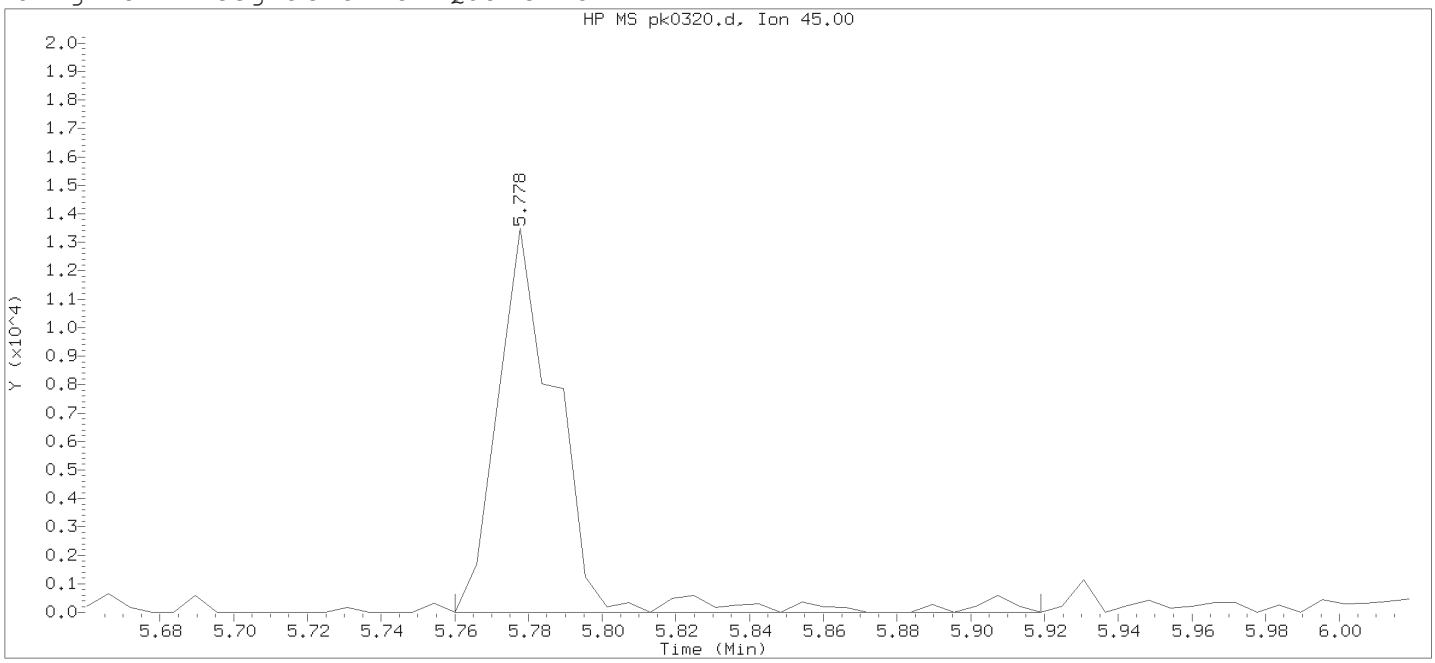
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

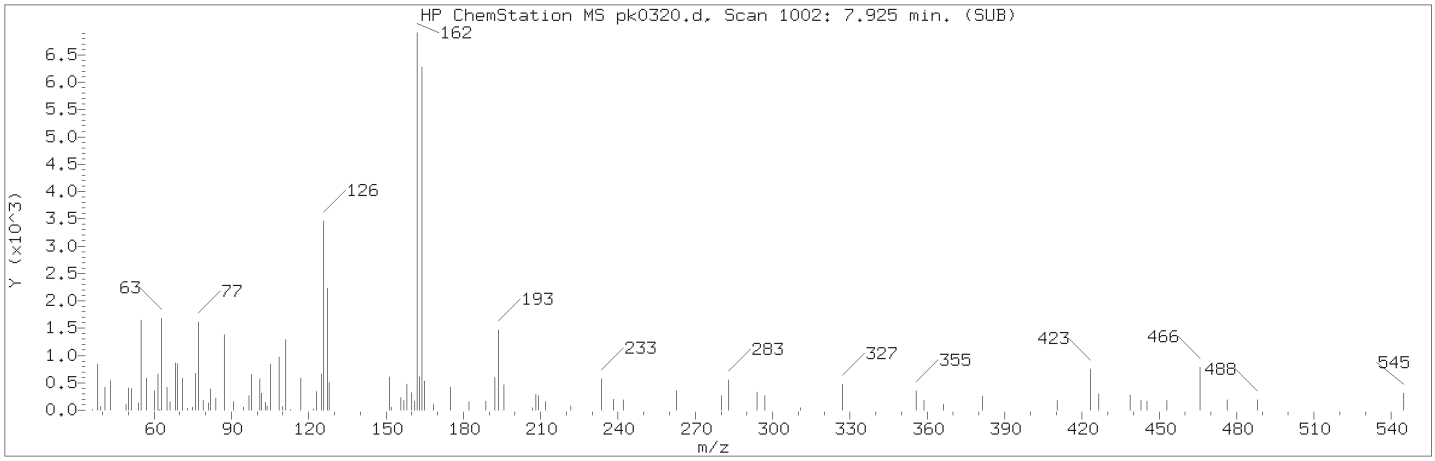
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 09-NOV-2018 19:09
Date, time and analyst ID of latest file update: 09-Nov-2018 19:32 Automation

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

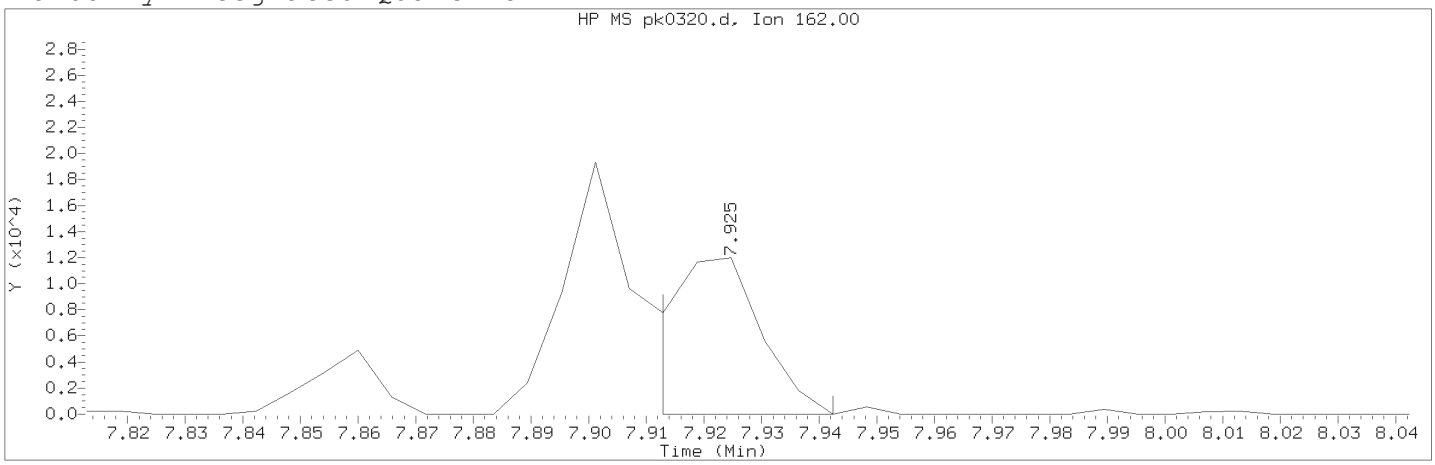
Compound Number	: 34		
Compound Name	: bis(2-Chloroisopropyl)ether		
Scan Number	: 637		
Retention Time (minutes)	: 5.778		
Quant Ion	: 45.00		
Area	: 15613		
On-column Amount (ng/ul)	: 0.6790		
Integration start scan	: 633	Integration stop scan:	660
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:12.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:03 apb10206

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

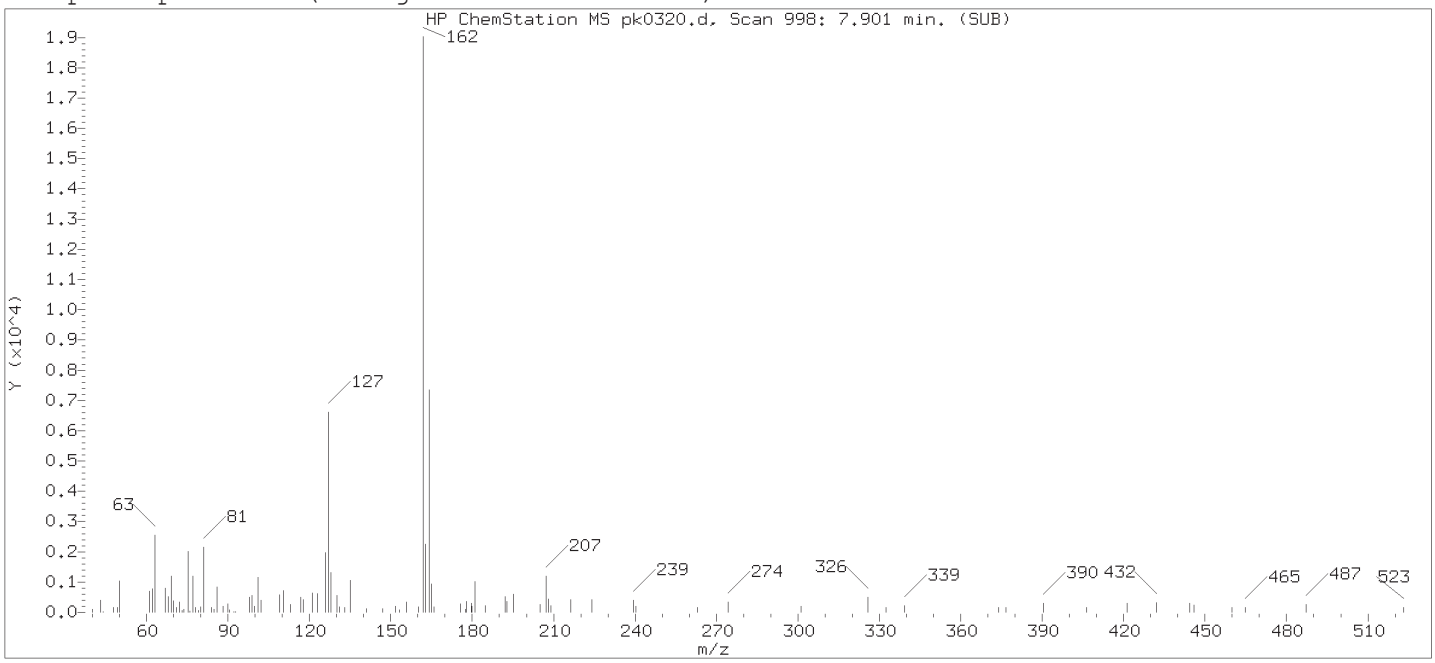
Compound Number : 98
Compound Name : 1-Chloronaphthalene
Scan Number : 1002
Retention Time (minutes) : 7.925
Quant Ion : 162.00
Area (flag) : 13712M
On-Column Amount (ng/ul) : 0.4830
Integration start scan : 999 Integration stop scan: 1004
Y at integration start : -5 Y at integration end: -5

Reason for manual integration: improper integration

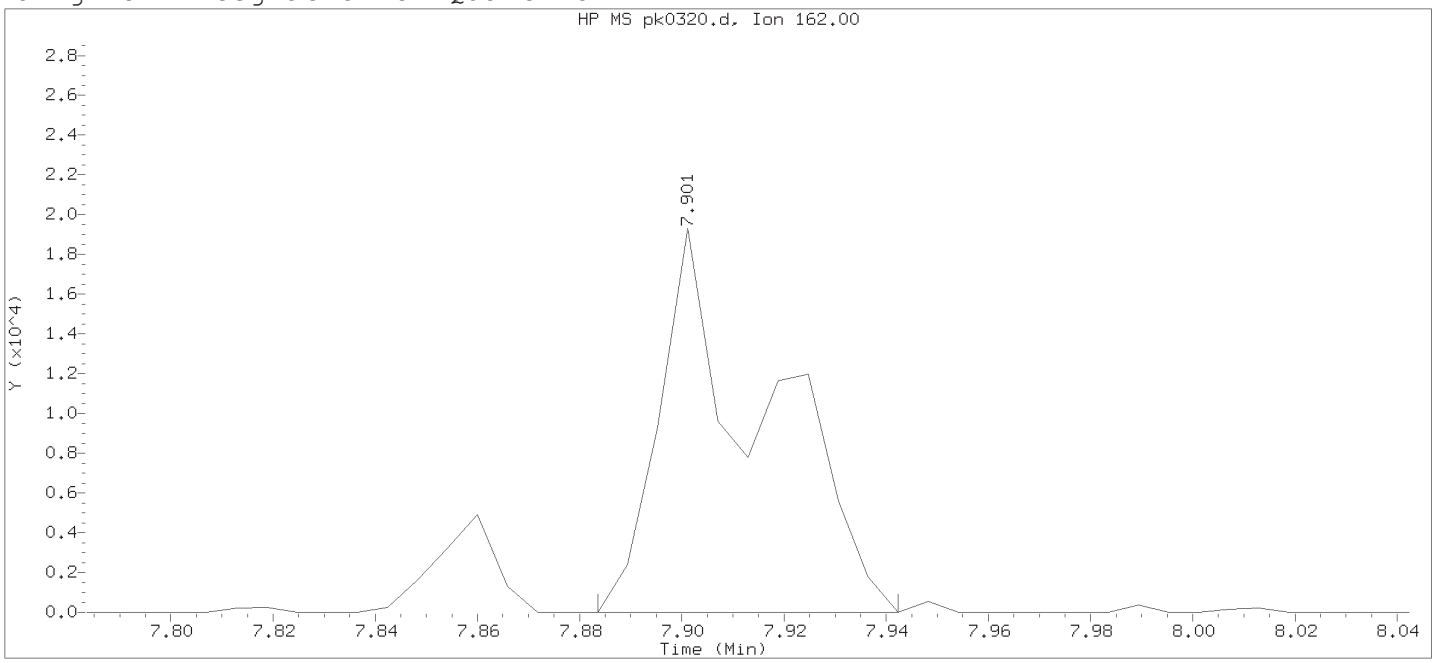
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

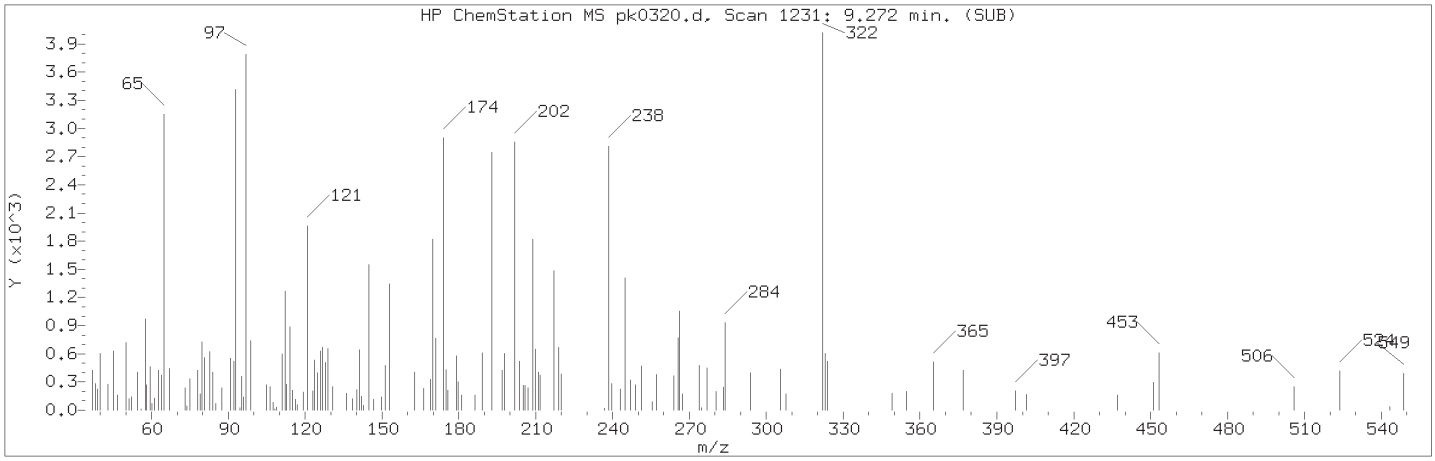
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 09-NOV-2018 19:09
Date, time and analyst ID of latest file update: 09-Nov-2018 19:32 Automation

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

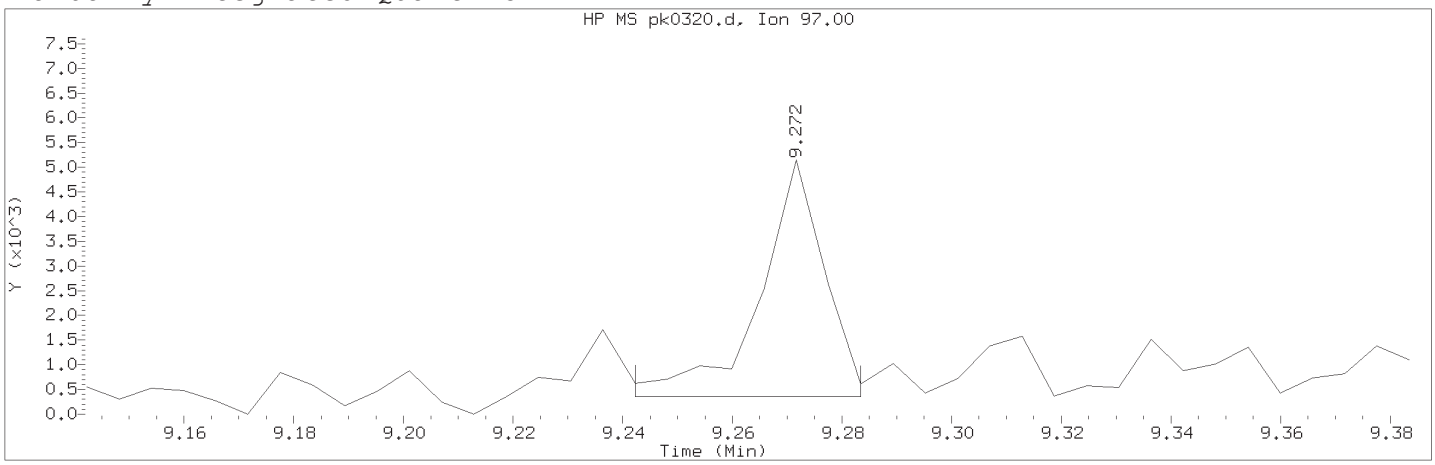
Compound Number	: 98		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 998		
Retention Time (minutes)	: 7.901		
Quant Ion	: 162.00		
Area	: 28041		
On-column Amount (ng/ul)	: 0.7777		
Integration start scan	: 994	Integration stop scan:	1004
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:12.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:03 apb10206

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

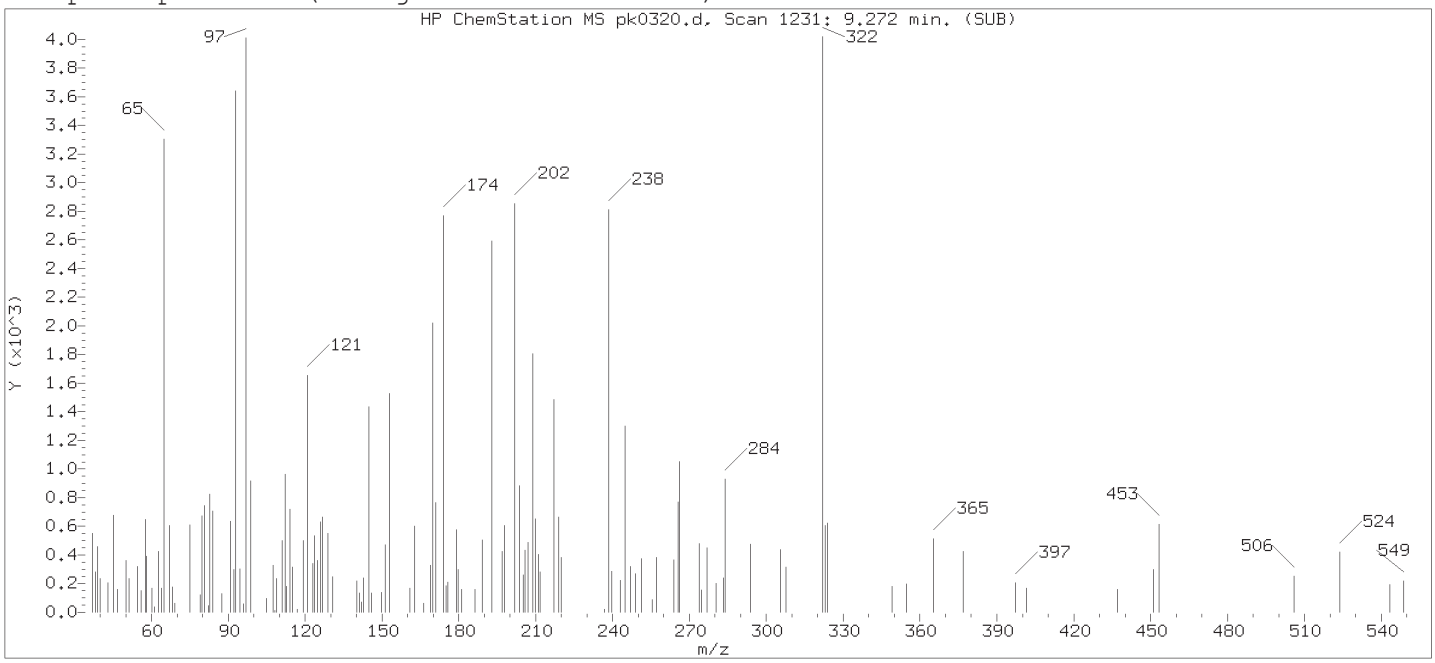
Compound Number : 137
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 1231
Retention Time (minutes) : 9.272
Quant Ion : 97.00
Area (flag) : 4008M
On-Column Amount (ng/ul) : 0.5593
Integration start scan : 1225 Integration stop scan: 1232
Y at integration start : 350 Y at integration end: 350

Reason for manual integration: improper integration

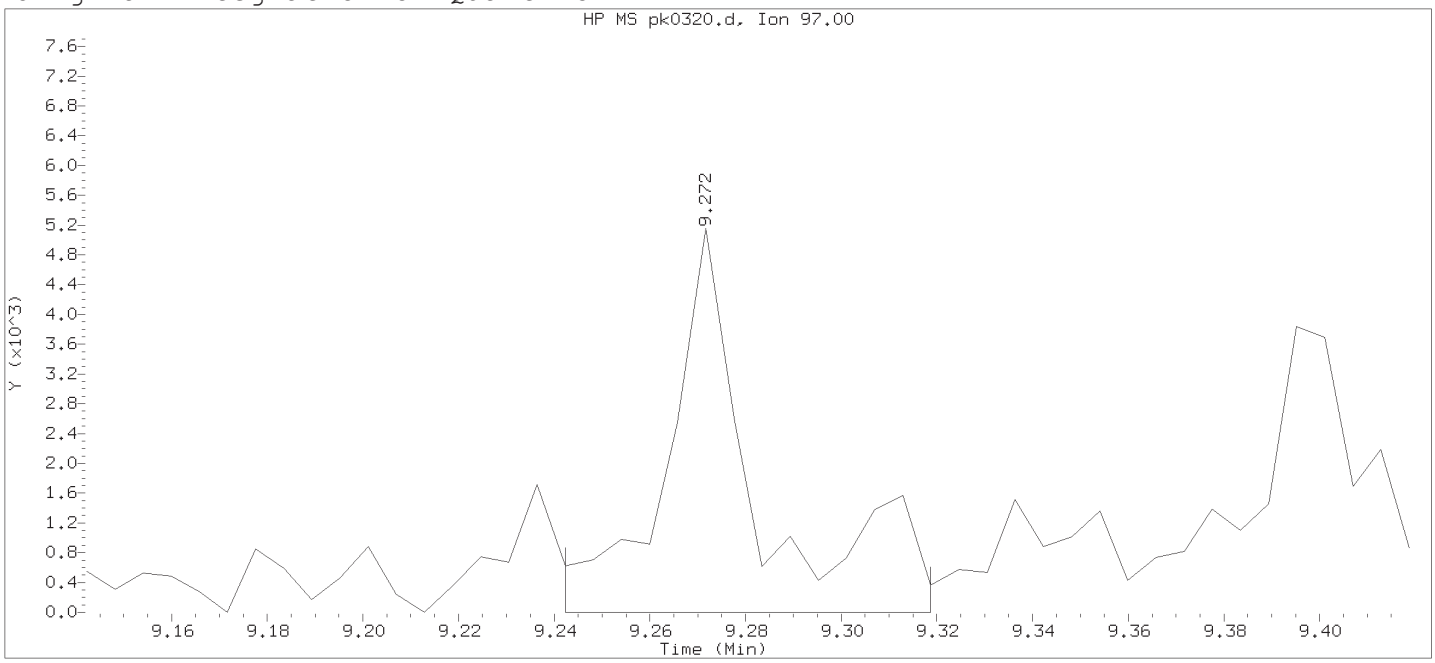
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

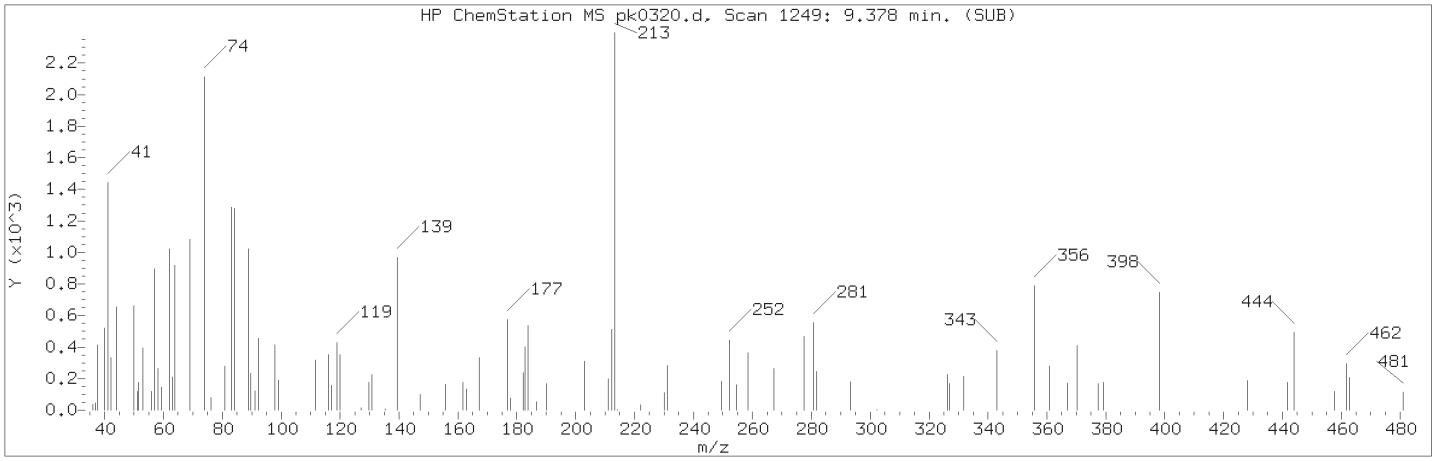
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 09-NOV-2018 19:09
Date, time and analyst ID of latest file update: 09-Nov-2018 19:32 Automation

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

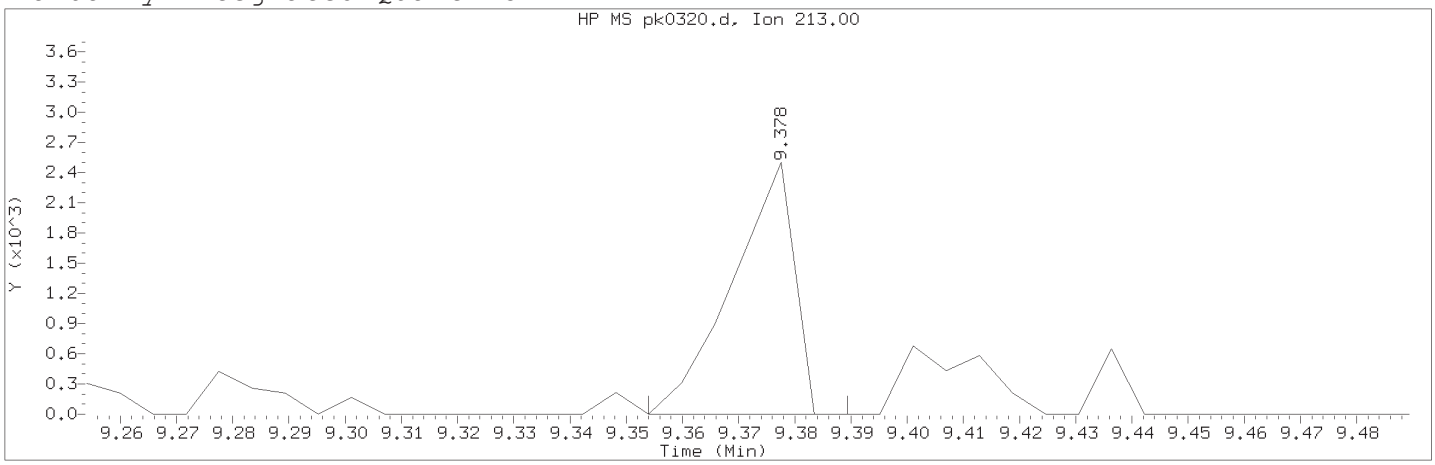
Compound Number	: 137		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 1231		
Retention Time (minutes)	: 9.272		
Quant Ion	: 97.00		
Area	: 6760		
On-column Amount (ng/ul)	: 0.9361		
Integration start scan	: 1225	Integration stop scan:	1238
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:12.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:03 apb10206

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

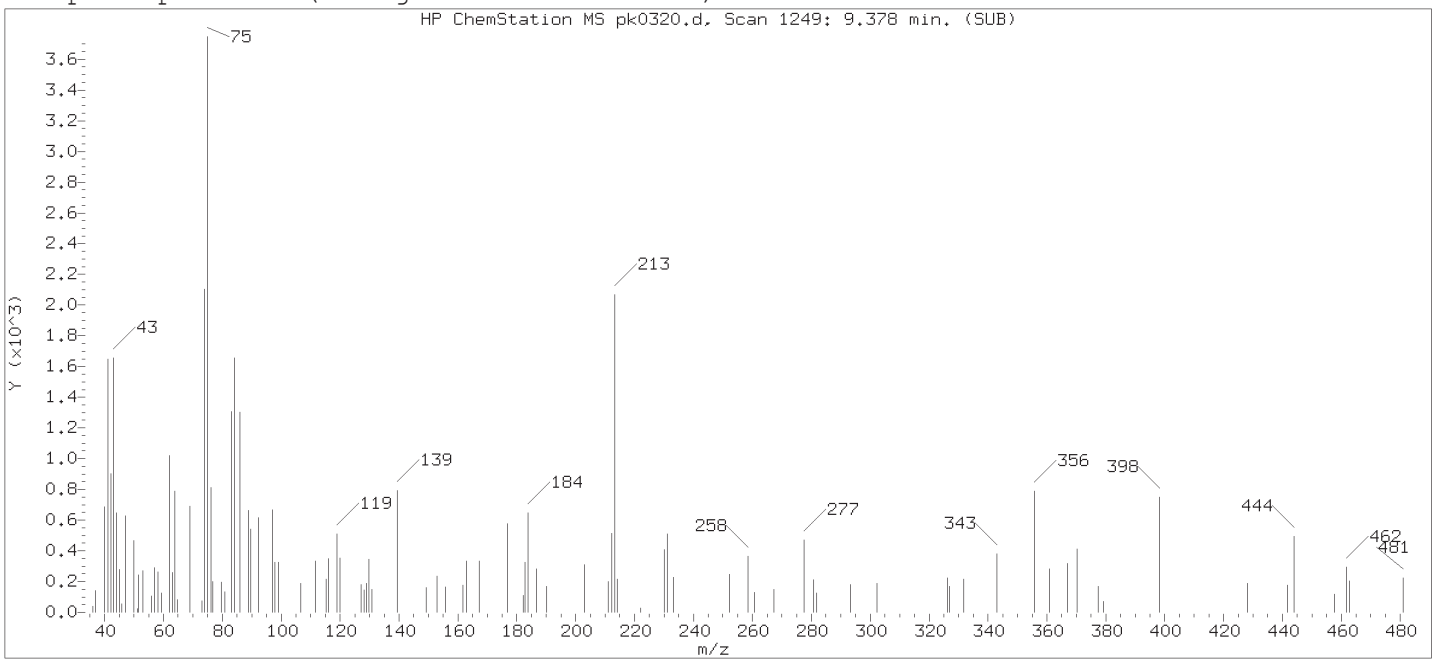
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 1249
Retention Time (minutes) : 9.378
Quant Ion : 213.00
Area (flag) : 1907M
On-Column Amount (ng/ul) : 0.4025
Integration start scan : 1244 Integration stop scan: 1250
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

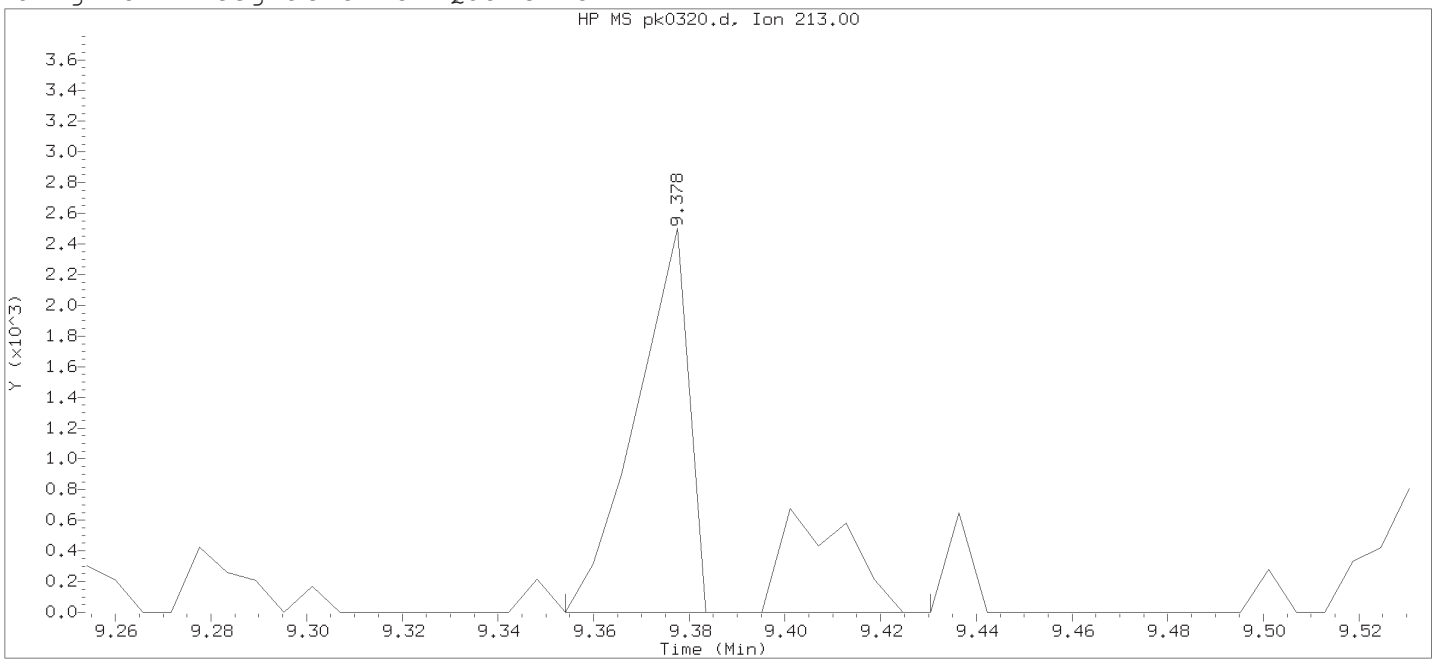
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



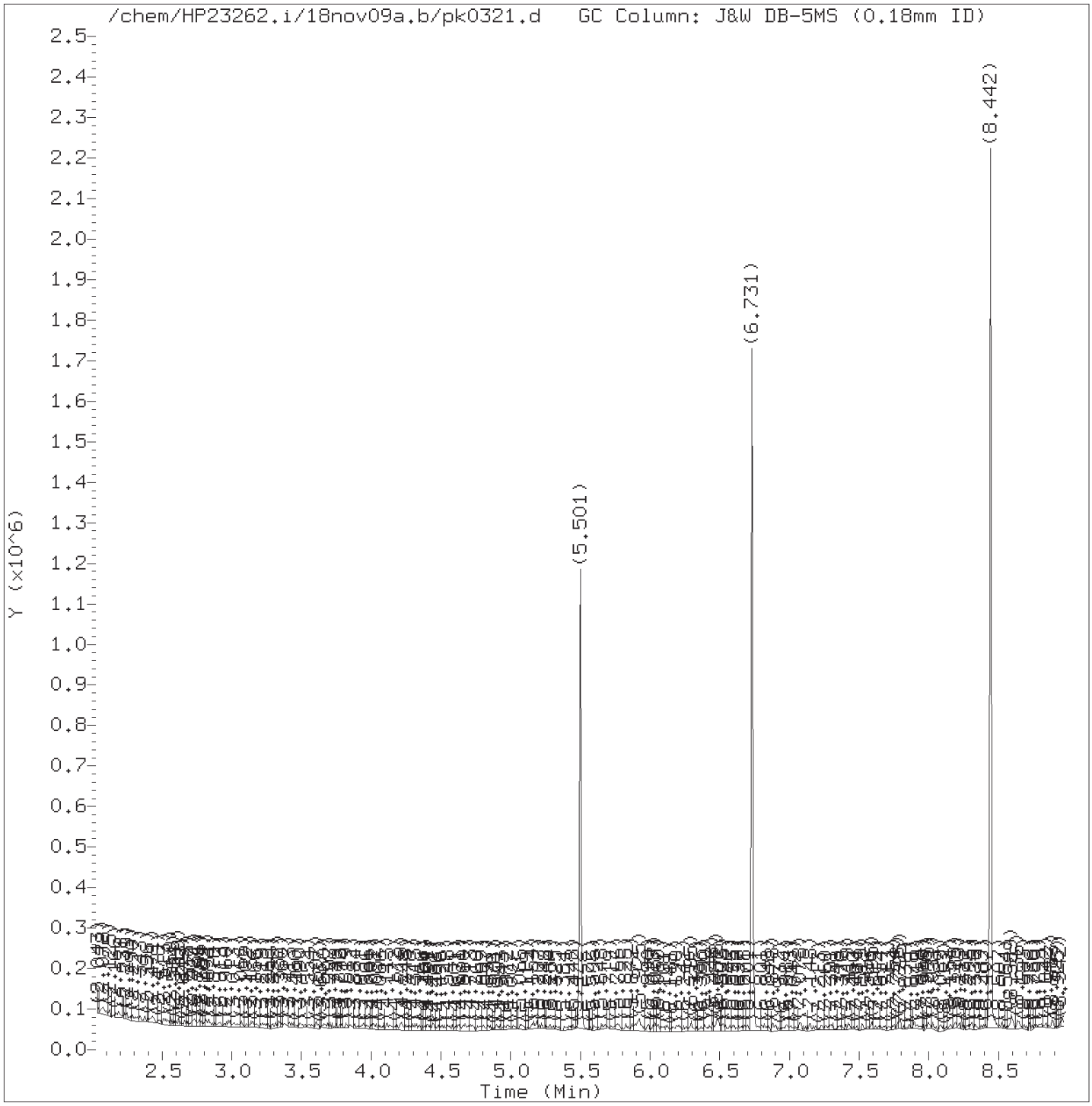
Data File: /chem/HP23262.i/18nov09a.b/pk0320.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:11 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: mdlall1-b
Calibration date and time: 09-NOV-2018 19:09
Date, time and analyst ID of latest file update: 09-Nov-2018 19:32 Automation

Sample Name: SSTD0.5 Lab Sample ID: MDL2928

Compound Number	: 139		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1249		
Retention Time (minutes)	: 9.378		
Quant Ion	: 213.00		
Area	: 2578		
On-column Amount (ng/ul)	: 0.5743		
Integration start scan	: 1244	Integration stop scan:	1257
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:12.
Target 3.5 esignature used: D10 Page 1610



Total Ion Chromatogram (TIC)

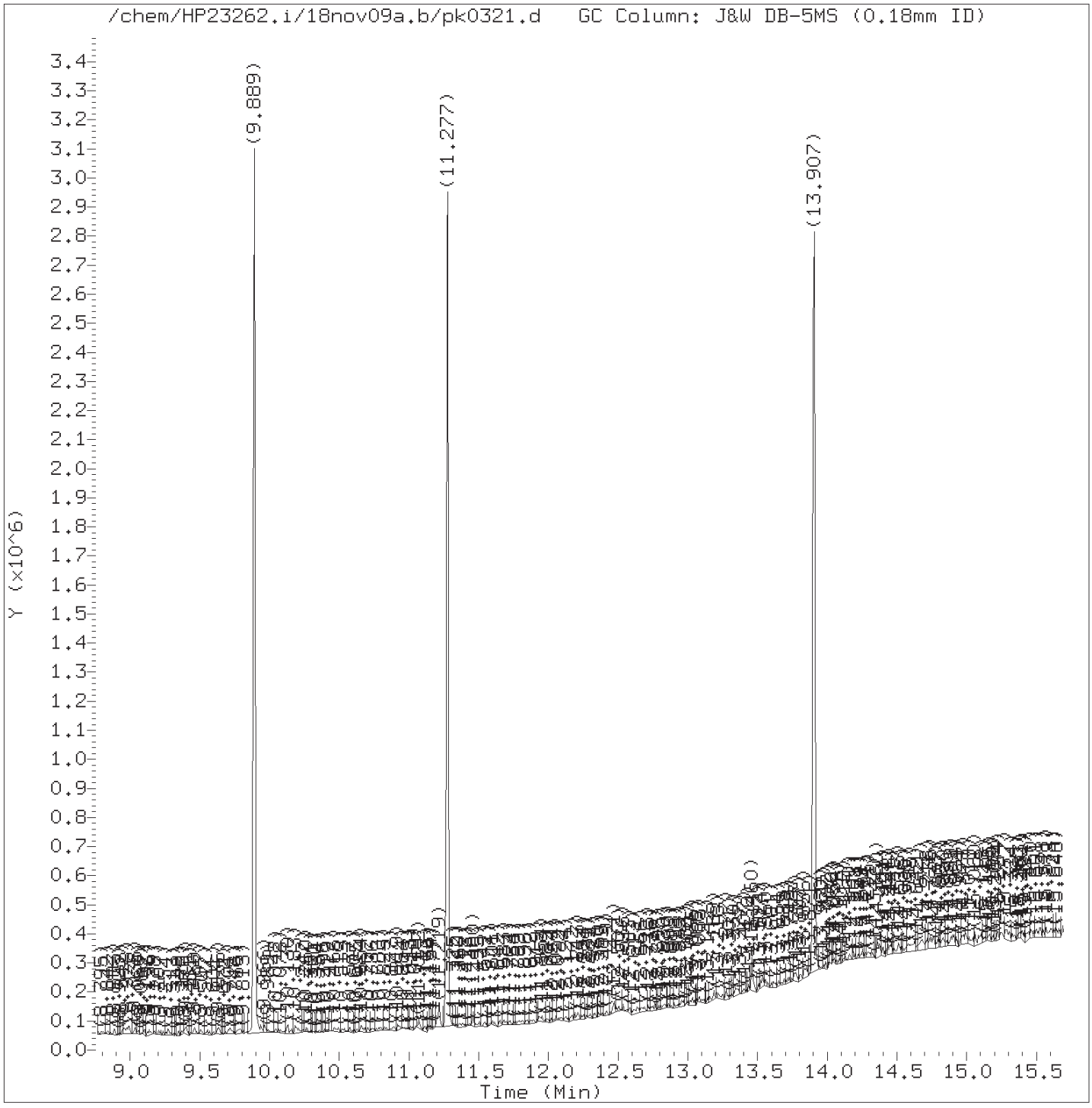
Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0321.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:34 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: pahmdl
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:04 apb10206

Sample Name: SSTD0.1 Lab Sample ID: PAHMDL2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0321.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:34 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: pahmdl
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:04 apb10206

Sample Name: SSTD0.1 Lab Sample ID: PAHMDL2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0321.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:34 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: pahmdl
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:04 apb10206

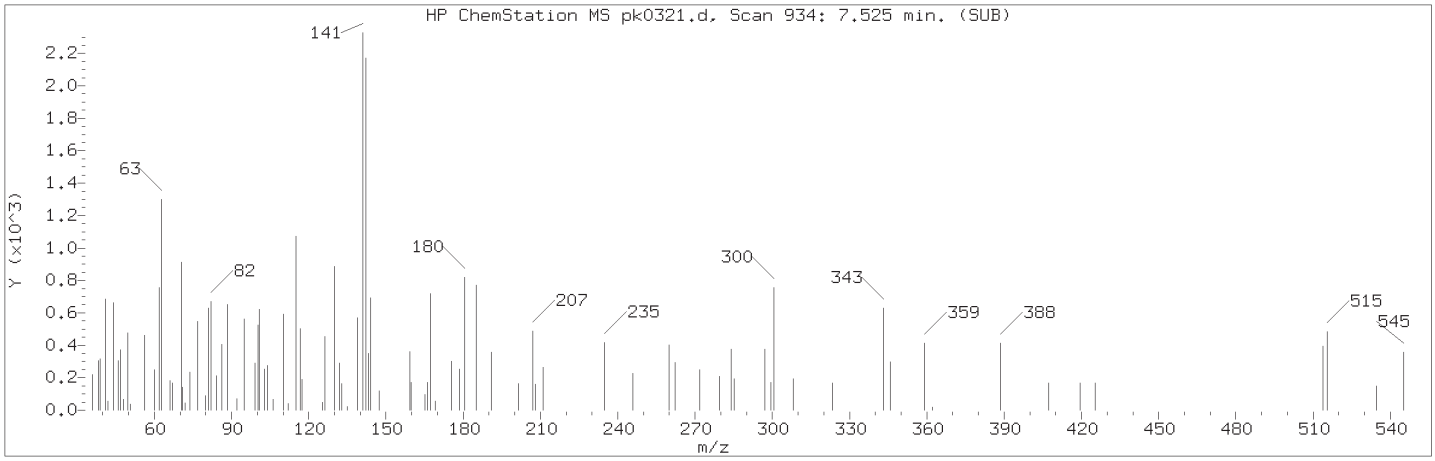
Sample Name: SSTD0.1 Lab Sample ID: PAHMDL2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	154319	20.000
44)$Nitrobenzene-d5	(2)	6.031	82	4230	0.254
65)*Naphthalene-d8	(2)	6.731	136	643586	20.000
66) Naphthalene	(2)	6.754	128	5760	0.157
83) 2-Methylnaphthalene	(2)	7.431	142	2621	0.104
84) 1-Methylnaphthalene	(2)	7.525	142	2190M	0.090
93)$2-Fluorobiphenyl	(3)	7.795	172	5817	0.195
96) 2-Chloronaphthalene	(3)	7.901	162	2503	0.095
109) Acenaphthylene	(3)	8.295	152	4962	0.132
113)*Acenaphthene-d10	(3)	8.442	164	387892	20.000
114) Acenaphthene	(3)	8.478	153	2018	0.076
126) Fluorene	(3)	8.972	166	4159	0.127
145) Hexachlorobenzene	(4)	9.483	284	1121	0.109
153)*Phenanthrene-d10	(4)	9.889	188	983512	20.000
155) Phenanthrene	(4)	9.913	178	7518	0.135
157) Anthracene	(4)	9.966	178	6599	0.117
173) Fluoranthene	(4)	11.072	202	6045	0.094
175)*Pyrene-d10	(5)	11.277	212	1036631	20.000
177) Pyrene	(5)	11.289	202	7279	0.103
179)$Terphenyl-d14	(5)	11.460	244	8842	0.200
195) Benzo(a)anthracene	(5)	12.471	228	6117	0.094
196) Chrysene	(5)	12.507	228	8001	0.128
206) Benzo(b)fluoranthene	(6)	13.536	252	6532	0.099
208) Benzo(k)fluoranthene	(6)	13.566	252	6927	0.107
211) Benzo(a)pyrene	(6)	13.854	252	7951	0.131
213)*Perylene-d12	(6)	13.907	264	943051	20.000
219) Indeno(1,2,3-cd)pyrene	(6)	14.977	276	7997	0.127
222) Total PAHs	(6)			106209	2.073
220) Dibenz(a,h)anthracene	(6)	15.001	278	7089MA	0.130
221) Benzo(g,h,i)perylene	(6)	15.283	276	6444M	0.121

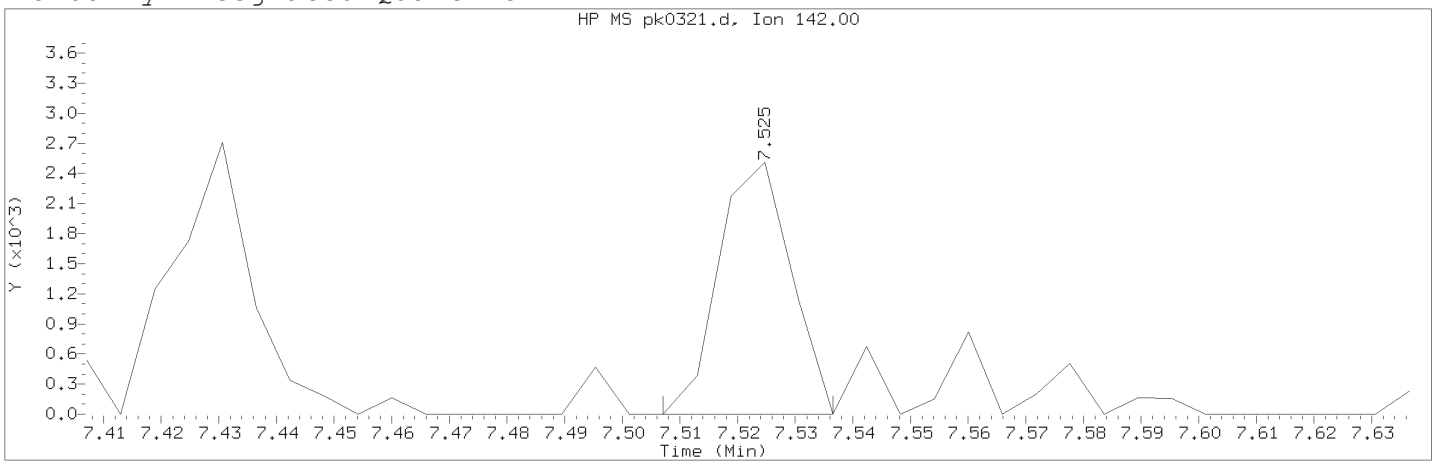
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0321.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:34 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: pahmdl
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:04 apb10206

Sample Name: SSTD0.1 Lab Sample ID: PAHMDL2928

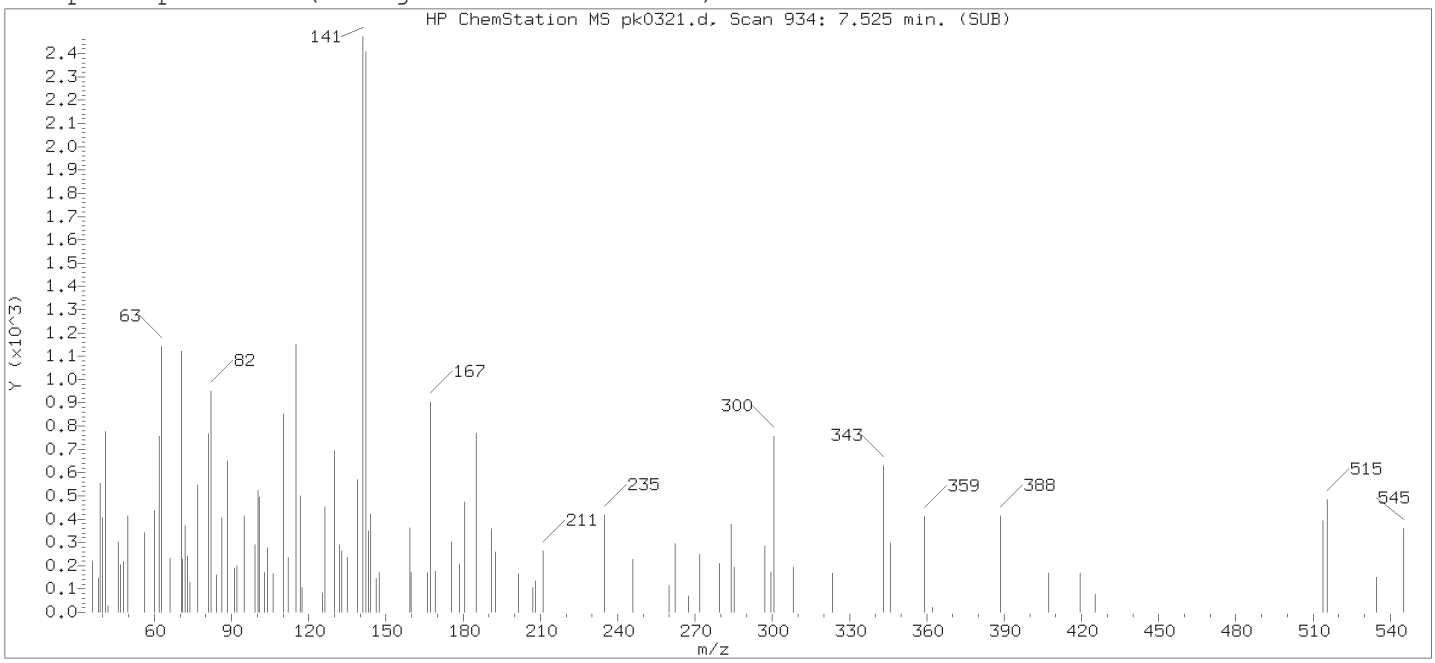
Compound Number	: 84		
Compound Name	: 1-Methylnaphthalene		
Scan Number	: 934		
Retention Time (minutes)	: 7.525		
Quant Ion	: 142.00		
Area (flag)	: 2190M		
On-Column Amount (ng/ul)	: 0.0901		
Integration start scan	: 930	Integration stop scan:	935
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

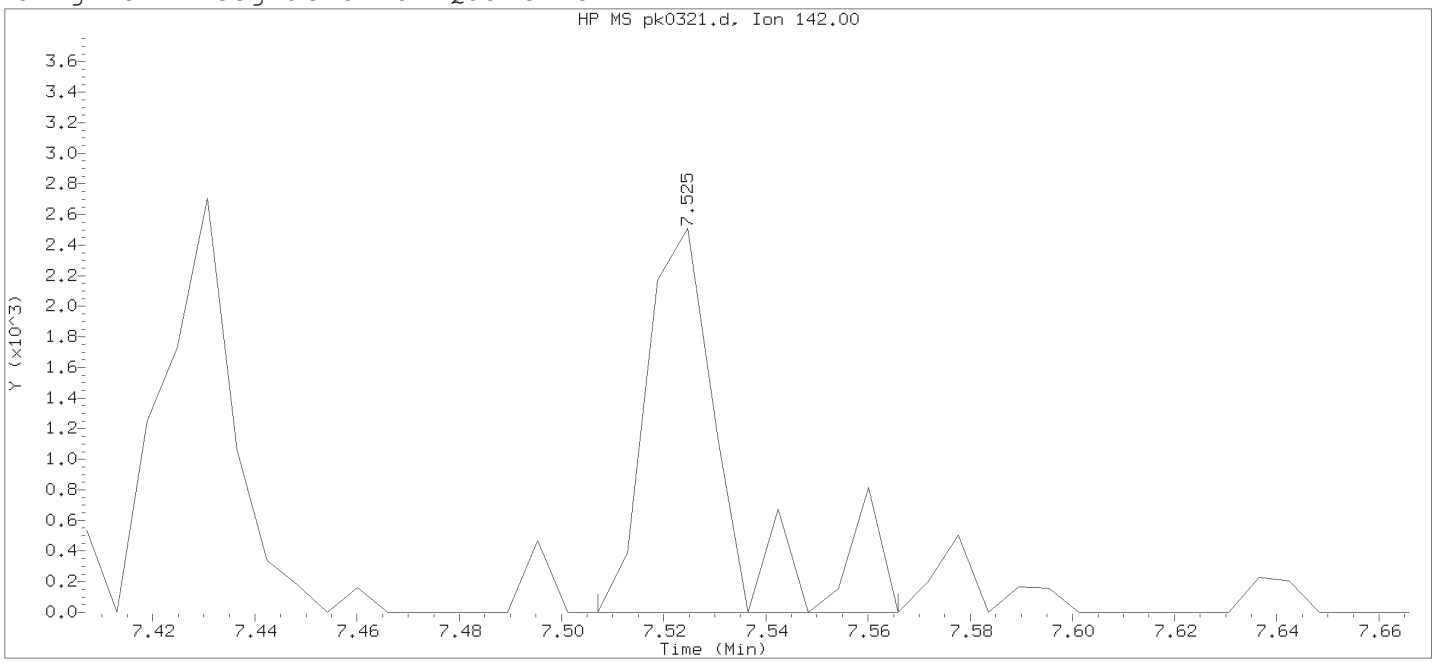
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0321.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:34 Analyst ID: lmh00956

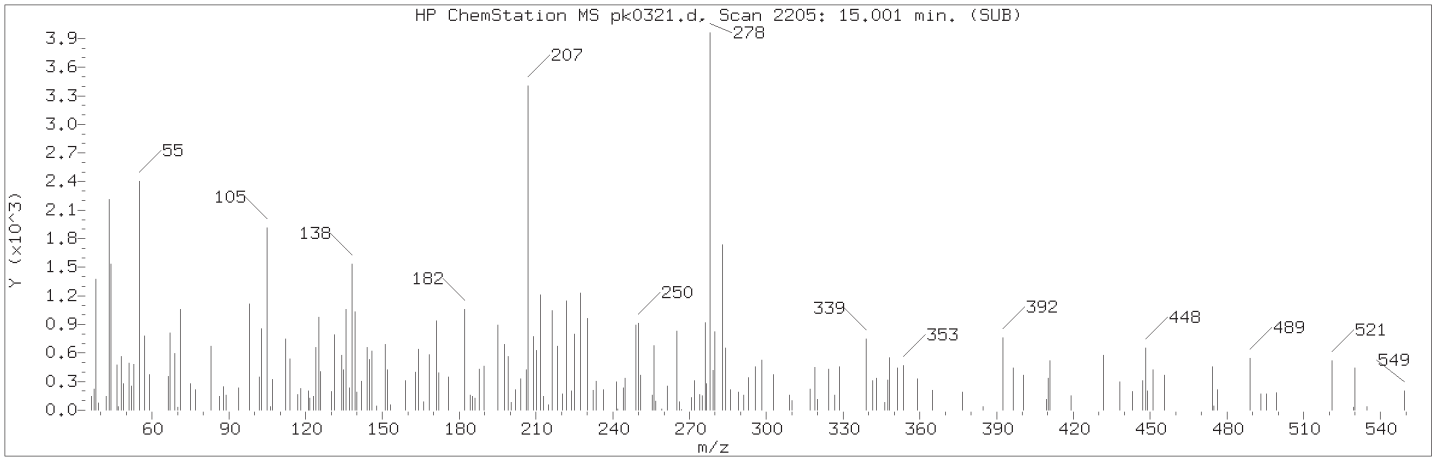
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: pahmdl
Calibration date and time: 09-NOV-2018 19:09
Date, time and analyst ID of latest file update: 09-Nov-2018 19:55 Automation

Sample Name: SSTD0.1 Lab Sample ID: PAHMDL2928

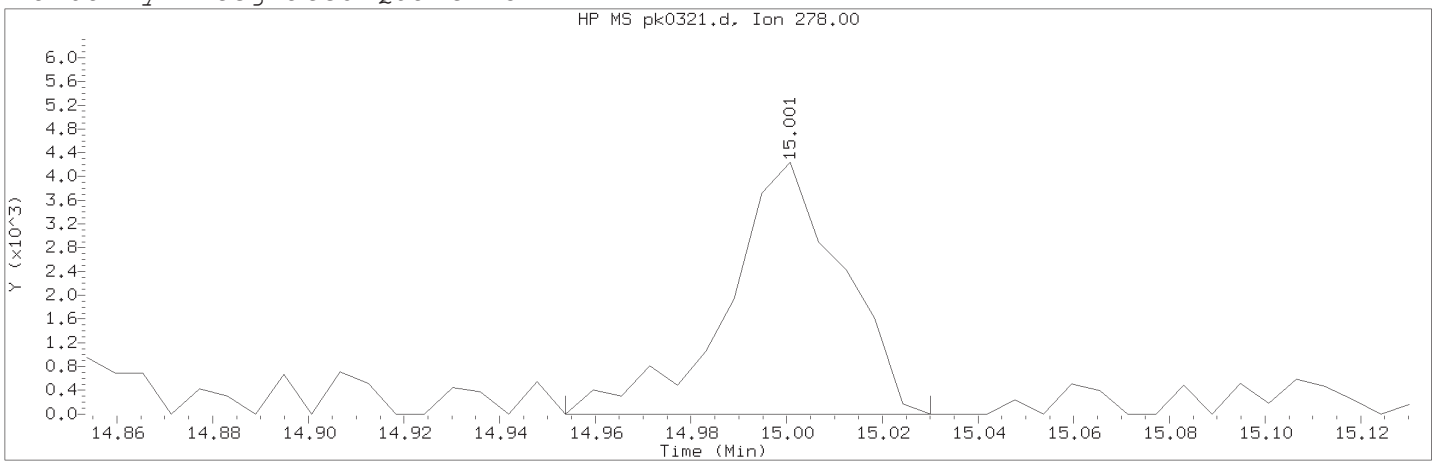
Compound Number	: 84		
Compound Name	: 1-Methylnaphthalene		
Scan Number	: 934		
Retention Time (minutes)	: 7.525		
Quant Ion	: 142.00		
Area	: 2770		
On-column Amount (ng/ul)	: 0.1147		
Integration start scan	: 930	Integration stop scan:	940
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:12.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0321.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:34 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: pahmdl
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:04 apb10206

Sample Name: SSTD0.1 Lab Sample ID: PAHMDL2928

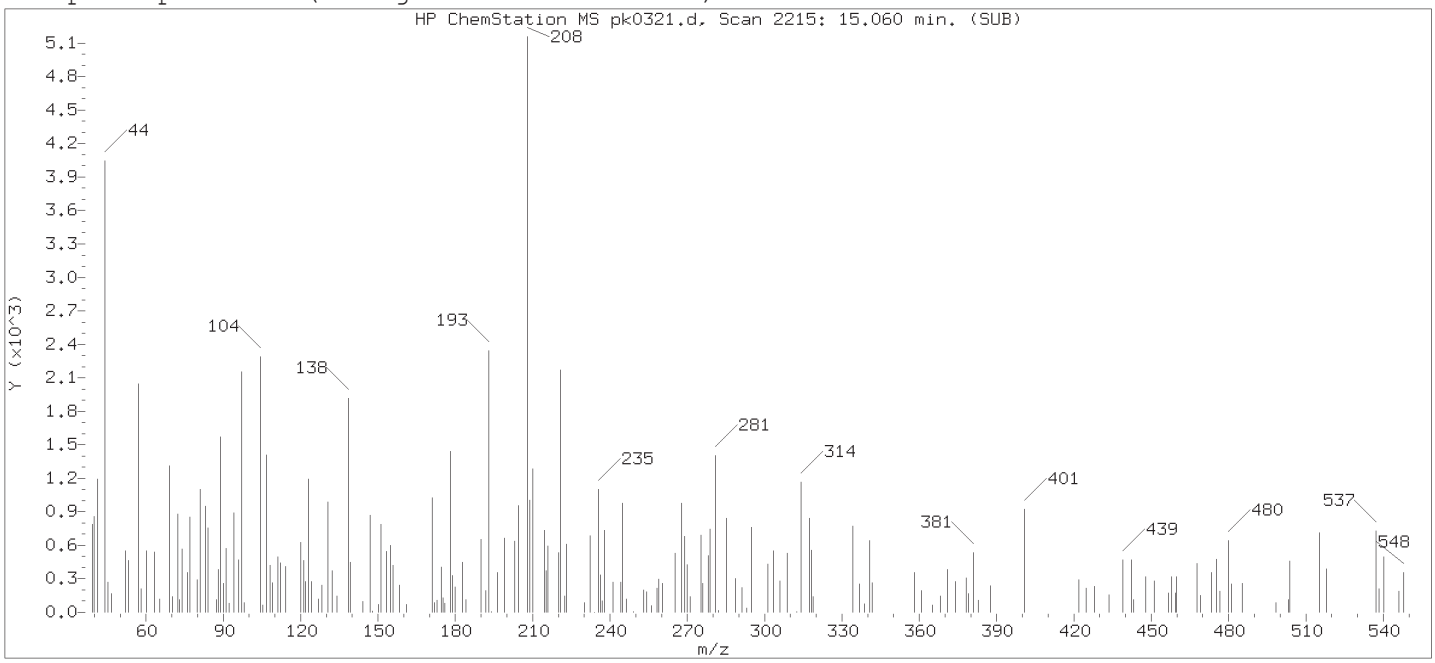
Compound Number	: 220		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 2205		
Retention Time (minutes)	: 15.001		
Quant Ion	: 278.00		
Area (flag)	: 7089MA		
On-Column Amount (ng/ul)	: 0.1300		
Integration start scan	: 2196	Integration stop scan:	2209
Y at integration start	: -3	Y at integration end:	-3

Reason for manual integration: improper integration

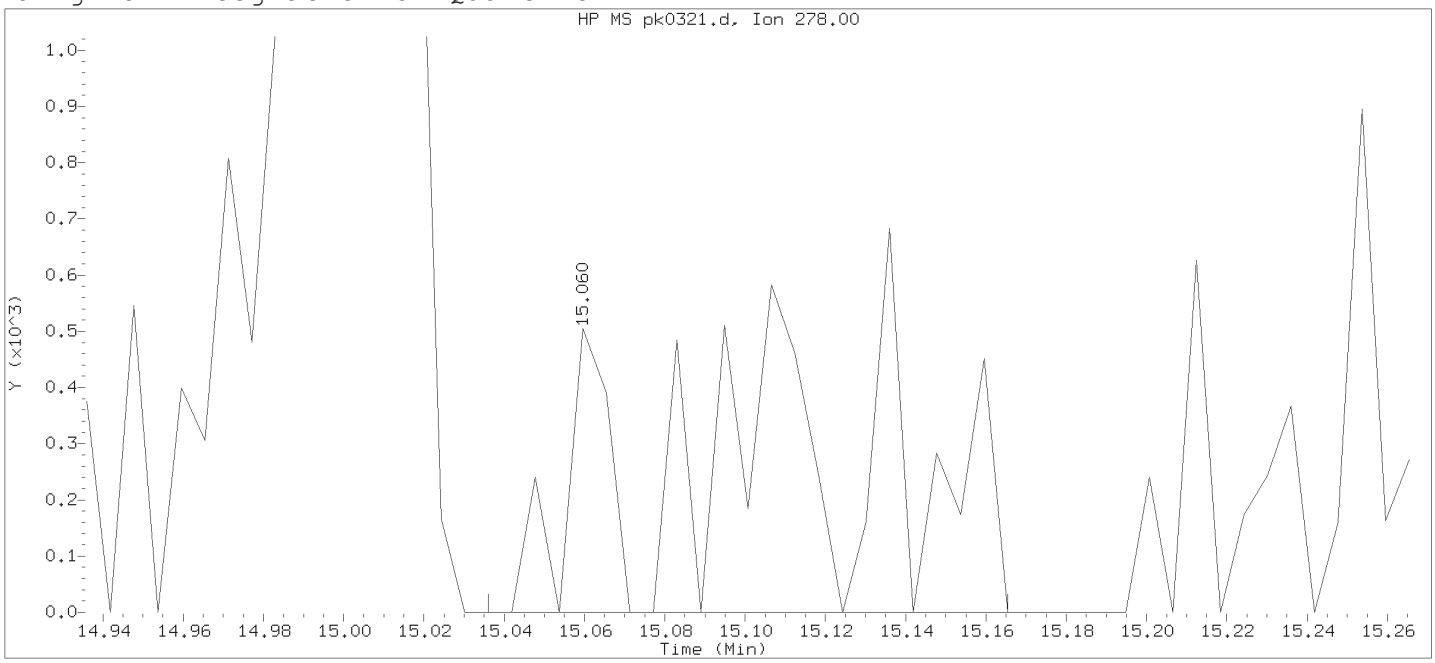
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0321.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:34 Analyst ID: lmh00956

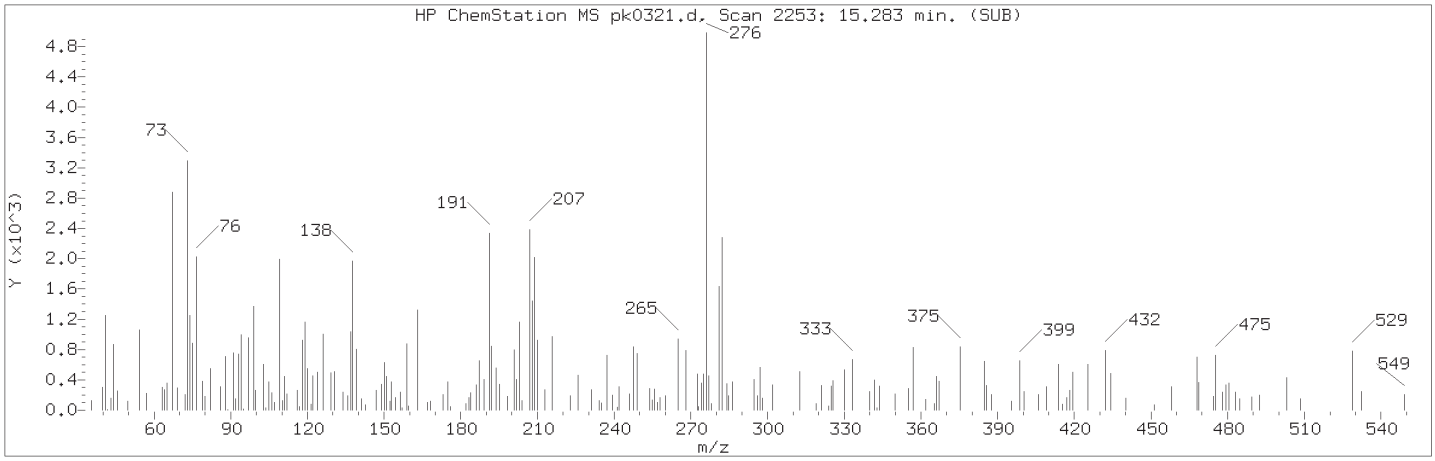
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: pahmdl
Calibration date and time: 09-NOV-2018 19:09
Date, time and analyst ID of latest file update: 09-Nov-2018 19:55 Automation

Sample Name: SSTD0.1 Lab Sample ID: PAHMDL2928

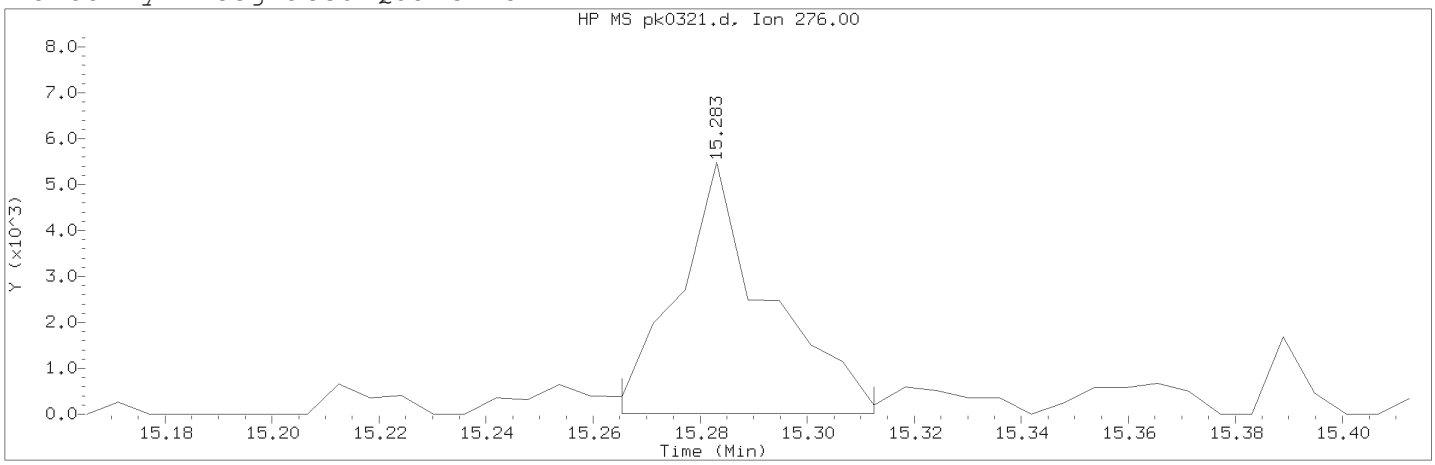
Compound Number : 220
Compound Name : Dibenz(a,h)anthracene
Scan Number : 2215
Retention Time (minutes) : 15.060
Quant Ion : 278.00
Area : 1888
On-column Amount (ng/ul) : 0.0349
Integration start scan : 2210 Integration stop scan: 2232
Y at integration start : 0 Y at integration end: 0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb1016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov09a.b/pk0321.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:34 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: pahmdl
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:04 apb10206

Sample Name: SSTD0.1 Lab Sample ID: PAHMDL2928

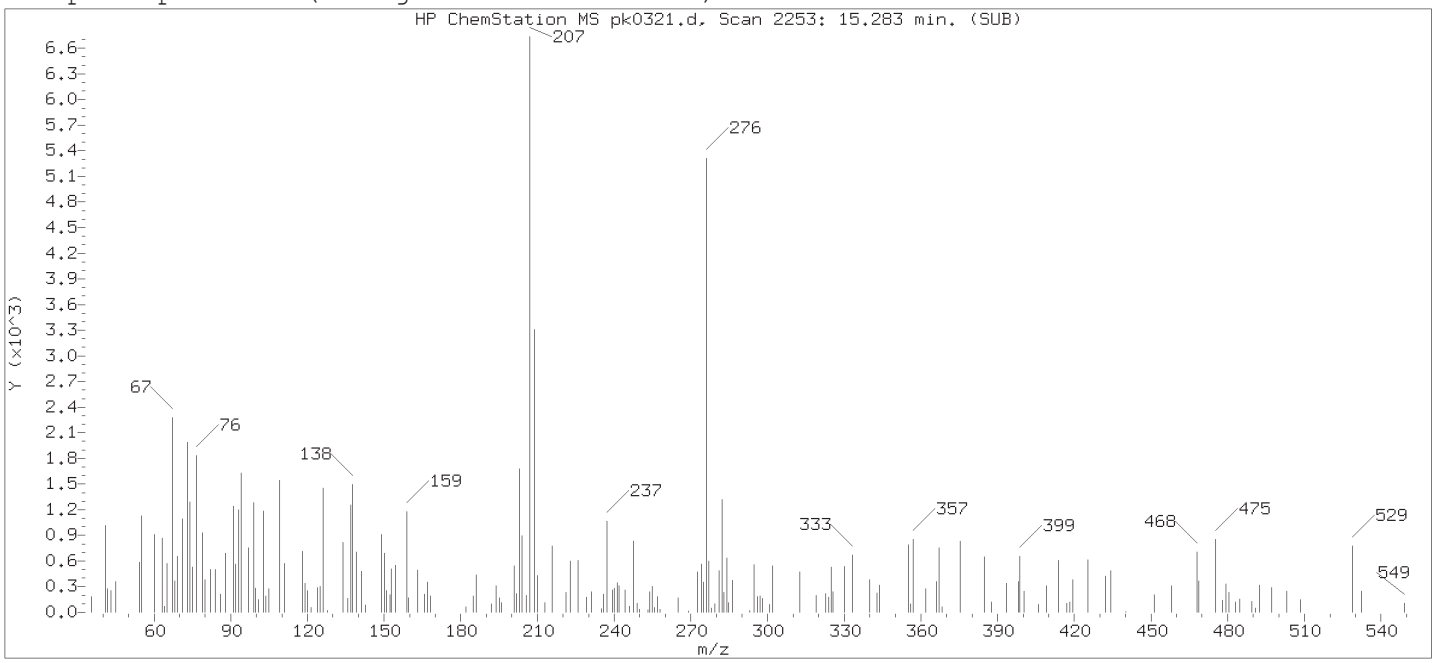
Compound Number	: 221		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2253		
Retention Time (minutes)	: 15.283		
Quant Ion	: 276.00		
Area (flag)	: 6444M		
On-Column Amount (ng/ul)	: 0.1207		
Integration start scan	: 2249	Integration stop scan:	2257
Y at integration start	: 9	Y at integration end:	9

Reason for manual integration: improper integration

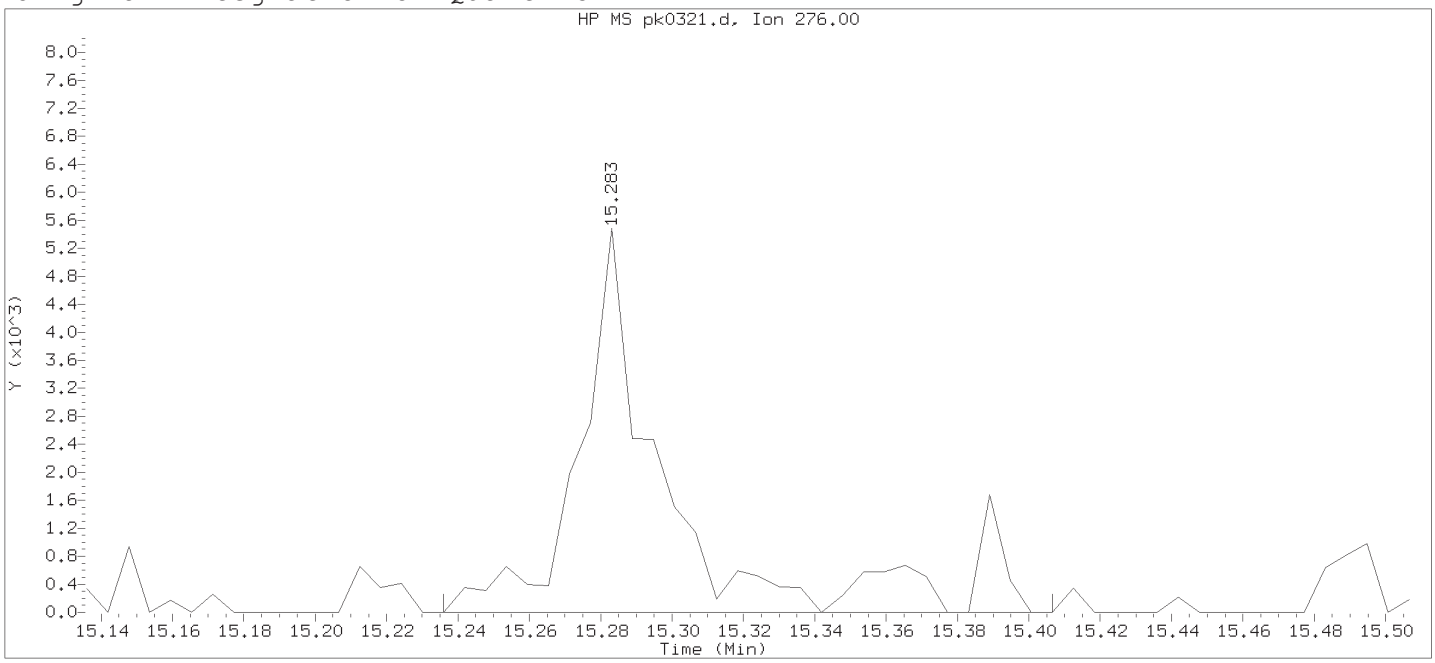
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



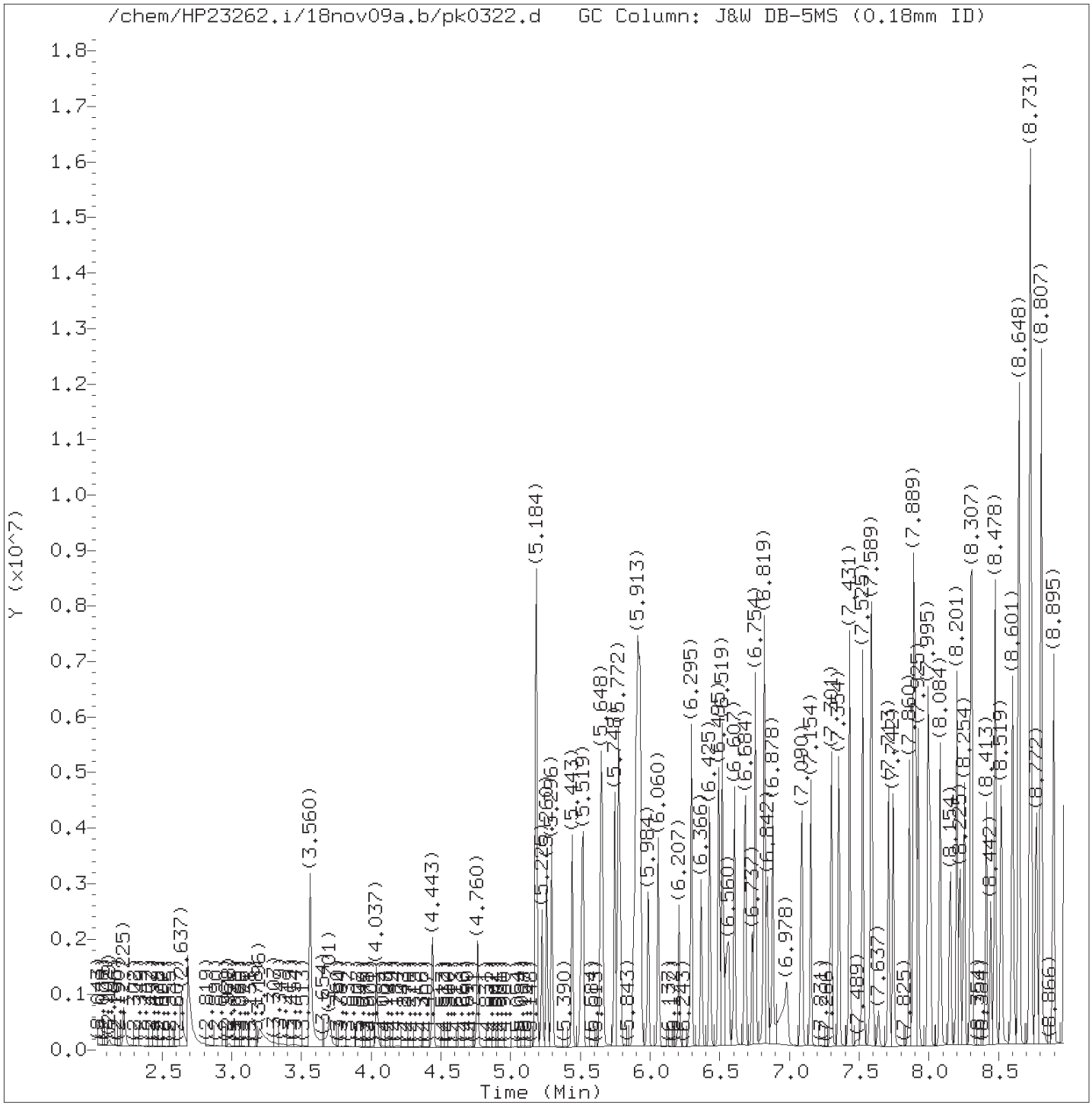
Data File: /chem/HP23262.i/18nov09a.b/pk0321.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:34 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: pahmdl
Calibration date and time: 09-NOV-2018 19:09
Date, time and analyst ID of latest file update: 09-Nov-2018 19:55 Automation

Sample Name: SSTD0.1 Lab Sample ID: PAHMDL2928

Compound Number	: 221		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2253		
Retention Time (minutes)	: 15.283		
Quant Ion	: 276.00		
Area	: 9386		
On-column Amount (ng/ul)	: 0.1748		
Integration start scan	: 2244	Integration stop scan:	2273
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 18:12.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

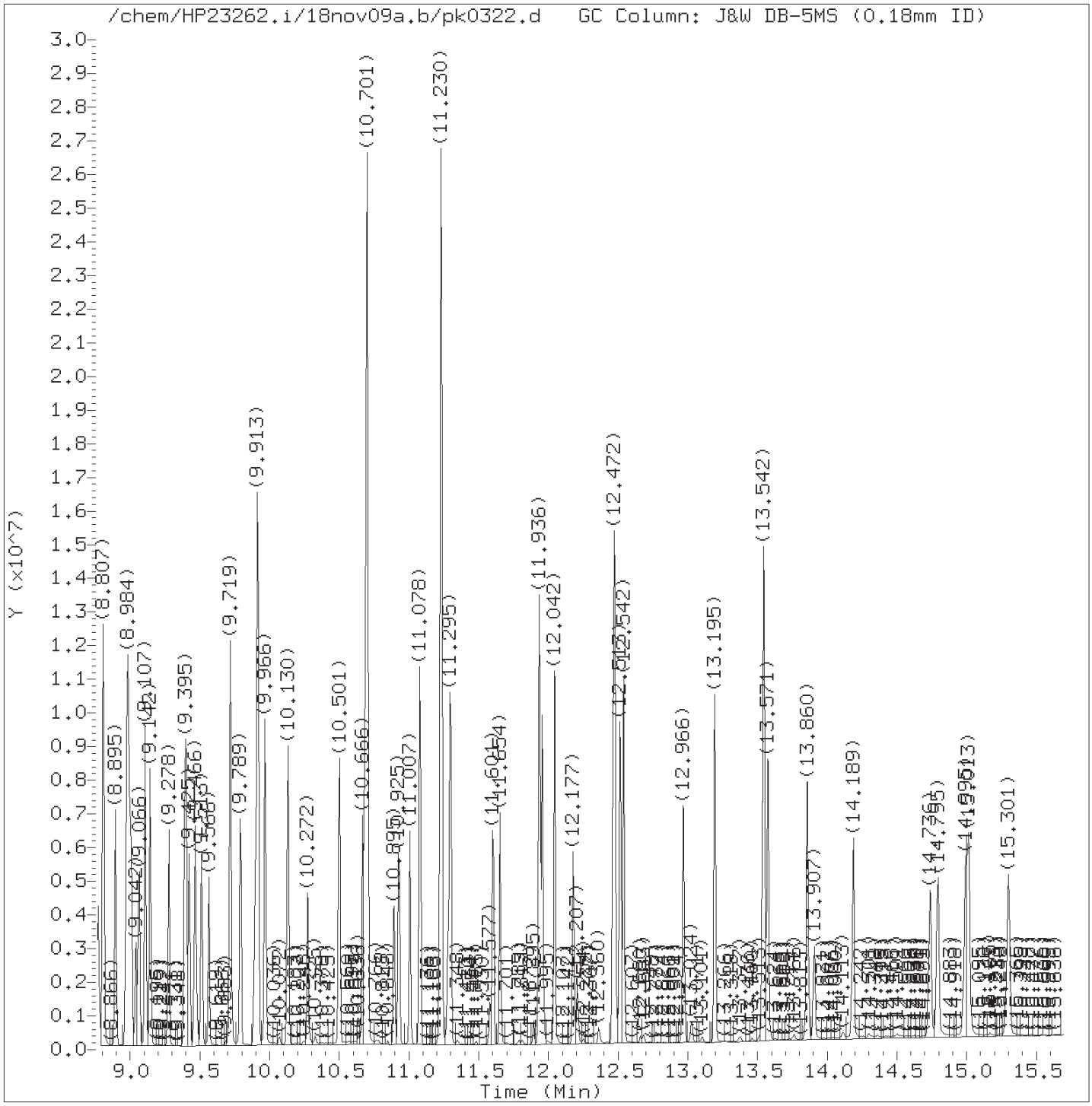
Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0322.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:57 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: icvall1-f
Calibration date and time: 11-NOV-2018 18:17
Date, time and analyst ID of latest file update: 11-Nov-2018 18:17 apb10206

Sample Name: SSTD050 Lab Sample ID: ICV2968

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:19.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0322.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:57 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: icvall1-f
Calibration date and time: 11-NOV-2018 18:17
Date, time and analyst ID of latest file update: 11-Nov-2018 18:17 apb10206

Sample Name: SSTD050 Lab Sample ID: ICV2968

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:19.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0322.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:57 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: icvall1-f
Calibration date and time: 11-NOV-2018 18:17
Date, time and analyst ID of latest file update: 11-Nov-2018 18:17 apb10206

Sample Name: SSTD050 Lab Sample ID: ICV2968

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1)	1,4-Dioxane	(1)	2.225	88	313890	46.565
4)	N-Nitrosodimethylamine	(1)	2.637	74	643351	59.892
5)	Pyridine	(1)	2.684	79	1032559	53.694
7)	2-Picoline	(1)	3.560	93	1099037	55.623
8)	N-Nitrosomethylethylamine	(1)	3.701	88	436020	49.899
9)	Methyl methanesulfonate	(1)	4.037	80	476156	54.671
13)	N-Nitrosodiethylamine	(1)	4.443	102	414430	49.143
15)	Ethyl methanesulfonate	(1)	4.760	109	396858	46.710
18)	Phenol	(1)	5.184	94	1499606	56.789
19)	Aniline	(1)	5.184	93	1521951	51.600
22)	bis(2-Chloroethyl)ether	(1)	5.260	93	1002835	53.743
23)	2-Chlorophenol	(1)	5.296	128	771777	54.281
24)	1,3-Dichlorobenzene	(1)	5.443	146	777460	54.619
25)*	1,4-Dichlorobenzene-d4	(1)	5.501	152	184090	20.000
26)	1,4-Dichlorobenzene	(1)	5.519	146	813906	57.510
27)	Benzyl alcohol	(1)	5.648	108	671303	58.449
42)	Total Cresols	(1)	5.660	100	1977588	112.431
28)	1,2-Dichlorobenzene	(1)	5.660	146	780203	55.153
30)	Indene	(1)	5.748	115	1328427	79.111
31)	2-Methylphenol	(1)	5.772	108	896471	55.457
34)	bis(2-Chloroisopropyl)ether	(1)	5.784	45	1441938	53.052
33)	2,2'-oxybis(1-Chloropropane)	(1)	5.784	45	1441938	53.052
35)	N-Nitrosopyrrolidine	(1)	5.884	100	519847	49.342
36)	Acetophenone	(1)	5.895	105	1355883	55.915
38)	N-Nitroso-di-n-propylamine	(1)	5.907	70	905797	55.931
37)	4-Methylphenol	(1)	5.919	108	1081117	56.861
39)	N-Nitrosomorpholine	(1)	5.925	56	630468	48.486
40)	o-Toluidine	(1)	5.931	106	1500751	55.016
43)	Hexachloroethane	(1)	5.984	117	318219	52.784
45)	Nitrobenzene	(2)	6.060	77	1195680	51.714
48)	N-Nitrosopiperidine	(2)	6.207	114	434325	44.509
50)	Isophorone	(2)	6.295	82	2387364	55.560
51)	2-Nitrophenol	(2)	6.366	139	449981	54.467
53)	2,4-Dimethylphenol	(2)	6.425	107	844105	44.685
57)	O,O,O-Triethylphosphorothioate	(2)	6.495	198	423039	47.070
55)	bis(2-Chloroethoxy)methane	(2)	6.519	93	1400709	54.699
56)	Benzoic acid	(2)	6.560	105	1375918	105.562
60)	2,4-Dichlorophenol	(2)	6.607	162	764648	55.552
62)	1,2,4-Trichlorobenzene	(2)	6.684	180	762753	53.405
65)*	Naphthalene-d8	(2)	6.737	136	825546	20.000

* = Compound is an internal standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:19.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0322.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:57 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: icvall1-f
Calibration date and time: 11-NOV-2018 18:17
Date, time and analyst ID of latest file update: 11-Nov-2018 18:17 apb10206

Sample Name: SSTD050 Lab Sample ID: ICV2968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
66) Naphthalene	(2)	6.754	128	2474892	52.468
67) 4-Chloroaniline	(2)	6.819	127	1092146	57.601
68) 2,6-Dichlorophenol	(2)	6.825	162	643066	47.659
69) Hexachloropropene	(2)	6.842	213	481084	57.931
71) Hexachlorobutadiene	(2)	6.878	225	451959	55.319
75) Quinoline	(2)	7.090	129	1555754	48.372
77) N-Nitrosodi-n-butylamine	(2)	7.154	84	775893	36.736
80) 4-Chloro-3-methylphenol	(2)	7.301	107	976283	55.521
82) Safrole	(2)	7.354	162	637727	49.448
97) Isosafrole	(3)	7.383	162	792504	59.482
83) 2-Methylnaphthalene	(2)	7.431	142	1777915	55.217
84) 1-Methylnaphthalene	(2)	7.525	142	1670512	53.534
85) Hexachlorocyclopentadiene	(3)	7.584	237	924269	113.927
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.595	216	887551	54.602
88) cis-Isosafrole	(3)	7.637	162	90031	6.680
90) 2,4,6-Trichlorophenol	(3)	7.713	196	623513	57.555
92) 2,4,5-Trichlorophenol	(3)	7.742	196	696805	58.681
94) trans-Isosafrole	(3)	7.860	162	702473	52.850
95) 1,1'-Biphenyl	(3)	7.889	154	2308816	56.671
96) 2-Chloronaphthalene	(3)	7.907	162	1725728	52.202
98) 1-Chloronaphthalene	(3)	7.925	162	1550090	48.697
99) Diphenyl ether	(3)	7.995	170	1145741	48.704
100) 2-Nitroaniline	(3)	8.013	138	645190	58.221
120) 2,4_2,6-Dinitrotoluenes	(3)	8.050	165	1242957	114.999
104) 1,4-Naphthoquinone	(3)	8.084	158	906304	64.444
105) 1,4-Dinitrobenzene	(3)	8.154	168	347826	57.440
106) Dimethylphthalate	(3)	8.201	163	2230485	56.560
107) 1,3-Dinitrobenzene	(3)	8.225	168	406547	57.885
108) 2,6-Dinitrotoluene	(3)	8.254	165	542318	57.809
112) 3-Nitroaniline	(3)	8.413	138	567124	58.905
113)*Acenaphthene-d10	(3)	8.442	164	486495	20.000
114) Acenaphthene	(3)	8.478	153	1896715	56.638
116) 4-Nitrophenol	(3)	8.595	109	355768	55.345
117) Pentachlorobenzene	(3)	8.607	250	758951	50.042
119) Dibenzofuran	(3)	8.648	168	2884690	56.542
118) 2,4-Dinitrotoluene	(3)	8.648	165	700639	56.458
121) 1-Naphthylamine	(3)	8.731	143	3776440	107.435
122) 2,3,4,6-Tetrachlorophenol	(3)	8.772	232	526685	52.271
146) Diallate trans/cis	(4)	8.775	86	1186132	48.518
123) 2-Naphthylamine	(3)	8.807	143	3696603	104.792

* = Compound is an internal standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:19.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0322.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:57 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: icvall1-f
Calibration date and time: 11-NOV-2018 18:17
Date, time and analyst ID of latest file update: 11-Nov-2018 18:17 apb10206

Sample Name: SSTD050 Lab Sample ID: ICV2968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
124) Diethylphthalate	(3)	8.895	149	2294392	56.628
125) Thionazin	(3)	8.972	107	378027	51.525
126) Fluorene	(3)	8.984	166	2351876	57.164
127) 4-Chlorophenyl-phenylether	(3)	8.989	204	1212466	54.197
128) 5-Nitro-o-toluidine	(3)	9.001	152	583043	49.348
129) 4-Nitroaniline	(3)	9.013	138	576652	52.416
131) N-Nitrosodiphenylamine	(4)	9.107	169	2080337	57.714
132) NDPA as diphenylamine	(4)	9.107	169	2080337	57.714
134) 1,2-Diphenylhydrazine	(4)	9.142	77	3127822	57.418
137) Tetraethyldithiopyrophosphate	(4)	9.278	97	373152	47.086
139) 1,3,5-Trinitrobenzene	(4)	9.389	213	241412	46.066
140) Diallate (peak 1)	(4)	9.395	86	897622	35.849
141) Phorate	(4)	9.401	75	2271188	56.100
142) Phenacetin	(4)	9.425	108	1117898	46.996
143) 4-Bromophenyl-phenylether	(4)	9.466	248	672846	54.780
144) Diallate (peak 2)	(4)	9.478	86	288510	13.381
145) Hexachlorobenzene	(4)	9.513	284	671985	57.262
147) Dimethoate	(4)	9.566	87	1019207	48.226
150) 4-Aminobiphenyl	(4)	9.719	169	2241507	131.950
151) Pentachloronitrobenzene	(4)	9.719	237	276782	49.442
152) Pronamide	(4)	9.789	173	951139	49.850
153)*Phenanthrene-d10	(4)	9.895	188	1120070	20.000
154) Dinoseb	(4)	9.901	211	539863	49.378
155) Phenanthrene	(4)	9.919	178	3470431	54.565
157) Anthracene	(4)	9.966	178	3593667	55.808
163) Carbazole	(4)	10.130	167	3310006	55.800
164) Methyl parathion	(4)	10.272	109	765069	50.053
165) Di-n-butylphthalate	(4)	10.501	149	4058527	57.351
167) Parathion	(4)	10.666	109	471589	48.854
168) 4-Nitroquinoline-1-oxide	(4)	10.701	190	4931246	807.387
171) Isodrin	(4)	10.925	193	383113	48.420
173) Fluoranthene	(4)	11.078	202	4141898	56.595
174) Benzidine	(5)	11.230	184	10230767	236.212
175)*Pyrene-d10	(5)	11.277	212	1135117	20.000
177) Pyrene	(5)	11.295	202	4186145	54.338
182) p-Dimethylaminoazobenzene	(5)	11.607	225	785191	58.787
185) Chlorobenzilate	(5)	11.654	139	977347	50.911
187) 3,3'-Dimethylbenzidine	(5)	11.936	212	4508573	99.525
188) Butylbenzylphthalate	(5)	11.954	149	1815445	55.633
191) 2-Acetylaminofluorene	(5)	12.177	181	1309380	47.113

* = Compound is an internal standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:19.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0322.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 19:57 Analyst ID: lmh00956

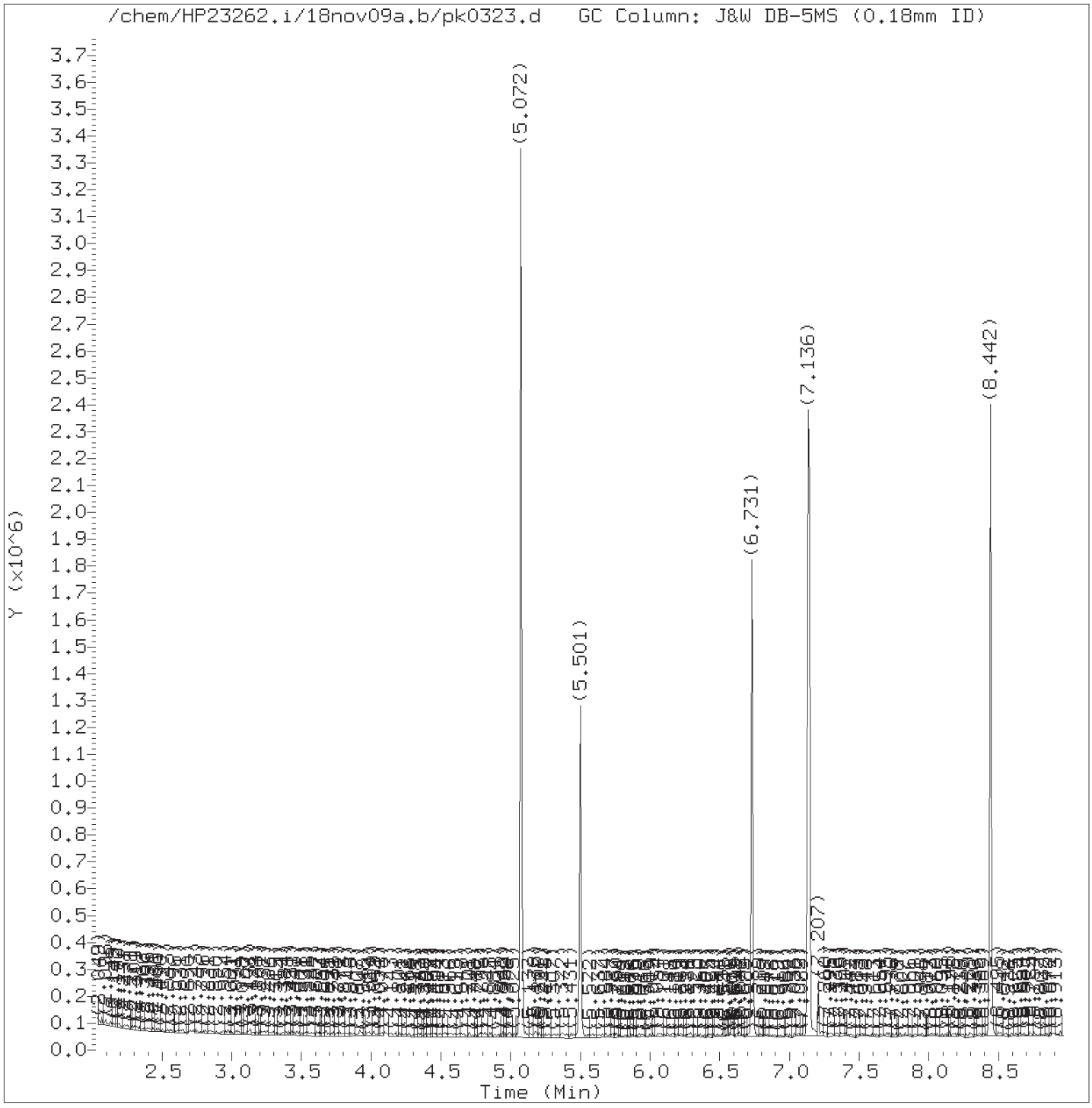
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: icvall1-f
Calibration date and time: 11-NOV-2018 18:17
Date, time and analyst ID of latest file update: 11-Nov-2018 18:17 apb10206

Sample Name: SSTD050 Lab Sample ID: ICV2968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
193) 3,3'-Dichlorobenzidine	(5)	12.466	252	1270499	48.674
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.472	231	691123	49.331
195) Benzo(a)anthracene	(5)	12.477	228	3825010	53.957
196) Chrysene	(5)	12.513	228	3708191	54.383
199) bis(2-Ethylhexyl)phthalate	(5)	12.542	149	2513933	54.442
203) 6-Methylchrysene	(5)	12.972	242	2225008	47.135
205) Di-n-octylphthalate	(6)	13.195	149	4263786	57.456
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.542	256	1739244	58.883
206) Benzo(b)fluoranthene	(6)	13.548	252	3611355	55.386
208) Benzo(k)fluoranthene	(6)	13.577	252	3688638	57.766
211) Benzo(a)pyrene	(6)	13.860	252	3412018	56.941
213)*Perylene-d12	(6)	13.907	264	930982	20.000
215) 3-Methylcholanthrene	(6)	14.189	268	1541836	64.102
217) Dibenz(a,h)acridine	(6)	14.742	279	2295463	49.120
218) Dibenz(a,j)acridine	(6)	14.795	279	2400620	49.703
219) Indeno(1,2,3-cd)pyrene	(6)	14.995	276	3505597	56.579
222) Total PAHs	(6)	15.000	100	53249662	1004.577
220) Dibenz(a,h)anthracene	(6)	15.013	278	3063297	56.903
221) Benzo(g,h,i)perylene	(6)	15.301	276	2871505	54.492

* = Compound is an internal standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:19.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

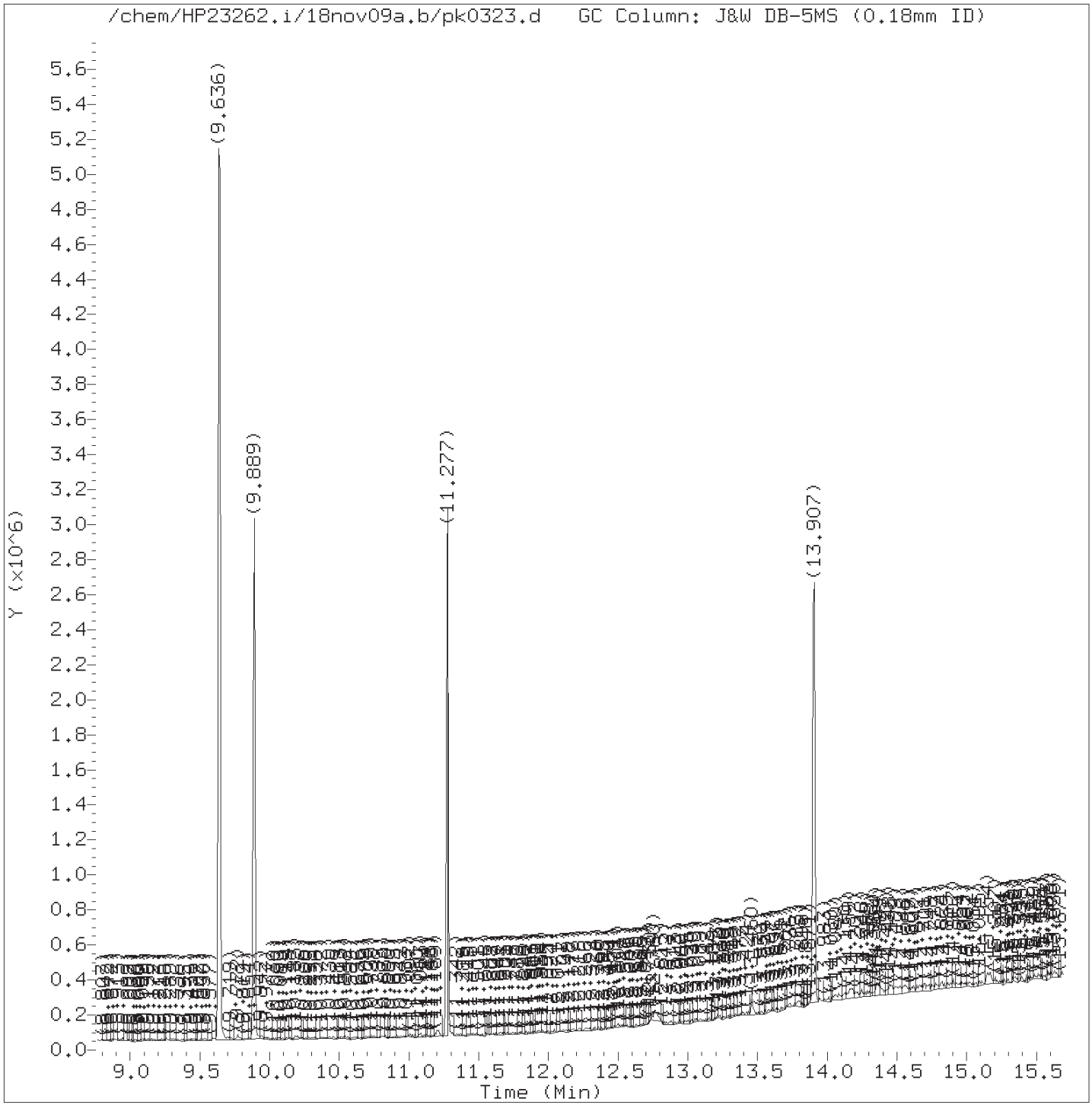
Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0323.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 20:20 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: capicvall1
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:05 apb10206

Sample Name: SSTD050 Lab Sample ID: BASICV2578

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0323.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 20:20 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: capicvall1
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:05 apb10206

Sample Name: SSTD050 Lab Sample ID: BASICV2578

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0323.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 20:20 Analyst ID: lmh00956

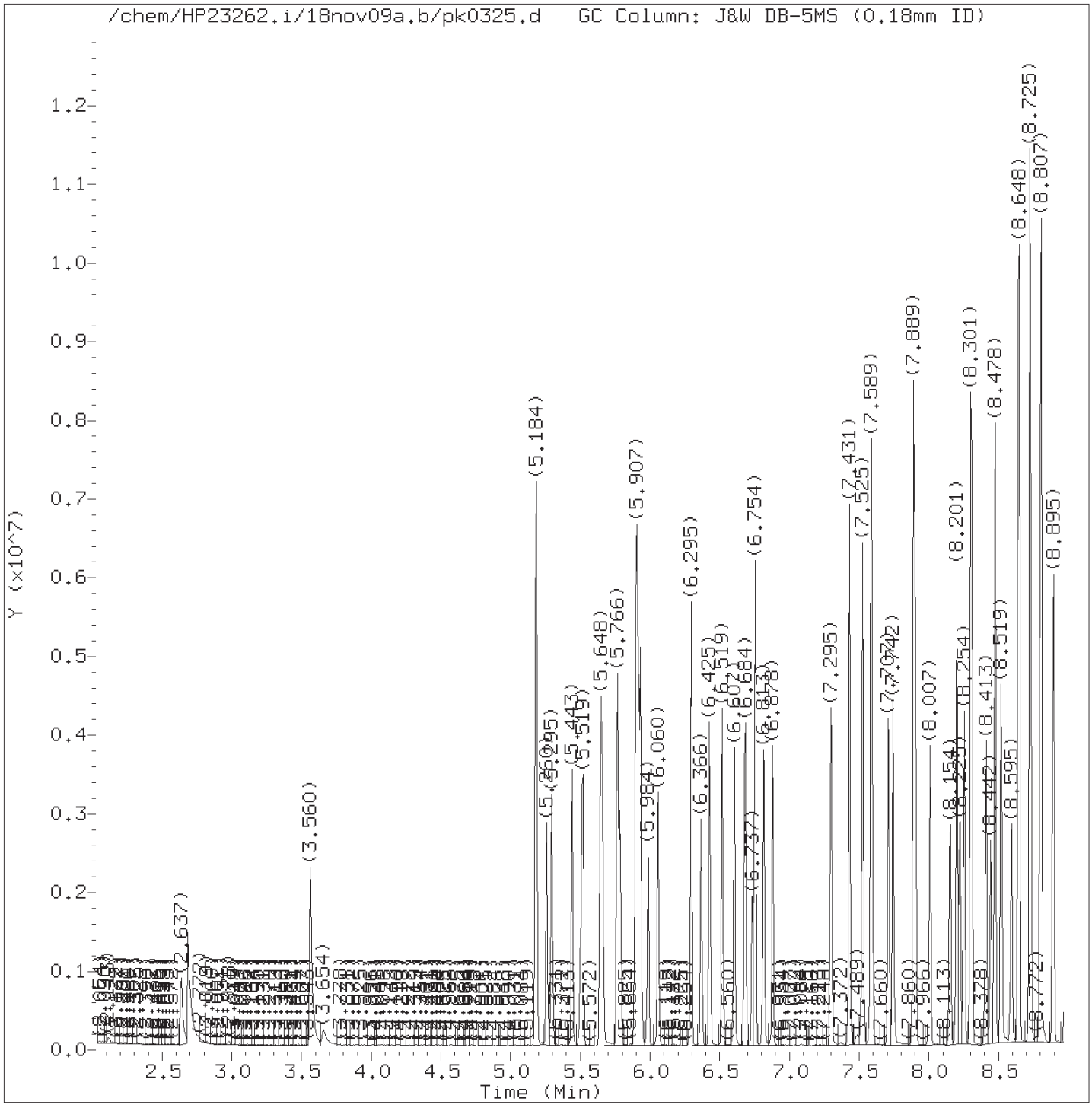
Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: capicvall1
Calibration date and time: 11-NOV-2018 18:01
Date, time and analyst ID of latest file update: 11-Nov-2018 18:05 apb10206

Sample Name: SSTD050 Lab Sample ID: BASICV2578

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	158608	20.000
65)*Naphthalene-d8	(2)	6.731	136	697969	20.000
76) Caprolactam	(2)	7.136	113	290644	51.253
113)*Acenaphthene-d10	(3)	8.442	164	416821	20.000
153)*Phenanthrene-d10	(4)	9.889	188	991503	20.000
175)*Pyrene-d10	(5)	11.277	212	1035364	20.000
213)*Perylene-d12	(6)	13.907	264	920723	20.000

* = Compound is an internal standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:12.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

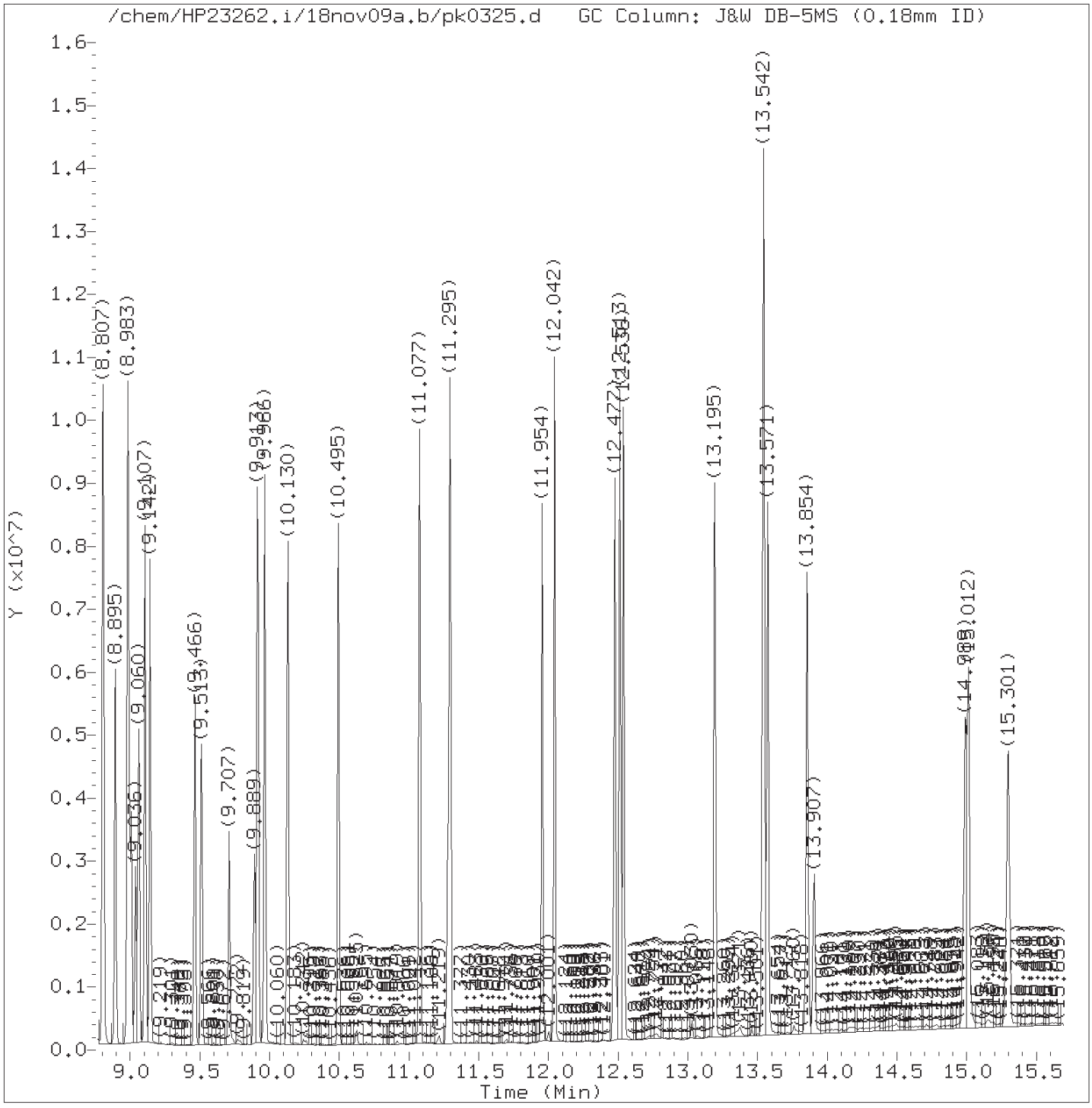
Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0325.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 21:06 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: icvall4
Calibration date and time: 11-NOV-2018 18:17
Date, time and analyst ID of latest file update: 11-Nov-2018 18:18 apb10206

Sample Name: SSTD050 Lab Sample ID: ICV2338

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:19.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0325.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 21:06 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: icvall4
Calibration date and time: 11-NOV-2018 18:17
Date, time and analyst ID of latest file update: 11-Nov-2018 18:18 apb10206

Sample Name: SSTD050 Lab Sample ID: ICV2338

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:19.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov09a.b/pk0325.d Instrument ID: HP23262.i
Injection date and time: 09-NOV-2018 21:06 Analyst ID: lmh00956

Method used: /chem/HP23262.i/18nov09a.b/m8270d.m Sublist used: icvall4
Calibration date and time: 11-NOV-2018 18:17
Date, time and analyst ID of latest file update: 11-Nov-2018 18:18 apb10206

Sample Name: SSTD050 Lab Sample ID: ICV2338

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	179020	20.000
65)*Naphthalene-d8	(2)	6.731	136	820182	20.000
109) Acenaphthylene	(3)	8.307	152	2716474	57.919
113)*Acenaphthene-d10	(3)	8.442	164	484327	20.000
115) 2,4-Dinitrophenol	(3)	8.519	184	607338	118.793
130) 4,6-Dinitro-2-methylphenol	(4)	9.036	198	400286	57.948
149) Pentachlorophenol	(4)	9.707	266	361515	55.367
153)*Phenanthrene-d10	(4)	9.889	188	1079552	20.000
175)*Pyrene-d10	(5)	11.277	212	1109790	20.000
213)*Perylene-d12	(6)	13.907	264	962318	20.000

* = Compound is an internal standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 18:19.
Target 3.5 esignature user ID: apb10206

Data File: /chem/HP23262.i/18nov11.b/pk0360d.d

Date : 11-NOV-2018 20:44

Client ID: DFTPP050

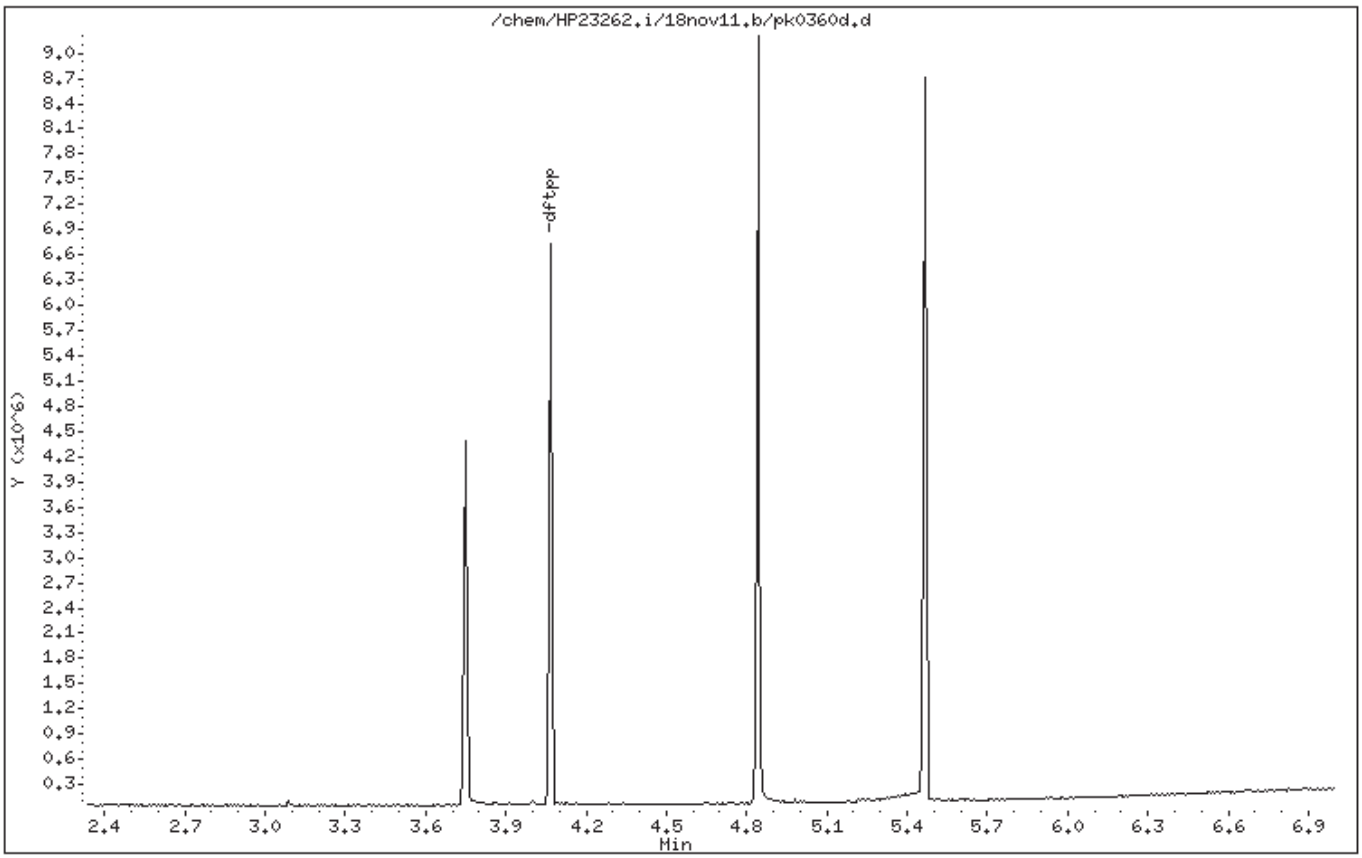
Instrument: HP23262.i

Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Anthony P. Bauer on 11/11/2018 at 22:09.
Target 3.5 esignature user ID: apb10206

Data File: /chem/HP23262.i/18nov11.b/pk0360d.d

Date : 11-NOV-2018 20:44

Client ID: DFTPP050

Instrument: HP23262.i

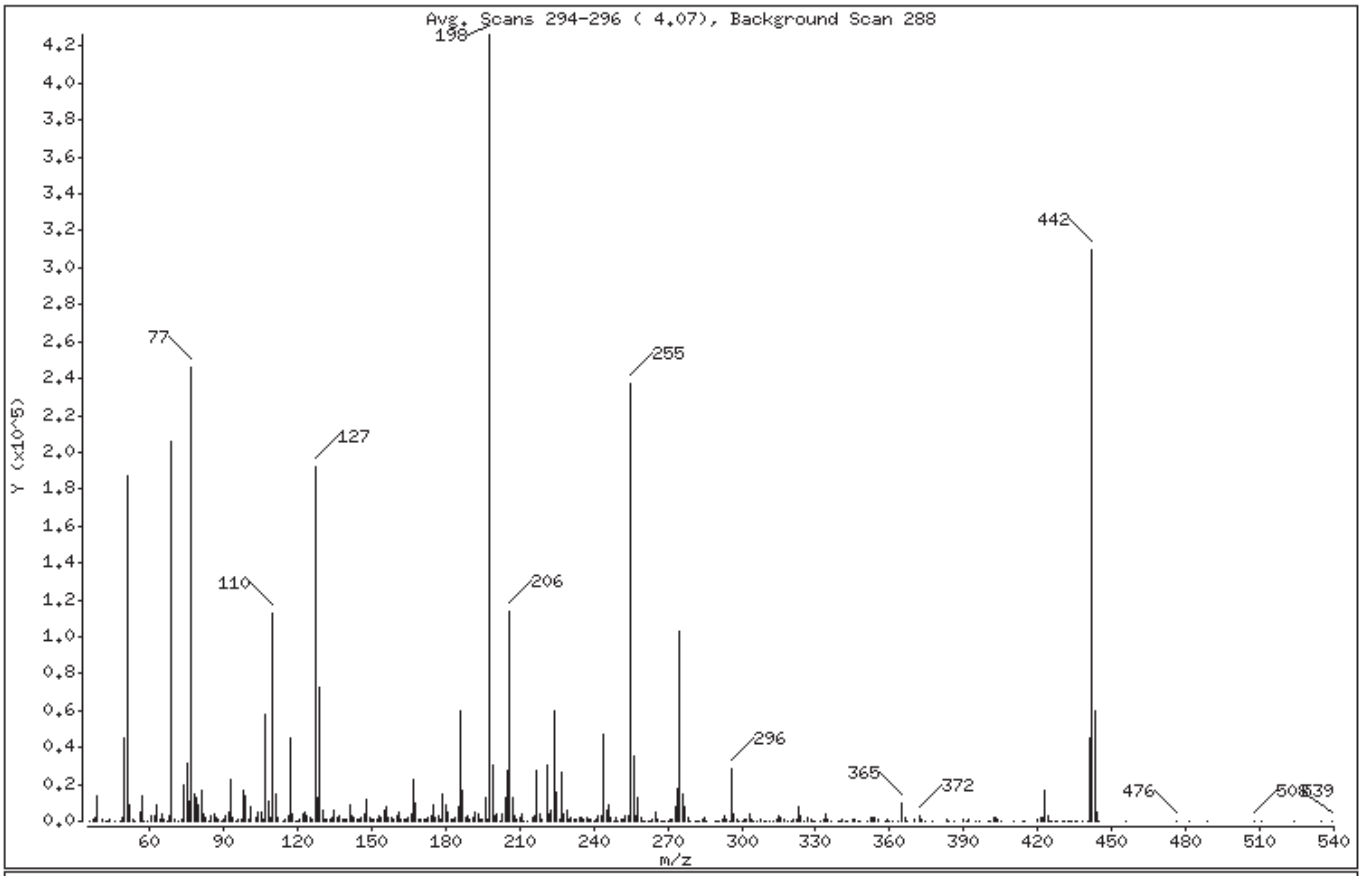
Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	43.81
68	Less than 2.00% of mass 69	0.78 (1.61)
69	Mass 69 relative abundance	48.29
70	Less than 2.00% of mass 69	0.32 (0.67)
127	10.00 - 80.00% of mass 198	45.05
197	Less than 2.00% of mass 198	0.27
199	5.00 - 9.00% of mass 198	7.11
275	10.00 - 60.00% of mass 198	24.15
365	Greater than 1.00% of mass 198	2.40
441	0.01 - 24.00% of mass 442	10.65 (14.67)
442	50.00 - 99.99% of mass 198	72.55
443	15.00 - 24.00% of mass 442	13.94 (19.22)

Digitally signed by Anthony P. Bauer on 11/11/2018 at 22:09.
Target 3.5 esignature user ID: apb10206

Date : 11-NOV-2018 20:44

Client ID: DFTPP050 Instrument: HP23262.i

Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

Data File: pk0360d.d
Spectrum: Avg. Scans 294-296 (4.07), Background Scan 288
Location of Maximum: 198.00
Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	231	134.00	2295	226.00	1224	322.00	574
37.00	1064	135.00	5829	227.00	26528	323.00	7660
38.00	2021	136.00	1728	228.00	3895	324.00	2496
39.00	13663	137.00	2646	229.00	5678	325.00	253
41.00	1193	138.00	1230	230.00	627	327.00	1856
42.00	125	139.00	571	231.00	1934	328.00	751
43.00	52	140.00	972	232.00	829	329.00	426
44.00	979	141.00	8921	233.00	852	330.00	198
46.00	225	142.00	2785	234.00	1741	332.00	473
48.00	245	143.00	1758	235.00	2445	333.00	683
49.00	1684	144.00	1065	236.00	1074	334.00	4066
50.00	45248	145.00	781	237.00	2180	335.00	1404
51.00	186752	146.00	1769	238.00	519	336.00	261
52.00	8597	147.00	3888	239.00	1417	339.00	169
53.00	524	148.00	11673	240.00	255	340.00	316
54.00	222	149.00	2087	241.00	1302	341.00	1211
56.00	5188	150.00	515	242.00	3324	342.00	265
57.00	13885	151.00	828	243.00	3151	343.00	149
58.00	49	152.00	937	244.00	46984	345.00	599
59.00	282	153.00	3234	245.00	5643	346.00	1111
61.00	3016	154.00	2438	246.00	8507	347.00	292
62.00	2602	155.00	6087	247.00	1957	348.00	127
63.00	8504	156.00	7937	248.00	471	351.00	55
64.00	993	157.00	1492	249.00	1818	352.00	2280
65.00	4128	158.00	1804	250.00	437	353.00	1558
66.00	627	159.00	1120	251.00	646	354.00	2176
67.00	90	160.00	2518	252.00	680	355.00	529
68.00	3317	161.00	4856	253.00	2496	358.00	139
69.00	205824	162.00	760	254.00	2870	359.00	633
70.00	1374	163.00	511	255.00	237568	360.00	225
72.00	332	164.00	661	256.00	35536	361.00	308
73.00	1351	165.00	2393	257.00	2827	363.00	97
74.00	19168	166.00	3523	258.00	12929	365.00	10215
75.00	30928	167.00	22920	259.00	1566	366.00	1583
76.00	10543	168.00	10072	260.00	463	367.00	263

Digitally signed by Anthony P. Bauer on 11/11/2018 at 22:09.
Target 3.5 esignature user ID: apb10206

Date : 11-NOV-2018 20:44

Client ID: DFTPP050 Instrument: HP23262.i

Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

Data File: pk0360d.d
Spectrum: Avg. Scans 294-296 (4.07), Background Scan 288
Location of Maximum: 198.00
Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	245568	169.00	1375	261.00	322	370.00	593
78.00	15161	170.00	719	262.00	67	372.00	3307
79.00	13222	171.00	1341	263.00	61	373.00	1154
80.00	9308	172.00	1434	264.00	814	374.00	291
81.00	16536	173.00	1771	265.00	5138	377.00	461
82.00	4126	174.00	3391	266.00	923	383.00	1419
83.00	2344	175.00	8667	267.00	416	384.00	445
84.00	468	176.00	2410	268.00	467	386.00	126
85.00	3035	177.00	3357	269.00	350	390.00	595
86.00	4311	178.00	1215	270.00	483	391.00	255
87.00	2446	179.00	15183	271.00	648	392.00	494
88.00	1031	180.00	8334	272.00	625	395.00	62
89.00	366	181.00	4762	273.00	7800	396.00	165
90.00	647	182.00	1125	274.00	17576	400.00	167
91.00	2691	183.00	1002	275.00	102936	401.00	288
92.00	4742	184.00	1680	276.00	14309	402.00	1580
93.00	22984	185.00	7966	277.00	7572	403.00	2126
94.00	1818	186.00	60024	278.00	2097	404.00	1124
95.00	307	187.00	16720	279.00	78	405.00	242
96.00	1054	188.00	1716	281.00	13	410.00	119
97.00	585	189.00	3179	282.00	393	414.00	180
98.00	16512	190.00	913	283.00	457	415.00	166
99.00	13676	191.00	1711	284.00	1011	420.00	562
100.00	787	192.00	4978	285.00	1768	421.00	2078
101.00	7494	193.00	3802	286.00	393	422.00	1645
103.00	2061	194.00	1387	289.00	462	423.00	16576
104.00	4885	195.00	1305	290.00	313	424.00	2790
105.00	4429	196.00	12513	291.00	400	425.00	470
106.00	1350	197.00	1134	292.00	534	426.00	428
107.00	57712	198.00	426304	293.00	2703	427.00	398
108.00	10903	199.00	30312	294.00	521	428.00	181
109.00	1518	200.00	2497	295.00	378	430.00	349
110.00	112960	201.00	4134	296.00	28264	431.00	258
111.00	14987	202.00	438	297.00	3628	432.00	333
112.00	1495	203.00	3873	298.00	720	433.00	482

Digitally signed by Anthony P. Bauer on 11/11/2018 at 22:09.
Target 3.5 esignature user ID: apb10206

Date : 11-NOV-2018 20:44

Client ID: DFTPP050 Instrument: HP23262.i

Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

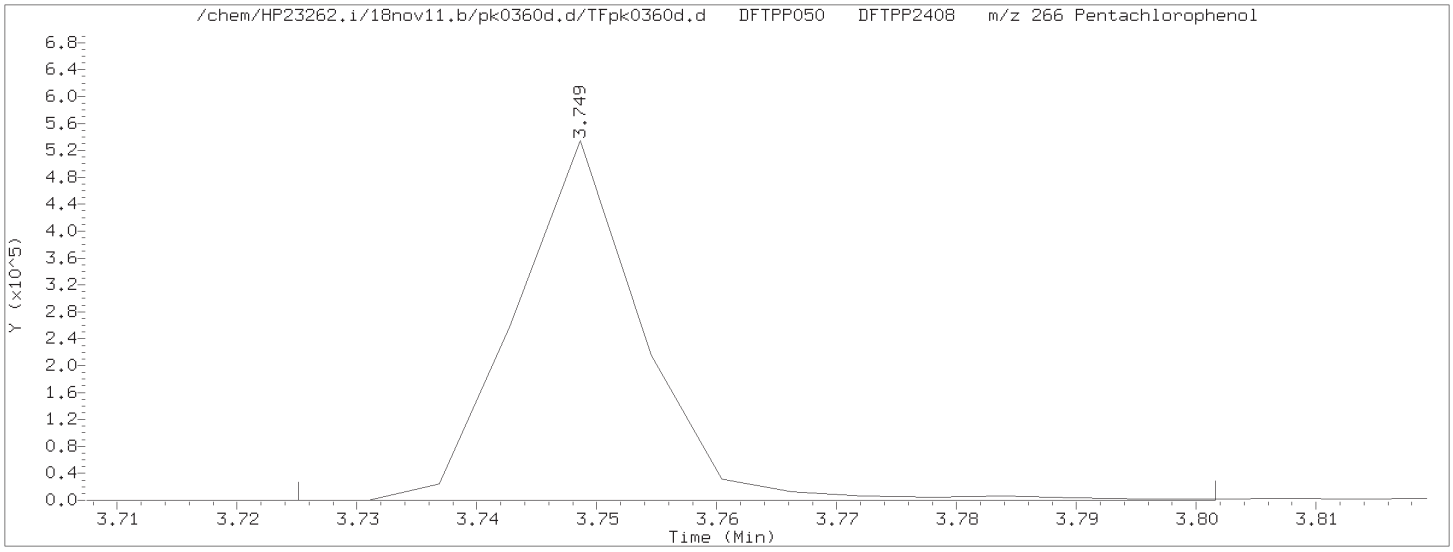
Data File: pk0360d.d
Spectrum: Avg. Scans 294-296 (4.07), Background Scan 288
Location of Maximum: 198.00
Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
114.00	103	204.00	13007	299.00	69	434.00	138
115.00	669	205.00	27200	300.00	203	435.00	268
116.00	3286	206.00	113856	301.00	543	436.00	191
117.00	45440	207.00	12284	302.00	691	438.00	94
118.00	3536	208.00	3330	303.00	3513	440.00	74
119.00	193	209.00	1467	304.00	1438	441.00	45384
120.00	394	210.00	1518	305.00	244	442.00	309248
121.00	772	211.00	3749	306.00	187	443.00	59432
122.00	3505	212.00	464	308.00	492	444.00	5028
123.00	4442	213.00	394	309.00	177	445.00	249
124.00	2479	215.00	1691	310.00	122	456.00	74
125.00	2149	216.00	2811	311.00	52	476.00	93
126.00	1434	217.00	27888	313.00	422	481.00	57
127.00	192000	218.00	3580	314.00	1443	489.00	53
128.00	13222	219.00	916	315.00	2665	508.00	151
129.00	72224	221.00	30496	316.00	1795	511.00	51
130.00	5781	222.00	3458	317.00	718	524.00	95
131.00	584	223.00	5899	319.00	180	535.00	62
132.00	1141	224.00	59840	320.00	413	539.00	109
133.00	492	225.00	15575	321.00	842		

Digitally signed by Anthony P. Bauer on 11/11/2018 at 22:09.
Target 3.5 esignature user ID: apb10206

Assessment of GC Column Performance and Injection Port Inertness for

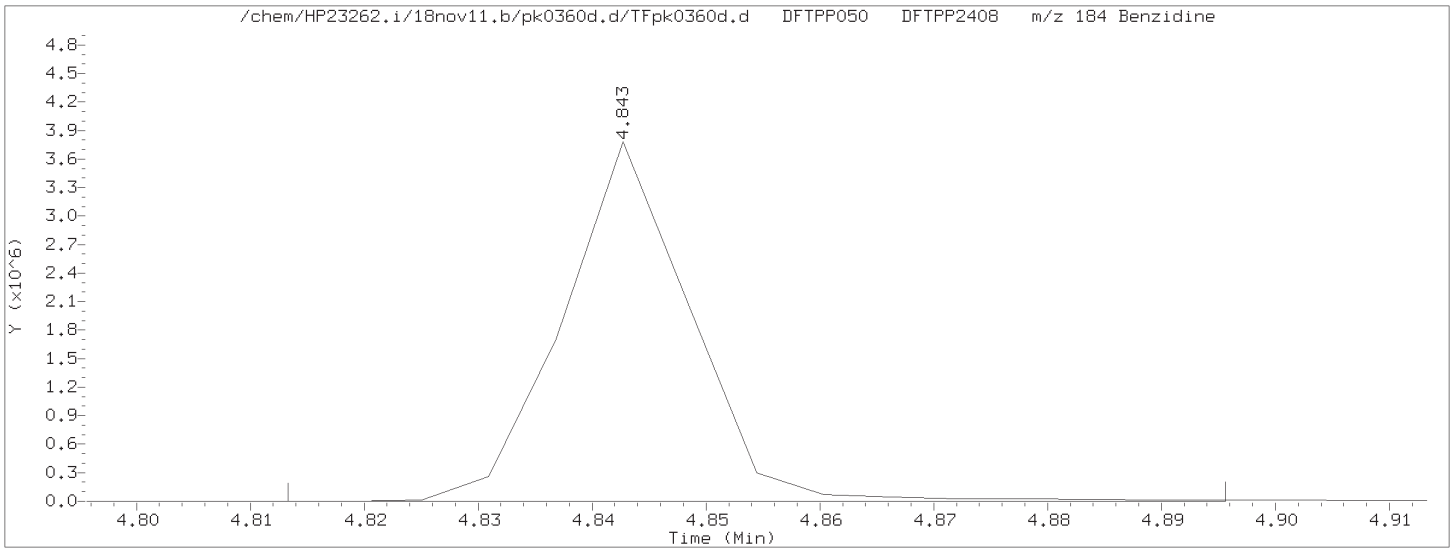
Instrument ID: HP23262.i Injection Date: 11-NOV-2018 20:44 Operator: apb10206



Pentachlorophenol EICP peak height = 534592 EICP peak height at 10% = 53459 Pentachlorophenol EICP area = 388189

Pentachlorophenol EICP peak apex (min.) = 3.749
RT at 10% of front half of EICP (min.) = 3.738 'Front' peak width (min.) = 0.0110000000
RT at 10% of back half of EICP (min.) = 3.760 'Tailing' peak width (min.) = 0.0110500000

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0110500000}{0.0110000000} = 1.005$



Benzidine EICP peak height = 3784585 EICP peak height at 10% = 378458 Benzidine EICP area = 2922893

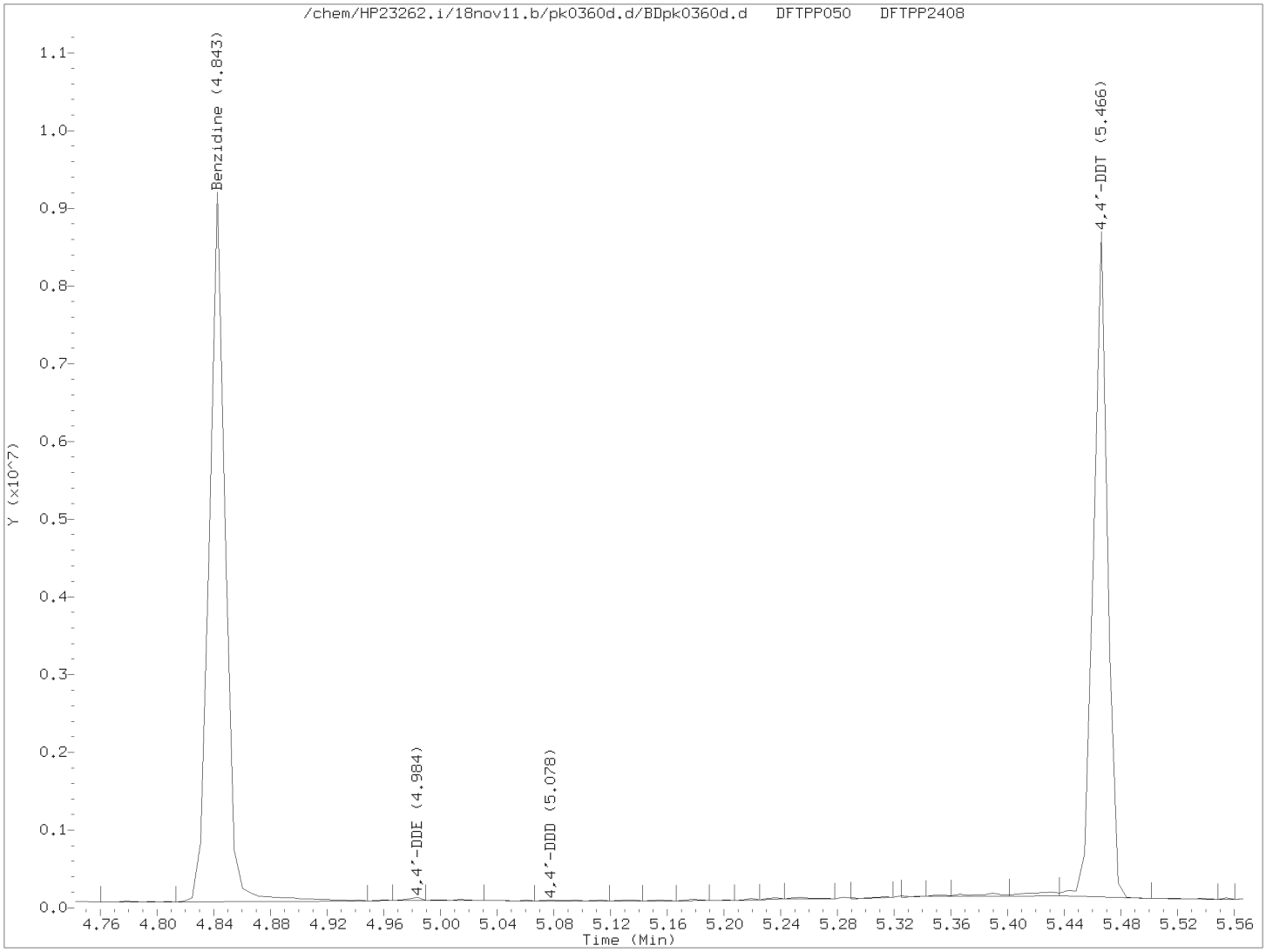
Benzidine EICP peak apex (min.) = 4.843
RT at 10% of front half of EICP (min.) = 4.831 'Front' peak width (min.) = 0.0112666667
RT at 10% of back half of EICP (min.) = 4.854 'Tailing' peak width (min.) = 0.0114666667

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0114666667}{0.0112666667} = 1.018$

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:32. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

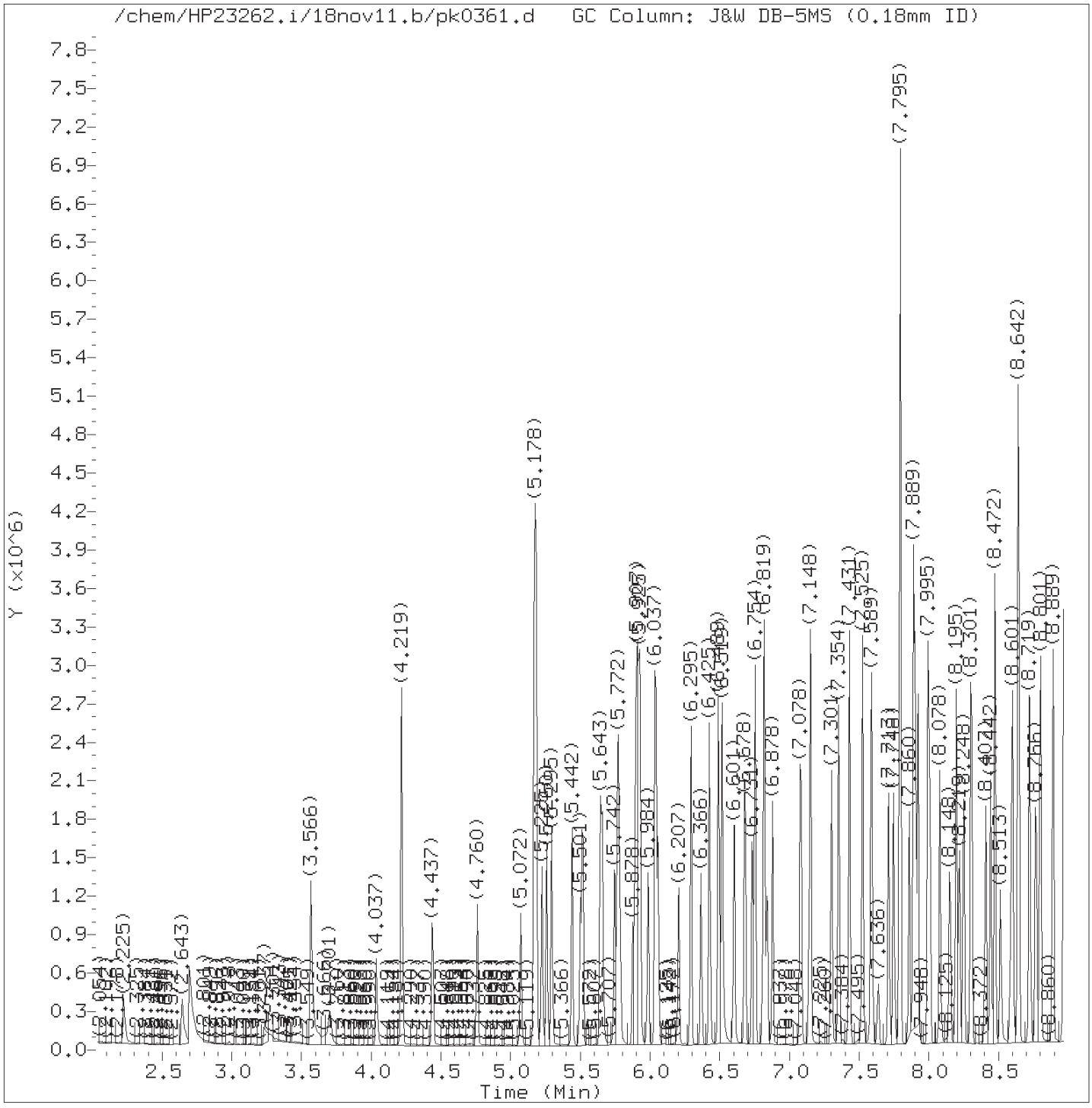
Instrument ID: HP23262.i Injection Date: 11-NOV-2018 20:44 Operator: apb10206



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{25283 + 25592}{25283 + 25592 + 5919329} \times 100 = 0.9$$

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:32. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

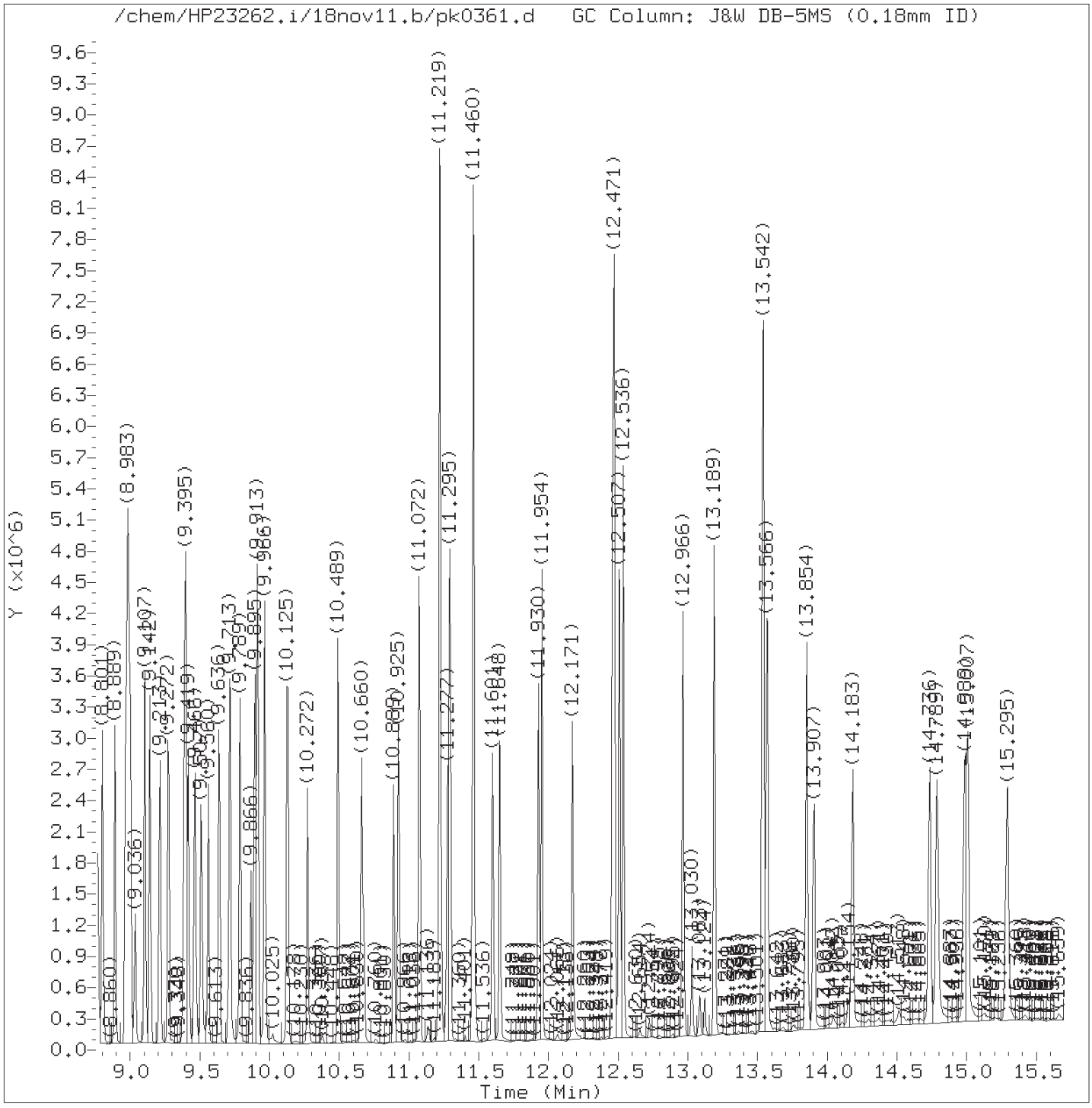
Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0361.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 20:58 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 21:46
Date, time and analyst ID of latest file update: 11-Nov-2018 21:46 apb10206

Sample Name: SSTD030 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 22:09.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0361.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 20:58 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 21:46
Date, time and analyst ID of latest file update: 11-Nov-2018 21:46 apb10206

Sample Name: SSTD030 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 22:09.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0361.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 20:58 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 21:46
Date, time and analyst ID of latest file update: 11-Nov-2018 21:46 apb10206

Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.225	88	167549	30.743
4) N-Nitrosodimethylamine	(1)	2.643	74	278095M	32.020
5) Pyridine	(1)	2.702	79	471195	30.306
7) 2-Picoline	(1)	3.566	93	484133	30.306
8) N-Nitrosomethylethylamine	(1)	3.701	88	222242	31.458
9) Methyl methanesulfonate	(1)	4.037	80	219109	31.116
11)$2-Fluorophenol	(1)	4.219	112	705105	61.882
13) N-Nitrosodiethylamine	(1)	4.437	102	210737	30.908
15) Ethyl methanesulfonate	(1)	4.760	109	211175	30.742
17)$Phenol-d6	(1)	5.166	99	1107199	61.669
18) Phenol	(1)	5.184	94	631829	29.594
19) Aniline	(1)	5.184	93	729285	30.582
22) bis(2-Chloroethyl)ether	(1)	5.260	93	464866	30.813
23) 2-Chlorophenol	(1)	5.295	128	353010	30.709
24) 1,3-Dichlorobenzene	(1)	5.442	146	358588	31.158
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	148838	20.000
26) 1,4-Dichlorobenzene	(1)	5.519	146	351305	30.702
27) Benzyl alcohol	(1)	5.643	108	281810	30.348
42) Total Cresols	(1)			863859	60.745
28) 1,2-Dichlorobenzene	(1)	5.660	146	346420	30.289
30) Indene	(1)	5.742	115	420447	30.969
31) 2-Methylphenol	(1)	5.766	108	398646	30.502
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.778	45	680949	30.987
34) bis(2-Chloroisopropyl)ether	(1)	5.778	45	680949	30.987
35) N-Nitrosopyrrolidine	(1)	5.878	100	246226	28.906
36) Acetophenone	(1)	5.895	105	602165	30.714
38) N-Nitroso-di-n-propylamine	(1)	5.907	70	386965	29.554
37) 4-Methylphenol	(1)	5.913	108	465213	30.263
39) N-Nitrosomorpholine	(1)	5.919	56	317501	30.200
40) o-Toluidine	(1)	5.931	106	662453	30.037
43) Hexachloroethane	(1)	5.984	117	148268	30.419
44)$Nitrobenzene-d5	(2)	6.037	82	1036774	61.996
45) Nitrobenzene	(2)	6.054	77	541283	29.962
48) N-Nitrosopiperidine	(2)	6.207	114	215483	28.262
50) Isophorone	(2)	6.295	82	1005527	29.950
51) 2-Nitrophenol	(2)	6.366	139	199809	30.953
53) 2,4-Dimethylphenol	(2)	6.425	107	440999	29.878
57) O,O,O-Triethylphosphorothioate	(2)	6.489	198	216930	30.891
55) bis(2-Chloroethoxy)methane	(2)	6.519	93	617104	30.842
56) Benzoic acid	(2)	6.519	105	363489	35.691

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 22:09.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0361.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 20:58 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 21:46
Date, time and analyst ID of latest file update: 11-Nov-2018 21:46 apb10206

Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.607	162	312569	29.063
62) 1,2,4-Trichlorobenzene	(2)	6.678	180	344191	30.843
65)*Naphthalene-d8	(2)	6.731	136	645044	20.000
66) Naphthalene	(2)	6.754	128	1083640	29.402
67) 4-Chloroaniline	(2)	6.813	127	460074	31.055
68) 2,6-Dichlorophenol	(2)	6.819	162	311342	29.531
69) Hexachloropropene	(2)	6.842	213	195585	30.143
71) Hexachlorobutadiene	(2)	6.878	225	207784	32.549
75) Quinoline	(2)	7.084	129	758822	30.196
76) Caprolactam	(2)	7.148	113	154957	29.568
77) N-Nitrosodi-n-butylamine	(2)	7.154	84	485277	29.406
80) 4-Chloro-3-methylphenol	(2)	7.301	107	392974	28.602
82) Safrole	(2)	7.354	162	303225	30.091
97) Isosafrole	(3)			327194	31.421
83) 2-Methylnaphthalene	(2)	7.431	142	789322	31.374
84) 1-Methylnaphthalene	(2)	7.525	142	730835	29.975
85) Hexachlorocyclopentadiene	(3)	7.584	237	207153	32.670
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.589	216	406649	32.008
88) cis-Isosafrole	(3)	7.636	162	53633	5.092
90) 2,4,6-Trichlorophenol	(3)	7.713	196	261296	30.860
92) 2,4,5-Trichlorophenol	(3)	7.748	196	284651	30.671
93)$2-Fluorobiphenyl	(3)	7.795	172	1869339	63.806
94) trans-Isosafrole	(3)	7.860	162	273561	26.333
95) 1,1'-Biphenyl	(3)	7.889	154	966932	30.366
96) 2-Chloronaphthalene	(3)	7.901	162	798620	30.909
98) 1-Chloronaphthalene	(3)	7.925	162	733573	29.486
99) Diphenyl ether	(3)	7.995	170	561608	30.545
100) 2-Nitroaniline	(3)	8.007	138	265295	30.630
120) 2,4_2,6-Dinitrotoluenes	(3)			526592	62.336
104) 1,4-Naphthoquinone	(3)	8.078	158	348749	31.728
105) 1,4-Dinitrobenzene	(3)	8.154	168	150138	31.723
106) Dimethylphthalate	(3)	8.195	163	956597	31.036
107) 1,3-Dinitrobenzene	(3)	8.219	168	162244	29.557
108) 2,6-Dinitrotoluene	(3)	8.254	165	223337	30.460
109) Acenaphthylene	(3)	8.301	152	1128879	30.658
112) 3-Nitroaniline	(3)	8.407	138	236414	31.418
113)*Acenaphthene-d10	(3)	8.442	164	380233	20.000
114) Acenaphthene	(3)	8.472	153	812421	31.040
115) 2,4-Dinitrophenol	(3)	8.513	184	158089	39.387
116) 4-Nitrophenol	(3)	8.589	109	151035	30.062

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 22:09.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0361.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 20:58 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 21:46
Date, time and analyst ID of latest file update: 11-Nov-2018 21:46 apb10206

Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
117) Pentachlorobenzene	(3)	8.601	250	356530	30.078
119) Dibenzofuran	(3)	8.642	168	1234030	30.947
118) 2,4-Dinitrotoluene	(3)	8.642	165	303255	31.266
121) 1-Naphthylamine	(3)	8.725	143	862240	31.385
122) 2,3,4,6-Tetrachlorophenol	(3)	8.772	232	242389	30.779
146) Diallate trans/cis	(4)			583581	30.803
123) 2-Naphthylamine	(3)	8.801	143	868391	31.497
124) Diethylphthalate	(3)	8.889	149	966937	30.535
125) Thionazin	(3)	8.966	107	180675	31.508
126) Fluorene	(3)	8.978	166	989297	30.765
127) 4-Chlorophenyl-phenylether	(3)	8.989	204	523313	29.929
128) 5-Nitro-o-toluidine	(3)	8.995	152	302536	32.762
129) 4-Nitroaniline	(3)	9.001	138	264783	30.794
130) 4,6-Dinitro-2-methylphenol	(4)	9.036	198	174725	31.459
132) NDPA as diphenylamine	(4)	9.107	169	866539	31.021
131) N-Nitrosodiphenylamine	(4)	9.107	169	866539	31.021
134) 1,2-Diphenylhydrazine	(4)	9.142	77	1270414	30.094
135)$2,4,6-Tribromophenol	(3)	9.213	330	232201	61.066
137) Tetraethyldithiopyrophosphate	(4)	9.272	97	191434	31.171
139) 1,3,5-Trinitrobenzene	(4)	9.378	213	122517	30.167
140) Diallate (peak 1)	(4)	9.389	86	499436	25.739
141) Phorate	(4)	9.401	75	776627	24.754
142) Phenacetin	(4)	9.419	108	554223	30.065
143) 4-Bromophenyl-phenylether	(4)	9.466	248	304828	32.025
144) Diallate (peak 2)	(4)	9.478	86	84145	5.036
145) Hexachlorobenzene	(4)	9.513	284	288336	31.705
147) Dimethoate	(4)	9.560	87	500026	30.530
149) Pentachlorophenol	(4)	9.707	266	160651	30.601
150) 4-Aminobiphenyl	(4)	9.719	169	398892	30.300
151) Pentachloronitrobenzene	(4)	9.719	237	140435	32.371
152) Pronamide	(4)	9.789	173	461018	31.179
153)*Phenanthrene-d10	(4)	9.889	188	868007	20.000
154) Dinoseb	(4)	9.901	211	250362	29.549
155) Phenanthrene	(4)	9.913	178	1504124	30.516
157) Anthracene	(4)	9.966	178	1566126	31.384
163) Carbazole	(4)	10.130	167	1412266	30.722
164) Methyl parathion	(4)	10.272	109	382124	32.260
165) Di-n-butylphthalate	(4)	10.489	149	1724036	31.437
167) Parathion	(4)	10.660	109	224236	29.975
168) 4-Nitroquinoline-1-oxide	(4)	10.677	190	137347	29.018

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 22:09.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0361.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 20:58 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 21:46
Date, time and analyst ID of latest file update: 11-Nov-2018 21:46 apb10206

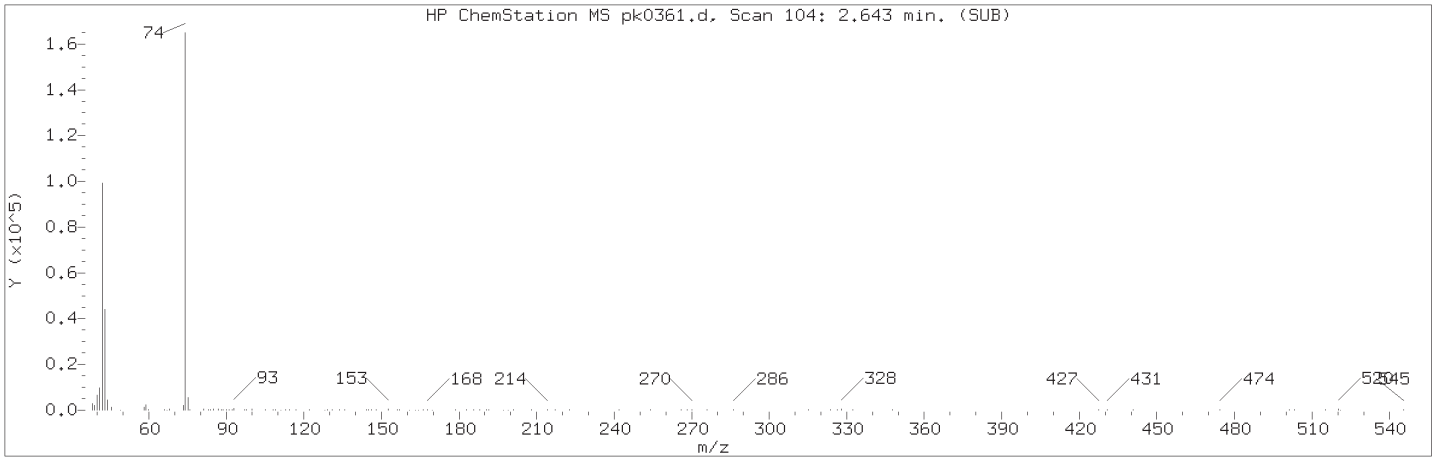
Sample Name: SSTD030 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
169) Octachlorostyrene	(4)	10.889	308	103741	29.025
171) Isodrin	(4)	10.925	193	184702	30.122
173) Fluoranthene	(4)	11.072	202	1830080	32.268
174) Benzidine	(5)	11.224	184	3539145	103.266
175)*Pyrene-d10	(5)	11.277	212	898203	20.000
177) Pyrene	(5)	11.295	202	1856668	30.457
179)$Terphenyl-d14	(5)	11.460	244	2489712	64.983
182) p-Dimethylaminoazobenzene	(5)	11.601	225	316639	29.959
185) Chlorobenzilate	(5)	11.648	139	463408	30.506
187) 3,3'-Dimethylbenzidine	(5)	11.930	212	1152115	32.141
188) Butylbenzylphthalate	(5)	11.954	149	812238	31.456
191) 2-Acetylaminofluorene	(5)	12.171	181	660346	30.027
193) 3,3'-Dichlorobenzidine	(5)	12.460	252	647000	31.325
198) 4,4'-Methylenebis(2-chloroanil	(5)	12.466	231	345971	31.208
195) Benzo(a)anthracene	(5)	12.471	228	1780557	31.742
196) Chrysene	(5)	12.513	228	1747011	32.379
199) bis(2-Ethylhexyl)phthalate	(5)	12.536	149	1121279	30.687
203) 6-Methylchrysene	(5)	12.966	242	1168174	31.274
205) Di-n-octylphthalate	(6)	13.189	149	1941319	30.871
207) 7,12-Dimethylbenz[a]anthracene	(6)	13.536	256	783558	31.305
206) Benzo(b)fluoranthene	(6)	13.542	252	1626560	29.438
208) Benzo(k)fluoranthene	(6)	13.571	252	1755248	32.438
211) Benzo(a)pyrene	(6)	13.854	252	1562537	30.772
213)*Perylene-d12	(6)	13.907	264	788919	20.000
215) 3-Methylcholanthrene	(6)	14.183	268	626057	30.715
217) Dibenz(a,h)acridine	(6)	14.736	279	1194155	30.155
218) Dibenz(a,j)acridine	(6)	14.789	279	1247352	30.476
219) Indeno(1,2,3-cd)pyrene	(6)	14.983	276	1637172	31.181
222) Total PAHs	(6)			25201546	561.051
220) Dibenz(a,h)anthracene	(6)	15.007	278	1406649	30.835
221) Benzo(g,h,i)perylene	(6)	15.295	276	1394420	31.227

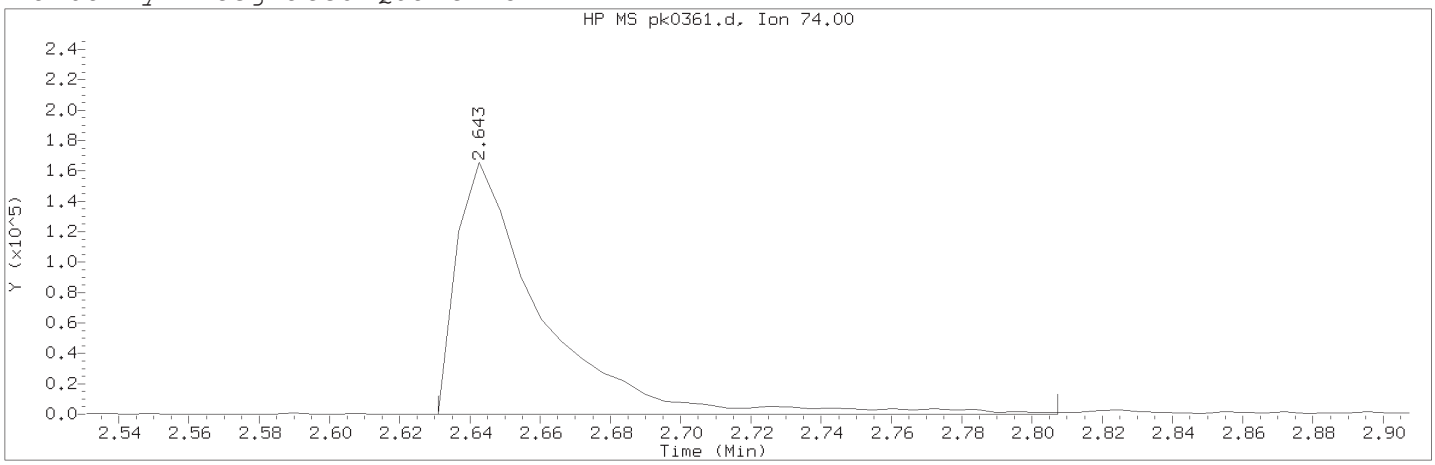
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/11/2018 at 22:09.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0361.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 20:58 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 21:46
Date, time and analyst ID of latest file update: 11-Nov-2018 21:46 apb10206

Sample Name: SSTD030 Lab Sample ID: STD2928

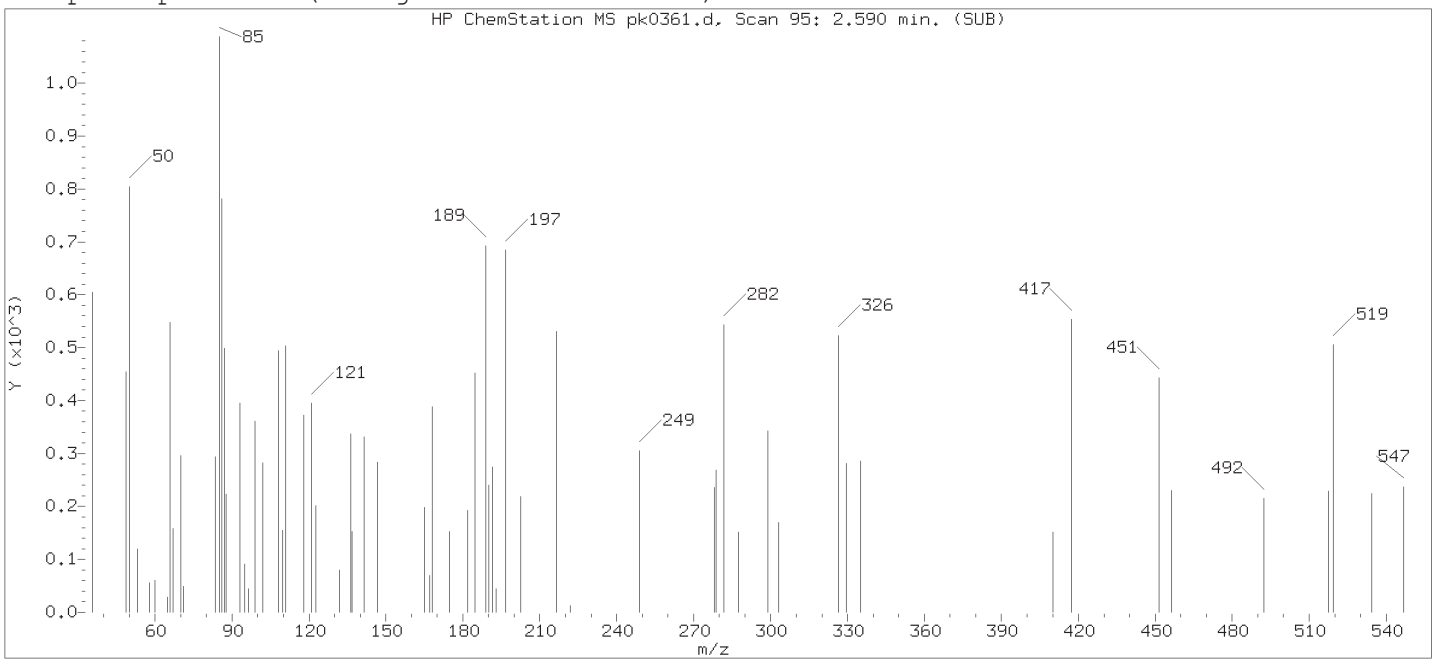
Compound Number : 4
Compound Name : N-Nitrosodimethylamine
Scan Number : 104
Retention Time (minutes) : 2.643
Quant Ion : 74.00
Area (flag) : 278095M
On-Column Amount (ng/ul) : 32.0205
Integration start scan : 101 Integration stop scan: 131
Y at integration start : 172 Y at integration end: 172

Reason for manual integration: improper integration

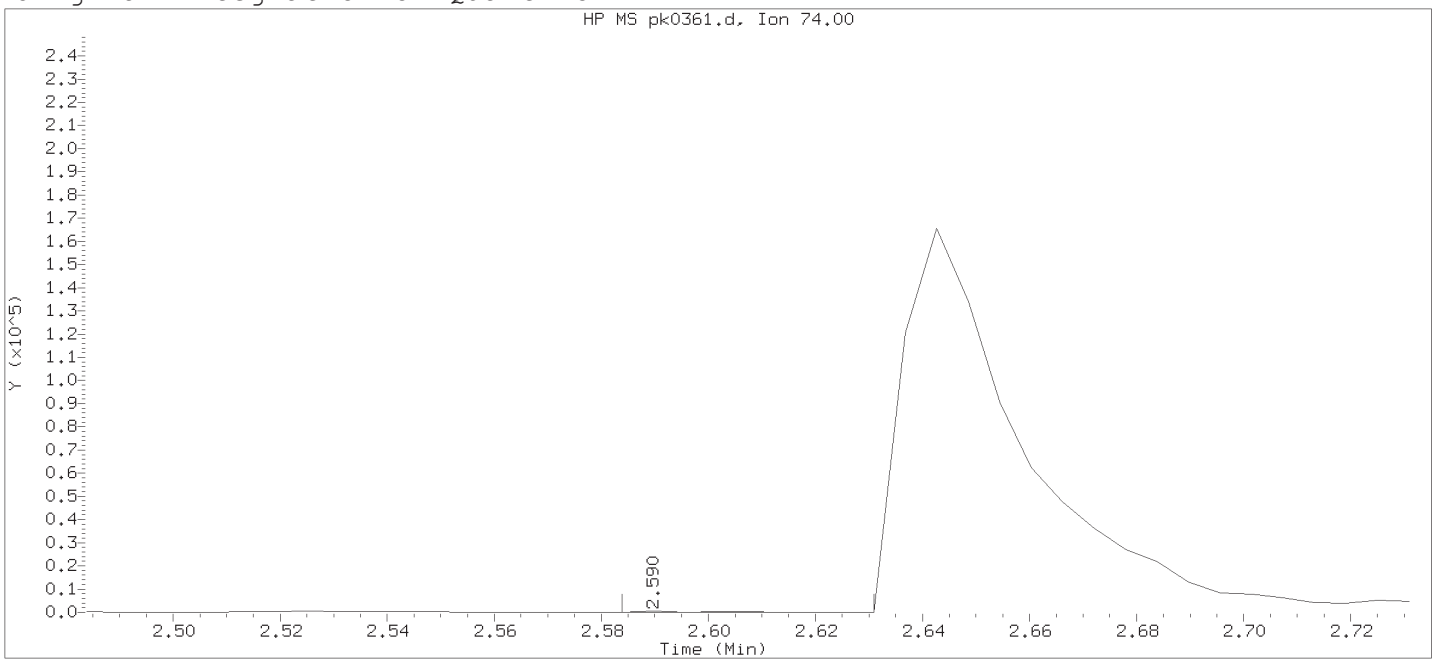
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/11/2018 at 22:09.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2018 at 09:32.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



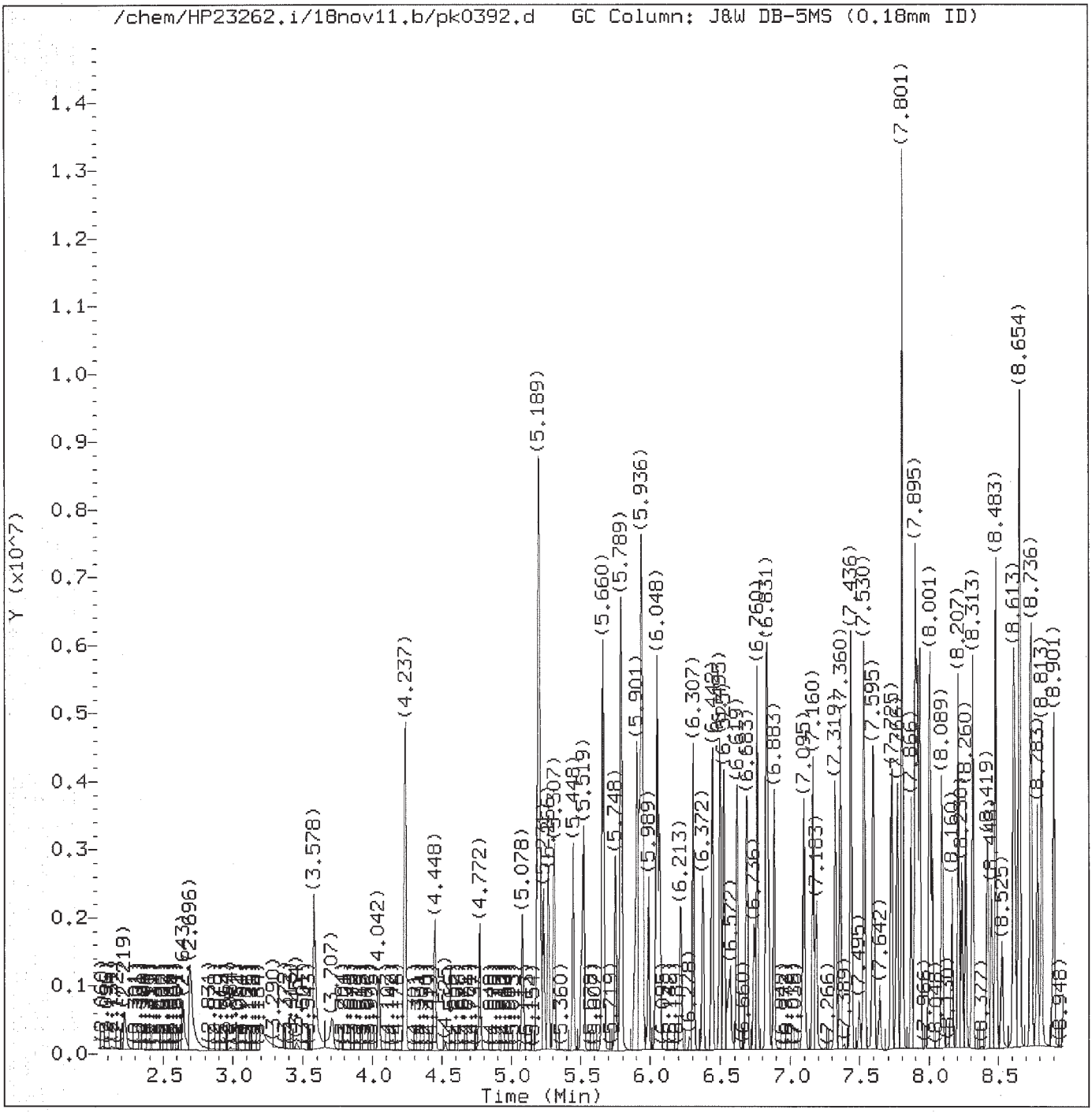
Data File: /chem/HP23262.i/18nov11.b/pk0361.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 20:58 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: all1
Calibration date and time: 11-NOV-2018 21:19
Date, time and analyst ID of latest file update: 11-Nov-2018 21:19 Automation

Sample Name: SSTD030 Lab Sample ID: STD2928

Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 95		
Retention Time (minutes)	: 2.590		
Quant Ion	: 74.00		
Area	: 353		
On-column Amount (ng/ul)	: 0.0407		
Integration start scan	: 93	Integration stop scan:	101
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 11/11/2018 at 22:09.
Target 3.5 esignature used 11/11/2018



Total Ion Chromatogram (TIC)

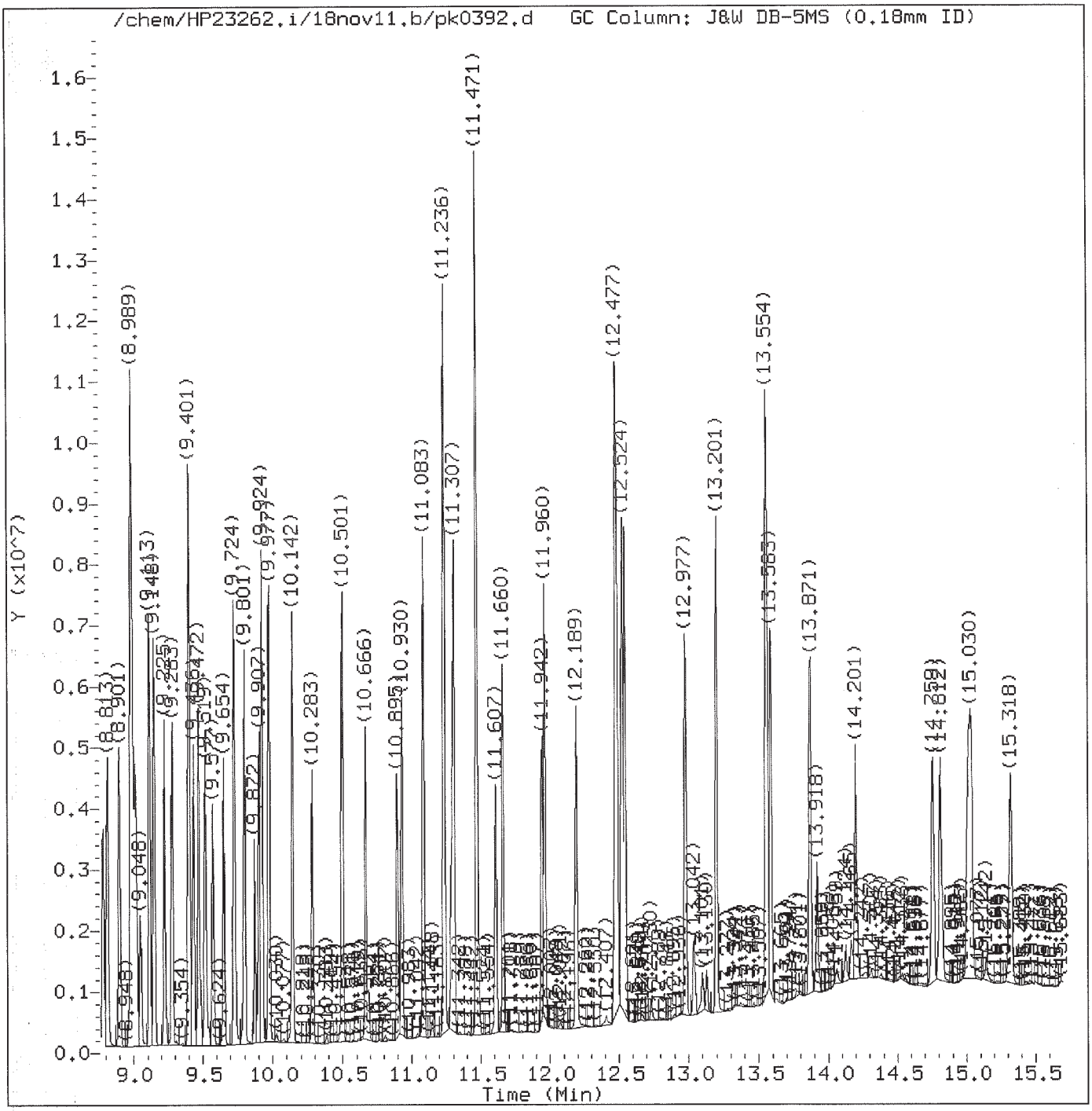
Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0392.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 08:03 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 311SLA
Calibration date and time: 12-NOV-2018 21:19
Date, time and analyst ID of latest file update: 12-Nov-2018 23:27 apb10206

Sample Name: SECC50 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/13/2018 at 00:51.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0392.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 08:03 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 311SLA
Calibration date and time: 12-NOV-2018 21:19
Date, time and analyst ID of latest file update: 12-Nov-2018 23:27 apb10206

Sample Name: SECC50 Lab Sample ID: STD2928

Digitally signed by Anthony P. Bauer
on 11/13/2018 at 00:51.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0392.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 08:03 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 311SLA
Calibration date and time: 12-NOV-2018 21:19
Date, time and analyst ID of latest file update: 12-Nov-2018 23:27 apb10206

Sample Name: SECC50 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.225	88	263035	40.373
11)$2-Fluorophenol	(1)	4.237	112	1295173	95.086
16) Benzaldehyde	(1)	5.078	77	423660	26.130
17)$Phenol-d6	(1)	5.189	99	2111881	98.399
18) Phenol	(1)	5.201	94	1259361	49.343
22) bis(2-Chloroethyl)ether	(1)	5.266	93	856422	47.487
23) 2-Chlorophenol	(1)	5.307	128	683905	49.767
25)*1,4-Dichlorobenzene-d4	(1)	5.507	152	177925	20.000
31) 2-Methylphenol	(1)	5.789	108	778430	49.823
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.789	45	1249360	47.559
36) Acetophenone	(1)	5.901	105	1095887	46.759
38) N-Nitroso-di-n-propylamine	(1)	5.919	70	727509	46.479
37) 4-Methylphenol	(1)	5.936	108	862074	46.911
43) Hexachloroethane	(1)	5.989	117	263455	45.215
44)$Nitrobenzene-d5	(2)	6.048	82	1983318	97.783
45) Nitrobenzene	(2)	6.066	77	1048236	47.840
50) Isophorone	(2)	6.307	82	1934403	47.504
51) 2-Nitrophenol	(2)	6.372	139	387486	49.492
53) 2,4-Dimethylphenol	(2)	6.442	107	859492	48.012
55) bis(2-Chloroethoxy)methane	(2)	6.525	93	1156732	47.665
60) 2,4-Dichlorophenol	(2)	6.619	162	626138	48.001
65)*Naphthalene-d8	(2)	6.736	136	782350	20.000
66) Naphthalene	(2)	6.760	128	2101084	47.002
67) 4-Chloroaniline	(2)	6.825	127	841683	46.842
71) Hexachlorobutadiene	(2)	6.883	225	402837	52.029
76) Caprolactam	(2)	7.183	113	290758	45.743
80) 4-Chloro-3-methylphenol	(2)	7.319	107	789710	47.390
83) 2-Methylnaphthalene	(2)	7.436	142	1514154	49.622
84) 1-Methylnaphthalene	(2)	7.530	142	1440594	48.715
85) Hexachlorocyclopentadiene	(3)	7.589	237	172004	22.600
86) 1,2,4,5-Tetrachlorobenzene	(3)	7.601	216	781607	51.255
90) 2,4,6-Trichlorophenol	(3)	7.725	196	544477	53.574
92) 2,4,5-Trichlorophenol	(3)	7.766	196	561064	50.365
93)$2-Fluorobiphenyl	(3)	7.801	172	3667346	104.288
95) 1,1'-Biphenyl	(3)	7.895	154	1958270	51.236
96) 2-Chloronaphthalene	(3)	7.913	162	1396964	45.044
100) 2-Nitroaniline	(3)	8.019	138	517378	49.767
106) Dimethylphthalate	(3)	8.207	163	1805435	48.801
108) 2,6-Dinitrotoluene	(3)	8.260	165	417695	47.461
109) Acenaphthylene	(3)	8.313	152	2179013	49.303

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/13/2018 at 00:51.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0392.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 08:03 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 311SLA
Calibration date and time: 12-NOV-2018 21:19
Date, time and analyst ID of latest file update: 12-Nov-2018 23:27 apb10206

Sample Name: SECC50 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
112) 3-Nitroaniline	(3)	8.425	138	445941	49.373
113)*Acenaphthene-d10	(3)	8.448	164	456396	20.000
114) Acenaphthene	(3)	8.483	153	1595733	50.793
115) 2,4-Dinitrophenol	(3)	8.525	184	215409	44.712
116) 4-Nitrophenol	(3)	8.619	109	308787	51.205
118) 2,4-Dinitrotoluene	(3)	8.654	165	577479	49.603
119) Dibenzofuran	(3)	8.654	168	2350310	49.105
122) 2,3,4,6-Tetrachlorophenol	(3)	8.783	232	476262	50.384
124) Diethylphthalate	(3)	8.901	149	1844094	48.516
126) Fluorene	(3)	8.989	166	1936497	50.172
127) 4-Chlorophenyl-phenylether	(3)	8.995	204	1043571	49.724
129) 4-Nitroaniline	(3)	9.025	138	470830	45.619
130) 4,6-Dinitro-2-methylphenol	(4)	9.054	198	310977	46.997
131) N-Nitrosodiphenylamine	(4)	9.113	169	1689341	50.762
135)$2,4,6-Tribromophenol	(3)	9.225	330	463441	101.540
143) 4-Bromophenyl-phenylether	(4)	9.472	248	582409	51.358
145) Hexachlorobenzene	(4)	9.519	284	570357	52.642
148) Atrazine	(4)	9.654	200	471845	40.413
149) Pentachlorophenol	(4)	9.724	266	310858	49.700
153)*Phenanthrene-d10	(4)	9.901	188	1034118	20.000
155) Phenanthrene	(4)	9.924	178	2848548	48.509
157) Anthracene	(4)	9.977	178	2930276	49.288
163) Carbazole	(4)	10.142	167	2647309	48.338
165) Di-n-butylphthalate	(4)	10.501	149	3294125	50.418
173) Fluoranthene	(4)	11.083	202	3339133	49.418
175)*Pyrene-d10	(5)	11.283	212	994218	20.000
177) Pyrene	(5)	11.307	202	3291794	48.784
179)$Terphenyl-d14	(5)	11.471	244	4410448	103.998
188) Butylbenzylphthalate	(5)	11.960	149	1405464	49.173
193) 3,3'-Dichlorobenzidine	(5)	12.471	252	1053481	46.079
195) Benzo(a)anthracene	(5)	12.489	228	2928493	47.165
196) Chrysene	(5)	12.524	228	2810120	47.053
199) bis(2-Ethylhexyl)phthalate	(5)	12.548	149	1978695	48.923
205) Di-n-octylphthalate	(6)	13.201	149	3320118	53.865
206) Benzo(b)fluoranthene	(6)	13.560	252	2643376	48.809
208) Benzo(k)fluoranthene	(6)	13.589	252	2704137	50.985
211) Benzo(a)pyrene	(6)	13.871	252	2507067	50.372
213)*Perylene-d12	(6)	13.918	264	773269	20.000
219) Indeno(1,2,3-cd)pyrene	(6)	15.012	276	2663175	51.749
220) Dibenz(a,h)anthracene	(6)	15.030	278	2205887	49.333

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/13/2018 at 00:51.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0392.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 08:03 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 311SLA
Calibration date and time: 12-NOV-2018 21:19
Date, time and analyst ID of latest file update: 12-Nov-2018 23:27 apb10206

Sample Name: SECC50 Lab Sample ID: STD2928

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
221) Benzo(g,h,i)perylene	(6)	15.318	276	2199919	50.262

Digitally signed by Anthony P. Bauer
on 11/13/2018 at 00:51.
Target 3.5 esignature user ID: apb10206

Raw QC Data

Semivolatiles by GC/MS

Data file: /chem/HP23262.i/18nov11.b/pk0363.d Injection date and time: **11-NOV-2018 21:57**
Data file Sample Info. Line: SBLKLI302;SBLKLI302;2;3;BLANK;;DOD26; Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 12-Nov-2018 00:32 apb10206

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 12-NOV-2018 00:31
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.495	(0.006)	589	152	156552	(5)	21.00	
65) Naphthalene-d8	6.731	(0.000)	799	136	640809	(-1)	21.00	
113) Acenaphthene-d10	8.442	(0.000)	1090	164	384147	(1)	21.00	
153) Phenanthrene-d10	9.889	(0.000)	1336	188	898742	(4)	21.00	
175) Pyrene-d10	11.272	(0.006)	1571	212	879313	(-2)	20.00	
213) Perylene-d12	13.901	(0.006)	2018	264	799889	(1)	21.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
11) 2-Fluorophenol	(1)	4.219	(-0.001)	112	2095935	183.627	92%
17) Phenol-d6	(1)	5.172	(-0.002)	99	3052274	169.711	85%
44) Nitrobenzene-d5	(2)	6.037	(0.000)	82	1388188	87.736	88%
93) 2-Fluorobiphenyl	(3)	7.795	(0.000)	172	2535488	89.945	90%
135) 2,4,6-Tribromophenol	(3)	9.213	(0.000)	330	671431	183.518	92%
179) Terphenyl-d14	(5)	11.466	(-0.001)	244	3756290	100.147	100%

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)				Not Detected					2
18) Phenol	(1)				Not Detected					0.7
19) Aniline	(1)				Not Detected					5
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.7
23) 2-Chlorophenol	(1)				Not Detected					0.5
24) 1,3-Dichlorobenzene	(1)				Not Detected					0.5
26) 1,4-Dichlorobenzene	(1)				Not Detected					0.5
27) Benzyl alcohol	(1)				Not Detected					5
28) 1,2-Dichlorobenzene	(1)				Not Detected					0.6
31) 2-Methylphenol	(1)				Not Detected					0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.5
37) 4-Methylphenol	(1)				Not Detected					0.6
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.6
43) Hexachloroethane	(1)				Not Detected					1
45) Nitrobenzene	(2)				Not Detected					0.8
50) Isophorone	(2)				Not Detected					0.5
51) 2-Nitrophenol	(2)				Not Detected					0.5
53) 2,4-Dimethylphenol	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.5
60) 2,4-Dichlorophenol	(2)				Not Detected					0.5
62) 1,2,4-Trichlorobenzene	(2)				Not Detected					0.5
67) 4-Chloroaniline	(2)				Not Detected					1
71) Hexachlorobutadiene	(2)				Not Detected					0.6
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)	7.431	(0.000)	142	9145	0.384	12.81		J	0.3
85) Hexachlorocyclopentadiene	(3)				Not Detected					5
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.6

Digitally signed by Anthony P. Bauer on 11/12/2018 at 00:32. Target 3.5 esignature user ID: apb10206

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP23262.i/18nov11.b/pk0363.d Injection date and time: **11-NOV-2018 21:57**
Data file Sample Info. Line: SBLKLI302;SBLKLI302;2;3;BLANK;;DOD26; Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 12-Nov-2018 00:32 apb10206

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 12-NOV-2018 00:31
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

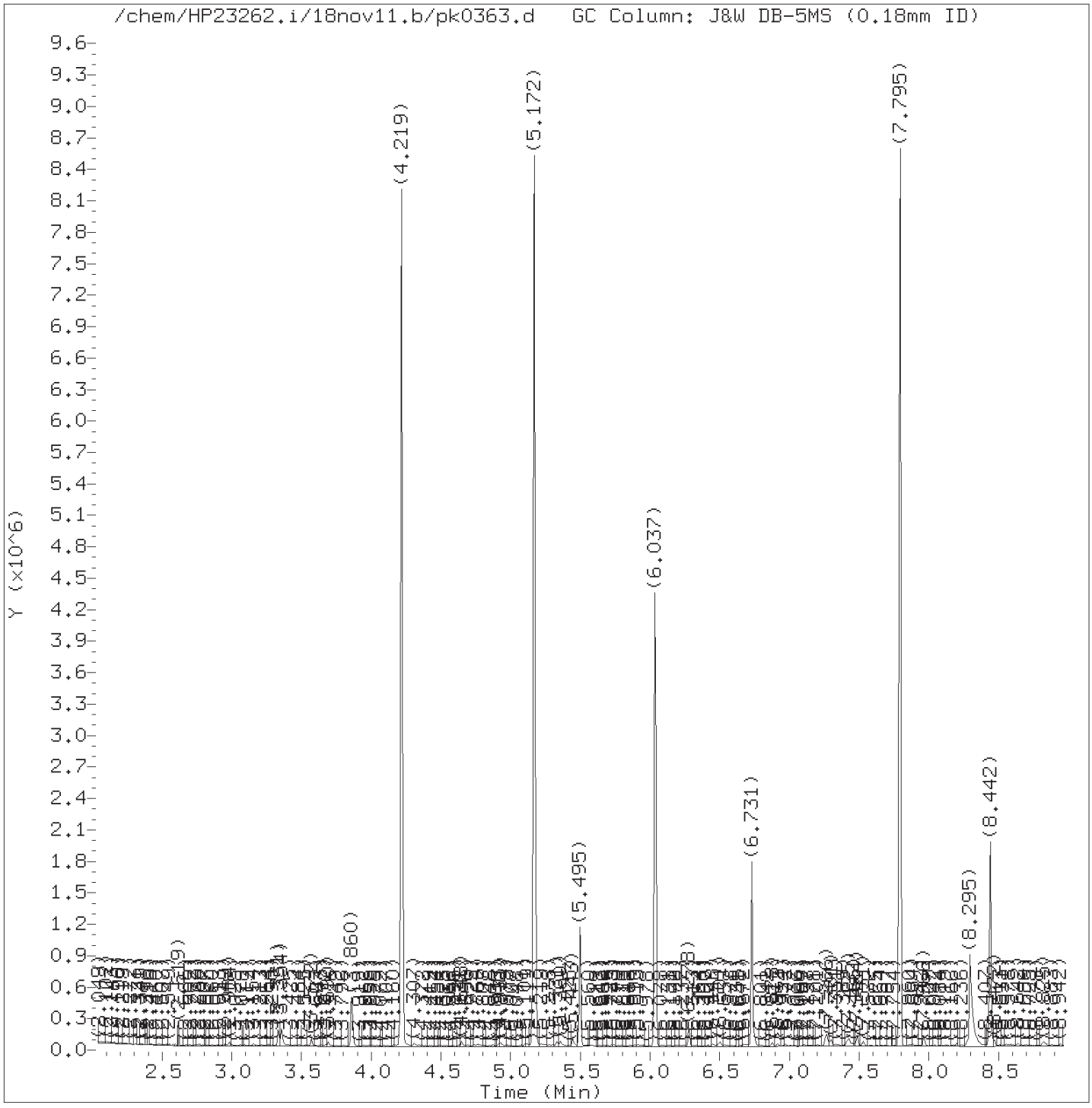
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.6
96) 2-Chloronaphthalene	(3)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.6
106) Dimethylphthalate	(3)				Not Detected					2
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.6
112) 3-Nitroaniline	(3)				Not Detected					2
115) 2,4-Dinitrophenol	(3)				Not Detected					11
116) 4-Nitrophenol	(3)				Not Detected					5
118) 2,4-Dinitrotoluene	(3)				Not Detected					2
119) Dibenzofuran	(3)				Not Detected					0.5
124) Diethylphthalate	(3)				Not Detected					2
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.5
129) 4-Nitroaniline	(3)				Not Detected					2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					5
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.5
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.6
145) Hexachlorobenzene	(4)				Not Detected					0.1
149) Pentachlorophenol	(4)				Not Detected					1
163) Carbazole	(4)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
205) Di-n-octylphthalate	(6)				Not Detected					2

Total number of targets = 48

Digitally signed by Anthony P. Bauer on 11/12/2018 at 00:32. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/13/2018 at 11:07. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

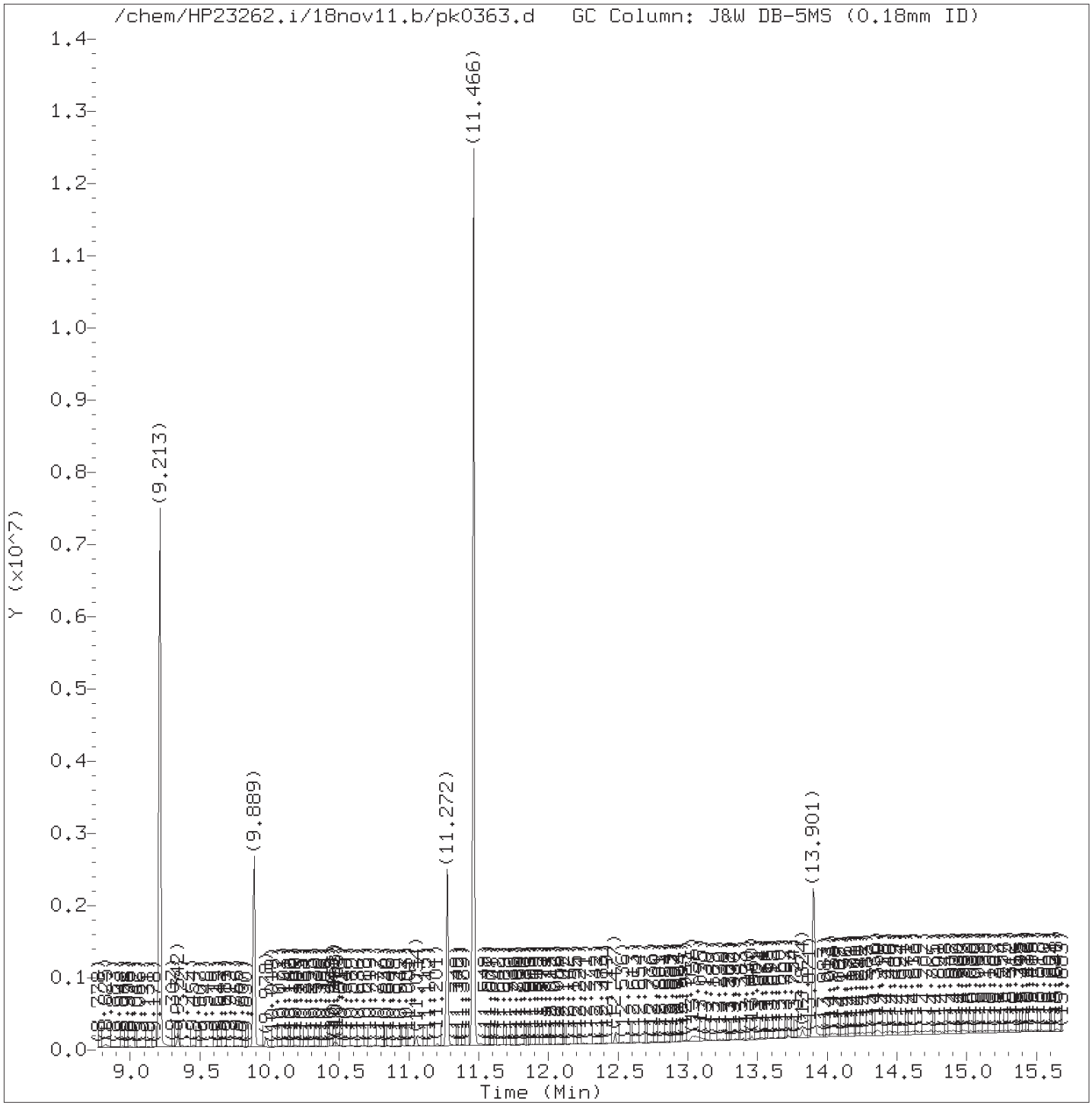
Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0363.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 21:57 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:31
Date, time and analyst ID of latest file update: 12-Nov-2018 00:32 apb10206

Sample Name: SBLKLI302 Lab Sample ID: SBLKLI302

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 00:32.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0363.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 21:57 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:31
Date, time and analyst ID of latest file update: 12-Nov-2018 00:32 apb10206

Sample Name: SBLKLI302 Lab Sample ID: SBLKLI302

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 00:32.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0363.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 21:57 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:31
Date, time and analyst ID of latest file update: 12-Nov-2018 00:32 apb10206

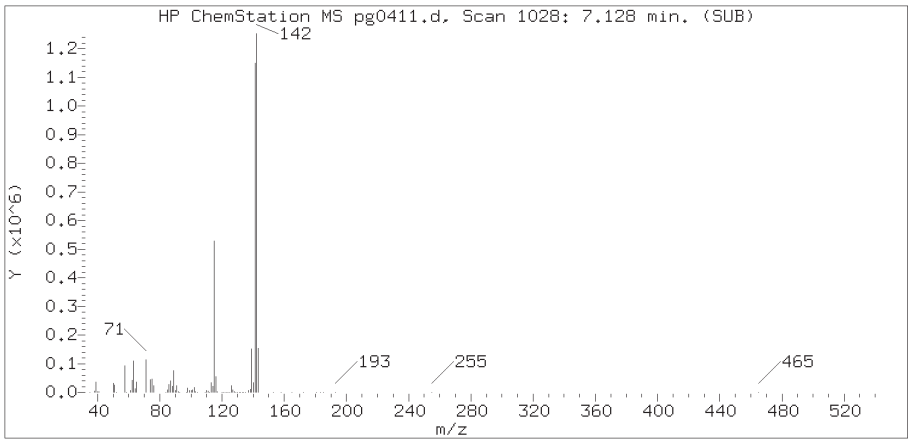
Sample Name: SBLKLI302 Lab Sample ID: SBLKLI302

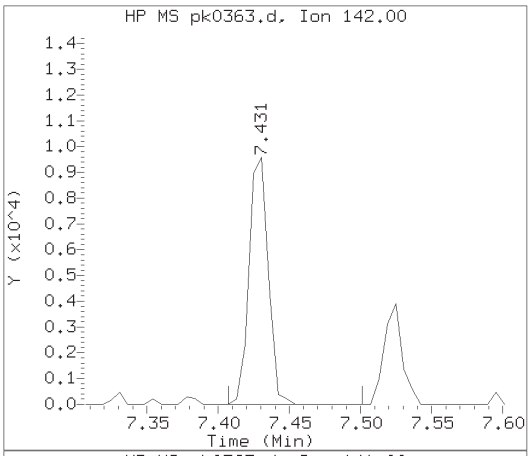
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.219	112	2095935	183.627
17)$Phenol-d6	(1)	5.172	99	3052274	169.711
25)*1,4-Dichlorobenzene-d4	(1)	5.495	152	156552	21.000
44)$Nitrobenzene-d5	(2)	6.037	82	1388188	87.736
65)*Naphthalene-d8	(2)	6.731	136	640809	21.000
83) 2-Methylnaphthalene	(2)	7.431	142	9145	0.384
93)$2-Fluorobiphenyl	(3)	7.795	172	2535488	89.945
113)*Acenaphthene-d10	(3)	8.442	164	384147	21.000
135)$2,4,6-Tribromophenol	(3)	9.213	330	671431	183.518
153)*Phenanthrene-d10	(4)	9.889	188	898742	21.000
175)*Pyrene-d10	(5)	11.272	212	879313	20.000
179)$Terphenyl-d14	(5)	11.466	244	3756290	100.147
213)*Perylene-d12	(6)	13.901	264	799889	21.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

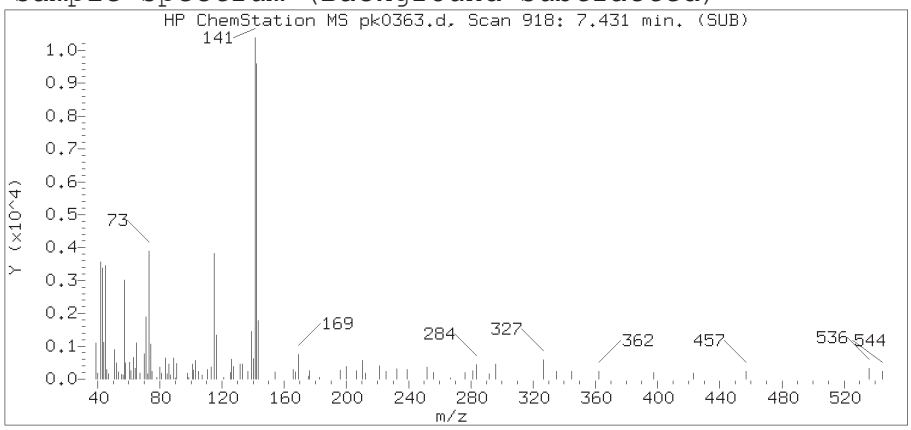
Digitally signed by Anthony P. Bauer
on 11/12/2018 at 00:32.
Target 3.5 esignature user ID: apb10206

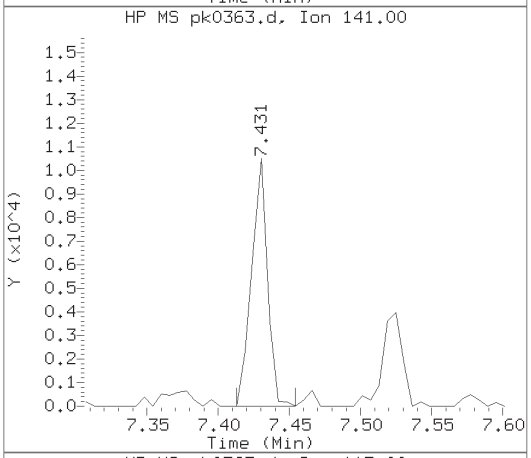
Reference Standard Spectrum for 2-Methylnaphthalene



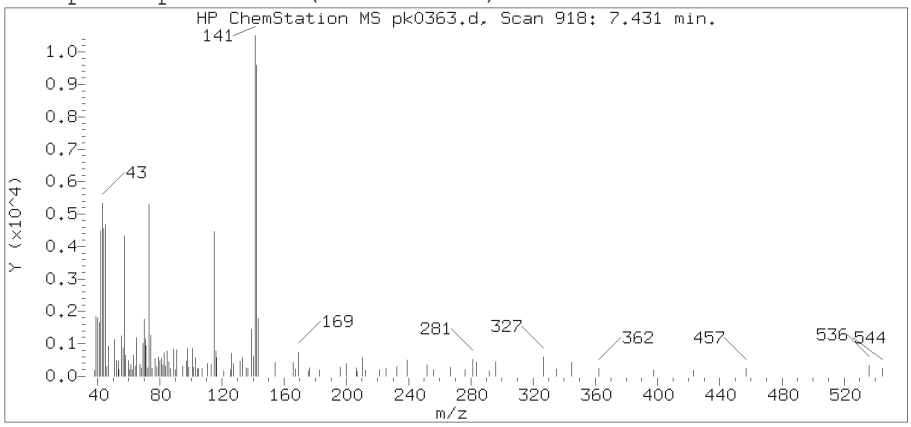


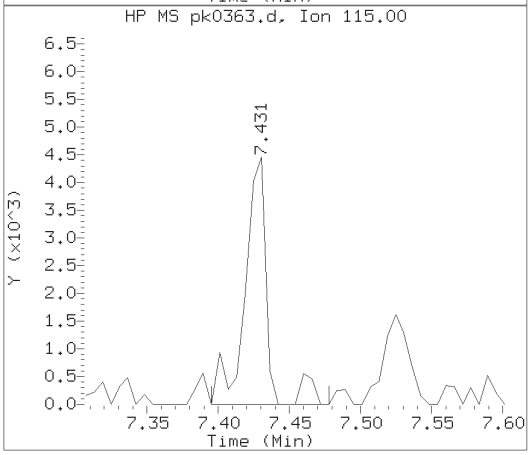
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP23262.i/18nov11.b/pk0363.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 21:57 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:31
Date, time and analyst ID of latest file update: 12-Nov-2018 00:32 apb10206

Sample Name: SBLKLI302 Lab Sample ID: SBLKLI302

Compound Number	: 83
Compound Name	: 2-Methylnaphthalene
Scan Number	: 918
Retention Time (minutes)	: 7.431
Relative Retention Time	: 0.00000
Quant Ion	: 142.00
Area (flag)	: 9145
On-column Amount (ng/ul)	: 0.3842

Digitally signed by Anthony P. Bauer on 11/12/2018 at 00:32.
Target 3.5 esignature user ID: apb10206

Data file: /chem/HP11165.i/18nov16.b/gk0854.d Injection date and time: **16-NOV-2018 14:51**
Data file Sample Info. Line: SBLKLB317;SBLKLB317;2;3;BLANK;;DOD26; Instrument ID: **HP11165.i** Batch: **18317SLB**
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Blank Data file reference: **/chem/HP11165.i/18nov16.b/gk0854.d**

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 19-NOV-2018 19:11
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/18nov16.b/gk0851.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.451	(0.000)	606	152	181226	(20)	20.00	
65) Naphthalene-d8	6.687	(0.000)	816	136	739497	(11)	20.00	
113) Acenaphthene-d10	8.398	(0.000)	1107	164	421612	(4)	20.00	
153) Phenanthrene-d10	9.851	(0.000)	1354	188	905534	(10)	20.00	
175) Pyrene-d10	11.239	(0.000)	1590	212	894746	(15)	20.00	
213) Perylene-d12	13.874	(0.000)	2038	264	829920	(27)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
11) 2-Fluorophenol	(1)	4.198	(0.000)	112	2155894	156.847	78%
17) Phenol-d6	(1)	5.163	(0.000)	99	3106679	145.960	73%
44) Nitrobenzene-d5	(2)	5.992	(0.000)	82	1451314	74.491	74%
93) 2-Fluorobiphenyl	(3)	7.751	(0.000)	172	2554449	74.856	75%
135) 2,4,6-Tribromophenol	(3)	9.181	(0.000)	330	649864	192.450	96%
179) Terphenyl-d14	(5)	11.433	(0.000)	244	3533389	81.665	82%

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)				Not Detected					2
18) Phenol	(1)				Not Detected					0.7
19) Aniline	(1)				Not Detected					5
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.7
23) 2-Chlorophenol	(1)				Not Detected					0.5
24) 1,3-Dichlorobenzene	(1)				Not Detected					0.5
26) 1,4-Dichlorobenzene	(1)				Not Detected					0.5
27) Benzyl alcohol	(1)				Not Detected					5
28) 1,2-Dichlorobenzene	(1)				Not Detected					0.6
31) 2-Methylphenol	(1)				Not Detected					0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.5
37) 4-Methylphenol	(1)				Not Detected					0.6
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.6
43) Hexachloroethane	(1)				Not Detected					1
45) Nitrobenzene	(2)				Not Detected					0.8
50) Isophorone	(2)				Not Detected					0.5
51) 2-Nitrophenol	(2)				Not Detected					0.5
53) 2,4-Dimethylphenol	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.5
60) 2,4-Dichlorophenol	(2)				Not Detected					0.5
62) 1,2,4-Trichlorobenzene	(2)				Not Detected					0.5
67) 4-Chloroaniline	(2)				Not Detected					1
71) Hexachlorobutadiene	(2)				Not Detected					0.6
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)				Not Detected					0.3
85) Hexachlorocyclopentadiene	(3)				Not Detected					5
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.6

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:13. Target 3.5 esignature user ID: bkc25363

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP11165.i/18nov16.b/gk0854.d Injection date and time: **16-NOV-2018 14:51**
Data file Sample Info. Line: SBLKLB317;SBLKLB317;2;3;BLANK;;DOD26; Instrument ID: **HP11165.i** Batch: **18317SLB**
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Blank Data file reference: **/chem/HP11165.i/18nov16.b/gk0854.d**

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 19-NOV-2018 19:11
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/18nov16.b/gk0851.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

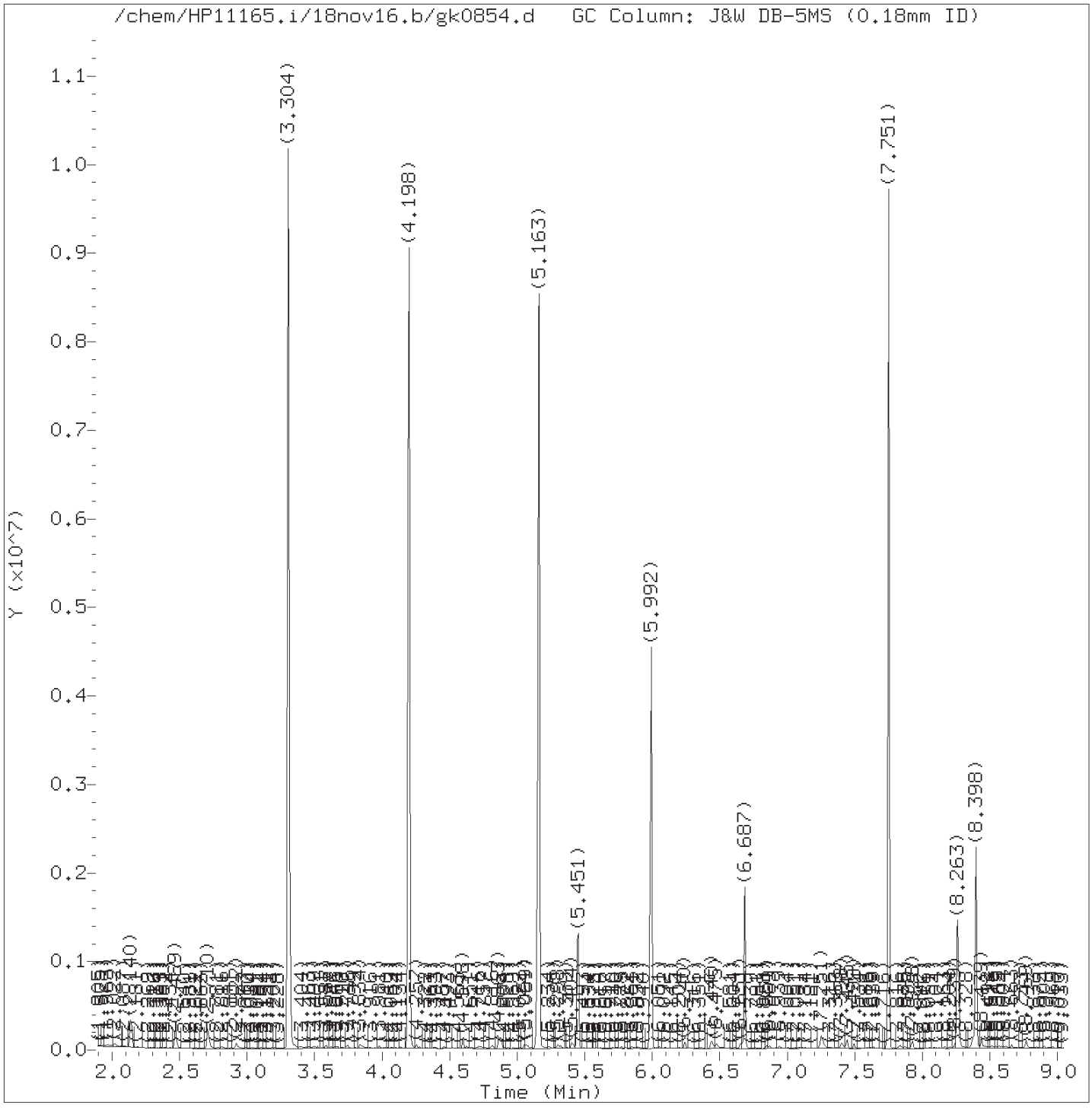
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.6
96) 2-Chloronaphthalene	(3)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.6
106) Dimethylphthalate	(3)				Not Detected					2
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.6
112) 3-Nitroaniline	(3)				Not Detected					2
115) 2,4-Dinitrophenol	(3)				Not Detected					11
116) 4-Nitrophenol	(3)				Not Detected					5
118) 2,4-Dinitrotoluene	(3)				Not Detected					2
119) Dibenzofuran	(3)				Not Detected					0.5
124) Diethylphthalate	(3)				Not Detected					2
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.5
129) 4-Nitroaniline	(3)				Not Detected					2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					5
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.5
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.6
145) Hexachlorobenzene	(4)				Not Detected					0.1
149) Pentachlorophenol	(4)				Not Detected					1
163) Carbazole	(4)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
205) Di-n-octylphthalate	(6)				Not Detected					2

Total number of targets = 48

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:13. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Chad A. Moline on 11/20/2018 at 12:59. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

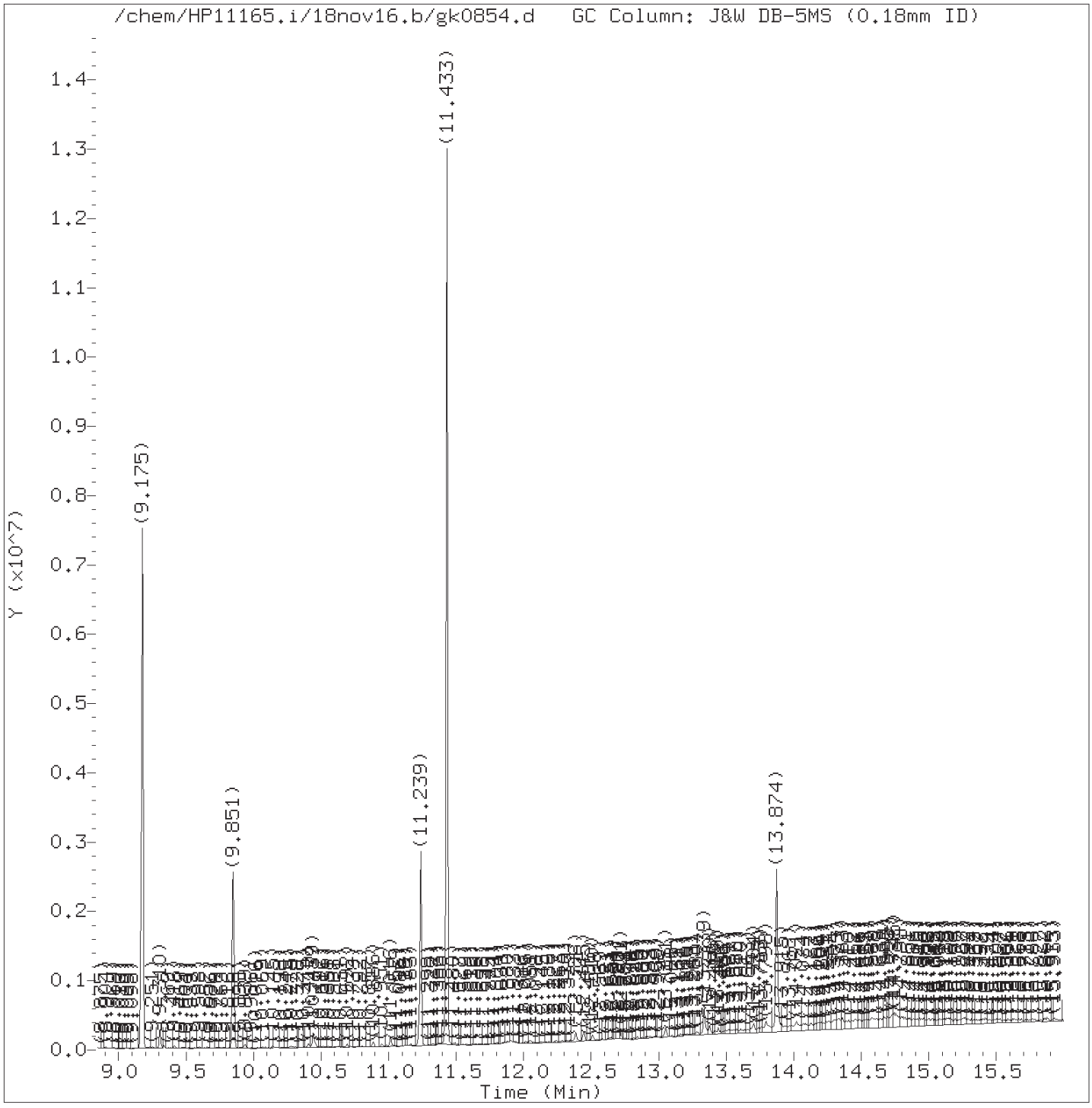
Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0854.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 14:51 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Sample Name: SBLKLB317 Lab Sample ID: SBLKLB317

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0854.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 14:51 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Sample Name: SBLKLB317 Lab Sample ID: SBLKLB317

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0854.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 14:51 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Sample Name: SBLKLB317 Lab Sample ID: SBLKLB317

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.198	112	2155894	156.847
17)$Phenol-d6	(1)	5.163	99	3106679	145.960
25)*1,4-Dichlorobenzene-d4	(1)	5.451	152	181226	20.000
44)$Nitrobenzene-d5	(2)	5.992	82	1451314	74.491
65)*Naphthalene-d8	(2)	6.687	136	739497	20.000
93)$2-Fluorobiphenyl	(3)	7.751	172	2554449	74.856
113)*Acenaphthene-d10	(3)	8.398	164	421612	20.000
135)$2,4,6-Tribromophenol	(3)	9.181	330	649864	192.450
153)*Phenanthrene-d10	(4)	9.851	188	905534	20.000
175)*Pyrene-d10	(5)	11.239	212	894746	20.000
179)$Terphenyl-d14	(5)	11.433	244	3533389	81.665
213)*Perylene-d12	(6)	13.874	264	829920	20.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles 9867763

Data file: /chem/HP23262.i/18nov11.b/pk0373.d Injection date and time: **12-NOV-2018 00:18**
Data file Sample Info. Line: T1003MS;9867763;2;3;MS;;DOD26;T1 Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 13-NOV-2018 11:28
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.32 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.501	(0.000)	590	152	157746	(6)	20.00	
65) Naphthalene-d8	6.737	(-0.006)	800	136	702180	(9)	20.00	
113) Acenaphthene-d10	8.442	(0.000)	1090	164	407318	(7)	20.00	
153) Phenanthrene-d10	9.889	(0.000)	1336	188	817175	(-6)	20.00	
175) Pyrene-d10	11.277	(0.000)	1572	212	784053	(-13)	20.00	
213) Perylene-d12	13.913	(-0.006)	2020	264	585196	(-26)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.231	(-0.002)	112	2087670	172.875	86%		35 - 115
17) Phenol-d6	(1)	5.184	(-0.003)	99	3170777	166.634	83%		47 - 120
44) Nitrobenzene-d5	(2)	6.043	(0.000)	82	1485364	81.593	82%		37 - 122
93) 2-Fluorobiphenyl	(3)	7.795	(0.000)	172	2663737	84.875	85%		44 - 115
135) 2,4,6-Tribromophenol	(3)	9.219	(-0.001)	330	639601	157.022	79%		39 - 132
179) Terphenyl-d14	(5)	11.466	(-0.001)	244	2926231	87.496	87%		54 - 127

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)	2.784	(-0.014)	79	398769MA	24.199	798.13			2
18) Phenol	(1)	5.196	(-0.002)	94	936542	41.389	1365.07			0.7
19) Aniline	(1)				Not Detected					5
22) bis(2-Chloroethyl)ether	(1)	5.260	(-0.000)	93	656493	41.057	1354.14			0.7
23) 2-Chlorophenol	(1)	5.301	(-0.001)	128	519126	42.609	1405.31			0.5
24) 1,3-Dichlorobenzene	(1)	5.442	(-0.000)	146	498065	40.834	1346.76			0.5
26) 1,4-Dichlorobenzene	(1)	5.519	(-0.000)	146	537574	44.328	1462.00			0.5
27) Benzyl alcohol	(1)	5.654	(-0.002)	108	453756	46.106	1520.64			5
28) 1,2-Dichlorobenzene	(1)	5.660	(-0.000)	146	508264	41.930	1382.90			0.6
31) 2-Methylphenol	(1)	5.772	(-0.001)	108	561889	40.564	1337.86			0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.784	(-0.001)	45	933790	40.094	1322.35			0.5
37) 4-Methylphenol	(1)	5.925	(-0.002)	108	611103	37.508	1237.08			0.6
38) N-Nitroso-di-n-propylamine	(1)	5.913	(-0.001)	70	593689	42.781	1410.99			0.6
43) Hexachloroethane	(1)	5.984	(0.000)	117	46138	8.931	294.56			1
45) Nitrobenzene	(2)	6.060	(-0.000)	77	778847	39.604	1306.21			0.8
50) Isophorone	(2)	6.301	(-0.000)	82	1504411	41.163	1357.62			0.5
51) 2-Nitrophenol	(2)	6.366	(0.000)	139	291771	41.522	1369.46			0.5
53) 2,4-Dimethylphenol	(2)	6.431	(-0.000)	107	325459	20.256	668.07			0.5
55) bis(2-Chloroethoxy)methane	(2)	6.519	(0.000)	93	885602	40.659	1341.01			0.5
60) 2,4-Dichlorophenol	(2)	6.607	(0.000)	162	470319	40.172	1324.93			0.5
62) 1,2,4-Trichlorobenzene	(2)	6.684	(-0.000)	180	508283	41.841	1379.97			0.5
67) 4-Chloroaniline	(2)				Not Detected					1
71) Hexachlorobutadiene	(2)	6.878	(0.000)	225	319193	45.932	1514.92			0.6
80) 4-Chloro-3-methylphenol	(2)	7.307	(0.000)	107	592885	39.641	1307.42			0.5
83) 2-Methylnaphthalene	(2)	7.431	(0.000)	142	1202466	43.906	1448.10	12.196	B	0.3

M = Compound was manually integrated. A = User selected an alternate peak. B = Compound detected in referenced method blank.

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44. Target 3.5 esignature user ID: lmh00956

Data file: /chem/HP23262.i/18nov11.b/pk0373.d Injection date and time: **12-NOV-2018 00:18**
Data file Sample Info. Line: T1003MS;9867763;2;3;MS;;DOD26;T1 Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 13-NOV-2018 11:28
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

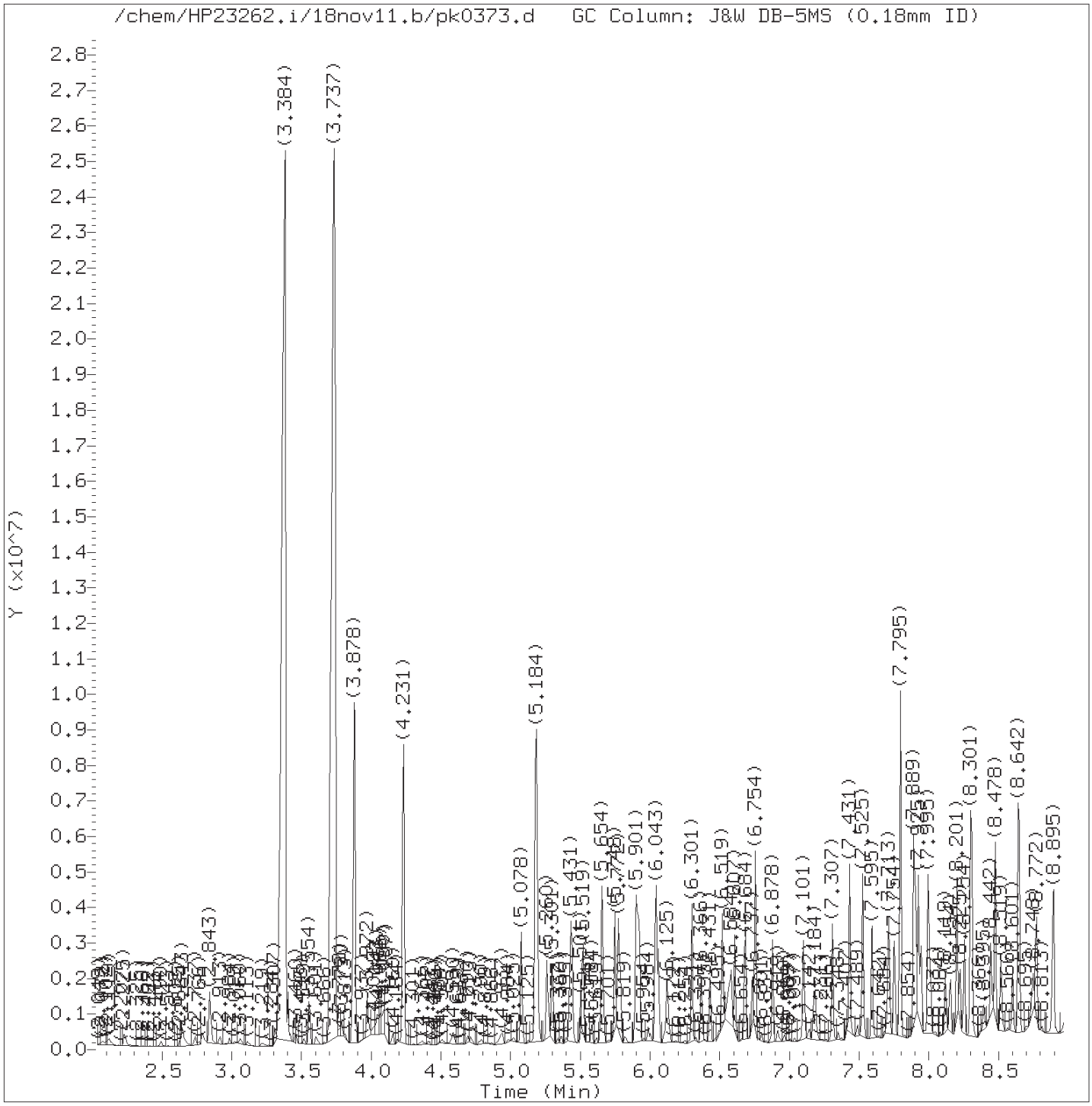
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.32 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
85) Hexachlorocyclopentadiene	(3)			Not Detected					5
90) 2,4,6-Trichlorophenol	(3)	7.713(-0.000)	196	389606	42.954	1416.70			0.6
92) 2,4,5-Trichlorophenol	(3)	7.754(-0.000)	196	420764	42.322	1395.85			0.6
96) 2-Chloronaphthalene	(3)	7.907(-0.000)	162	1034284	37.368	1232.46			0.2
100) 2-Nitroaniline	(3)	8.013(-0.000)	138	294857	31.780	1048.14			0.6
106) Dimethylphthalate	(3)	8.201(-0.000)	163	1350286	40.896	1348.81			2
108) 2,6-Dinitrotoluene	(3)	8.254(-0.000)	165	302696	38.538	1271.05			0.6
112) 3-Nitroaniline	(3)			Not Detected					2
115) 2,4-Dinitrophenol	(3)	8.519(-0.000)	184	301197	70.051	2310.40			11
116) 4-Nitrophenol	(3)	8.601(-0.001)	109	199161	37.005	1220.49			5
118) 2,4-Dinitrotoluene	(3)	8.642(0.000)	165	396879	38.198	1259.82			2
119) Dibenzofuran	(3)	8.648(-0.000)	168	1775927	41.576	1371.23			0.5
124) Diethylphthalate	(3)	8.895(-0.000)	149	1355602	39.962	1318.00			2
127) 4-Chlorophenyl-phenylether	(3)	8.989(0.000)	204	719578	38.418	1267.07			0.5
129) 4-Nitroaniline	(3)			Not Detected					2
130) 4,6-Dinitro-2-methylphenol	(4)	9.036(-0.000)	198	203200	38.861	1281.71			5
131) N-Nitrosodiphenylamine	(4)	9.107(-0.000)	169	941593	35.805	1180.90			0.5
143) 4-Bromophenyl-phenylether	(4)	9.466(-0.000)	248	401083	44.758	1476.19			0.6
145) Hexachlorobenzene	(4)	9.513(-0.000)	284	404400	47.234	1557.83			0.1
149) Pentachlorophenol	(4)	9.713(-0.000)	266	252171	51.021	1682.75			1
163) Carbazole	(4)	10.130(0.000)	167	1765808	40.802	1345.71			0.5
193) 3,3'-Dichlorobenzidine	(5)			Not Detected					3
205) Di-n-octylphthalate	(6)	13.195(-0.000)	149	2222179	47.639	1571.20			2

Total number of targets = 48

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

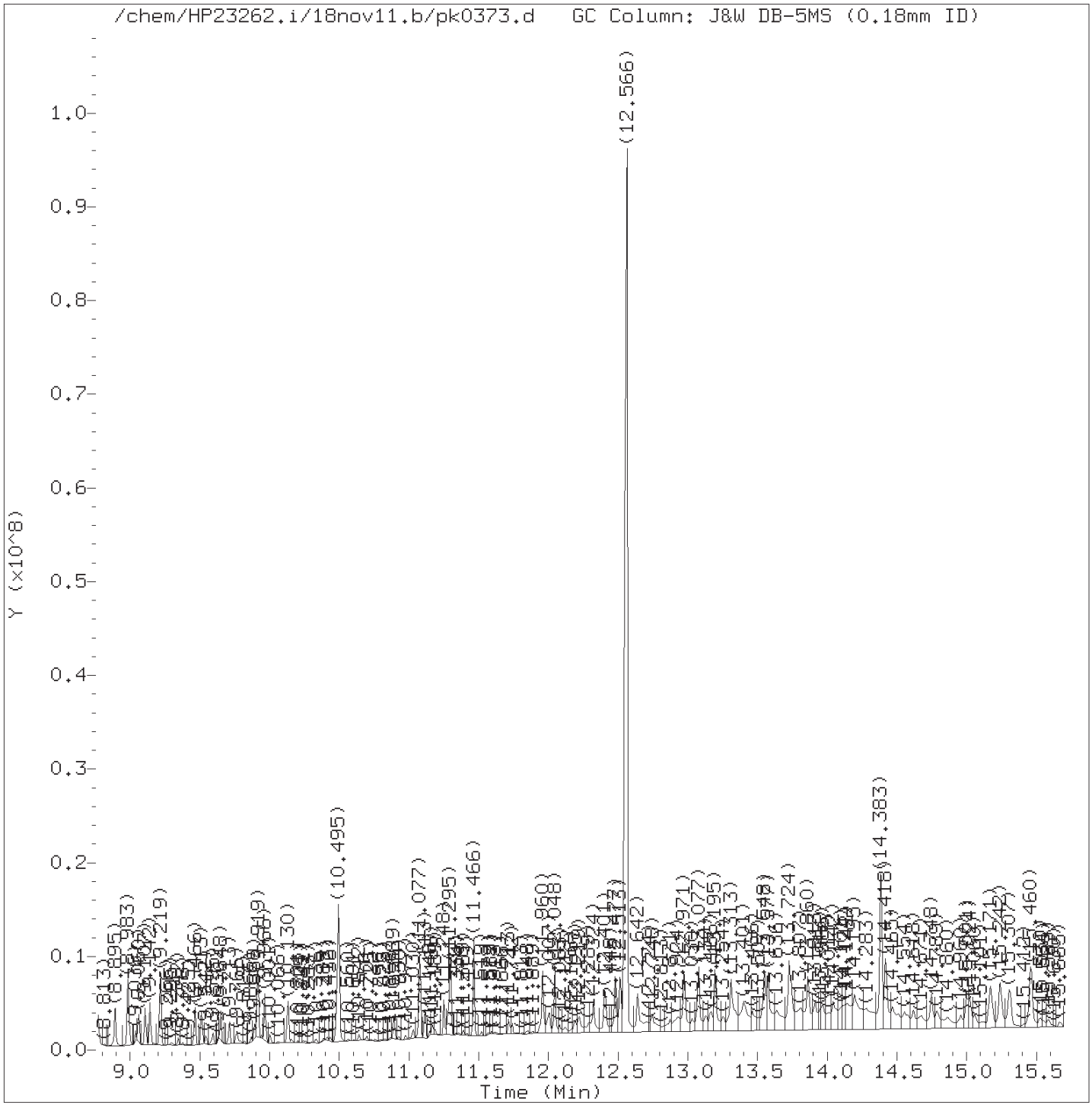
Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0373.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 00:18 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003MS Lab Sample ID: 9867763

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0373.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 00:18 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003MS Lab Sample ID: 9867763

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0373.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 00:18 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003MS Lab Sample ID: 9867763

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) Pyridine	(1)	2.784	79	398769MA	24.199
11)$2-Fluorophenol	(1)	4.231	112	2087670	172.875
17)$Phenol-d6	(1)	5.184	99	3170777	166.634
18) Phenol	(1)	5.196	94	936542	41.389
22) bis(2-Chloroethyl)ether	(1)	5.260	93	656493	41.057
23) 2-Chlorophenol	(1)	5.301	128	519126	42.609
24) 1,3-Dichlorobenzene	(1)	5.443	146	498065	40.834
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	157746	20.000
26) 1,4-Dichlorobenzene	(1)	5.519	146	537574	44.328
27) Benzyl alcohol	(1)	5.654	108	453756	46.106
28) 1,2-Dichlorobenzene	(1)	5.660	146	508264	41.930
31) 2-Methylphenol	(1)	5.772	108	561889	40.564
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.784	45	933790	40.094
38) N-Nitroso-di-n-propylamine	(1)	5.913	70	593689	42.781
37) 4-Methylphenol	(1)	5.925	108	611103	37.508
43) Hexachloroethane	(1)	5.984	117	46138	8.931
44)$Nitrobenzene-d5	(2)	6.043	82	1485364	81.593
45) Nitrobenzene	(2)	6.060	77	778847	39.604
50) Isophorone	(2)	6.301	82	1504411	41.163
51) 2-Nitrophenol	(2)	6.366	139	291771	41.522
53) 2,4-Dimethylphenol	(2)	6.431	107	325459	20.256
55) bis(2-Chloroethoxy)methane	(2)	6.519	93	885602	40.659
60) 2,4-Dichlorophenol	(2)	6.607	162	470319	40.172
62) 1,2,4-Trichlorobenzene	(2)	6.684	180	508283	41.841
65)*Naphthalene-d8	(2)	6.737	136	702180	20.000
71) Hexachlorobutadiene	(2)	6.878	225	319193	45.932
80) 4-Chloro-3-methylphenol	(2)	7.307	107	592885	39.641
83) 2-Methylnaphthalene	(2)	7.431	142	1202466	43.906
90) 2,4,6-Trichlorophenol	(3)	7.713	196	389606	42.954
92) 2,4,5-Trichlorophenol	(3)	7.754	196	420764	42.322
93)$2-Fluorobiphenyl	(3)	7.795	172	2663737	84.875
96) 2-Chloronaphthalene	(3)	7.907	162	1034284	37.368
100) 2-Nitroaniline	(3)	8.013	138	294857	31.780
106) Dimethylphthalate	(3)	8.201	163	1350286	40.896
108) 2,6-Dinitrotoluene	(3)	8.254	165	302696	38.538
113)*Acenaphthene-d10	(3)	8.442	164	407318	20.000
115) 2,4-Dinitrophenol	(3)	8.519	184	301197	70.051
116) 4-Nitrophenol	(3)	8.601	109	199161	37.005
118) 2,4-Dinitrotoluene	(3)	8.642	165	396879	38.198
119) Dibenzofuran	(3)	8.648	168	1775927	41.576

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0373.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 00:18 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

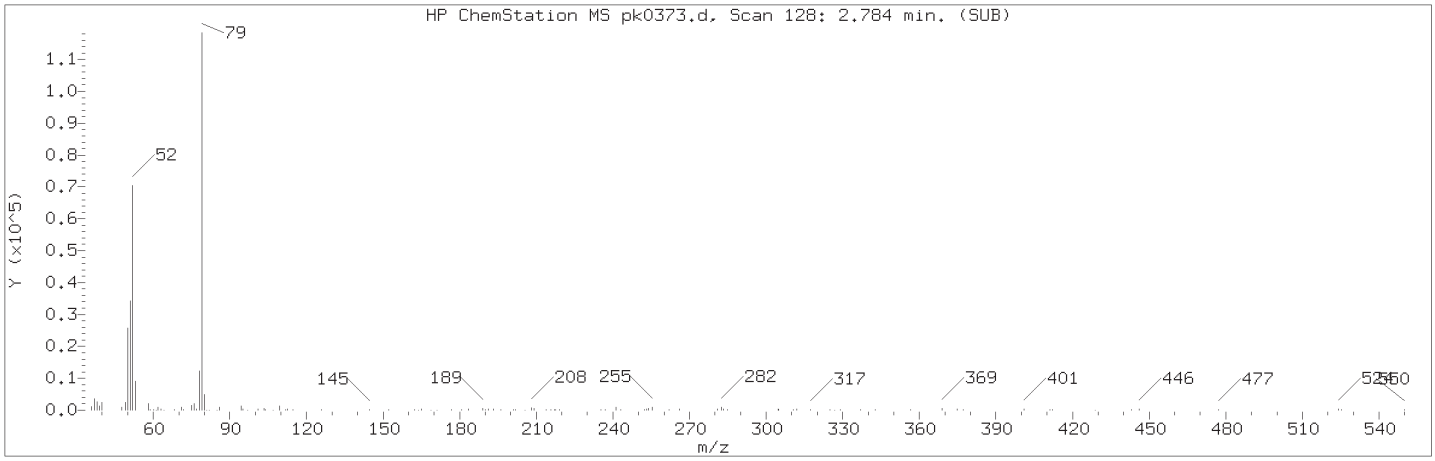
Sample Name: T1003MS Lab Sample ID: 9867763

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
124) Diethylphthalate	(3)	8.895	149	1355602	39.962
127) 4-Chlorophenyl-phenylether	(3)	8.989	204	719578	38.418
130) 4,6-Dinitro-2-methylphenol	(4)	9.036	198	203200	38.861
131) N-Nitrosodiphenylamine	(4)	9.107	169	941593	35.805
135)$2,4,6-Tribromophenol	(3)	9.219	330	639601	157.022
143) 4-Bromophenyl-phenylether	(4)	9.466	248	401083	44.758
145) Hexachlorobenzene	(4)	9.513	284	404400	47.234
149) Pentachlorophenol	(4)	9.713	266	252171	51.021
153)*Phenanthrene-d10	(4)	9.889	188	817175	20.000
163) Carbazole	(4)	10.130	167	1765808	40.802
175)*Pyrene-d10	(5)	11.277	212	784053	20.000
179)$Terphenyl-d14	(5)	11.466	244	2926231	87.496
205) Di-n-octylphthalate	(6)	13.195	149	2222179	47.639
213)*Perylene-d12	(6)	13.913	264	585196	20.000

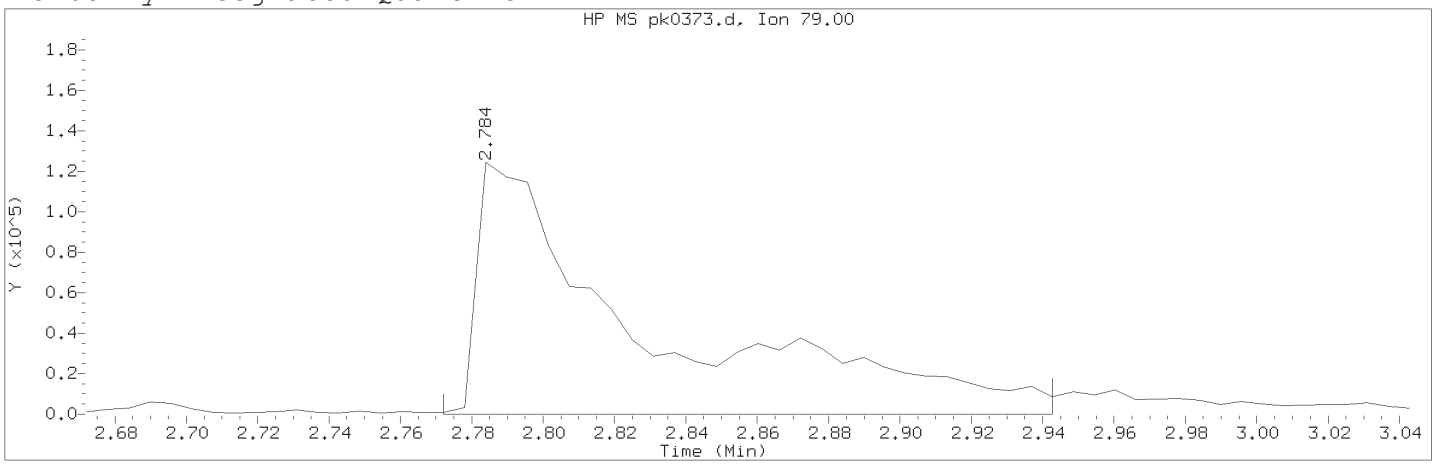
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0373.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 00:18 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003MS Lab Sample ID: 9867763

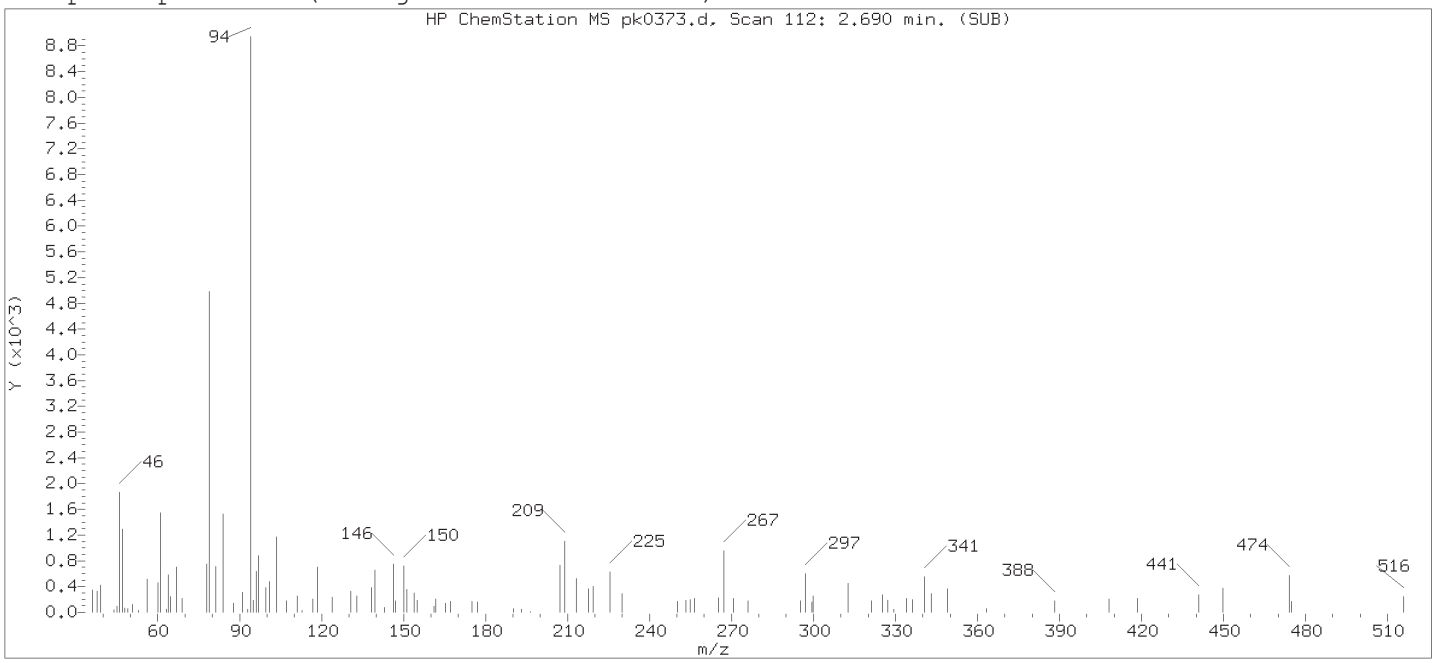
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 128		
Retention Time (minutes)	: 2.784		
Quant Ion	: 79.00		
Area (flag)	: 398769MA		
On-Column Amount (ng/ul)	: 24.1992		
Integration start scan	: 125	Integration stop scan:	154
Y at integration start	: -55	Y at integration end:	-55

Reason for manual integration: improper integration

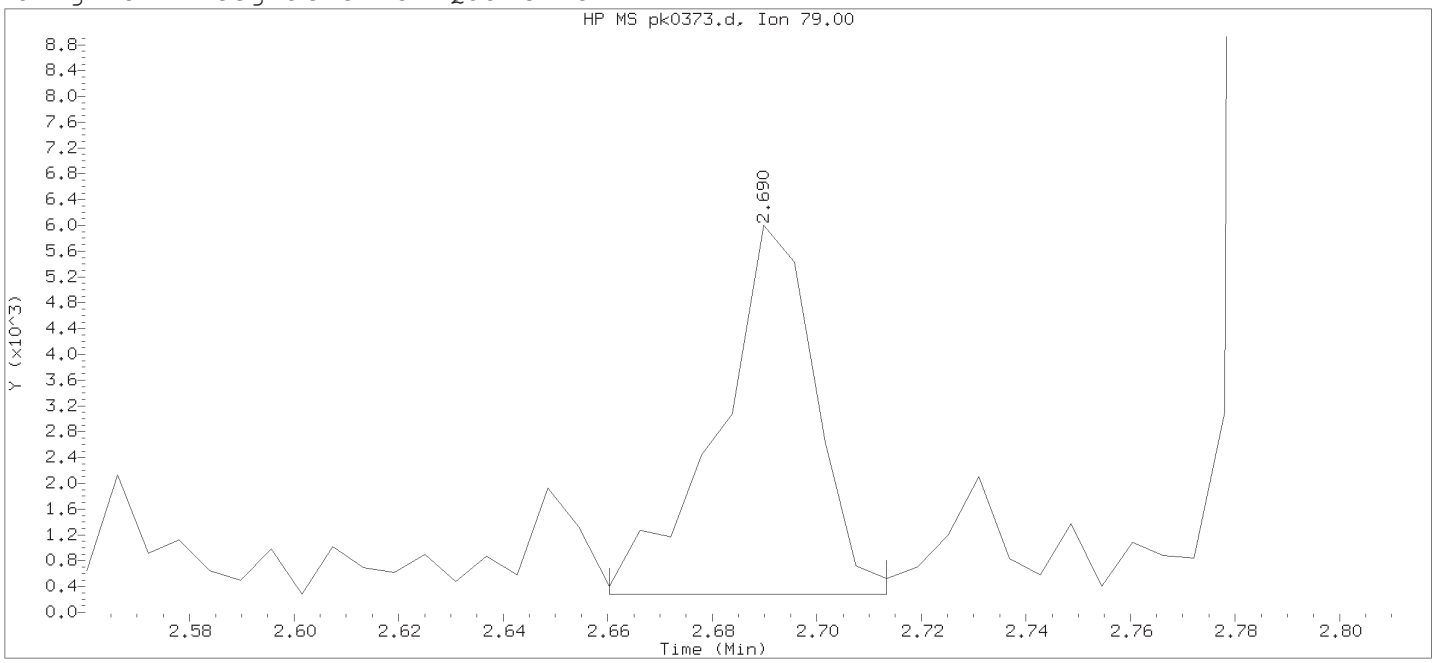
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0373.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 00:18 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:34
Date, time and analyst ID of latest file update: 12-Nov-2018 00:39 Automation

Sample Name: T1003MS Lab Sample ID: 9867763

Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 112		
Retention Time (minutes)	: 2.690		
Quant Ion	: 79.00		
Area	: 7294		
On-column Amount (ng/ul)	: 0.4648		
Integration start scan	: 106	Integration stop scan:	115
Y at integration start	: 283	Y at integration end:	283

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: 1a0076

T1003MSD

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

9867764

Data file: /chem/HP23262.i/18nov11.b/pk0374.d
Data file Sample Info. Line: T1003MSD;9867764;2;3;MSD;;DOD26;T1
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Injection date and time: **12-NOV-2018 00:41**
Instrument ID: **HP23262.i** Batch: **18302SLI**

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 13-NOV-2018 11:28
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.34 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.501	(0.000)	590	152	165913	(11)	20.00	
65) Naphthalene-d8	6.737	(-0.006)	800	136	730129	(13)	20.00	
113) Acenaphthene-d10	8.442	(0.000)	1090	164	411814	(8)	20.00	
153) Phenanthrene-d10	9.895	(-0.006)	1337	188	872834	(1)	20.00	
175) Pyrene-d10	11.278	(0.000)	1572	212	788441	(-12)	20.00	
213) Perylene-d12	13.913	(-0.006)	2020	264	626205	(-21)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.231	(-0.002)	112	2083819	164.062	82%		35 - 115
17) Phenol-d6	(1)	5.184	(-0.003)	99	3166626	158.224	79%		47 - 120
44) Nitrobenzene-d5	(2)	6.043	(0.000)	82	1498909	79.186	79%		37 - 122
93) 2-Fluorobiphenyl	(3)	7.795	(0.000)	172	2728535	85.991	86%		44 - 115
135) 2,4,6-Tribromophenol	(3)	9.219	(-0.001)	330	674652	163.819	82%		39 - 132
179) Terphenyl-d14	(5)	11.466	(-0.001)	244	2937253	87.336	87%		54 - 127

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)	2.760	(-0.010)	79	404963A	23.365	770.12			2
18) Phenol	(1)	5.196	(-0.002)	94	941744	39.570	1304.22			0.7
19) Aniline	(1)				Not Detected					5
22) bis(2-Chloroethyl)ether	(1)	5.260	(-0.000)	93	652276	38.786	1278.37			0.7
23) 2-Chlorophenol	(1)	5.301	(-0.001)	128	525335	40.996	1351.22			0.5
24) 1,3-Dichlorobenzene	(1)	5.443	(-0.000)	146	498674	38.871	1281.19			0.5
26) 1,4-Dichlorobenzene	(1)	5.519	(0.000)	146	524559	41.125	1355.48			0.5
27) Benzyl alcohol	(1)	5.654	(-0.002)	108	453872	43.847	1445.20			5
28) 1,2-Dichlorobenzene	(1)	5.660	(0.000)	146	507290	39.789	1311.44			0.6
31) 2-Methylphenol	(1)	5.772	(-0.001)	108	591841	40.623	1338.93			0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.790	(-0.002)	45	927670	37.870	1248.19			0.5
37) 4-Methylphenol	(1)	5.925	(-0.002)	108	657506	38.370	1264.66			0.6
38) N-Nitroso-di-n-propylamine	(1)	5.913	(-0.001)	70	593387	40.655	1339.97			0.6
43) Hexachloroethane	(1)	5.984	(0.000)	117	124471	22.908	755.06			1
45) Nitrobenzene	(2)	6.060	(-0.000)	77	802727	39.256	1293.87			0.8
50) Isophorone	(2)	6.301	(-0.000)	82	1517295	39.926	1315.96			0.5
51) 2-Nitrophenol	(2)	6.366	(0.000)	139	294784	40.345	1329.76			0.5
53) 2,4-Dimethylphenol	(2)	6.431	(-0.000)	107	388923	23.279	767.28			0.5
55) bis(2-Chloroethoxy)methane	(2)	6.519	(0.000)	93	895915	39.558	1303.83			0.5
60) 2,4-Dichlorophenol	(2)	6.607	(0.000)	162	509405	41.845	1379.20			0.5
62) 1,2,4-Trichlorobenzene	(2)	6.684	(-0.000)	180	517711	40.985	1350.87			0.5
67) 4-Chloroaniline	(2)				Not Detected					1
71) Hexachlorobutadiene	(2)	6.878	(0.000)	225	316262	43.768	1442.60			0.6
80) 4-Chloro-3-methylphenol	(2)	7.307	(0.000)	107	615457	39.575	1304.39			0.5
83) 2-Methylnaphthalene	(2)	7.431	(0.000)	142	1214828	42.660	1406.05	12.196	B	0.3
85) Hexachlorocyclopentadiene	(3)				Not Detected					5
90) 2,4,6-Trichlorophenol	(3)	7.713	(-0.000)	196	408590	44.555	1468.54			0.6

A = User selected an alternate peak. B = Compound detected in referenced method blank.

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44. Target 3.5 esignature user ID: lmh00956

Data file: /chem/HP23262.i/18nov11.b/pk0374.d Injection date and time: **12-NOV-2018 00:41**
Data file Sample Info. Line: T1003MSD;9867764;2;3;MSD;;DOD26;T1 Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 13-NOV-2018 11:28
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.34 g

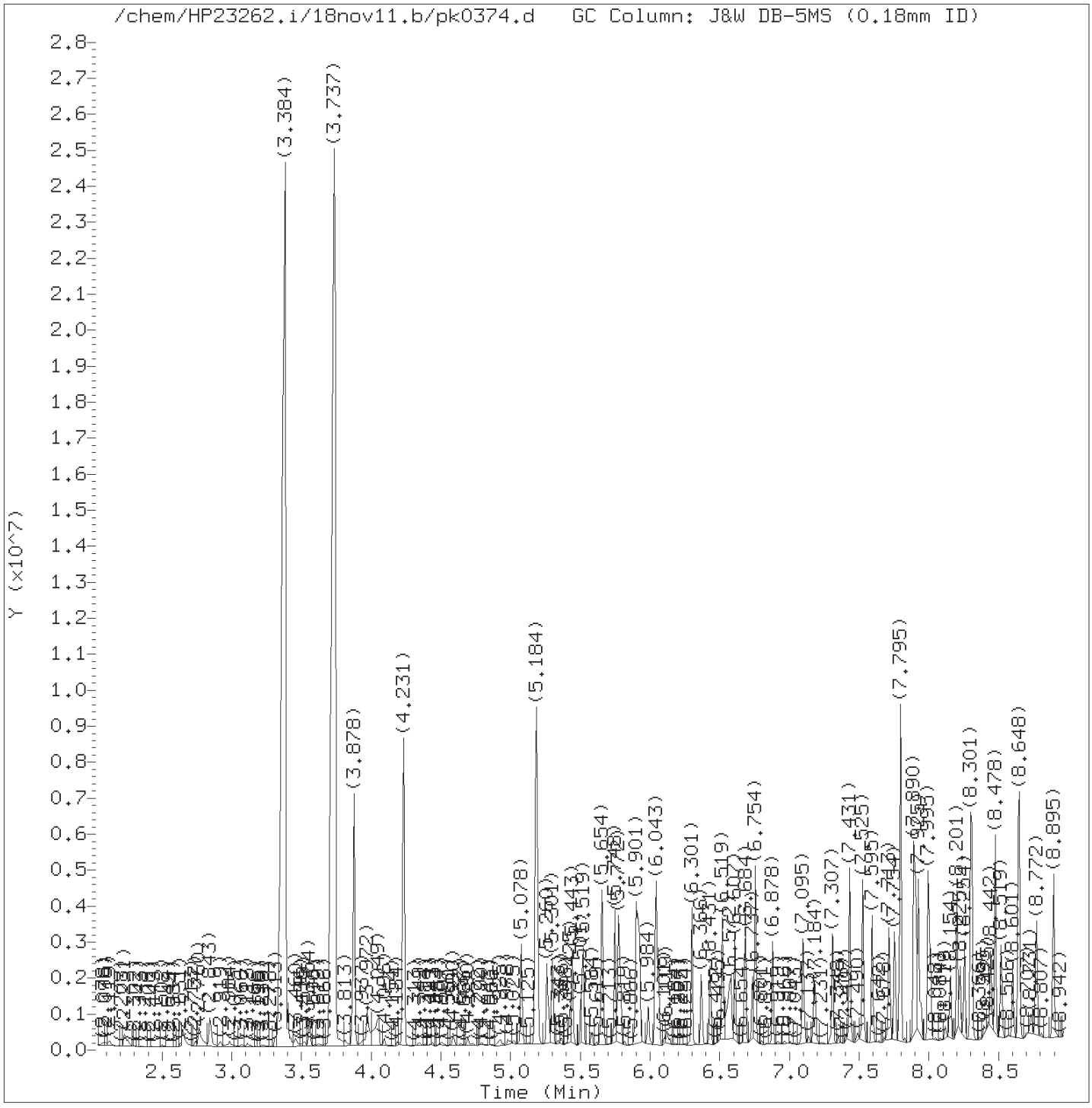
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
92) 2,4,5-Trichlorophenol	(3)	7.754	(-0.000)	196	436537	43.429	1431.42			0.6
96) 2-Chloronaphthalene	(3)	7.907	(-0.000)	162	1433601M	51.230	1688.52			0.2
100) 2-Nitroaniline	(3)	8.013	(-0.000)	138	378624	40.363	1330.34			0.6
106) Dimethylphthalate	(3)	8.201	(-0.000)	163	1403310	42.038	1385.56			2
108) 2,6-Dinitrotoluene	(3)	8.254	(-0.000)	165	318995	40.170	1324.00			0.6
112) 3-Nitroaniline	(3)				Not Detected					2
115) 2,4-Dinitrophenol	(3)	8.519	(-0.000)	184	329475	75.792	2498.07			11
116) 4-Nitrophenol	(3)	8.601	(-0.001)	109	200718	36.887	1215.80			5
118) 2,4-Dinitrotoluene	(3)	8.648	(-0.000)	165	417370	39.731	1309.54			2
119) Dibenzofuran	(3)	8.648	(-0.000)	168	1803009	41.749	1376.03			0.5
124) Diethylphthalate	(3)	8.895	(-0.000)	149	1439900	41.983	1383.76			2
127) 4-Chlorophenyl-phenylether	(3)	8.989	(0.000)	204	773180	40.829	1345.71			0.5
129) 4-Nitroaniline	(3)				Not Detected					2
130) 4,6-Dinitro-2-methylphenol	(4)	9.042	(-0.000)	198	230091	41.198	1357.88			5
131) N-Nitrosodiphenylamine	(4)	9.107	(0.000)	169	1186428	42.238	1392.16			0.5
143) 4-Bromophenyl-phenylether	(4)	9.466	(0.000)	248	427000	44.612	1470.39			0.6
145) Hexachlorobenzene	(4)	9.513	(0.000)	284	409983	44.832	1477.65			0.1
149) Pentachlorophenol	(4)	9.713	(-0.000)	266	255899	48.474	1597.68			1
163) Carbazole	(4)	10.130	(0.000)	167	1786884	38.656	1274.09			0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
205) Di-n-octylphthalate	(6)	13.195	(-0.000)	149	2145365	42.980	1416.62			2

M = Compound was manually integrated.

Total number of targets = 48

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

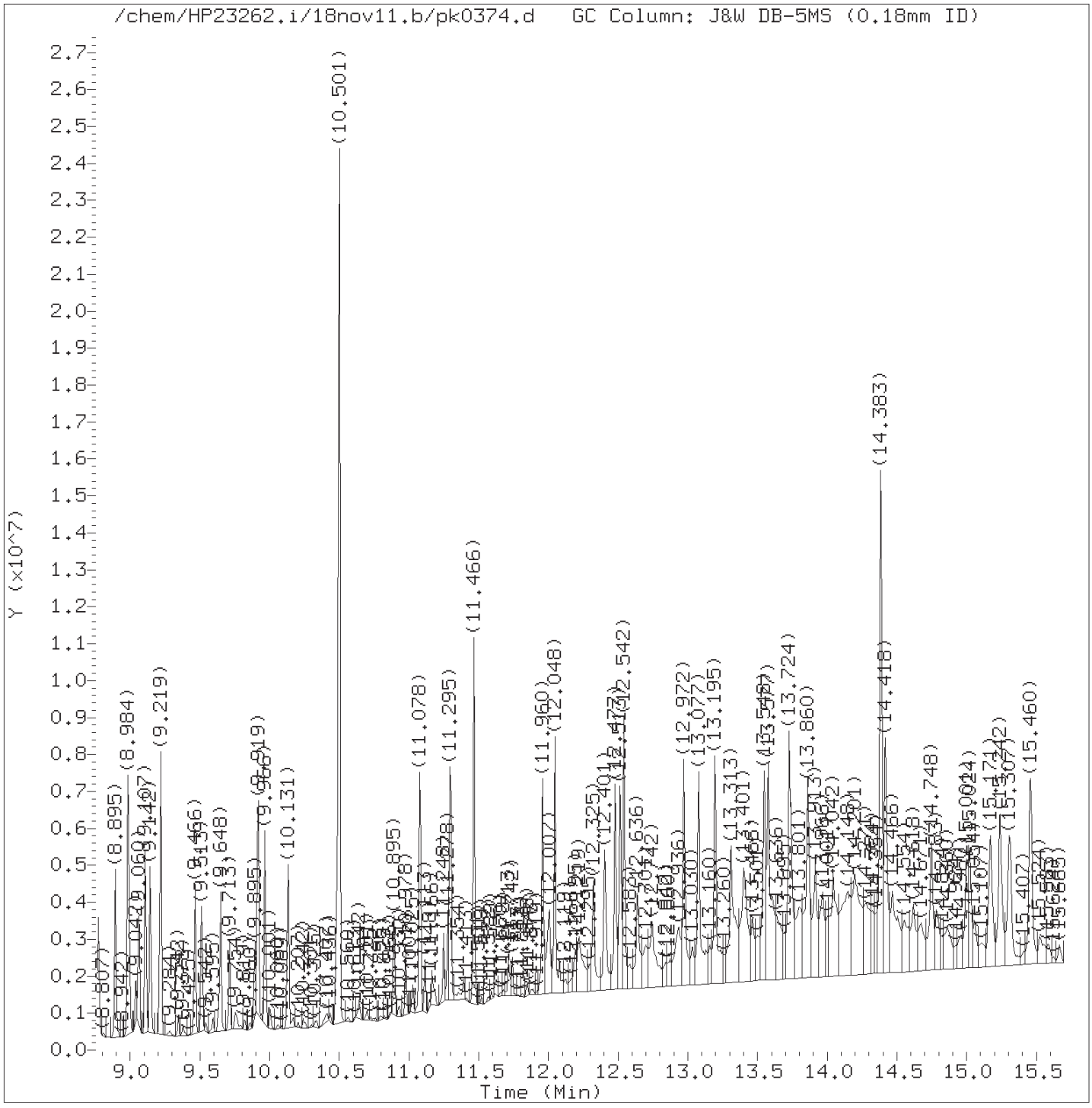
Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0374.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 00:41 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003MSD Lab Sample ID: 9867764

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0374.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 00:41 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003MSD Lab Sample ID: 9867764

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0374.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 00:41 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003MSD Lab Sample ID: 9867764

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) Pyridine	(1)	2.760	79	404963A	23.365
11)$2-Fluorophenol	(1)	4.231	112	2083819	164.062
17)$Phenol-d6	(1)	5.184	99	3166626	158.224
18) Phenol	(1)	5.196	94	941744	39.570
22) bis(2-Chloroethyl)ether	(1)	5.260	93	652276	38.786
23) 2-Chlorophenol	(1)	5.301	128	525335	40.996
24) 1,3-Dichlorobenzene	(1)	5.443	146	498674	38.871
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	165913	20.000
26) 1,4-Dichlorobenzene	(1)	5.519	146	524559	41.125
27) Benzyl alcohol	(1)	5.654	108	453872	43.847
28) 1,2-Dichlorobenzene	(1)	5.660	146	507290	39.789
31) 2-Methylphenol	(1)	5.772	108	591841	40.623
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.790	45	927670	37.870
38) N-Nitroso-di-n-propylamine	(1)	5.913	70	593387	40.655
37) 4-Methylphenol	(1)	5.925	108	657506	38.370
43) Hexachloroethane	(1)	5.984	117	124471	22.908
44)$Nitrobenzene-d5	(2)	6.043	82	1498909	79.186
45) Nitrobenzene	(2)	6.060	77	802727	39.256
50) Isophorone	(2)	6.301	82	1517295	39.926
51) 2-Nitrophenol	(2)	6.366	139	294784	40.345
53) 2,4-Dimethylphenol	(2)	6.431	107	388923	23.279
55) bis(2-Chloroethoxy)methane	(2)	6.519	93	895915	39.558
60) 2,4-Dichlorophenol	(2)	6.607	162	509405	41.845
62) 1,2,4-Trichlorobenzene	(2)	6.684	180	517711	40.985
65)*Naphthalene-d8	(2)	6.737	136	730129	20.000
71) Hexachlorobutadiene	(2)	6.878	225	316262	43.768
80) 4-Chloro-3-methylphenol	(2)	7.307	107	615457	39.575
83) 2-Methylnaphthalene	(2)	7.431	142	1214828	42.660
90) 2,4,6-Trichlorophenol	(3)	7.713	196	408590	44.555
92) 2,4,5-Trichlorophenol	(3)	7.754	196	436537	43.429
93)$2-Fluorobiphenyl	(3)	7.795	172	2728535	85.991
96) 2-Chloronaphthalene	(3)	7.907	162	1433601M	51.230
100) 2-Nitroaniline	(3)	8.013	138	378624	40.363
106) Dimethylphthalate	(3)	8.201	163	1403310	42.038
108) 2,6-Dinitrotoluene	(3)	8.254	165	318995	40.170
113)*Acenaphthene-d10	(3)	8.442	164	411814	20.000
115) 2,4-Dinitrophenol	(3)	8.519	184	329475	75.792
116) 4-Nitrophenol	(3)	8.601	109	200718	36.887
118) 2,4-Dinitrotoluene	(3)	8.648	165	417370	39.731
119) Dibenzofuran	(3)	8.648	168	1803009	41.749

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0374.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 00:41 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

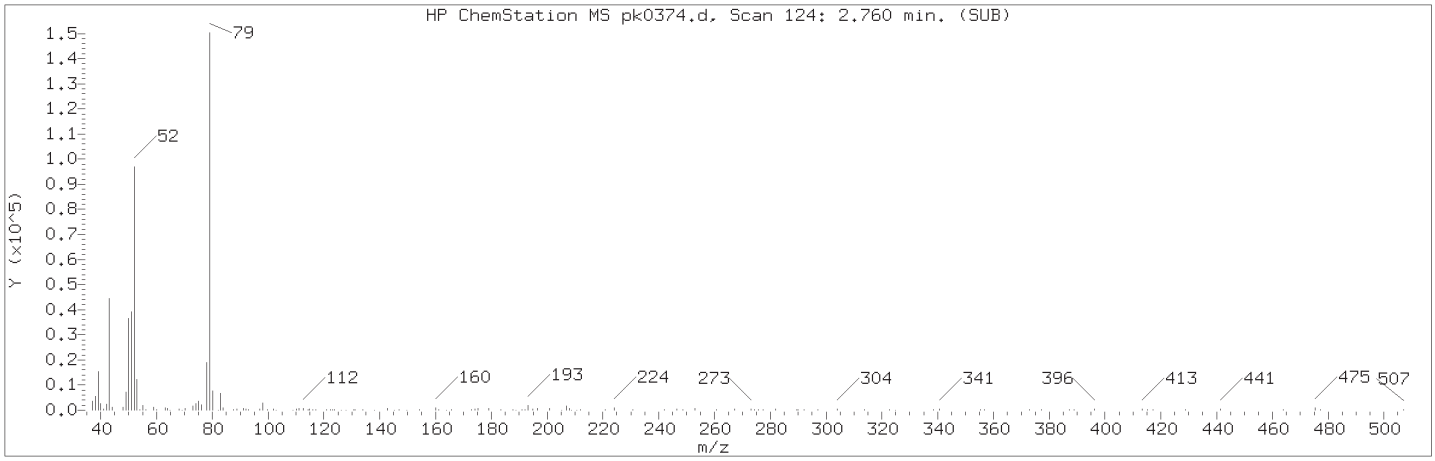
Sample Name: T1003MSD Lab Sample ID: 9867764

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
124) Diethylphthalate	(3)	8.895	149	1439900	41.983
127) 4-Chlorophenyl-phenylether	(3)	8.989	204	773180	40.829
130) 4,6-Dinitro-2-methylphenol	(4)	9.042	198	230091	41.198
131) N-Nitrosodiphenylamine	(4)	9.107	169	1186428	42.238
135)$2,4,6-Tribromophenol	(3)	9.219	330	674652	163.819
143) 4-Bromophenyl-phenylether	(4)	9.466	248	427000	44.612
145) Hexachlorobenzene	(4)	9.513	284	409983	44.832
149) Pentachlorophenol	(4)	9.713	266	255899	48.474
153)*Phenanthrene-d10	(4)	9.895	188	872834	20.000
163) Carbazole	(4)	10.131	167	1786884	38.656
175)*Pyrene-d10	(5)	11.278	212	788441	20.000
179)$Terphenyl-d14	(5)	11.466	244	2937253	87.336
205) Di-n-octylphthalate	(6)	13.195	149	2145365	42.980
213)*Perylene-d12	(6)	13.913	264	626205	20.000

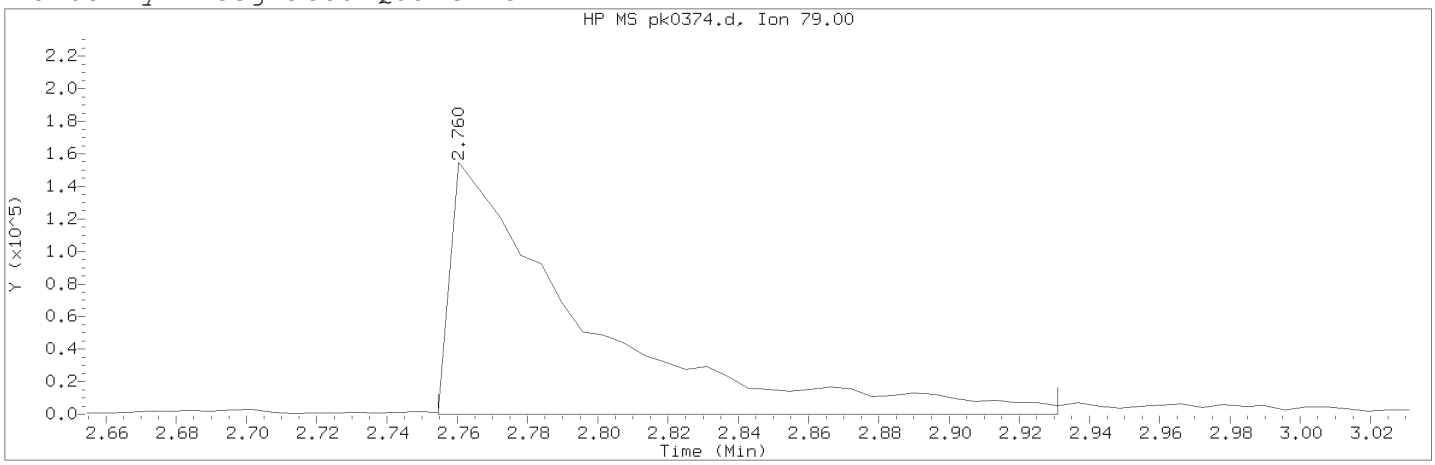
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0374.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 00:41 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003MSD Lab Sample ID: 9867764

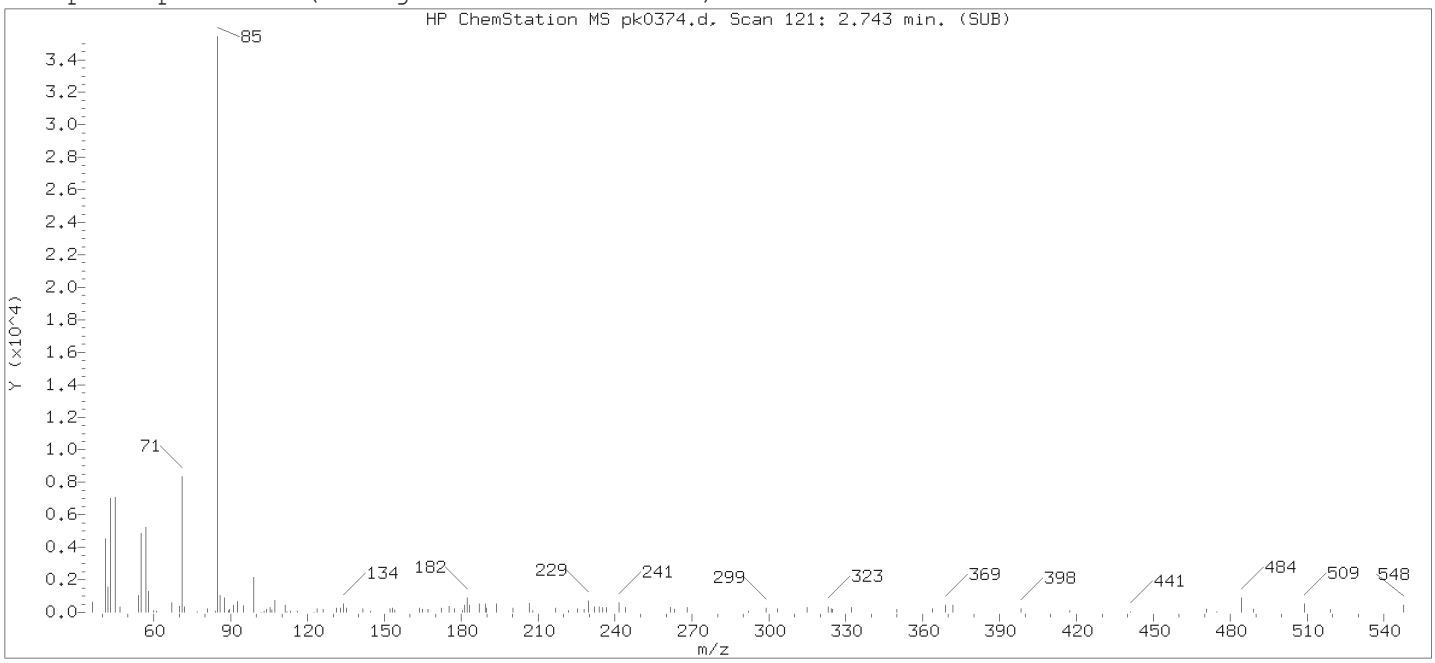
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 124		
Retention Time (minutes)	: 2.760		
Quant Ion	: 79.00		
Area (flag)	: 404963A		
On-Column Amount (ng/ul)	: 23.3654		
Integration start scan	: 122	Integration stop scan:	152
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

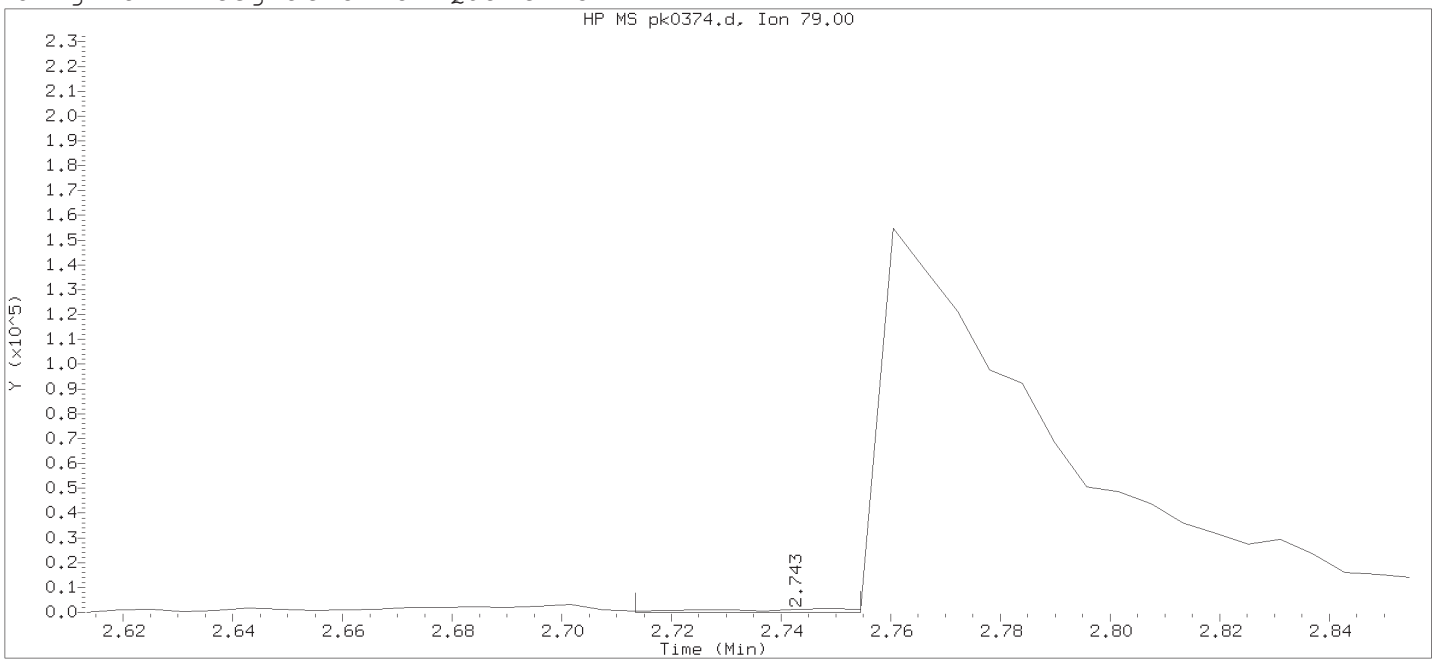
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0374.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 00:41 Analyst ID: apb10206

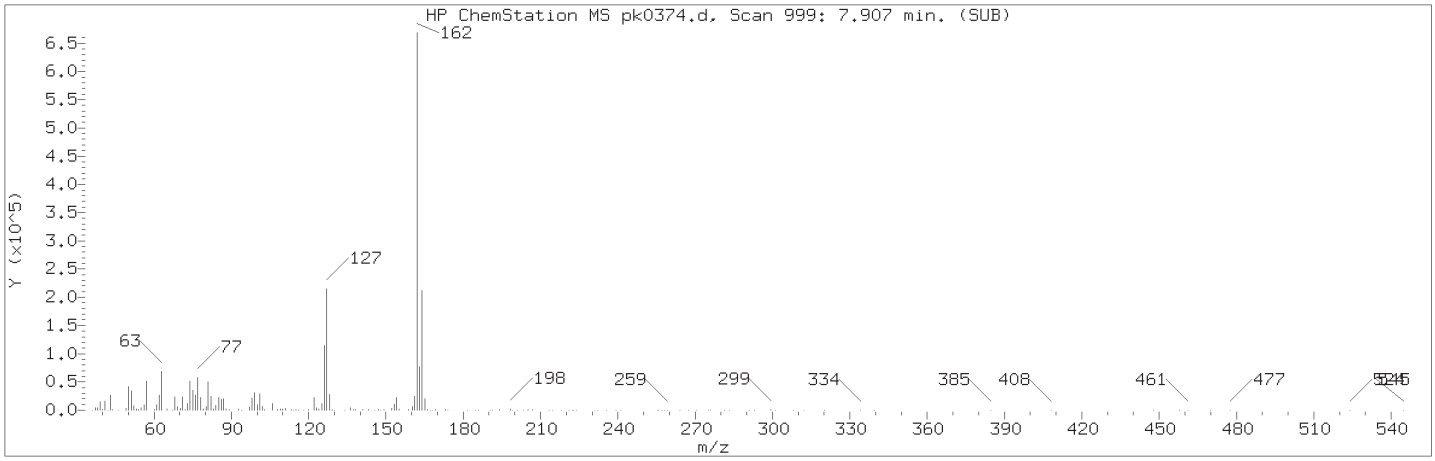
Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:34
Date, time and analyst ID of latest file update: 12-Nov-2018 01:02 Automation

Sample Name: T1003MSD Lab Sample ID: 9867764

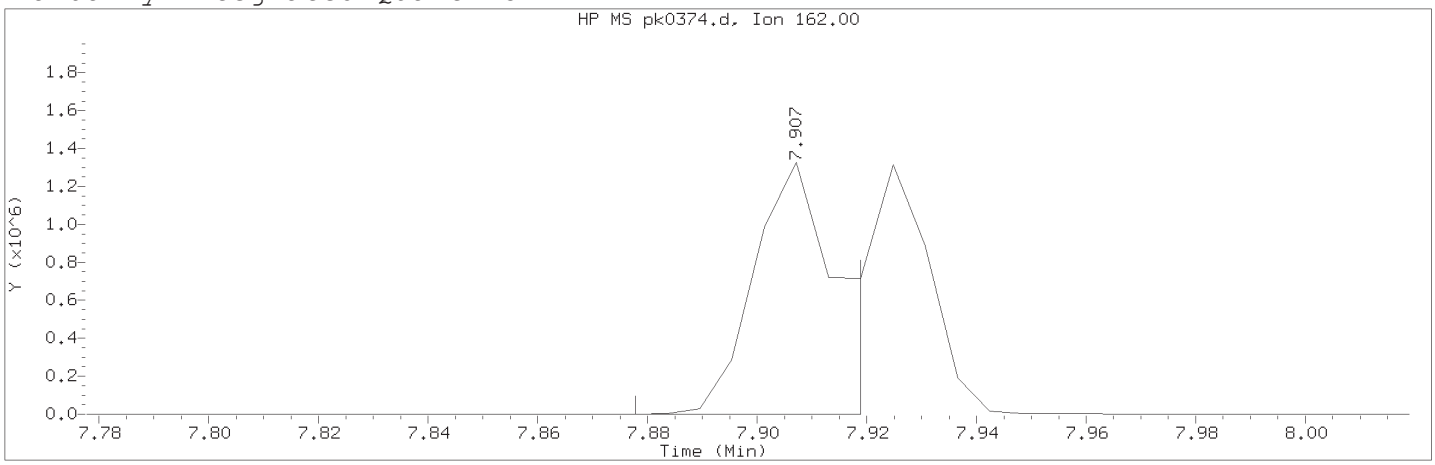
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 121		
Retention Time (minutes)	: 2.743		
Quant Ion	: 79.00		
Area	: 2337		
On-column Amount (ng/ul)	: 0.1416		
Integration start scan	: 115	Integration stop scan:	122
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0374.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 00:41 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 13-NOV-2018 11:28
Date, time and analyst ID of latest file update: 14-Nov-2018 08:42 lmh00956

Sample Name: T1003MSD Lab Sample ID: 9867764

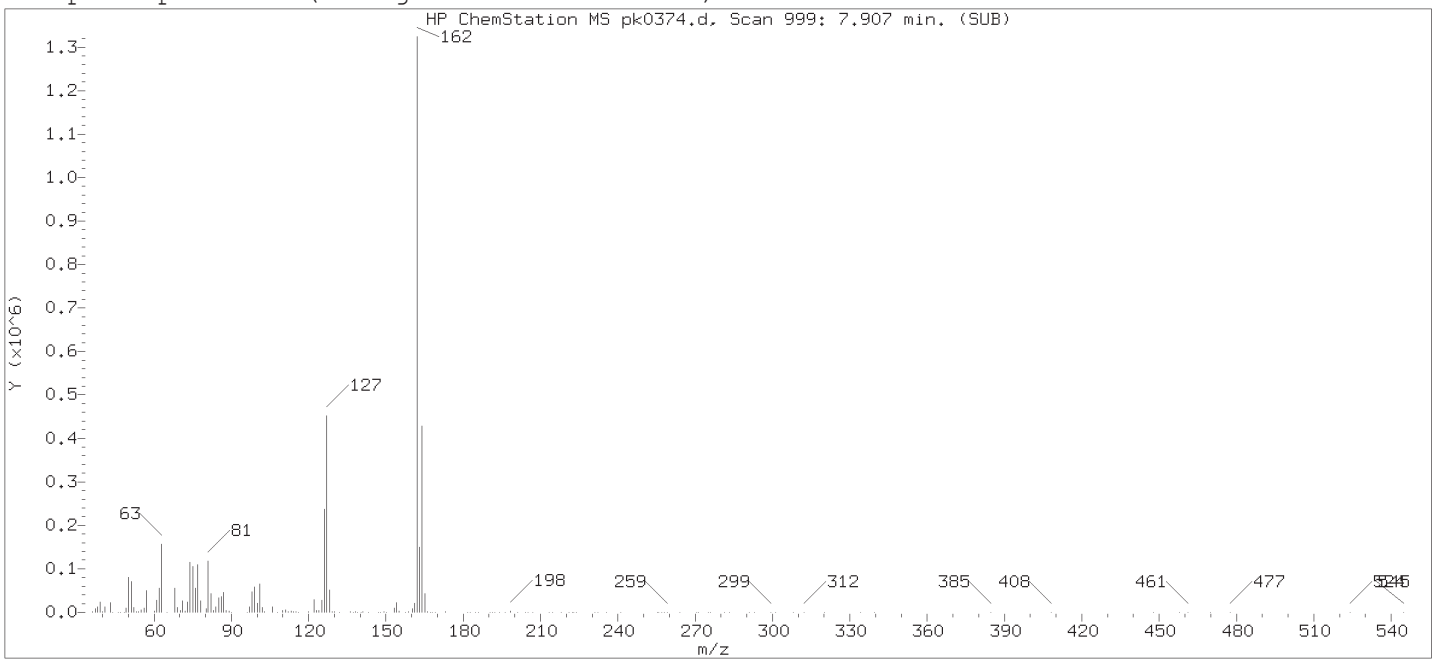
Compound Number	: 96		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 999		
Retention Time (minutes)	: 7.907		
Quant Ion	: 162.00		
Area (flag)	: 1433601M		
On-Column Amount (ng/ul)	: 51.2298		
Integration start scan	: 993	Integration stop scan:	1000
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

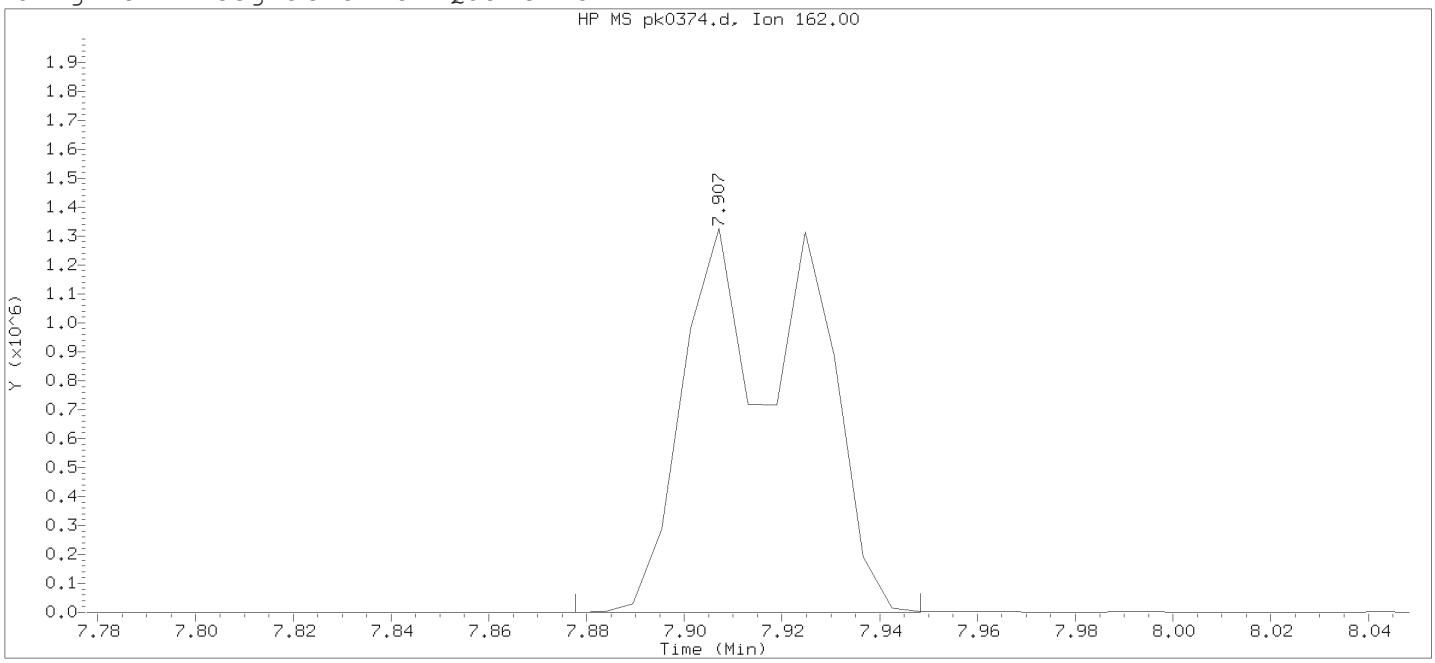
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 08:45.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23262.i/18nov11.b/pk0374.d Instrument ID: HP23262.i
Injection date and time: 12-NOV-2018 00:41 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:34
Date, time and analyst ID of latest file update: 12-Nov-2018 01:02 Automation

Sample Name: T1003MSD Lab Sample ID: 9867764

Compound Number	: 96		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 999		
Retention Time (minutes)	: 7.907		
Quant Ion	: 162.00		
Area	: 2283516		
On-column Amount (ng/ul)	: 85.6815		
Integration start scan	: 993	Integration stop scan:	1005
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/14/2018 at 08:44.
Target 3.5 esignature used.

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP23262.i/18nov11.b/pk0364.d Injection date and time: **11-NOV-2018 22:44**
Data file Sample Info. Line: 302LILCS;302LILCS;2;3;LCS;;DOD26; Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 12-Nov-2018 00:33 apb10206

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 12-NOV-2018 00:33
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.501	(0.000)	590	152	156824	(5)	20.00	
65) Naphthalene-d8	6.731	(0.000)	799	136	633783	(-2)	20.00	
113) Acenaphthene-d10	8.442	(0.000)	1090	164	359776	(-5)	20.00	
153) Phenanthrene-d10	9.889	(0.000)	1336	188	842516	(-3)	20.00	
175) Pyrene-d10	11.277	(0.000)	1572	212	846551	(-6)	20.00	
213) Perylene-d12	13.907	(0.000)	2019	264	700027	(-11)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
11) 2-Fluorophenol	(1)	4.219	(0.000)	112	2083373	173.533	87%
17) Phenol-d6	(1)	5.172	(-0.001)	99	3051949	161.332	81%
44) Nitrobenzene-d5	(2)	6.037	(0.000)	82	1414752	86.101	86%
93) 2-Fluorobiphenyl	(3)	7.795	(0.000)	172	2618940	94.475	94%
135) 2,4,6-Tribromophenol	(3)	9.219	(-0.001)	330	680842	189.234	95%
179) Terphenyl-d14	(5)	11.466	(-0.001)	244	3539899	98.030	98%

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)	2.696	(0.001)	79	488163	29.798	993.27			2
18) Phenol	(1)	5.184	(-0.000)	94	958664	42.616	1420.52			0.7
19) Aniline	(1)	5.184	(-0.000)	93	635804	25.304	843.47			5
22) bis(2-Chloroethyl)ether	(1)	5.260	(-0.000)	93	631589	39.732	1324.40			0.7
23) 2-Chlorophenol	(1)	5.295	(0.000)	128	511593	42.237	1407.92			0.5
24) 1,3-Dichlorobenzene	(1)	5.442	(-0.000)	146	491155	40.504	1350.13			0.5
26) 1,4-Dichlorobenzene	(1)	5.519	(-0.000)	146	494832	41.043	1368.11			0.5
27) Benzyl alcohol	(1)	5.642	(-0.000)	108	417851	42.707	1423.57			5
28) 1,2-Dichlorobenzene	(1)	5.660	(-0.000)	146	479424	39.783	1326.10			0.6
31) 2-Methylphenol	(1)	5.766	(-0.000)	108	577561	41.940	1398.02			0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.784	(-0.001)	45	906443	39.148	1304.94			0.5
37) 4-Methylphenol	(1)	5.919	(-0.001)	108	674454	41.640	1388.00			0.6
38) N-Nitroso-di-n-propylamine	(1)	5.907	(-0.000)	70	560265	40.610	1353.67			0.6
43) Hexachloroethane	(1)	5.984	(-0.000)	117	208542	40.606	1353.53			1
45) Nitrobenzene	(2)	6.060	(-0.000)	77	760105	42.822	1427.41			0.8
50) Isophorone	(2)	6.295	(0.000)	82	1447519	43.881	1462.68			0.5
51) 2-Nitrophenol	(2)	6.366	(0.000)	139	280993	44.304	1476.79			0.5
53) 2,4-Dimethylphenol	(2)	6.425	(0.000)	107	506839	34.949	1164.97			0.5
55) bis(2-Chloroethoxy)methane	(2)	6.519	(0.000)	93	873799	44.447	1481.56			0.5
60) 2,4-Dichlorophenol	(2)	6.607	(-0.000)	162	478568	45.288	1509.60			0.5
62) 1,2,4-Trichlorobenzene	(2)	6.678	(-0.000)	180	487263	44.439	1481.30			0.5
67) 4-Chloroaniline	(2)	6.813	(-0.000)	127	408633	28.073	935.75			1
71) Hexachlorobutadiene	(2)	6.878	(-0.000)	225	290474	46.311	1543.69			0.6
80) 4-Chloro-3-methylphenol	(2)	7.301	(-0.000)	107	619253	45.872	1529.08			0.5
83) 2-Methylnaphthalene	(2)	7.430	(-0.000)	142	1101594	44.564	1485.46	12.806	B	0.3
85) Hexachlorocyclopentadiene	(3)	7.583	(0.000)	237	451313	75.224	2507.45			5
90) 2,4,6-Trichlorophenol	(3)	7.713	(-0.000)	196	396429	49.482	1649.40			0.6

B = Compound detected in referenced method blank.

Digitally signed by Anthony P. Bauer on 11/12/2018 at 00:33. Target 3.5 esignature user ID: apb10206

Data file: /chem/HP23262.i/18nov11.b/pk0364.d Injection date and time: **11-NOV-2018 22:44**
Data file Sample Info. Line: 302LILCS;302LILCS;2;3;LCS;;DOD26; Instrument ID: **HP23262.i** Batch: **18302SLI**
Date, time and analyst ID of latest file update: 12-Nov-2018 00:33 apb10206

Blank Data file reference: **/chem/HP23262.i/18nov11.b/pk0363.d**

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 12-NOV-2018 00:33
Mid Level Daily Calibration Standard Reference: **/chem/HP23262.i/18nov11.b/pk0361.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

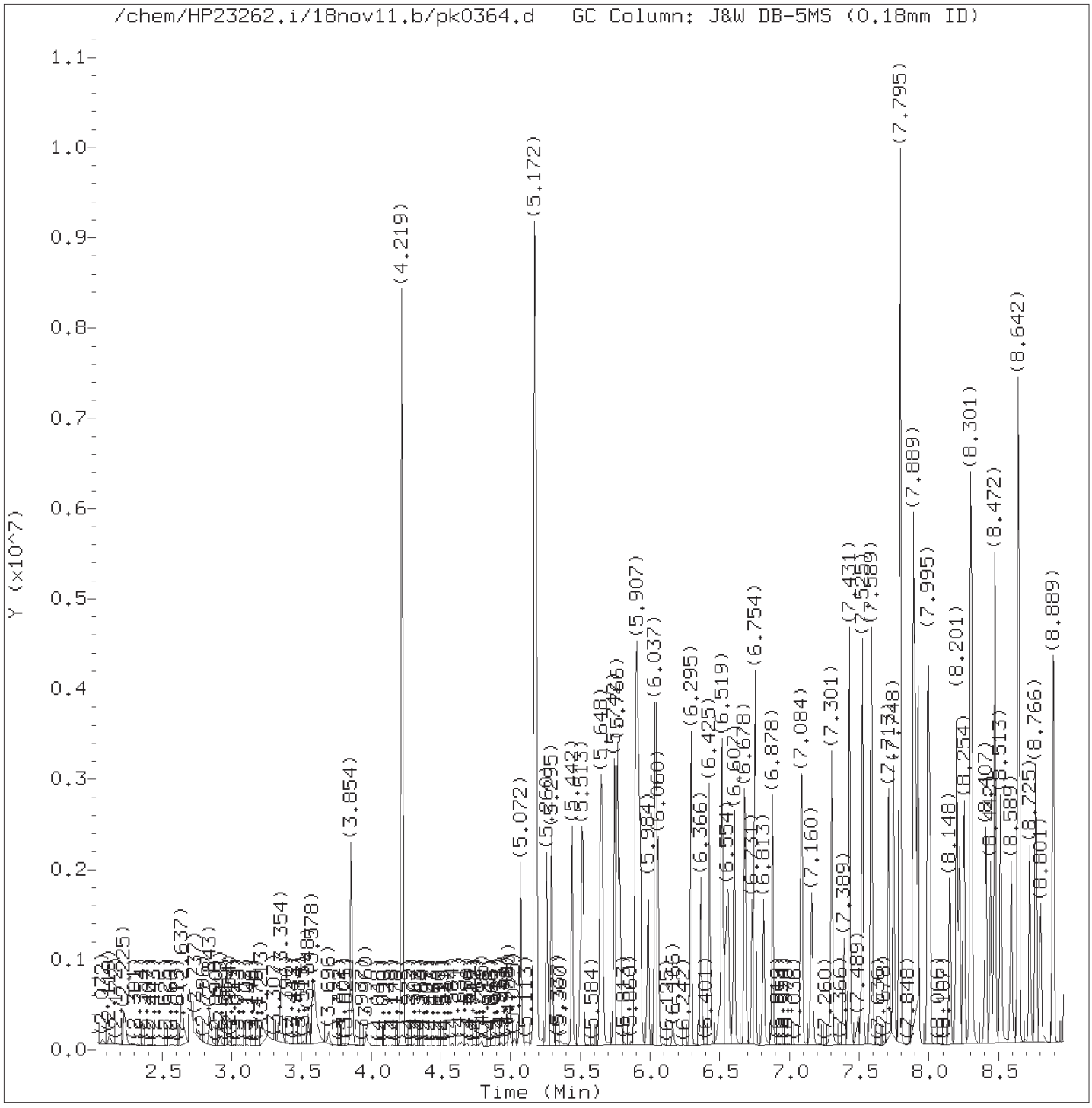
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
92) 2,4,5-Trichlorophenol	(3)	7.748	(-0.000)	196	436371	49.692	1656.40			0.6
96) 2-Chloronaphthalene	(3)	7.901	(-0.000)	162	1128474	46.159	1538.63			0.2
100) 2-Nitroaniline	(3)	8.007	(0.000)	138	394132	48.093	1603.10			0.6
106) Dimethylphthalate	(3)	8.201	(-0.000)	163	1402220	48.081	1602.69			2
108) 2,6-Dinitrotoluene	(3)	8.254	(-0.000)	165	324432	46.764	1558.80			0.6
112) 3-Nitroaniline	(3)	8.407	(-0.000)	138	320651	45.036	1501.19			2
115) 2,4-Dinitrophenol	(3)	8.519	(-0.000)	184	386306	101.718	3390.60			11
116) 4-Nitrophenol	(3)	8.589	(-0.000)	109	209823	44.138	1471.27			5
118) 2,4-Dinitrotoluene	(3)	8.642	(-0.000)	165	434916	47.390	1579.67			2
119) Dibenzofuran	(3)	8.642	(-0.000)	168	1785992	47.336	1577.88			0.5
124) Diethylphthalate	(3)	8.889	(-0.000)	149	1441745	48.117	1603.91			2
127) 4-Chlorophenyl-phenylether	(3)	8.989	(-0.000)	204	762512	46.089	1536.31			0.5
129) 4-Nitroaniline	(3)	9.007	(-0.000)	138	316759	38.933	1297.78			2
130) 4,6-Dinitro-2-methylphenol	(4)	9.036	(0.000)	198	252813	46.895	1563.18			5
131) N-Nitrosodiphenylamine	(4)	9.107	(0.000)	169	1268801	46.796	1559.87			0.5
143) 4-Bromophenyl-phenylether	(4)	9.466	(0.000)	248	437558	47.360	1578.66			0.6
145) Hexachlorobenzene	(4)	9.507	(0.000)	284	415260	47.043	1568.10			0.1
149) Pentachlorophenol	(4)	9.707	(-0.000)	266	250985	49.254	1641.79			1
163) Carbazole	(4)	10.130	(-0.000)	167	2112496	47.344	1578.15			0.5
193) 3,3'-Dichlorobenzidine	(5)	12.460	(-0.000)	252	721025	37.039	1234.63			3
205) Di-n-octylphthalate	(6)	13.189	(0.000)	149	2754446	49.363	1645.44			2

Total number of targets = 48

Digitally signed by Anthony P. Bauer on 11/12/2018 at 00:33. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/13/2018 at 11:07. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

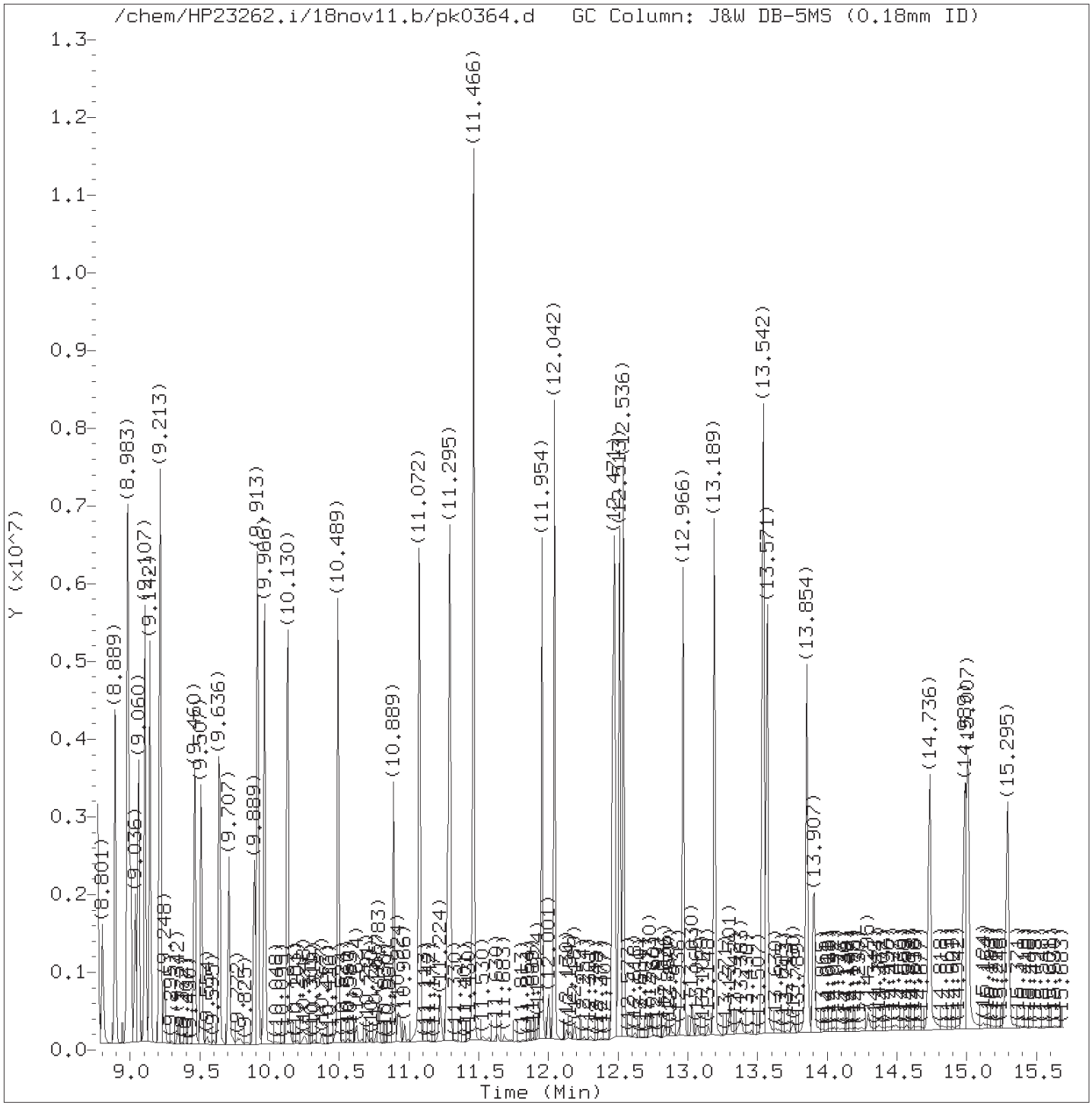
Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0364.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:33
Date, time and analyst ID of latest file update: 12-Nov-2018 00:33 apb10206

Sample Name: 302LILCS Lab Sample ID: 302LILCS

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 00:33.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0364.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:33
Date, time and analyst ID of latest file update: 12-Nov-2018 00:33 apb10206

Sample Name: 302LILCS Lab Sample ID: 302LILCS

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 00:33.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0364.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:33
Date, time and analyst ID of latest file update: 12-Nov-2018 00:33 apb10206

Sample Name: 302LILCS Lab Sample ID: 302LILCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) Pyridine	(1)	2.696	79	488163	29.798
11)$2-Fluorophenol	(1)	4.219	112	2083373	173.533
17)$Phenol-d6	(1)	5.172	99	3051949	161.332
18) Phenol	(1)	5.184	94	958664	42.616
19) Aniline	(1)	5.184	93	635804	25.304
22) bis(2-Chloroethyl)ether	(1)	5.260	93	631589	39.732
23) 2-Chlorophenol	(1)	5.295	128	511593	42.237
24) 1,3-Dichlorobenzene	(1)	5.442	146	491155	40.504
25)*1,4-Dichlorobenzene-d4	(1)	5.501	152	156824	20.000
26) 1,4-Dichlorobenzene	(1)	5.519	146	494832	41.043
27) Benzyl alcohol	(1)	5.642	108	417851	42.707
28) 1,2-Dichlorobenzene	(1)	5.660	146	479424	39.783
31) 2-Methylphenol	(1)	5.766	108	577561	41.940
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.784	45	906443	39.148
38) N-Nitroso-di-n-propylamine	(1)	5.907	70	560265	40.610
37) 4-Methylphenol	(1)	5.919	108	674454	41.640
43) Hexachloroethane	(1)	5.984	117	208542	40.606
44)$Nitrobenzene-d5	(2)	6.037	82	1414752	86.101
45) Nitrobenzene	(2)	6.060	77	760105	42.822
50) Isophorone	(2)	6.295	82	1447519	43.881
51) 2-Nitrophenol	(2)	6.366	139	280993	44.304
53) 2,4-Dimethylphenol	(2)	6.425	107	506839	34.949
55) bis(2-Chloroethoxy)methane	(2)	6.519	93	873799	44.447
60) 2,4-Dichlorophenol	(2)	6.607	162	478568	45.288
62) 1,2,4-Trichlorobenzene	(2)	6.678	180	487263	44.439
65)*Naphthalene-d8	(2)	6.731	136	633783	20.000
67) 4-Chloroaniline	(2)	6.813	127	408633	28.073
71) Hexachlorobutadiene	(2)	6.878	225	290474	46.311
80) 4-Chloro-3-methylphenol	(2)	7.301	107	619253	45.872
83) 2-Methylnaphthalene	(2)	7.431	142	1101594	44.564
85) Hexachlorocyclopentadiene	(3)	7.583	237	451313	75.224
90) 2,4,6-Trichlorophenol	(3)	7.713	196	396429	49.482
92) 2,4,5-Trichlorophenol	(3)	7.748	196	436371	49.692
93)$2-Fluorobiphenyl	(3)	7.795	172	2618940	94.475
96) 2-Chloronaphthalene	(3)	7.901	162	1128474	46.159
100) 2-Nitroaniline	(3)	8.007	138	394132	48.093
106) Dimethylphthalate	(3)	8.201	163	1402220	48.081
108) 2,6-Dinitrotoluene	(3)	8.254	165	324432	46.764
112) 3-Nitroaniline	(3)	8.407	138	320651	45.036
113)*Acenaphthene-d10	(3)	8.442	164	359776	20.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 00:33.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP23262.i/18nov11.b/pk0364.d Instrument ID: HP23262.i
Injection date and time: 11-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP23262.i/18nov11.b/m8270d.m Sublist used: 25806
Calibration date and time: 12-NOV-2018 00:33
Date, time and analyst ID of latest file update: 12-Nov-2018 00:33 apb10206

Sample Name: 302LILCS Lab Sample ID: 302LILCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
115) 2,4-Dinitrophenol	(3)	8.519	184	386306	101.718
116) 4-Nitrophenol	(3)	8.589	109	209823	44.138
118) 2,4-Dinitrotoluene	(3)	8.642	165	434916	47.390
119) Dibenzofuran	(3)	8.642	168	1785992	47.336
124) Diethylphthalate	(3)	8.889	149	1441745	48.117
127) 4-Chlorophenyl-phenylether	(3)	8.989	204	762512	46.089
129) 4-Nitroaniline	(3)	9.007	138	316759	38.933
130) 4,6-Dinitro-2-methylphenol	(4)	9.036	198	252813	46.895
131) N-Nitrosodiphenylamine	(4)	9.107	169	1268801	46.796
135)$2,4,6-Tribromophenol	(3)	9.219	330	680842	189.234
143) 4-Bromophenyl-phenylether	(4)	9.466	248	437558	47.360
145) Hexachlorobenzene	(4)	9.507	284	415260	47.043
149) Pentachlorophenol	(4)	9.707	266	250985	49.254
153)*Phenanthrene-d10	(4)	9.889	188	842516	20.000
163) Carbazole	(4)	10.130	167	2112496	47.344
175)*Pyrene-d10	(5)	11.277	212	846551	20.000
179)$Terphenyl-d14	(5)	11.466	244	3539899	98.030
193) 3,3'-Dichlorobenzidine	(5)	12.460	252	721025	37.039
205) Di-n-octylphthalate	(6)	13.189	149	2754446	49.363
213)*Perylene-d12	(6)	13.907	264	700027	20.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 00:33.
Target 3.5 esignature user ID: apb10206

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

317LBLCS

Data file: /chem/HP11165.i/18nov16.b/gk0855.d Injection date and time: **16-NOV-2018 15:39**
Data file Sample Info. Line: 317LBLCS;317LBLCS;2;3;LCS;;DOD26; Instrument ID: **HP11165.i** Batch: **18317SLB**
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Blank Data file reference: **/chem/HP11165.i/18nov16.b/gk0854.d**

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 19-NOV-2018 19:11
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/18nov16.b/gk0851.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.451	(0.000)	606	152	159924	(6)	20.00	
65) Naphthalene-d8	6.687	(0.000)	816	136	689812	(3)	20.00	
113) Acenaphthene-d10	8.398	(0.000)	1107	164	409783	(1)	20.00	
153) Phenanthrene-d10	9.851	(0.000)	1354	188	847381	(3)	20.00	
175) Pyrene-d10	11.239	(0.000)	1590	212	800819	(3)	20.00	
213) Perylene-d12	13.874	(0.000)	2038	264	655680	(0)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
11) 2-Fluorophenol	(1)	4.199	(0.000)	112	2050319	169.036	85%
17) Phenol-d6	(1)	5.163	(0.000)	99	2991406	159.265	80%
44) Nitrobenzene-d5	(2)	5.992	(0.000)	82	1402066	77.146	77%
93) 2-Fluorobiphenyl	(3)	7.751	(0.000)	172	2490202	75.080	75%
135) 2,4,6-Tribromophenol	(3)	9.181	(0.000)	330	644319	196.316	98%
179) Terphenyl-d14	(5)	11.433	(0.000)	244	3171668	81.903	82%

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)	2.704	(-0.001)	79	398416M	27.639	921.30			2
18) Phenol	(1)	5.175	(-0.000)	94	818423	38.272	1275.72			0.7
19) Aniline	(1)	5.140	(0.000)	93	657128	26.188	872.93			5
22) bis(2-Chloroethyl)ether	(1)	5.210	(0.000)	93	565931	36.848	1228.26			0.7
23) 2-Chlorophenol	(1)	5.257	(-0.000)	128	531393	45.081	1502.70			0.5
24) 1,3-Dichlorobenzene	(1)	5.392	(-0.000)	146	499232	38.448	1281.61			0.5
26) 1,4-Dichlorobenzene	(1)	5.469	(0.000)	146	530443	39.139	1304.65			0.5
27) Benzyl alcohol	(1)	5.610	(0.000)	108	388627	41.385	1379.50			5
28) 1,2-Dichlorobenzene	(1)	5.610	(0.000)	146	484502	36.937	1231.22			0.6
31) 2-Methylphenol	(1)	5.745	(0.001)	108	567139	39.336	1311.21			0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.740	(-0.001)	45	566674	36.354	1211.81			0.5
37) 4-Methylphenol	(1)	5.892	(0.002)	108	645497	44.208	1473.60			0.6
38) N-Nitroso-di-n-propylamine	(1)	5.869	(0.000)	70	526442	38.307	1276.89			0.6
43) Hexachloroethane	(1)	5.934	(0.000)	117	205785	40.341	1344.69			1
45) Nitrobenzene	(2)	6.010	(0.000)	77	721443	38.056	1268.53			0.8
50) Isophorone	(2)	6.251	(-0.000)	82	1326584	38.720	1290.65			0.5
51) 2-Nitrophenol	(2)	6.322	(-0.000)	139	288876	42.296	1409.86			0.5
53) 2,4-Dimethylphenol	(2)	6.398	(-0.000)	107	516186	34.203	1140.09			0.5
55) bis(2-Chloroethoxy)methane	(2)	6.475	(-0.000)	93	763046	40.066	1335.54			0.5
60) 2,4-Dichlorophenol	(2)	6.575	(0.000)	162	463094	43.976	1465.87			0.5
62) 1,2,4-Trichlorobenzene	(2)	6.634	(0.000)	180	451022	40.613	1353.76			0.5
67) 4-Chloroaniline	(2)	6.775	(0.000)	127	188080	11.725	390.84			1
71) Hexachlorobutadiene	(2)	6.834	(0.000)	225	236880	39.751	1325.03			0.6
80) 4-Chloro-3-methylphenol	(2)	7.286	(0.000)	107	609515	46.373	1545.78			0.5
83) 2-Methylnaphthalene	(2)	7.386	(0.000)	142	1128415	40.838	1361.28			0.3
85) Hexachlorocyclopentadiene	(3)	7.539	(-0.000)	237	387189	64.103	2136.78			5
90) 2,4,6-Trichlorophenol	(3)	7.681	(-0.000)	196	356819	43.715	1457.18			0.6

M = Compound was manually integrated.

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:13. Target 3.5 esignature user ID: bkc25363

Data file: /chem/HP11165.i/18nov16.b/gk0855.d Injection date and time: **16-NOV-2018 15:39**
Data file Sample Info. Line: 317LBLCS;317LBLCS;2;3;LCS;;DOD26; Instrument ID: **HP11165.i** Batch: **18317SLB**
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Blank Data file reference: **/chem/HP11165.i/18nov16.b/gk0854.d**

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 19-NOV-2018 19:11
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/18nov16.b/gk0851.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

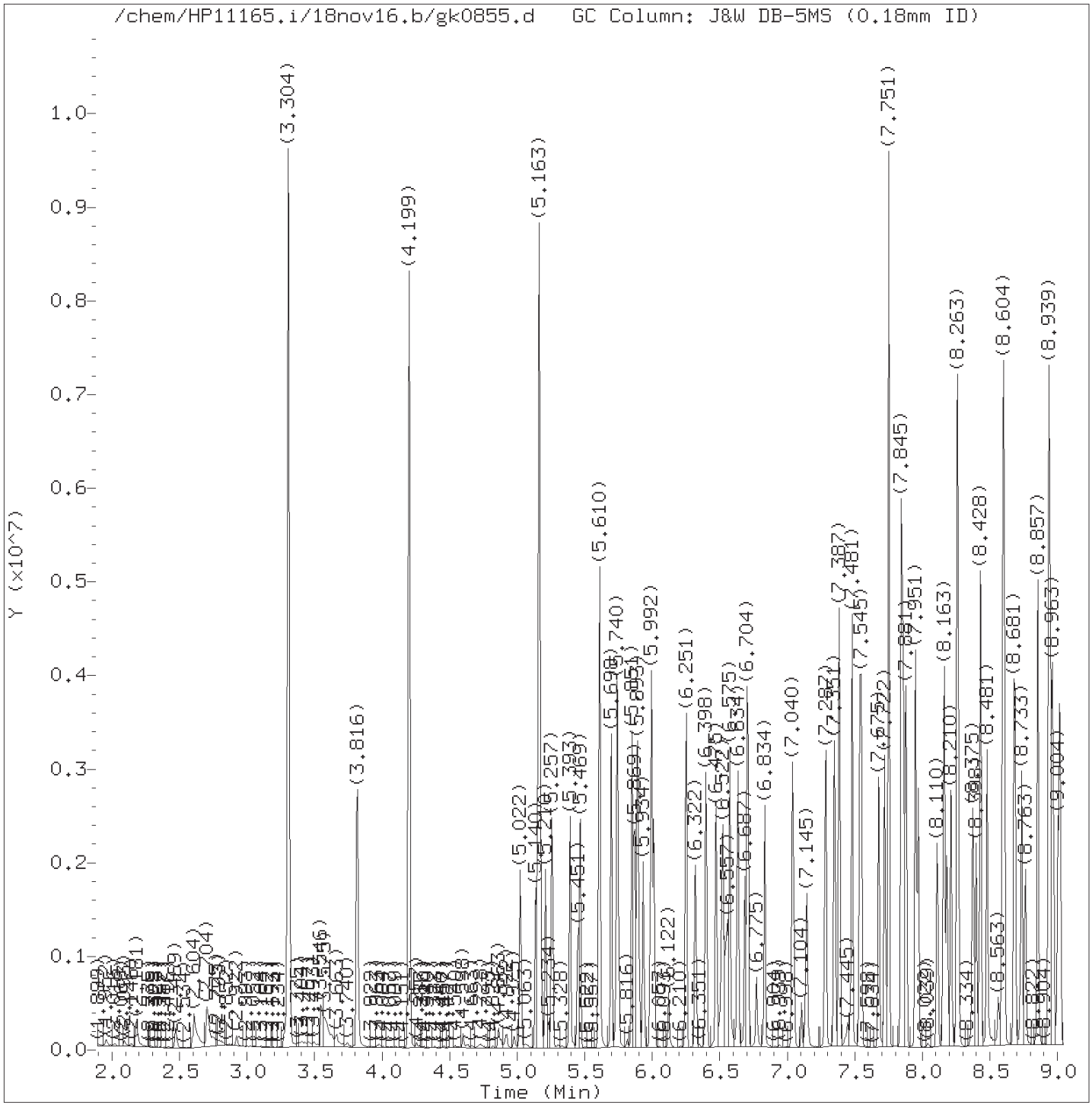
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
92) 2,4,5-Trichlorophenol	(3)	7.722(0.000)	196	396516	44.600	1486.66			0.6
96) 2-Chloronaphthalene	(3)	7.857(0.000)	162	1101294	38.842	1294.74			0.2
100) 2-Nitroaniline	(3)	7.969(-0.000)	138	399335	45.079	1502.63			0.6
106) Dimethylphthalate	(3)	8.163(-0.000)	163	1408574	42.412	1413.73			2
108) 2,6-Dinitrotoluene	(3)	8.216(-0.000)	165	322068	43.185	1439.49			0.6
112) 3-Nitroaniline	(3)	8.375(0.000)	138	319089	38.161	1272.05			2
115) 2,4-Dinitrophenol	(3)	8.480(0.000)	184	374435	74.451	2481.69			11
116) 4-Nitrophenol	(3)	8.592(0.000)	109	254487	43.839	1461.31			5
118) 2,4-Dinitrotoluene	(3)	8.604(0.000)	165	443259	42.773	1425.77			2
119) Dibenzofuran	(3)	8.604(0.000)	168	1699968	42.243	1408.11			0.5
124) Diethylphthalate	(3)	8.857(0.000)	149	1405126	42.148	1404.94			2
127) 4-Chlorophenyl-phenylether	(3)	8.945(0.000)	204	643081	41.126	1370.88			0.5
129) 4-Nitroaniline	(3)	8.975(0.000)	138	301019	33.048	1101.59			2
130) 4,6-Dinitro-2-methylphenol	(4)	9.004(0.000)	198	256179	40.795	1359.82			5
131) N-Nitrosodiphenylamine	(4)	9.069(-0.000)	169	1281841	42.881	1429.35			0.5
143) 4-Bromophenyl-phenylether	(4)	9.422(-0.000)	248	364683	39.161	1305.37			0.6
145) Hexachlorobenzene	(4)	9.469(-0.000)	284	355509	40.930	1364.32			0.1
149) Pentachlorophenol	(4)	9.675(0.000)	266	199472	34.391	1146.36			1
163) Carbazole	(4)	10.092(0.000)	167	2082652	43.912	1463.72			0.5
193) 3,3'-Dichlorobenzidine	(5)	12.427(0.000)	252	546036	29.832	994.42			3
205) Di-n-octylphthalate	(6)	13.168(-0.000)	149	2590365	43.867	1462.22			2

Total number of targets = 48

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:13. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Chad A. Moline on 11/20/2018 at 12:59. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

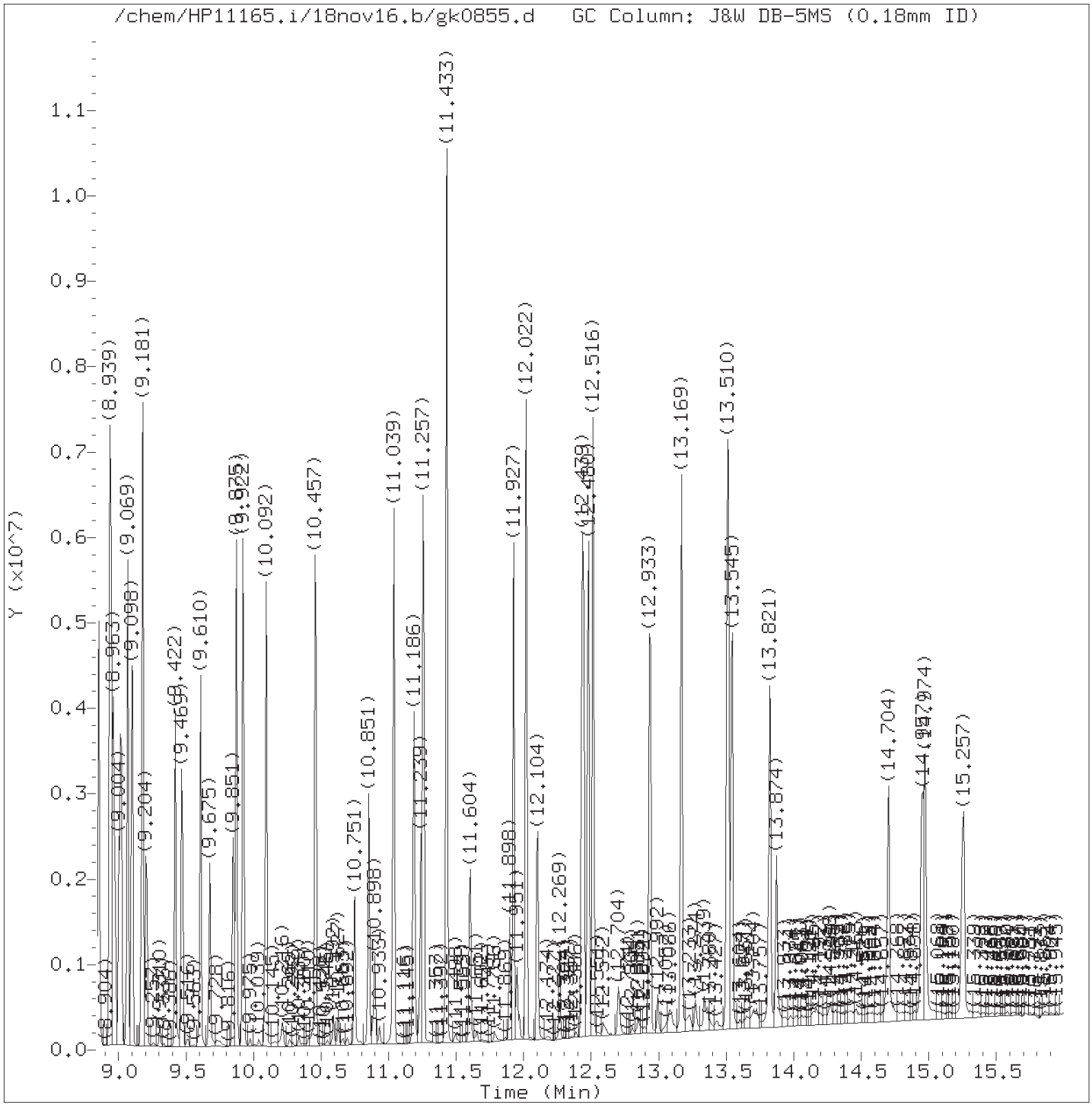
Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0855.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 15:39 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Sample Name: 317LBLCS Lab Sample ID: 317LBLCS

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0855.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 15:39 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Sample Name: 317LBLCS Lab Sample ID: 317LBLCS

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0855.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 15:39 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Sample Name: 317LBLCS Lab Sample ID: 317LBLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) Pyridine	(1)	2.704	79	398416M	27.639
11)$2-Fluorophenol	(1)	4.199	112	2050319	169.036
19) Aniline	(1)	5.140	93	657128	26.188
17)$Phenol-d6	(1)	5.163	99	2991406	159.265
18) Phenol	(1)	5.175	94	818423	38.272
22) bis(2-Chloroethyl)ether	(1)	5.210	93	565931	36.848
23) 2-Chlorophenol	(1)	5.257	128	531393	45.081
24) 1,3-Dichlorobenzene	(1)	5.393	146	499232	38.448
25)*1,4-Dichlorobenzene-d4	(1)	5.451	152	159924	20.000
26) 1,4-Dichlorobenzene	(1)	5.469	146	530443	39.139
27) Benzyl alcohol	(1)	5.610	108	388627	41.385
28) 1,2-Dichlorobenzene	(1)	5.610	146	484502	36.937
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.740	45	566674	36.354
31) 2-Methylphenol	(1)	5.745	108	567139	39.336
38) N-Nitroso-di-n-propylamine	(1)	5.869	70	526442	38.307
37) 4-Methylphenol	(1)	5.893	108	645497	44.208
43) Hexachloroethane	(1)	5.934	117	205785	40.341
44)$Nitrobenzene-d5	(2)	5.992	82	1402066	77.146
45) Nitrobenzene	(2)	6.010	77	721443	38.056
50) Isophorone	(2)	6.251	82	1326584	38.720
51) 2-Nitrophenol	(2)	6.322	139	288876	42.296
53) 2,4-Dimethylphenol	(2)	6.398	107	516186	34.203
55) bis(2-Chloroethoxy)methane	(2)	6.475	93	763046	40.066
60) 2,4-Dichlorophenol	(2)	6.575	162	463094	43.976
62) 1,2,4-Trichlorobenzene	(2)	6.634	180	451022	40.613
65)*Naphthalene-d8	(2)	6.687	136	689812	20.000
67) 4-Chloroaniline	(2)	6.775	127	188080	11.725
71) Hexachlorobutadiene	(2)	6.834	225	236880	39.751
80) 4-Chloro-3-methylphenol	(2)	7.287	107	609515	46.373
83) 2-Methylnaphthalene	(2)	7.387	142	1128415	40.838
85) Hexachlorocyclopentadiene	(3)	7.539	237	387189	64.103
90) 2,4,6-Trichlorophenol	(3)	7.681	196	356819	43.715
92) 2,4,5-Trichlorophenol	(3)	7.722	196	396516	44.600
93)$2-Fluorobiphenyl	(3)	7.751	172	2490202	75.080
96) 2-Chloronaphthalene	(3)	7.857	162	1101294	38.842
100) 2-Nitroaniline	(3)	7.969	138	399335	45.079
106) Dimethylphthalate	(3)	8.163	163	1408574	42.412
108) 2,6-Dinitrotoluene	(3)	8.216	165	322068	43.185
112) 3-Nitroaniline	(3)	8.375	138	319089	38.161
113)*Acenaphthene-d10	(3)	8.398	164	409783	20.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0855.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 15:39 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

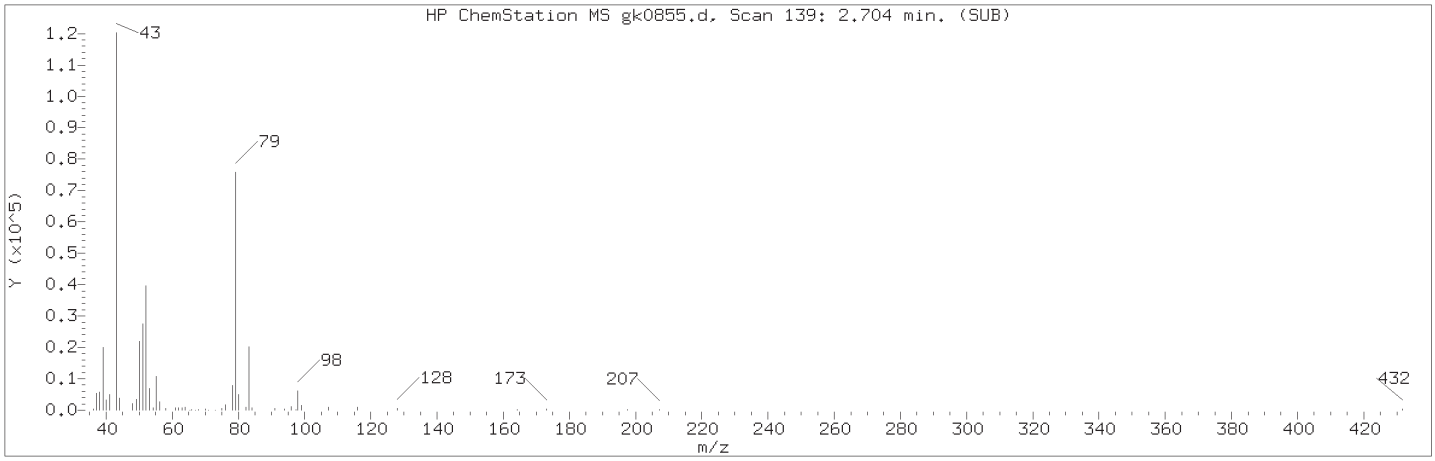
Sample Name: 317LBLCS Lab Sample ID: 317LBLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
115) 2,4-Dinitrophenol	(3)	8.481	184	374435	74.451
116) 4-Nitrophenol	(3)	8.592	109	254487	43.839
118) 2,4-Dinitrotoluene	(3)	8.604	165	443259	42.773
119) Dibenzofuran	(3)	8.604	168	1699968	42.243
124) Diethylphthalate	(3)	8.857	149	1405126	42.148
127) 4-Chlorophenyl-phenylether	(3)	8.945	204	643081	41.126
129) 4-Nitroaniline	(3)	8.975	138	301019	33.048
130) 4,6-Dinitro-2-methylphenol	(4)	9.004	198	256179	40.795
131) N-Nitrosodiphenylamine	(4)	9.069	169	1281841	42.881
135)$2,4,6-Tribromophenol	(3)	9.181	330	644319	196.316
143) 4-Bromophenyl-phenylether	(4)	9.422	248	364683	39.161
145) Hexachlorobenzene	(4)	9.469	284	355509	40.930
149) Pentachlorophenol	(4)	9.675	266	199472	34.391
153)*Phenanthrene-d10	(4)	9.851	188	847381	20.000
163) Carbazole	(4)	10.092	167	2082652	43.912
175)*Pyrene-d10	(5)	11.239	212	800819	20.000
179)$Terphenyl-d14	(5)	11.433	244	3171668	81.903
193) 3,3'-Dichlorobenzidine	(5)	12.427	252	546036	29.832
205) Di-n-octylphthalate	(6)	13.169	149	2590365	43.867
213)*Perylene-d12	(6)	13.874	264	655680	20.000

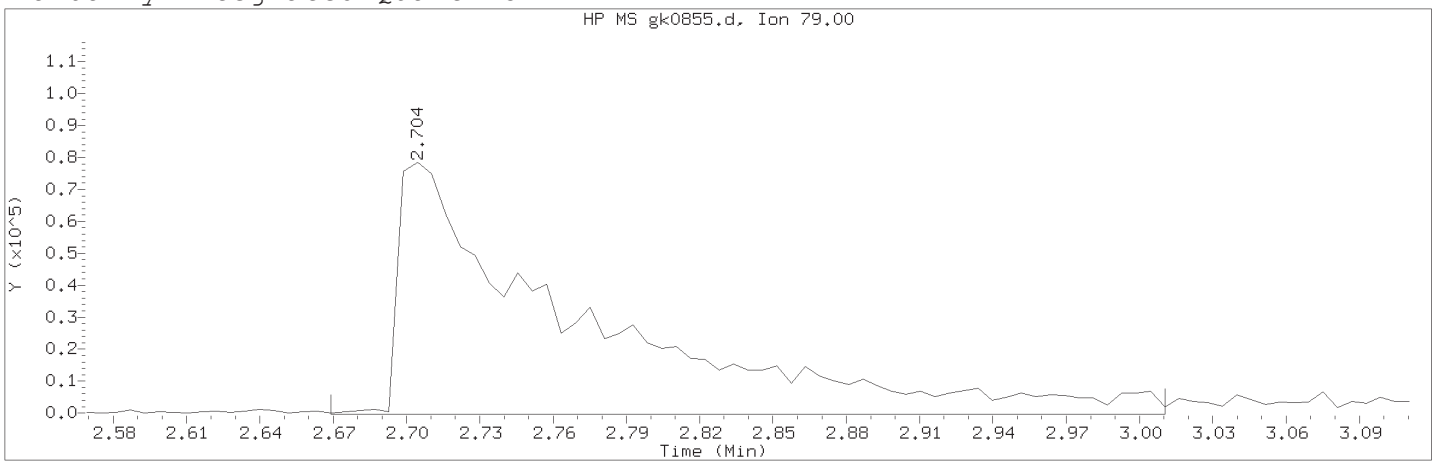
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0855.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 15:39 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Sample Name: 317LBLCS Lab Sample ID: 317LBLCS

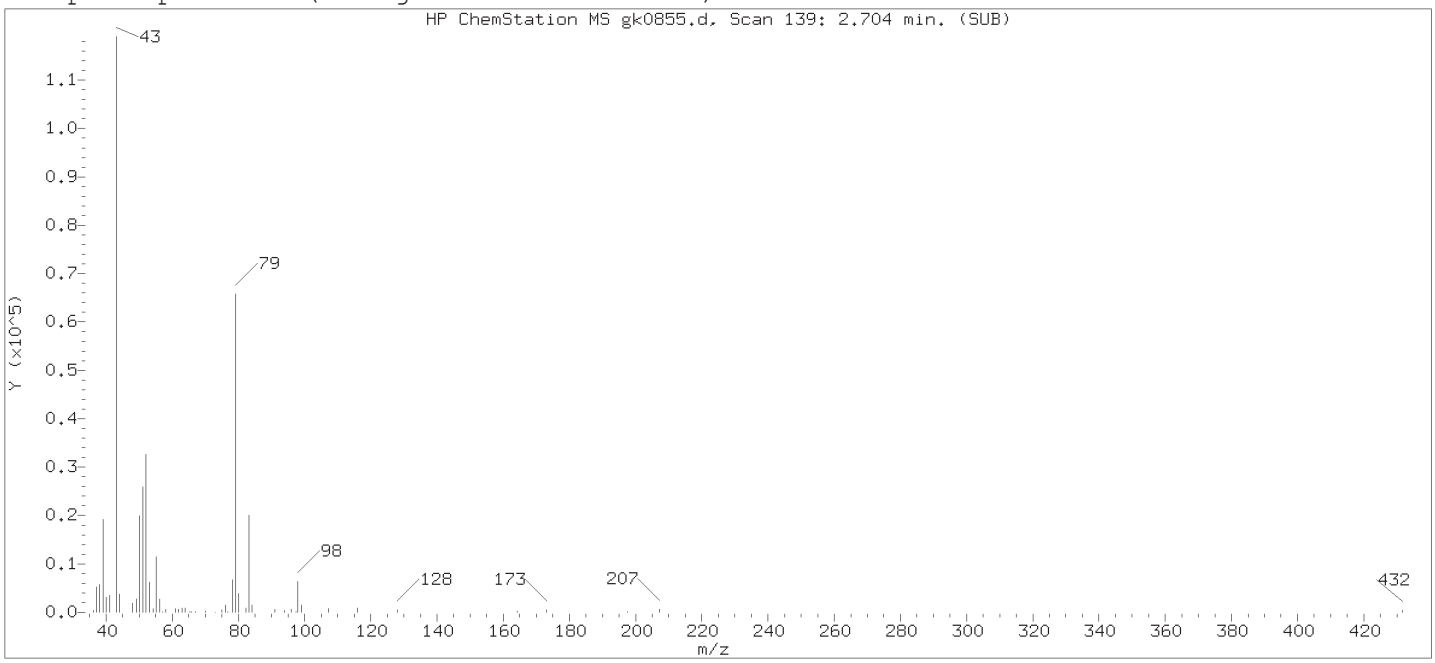
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 139		
Retention Time (minutes)	: 2.704		
Quant Ion	: 79.00		
Area (flag)	: 398416M		
On-Column Amount (ng/ul)	: 27.6390		
Integration start scan	: 132	Integration stop scan:	190
Y at integration start	: -336	Y at integration end:	-336

Reason for manual integration: improper integration

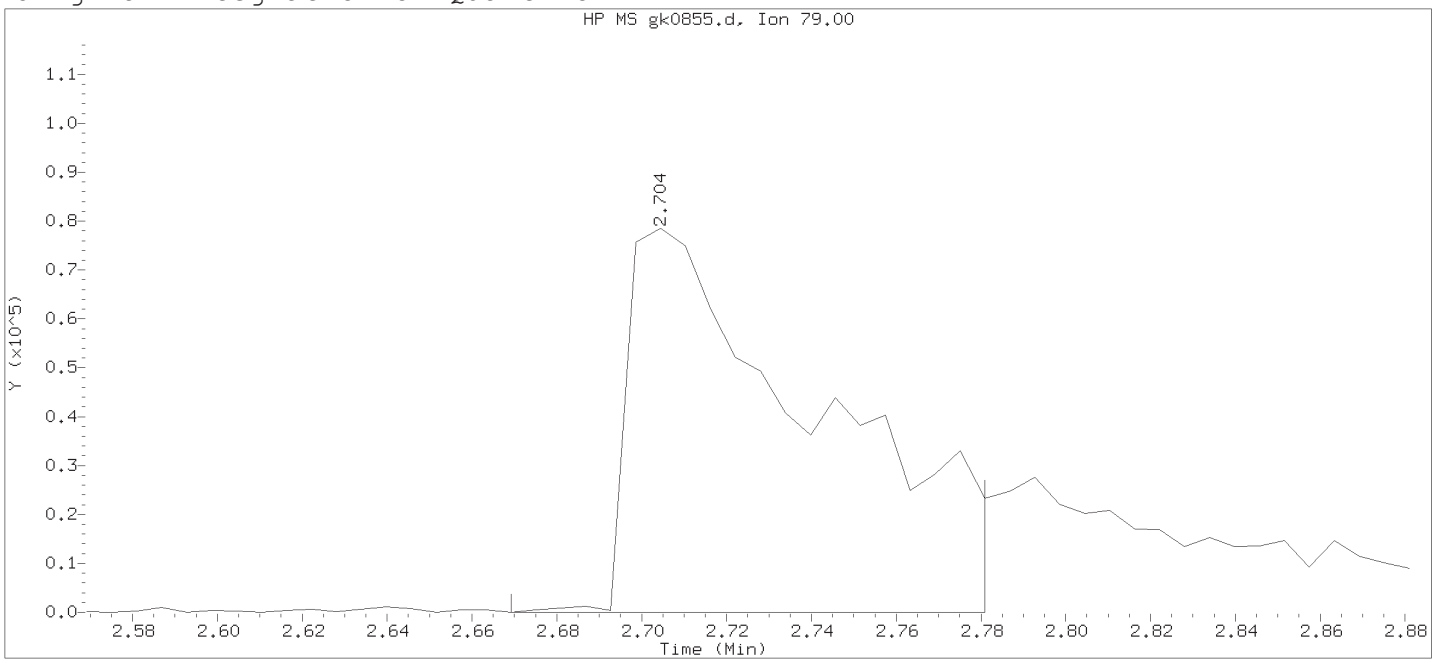
Analyst responsible for change: Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Chad A. Moline on 11/20/2018 at 12:59.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0855.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 15:39 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 16-NOV-2018 14:59
Date, time and analyst ID of latest file update: 16-Nov-2018 16:00 Automation

Sample Name: 317LBLCS Lab Sample ID: 317LBLCS

Compound Number	:	5
Compound Name	:	Pyridine
Scan Number	:	139
Retention Time (minutes)	:	2.704
Quant Ion	:	79.00
Area	:	244509
On-column Amount (ng/ul)	:	16.9620
Integration start scan	:	132 Integration stop scan: 151
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: 2595

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP11165.i/18nov16.b/gk0856.d Injection date and time: **16-NOV-2018 16:03**
Data file Sample Info. Line: 317LBLCSD;317LBLCSD;2;3;LCSD;;DOD26; Instrument ID: **HP11165.i** Batch: **18317SLB**
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Blank Data file reference: **/chem/HP11165.i/18nov16.b/gk0854.d**

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 19-NOV-2018 19:11
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/18nov16.b/gk0851.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.451	(0.000)	606	152	146941	(-2)	20.00	
65) Naphthalene-d8	6.687	(0.000)	816	136	625614	(-6)	20.00	
113) Acenaphthene-d10	8.398	(0.000)	1107	164	391458	(-3)	20.00	
153) Phenanthrene-d10	9.851	(0.000)	1354	188	849945	(3)	20.00	
175) Pyrene-d10	11.239	(0.000)	1590	212	770844	(-1)	20.00	
213) Perylene-d12	13.874	(0.000)	2038	264	616840	(-6)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
11) 2-Fluorophenol	(1)	4.199	(0.000)	112	1849237	165.928	83%
17) Phenol-d6	(1)	5.157	(0.001)	99	2716401	157.402	79%
44) Nitrobenzene-d5	(2)	5.993	(0.000)	82	1262657	76.605	77%
93) 2-Fluorobiphenyl	(3)	7.751	(0.000)	172	2383138	75.216	75%
135) 2,4,6-Tribromophenol	(3)	9.181	(0.000)	330	617377	196.913	98%
179) Terphenyl-d14	(5)	11.428	(0.001)	244	3034484	81.407	81%

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Pyridine	(1)	2.704	(-0.001)	79	331228M	25.008	833.61			2
18) Phenol	(1)	5.169	(0.001)	94	740837	37.704	1256.81			0.7
19) Aniline	(1)	5.140	(0.000)	93	588825	25.539	851.31			5
22) bis(2-Chloroethyl)ether	(1)	5.210	(0.000)	93	523695	37.111	1237.02			0.7
23) 2-Chlorophenol	(1)	5.257	(0.000)	128	470472	43.439	1447.98			0.5
24) 1,3-Dichlorobenzene	(1)	5.393	(0.000)	146	432534	36.255	1208.49			0.5
26) 1,4-Dichlorobenzene	(1)	5.469	(0.000)	146	443155	35.588	1186.26			0.5
27) Benzyl alcohol	(1)	5.610	(0.000)	108	366623	42.491	1416.37			5
28) 1,2-Dichlorobenzene	(1)	5.610	(0.000)	146	436901	36.251	1208.35			0.6
31) 2-Methylphenol	(1)	5.746	(0.001)	108	527543	39.823	1327.43			0.8
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.740	(-0.001)	45	520158	36.319	1210.62			0.5
37) 4-Methylphenol	(1)	5.892	(0.002)	108	597518	44.538	1484.59			0.6
38) N-Nitroso-di-n-propylamine	(1)	5.863	(0.001)	70	484345	38.358	1278.59			0.6
43) Hexachloroethane	(1)	5.934	(0.000)	117	177863	37.948	1264.93			1
45) Nitrobenzene	(2)	6.010	(-0.000)	77	662335	38.523	1284.10			0.8
50) Isophorone	(2)	6.251	(-0.000)	82	1233935	39.711	1323.70			0.5
51) 2-Nitrophenol	(2)	6.322	(-0.000)	139	261355	42.193	1406.43			0.5
53) 2,4-Dimethylphenol	(2)	6.398	(-0.000)	107	489193	35.740	1191.35			0.5
55) bis(2-Chloroethoxy)methane	(2)	6.475	(-0.000)	93	702934	40.697	1356.58			0.5
60) 2,4-Dichlorophenol	(2)	6.575	(-0.000)	162	435462	45.596	1519.85			0.5
62) 1,2,4-Trichlorobenzene	(2)	6.634	(-0.000)	180	412012	40.907	1363.57			0.5
67) 4-Chloroaniline	(2)	6.775	(0.000)	127	203538	13.991	466.37			1
71) Hexachlorobutadiene	(2)	6.834	(0.000)	225	223445	41.344	1378.13			0.6
80) 4-Chloro-3-methylphenol	(2)	7.281	(0.000)	107	580782	48.722	1624.06			0.5
83) 2-Methylnaphthalene	(2)	7.387	(0.000)	142	1064587	42.482	1416.07			0.3
85) Hexachlorocyclopentadiene	(3)	7.540	(-0.000)	237	344943	59.782	1992.75			5
90) 2,4,6-Trichlorophenol	(3)	7.675	(0.000)	196	345503	44.311	1477.02			0.6

M = Compound was manually integrated.

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:13. Target 3.5 esignature user ID: bkc25363

Data file: /chem/HP11165.i/18nov16.b/gk0856.d Injection date and time: **16-NOV-2018 16:03**
Data file Sample Info. Line: 317LBLCSD;317LBLCSD;2;3;LCSD;;DOD26; Instrument ID: **HP11165.i** Batch: **18317SLB**
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Blank Data file reference: **/chem/HP11165.i/18nov16.b/gk0854.d**

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: **25806**
Calibration date and time (Last Method Edit): 19-NOV-2018 19:11
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/18nov16.b/gk0851.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

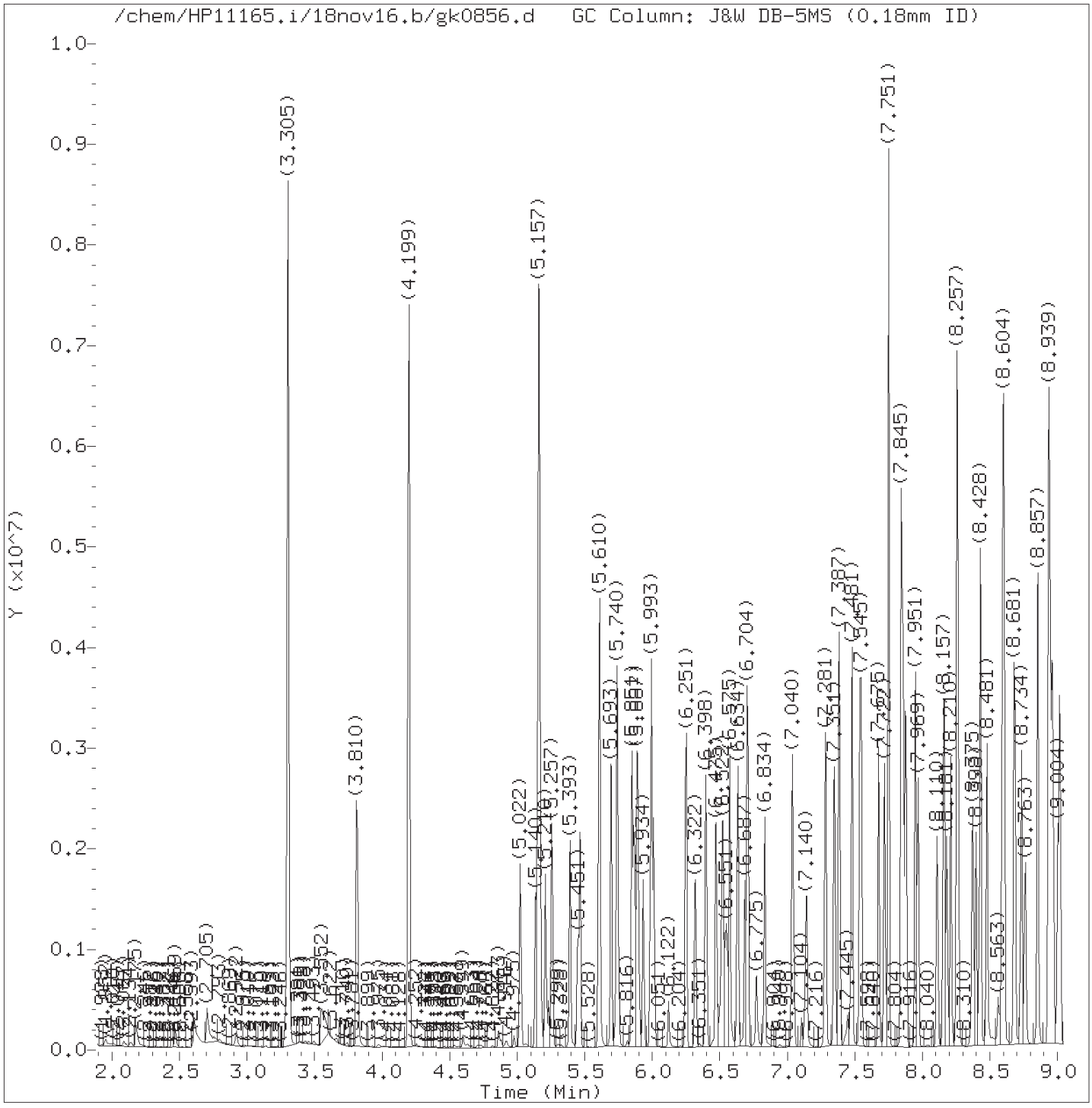
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
92) 2,4,5-Trichlorophenol	(3)	7.722(-0.000)	196	359838	42.369	1412.29			0.6
96) 2-Chloronaphthalene	(3)	7.857(0.000)	162	1039554	38.381	1279.37			0.2
100) 2-Nitroaniline	(3)	7.969(-0.000)	138	385834	45.594	1519.79			0.6
106) Dimethylphthalate	(3)	8.163(-0.000)	163	1276438	40.232	1341.08			2
108) 2,6-Dinitrotoluene	(3)	8.210(0.000)	165	313878	44.057	1468.56			0.6
112) 3-Nitroaniline	(3)	8.375(0.000)	138	312455	39.117	1303.91			2
115) 2,4-Dinitrophenol	(3)	8.481(0.000)	184	367833	76.562	2552.05			11
116) 4-Nitrophenol	(3)	8.592(0.000)	109	225764	40.712	1357.07			5
118) 2,4-Dinitrotoluene	(3)	8.604(0.000)	165	433628	43.803	1460.09			2
119) Dibenzofuran	(3)	8.598(0.000)	168	1554007	40.424	1347.46			0.5
124) Diethylphthalate	(3)	8.857(0.000)	149	1344551	42.219	1407.31			2
127) 4-Chlorophenyl-phenylether	(3)	8.945(0.000)	204	603954	40.432	1347.74			0.5
129) 4-Nitroaniline	(3)	8.975(0.000)	138	278918	32.055	1068.49			2
130) 4,6-Dinitro-2-methylphenol	(4)	9.004(-0.000)	198	250696	39.801	1326.70			5
131) N-Nitrosodiphenylamine	(4)	9.069(-0.000)	169	1219725	40.680	1355.99			0.5
143) 4-Bromophenyl-phenylether	(4)	9.422(-0.000)	248	348618	37.323	1244.10			0.6
145) Hexachlorobenzene	(4)	9.469(-0.000)	284	326856	37.517	1250.58			0.1
149) Pentachlorophenol	(4)	9.675(0.000)	266	192894	33.156	1105.21			1
163) Carbazole	(4)	10.092(0.000)	167	1992219	41.878	1395.94			0.5
193) 3,3'-Dichlorobenzidine	(5)	12.427(0.000)	252	522770	29.672	989.07			3
205) Di-n-octylphthalate	(6)	13.168(-0.000)	149	2460948	44.299	1476.63			2

Total number of targets = 48

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:13. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Chad A. Moline on 11/20/2018 at 12:59. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

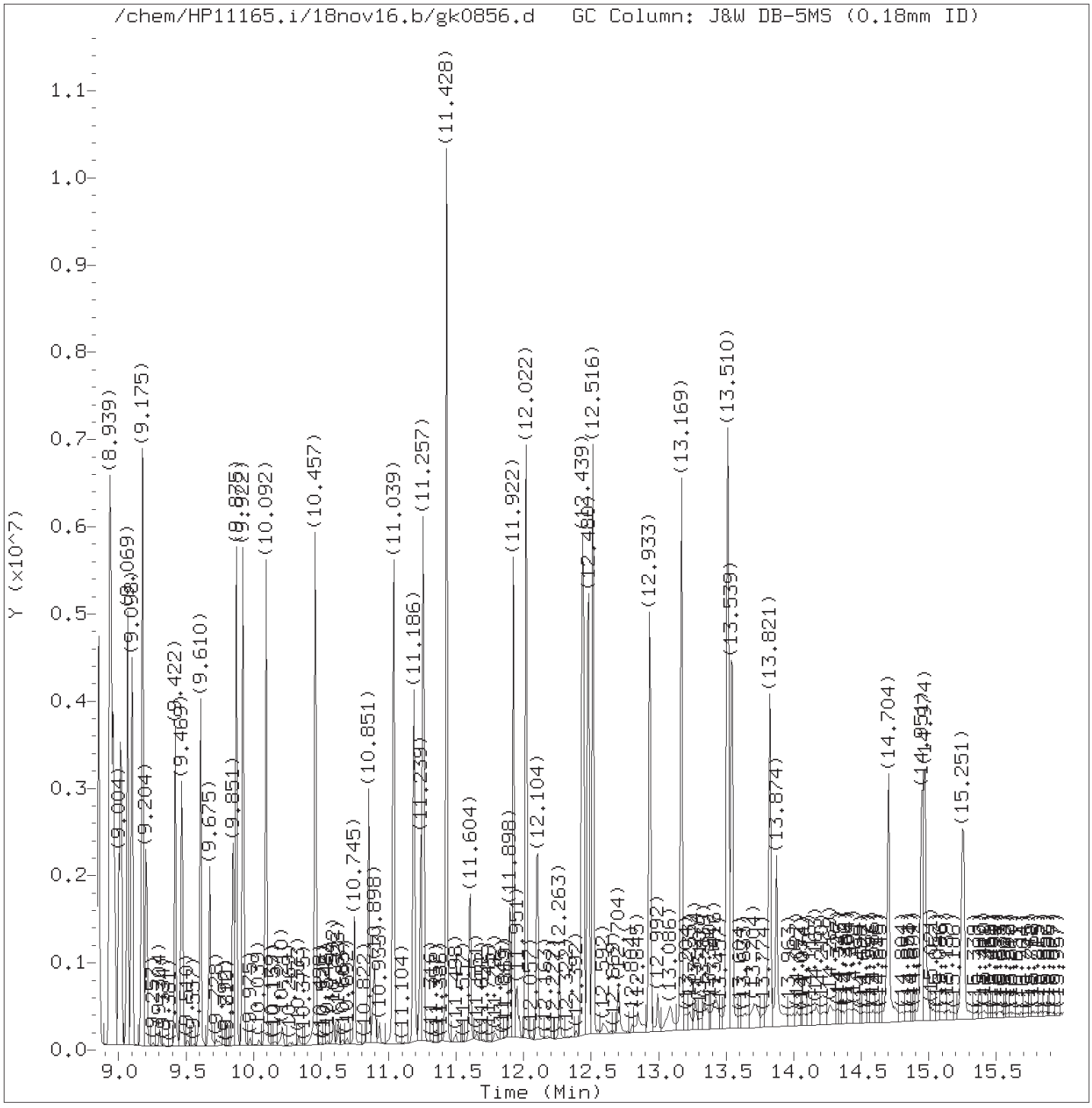
Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0856.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:03 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Sample Name: 317LBLCSD Lab Sample ID: 317LBLCSD

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0856.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:03 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Sample Name: 317LBLCSD Lab Sample ID: 317LBLCSD

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0856.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:03 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Sample Name: 317LBLCSD Lab Sample ID: 317LBLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) Pyridine	(1)	2.705	79	331228M	25.008
11)$2-Fluorophenol	(1)	4.199	112	1849237	165.928
19) Aniline	(1)	5.140	93	588825	25.539
17)$Phenol-d6	(1)	5.157	99	2716401	157.402
18) Phenol	(1)	5.169	94	740837	37.704
22) bis(2-Chloroethyl)ether	(1)	5.210	93	523695	37.111
23) 2-Chlorophenol	(1)	5.257	128	470472	43.439
24) 1,3-Dichlorobenzene	(1)	5.393	146	432534	36.255
25)*1,4-Dichlorobenzene-d4	(1)	5.451	152	146941	20.000
26) 1,4-Dichlorobenzene	(1)	5.469	146	443155	35.588
27) Benzyl alcohol	(1)	5.610	108	366623	42.491
28) 1,2-Dichlorobenzene	(1)	5.610	146	436901	36.251
33) 2,2'-oxybis(1-Chloropropane)	(1)	5.740	45	520158	36.319
31) 2-Methylphenol	(1)	5.746	108	527543	39.823
38) N-Nitroso-di-n-propylamine	(1)	5.863	70	484345	38.358
37) 4-Methylphenol	(1)	5.893	108	597518	44.538
43) Hexachloroethane	(1)	5.934	117	177863	37.948
44)$Nitrobenzene-d5	(2)	5.993	82	1262657	76.605
45) Nitrobenzene	(2)	6.010	77	662335	38.523
50) Isophorone	(2)	6.251	82	1233935	39.711
51) 2-Nitrophenol	(2)	6.322	139	261355	42.193
53) 2,4-Dimethylphenol	(2)	6.398	107	489193	35.740
55) bis(2-Chloroethoxy)methane	(2)	6.475	93	702934	40.697
60) 2,4-Dichlorophenol	(2)	6.575	162	435462	45.596
62) 1,2,4-Trichlorobenzene	(2)	6.634	180	412012	40.907
65)*Naphthalene-d8	(2)	6.687	136	625614	20.000
67) 4-Chloroaniline	(2)	6.775	127	203538	13.991
71) Hexachlorobutadiene	(2)	6.834	225	223445	41.344
80) 4-Chloro-3-methylphenol	(2)	7.281	107	580782	48.722
83) 2-Methylnaphthalene	(2)	7.387	142	1064587	42.482
85) Hexachlorocyclopentadiene	(3)	7.540	237	344943	59.782
90) 2,4,6-Trichlorophenol	(3)	7.675	196	345503	44.311
92) 2,4,5-Trichlorophenol	(3)	7.722	196	359838	42.369
93)$2-Fluorobiphenyl	(3)	7.751	172	2383138	75.216
96) 2-Chloronaphthalene	(3)	7.857	162	1039554	38.381
100) 2-Nitroaniline	(3)	7.969	138	385834	45.594
106) Dimethylphthalate	(3)	8.163	163	1276438	40.232
108) 2,6-Dinitrotoluene	(3)	8.210	165	313878	44.057
112) 3-Nitroaniline	(3)	8.375	138	312455	39.117
113)*Acenaphthene-d10	(3)	8.398	164	391458	20.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/18nov16.b/gk0856.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:03 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

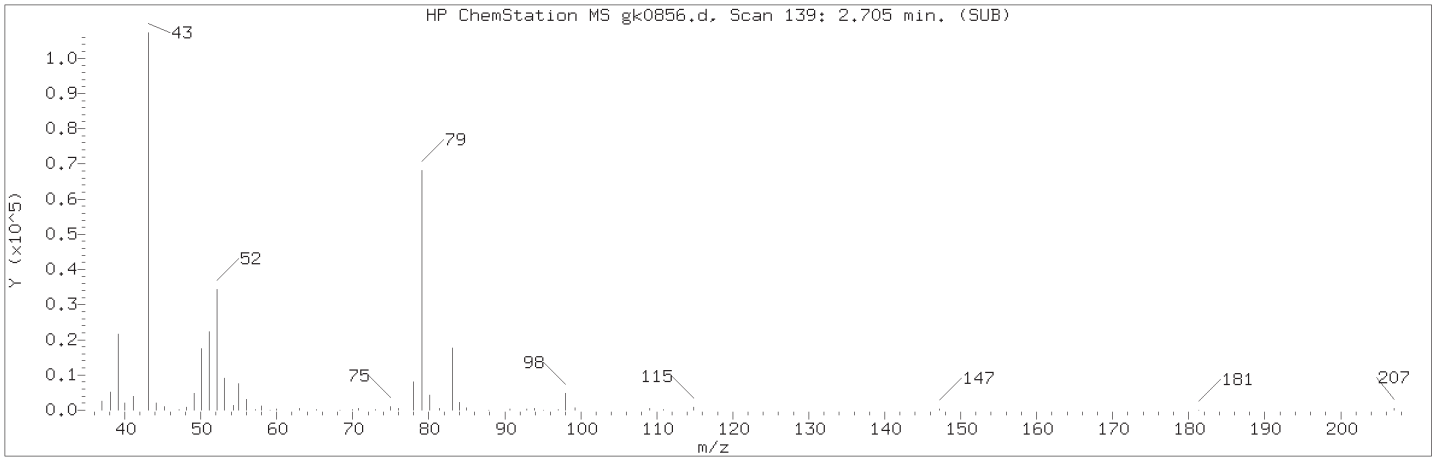
Sample Name: 317LBLCSD Lab Sample ID: 317LBLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
115) 2,4-Dinitrophenol	(3)	8.481	184	367833	76.562
116) 4-Nitrophenol	(3)	8.592	109	225764	40.712
119) Dibenzofuran	(3)	8.598	168	1554007	40.424
118) 2,4-Dinitrotoluene	(3)	8.604	165	433628	43.803
124) Diethylphthalate	(3)	8.857	149	1344551	42.219
127) 4-Chlorophenyl-phenylether	(3)	8.945	204	603954	40.432
129) 4-Nitroaniline	(3)	8.975	138	278918	32.055
130) 4,6-Dinitro-2-methylphenol	(4)	9.004	198	250696	39.801
131) N-Nitrosodiphenylamine	(4)	9.069	169	1219725	40.680
135)$2,4,6-Tribromophenol	(3)	9.181	330	617377	196.913
143) 4-Bromophenyl-phenylether	(4)	9.422	248	348618	37.323
145) Hexachlorobenzene	(4)	9.469	284	326856	37.517
149) Pentachlorophenol	(4)	9.675	266	192894	33.156
153)*Phenanthrene-d10	(4)	9.851	188	849945	20.000
163) Carbazole	(4)	10.092	167	1992219	41.878
175)*Pyrene-d10	(5)	11.239	212	770844	20.000
179)$Terphenyl-d14	(5)	11.428	244	3034484	81.407
193) 3,3'-Dichlorobenzidine	(5)	12.427	252	522770	29.672
205) Di-n-octylphthalate	(6)	13.169	149	2460948	44.299
213)*Perylene-d12	(6)	13.874	264	616840	20.000

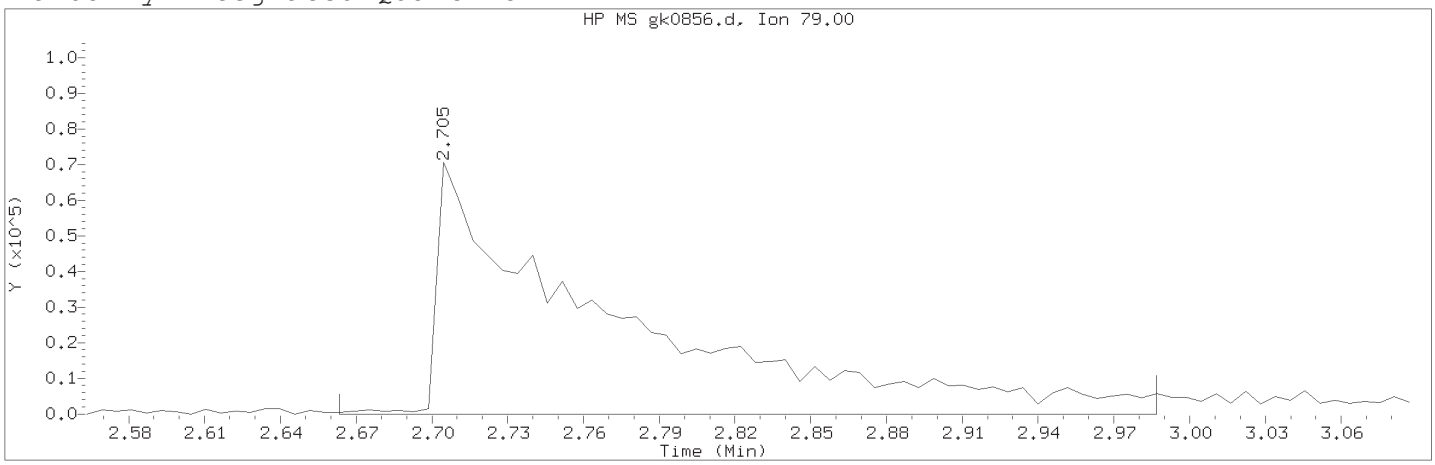
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0856.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:03 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 19-NOV-2018 19:11
Date, time and analyst ID of latest file update: 19-Nov-2018 19:11 bkc25363

Sample Name: 317LBLCSD Lab Sample ID: 317LBLCSD

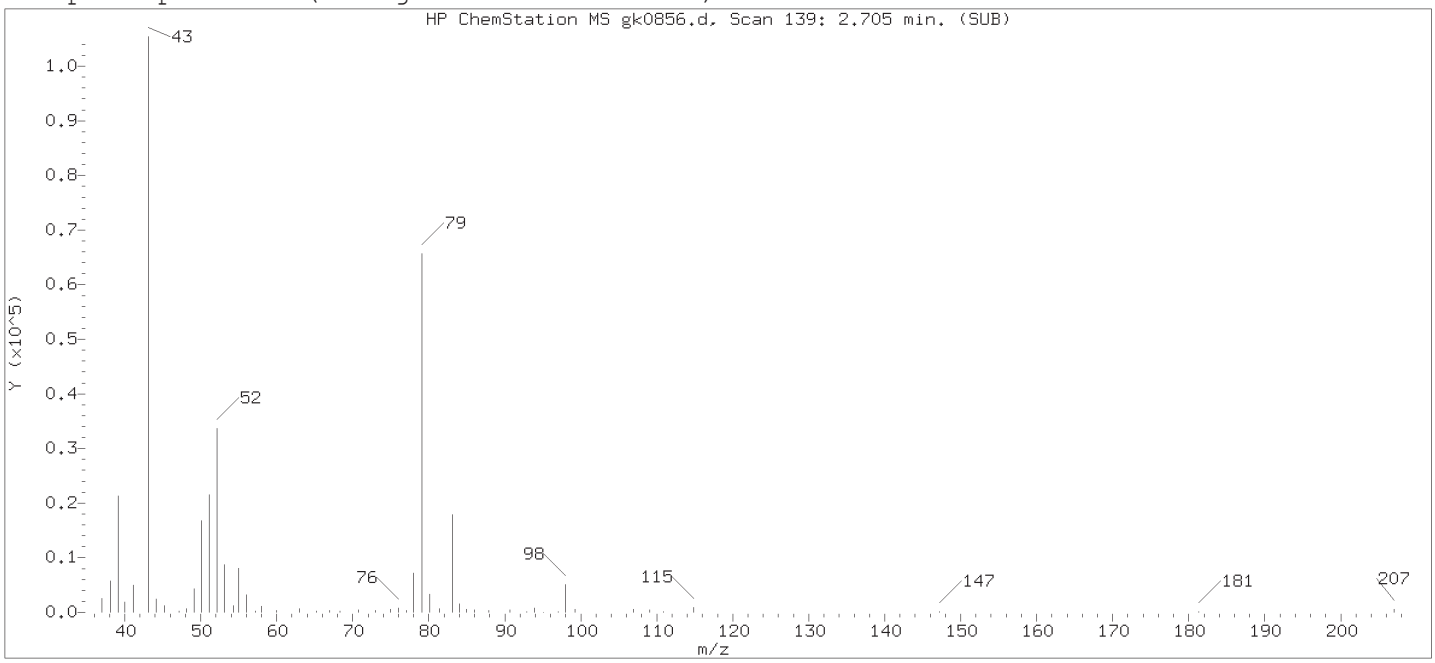
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 139		
Retention Time (minutes)	: 2.705		
Quant Ion	: 79.00		
Area (flag)	: 331228M		
On-Column Amount (ng/ul)	: 25.0082		
Integration start scan	: 131	Integration stop scan:	186
Y at integration start	: -71	Y at integration end:	-71

Reason for manual integration: improper integration

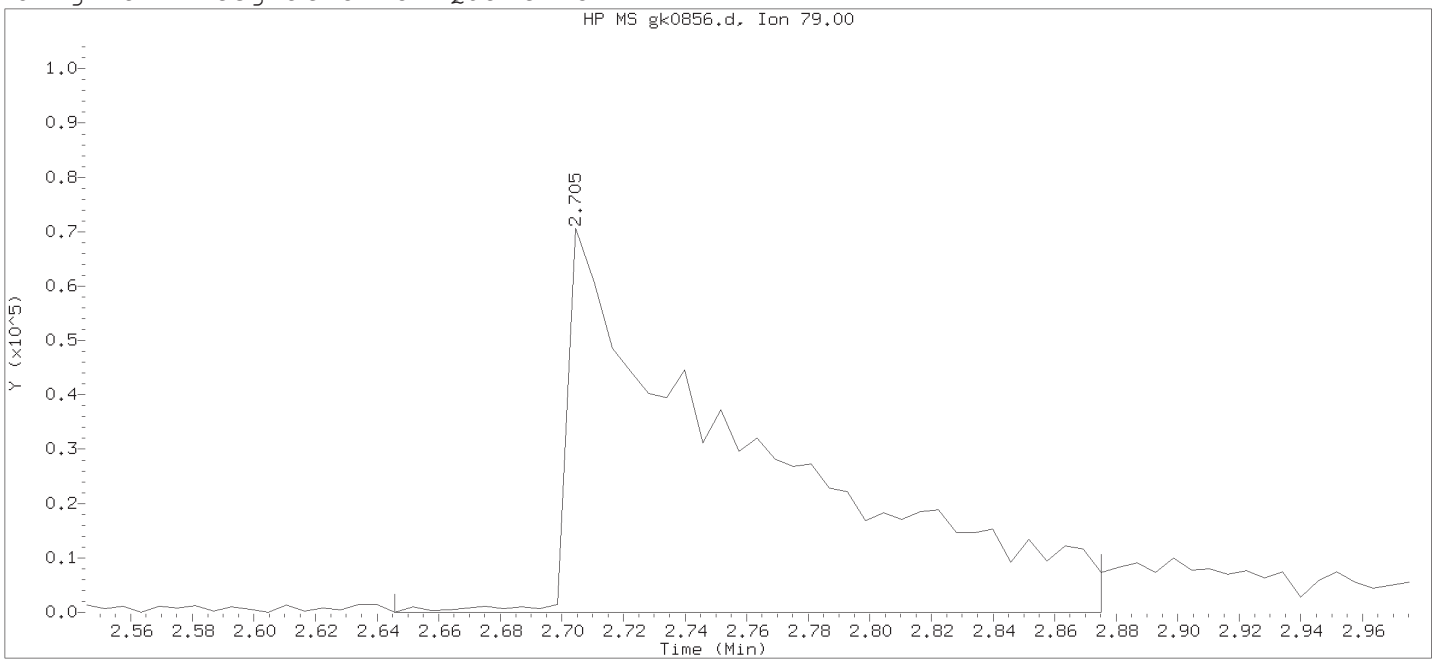
Analyst responsible for change: Digitally signed by Brandon K. Cordova
on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Chad A. Moline on 11/20/2018 at 12:59.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/18nov16.b/gk0856.d Instrument ID: HP11165.i
Injection date and time: 16-NOV-2018 16:03 Analyst ID: whs02991

Method used: /chem/HP11165.i/18nov16.b/m8270d.m Sublist used: 25806
Calibration date and time: 16-NOV-2018 14:59
Date, time and analyst ID of latest file update: 16-Nov-2018 16:25 Automation

Sample Name: 317LBLCSD Lab Sample ID: 317LBLCSD

Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 139		
Retention Time (minutes)	: 2.705		
Quant Ion	: 79.00		
Area	: 284691		
On-column Amount (ng/ul)	: 21.4945		
Integration start scan	: 128	Integration stop scan:	167
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon K. Cordova on 11/19/2018 at 19:13.
Target 3.5 esignature user ID: 2703

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS

Organic Extraction Batchlog Assigned to: 12366 Joshua Ruth Reviewed by: JRR 10206 11-11-18 Start Date: 10/30/18 Start time: 7:00

18302SLI026

Tech 1: JSR 12366 Tech 2: N/A

Dept: 26 Prep Analysis: 10813 BNA Soil Microwave APP IX SVOA 8270D (microwave)

QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
9867763MS	T1003	30.32	SS1829826C	1.0	MS1828526A MS1829726A	1.0 1.0	10	Z	Z	301A	brown soil
9867764MSD	T1003	30.34	SS1829826C	↓	MS1828526A MS1829726A	1.0 1.0	10	Z	Z	301A	↓
BLANKA ✱	SBLKLI302	30.0	SS1829826C	↓	—	—	10	Z	Z	↓	Na_2SO_4
LCSA	302LILCS	30.0	SS1829826C	↓	MS1828526A MS1829726A	1.0 1.0	10	Z	Z	↓	↓
LCSAP1	302LILCS	30.0	SS1829826C	↓	MS1829526C	1.0	10	Z	Z	↓	↓
LCSDAP1	302LILCSD	30.0	SS1829826C	↓	MS1829526C	1.0	10	Z	Z	↓	↓

Solvent Used	Lot No.
1:1 Methylene Chloride/Acetone	178S102918A
Methylene Chloride	187356
Sodium Sulfate	182994
Syringe filter	16837045

N/A

Spike Solutions: Witness: N/A

MS1829526C APPIX MIX #1
MS1828526A LCS SPIKE MIX #1
MS1829726A LCS SPIKE MIX #2
SS1829826C BNA SURROGATE STANDARD

✱ split w/ 18302SLH026

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1 9867761 ✱	T1002	30.16	SS1829826C	1.0	10	Z	Z	301A	Soil;Sandy;Brown	10726	25806	11/05/2018	N
2 9867762BKG ✱	T1003	30.43	SS1829826C	↓	10	Z	Z	301A	Soil;Sandy;Brown	10726	25806	11/05/2018	N
3 9867766 ✱	T1004	30.16	SS1829826C	↓	10	Z	Z	301A	Soil;Sandy;Rocks;Brown	10726	25806	11/05/2018	N
4 9867767 ✱	T1005	30.39	SS1829826C	↓	10	Z	Z	301A	Soil;Wet;Brown	10726	25806	11/05/2018	N
5 9872064 ✱	12T06	30.23	SS1829826C	↓	10	Z	Z	301A	Organic Matter;Soil;Rocks;Black	10726	25806	11/07/2018	N
6 9872065 ✱	12T07	30.15	SS1829826C	↓	10	Z	Z	301A	Soil;Brown	10726	25806	11/07/2018	N

TID10 Page 1705 of 6051

N/A

Bench# /	Bench# /	Bench# /	17424	
Rack ID:	/	Work Station	Hood 900	Micro Temp 100? ✓
Internal Standard	A0134880	Balance #	17609	

R-VAP ID	/ C	R-VAP ID	/ C	R-VAP ID	✓ C				
S-bath ID 5	98 C	S-bath ID	/ C	N-Evap	✓ C	M-vap	/ C	18302SLI026	

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Prep-Process Worksheet

GPC
Prep: 10813 BNA Soil Microwave APP IX
Batch: 18302SLI026

Verified: 10206 ALB 11-11-18
Start Date: 11-1-18
Start Time: 18:00
Tech 1: [illegible] 572
Tech 2:

Sample #	Vol. (mL) on	Final Conc Volume (ml)	Column ID	D.F. Aliq	D.F. F.V.	Comments
9867763MS	5	0.5	1			
9867764MSD	5	0.5	1			

	Sample #	Vol. (mL) on	Final Conc Volume (ml)	Column ID		D.F. Aliq	D.F. F.V.	Comments	Analyses
1	9867761 S	5	0.5	1	2				10726
2	9867762 S			1	2				10726
3	9867766 S			1	2				10726
4	9867767 S			1	2				10726
5	9872064 S			1	2				10726
6	9872065 S			1	2				10726

Blank
LCS
LCSP1
LCSDP1

NA [illegible] 572 11-1-18

Additional Comment: _____

DF = Dilution Factor FV = Final Volume

Solvent Used	Lot No.	Solvent Used	Lot No.
		MeCl2	187356
		MeCl2	186618

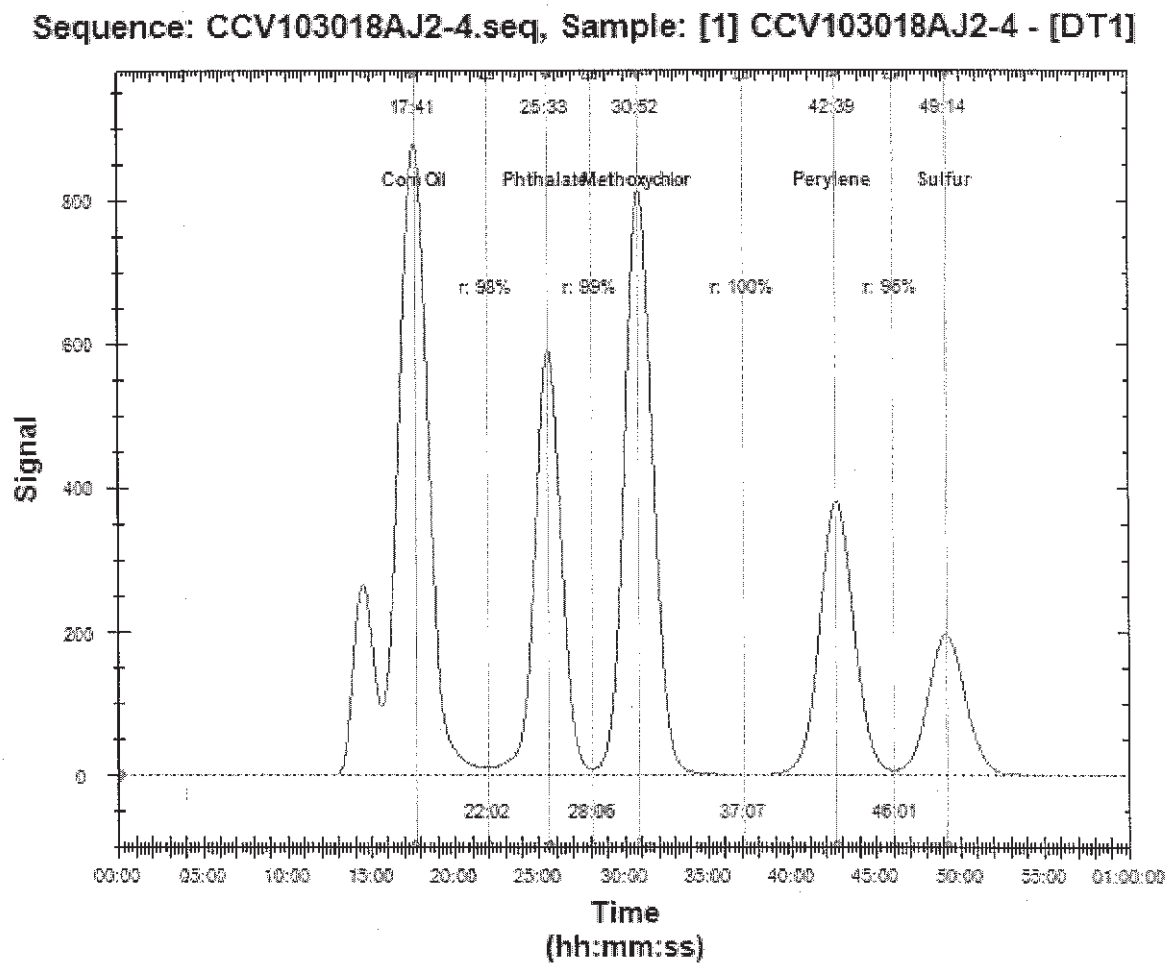
S-Evap/~~bath~~	~~C~~	S-Evap/bath	85° C	N-~~Evap~~	~~C~~

#16982

Instrument #: G2-4
Column ID #1: 112
Column ID #2:

The documented temperatures are NIST corrected.

CALIBRATION REPORT



TEMPLATE NAME : CO100

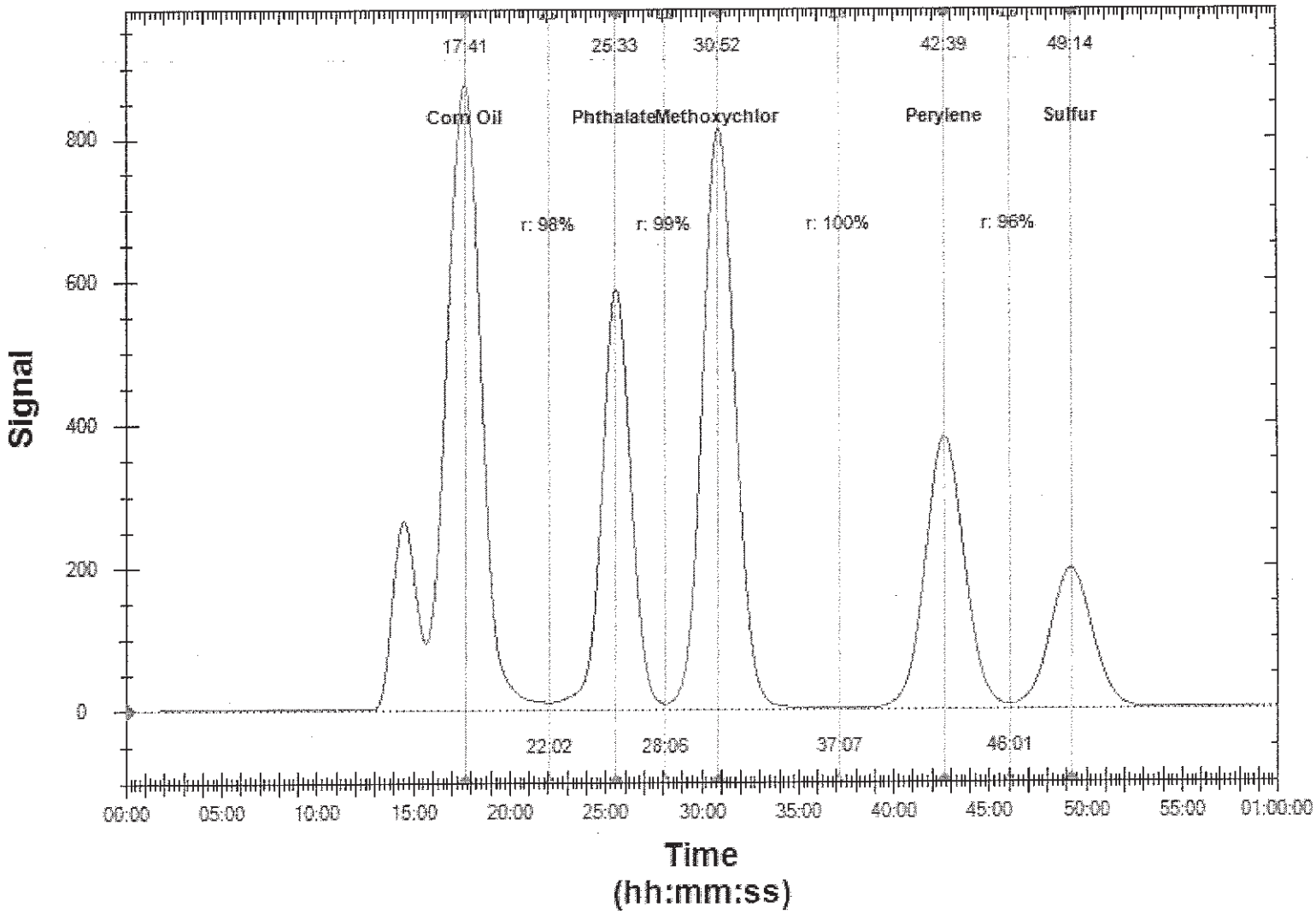
PEAK	SAMPLE	RET. TIME	SIGNAL
1	Corn Oil	17:41	879
2	Phthalate	25:33	592
3	Methoxychlor	30:52	815
4	Perylene	42:39	382
5	Sulfur	49:14	197

VALLEY	PEAKS	RES.	LIMIT	P/F
1	Corn Oil/Phthalate	98	0	P
2	Phthalate/Methoxychlor	99	0	P
3	Methoxychlor/Perylene	100	0	P
4	Perylene/Sulfur	96	0	P

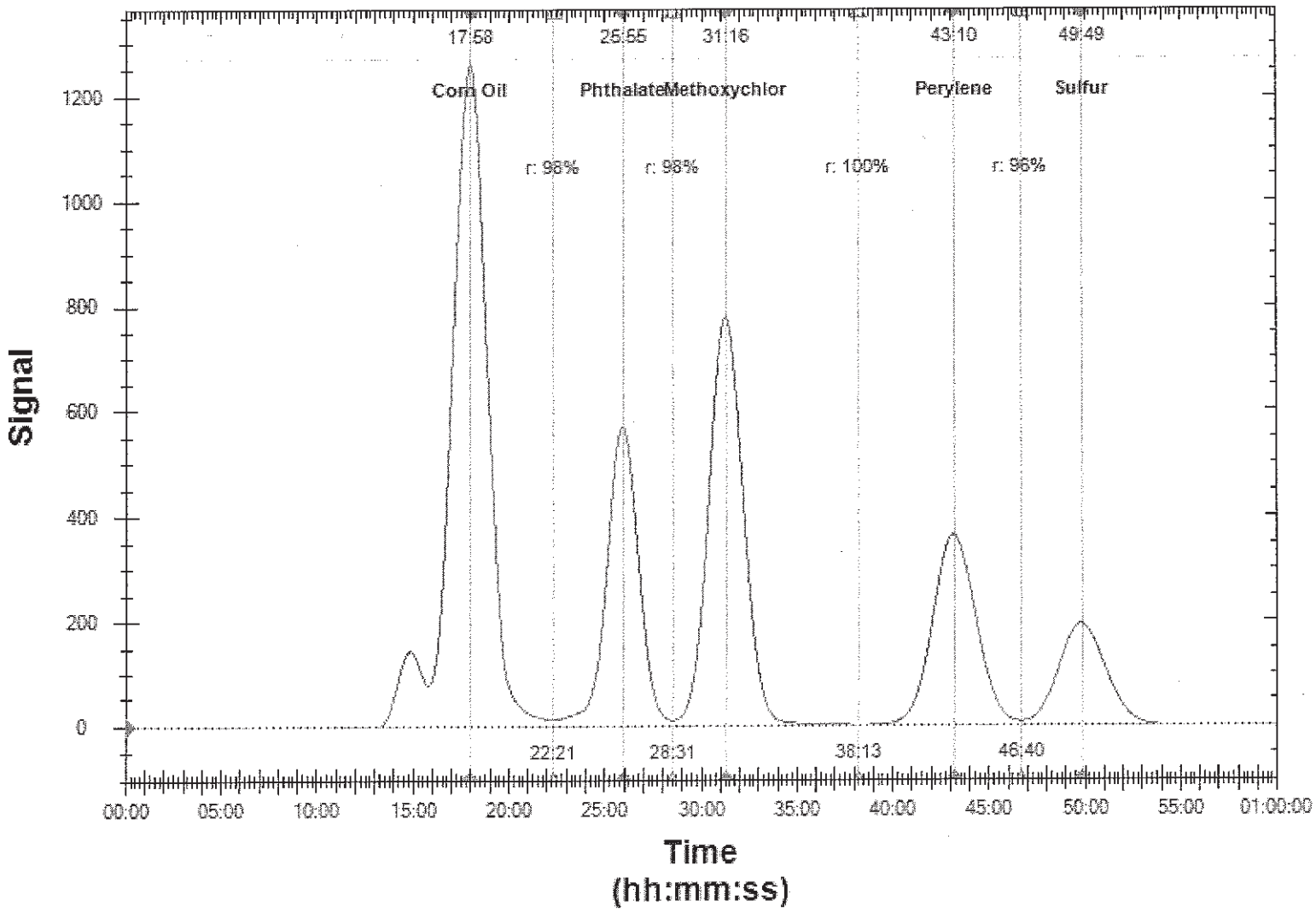
PREPARED BY: System 12/6/2018 1:33:56 PM

SAMPLE	: 1 - 1
TYPE	:
ID	: CCV103018AJ2-4
BATCH	:
START TIME	: 10/30/2018 4:45:56 PM
END TIME	: 10/30/2018 5:50:01 PM
METHOD	: Calibration.gmf
REVISION	: 3
VOLUME (uL)	: 5000
STATUS	: PROCESSED

Sequence: CCV103018AJ2-4.seq, Sample: [1] CCV103018AJ2-4 - [DT1]



Sequence: CCV101518AJ2-4.seq, Sample: [1] CCV101518AJ2-4 - [DT1]



COLUMN : Inline
SEQUENCE: CCV103018AJ2-4.SEQ, SAMPLE: [1] CCV103018AJ2-4 - [DT1]
PREPARED BY: System 12/6/2018 3:28:04 PM

METHOD : Calibration.gmf
TEMPLATE NAME : CO100

PEAK	SAMPLE	RET. TIME	SIGNAL
1	Corn Oil	17:41	879
2	Phthalate	25:33	592
3	Methoxychlor	30:52	815
4	Perylene	42:39	382
5	Sulfur	49:14	197

COLUMN : Inline
SEQUENCE: CCV101518AJ2-4.SEQ, SAMPLE: [1] CCV101518AJ2-4 - [DT1]
METHOD : Calibration.gmf
TEMPLATE NAME : CO100

PEAK	SAMPLE	RET. TIME	SIGNAL
1	Corn Oil	17:58	1263
2	Phthalate	25:55	572
3	Methoxychlor	31:16	779
4	Perylene	43:10	364
5	Sulfur	49:49	193

RESULTS

RESOLUTION RESULTS FOR SEQUENCE: CCV103018AJ2-4.SEQ, SAMPLE: [1] CCV103018AJ2-4 - [DT1]

VALLEY	PEAKS	RES.	LIMIT	P/F
1	Corn Oil/Phthalate	98	0	P
2	Phthalate/Methoxychlor	99	0	P
3	Methoxychlor/Perylene	100	0	P
4	Perylene/Sulfur	96	0	P

RESOLUTION RESULTS FOR SEQUENCE: CCV101518AJ2-4.SEQ, SAMPLE: [1] CCV101518AJ2-4 - [DT1]

VALLEY	PEAKS	RES.	LIMIT	P/F

PREPARED BY: System 12/6/2018 3:28:04 PM

TID10 Page 1711 of 6051

1	Corn Oil/Phthalate	98	0	P
2	Phthalate/Methoxychlor	98	0	P
3	Methoxychlor/Perylene	100	0	P
4	Perylene/Sulfur	96	0	P

RETENTION TIME COMPARISON

COMPOUND	RT DRIFT	RT DRIFT +/-	P/F
Corn Oil	2%	85%	P
Phthalate	1%	85%	P
Methoxychlor	1%	85%	P
Perylene	1%	85%	P
Sulfur	1%	85%	P

OVERALL RESULT: PASS

PREPARED BY: System 12/6/2018 3:28:04 PM

SEQUENCE REPORT V.2

SEQUENCE NAME : 103118AJ2-4.seq

PROCESSED BY : System

MAT NAME : ELLE.m3k

SAMPLE	STATUS	TYPE	METHOD	REV.	VOLUME (uL)	TYPE	ID
1	PROCESSED	GPC	SEMI.gmf	112	5000		BLANKA
2	PROCESSED	GPC	SEMI.gmf	112	5000		LCSA
3	PROCESSED	GPC	SEMI.gmf	112	5000		9863854 MS
4	PROCESSED	GPC	SEMI.gmf	112	5000		9863855 MSD
5	PROCESSED	GPC	SEMI.gmf	112	5000		LCSA
6	PROCESSED	GPC	SEMI.gmf	112	5000		LCSAP1
7	PROCESSED	GPC	SEMI.gmf	112	5000		LCSDAP1
8	PROCESSED	GPC	SEMI.gmf	112	5000		9863854 MS
9	PROCESSED	GPC	SEMI.gmf	112	5000		9863855 MSD
10	PROCESSED	GPC	SEMI.gmf	112	5000		9863851
11	PROCESSED	GPC	SEMI.gmf	112	5000		9863852
12	PROCESSED	GPC	SEMI.gmf	112	5000		9863853 BKG
13	PROCESSED	GPC	SEMI.gmf	112	5000		9863857
14	PROCESSED	GPC	SEMI.gmf	112	5000		9863858
15	PROCESSED	GPC	SEMI.gmf	112	5000		9866461
16	PROCESSED	GPC	SEMI.gmf	112	5000		9866462
17	PROCESSED	GPC	SEMI.gmf	112	5000		9866463
18	PROCESSED	GPC	SEMI.gmf	112	5000		9866464
19	PROCESSED	GPC	SEMI.gmf	112	5000		9866465
20	PROCESSED	GPC	SEMI.gmf	112	5000		9866466
21	PROCESSED	GPC	SEMI.gmf	112	5000		9866467
22	PROCESSED	GPC	SEMI.gmf	112	5000		9870251
23	PROCESSED	GPC	SEMI.gmf	112	5000		9870252
24	PROCESSED	GPC	SEMI.gmf	112	5000		9870253
25	PROCESSED	GPC	SEMI.gmf	112	5000		9870254
26	PROCESSED	GPC	SEMI.gmf	112	5000		9872060
27	PROCESSED	GPC	SEMI.gmf	112	5000		9872061
28	PROCESSED	GPC	SEMI.gmf	112	5000		9872062
29	PROCESSED	GPC	SEMI.gmf	112	5000		9872063
30	PROCESSED	GPC	SEMI.gmf	112	5000		SYSTEM BLANK
31	PROCESSED	GPC	SEMI.gmf	112	5000		SYSTEM BLANK
32	PROCESSED	GPC	SEMI.gmf	112	5000		BLANKA
33	PROCESSED	GPC	SEMI.gmf	112	5000		LCSA
34	PROCESSED	GPC	SEMI.gmf	112	5000		9867763 MS
35	PROCESSED	GPC	SEMI.gmf	112	5000		9867764 MSD
36	PROCESSED	GPC	SEMI.gmf	112	5000		LCSA
37	PROCESSED	GPC	SEMI.gmf	112	5000		LCSAP1
38	PROCESSED	GPC	SEMI.gmf	112	5000		LCSDAP1
39	PROCESSED	GPC	SEMI.gmf	112	5000		9867763 MS
40	PROCESSED	GPC	SEMI.gmf	112	5000		9867764 MSD
41	PROCESSED	GPC	SEMI.gmf	112	5000		9867761
42	PROCESSED	GPC	SEMI.gmf	112	5000		9867762 BKG
43	PROCESSED	GPC	SEMI.gmf	112	5000		9867766
44	PROCESSED	GPC	SEMI.gmf	112	5000		9867767

45	PROCESSED	GPC	SEMI.gmf	112	5000	9872064
46	PROCESSED	GPC	SEMI.gmf	112	5000	9872065
47	PROCESSED	GPC	SEMI.gmf	112	5000	SYSTEM BLANK
48	PROCESSED	GPC	SEMI.gmf	112	5000	SYSTEM BLANK

START TIME : 10/31/2018 2:07:10 PM
END TIME : 11/2/2018 9:29:06 PM

Organic Extraction Batchlog Assigned to: 504 Sally Appleyard

Reviewed by: WS2991 11/14/18 Start Date: 11/13/18 Start time: 19:20

18317SLB026

Tech 1: SLA-504 Tech 2: —

Dept: 26 Prep Analysis: 10813 BNA Soil Microwave APP IX SVOA 8270D (microwave)

QC	Sample Code	Amt (G)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
BLANKA	SBLKLB317	30.0	SS1829826C	1.0	—	—	10	Z	Z		Aqueous
LCSA	317LBLCS	30.0	SS1829826C	1.0	MS1829726A MS1830926A	1.0 1.0	10	Z	Z		Aqueous
LCSAP	317LBLCS	30.0	SS1829826C	1.0	~~MS1829526C~~	1.0	10	Z	Z		Aqueous
(8) LCSDA	317LBLCSD	30.0	SS1829826C	1.0	MS1829726A MS1830926A	1.0 1.0	10	Z	Z		Aqueous
LCSDAP	317LBLCSD	30.0	SS1829826C	1.0	~~MS1829526C~~	1.0	10	Z	Z		Aqueous

(8) Not enough sample for MS/MSD. SM7964 11/13/18

MS1830926A

Solvent Used	Lot No.
1:1 Methylene Chloride/Acetone	247701131B
Methylene Chloride	187901
Sodium Sulfate	183164
—	—

Spike Solutions: Witness: —

~~MS1829526C~~	APPIX MIX #1
MS1830926A	LCS SPIKE MIX #1
MS1829726A	LCS SPIKE MIX #2
SS1829826C	BNA SURROGATE STANDARD

*Split with 18317SLC026

Sample #	Sample Code	Amt (G)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1 9867761 R	T1002	30.3	SS1829826C	1.0	10	Z	Z	36A	Silty STONE	10726	25806	11/05/2018	N
2 9867762BKGR	T1003	30.0	SS1829826C	1.0	10	Z	Z	36A	Silt STONE	10726	25806	11/05/2018	N
3 9867766 R	T1004	30.2	SS1829826C	1.0	10	Z	Z	36A	Silt STONE	10726	25806	11/05/2018	N
4 9867767 R	T1005	30.0	SS1829826C	1.0	10	Z	Z	36A	Clumps	10726	25806	11/05/2018	N
(8a) ~~5 9870252 R~~	~~T1103~~	~~30.2~~	~~SS1829826C~~	~~1.0~~	~~10~~	~~Z~~	~~Z~~	~~36A~~	~~Silty STONE~~	10726	~~25806~~	~~11/06/2018~~	~~N~~
(8a) ~~6 9870254 R~~	~~T1105~~	~~30.2~~	~~SS1829826C~~	~~1.0~~	~~10~~	~~Z~~	~~Z~~	~~36A~~	~~Silt, Clumps, STONE~~	10726	~~25806~~	~~11/06/2018~~	~~N~~
(8a) ~~7 9872060 R~~	~~12T02~~	~~30.2~~	~~SS1829826C~~	~~1.0~~	~~10~~	~~Z~~	~~Z~~	~~36A~~	~~Silt, Clumps, STONE~~	10726	~~25806~~	~~11/07/2018~~	~~N~~
(8a) ~~8 9872061 R~~	~~12T03~~	~~30.0~~	~~SS1829826C~~	~~1.0~~	~~10~~	~~Z~~	~~Z~~	~~36A~~	~~Silt, Clumps~~	10726	~~25806~~	~~11/07/2018~~	~~N~~
(8a) ~~9 9872062 R~~	~~12T04~~	~~30.3~~	~~SS1829826C~~	~~1.0~~	~~10~~	~~Z~~	~~Z~~	~~36A~~	~~Silt, Clumps STONE~~	10726	~~25806~~	~~11/07/2018~~	~~N~~
(8a) ~~10 9872063 R~~	~~12T05~~	~~30.1~~	~~SS1829826C~~	~~1.0~~	~~10~~	~~Z~~	~~Z~~	~~36A~~	~~Clumps STONE~~	10726	~~25806~~	~~11/07/2018~~	~~N~~
11 9872065 R	12T07	30.0	SS1829826C	1.0	10	Z	Z	36A	Clay	10726	25806	11/07/2018	N

(3) LM 11/13/18

TID10 Page 1745 of 6041

(8a) Re-extract not needed WS 2991 11/14/18

SLA 11/13/18 N/A

Bench# ~~Bench#~~	Bench#		
Rack ID: —	Work Station	Micro	Micro Temp 100? ✓
Internal Standard A0134880	Balance #	25996	

R-VAP ID — C	R-VAP ID — C	R-VAP ID — C
S-bath ID 5 97 C	S-bath ID — C	N-Evap — C

M-vap — C

18317SLB026

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Prep-Process Worksheet

GPC
Prep: 10813 BNA Soil Microwave APP IX
Batch: 18317SLB026

Verified: HB2 11/20/18
Start Date: 11-14-18
Start Time: 12:47
Tech 1: YS72
Tech 2: EG12385

Sample #	Vol. (mL) on	Final Conc Volume (ml)	Column ID	D.F. Aliq	D.F. F.V.	Comments
~~9867763MS~~ WS	5	0.5	(1)			(1) YS72 11-14-18
~~9867764MSD~~ WSD	5	0.5	(1)			(1) YS72 11-14-18

	Sample #	Vol. (mL) on	Final Conc Volume (ml)	Column ID		D.F. Aliq	D.F. F.V.	Comments	Analyses
1	9867761 S	5	0.5	(1)	2				10726
2	9867762 S	5	0.5	(1)	2				10726
3	9867766 S	5	0.5	(1)	2				10726
4	9867767 S	5	0.5	(1)	2				10726
5	~~9870252 S~~			(8)	1 2				10726
6	~~9870254 S~~			(8)	1 2				10726
7	~~9872060 S~~			(8)	1 2				10726
8	~~9872061 S~~			(8)	1 2				10726
9	~~9872062 S~~			(8)	1 2				10726
10	~~9872063 S~~			(8)	1 2				10726
11	9872065 S	5	0.5	(1)	2				10726
	Blank	5	0.5	(8)	(1) extraction not needed WS 2951 11/14/18				

NA YS72 11-14-18

Additional Comment: NA

DF = Dilution Factor FV = Final Volume

Solvent Used	Lot No.	Solvent Used	Lot No.
		MeCl	187001

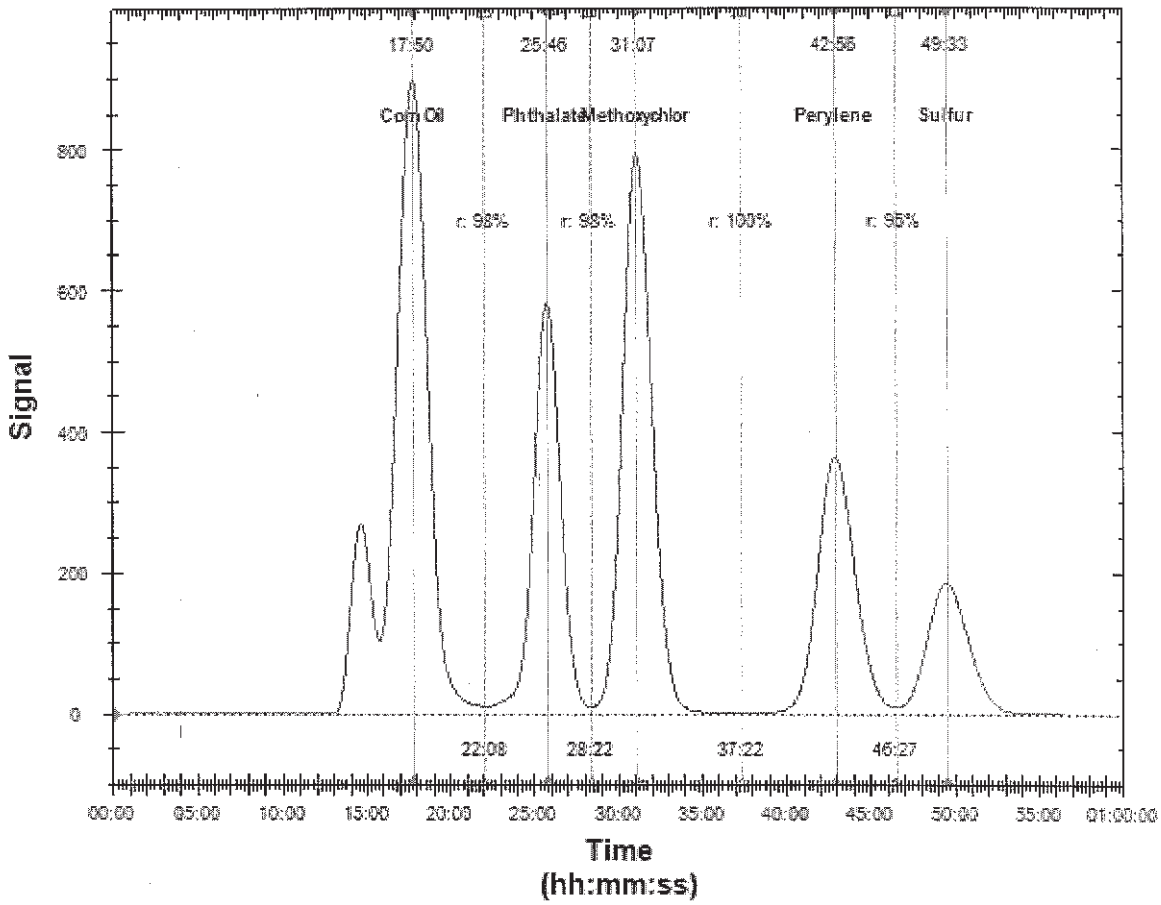
S-Evap/bath	90°C	S-Evap/bath	C	N-Evap	C

Instrument #: GZ-4
Column ID #1: 112
Column ID #2: NA

The documented temperatures are NIST corrected.

CALIBRATION REPORT

Sequence: CCV111318AJ2-4.seq, Sample: [1] CCV111318AJ2-4 - [DT1]



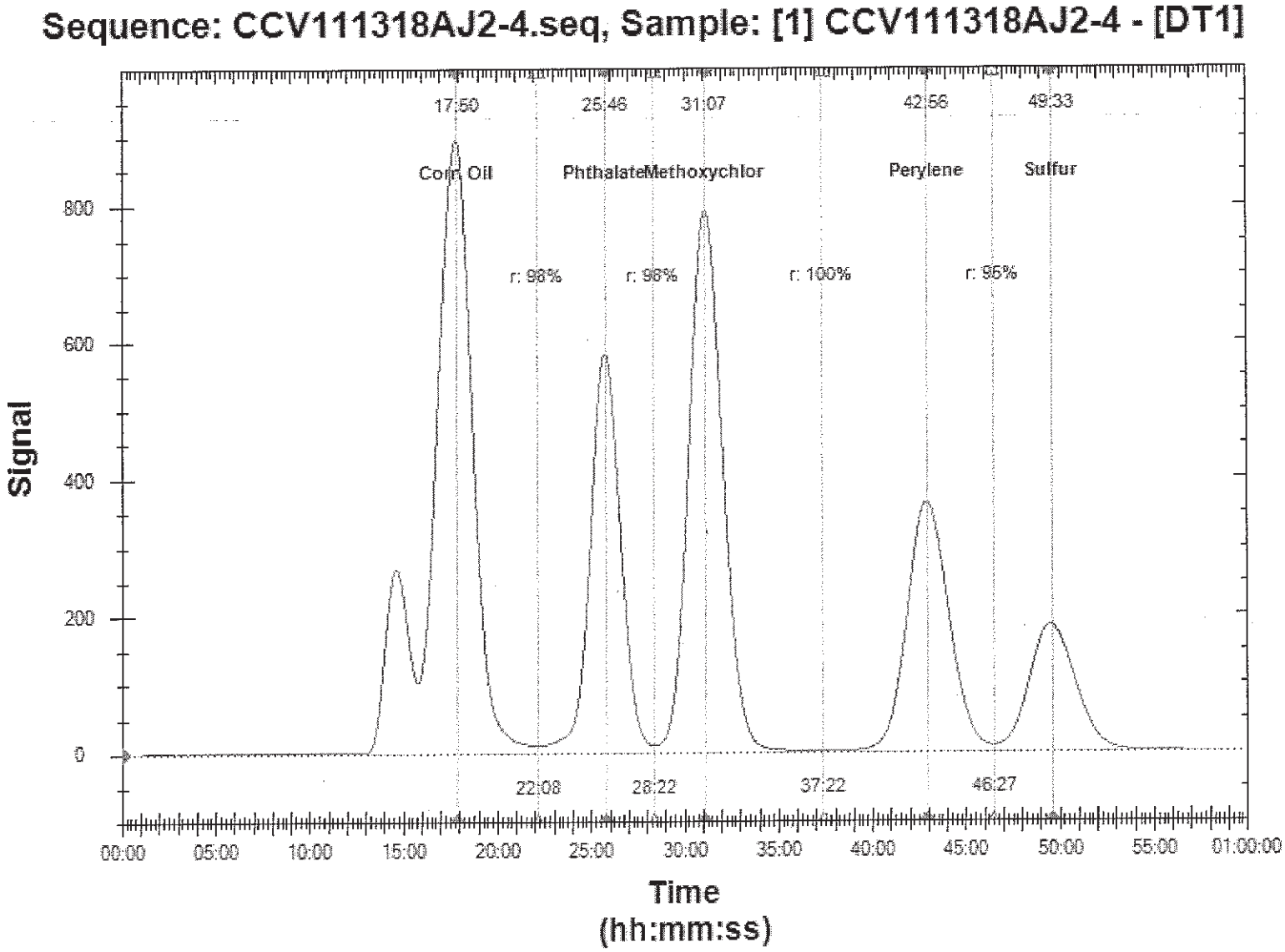
TEMPLATE NAME : CO100

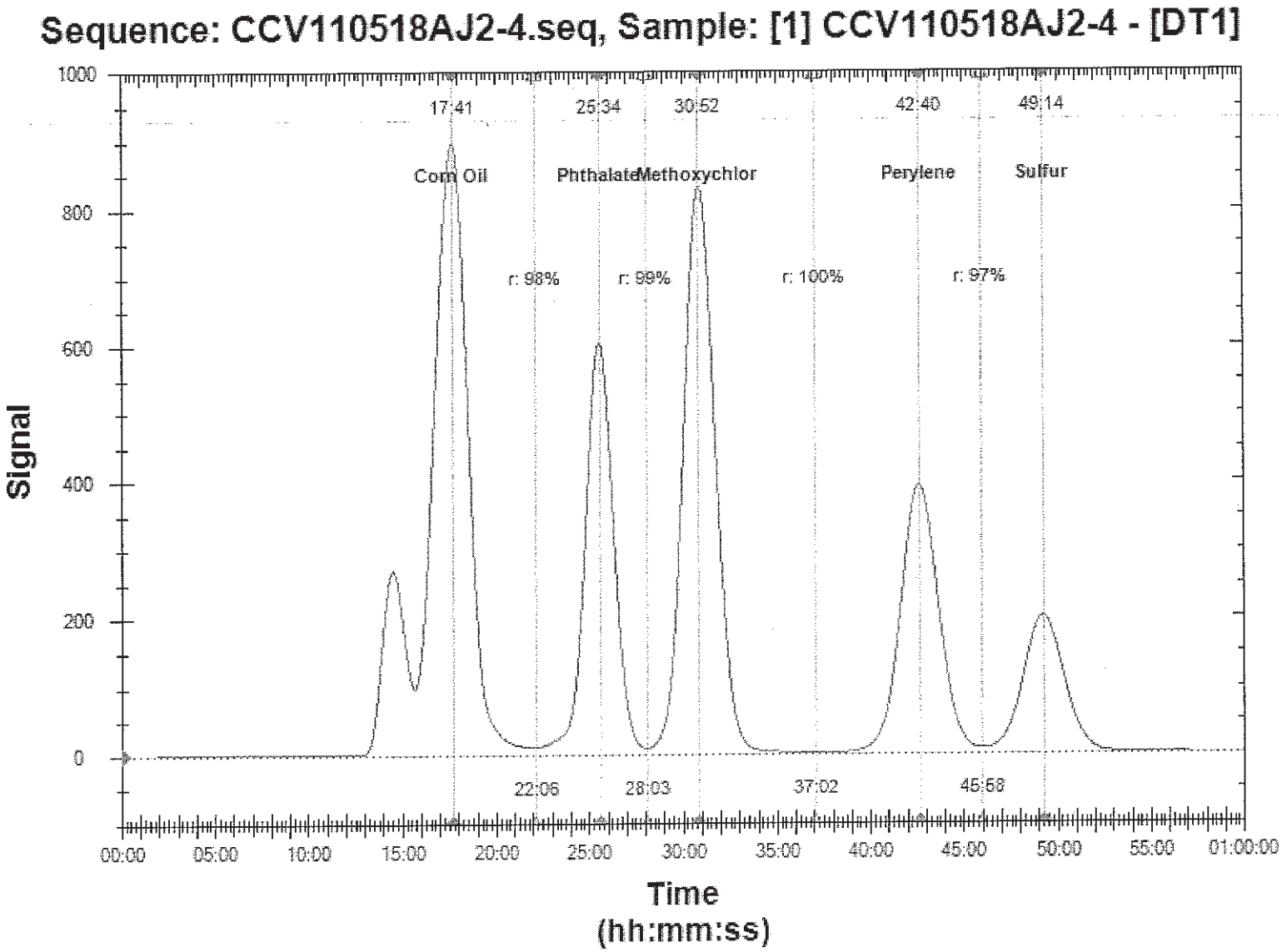
PEAK	SAMPLE	RET. TIME	SIGNAL
1	Corn Oil	17:50	898
2	Phthalate	25:46	584
3	Methoxychlor	31:07	795
4	Perylene	42:56	365
5	Sulfur	49:33	186

VALLEY	PEAKS	RES.	LIMIT	P/F
1	Corn Oil/Phthalate	98	0	P
2	Phthalate/Methoxychlor	98	0	P
3	Methoxychlor/Perylene	100	0	P
4	Perylene/Sulfur	95	0	P

PREPARED BY: System 12/6/2018 1:41:22 PM

SAMPLE	: 1 - 1
TYPE	:
ID	: CCV111318AJ2-4
BATCH	:
START TIME	: 11/13/2018 1:44:52 PM
END TIME	: 11/13/2018 2:48:55 PM
METHOD	: Calibration.gmf
REVISION	: 3
VOLUME (uL)	: 5000
STATUS	: PROCESSED


Sequence: CCV111318AJ2-4.seq, Sample: [1] CCV111318AJ2-4 - [DT1]
17:50
25:46
31:07
42:56
49:33
Corn Oil
PhthalateMethoxychlor
Perylene
Sulfur
r: 98%
r: 98%
r: 100%
r: 95%
800
600
400
200
0
Signal
22:08
28:22
37:22
46:27
00:00
05:00
10:00
15:00
20:00
25:00
30:00
35:00
40:00
45:00
50:00
55:00
01:00:00
Time
(hh:mm:ss)



COLUMN : Inline
SEQUENCE: CCV111318AJ2-4.SEQ, SAMPLE: [1] CCV111318AJ2-4 - [DT1]
PREPARED BY: System 12/6/2018 3:30:29 PM

METHOD : Calibration.gmf
TEMPLATE NAME : CO100

PEAK	SAMPLE	RET. TIME	SIGNAL
1	Corn Oil	17:50	898
2	Phthalate	25:46	584
3	Methoxychlor	31:07	795
4	Perylene	42:56	365
5	Sulfur	49:33	186

COLUMN : Inline
SEQUENCE: CCV110518AJ2-4.SEQ, SAMPLE: [1] CCV110518AJ2-4 - [DT1]
METHOD : Calibration.gmf
TEMPLATE NAME : CO100

PEAK	SAMPLE	RET. TIME	SIGNAL
1	Corn Oil	17:41	899
2	Phthalate	25:34	608
3	Methoxychlor	30:52	836
4	Perylene	42:40	393
5	Sulfur	49:14	203

RESULTS

RESOLUTION RESULTS FOR SEQUENCE: CCV111318AJ2-4.SEQ, SAMPLE: [1] CCV111318AJ2-4 - [DT1]

VALLEY	PEAKS	RES.	LIMIT	P/F
1	Corn Oil/Phthalate	98	0	P
2	Phthalate/Methoxychlor	98	0	P
3	Methoxychlor/Perylene	100	0	P
4	Perylene/Sulfur	95	0	P

RESOLUTION RESULTS FOR SEQUENCE: CCV110518AJ2-4.SEQ, SAMPLE: [1] CCV110518AJ2-4 - [DT1]

VALLEY	PEAKS	RES.	LIMIT	P/F

PREPARED BY: System 12/6/2018 3:30:29 PM

1	Corn Oil/Phthalate	98	0	P
2	Phthalate/Methoxychlor	99	0	P
3	Methoxychlor/Perylene	100	0	P
4	Perylene/Sulfur	97	0	P

RETENTION TIME COMPARISON

COMPOUND	RT DRIFT	RT DRIFT +/-	P/F
Corn Oil	1%	85%	P
Phthalate	1%	85%	P
Methoxychlor	1%	85%	P
Perylene	1%	85%	P
Sulfur	1%	85%	P

OVERALL RESULT: PASS

SEQUENCE REPORT V.2

SEQUENCE NAME : 111418AJ2-4.seq

PROCESSED BY : System

MAT NAME : ELLE.m3k

SAMPLE	STATUS	TYPE	METHOD	REV.	VOLUME (uL)	TYPE	ID
1	PROCESSED	GPC	SEMI.gmf	114	5000		BLANKA
2	PROCESSED	GPC	SEMI.gmf	114	5000		LCSA
3	PROCESSED	GPC	SEMI.gmf	114	5000		LCSA
4	PROCESSED	GPC	SEMI.gmf	114	5000		LCSDA
5	PROCESSED	GPC	SEMI.gmf	114	5000		LCSAP1
6	PROCESSED	GPC	SEMI.gmf	114	5000		LCSDAP1
7	PROCESSED	GPC	SEMI.gmf	114	5000		9867763 MS
8	PROCESSED	GPC	SEMI.gmf	114	5000		9867764 MSD
9	PROCESSED	GPC	SEMI.gmf	114	5000		9867761
10	PROCESSED	GPC	SEMI.gmf	114	5000		9867762
11	PROCESSED	GPC	SEMI.gmf	114	5000		9867766
12	PROCESSED	GPC	SEMI.gmf	114	5000		9867767
13	PROCESSED	GPC	SEMI.gmf	114	5000		9872065
14	PROCESSED	GPC	SEMI.gmf	114	5000		SYSTEM BLANK
15	PROCESSED	GPC	SEMI.gmf	114	5000		SYSTEM BLANK

START TIME : 11/14/2018 12:46:47 PM
END TIME : 11/15/2018 6:06:41 AM

Semivolatiles by GC/MS-SIM Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS-SIM

eurofins | Lancaster Laboratories Environmental

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID10

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS-SIM

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9867761	OU2-1-SS004		X	1	
9867762	OU2-1-SS006		X	50; 10; 1	Unspiked
9867763	OU2-1-SS006 MS		X	1	Matrix Spike
9867764	OU2-1-SS006 MSD		X	1	Matrix Spike Duplicate
9867766	OU2-1-SS002		X	1	
9867767	OU2-1-SS008		X	1; 10; 1	

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

(Sample number(s): 9867761-9867764, 9867766, 9867767: Analysis: 12969)
The SECC exceeded the +/- 50% of the expected value from
the ICAL. Sample and the SECC were reanalyzed and the SECC was once again
outside client requirements which indicates a matrix effect.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Method Blank

For noncompliant preparation/method blanks, corrective action is not required if the sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

(Sample number(s): 9867761-9867764, 9867766, 9867767: Analysis: 12969)
Target analytes were detected in the method blank associated with the

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID10

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS-SIM

samples as noted on the QC Summary. The following action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from both trials.

LCS/LCSD

Batch#: 18317SLC026 (Sample number(s): 9867761-9867764, 9867766-9867767, UNSPK: 9867762)
The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: 1,4-Dioxane

Batch#: 18302SLH026 (Sample number(s): 9867761-9867764, 9867766-9867767, UNSPK: 9867762)
The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: 1,4-Dioxane

(Sample number(s): 9867761-9867764, 9867766, 9867767: Analysis: 12969)
The stated QC limits for 1,4-dioxane are advisory only until sufficient data points can be obtained to calculate statistical limits.

MS/MSD

Batch#: 18302SLH026 (Sample number(s): 9867761-9867764, 9867766-9867767, UNSPK: 9867762)
The relative percent difference(s) for the following analyte(s) in the MS/MSD is outside the acceptance window: 1,4-Dioxane, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, bis(2-Ethylhexyl)phthalate, Chrysene, Di-n-butylphthalate, Fluoranthene, Indeno(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, Pyrene

The recovery(ies) for the following analyte(s) in the MS were below the acceptance window: 1,4-Dioxane, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Dibenz(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, Pyrene

The recovery(ies) for the following analyte(s) in the MSD exceeded the acceptance window indicating a positive bias:Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Fluoranthene, Naphthalene, Phenanthrene, Pyrene

The recovery(ies) for the following analyte(s) in the MS and MSD were below the acceptance window: Benzo(g,h,i)perylene, Di-n-butylphthalate
The recovery(ies) for the following analyte(s) in the MS and MSD exceeded the acceptance window indicating a positive bias: bis(2-Ethylhexyl)phthalate

Batch#: 18317SLC026 (Sample number(s): 9867761-9867764, 9867766-9867767, UNSPK: 9867762)
The relative percent difference(s) for the following analyte(s) in the MS/MSD is outside the acceptance window: Anthracene, bis(2-Ethylhexyl)phthalate, Di-n-butylphthalate, Fluorene, Naphthalene

eurofins | Lancaster Laboratories Environmental

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID10

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS-SIM

The recovery(ies) for the following analyte(s) in the MS were below the acceptance window: 1,4-Dioxane, Benzo(g,h,i)perylene

The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: Di-n-butylphthalate

The recovery(ies) for the following analyte(s) in the MSD were below the acceptance window: bis(2-Ethylhexyl)phthalate, Di-n-butylphthalate

The recovery(ies) for the following analyte(s) in the MSD exceeded the acceptance window indicating a positive bias:Naphthalene

The recovery(ies) for the following analyte(s) in the MS and MSD exceeded the acceptance window indicating a positive bias: Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Fluoranthene, Phenanthrene, Pyrene

SAMPLE ANALYSIS:

(Sample number(s): 9867767: Analysis: 12969)
Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken:
The sample was re-analyzed and internal standard areas are again outside of the QC acceptance limits, indicating a matrix effect.
The reported data is from both trials.

No other problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Semivolatiles by GC/MS-SIM

eurofins | Lancaster Laboratories Environmental

Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Tidewater, Inc.
SDG: TID10

Fraction: Semivolatiles by GC/MS-SIM

Analysis	Batch Number	Sample Number	Analysis Date
SIM SVOAs 8270D (microwave)	18302SLH026	SBLKLH302	11/07/2018 18:15
		302LHLCS	11/07/2018 19:46
		9867761	11/07/2018 20:15
		9867762 UNSPK	11/07/2018 20:45
		9867762DL UNSPK	11/08/2018 10:03
		9867762DL2 UNSPK	11/08/2018 17:03
		9867763 MS	11/07/2018 21:15
		9867764 MSD	11/07/2018 21:45
		9867766	11/08/2018 11:34
		9867767	11/07/2018 22:44
		9867767DL	11/08/2018 12:35
		9867767RE	11/08/2018 12:05
SIM SVOAs 8270D (microwave)	18317SLC026	SBLKLC317	11/16/2018 07:21
		317LCLCS	11/16/2018 07:51
		9867761RE	11/16/2018 08:22
		9867762RE UNSPK	11/16/2018 10:26
		9867762RE MS	11/16/2018 10:57
		9867762RE MSD	11/16/2018 11:28
		9867763RE MS	11/16/2018 10:57
		9867764RE MSD	11/16/2018 11:28
		9867766RE	11/16/2018 08:53
		9867767RE2	11/16/2018 09:24

Fraction: Semivolatiles by GC/MS-SIM

18302SLH026 / SBLKLH302 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
1,4-Dioxane	11/07/18	N.D.	mg/kg	0.0007	0.001	0.002
Acenaphthene	11/07/18	0.002	mg/kg	0.0007	0.001	0.002
Acenaphthylene	11/07/18	N.D.	mg/kg	0.0003	0.001	0.002
Anthracene	11/07/18	0.0007 J	mg/kg	0.0007	0.001	0.002
Benzo(a)anthracene	11/07/18	N.D.	mg/kg	0.0007	0.001	0.002
Benzo(a)pyrene	11/07/18	N.D.	mg/kg	0.0007	0.001	0.002
Benzo(b)fluoranthene	11/07/18	N.D.	mg/kg	0.0007	0.001	0.002
Benzo(g,h,i)perylene	11/07/18	N.D.	mg/kg	0.0007	0.001	0.002
Benzo(k)fluoranthene	11/07/18	N.D.	mg/kg	0.0007	0.001	0.002
Di-n-butylphthalate	11/07/18	N.D.	mg/kg	0.007	0.013	0.020
Chrysene	11/07/18	N.D.	mg/kg	0.0003	0.001	0.002
Dibenz(a,h)anthracene	11/07/18	N.D.	mg/kg	0.0007	0.001	0.002
bis(2-Ethylhexyl)phthalate	11/07/18	N.D.	mg/kg	0.010	0.020	0.023
Fluoranthene	11/07/18	N.D.	mg/kg	0.0007	0.001	0.002
Fluorene	11/07/18	0.002	mg/kg	0.0007	0.001	0.002
Indeno(1,2,3-cd)pyrene	11/07/18	N.D.	mg/kg	0.0007	0.001	0.002
Naphthalene	11/07/18	0.031	mg/kg	0.001	0.003	0.003
Phenanthrene	11/07/18	0.003	mg/kg	0.0007	0.001	0.002
Pyrene	11/07/18	N.D.	mg/kg	0.0007	0.001	0.002

18317SLC026 / SBLKLC317 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
1,4-Dioxane	11/16/18	N.D.	mg/kg	0.0007	0.001	0.002
Acenaphthene	11/16/18	N.D.	mg/kg	0.0007	0.001	0.002
Acenaphthylene	11/16/18	0.0003 J	mg/kg	0.0003	0.001	0.002
Anthracene	11/16/18	N.D.	mg/kg	0.0007	0.001	0.002
Benzo(a)anthracene	11/16/18	N.D.	mg/kg	0.0007	0.001	0.002
Benzo(a)pyrene	11/16/18	N.D.	mg/kg	0.0007	0.001	0.002
Benzo(b)fluoranthene	11/16/18	N.D.	mg/kg	0.0007	0.001	0.002
Benzo(g,h,i)perylene	11/16/18	N.D.	mg/kg	0.0007	0.001	0.002
Benzo(k)fluoranthene	11/16/18	N.D.	mg/kg	0.0007	0.001	0.002
Di-n-butylphthalate	11/16/18	N.D.	mg/kg	0.007	0.013	0.020
Chrysene	11/16/18	N.D.	mg/kg	0.0003	0.001	0.002
Dibenz(a,h)anthracene	11/16/18	N.D.	mg/kg	0.0007	0.001	0.002
bis(2-Ethylhexyl)phthalate	11/16/18	0.018 J	mg/kg	0.010	0.020	0.023
Fluoranthene	11/16/18	N.D.	mg/kg	0.0007	0.001	0.002
Fluorene	11/16/18	N.D.	mg/kg	0.0007	0.001	0.002
Indeno(1,2,3-cd)pyrene	11/16/18	N.D.	mg/kg	0.0007	0.001	0.002
Naphthalene	11/16/18	N.D.	mg/kg	0.001	0.003	0.003
Phenanthrene	11/16/18	N.D.	mg/kg	0.0007	0.001	0.002
Pyrene	11/16/18	N.D.	mg/kg	0.0007	0.001	0.002

Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: TID10
Matrix: SOLID

Fraction: Semivolatiles by GC/MS-SIM

18302SLH026	1-Methylnaphthalene-d10		Benzo(a)pyrene-d12		Fluoranthene-d10	
	Spike Added	0.033333 mg/kg	Spike Added	0.033333 mg/kg	Spike Added	0.033333 mg/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKLH302	88	61 - 111	84	54 - 122	88	54 - 122
302LHLCS	85	61 - 111	82	54 - 122	86	54 - 122
9867761	83	61 - 111	71	54 - 122	81	54 - 122
9867762 UNSPK	77	61 - 111	65	54 - 122	73	54 - 122
9867762DL UNSPK	93	61 - 111	66	54 - 122	90	54 - 122
9867762DL2 UNSPK	96	61 - 111	71	54 - 122	90	54 - 122
9867763 MS	80	61 - 111	61	54 - 122	73	54 - 122
9867764 MSD	73	61 - 111	55	54 - 122	82	54 - 122
9867766	84	61 - 111	69	54 - 122	82	54 - 122
9867767	76	61 - 111	70	54 - 122	67	54 - 122
9867767DL	85	61 - 111	70	54 - 122	83	54 - 122
9867767RE	75	61 - 111	71	54 - 122	90	54 - 122

18317SLC026	1-Methylnaphthalene-d10		Benzo(a)pyrene-d12		Fluoranthene-d10	
	Spike Added	0.033333 mg/kg	Spike Added	0.033333 mg/kg	Spike Added	0.033333 mg/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKLC317	107	61 - 111	96	54 - 122	107	54 - 122
317LCLCS	94	61 - 111	82	54 - 122	90	54 - 122
9867761RE	79	61 - 111	62	54 - 122	73	54 - 122
9867762RE UNSPK	80	61 - 111	62	54 - 122	83	54 - 122
9867762RE MS	86	61 - 111	69	54 - 122	91	54 - 122
9867762RE MSD	92	61 - 111	70	54 - 122	83	54 - 122
9867763RE MS	86	61 - 111	69	54 - 122	91	54 - 122
9867764RE MSD	92	61 - 111	70	54 - 122	83	54 - 122
9867766RE	97	61 - 111	70	54 - 122	83	54 - 122
9867767RE2	68	61 - 111	58	54 - 122	84	54 - 122

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS-SIM

UNSPK: 9867762 MS: 9867763 MSD: 9867764 **Analyte**	Batch: **18302SLH026** (Sample number(s): 9867761-9867764, 9867766-9867767)								
	Spike Added mg/kg MS/MSD	**Unspiked Conc mg/kg**	**MS Conc mg/kg**	**MSD Conc mg/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	0.0332 / 0.0330	0.00710	0.0279	0.0384	63 *	95	70-130	32 *	30
Acenaphthene	0.0332 / 0.0330	0.0104	0.0326	0.0377	67	83	44-111	15	20
Acenaphthylene	0.0332 / 0.0330	0.0121	0.0285	0.0274	49	47	39-116	4	20
Anthracene	0.0332 / 0.0330	0.0299	0.0426	0.0731	38 *	131 *	50-114	53 *	20
Benzo(a)anthracene	0.0332 / 0.0330	0.138	0.151	0.208	38 (2)	211 (2)	54-122	32 *	20
Benzo(a)pyrene	0.0332 / 0.0330	0.160	0.165	0.211	13 (2)	153 (2)	50-125	25 *	20
Benzo(b)fluoranthene	0.0332 / 0.0330	0.364	0.382	0.539	56 (2)	530 (2)	53-128	34 *	20
Benzo(g,h,i)perylene	0.0332 / 0.0330	0.0728	0.0720	0.0883	-2 *	47 *	49-127	20	20
Benzo(k)fluoranthene	0.0332 / 0.0330	0.154	0.183	0.251	86 (2)	294 (2)	56-123	31 *	20
bis(2-Ethylhexyl)phthalate	0.0332 / 0.0330	0.195	0.345	0.257	453 (2)	190 (2)	67-150	29 *	20
Chrysene	0.0332 / 0.0330	0.216	0.197	0.306	-58 (2)	271 (2)	57-118	43 *	20
Dibenz(a,h)anthracene	0.0332 / 0.0330	0.0252	0.0398	0.0458	44 *	62	50-129	14	20
Di-n-butylphthalate	0.0332 / 0.0330	4.47	1.93	2.56	-7623 (2)	-5771 (2)	68-145	28 *	20
Fluoranthene	0.0332 / 0.0330	0.297	0.265	0.493	-96 (2)	593 (2)	55-119	60 *	20
Fluorene	0.0332 / 0.0330	0.0123	0.0353	0.0397	69	83	47-114	12	20
Indeno(1,2,3-cd)pyrene	0.0332 / 0.0330	0.0756	0.0773	0.100	5 *	74	49-130	26 *	20
Naphthalene	0.0332 / 0.0330	0.202	0.235	0.371	98 (2)	510 (2)	38-111	45 *	20
Phenanthrene	0.0332 / 0.0330	0.166	0.156	0.359	-31 (2)	582 (2)	49-113	79 *	20
Pyrene	0.0332 / 0.0330	0.272	0.256	0.403	-48 (2)	396 (2)	55-117	45 *	20

UNSPK: 9867762RE MS: 9867762RE MSD: 9867762RE **Analyte**	Batch: **18317SLC026** (Sample number(s): 9867761-9867764, 9867766-9867767)								
	Spike Added mg/kg	**Unspiked Conc mg/kg**	**MS Conc mg/kg**	**MSD Conc mg/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	0.0495	0.00359	0.0336	0.0426	61 *	79	70-130	24	30
Acenaphthene	0.0495	0.00609	0.0501	0.0531	89	95	44-111	6	20
Acenaphthylene	0.0495	0.0154	0.0575	0.0528	85	76	39-116	9	20
Anthracene	0.0495	0.0352	0.115	0.0929	162 *	117 *	50-114	22 *	20
Benzo(a)anthracene	0.0495	0.155	0.255	0.271	203 *	234 *	54-122	6	20
Benzo(a)pyrene	0.0495	0.160	0.260	0.261	202 *	203 *	50-125	0	20
Benzo(b)fluoranthene	0.0495	0.291	0.492	0.455	407 (2)	332 (2)	53-128	8	20
Benzo(g,h,i)perylene	0.0495	0.0869	0.109	0.117	45 *	61	49-127	7	20
Benzo(k)fluoranthene	0.0495	0.116	0.228	0.196	228 *	163 *	56-123	15	20
bis(2-Ethylhexyl)phthalate	0.0495	0.337	0.398	0.264	122 (2)	-146 (2)	67-150	40 *	20
Chrysene	0.0495	0.194	0.300	0.309	212 *	231 *	57-118	3	20
Dibenz(a,h)anthracene	0.0495	0.0310	0.0647	0.0684	68	75	50-129	5	20
Di-n-butylphthalate	0.0495	2.35	5.07	1.86	5490 (2)	-997 (2)	68-145	93 *	20

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS-SIM

UNSPK: 9867762RE MS: 9867762RE MSD: 9867762RE **Analyte**	Batch: **18317SLC026** (Sample number(s): 9867761-9867764, 9867766-9867767)								
	Spike Added mg/kg	**Unspiked Conc mg/kg**	**MS Conc mg/kg**	**MSD Conc mg/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Fluoranthene	0.0495	0.278	0.473	0.434	395 (2)	315 (2)	55-119	9	20
Fluorene	0.0495	0.00963	0.0562	0.0458	94	73	47-114	21 *	20
Indeno(1,2,3-cd)pyrene	0.0495	0.0955	0.129	0.137	68	85	49-130	6	20
Naphthalene	0.0495	0.166	0.214	0.296	96	261 *	38-111	32 *	20
Phenanthrene	0.0495	0.153	0.281	0.277	258 *	250 *	49-113	1	20
Pyrene	0.0495	0.249	0.418	0.437	342 (2)	379 (2)	55-117	4	20

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS-SIM

LCS: 302LHLCS	Batch: **18302SLH026** (Sample number(s): 9867761-9867764, 9867766-9867767)							
Analyte	**Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	0.0333	0.0228	NA	69 *	NA	70-130	NA	NA
Acenaphthene	0.0333	0.0342	NA	103	NA	44-111	NA	NA
Acenaphthylene	0.0333	0.0277	NA	83	NA	39-116	NA	NA
Anthracene	0.0333	0.0307	NA	92	NA	50-114	NA	NA
Benzo(a)anthracene	0.0333	0.0301	NA	90	NA	54-122	NA	NA
Benzo(a)pyrene	0.0333	0.0327	NA	98	NA	50-125	NA	NA
Benzo(b)fluoranthene	0.0333	0.0339	NA	102	NA	53-128	NA	NA
Benzo(g,h,i)perylene	0.0333	0.0324	NA	97	NA	49-127	NA	NA
Benzo(k)fluoranthene	0.0333	0.0326	NA	98	NA	56-123	NA	NA
bis(2-Ethylhexyl)phthalate	0.0333	0.0392	NA	118	NA	67-150	NA	NA
Chrysene	0.0333	0.0315	NA	94	NA	57-118	NA	NA
Dibenz(a,h)anthracene	0.0333	0.0320	NA	96	NA	50-129	NA	NA
Di-n-butylphthalate	0.0333	0.0371	NA	111	NA	68-145	NA	NA
Fluoranthene	0.0333	0.0311	NA	93	NA	55-119	NA	NA
Fluorene	0.0333	0.0302	NA	91	NA	47-114	NA	NA
Indeno(1,2,3-cd)pyrene	0.0333	0.0319	NA	96	NA	49-130	NA	NA
Naphthalene	0.0333	0.0367	NA	110	NA	38-111	NA	NA
Phenanthrene	0.0333	0.0312	NA	94	NA	49-113	NA	NA
Pyrene	0.0333	0.0301	NA	90	NA	55-117	NA	NA

LCS: 317LCLCS	Batch: **18317SLC026** (Sample number(s): 9867761-9867764, 9867766-9867767)							
Analyte	**Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	0.0333	0.0224	NA	67 *	NA	70-130	NA	NA
Acenaphthene	0.0333	0.0300	NA	90	NA	44-111	NA	NA
Acenaphthylene	0.0333	0.0284	NA	85	NA	39-116	NA	NA
Anthracene	0.0333	0.0295	NA	88	NA	50-114	NA	NA
Benzo(a)anthracene	0.0333	0.0308	NA	92	NA	54-122	NA	NA
Benzo(a)pyrene	0.0333	0.0315	NA	95	NA	50-125	NA	NA
Benzo(b)fluoranthene	0.0333	0.0305	NA	92	NA	53-128	NA	NA
Benzo(g,h,i)perylene	0.0333	0.0296	NA	89	NA	49-127	NA	NA
Benzo(k)fluoranthene	0.0333	0.0308	NA	92	NA	56-123	NA	NA
bis(2-Ethylhexyl)phthalate	0.0333	0.0437	NA	131	NA	67-150	NA	NA
Chrysene	0.0333	0.0291	NA	87	NA	57-118	NA	NA
Dibenz(a,h)anthracene	0.0333	0.0331	NA	99	NA	50-129	NA	NA
Di-n-butylphthalate	0.0333	0.0396	NA	119	NA	68-145	NA	NA
Fluoranthene	0.0333	0.0287	NA	86	NA	55-119	NA	NA
Fluorene	0.0333	0.0294	NA	88	NA	47-114	NA	NA
Indeno(1,2,3-cd)pyrene	0.0333	0.0325	NA	98	NA	49-130	NA	NA
Naphthalene	0.0333	0.0287	NA	86	NA	38-111	NA	NA
Phenanthrene	0.0333	0.0288	NA	87	NA	49-113	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS-SIM

LCS: 317LCLCS	Batch: **18317SLC026** (Sample number(s): 9867761-9867764, 9867766-9867767)							
Analyte	**Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Pyrene	0.0333	0.0293	NA	88	NA	55-117	NA	NA

Fraction: Semivolatiles by GC/MS-SIM

12969: SIM SVOAs 8270D (microwave) Analyte Name	Default DL	Default LOD	Default LOQ	Units
1,4-Dioxane	0.0007	0.001	0.002	mg/kg
Naphthalene	0.001	0.003	0.003	mg/kg
Acenaphthylene	0.0003	0.001	0.002	mg/kg
Acenaphthene	0.0007	0.001	0.002	mg/kg
Fluorene	0.0007	0.001	0.002	mg/kg
Phenanthrene	0.0007	0.001	0.002	mg/kg
Anthracene	0.0007	0.001	0.002	mg/kg
Di-n-butylphthalate	0.007	0.013	0.020	mg/kg
Fluoranthene	0.0007	0.001	0.002	mg/kg
Pyrene	0.0007	0.001	0.002	mg/kg
Benzo(a)anthracene	0.0007	0.001	0.002	mg/kg
Chrysene	0.0003	0.001	0.002	mg/kg
bis(2-Ethylhexyl)phthalate	0.010	0.020	0.023	mg/kg
Benzo(b)fluoranthene	0.0007	0.001	0.002	mg/kg
Benzo(k)fluoranthene	0.0007	0.001	0.002	mg/kg
Benzo(a)pyrene	0.0007	0.001	0.002	mg/kg
Indeno(1,2,3-cd)pyrene	0.0007	0.001	0.002	mg/kg
Dibenz(a,h)anthracene	0.0007	0.001	0.002	mg/kg
Benzo(g,h,i)perylene	0.0007	0.001	0.002	mg/kg

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: cj0280d.d DFTPP Injection Date: 10/06/18

Instrument ID: HP10623 DFTPP Injection Time: 23:06

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	43.5
68	Less than 2.0% of mass 69	0.76 (1.76)1
69	Mass 69 relative abundance	43.2
70	Less than 2.0% of mass 69	0.21 (0.49)1
127	10.0 - 80.00% of mass 198	55.9
197	Less than 2.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.86
275	10.0 - 60.0% of mass 198	18.5
365	Greater than 1.00% of mass 198	1.74
441	Present, and less than mass 443	8.0
442	Greater than 50.00% of mass 198	55.3
443	15.00 - 24.00% of mass 442	11.3 (20.4)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SIM2598 - SSTD.5	cj0281d.d	10/06/18	23:27
02	SIM2598 - SSTD10	cj0282d.d	10/07/18	00:04
03	SIM2598 - SSTD5	cj0283d.d	10/07/18	00:35
04	SIM2598 - SSTD1	cj0284d.d	10/07/18	01:07
05	SIM2598 - SSTD.2	cj0285d.d	10/07/18	01:39
06	SIM2598 - SSTD.05	cj0286d.d	10/07/18	02:10
07	SIM2598 - SSTD.01	cj0287d.d	10/07/18	02:42
08	SIM2598 - SSTD0.005	cj0289d.d	10/07/18	03:45
09	SICV1908 - SSTD001	cj0290d.d	10/07/18	04:16

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ck0700.d DFTPP Injection Date: 11/16/18

Instrument ID: HP10623 DFTPP Injection Time: 05:01

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	33.4
68	Less than 2.0% of mass 69	0.65 (1.87)1
69	Mass 69 relative abundance	34.6
70	Less than 2.0% of mass 69	0.18 (0.51)1
127	10.0 - 80.00% of mass 198	48.4
197	Less than 2.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.71
275	10.0 - 60.0% of mass 198	23.0
365	Greater than 1.00% of mass 198	2.12
441	Present, and less than mass 443	11.9
442	Greater than 50.00% of mass 198	81.8
443	15.00 - 24.00% of mass 442	15.6 (19.1)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SIM2598 - SSTD1	ck0701a.d	11/16/18	05:58
02	SBLKLC317	ck0702.d	11/16/18	07:21
03	317LCLCS	ck0703.d	11/16/18	07:51
04	9867761RE	ck0704.d	11/16/18	08:22
05	9867766RE	ck0705.d	11/16/18	08:53
06	9867767RE2	ck0706.d	11/16/18	09:24
07	9872065RE	ck0707.d	11/16/18	09:55
08	9867762RE	ck0708.d	11/16/18	10:26
09	9867763RE	ck0709.d	11/16/18	10:57
10	9867764MSDSD	ck0710.d	11/16/18	11:28
11	SIM2598	ck0711.d	11/16/18	11:59

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ii0100f.d DFTPP Injection Date: 09/04/18

Instrument ID: HP10976 DFTPP Injection Time: 19:19

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	53.6
68	Less than 2.0% of mass 69	0.66 (0.95)1
69	Mass 69 relative abundance	69.5
70	Less than 2.0% of mass 69	0.99 (1.43)1
127	10.0 - 80.00% of mass 198	51.1
197	Less than 2.0% of mass 198	0.57
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.74
275	10.0 - 60.0% of mass 198	29.4
365	Greater than 1.00% of mass 198	4.58
441	Present, and less than mass 443	4.71
442	Greater than 50.00% of mass 198	66.7
443	15.00 - 24.00% of mass 442	13.0 (19.5)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SIM1288 - SSTD1	ii0101.d	09/04/18	19:41
02	SIM1288 - SSTD10	ii0102.d	09/04/18	20:12
03	SIM1288 - SSTD5	ii0103.d	09/04/18	20:43
04	SIM1288 - SSTD.5	ii0104.d	09/04/18	21:14
05	SIM1288 - SSTD.2	ii0105.d	09/04/18	21:45
06	SIM1288 - SSTD.05	ii0106.d	09/04/18	22:16
07	SIM1288 - SSTD.01	ii0107.d	09/04/18	22:47
08	SIM1288 - SSTD0.005	ii0109.d	09/04/18	23:49
09	SICV1908 - SSTD001	ii0110.d	09/05/18	00:19

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ik0300.d DFTPP Injection Date: 11/07/18

Instrument ID: HP10976 DFTPP Injection Time: 17:14

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	37.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	47.4
70	Less than 2.0% of mass 69	0.35 (0.74)1
127	10.0 - 80.00% of mass 198	50.1
197	Less than 2.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	5.73
275	10.0 - 60.0% of mass 198	25.4
365	Greater than 1.00% of mass 198	3.9
441	Present, and less than mass 443	8.58
442	Greater than 50.00% of mass 198	72.0
443	15.00 - 24.00% of mass 442	12.3 (17.1)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SIM2598 - SSTD.50	ik0301.d	11/07/18	17:32
02	SBLKLH302	ik0302.d	11/07/18	18:15
03	302LHLCS	ik0303.d	11/07/18	19:46
04	9867761	ik0304.d	11/07/18	20:15
05	9867762	ik0305.d	11/07/18	20:45
06	9867763MS	ik0306.d	11/07/18	21:15
07	9867764MSD	ik0307.d	11/07/18	21:45
08	9867767	ik0309.d	11/07/18	22:44
09	9872064	ik0310.d	11/07/18	23:14
10	9872065	ik0311.d	11/07/18	23:43
11	9878781	ik0313.d	11/08/18	00:43
12	9878782	ik0314.d	11/08/18	01:13

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ik0350.d DFTPP Injection Date: 11/08/18

Instrument ID: HP10976 DFTPP Injection Time: 06:43

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	37.8
68	Less than 2.0% of mass 69	0.4 (0.81)1
69	Mass 69 relative abundance	49.8
70	Less than 2.0% of mass 69	0.24 (0.47)1
127	10.0 - 80.00% of mass 198	49.1
197	Less than 2.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	7.04
275	10.0 - 60.0% of mass 198	26.6
365	Greater than 1.00% of mass 198	3.26
441	Present, and less than mass 443	12.6
442	Greater than 50.00% of mass 198	72.8
443	15.00 - 24.00% of mass 442	12.3 (16.9)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SIM2598 - SSTD.50	ik0351.d	11/08/18	07:03
02	9867762DL	ik0356.d	11/08/18	10:03
03	9867766	ik0359.d	11/08/18	11:34
04	9867767RE	ik0360.d	11/08/18	12:05
05	9867767DL	ik0361.d	11/08/18	12:35
06	9872064DL	ik0363.d	11/08/18	13:34
07	9872065DL	ik0365.d	11/08/18	14:34
08	9867762DL2	ik0356a.d	11/08/18	17:03
09	SIM2598	ik0366a.d	11/08/18	17:32

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date(s): 10/06/18 10/07/18

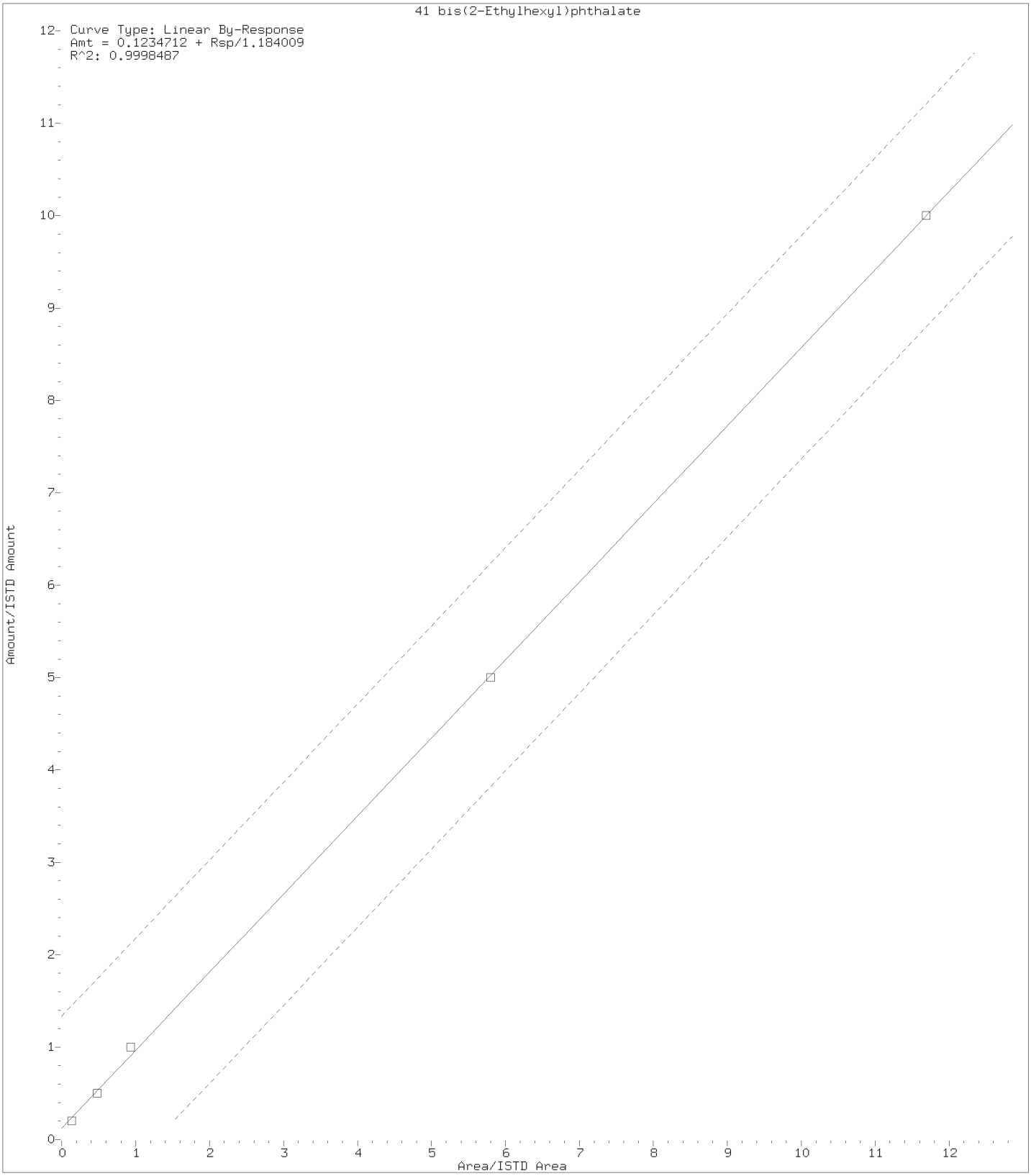
Calibration Times: 23:27 02:42

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID: RRF0.01 = cj0287d.d RRF0.05 = cj0286d.d RRF0.2 = cj0285d.d
RRF0.5 = cj0281d.d RRF1 = cj0284d.d RRF5 = cj0283d.d RRF10 = cj0282d.d

COMPOUND	RRF0.01	RRF0.05	RRF0.2	RRF0.5	RRF1	RRF5	RRF10	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane		0.611	0.650	0.638	0.643	0.668	0.647	0.643	3	AVG
N-Nitrosodimethylamine		0.704	0.790	0.819	0.839	0.920	0.907	0.830	10	AVG
bis(2-Chloroethyl)ether		1.163	1.262	1.281	1.333	1.404	1.367	1.302	7	AVG
Naphthalene		0.997	1.066	1.074	1.085	1.120	1.028	1.062	4	AVG
Quinoline		0.512	0.583	0.630	0.644	0.685	0.633	0.615	10	AVG
2-Methylnaphthalene		0.590	0.635	0.670	0.685	0.725	0.669	0.662	7	AVG
1-Methylnaphthalene		0.609	0.652	0.677	0.685	0.721	0.654	0.666	6	AVG
Dimethylphthalate		1.147	1.317	1.458	1.467	1.573	1.533	1.416	11	AVG
Acenaphthylene		1.533	1.775	2.033	2.074	2.302	2.194	1.985	14	AVG
Acenaphthene		1.245	1.331	1.377	1.386	1.430	1.383	1.359	5	AVG
Dibenzofuran		1.671	1.804	1.893	1.910	1.950	1.873	1.850	5	AVG
Diethylphthalate		1.088	1.238	1.425	1.432	1.583	1.533	1.383	13	AVG
Fluorene		1.232	1.392	1.498	1.516	1.589	1.493	1.453	9	AVG
N-Nitrosodiphenylamine (1)		0.409	0.475	0.514	0.520	0.486	0.426	0.472	10	AVG
NDPA as diphenylamine		0.409	0.475	0.514	0.520	0.486	0.426	0.472	10	AVG
Hexachlorobenzene		0.161	0.173	0.175	0.180	0.185	0.182	0.176	5	AVG
Phenanthrene		1.077	1.178	1.203	1.227	1.271	1.202	1.193	5	AVG
Anthracene		0.899	1.066	1.177	1.203	1.293	1.246	1.147	13	AVG
Di-n-butylphthalate				0.954	1.237	1.263	1.463	1.474	1.278	17	AVG
Fluoranthene		0.966	1.132	1.210	1.237	1.261	1.228	1.172	9	AVG
Pyrene		1.352	1.546	1.676	1.673	1.735	1.675	1.609	9	AVG
Butylbenzylphthalate				0.535	0.715	0.694	0.842	0.844	0.726	18	AVG
bis(2-Ethylhexyl)phthalate				0.687	0.967	0.935	1.160	1.169	0.983	20	1STDEG
Benzo(a)anthracene	1.221	1.104	1.230	1.355	1.359	1.424	1.378	1.296	9	AVG
Chrysene	1.100	1.253	1.356	1.405	1.404	1.434	1.343	1.328	9	AVG
Di-n-octylphthalate				1.295	1.955	1.847	2.209	2.241	1.909	20	AVG
Benzo(b)fluoranthene	1.022	1.122	1.271	1.389	1.392	1.407	1.369	1.282	12	AVG
Benzo(k)fluoranthene	1.079	1.265	1.436	1.559	1.567	1.435	1.293	1.376	13	AVG
Benzo(e)pyrene		1.184	1.316	1.406	1.374	1.332	1.270	1.314	6	AVG
Benzo(a)pyrene	0.846	0.999	1.192	1.294	1.329	1.282	1.244	1.169	15	AVG
Perylene		1.079	1.301	1.331	1.339	1.322	1.265	1.273	8	AVG
Indeno(1,2,3-cd)pyrene		0.949	1.107	1.213	1.210	1.258	1.222	1.160	10	AVG
Dibenz(a,h)anthracene	0.710	0.816	0.957	1.054	1.048	1.089	1.056	0.962	15	AVG
Benzo(g,h,i)perylene		0.902	1.069	1.126	1.065	1.175	1.159	1.083	9	AVG
1-Methylnaphthalene-d10		0.462	0.500	0.514	0.525	0.545	0.486	0.505	6	AVG
Fluoranthene-d10		0.756	0.855	0.943	0.962	0.979	0.948	0.907	9	AVG
Benzo(a)pyrene-d12		0.737	0.867	0.980	0.994	0.988	0.948	0.919	11	AVG
								Average %RSD	10	

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.



Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:25.
Target 3.5 esignature user ID: apb10206

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP10623.i/18oct06d.b/cj0281d.d SSTD0.5
/chem/HP10623.i/18oct06d.b/cj0282d.d SSTD010
/chem/HP10623.i/18oct06d.b/cj0283d.d SSTD005
/chem/HP10623.i/18oct06d.b/cj0284d.d SSTD001
/chem/HP10623.i/18oct06d.b/cj0285d.d SSTD0.20
/chem/HP10623.i/18oct06d.b/cj0286d.d SSTD0.05
/chem/HP10623.i/18oct06d.b/cj0287d.d SSTD0.01

Area Summary

File ID:

Internal Standard Name	cj0281d.d	cj0282d.d	cj0283d.d	cj0284d.d	cj0285d.d	cj0286d.d	cj0287d.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	73266	71753	71753	70798	71447	72122	68868	71430	2	Yes
Naphthalene-d8	298915	308079	293967	288589	291607	288195	277886	292463	3	Yes
Acenaphthene-d10	137445	134145	134194	132299	134148	133032	124779	132863	3	Yes
Phenanthrene-d10	254258	246146	248906	244232	247979	246827	231062	245630	3	Yes
Chrysene-d12	189562	186307	188840	186483	184440	181988	169404	183861	4	Yes
Perylene-d12	150250	164798	165846	151438	147266	145437	135541	151511	7	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	cj0281d.d	cj0282d.d	cj0283d.d	cj0284d.d	cj0285d.d	cj0286d.d	cj0287d.d	Avg. RT
1,4-Dichlorobenzene-d4	7.127	7.127	7.127	7.127	7.127	7.127	7.127	7.127
Naphthalene-d8	8.653	8.652	8.652	8.652	8.652	8.652	8.652	8.652
Acenaphthene-d10	10.827	10.827	10.827	10.827	10.827	10.827	10.827	10.827
Phenanthrene-d10	12.688	12.687	12.687	12.688	12.688	12.687	12.687	12.687
Chrysene-d12	16.020	16.027	16.019	16.020	16.020	16.019	16.019	16.021
Perylene-d12	18.326	18.334	18.326	18.326	18.326	18.326	18.326	18.328

Comments:_____

_____

Report generated on 10/07/2018 at 21:19

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP10623

Method: SW-846 8270D File ID: cj0290d.d

ICV SAMPLE ID: SICV1908 BATCH: 18OCT06A026 Sample Name: SSTD001

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	1.00	1.02	2	30	YES
N-Nitrosodimethylamine	1.00	1.08	8	30	YES
bis(2-Chloroethyl)ether	1.00	1.23	23	30	YES
Naphthalene	1.00	1.03	3	30	YES
Quinoline	1.00	1.09	9	30	YES
2-Methylnaphthalene	1.00	1.07	7	30	YES
1-Methylnaphthalene	1.00	1.01	1	30	YES
Dimethylphthalate	1.00	1.09	9	30	YES
Acenaphthylene	1.00	1.08	8	30	YES
Acenaphthene	1.00	1.01	1	30	YES
Dibenzofuran	1.00	1.09	9	30	YES
Diethylphthalate	1.00	1.08	8	30	YES
Fluorene	1.00	1.10	10	30	YES
N-Nitrosodiphenylamine	1.00	1.00	0	30	YES
NDPA as diphenylamine	1.00	1.00	0	30	YES
Hexachlorobenzene	1.00	1.15	15	30	YES
Phenanthrene	1.00	1.02	2	30	YES
Anthracene	1.00	1.03	3	30	YES
Di-n-butylphthalate	1.00	.95	-5	30	YES
Fluoranthene	1.00	1.04	4	30	YES
Pyrene	1.00	1.02	2	30	YES
Butylbenzylphthalate	1.00	.87	-13	30	YES
bis(2-Ethylhexyl)phthalate	1.00	.84	-16	30	YES
Benzo(a)anthracene	1.00	1.06	6	30	YES
Chrysene	1.00	1.02	2	30	YES
Di-n-octylphthalate	1.00	.94	-6	30	YES
Benzo(b)fluoranthene	1.00	1.12	12	30	YES
Benzo(k)fluoranthene	1.00	1.20	20	30	YES
Benzo(e)pyrene	1.00	1.22	22	30	YES
Benzo(a)pyrene	1.00	1.16	16	30	YES
Perylene	1.00	1.20	20	30	YES
Indeno(1,2,3-cd)pyrene	1.00	1.17	17	30	YES
Dibenz(a,h)anthracene	1.00	1.13	13	30	YES
Benzo(g,h,i)perylene	1.00	1.11	11	30	YES

NC = Could not calculate

Comments: _____

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10976 Calibration Date(s): 09/04/18 09/04/18

Calibration Times: 19:41 22:47

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID: RRF0.01 = ii0107.d RRF0.05 = ii0106.d RRF0.2 = ii0105.d
RRF0.5 = ii0104.d RRF1 = ii0101.d RRF5 = ii0103.d RRF10 = ii0102.d

COMPOUND	RRF0.01	RRF0.05	RRF0.2	RRF0.5	RRF1	RRF5	RRF10	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane		0.555	0.590	0.610	0.624	0.581	0.633	0.599	5	AVG
N-Nitrosodimethylamine		0.864	0.882	0.912	0.963	0.897	0.963	0.913	5	AVG
bis(2-Chloroethyl)ether		1.210	1.232	1.267	1.311	1.218	1.291	1.255	3	AVG
Naphthalene		1.018	1.019	1.053	1.057	0.994	1.037	1.030	2	AVG
Quinoline		0.617	0.622	0.652	0.668	0.613	0.649	0.637	4	AVG
2-Methylnaphthalene		0.719	0.734	0.751	0.772	0.720	0.752	0.741	3	AVG
1-Methylnaphthalene		0.720	0.716	0.739	0.748	0.711	0.730	0.727	2	AVG
Dimethylphthalate		1.443	1.450	1.475	1.506	1.444	1.534	1.475	3	AVG
Acenaphthylene		1.842	1.866	1.939	1.956	1.896	1.993	1.915	3	AVG
Acenaphthene		1.244	1.261	1.293	1.277	1.209	1.272	1.259	2	AVG
Dibenzofuran		1.890	1.945	1.983	1.999	1.890	1.993	1.950	3	AVG
Diethylphthalate		1.391	1.398	1.480	1.495	1.406	1.465	1.439	3	AVG
Fluorene		1.461	1.522	1.569	1.609	1.535	1.603	1.550	4	AVG
N-Nitrosodiphenylamine (1)		0.447	0.445	0.464	0.457	0.356	0.330	0.417	14	AVG
NDPA as diphenylamine		0.447	0.445	0.464	0.457	0.356	0.330	0.417	14	AVG
Hexachlorobenzene		0.307	0.298	0.298	0.293	0.277	0.285	0.293	4	AVG
Phenanthrene		1.084	1.078	1.093	1.089	1.040	1.099	1.080	2	AVG
Anthracene		1.049	1.061	1.087	1.119	1.063	1.113	1.082	3	AVG
Di-n-butylphthalate				0.962	1.025	1.075	1.026	1.081	1.034	5	AVG
Fluoranthene		1.265	1.296	1.359	1.384	1.335	1.432	1.345	4	AVG
Pyrene		1.443	1.383	1.428	1.411	1.315	1.325	1.384	4	AVG
Butylbenzylphthalate				0.404	0.442	0.464	0.433	0.445	0.438	5	AVG
bis(2-Ethylhexyl)phthalate				0.601	0.667	0.699	0.645	0.676	0.658	6	AVG
Benzo(a)anthracene	1.423	1.262	1.243	1.280	1.294	1.235	1.266	1.287	5	AVG
Chrysene	1.210	1.249	1.224	1.255	1.250	1.185	1.230	1.229	2	AVG
Di-n-octylphthalate				0.984	1.091	1.167	1.091	1.137	1.094	6	AVG
Benzo(b)fluoranthene	1.249	1.220	1.240	1.272	1.287	1.180	1.258	1.244	3	AVG
Benzo(k)fluoranthene	1.151	1.141	1.121	1.169	1.170	1.201	1.208	1.166	3	AVG
Benzo(e)pyrene		1.211	1.192	1.245	1.248	1.189	1.219	1.217	2	AVG
Benzo(a)pyrene	1.059	1.024	1.033	1.084	1.101	1.067	1.093	1.066	3	AVG
Perylene		1.204	1.178	1.205	1.210	1.154	1.176	1.188	2	AVG
Indeno(1,2,3-cd)pyrene	1.193	1.227	1.237	1.280	1.294	1.261	1.306	1.257	3	AVG
Dibenz(a,h)anthracene	0.981	1.002	1.018	1.043	1.053	1.023	1.064	1.026	3	AVG
Benzo(g,h,i)perylene		1.085	1.086	1.123	1.136	1.089	1.112	1.105	2	AVG
1-Methylnaphthalene-d10		0.623	0.600	0.607	0.629	0.587	0.613	0.610	3	AVG
Fluoranthene-d10		1.182	1.195	1.257	1.262	1.243	1.301	1.240	4	AVG
Benzo(a)pyrene-d12		0.904	0.919	0.963	0.988	0.965	0.993	0.955	4	AVG

Average %RSD 4

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP10976.i/18sep04a.b/ii0101.d SSTD001
/chem/HP10976.i/18sep04a.b/ii0102.d SSTD010
/chem/HP10976.i/18sep04a.b/ii0103.d SSTD005
/chem/HP10976.i/18sep04a.b/ii0104.d SSTD0.5
/chem/HP10976.i/18sep04a.b/ii0105.d SSTD0.2
/chem/HP10976.i/18sep04a.b/ii0106.d SSTD0.05
/chem/HP10976.i/18sep04a.b/ii0107.d SSTD0.01

Area Summary

	File ID:									
Internal Standard Name	ii0101.d	ii0102.d	ii0103.d	ii0104.d	ii0105.d	ii0106.d	ii0107.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	62135	57215	65069	61558	56238	57036	55324	59225	6	Yes
Naphthalene-d8	234679	223185	241875	232516	211328	215309	207127	223717	6	Yes
Acenaphthene-d10	144286	133230	145290	141121	127752	130523	126750	135565	6	Yes
Phenanthrene-d10	331893	313169	335792	320188	289036	293041	285967	309869	7	Yes
Chrysene-d12	331592	339647	352329	309373	276026	273917	266943	307118	11	Yes
Perylene-d12	333223	346603	356058	312109	276848	270990	263732	308509	12	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:							
Internal Standard Name	ii0101.d	ii0102.d	ii0103.d	ii0104.d	ii0105.d	ii0106.d	ii0107.d	Avg. RT
1,4-Dichlorobenzene-d4	7.387	7.387	7.387	7.387	7.387	7.387	7.387	7.387
Naphthalene-d8	8.912	8.913	8.913	8.912	8.912	8.912	8.913	8.912
Acenaphthene-d10	11.095	11.095	11.095	11.095	11.095	11.095	11.095	11.095
Phenanthrene-d10	12.956	12.956	12.956	12.956	12.956	12.956	12.956	12.956
Chrysene-d12	16.292	16.292	16.292	16.292	16.292	16.292	16.292	16.292
Perylene-d12	18.614	18.614	18.615	18.614	18.614	18.614	18.614	18.614

Comments:_____

_____

Report generated on 09/04/2018 at 23:57

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP10976

Method: SW-846 8270D (SIM) File ID: ii0110.d

ICV SAMPLE ID: SICV1908 BATCH: 18SEP04A026 Sample Name: SSTD001

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	1.00	1.07	7	30	YES
N-Nitrosodimethylamine	1.00	1.11	11	30	YES
bis(2-Chloroethyl)ether	1.00	1.24	24	30	YES
Naphthalene	1.00	1.05	5	30	YES
Quinoline	1.00	1.11	11	30	YES
2-Methylnaphthalene	1.00	1.07	7	30	YES
1-Methylnaphthalene	1.00	1.04	4	30	YES
Dimethylphthalate	1.00	1.16	16	30	YES
Acenaphthylene	1.00	1.08	8	30	YES
Acenaphthene	1.00	1.02	2	30	YES
Dibenzofuran	1.00	1.08	8	30	YES
Diethylphthalate	1.00	1.13	13	30	YES
Fluorene	1.00	1.09	9	30	YES
N-Nitrosodiphenylamine	1.00	1.03	3	30	YES
NDPA as diphenylamine	1.00	1.03	3	30	YES
Hexachlorobenzene	1.00	1.19	19	30	YES
Phenanthrene	1.00	1.05	5	30	YES
Anthracene	1.00	1.06	6	30	YES
Di-n-butylphthalate	1.00	1.11	11	30	YES
Fluoranthene	1.00	1.05	5	30	YES
Pyrene	1.00	1.04	4	30	YES
Butylbenzylphthalate	1.00	1.08	8	30	YES
bis(2-Ethylhexyl)phthalate	1.00	1.06	6	30	YES
Benzo(a)anthracene	1.00	1.04	4	30	YES
Chrysene	1.00	1.00	0	30	YES
Di-n-octylphthalate	1.00	1.07	7	30	YES
Benzo(b)fluoranthene	1.00	1.04	4	30	YES
Benzo(k)fluoranthene	1.00	1.07	7	30	YES
Benzo(e)pyrene	1.00	1.15	15	30	YES
Benzo(a)pyrene	1.00	1.08	8	30	YES
Perylene	1.00	1.15	15	30	YES
Indeno(1,2,3-cd)pyrene	1.00	1.09	9	30	YES
Dibenz(a,h)anthracene	1.00	1.06	6	30	YES
Benzo(g,h,i)perylene	1.00	1.13	13	30	YES

NC = Could not calculate

Comments: _____

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/16/18 Time: 05:58

Lab File ID: ck0701a.d Init. Calib. Date(s): 10/06/18 10/07/18

Init. Calib. Times(s): 23:27 02:42

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF1	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.643	0.531	0.830	1.0	-17
N-Nitrosodimethylamine	0.830	0.773	0.930	1.0	-7
bis(2-Chloroethyl)ether	1.302	1.267	0.970	1.0	-3
Naphthalene	1.062	1.121	1.060	1.0	6
Quinoline	0.615	0.665	1.080	1.0	8
2-Methylnaphthalene	0.662	0.792	1.200	1.0	20
1-Methylnaphthalene	0.666	0.760	1.140	1.0	14
Dimethylphthalate	1.416	1.557	1.100	1.0	10
Acenaphthylene	1.985	2.164	1.090	1.0	9
Acenaphthene	1.359	1.400	1.030	1.0	3
Dibenzofuran	1.850	1.130	0.610	1.0	-39
Diethylphthalate	1.383	1.619	1.170	1.0	17
Fluorene	1.453	1.593	1.100	1.0	10
N-Nitrosodiphenylamine (1)	0.472	0.536	1.140	1.0	14
NDPA as diphenylamine	0.472	0.536	1.140	1.0	14
Hexachlorobenzene	0.176	0.197	1.120	1.0	12
Phenanthrene	1.193	1.229	1.030	1.0	3
Anthracene	1.147	1.241	1.080	1.0	8
Di-n-butylphthalate	1.278	1.367	1.070	1.0	7
Fluoranthene	1.172	1.220	1.040	1.0	4
Pyrene	1.610	1.640	1.020	1.0	2
Butylbenzylphthalate	0.726	0.897	1.240	1.0	24
bis(2-Ethylhexyl)phthalate	0.983	1.046	1.010	1.0	1
Benzo(a)anthracene	1.296	1.397	1.080	1.0	8
Chrysene	1.328	1.416	1.070	1.0	7
Di-n-octylphthalate	1.909	1.968	1.030	1.0	3
Benzo(b)fluoranthene	1.282	1.460	1.140	1.0	14
Benzo(k)fluoranthene	1.376	1.479	1.070	1.0	7
Benzo(e)pyrene	1.314	1.399	1.060	1.0	6
Benzo(a)pyrene	1.169	1.327	1.130	1.0	13
Perylene	1.273	1.324	1.040	1.0	4
Indeno(1,2,3-cd)pyrene	1.160	1.263	1.090	1.0	9
Dibenz(a,h)anthracene	0.962	1.104	1.150	1.0	15
Benzo(g,h,i)perylene	1.082	1.163	1.070	1.0	7
1-Methylnaphthalene-d10	0.505	0.571	1.130	1.0	13

(1) Cannot be Separated from Diphenylamine

FORM VII SV-1

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/16/18 Time: 05:58

Lab File ID: ck0701a.d Init. Calib. Date(s): 10/06/18 10/07/18

Init. Calib. Times(s): 23:27 02:42

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	$\overline{RRF}$	RRF1	ACTUAL CONC.	TRUE CONC.	% DRIFT
Fluoranthene-d10	0.907	0.964	1.060	1.0	6
Benzo(a)pyrene-d12	0.919	1.017	1.110	1.0	11
			Average %Drift:		10

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP10623.i/18oct06d.b/cj0281d.d
/chem/HP10623.i/18oct06d.b/cj0282d.d
/chem/HP10623.i/18oct06d.b/cj0283d.d
/chem/HP10623.i/18oct06d.b/cj0284d.d **
/chem/HP10623.i/18oct06d.b/cj0285d.d
/chem/HP10623.i/18oct06d.b/cj0286d.d
/chem/HP10623.i/18oct06d.b/cj0287d.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP10623.i/18nov16.b/ck0701a.d

Area Summary

File ID:

Internal Standard Name	ck0701a.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	68540	70798	35399	141596	Yes
Naphthalene-d8	263636	288589	144294	577178	Yes
Acenaphthene-d10	121087	132299	66150	264598	Yes
Phenanthrene-d10	228805	244232	122116	488464	Yes
Chrysene-d12	175341	186483	93242	372966	Yes
Perylene-d12	153412	151438	75719	302876	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	ck0701a.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.764	7.127	No
Naphthalene-d8	8.289	8.652	No
Acenaphthene-d10	10.458	10.827	No
Phenanthrene-d10	12.304	12.688	No
Chrysene-d12	15.609	16.020	No
Perylene-d12	17.720	18.326	No

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: Unless otherwise documented, the shift in retention time is due to routine injection port maintenance, which involves the removal of a length of the analytical column.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10976 Calibration Date: 11/07/18 Time: 17:32

Lab File ID: ik0301.d Init. Calib. Date(s): 09/04/18 09/04/18

Init. Calib. Times(s): 19:41 22:47

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.599	0.517	0.430	.5	-14
N-Nitrosodimethylamine	0.913	0.827	0.450	.5	-9
bis(2-Chloroethyl)ether	1.255	1.162	0.460	.5	-7
Naphthalene	1.030	1.086	0.530	.5	5
Quinoline	0.637	0.673	0.530	.5	6
2-Methylnaphthalene	0.741	0.774	0.520	.5	4
1-Methylnaphthalene	0.727	0.775	0.530	.5	7
Dimethylphthalate	1.475	1.538	0.520	.5	4
Acenaphthylene	1.915	1.908	0.500	.5	0
Acenaphthene	1.259	1.263	0.500	.5	0
Dibenzofuran	1.950	0.094	0.020	.5	-95
Diethylphthalate	1.439	1.533	0.530	.5	7
Fluorene	1.550	1.562	0.500	.5	1
N-Nitrosodiphenylamine (1)	0.417	0.460	0.550	.5	10
NDPA as diphenylamine	0.417	0.460	0.550	.5	10
Hexachlorobenzene	0.293	0.300	0.510	.5	2
Phenanthrene	1.080	1.115	0.520	.5	3
Anthracene	1.082	1.122	0.520	.5	4
Di-n-butylphthalate	1.034	1.185	0.570	.5	15
Fluoranthene	1.345	1.392	0.520	.5	3
Pyrene	1.384	1.384	0.500	.5	0
Butylbenzylphthalate	0.438	0.447	0.510	.5	2
bis(2-Ethylhexyl)phthalate	0.658	0.748	0.570	.5	14
Benzo(a)anthracene	1.286	1.269	0.490	.5	-1
Chrysene	1.229	1.283	0.520	.5	4
Di-n-octylphthalate	1.094	1.218	0.560	.5	11
Benzo(b)fluoranthene	1.244	1.268	0.510	.5	2
Benzo(k)fluoranthene	1.166	1.215	0.520	.5	4
Benzo(e)pyrene	1.217	1.211	0.500	.5	-1
Benzo(a)pyrene	1.066	1.095	0.510	.5	3
Perylene	1.188	1.172	0.490	.5	-1
Indeno(1,2,3-cd)pyrene	1.257	1.248	0.500	.5	-1
Dibenz(a,h)anthracene	1.026	1.059	0.520	.5	3
Benzo(g,h,i)perylene	1.105	1.210	0.550	.5	10
1-Methylnaphthalene-d10	0.610	0.591	0.480	.5	-3

(1) Cannot be Separated from Diphenylamine

FORM VII SV-1

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10976 Calibration Date: 11/07/18 Time: 17:32

Lab File ID: ik0301.d Init. Calib. Date(s): 09/04/18 09/04/18

Init. Calib. Times(s): 19:41 22:47

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Fluoranthene-d10	1.240	1.222	0.490	.5	-1
Benzo(a)pyrene-d12	0.955	0.956	0.500	.5	0
			Average %Drift:		7

FORM VII SV-1

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP10976.i/18sep04a.b/ii0101.d **
/chem/HP10976.i/18sep04a.b/ii0102.d
/chem/HP10976.i/18sep04a.b/ii0103.d
/chem/HP10976.i/18sep04a.b/ii0104.d
/chem/HP10976.i/18sep04a.b/ii0105.d
/chem/HP10976.i/18sep04a.b/ii0106.d
/chem/HP10976.i/18sep04a.b/ii0107.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP10976.i/18nov07.b/ik0301.d

Area Summary

File ID:

Internal Standard Name	ik0301.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	43881	62135	31068	124270	Yes
Naphthalene-d8	160275	234679	117340	469358	Yes
Acenaphthene-d10	101156	144286	72143	288572	Yes
Phenanthrene-d10	222571	331893	165946	663786	Yes
Chrysene-d12	229303	331592	165796	663184	Yes
Perylene-d12	230626	333223	166612	666446	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	ik0301.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.808	7.387	No
Naphthalene-d8	8.320	8.912	No
Acenaphthene-d10	10.487	11.095	No
Phenanthrene-d10	12.332	12.956	No
Chrysene-d12	15.614	16.292	No
Perylene-d12	17.569	18.614	No

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: Unless otherwise documented, the shift in retention time is due to routine injection port maintenance, which involves the removal of a length of the analytical column.

Report generated on 11/07/2018 at 18:03

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10976 Calibration Date: 11/08/18 Time: 07:03

Lab File ID: ik0351.d Init. Calib. Date(s): 09/04/18 09/04/18

Init. Calib. Times(s): 19:41 22:47

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.599	0.579	0.480	.5	-3
N-Nitrosodimethylamine	0.913	0.846	0.460	.5	-7
bis(2-Chloroethyl)ether	1.255	1.194	0.480	.5	-5
Naphthalene	1.030	1.099	0.530	.5	7
Quinoline	0.637	0.644	0.510	.5	1
2-Methylnaphthalene	0.741	0.772	0.520	.5	4
1-Methylnaphthalene	0.727	0.771	0.530	.5	6
Dimethylphthalate	1.475	1.571	0.530	.5	7
Acenaphthylene	1.915	1.945	0.510	.5	2
Acenaphthene	1.259	1.284	0.510	.5	2
Dibenzofuran	1.950	0.054	0.010	.5	-97
Diethylphthalate	1.439	1.669	0.580	.5	16
Fluorene	1.550	1.563	0.500	.5	1
N-Nitrosodiphenylamine (1)	0.417	0.464	0.560	.5	11
NDPA as diphenylamine	0.417	0.464	0.560	.5	11
Hexachlorobenzene	0.293	0.299	0.510	.5	2
Phenanthrene	1.080	1.110	0.510	.5	3
Anthracene	1.082	1.130	0.520	.5	4
Di-n-butylphthalate	1.034	1.179	0.570	.5	14
Fluoranthene	1.345	1.392	0.520	.5	4
Pyrene	1.384	1.401	0.510	.5	1
Butylbenzylphthalate	0.438	0.450	0.510	.5	3
bis(2-Ethylhexyl)phthalate	0.658	0.740	0.560	.5	12
Benzo(a)anthracene	1.286	1.267	0.490	.5	-1
Chrysene	1.229	1.269	0.520	.5	3
Di-n-octylphthalate	1.094	1.223	0.560	.5	12
Benzo(b)fluoranthene	1.244	1.263	0.510	.5	2
Benzo(k)fluoranthene	1.166	1.192	0.510	.5	2
Benzo(e)pyrene	1.217	1.213	0.500	.5	0
Benzo(a)pyrene	1.066	1.121	0.530	.5	5
Perylene	1.188	1.185	0.500	.5	0
Indeno(1,2,3-cd)pyrene	1.257	1.278	0.510	.5	2
Dibenz(a,h)anthracene	1.026	1.079	0.530	.5	5
Benzo(g,h,i)perylene	1.105	1.229	0.560	.5	11
1-Methylnaphthalene-d10	0.610	0.584	0.480	.5	-4

(1) Cannot be Separated from Diphenylamine

FORM VII SV-1

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10976 Calibration Date: 11/08/18 Time: 07:03

Lab File ID: ik0351.d Init. Calib. Date(s): 09/04/18 09/04/18

Init. Calib. Times(s): 19:41 22:47

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Fluoranthene-d10	1.240	1.221	0.490	.5	-2
Benzo(a)pyrene-d12	0.955	0.963	0.500	.5	1
			Average %Drift:		7

FORM VII SV-1

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP10976.i/18sep04a.b/ii0101.d **
/chem/HP10976.i/18sep04a.b/ii0102.d
/chem/HP10976.i/18sep04a.b/ii0103.d
/chem/HP10976.i/18sep04a.b/ii0104.d
/chem/HP10976.i/18sep04a.b/ii0105.d
/chem/HP10976.i/18sep04a.b/ii0106.d
/chem/HP10976.i/18sep04a.b/ii0107.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP10976.i/18nov08.b/ik0351.d

Area Summary

File ID:

Internal Standard Name	ik0351.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	70563	62135	31068	124270	Yes
Naphthalene-d8	261021	234679	117340	469358	Yes
Acenaphthene-d10	160070	144286	72143	288572	Yes
Phenanthrene-d10	349633	331893	165946	663786	Yes
Chrysene-d12	363603	331592	165796	663184	Yes
Perylene-d12	363146	333223	166612	666446	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	ik0351.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.794	7.387	No
Naphthalene-d8	8.306	8.912	No
Acenaphthene-d10	10.467	11.095	No
Phenanthrene-d10	12.312	12.956	No
Chrysene-d12	15.597	16.292	No
Perylene-d12	17.537	18.614	No

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: Unless otherwise documented, the shift in retention time is due to routine injection port maintenance, which involves the removal of a length of the analytical column.

Report generated on 11/08/2018 at 08:10

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ck0701a.d Date Analyzed: 11/16/18

Instrument ID: HP10623 Time Analyzed: 05:58

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	68540	6.764	263636	8.289	121087	10.458
UPPER LIMIT	137080	7.264	527272	8.789	242174	10.958
LOWER LIMIT	34270	6.264	131818	7.789	60544	9.958
LLI SAMPLE NO.						
01 SBLKLC317	62792	6.764	252987	8.276	117061	10.448
02 317LCLCS	62085	6.764	254083	8.276	115753	10.448
03 9867761RE	66230	6.764	273416	8.289	125380	10.458
04 9867766RE	62117	6.764	245840	8.289	120701	10.459
05 9867767RE2	55596	6.777	239131	8.289	91975	10.459
06 9872065RE	61232	6.777	238342	8.289	98180	10.469
07 9867762RE	52202	6.777	239103	8.289	94681	10.469
08 9867763RE	49732	6.777	212998	8.289	98796	10.469
09 9867764MSDSD	48416	6.777	214869	8.289	100655	10.469
10 SIM2598	49338	6.777	198221	8.289	97301	10.470

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ck0701a.d Date Analyzed: 11/16/18

Instrument ID: HP10623 Time Analyzed: 05:58

	IS4(PHN)		IS5(CRY)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	228805	12.304	175341	15.609	153412	17.720
UPPER LIMIT	457610	12.804	350682	16.109	306824	18.220
LOWER LIMIT	114403	11.804	87671	15.109	76706	17.220
LLI SAMPLE NO.						
01 SBLKLC317	223243	12.305	169975	15.609	141767	17.720
02 317LCLCS	211999	12.305	155001	15.609	143114	17.720
03 9867761RE	212424	12.316	151344	15.616	128678	17.736
04 9867766RE	202414	12.316	135178	15.624	101644	17.759
05 9867767RE2	145562	12.327	97625	15.679	67653*	17.884
06 9872065RE	140430	12.327	86658*	15.695	77924	17.900
07 9867762RE	164418	12.327	123956	15.632	98282	17.767
08 9867763RE	180628	12.327	136001	15.648	86875	17.798
09 9867764MSDSD	181723	12.271	123180	15.640	85710	17.783
10 SIM2598	165912	12.327	130311	15.632	104720	17.752

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ik0301.d Date Analyzed: 11/07/18

Instrument ID: HP10976 Time Analyzed: 17:32

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	43881	6.808	160275	8.320	101156	10.487
UPPER LIMIT	87762	7.308	320550	8.820	202312	10.987
LOWER LIMIT	21941	6.308	80138	7.820	50578	9.987
LLI SAMPLE NO.						
01 SBLKLH302	38204	6.808	140365	8.320	85870	10.489
02 302LHLCS	41340	6.808	148938	8.320	90471	10.489
03 9867761	41076	6.808	151112	8.320	92886	10.487
04 9867762	43400	6.808	164370	8.333	103991	10.489
05 9867763MS	44472	6.808	163084	8.333	110201	10.489
06 9867764MSD	41300	6.821	177848	8.333	113809	10.500
07 9867767	45748	6.808	171805	8.333	113934	10.498
08 9872064	48357	6.808	198454	8.333	131871	10.498
09 9872065	55309	6.808	206765	8.333	132504	10.500
10 9878781	70612	6.808	261913	8.333	162021	10.498
11 9878782	60973	6.808	224823	8.333	138412	10.498

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ik0301.d Date Analyzed: 11/07/18

Instrument ID: HP10976 Time Analyzed: 17:32

	IS4(PHN)		IS5(CRY)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	222571	12.332	229303	15.614	230626	17.569
UPPER LIMIT	445142	12.832	458606	16.114	461252	18.069
LOWER LIMIT	111286	11.832	114652	15.114	115313	17.069
LLI SAMPLE NO.						
01 SBLKLH302	190240	12.334	189233	15.621	179720	17.568
02 302LHLCS	197716	12.334	201020	15.621	190917	17.576
03 9867761	209546	12.343	227525	15.630	146882	17.593
04 9867762	238746	12.346	246584	15.637	133648	17.607
05 9867763MS	246471	12.346	244755	15.636	119337	17.607
06 9867764MSD	221093	12.301	224327	15.644	111608*	17.615
07 9867767	298981	12.253	247122	15.677	94968*	17.686
08 9872064	238316	12.354	289540	15.653	159954	17.624
09 9872065	305871	12.256	309927	15.691	130173	17.693
10 9878781	358463	12.343	373139	15.638	230984	17.593
11 9878782	305152	12.343	316022	15.630	182409	17.593

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ik0351.d Date Analyzed: 11/08/18

Instrument ID: HP10976 Time Analyzed: 07:03

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	70563	6.794	261021	8.306	160070	10.467
UPPER LIMIT	141126	7.294	522042	8.806	320140	10.967
LOWER LIMIT	35282	6.294	130511	7.806	80035	9.967
LLI SAMPLE NO.						
01 9867762DL	66649	6.794	240296	8.306	150079	10.476
02 9867766	72138	6.794	257089	8.306	167004	10.478
03 9867767RE	76149	6.794	276127	8.320	168741	10.478
04 9867767DL	72641	6.794	262701	8.320	170283	10.478
05 9872064DL	81871	6.794	297227	8.320	179757	10.476
06 9872065DL	85377	6.794	309479	8.320	191196	10.478
07 9867762DL2	89415	6.794	320893	8.306	200297	10.478
08 SIM2598	96987	6.794	341532	8.320	216290	10.478

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ik0351.d Date Analyzed: 11/08/18

Instrument ID: HP10976 Time Analyzed: 07:03

	IS4(PHN)		IS5(CRY)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	349633	12.312	363603	15.597	363146	17.537
UPPER LIMIT	699266	12.812	727206	16.097	726292	18.037
LOWER LIMIT	174817	11.812	181802	15.097	181573	17.037
LLI SAMPLE NO.						
01 9867762DL	332318	12.320	375127	15.598	340753	17.553
02 9867766	357397	12.323	382174	15.613	224329	17.584
03 9867767RE	373441	12.334	444222	15.660	158058*	17.662
04 9867767DL	377331	12.323	415172	15.613	274561	17.584
05 9872064DL	407297	12.321	457376	15.606	304795	17.561
06 9872065DL	417953	12.323	480761	15.613	291492	17.584
07 9867762DL2	455504	12.323	491651	15.605	305627	17.560
08 SIM2598	492570	12.323	516639	15.605	313542	17.552

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

Sample Data

Semivolatiles by GC/MS-SIM

T1002 Lancaster Laboratories, Inc. 9867761
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10976.i/18nov07.b/ik0304.d Injection date and time: **07-NOV-2018 20:15**
Data file Sample Info. Line: T1002;9867761;2;0;SAMPLE;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 07-NOV-2018 18:18
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov07.b/ik0301.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.16 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.808	(0.000)	500	152	41076	(-6)	1.00	
10) Naphthalene-d8	8.320	(0.000)	614	136	151112	(-6)	1.00	
20) Acenaphthene-d10	10.487	(0.000)	802	164	92886	(-8)	1.00	
31) Phenanthrene-d10	12.343	(-0.011)	968	188	209546	(-6)	1.00	
43) Chrysene-d12	15.630	(-0.016)	1269	240	227525	(-1)	1.00	
51) Perylene-d12	17.593	(-0.024)	1520	264	146882	(-36)	1.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.270	(0.000)	152	76369	0.829	83%		61 - 111
36) Fluoranthene-d10	(4)	13.828	(0.000)	212	211333	0.813	81%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.467	(0.000)	264	100238	0.714	71%		54 - 122

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.174	(-0.018)	88	3137A	0.128	4.23			0.02
11) Naphthalene	(2)	8.346	(-0.000)	128	367577	2.362	78.32	31.312	B	0.04
19) Acenaphthylene	(3)	10.313	(-0.000)	152	23998	0.135	4.47			0.01
21) Acenaphthene	(3)	10.530	(-0.001)	154	6768M	0.058	1.92	1.723	B	0.02
26) Fluorene	(3)	11.163	(0.000)	166	14436	0.100	3.32	1.949	B	0.02
32) Phenanthrene	(4)	12.366	(0.000)	178	327542	1.447	47.97	2.56	B	0.02
33) Anthracene	(4)	12.433	(0.000)	178	46966	0.207	6.87	0.732	B	0.02
35) Di-n-butylphthalate	(4)	13.010	(0.000)	149	1114304	5.144	170.56			0.2
37) Fluoranthene	(4)	13.852	(0.000)	202	661586	2.347	77.82			0.02
39) Pyrene	(5)	14.133	(0.000)	202	594217	1.887	62.56			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.567	(0.000)	149	250712	1.675	55.54			0.3
42) Benzo(a)anthracene	(5)	15.614	(-0.000)	228	327637	1.119	37.11			0.02
44) Chrysene	(5)	15.661	(0.000)	228	568364	2.033	67.40			0.01
46) Benzo(b)fluoranthene	(6)	17.014	(-0.000)	252	655425M	3.588	118.96			0.02
47) Benzo(k)fluoranthene	(6)	17.053	(-0.000)	252	208328M	1.217	40.34			0.02
50) Benzo(a)pyrene	(6)	17.506	(-0.000)	252	230862	1.475	48.89			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.382	(-0.000)	276	159830	0.866	28.70			0.02
54) Dibenz(a,h)anthracene	(6)	19.382	(-0.000)	278	47132	0.313	10.37			0.02
55) Benzo(g,h,i)perylene	(6)	19.884	(-0.000)	276	148133	0.913	30.26			0.02

A = User selected an alternate peak. B = Compound detected in referenced method blank. M = Compound was manually integrated.

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17. Target 3.5 esignature user ID: apb10206

Data file: /chem/HP10976.i/18nov07.b/ik0304.d Injection date and time: **07-NOV-2018 20:15**
Data file Sample Info. Line: T1002;9867761;2;0;SAMPLE;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 07-NOV-2018 18:18
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov07.b/ik0301.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

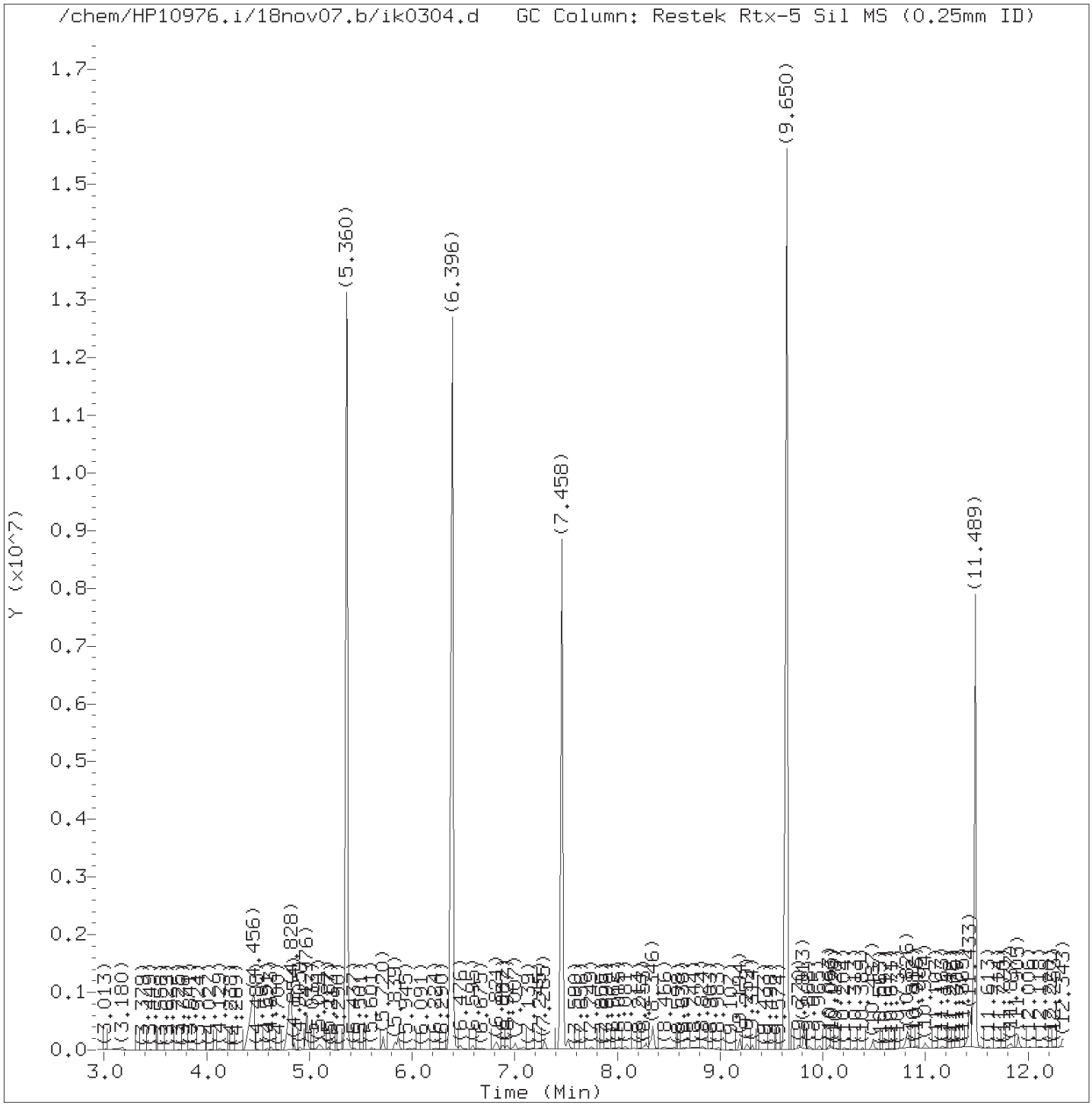
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.16 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

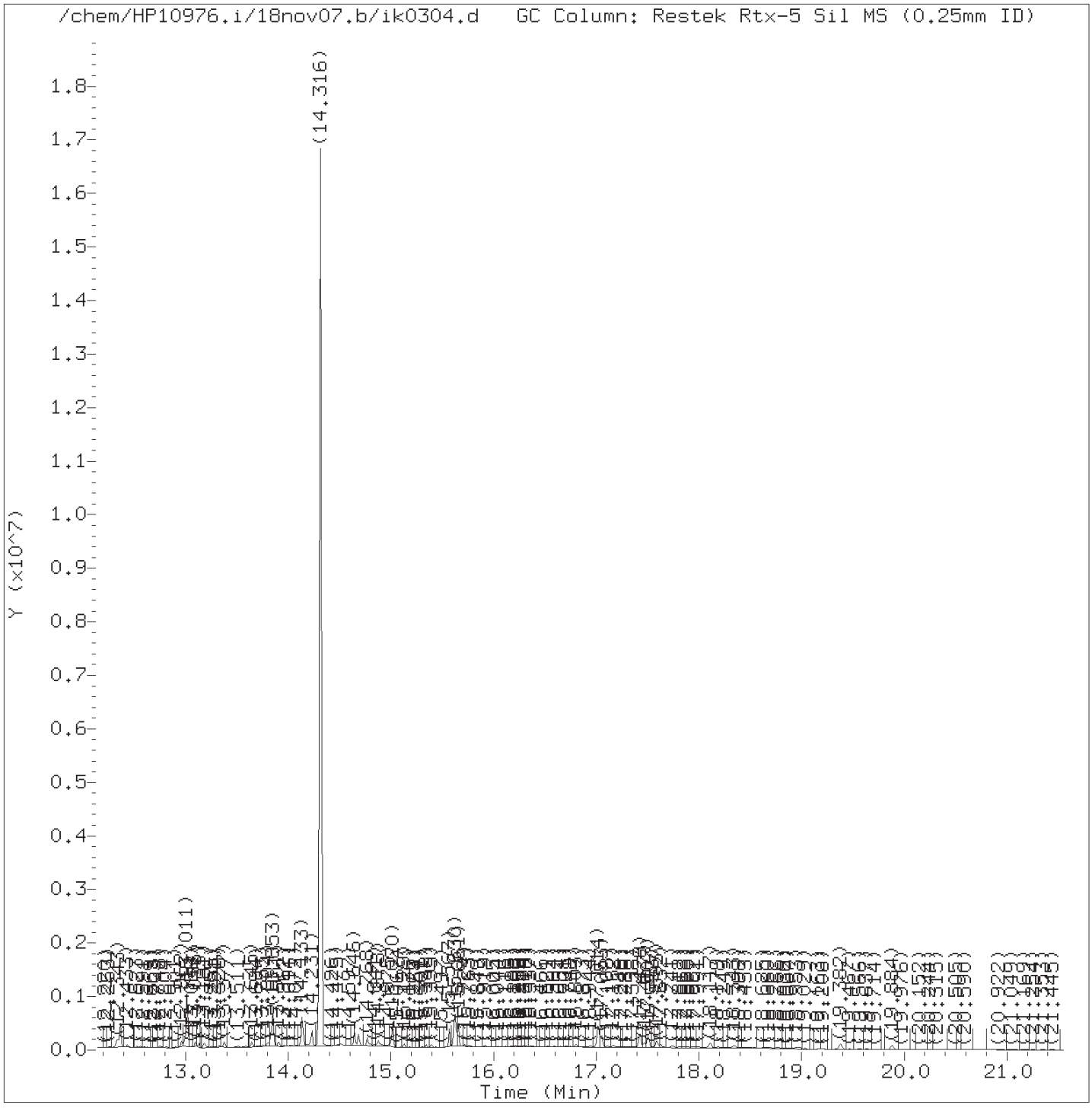
Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1002 Lab Sample ID: 9867761

Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1002 Lab Sample ID: 9867761

Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

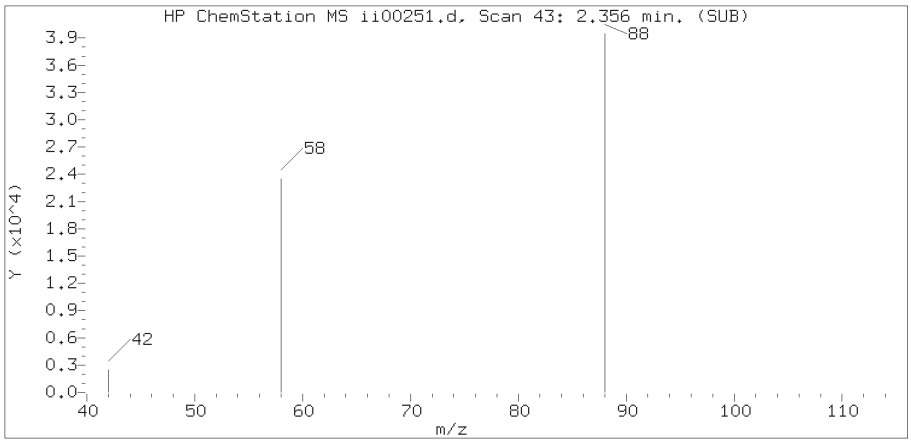
Sample Name: T1002 Lab Sample ID: 9867761

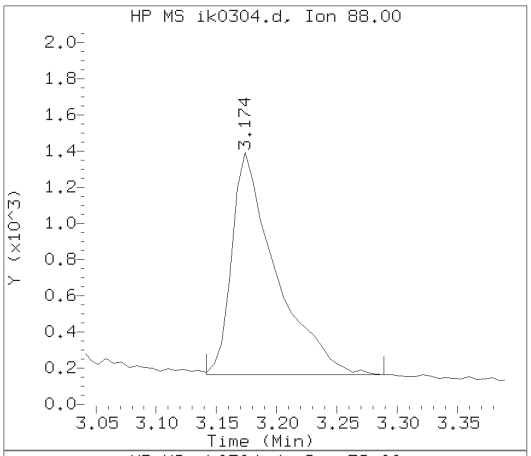
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.174	88	3137A	0.128
6)*1,4-Dichlorobenzene-d4	(1)	6.808	152	41076	1.000
10)*Naphthalene-d8	(2)	8.320	136	151112	1.000
11) Naphthalene	(2)	8.346	128	367577	2.362
14)$1-Methylnaphthalene-d10	(2)	9.270	152	76369	0.829
19) Acenaphthylene	(3)	10.313	152	23998	0.135
20)*Acenaphthene-d10	(3)	10.487	164	92886	1.000
21) Acenaphthene	(3)	10.530	154	6768M	0.058
26) Fluorene	(3)	11.163	166	14436	0.100
31)*Phenanthrene-d10	(4)	12.343	188	209546	1.000
32) Phenanthrene	(4)	12.366	178	327542	1.447
33) Anthracene	(4)	12.433	178	46966	0.207
35) Di-n-butylphthalate	(4)	13.011	149	1114304	5.144
36)$Fluoranthene-d10	(4)	13.828	212	211333	0.813
37) Fluoranthene	(4)	13.853	202	661586	2.347
39) Pyrene	(5)	14.133	202	594217	1.887
41) bis(2-Ethylhexyl)phthalate	(5)	15.567	149	250712	1.675
42) Benzo(a)anthracene	(5)	15.614	228	327637	1.119
43)*Chrysene-d12	(5)	15.630	240	227525	1.000
44) Chrysene	(5)	15.661	228	568364	2.033
46) Benzo(b)fluoranthene	(6)	17.014	252	655425M	3.588
47) Benzo(k)fluoranthene	(6)	17.053	252	208328M	1.217
49)$Benzo(a)pyrene-d12	(6)	17.467	264	100238	0.714
50) Benzo(a)pyrene	(6)	17.507	252	230862	1.475
51)*Perylene-d12	(6)	17.593	264	146882	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.382	276	159830	0.866
54) Dibenz(a,h)anthracene	(6)	19.382	278	47132	0.313
55) Benzo(g,h,i)perylene	(6)	19.884	276	148133	0.913

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

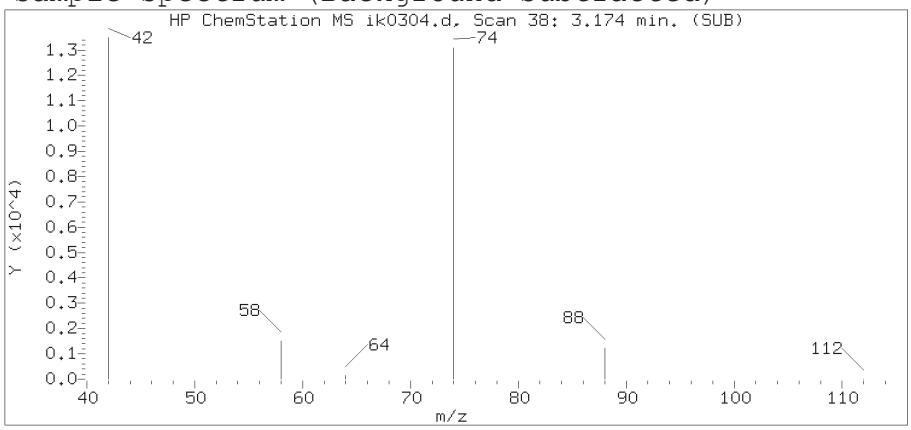
Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

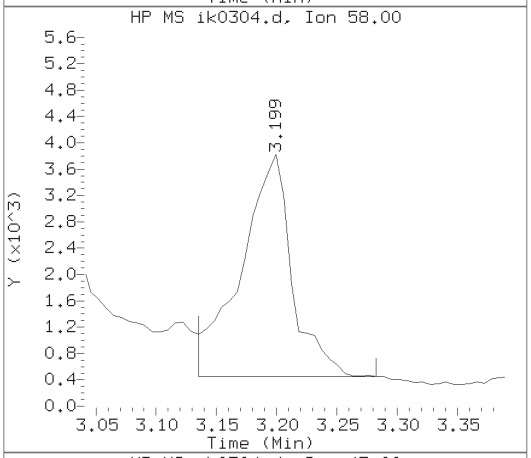
Reference Standard Spectrum for 1,4-Dioxane



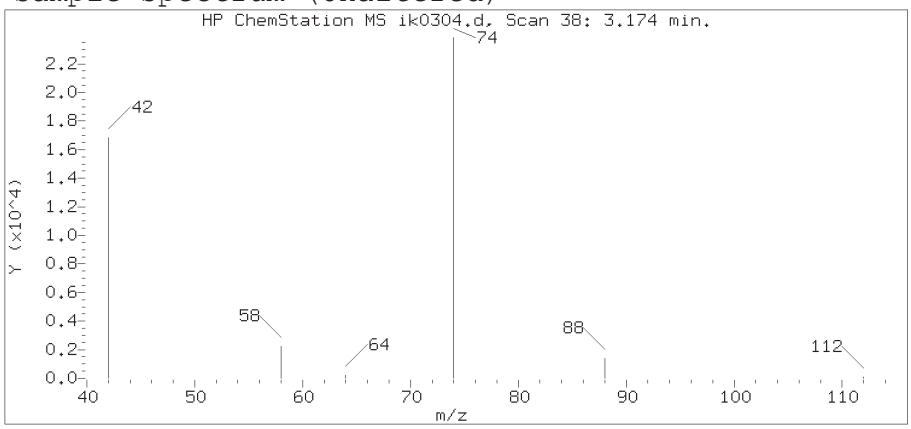


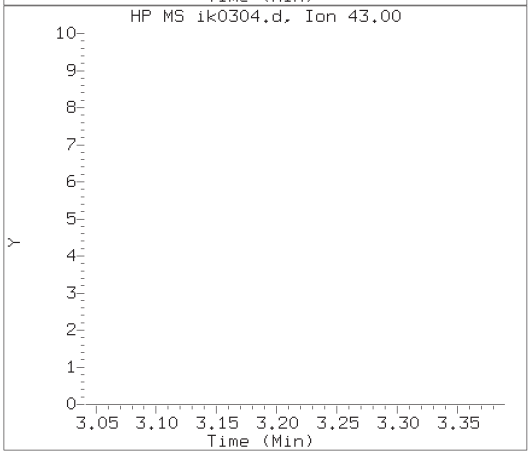
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

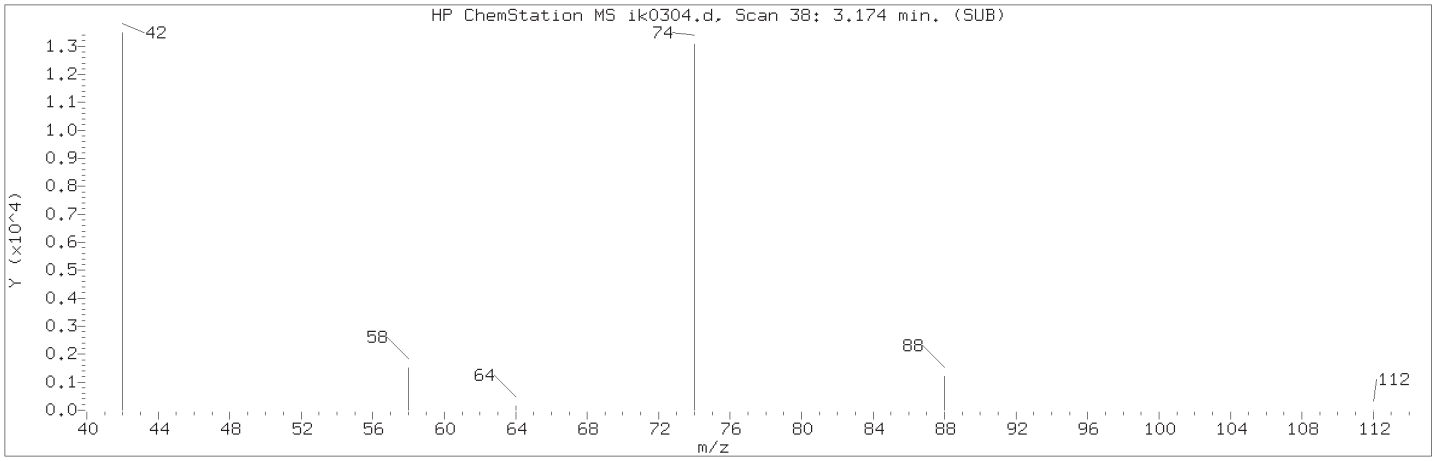
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1002 Lab Sample ID: 9867761

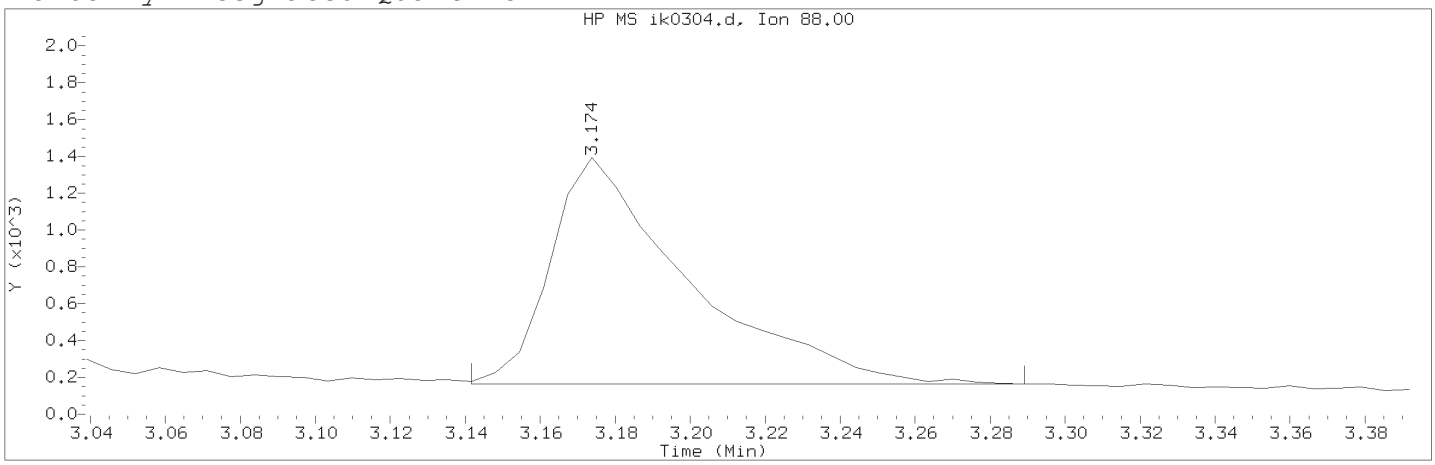
Compound Number	: 1
Compound Name	: 1,4-Dioxane
Scan Number	: 38
Retention Time (minutes)	: 3.174
Relative Retention Time	:-0.01884
Quant Ion	: 88.00
Area (flag)	: 3137A
On-column Amount (ng/ul)	: 0.1276

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1002 Lab Sample ID: 9867761

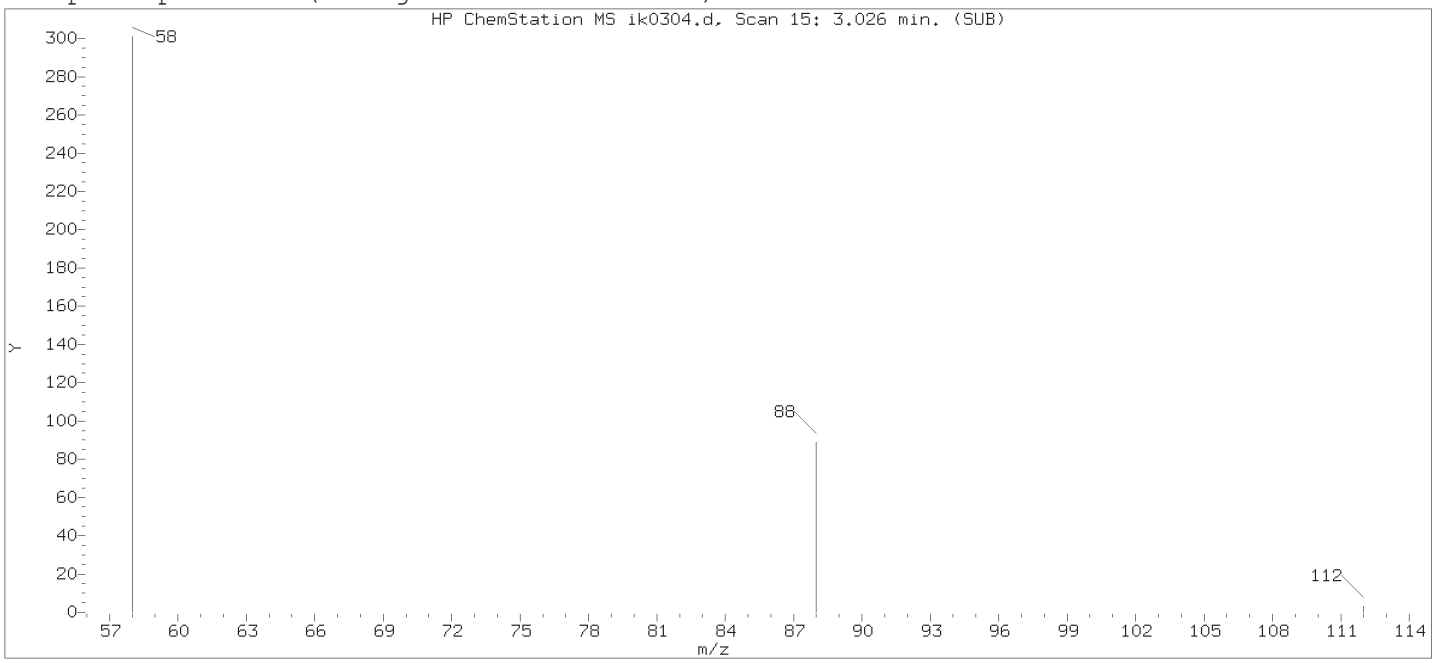
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 38		
Retention Time (minutes)	: 3.174		
Quant Ion	: 88.00		
Area (flag)	: 3137A		
On-column Amount (ng/ul)	: 0.1276		
Integration start scan	: 32	Integration stop scan:	55
Y at integration start	: 163	Y at integration end:	163

Reason for manual integration: improper integration

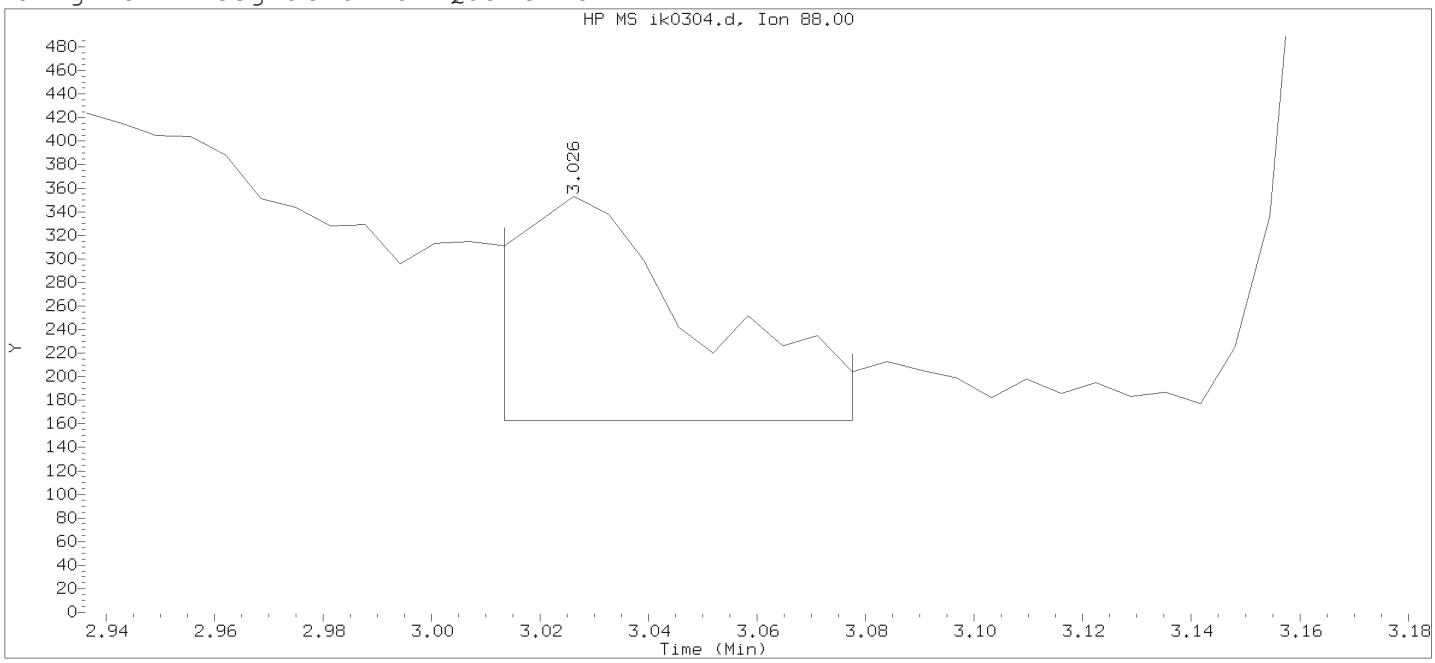
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

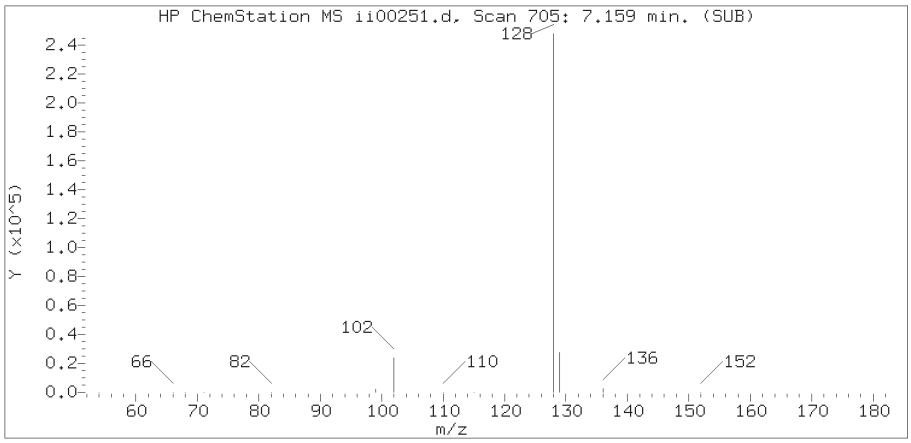
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

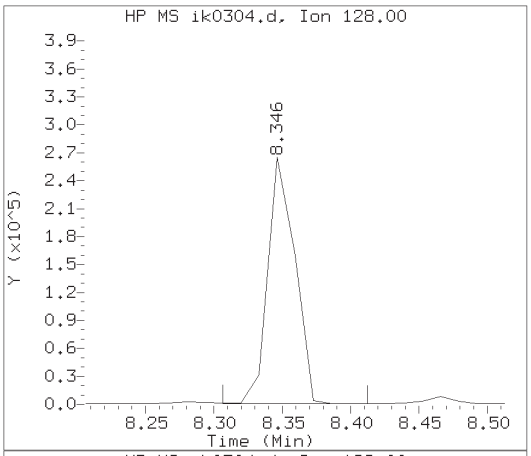
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 15
Retention Time (minutes) : 3.026
Quant Ion : 88.00
Area : 432
On-column Amount (ng/ul) : 0.0176
Integration start scan : 12 Integration stop scan: 22
Y at integration start : 163 Y at integration end: 163

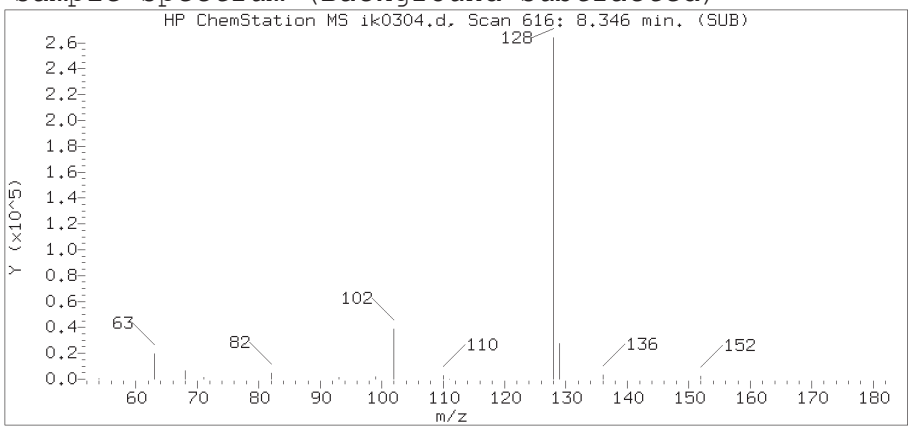
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

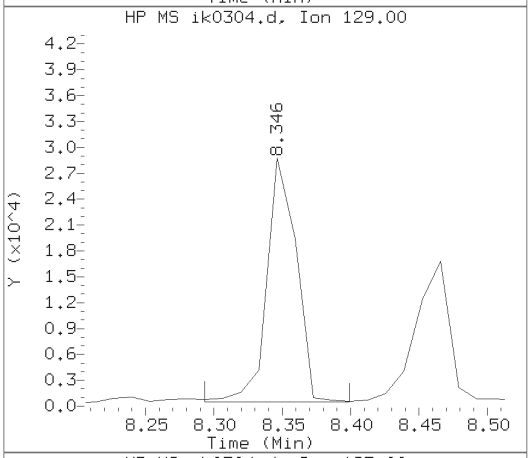
Reference Standard Spectrum for Naphthalene



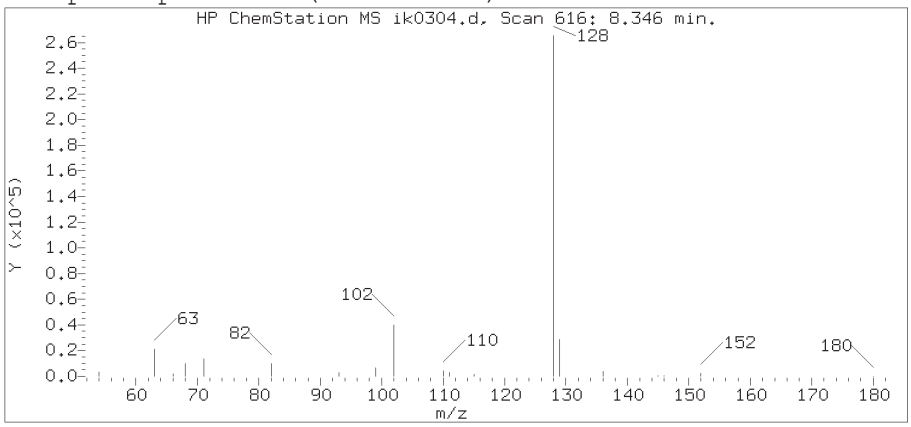


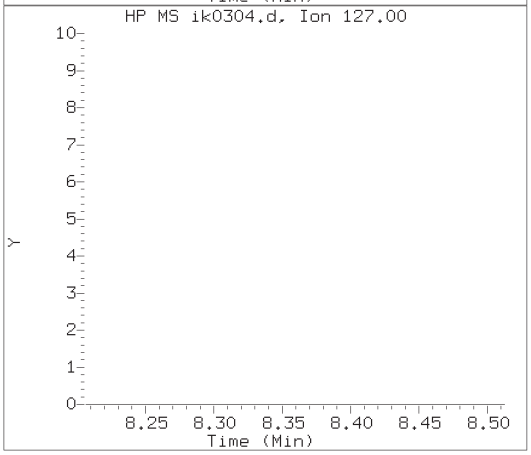
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

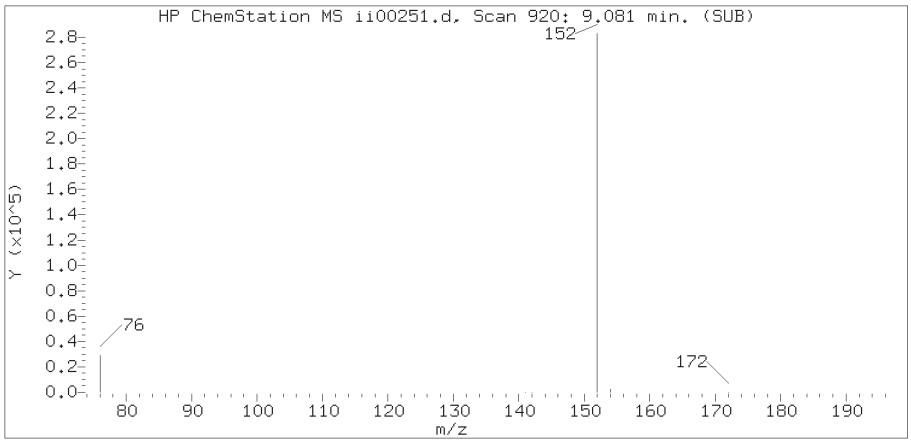
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

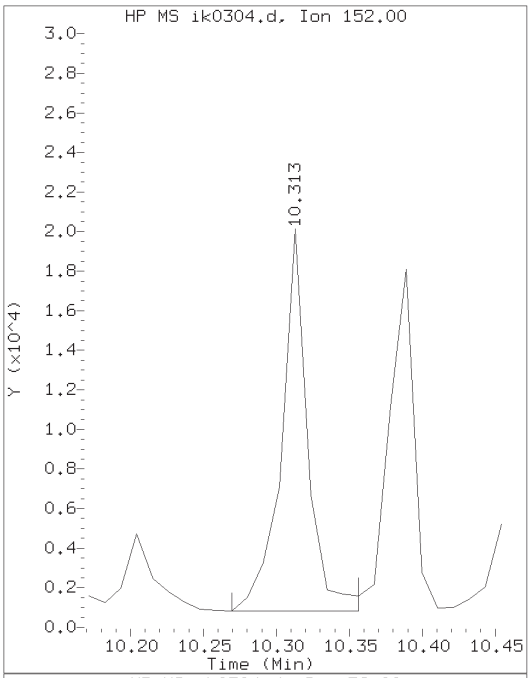
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 11
Compound Name	: Naphthalene
Scan Number	: 616
Retention Time (minutes)	: 8.346
Relative Retention Time	:-0.00000
Quant Ion	: 128.00
Area (flag)	: 367577
On-column Amount (ng/ul)	: 2.3622

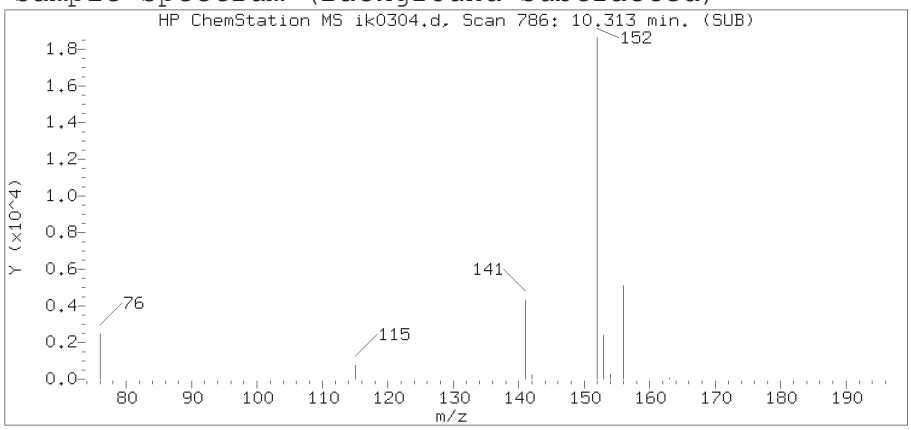
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

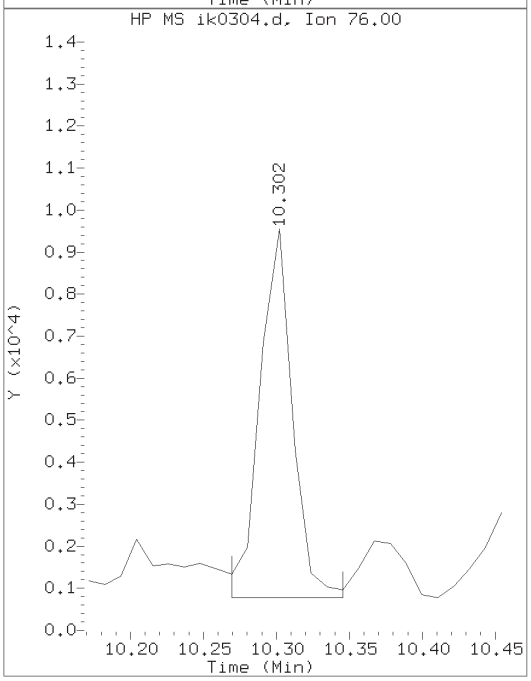
Reference Standard Spectrum for Acenaphthylene



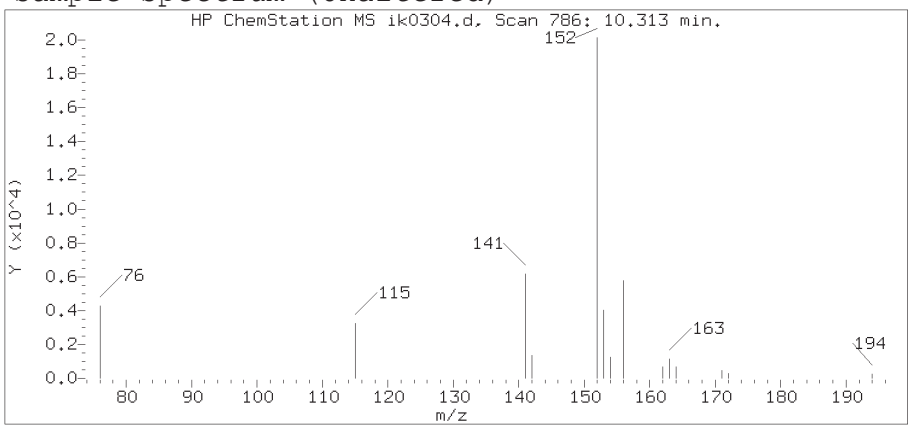


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

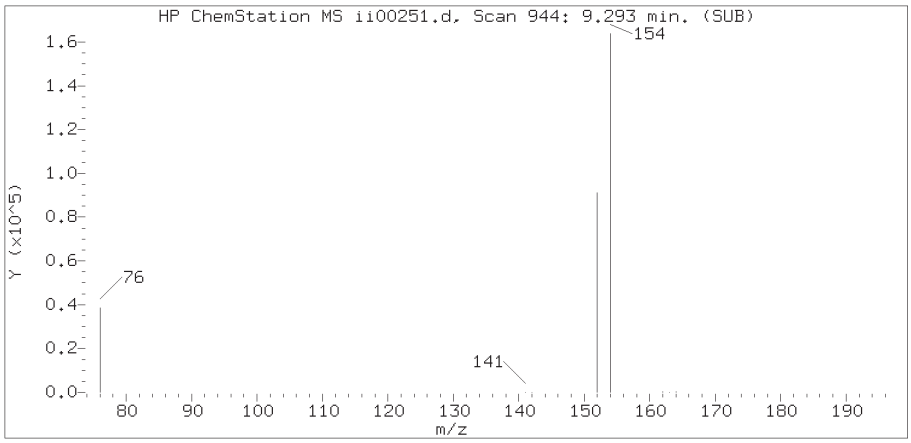
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

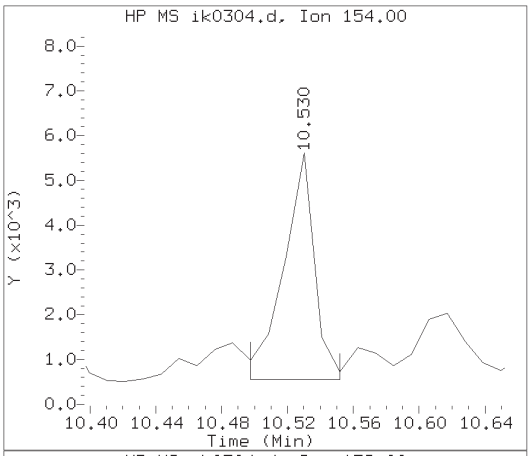
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 19
Compound Name	: Acenaphthylene
Scan Number	: 786
Retention Time (minutes)	: 10.313
Relative Retention Time	:-0.00000
Quant Ion	: 152.00
Area (flag)	: 23998
On-column Amount (ng/ul)	: 0.1349

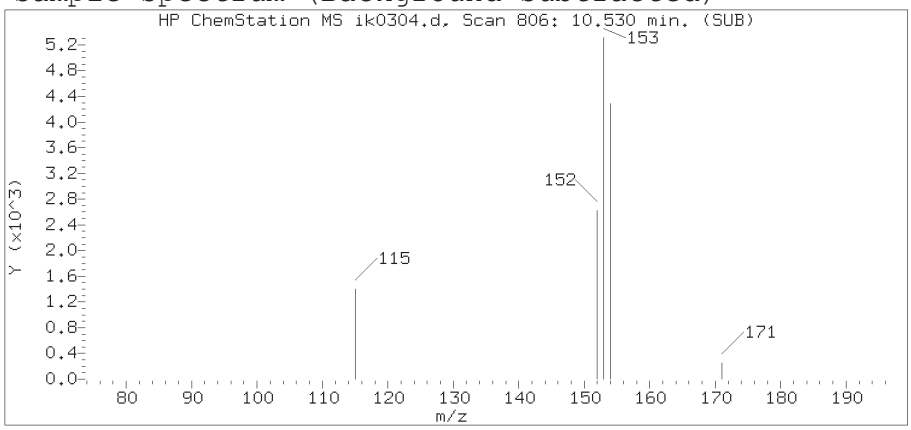
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

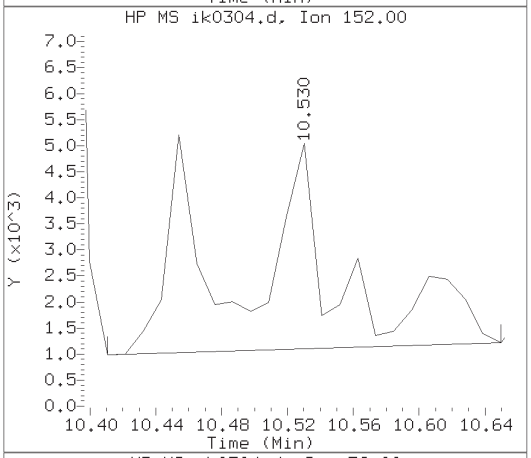
Reference Standard Spectrum for Acenaphthene



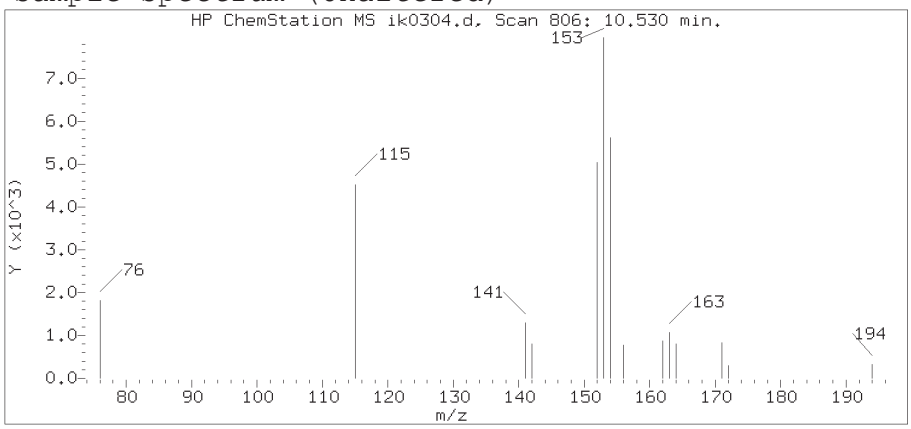


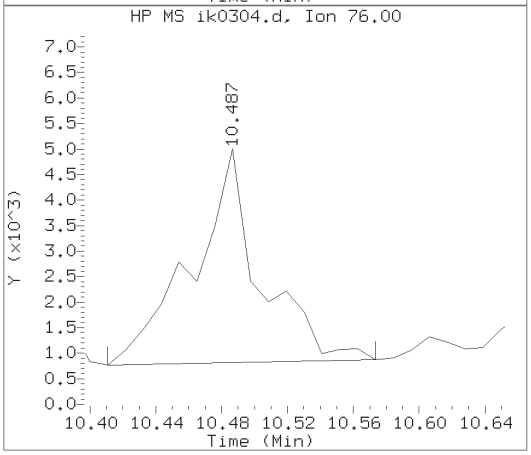
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

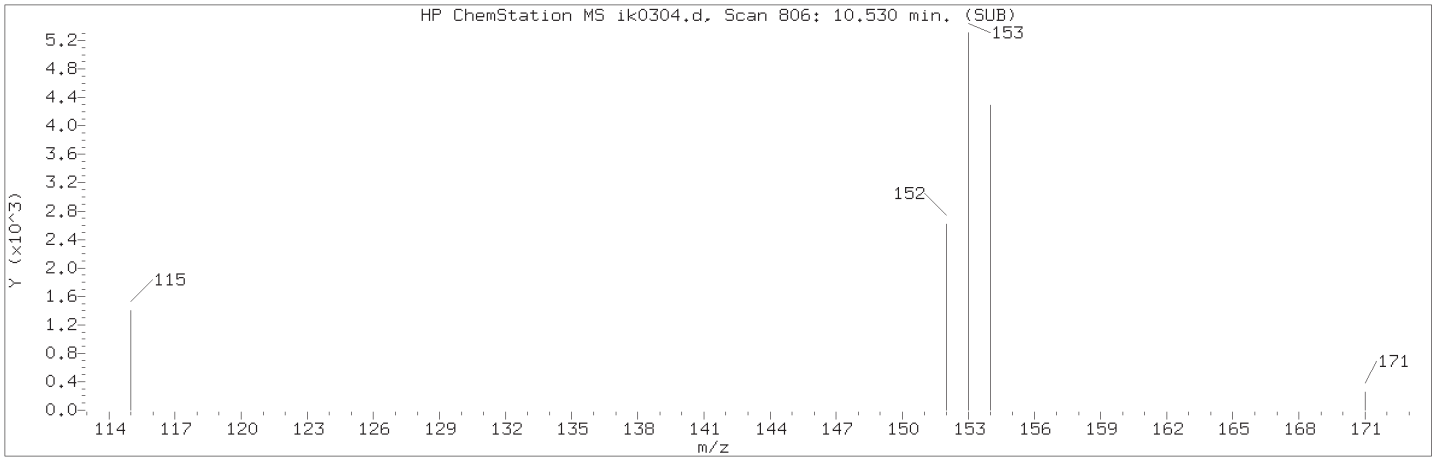
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1002 Lab Sample ID: 9867761

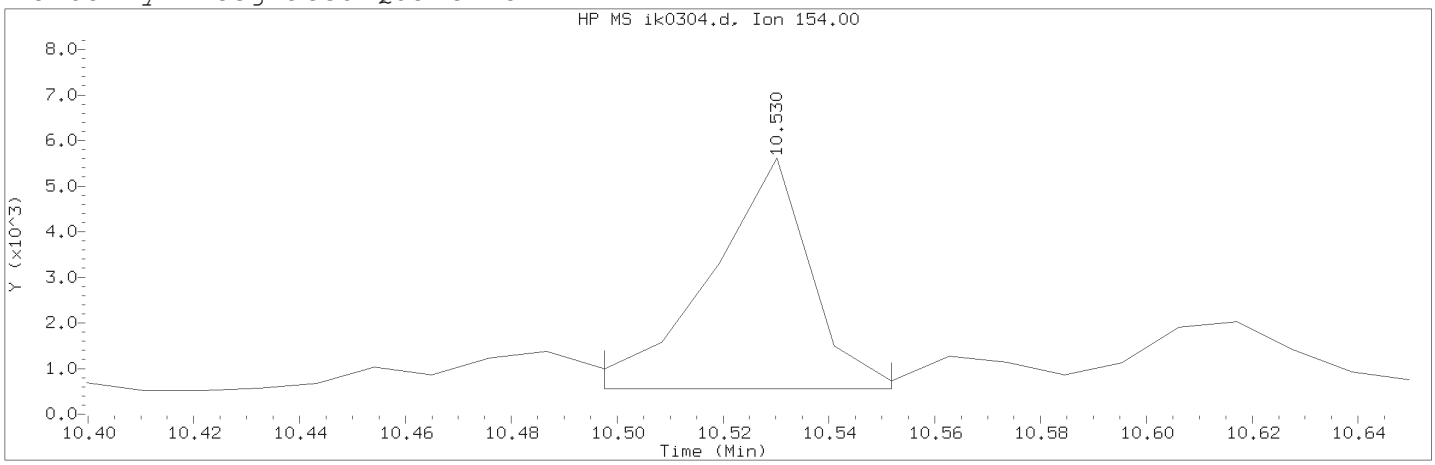
Compound Number	: 21
Compound Name	: Acenaphthene
Scan Number	: 806
Retention Time (minutes)	: 10.530
Relative Retention Time	:-0.00103
Quant Ion	: 154.00
Area (flag)	: 6768M
On-column Amount (ng/ul)	: 0.0579

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1002 Lab Sample ID: 9867761

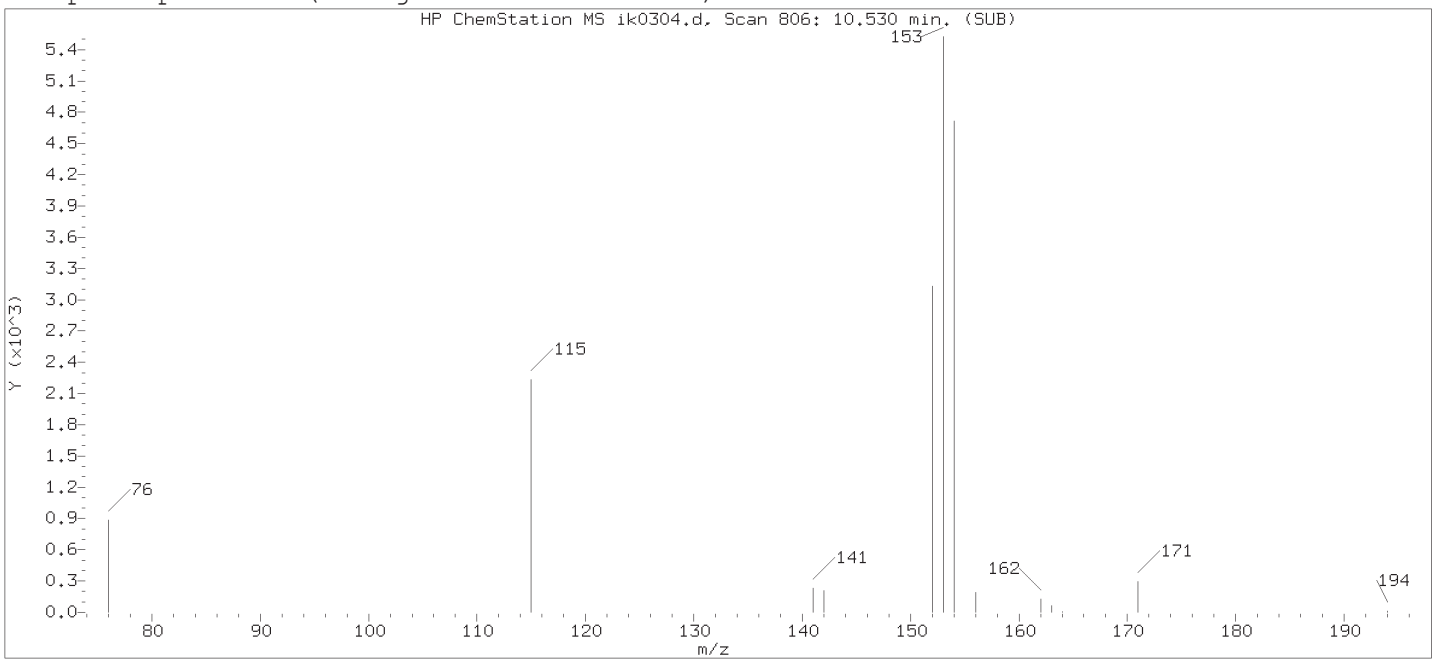
Compound Number : 21
Compound Name : Acenaphthene
Scan Number : 806
Retention Time (minutes) : 10.530
Quant Ion : 154.00
Area (flag) : 6768M
On-column Amount (ng/ul) : 0.0579
Integration start scan : 802 Integration stop scan: 807
Y at integration start : 551 Y at integration end: 551

Reason for manual integration: improper integration

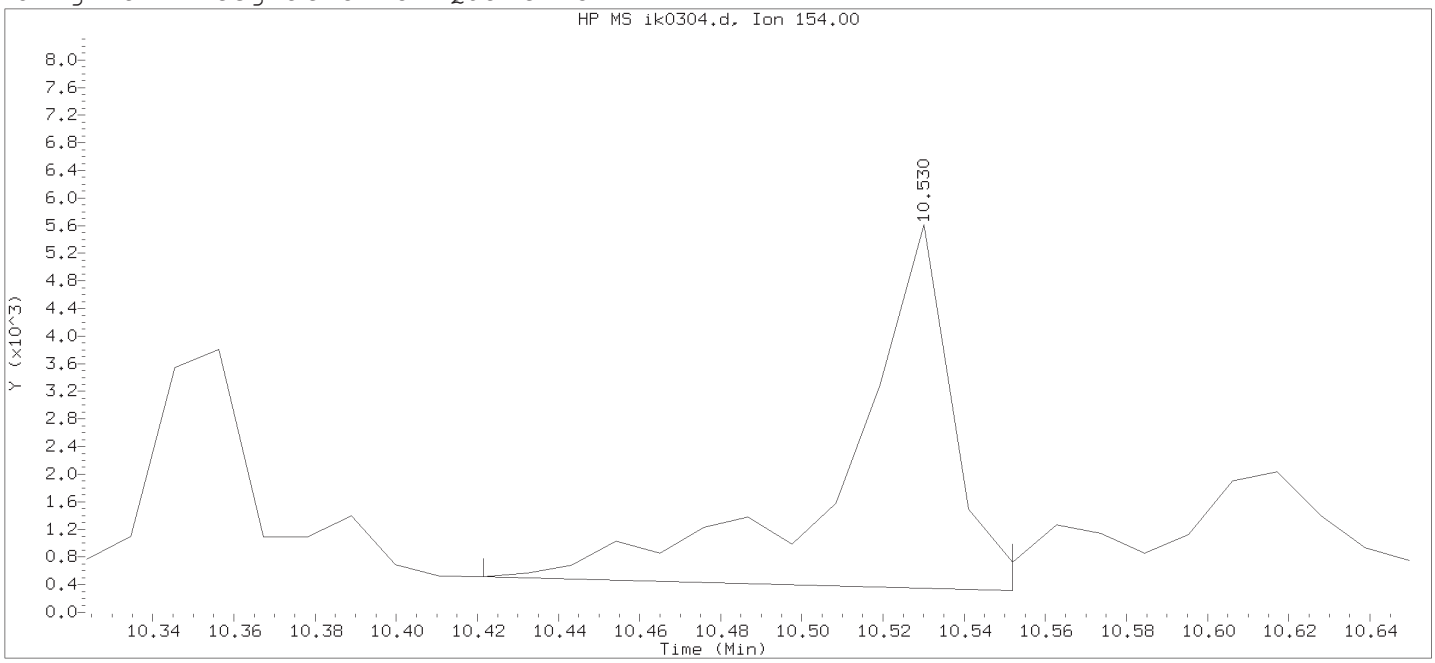
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

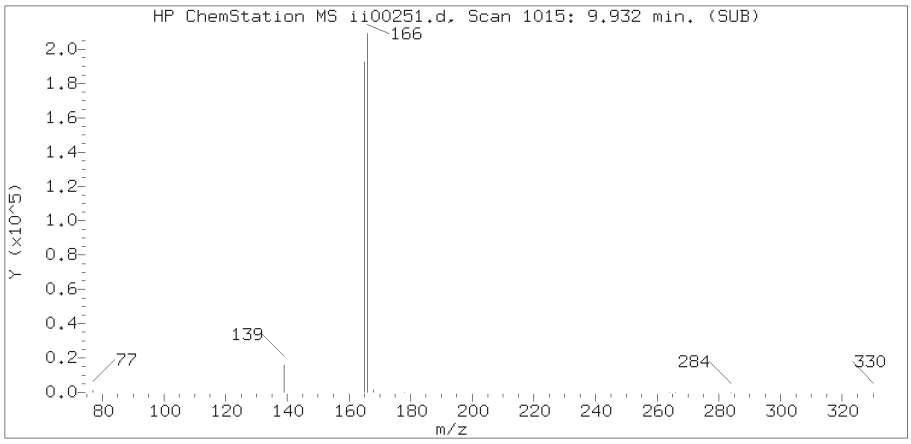
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

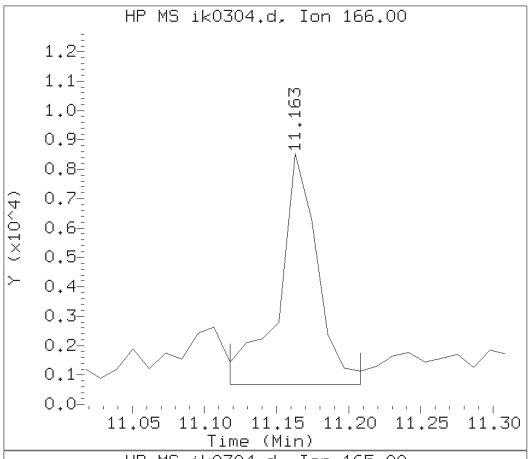
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 806		
Retention Time (minutes)	: 10.530		
Quant Ion	: 154.00		
Area	: 9377		
On-column Amount (ng/ul)	: 0.0802		
Integration start scan	: 795	Integration stop scan:	807
Y at integration start	: 511	Y at integration end:	313

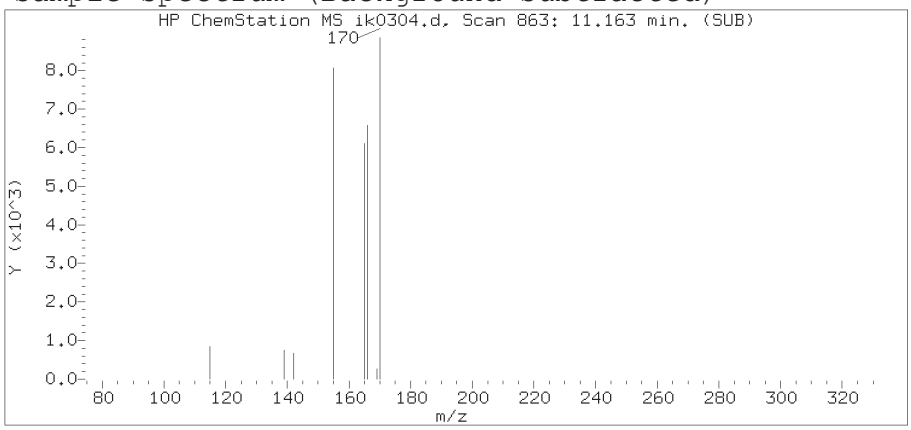
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature used: D10 Page 1780

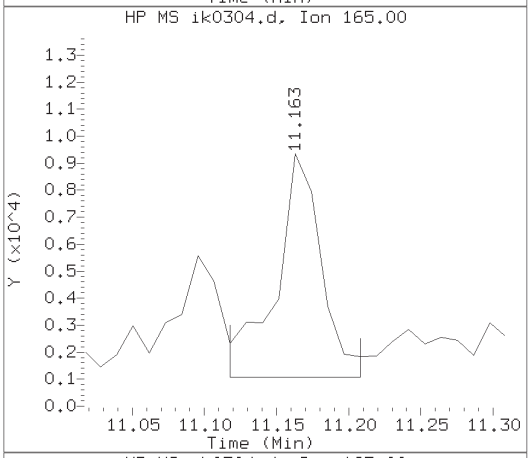
Reference Standard Spectrum for Fluorene



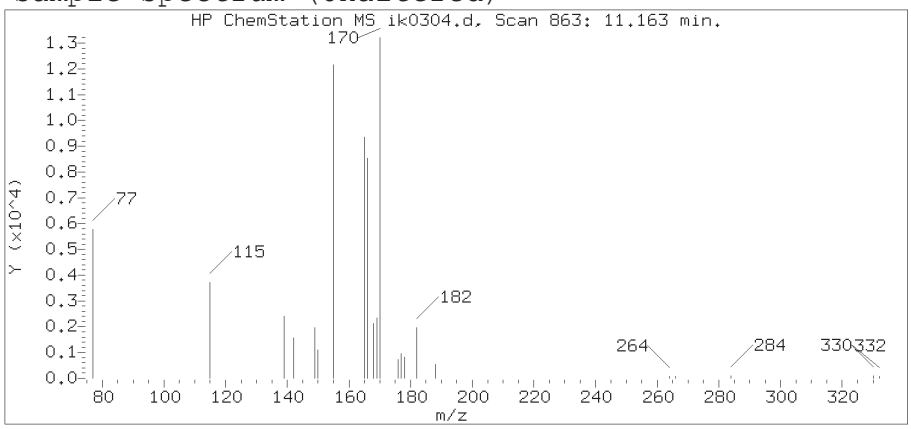


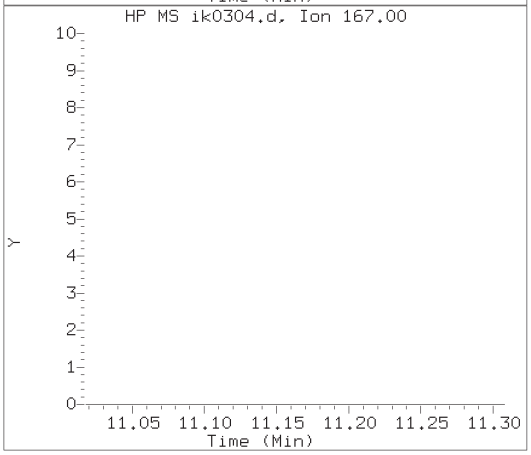
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

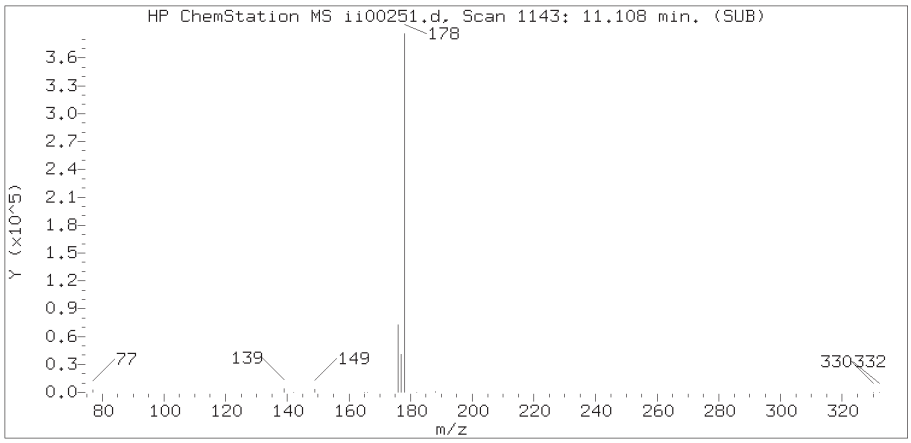
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

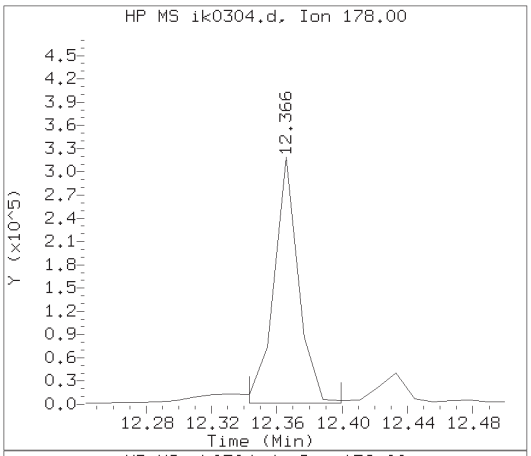
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 26
Compound Name	: Fluorene
Scan Number	: 863
Retention Time (minutes)	: 11.163
Relative Retention Time	: 0.00000
Quant Ion	: 166.00
Area (flag)	: 14436
On-column Amount (ng/ul)	: 0.1003

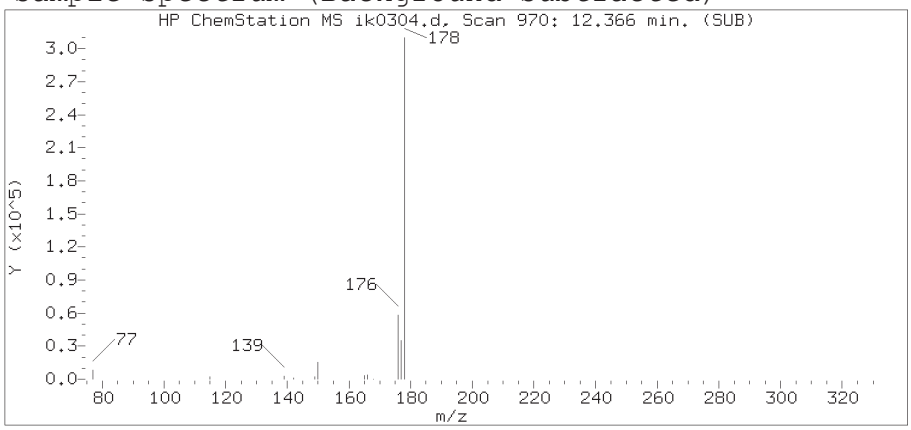
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

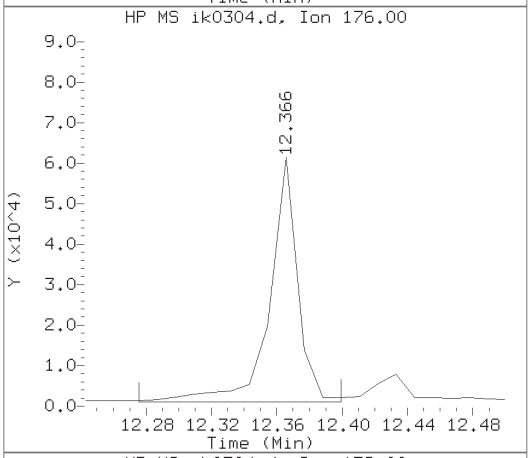
Reference Standard Spectrum for Phenanthrene



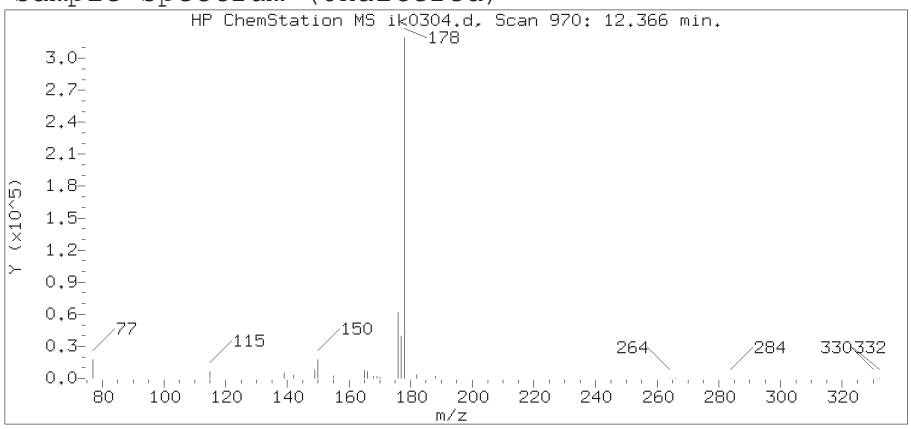


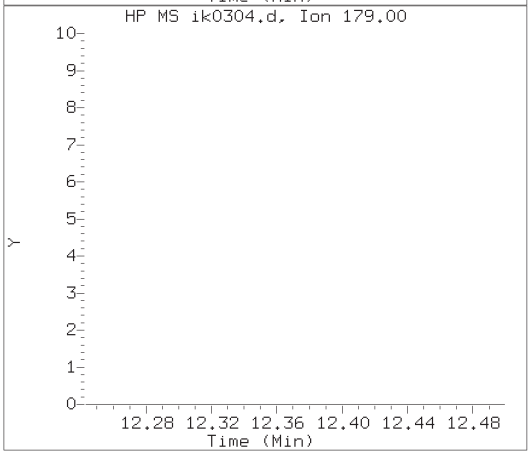
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

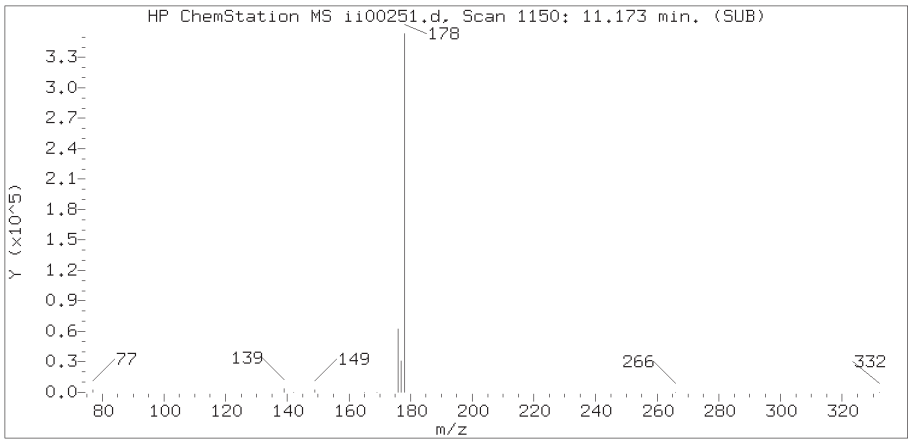
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

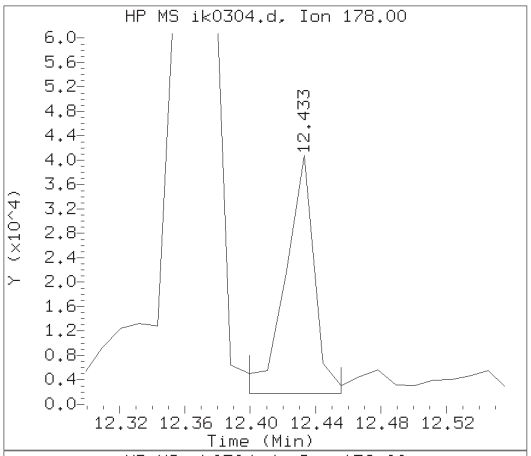
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 32
Compound Name	: Phenanthrene
Scan Number	: 970
Retention Time (minutes)	: 12.366
Relative Retention Time	: 0.00091
Quant Ion	: 178.00
Area (flag)	: 327542
On-column Amount (ng/ul)	: 1.4468

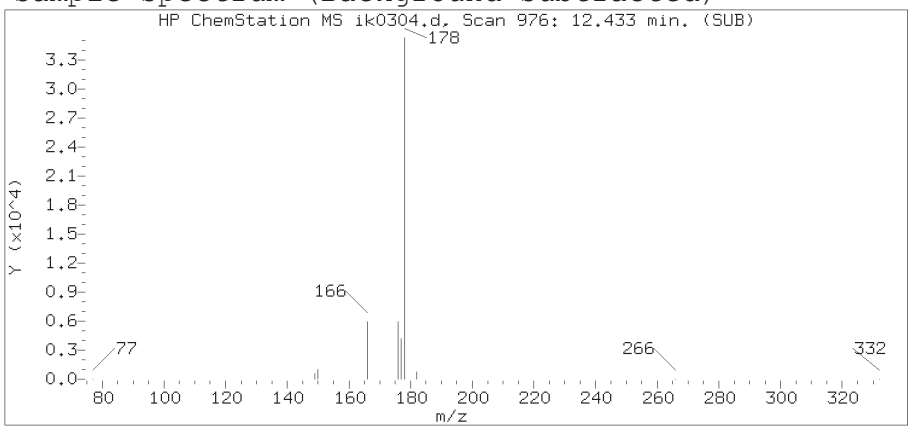
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

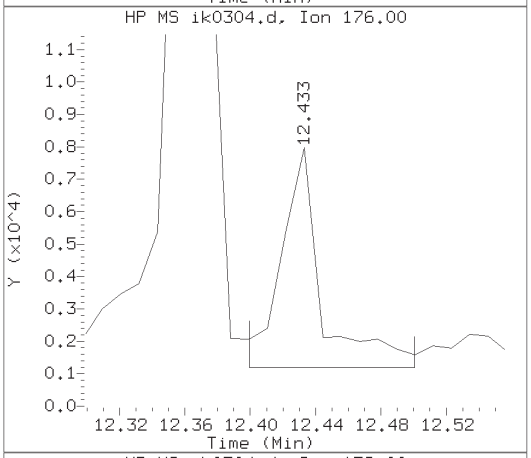
Reference Standard Spectrum for Anthracene



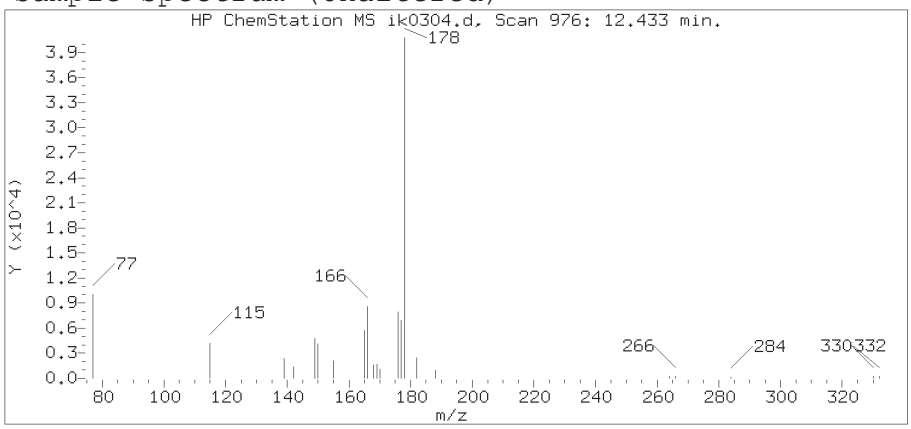


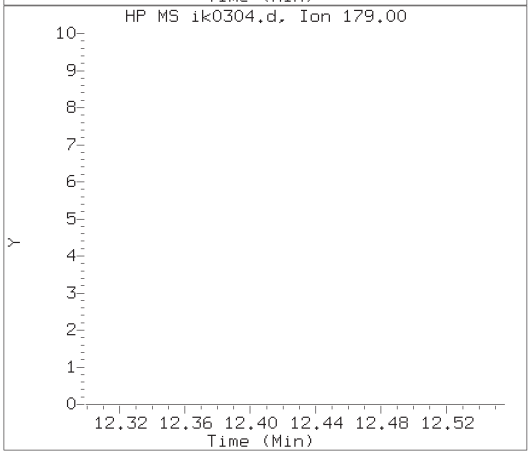
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

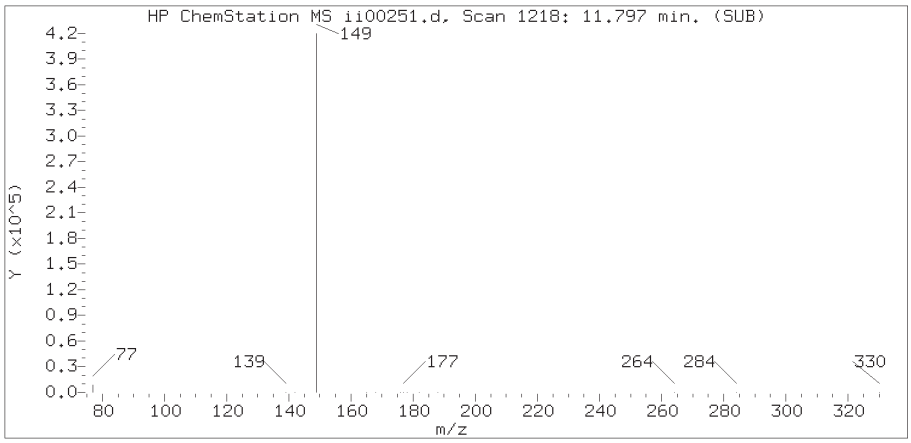
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

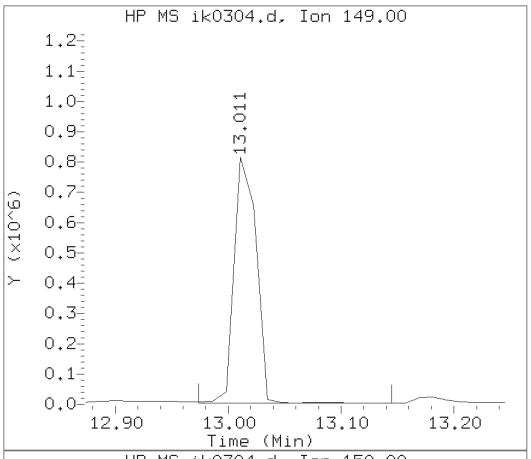
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 33
Compound Name	: Anthracene
Scan Number	: 976
Retention Time (minutes)	: 12.433
Relative Retention Time	: 0.00001
Quant Ion	: 178.00
Area (flag)	: 46966
On-column Amount (ng/ul)	: 0.2071

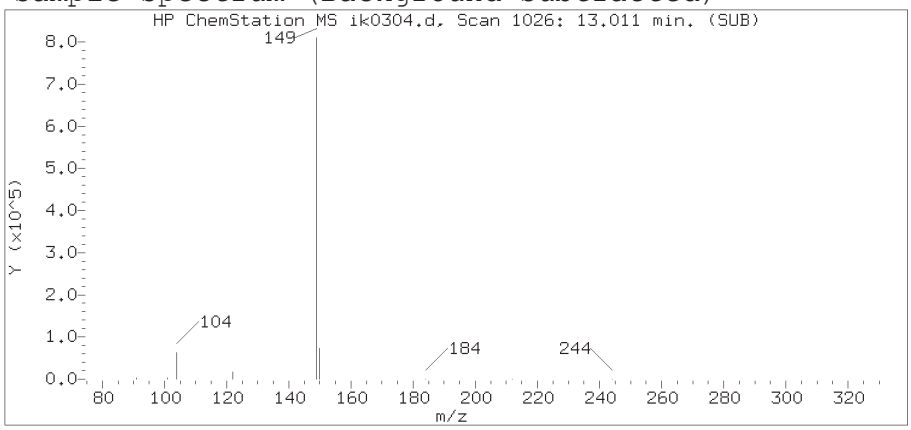
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

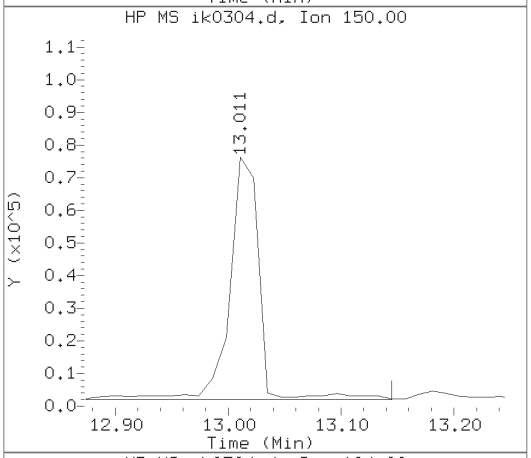
Reference Standard Spectrum for Di-n-butylphthalate



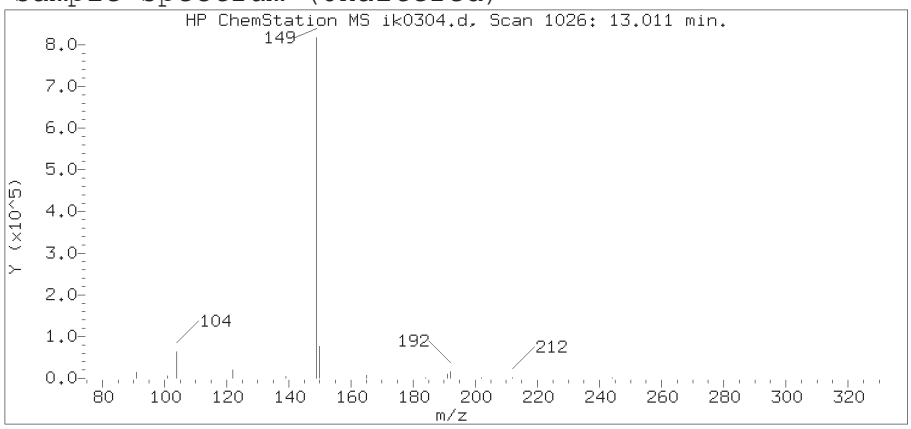


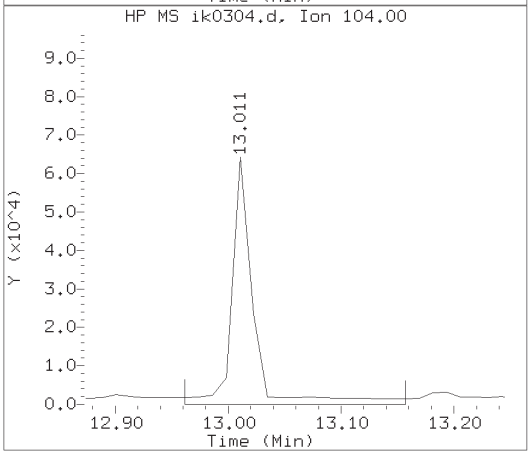
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

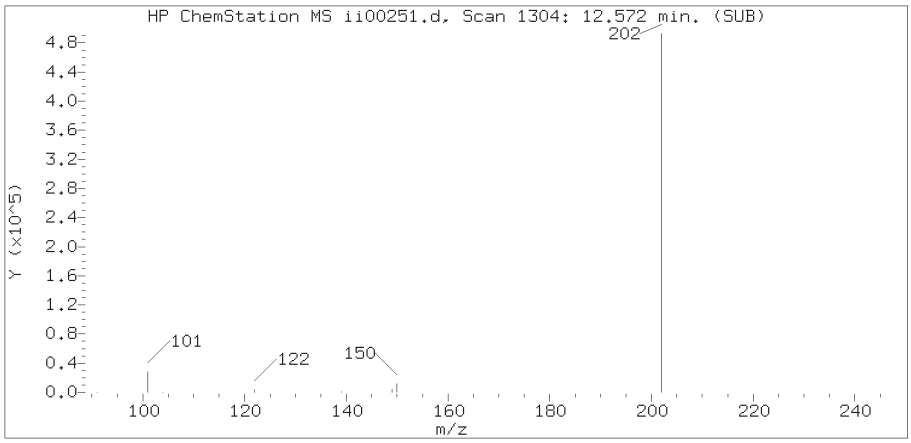
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

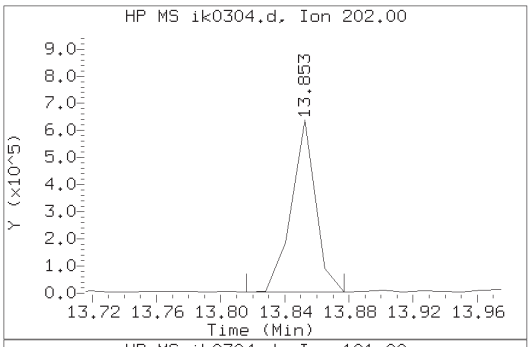
Sample Name: T1002 Lab Sample ID: 9867761

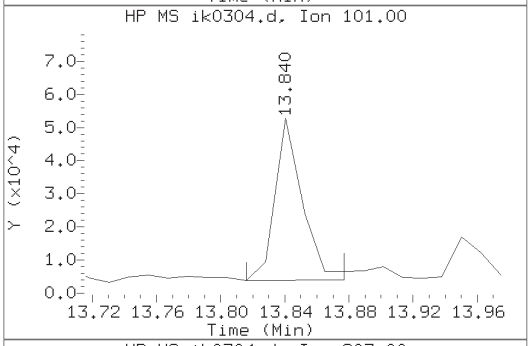
Compound Number	: 35
Compound Name	: Di-n-butylphthalate
Scan Number	: 1026
Retention Time (minutes)	: 13.011
Relative Retention Time	: 0.00096
Quant Ion	: 149.00
Area (flag)	: 1114304
On-column Amount (ng/ul)	: 5.1441

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

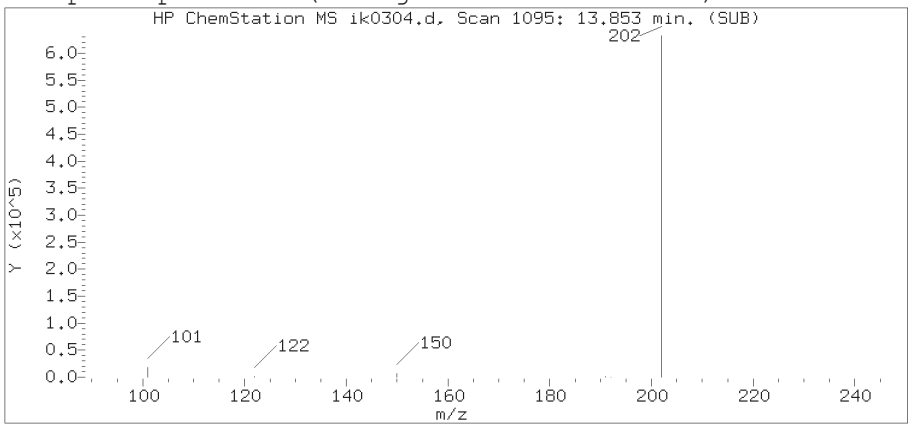
Reference Standard Spectrum for Fluoranthene

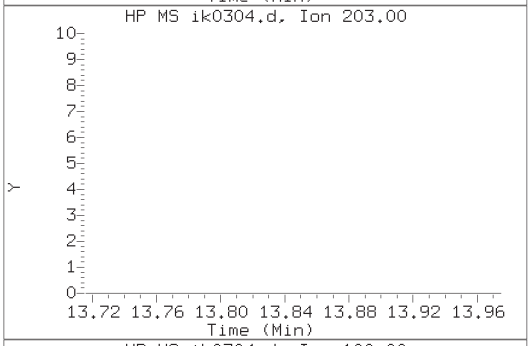




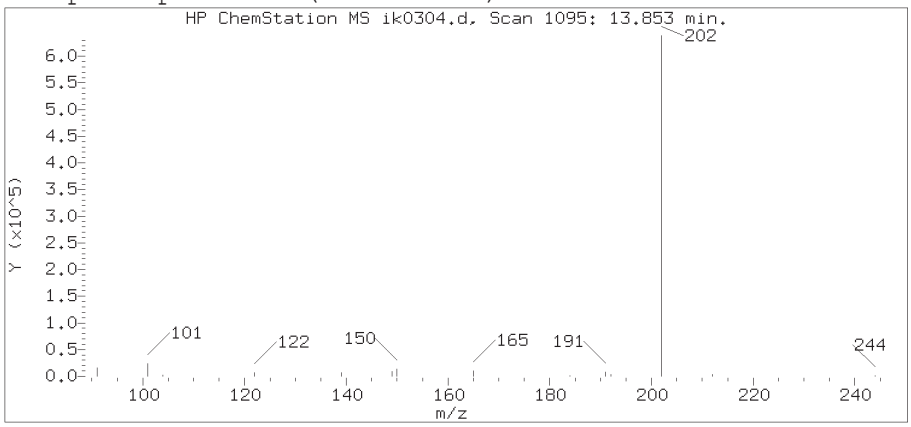


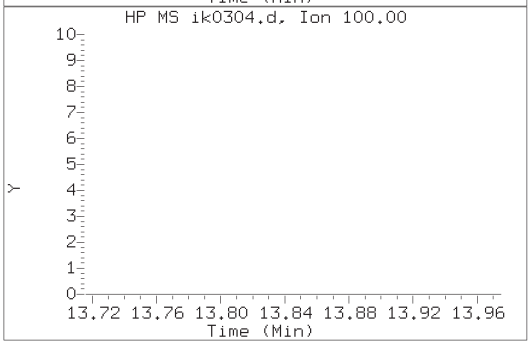
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

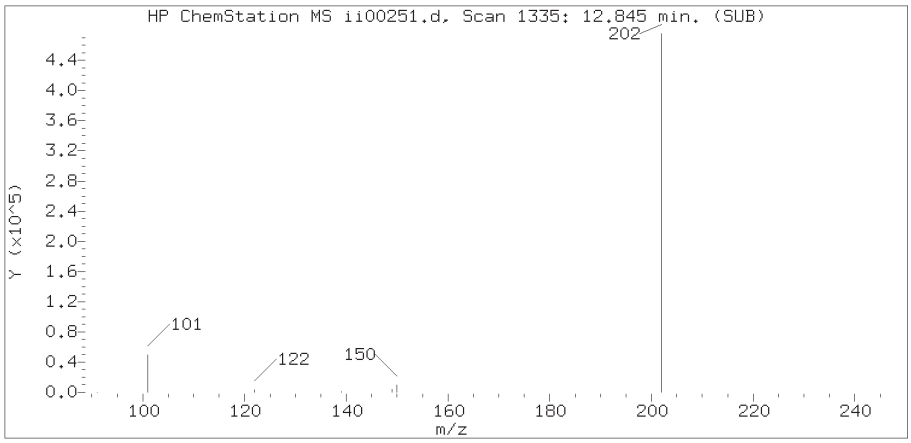
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

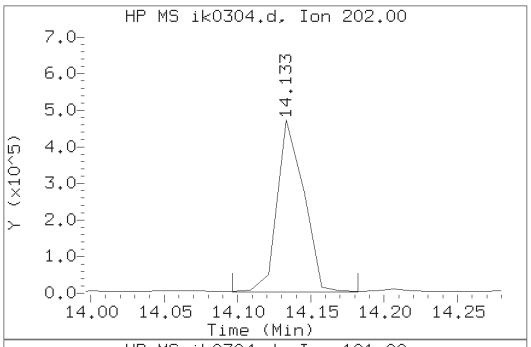
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 37
Compound Name	: Fluoranthene
Scan Number	: 1095
Retention Time (minutes)	: 13.853
Relative Retention Time	: 0.00003
Quant Ion	: 202.00
Area (flag)	: 661586
On-column Amount (ng/ul)	: 2.3472

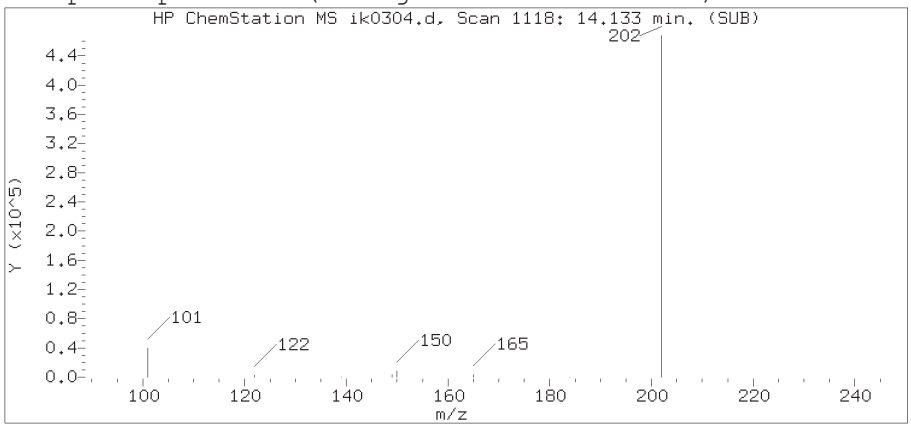
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

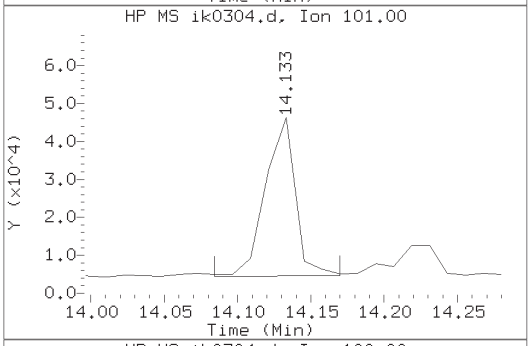
Reference Standard Spectrum for Pyrene

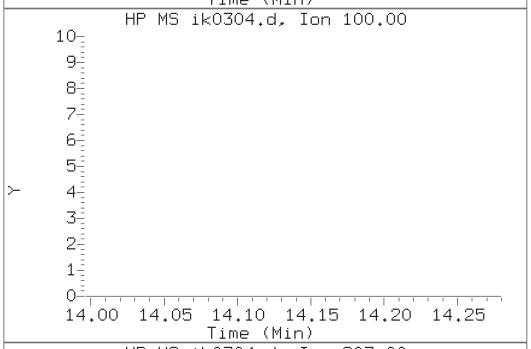




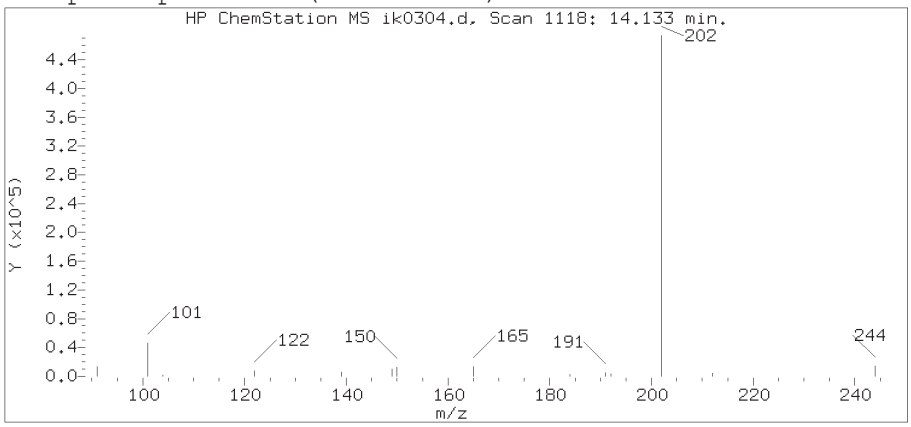
Sample Spectrum (Background Subtracted)

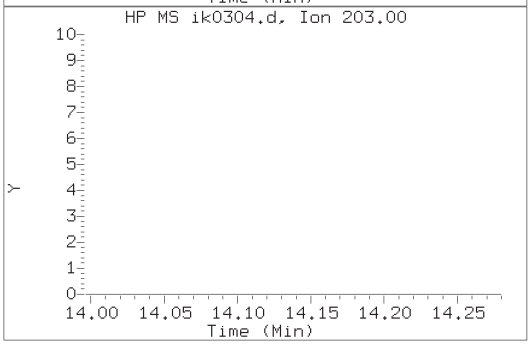






Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

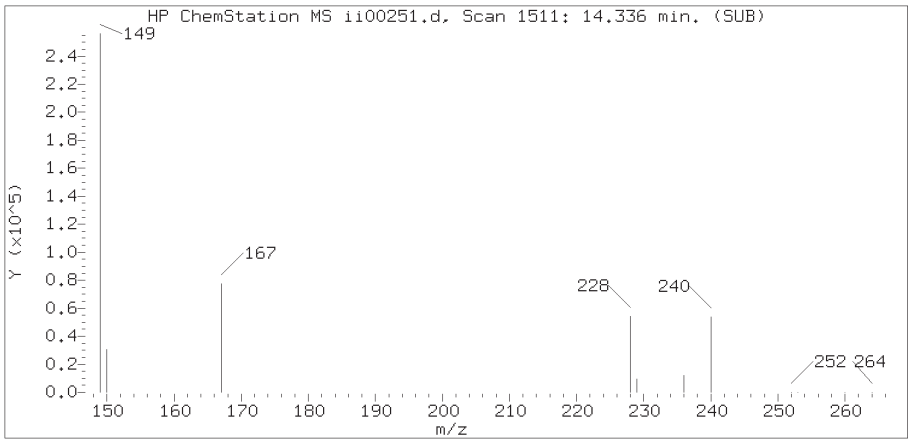
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

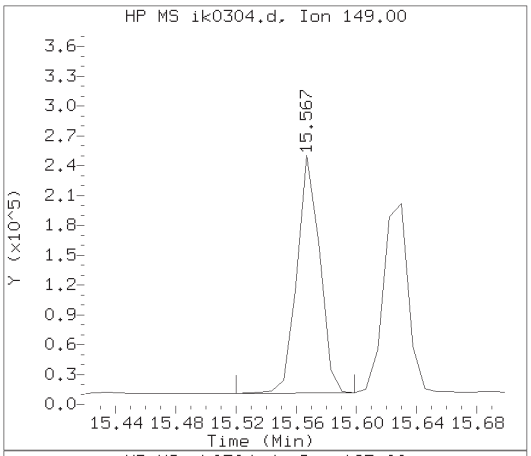
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 39
Compound Name	: Pyrene
Scan Number	: 1118
Retention Time (minutes)	: 14.133
Relative Retention Time	: 0.00090
Quant Ion	: 202.00
Area (flag)	: 594217
On-column Amount (ng/ul)	: 1.8868

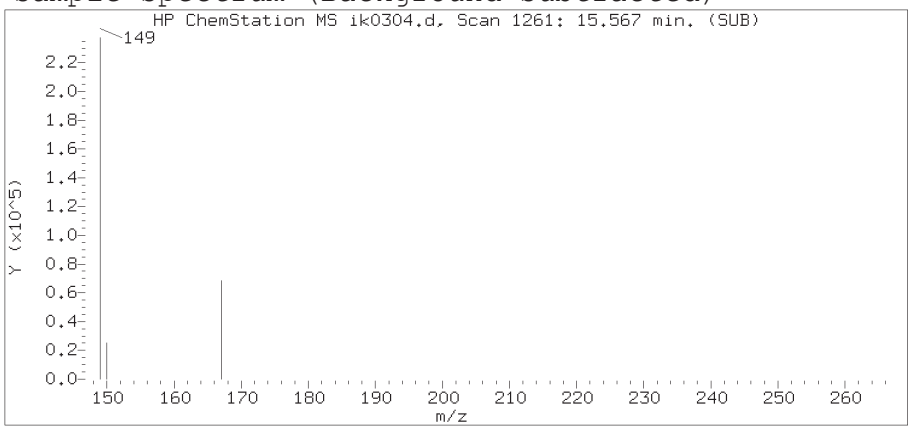
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

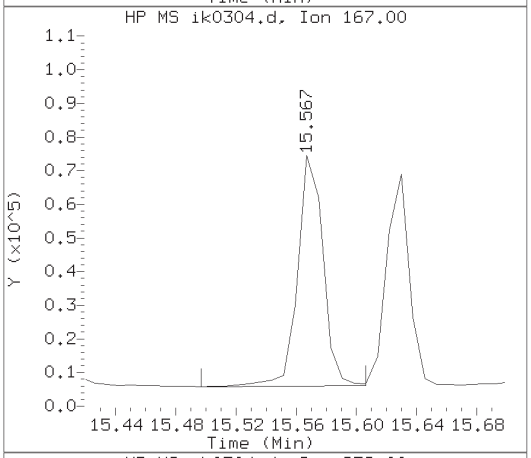
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



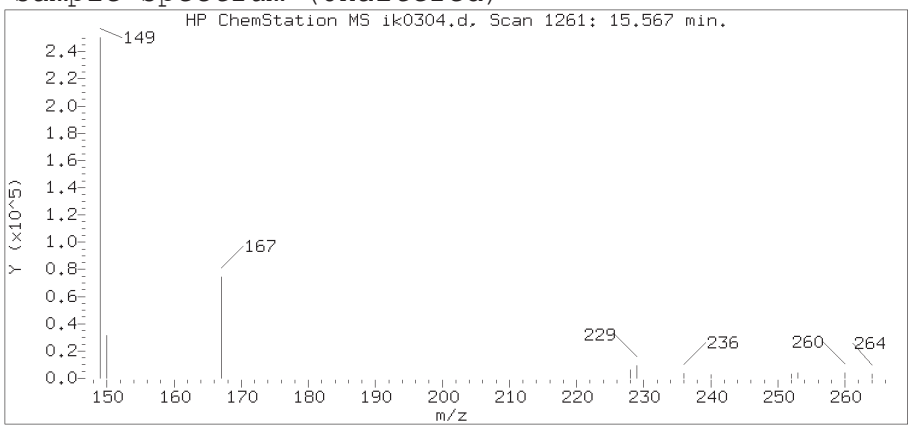


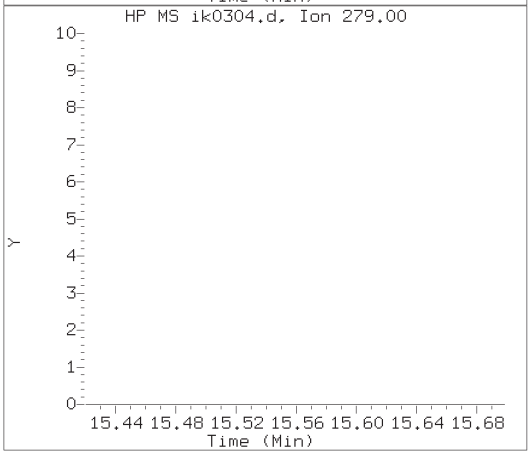
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

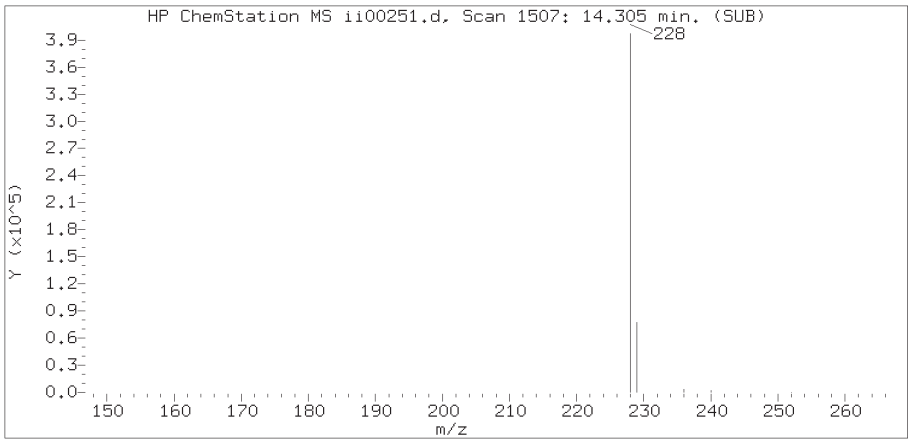
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

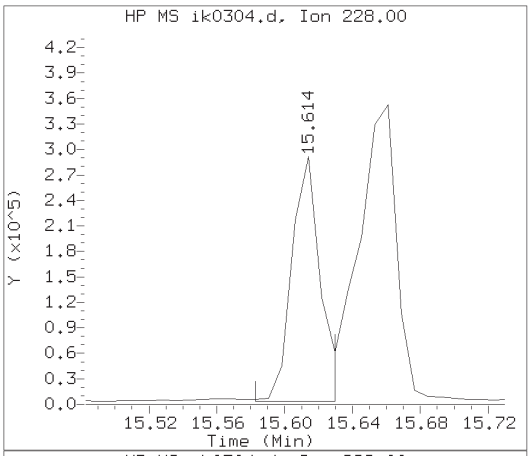
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 41
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1261
Retention Time (minutes)	: 15.567
Relative Retention Time	: 0.00050
Quant Ion	: 149.00
Area (flag)	: 250712
On-column Amount (ng/ul)	: 1.6751

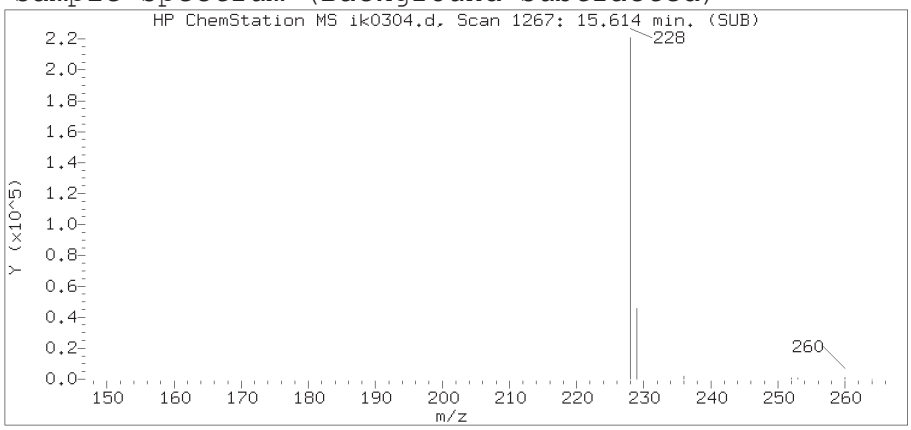
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

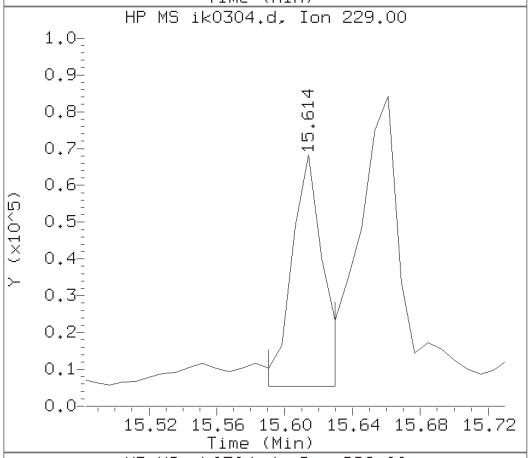
Reference Standard Spectrum for Benzo(a)anthracene



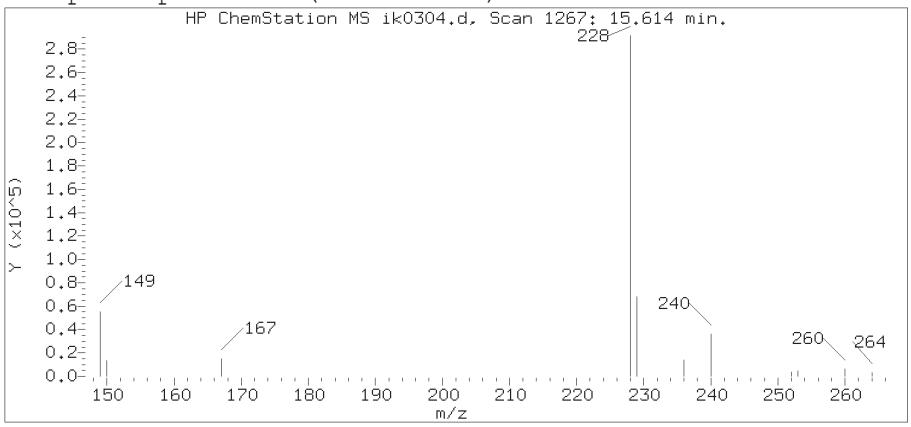


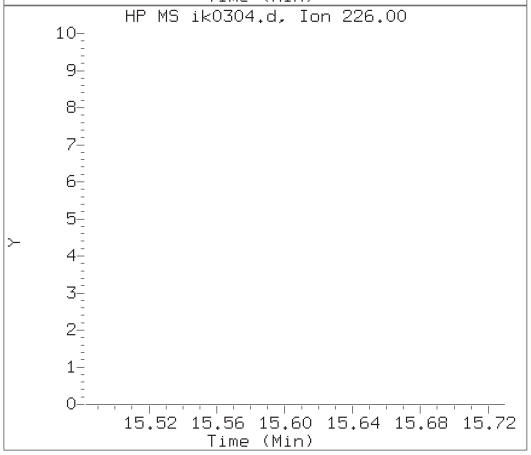
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

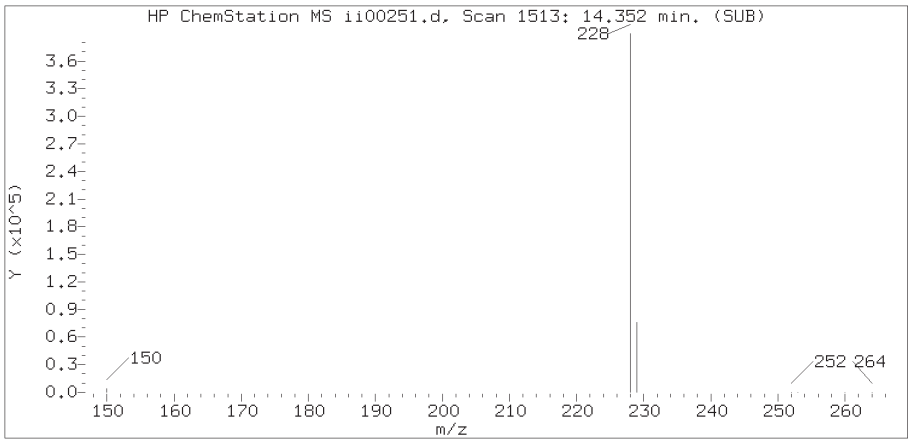
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

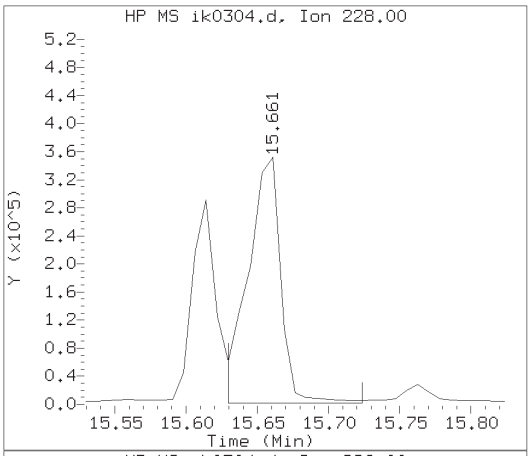
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 42
Compound Name	: Benzo(a)anthracene
Scan Number	: 1267
Retention Time (minutes)	: 15.614
Relative Retention Time	:-0.00000
Quant Ion	: 228.00
Area (flag)	: 327637
On-column Amount (ng/ul)	: 1.1193

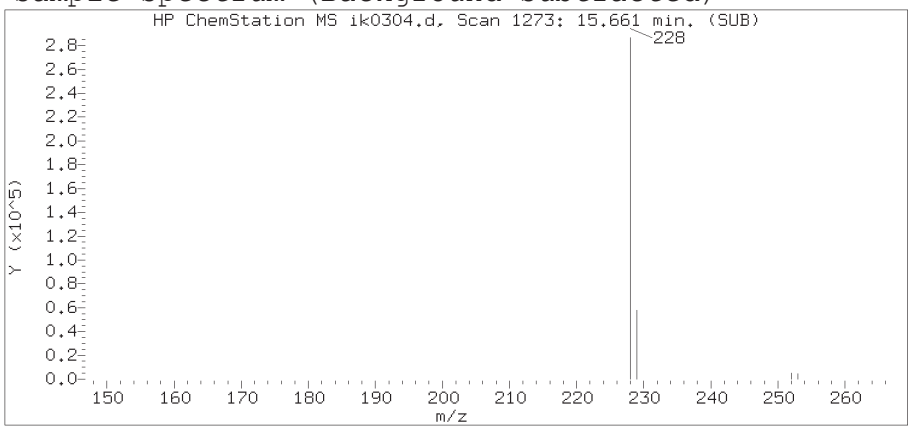
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

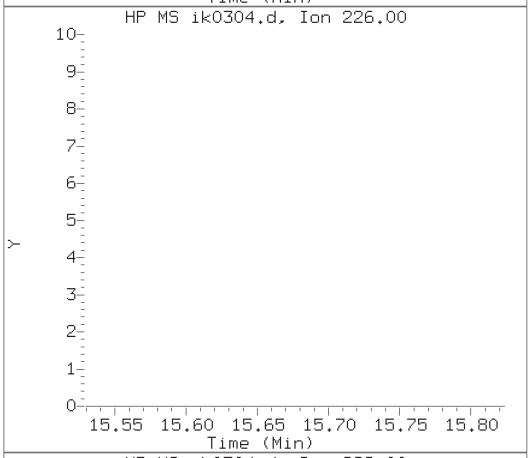
Reference Standard Spectrum for Chrysene



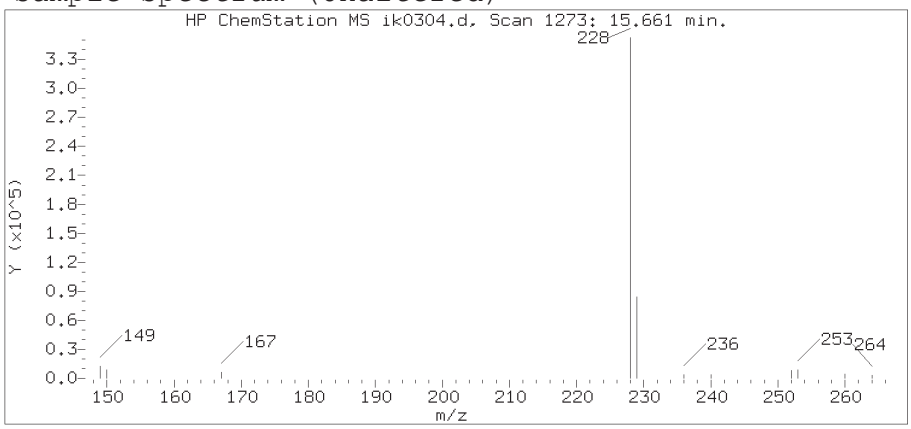


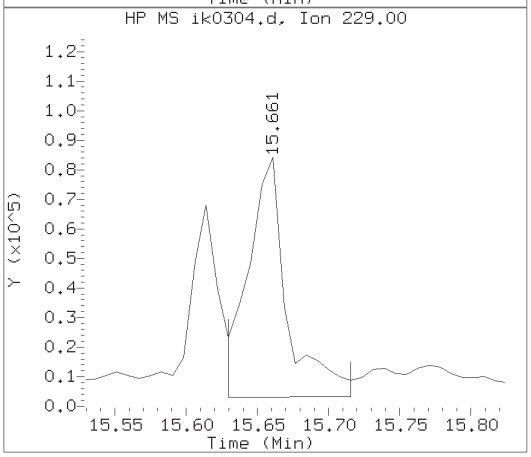
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

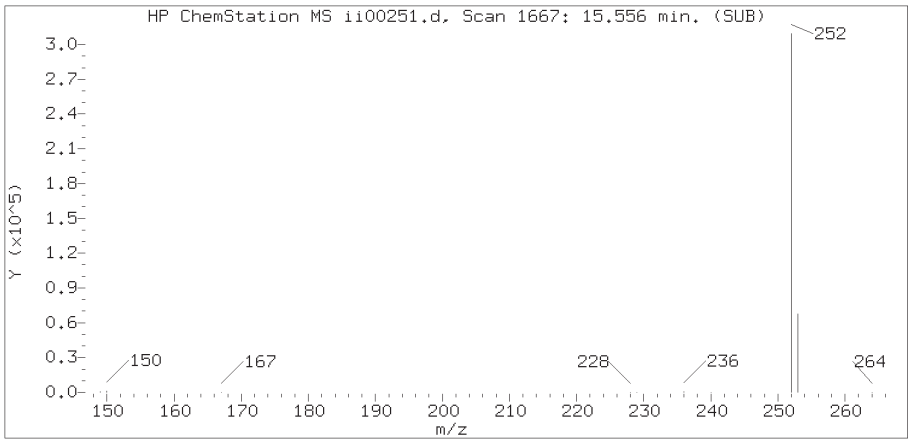
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

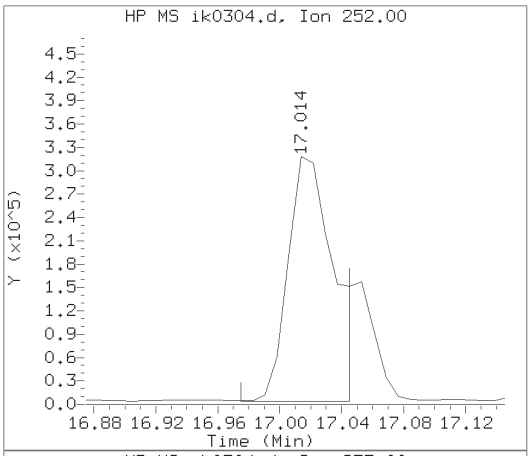
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 44
Compound Name	: Chrysene
Scan Number	: 1273
Retention Time (minutes)	: 15.661
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 568364
On-column Amount (ng/ul)	: 2.0327

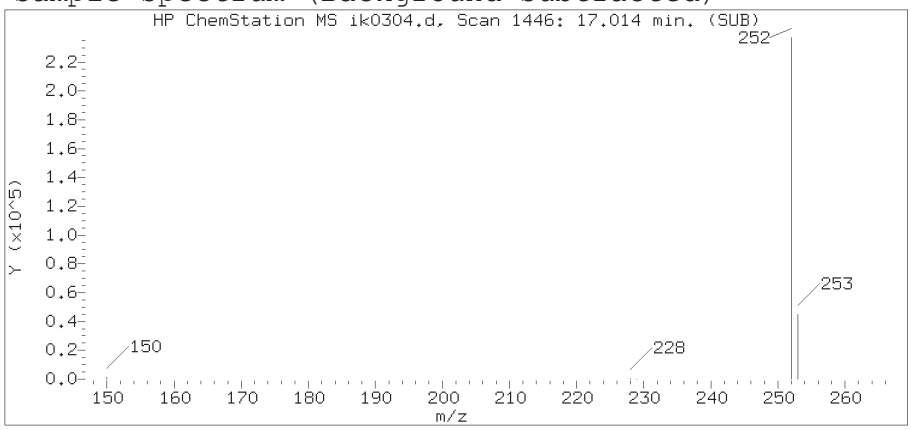
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

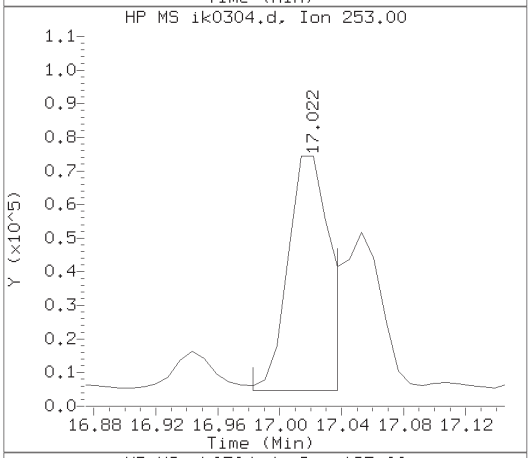
Reference Standard Spectrum for Benzo(b)fluoranthene



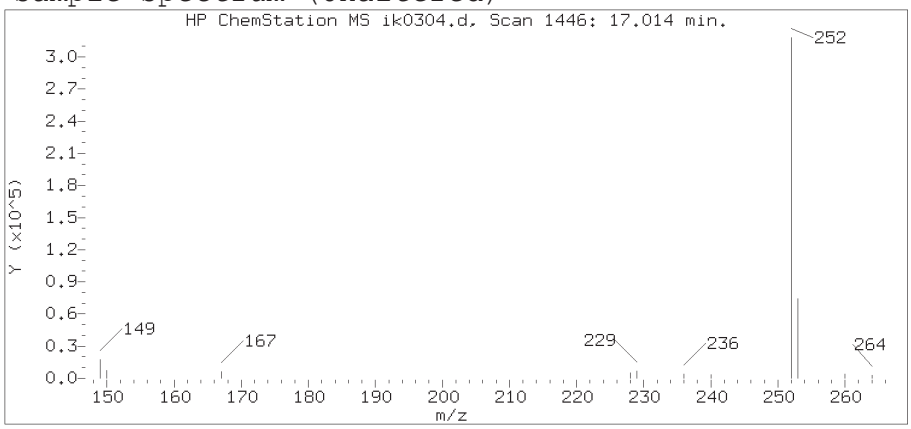


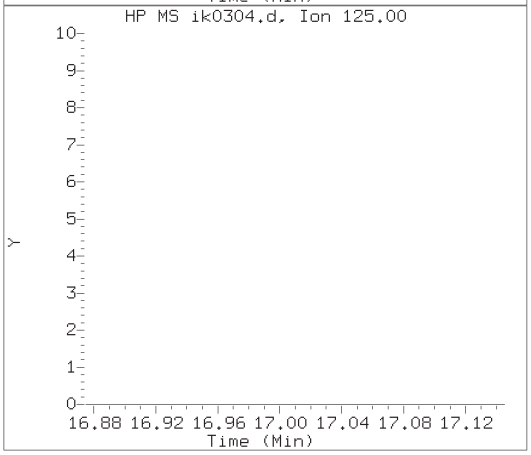
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

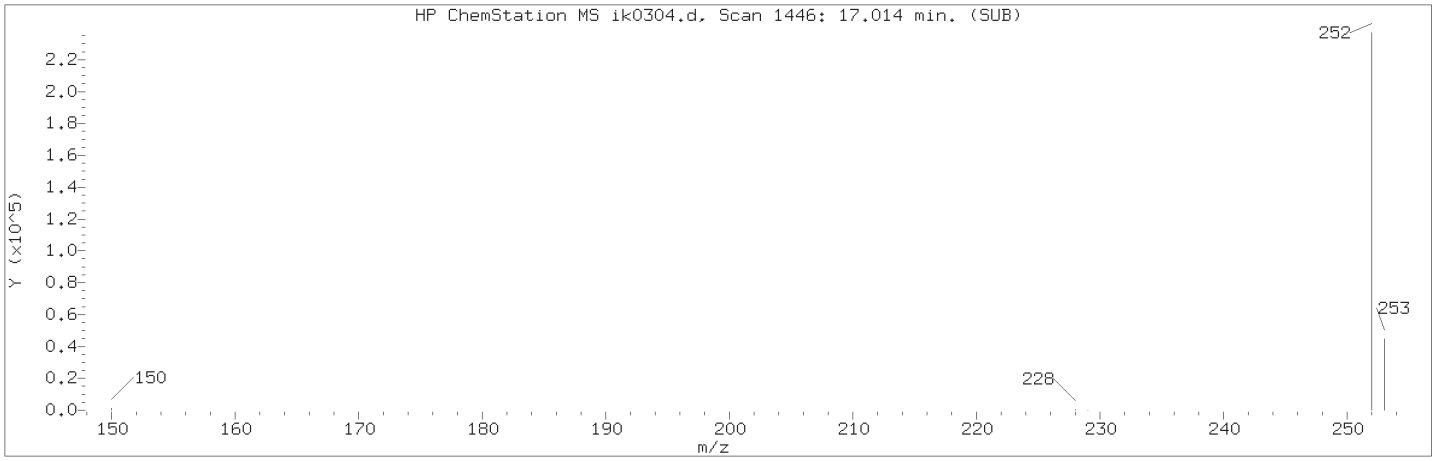
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1002 Lab Sample ID: 9867761

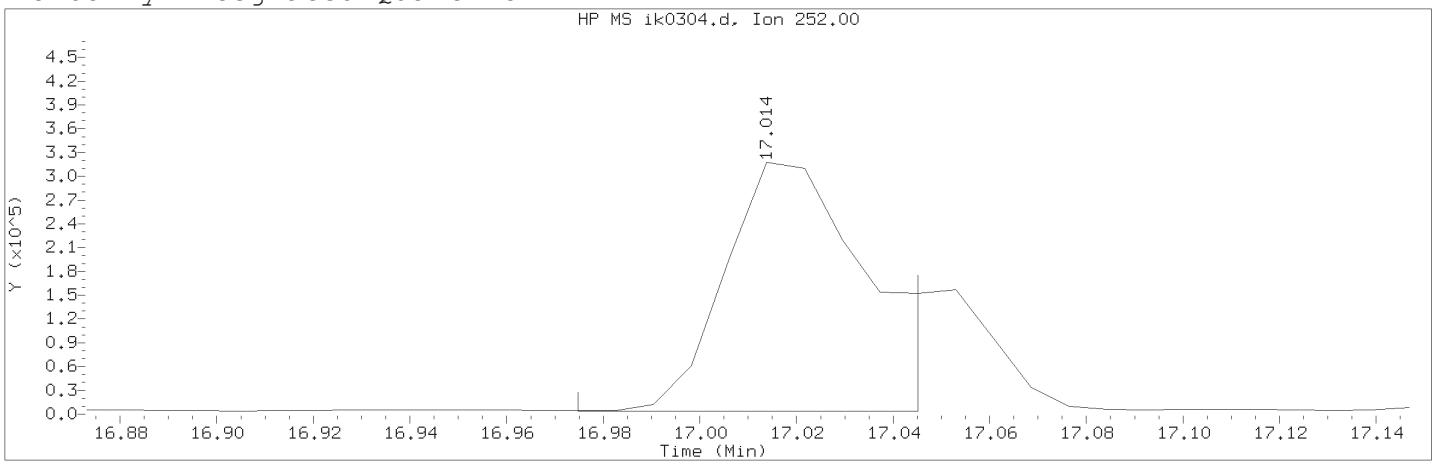
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1446
Retention Time (minutes) : 17.014
Relative Retention Time :-0.00004
Quant Ion : 252.00
Area (flag) : 655425M
On-column Amount (ng/ul) : 3.5879

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1002 Lab Sample ID: 9867761

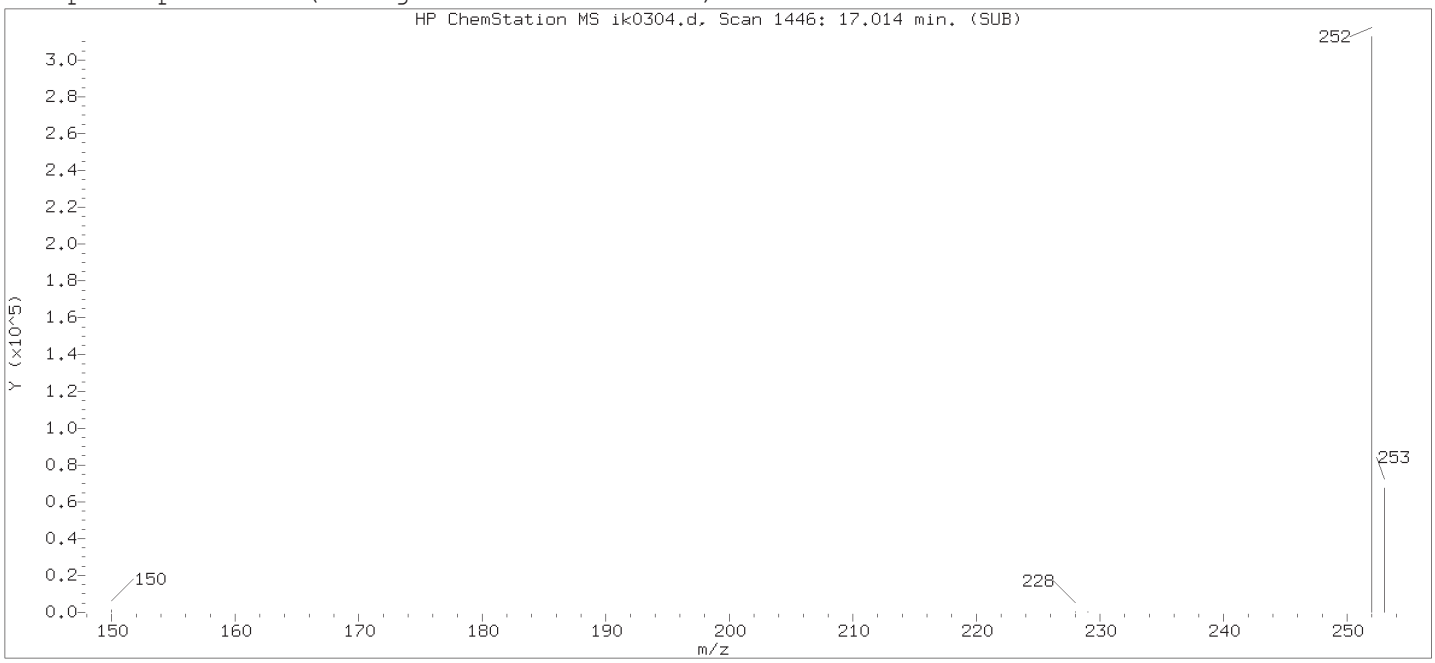
Compound Number	: 46		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1446		
Retention Time (minutes)	: 17.014		
Quant Ion	: 252.00		
Area (flag)	: 655425M		
On-column Amount (ng/ul)	: 3.5879		
Integration start scan	: 1440	Integration stop scan:	1449
Y at integration start	: 3495	Y at integration end:	3535

Reason for manual integration: improper integration

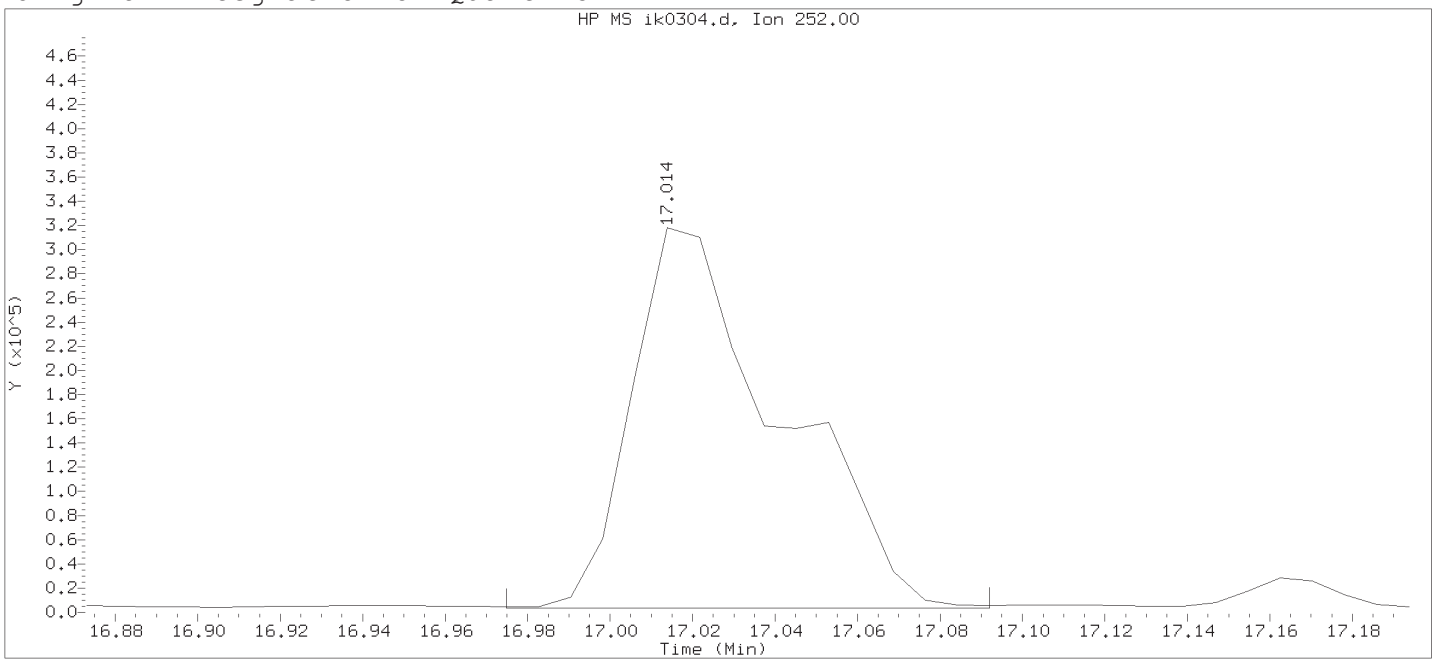
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

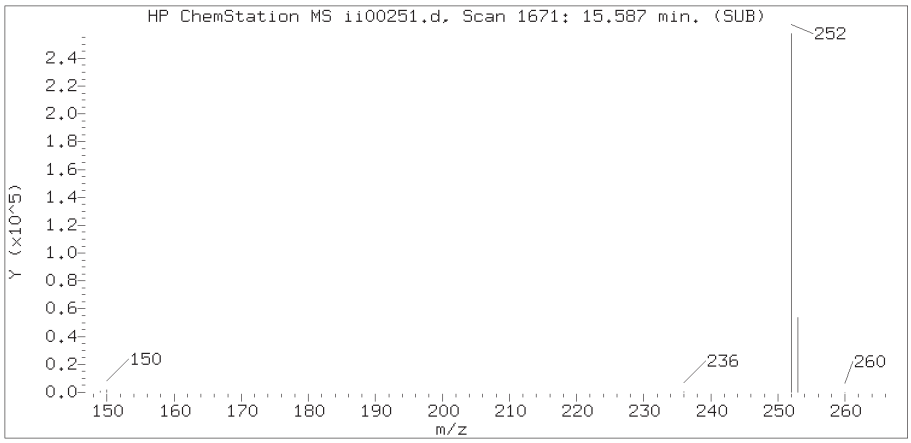
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

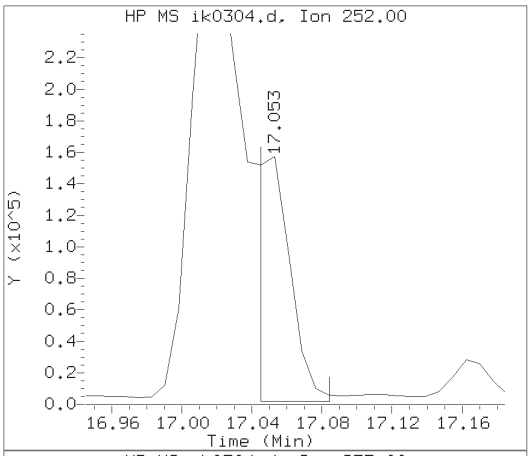
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 46		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1446		
Retention Time (minutes)	: 17.014		
Quant Ion	: 252.00		
Area	: 789464		
On-column Amount (ng/ul)	: 4.3216		
Integration start scan	: 1440	Integration stop scan:	1455
Y at integration start	: 3495	Y at integration end:	3563

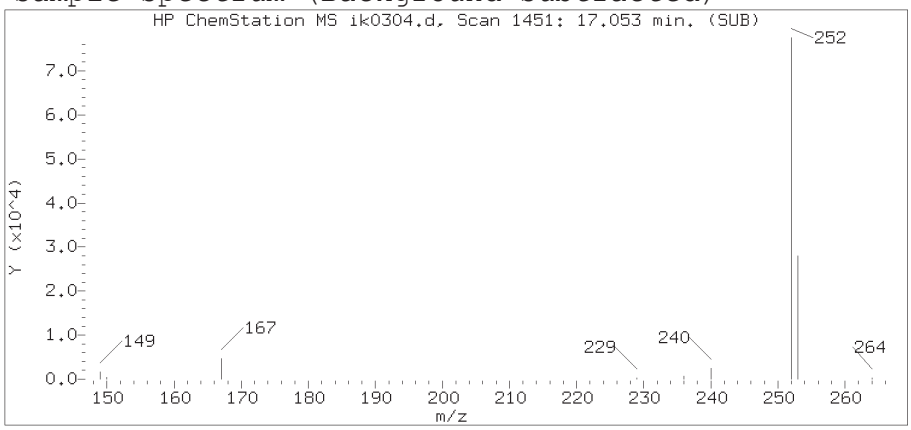
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature used [illegible]

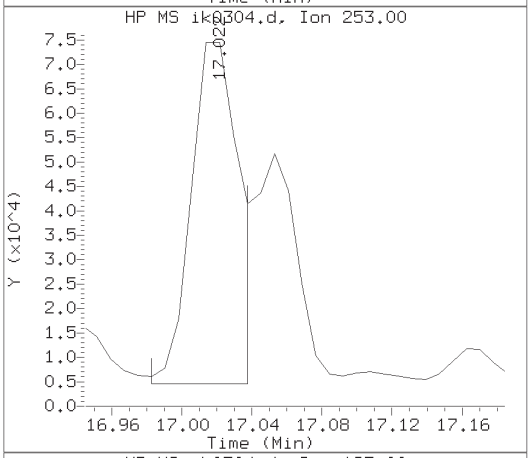
Reference Standard Spectrum for Benzo(k)fluoranthene



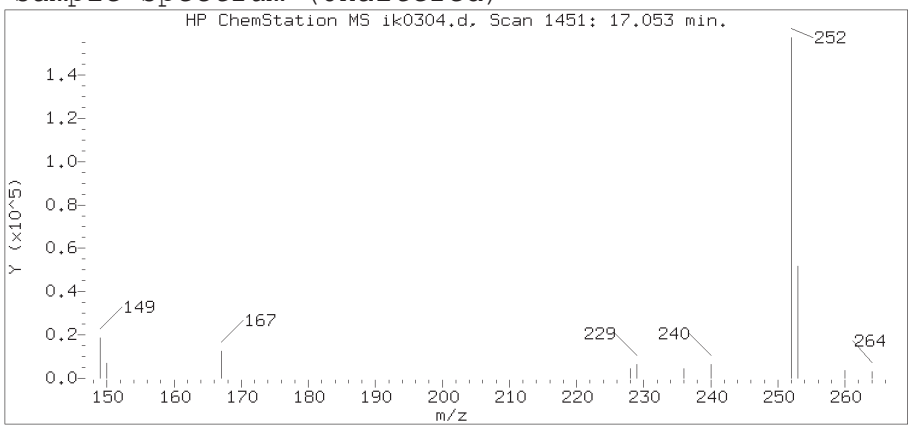


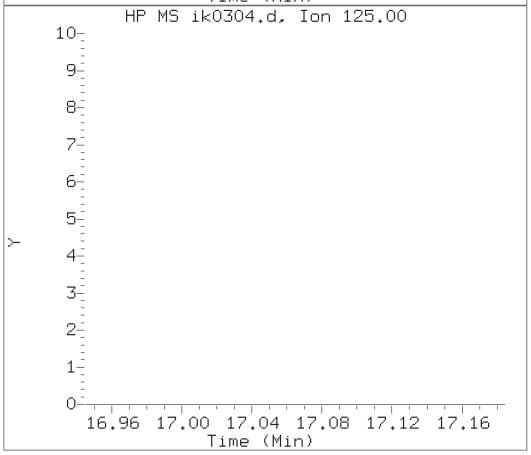
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

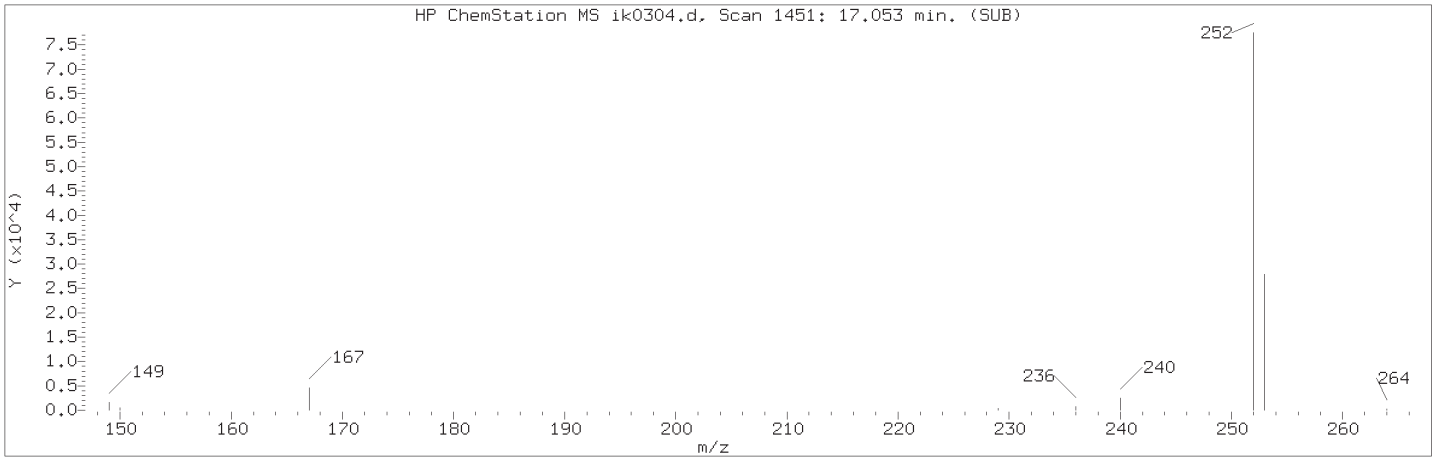
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1002 Lab Sample ID: 9867761

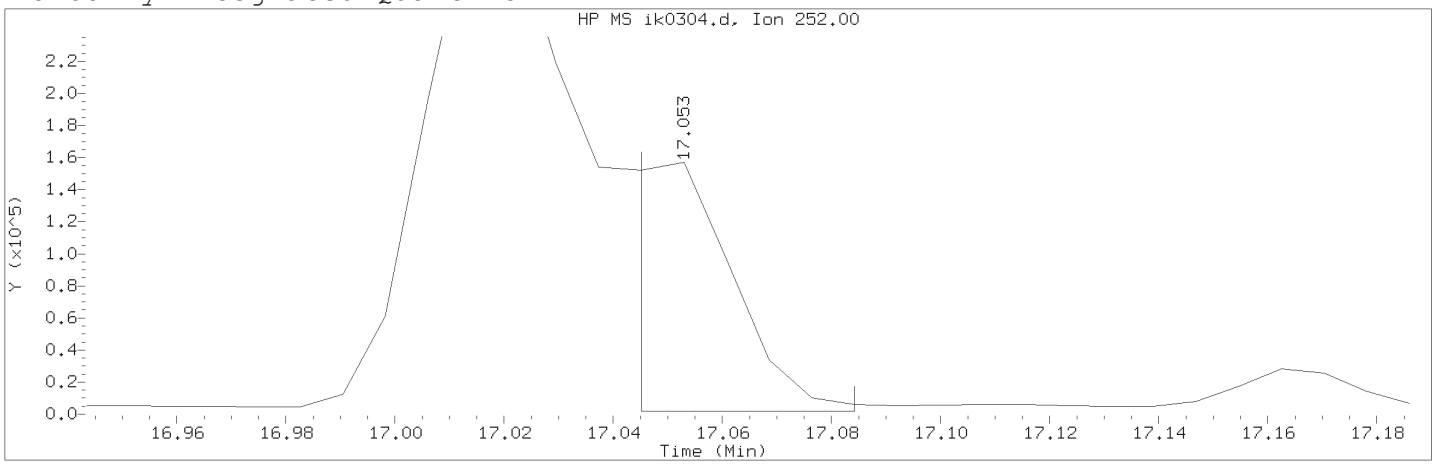
Compound Number	: 47
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1451
Retention Time (minutes)	: 17.053
Relative Retention Time	:-0.00004
Quant Ion	: 252.00
Area (flag)	: 208328M
On-column Amount (ng/ul)	: 1.2165

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1002 Lab Sample ID: 9867761

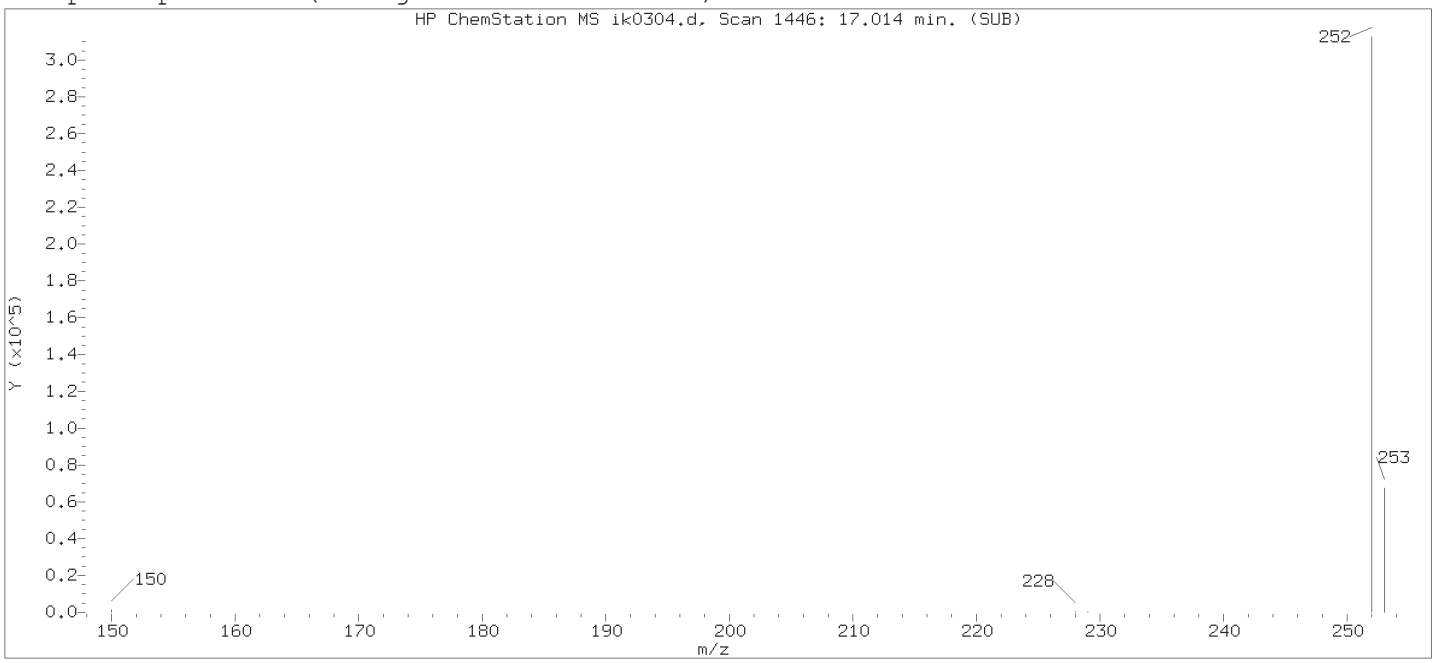
Compound Number	: 47		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1451		
Retention Time (minutes)	: 17.053		
Quant Ion	: 252.00		
Area (flag)	: 208328M		
On-column Amount (ng/ul)	: 1.2165		
Integration start scan	: 1449	Integration stop scan:	1454
Y at integration start	: 1831	Y at integration end:	1831

Reason for manual integration: improper integration

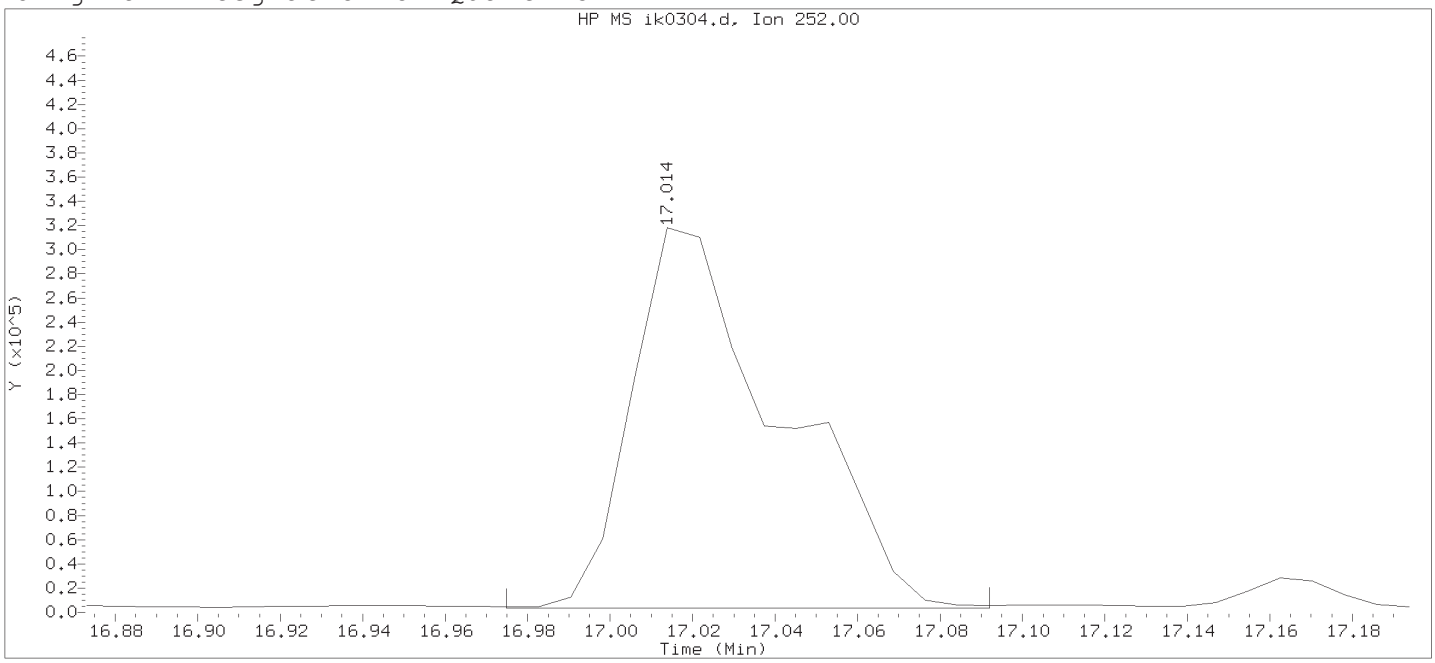
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

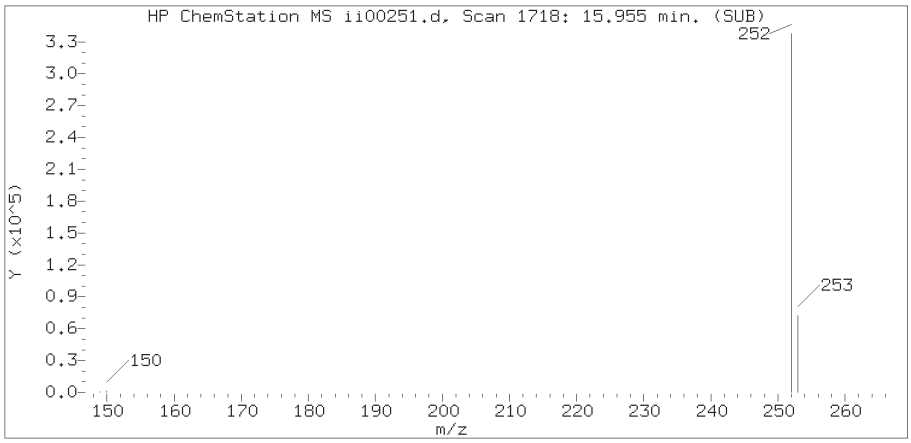
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

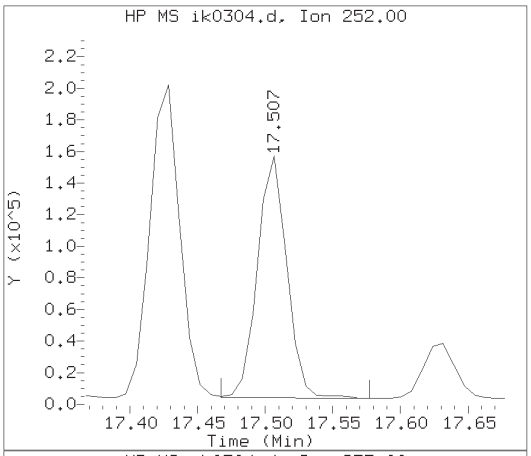
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 47		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1446		
Retention Time (minutes)	: 17.014		
Quant Ion	: 252.00		
Area	: 791128		
On-column Amount (ng/ul)	: 4.6198		
Integration start scan	: 1440	Integration stop scan:	1455
Y at integration start	: 3274	Y at integration end:	3311

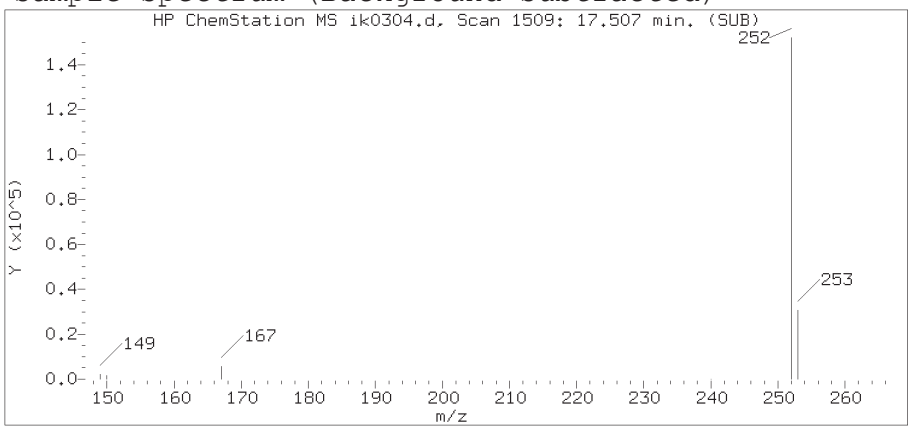
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature used [illegible]

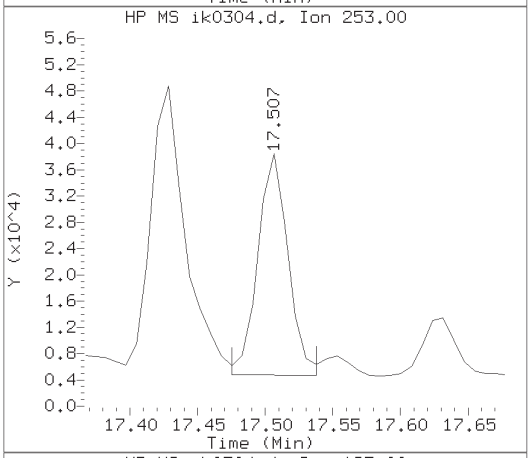
Reference Standard Spectrum for Benzo(a)pyrene



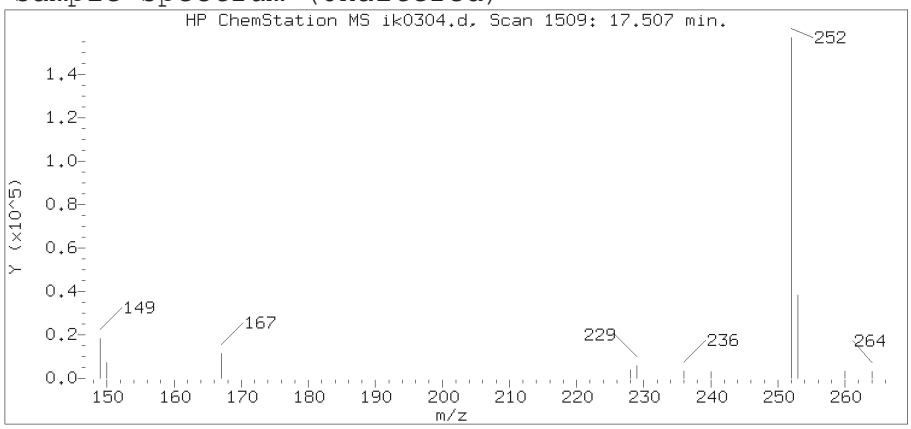


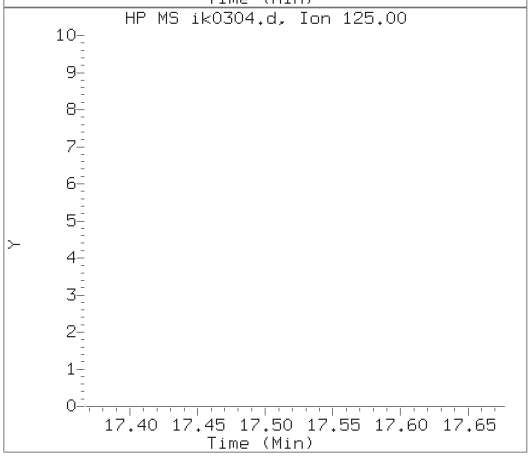
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

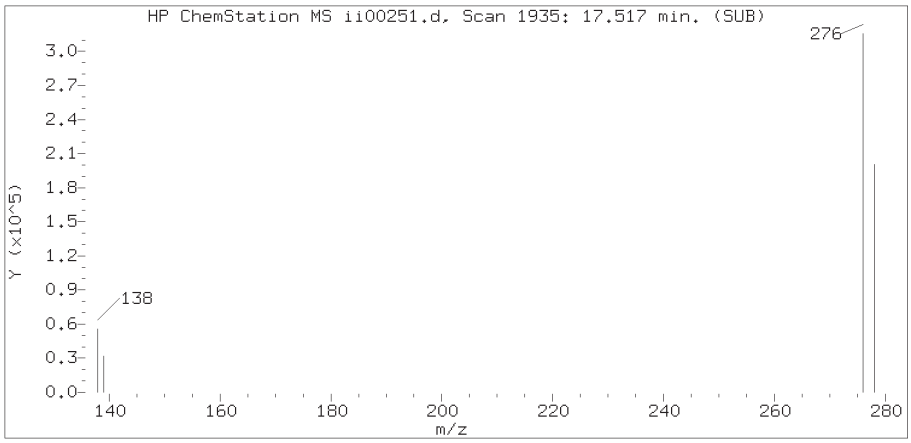
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

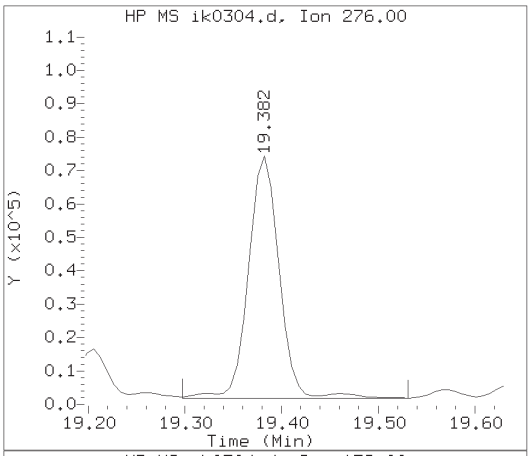
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 50
Compound Name	: Benzo(a)pyrene
Scan Number	: 1509
Retention Time (minutes)	: 17.507
Relative Retention Time	:-0.00001
Quant Ion	: 252.00
Area (flag)	: 230862
On-column Amount (ng/ul)	: 1.4746

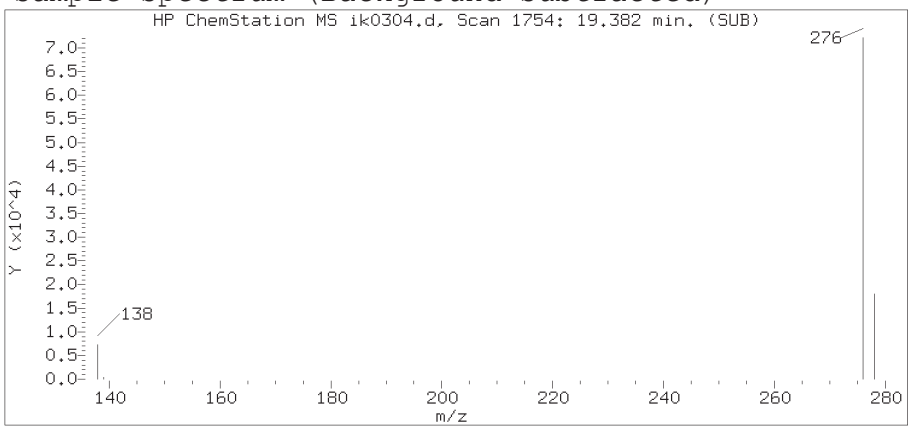
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

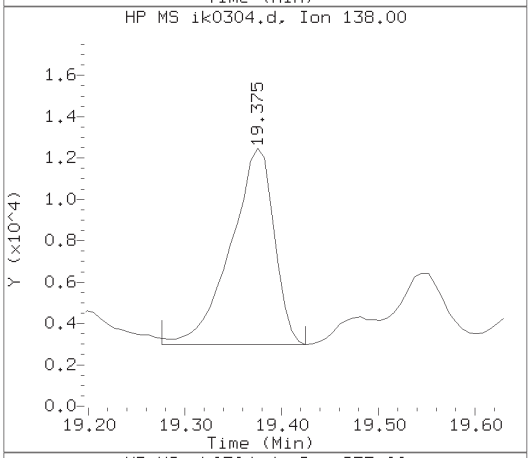
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



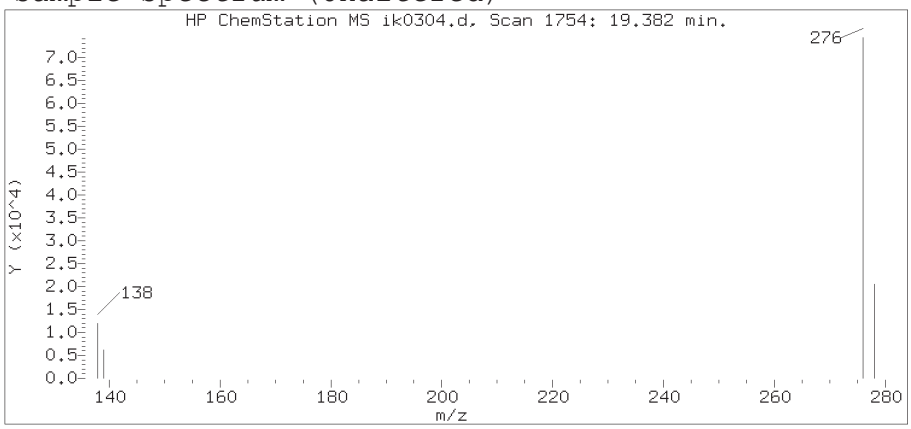


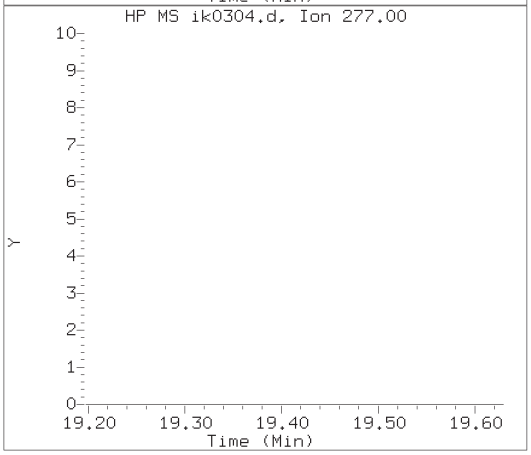
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

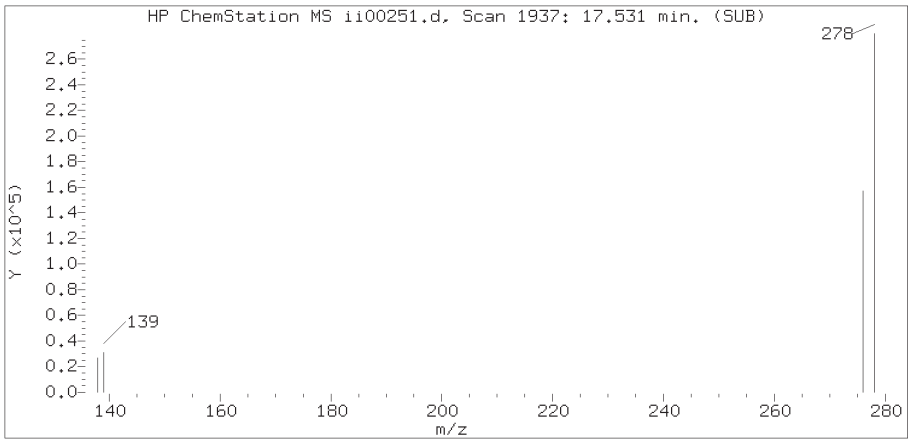
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

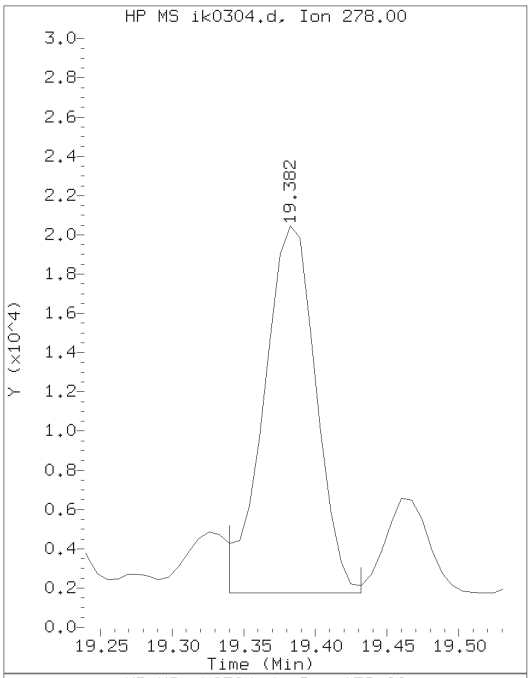
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 53
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 1754
Retention Time (minutes)	: 19.382
Relative Retention Time	:-0.00054
Quant Ion	: 276.00
Area (flag)	: 159830
On-column Amount (ng/ul)	: 0.8657

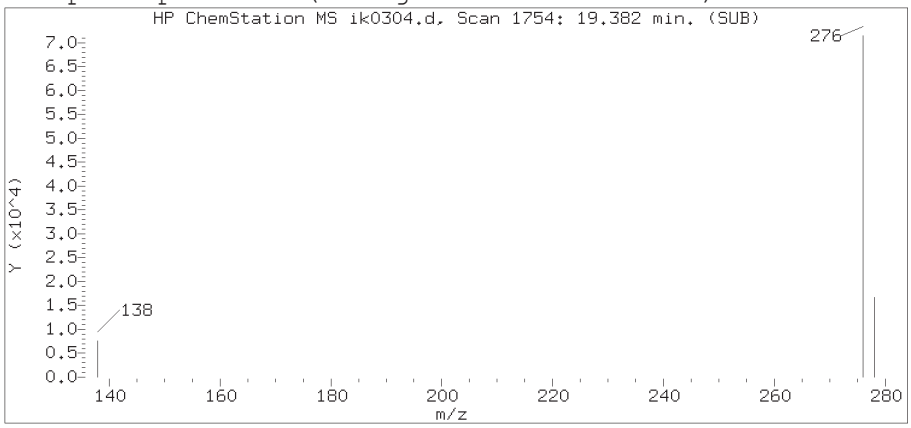
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

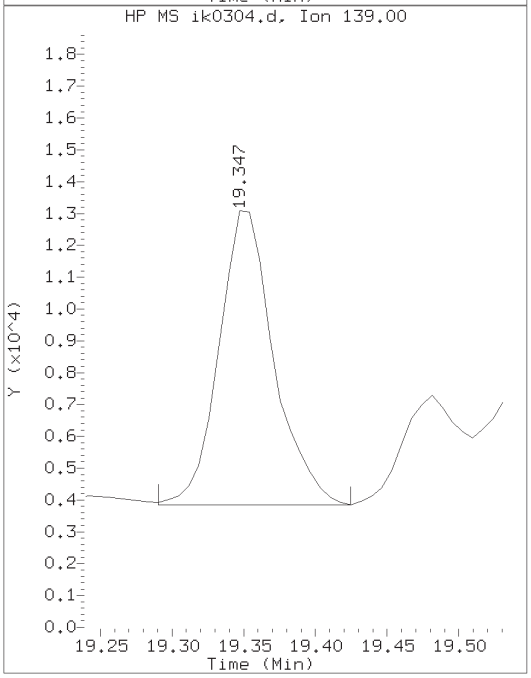
Reference Standard Spectrum for Dibenz(a,h)anthracene



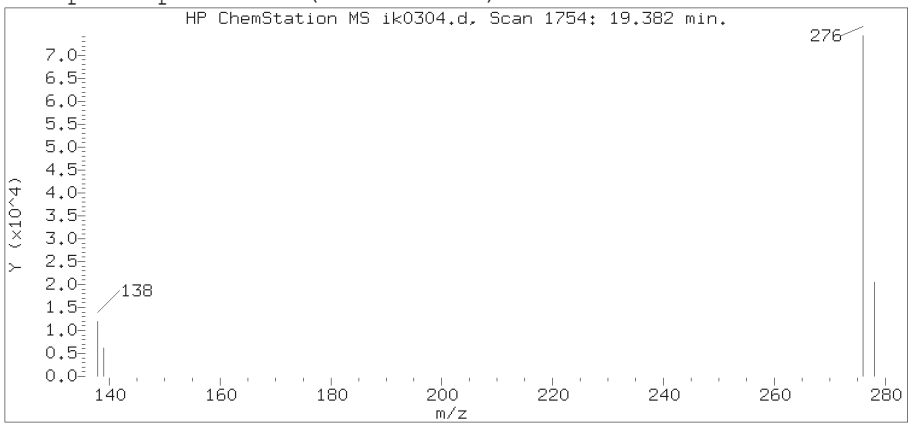


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

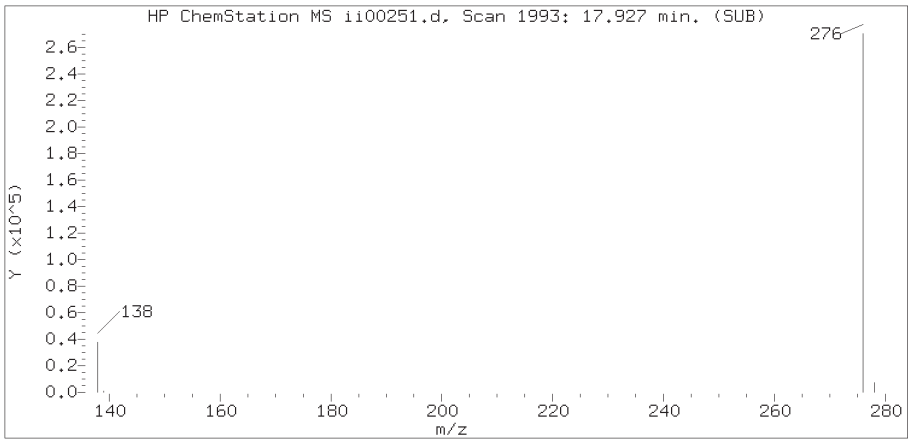
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

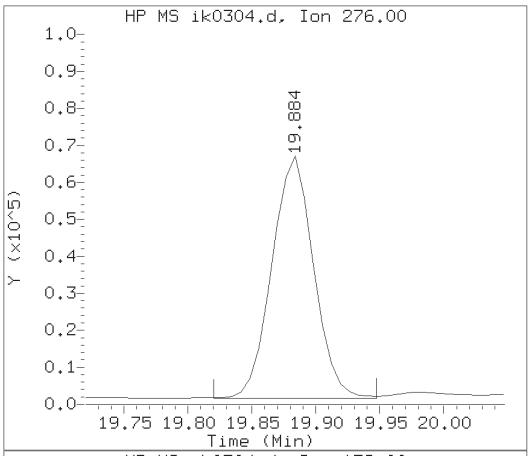
Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 54
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 1754
Retention Time (minutes)	: 19.382
Relative Retention Time	:-0.00014
Quant Ion	: 278.00
Area (flag)	: 47132
On-column Amount (ng/ul)	: 0.3127

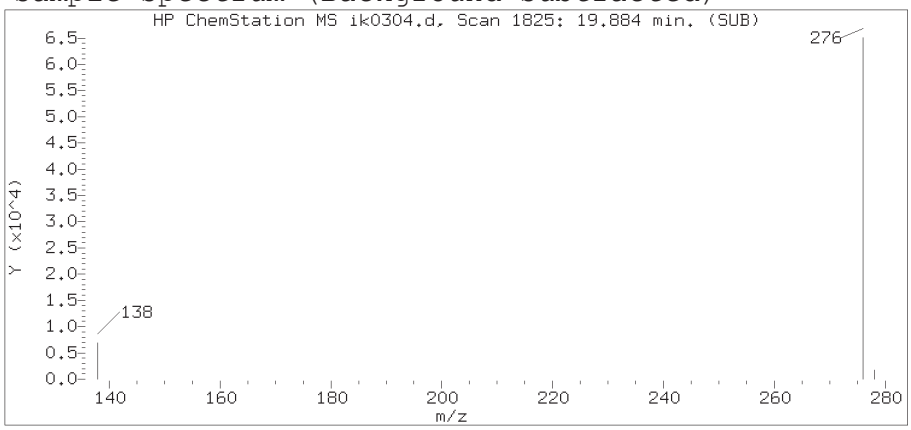
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

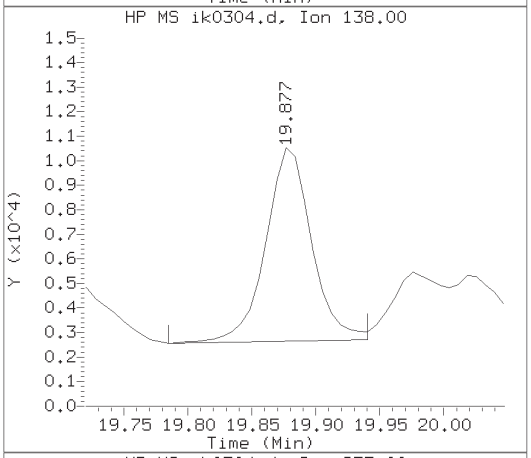
Reference Standard Spectrum for Benzo(g,h,i)perylene



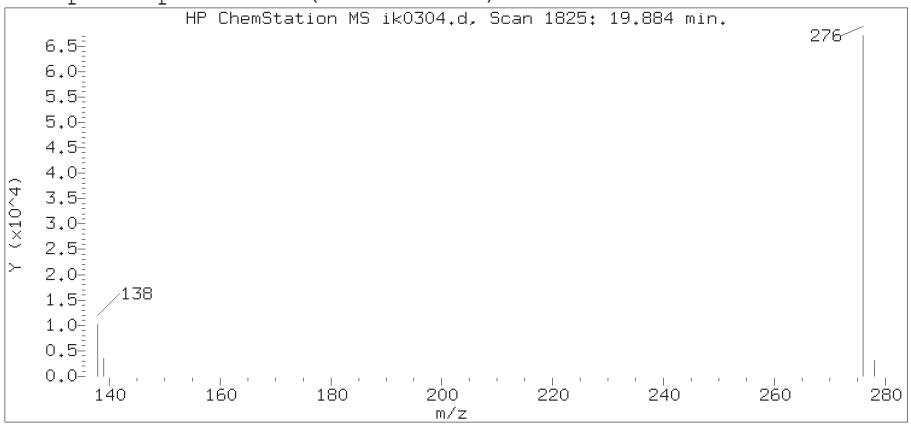


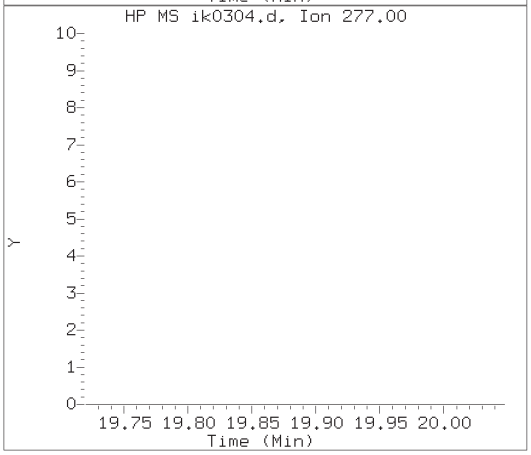
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0304.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1002 Lab Sample ID: 9867761

Compound Number	: 55
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 1825
Retention Time (minutes)	: 19.884
Relative Retention Time	:-0.00090
Quant Ion	: 276.00
Area (flag)	: 148133
On-column Amount (ng/ul)	: 0.9125

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:17.
Target 3.5 esignature user ID: apb10206

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/18nov16.b/ck0704.d Injection date and time: **16-NOV-2018 08:22**
Data file Sample Info. Line: T1002RE;9867761RE;2;0;SAMPLE;;DOD26;T2 Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.3 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.764	(0.000)	473	152	66230	(-3)	1.00	
10) Naphthalene-d8	8.289	(0.000)	588	136	273416	(4)	1.00	
20) Acenaphthene-d10	10.458	(0.000)	774	164	125380	(4)	1.00	
31) Phenanthrene-d10	12.316	(-0.011)	940	188	212424	(-7)	1.00	
43) Chrysene-d12	15.616	(-0.008)	1252	240	151344	(-14)	1.00	
51) Perylene-d12	17.736	(-0.016)	1523	264	128678	(-16)	1.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.231	(0.000)	152	109584	0.793	79%		61 - 111
36) Fluoranthene-d10	(4)	13.806	(0.001)	212	141322M	0.733	73%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.603	(0.000)	264	72944	0.617	62%		54 - 122

M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.324	(-0.013)	88	5657A	0.133	4.39			0.02
11) Naphthalene	(2)	8.302	(0.001)	128	594037	2.046	67.53			0.04
19) Acenaphthylene	(3)	10.274	(0.000)	152	36384	0.146	4.82	0.335	B	0.01
21) Acenaphthene	(3)	10.491	(0.000)	154	11084	0.065	2.15			0.02
26) Fluorene	(3)	11.135	(0.000)	166	17972	0.099	3.26			0.02
32) Phenanthrene	(4)	12.338	(0.000)	178	352877	1.392	45.95			0.02
33) Anthracene	(4)	12.406	(0.000)	178	63439	0.260	8.59			0.02
35) Di-n-butylphthalate	(4)	12.968	(0.000)	149	1568232	5.776	190.64			0.2
37) Fluoranthene	(4)	13.830	(0.001)	202	519409	2.086	68.83			0.02
39) Pyrene	(5)	14.123	(0.000)	202	455379	1.869	61.70			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.522	(0.000)	149	331872	1.976	65.20	18.477	B	0.3
42) Benzo(a)anthracene	(5)	15.601	(-0.000)	228	230425	1.175	38.77			0.02
44) Chrysene	(5)	15.648	(0.000)	228	356901	1.776	58.61			0.01
46) Benzo(b)fluoranthene	(6)	17.110	(-0.000)	252	433148M	2.626	86.68			0.02
47) Benzo(k)fluoranthene	(6)	17.149	(-0.000)	252	135997M	0.768	25.34			0.02
50) Benzo(a)pyrene	(6)	17.642	(-0.000)	252	190314	1.265	41.74			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.675	(-0.000)	276	133169	0.892	29.45			0.02
54) Dibenz(a,h)anthracene	(6)	19.682	(-0.000)	278	34572	0.279	9.22			0.02
55) Benzo(g,h,i)perylene	(6)	20.247	(-0.001)	276	125035	0.898	29.62			0.02

A = User selected an alternate peak. B = Compound detected in referenced method blank. M = Compound was manually integrated.

Digitally signed by William H Saadeh on 11/16/2018 at 12:34. Target 3.5 esignature user ID: whs02991

Data file: /chem/HP10623.i/18nov16.b/ck0704.d Injection date and time: **16-NOV-2018 08:22**
Data file Sample Info. Line: T1002RE;9867761RE;2;0;SAMPLE;;DOD26;T2 Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

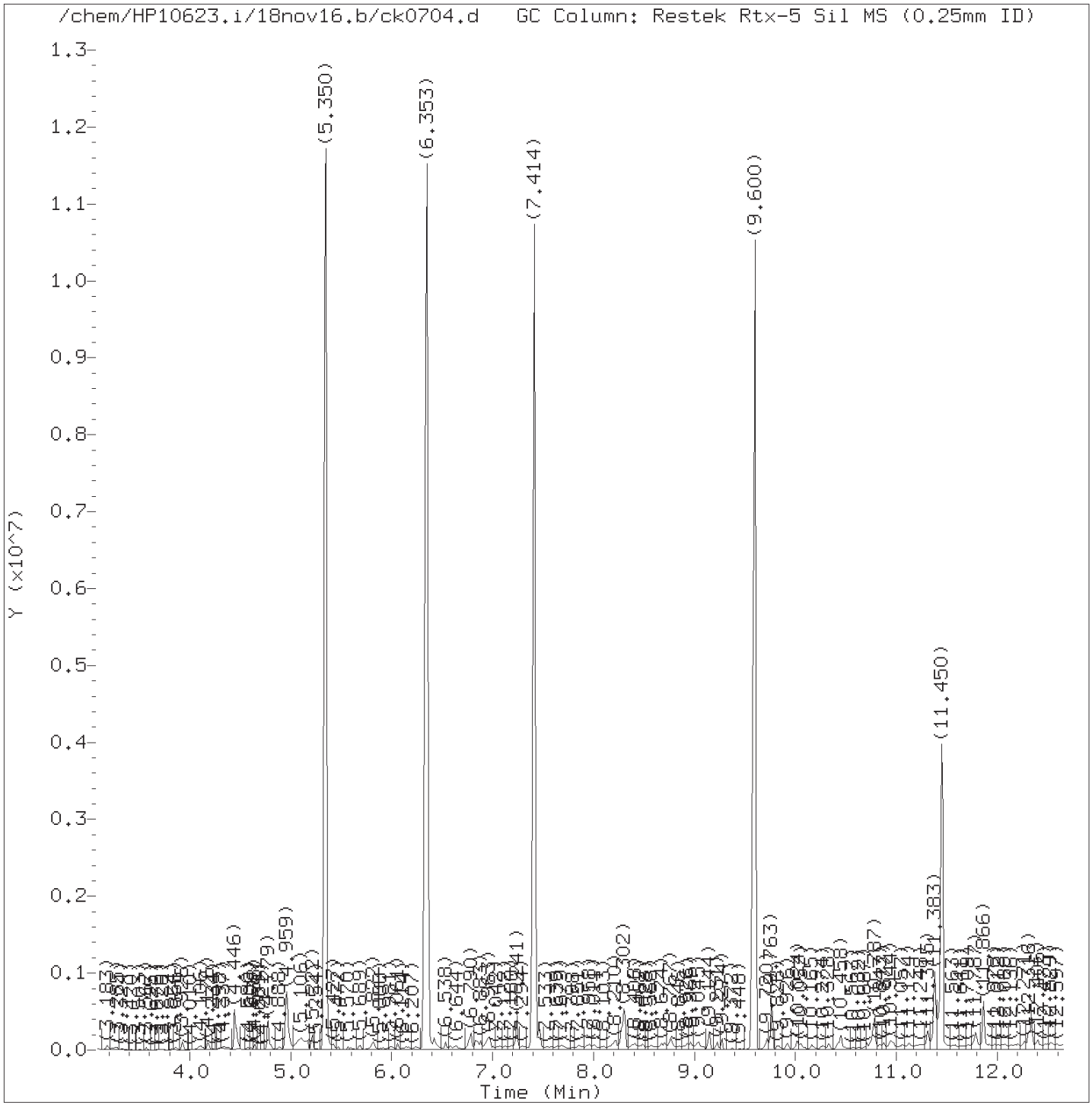
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.3 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by William H Saadeh on 11/16/2018 at 12:34. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

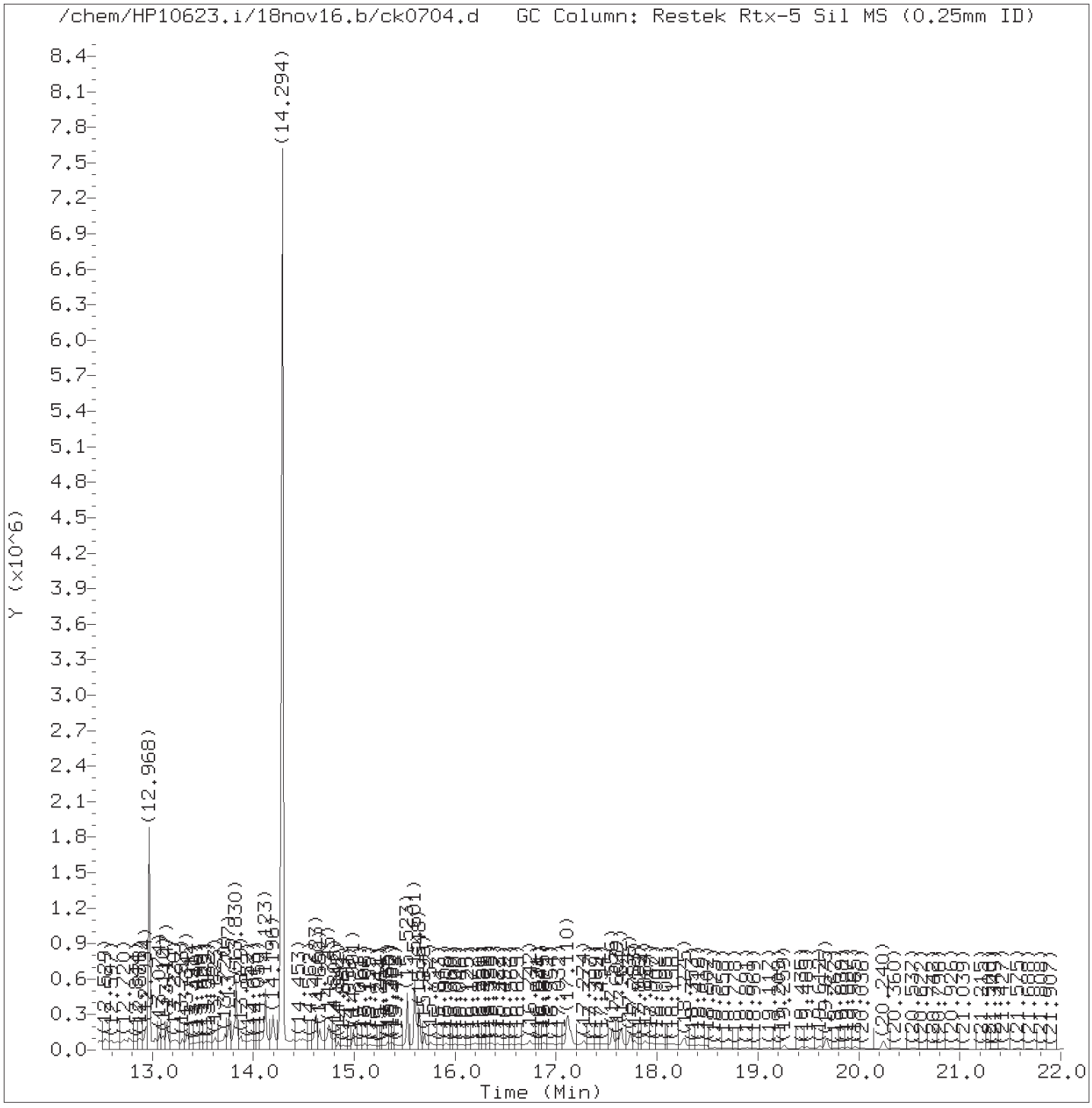
Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

Sample Name: T1002RE Lab Sample ID: 9867761RE

Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

Sample Name: T1002RE Lab Sample ID: 9867761RE

Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

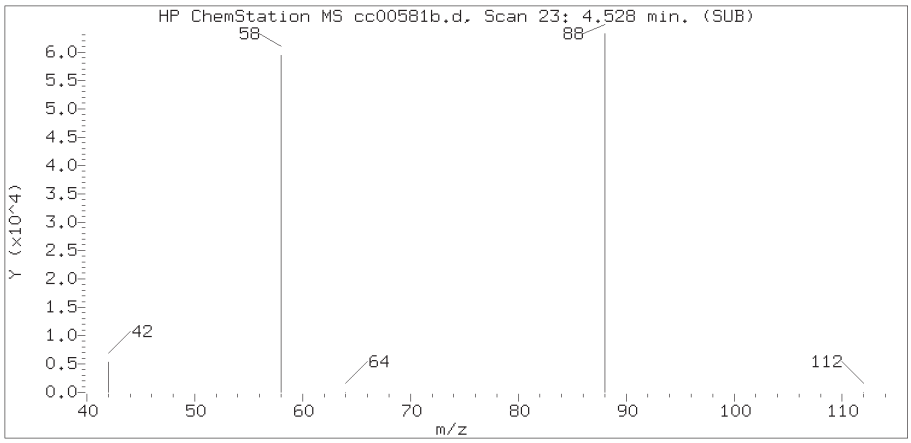
Sample Name: T1002RE Lab Sample ID: 9867761RE

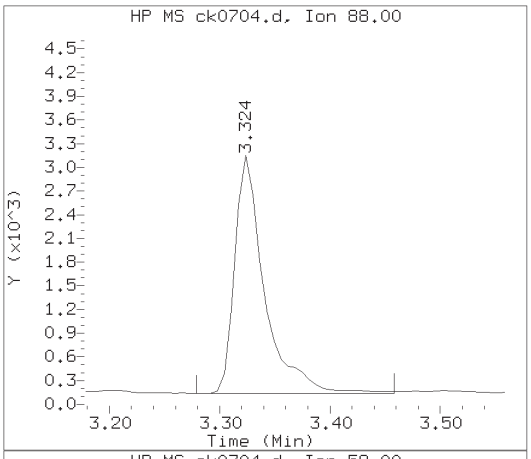
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.324	88	5657A	0.133
6)*1,4-Dichlorobenzene-d4	(1)	6.764	152	66230	1.000
10)*Naphthalene-d8	(2)	8.289	136	273416	1.000
11) Naphthalene	(2)	8.302	128	594037	2.046
14)$1-Methylnaphthalene-d10	(2)	9.231	152	109584	0.793
19) Acenaphthylene	(3)	10.274	152	36384	0.146
20)*Acenaphthene-d10	(3)	10.458	164	125380	1.000
21) Acenaphthene	(3)	10.491	154	11084	0.065
26) Fluorene	(3)	11.135	166	17972	0.099
31)*Phenanthrene-d10	(4)	12.316	188	212424	1.000
32) Phenanthrene	(4)	12.338	178	352877	1.392
33) Anthracene	(4)	12.406	178	63439	0.260
35) Di-n-butylphthalate	(4)	12.968	149	1568232	5.776
36)$Fluoranthene-d10	(4)	13.806	212	141322M	0.733
37) Fluoranthene	(4)	13.830	202	519409	2.086
39) Pyrene	(5)	14.123	202	455379	1.869
41) bis(2-Ethylhexyl)phthalate	(5)	15.523	149	331872	1.976
42) Benzo(a)anthracene	(5)	15.601	228	230425	1.175
43)*Chrysene-d12	(5)	15.616	240	151344	1.000
44) Chrysene	(5)	15.648	228	356901	1.776
46) Benzo(b)fluoranthene	(6)	17.110	252	433148M	2.626
47) Benzo(k)fluoranthene	(6)	17.149	252	135997M	0.768
49)$Benzo(a)pyrene-d12	(6)	17.603	264	72944	0.617
50) Benzo(a)pyrene	(6)	17.642	252	190314	1.265
51)*Perylene-d12	(6)	17.736	264	128678	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.675	276	133169	0.892
54) Dibenz(a,h)anthracene	(6)	19.682	278	34572	0.279
55) Benzo(g,h,i)perylene	(6)	20.247	276	125035	0.898

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

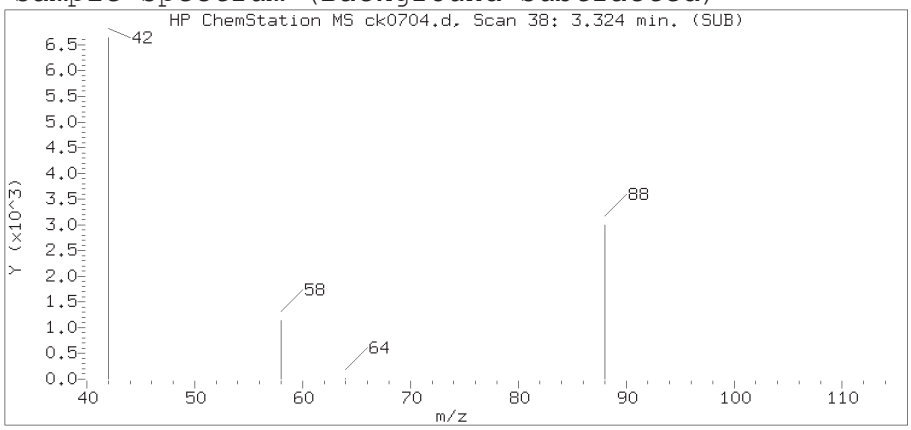
Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

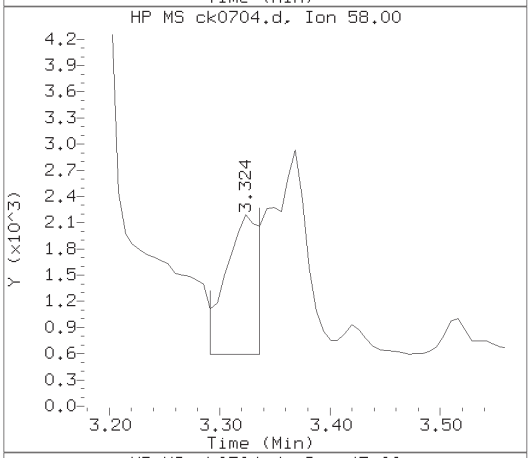
Reference Standard Spectrum for 1,4-Dioxane



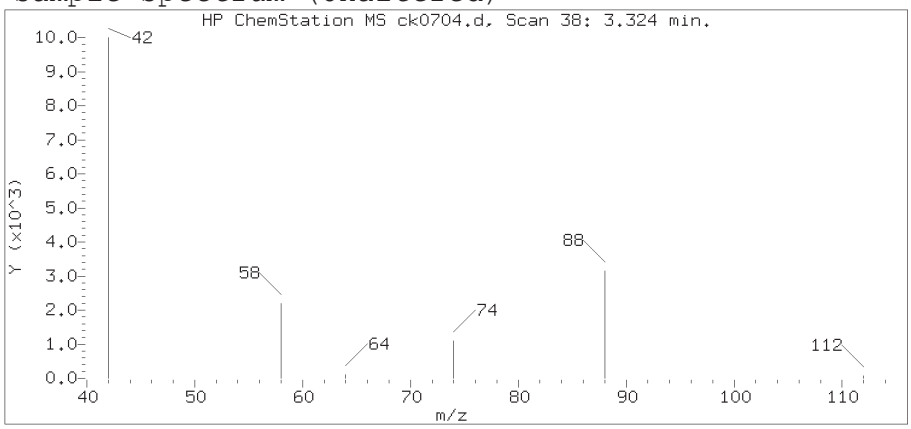


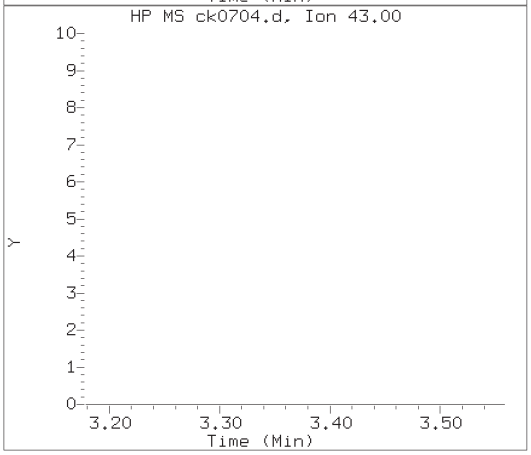
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

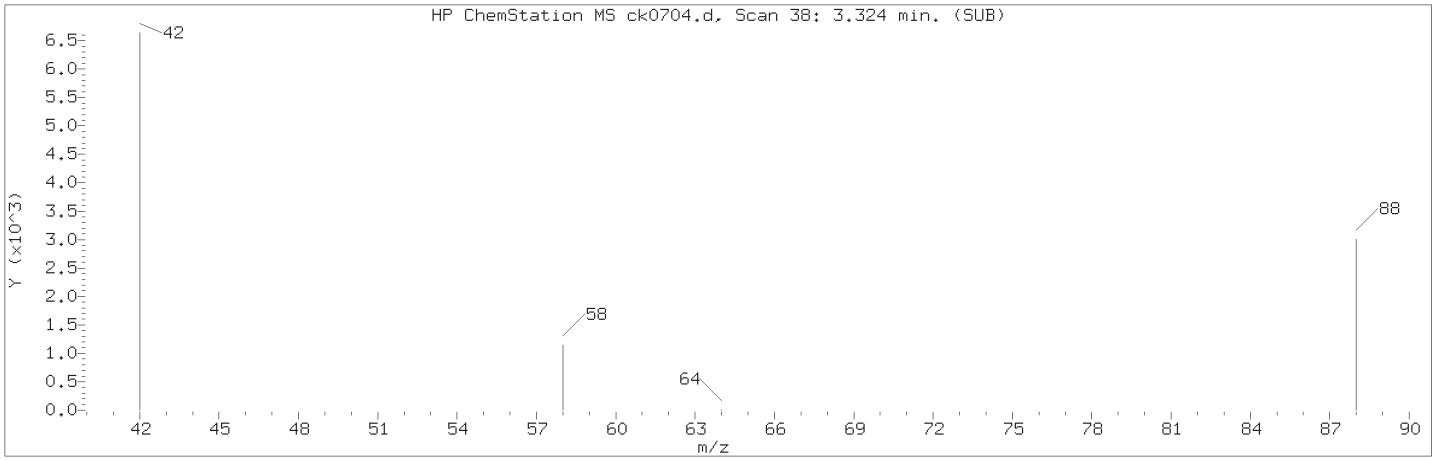
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

Sample Name: T1002RE Lab Sample ID: 9867761RE

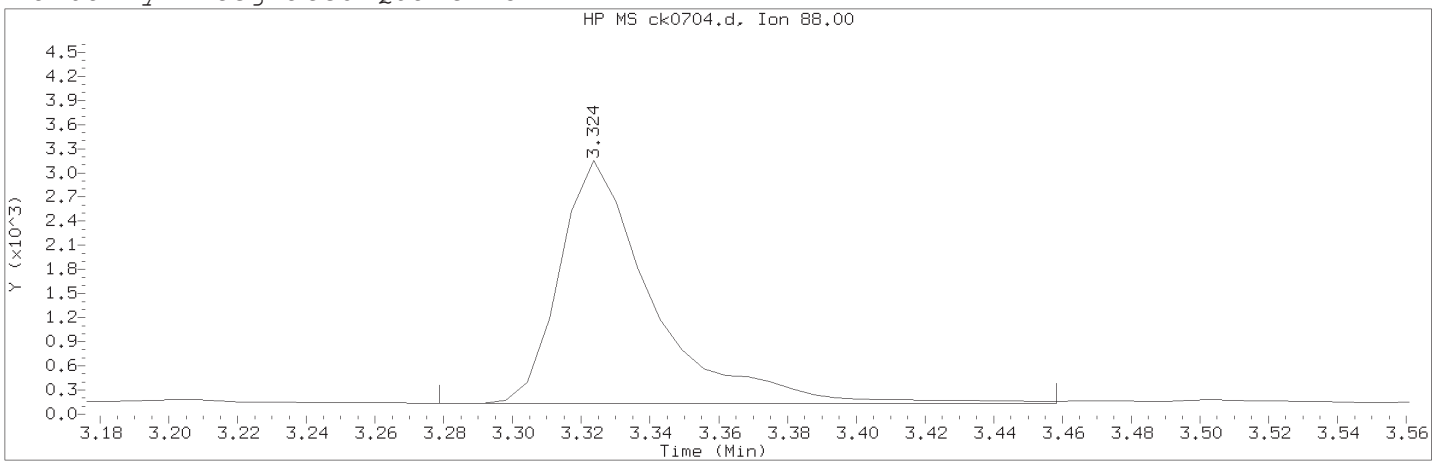
Compound Number	: 1
Compound Name	: 1,4-Dioxane
Scan Number	: 38
Retention Time (minutes)	: 3.324
Relative Retention Time	:-0.01327
Quant Ion	: 88.00
Area (flag)	: 5657A
On-column Amount (ng/ul)	: 0.1329

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

Sample Name: T1002RE Lab Sample ID: 9867761RE

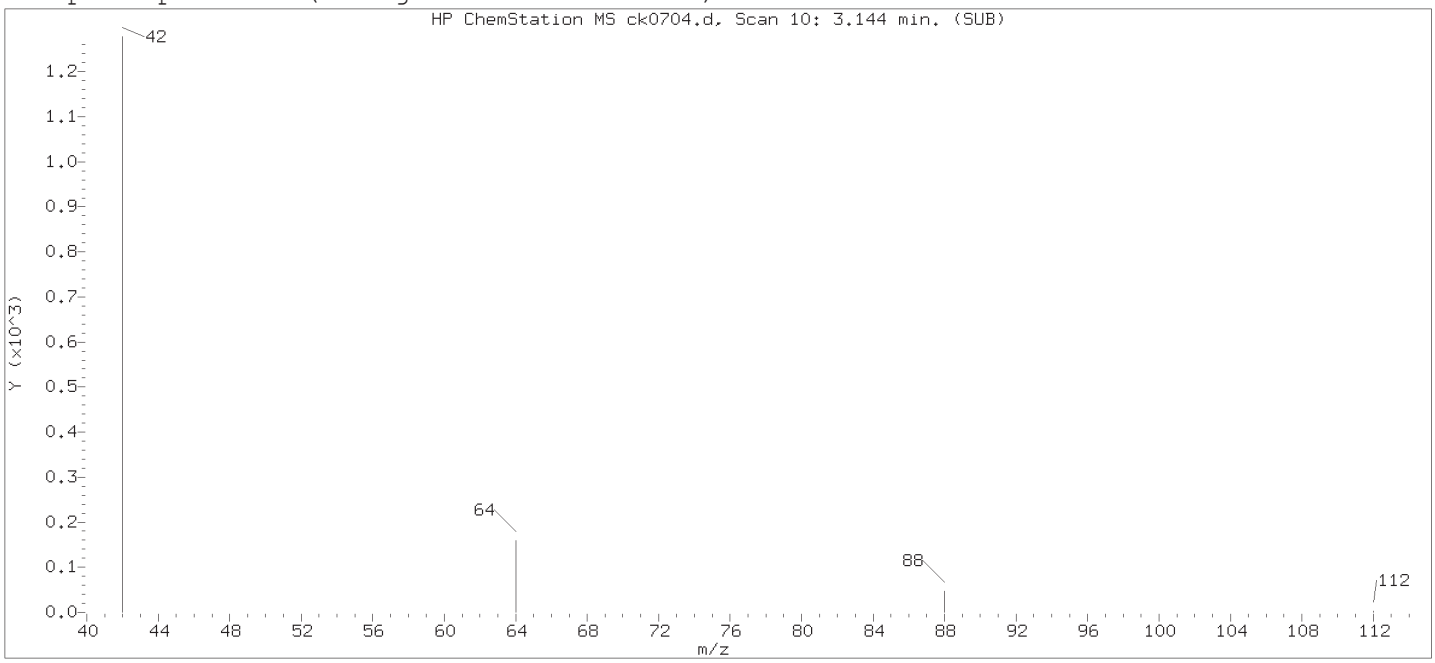
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 38
Retention Time (minutes) : 3.324
Quant Ion : 88.00
Area (flag) : 5657A
On-column Amount (ng/ul) : 0.1329
Integration start scan : 30 Integration stop scan: 58
Y at integration start : 136 Y at integration end: 136

Reason for manual integration: improper integration

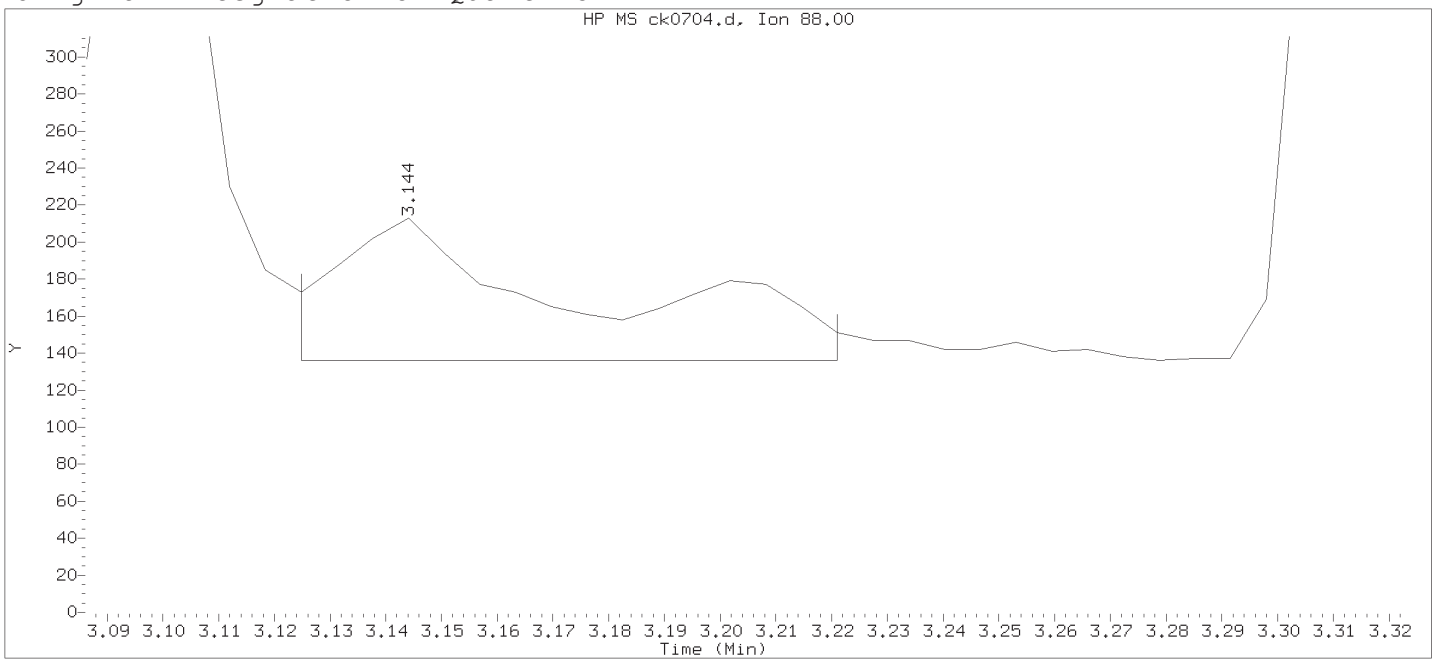
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

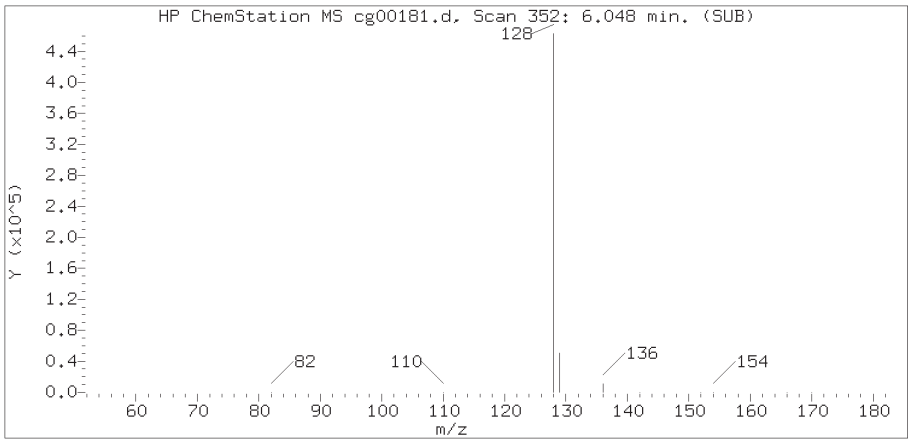
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 08:49 Automation

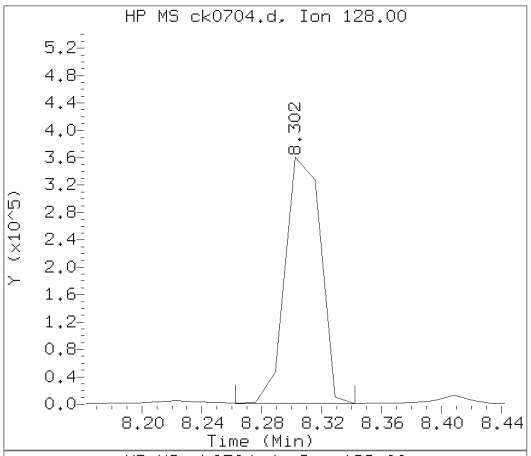
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 10
Retention Time (minutes) : 3.144
Quant Ion : 88.00
Area : 234
On-column Amount (ng/ul) : 0.0055
Integration start scan : 6 Integration stop scan: 21
Y at integration start : 136 Y at integration end: 136

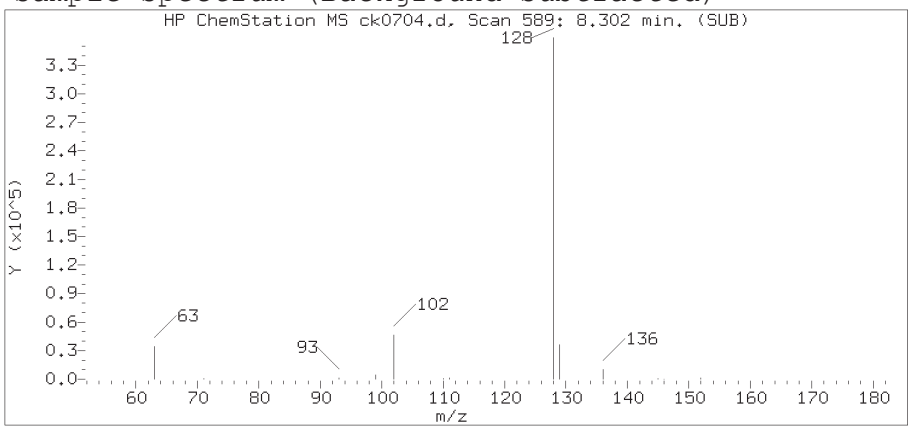
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature used [illegible]

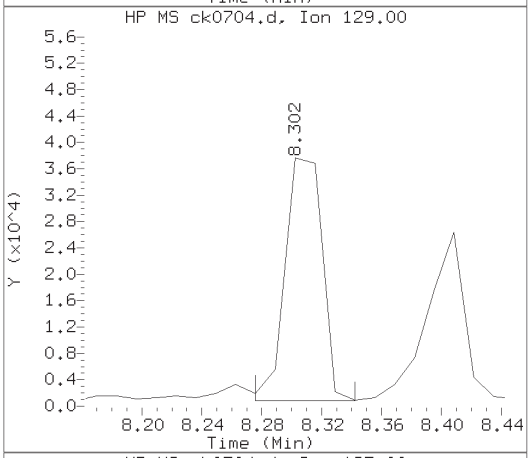
Reference Standard Spectrum for Naphthalene



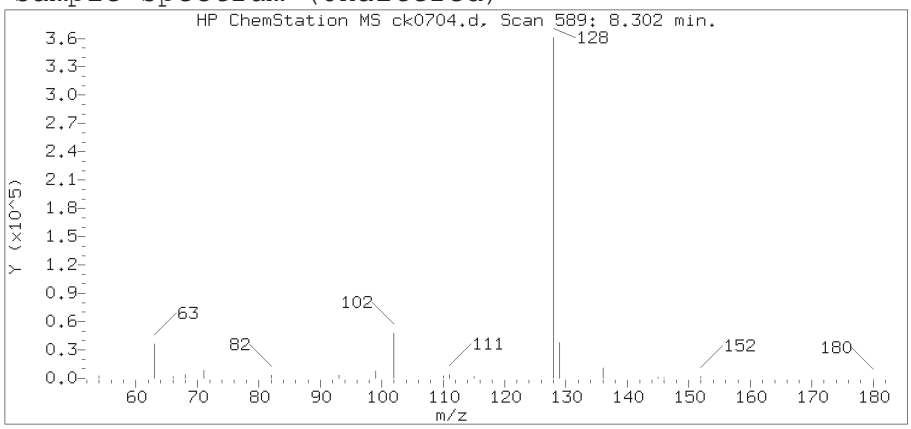


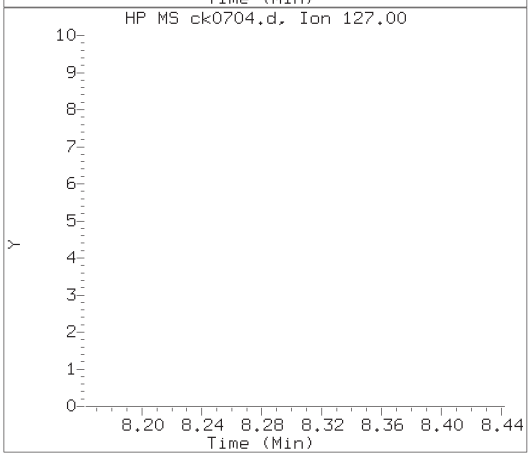
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

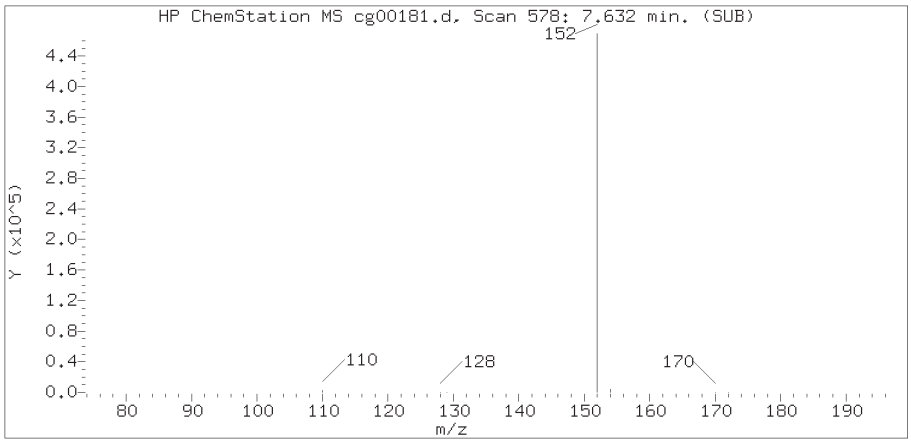
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

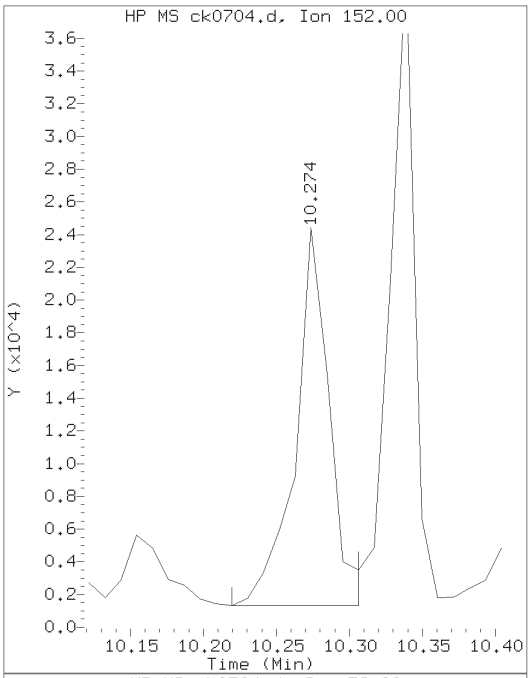
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 11
Compound Name	: Naphthalene
Scan Number	: 589
Retention Time (minutes)	: 8.302
Relative Retention Time	: 0.00160
Quant Ion	: 128.00
Area (flag)	: 594037
On-column Amount (ng/ul)	: 2.0462

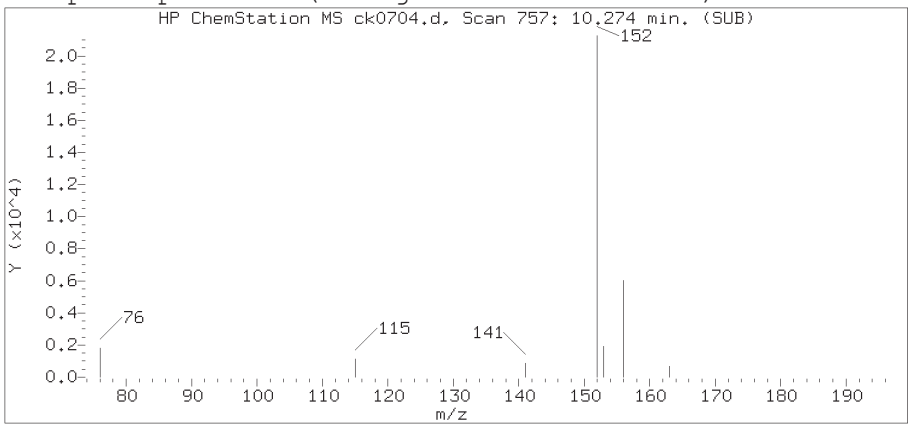
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02001

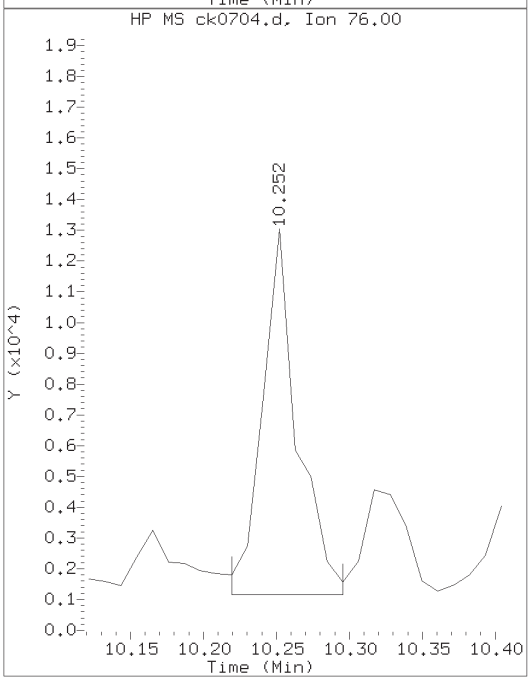
Reference Standard Spectrum for Acenaphthylene



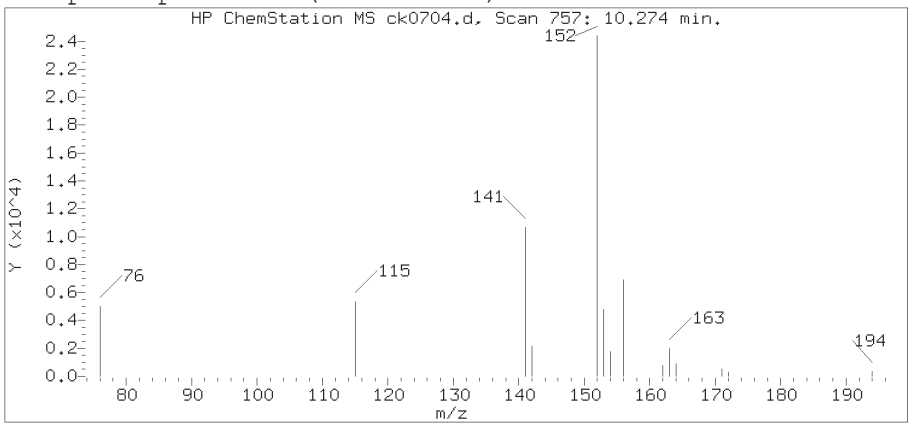


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

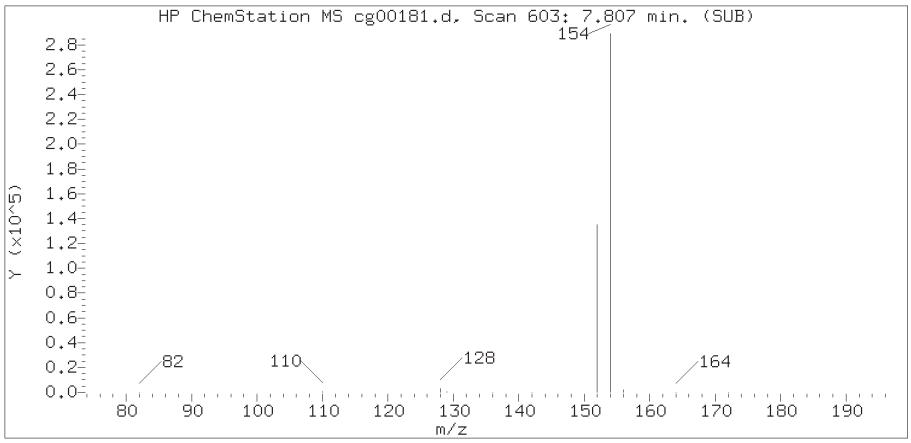
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

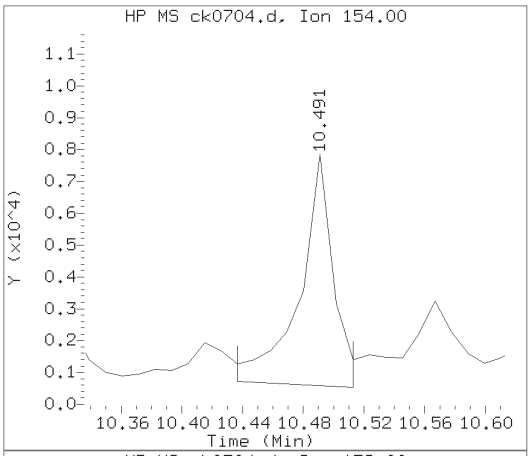
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 19
Compound Name	: Acenaphthylene
Scan Number	: 757
Retention Time (minutes)	: 10.274
Relative Retention Time	: 0.00000
Quant Ion	: 152.00
Area (flag)	: 36384
On-column Amount (ng/ul)	: 0.1462

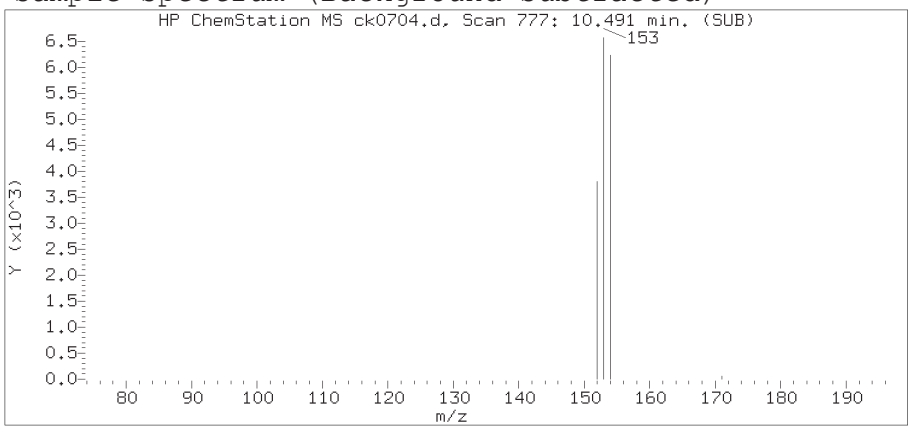
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

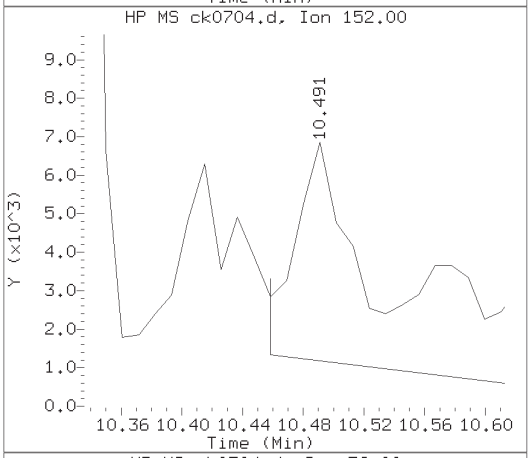
Reference Standard Spectrum for Acenaphthene



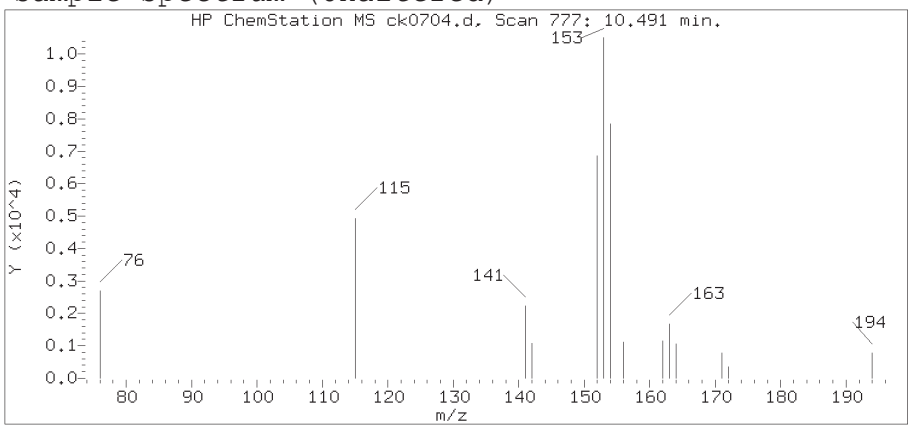


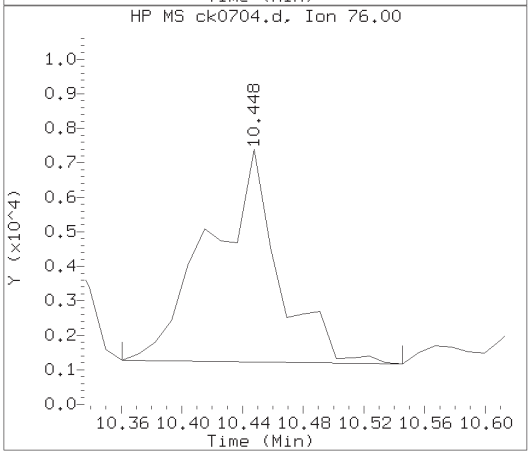
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

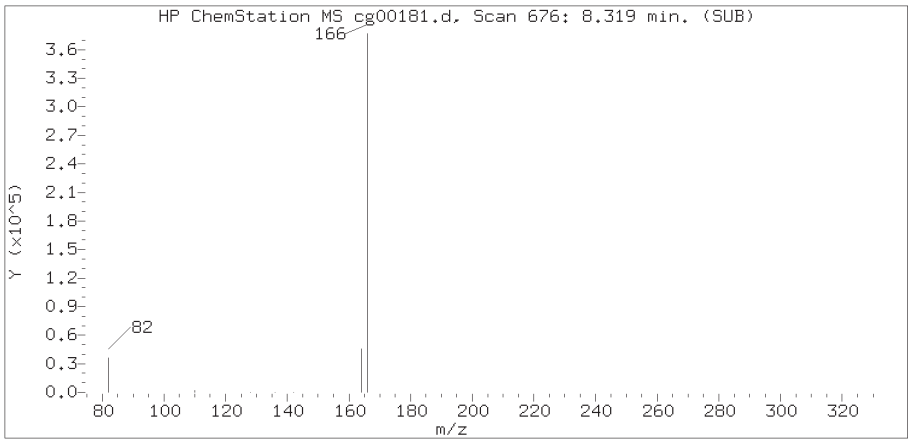
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

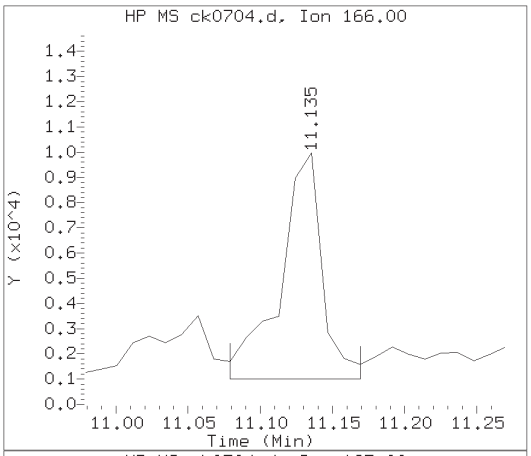
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 21
Compound Name	: Acenaphthene
Scan Number	: 777
Retention Time (minutes)	: 10.491
Relative Retention Time	: 0.00000
Quant Ion	: 154.00
Area (flag)	: 11084
On-column Amount (ng/ul)	: 0.0651

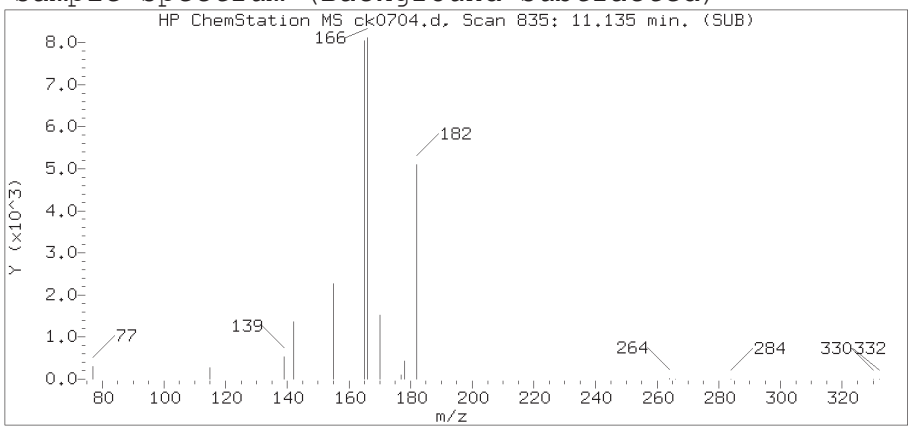
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

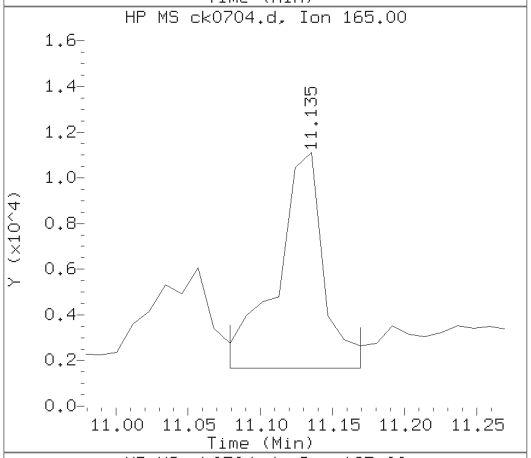
Reference Standard Spectrum for Fluorene



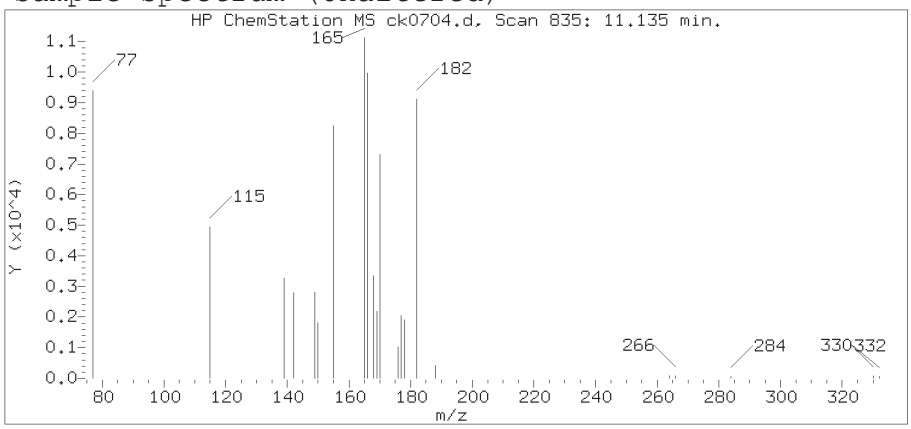


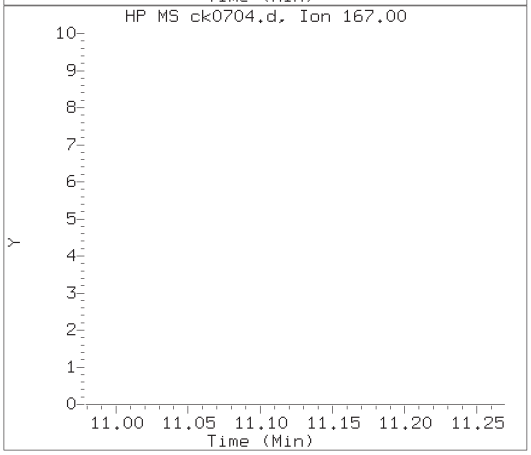
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

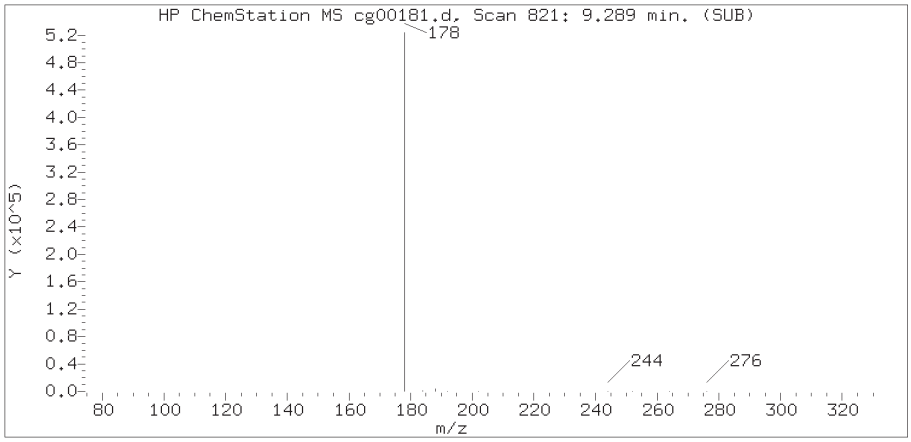
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

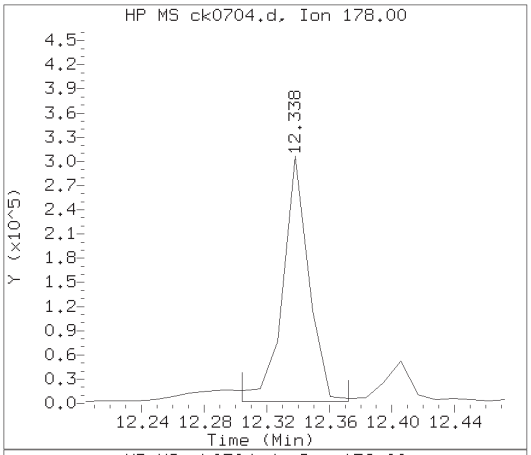
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 26
Compound Name	: Fluorene
Scan Number	: 835
Retention Time (minutes)	: 11.135
Relative Retention Time	: 0.00000
Quant Ion	: 166.00
Area (flag)	: 17972
On-column Amount (ng/ul)	: 0.0986

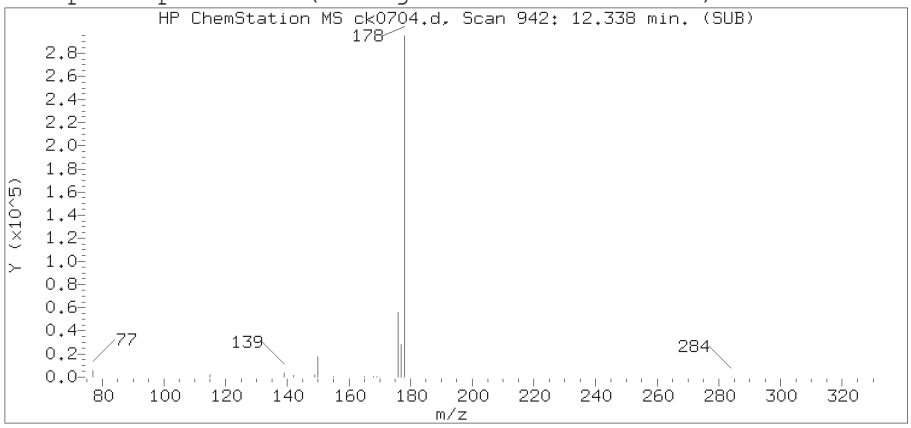
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

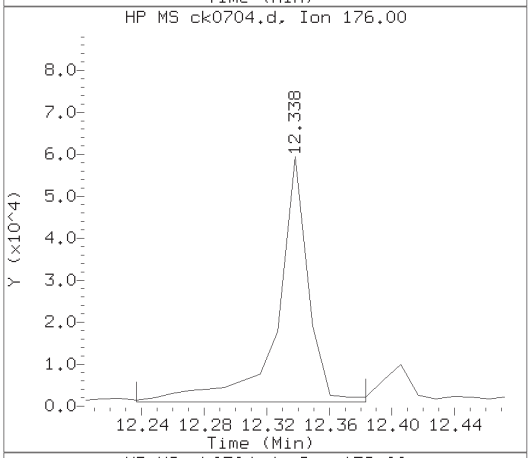
Reference Standard Spectrum for Phenanthrene



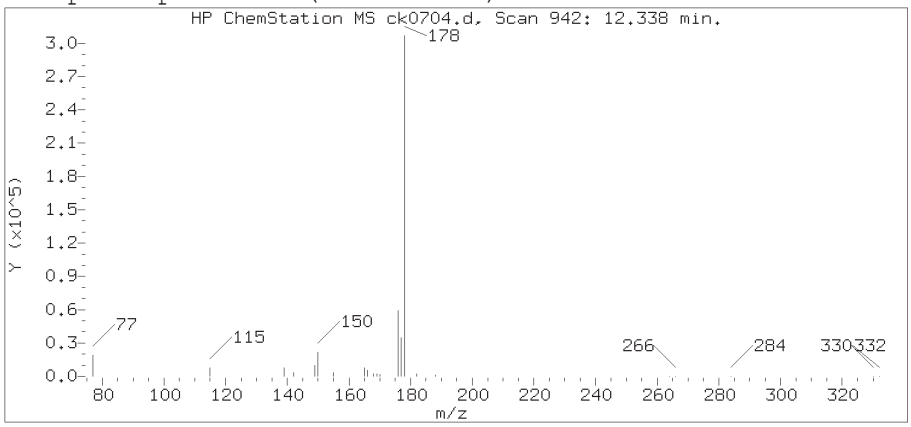


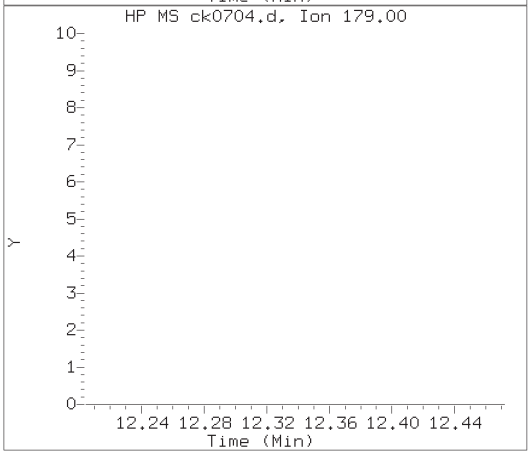
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

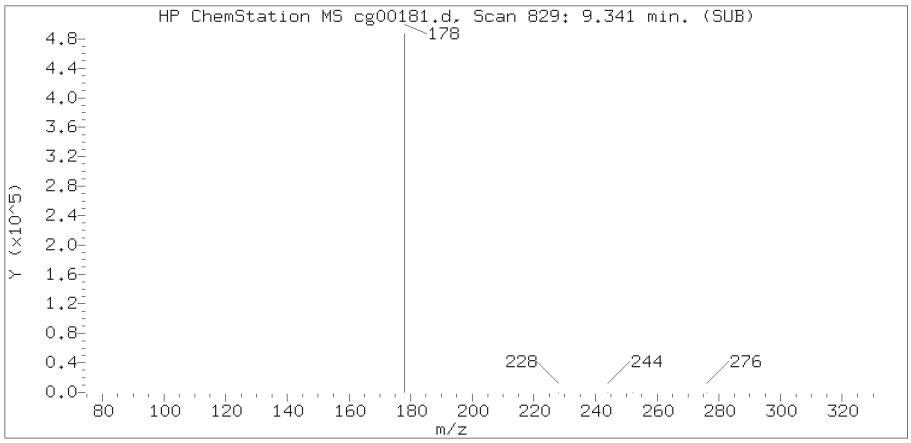
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

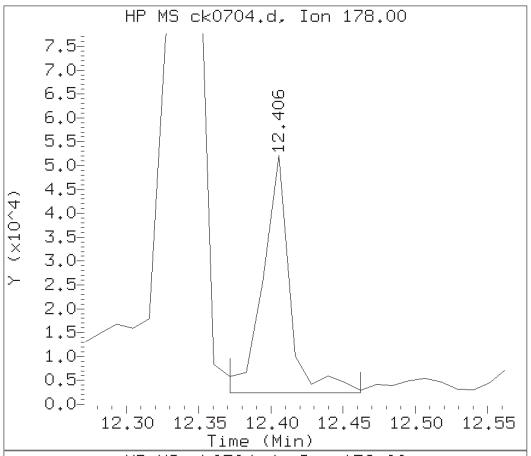
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 32
Compound Name	: Phenanthrene
Scan Number	: 942
Retention Time (minutes)	: 12.338
Relative Retention Time	: 0.00092
Quant Ion	: 178.00
Area (flag)	: 352877
On-column Amount (ng/ul)	: 1.3922

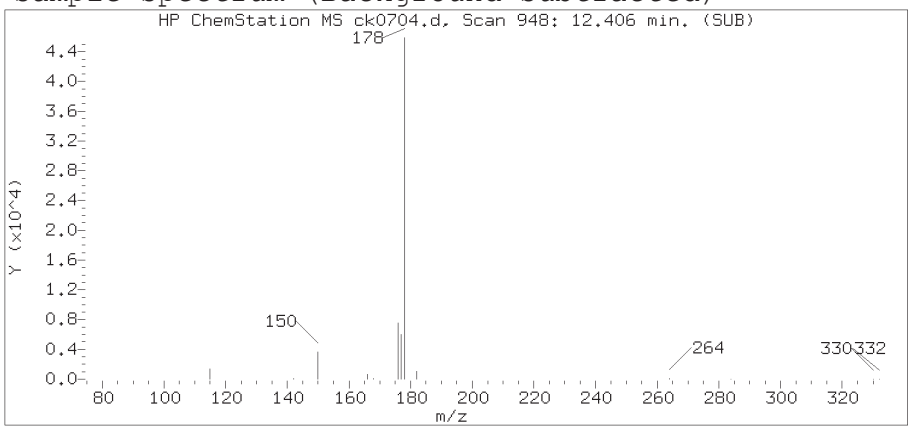
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

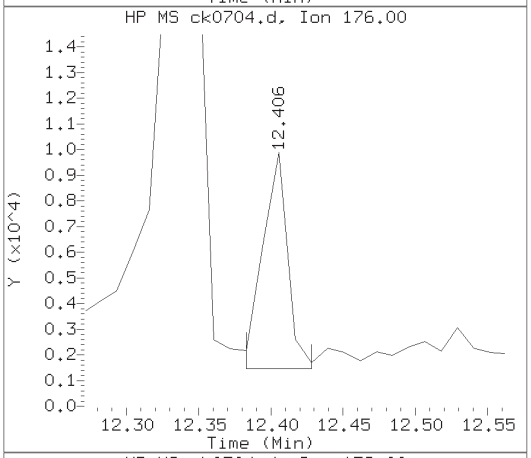
Reference Standard Spectrum for Anthracene



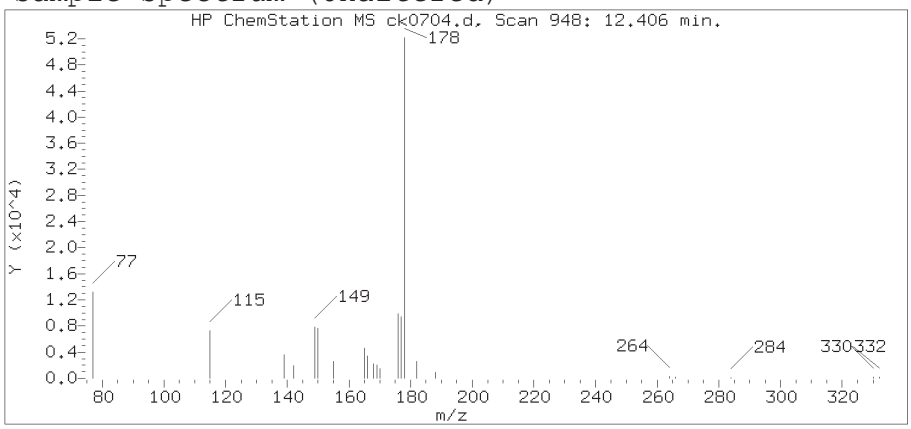


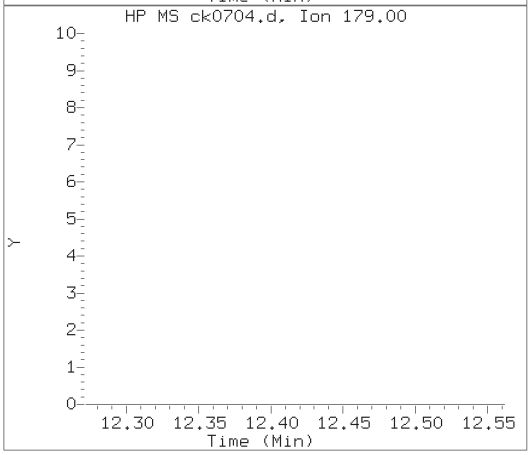
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

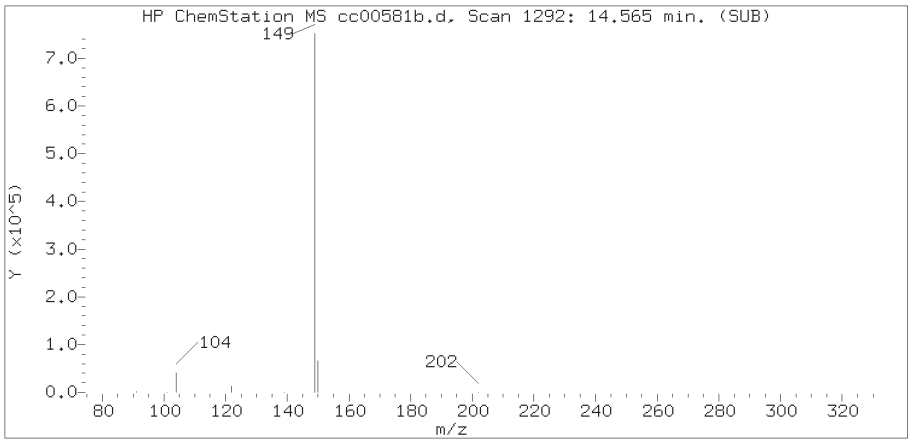
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

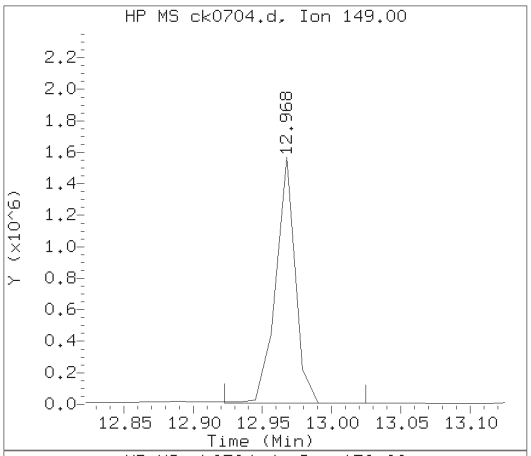
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 33
Compound Name	: Anthracene
Scan Number	: 948
Retention Time (minutes)	: 12.406
Relative Retention Time	: 0.00092
Quant Ion	: 178.00
Area (flag)	: 63439
On-column Amount (ng/ul)	: 0.2603

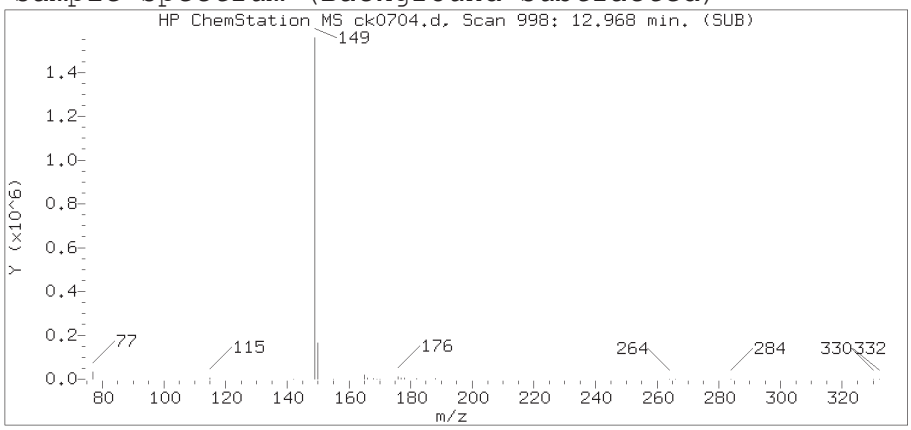
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

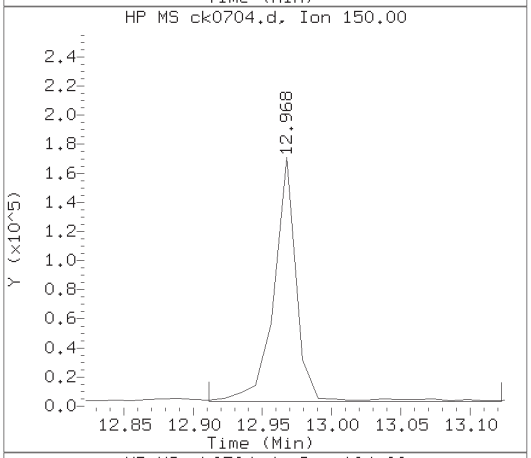
Reference Standard Spectrum for Di-n-butylphthalate



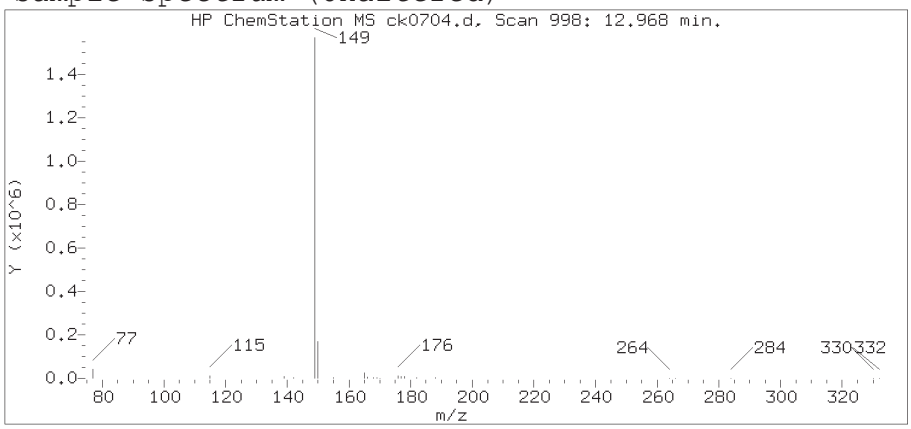


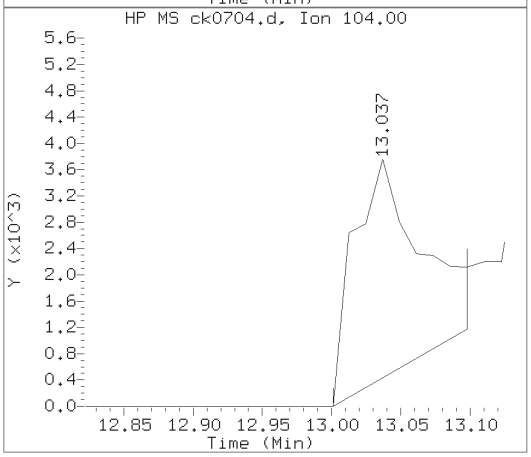
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

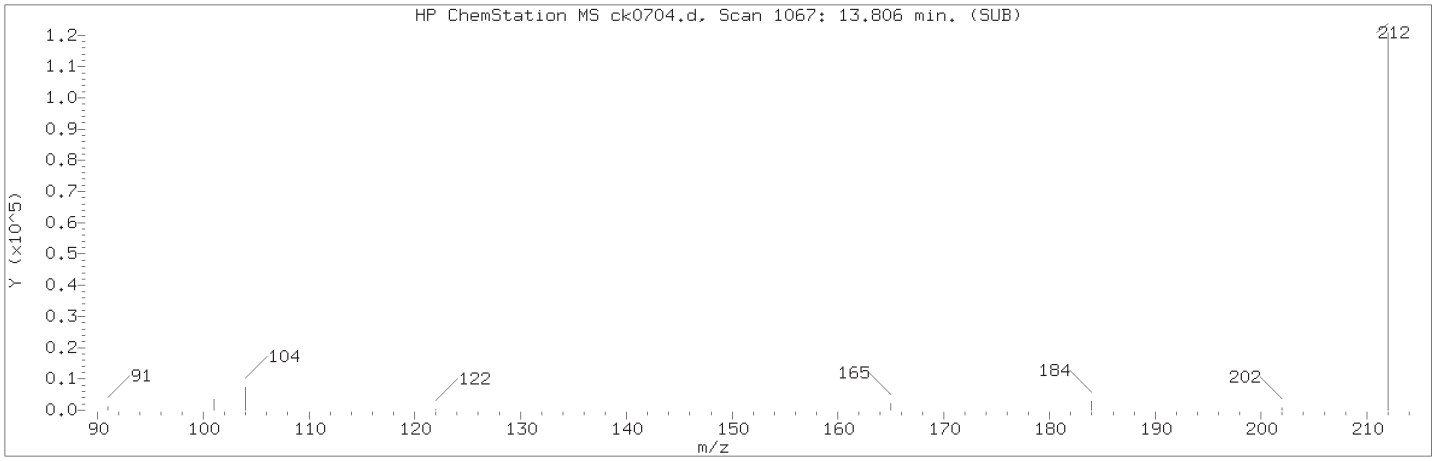
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

Sample Name: T1002RE Lab Sample ID: 9867761RE

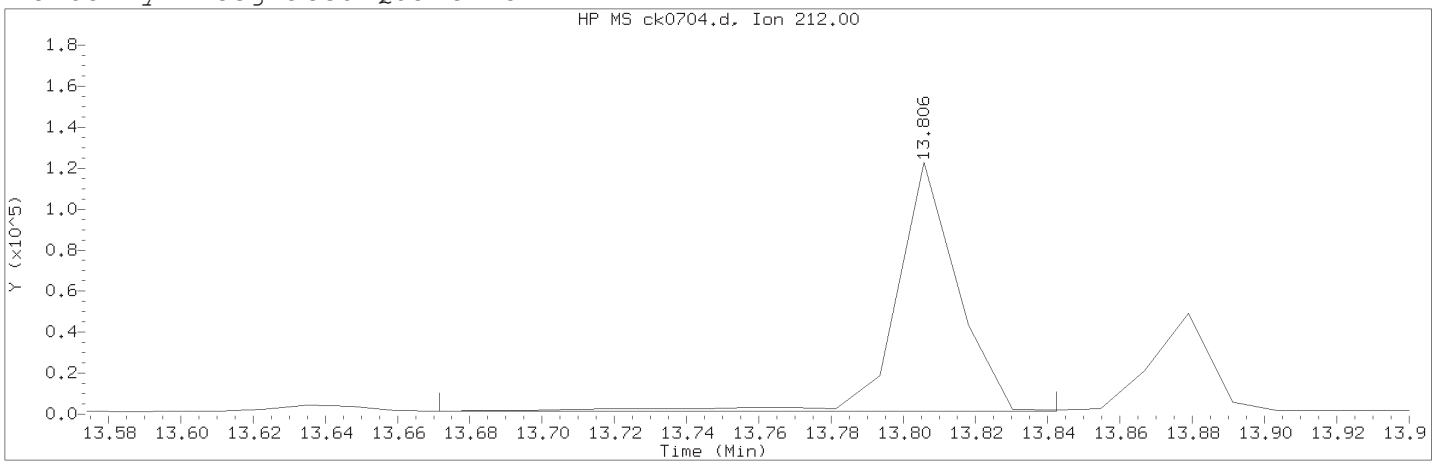
Compound Number	: 35
Compound Name	: Di-n-butylphthalate
Scan Number	: 998
Retention Time (minutes)	: 12.968
Relative Retention Time	: 0.00096
Quant Ion	: 149.00
Area (flag)	: 1568232
On-column Amount (ng/ul)	: 5.7763

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

Sample Name: T1002RE Lab Sample ID: 9867761RE

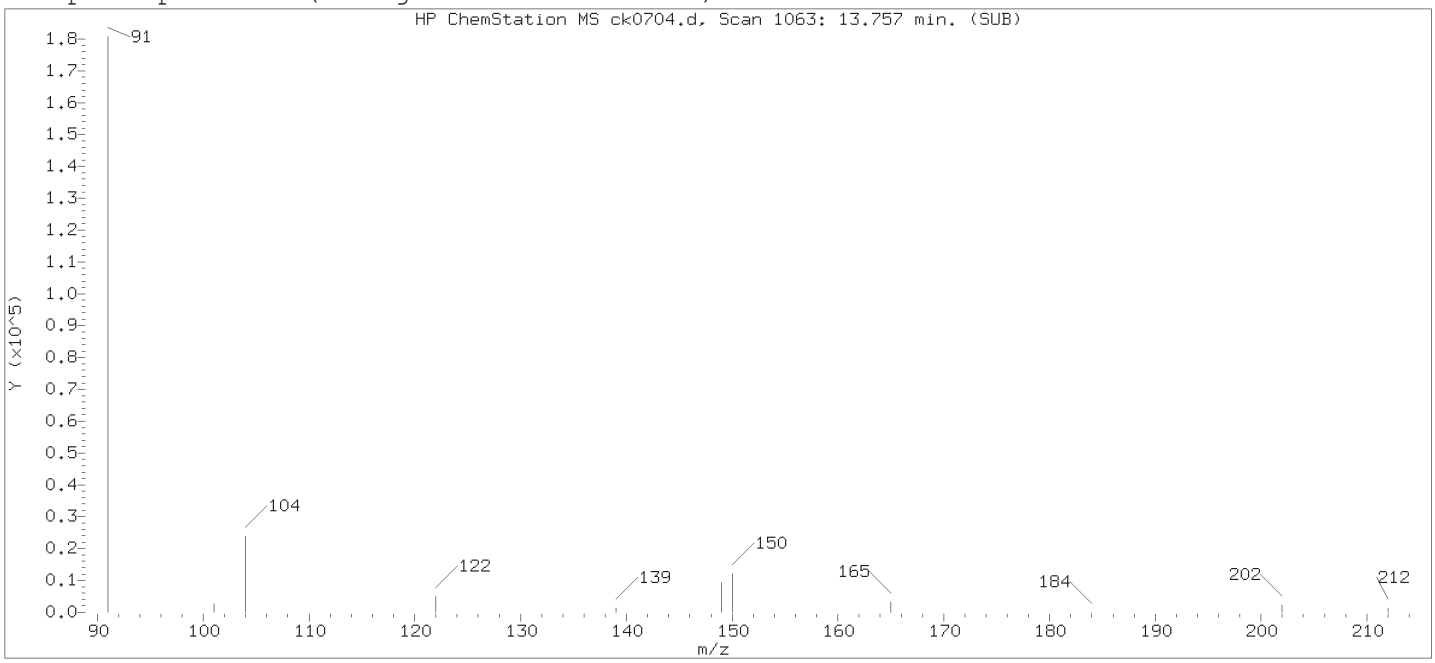
Compound Number : 36
Compound Name : Fluoranthene-d10
Scan Number : 1067
Retention Time (minutes) : 13.806
Quant Ion : 212.00
Area (flag) : 141322M
On-column Amount (ng/ul) : 0.7333
Integration start scan : 1055 Integration stop scan: 1069
Y at integration start : 1368 Y at integration end: 1428

Reason for manual integration: improper integration

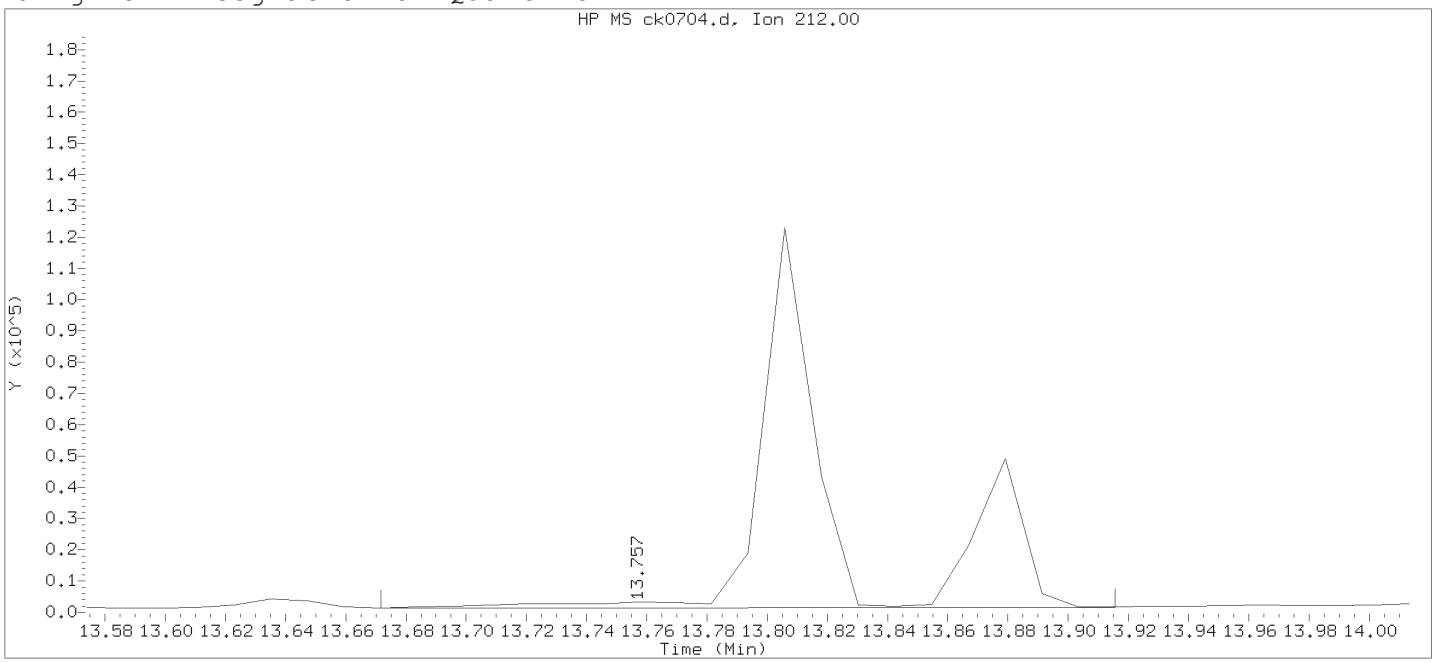
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

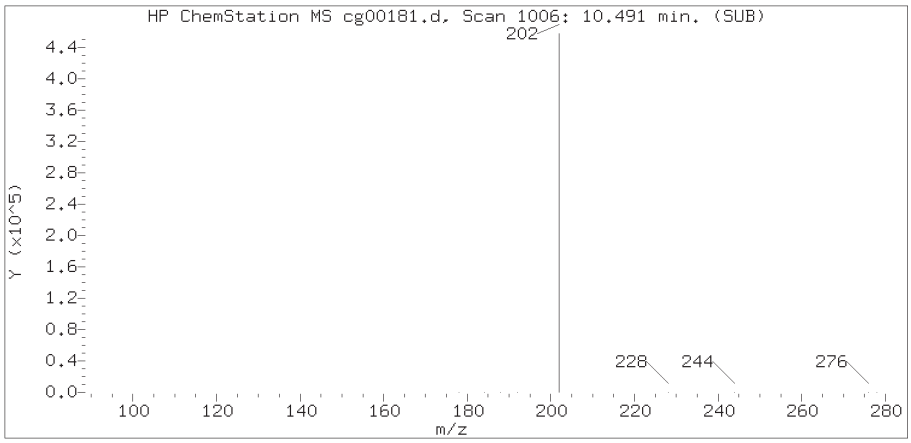
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 08:49 Automation

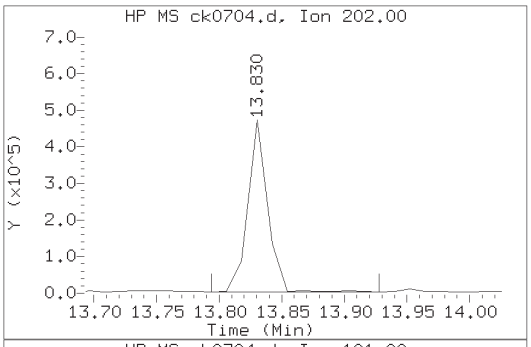
Sample Name: T1002RE Lab Sample ID: 9867761RE

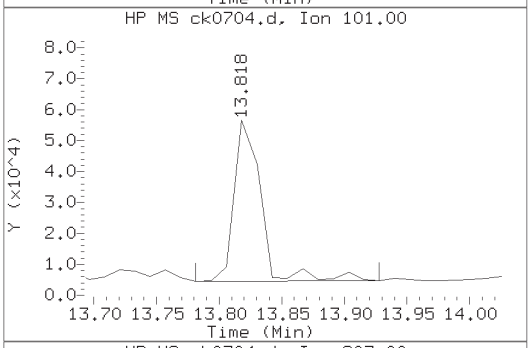
Compound Number	: 36		
Compound Name	: Fluoranthene-d10		
Scan Number	: 1063		
Retention Time (minutes)	: 13.757		
Quant Ion	: 212.00		
Area	: 195221		
On-column Amount (ng/ul)	: 1.0129		
Integration start scan	: 1055	Integration stop scan:	1075
Y at integration start	: 1368	Y at integration end:	1454

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature used 11/16/2018

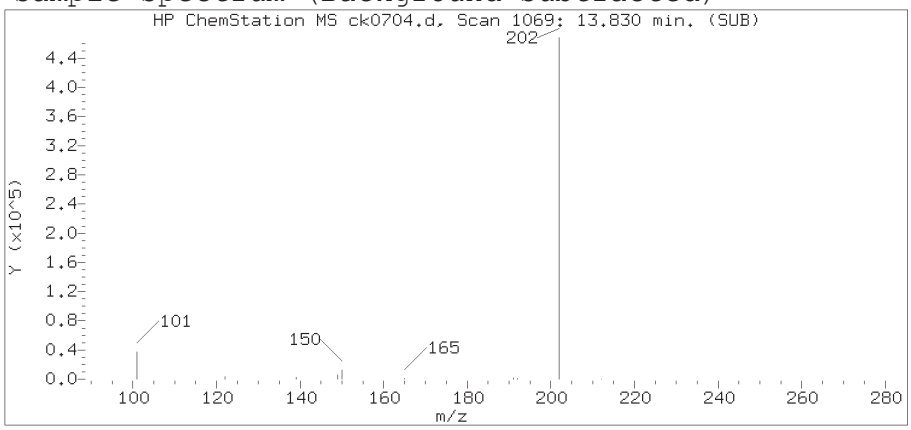
Reference Standard Spectrum for Fluoranthene

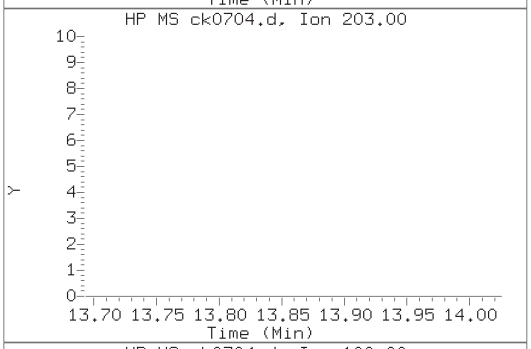




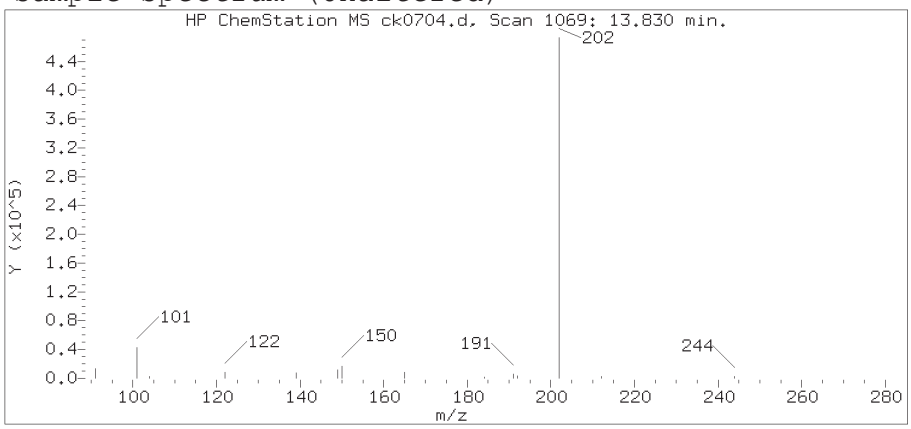


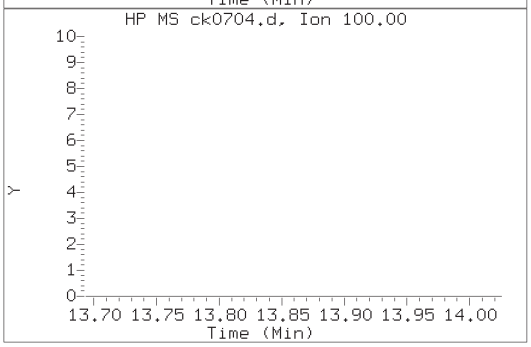
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

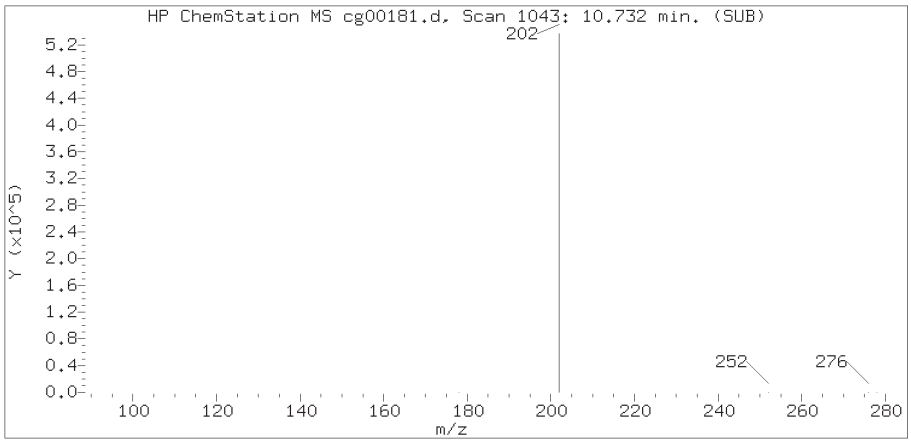
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

Sample Name: T1002RE Lab Sample ID: 9867761RE

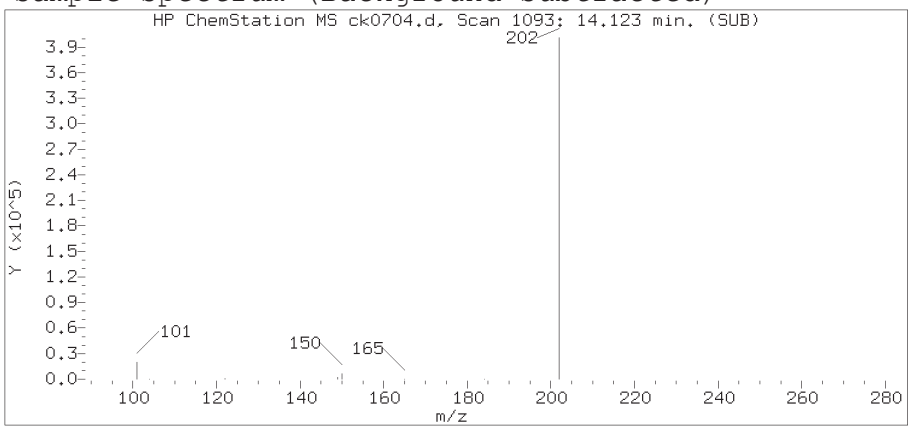
Compound Number	: 37
Compound Name	: Fluoranthene
Scan Number	: 1069
Retention Time (minutes)	: 13.830
Relative Retention Time	: 0.00103
Quant Ion	: 202.00
Area (flag)	: 519409
On-column Amount (ng/ul)	: 2.0856

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

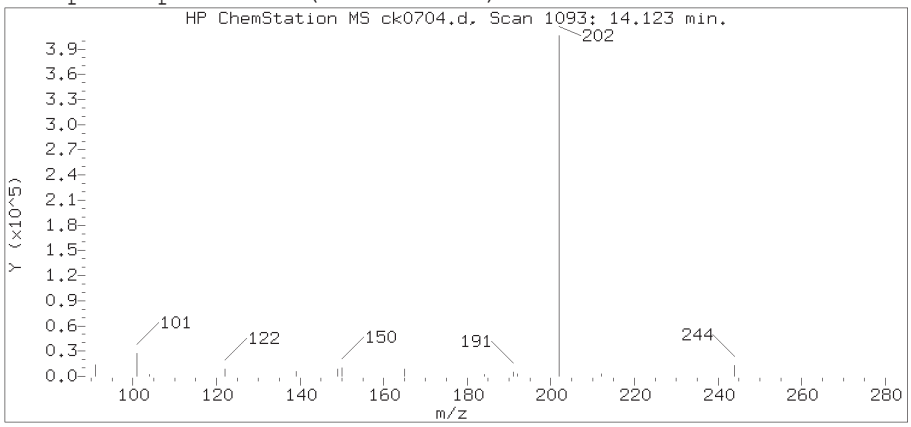
Reference Standard Spectrum for Pyrene

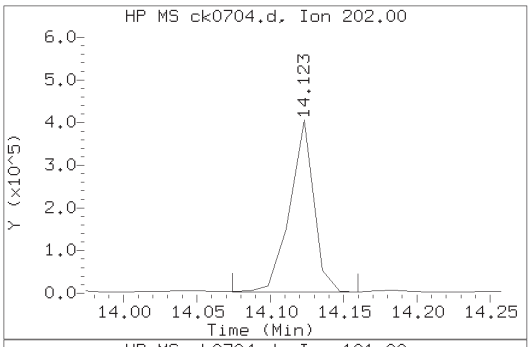


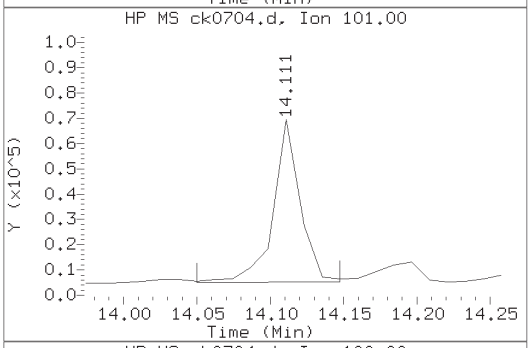
Sample Spectrum (Background Subtracted)

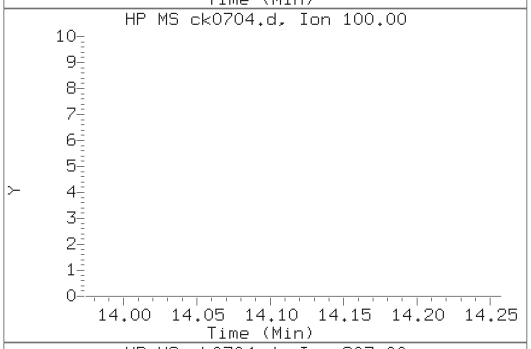


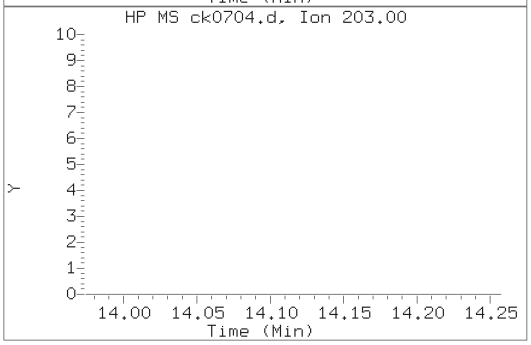
Sample Spectrum (Unaltered)











Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

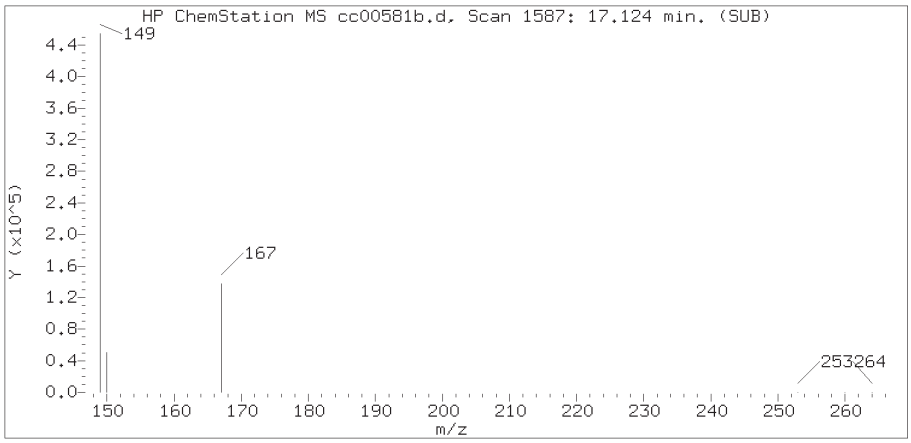
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

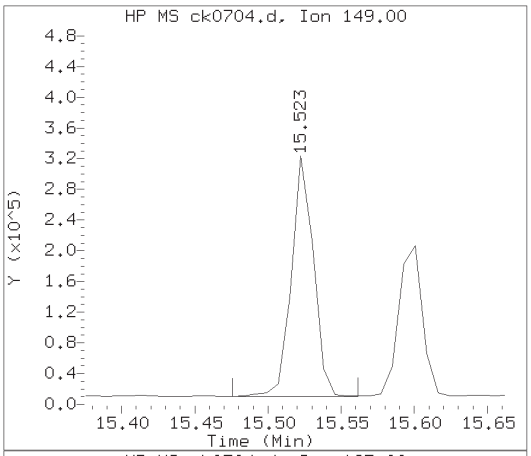
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 39
Compound Name	: Pyrene
Scan Number	: 1093
Retention Time (minutes)	: 14.123
Relative Retention Time	: 0.00045
Quant Ion	: 202.00
Area (flag)	: 455379
On-column Amount (ng/ul)	: 1.8695

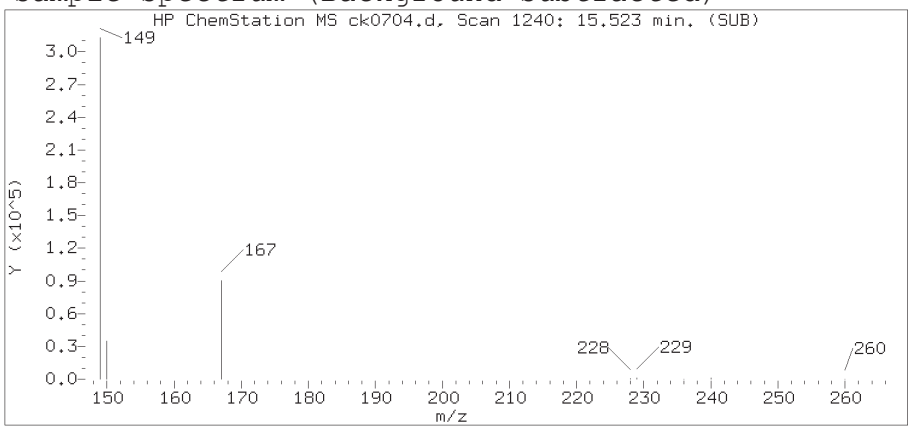
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

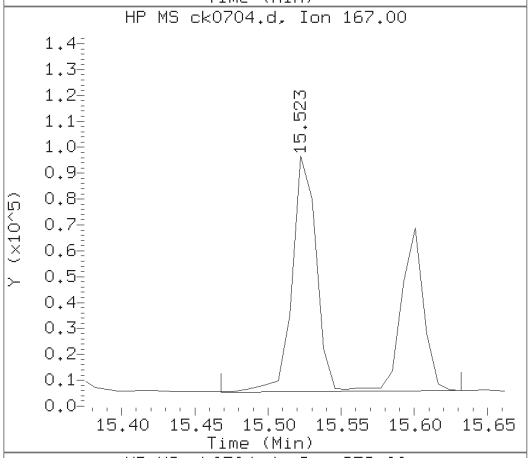
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



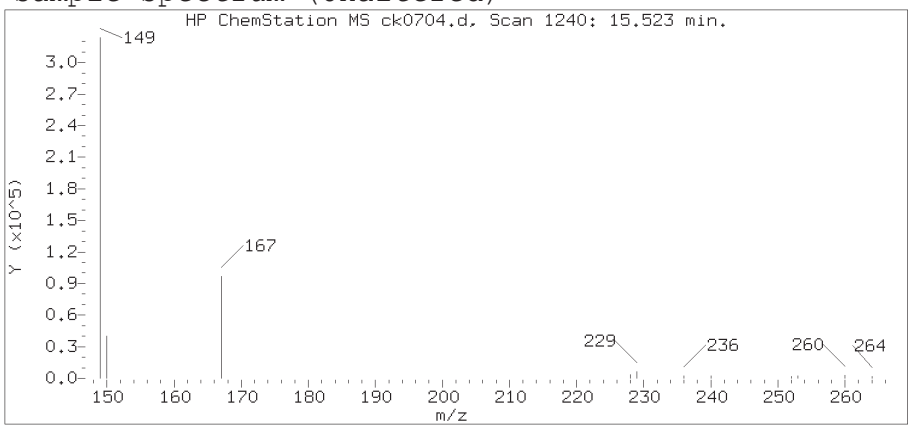


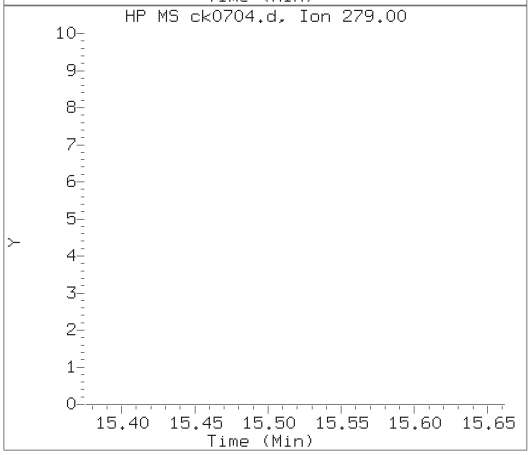
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

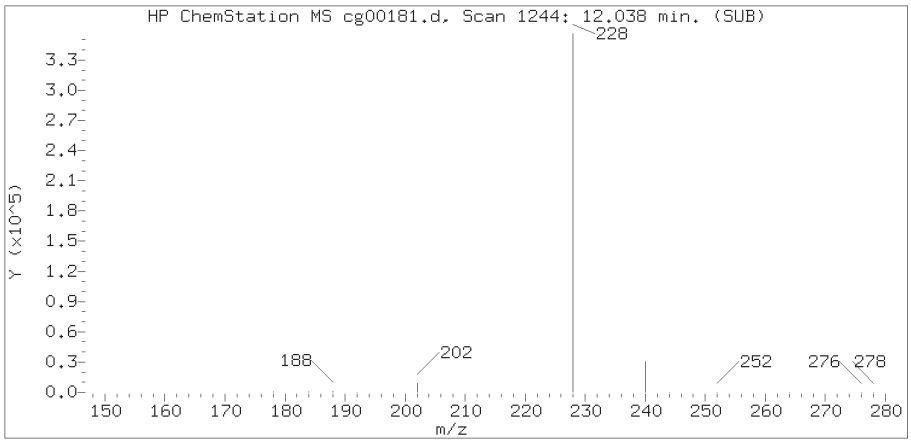
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

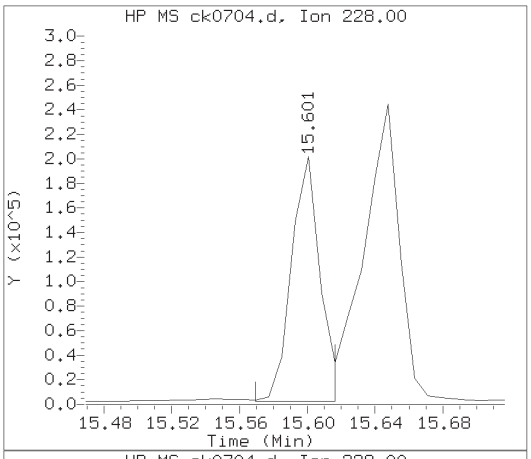
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 41
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1240
Retention Time (minutes)	: 15.523
Relative Retention Time	: 0.00050
Quant Ion	: 149.00
Area (flag)	: 331872
On-column Amount (ng/ul)	: 1.9755

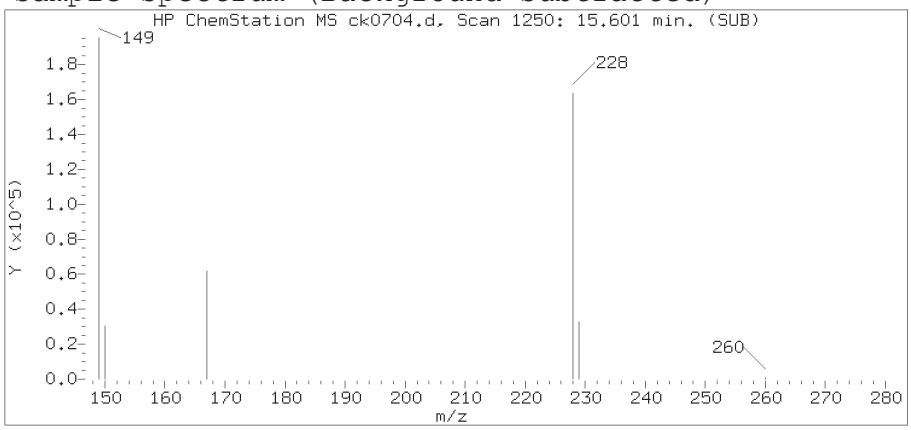
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

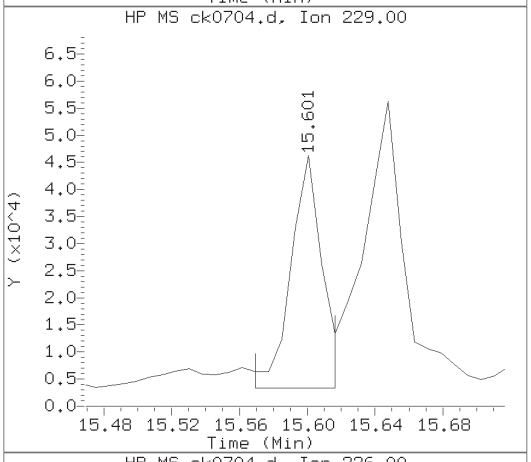
Reference Standard Spectrum for Benzo(a)anthracene



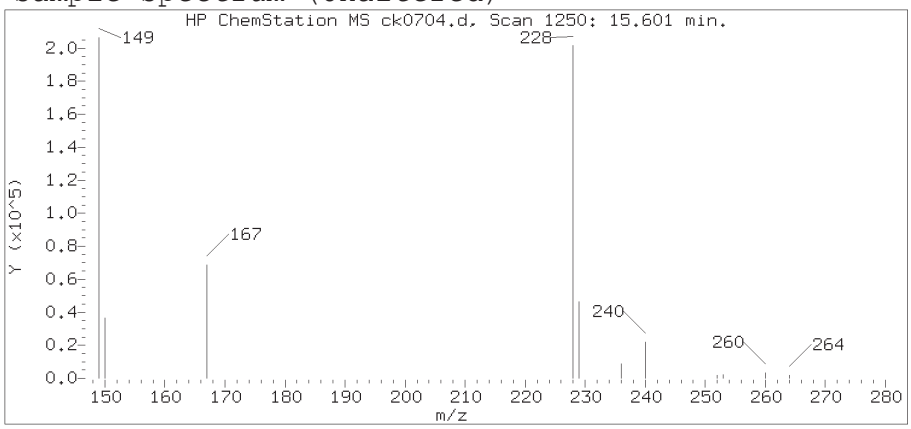


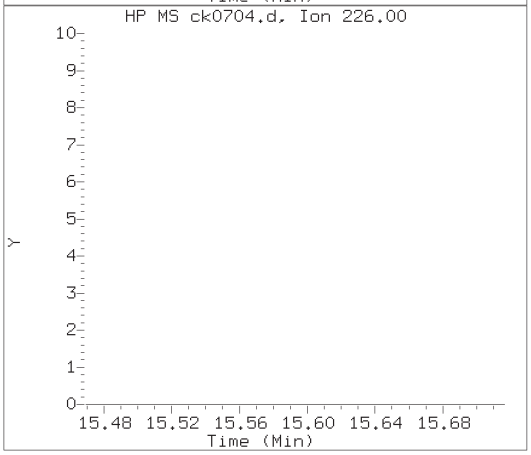
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

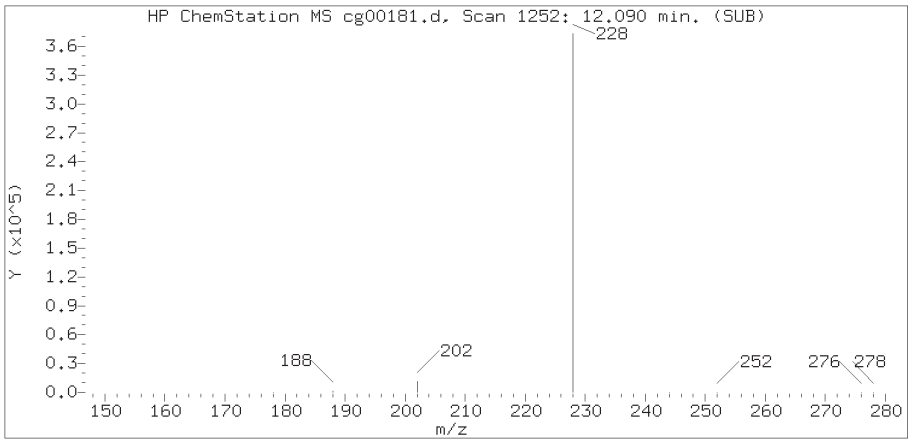
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

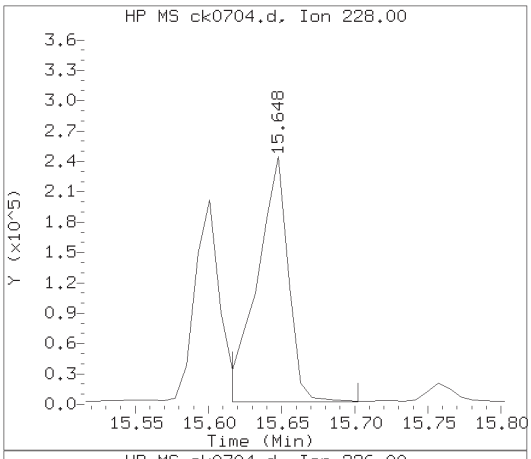
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 42
Compound Name	: Benzo(a)anthracene
Scan Number	: 1250
Retention Time (minutes)	: 15.601
Relative Retention Time	:-0.00000
Quant Ion	: 228.00
Area (flag)	: 230425
On-column Amount (ng/ul)	: 1.1748

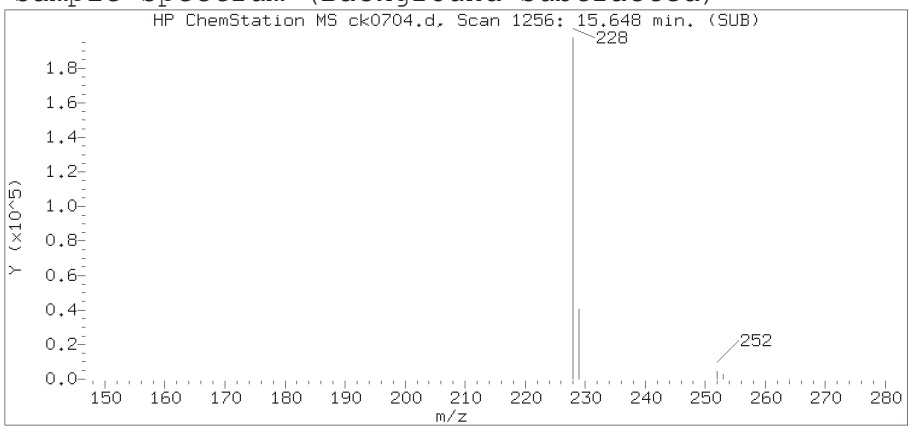
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

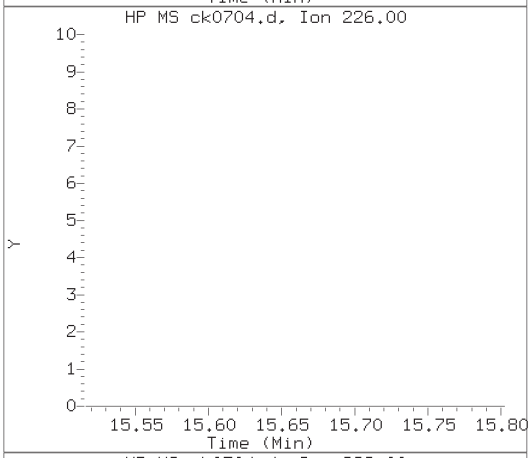
Reference Standard Spectrum for Chrysene



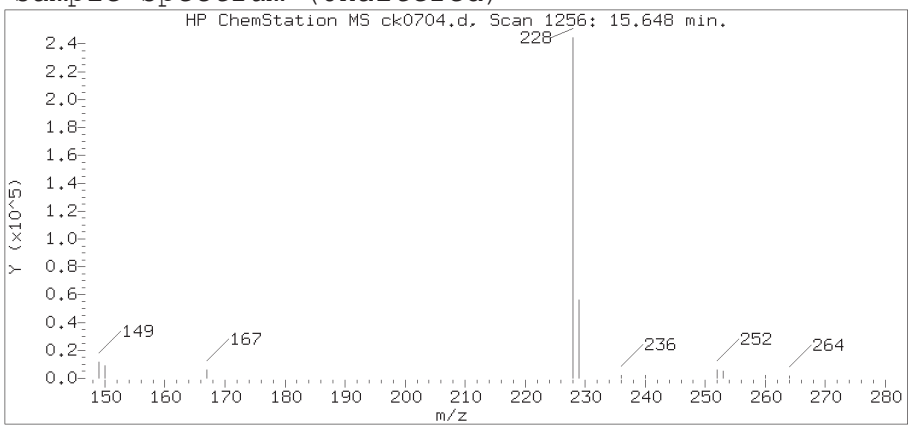


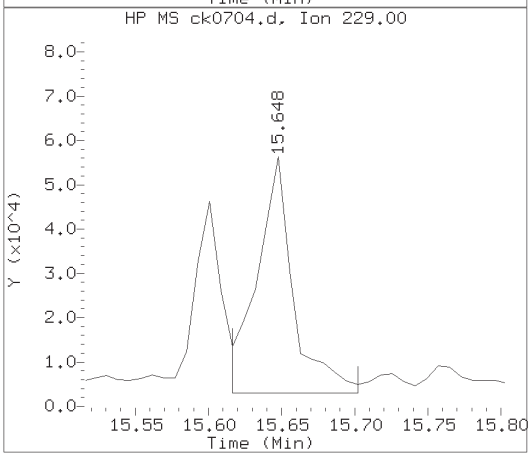
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

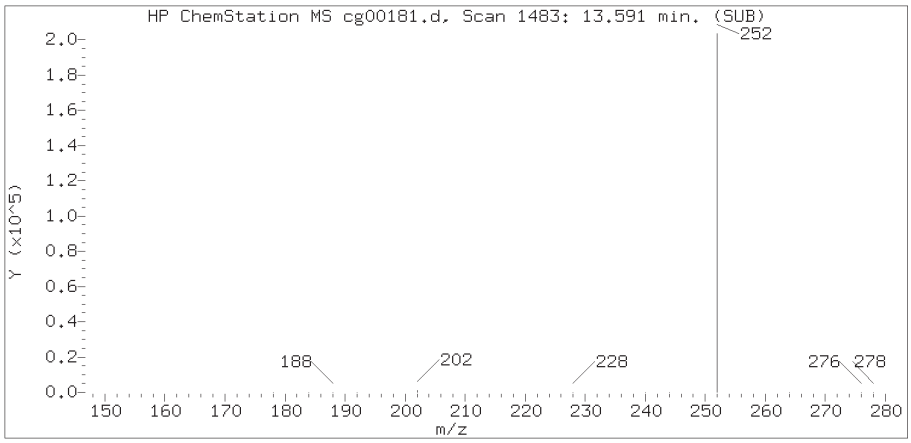
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

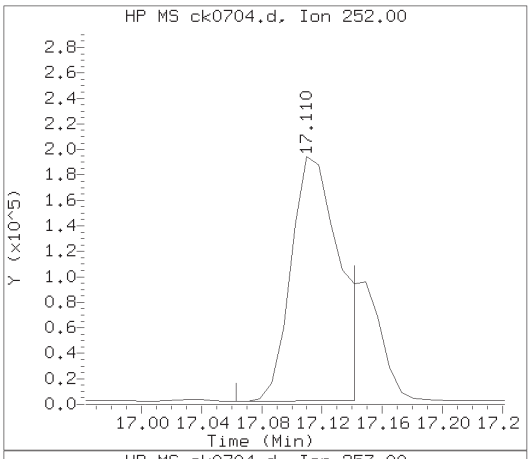
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 44
Compound Name	: Chrysene
Scan Number	: 1256
Retention Time (minutes)	: 15.648
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 356901
On-column Amount (ng/ul)	: 1.7760

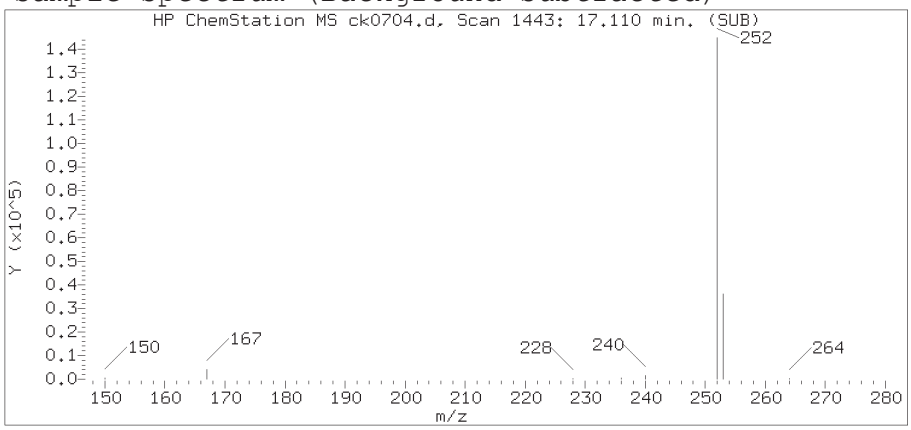
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

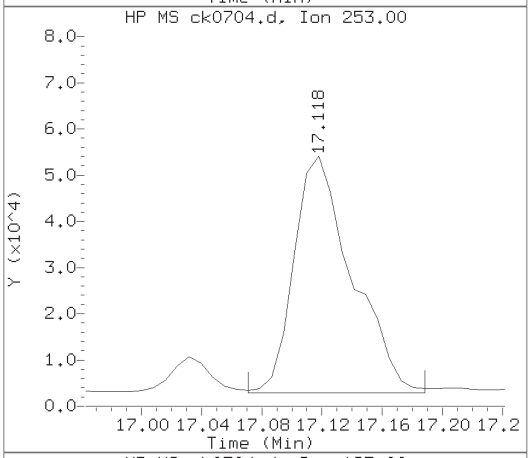
Reference Standard Spectrum for Benzo(b)fluoranthene



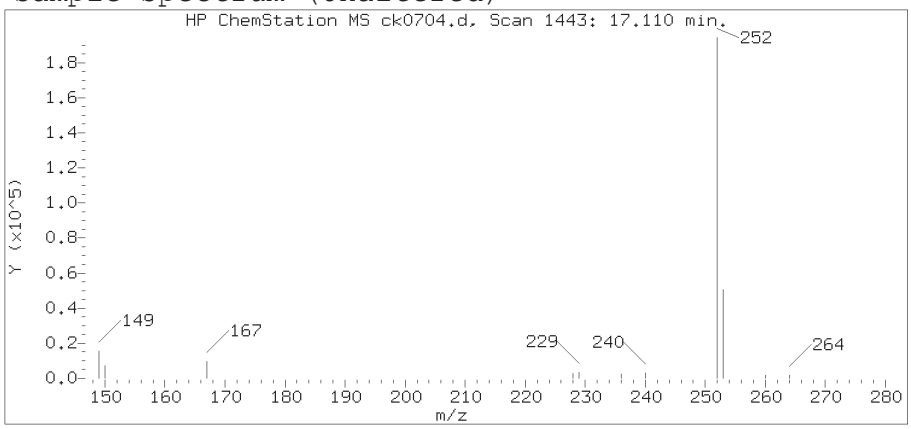


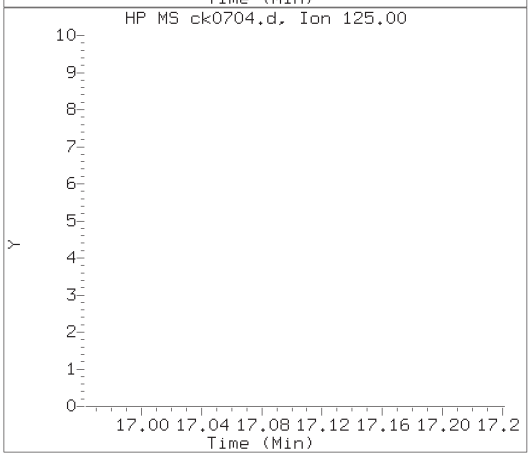
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

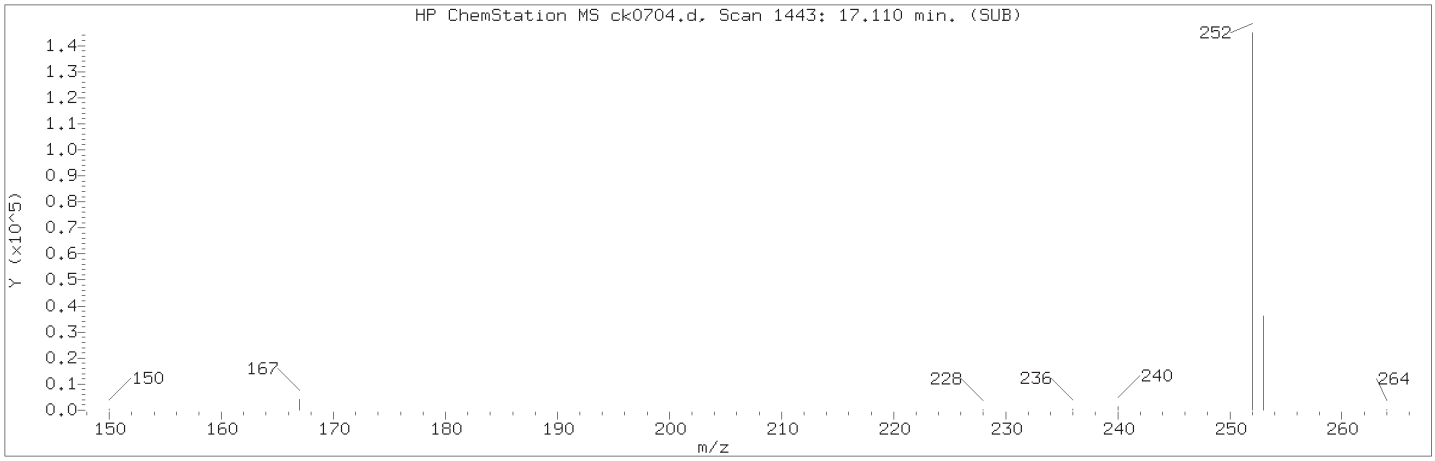
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

Sample Name: T1002RE Lab Sample ID: 9867761RE

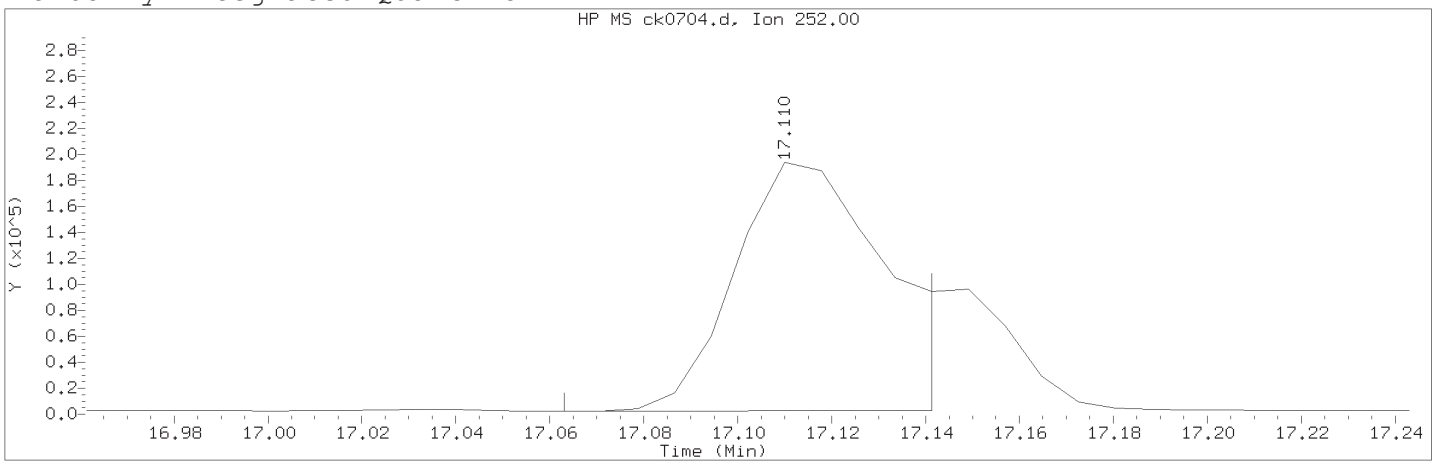
Compound Number	: 46
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1443
Retention Time (minutes)	: 17.110
Relative Retention Time	:-0.00003
Quant Ion	: 252.00
Area (flag)	: 433148M
On-column Amount (ng/ul)	: 2.6264

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

Sample Name: T1002RE Lab Sample ID: 9867761RE

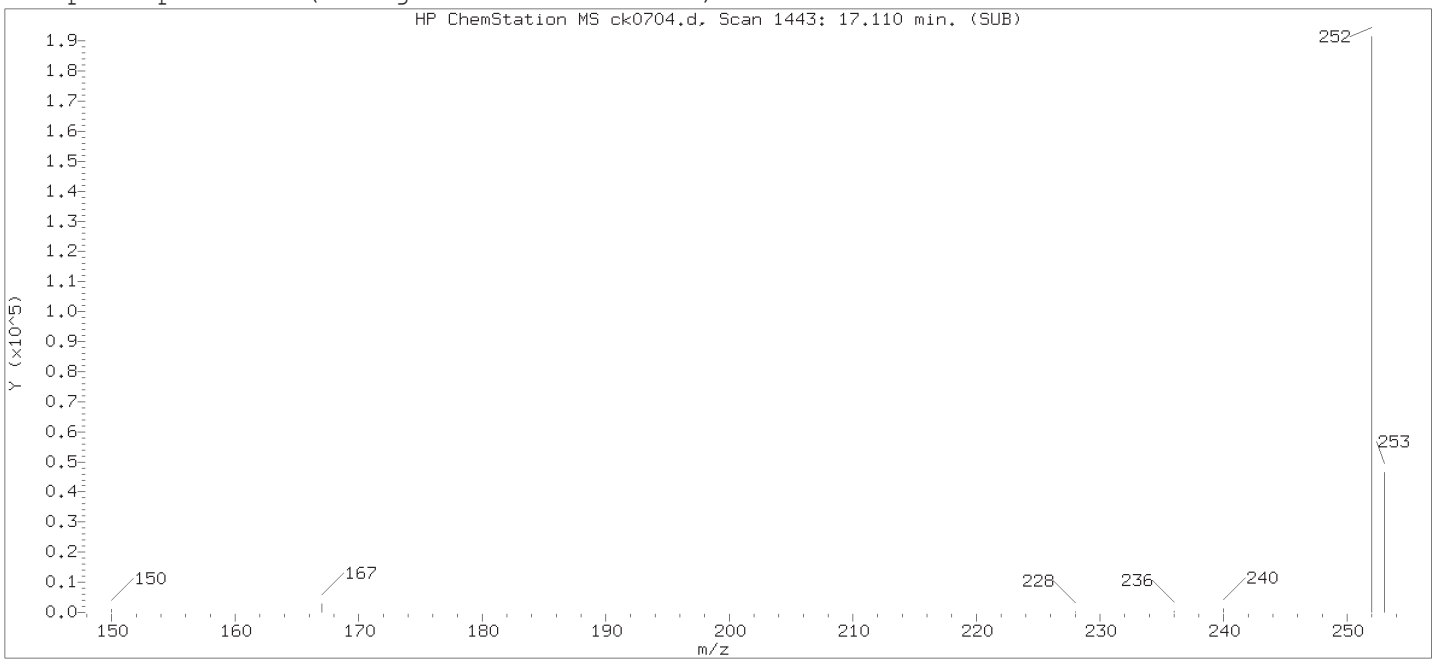
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1443
Retention Time (minutes) : 17.110
Quant Ion : 252.00
Area (flag) : 433148M
On-column Amount (ng/ul) : 2.6264
Integration start scan : 1436 Integration stop scan: 1446
Y at integration start : 2280 Y at integration end: 2801

Reason for manual integration: improper integration

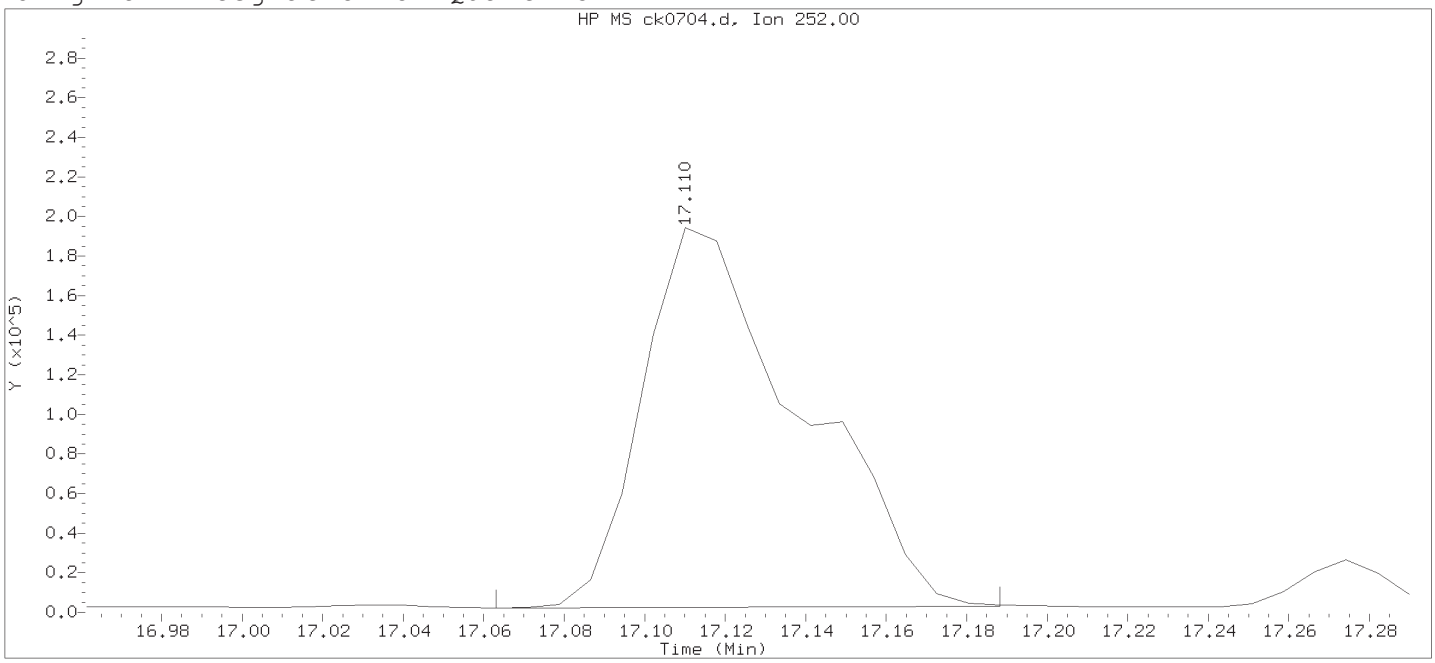
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

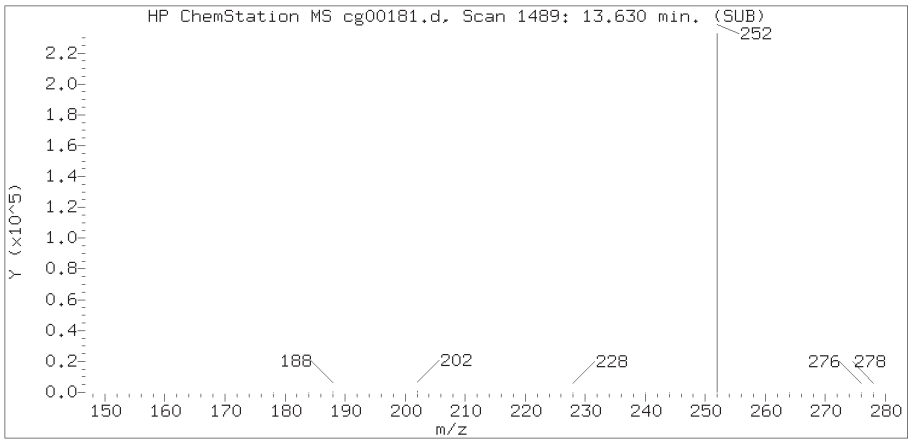
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 08:49 Automation

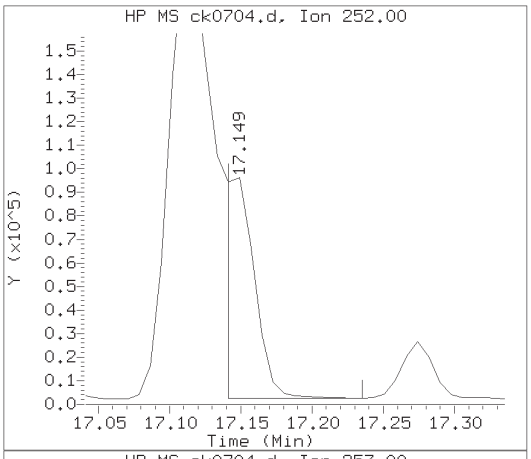
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 46		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1443		
Retention Time (minutes)	: 17.110		
Quant Ion	: 252.00		
Area	: 523815		
On-column Amount (ng/ul)	: 3.1761		
Integration start scan	: 1436	Integration stop scan:	1452
Y at integration start	: 2280	Y at integration end:	3114

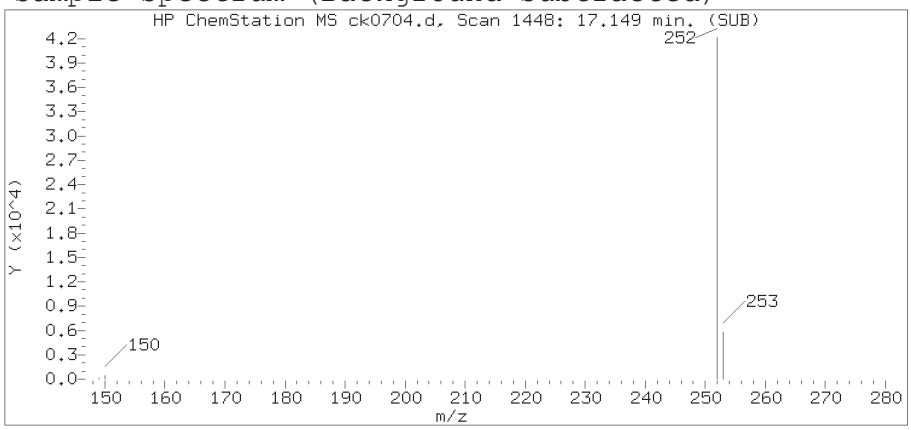
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature used [illegible]

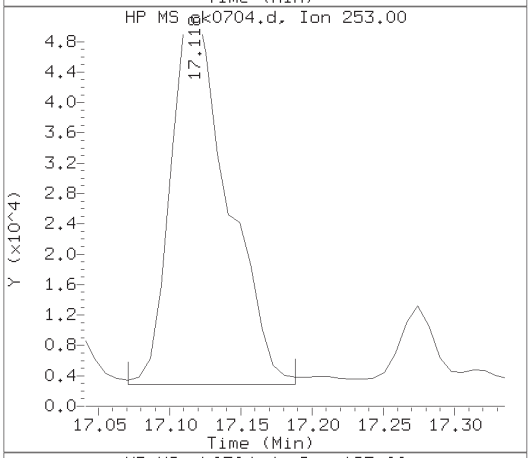
Reference Standard Spectrum for Benzo(k)fluoranthene



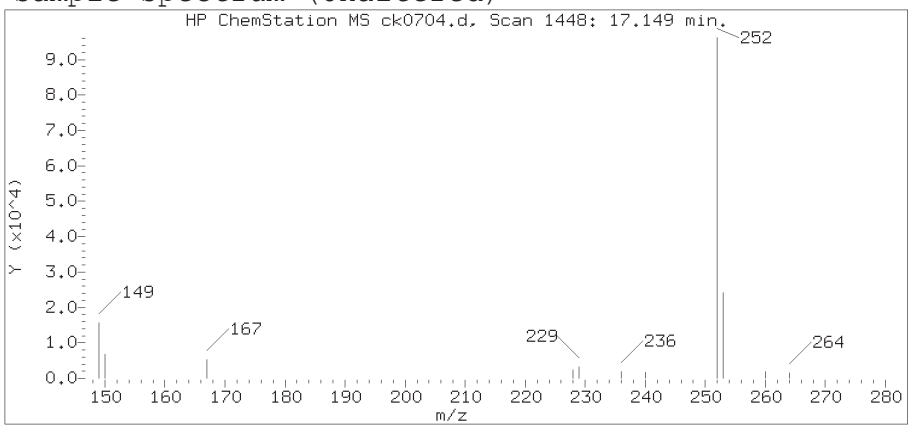


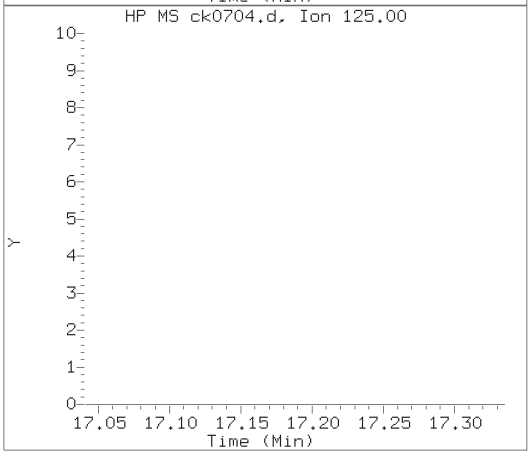
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

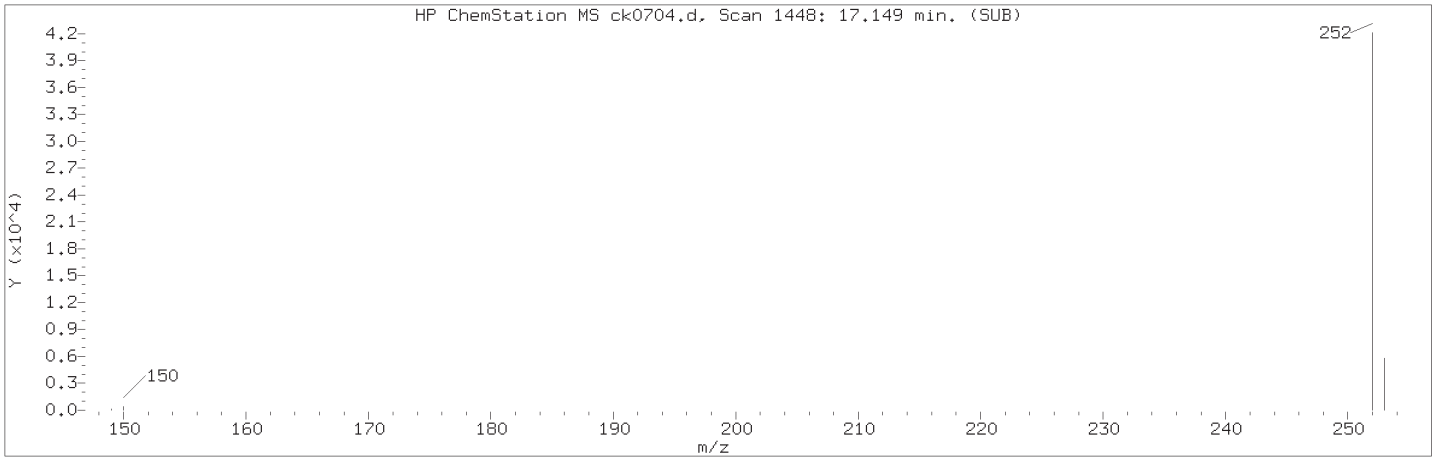
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

Sample Name: T1002RE Lab Sample ID: 9867761RE

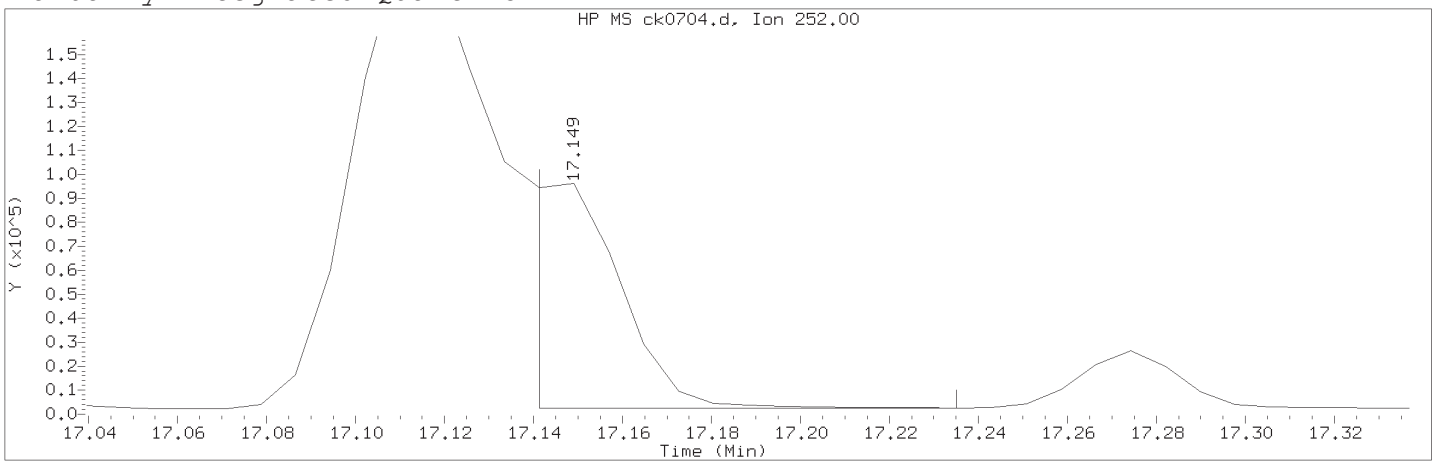
Compound Number	: 47
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1448
Retention Time (minutes)	: 17.149
Relative Retention Time	:-0.00003
Quant Ion	: 252.00
Area (flag)	: 135997M
On-column Amount (ng/ul)	: 0.7679

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

Sample Name: T1002RE Lab Sample ID: 9867761RE

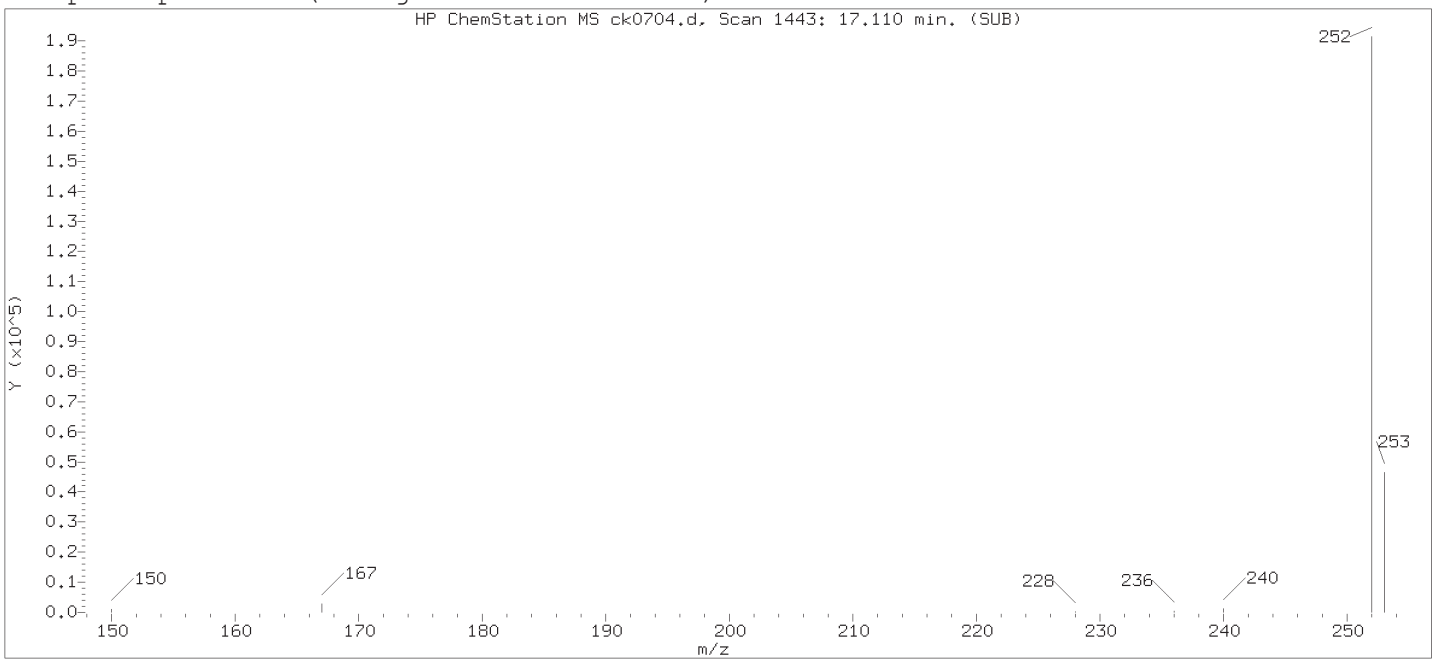
Compound Number : 47
Compound Name : Benzo(k)fluoranthene
Scan Number : 1448
Retention Time (minutes) : 17.149
Quant Ion : 252.00
Area (flag) : 135997M
On-column Amount (ng/ul) : 0.7679
Integration start scan : 1446 Integration stop scan: 1458
Y at integration start : 2562 Y at integration end: 2562

Reason for manual integration: improper integration

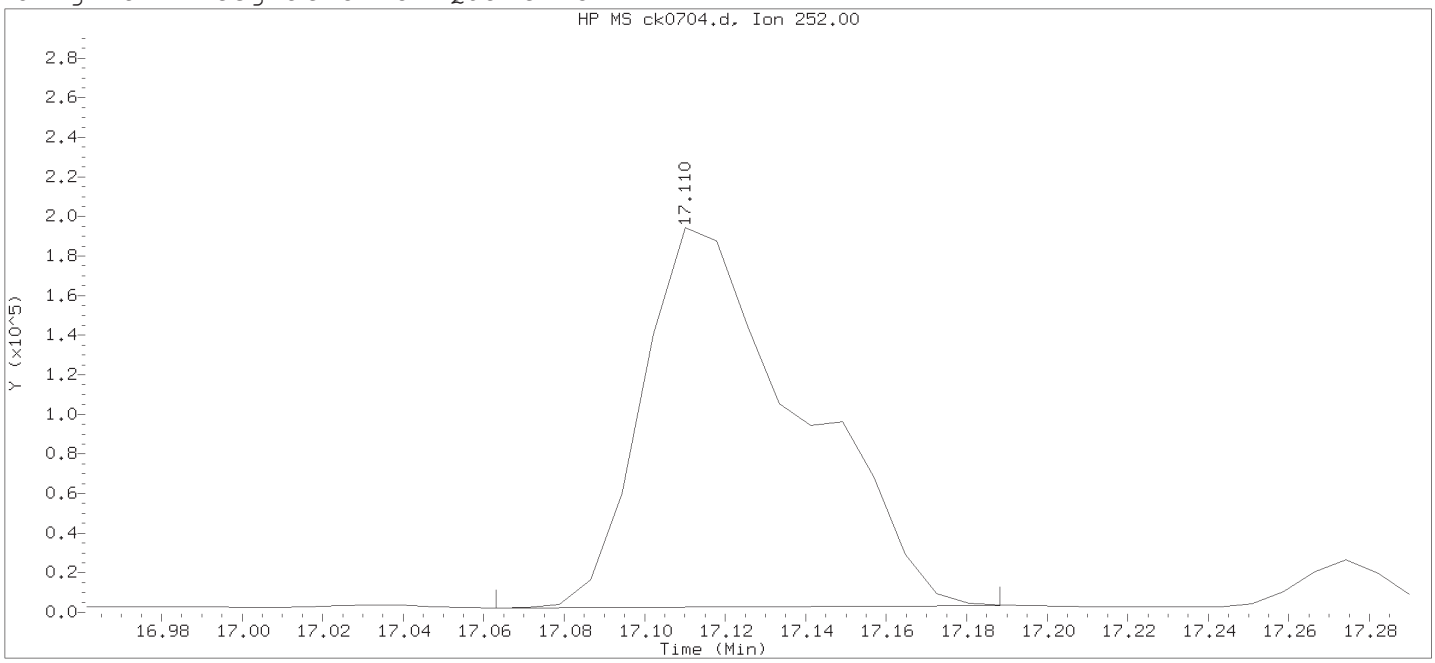
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

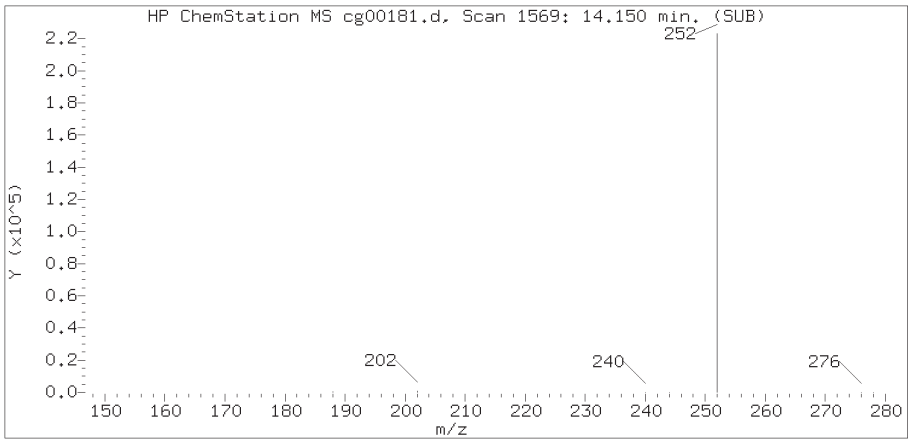
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 08:49 Automation

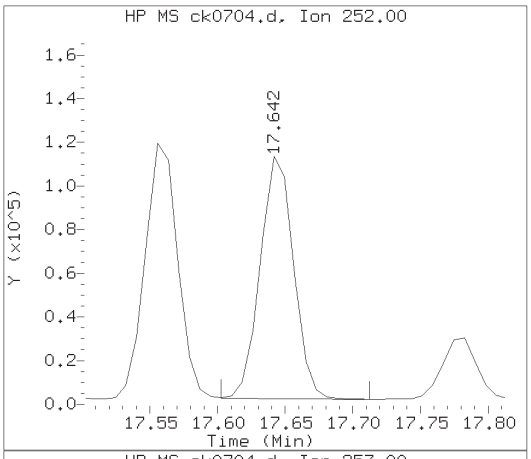
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	:	47
Compound Name	:	Benzo(k)fluoranthene
Scan Number	:	1443
Retention Time (minutes)	:	17.110
Quant Ion	:	252.00
Area	:	523436
On-column Amount (ng/ul)	:	2.9555
Integration start scan	:	1436 Integration stop scan: 1452
Y at integration start	:	2280 Y at integration end: 3215

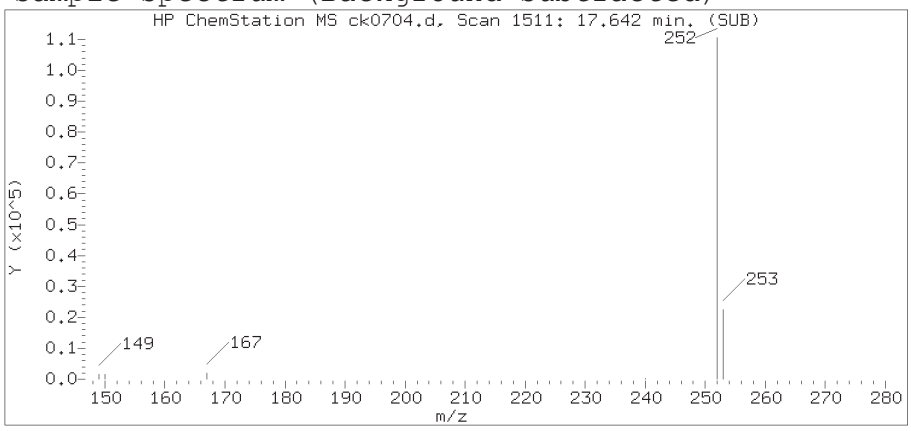
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs0187

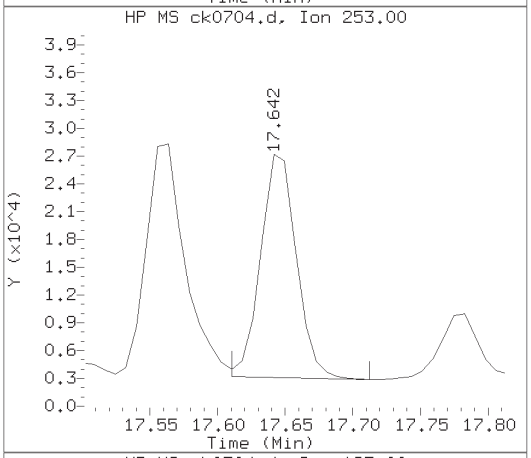
Reference Standard Spectrum for Benzo(a)pyrene



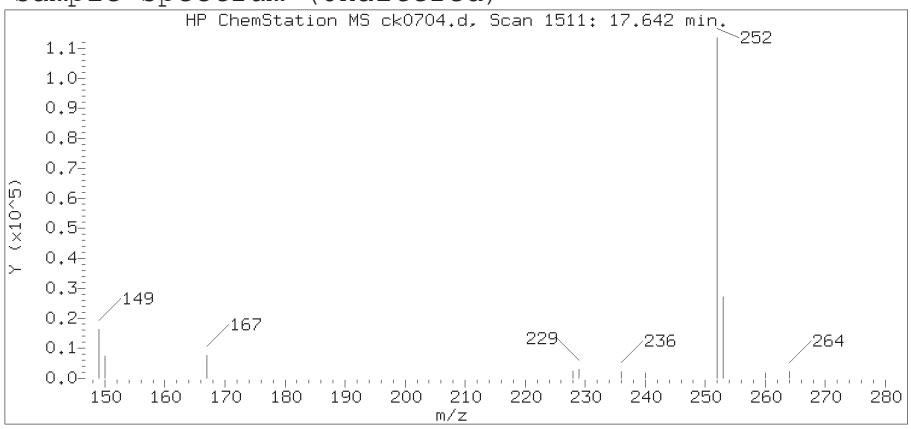


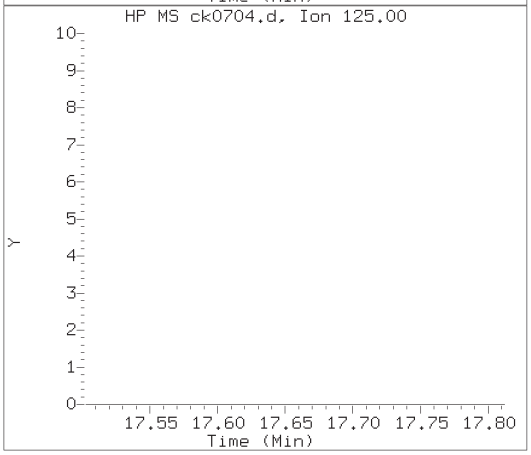
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

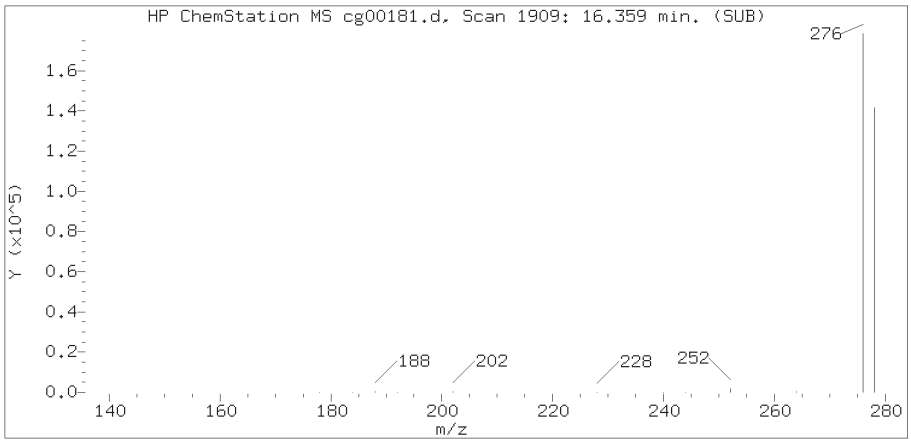
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

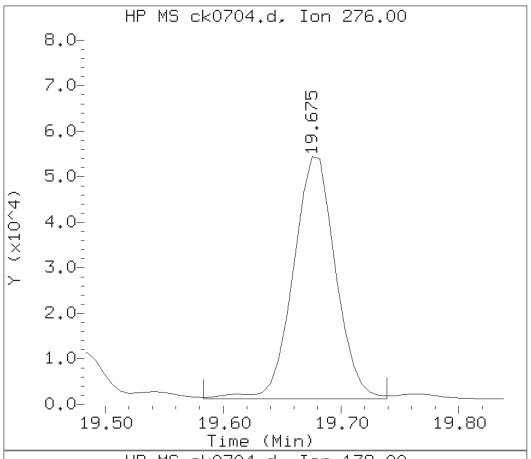
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 50
Compound Name	: Benzo(a)pyrene
Scan Number	: 1511
Retention Time (minutes)	: 17.642
Relative Retention Time	:-0.00000
Quant Ion	: 252.00
Area (flag)	: 190314
On-column Amount (ng/ul)	: 1.2648

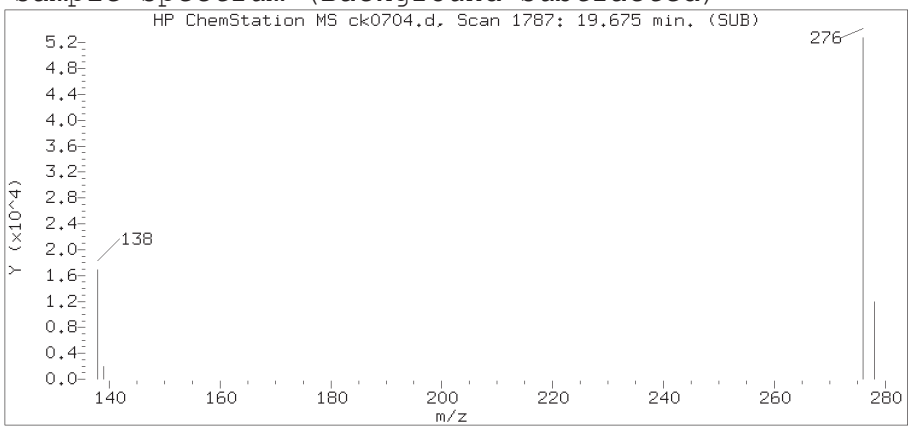
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

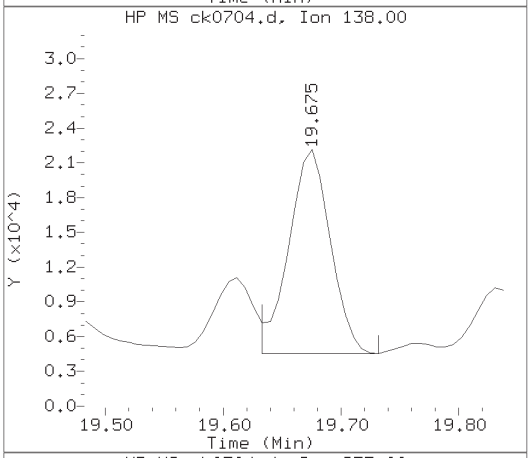
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



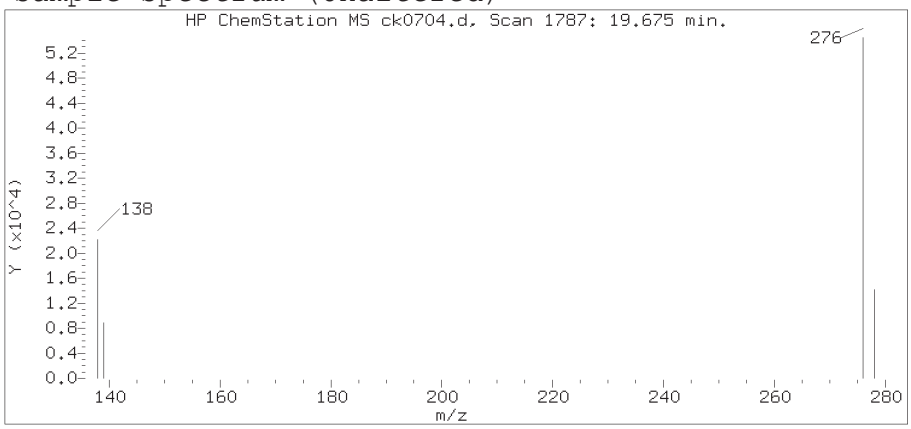


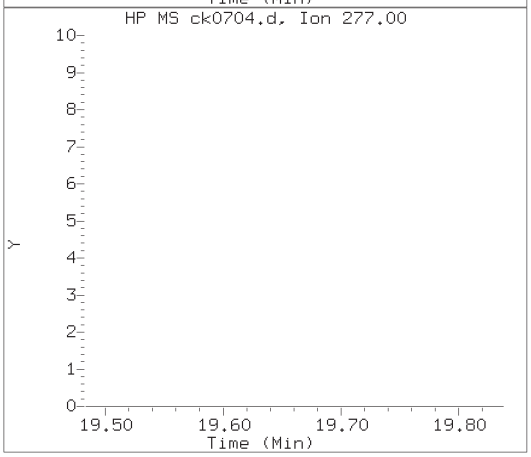
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

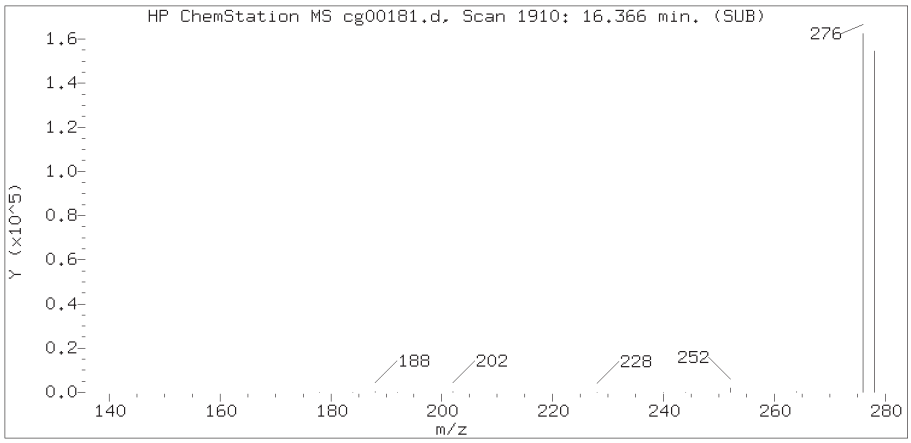
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

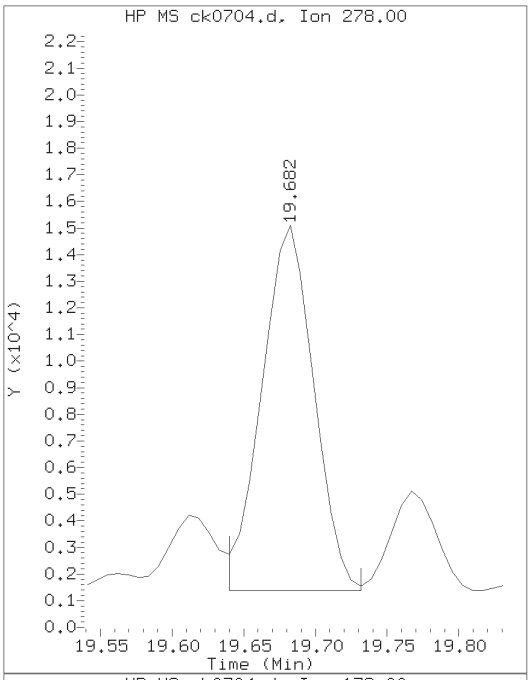
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 53
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 1787
Retention Time (minutes)	: 19.675
Relative Retention Time	:-0.00062
Quant Ion	: 276.00
Area (flag)	: 133169
On-column Amount (ng/ul)	: 0.8922

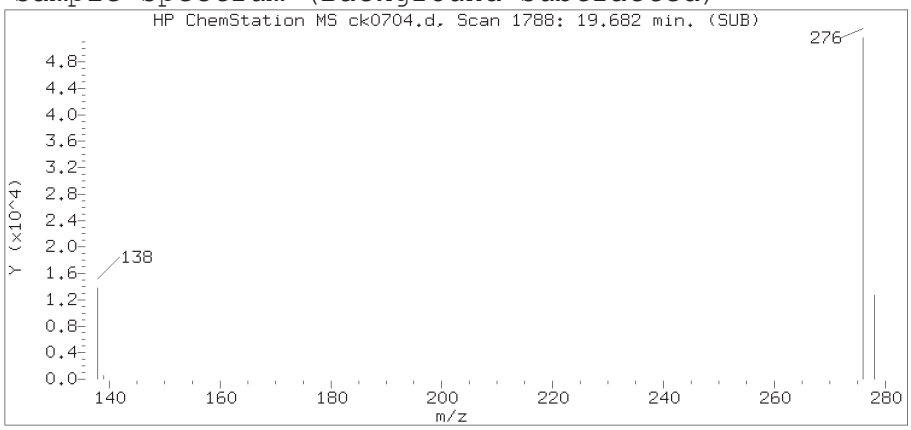
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

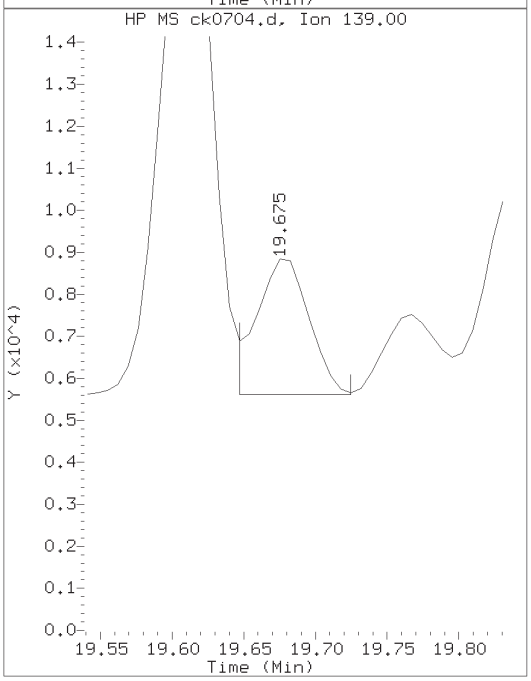
Reference Standard Spectrum for Dibenz(a,h)anthracene



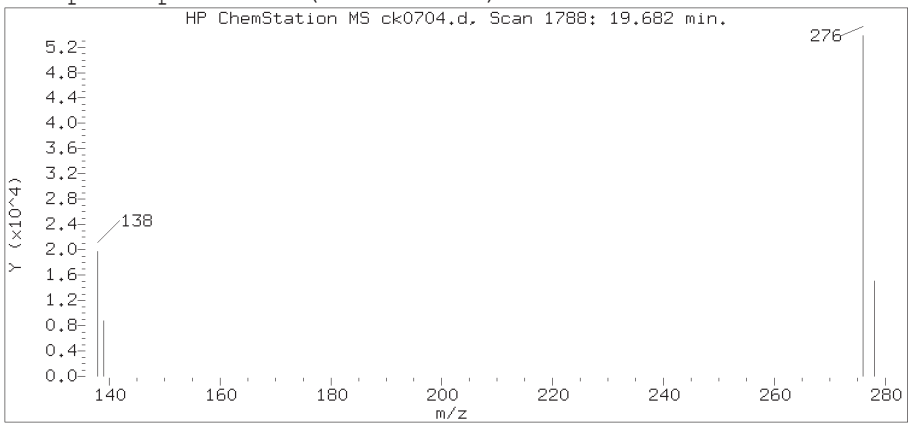


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

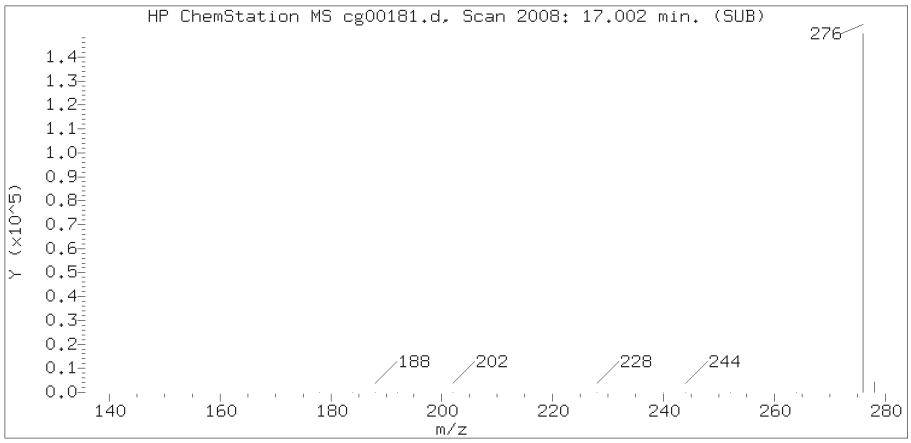
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

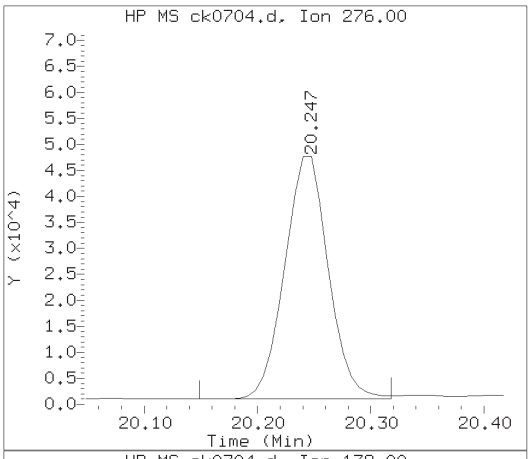
Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 54
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 1788
Retention Time (minutes)	: 19.682
Relative Retention Time	:-0.00061
Quant Ion	: 278.00
Area (flag)	: 34572
On-column Amount (ng/ul)	: 0.2794

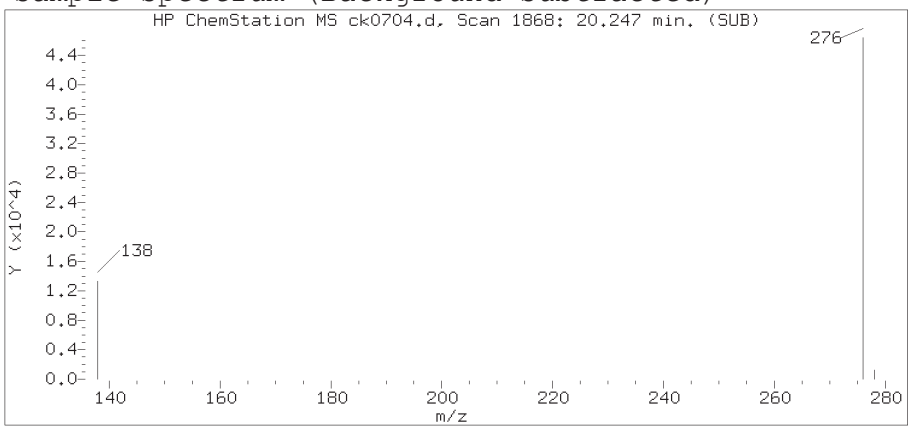
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

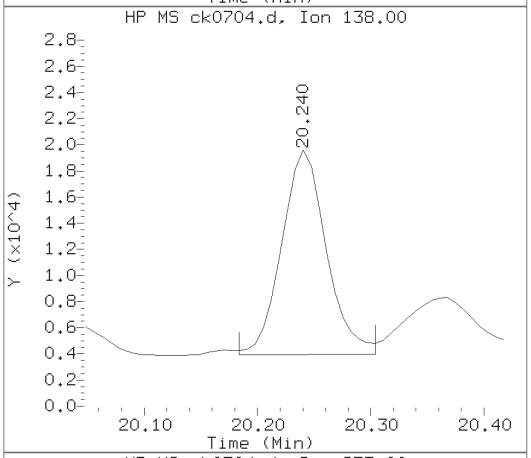
Reference Standard Spectrum for Benzo(g,h,i)perylene



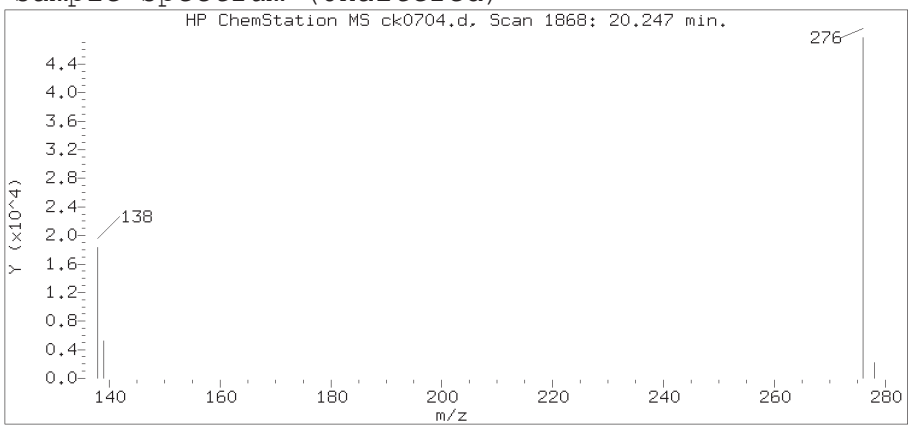


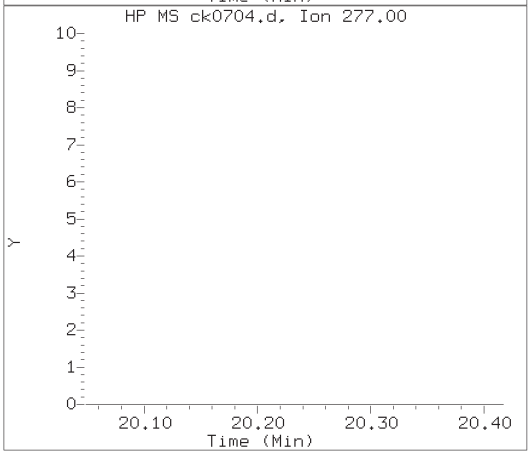
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0704.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:22 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:17 whs02991

Sample Name: T1002RE Lab Sample ID: 9867761RE

Compound Number	: 55
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 1868
Retention Time (minutes)	: 20.247
Relative Retention Time	:-0.00178
Quant Ion	: 276.00
Area (flag)	: 125035
On-column Amount (ng/ul)	: 0.8976

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

T1003 Lancaster Laboratories, Inc. 9867762
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10976.i/18nov07.b/ik0305.d Injection date and time: **07-NOV-2018 20:45**
Data file Sample Info. Line: T1003;9867762;2;0;SAMPLE;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 07-NOV-2018 18:18
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov07.b/ik0301.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.43 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.808	(0.000)	500	152	43400	(-1)	1.00	
10) Naphthalene-d8	8.333	(-0.013)	615	136	164370	(3)	1.00	
20) Acenaphthene-d10	10.489	(-0.002)	802	164	103991	(3)	1.00	
31) Phenanthrene-d10	12.346	(-0.014)	968	188	238746	(7)	1.00	
43) Chrysene-d12	15.637	(-0.023)	1270	240	246584	(8)	1.00	
51) Perylene-d12	17.607	(-0.038)	1522	264	133648	(-42)	1.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.272	(0.001)	152	77197	0.770	77%		61 - 111
36) Fluoranthene-d10	(4)	13.832	(0.000)	212	215895	0.729	73%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.490	(0.000)	264	83153	0.651	65%		54 - 122

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.174	(-0.018)	88	5614A	0.216	7.10			0.02
11) Naphthalene	(2)	8.359	(0.000)	128	1042691	6.160	202.44	31.312	B	0.04
19) Acenaphthylene	(3)	10.315	(-0.000)	152	73176	0.367	12.07			0.01
21) Acenaphthene	(3)	10.532	(-0.001)	154	41496M	0.317	10.41	1.723	B	0.02
26) Fluorene	(3)	11.165	(0.000)	166	60575	0.376	12.35	1.949	B	0.02
32) Phenanthrene	(4)	12.368	(0.000)	178	1306033	5.063	166.39	2.56	B	0.02
33) Anthracene	(4)	12.436	(0.000)	178	235427	0.911	29.95	0.732	B	0.02
35) Di-n-butylphthalate	(4)	13.038	(-0.001)	149	14837673	60.120	1975.68		E	0.2
37) Fluoranthene	(4)	13.856	(-0.000)	202	2901909	9.036	296.95			0.02
39) Pyrene	(5)	14.149	(0.000)	202	2823673	8.273	271.87			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.574	(0.000)	149	961546	5.928	194.81			0.3
42) Benzo(a)anthracene	(5)	15.621	(-0.000)	228	1334506	4.207	138.24			0.02
44) Chrysene	(5)	15.668	(0.000)	228	1993622	6.579	216.19			0.01
46) Benzo(b)fluoranthene	(6)	17.036	(-0.000)	252	1967513M	11.837	388.99		E	0.02
47) Benzo(k)fluoranthene	(6)	17.068	(-0.000)	252	731333M	4.693	154.24			0.02
50) Benzo(a)pyrene	(6)	17.521	(-0.000)	252	694604	4.876	160.24			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.402	(-0.000)	276	386384	2.300	75.58			0.02
54) Dibenz(a,h)anthracene	(6)	19.402	(-0.000)	278	105323	0.768	25.23			0.02
55) Benzo(g,h,i)perylene	(6)	19.904	(-0.001)	276	327324	2.216	72.82			0.02

A = User selected an alternate peak. B = Compound detected in referenced method blank. M = Compound was manually integrated.
E = Compound concentration above calibration range.

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18. Target 3.5 esignature user ID: apb10206

Data file: /chem/HP10976.i/18nov07.b/ik0305.d Injection date and time: **07-NOV-2018 20:45**
Data file Sample Info. Line: T1003;9867762;2;0;SAMPLE;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 07-NOV-2018 18:18
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov07.b/ik0301.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

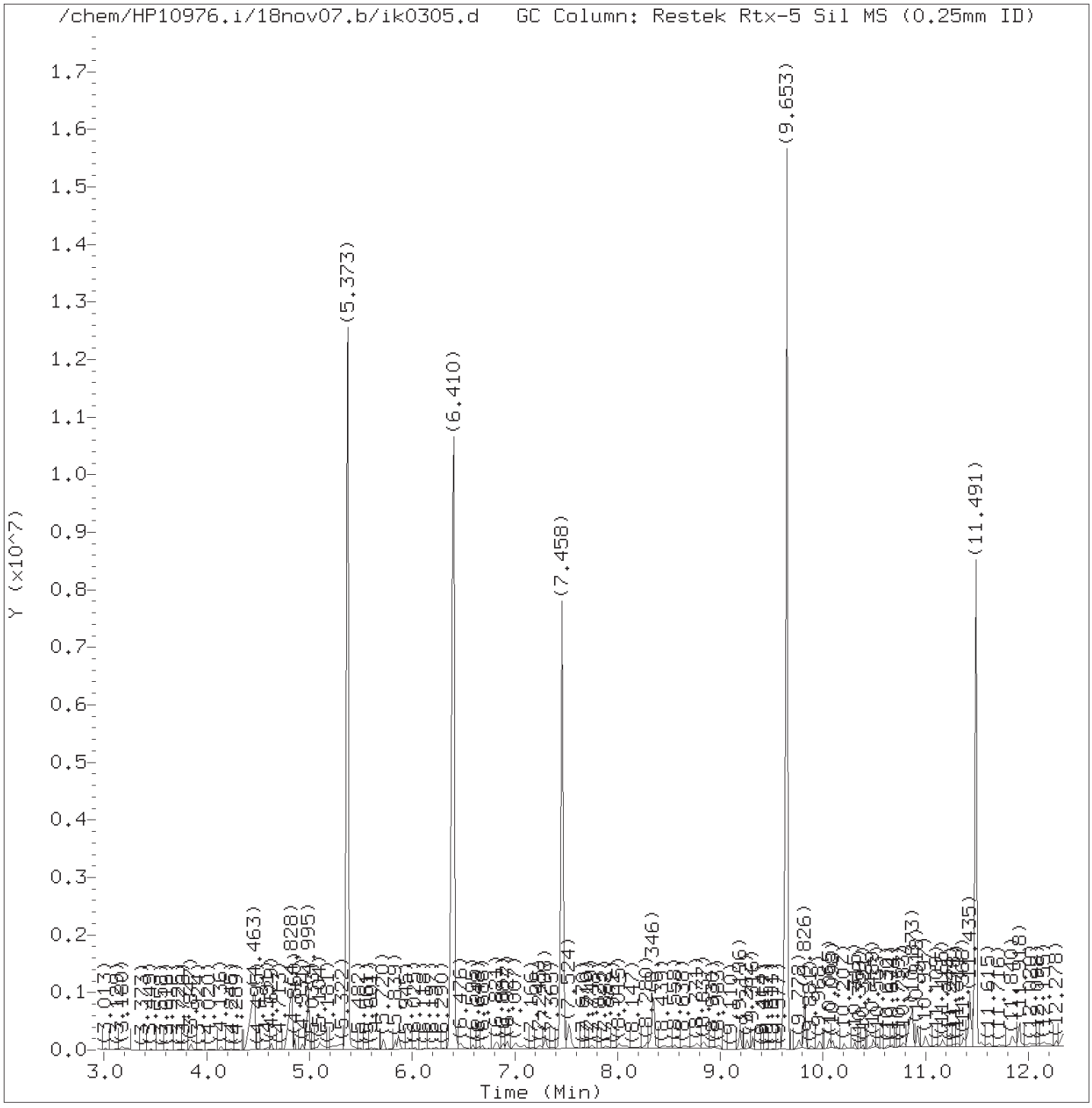
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.43 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

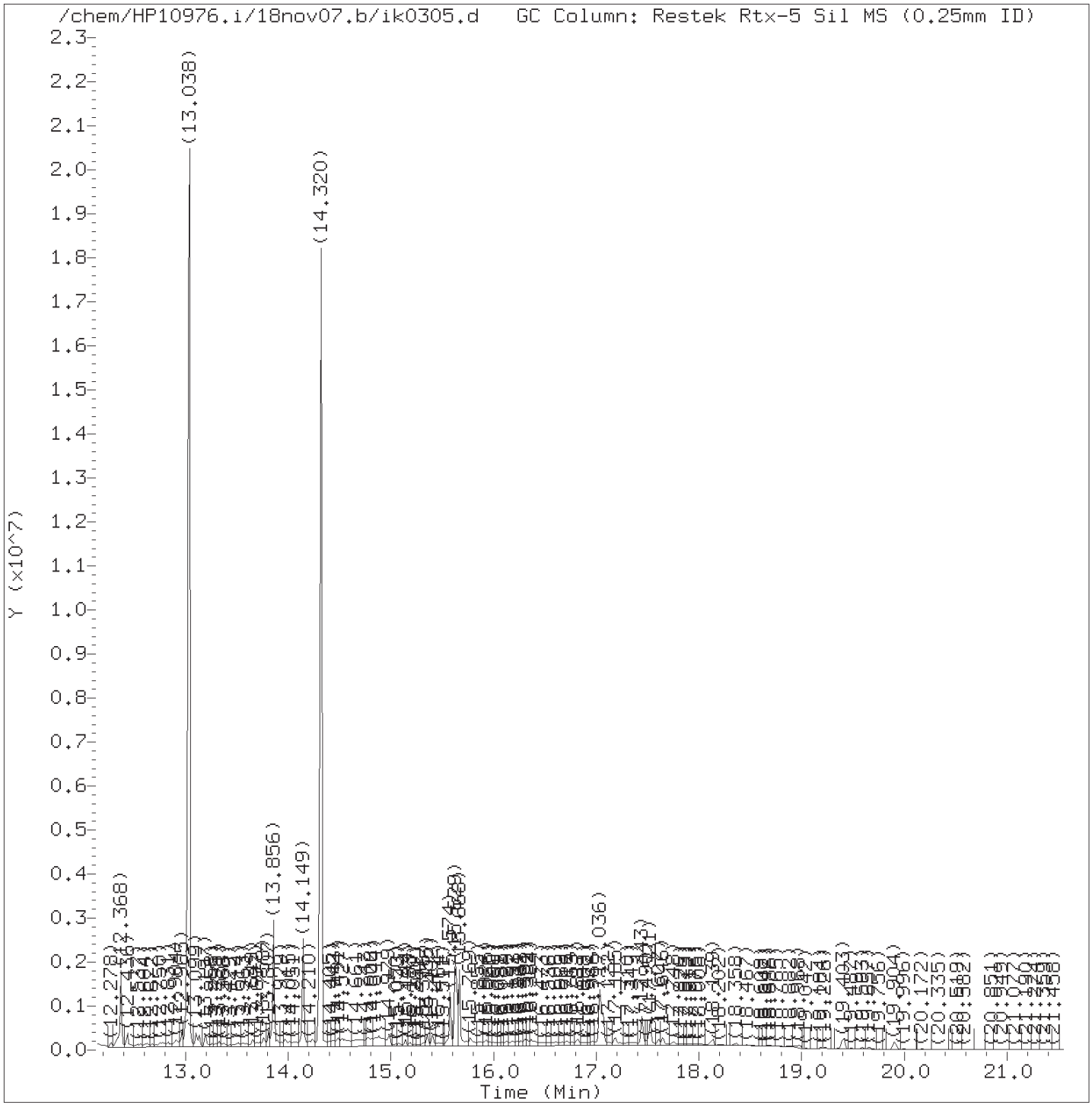
Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1003 Lab Sample ID: 9867762

Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1003 Lab Sample ID: 9867762

Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

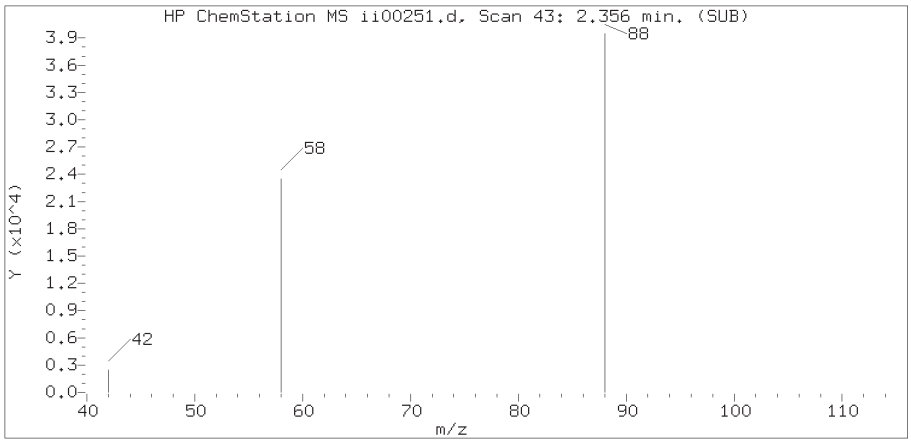
Sample Name: T1003 Lab Sample ID: 9867762

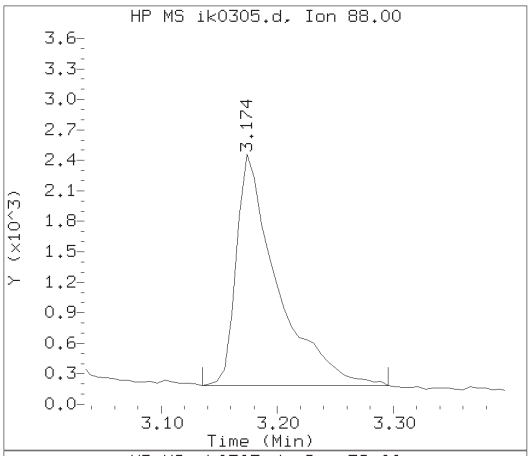
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.174	88	5614A	0.216
6)*1,4-Dichlorobenzene-d4	(1)	6.808	152	43400	1.000
10)*Naphthalene-d8	(2)	8.333	136	164370	1.000
11) Naphthalene	(2)	8.359	128	1042691	6.160
14)$1-Methylnaphthalene-d10	(2)	9.272	152	77197	0.770
19) Acenaphthylene	(3)	10.315	152	73176	0.367
20)*Acenaphthene-d10	(3)	10.489	164	103991	1.000
21) Acenaphthene	(3)	10.533	154	41496M	0.317
26) Fluorene	(3)	11.165	166	60575	0.376
31)*Phenanthrene-d10	(4)	12.346	188	238746	1.000
32) Phenanthrene	(4)	12.368	178	1306033	5.063
33) Anthracene	(4)	12.436	178	235427	0.911
35) Di-n-butylphthalate	(4)	13.038	149	14837673	60.120
36)$Fluoranthene-d10	(4)	13.832	212	215895	0.729
37) Fluoranthene	(4)	13.856	202	2901909	9.036
39) Pyrene	(5)	14.149	202	2823673	8.273
41) bis(2-Ethylhexyl)phthalate	(5)	15.574	149	961546	5.928
42) Benzo(a)anthracene	(5)	15.621	228	1334506	4.207
43)*Chrysene-d12	(5)	15.637	240	246584	1.000
44) Chrysene	(5)	15.668	228	1993622	6.579
46) Benzo(b)fluoranthene	(6)	17.036	252	1967513M	11.837
47) Benzo(k)fluoranthene	(6)	17.068	252	731333M	4.693
49)$Benzo(a)pyrene-d12	(6)	17.490	264	83153	0.651
50) Benzo(a)pyrene	(6)	17.521	252	694604	4.876
51)*Perylene-d12	(6)	17.607	264	133648	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.403	276	386384	2.300
54) Dibenz(a,h)anthracene	(6)	19.403	278	105323	0.768
55) Benzo(g,h,i)perylene	(6)	19.904	276	327324	2.216

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

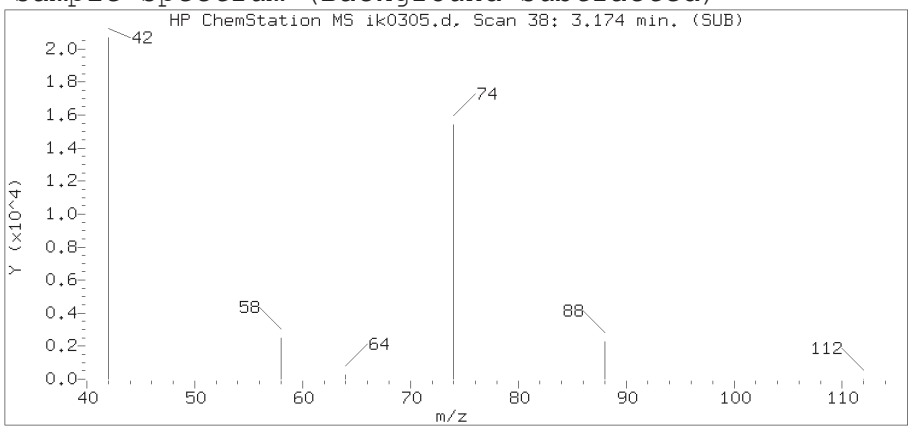
Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

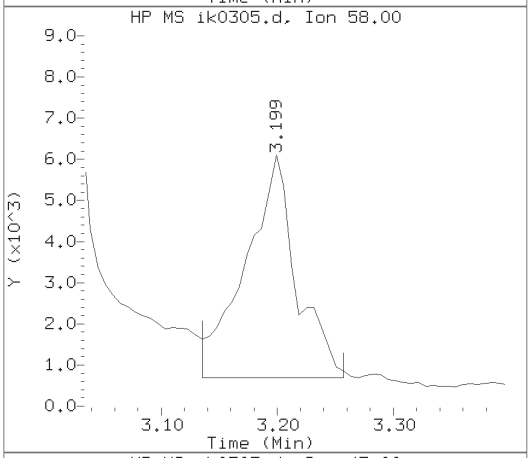
Reference Standard Spectrum for 1,4-Dioxane



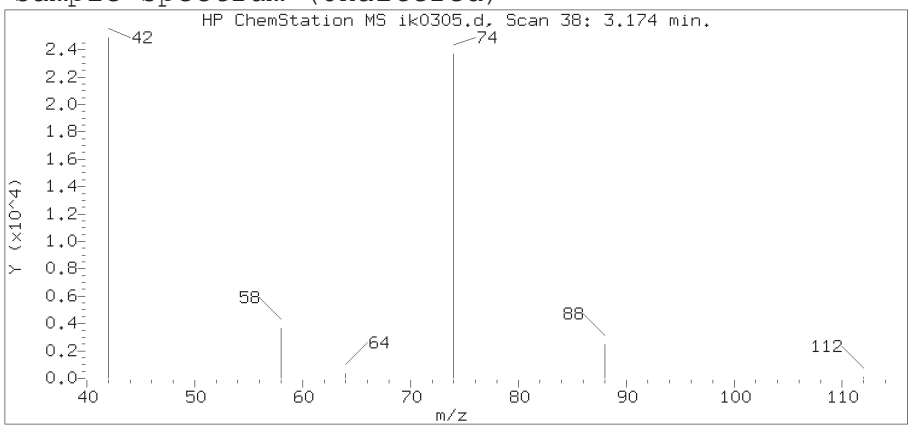


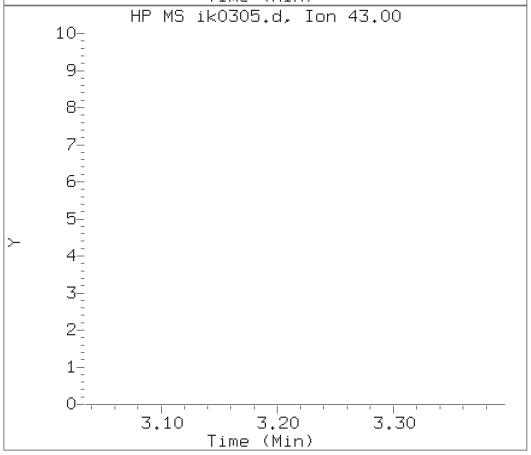
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

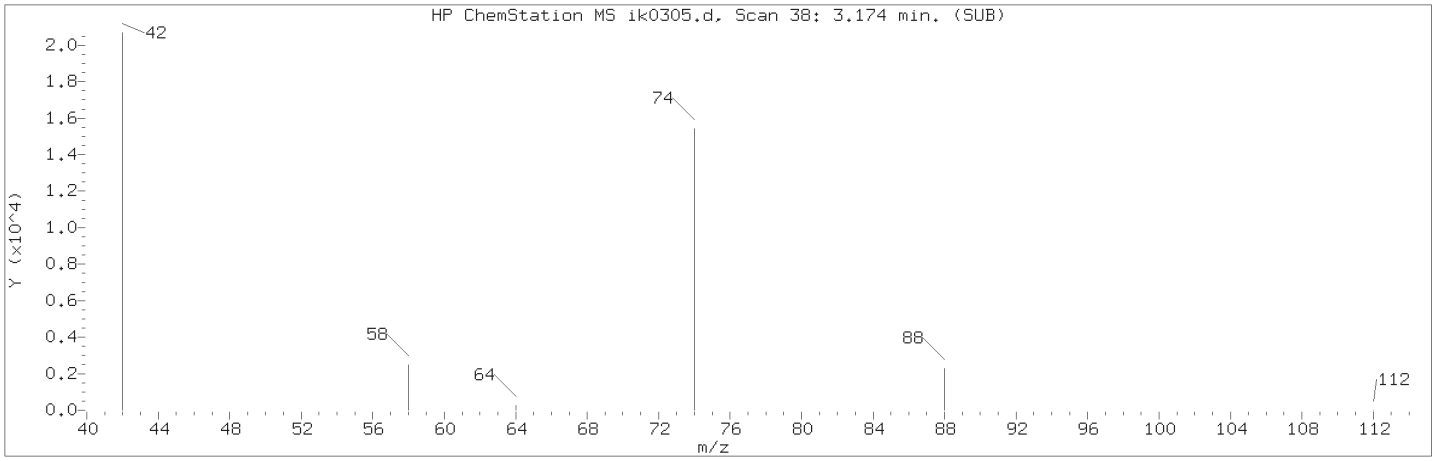
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1003 Lab Sample ID: 9867762

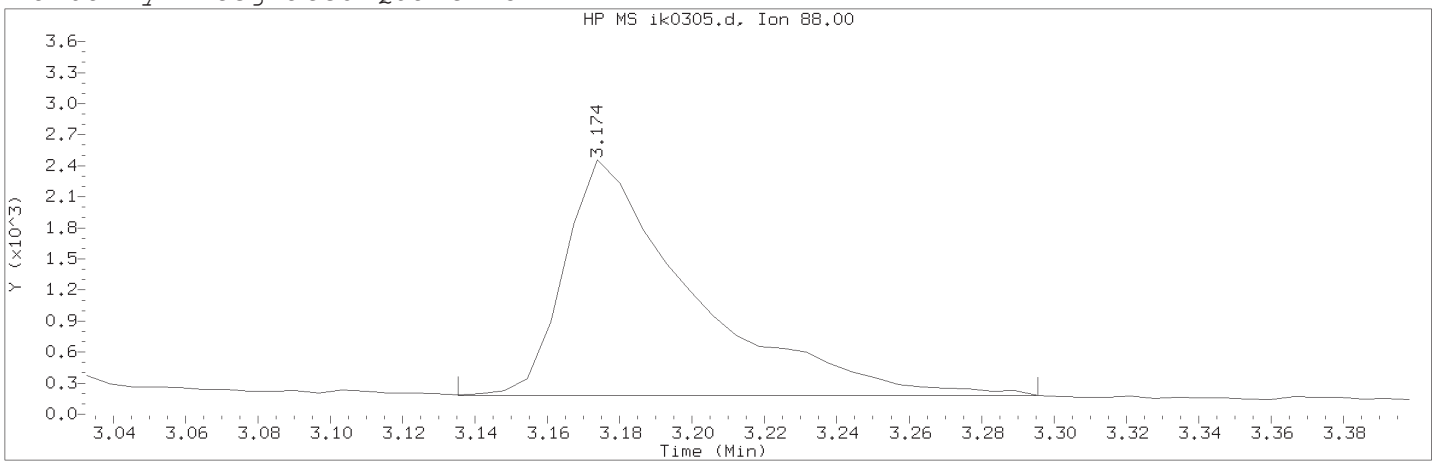
Compound Number	: 1
Compound Name	: 1,4-Dioxane
Scan Number	: 38
Retention Time (minutes)	: 3.174
Relative Retention Time	:-0.01884
Quant Ion	: 88.00
Area (flag)	: 5614A
On-column Amount (ng/ul)	: 0.2161

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1003 Lab Sample ID: 9867762

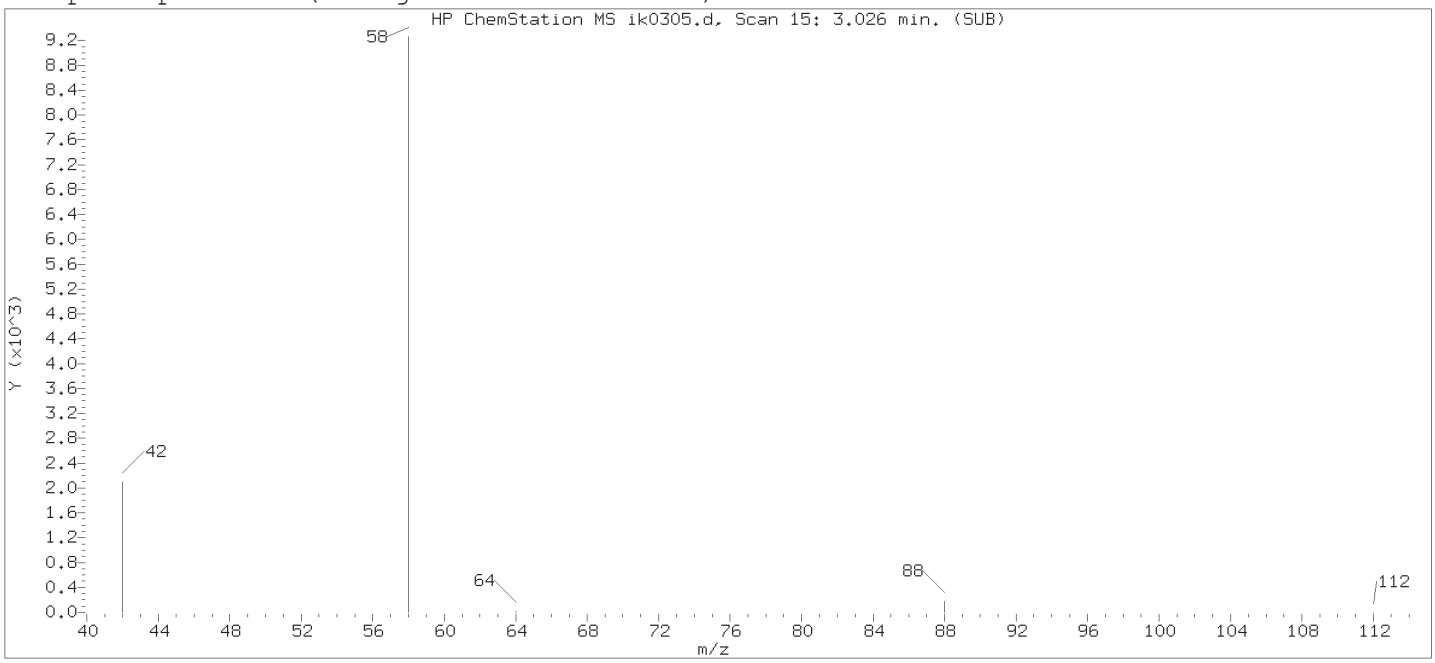
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 38		
Retention Time (minutes)	: 3.174		
Quant Ion	: 88.00		
Area (flag)	: 5614A		
On-column Amount (ng/ul)	: 0.2161		
Integration start scan	: 31	Integration stop scan:	56
Y at integration start	: 182	Y at integration end:	182

Reason for manual integration: improper integration

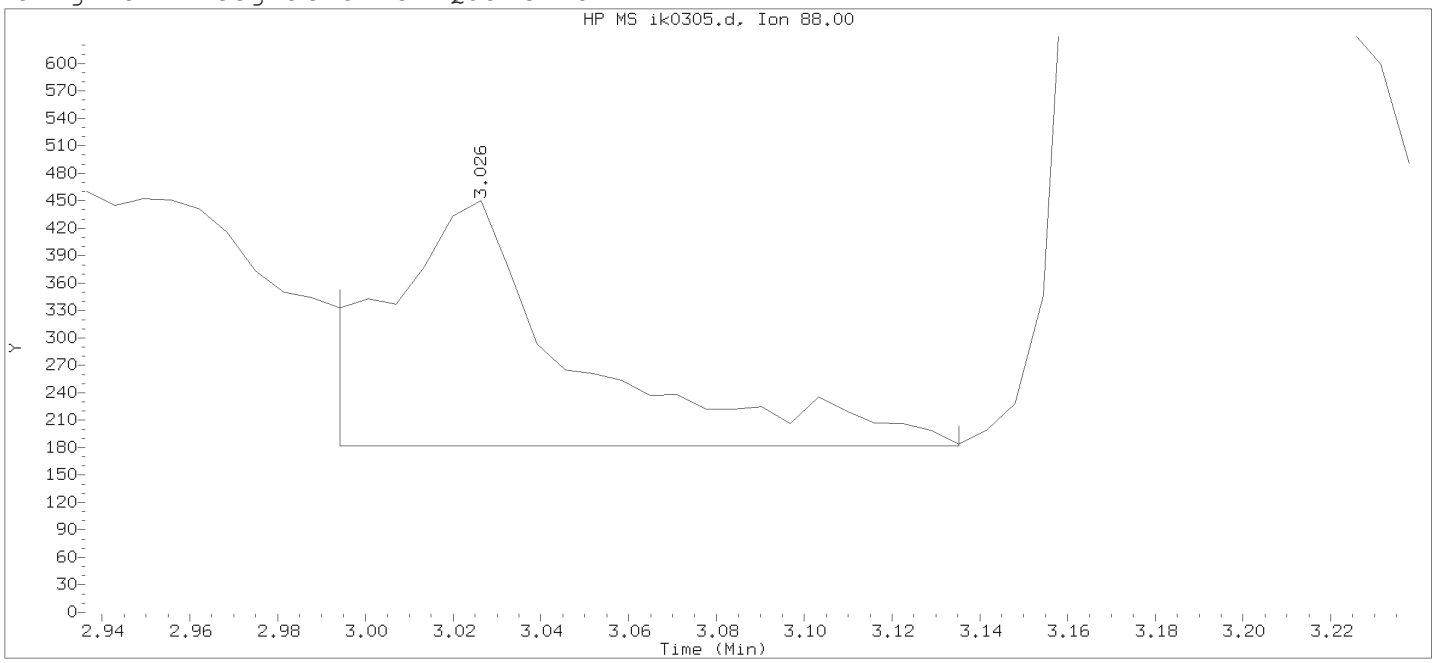
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

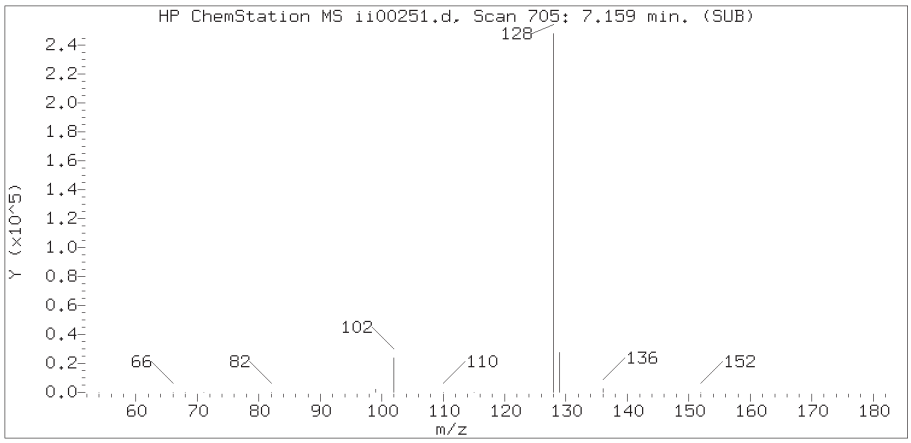
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

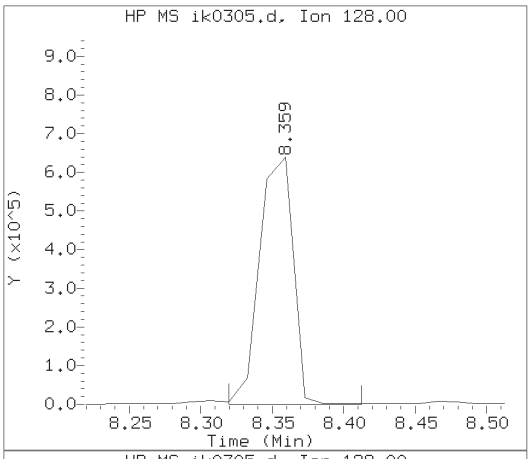
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 15
Retention Time (minutes) : 3.026
Quant Ion : 88.00
Area : 793
On-column Amount (ng/ul) : 0.0305
Integration start scan : 9 Integration stop scan: 31
Y at integration start : 182 Y at integration end: 182

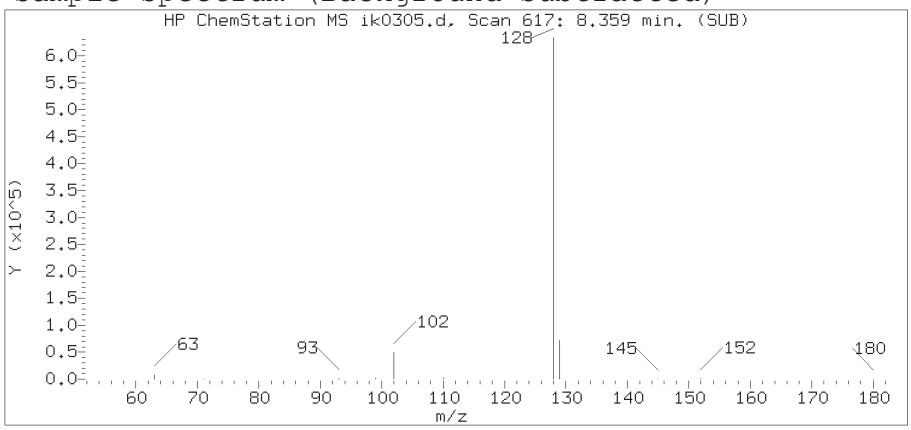
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature used in this report

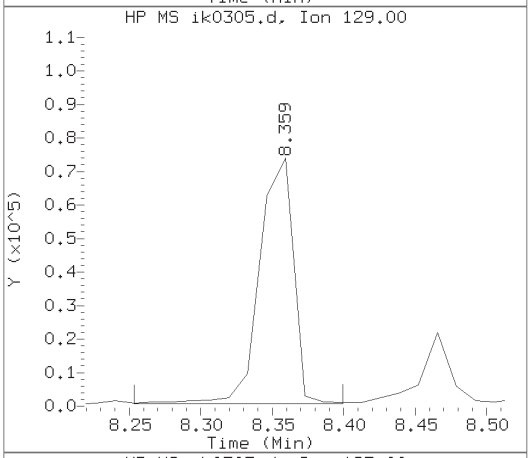
Reference Standard Spectrum for Naphthalene



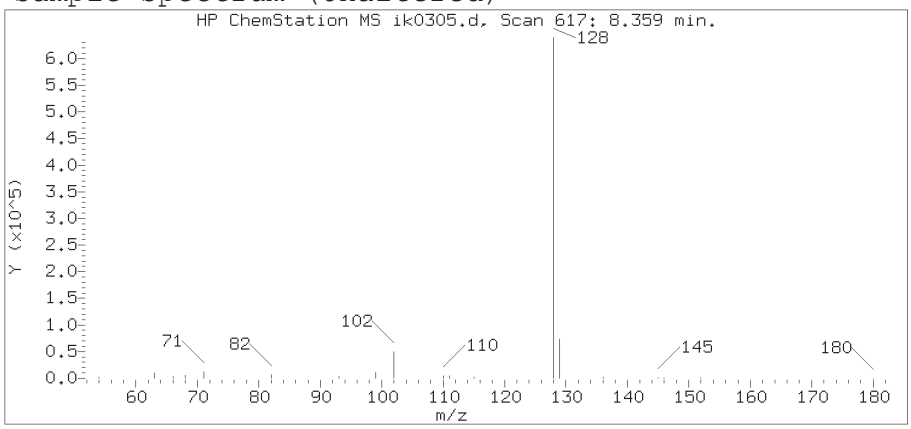


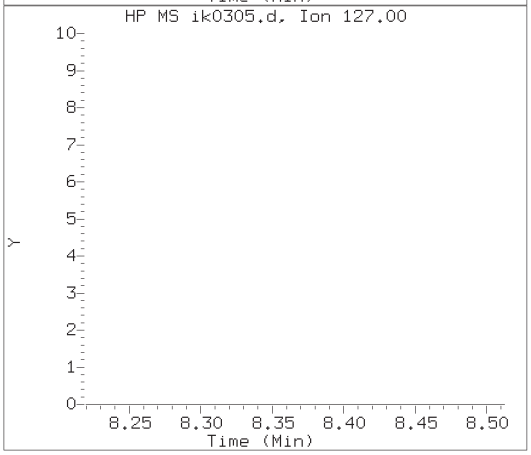
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

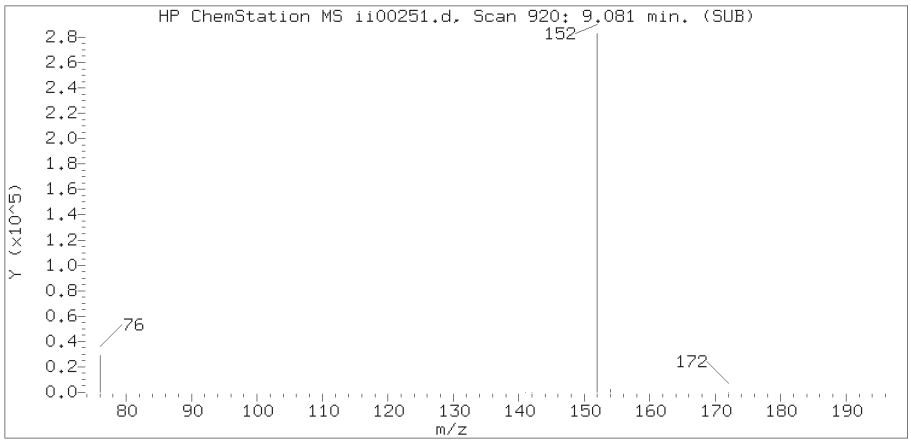
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

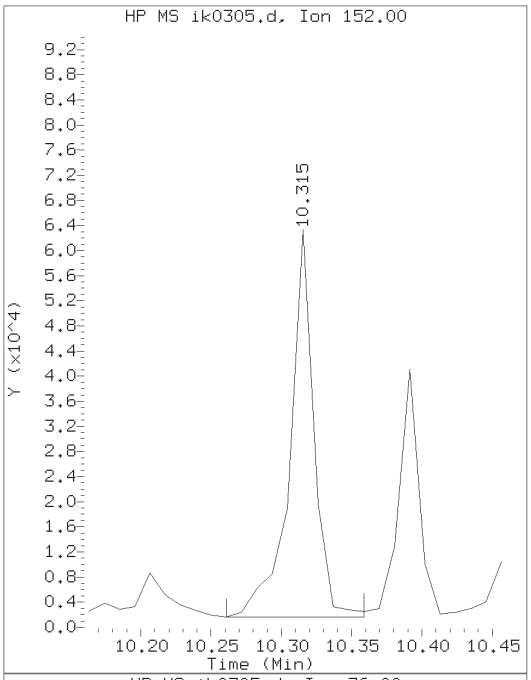
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 11
Compound Name	: Naphthalene
Scan Number	: 617
Retention Time (minutes)	: 8.359
Relative Retention Time	: 0.00001
Quant Ion	: 128.00
Area (flag)	: 1042691
On-column Amount (ng/ul)	: 6.1603

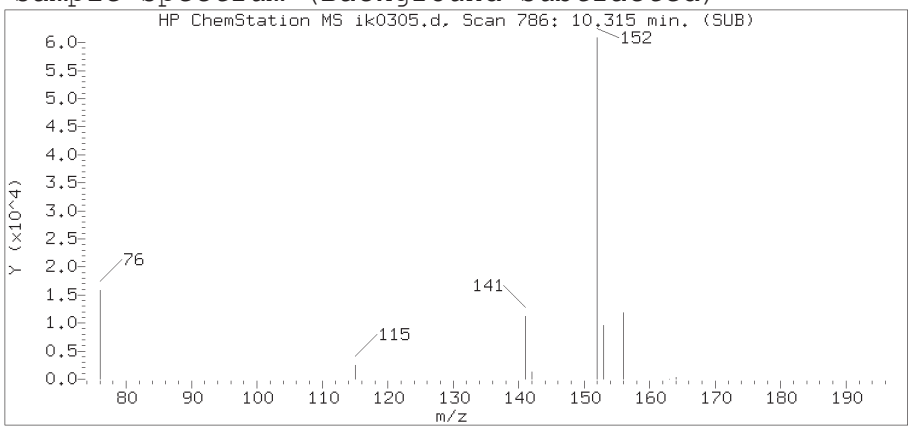
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

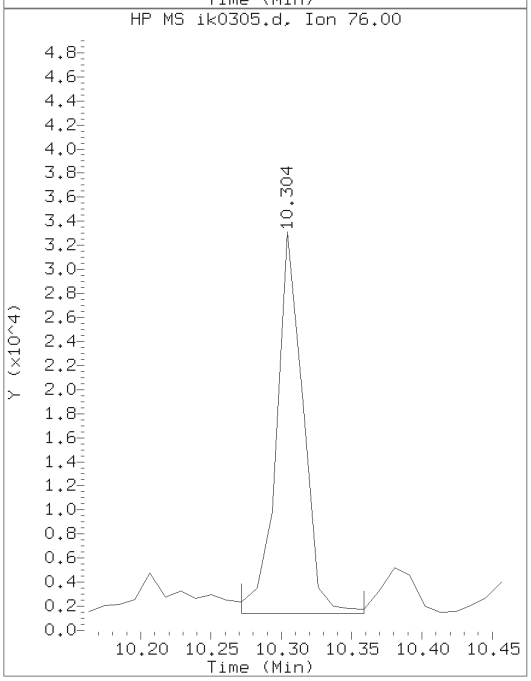
Reference Standard Spectrum for Acenaphthylene



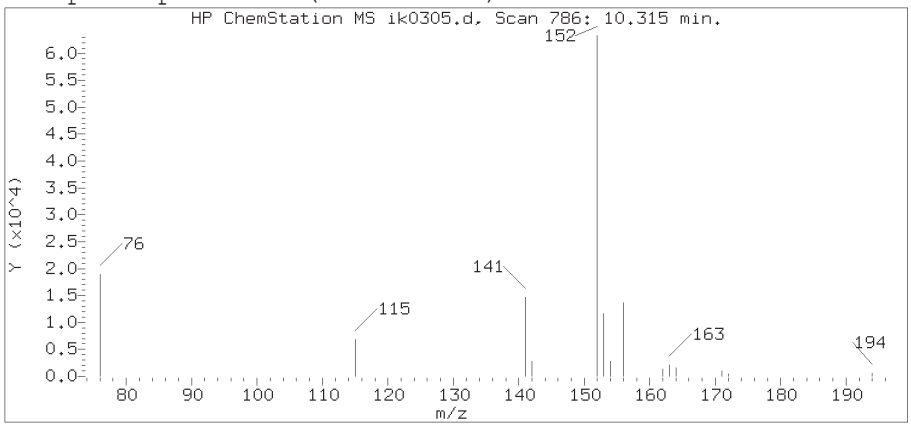


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

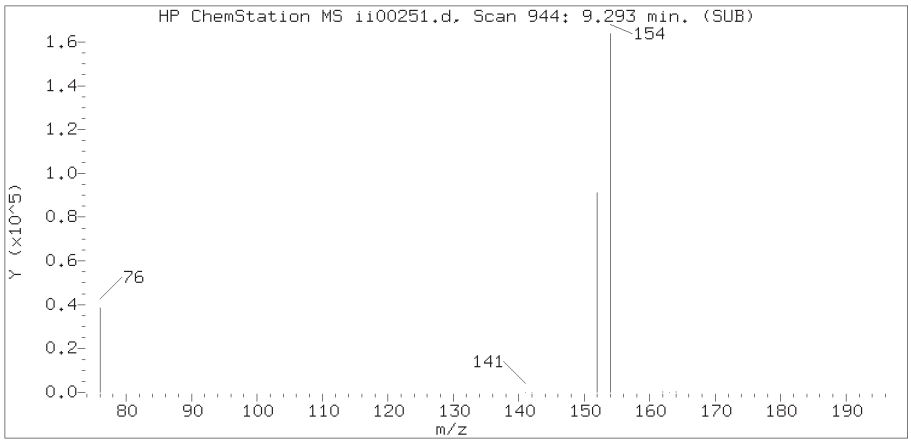
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

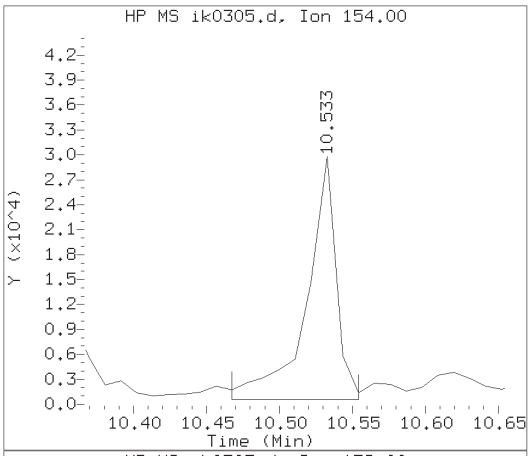
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 19
Compound Name	: Acenaphthylene
Scan Number	: 786
Retention Time (minutes)	: 10.315
Relative Retention Time	:-0.00000
Quant Ion	: 152.00
Area (flag)	: 73176
On-column Amount (ng/ul)	: 0.3674

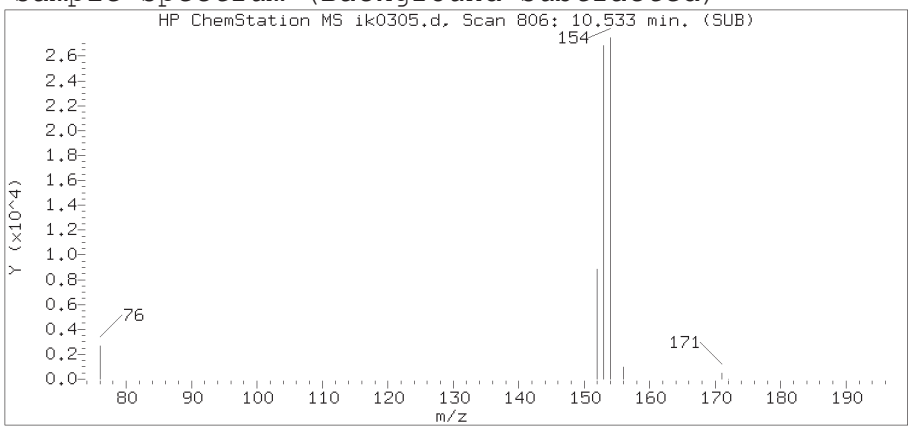
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

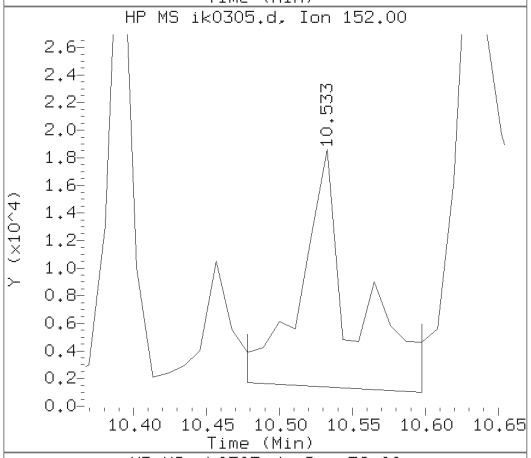
Reference Standard Spectrum for Acenaphthene



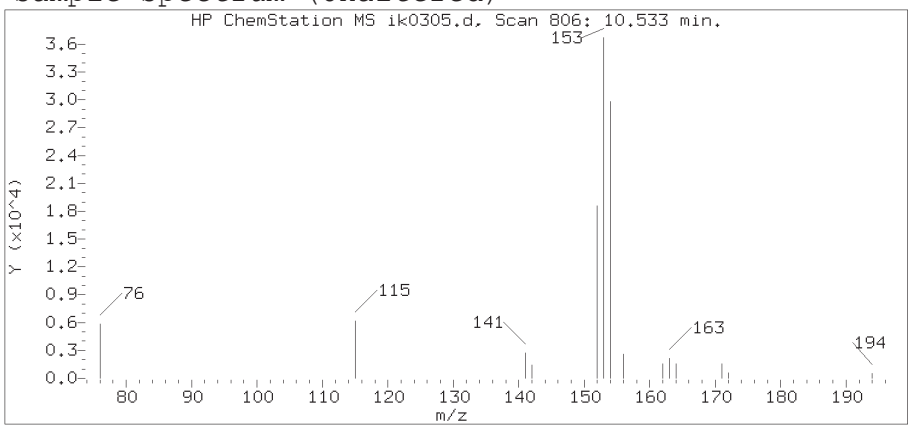


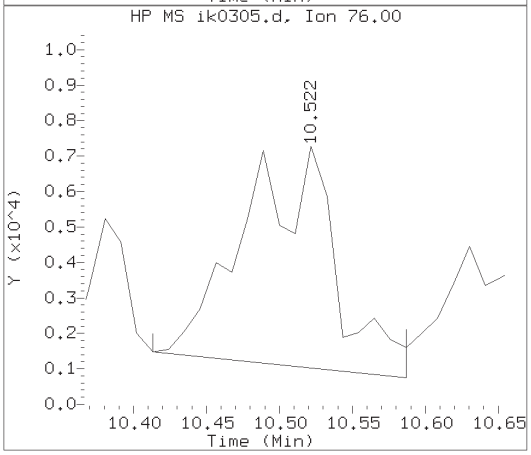
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

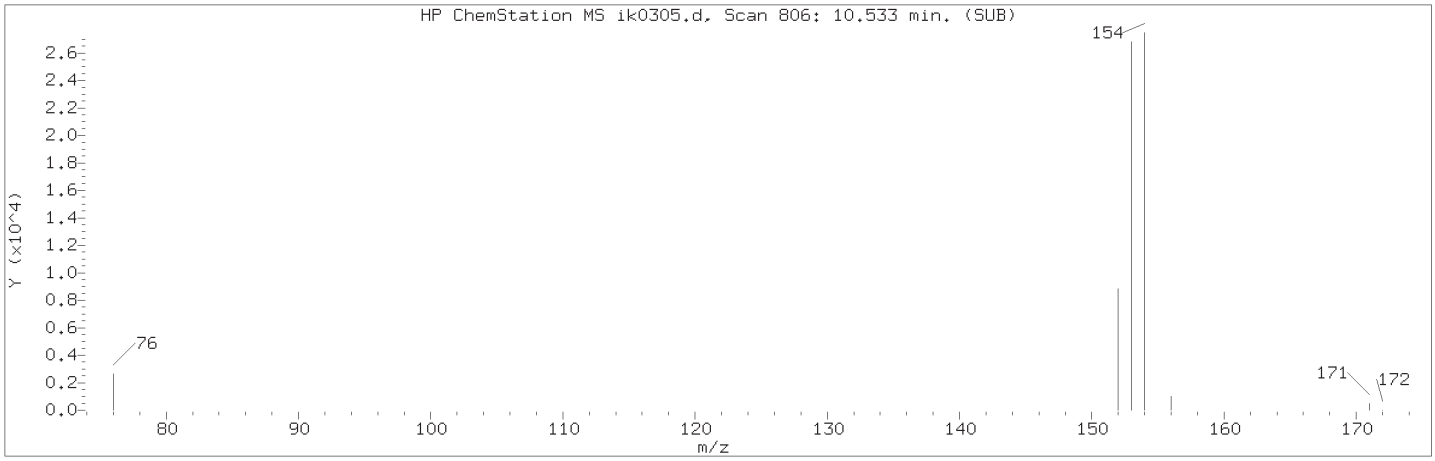
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1003 Lab Sample ID: 9867762

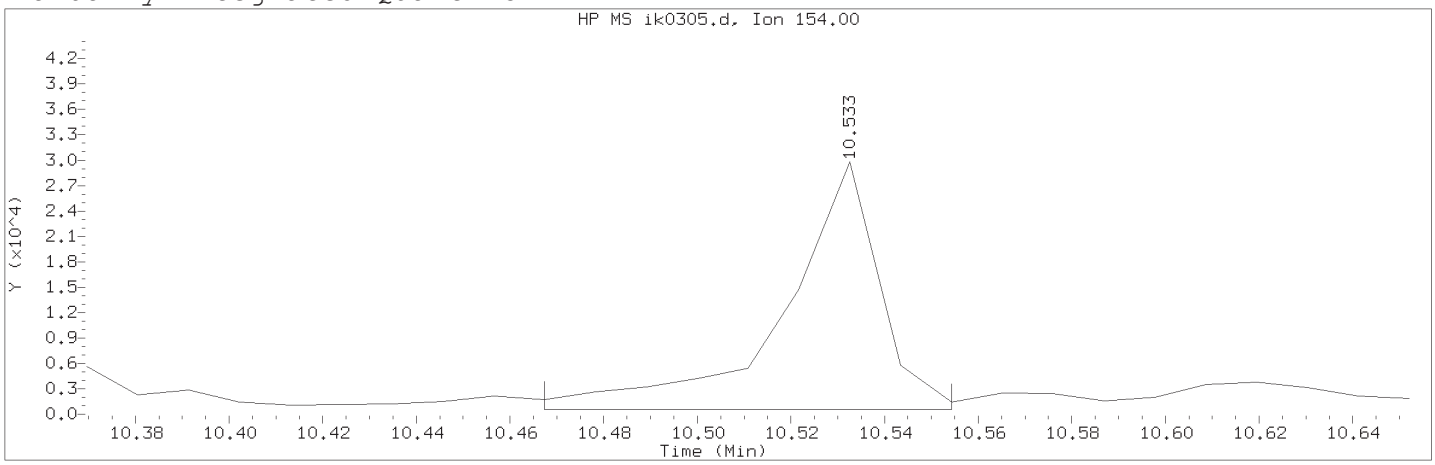
Compound Number	: 21
Compound Name	: Acenaphthene
Scan Number	: 806
Retention Time (minutes)	: 10.533
Relative Retention Time	:-0.00103
Quant Ion	: 154.00
Area (flag)	: 41496M
On-column Amount (ng/ul)	: 0.3168

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1003 Lab Sample ID: 9867762

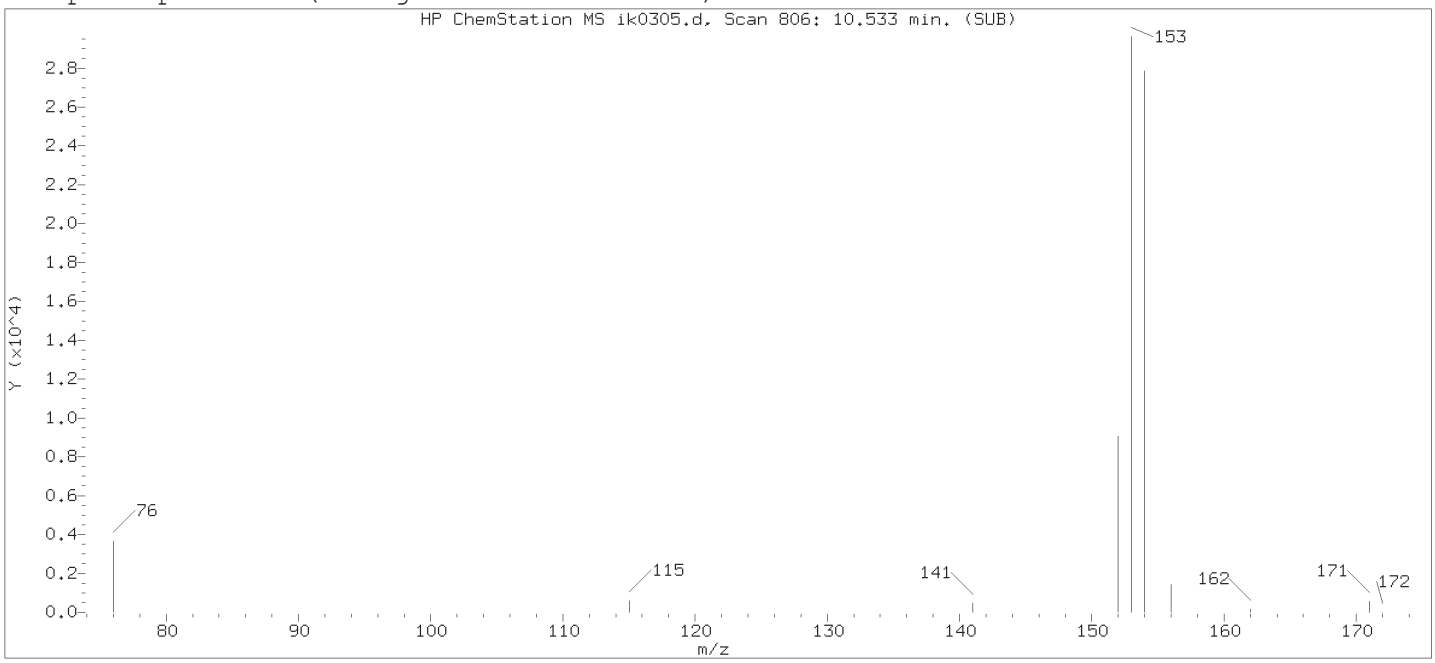
Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 806		
Retention Time (minutes)	: 10.533		
Quant Ion	: 154.00		
Area (flag)	: 41496M		
On-column Amount (ng/ul)	: 0.3168		
Integration start scan	: 799	Integration stop scan:	807
Y at integration start	: 579	Y at integration end:	579

Reason for manual integration: improper integration

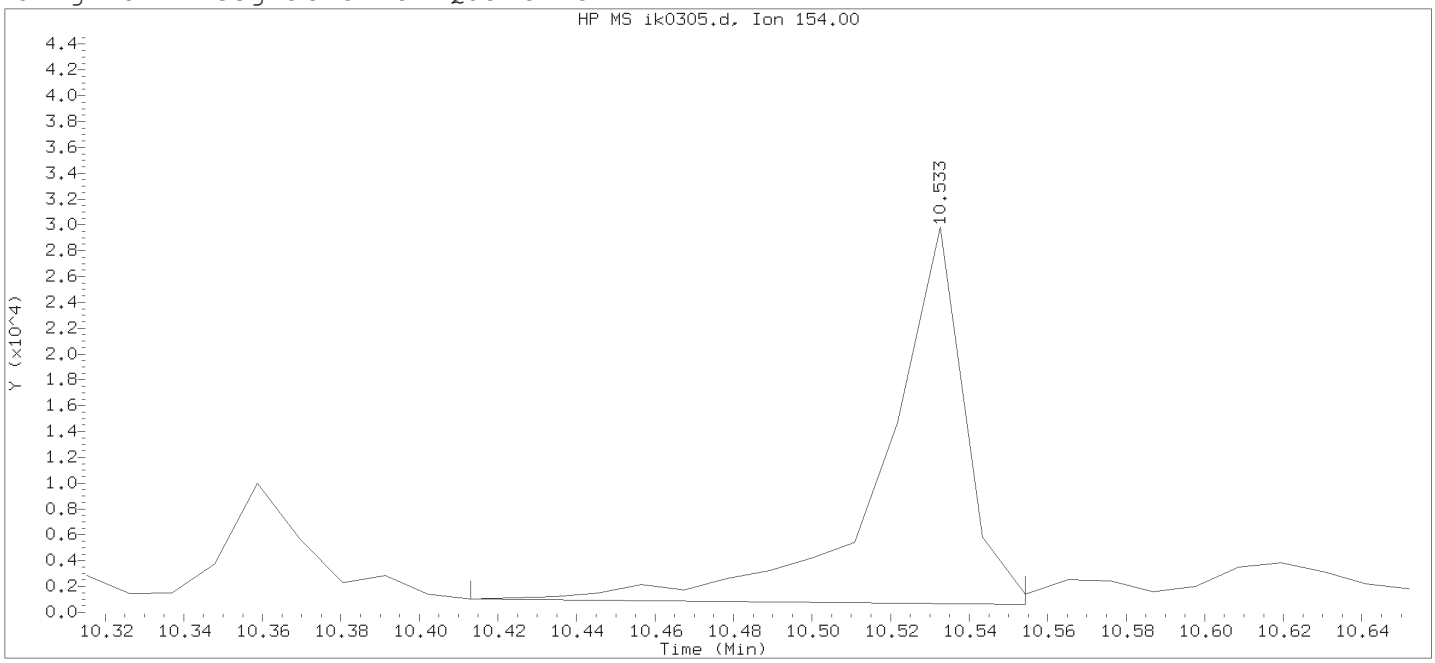
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

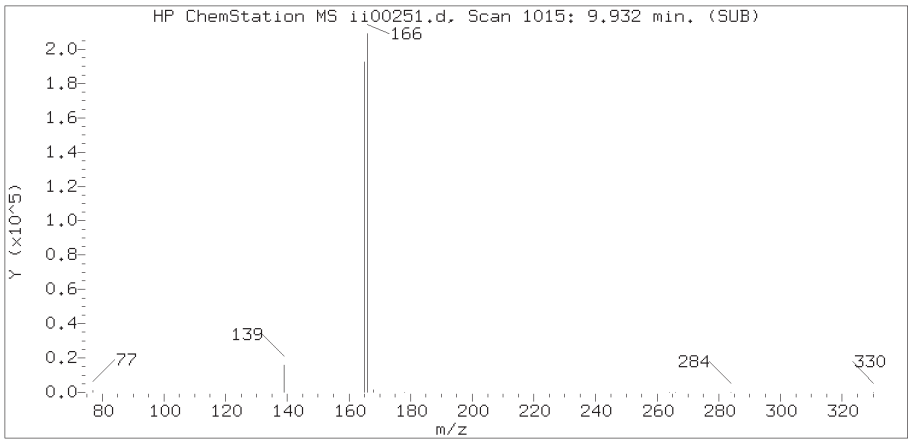
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

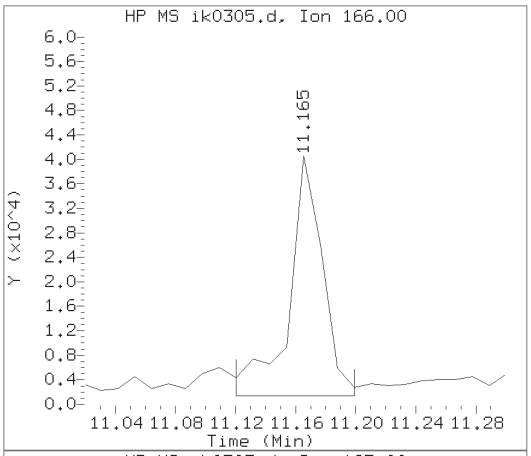
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 806		
Retention Time (minutes)	: 10.533		
Quant Ion	: 154.00		
Area	: 41631		
On-column Amount (ng/ul)	: 0.3179		
Integration start scan	: 794	Integration stop scan:	807
Y at integration start	: 1047	Y at integration end:	621

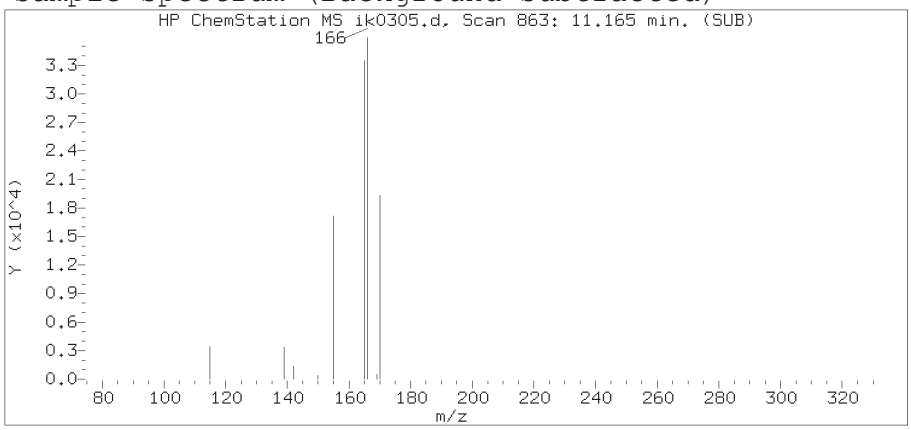
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature used [illegible]

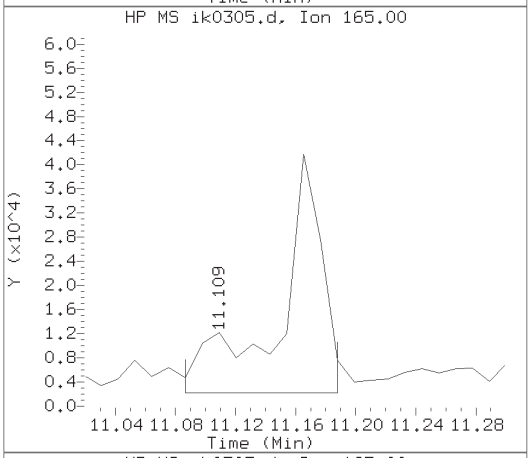
Reference Standard Spectrum for Fluorene



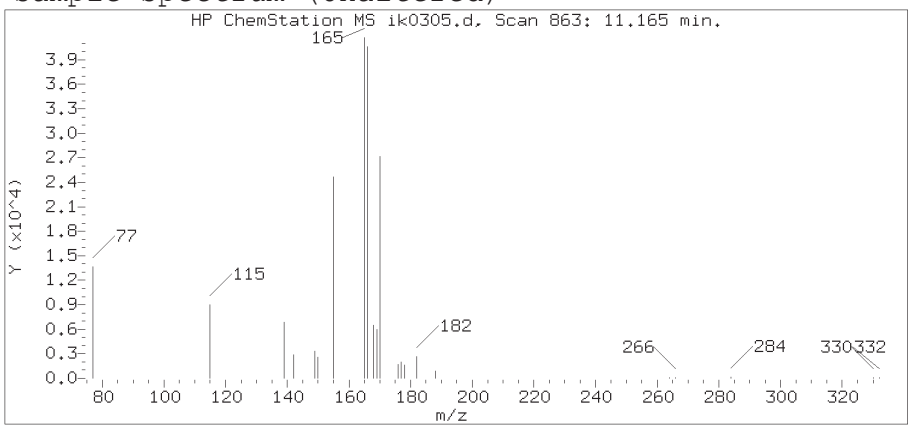


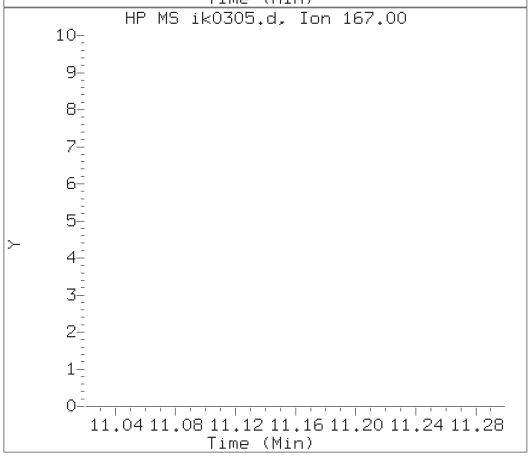
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

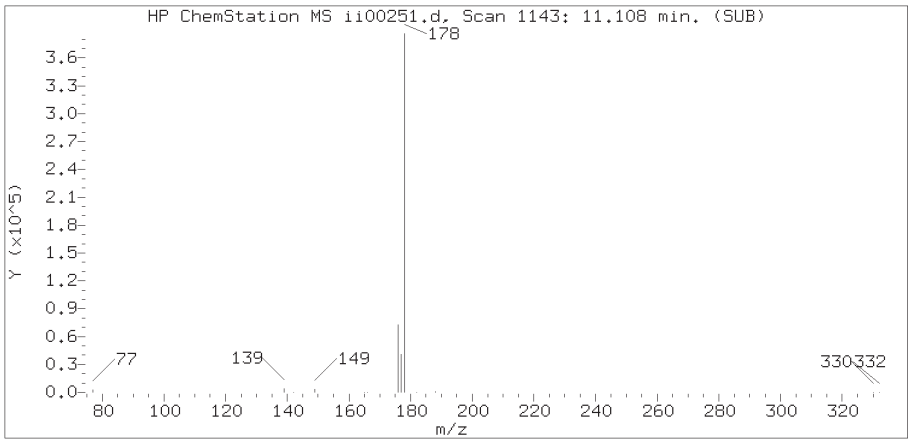
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

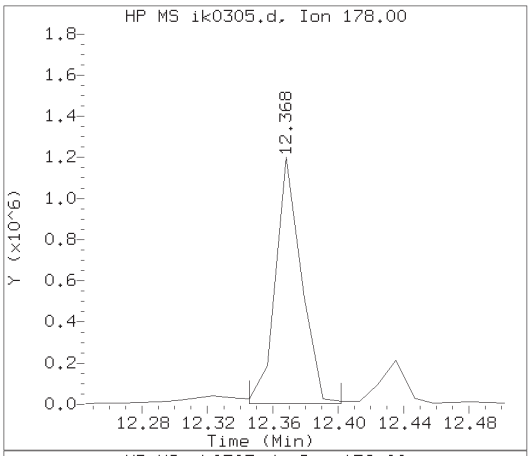
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 26
Compound Name	: Fluorene
Scan Number	: 863
Retention Time (minutes)	: 11.165
Relative Retention Time	: 0.00002
Quant Ion	: 166.00
Area (flag)	: 60575
On-column Amount (ng/ul)	: 0.3758

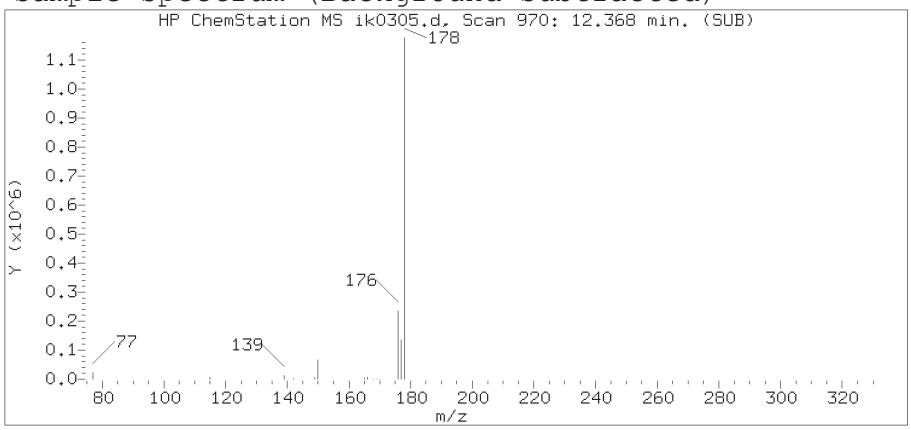
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

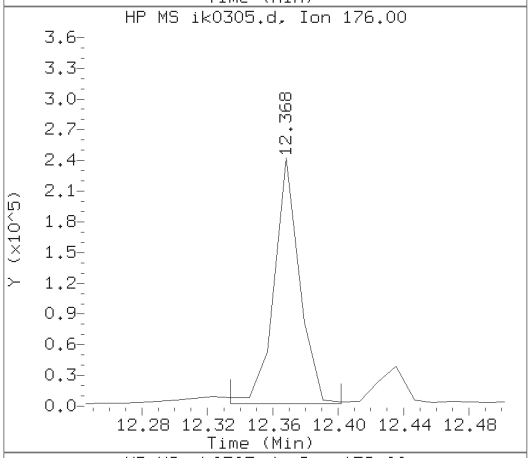
Reference Standard Spectrum for Phenanthrene



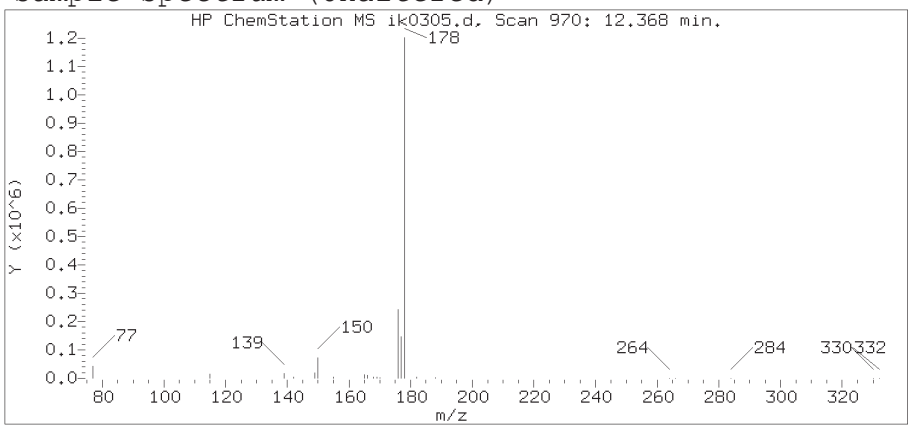


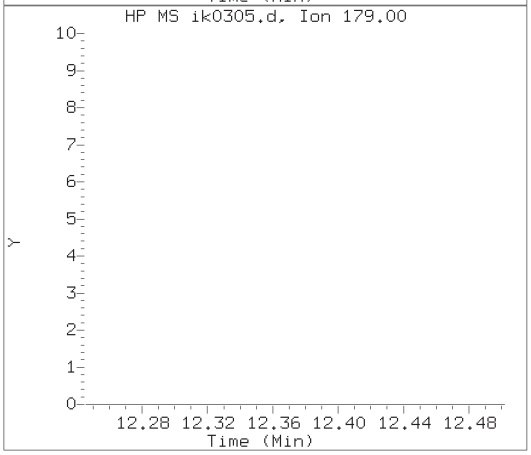
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

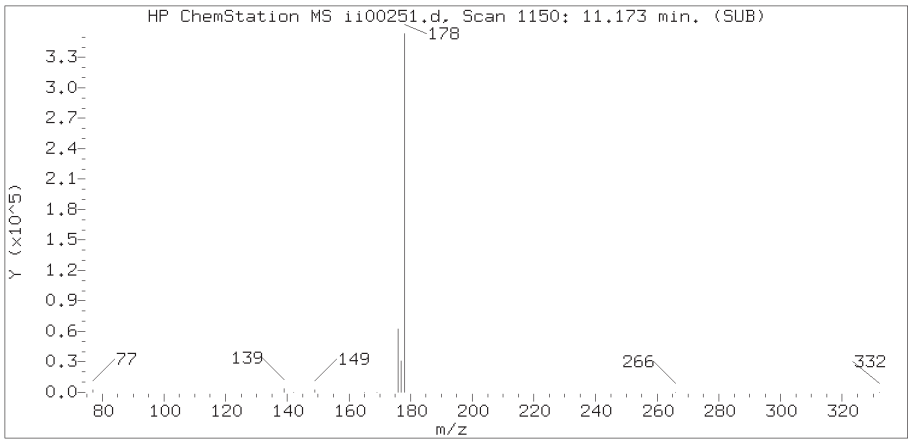
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

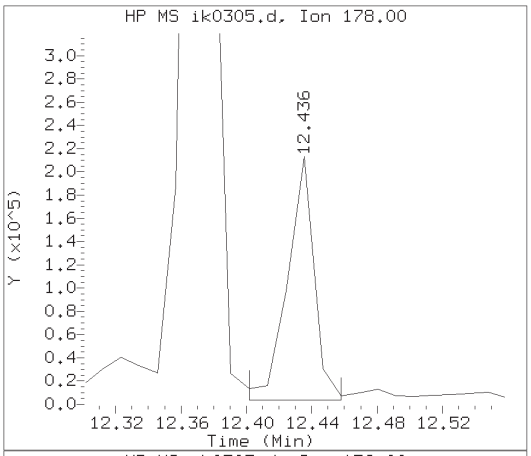
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 32
Compound Name	: Phenanthrene
Scan Number	: 970
Retention Time (minutes)	: 12.368
Relative Retention Time	: 0.00091
Quant Ion	: 178.00
Area (flag)	: 1306033
On-column Amount (ng/ul)	: 5.0634

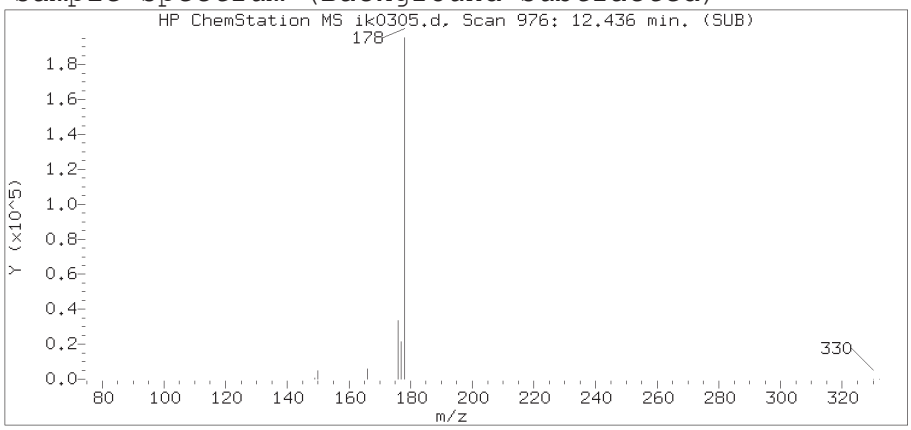
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

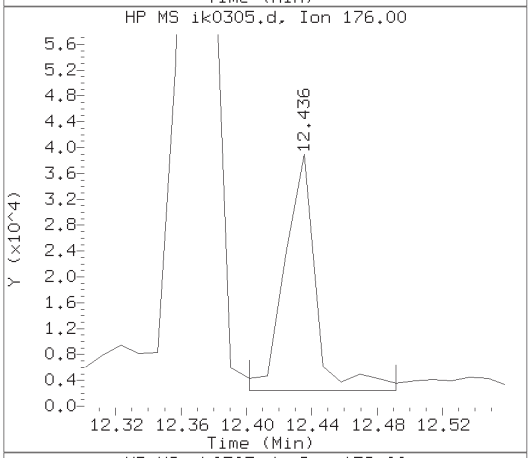
Reference Standard Spectrum for Anthracene



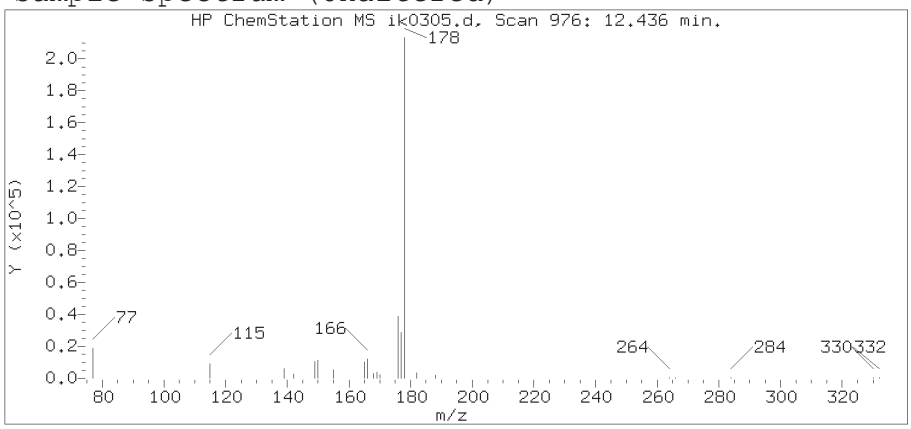


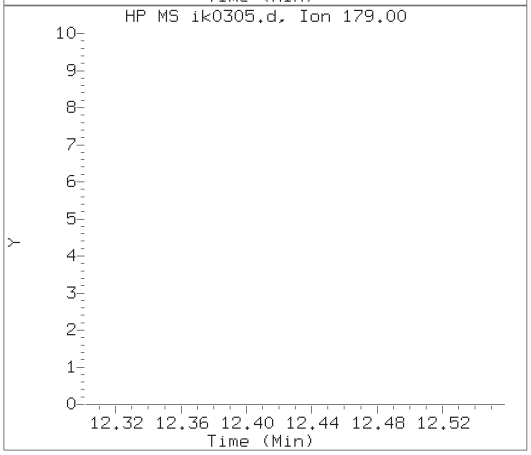
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

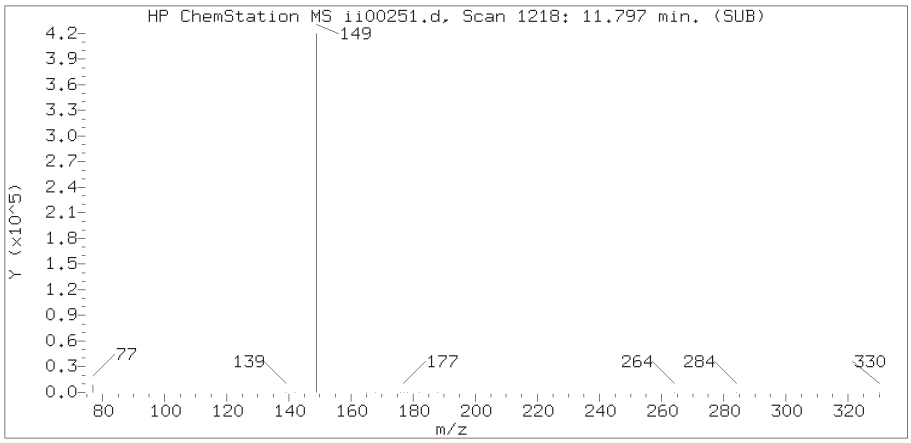
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

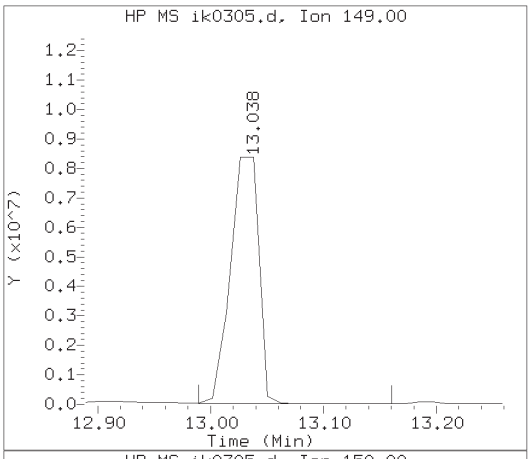
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 33
Compound Name	: Anthracene
Scan Number	: 976
Retention Time (minutes)	: 12.436
Relative Retention Time	: 0.00001
Quant Ion	: 178.00
Area (flag)	: 235427
On-column Amount (ng/ul)	: 0.9114

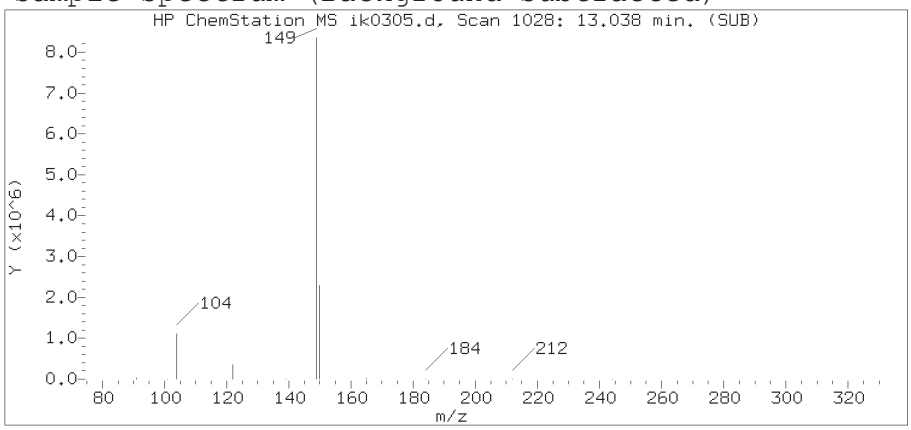
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

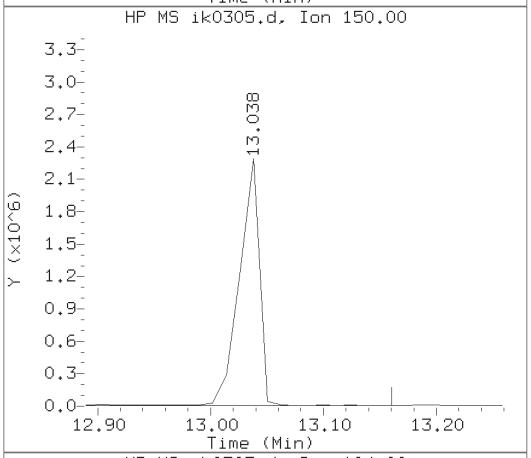
Reference Standard Spectrum for Di-n-butylphthalate



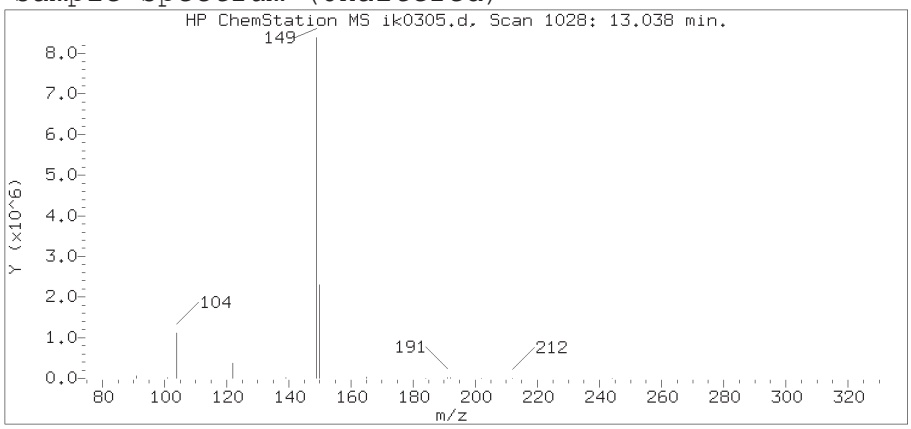


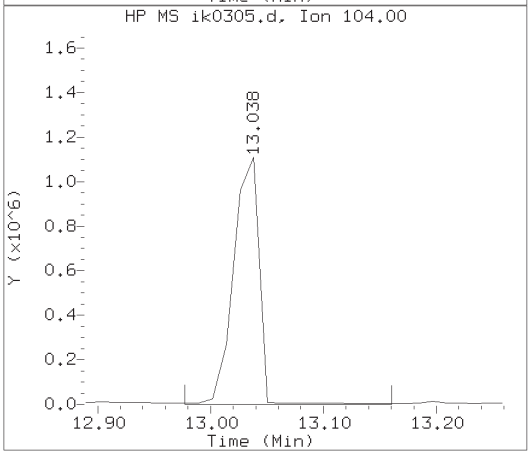
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

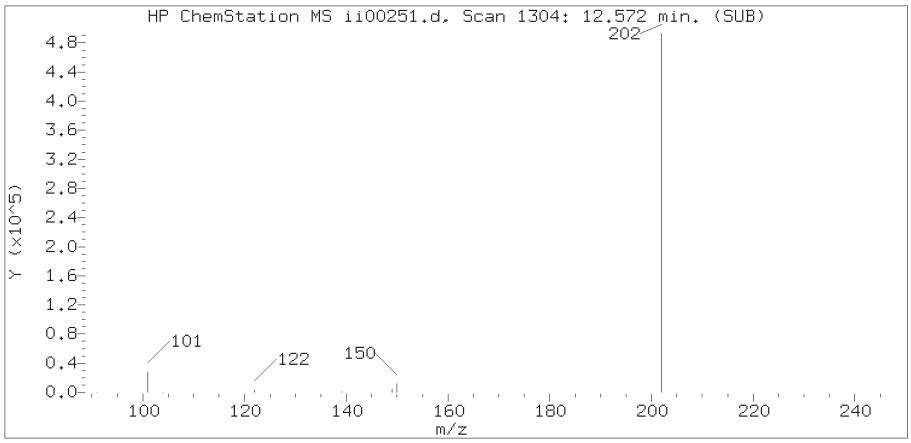
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

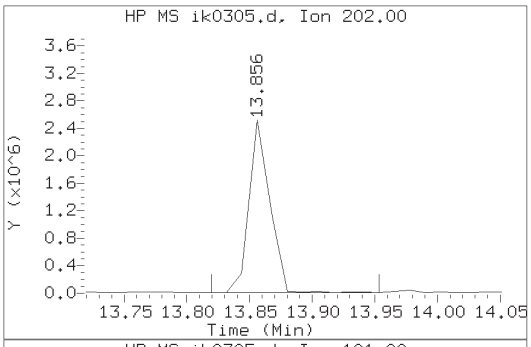
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 35
Compound Name	: Di-n-butylphthalate
Scan Number	: 1028
Retention Time (minutes)	: 13.038
Relative Retention Time	:-0.00108
Quant Ion	: 149.00
Area (flag)	: 14837673
On-column Amount (ng/ul)	: 60.1200

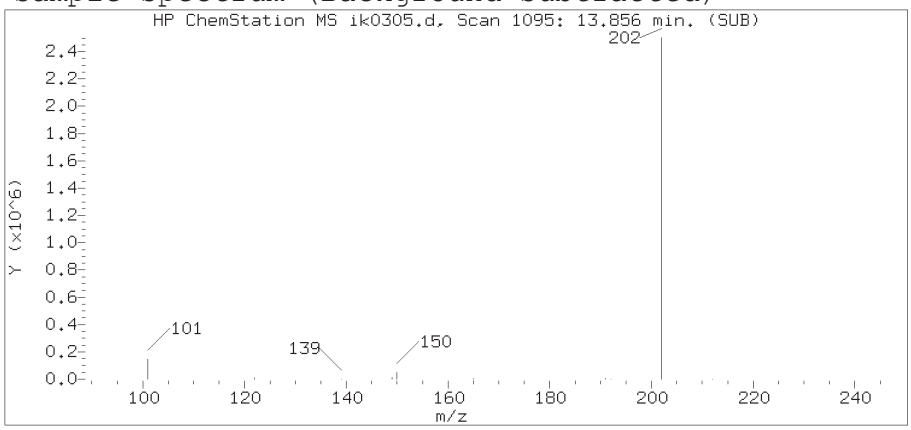
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

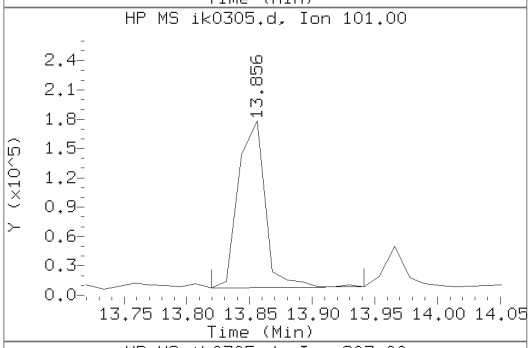
Reference Standard Spectrum for Fluoranthene

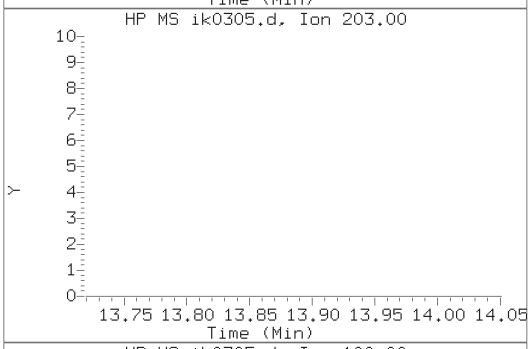




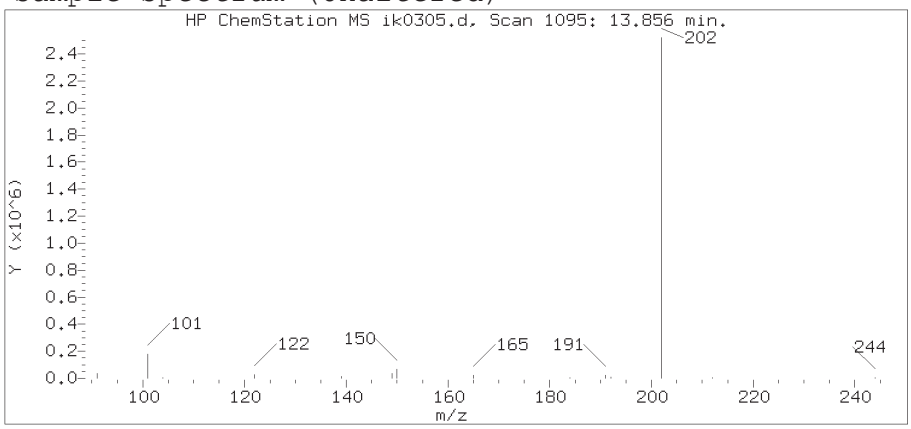
Sample Spectrum (Background Subtracted)

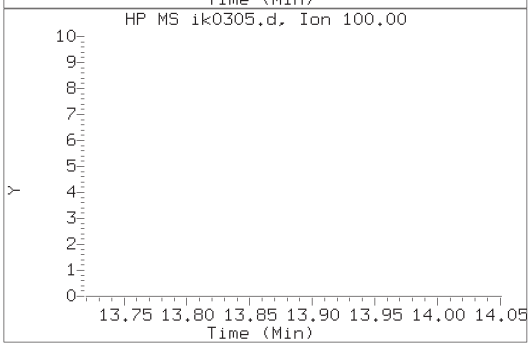






Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

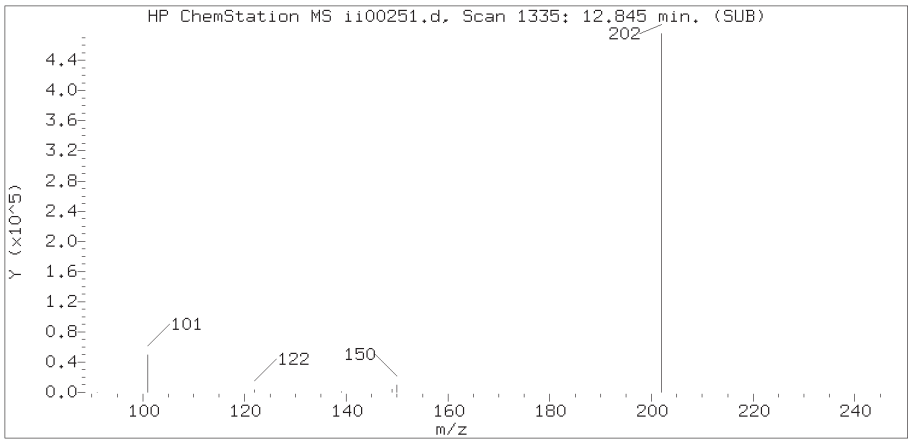
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1003 Lab Sample ID: 9867762

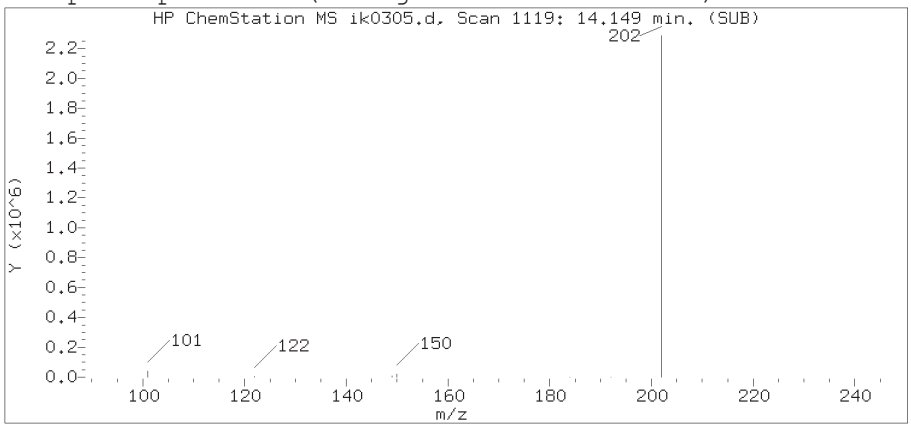
Compound Number	: 37
Compound Name	: Fluoranthene
Scan Number	: 1095
Retention Time (minutes)	: 13.856
Relative Retention Time	:-0.00002
Quant Ion	: 202.00
Area (flag)	: 2901909
On-column Amount (ng/ul)	: 9.0361

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

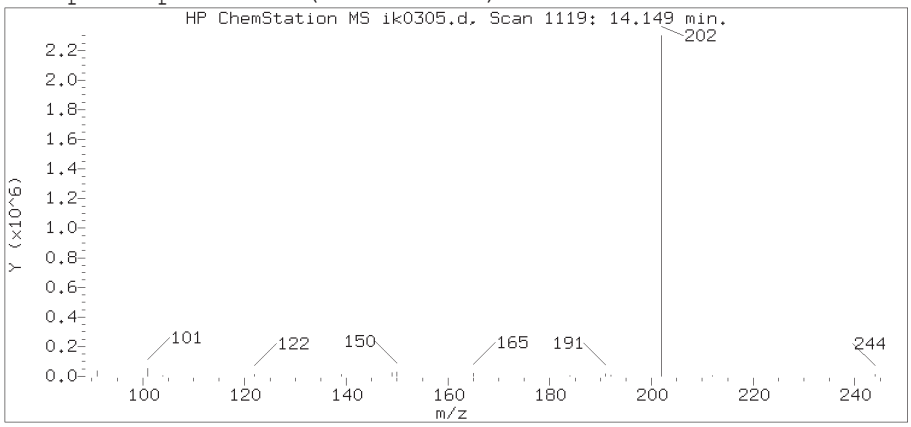
Reference Standard Spectrum for Pyrene

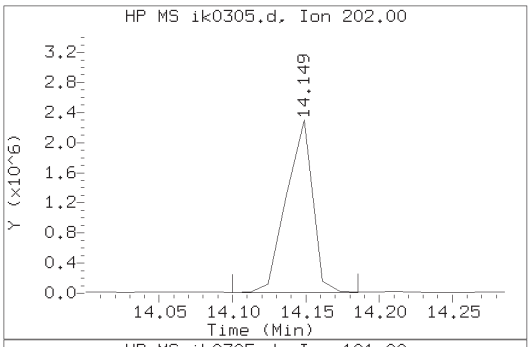


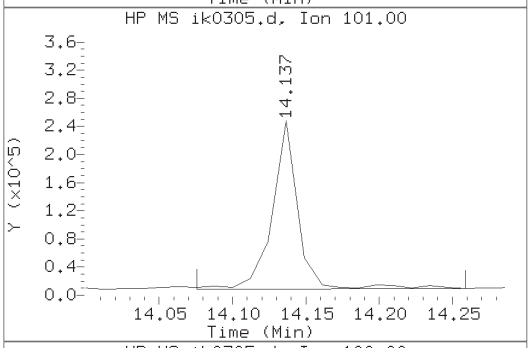
Sample Spectrum (Background Subtracted)

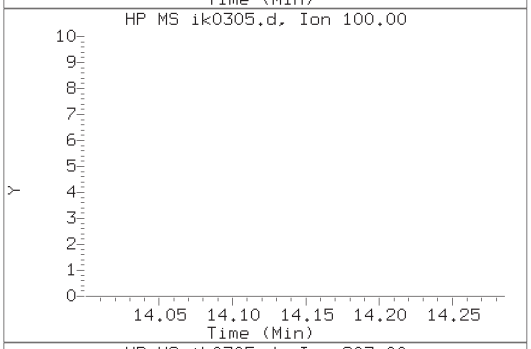


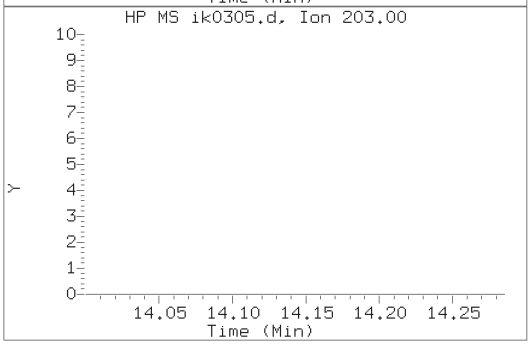
Sample Spectrum (Unaltered)











Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

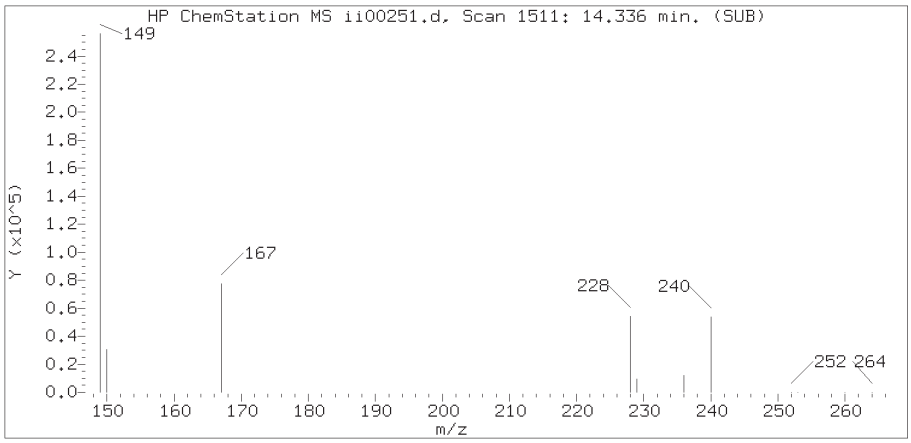
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

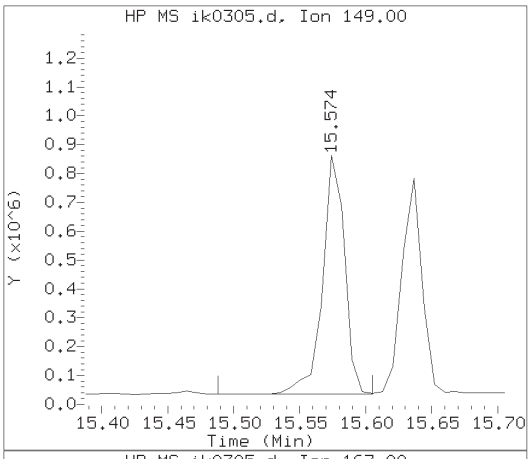
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 39
Compound Name	: Pyrene
Scan Number	: 1119
Retention Time (minutes)	: 14.149
Relative Retention Time	: 0.00030
Quant Ion	: 202.00
Area (flag)	: 2823673
On-column Amount (ng/ul)	: 8.2729

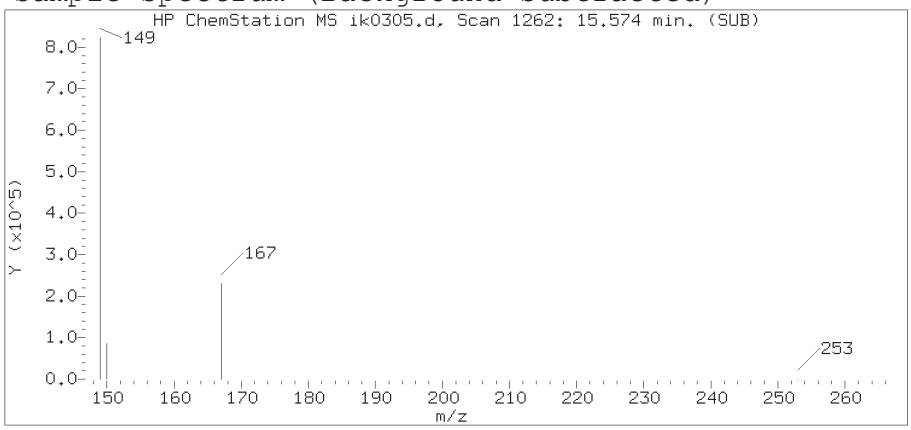
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

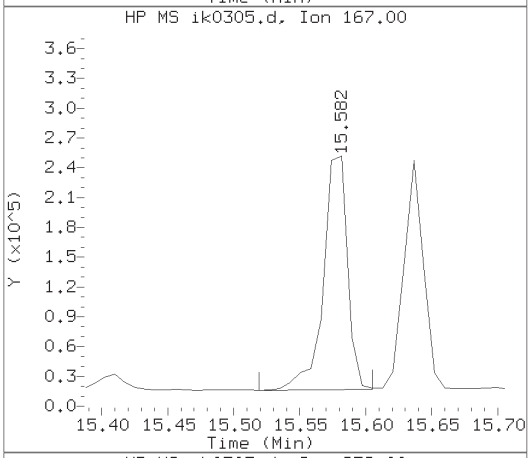
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



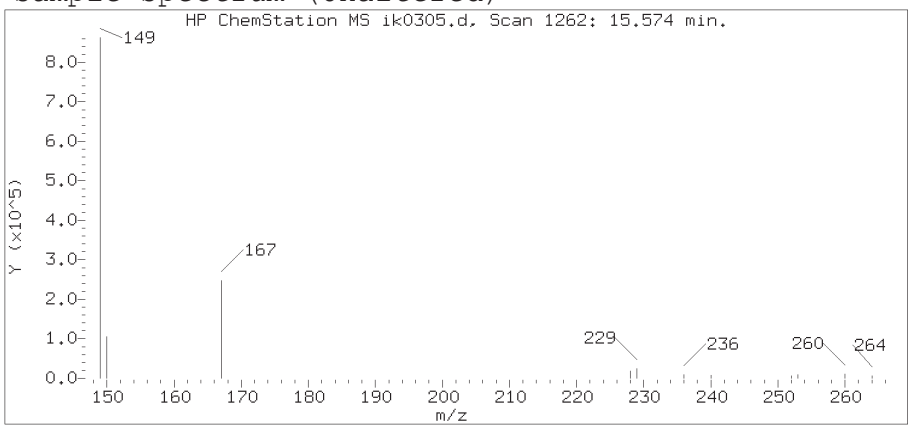


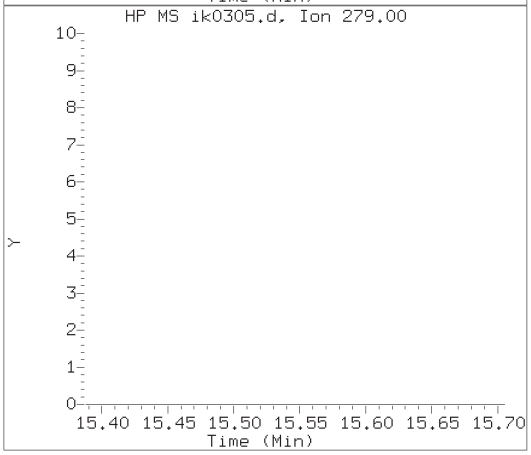
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

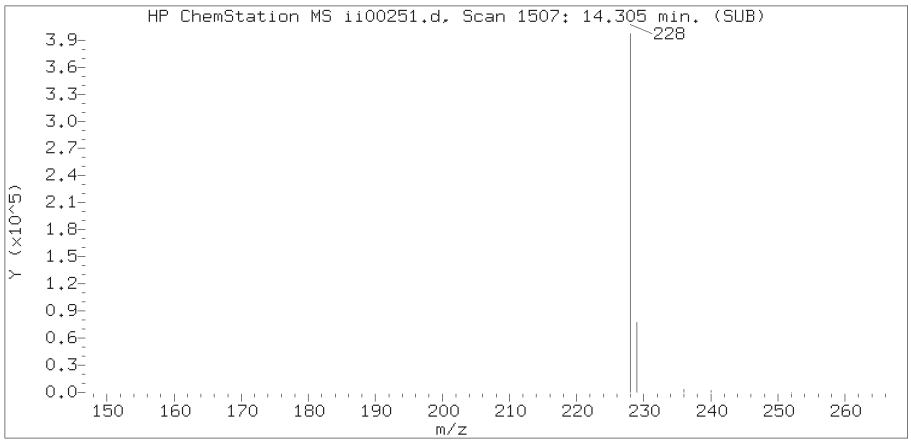
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

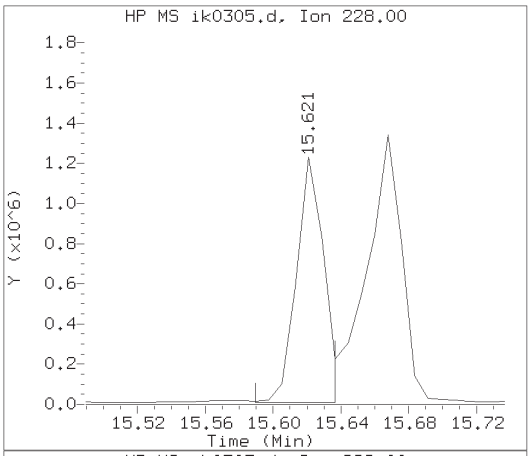
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 41
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1262
Retention Time (minutes)	: 15.574
Relative Retention Time	: 0.00049
Quant Ion	: 149.00
Area (flag)	: 961546
On-column Amount (ng/ul)	: 5.9280

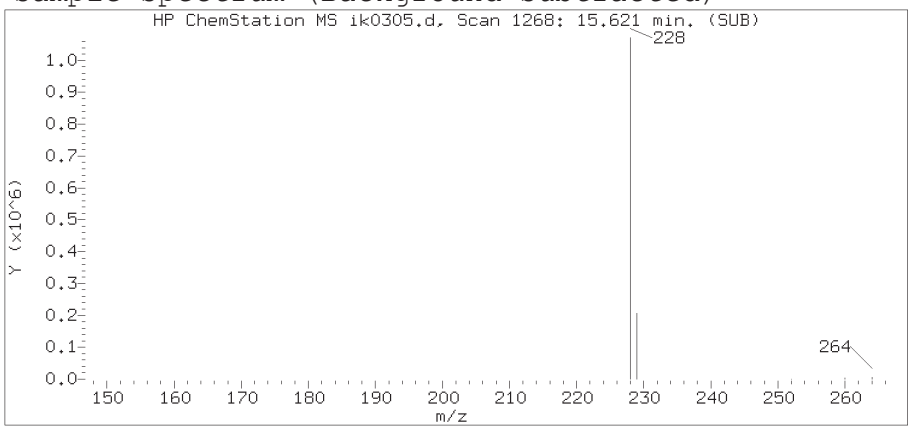
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

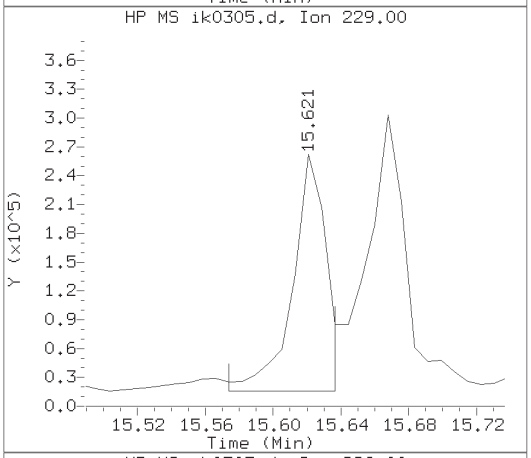
Reference Standard Spectrum for Benzo(a)anthracene



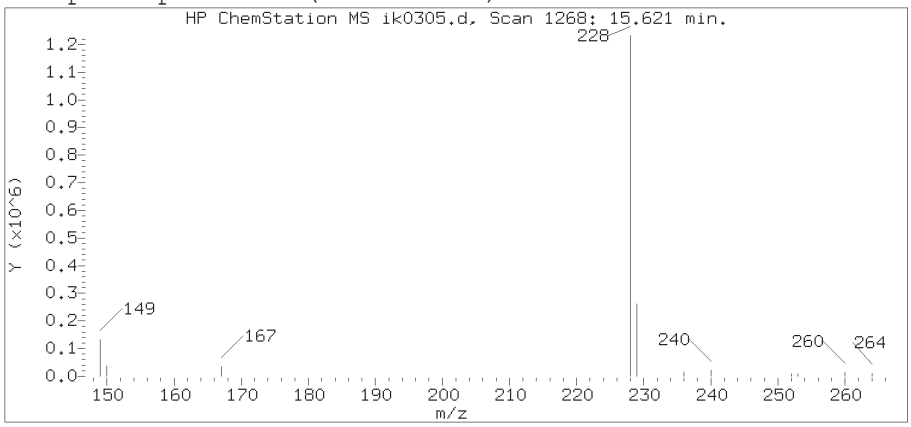


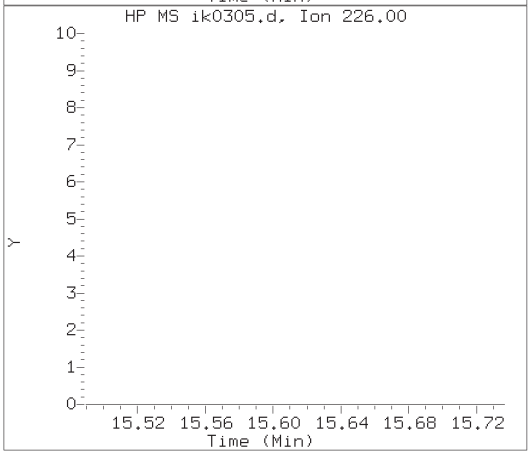
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

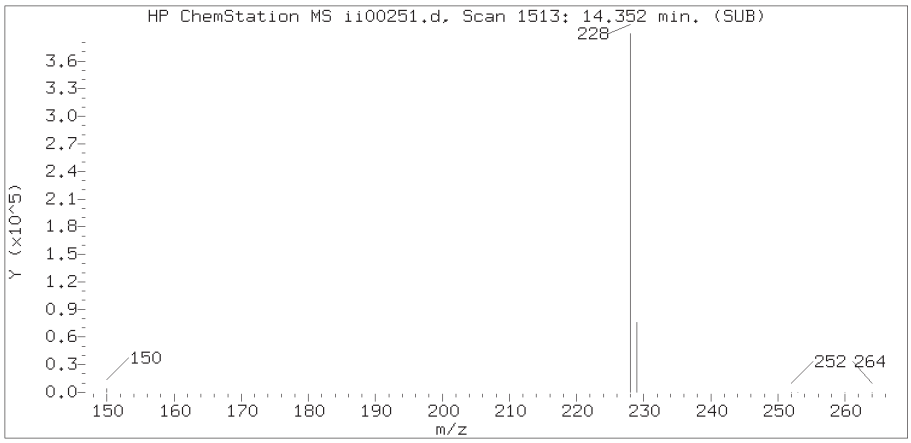
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

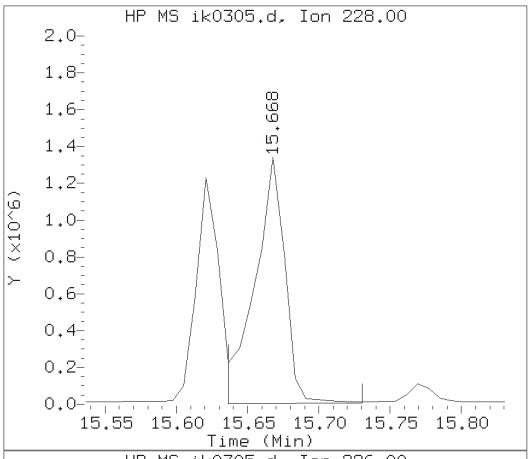
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 42
Compound Name	: Benzo(a)anthracene
Scan Number	: 1268
Retention Time (minutes)	: 15.621
Relative Retention Time	:-0.00000
Quant Ion	: 228.00
Area (flag)	: 1334506
On-column Amount (ng/ul)	: 4.2067

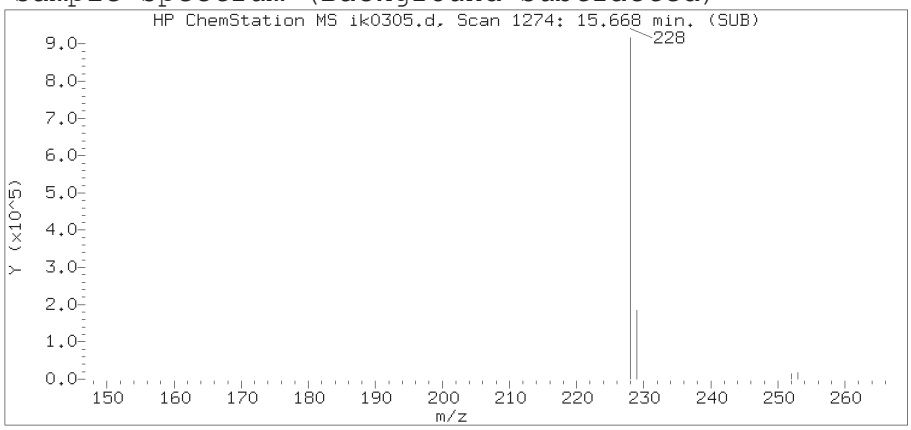
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

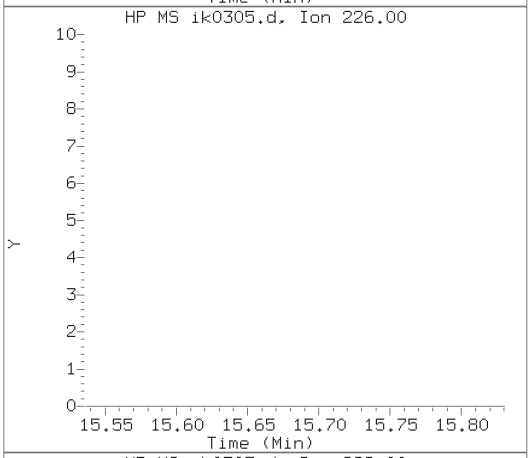
Reference Standard Spectrum for Chrysene



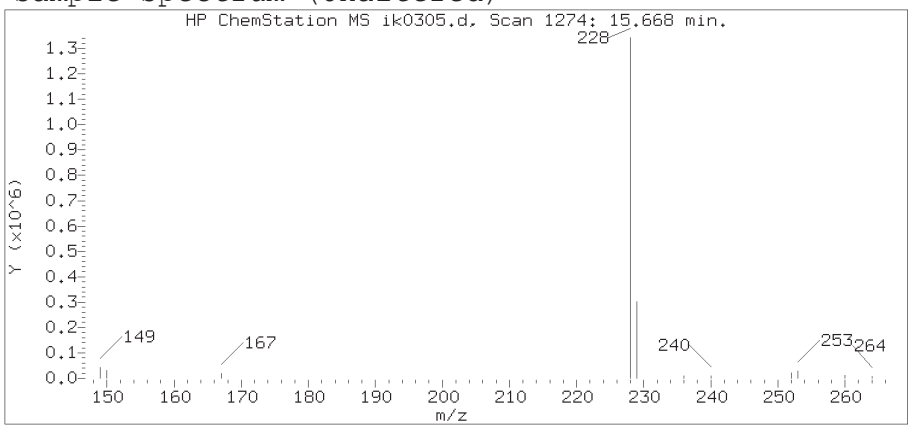


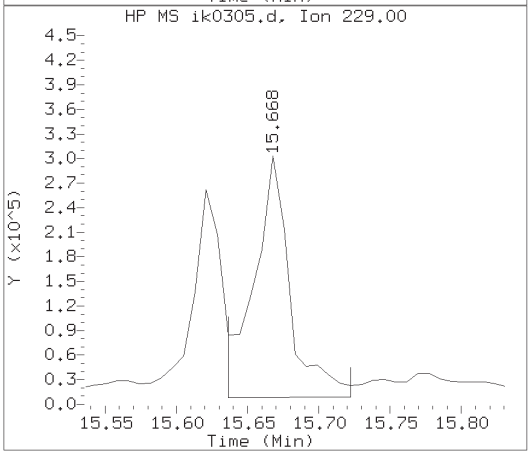
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

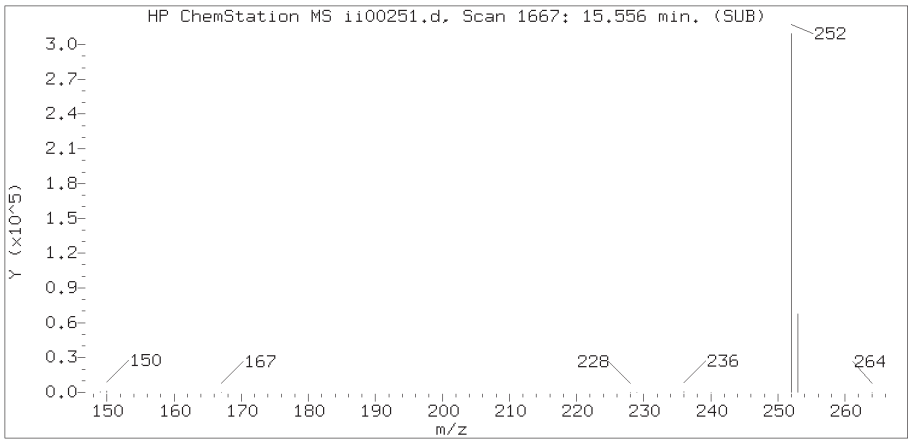
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

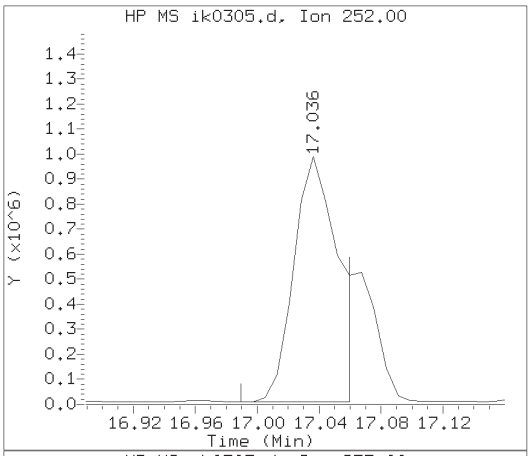
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 44
Compound Name	: Chrysene
Scan Number	: 1274
Retention Time (minutes)	: 15.668
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 1993622
On-column Amount (ng/ul)	: 6.5788

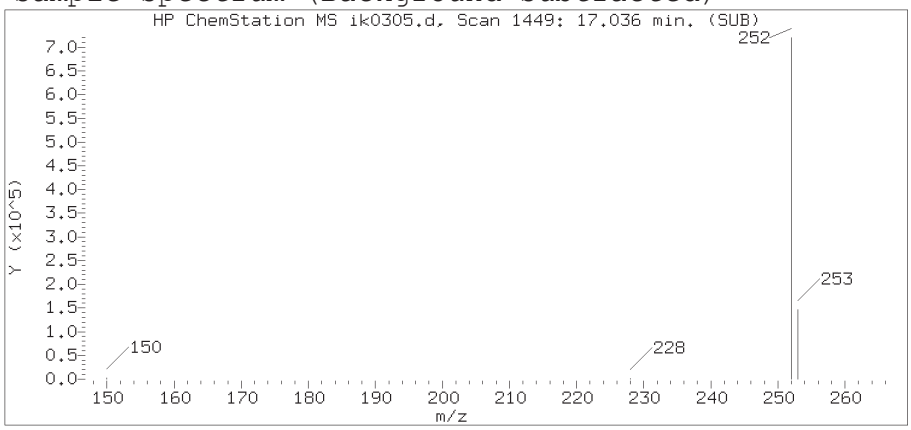
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

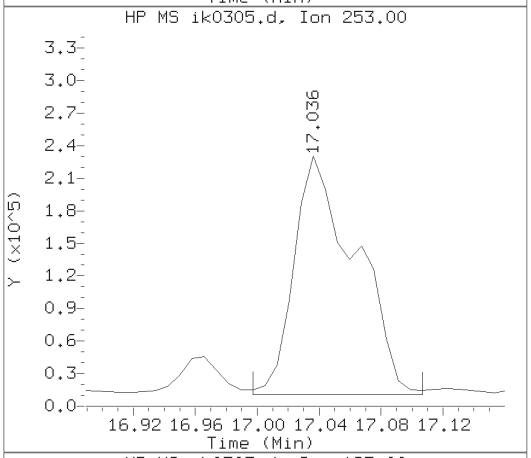
Reference Standard Spectrum for Benzo(b)fluoranthene



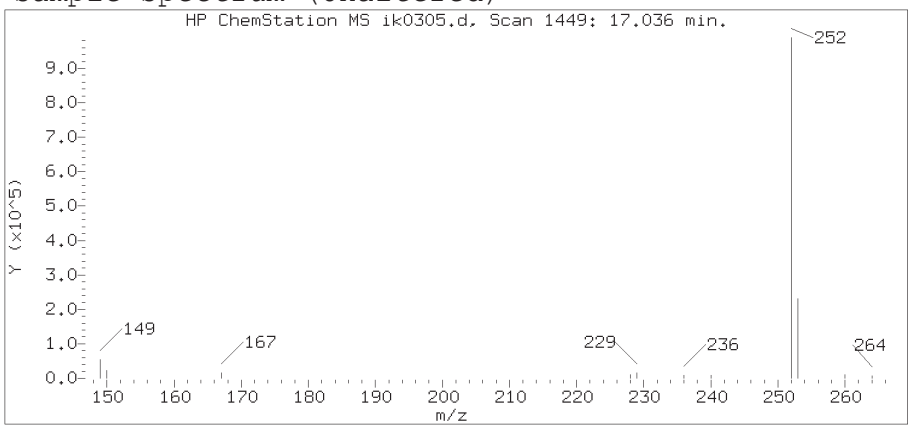


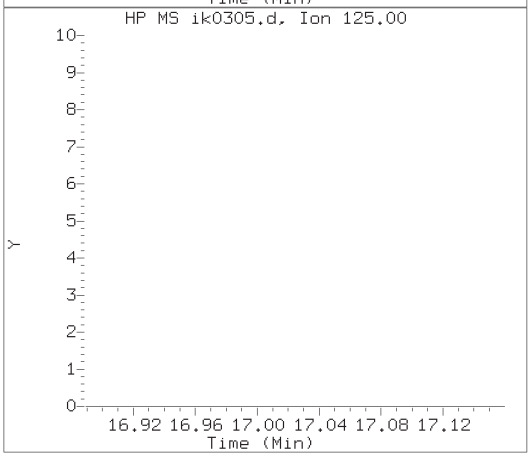
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

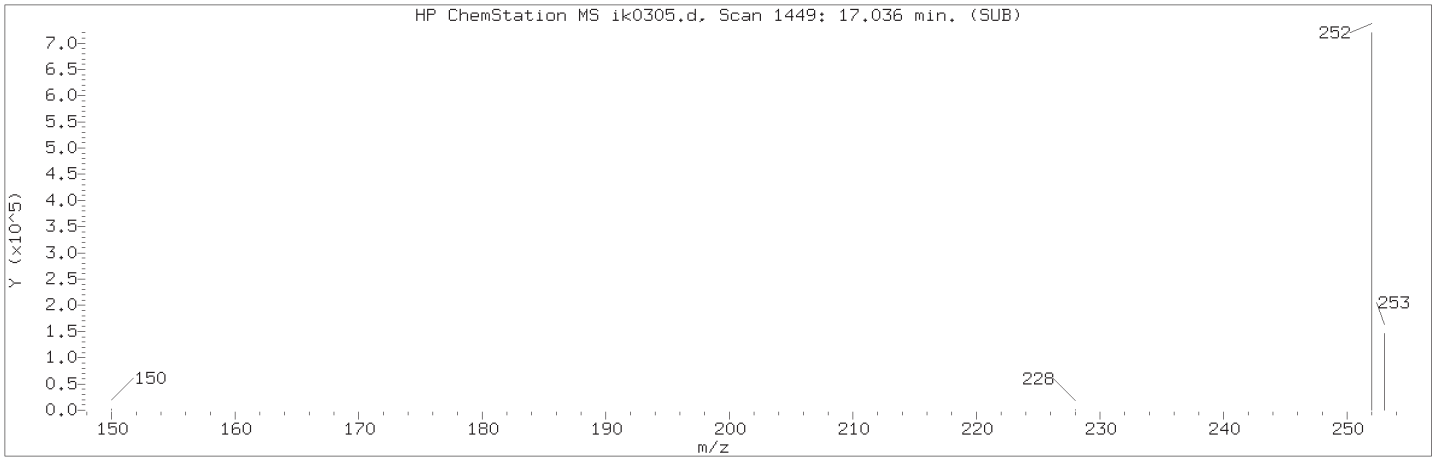
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1003 Lab Sample ID: 9867762

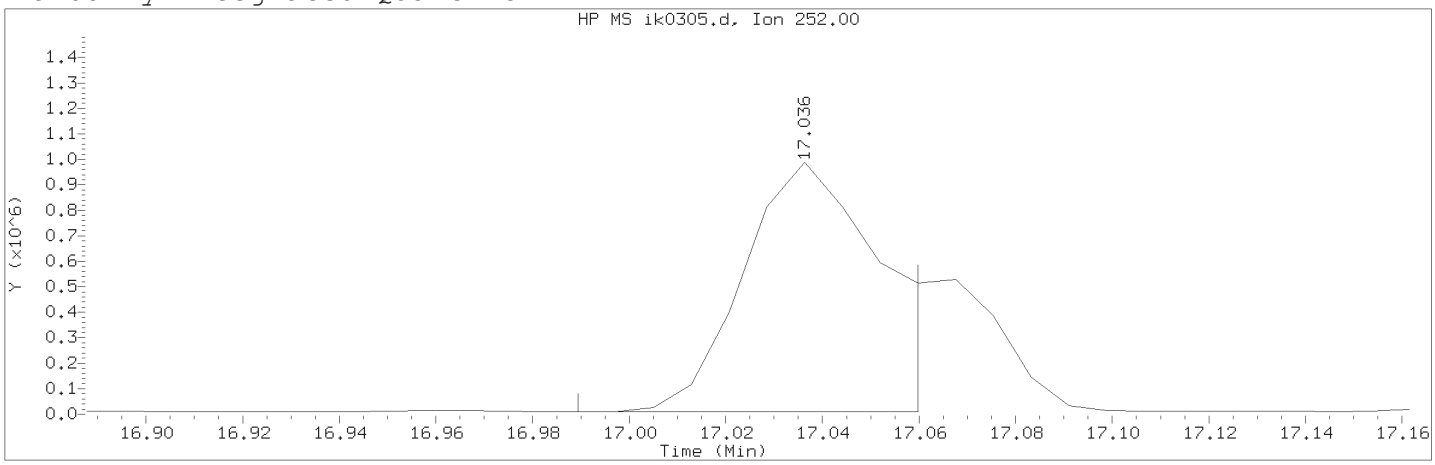
Compound Number	: 46
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1449
Retention Time (minutes)	: 17.036
Relative Retention Time	:-0.00052
Quant Ion	: 252.00
Area (flag)	: 1967513M
On-column Amount (ng/ul)	: 11.8369

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1003 Lab Sample ID: 9867762

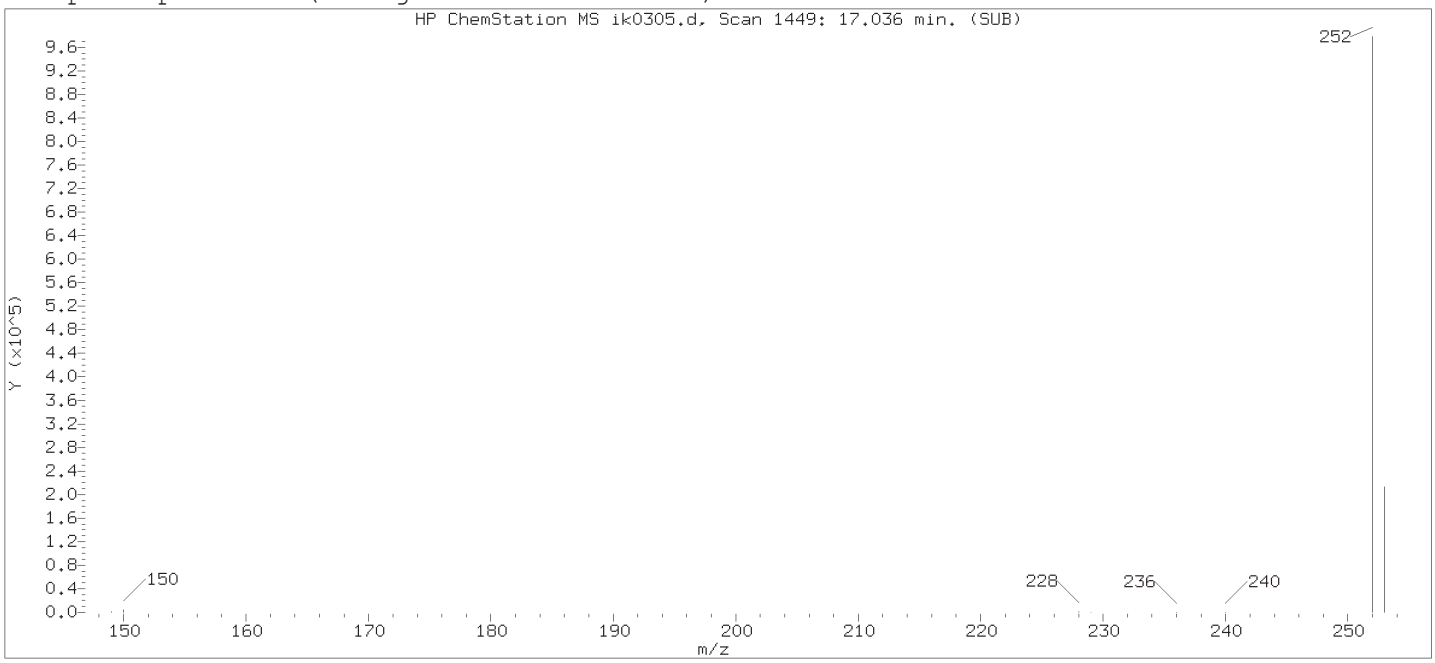
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1449
Retention Time (minutes) : 17.036
Quant Ion : 252.00
Area (flag) : 1967513M
On-column Amount (ng/ul) : 11.8369
Integration start scan : 1442 Integration stop scan: 1451
Y at integration start : 8913 Y at integration end: 10306

Reason for manual integration: improper integration

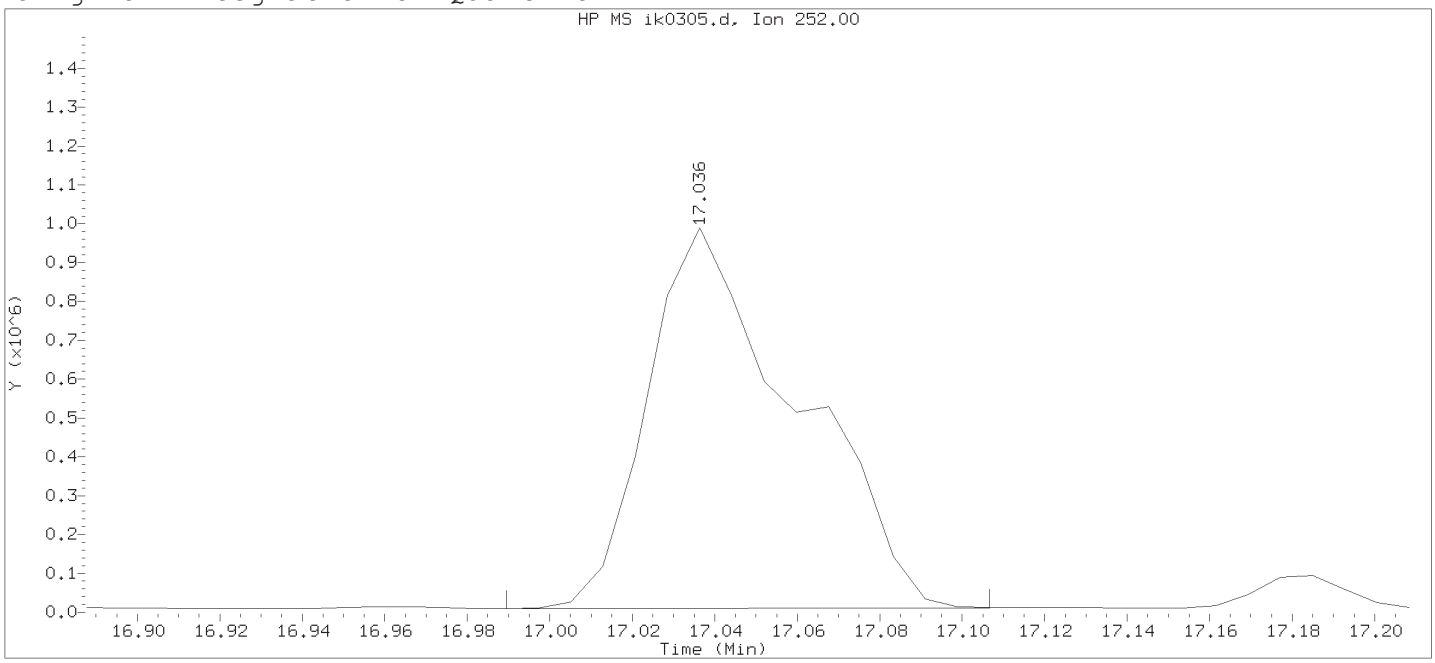
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

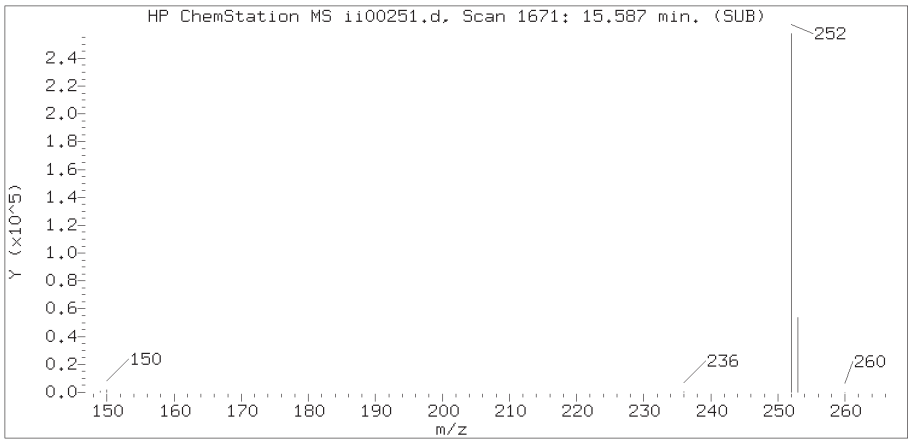
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

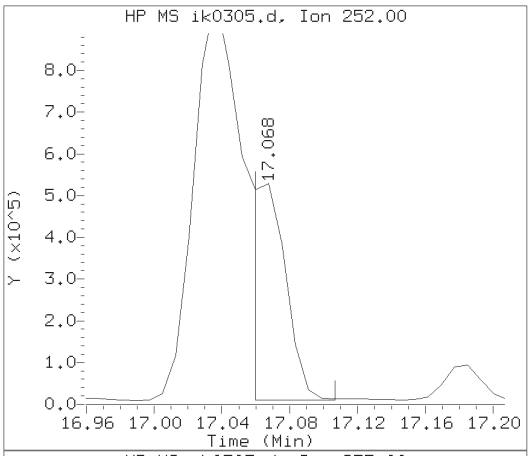
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	:	46
Compound Name	:	Benzo(b)fluoranthene
Scan Number	:	1449
Retention Time (minutes)	:	17.036
Quant Ion	:	252.00
Area	:	2461824
On-column Amount (ng/ul)	:	14.8107
Integration start scan	:	1442 Integration stop scan: 1457
Y at integration start	:	8913 Y at integration end: 11236

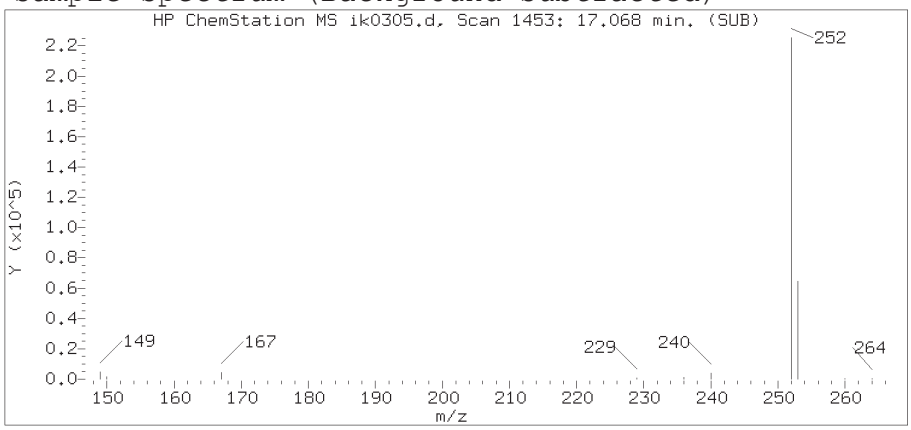
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

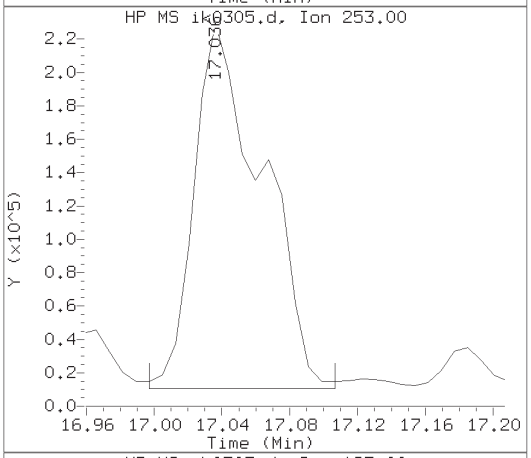
Reference Standard Spectrum for Benzo(k)fluoranthene



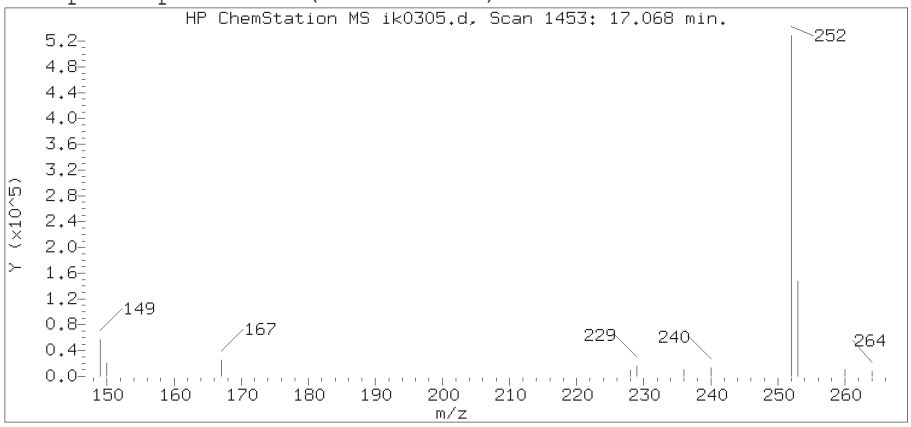


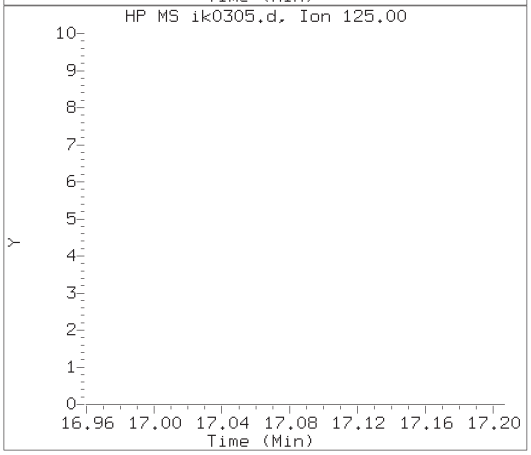
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

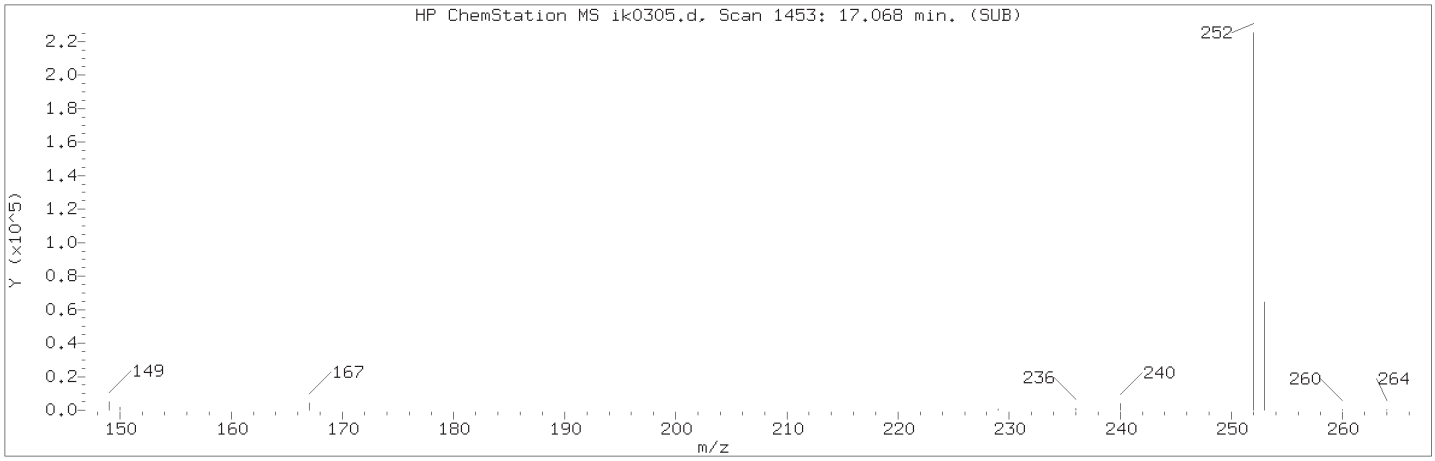
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1003 Lab Sample ID: 9867762

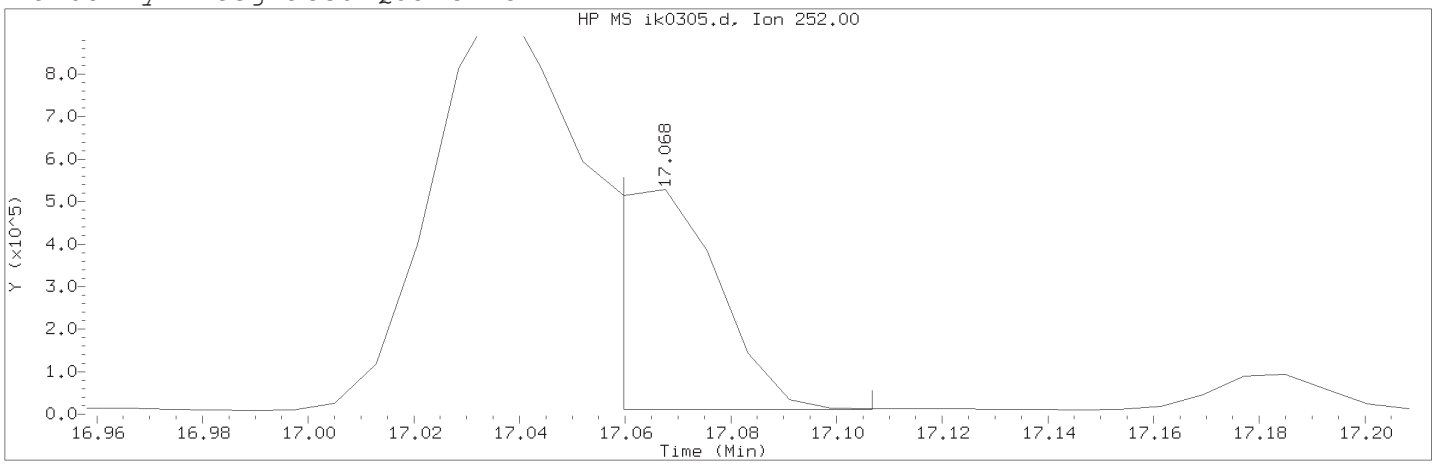
Compound Number	: 47
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1453
Retention Time (minutes)	: 17.068
Relative Retention Time	:-0.00007
Quant Ion	: 252.00
Area (flag)	: 731333M
On-column Amount (ng/ul)	: 4.6935

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1003 Lab Sample ID: 9867762

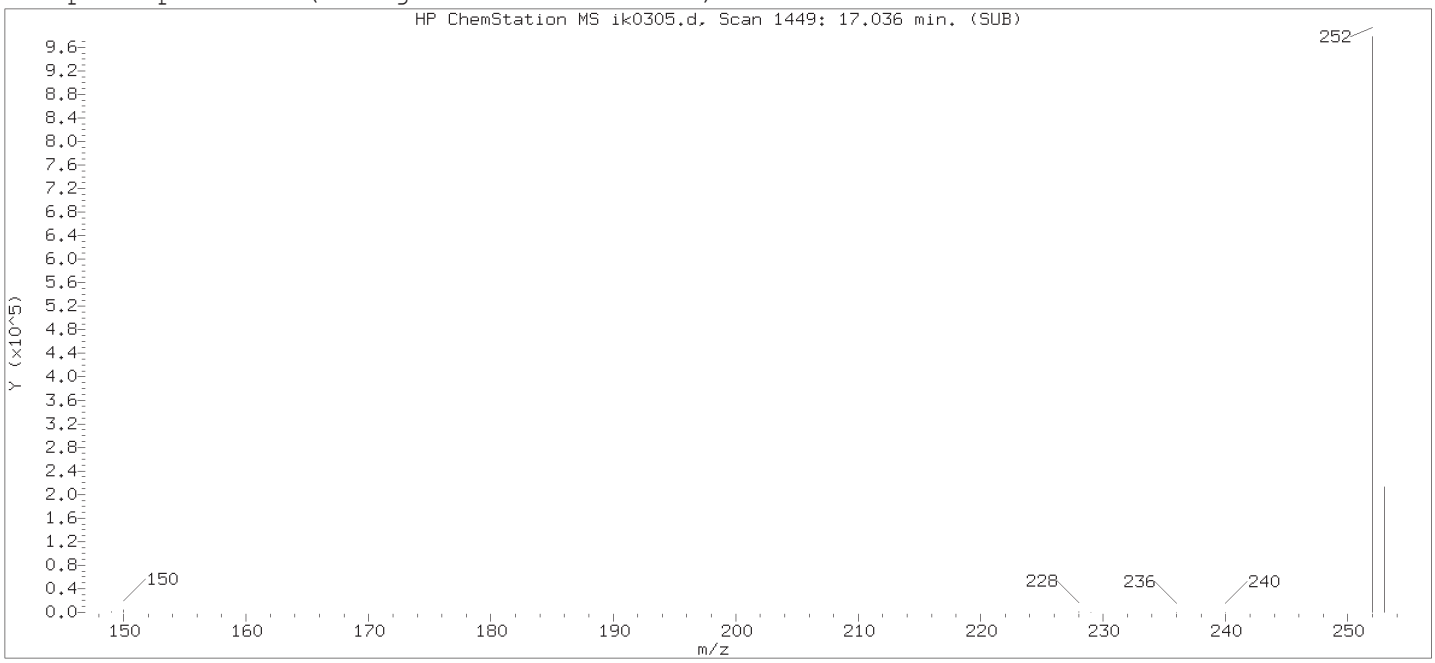
Compound Number : 47
Compound Name : Benzo(k)fluoranthene
Scan Number : 1453
Retention Time (minutes) : 17.068
Quant Ion : 252.00
Area (flag) : 731333M
On-column Amount (ng/ul) : 4.6935
Integration start scan : 1451 Integration stop scan: 1457
Y at integration start : 10794 Y at integration end: 10794

Reason for manual integration: improper integration

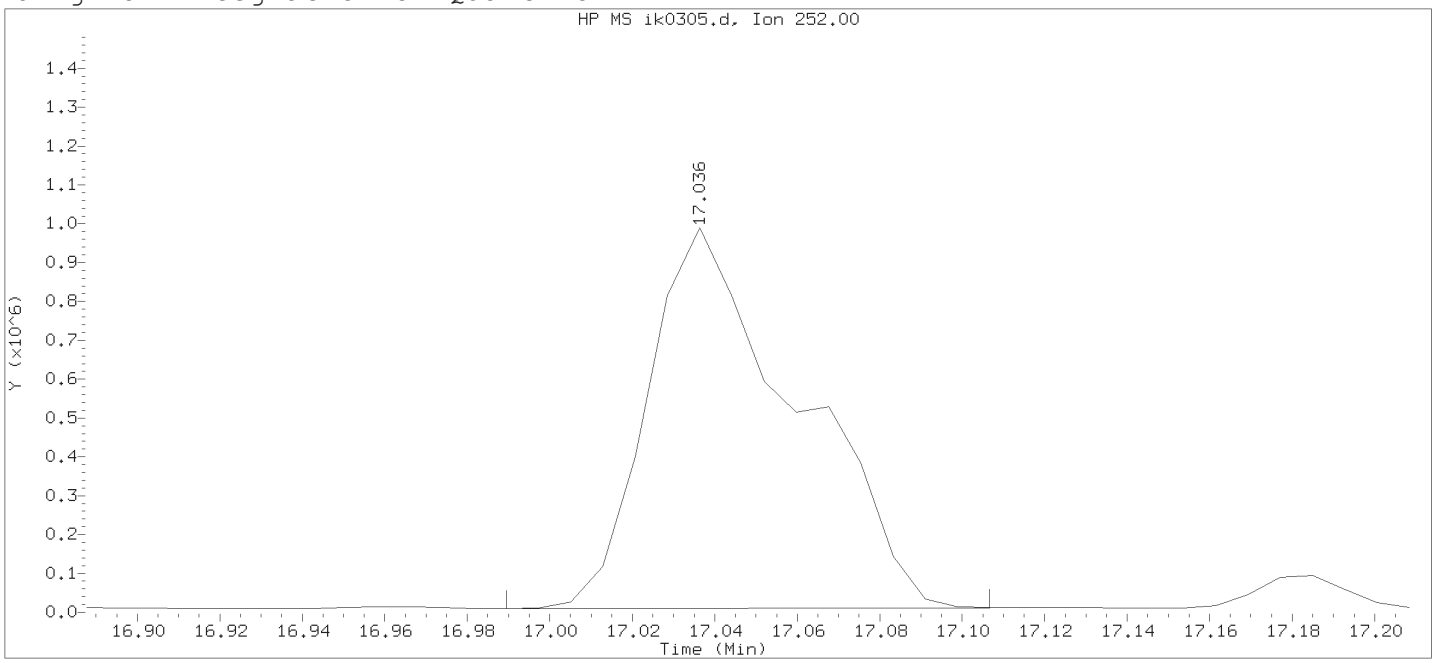
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

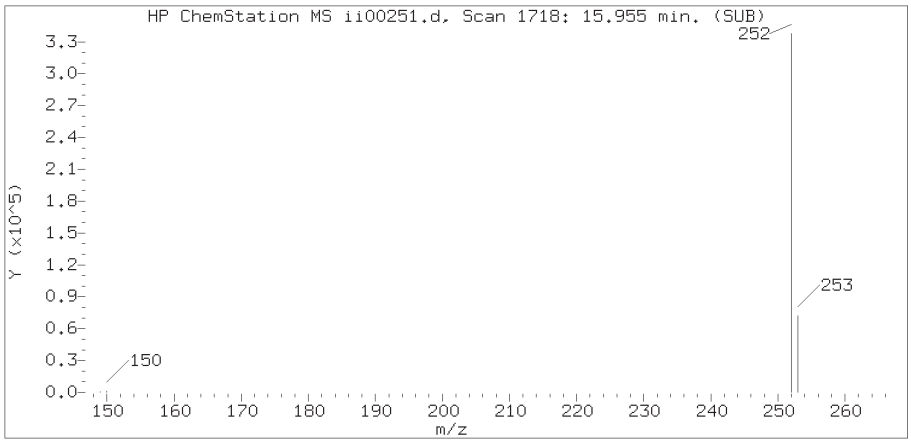
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

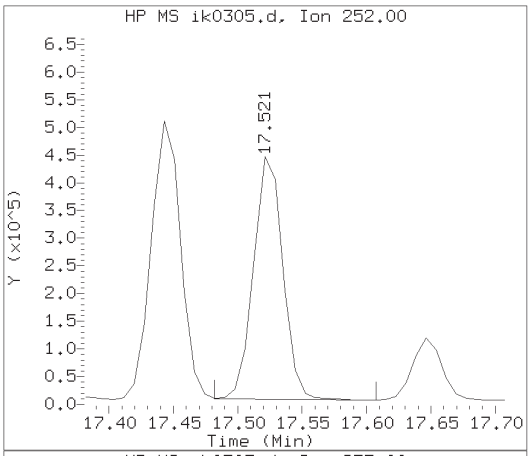
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 47		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1449		
Retention Time (minutes)	: 17.036		
Quant Ion	: 252.00		
Area	: 2461820		
On-column Amount (ng/ul)	: 15.7992		
Integration start scan	: 1442	Integration stop scan:	1457
Y at integration start	: 8913	Y at integration end:	11237

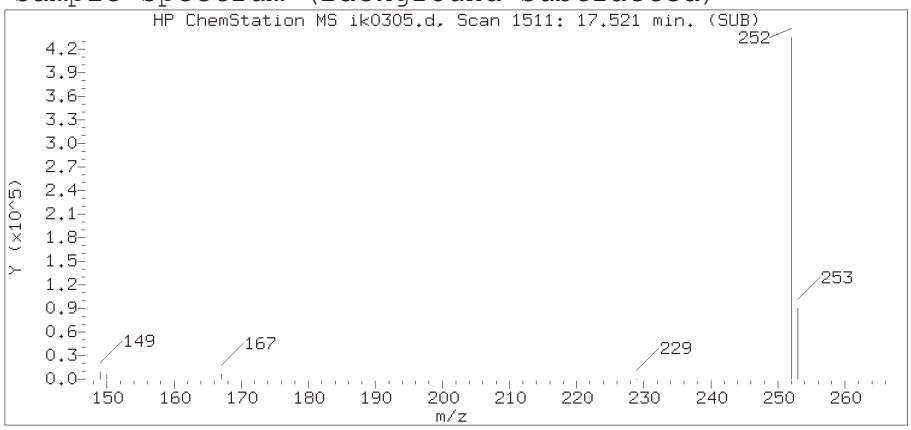
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature used [illegible]

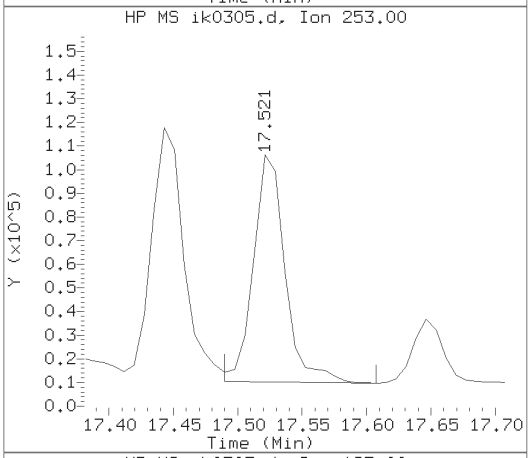
Reference Standard Spectrum for Benzo(a)pyrene



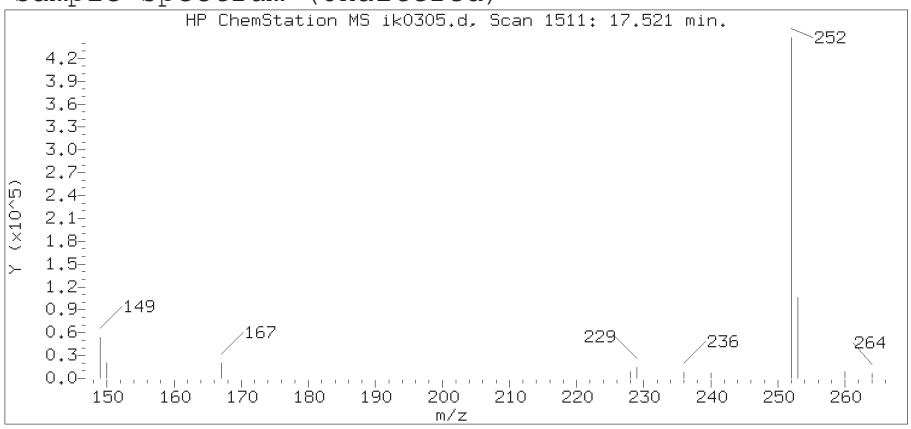


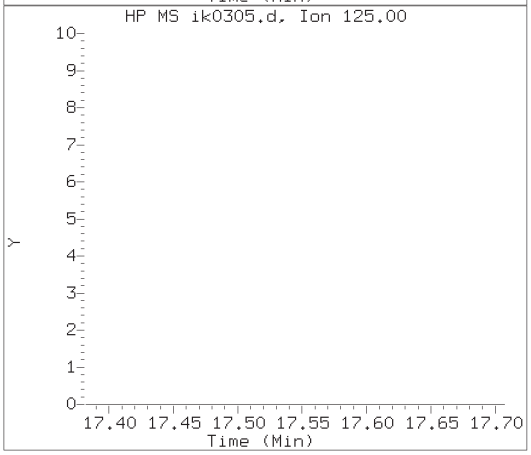
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

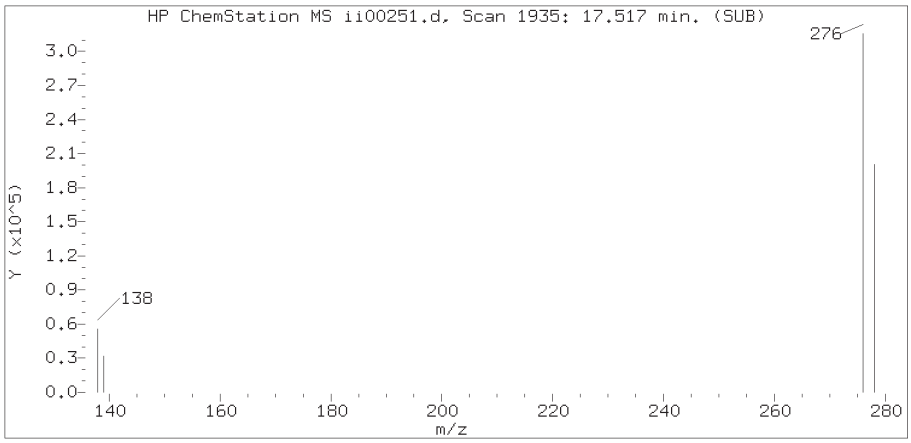
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

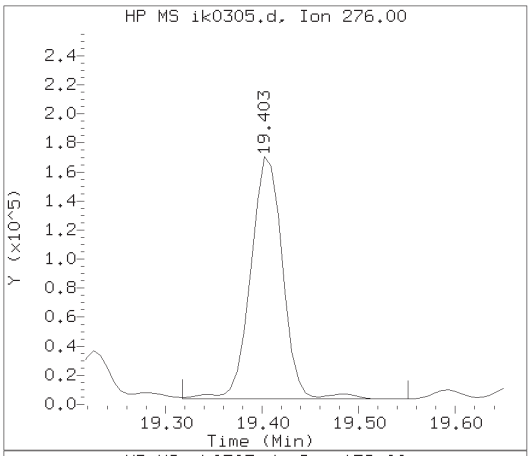
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 50
Compound Name	: Benzo(a)pyrene
Scan Number	: 1511
Retention Time (minutes)	: 17.521
Relative Retention Time	:-0.00001
Quant Ion	: 252.00
Area (flag)	: 694604
On-column Amount (ng/ul)	: 4.8760

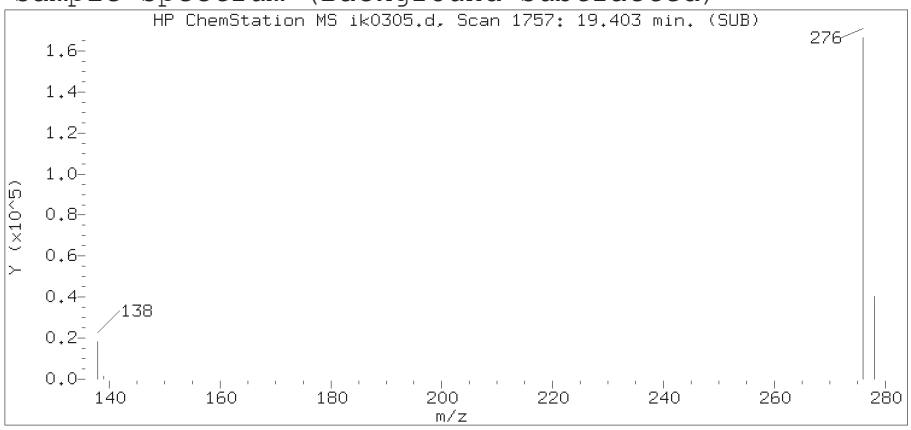
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

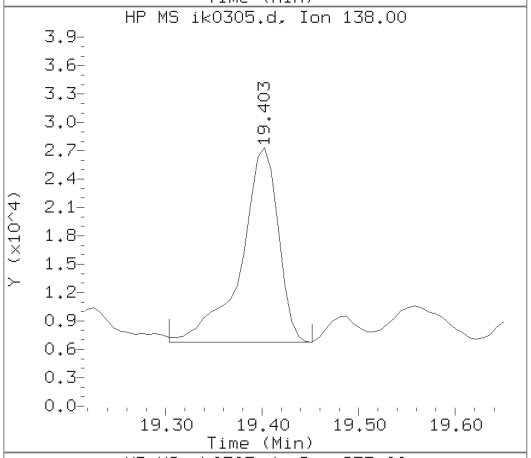
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



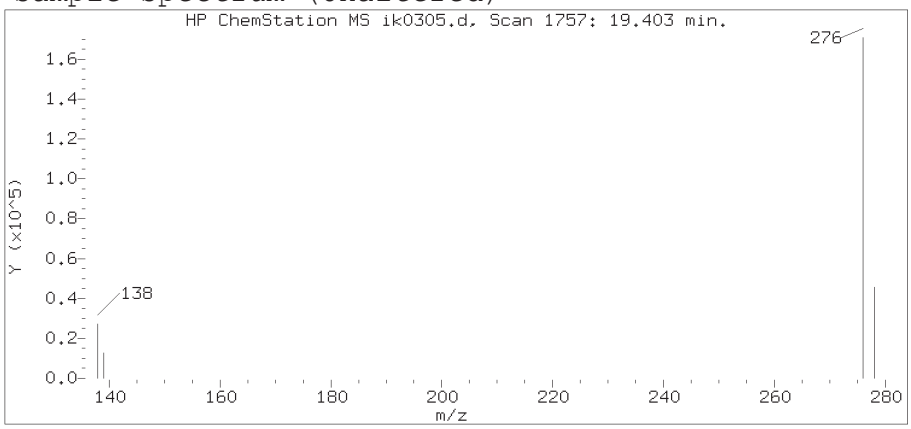


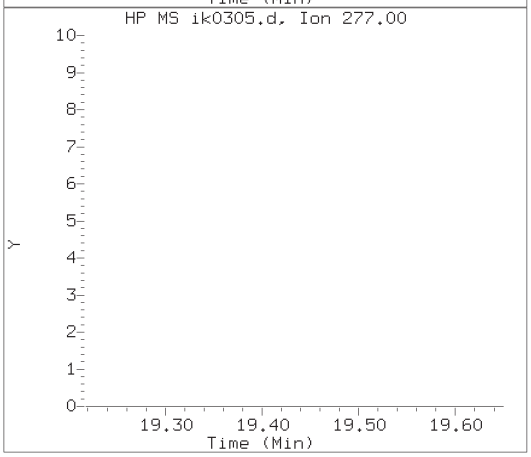
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

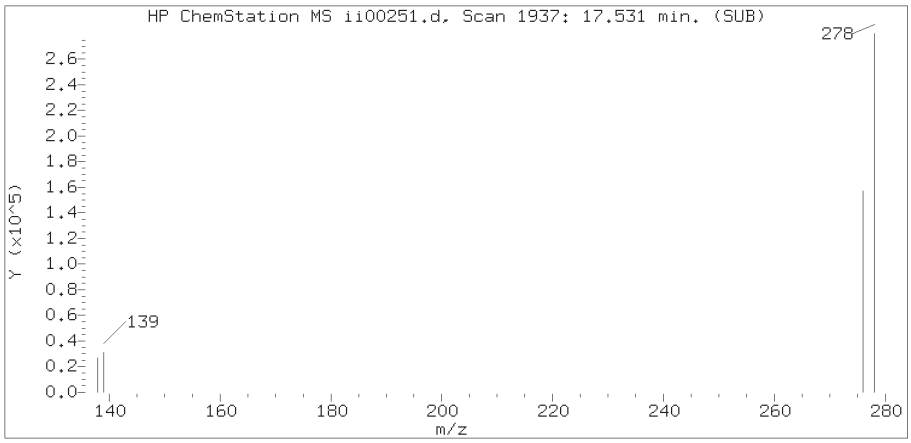
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

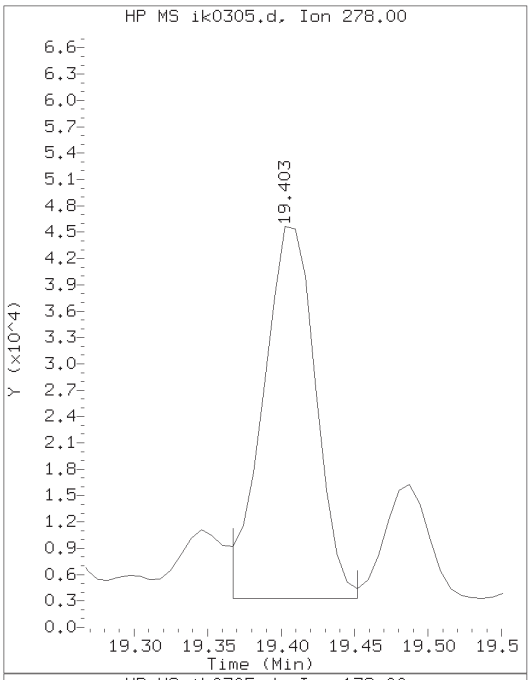
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 53
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 1757
Retention Time (minutes)	: 19.403
Relative Retention Time	:-0.00077
Quant Ion	: 276.00
Area (flag)	: 386384
On-column Amount (ng/ul)	: 2.3000

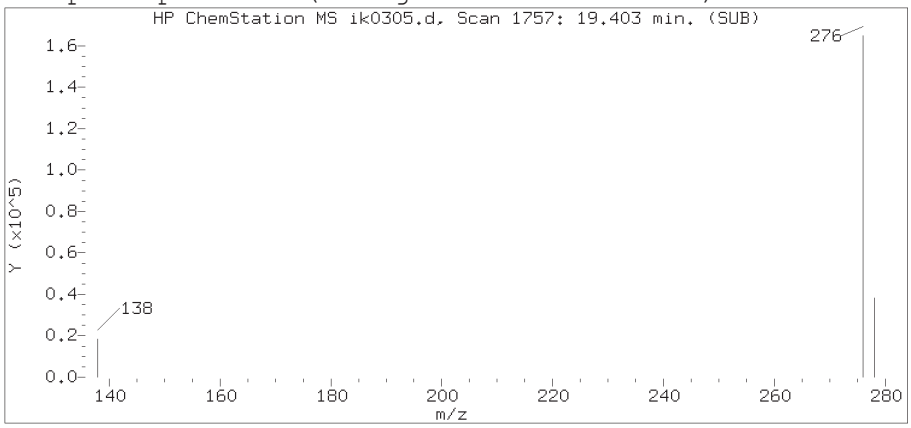
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

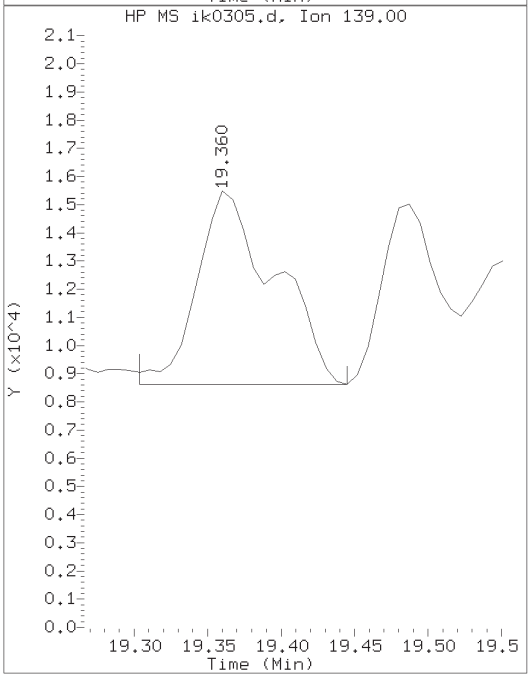
Reference Standard Spectrum for Dibenz(a,h)anthracene



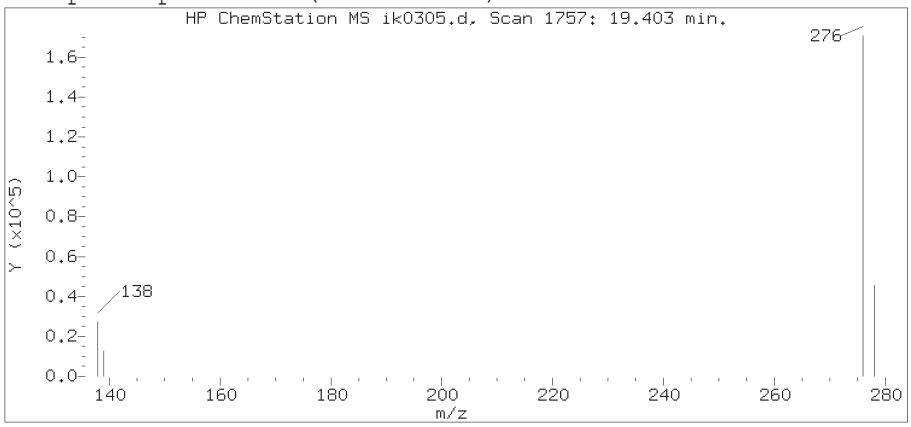


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

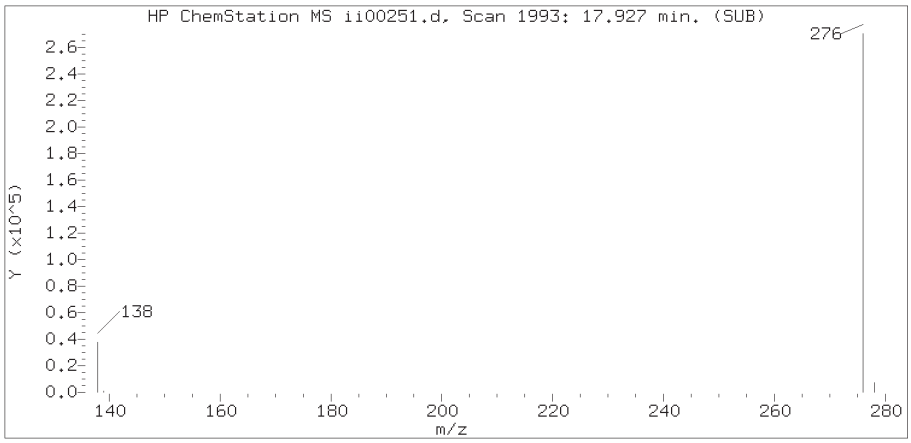
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

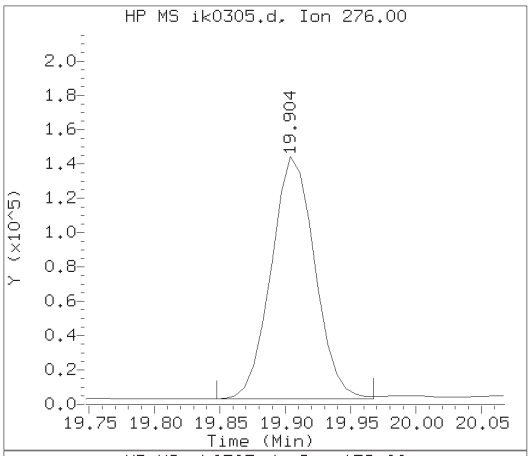
Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 54
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 1757
Retention Time (minutes)	: 19.403
Relative Retention Time	:-0.00037
Quant Ion	: 278.00
Area (flag)	: 105323
On-column Amount (ng/ul)	: 0.7679

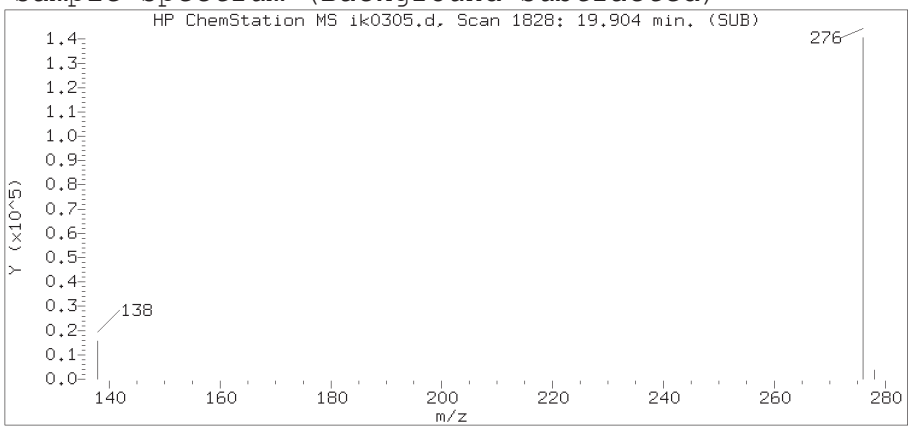
Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

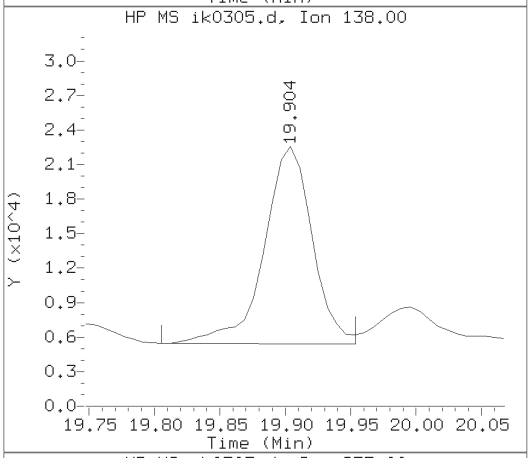
Reference Standard Spectrum for Benzo(g,h,i)perylene



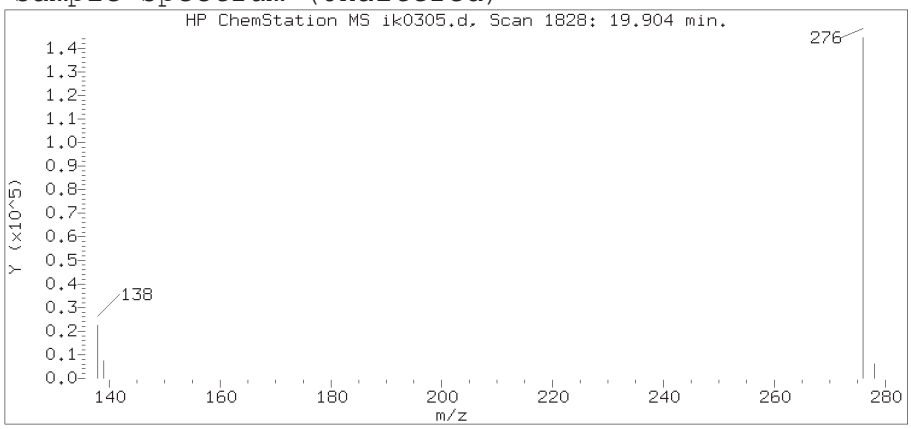


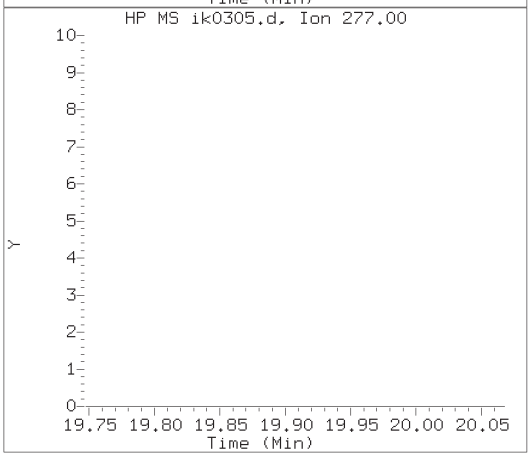
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0305.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 20:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 18:17 apb10206

Sample Name: T1003 Lab Sample ID: 9867762

Compound Number	: 55
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 1828
Retention Time (minutes)	: 19.904
Relative Retention Time	:-0.00111
Quant Ion	: 276.00
Area (flag)	: 327324
On-column Amount (ng/ul)	: 2.2161

Digitally signed by Anthony P. Bauer on 11/08/2018 at 18:18.
Target 3.5 esignature user ID: apb10206

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10976.i/18nov08.b/ik0356.d
Data file Sample Info. Line: T1003DL;9867762DL;2;0;SAMPLE;;DOD26;
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Injection date and time: **08-NOV-2018 10:03**
Instrument ID: **HP10976.i** Batch: **18302SLH**

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov08.b/ik0351.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 10
Final Extract Volume (Vt): 500 ul
GpcCleanup (No = 0, Yes = 1): 1
Volume Injected (Vi): 1 ul
Unit Correction Factor (Uf): 1
Sample Weight (Ws): 30.43 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.794	(0.000)	499	152	66649	(-6)	1.00	
10) Naphthalene-d8	8.306	(0.000)	613	136	240296	(-8)	1.00	
20) Acenaphthene-d10	10.476	(-0.008)	801	164	150079	(-6)	1.00	
31) Phenanthrene-d10	12.320	(-0.009)	966	188	332318	(-5)	1.00	
43) Chrysene-d12	15.598	(-0.001)	1265	240	375127	(3)	1.00	
51) Perylene-d12	17.553	(-0.016)	1515	264	340753	(-6)	1.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.259	(-0.001)	152	13602	0.093	93%		61 - 111
36) Fluoranthene-d10	(4)	13.804	(0.001)	212	37070	0.090	90%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.428	(0.000)	264	21622	0.066	66%		54 - 122

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)				Not Detected					0.02
11) Naphthalene	(2)	8.333	(-0.000)	128	179534	0.726	238.43	31.312	B	0.04
19) Acenaphthylene	(3)	10.291	(0.001)	152	12758	0.044	14.59			0.01
21) Acenaphthene	(3)	10.508	(0.001)	154	6135M	0.032	10.67	1.723	B	0.02
26) Fluorene	(3)	11.151	(0.000)	166	10920	0.047	15.43	1.949	B	0.02
32) Phenanthrene	(4)	12.343	(0.000)	178	233277	0.650	213.52	2.56	B	0.02
33) Anthracene	(4)	12.410	(0.000)	178	42892	0.119	39.20	0.732	B	0.02
35) Di-n-butylphthalate	(4)	12.998	(0.000)	149	4641613	13.512	4440.20		E	0.2
37) Fluoranthene	(4)	13.828	(0.001)	202	507193	1.135	372.87			0.02
39) Pyrene	(5)	14.109	(0.000)	202	474186	0.913	300.11			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.543	(-0.000)	149	170302	0.690	226.80			0.3
42) Benzo(a)anthracene	(5)	15.582	(-0.000)	228	263527	0.546	179.44			0.02
44) Chrysene	(5)	15.629	(0.000)	228	342976	0.744	244.48			0.01
46) Benzo(b)fluoranthene	(6)	16.982	(-0.000)	252	468788M	1.106	363.51			0.02
47) Benzo(k)fluoranthene	(6)	17.014	(0.000)	252	164771M	0.415	136.30			0.02
50) Benzo(a)pyrene	(6)	17.467	(-0.000)	252	183070	0.504	165.64			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.333	(-0.000)	276	127344	0.297	97.70			0.02
54) Dibenz(a,h)anthracene	(6)	19.333	(0.000)	278	34274	0.098	32.21			0.02
55) Benzo(g,h,i)perylene	(6)	19.827	(-0.000)	276	105478	0.280	92.04			0.02

B = Compound detected in referenced method blank. M = Compound was manually integrated. E = Compound concentration above calibration range.

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33. Target 3.5 esignature user ID: apb10206

Data file: /chem/HP10976.i/18nov08.b/ik0356.d Injection date and time: **08-NOV-2018 10:03**
Data file Sample Info. Line: T1003DL;9867762DL;2;0;SAMPLE;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov08.b/ik0351.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

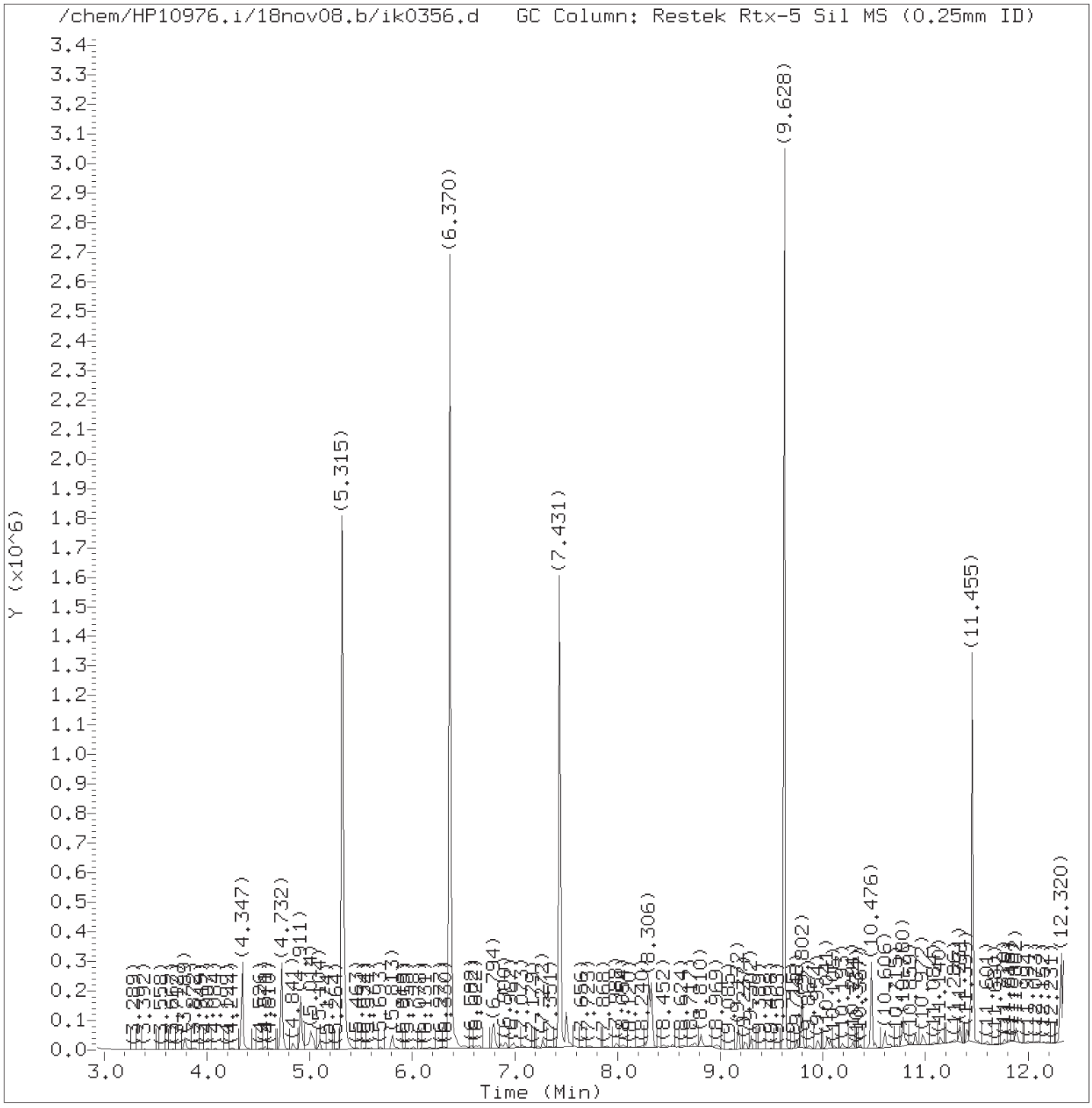
Dilution Factor (DF): 10 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.43 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

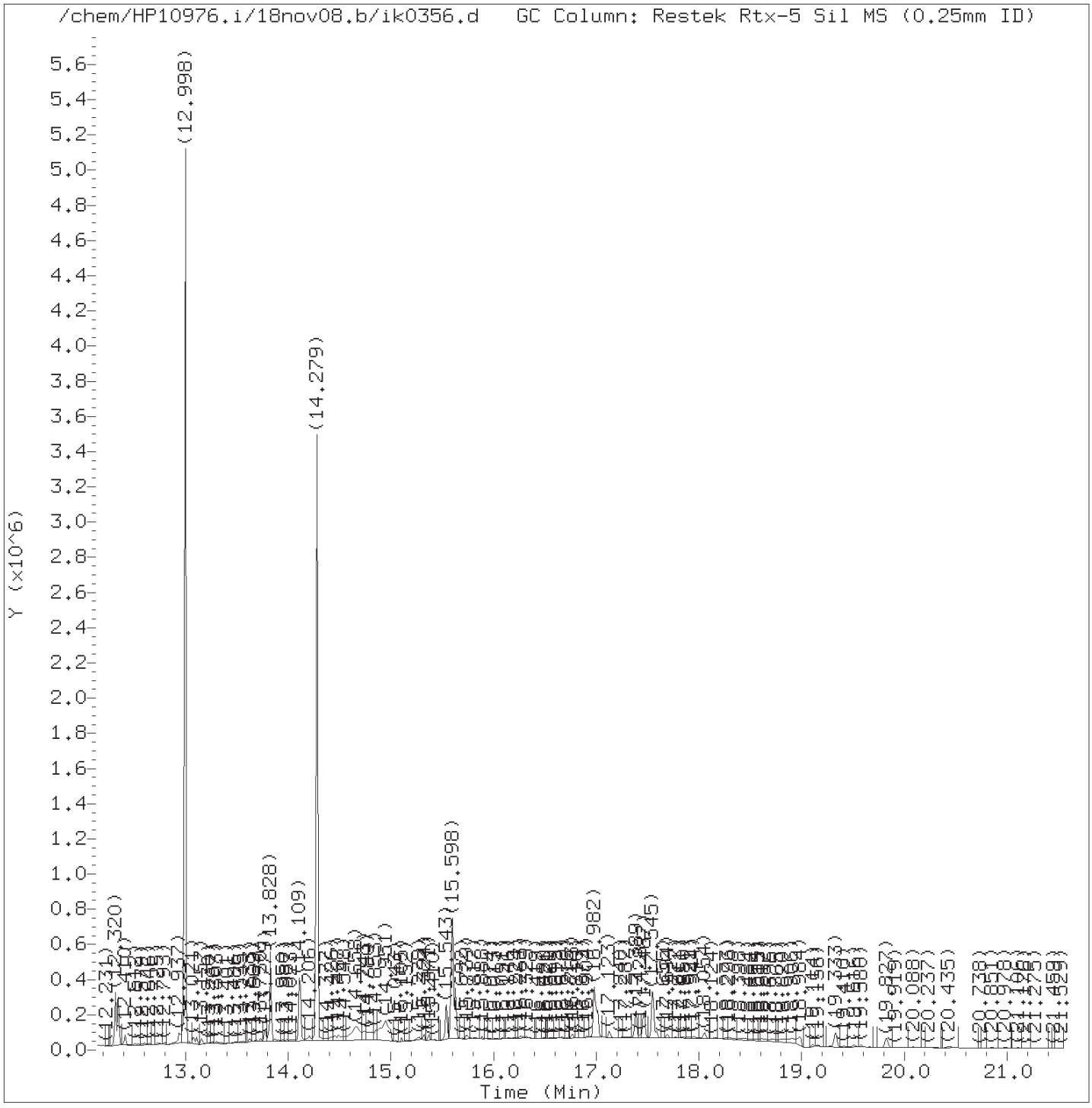
Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL Lab Sample ID: 9867762DL

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL Lab Sample ID: 9867762DL

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

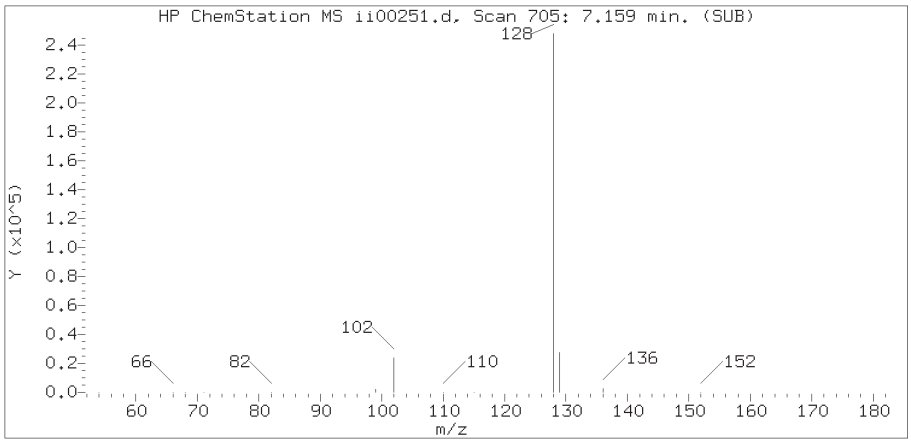
Sample Name: T1003DL Lab Sample ID: 9867762DL

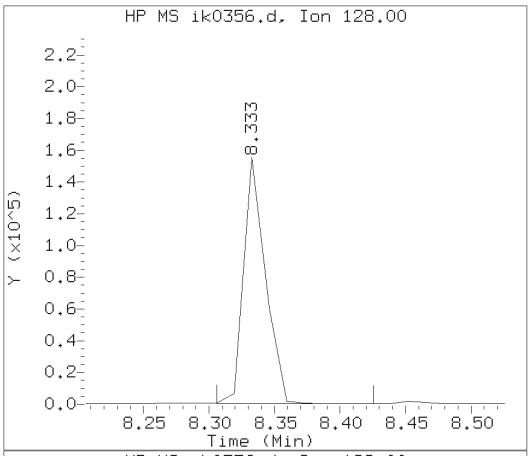
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
6)*1,4-Dichlorobenzene-d4	(1)	6.794	152	66649	1.000
10)*Naphthalene-d8	(2)	8.306	136	240296	1.000
11) Naphthalene	(2)	8.333	128	179534	0.726
14)$1-Methylnaphthalene-d10	(2)	9.259	152	13602	0.093
19) Acenaphthylene	(3)	10.291	152	12758	0.044
20)*Acenaphthene-d10	(3)	10.476	164	150079	1.000
21) Acenaphthene	(3)	10.508	154	6135M	0.032
26) Fluorene	(3)	11.151	166	10920	0.047
31)*Phenanthrene-d10	(4)	12.320	188	332318	1.000
32) Phenanthrene	(4)	12.343	178	233277	0.650
33) Anthracene	(4)	12.410	178	42892	0.119
35) Di-n-butylphthalate	(4)	12.998	149	4641613	13.512
36)$Fluoranthene-d10	(4)	13.804	212	37070	0.090
37) Fluoranthene	(4)	13.828	202	507193	1.135
39) Pyrene	(5)	14.109	202	474186	0.913
41) bis(2-Ethylhexyl)phthalate	(5)	15.543	149	170302	0.690
42) Benzo(a)anthracene	(5)	15.583	228	263527	0.546
43)*Chrysene-d12	(5)	15.598	240	375127	1.000
44) Chrysene	(5)	15.629	228	342976	0.744
46) Benzo(b)fluoranthene	(6)	16.982	252	468788M	1.106
47) Benzo(k)fluoranthene	(6)	17.014	252	164771M	0.415
49)$Benzo(a)pyrene-d12	(6)	17.428	264	21622	0.066
50) Benzo(a)pyrene	(6)	17.467	252	183070	0.504
51)*Perylene-d12	(6)	17.553	264	340753	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.333	276	127344	0.297
54) Dibenz(a,h)anthracene	(6)	19.333	278	34274	0.098
55) Benzo(g,h,i)perylene	(6)	19.827	276	105478	0.280

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

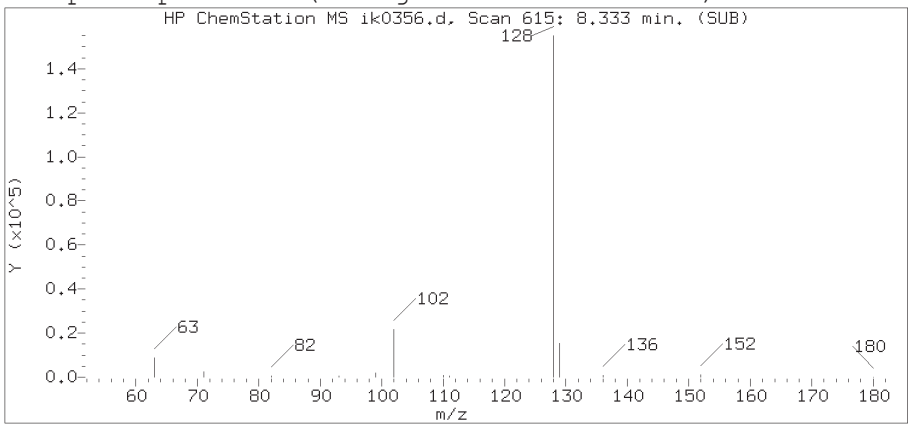
Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

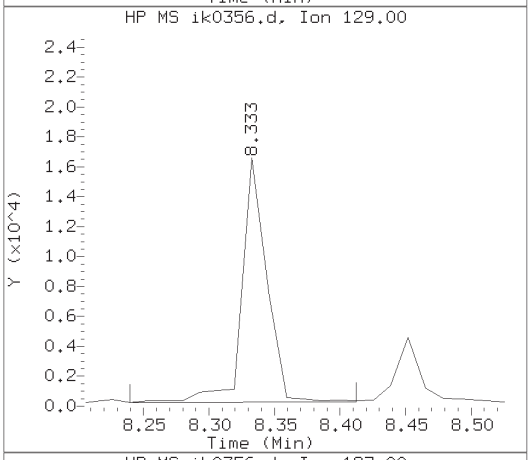
Reference Standard Spectrum for Naphthalene



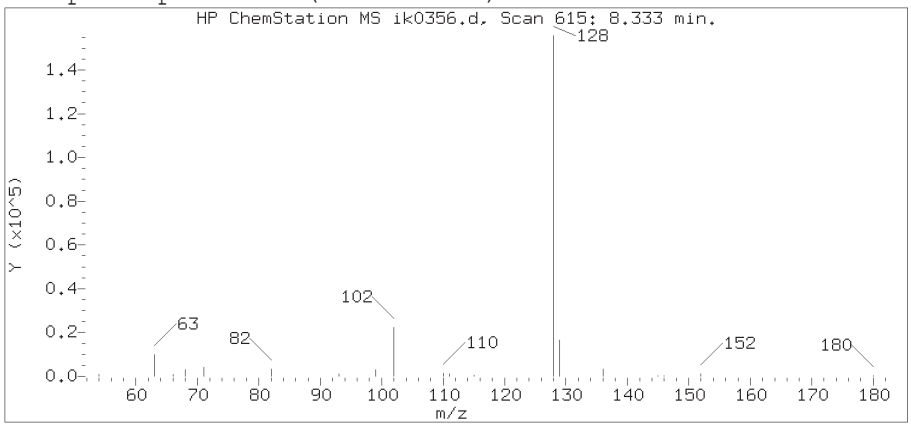


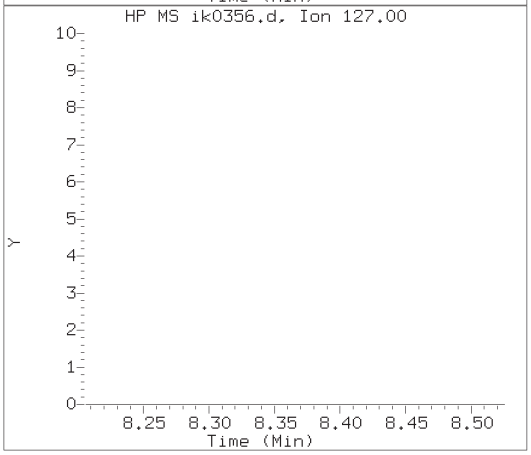
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

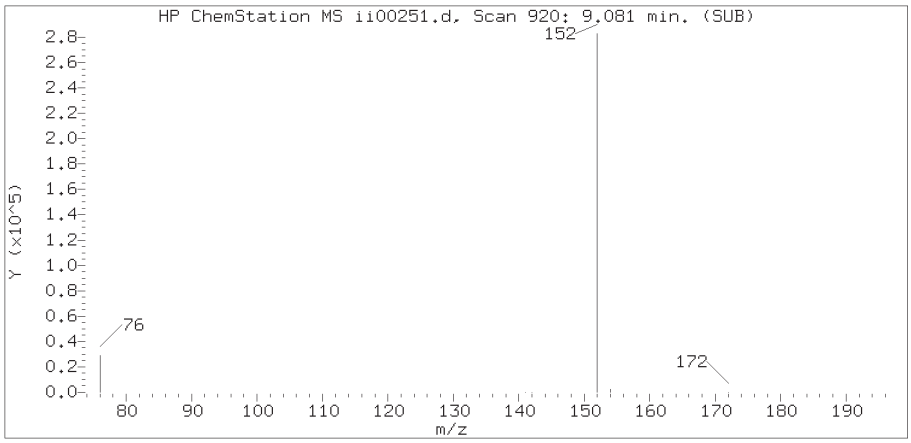
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

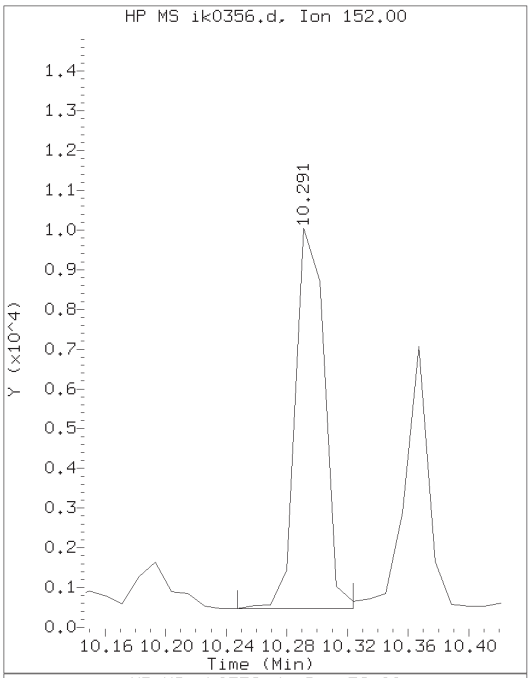
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 11
Compound Name	: Naphthalene
Scan Number	: 615
Retention Time (minutes)	: 8.333
Relative Retention Time	:-0.00000
Quant Ion	: 128.00
Area (flag)	: 179534
On-column Amount (ng/ul)	: 0.7255

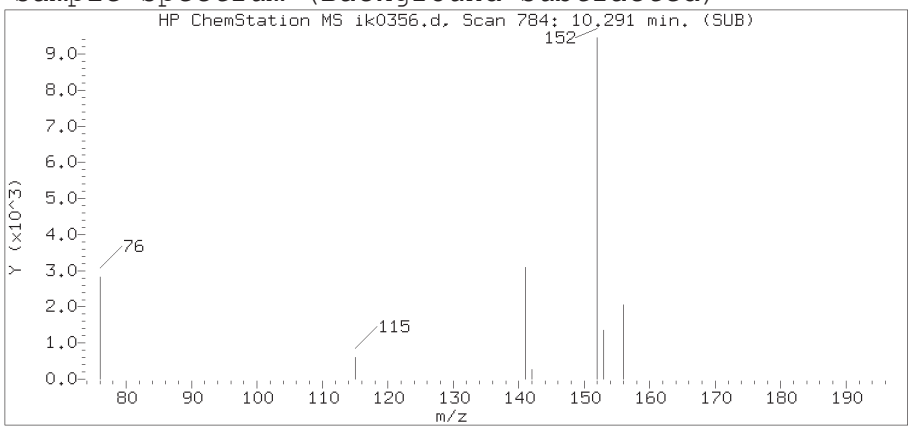
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

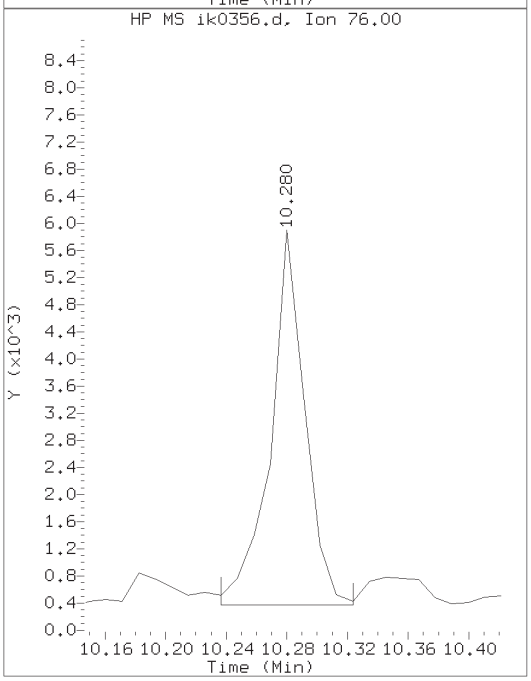
Reference Standard Spectrum for Acenaphthylene



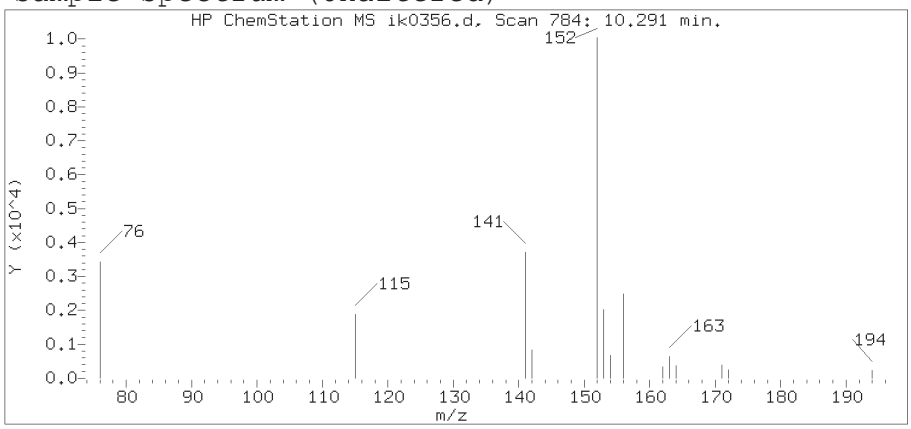


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

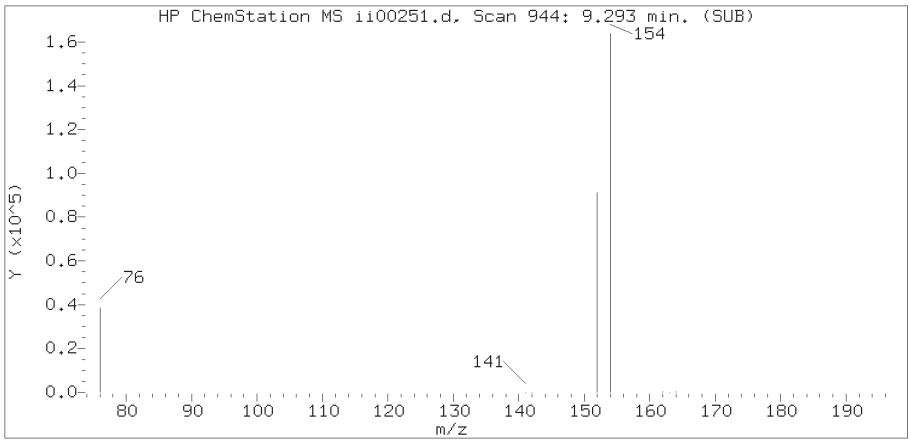
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

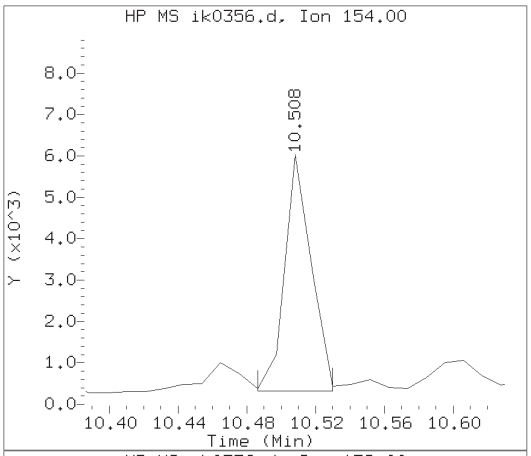
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 19
Compound Name	: Acenaphthylene
Scan Number	: 784
Retention Time (minutes)	: 10.291
Relative Retention Time	: 0.00102
Quant Ion	: 152.00
Area (flag)	: 12758
On-column Amount (ng/ul)	: 0.0444

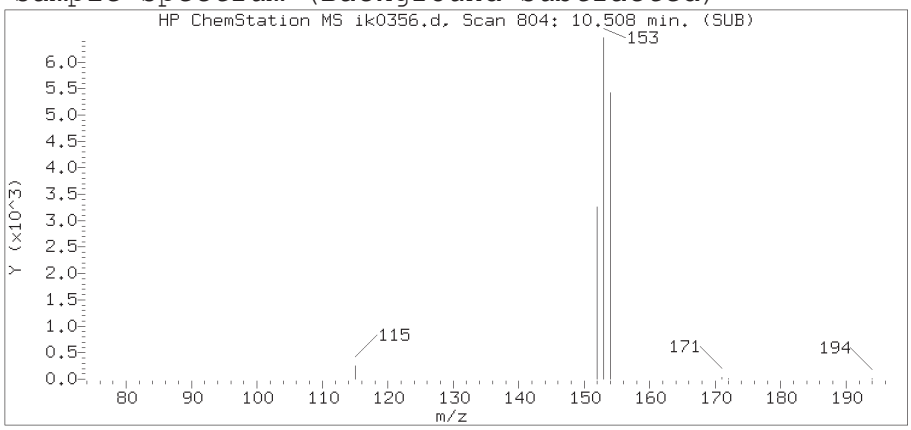
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

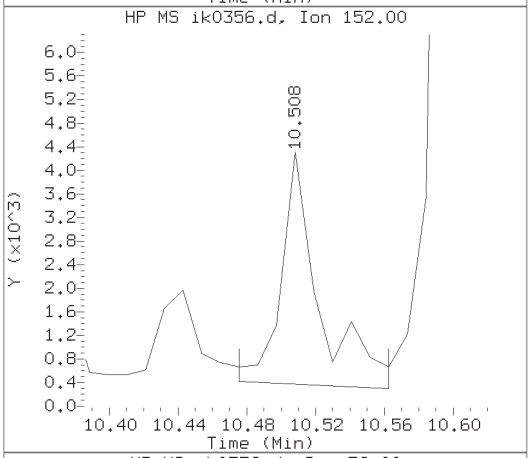
Reference Standard Spectrum for Acenaphthene



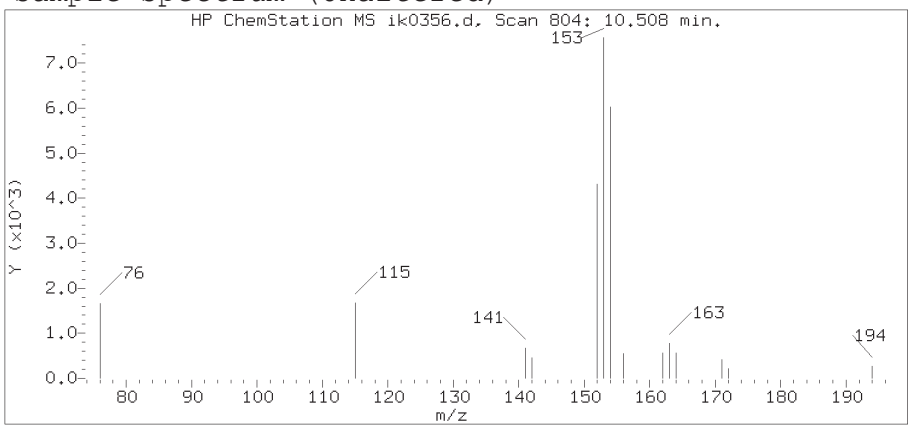


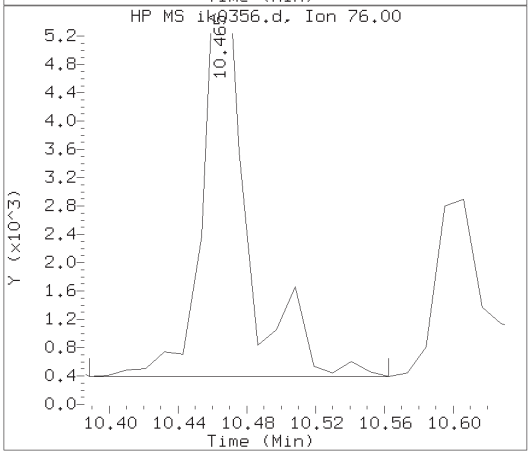
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

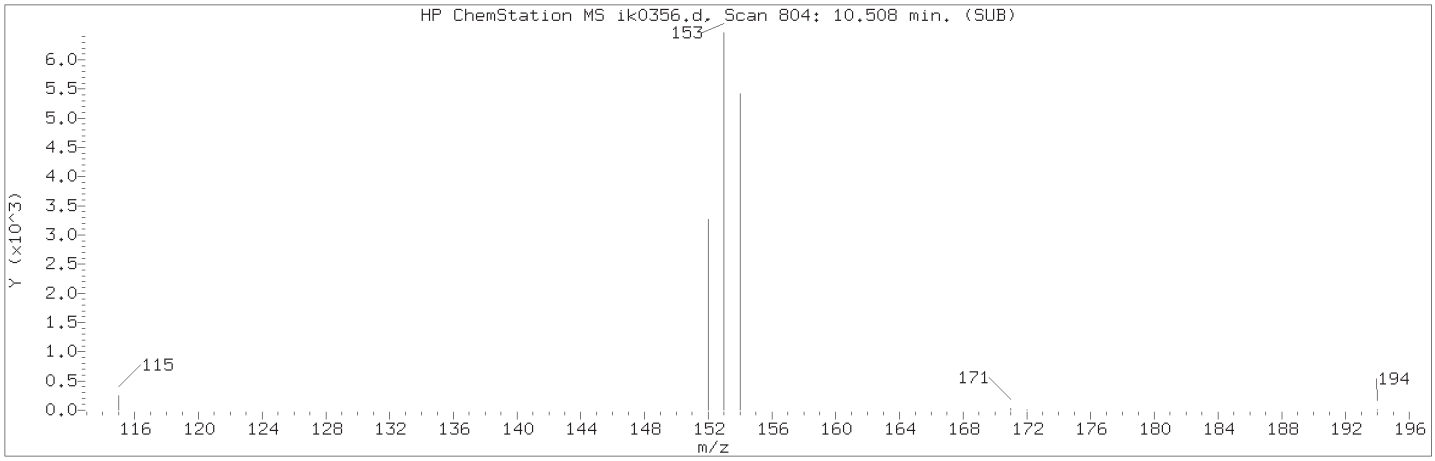
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL Lab Sample ID: 9867762DL

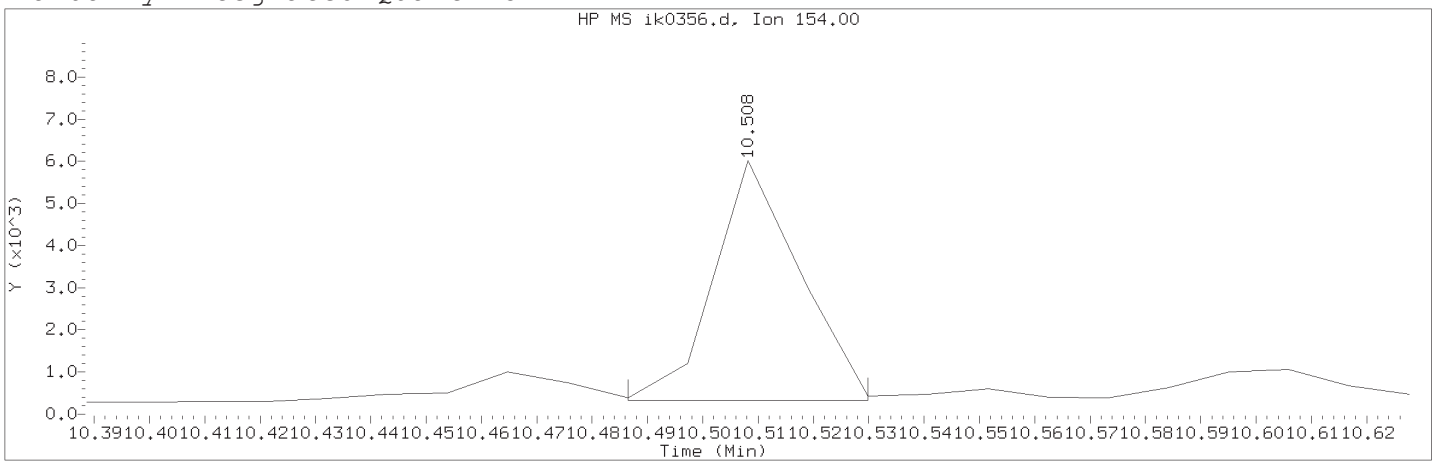
Compound Number	: 21
Compound Name	: Acenaphthene
Scan Number	: 804
Retention Time (minutes)	: 10.508
Relative Retention Time	: 0.00104
Quant Ion	: 154.00
Area (flag)	: 6135M
On-column Amount (ng/ul)	: 0.0325

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL Lab Sample ID: 9867762DL

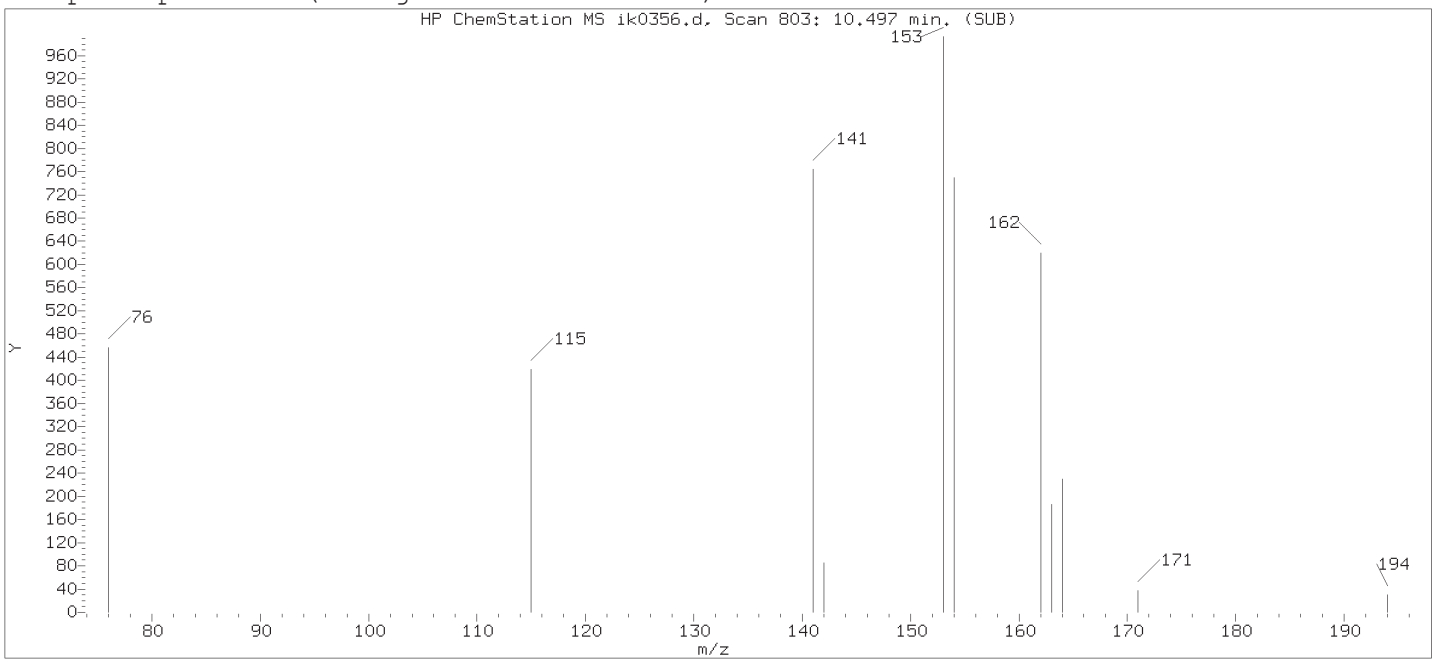
Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 804		
Retention Time (minutes)	: 10.508		
Quant Ion	: 154.00		
Area (flag)	: 6135M		
On-column Amount (ng/ul)	: 0.0325		
Integration start scan	: 801	Integration stop scan:	805
Y at integration start	: 324	Y at integration end:	324

Reason for manual integration: improper integration

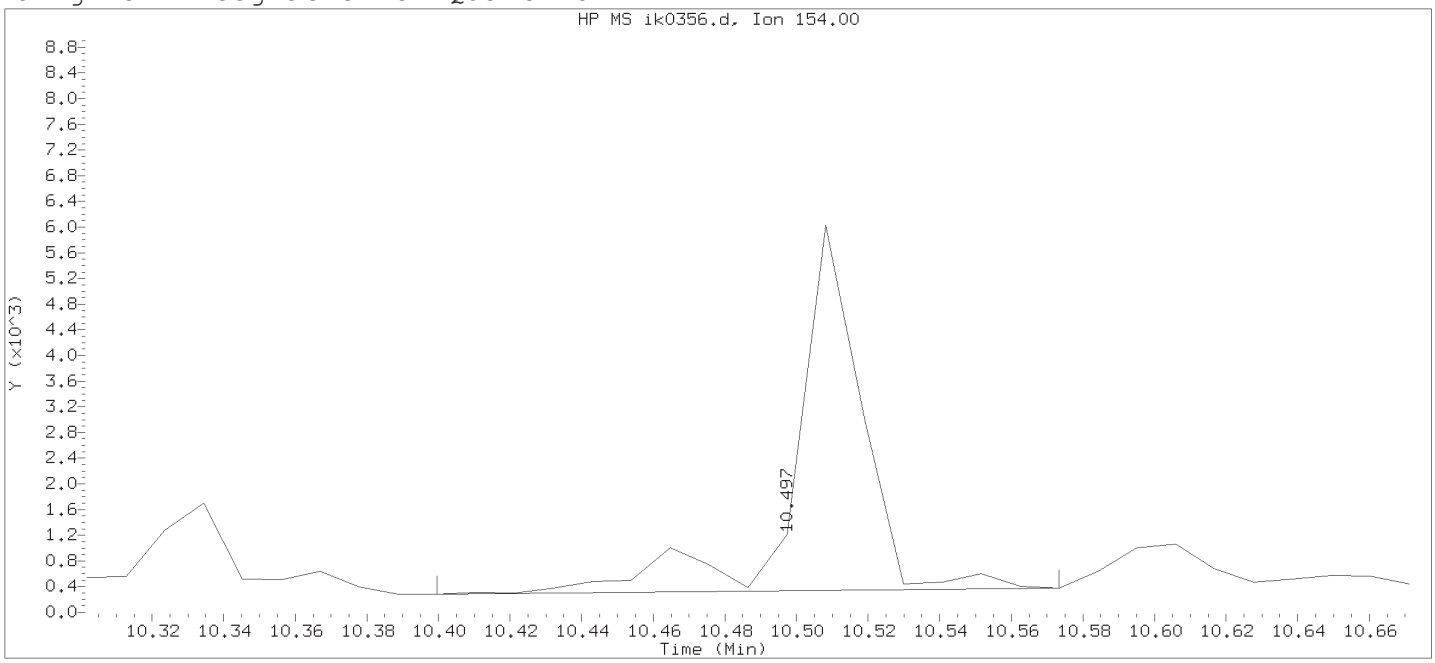
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

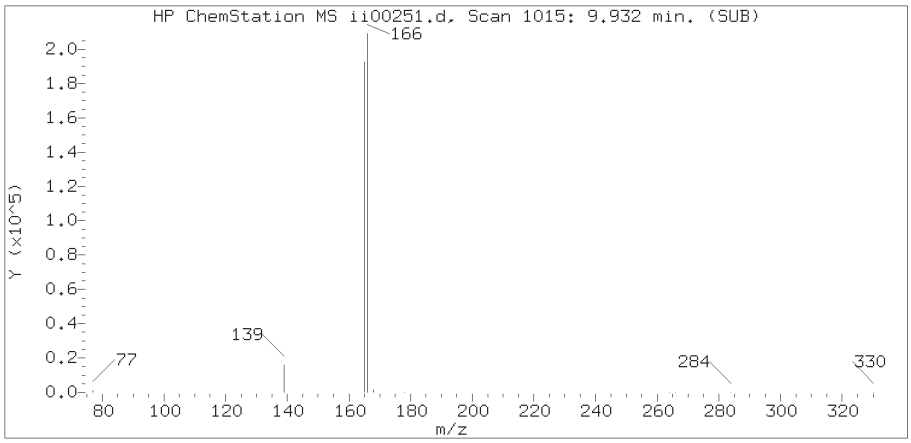
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 08:10
Date, time and analyst ID of latest file update: 08-Nov-2018 10:30 Automation

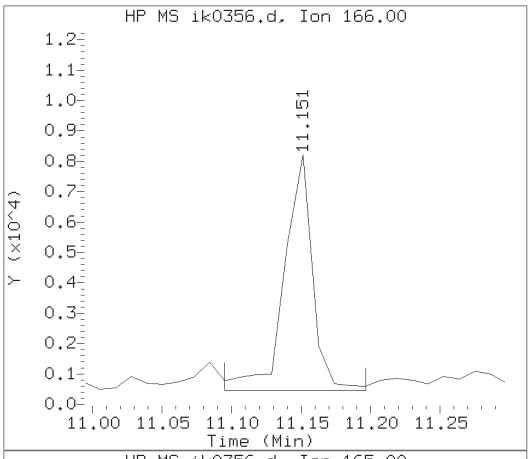
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 803		
Retention Time (minutes)	: 10.497		
Quant Ion	: 154.00		
Area	: 7347		
On-column Amount (ng/ul)	: 0.0389		
Integration start scan	: 793	Integration stop scan:	809
Y at integration start	: 280	Y at integration end:	380

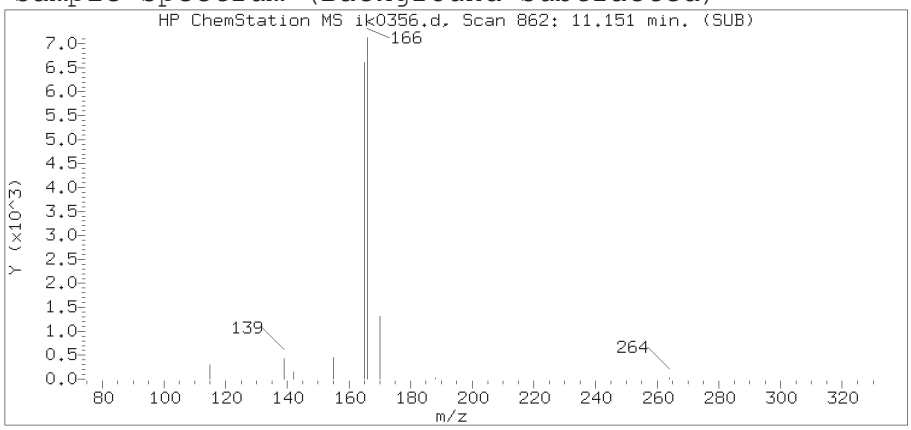
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature used [illegible]

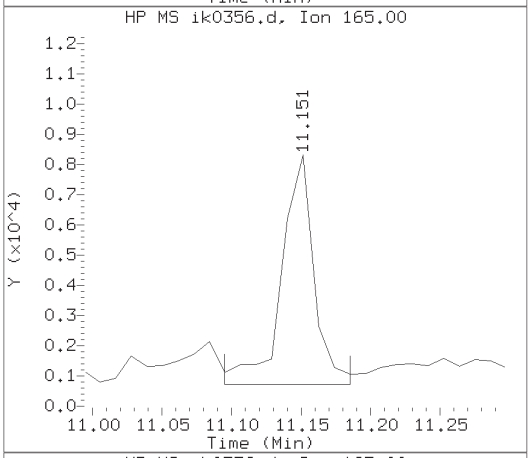
Reference Standard Spectrum for Fluorene



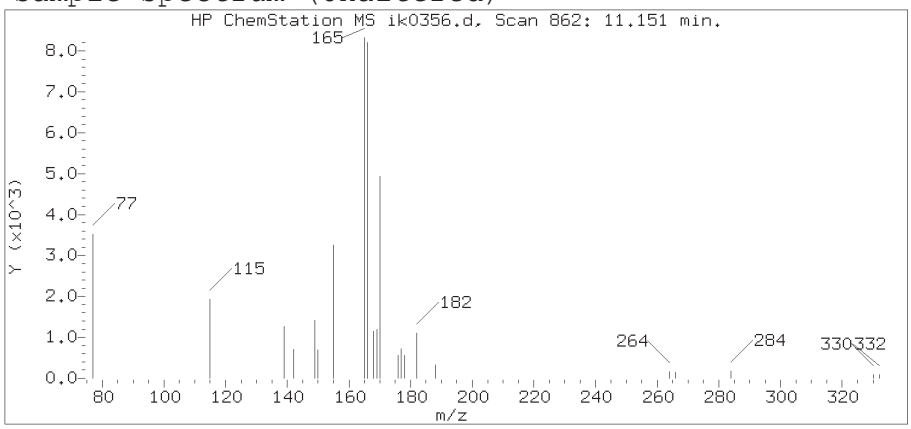


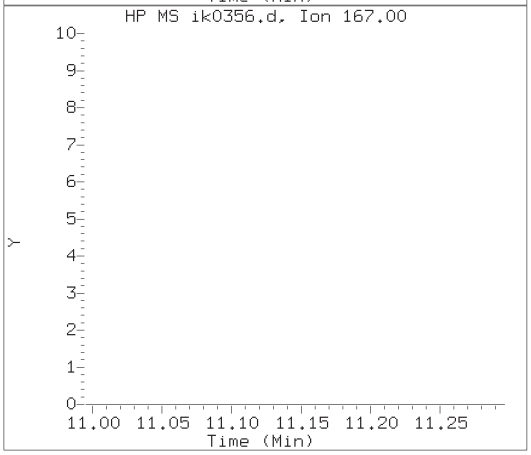
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

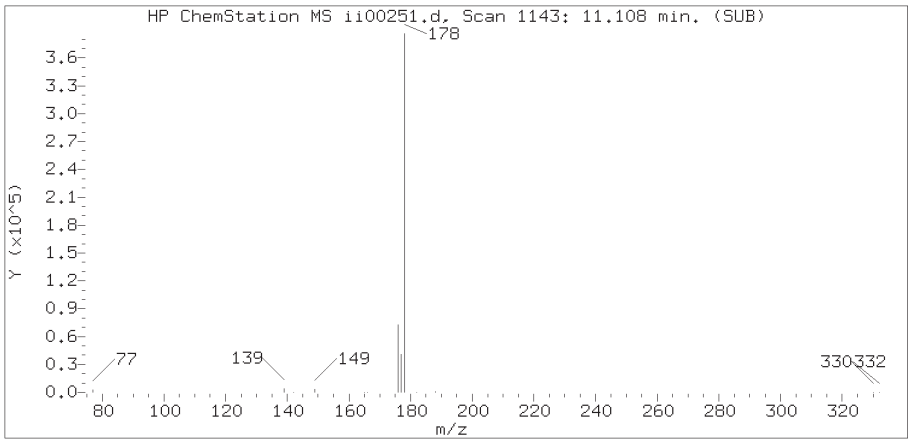
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

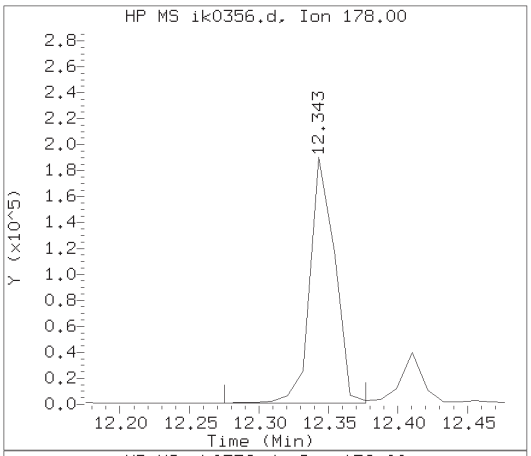
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 26
Compound Name	: Fluorene
Scan Number	: 862
Retention Time (minutes)	: 11.151
Relative Retention Time	: 0.00001
Quant Ion	: 166.00
Area (flag)	: 10920
On-column Amount (ng/ul)	: 0.0469

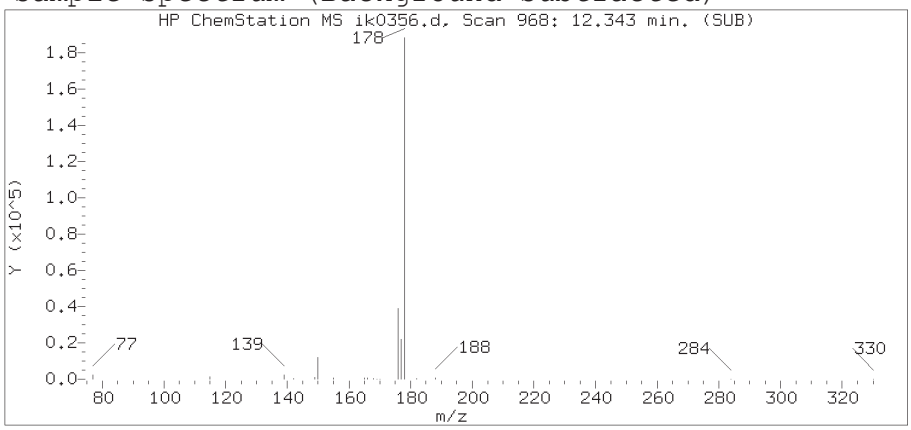
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

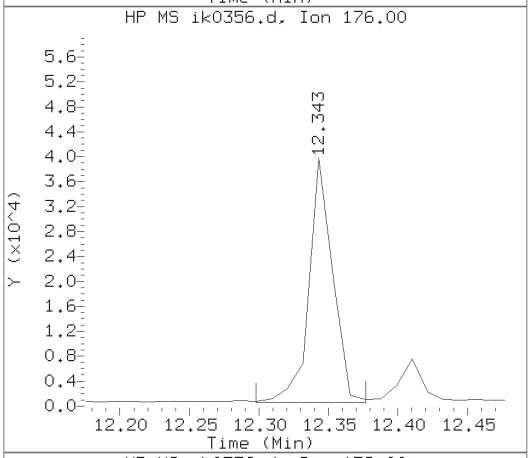
Reference Standard Spectrum for Phenanthrene



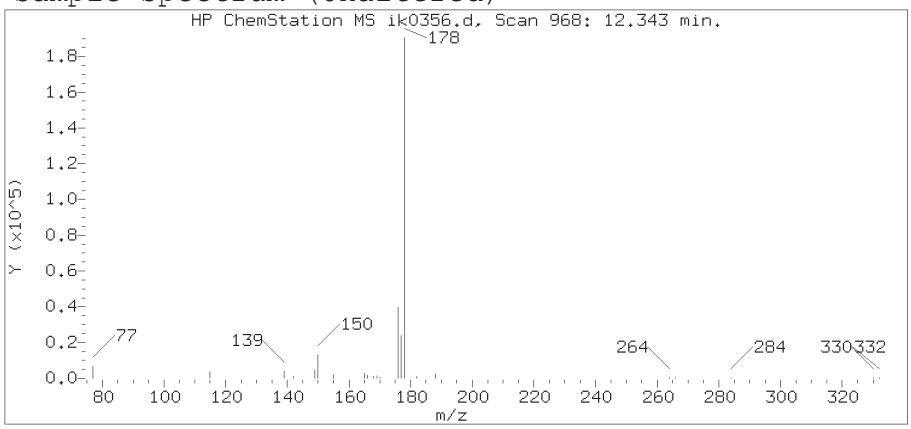


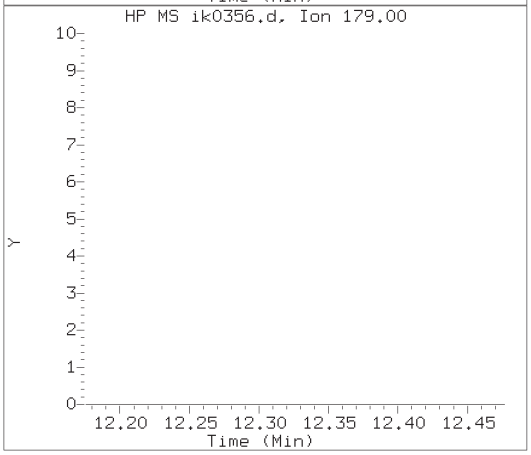
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

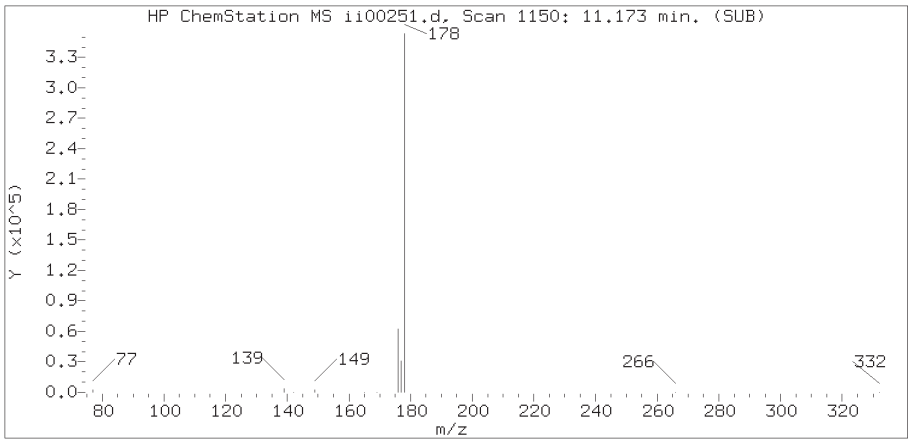
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

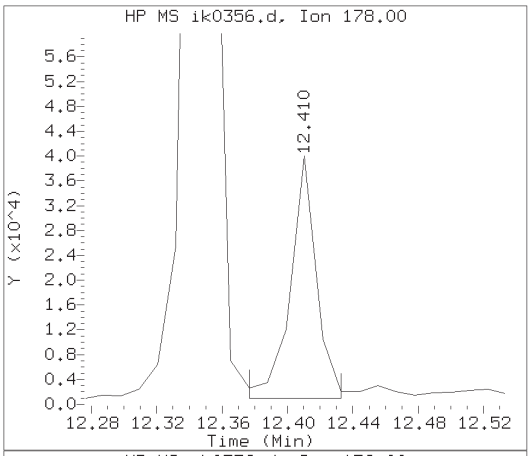
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 32
Compound Name	: Phenanthrene
Scan Number	: 968
Retention Time (minutes)	: 12.343
Relative Retention Time	: 0.00091
Quant Ion	: 178.00
Area (flag)	: 233277
On-column Amount (ng/ul)	: 0.6497

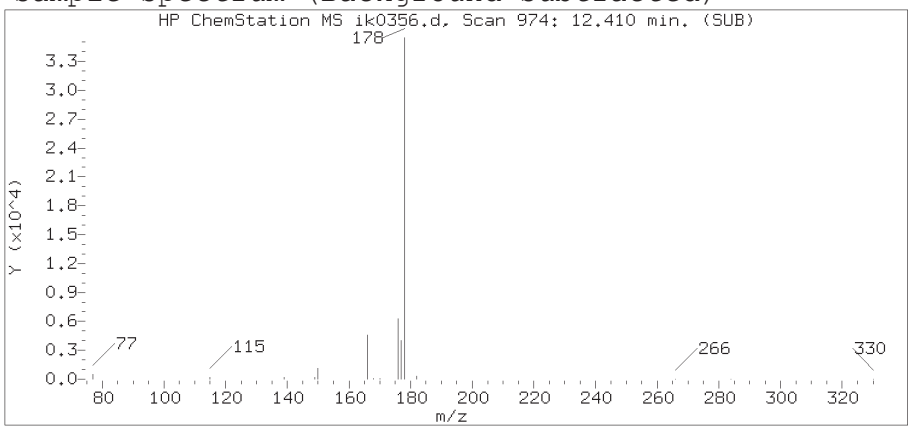
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

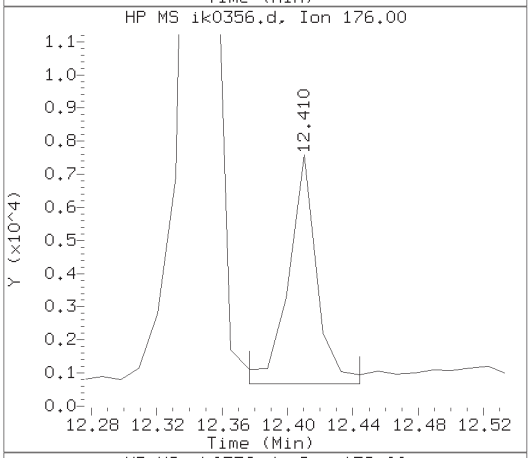
Reference Standard Spectrum for Anthracene



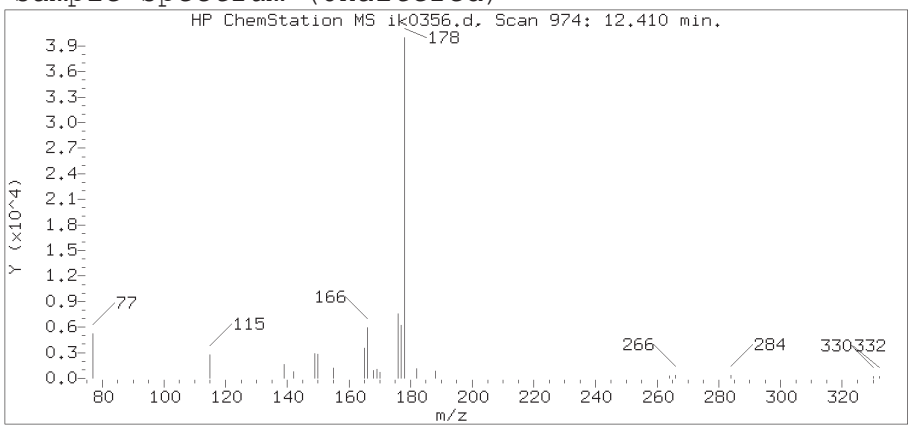


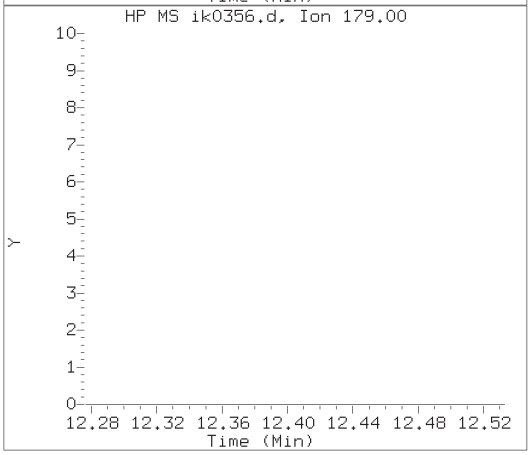
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

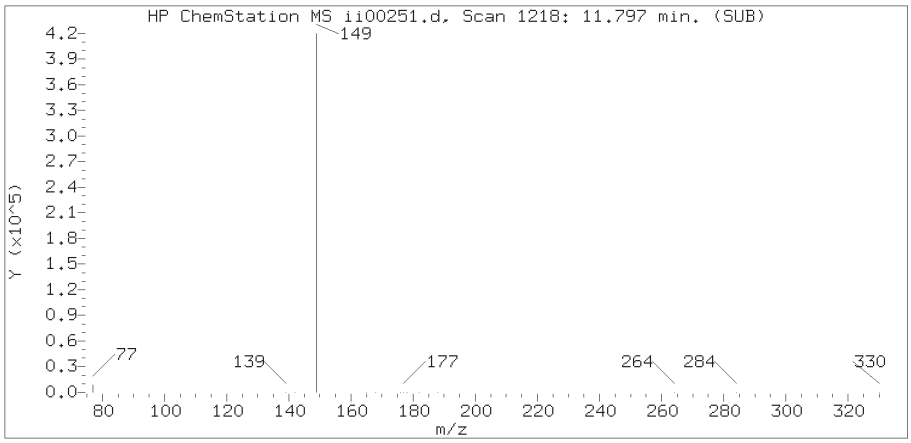
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

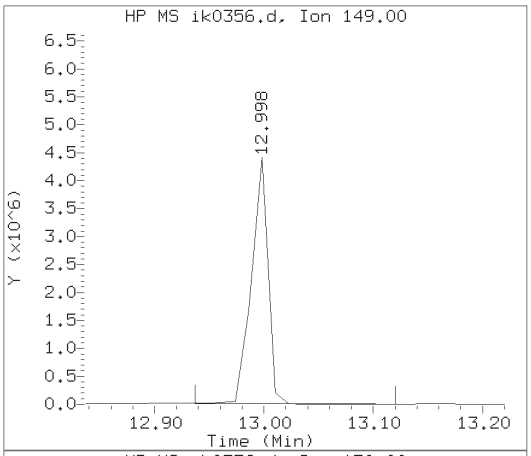
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 33
Compound Name	: Anthracene
Scan Number	: 974
Retention Time (minutes)	: 12.410
Relative Retention Time	: 0.00092
Quant Ion	: 178.00
Area (flag)	: 42892
On-column Amount (ng/ul)	: 0.1193

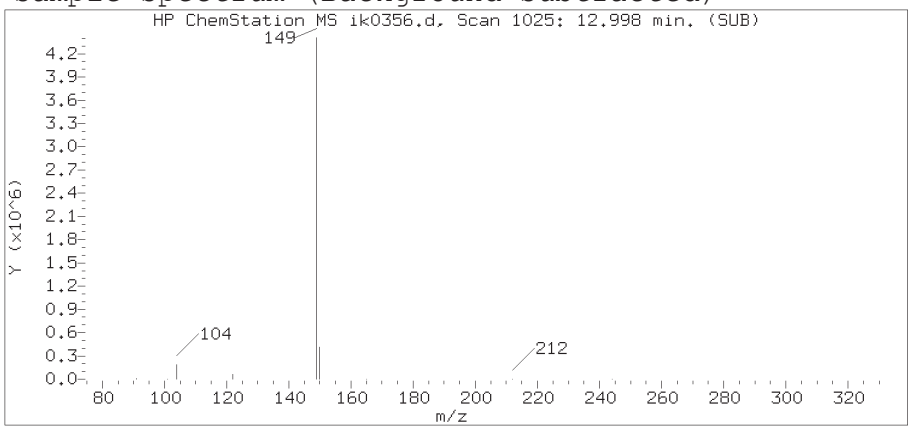
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

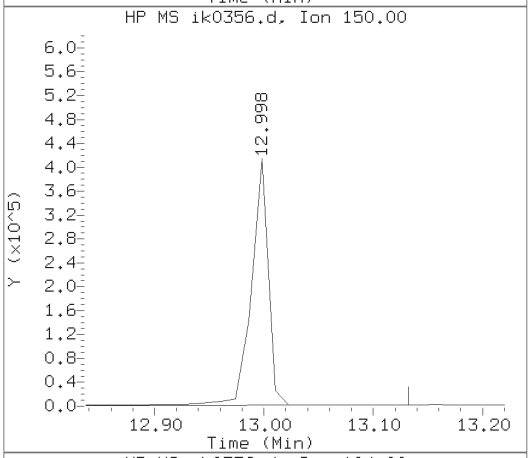
Reference Standard Spectrum for Di-n-butylphthalate



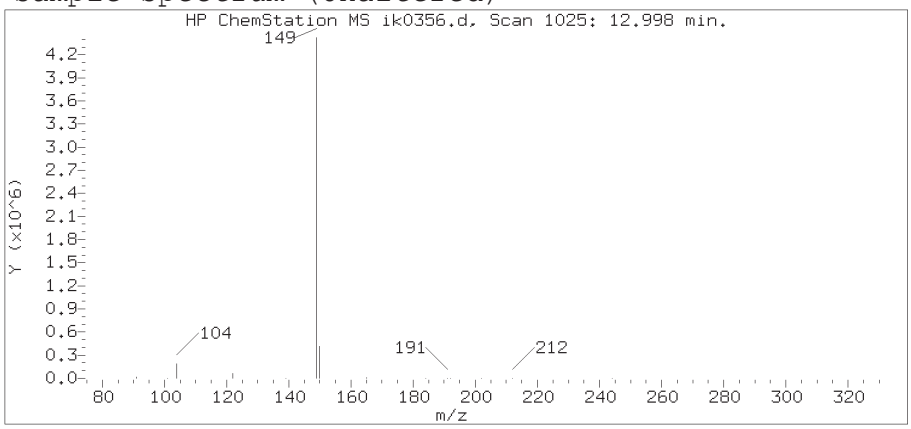


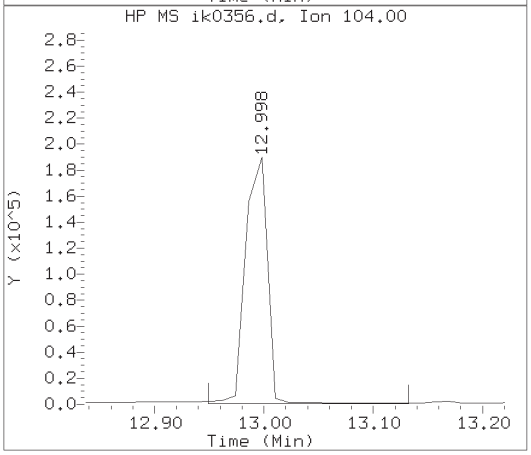
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

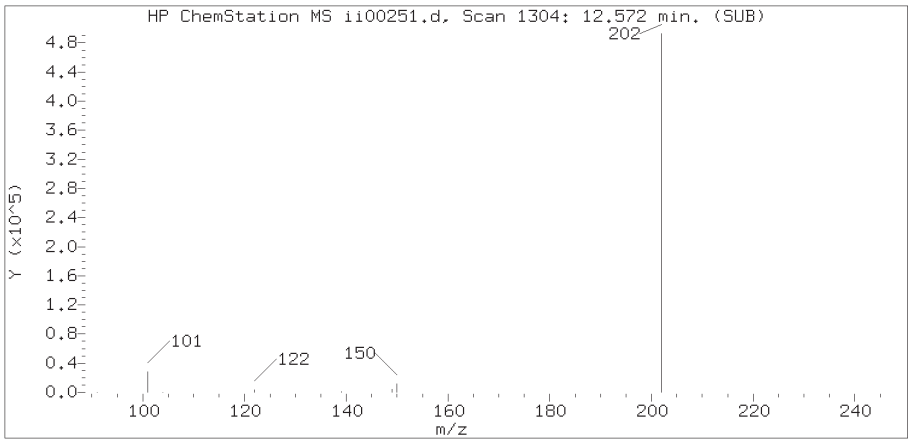
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

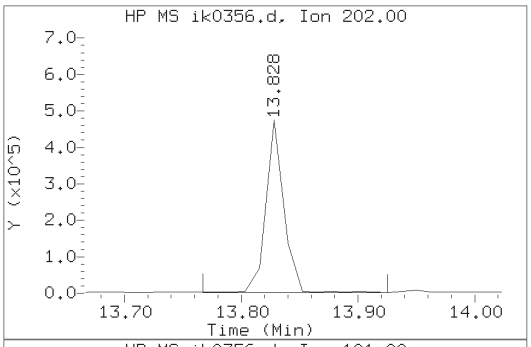
Sample Name: T1003DL Lab Sample ID: 9867762DL

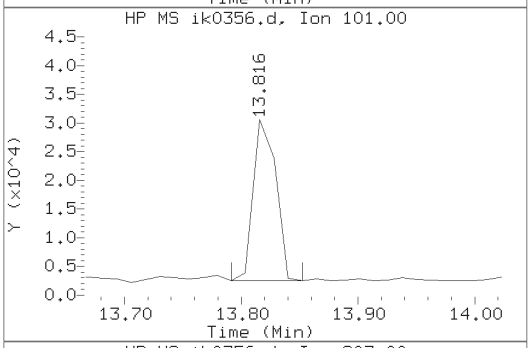
Compound Number	: 35
Compound Name	: Di-n-butylphthalate
Scan Number	: 1025
Retention Time (minutes)	: 12.998
Relative Retention Time	: 0.00004
Quant Ion	: 149.00
Area (flag)	: 4641613
On-column Amount (ng/ul)	: 13.5115

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

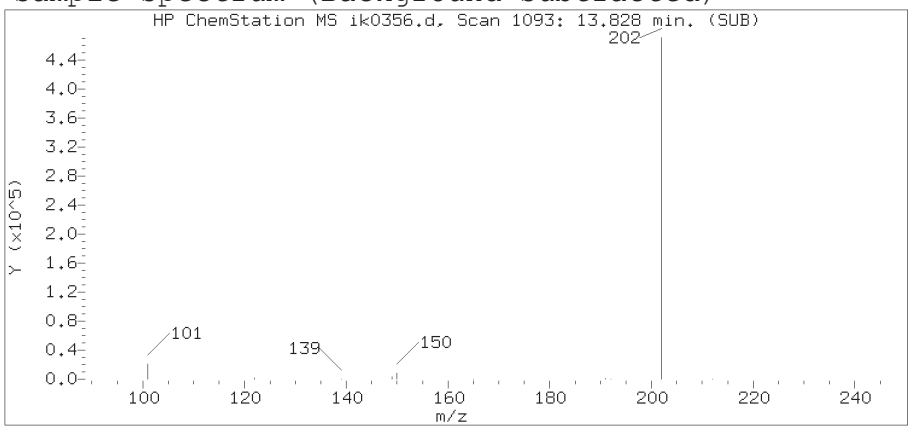
Reference Standard Spectrum for Fluoranthene

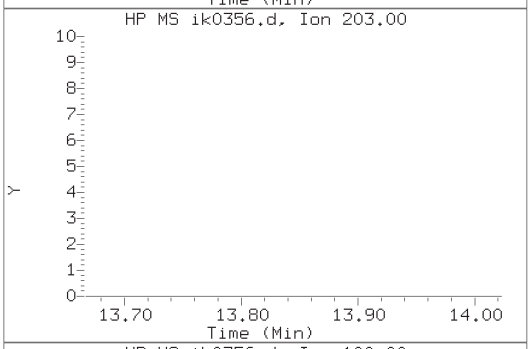




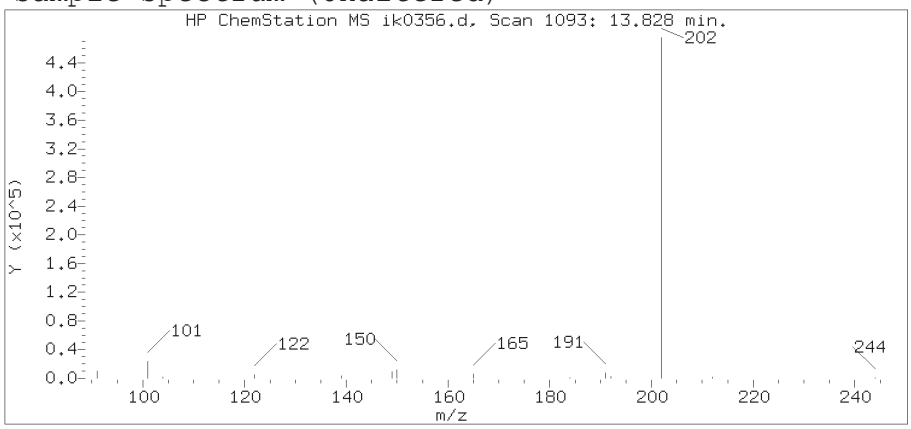


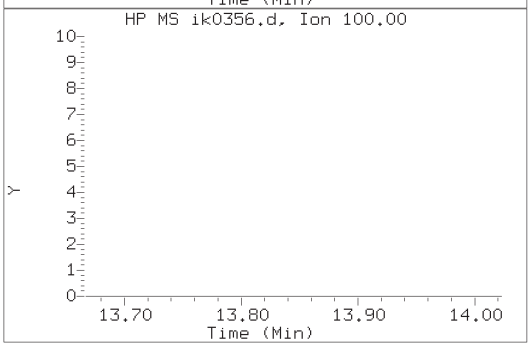
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

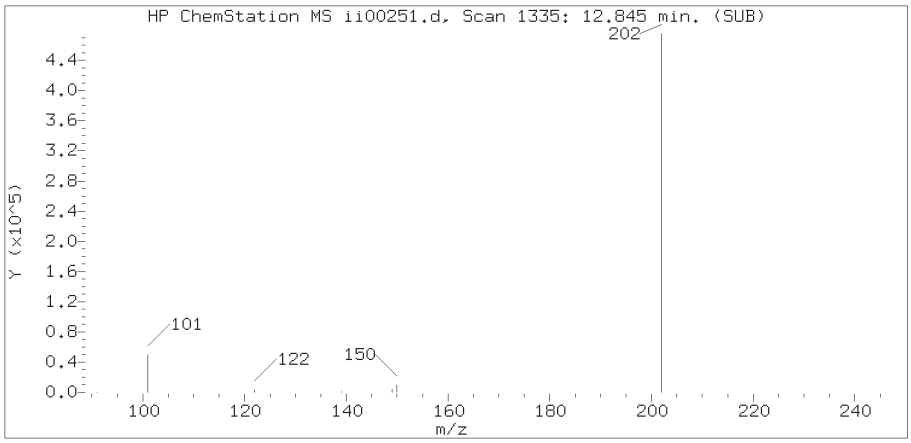
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL Lab Sample ID: 9867762DL

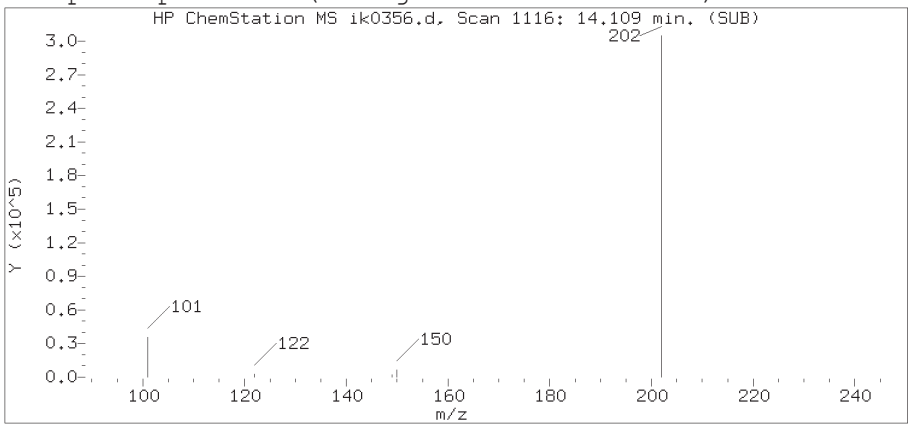
Compound Number	: 37
Compound Name	: Fluoranthene
Scan Number	: 1093
Retention Time (minutes)	: 13.828
Relative Retention Time	: 0.00108
Quant Ion	: 202.00
Area (flag)	: 507193
On-column Amount (ng/ul)	: 1.1346

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

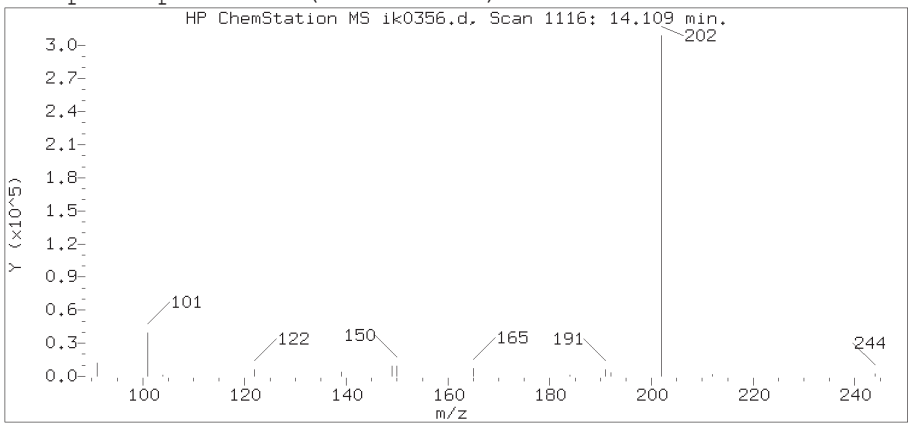
Reference Standard Spectrum for Pyrene

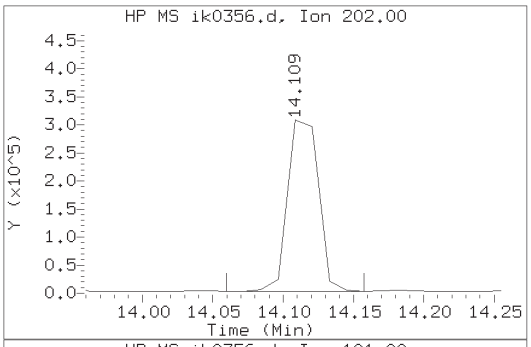


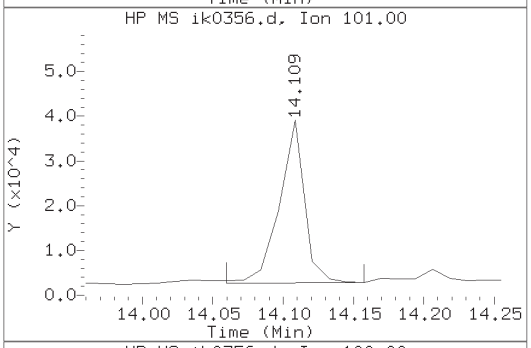
Sample Spectrum (Background Subtracted)

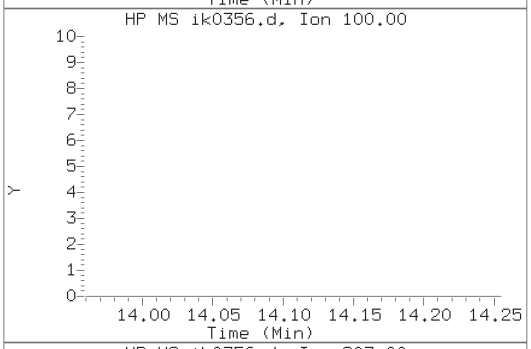


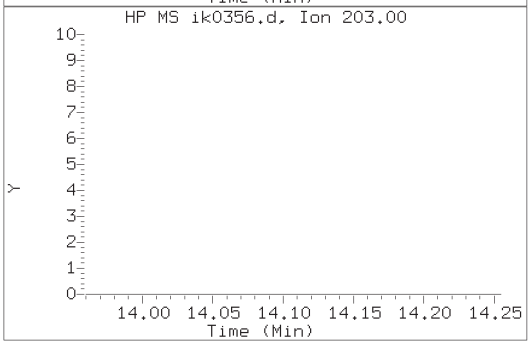
Sample Spectrum (Unaltered)











Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

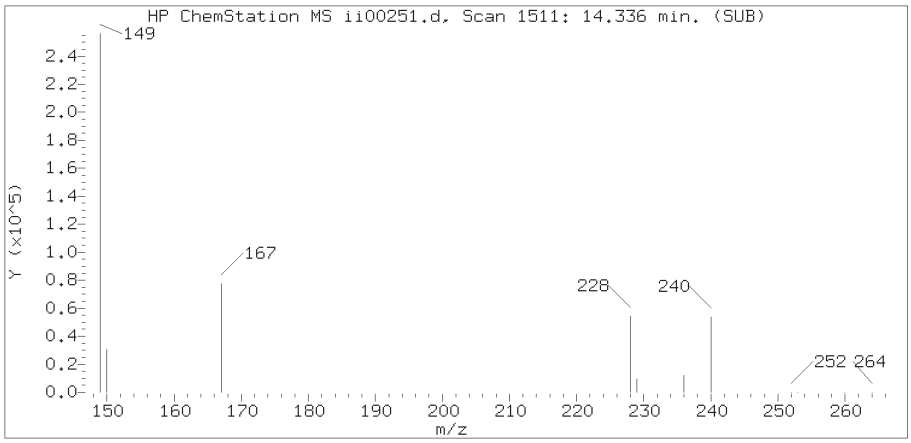
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

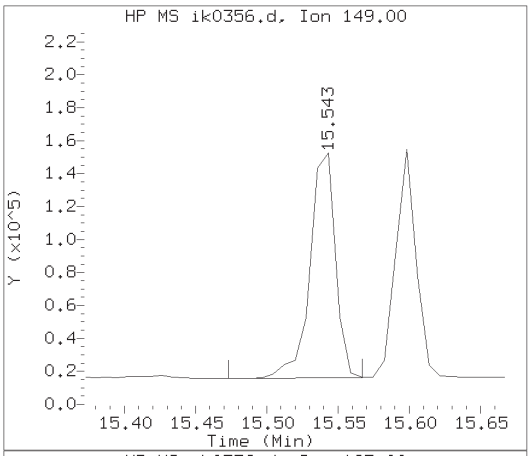
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 39
Compound Name	: Pyrene
Scan Number	: 1116
Retention Time (minutes)	: 14.109
Relative Retention Time	: 0.00028
Quant Ion	: 202.00
Area (flag)	: 474186
On-column Amount (ng/ul)	: 0.9132

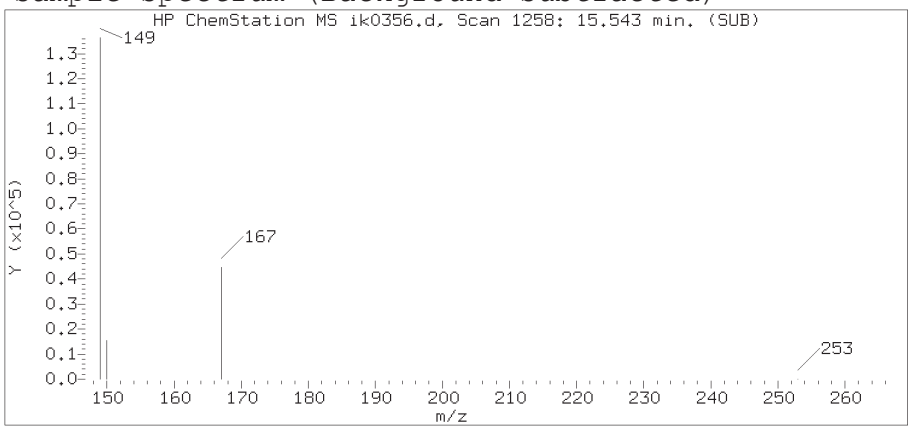
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

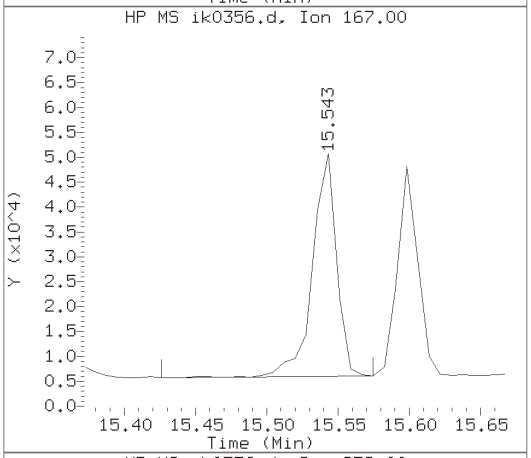
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



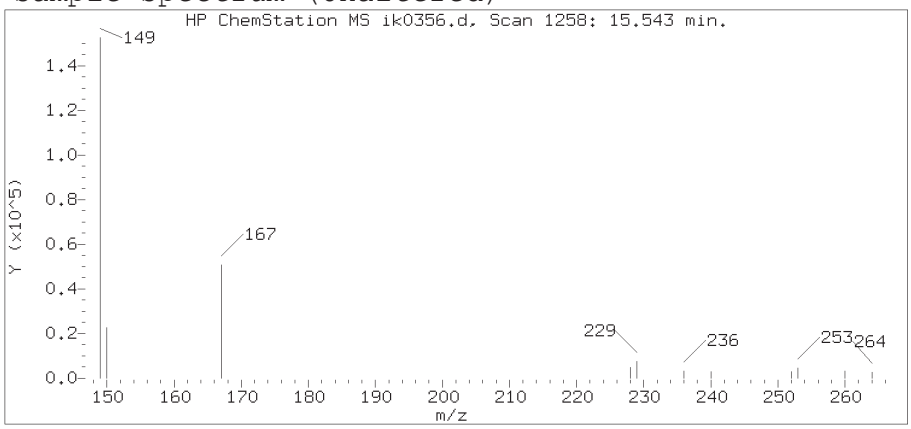


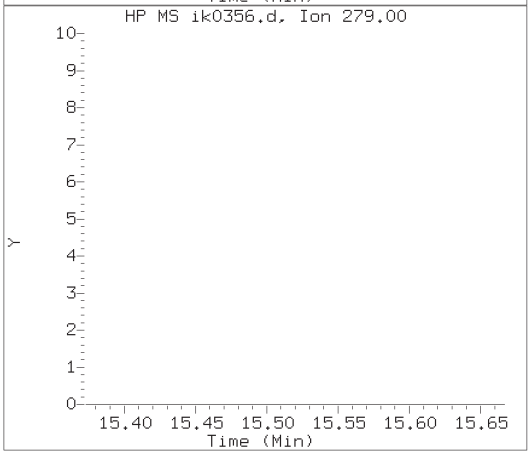
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

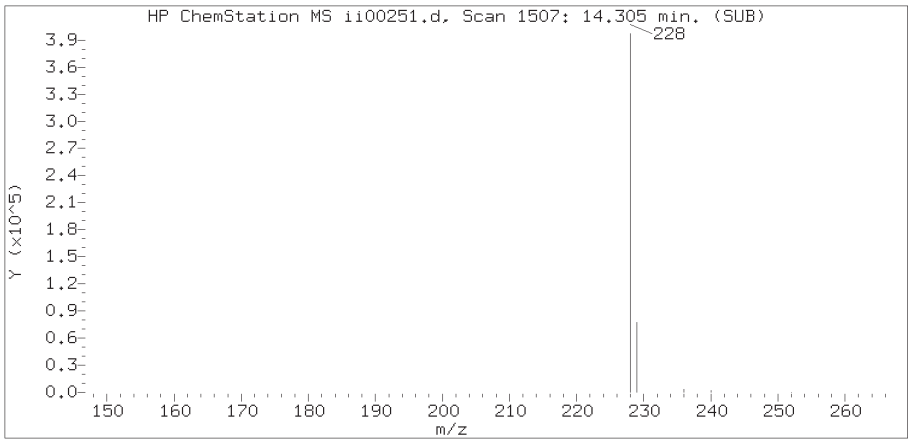
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

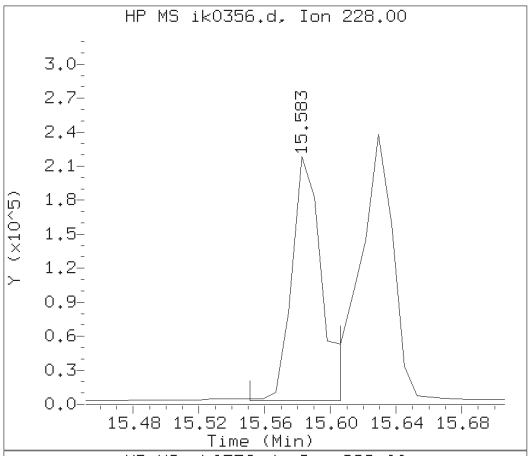
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 41
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1258
Retention Time (minutes)	: 15.543
Relative Retention Time	:-0.00050
Quant Ion	: 149.00
Area (flag)	: 170302
On-column Amount (ng/ul)	: 0.6902

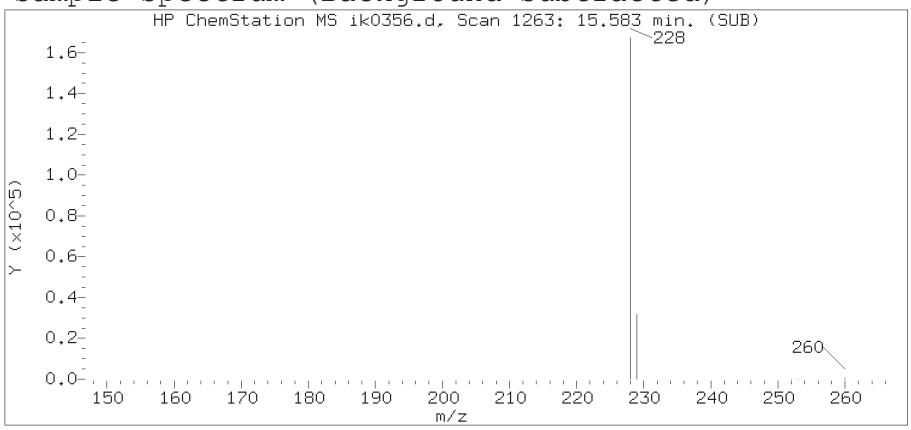
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

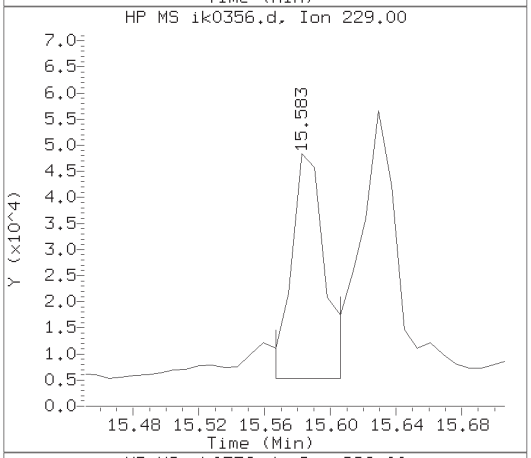
Reference Standard Spectrum for Benzo(a)anthracene



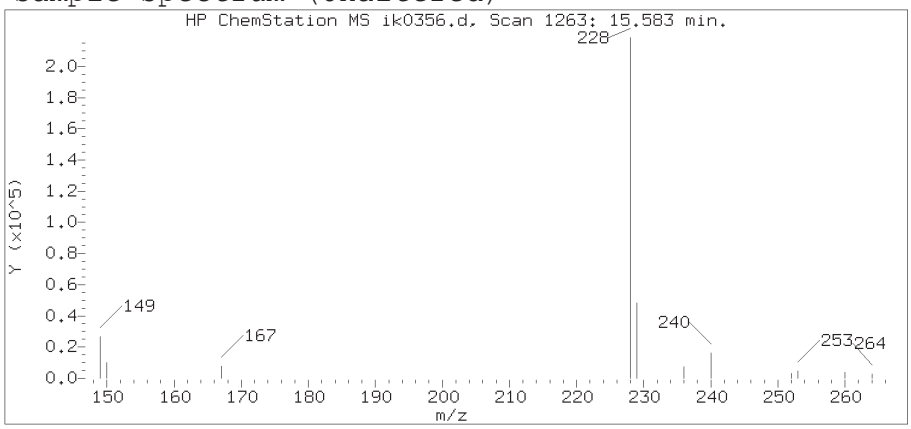


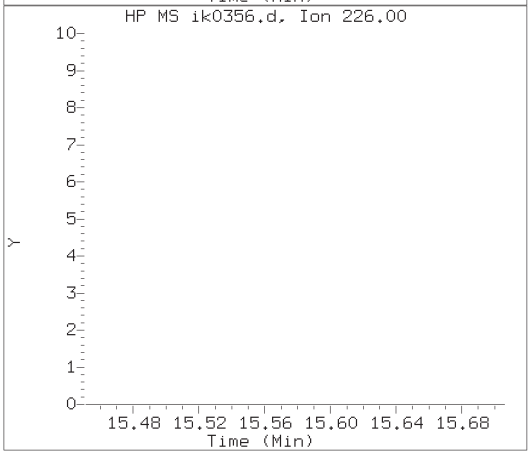
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

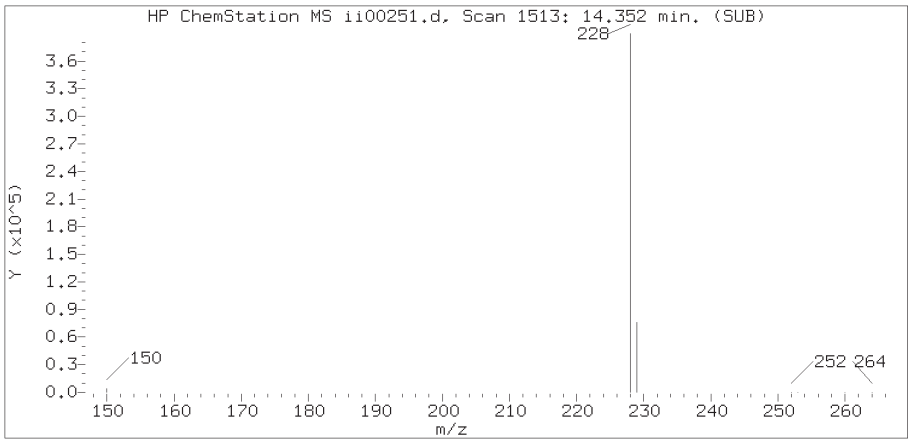
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

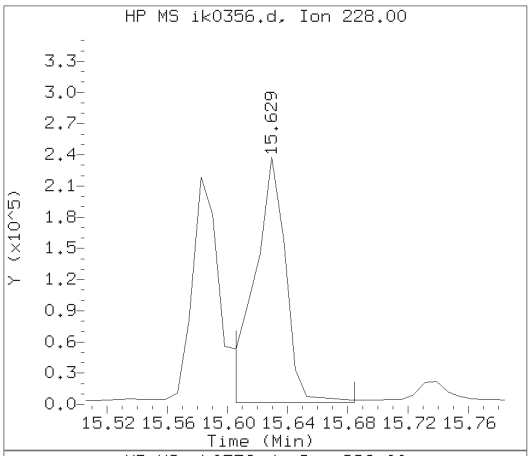
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 42
Compound Name	: Benzo(a)anthracene
Scan Number	: 1263
Retention Time (minutes)	: 15.583
Relative Retention Time	:-0.00000
Quant Ion	: 228.00
Area (flag)	: 263527
On-column Amount (ng/ul)	: 0.5460

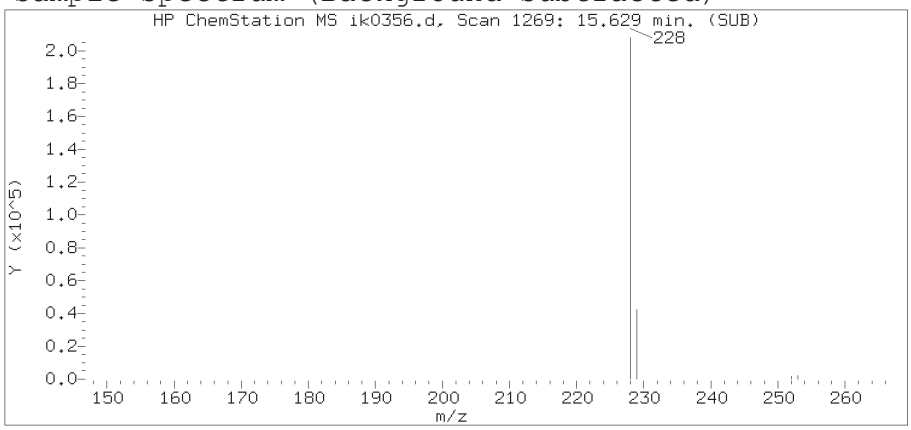
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

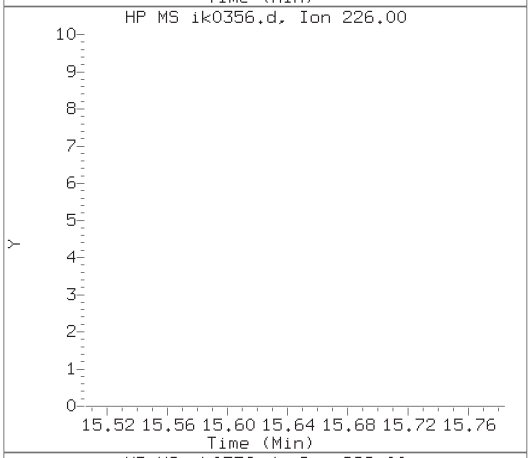
Reference Standard Spectrum for Chrysene



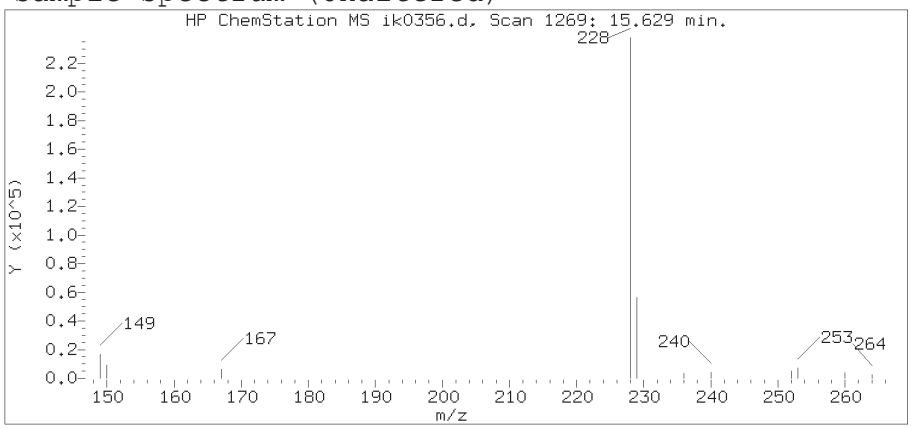


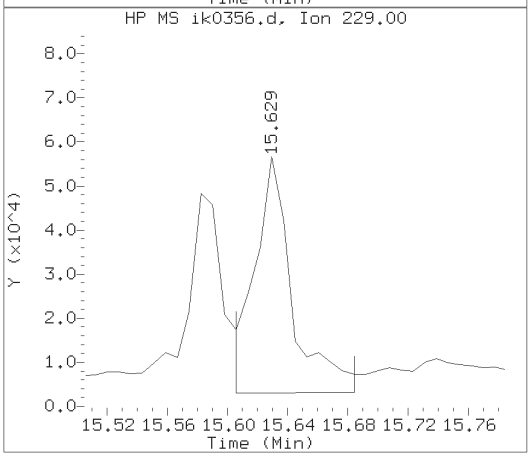
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

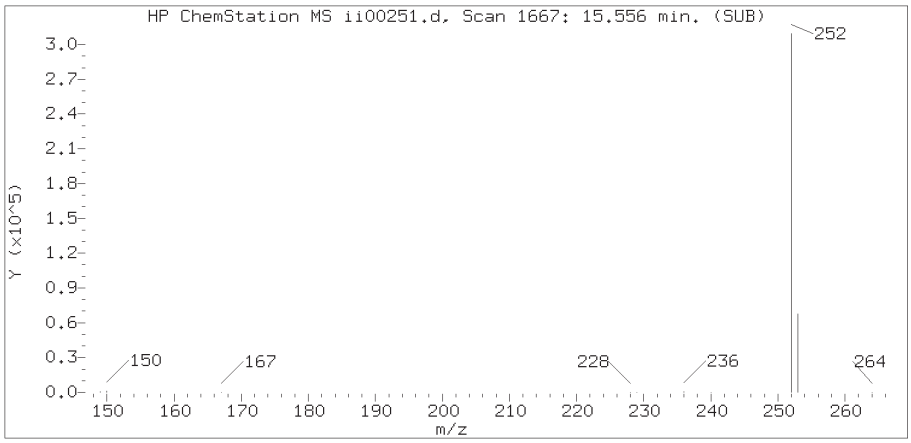
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

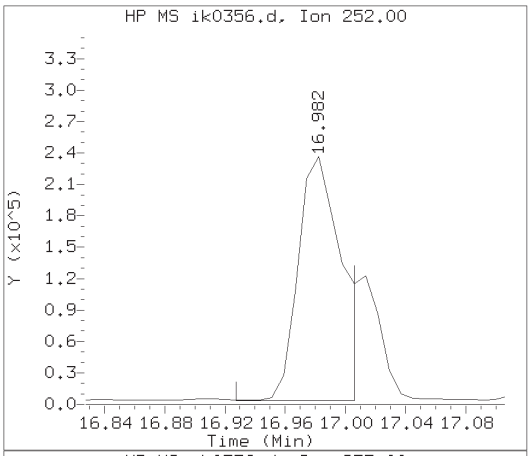
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 44
Compound Name	: Chrysene
Scan Number	: 1269
Retention Time (minutes)	: 15.629
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 342976
On-column Amount (ng/ul)	: 0.7440

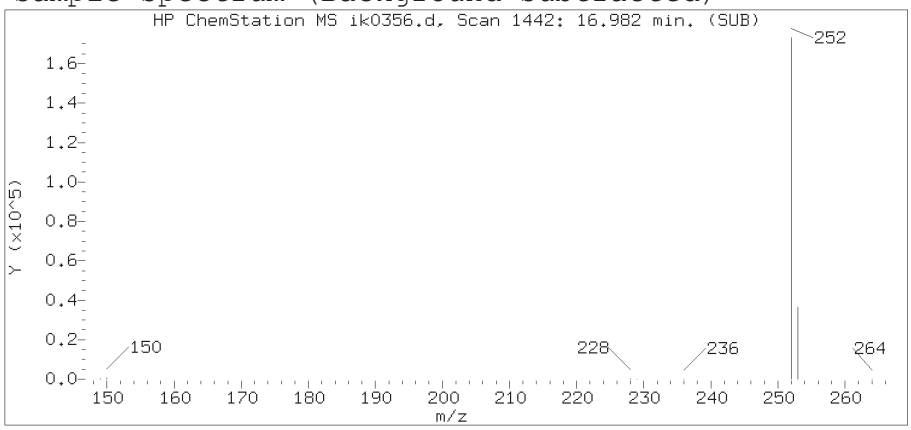
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

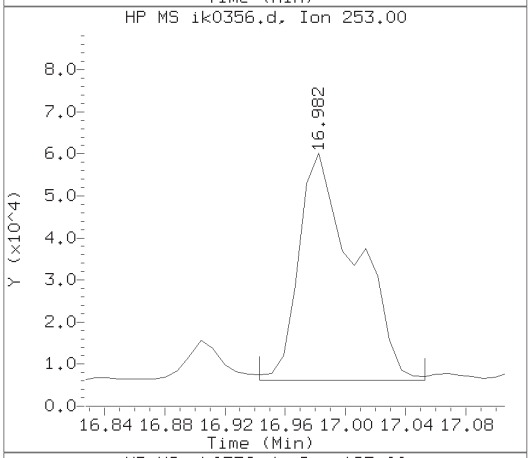
Reference Standard Spectrum for Benzo(b)fluoranthene



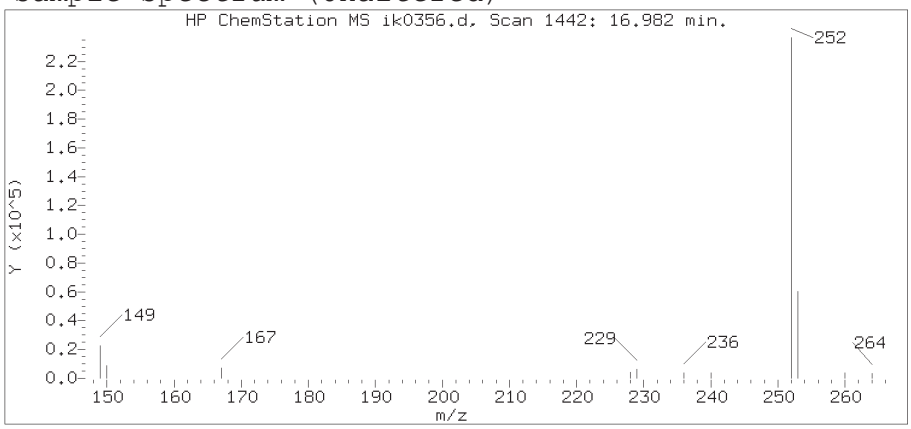


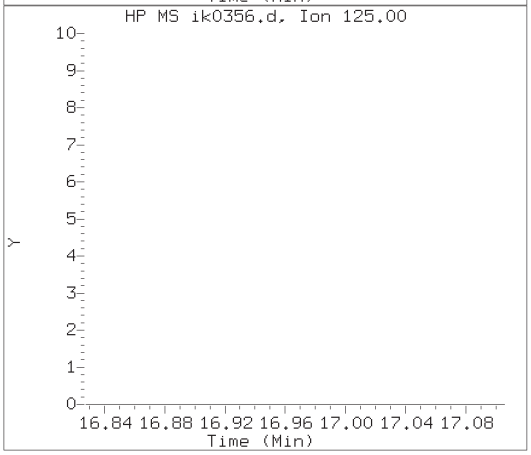
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

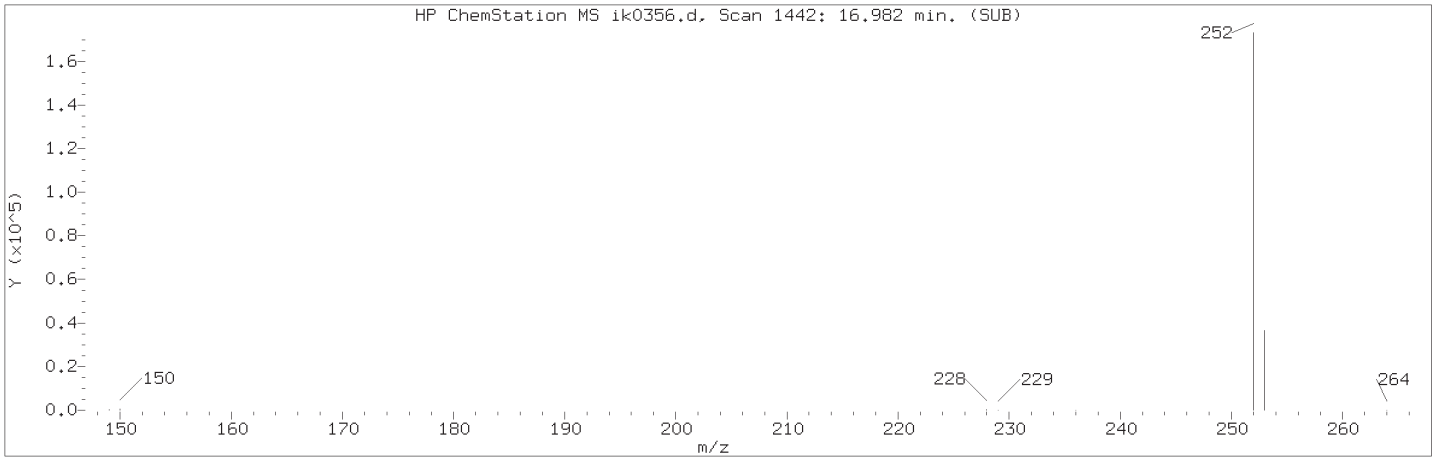
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL Lab Sample ID: 9867762DL

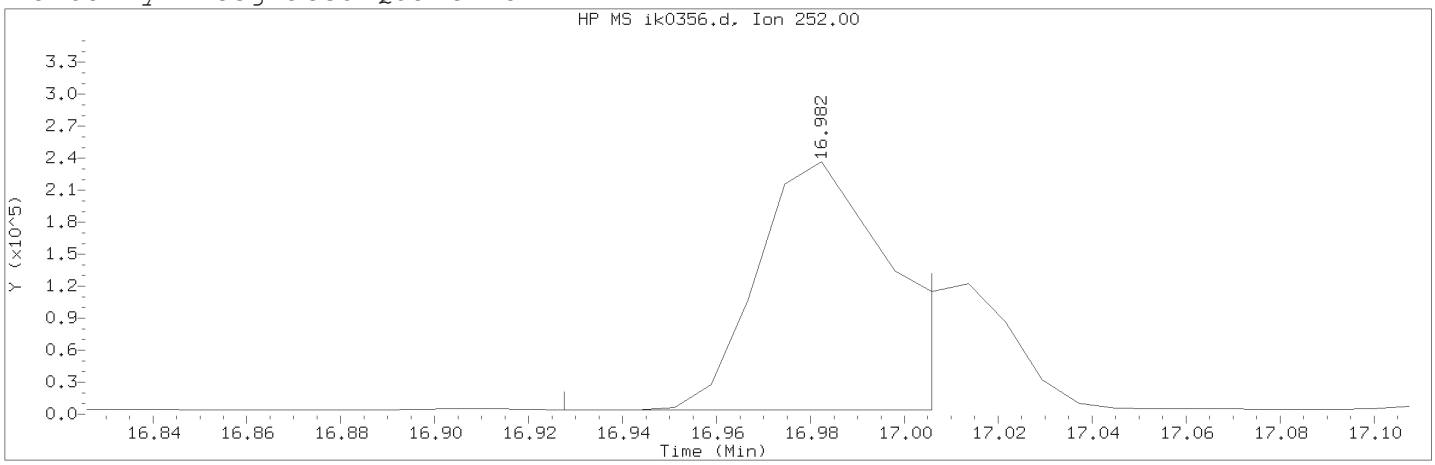
Compound Number	: 46
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1442
Retention Time (minutes)	: 16.982
Relative Retention Time	:-0.00003
Quant Ion	: 252.00
Area (flag)	: 468788M
On-column Amount (ng/ul)	: 1.1062

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL Lab Sample ID: 9867762DL

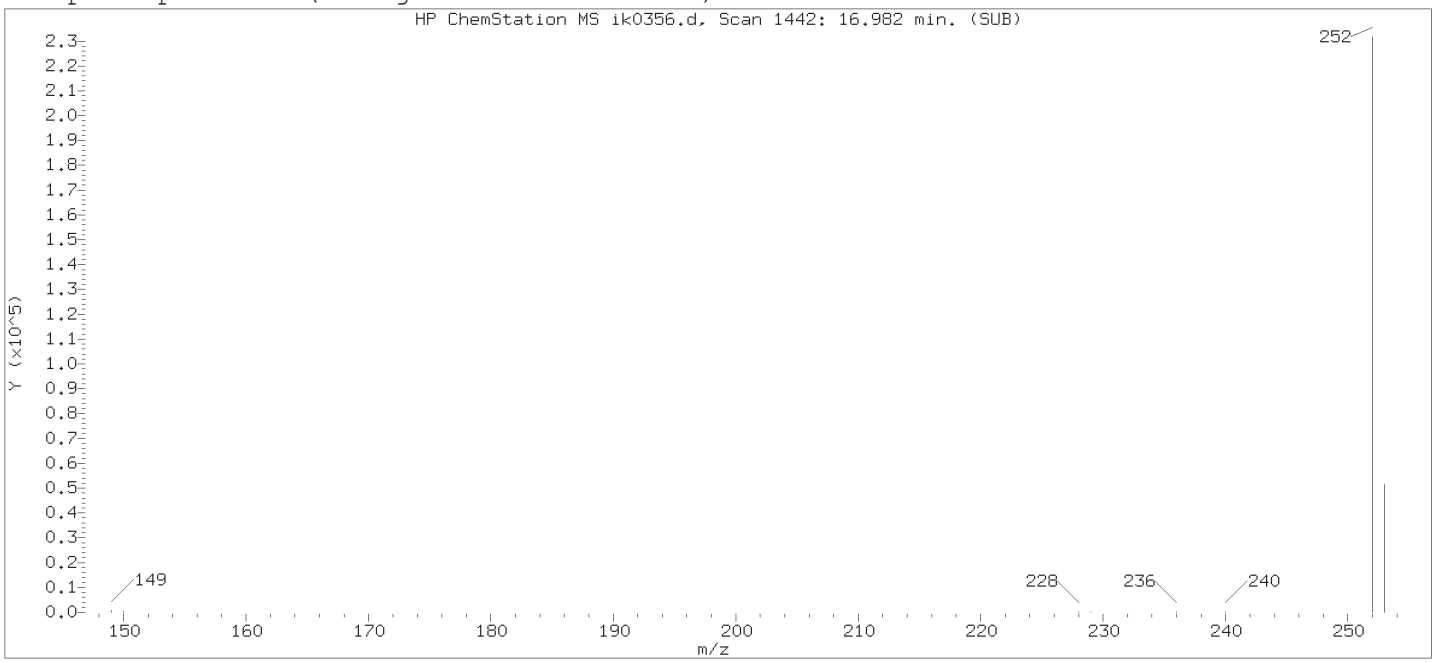
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1442
Retention Time (minutes) : 16.982
Quant Ion : 252.00
Area (flag) : 468788M
On-column Amount (ng/ul) : 1.1062
Integration start scan : 1434 Integration stop scan: 1444
Y at integration start : 3708 Y at integration end: 3726

Reason for manual integration: improper integration

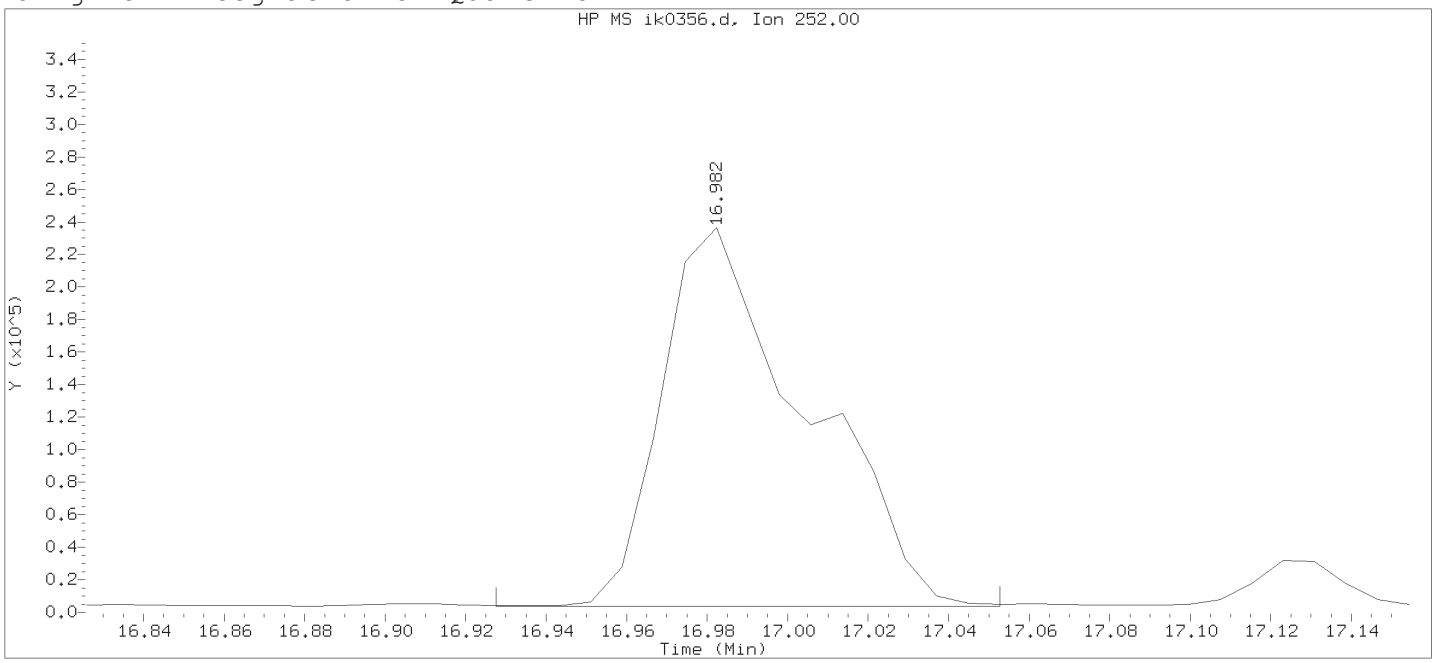
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

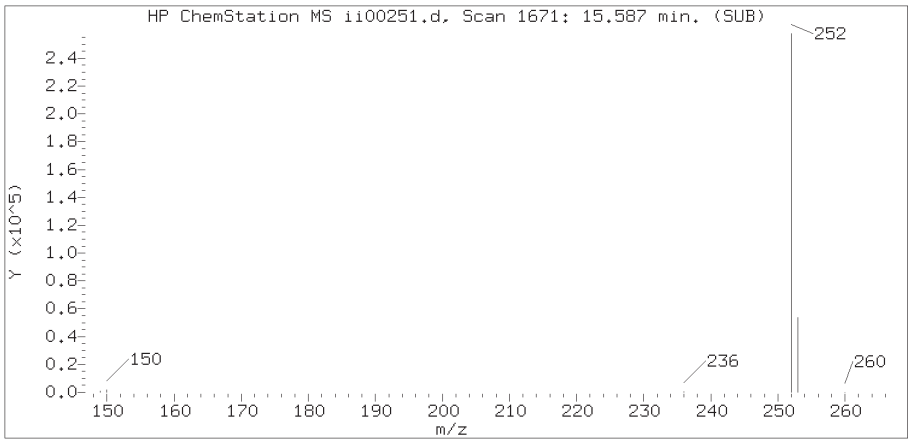
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 08:10
Date, time and analyst ID of latest file update: 08-Nov-2018 10:30 Automation

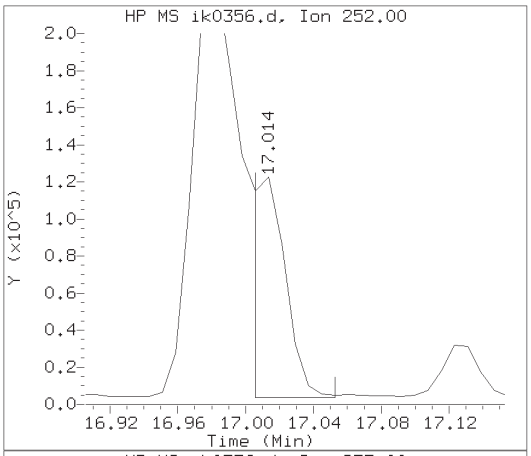
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 46		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1442		
Retention Time (minutes)	: 16.982		
Quant Ion	: 252.00		
Area	: 580778		
On-column Amount (ng/ul)	: 1.3704		
Integration start scan	: 1434	Integration stop scan:	1450
Y at integration start	: 3708	Y at integration end:	3738

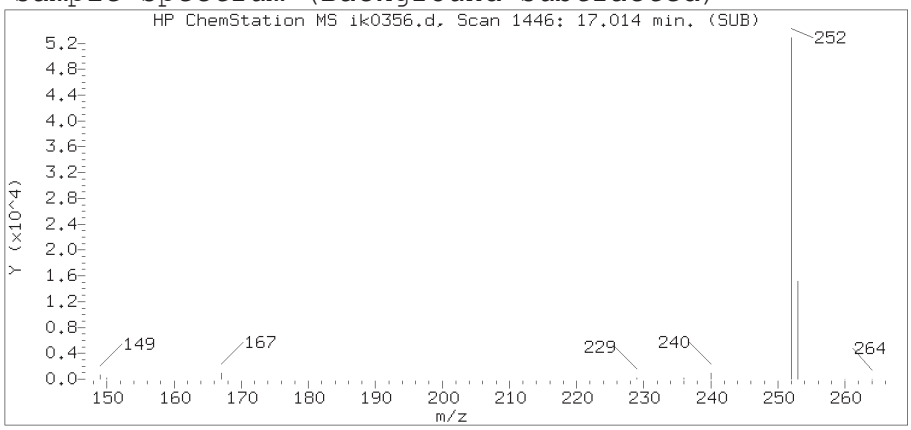
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature used [illegible]

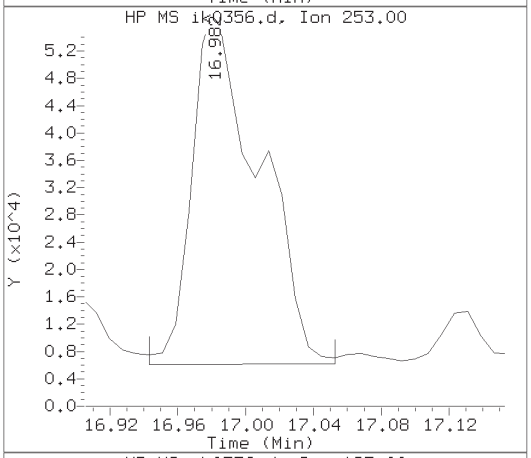
Reference Standard Spectrum for Benzo(k)fluoranthene



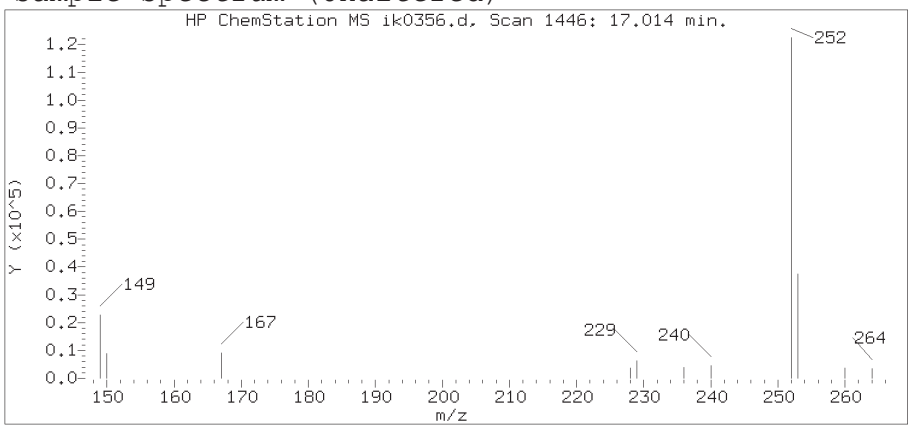


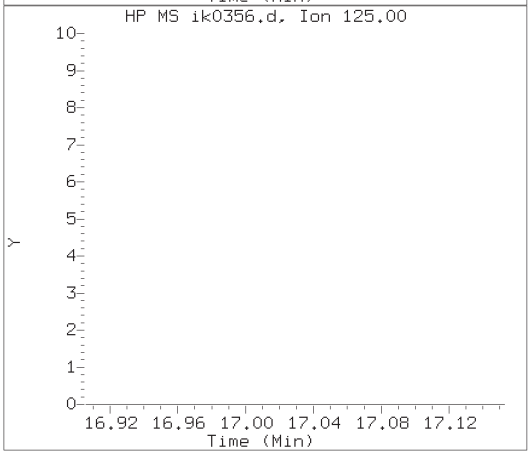
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

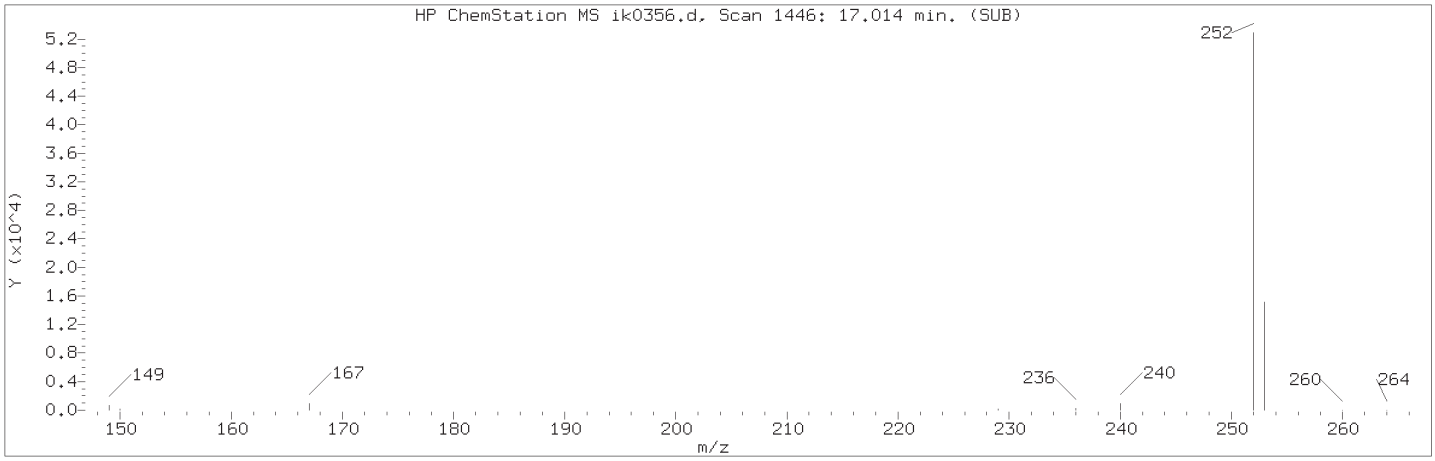
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL Lab Sample ID: 9867762DL

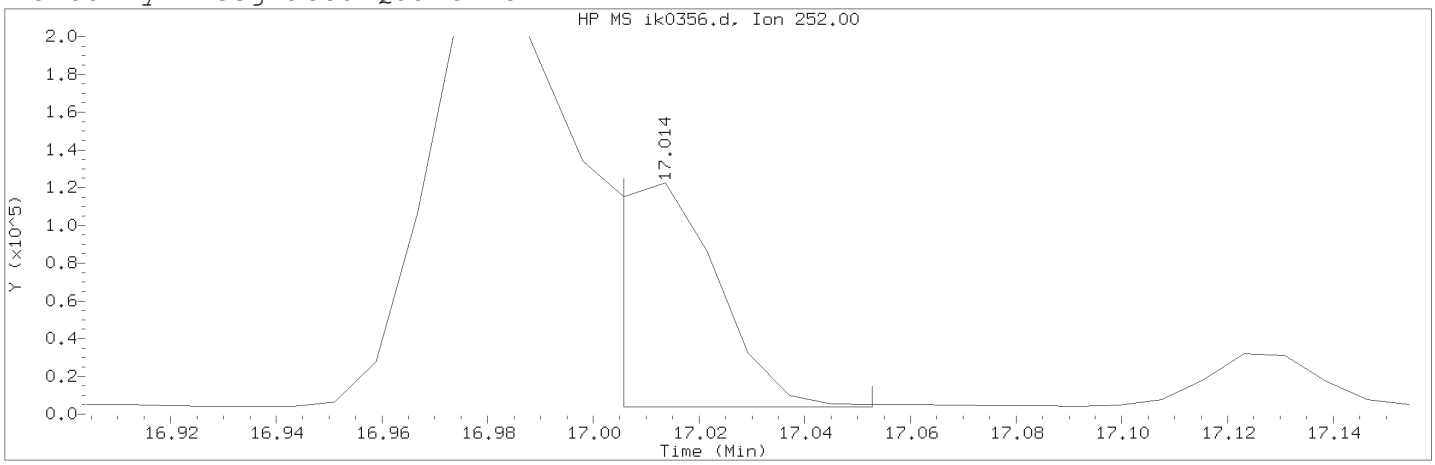
Compound Number	: 47
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1446
Retention Time (minutes)	: 17.014
Relative Retention Time	: 0.00042
Quant Ion	: 252.00
Area (flag)	: 164771M
On-column Amount (ng/ul)	: 0.4147

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL Lab Sample ID: 9867762DL

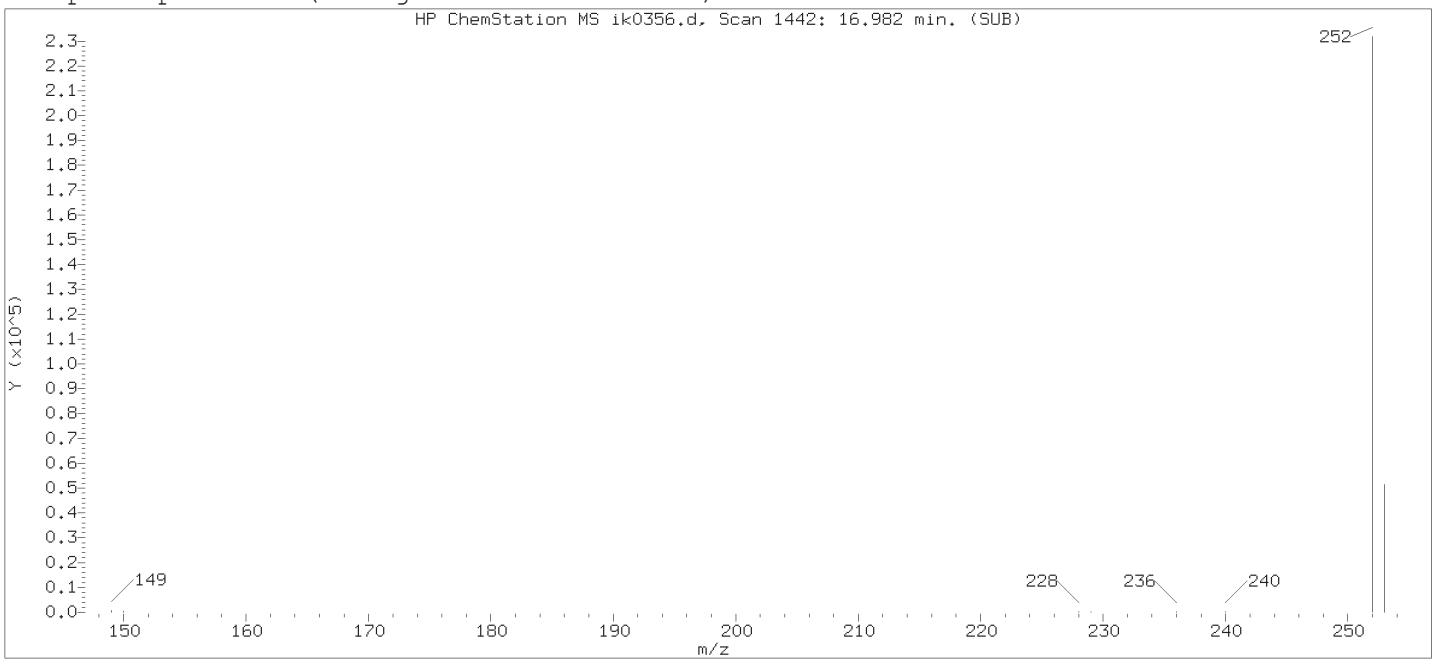
Compound Number : 47
Compound Name : Benzo(k)fluoranthene
Scan Number : 1446
Retention Time (minutes) : 17.014
Quant Ion : 252.00
Area (flag) : 164771M
On-column Amount (ng/ul) : 0.4147
Integration start scan : 1444 Integration stop scan: 1450
Y at integration start : 3694 Y at integration end: 3694

Reason for manual integration: improper integration

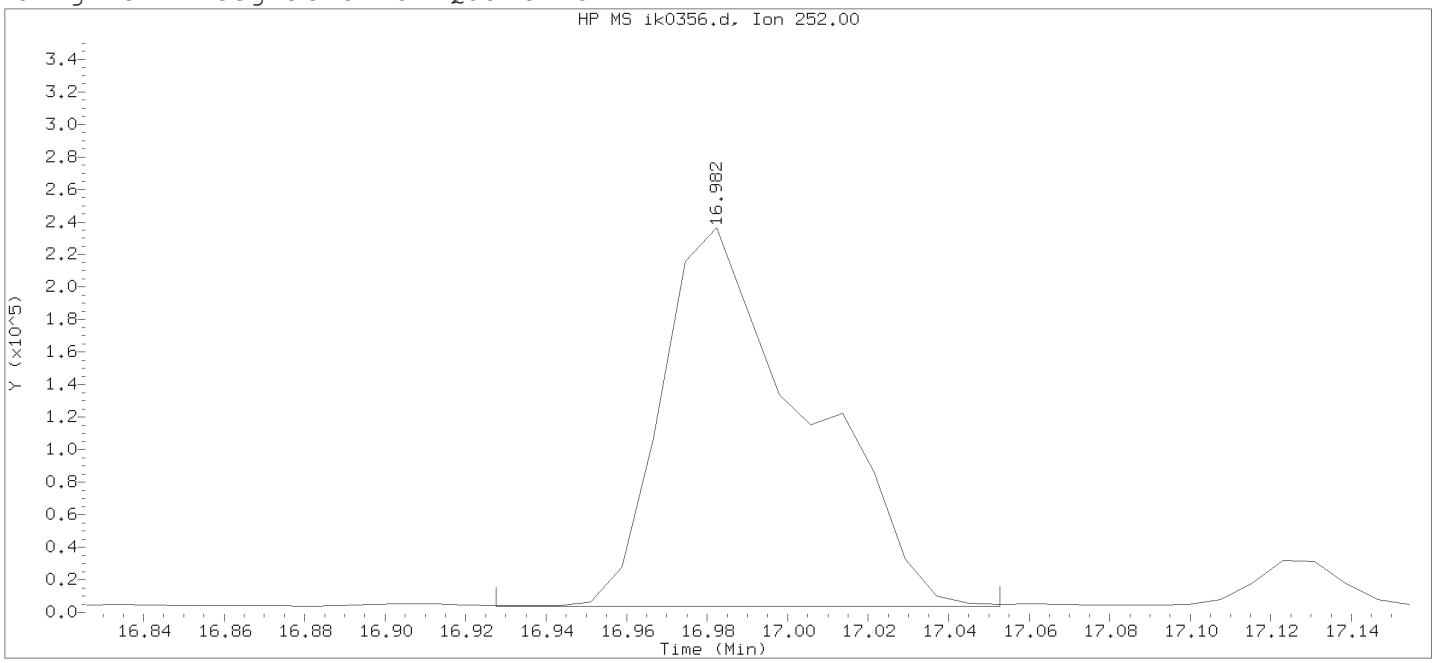
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

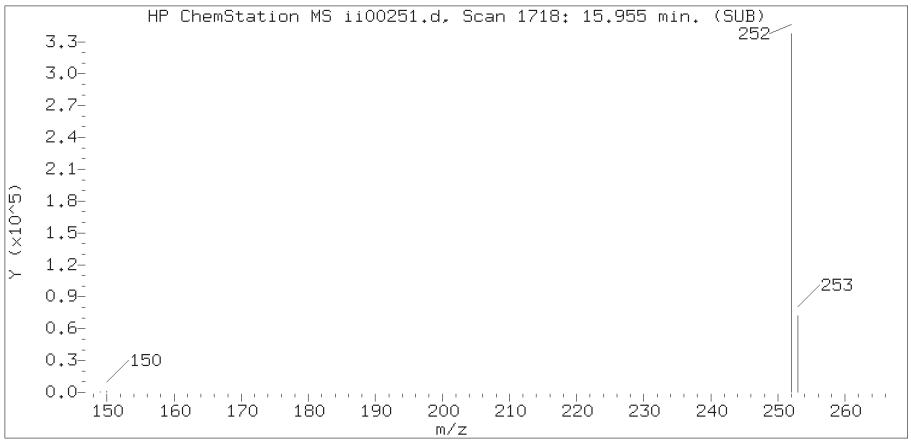
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 08:10
Date, time and analyst ID of latest file update: 08-Nov-2018 10:30 Automation

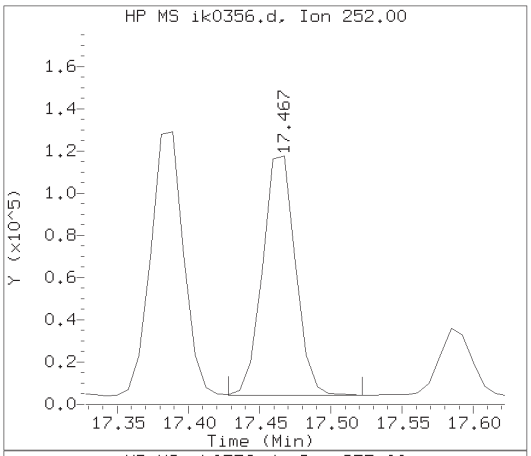
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 47		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1442		
Retention Time (minutes)	: 16.982		
Quant Ion	: 252.00		
Area	: 580549		
On-column Amount (ng/ul)	: 1.4613		
Integration start scan	: 1434	Integration stop scan:	1450
Y at integration start	: 3734	Y at integration end:	3773

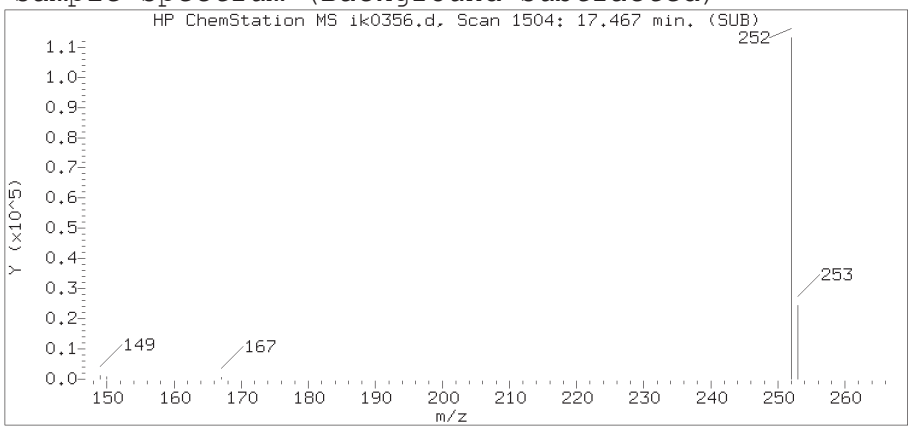
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature used: D10 Page 1888

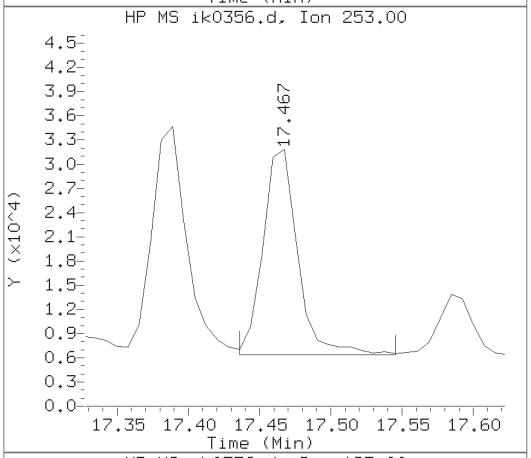
Reference Standard Spectrum for Benzo(a)pyrene



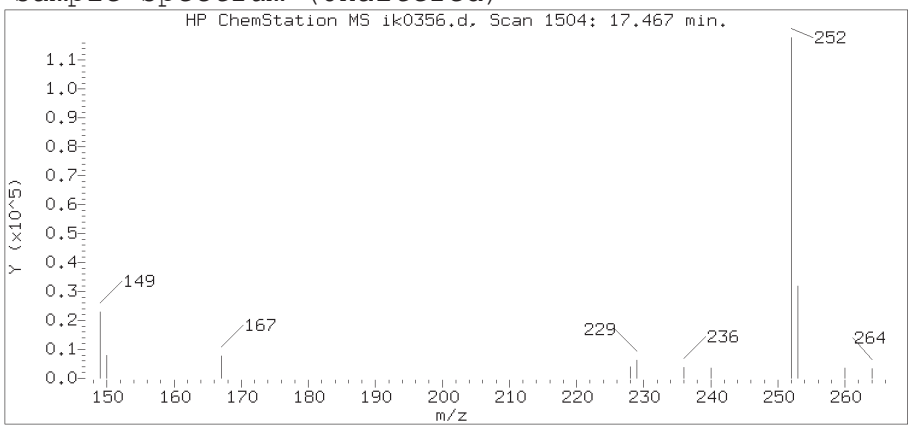


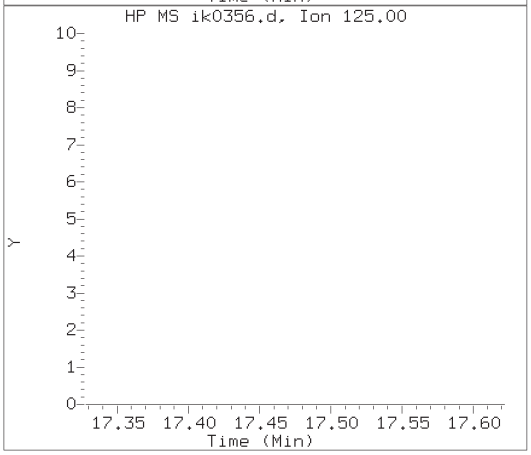
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

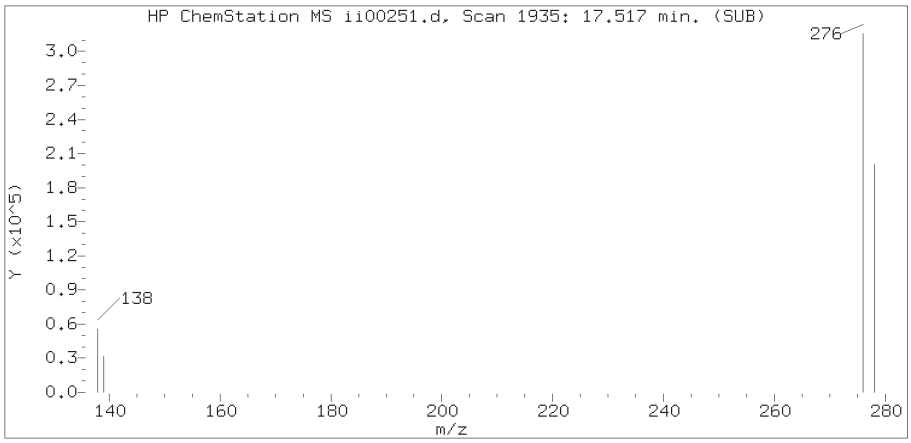
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

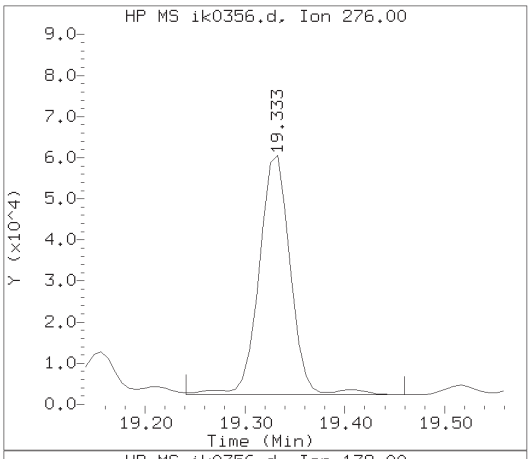
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 50
Compound Name	: Benzo(a)pyrene
Scan Number	: 1504
Retention Time (minutes)	: 17.467
Relative Retention Time	:-0.00000
Quant Ion	: 252.00
Area (flag)	: 183070
On-column Amount (ng/ul)	: 0.5040

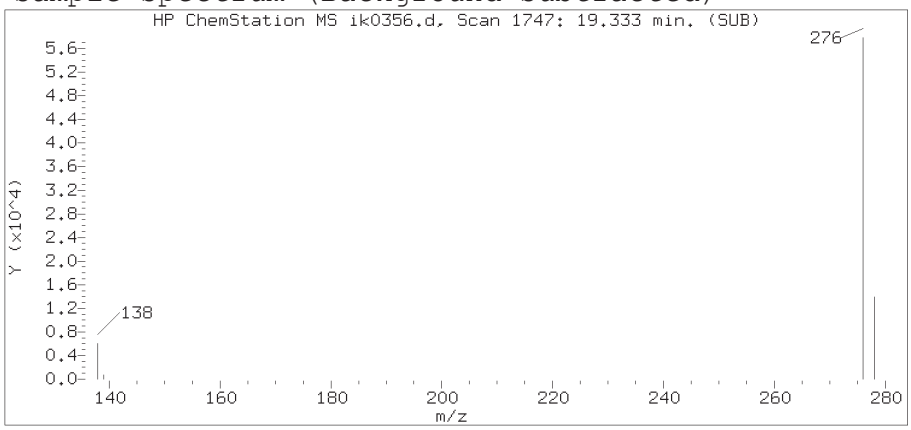
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

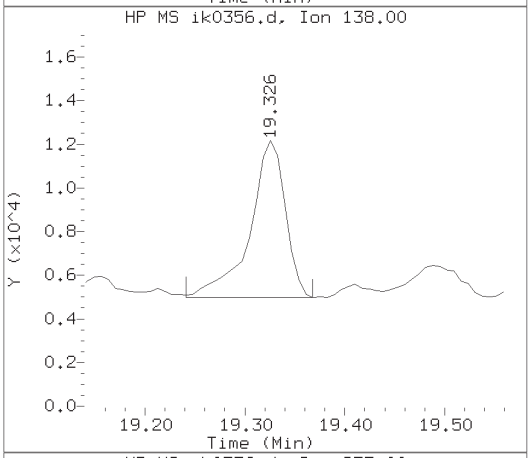
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



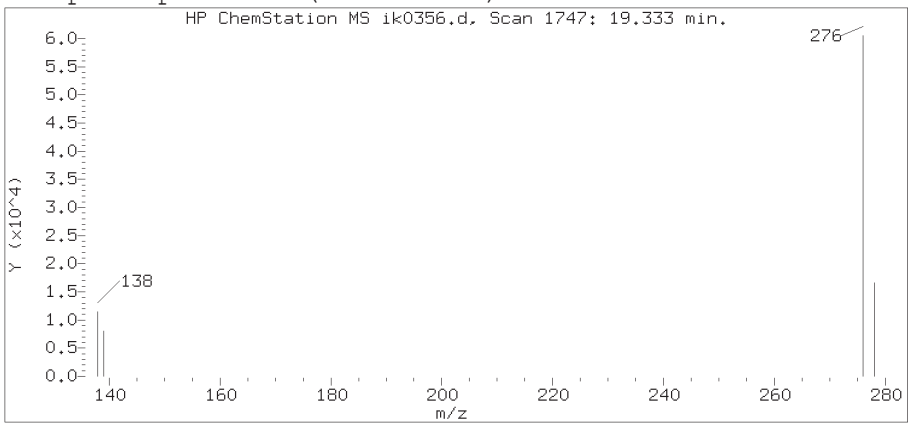


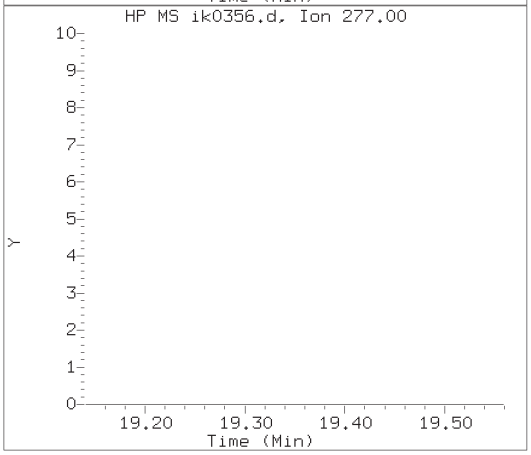
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

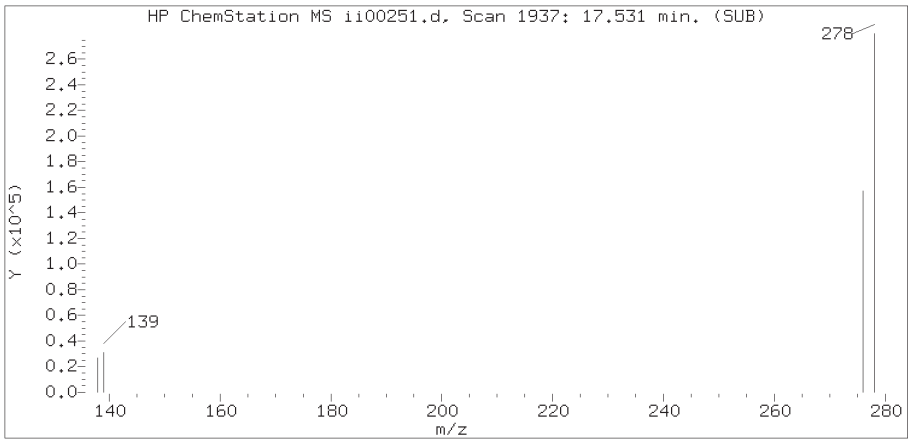
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

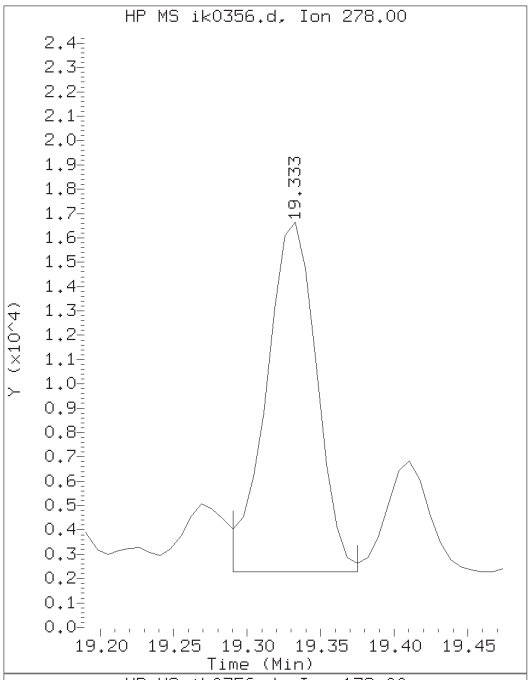
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 53
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 1747
Retention Time (minutes)	: 19.333
Relative Retention Time	:-0.00022
Quant Ion	: 276.00
Area (flag)	: 127344
On-column Amount (ng/ul)	: 0.2973

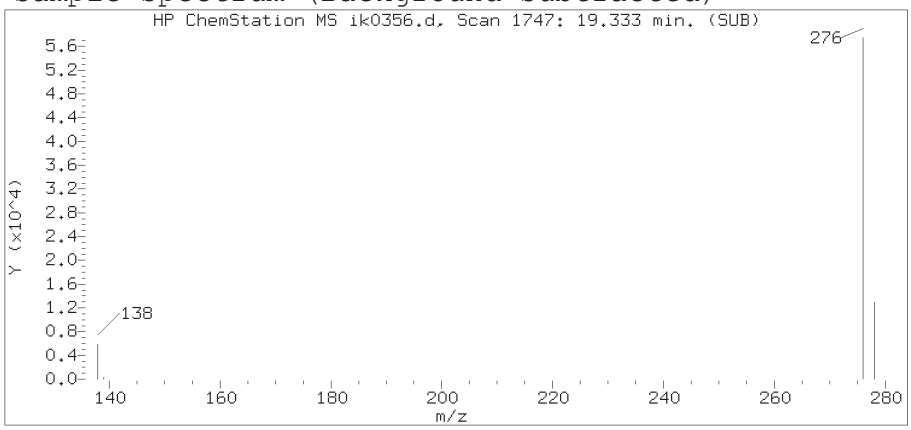
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

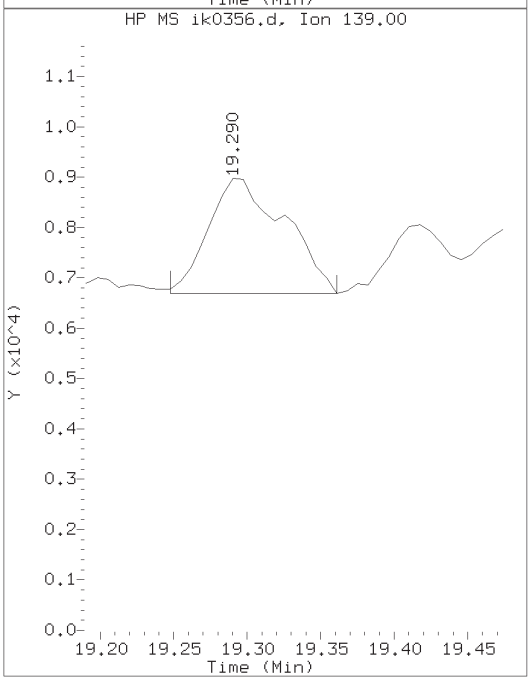
Reference Standard Spectrum for Dibenz(a,h)anthracene



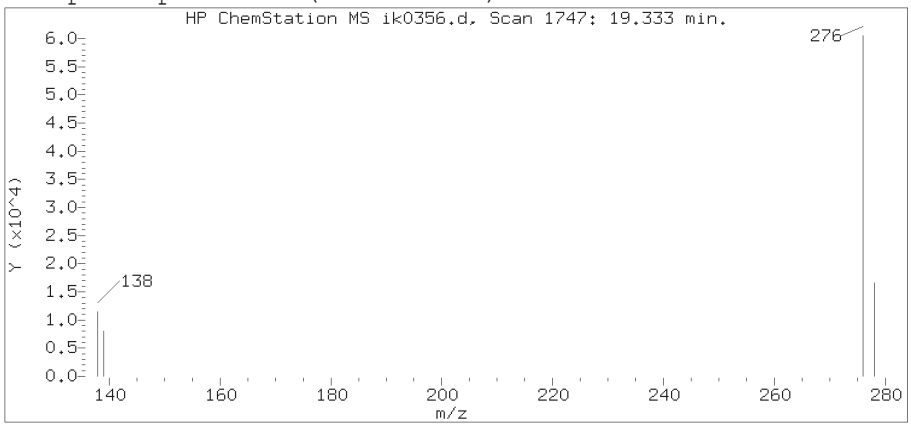


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

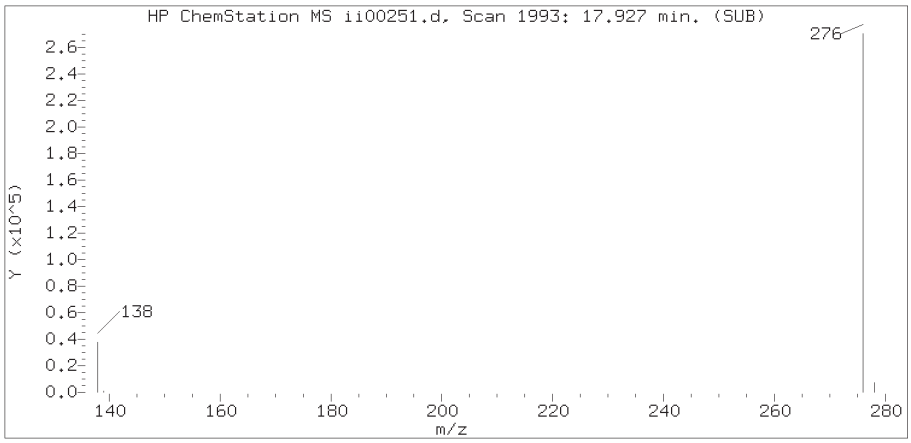
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

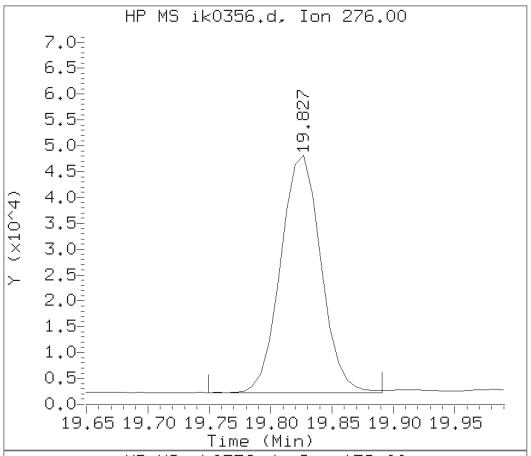
Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 54
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 1747
Retention Time (minutes)	: 19.333
Relative Retention Time	: 0.00018
Quant Ion	: 278.00
Area (flag)	: 34274
On-column Amount (ng/ul)	: 0.0980

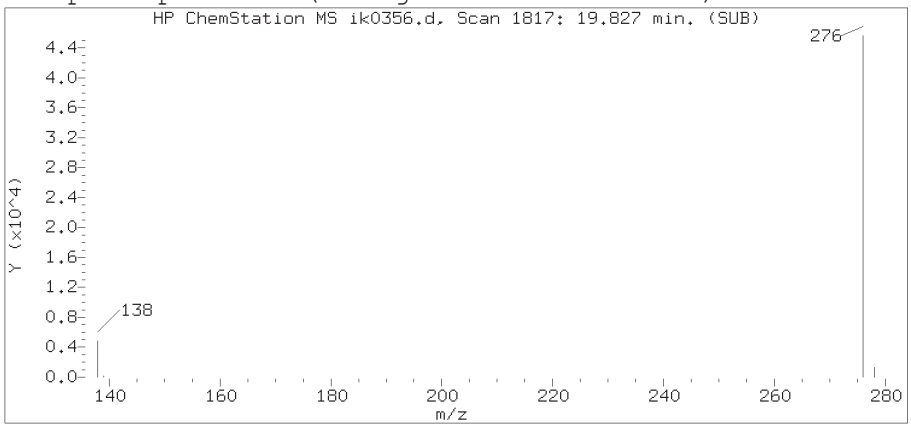
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

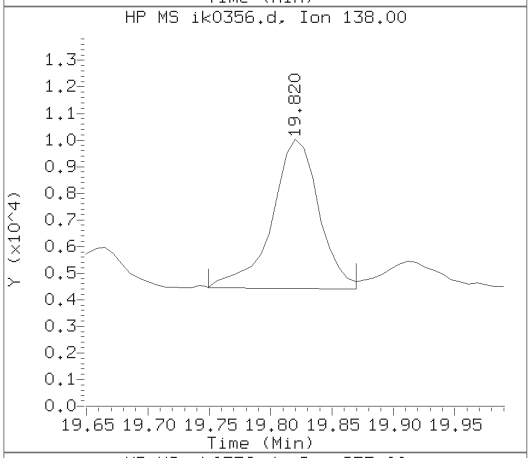
Reference Standard Spectrum for Benzo(g,h,i)perylene



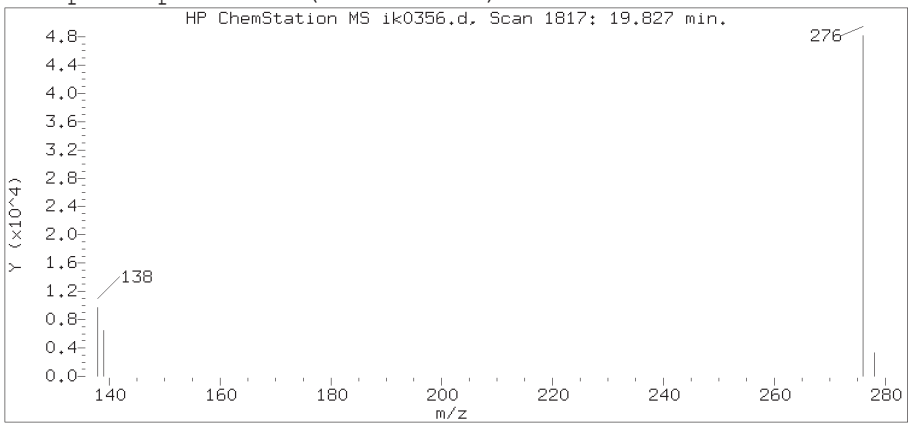


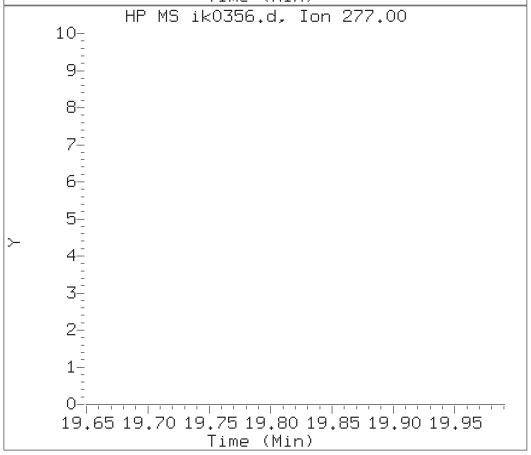
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 10:03 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL Lab Sample ID: 9867762DL

Compound Number	: 55
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 1817
Retention Time (minutes)	: 19.827
Relative Retention Time	:-0.00019
Quant Ion	: 276.00
Area (flag)	: 105478
On-column Amount (ng/ul)	: 0.2801

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10976.i/18nov08.b/ik0356a.d Injection date and time: **08-NOV-2018 17:03**
Data file Sample Info. Line: T1003DL2;9867762DL2;2;0;SAMPLE;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov08.b/ik0351.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 50 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.43 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.794	(0.000)	499	152	89415	(27)	1.00	
10) Naphthalene-d8	8.306	(0.000)	613	136	320893	(23)	1.00	
20) Acenaphthene-d10	10.478	(-0.011)	801	164	200297	(25)	1.00	
31) Phenanthrene-d10	12.323	(-0.011)	966	188	455504	(30)	1.00	
43) Chrysene-d12	15.605	(-0.008)	1266	240	491651	(35)	1.00	
51) Perylene-d12	17.560	(-0.023)	1516	264	305627	(-16)	1.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.262	(-0.001)	152	3750	0.019	96%		61 - 111
36) Fluoranthene-d10	(4)	13.807	(0.001)	212	10199M	0.018	90%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.435	(0.000)	264	4138	0.014	71%		54 - 122

M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)				Not Detected					0.02
11) Naphthalene	(2)	8.333	(-0.000)	128	49125	0.149	244.27	31.312	B	0.04
19) Acenaphthylene	(3)				Not Detected					0.01
21) Acenaphthene	(3)				Not Detected					0.02
26) Fluorene	(3)				Not Detected					0.02
32) Phenanthrene	(4)	12.346	(0.000)	178	66560	0.135	222.23	2.56	B	0.02
33) Anthracene	(4)	12.413	(0.000)	178	14470	0.029	48.24	0.732	B	0.02
35) Di-n-butylphthalate	(4)	12.989	(0.000)	149	1280191	2.719	4467.25			0.2
37) Fluoranthene	(4)	13.832	(0.001)	202	143225M	0.234	384.09			0.02
39) Pyrene	(5)	14.124	(-0.000)	202	134205	0.197	324.03			0.02
41) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.3
42) Benzo(a)anthracene	(5)	15.590	(-0.000)	228	65437	0.103	169.99			0.02
44) Chrysene	(5)	15.636	(0.000)	228	100068	0.166	272.13			0.01
46) Benzo(b)fluoranthene	(6)	16.989	(-0.000)	252	93801M	0.247	405.48			0.02
47) Benzo(k)fluoranthene	(6)	17.021	(0.000)	252	35678M	0.100	164.52			0.02
50) Benzo(a)pyrene	(6)	17.474	(-0.000)	252	33563	0.103	169.29			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.339	(-0.000)	276	16128	0.042	68.98			0.02
54) Dibenz(a,h)anthracene	(6)				Not Detected					0.02
55) Benzo(g,h,i)perylene	(6)	19.833	(-0.000)	276	12137	0.036	59.04			0.02

B = Compound detected in referenced method blank. M = Compound was manually integrated.

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33. Target 3.5 esignature user ID: apb10206

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10976.i/18nov08.b/ik0356a.d Injection date and time: **08-NOV-2018 17:03**
Data file Sample Info. Line: T1003DL2;9867762DL2;2;0;SAMPLE;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov08.b/ik0351.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

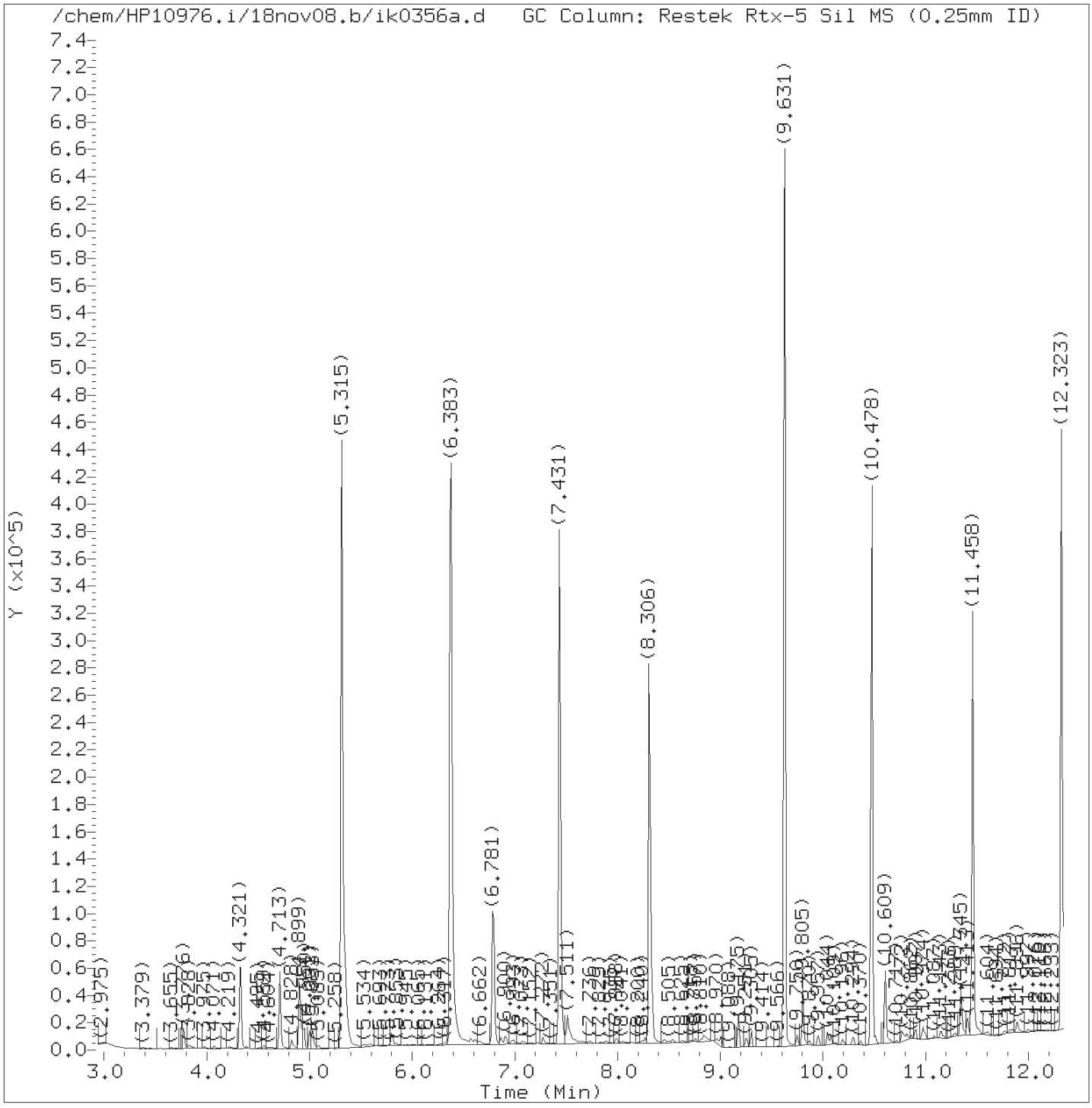
Dilution Factor (DF): 50 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.43 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

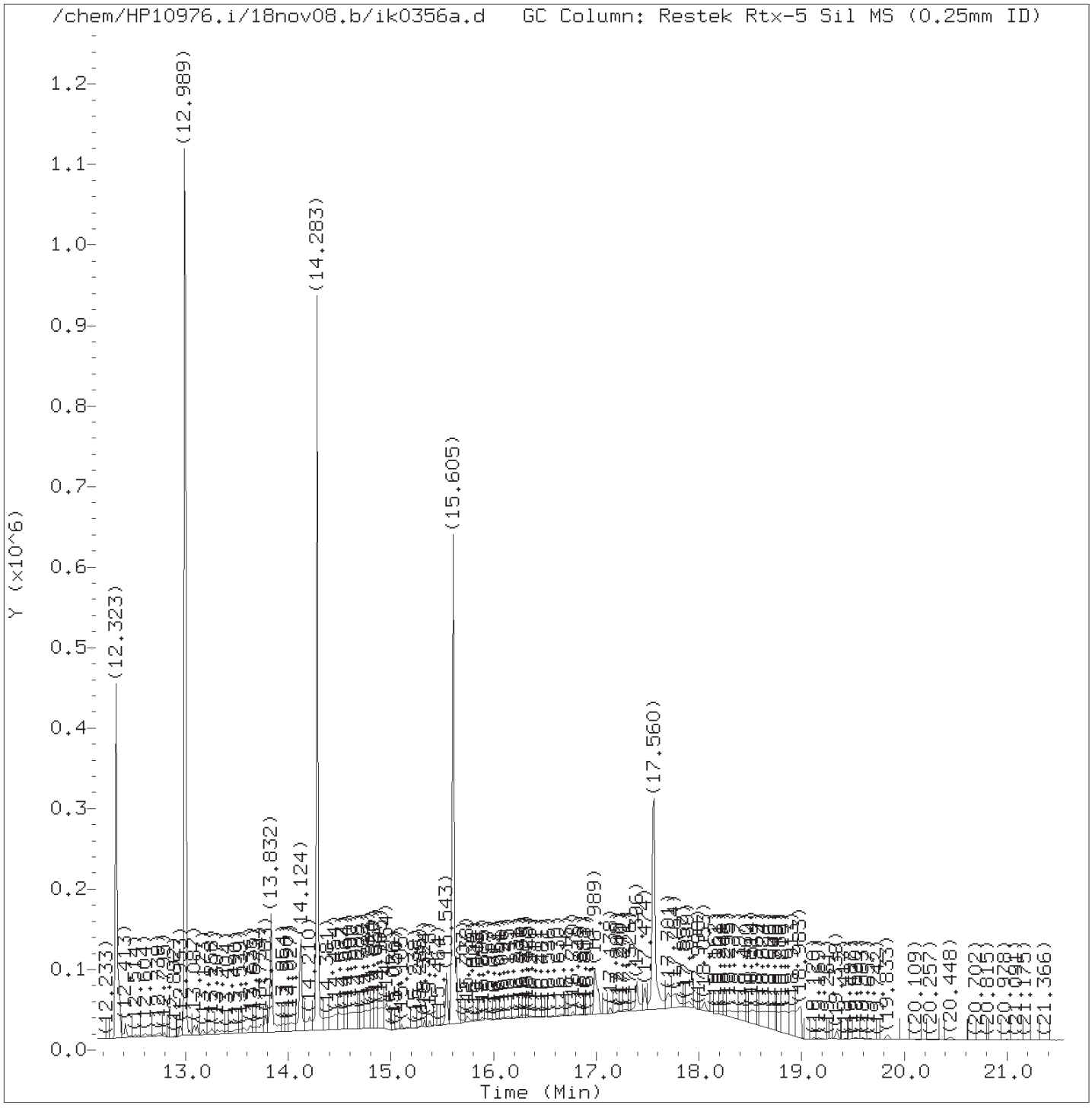
Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

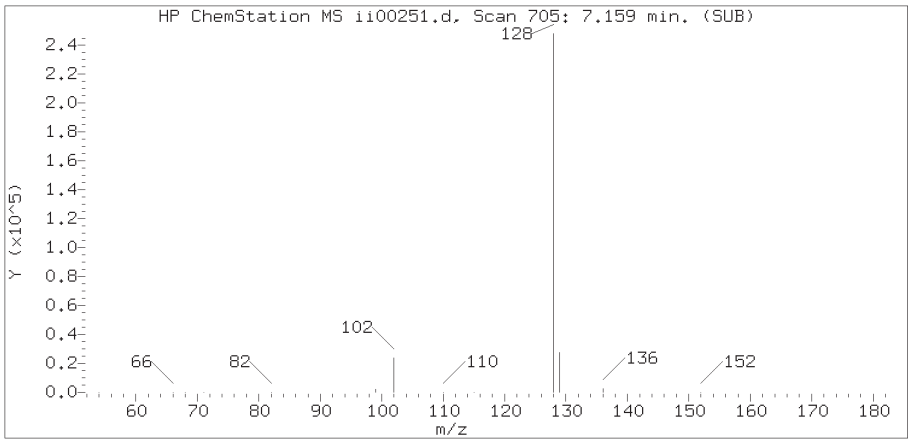
Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

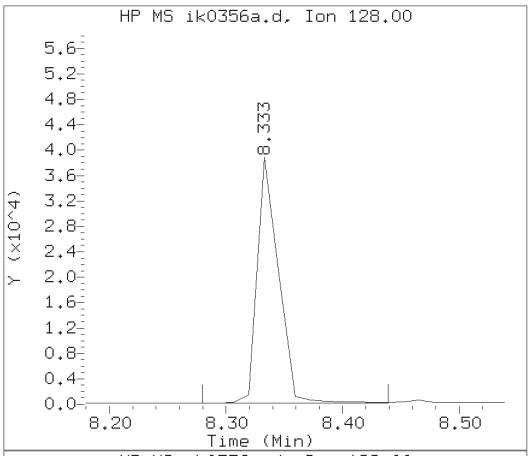
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
6)*1,4-Dichlorobenzene-d4	(1)	6.794	152	89415	1.000
10)*Naphthalene-d8	(2)	8.306	136	320893	1.000
11) Naphthalene	(2)	8.333	128	49125	0.149
14)$1-Methylnaphthalene-d10	(2)	9.262	152	3750	0.019
20)*Acenaphthene-d10	(3)	10.478	164	200297	1.000
31)*Phenanthrene-d10	(4)	12.323	188	455504	1.000
32) Phenanthrene	(4)	12.346	178	66560	0.135
33) Anthracene	(4)	12.413	178	14470	0.029
35) Di-n-butylphthalate	(4)	12.989	149	1280191	2.719
36)$Fluoranthene-d10	(4)	13.807	212	10199M	0.018
37) Fluoranthene	(4)	13.832	202	143225M	0.234
39) Pyrene	(5)	14.124	202	134205	0.197
42) Benzo(a)anthracene	(5)	15.590	228	65437	0.103
43)*Chrysene-d12	(5)	15.605	240	491651	1.000
44) Chrysene	(5)	15.636	228	100068	0.166
46) Benzo(b)fluoranthene	(6)	16.989	252	93801M	0.247
47) Benzo(k)fluoranthene	(6)	17.021	252	35678M	0.100
49)$Benzo(a)pyrene-d12	(6)	17.435	264	4138	0.014
50) Benzo(a)pyrene	(6)	17.474	252	33563	0.103
51)*Perylene-d12	(6)	17.560	264	305627	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.339	276	16128	0.042
55) Benzo(g,h,i)perylene	(6)	19.833	276	12137	0.036

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

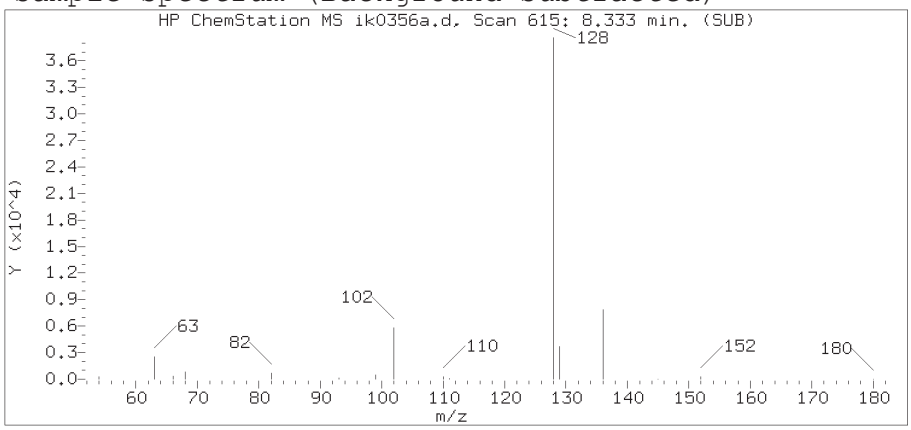
Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

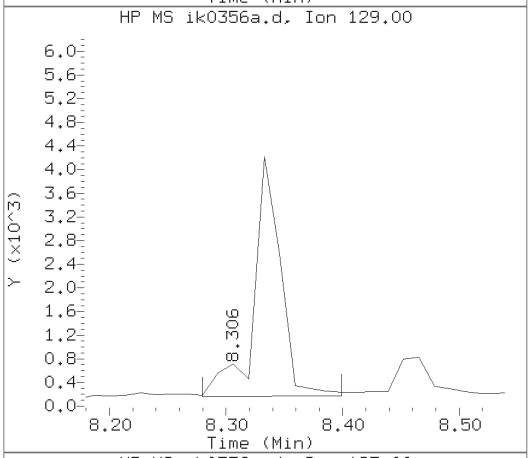
Reference Standard Spectrum for Naphthalene



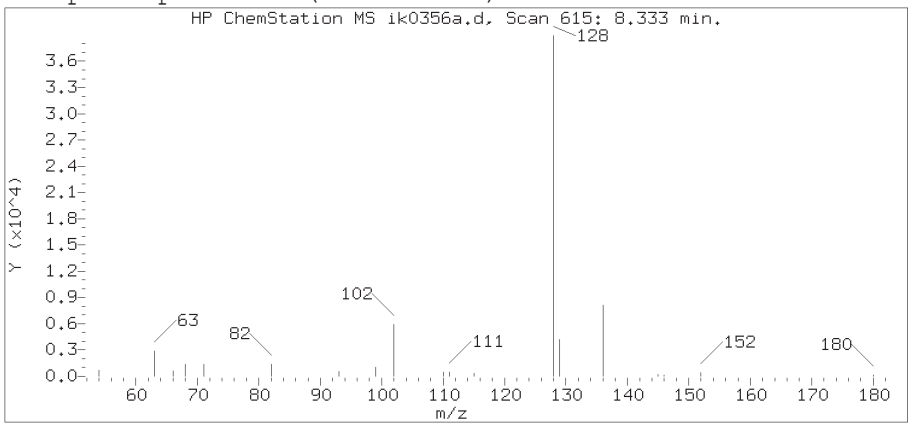


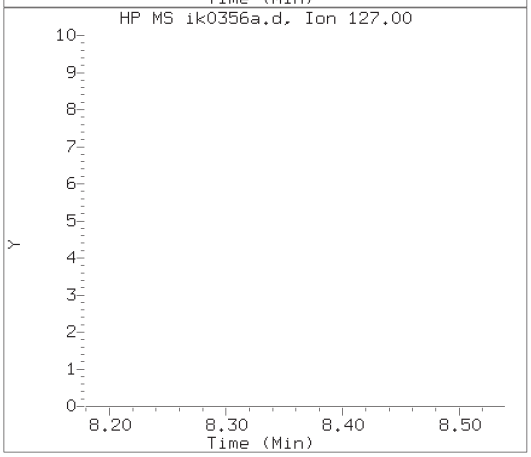
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

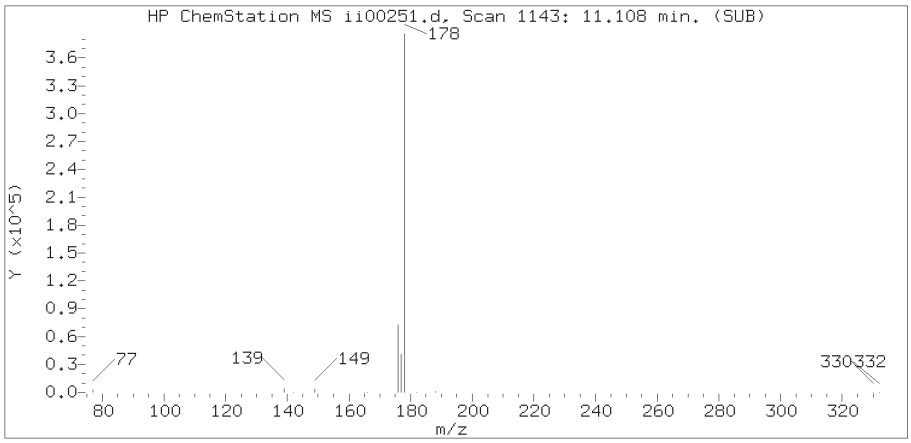
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

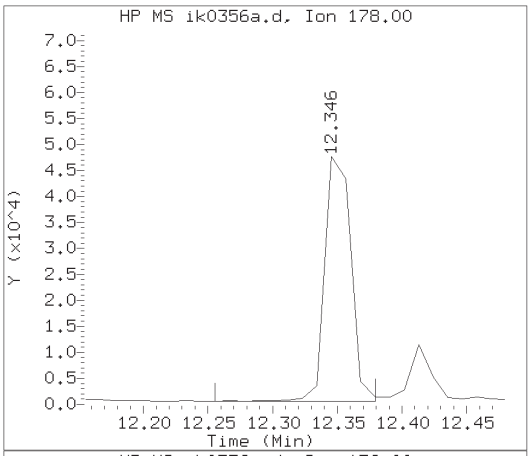
Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

Compound Number	: 11
Compound Name	: Naphthalene
Scan Number	: 615
Retention Time (minutes)	: 8.333
Relative Retention Time	:-0.00000
Quant Ion	: 128.00
Area (flag)	: 49125
On-column Amount (ng/ul)	: 0.1487

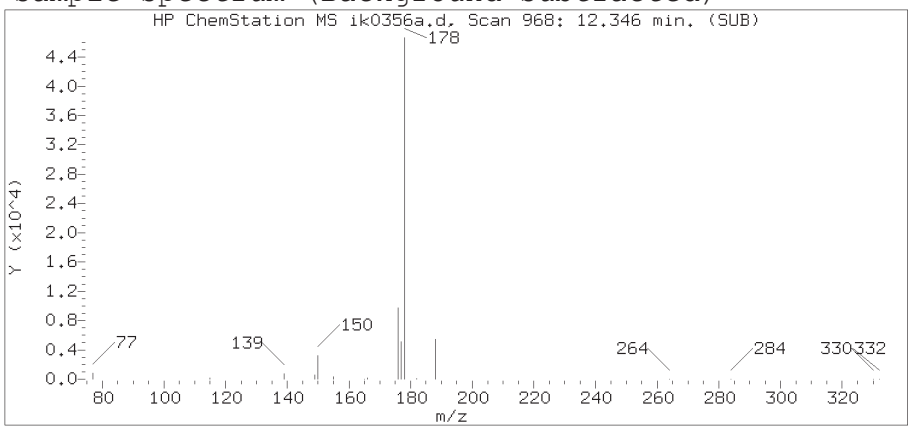
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

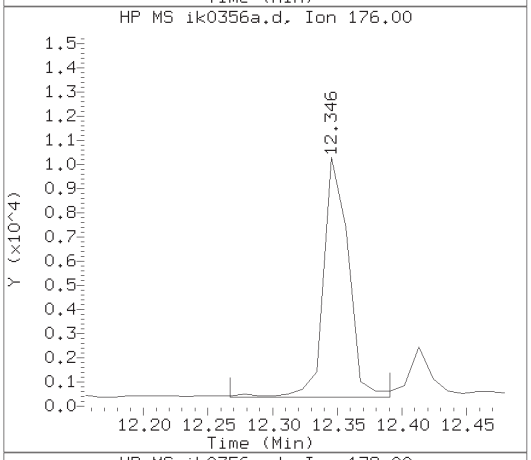
Reference Standard Spectrum for Phenanthrene



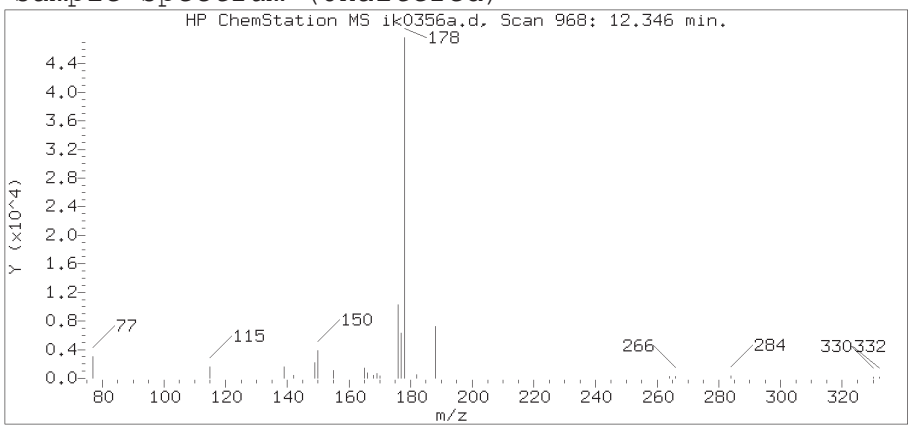


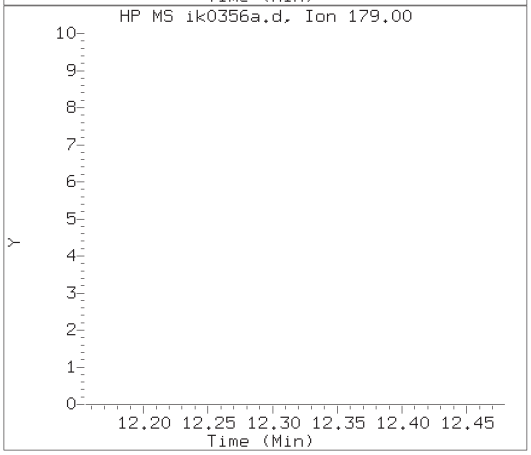
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

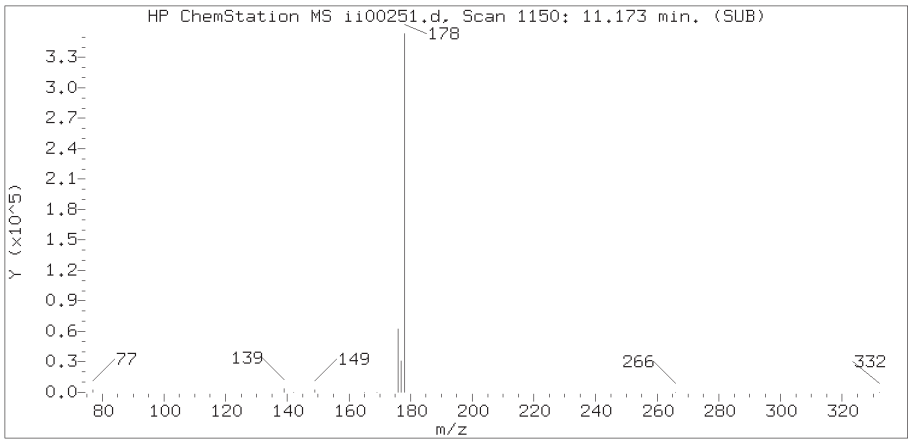
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

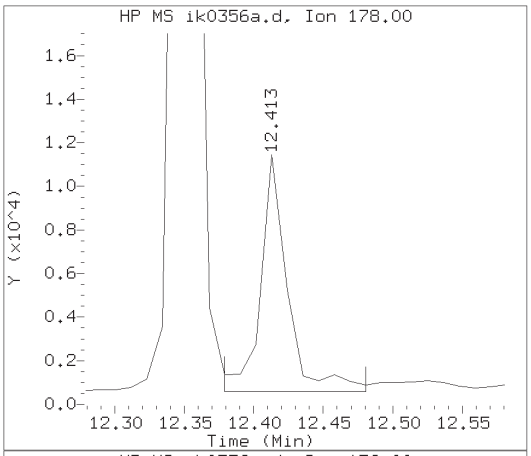
Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

Compound Number	: 32
Compound Name	: Phenanthrene
Scan Number	: 968
Retention Time (minutes)	: 12.346
Relative Retention Time	: 0.00091
Quant Ion	: 178.00
Area (flag)	: 66560
On-column Amount (ng/ul)	: 0.1353

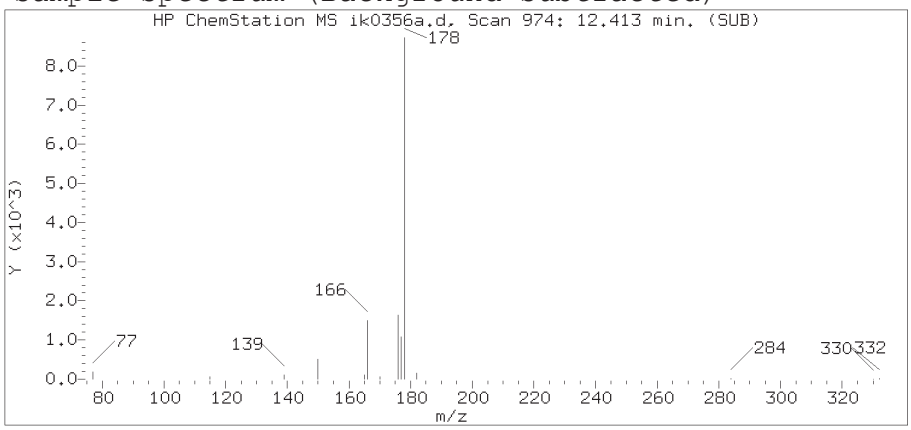
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

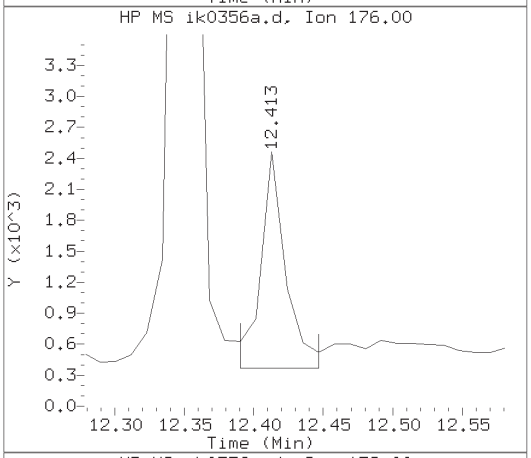
Reference Standard Spectrum for Anthracene



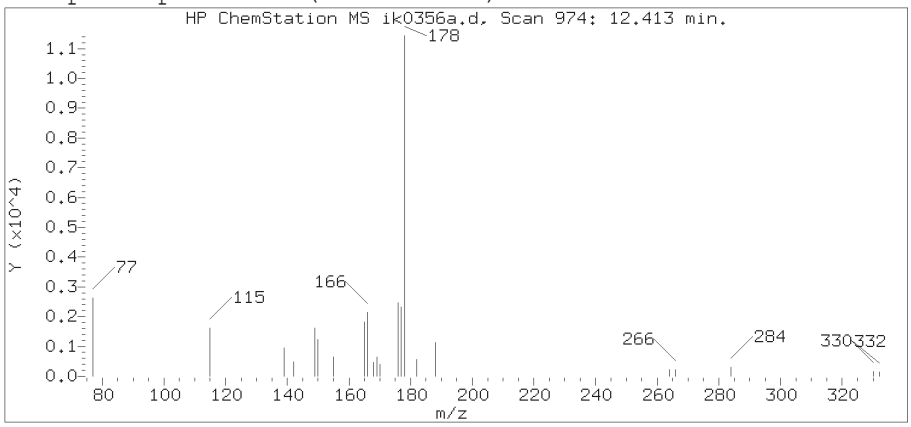


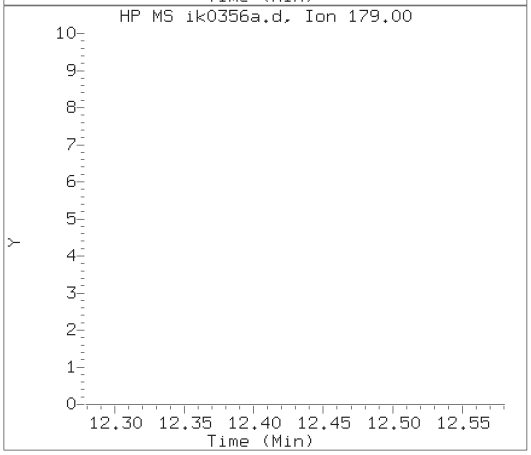
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

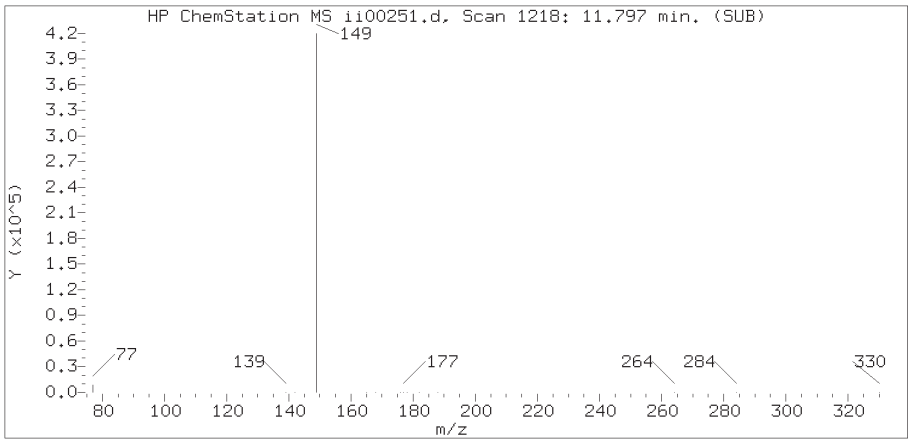
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

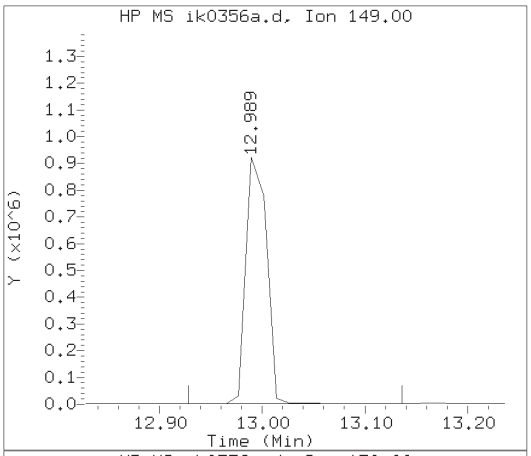
Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

Compound Number	: 33
Compound Name	: Anthracene
Scan Number	: 974
Retention Time (minutes)	: 12.413
Relative Retention Time	: 0.00092
Quant Ion	: 178.00
Area (flag)	: 14470
On-column Amount (ng/ul)	: 0.0294

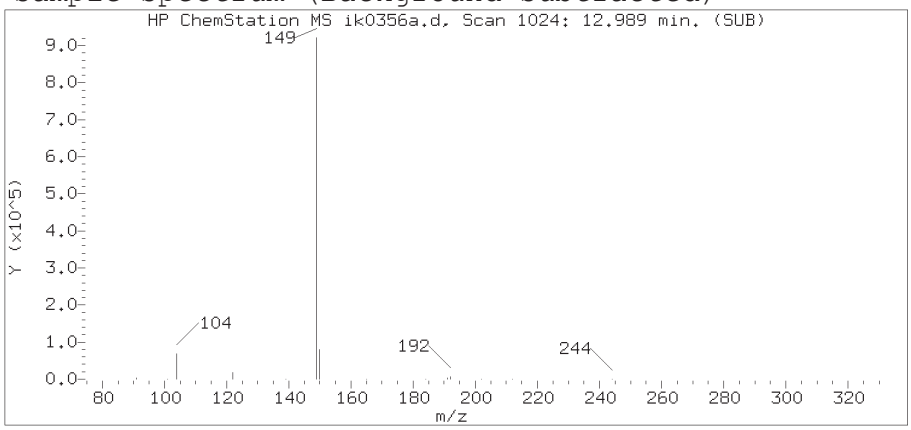
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

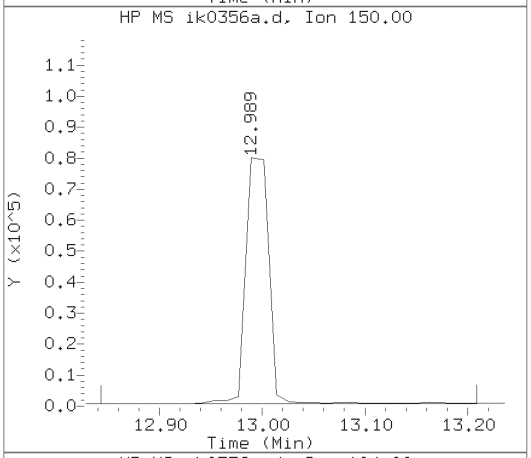
Reference Standard Spectrum for Di-n-butylphthalate



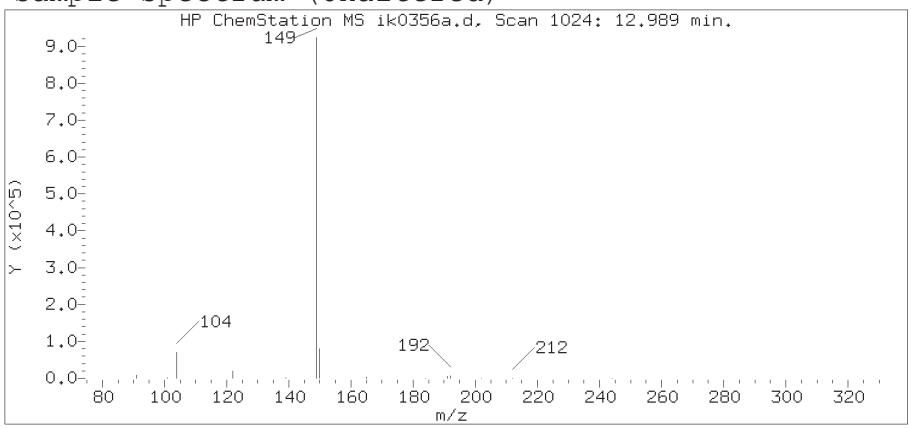


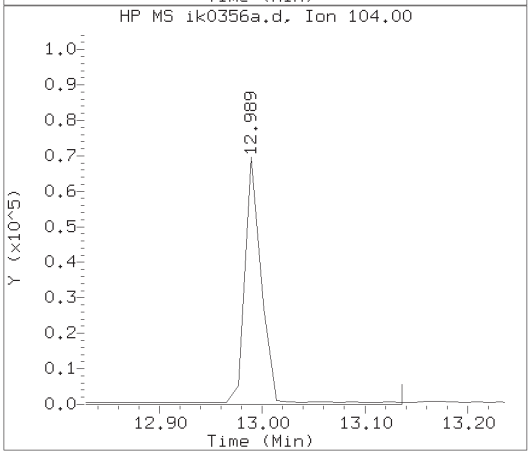
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

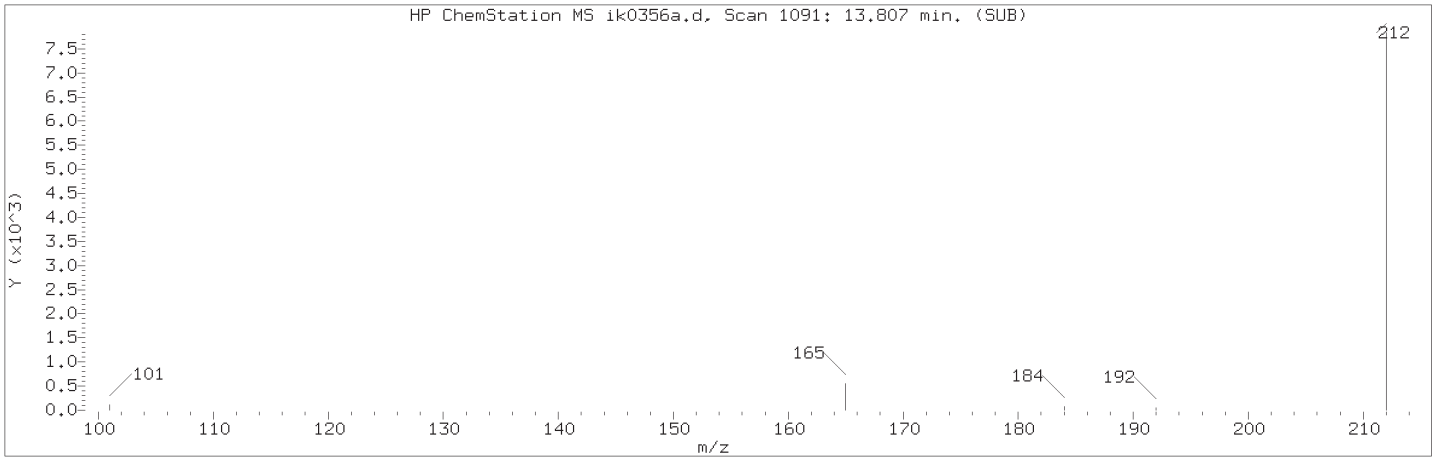
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

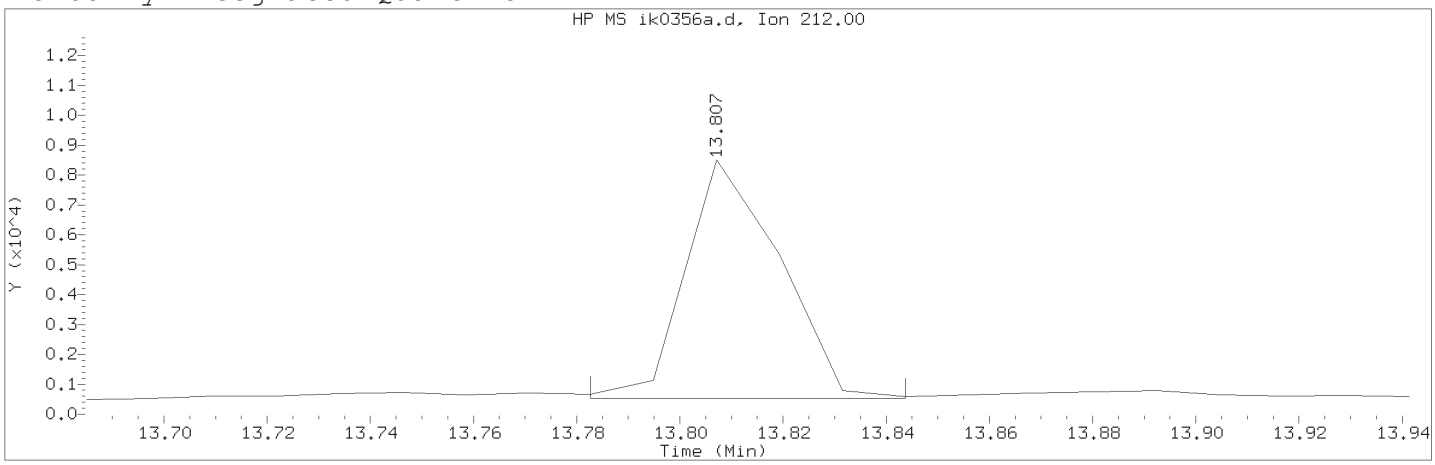
Compound Number	: 35
Compound Name	: Di-n-butylphthalate
Scan Number	: 1024
Retention Time (minutes)	: 12.989
Relative Retention Time	: 0.00096
Quant Ion	: 149.00
Area (flag)	: 1280191
On-column Amount (ng/ul)	: 2.7188

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

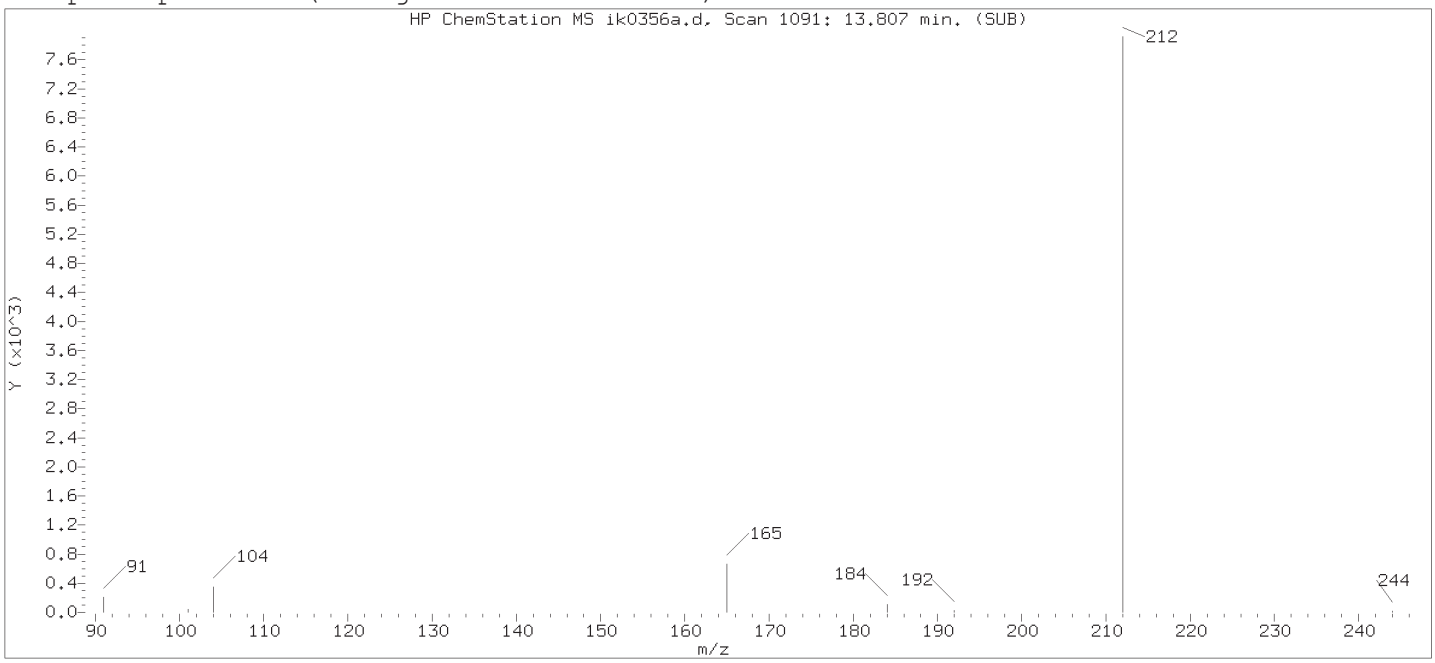
Compound Number : 36
Compound Name : Fluoranthene-d10
Scan Number : 1091
Retention Time (minutes) : 13.807
Quant Ion : 212.00
Area (flag) : 10199M
On-column Amount (ng/ul) : 0.0181
Integration start scan : 1088 Integration stop scan: 1093
Y at integration start : 520 Y at integration end: 520

Reason for manual integration: improper integration

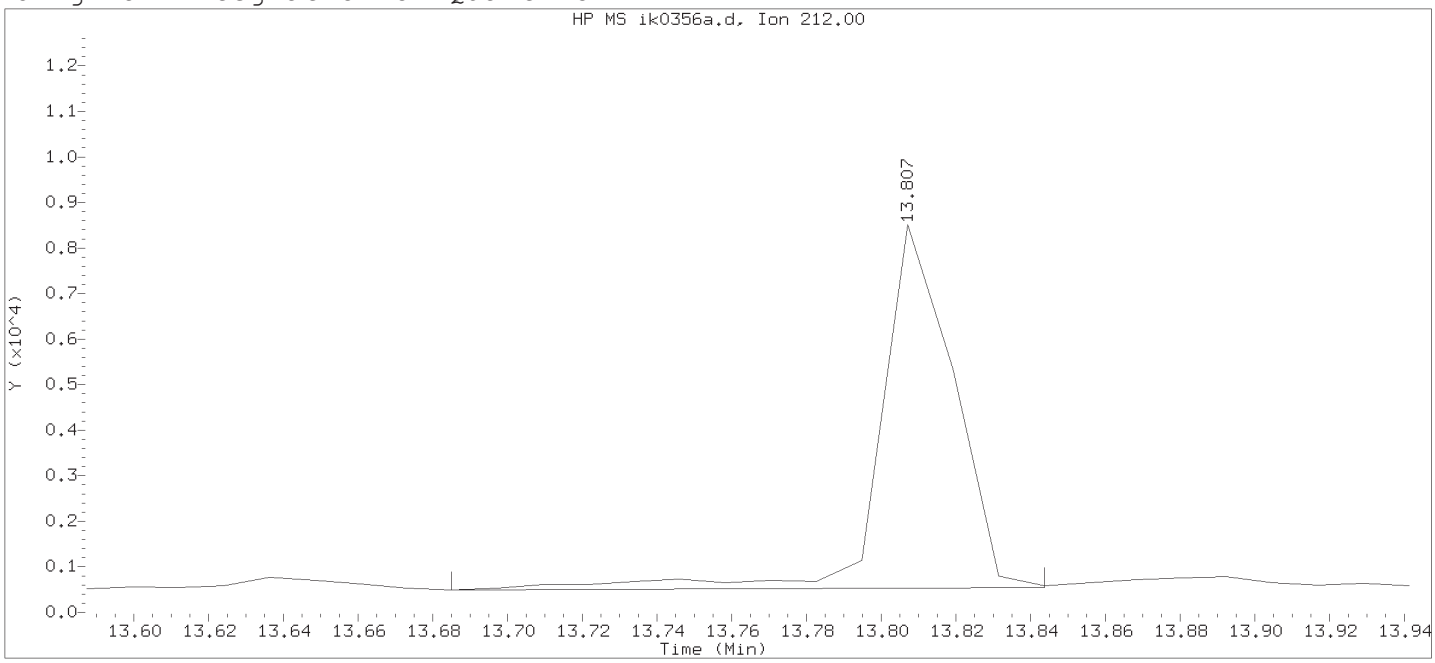
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

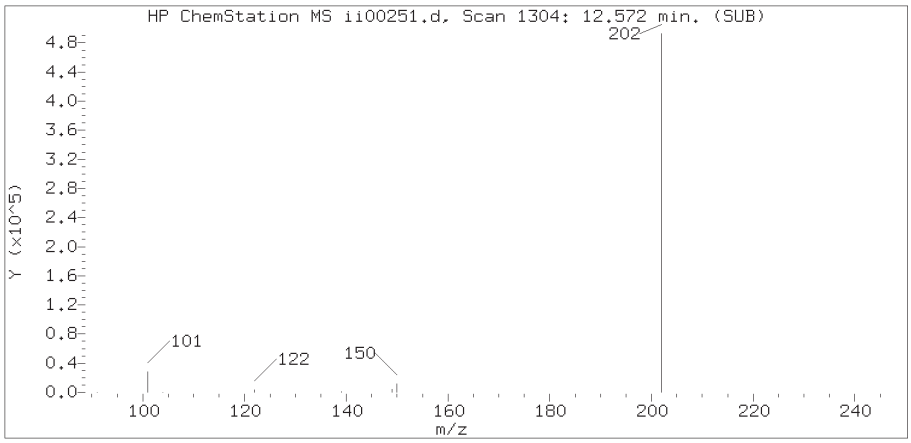
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 17:29 Automation

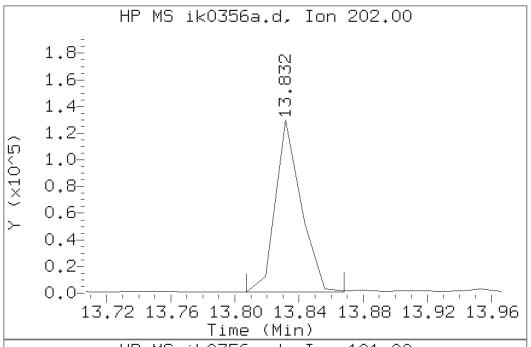
Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

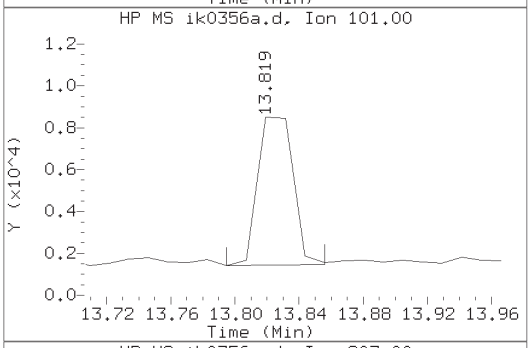
Compound Number	: 36		
Compound Name	: Fluoranthene-d10		
Scan Number	: 1091		
Retention Time (minutes)	: 13.807		
Quant Ion	: 212.00		
Area	: 10830		
On-column Amount (ng/ul)	: 0.0192		
Integration start scan	: 1080	Integration stop scan:	1093
Y at integration start	: 489	Y at integration end:	543

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature used: D10 Page 1903

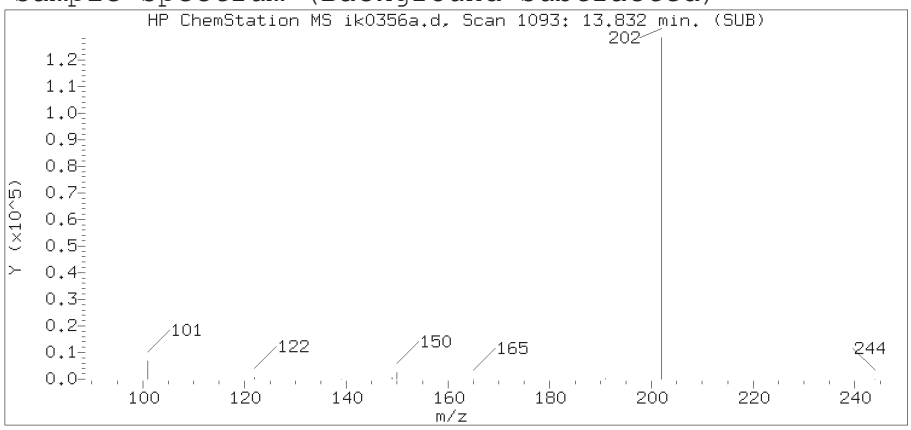
Reference Standard Spectrum for Fluoranthene

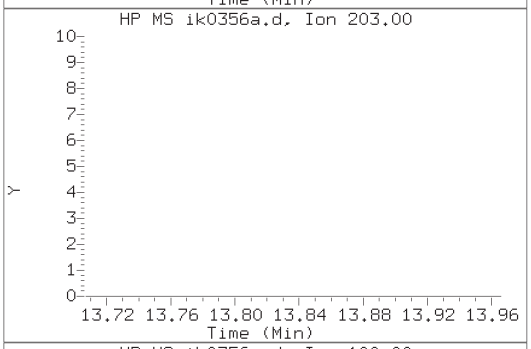




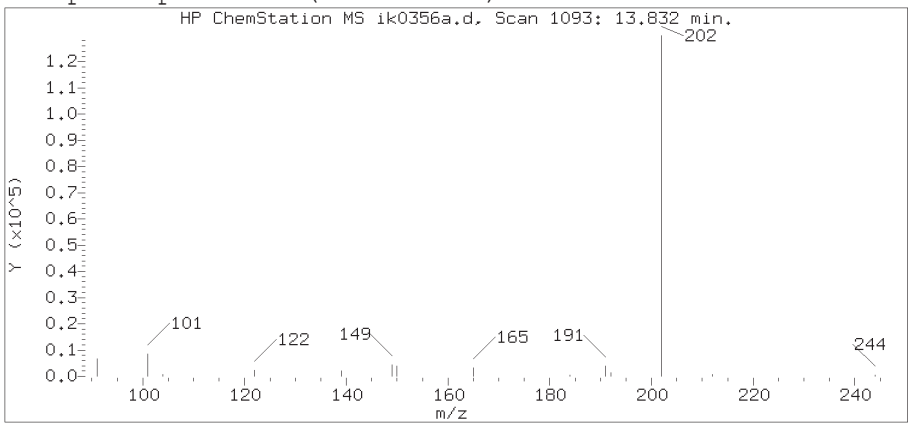


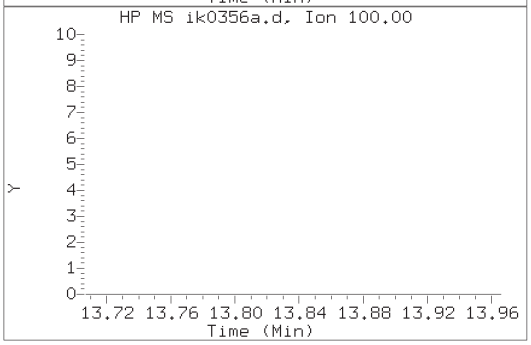
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

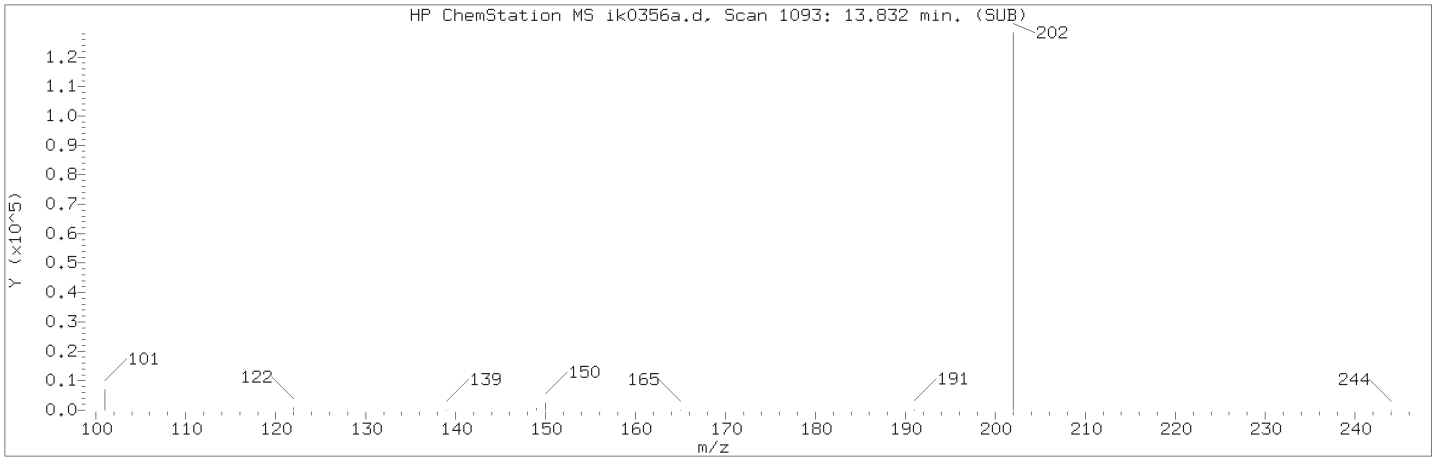
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

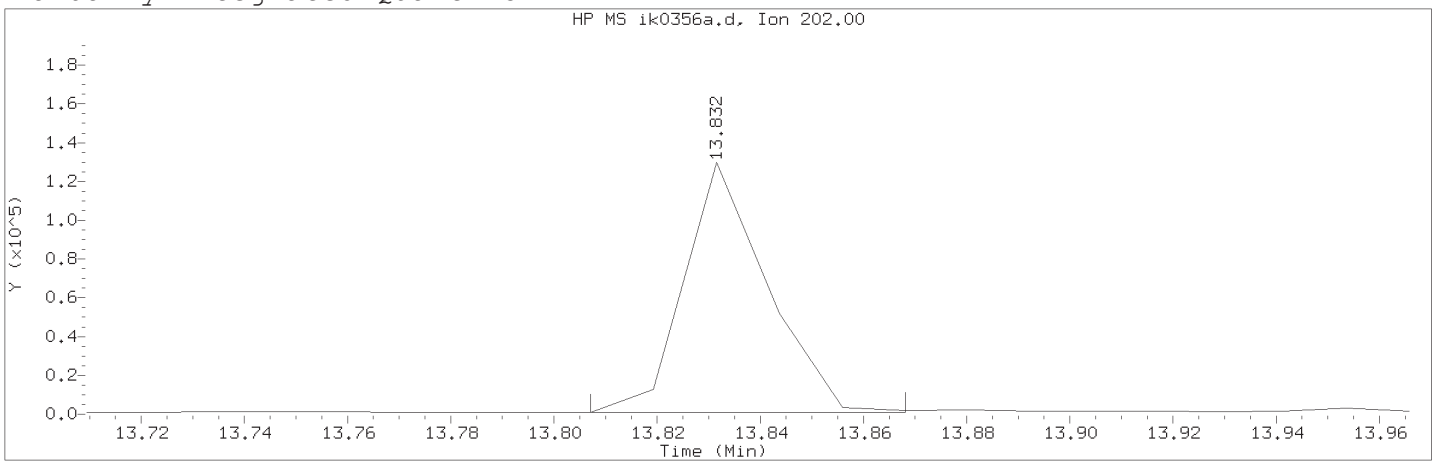
Compound Number	: 37
Compound Name	: Fluoranthene
Scan Number	: 1093
Retention Time (minutes)	: 13.832
Relative Retention Time	: 0.00102
Quant Ion	: 202.00
Area (flag)	: 143225M
On-column Amount (ng/ul)	: 0.2338

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

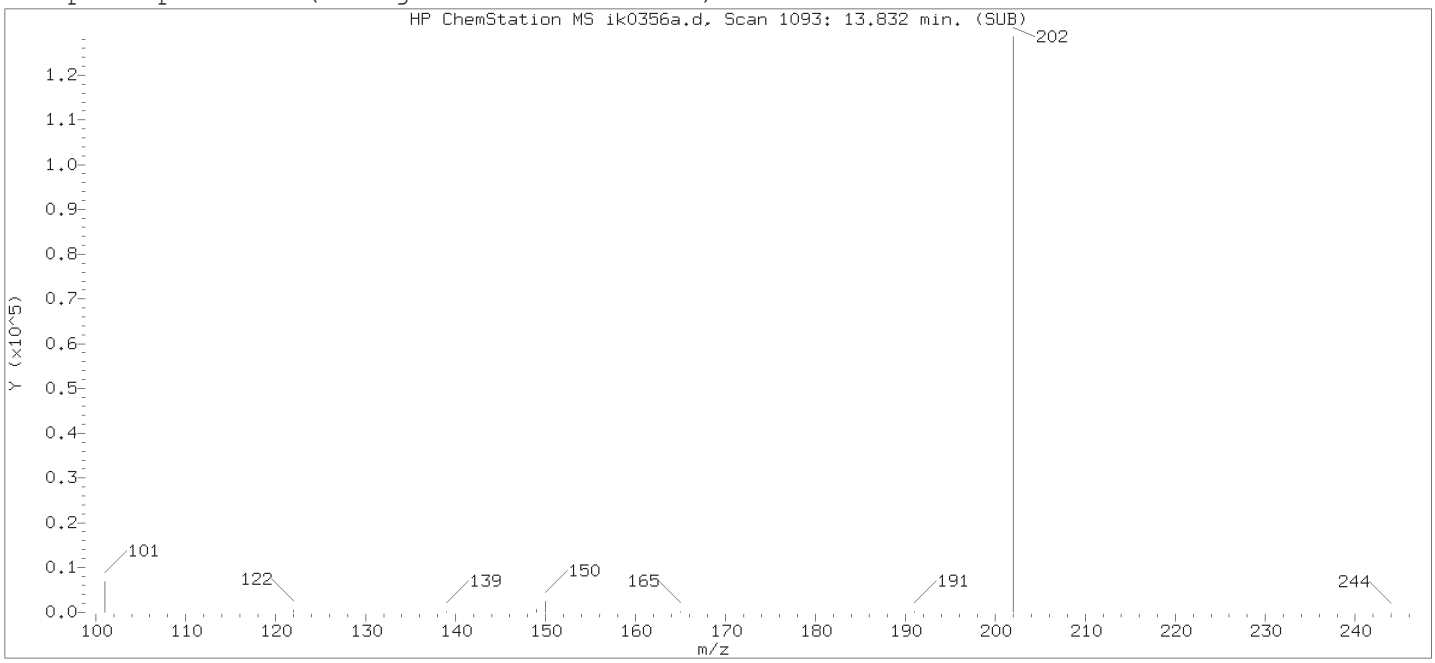
Compound Number : 37
Compound Name : Fluoranthene
Scan Number : 1093
Retention Time (minutes) : 13.832
Quant Ion : 202.00
Area (flag) : 143225M
On-column Amount (ng/ul) : 0.2338
Integration start scan : 1090 Integration stop scan: 1095
Y at integration start : 865 Y at integration end: 913

Reason for manual integration: improper integration

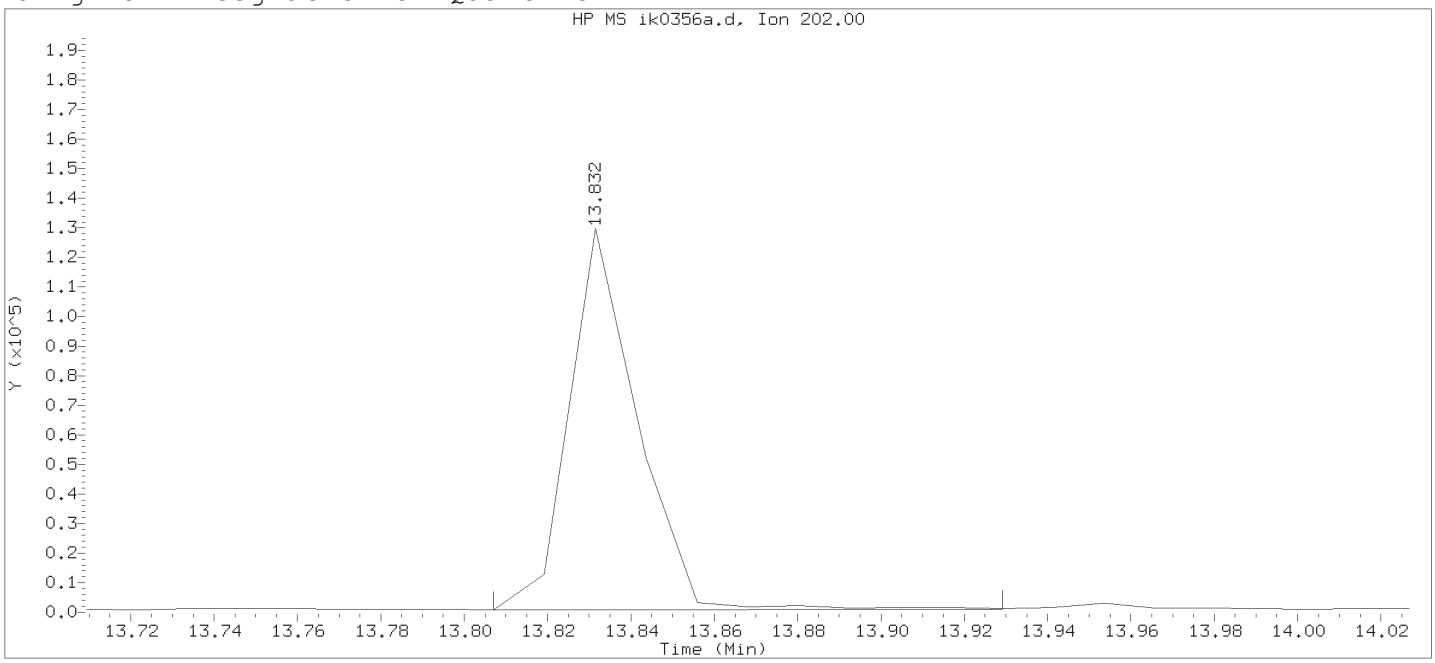
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

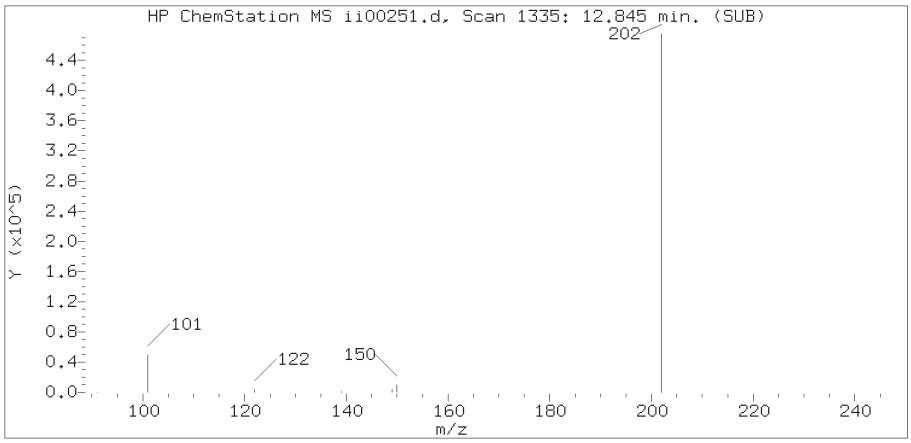
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 17:29 Automation

Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

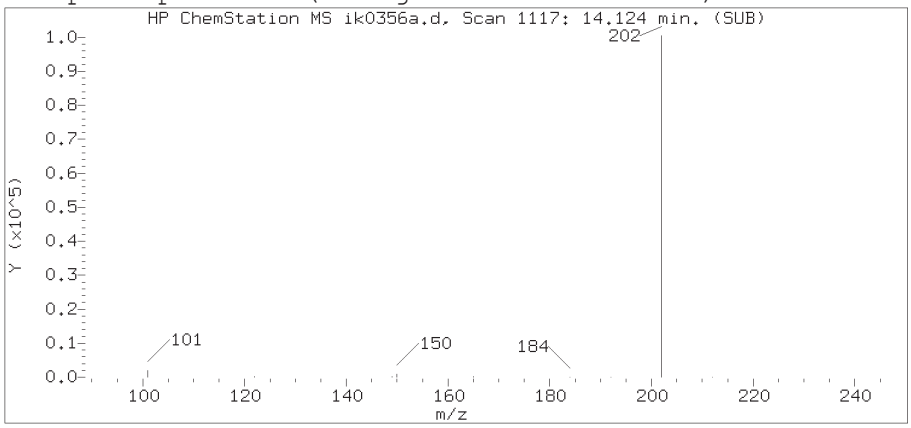
Compound Number	: 37		
Compound Name	: Fluoranthene		
Scan Number	: 1093		
Retention Time (minutes)	: 13.832		
Quant Ion	: 202.00		
Area	: 145625		
On-column Amount (ng/ul)	: 0.2377		
Integration start scan	: 1090	Integration stop scan:	1100
Y at integration start	: 865	Y at integration end:	961

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature used [illegible]

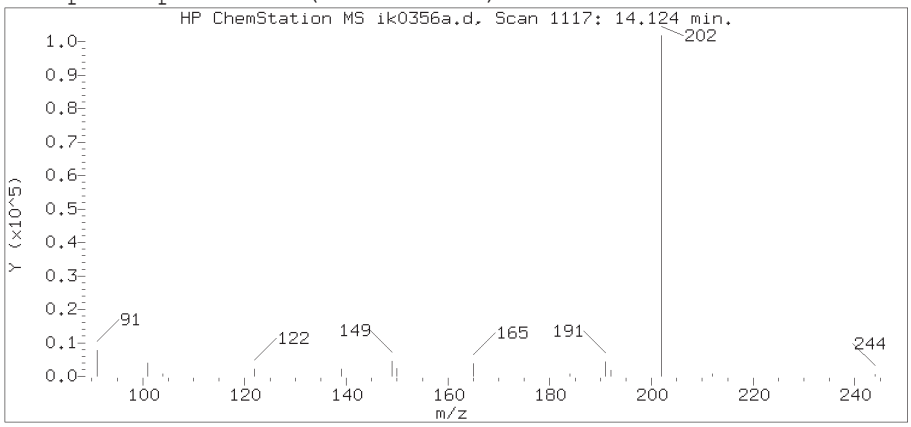
Reference Standard Spectrum for Pyrene

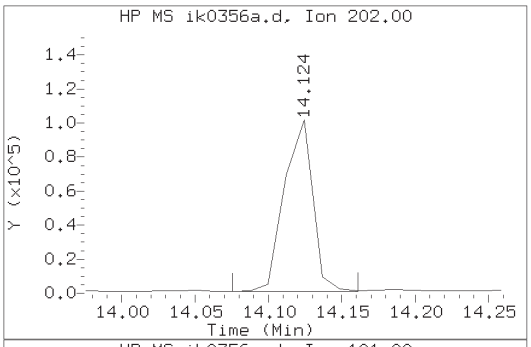


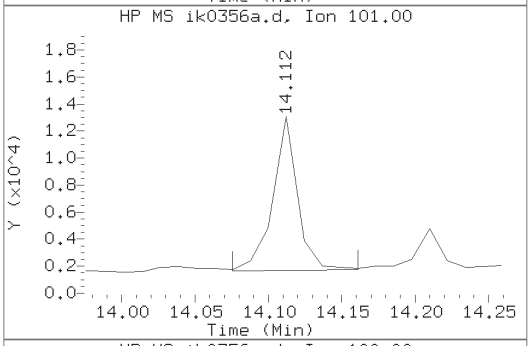
Sample Spectrum (Background Subtracted)

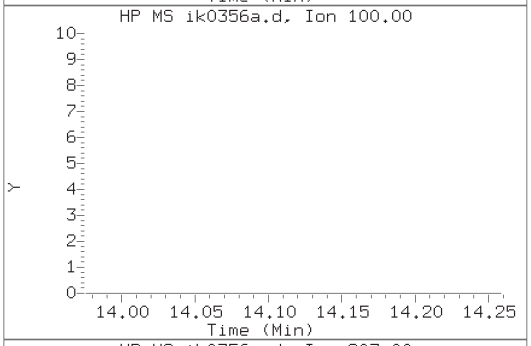


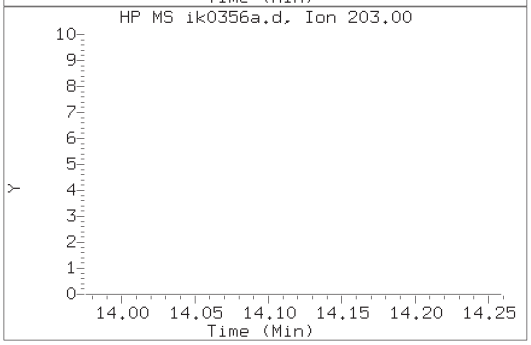
Sample Spectrum (Unaltered)











Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

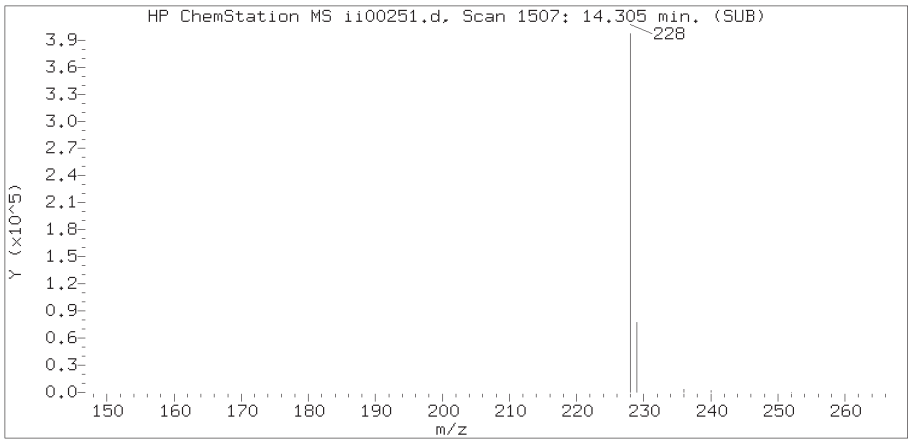
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

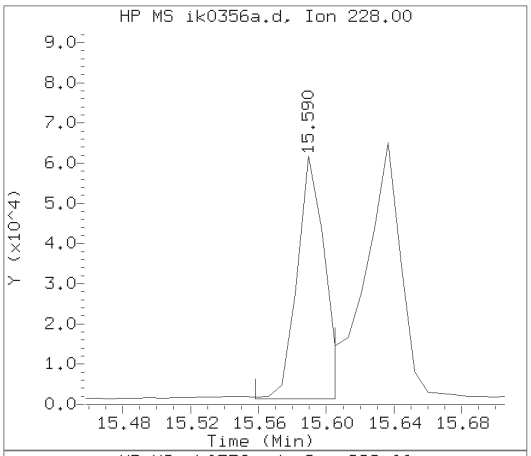
Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

Compound Number	: 39
Compound Name	: Pyrene
Scan Number	: 1117
Retention Time (minutes)	: 14.124
Relative Retention Time	:-0.00033
Quant Ion	: 202.00
Area (flag)	: 134205
On-column Amount (ng/ul)	: 0.1972

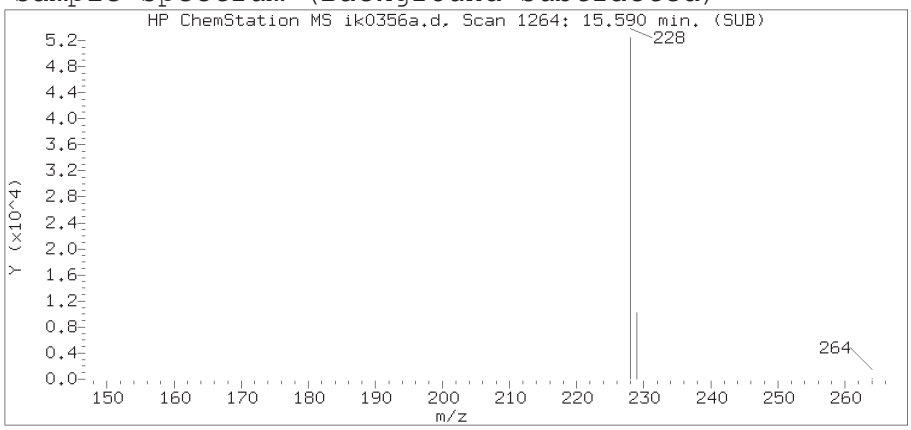
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

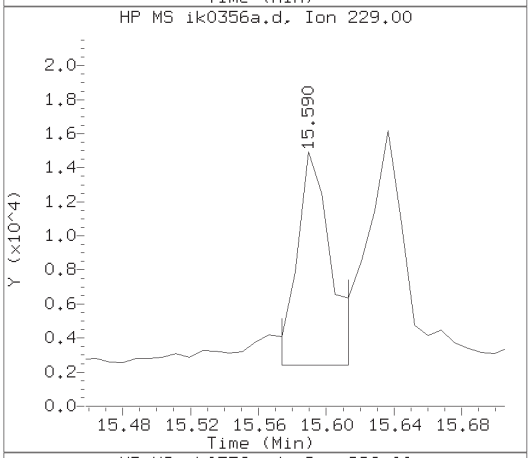
Reference Standard Spectrum for Benzo(a)anthracene



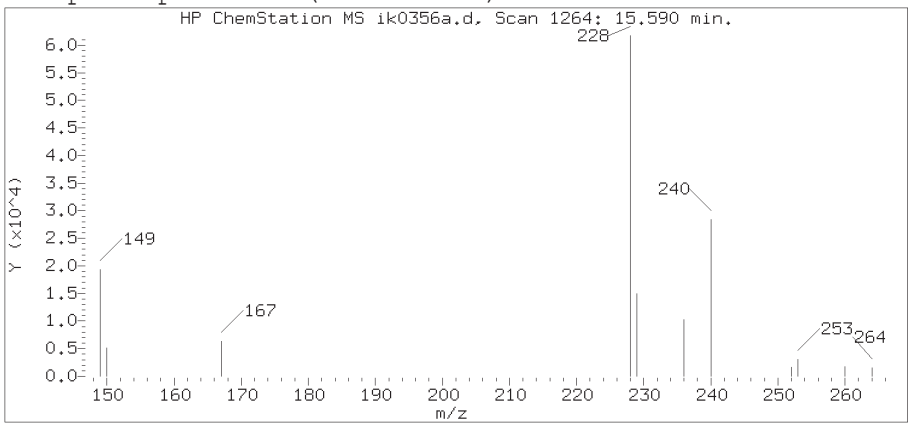


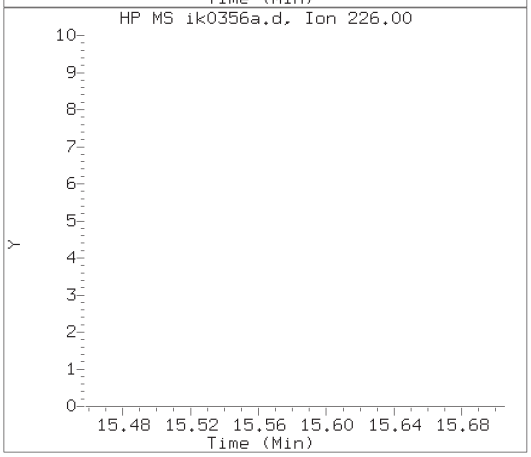
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

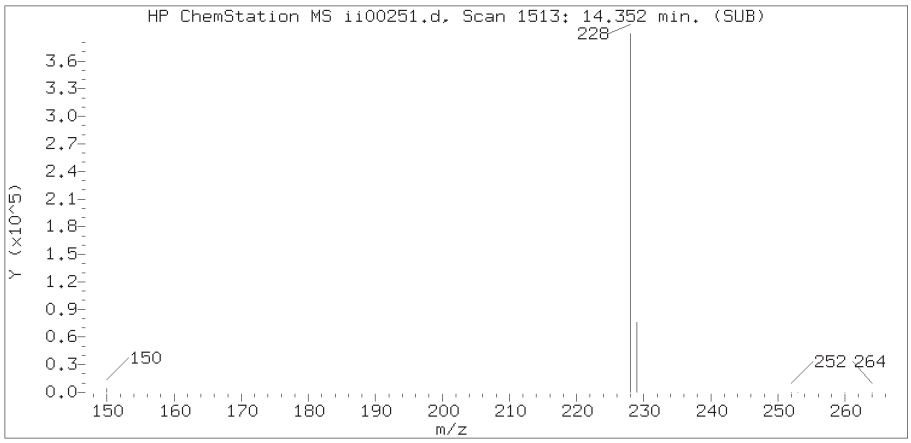
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

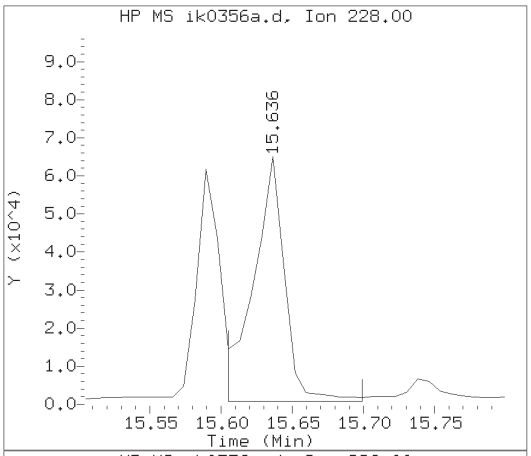
Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

Compound Number	: 42
Compound Name	: Benzo(a)anthracene
Scan Number	: 1264
Retention Time (minutes)	: 15.590
Relative Retention Time	:-0.00000
Quant Ion	: 228.00
Area (flag)	: 65437
On-column Amount (ng/ul)	: 0.1035

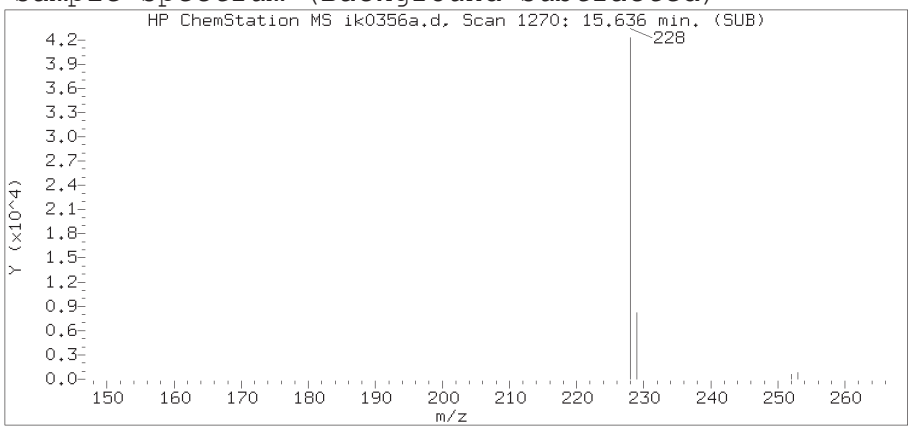
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

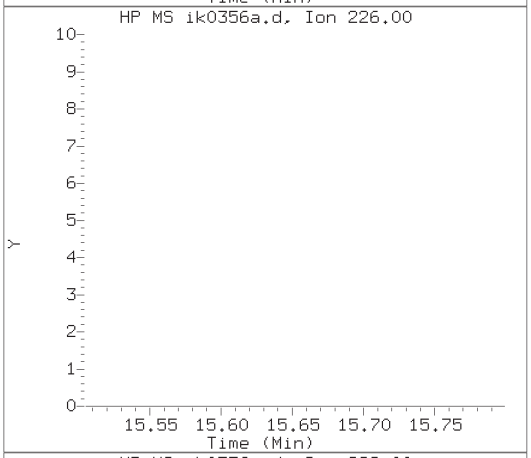
Reference Standard Spectrum for Chrysene



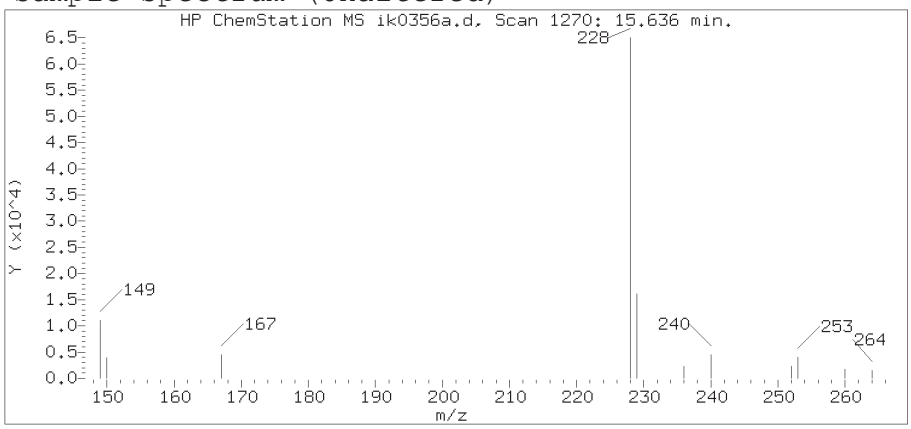


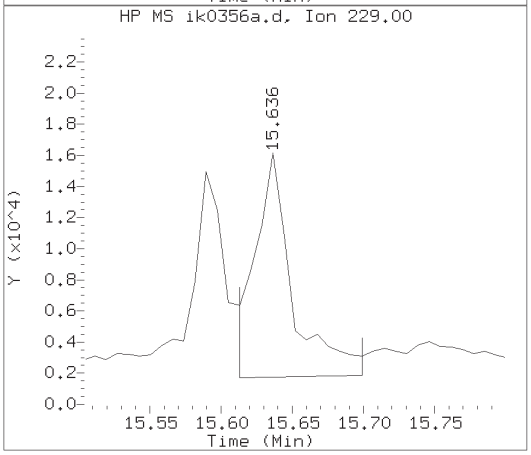
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

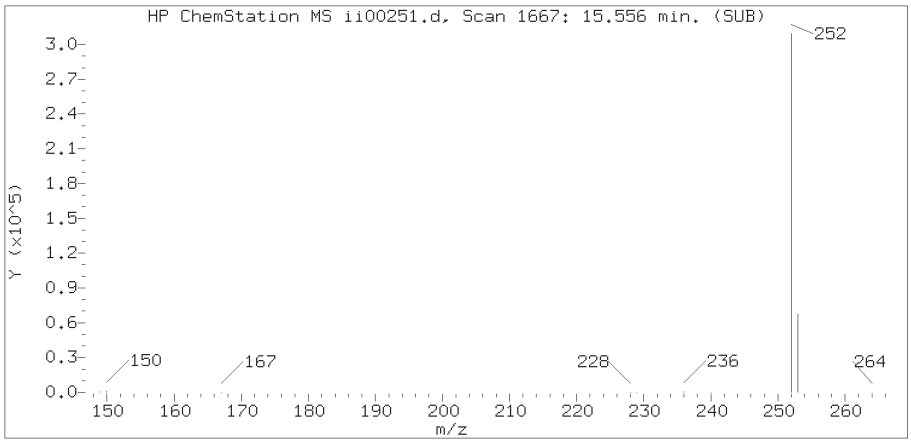
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

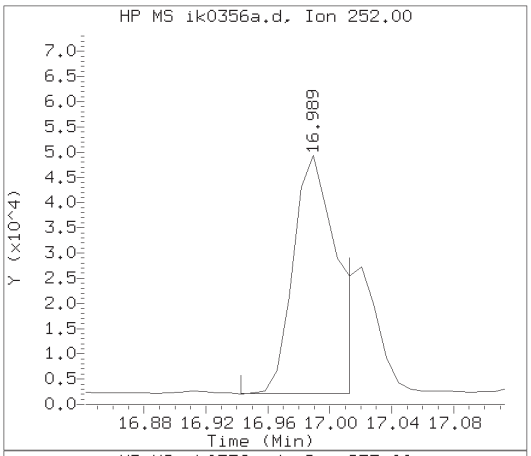
Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

Compound Number	: 44
Compound Name	: Chrysene
Scan Number	: 1270
Retention Time (minutes)	: 15.636
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 100068
On-column Amount (ng/ul)	: 0.1656

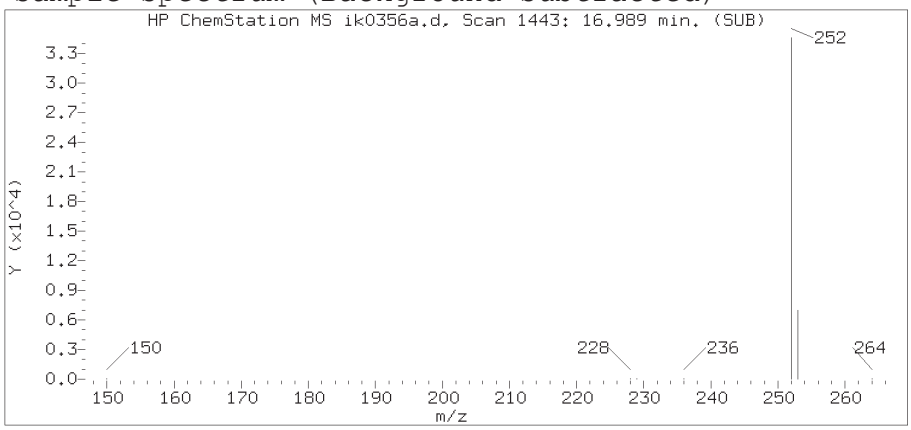
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

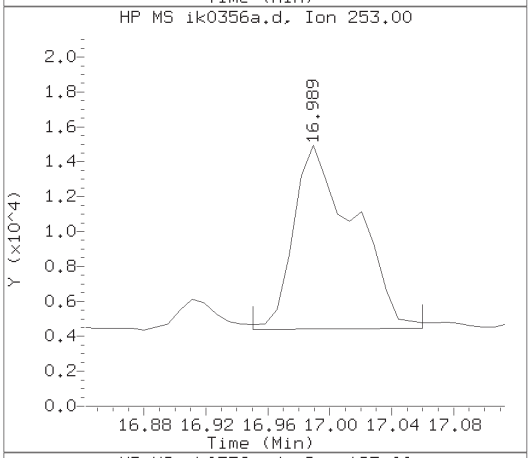
Reference Standard Spectrum for Benzo(b)fluoranthene



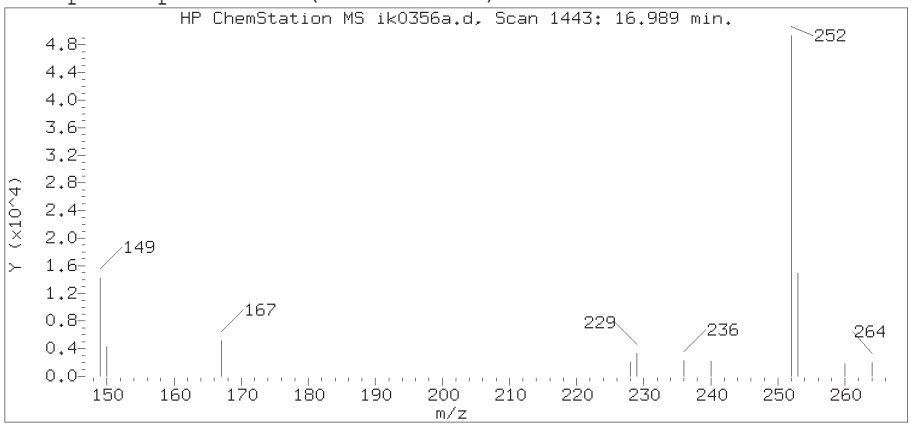


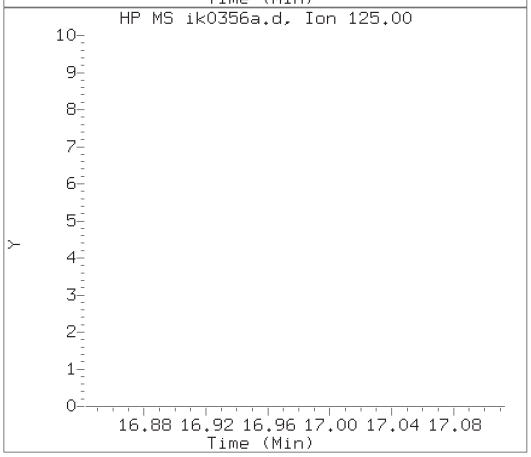
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

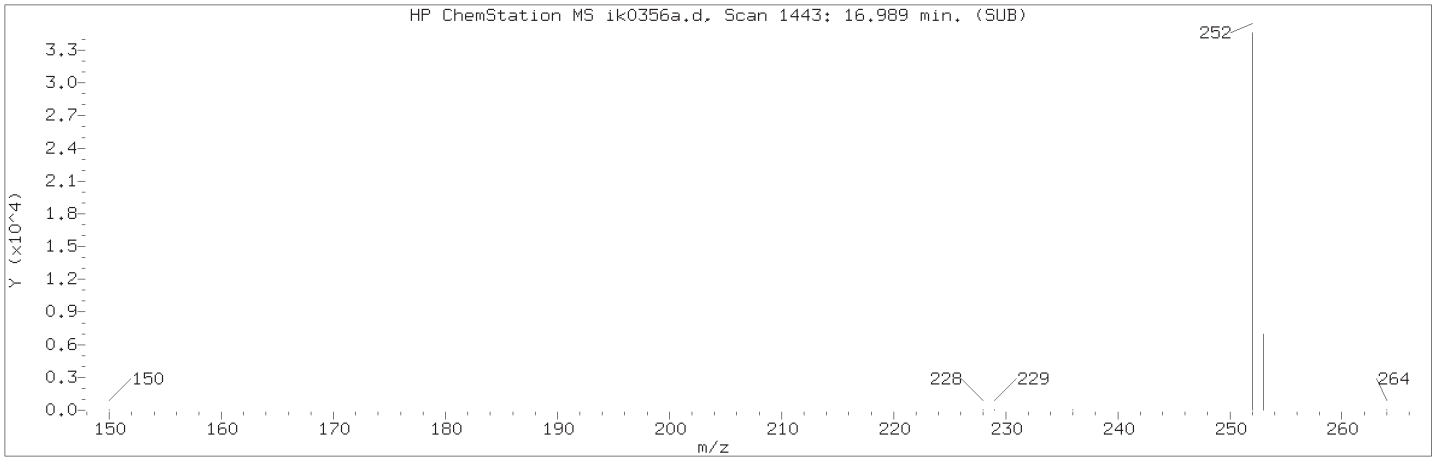
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

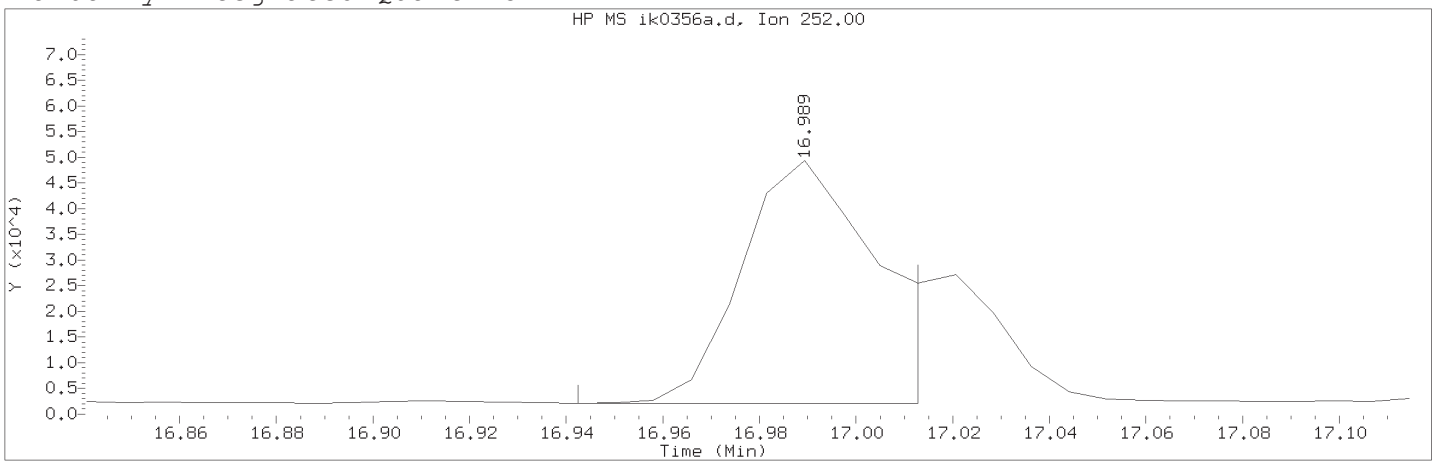
Compound Number	: 46
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1443
Retention Time (minutes)	: 16.989
Relative Retention Time	:-0.00004
Quant Ion	: 252.00
Area (flag)	: 93801M
On-column Amount (ng/ul)	: 0.2468

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

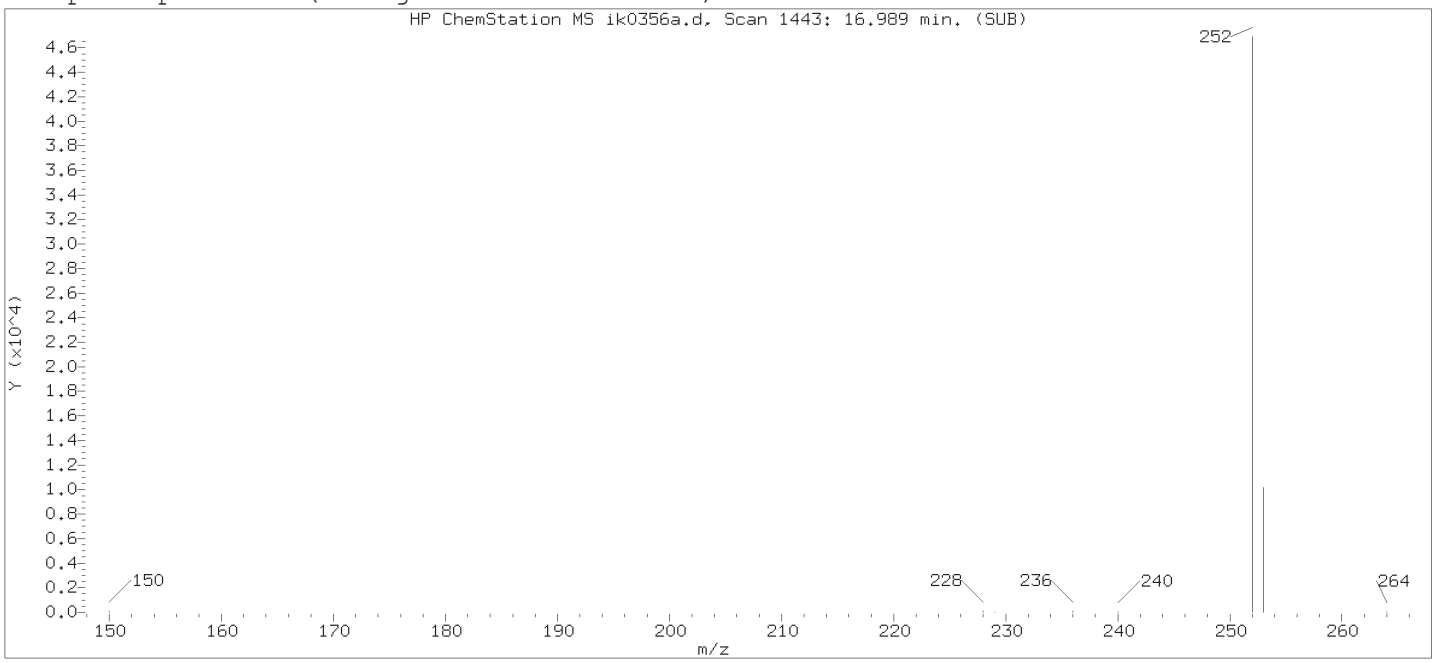
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1443
Retention Time (minutes) : 16.989
Quant Ion : 252.00
Area (flag) : 93801M
On-column Amount (ng/ul) : 0.2468
Integration start scan : 1436 Integration stop scan: 1445
Y at integration start : 2105 Y at integration end: 2105

Reason for manual integration: improper integration

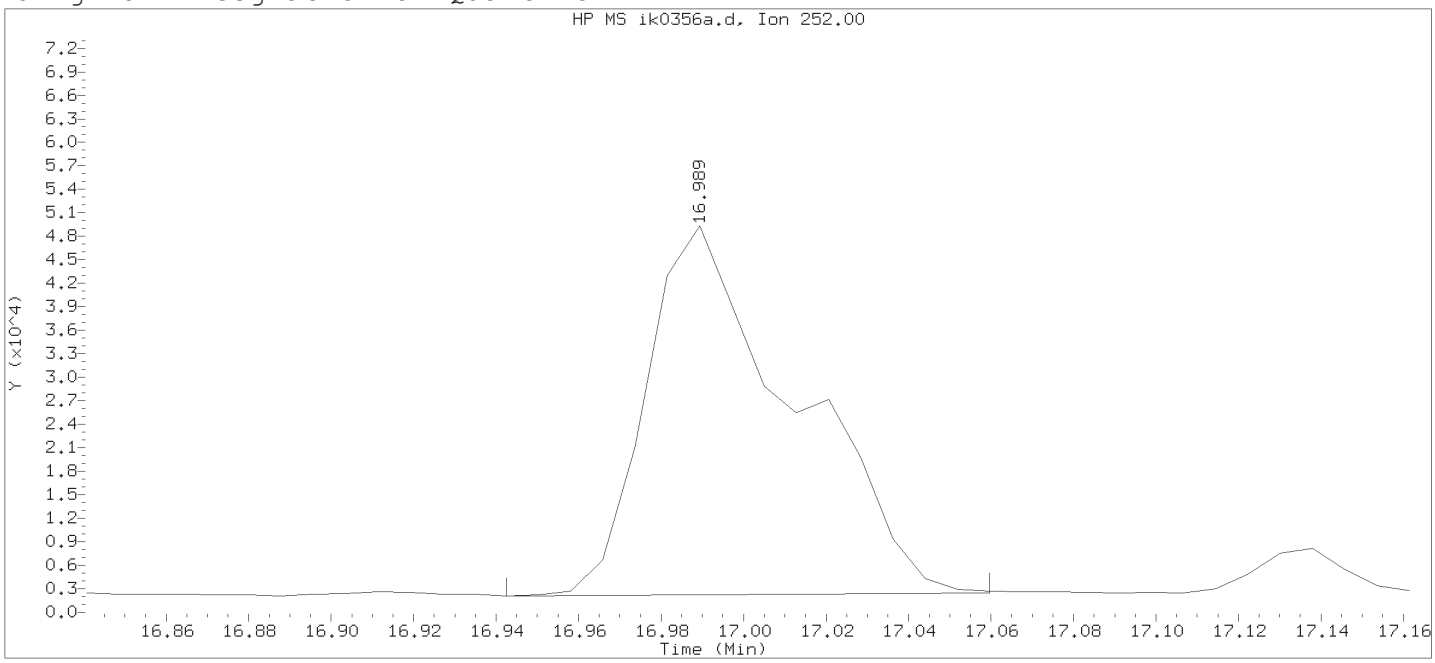
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

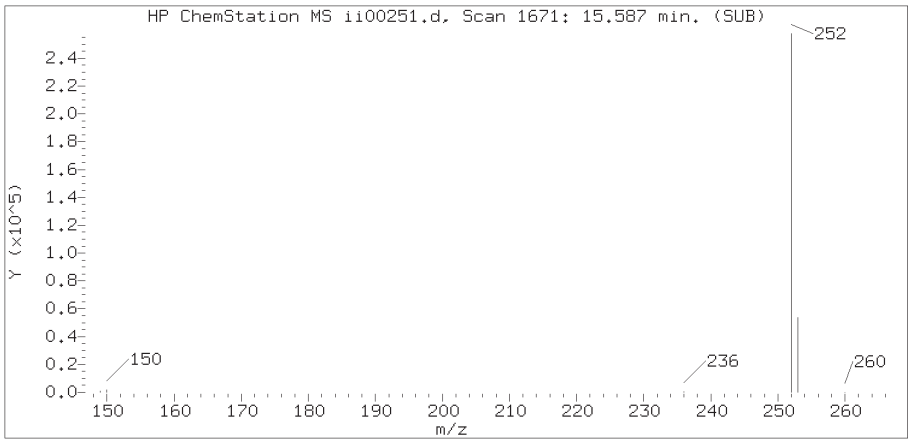
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 17:29 Automation

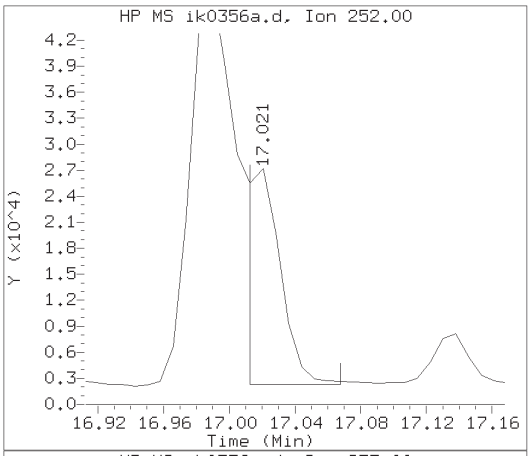
Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

Compound Number	: 46		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1443		
Retention Time (minutes)	: 16.989		
Quant Ion	: 252.00		
Area	: 117629		
On-column Amount (ng/ul)	: 0.3095		
Integration start scan	: 1436	Integration stop scan:	1451
Y at integration start	: 2084	Y at integration end:	2469

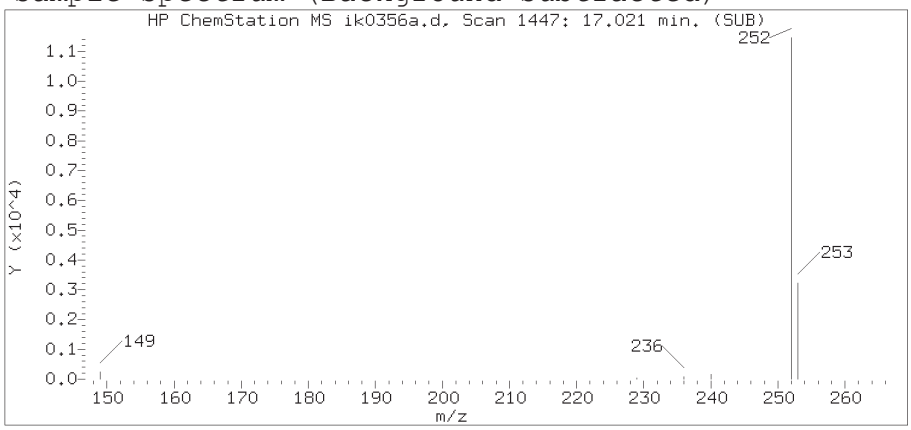
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature used 11/12/2018

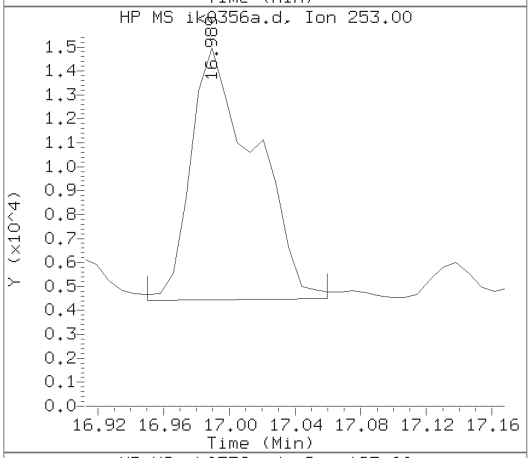
Reference Standard Spectrum for Benzo(k)fluoranthene



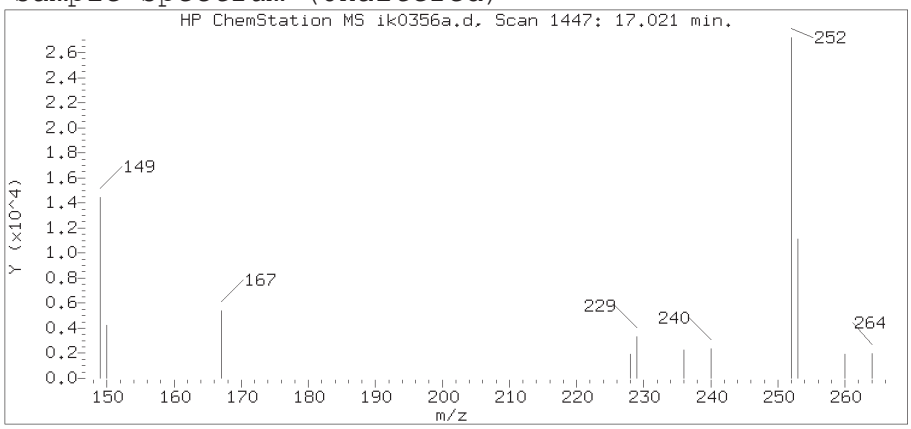


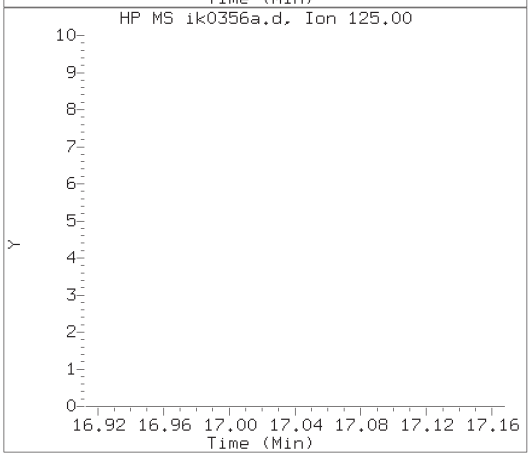
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

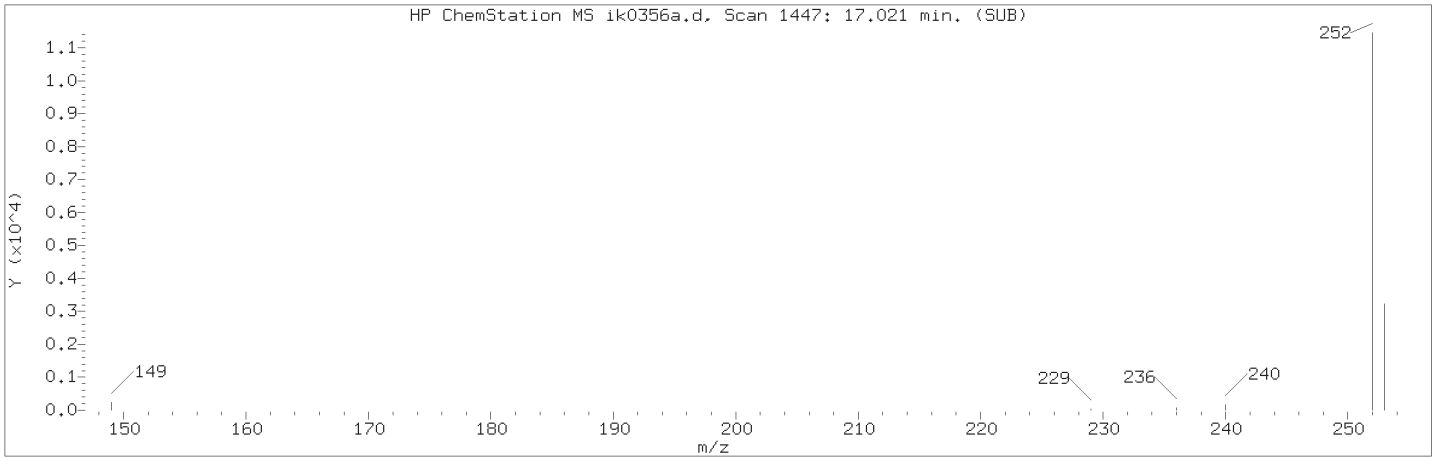
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

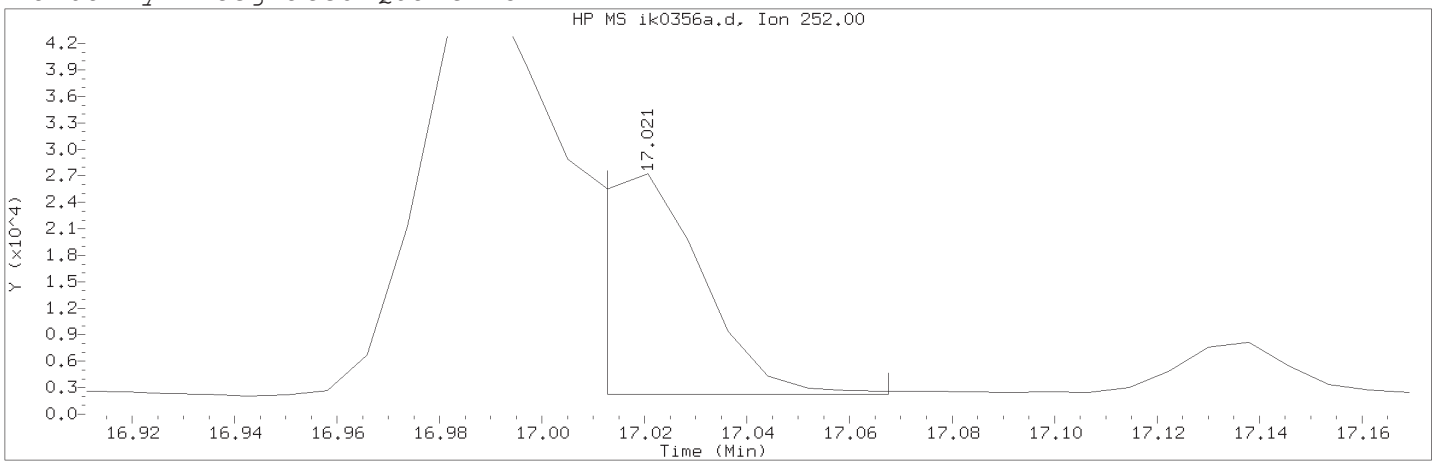
Compound Number	: 47
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1447
Retention Time (minutes)	: 17.021
Relative Retention Time	: 0.00040
Quant Ion	: 252.00
Area (flag)	: 35678M
On-column Amount (ng/ul)	: 0.1001

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

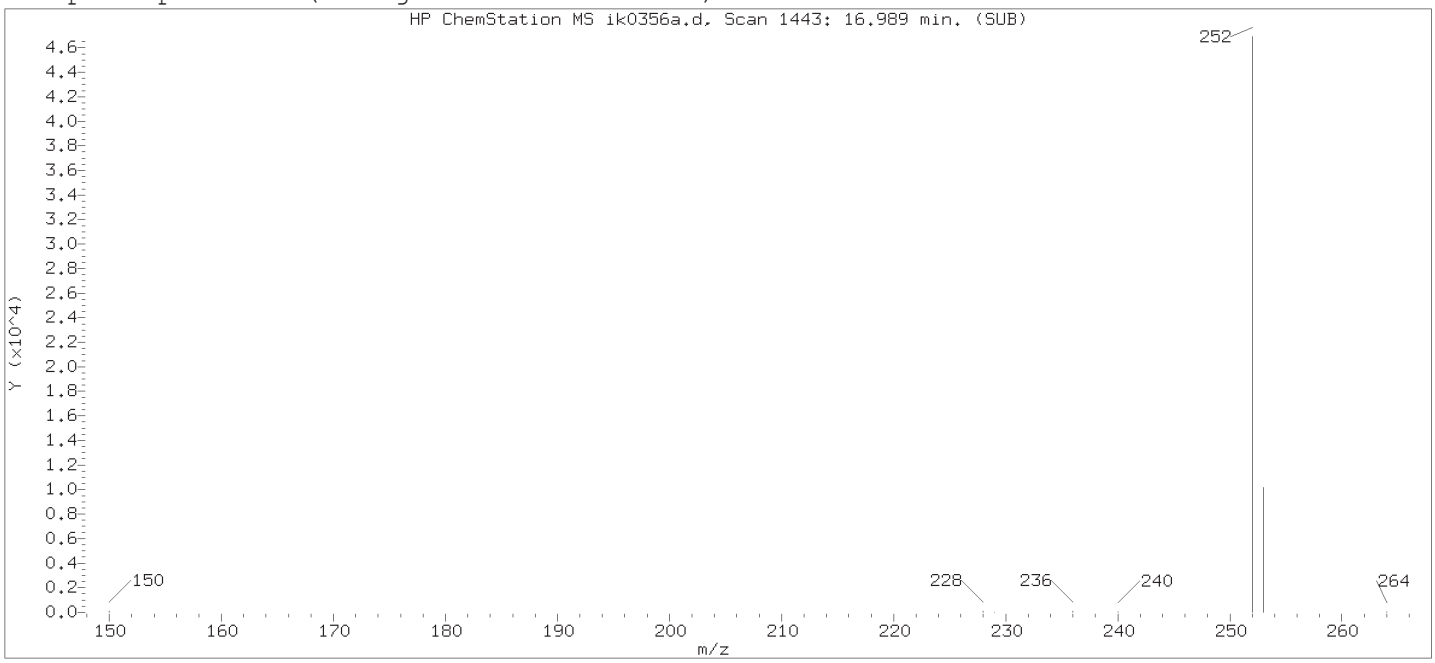
Compound Number : 47
Compound Name : Benzo(k)fluoranthene
Scan Number : 1447
Retention Time (minutes) : 17.021
Quant Ion : 252.00
Area (flag) : 35678M
On-column Amount (ng/ul) : 0.1001
Integration start scan : 1445 Integration stop scan: 1452
Y at integration start : 2292 Y at integration end: 2292

Reason for manual integration: improper integration

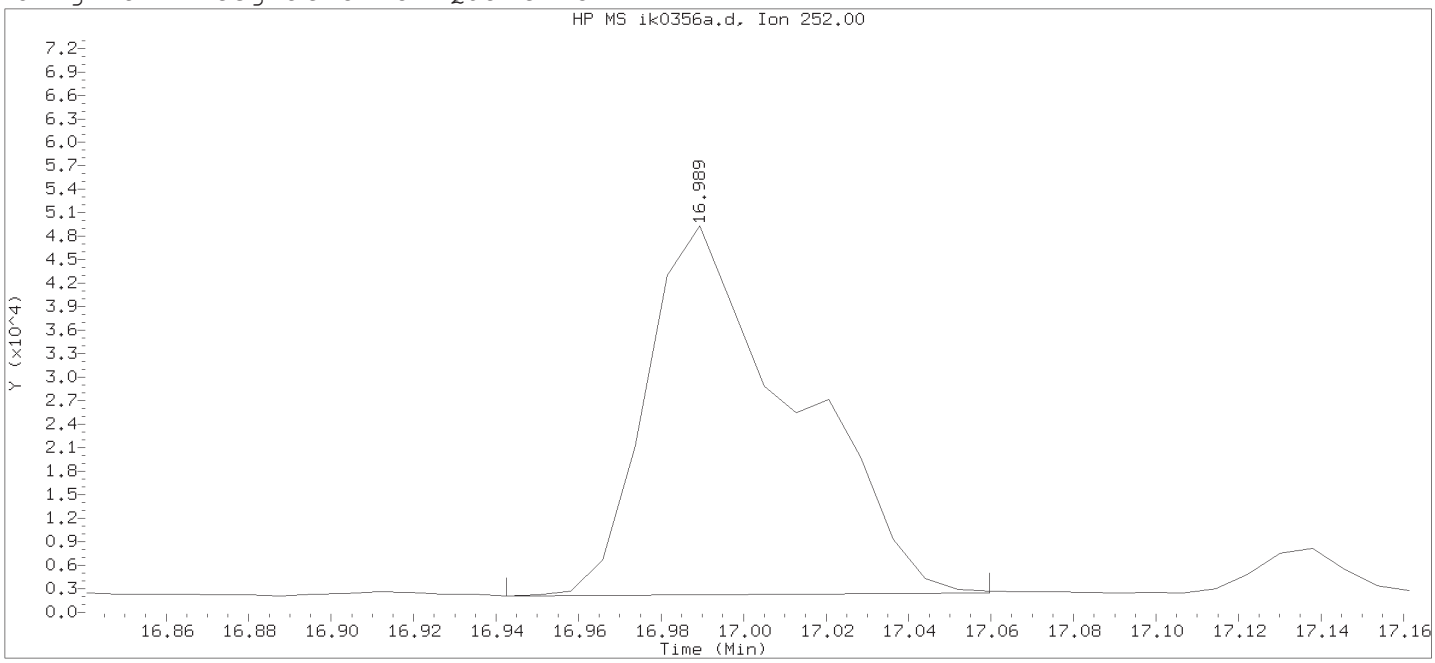
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

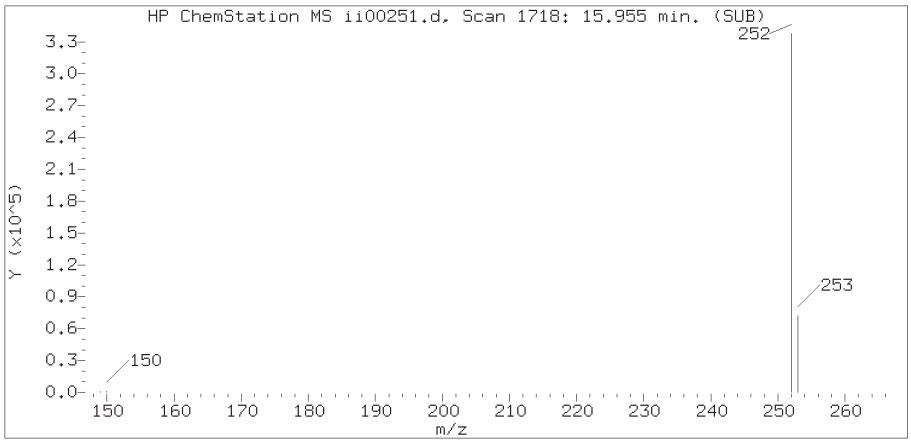
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 17:29 Automation

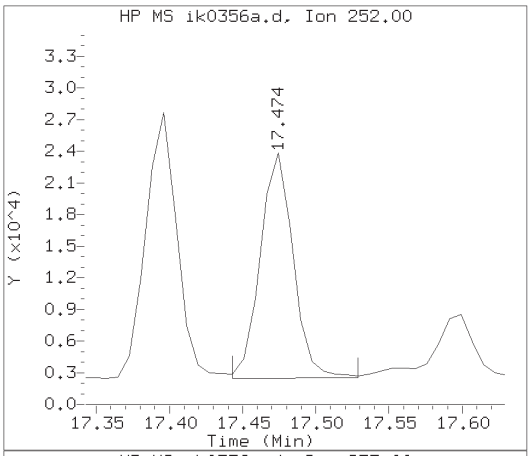
Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

Compound Number	: 47		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1443		
Retention Time (minutes)	: 16.989		
Quant Ion	: 252.00		
Area	: 117633		
On-column Amount (ng/ul)	: 0.3301		
Integration start scan	: 1436	Integration stop scan:	1451
Y at integration start	: 2084	Y at integration end:	2468

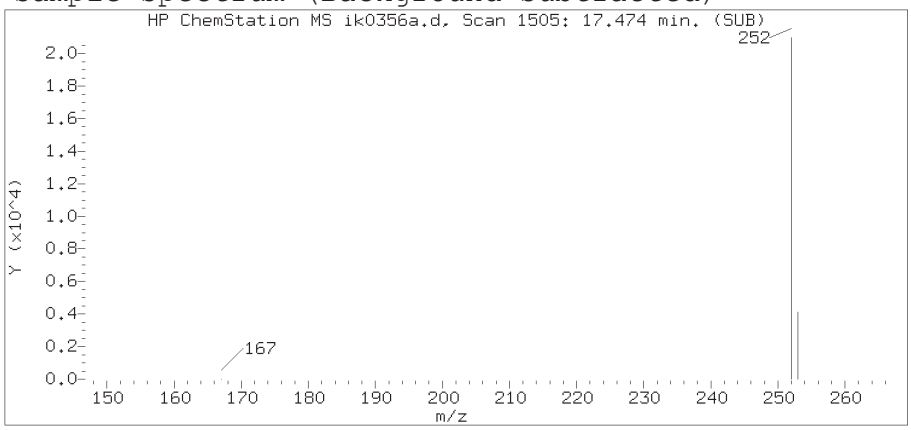
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature used [illegible]

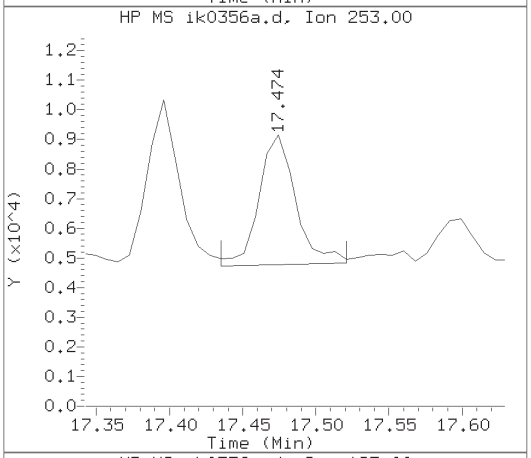
Reference Standard Spectrum for Benzo(a)pyrene



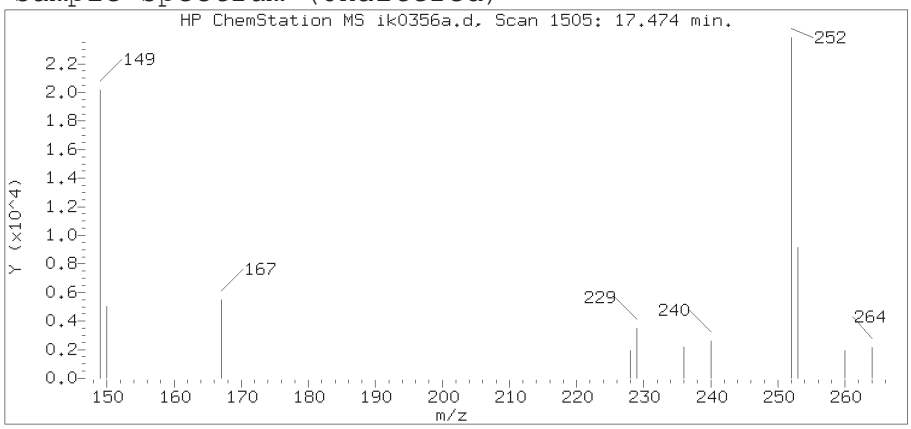


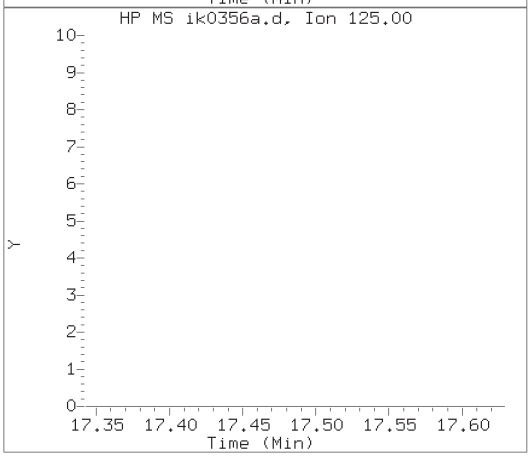
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

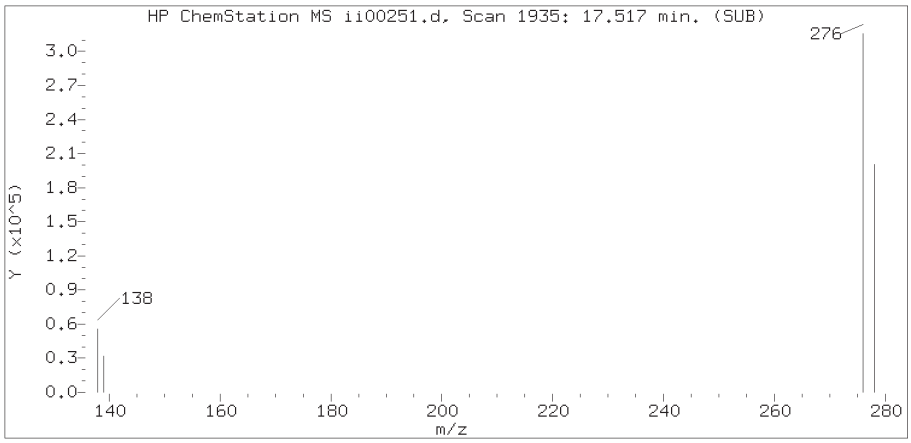
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

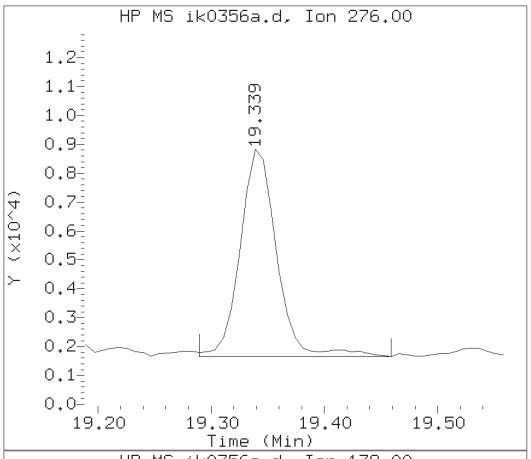
Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

Compound Number	: 50
Compound Name	: Benzo(a)pyrene
Scan Number	: 1505
Retention Time (minutes)	: 17.474
Relative Retention Time	:-0.00001
Quant Ion	: 252.00
Area (flag)	: 33563
On-column Amount (ng/ul)	: 0.1030

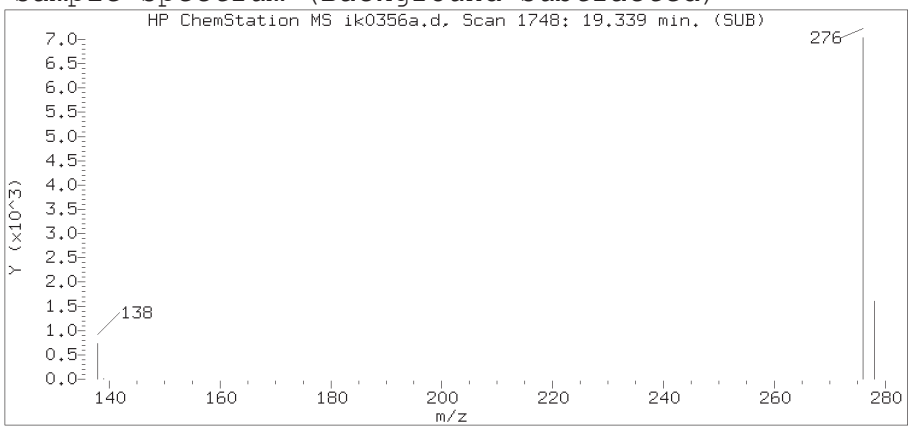
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

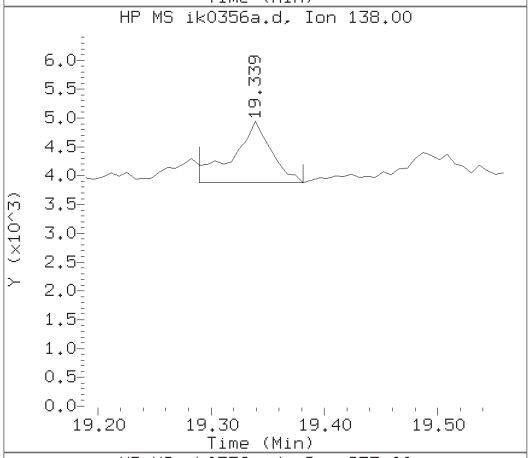
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



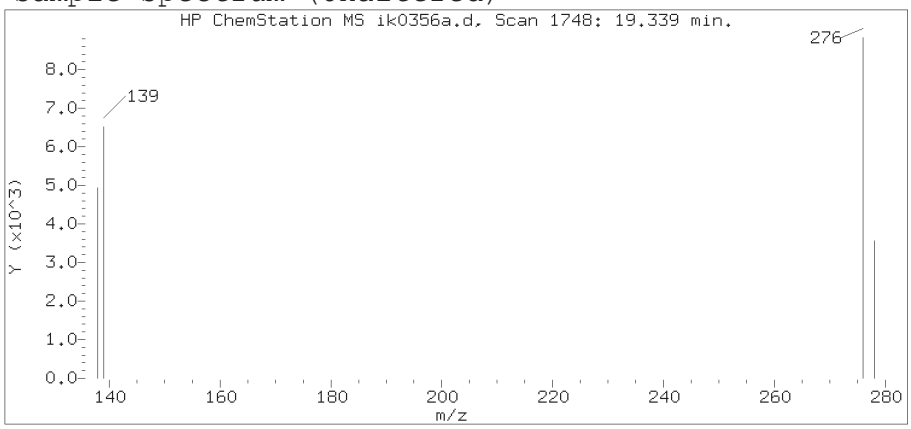


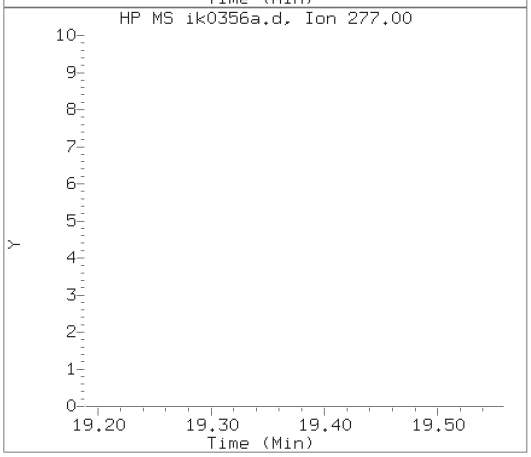
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

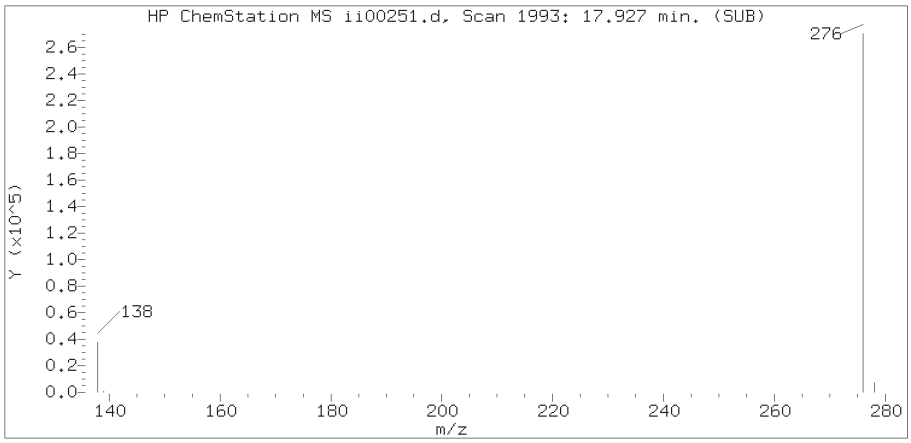
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

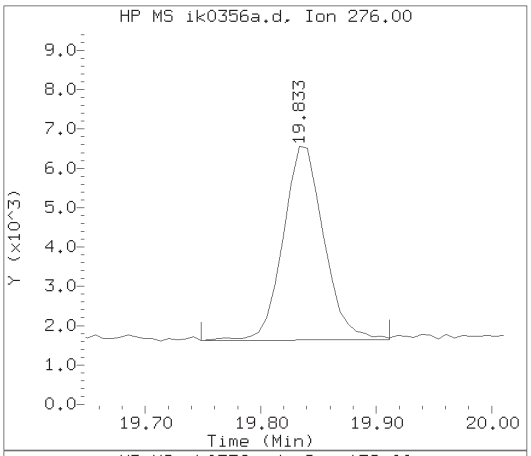
Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

Compound Number	: 53
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 1748
Retention Time (minutes)	: 19.339
Relative Retention Time	:-0.00014
Quant Ion	: 276.00
Area (flag)	: 16128
On-column Amount (ng/ul)	: 0.0420

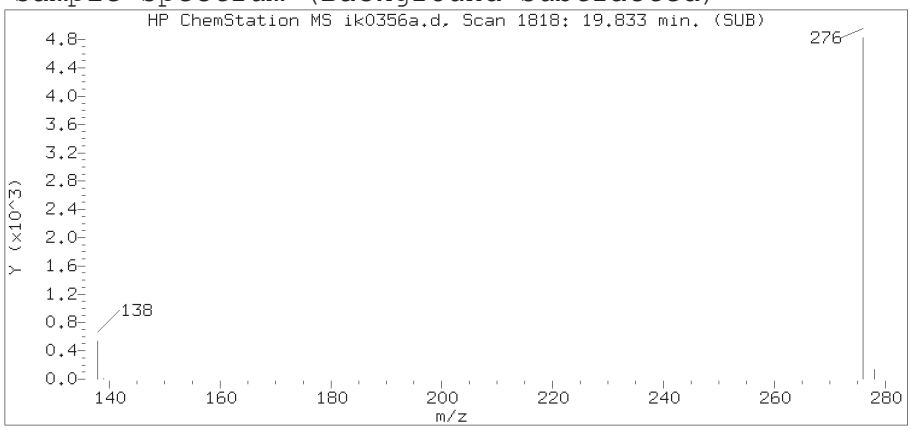
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

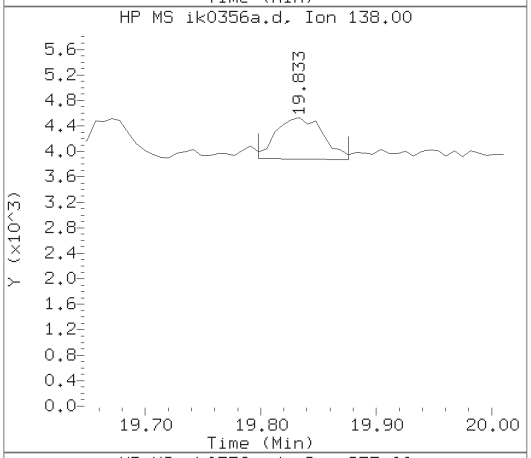
Reference Standard Spectrum for Benzo(g,h,i)perylene



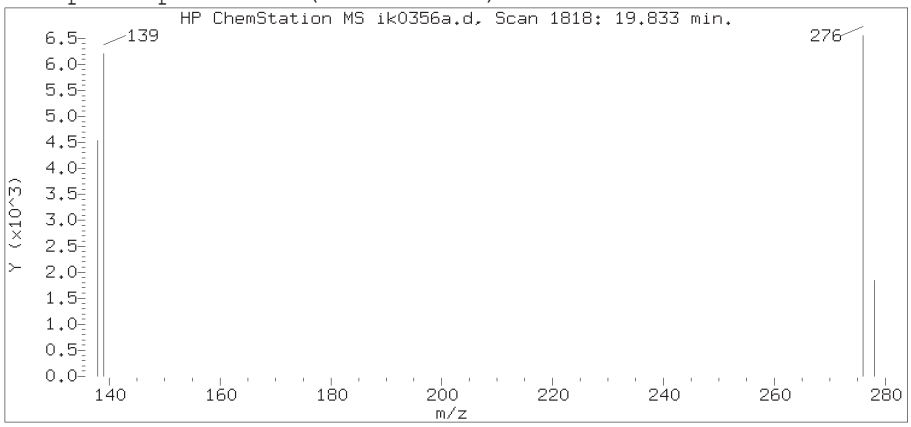


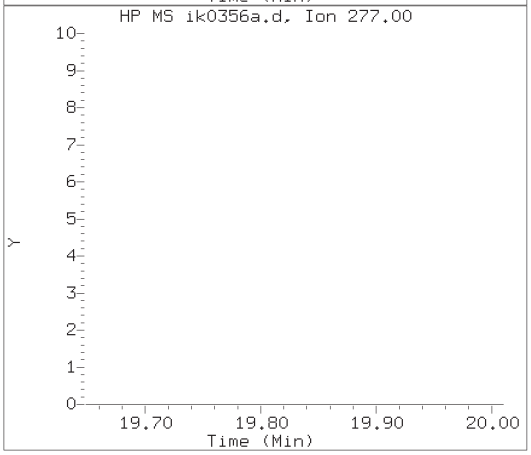
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0356a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:03 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:28 apb10206

Sample Name: T1003DL2 Lab Sample ID: 9867762DL2

Compound Number	: 55
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 1818
Retention Time (minutes)	: 19.833
Relative Retention Time	:-0.00010
Quant Ion	: 276.00
Area (flag)	: 12137
On-column Amount (ng/ul)	: 0.0359

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/18nov16.b/ck0708.d Injection date and time: **16-NOV-2018 10:26**
Data file Sample Info. Line: T1003RE;9867762RE;2;0;SAMPLE;;DOD26;T4 Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 20 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.777	(-0.013)	474	152	52202	(-24)	1.00	
10) Naphthalene-d8	8.289	(0.000)	588	136	239103	(-9)	1.00	
20) Acenaphthene-d10	10.469	(-0.011)	775	164	94681	(-22)	1.00	
31) Phenanthrene-d10	12.327	(-0.022)	941	188	164418	(-28)	1.00	
43) Chrysene-d12	15.632	(-0.023)	1254	240	123956	(-29)	1.00	
51) Perylene-d12	17.767	(-0.047)	1527	264	98282	(-36)	1.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.242	(-0.001)	152	96397	0.798	80%		61 - 111
36) Fluoranthene-d10	(4)	13.818	(0.001)	212	123171	0.826	83%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.634	(0.000)	264	56230	0.623	62%		54 - 122

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.336	(-0.014)	88	2406MA	0.072	3.59			0.02
11) Naphthalene	(2)	8.316	(-0.000)	128	845310	3.330	166.48			0.04
19) Acenaphthylene	(3)	10.285	(-0.000)	152	57895	0.308	15.40	0.335	B	0.01
21) Acenaphthene	(3)	10.502	(0.000)	154	15680	0.122	6.09			0.02
26) Fluorene	(3)	11.147	(0.000)	166	26498	0.193	9.63			0.02
32) Phenanthrene	(4)	12.349	(0.000)	178	602018	3.069	153.43			0.02
33) Anthracene	(4)	12.417	(0.000)	178	132725	0.704	35.18			0.02
35) Di-n-butylphthalate	(4)	12.979	(0.001)	149	9892166	47.075	2353.74		E	0.2
37) Fluoranthene	(4)	13.842	(0.001)	202	1070229	5.552	277.60			0.02
39) Pyrene	(5)	14.135	(0.000)	202	993275	4.979	248.93			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.538	(0.000)	149	972339	6.749	337.43	18.477	B	0.3
42) Benzo(a)anthracene	(5)	15.616	(-0.000)	228	497143	3.095	154.73			0.02
44) Chrysene	(5)	15.663	(0.000)	228	640029	3.889	194.43			0.01
46) Benzo(b)fluoranthene	(6)	17.141	(-0.000)	252	732348M	5.814	290.69			0.02
47) Benzo(k)fluoranthene	(6)	17.165	(0.000)	252	312991M	2.314	115.69			0.02
50) Benzo(a)pyrene	(6)	17.673	(-0.000)	252	368816	3.209	160.46			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.725	(-0.001)	276	217798	1.911	95.53			0.02
54) Dibenz(a,h)anthracene	(6)	19.725	(-0.001)	278	58621	0.620	31.01			0.02
55) Benzo(g,h,i)perylene	(6)	20.297	(-0.002)	276	184876	1.738	86.89			0.02

M = Compound was manually integrated. A = User selected an alternate peak. B = Compound detected in referenced method blank.
E = Compound concentration above calibration range.

Digitally signed by William H Saadeh on 11/16/2018 at 12:56. Target 3.5 esignature user ID: whs02991

Data file: /chem/HP10623.i/18nov16.b/ck0708.d Injection date and time: **16-NOV-2018 10:26**
Data file Sample Info. Line: T1003RE;9867762RE;2;0;SAMPLE;;DOD26;T4 Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

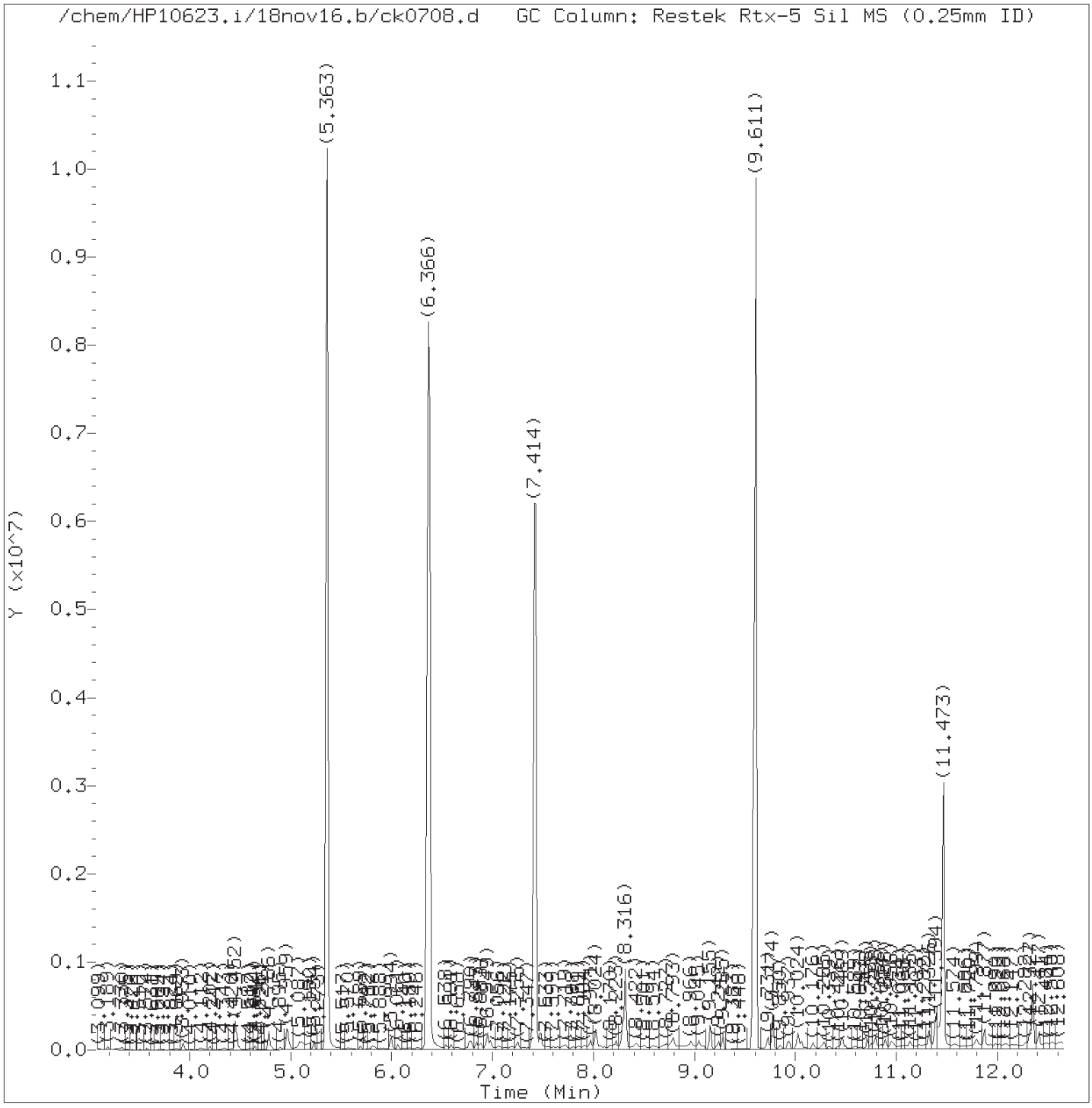
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 20 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by William H Saadeh on 11/16/2018 at 12:56. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

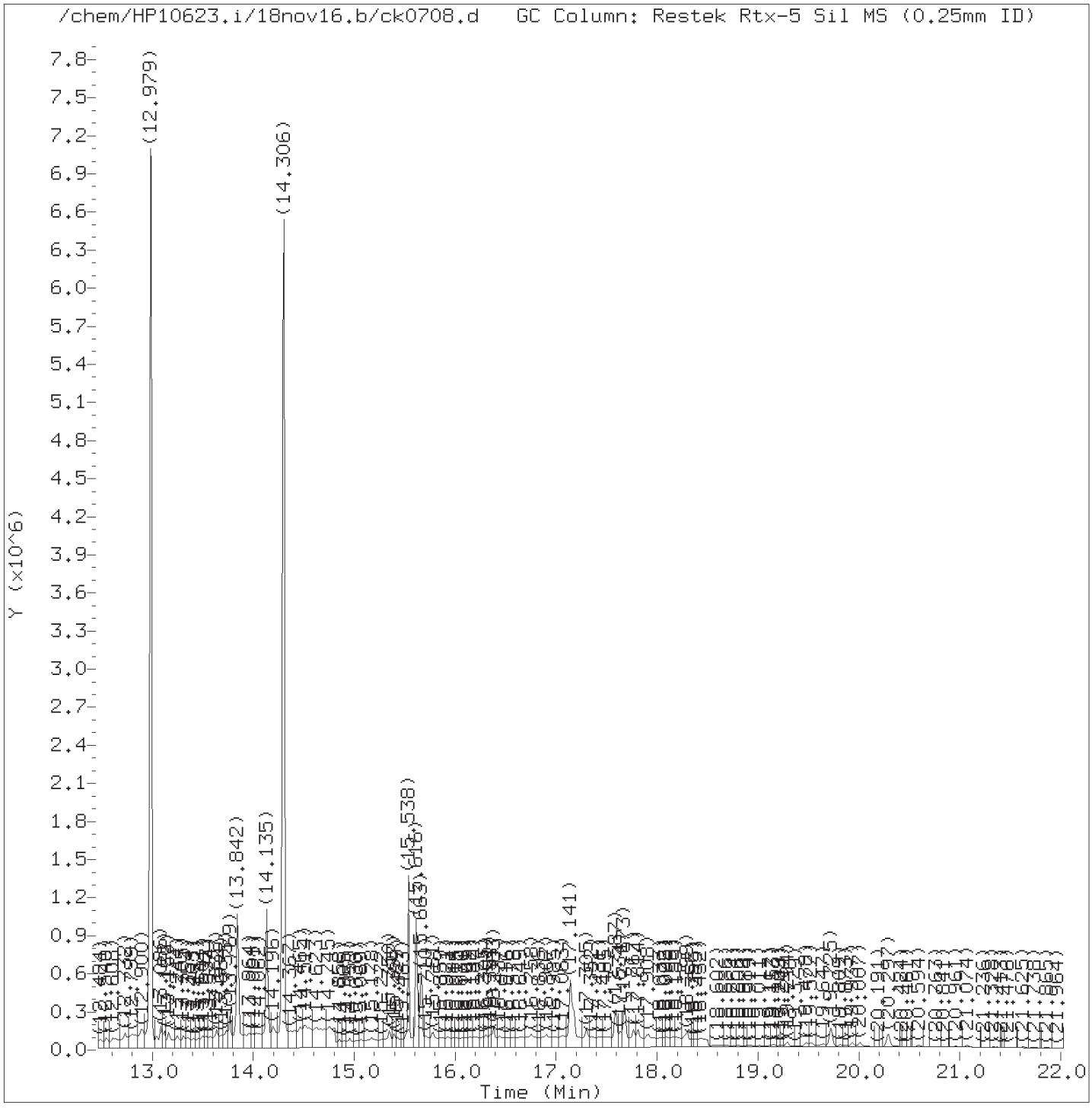
Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1003RE Lab Sample ID: 9867762RE

Digitally signed by William H Saadeh
on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1003RE Lab Sample ID: 9867762RE

Digitally signed by William H Saadeh
on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

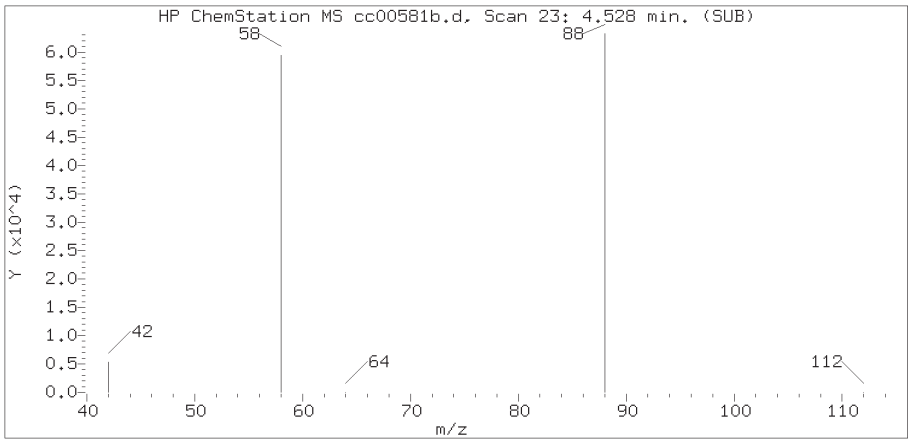
Sample Name: T1003RE Lab Sample ID: 9867762RE

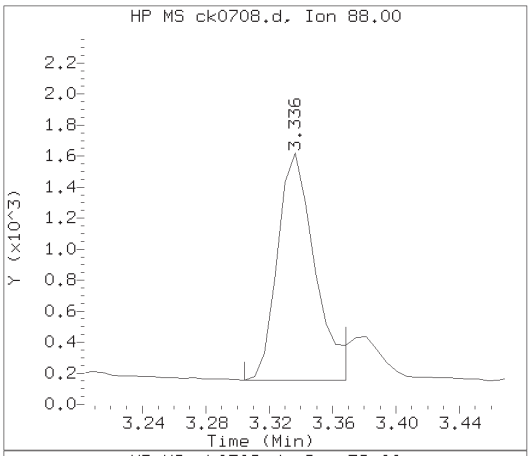
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.336	88	2406MA	0.072
6)*1,4-Dichlorobenzene-d4	(1)	6.777	152	52202	1.000
10)*Naphthalene-d8	(2)	8.289	136	239103	1.000
11) Naphthalene	(2)	8.316	128	845310	3.330
14)$1-Methylnaphthalene-d10	(2)	9.242	152	96397	0.798
19) Acenaphthylene	(3)	10.285	152	57895	0.308
20)*Acenaphthene-d10	(3)	10.469	164	94681	1.000
21) Acenaphthene	(3)	10.502	154	15680	0.122
26) Fluorene	(3)	11.147	166	26498	0.193
31)*Phenanthrene-d10	(4)	12.327	188	164418	1.000
32) Phenanthrene	(4)	12.349	178	602018	3.069
33) Anthracene	(4)	12.417	178	132725	0.704
35) Di-n-butylphthalate	(4)	12.979	149	9892166	47.075
36)$Fluoranthene-d10	(4)	13.818	212	123171	0.826
37) Fluoranthene	(4)	13.842	202	1070229	5.552
39) Pyrene	(5)	14.135	202	993275	4.979
41) bis(2-Ethylhexyl)phthalate	(5)	15.538	149	972339	6.749
42) Benzo(a)anthracene	(5)	15.616	228	497143	3.095
43)*Chrysene-d12	(5)	15.632	240	123956	1.000
44) Chrysene	(5)	15.663	228	640029	3.889
46) Benzo(b)fluoranthene	(6)	17.141	252	732348M	5.814
47) Benzo(k)fluoranthene	(6)	17.165	252	312991M	2.314
49)$Benzo(a)pyrene-d12	(6)	17.634	264	56230	0.623
50) Benzo(a)pyrene	(6)	17.673	252	368816	3.209
51)*Perylene-d12	(6)	17.767	264	98282	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.725	276	217798	1.911
54) Dibenz(a,h)anthracene	(6)	19.725	278	58621	0.620
55) Benzo(g,h,i)perylene	(6)	20.297	276	184876	1.738

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

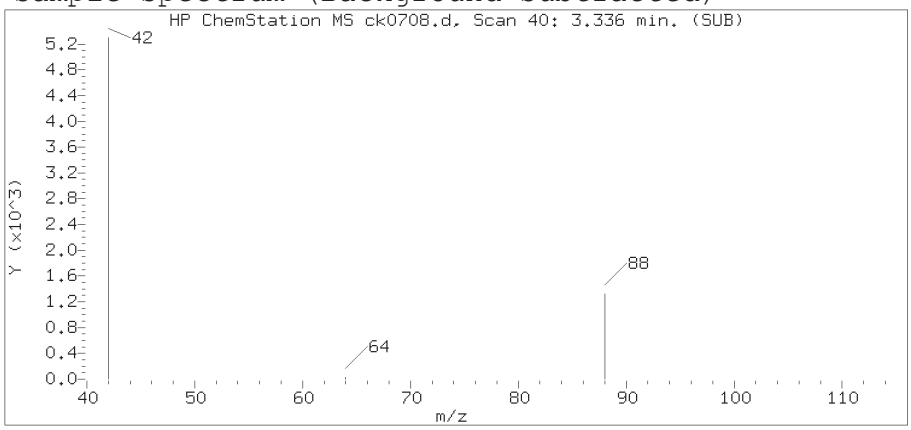
Digitally signed by William H Saadeh
on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

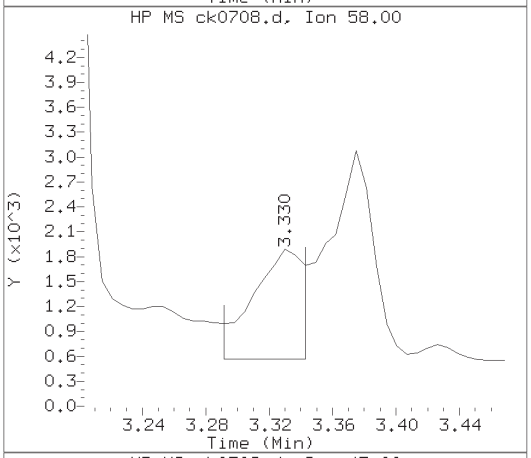
Reference Standard Spectrum for 1,4-Dioxane



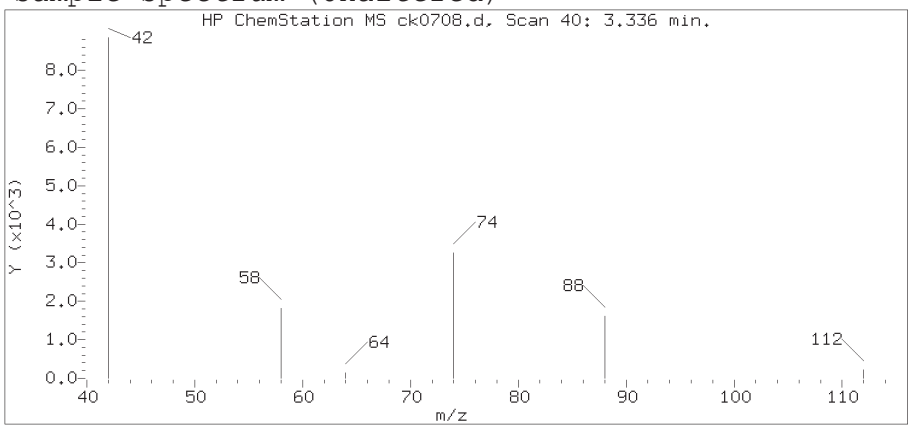


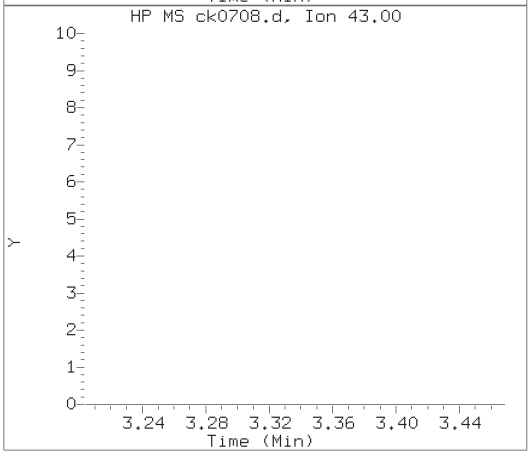
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

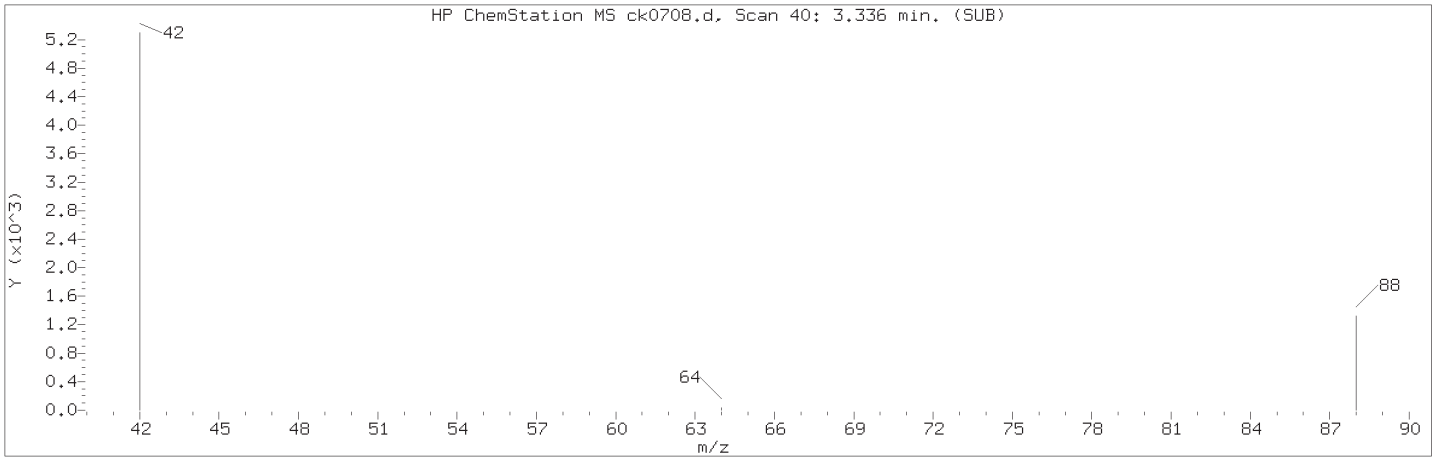
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1003RE Lab Sample ID: 9867762RE

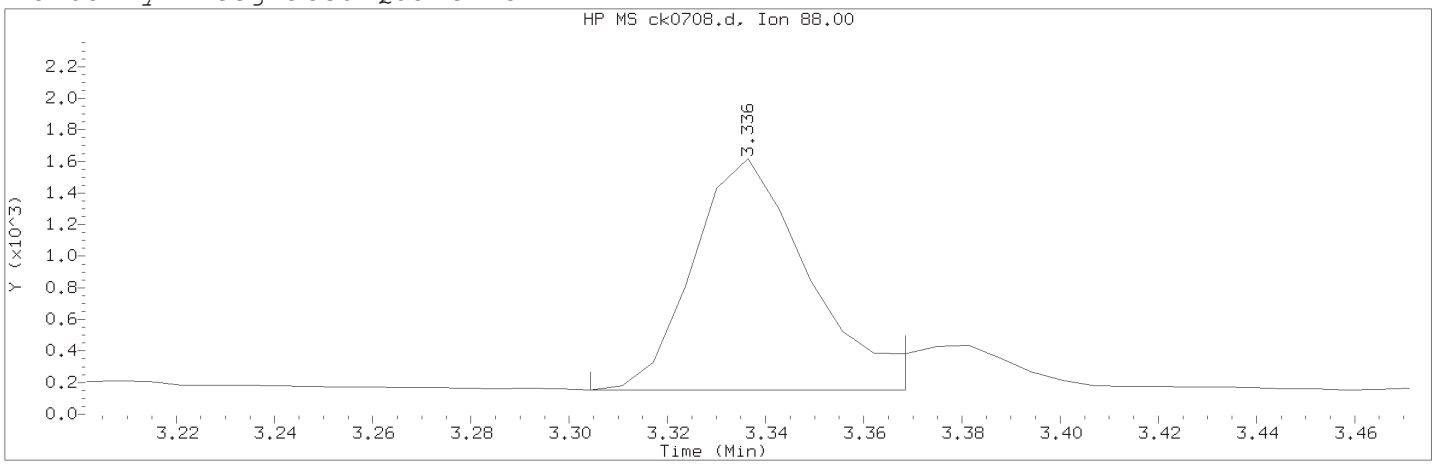
Compound Number	: 1
Compound Name	: 1,4-Dioxane
Scan Number	: 40
Retention Time (minutes)	: 3.336
Relative Retention Time	:-0.01420
Quant Ion	: 88.00
Area (flag)	: 2406AM
On-column Amount (ng/ul)	: 0.0717

Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1003RE Lab Sample ID: 9867762RE

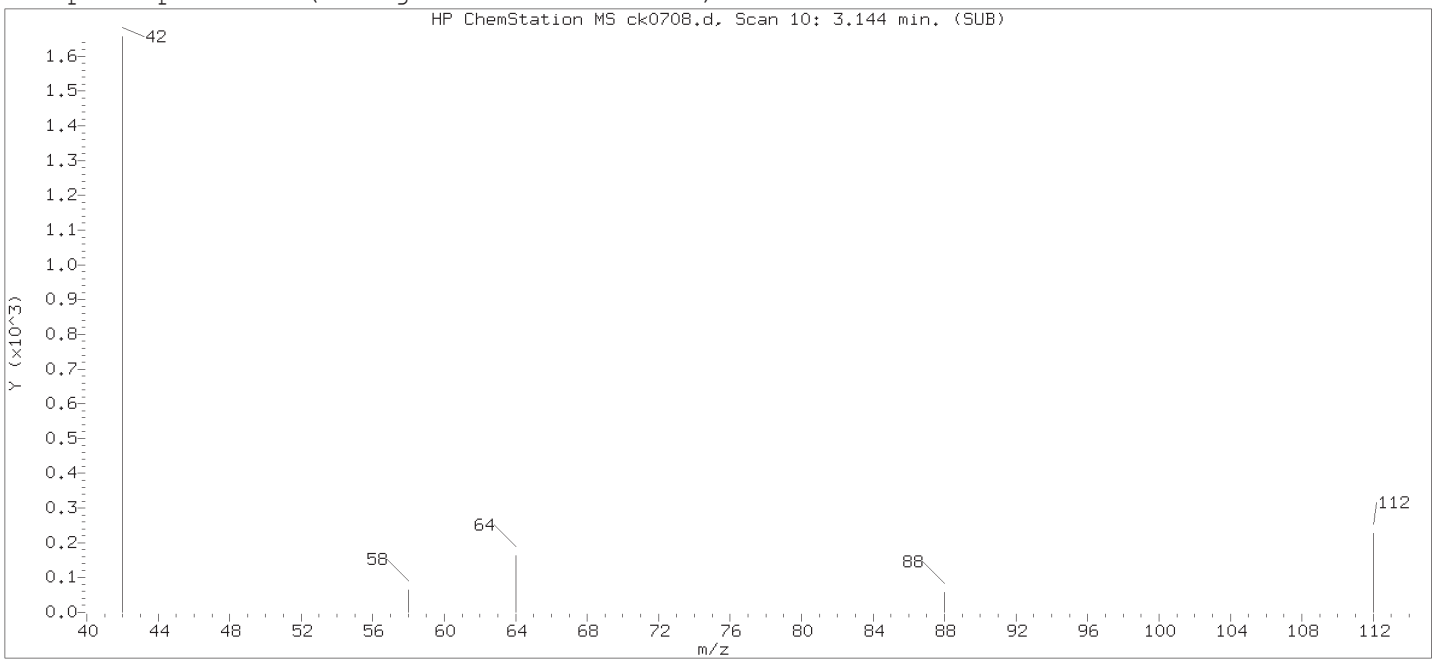
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 40		
Retention Time (minutes)	: 3.336		
Quant Ion	: 88.00		
Area (flag)	: 2406AM		
On-column Amount (ng/ul)	: 0.0717		
Integration start scan	: 34	Integration stop scan:	44
Y at integration start	: 154	Y at integration end:	154

Reason for manual integration: improper integration

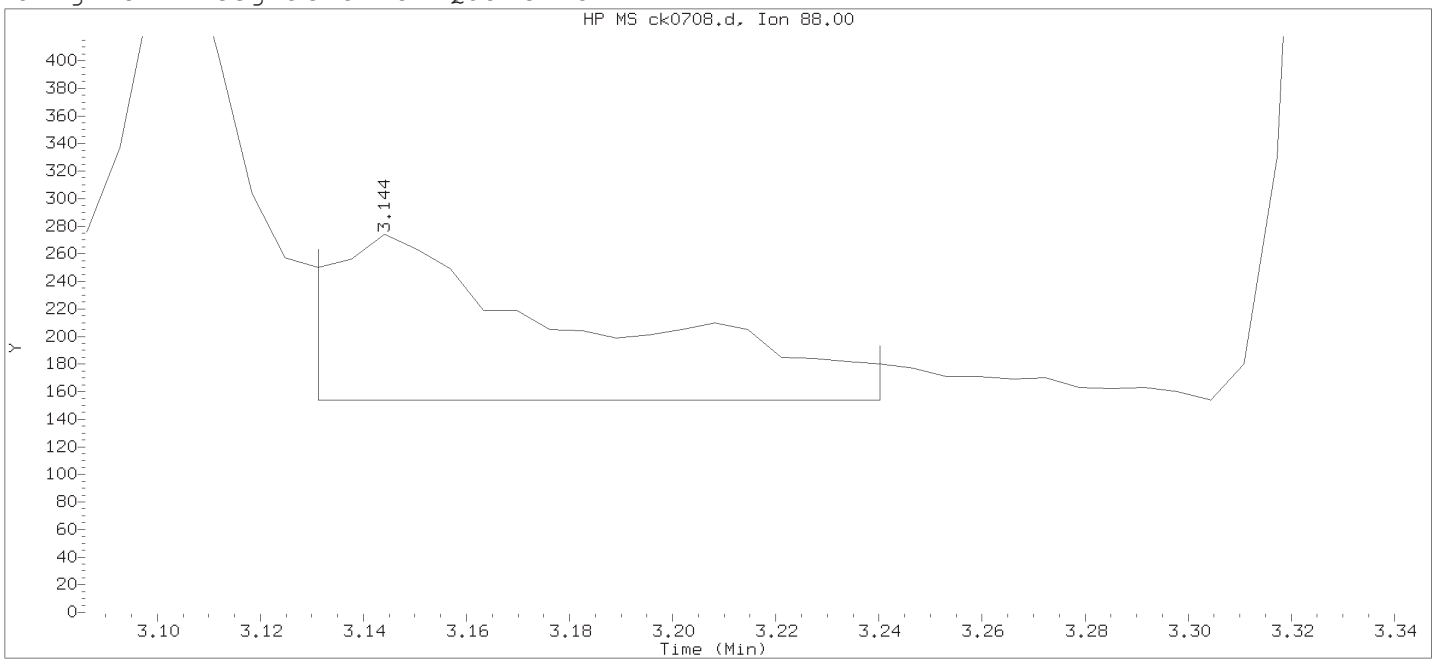
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

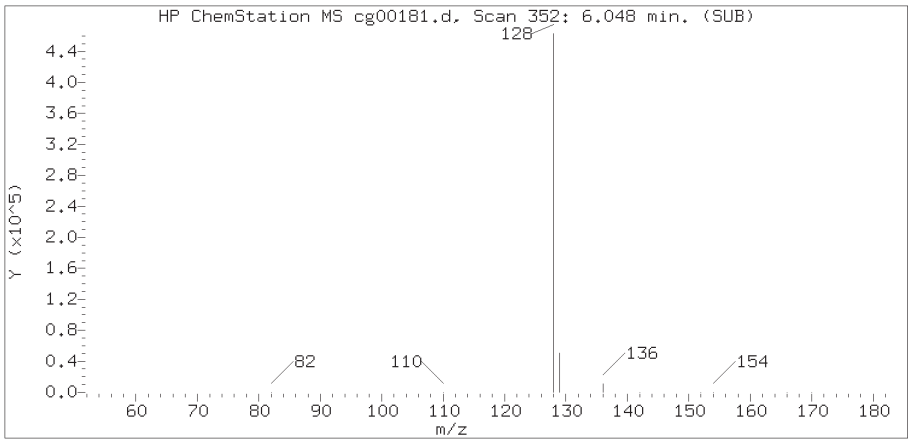
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 10:53 Automation

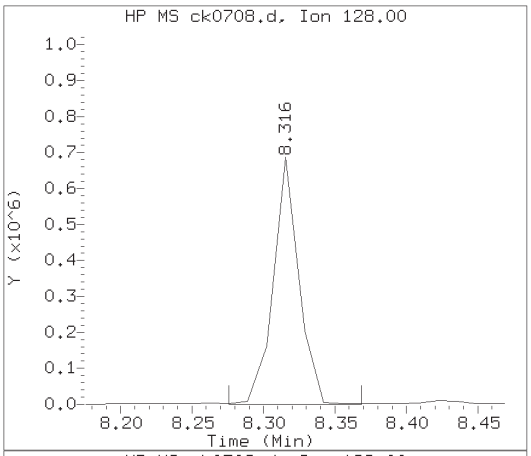
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 10
Retention Time (minutes) : 3.144
Quant Ion : 88.00
Area : 406
On-column Amount (ng/ul) : 0.0121
Integration start scan : 7 Integration stop scan: 24
Y at integration start : 154 Y at integration end: 154

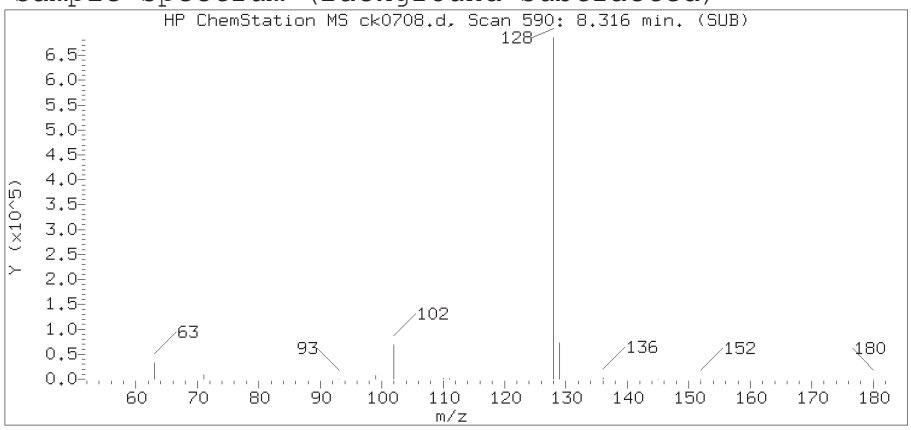
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: [illegible]

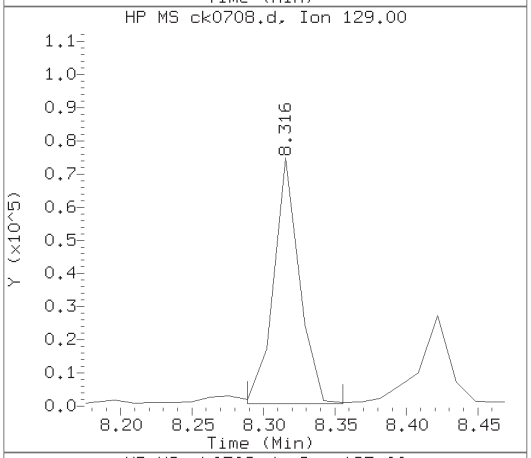
Reference Standard Spectrum for Naphthalene



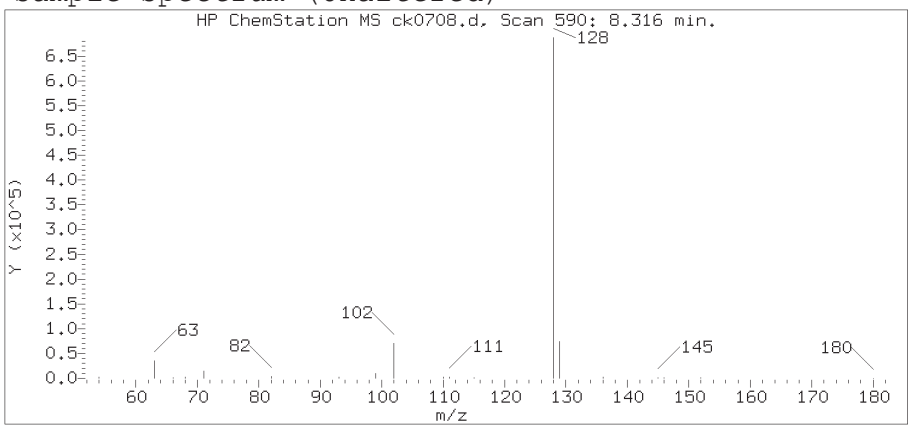


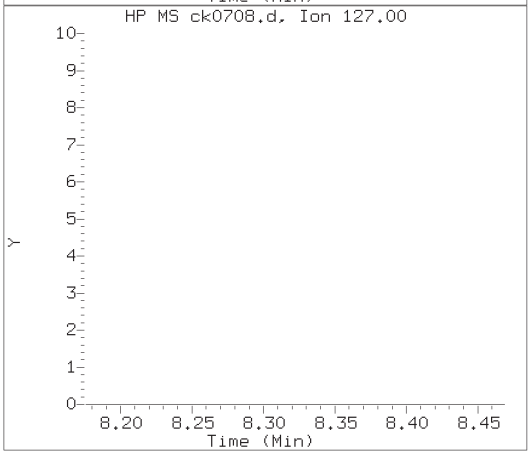
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

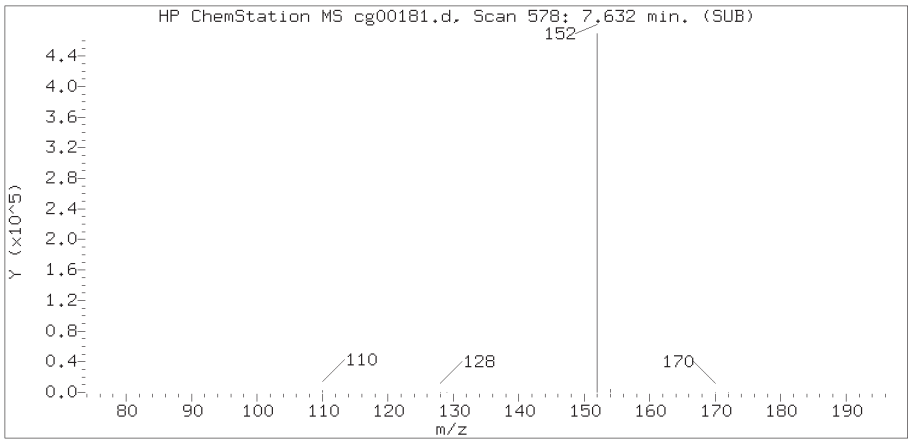
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

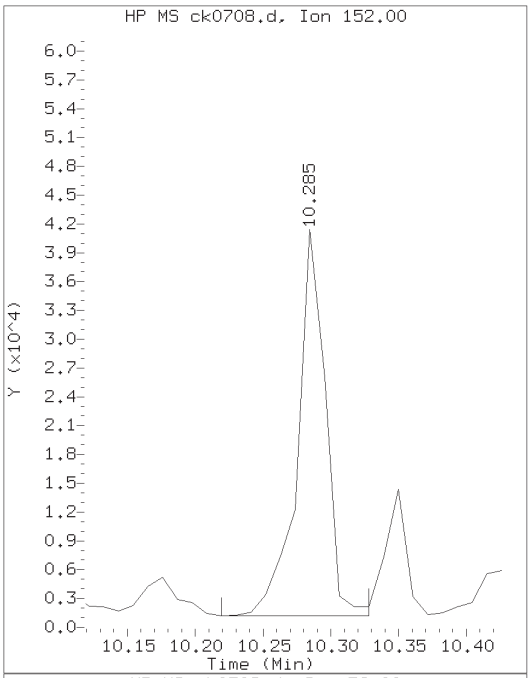
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 11
Compound Name	: Naphthalene
Scan Number	: 590
Retention Time (minutes)	: 8.316
Relative Retention Time	:-0.00000
Quant Ion	: 128.00
Area (flag)	: 845310
On-column Amount (ng/ul)	: 3.3295

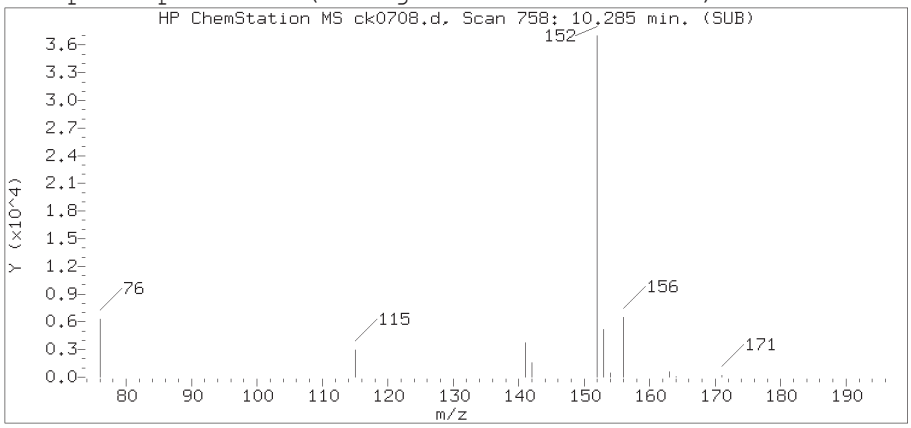
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

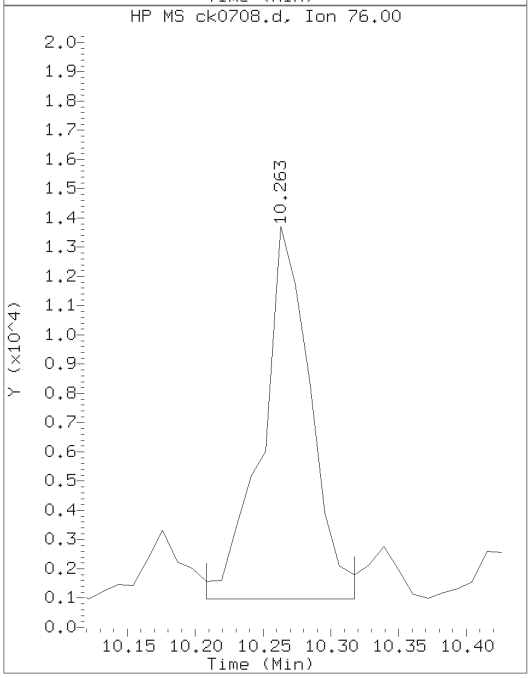
Reference Standard Spectrum for Acenaphthylene



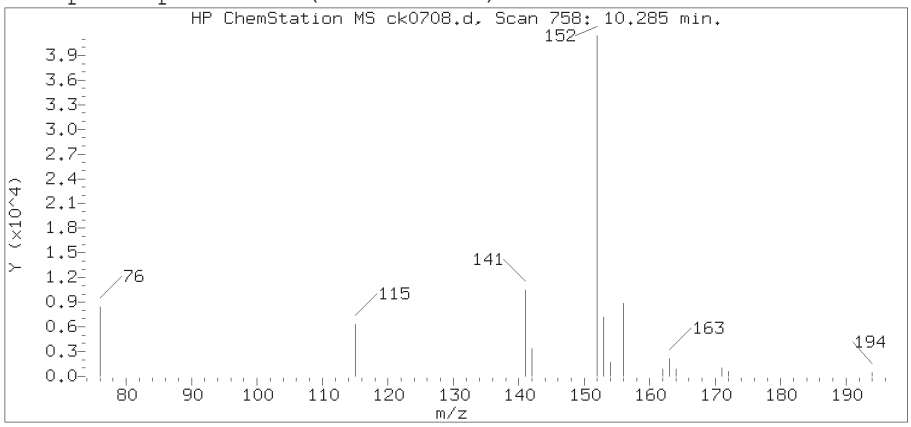


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

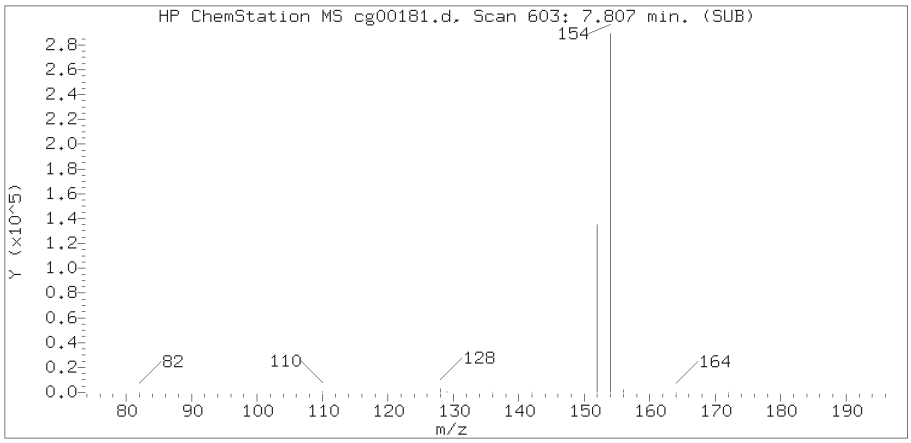
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

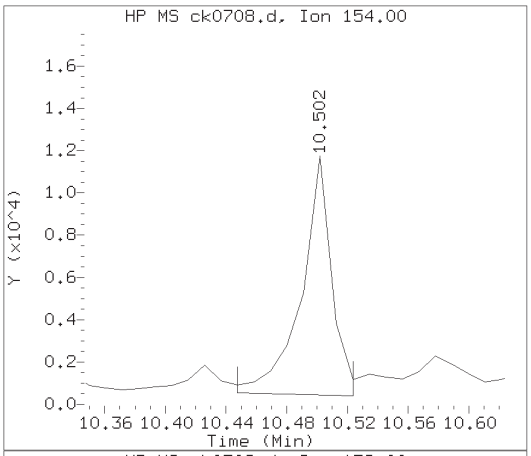
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 19
Compound Name	: Acenaphthylene
Scan Number	: 758
Retention Time (minutes)	: 10.285
Relative Retention Time	:-0.00002
Quant Ion	: 152.00
Area (flag)	: 57895
On-column Amount (ng/ul)	: 0.3080

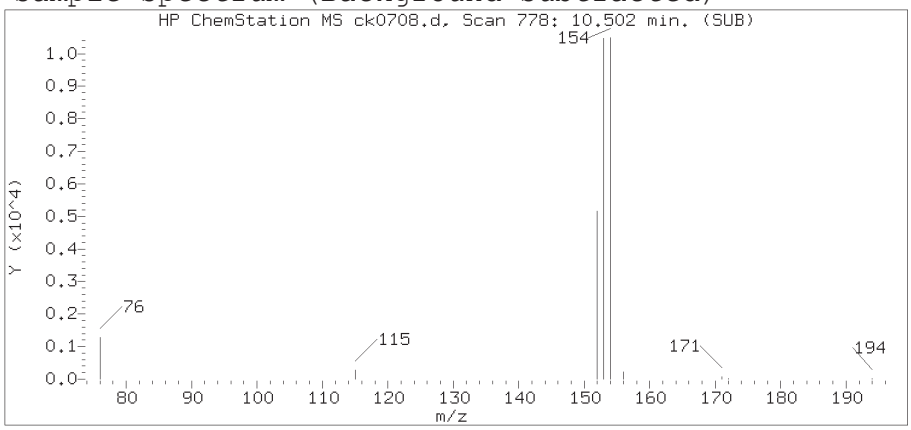
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

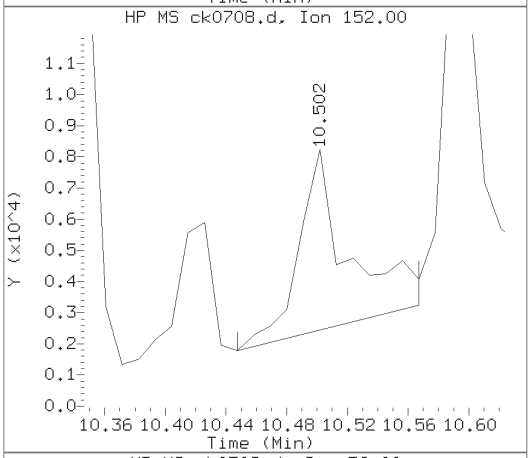
Reference Standard Spectrum for Acenaphthene



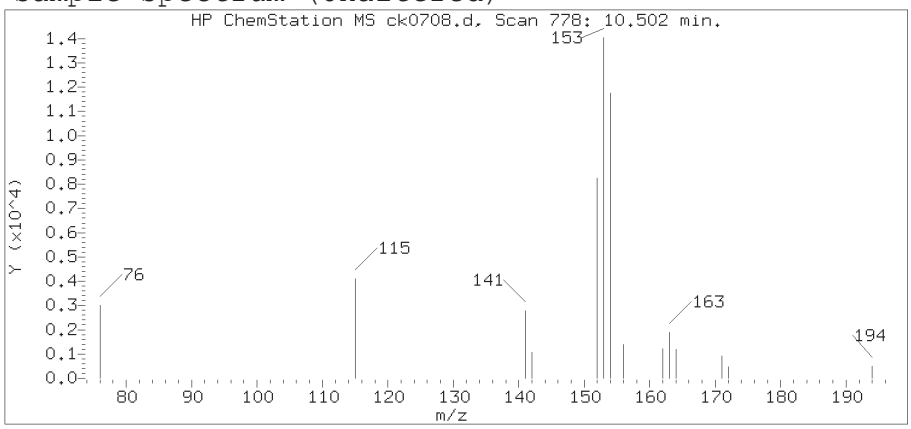


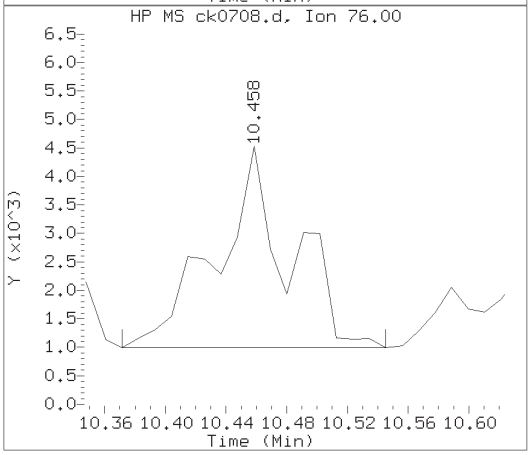
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

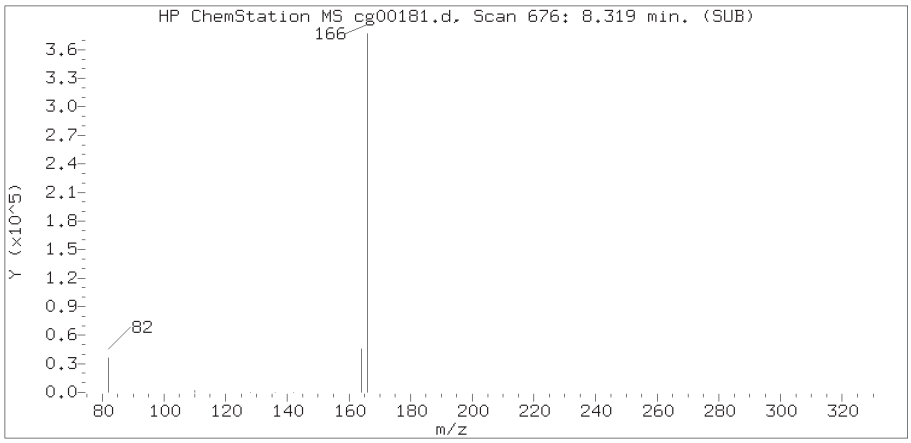
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

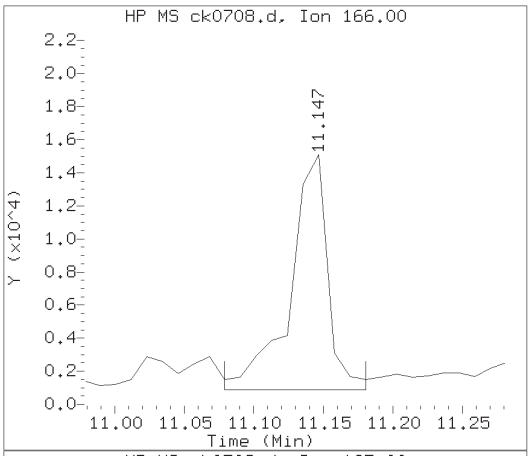
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 21
Compound Name	: Acenaphthene
Scan Number	: 778
Retention Time (minutes)	: 10.502
Relative Retention Time	: 0.00000
Quant Ion	: 154.00
Area (flag)	: 15680
On-column Amount (ng/ul)	: 0.1219

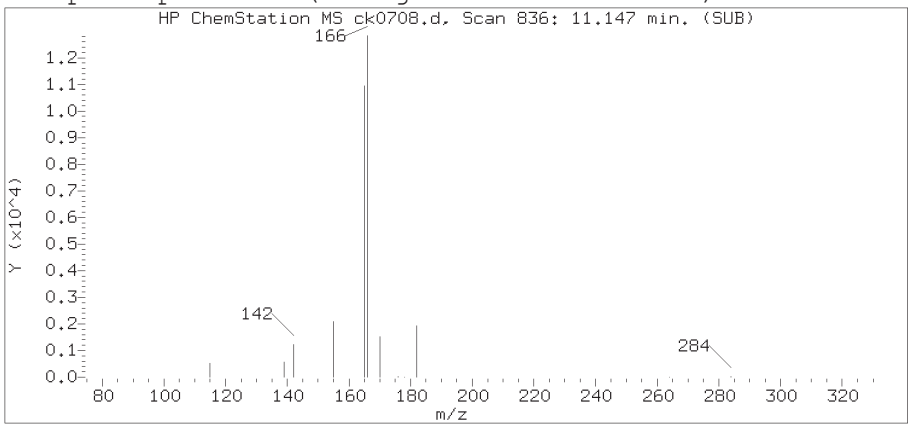
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

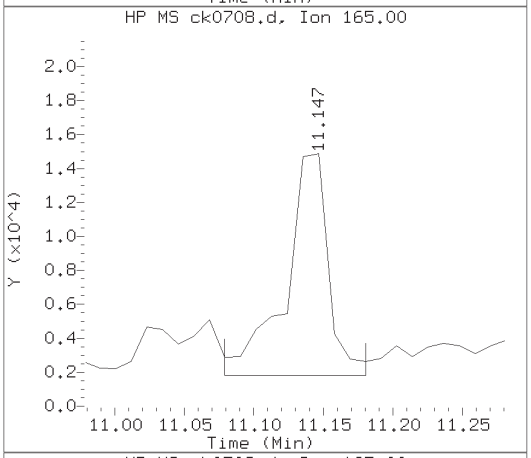
Reference Standard Spectrum for Fluorene



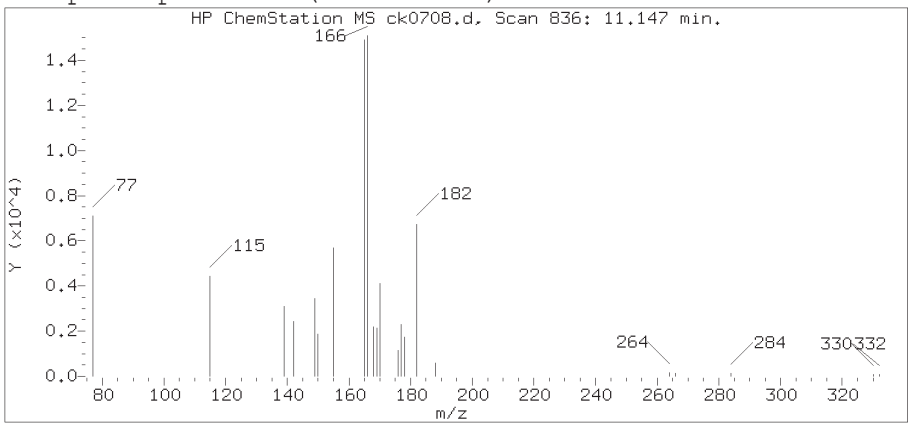


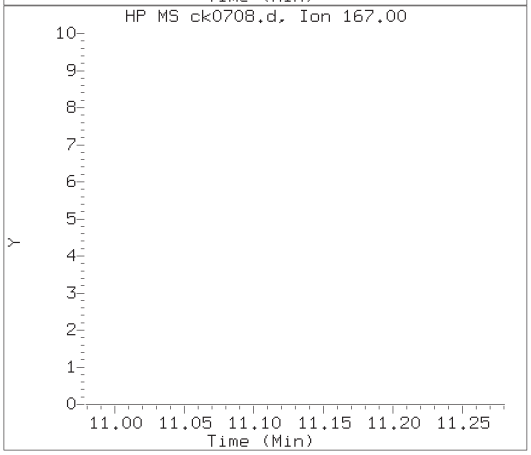
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

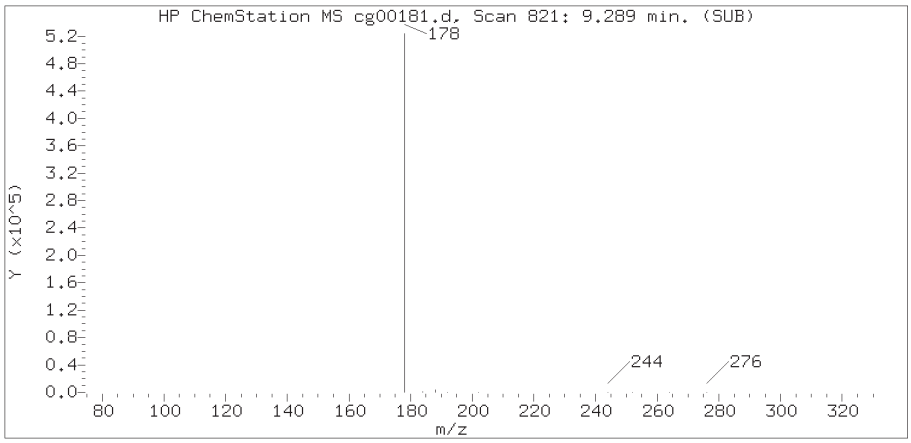
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

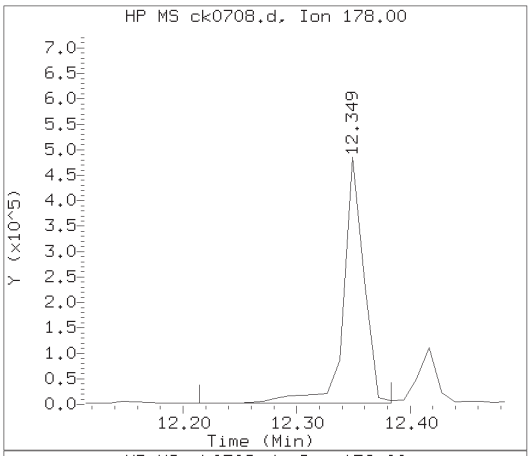
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 26
Compound Name	: Fluorene
Scan Number	: 836
Retention Time (minutes)	: 11.147
Relative Retention Time	: 0.00003
Quant Ion	: 166.00
Area (flag)	: 26498
On-column Amount (ng/ul)	: 0.1926

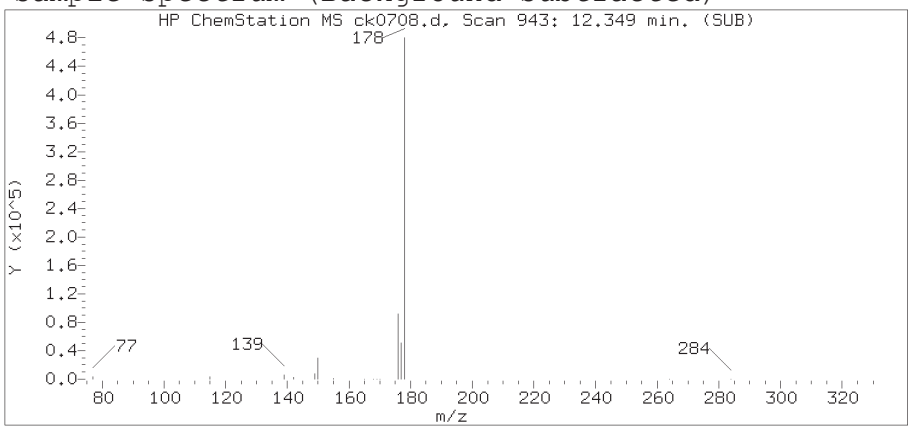
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

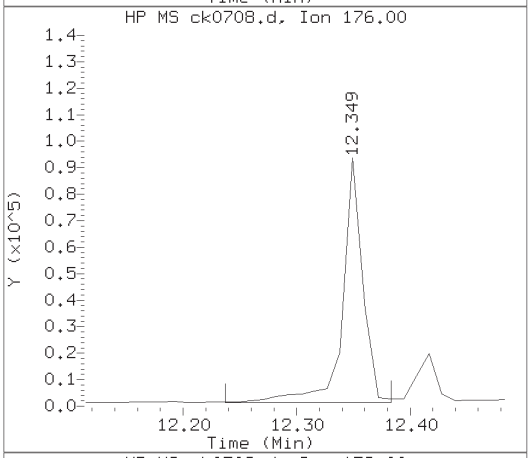
Reference Standard Spectrum for Phenanthrene



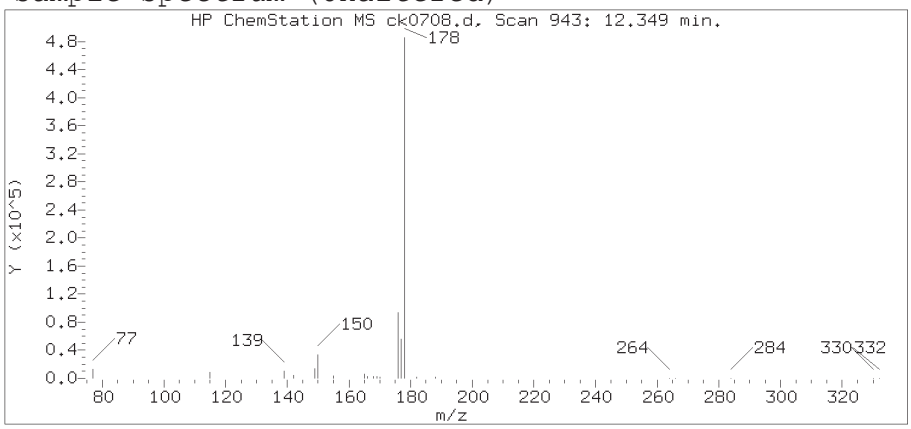


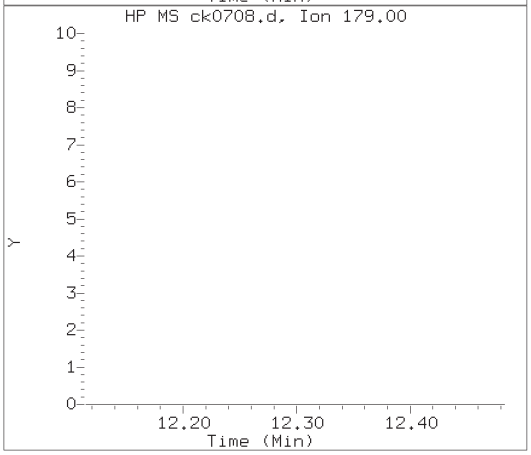
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

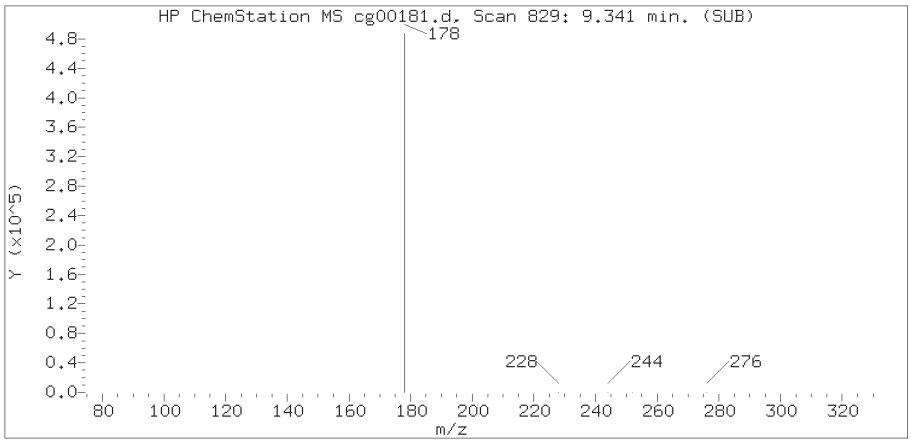
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

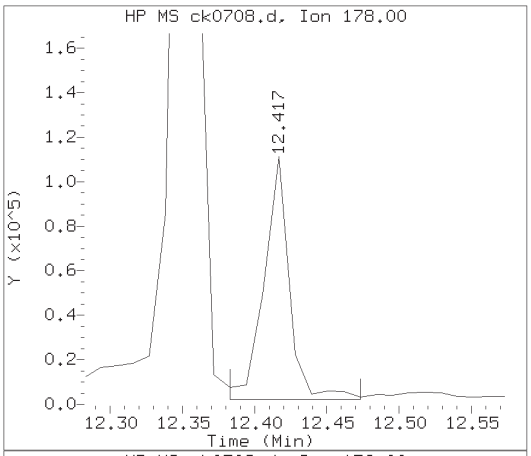
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 32
Compound Name	: Phenanthrene
Scan Number	: 943
Retention Time (minutes)	: 12.349
Relative Retention Time	: 0.00092
Quant Ion	: 178.00
Area (flag)	: 602018
On-column Amount (ng/ul)	: 3.0687

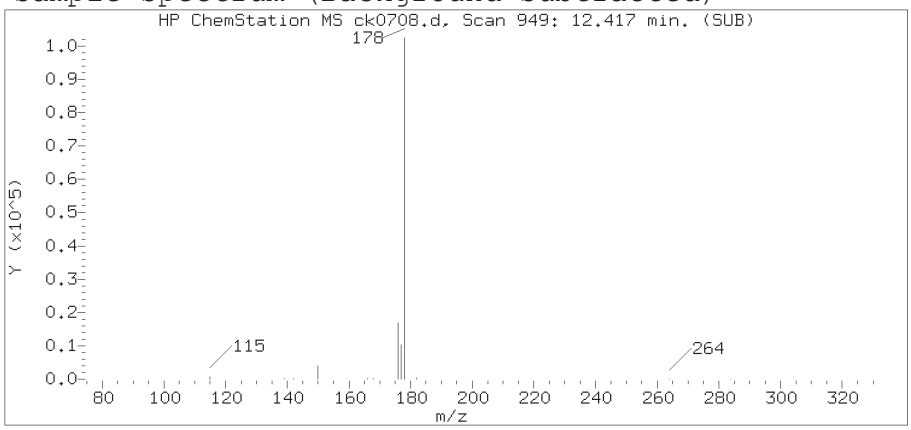
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

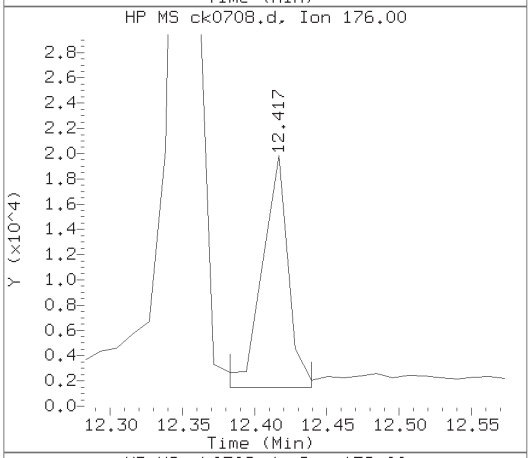
Reference Standard Spectrum for Anthracene



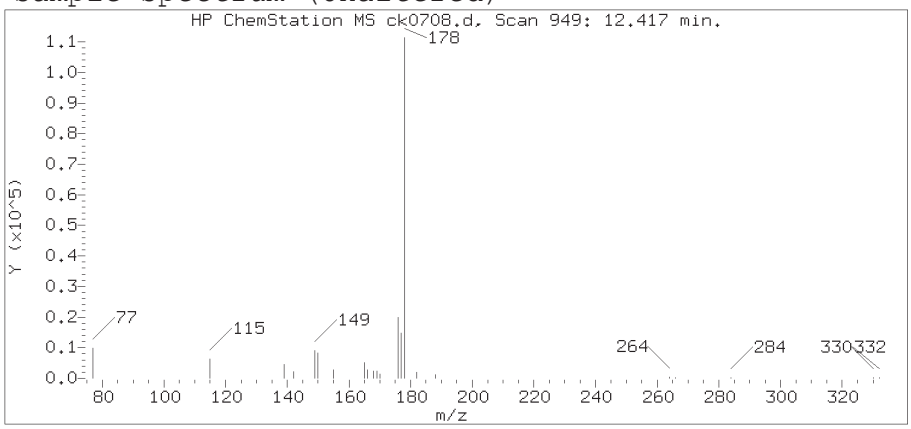


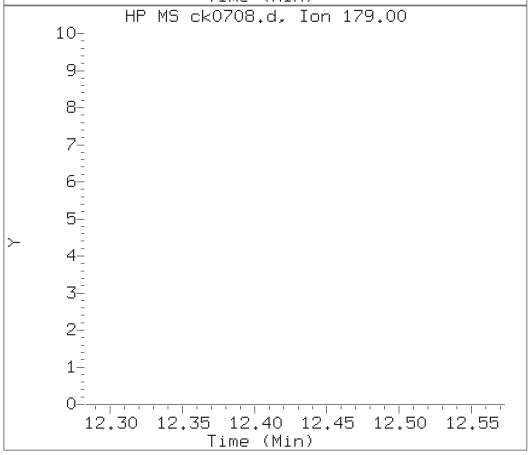
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

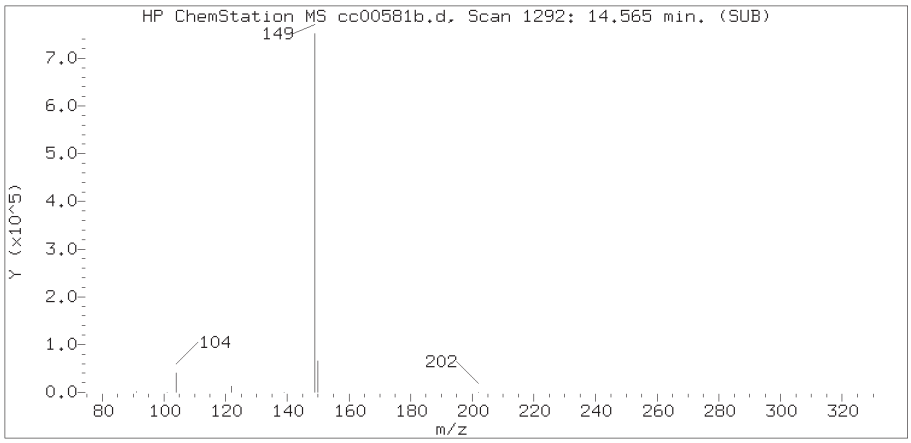
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

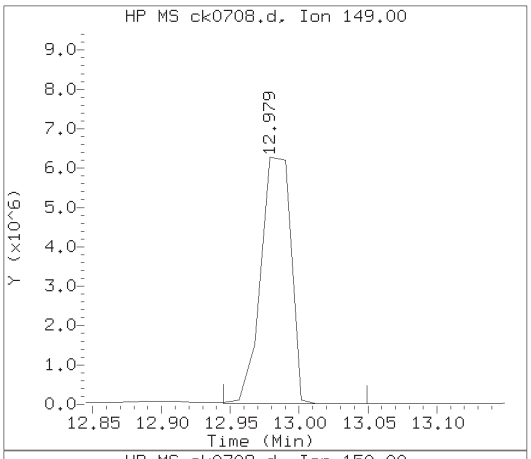
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 33
Compound Name	: Anthracene
Scan Number	: 949
Retention Time (minutes)	: 12.417
Relative Retention Time	: 0.00093
Quant Ion	: 178.00
Area (flag)	: 132725
On-column Amount (ng/ul)	: 0.7036

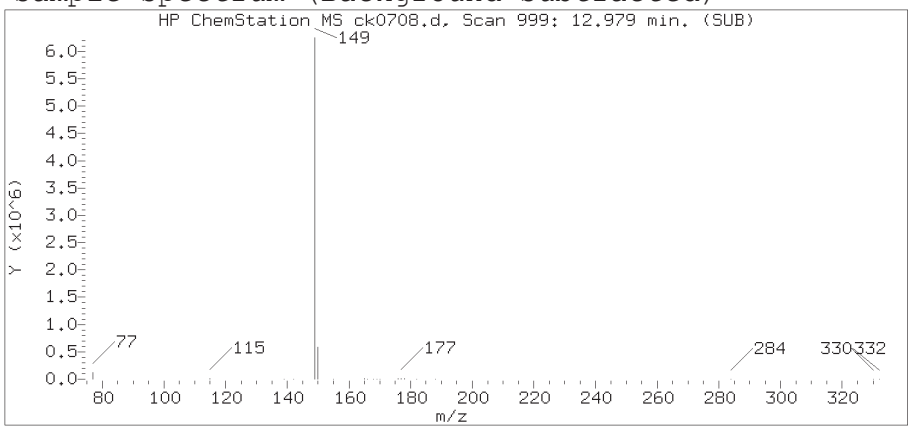
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

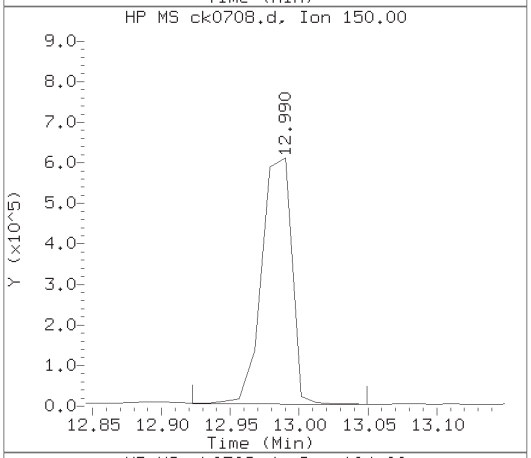
Reference Standard Spectrum for Di-n-butylphthalate



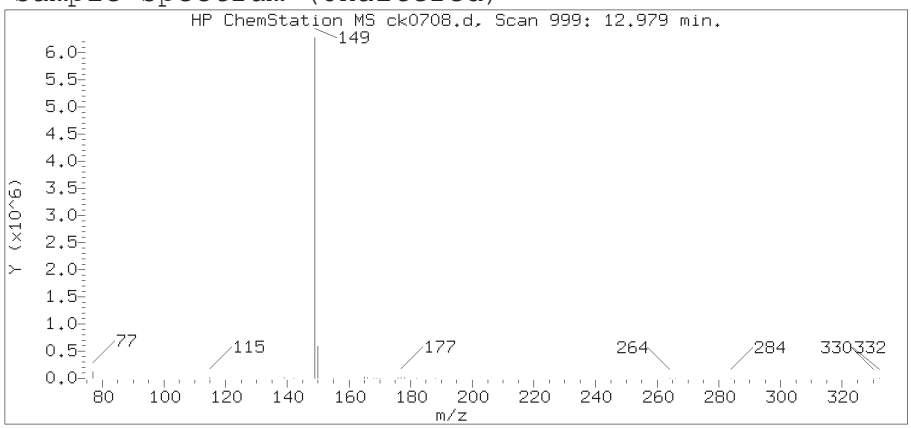


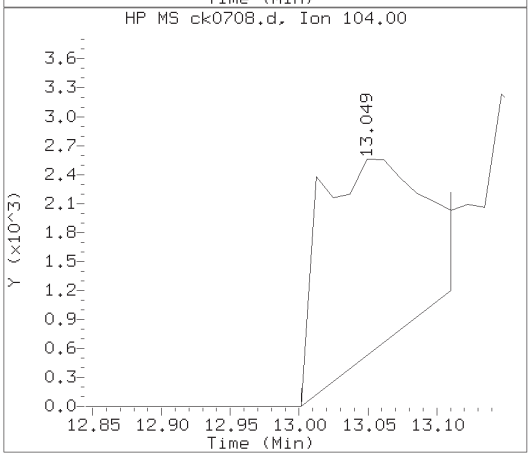
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

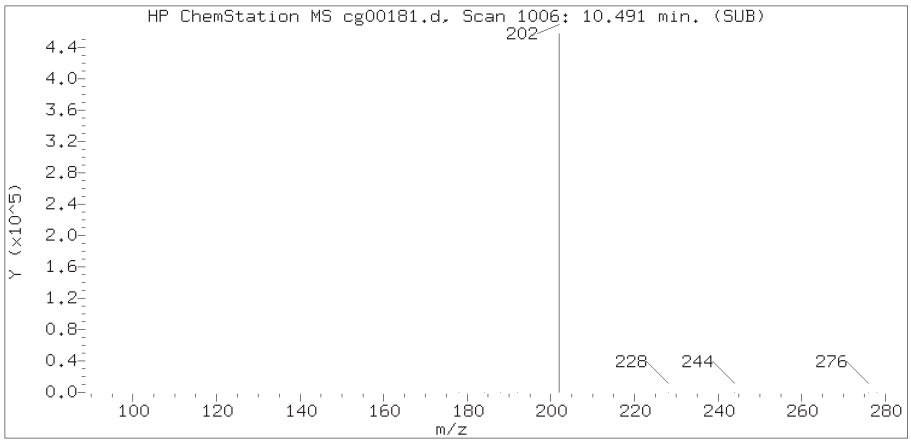
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

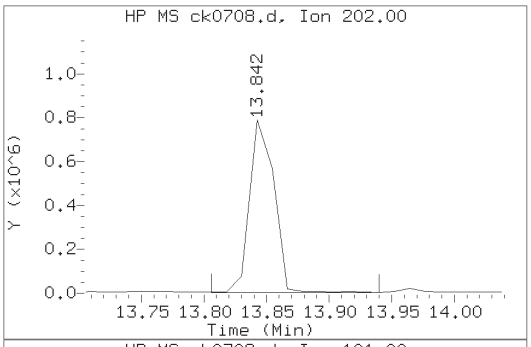
Sample Name: T1003RE Lab Sample ID: 9867762RE

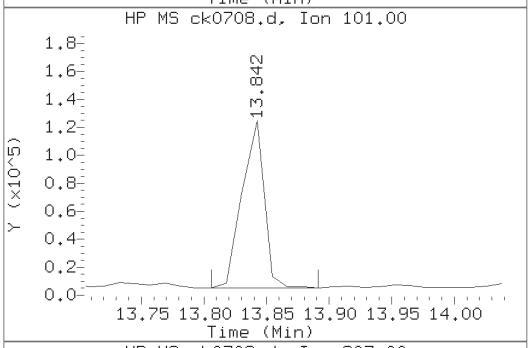
Compound Number	: 35
Compound Name	: Di-n-butylphthalate
Scan Number	: 999
Retention Time (minutes)	: 12.979
Relative Retention Time	: 0.00101
Quant Ion	: 149.00
Area (flag)	: 9892166
On-column Amount (ng/ul)	: 47.0747

Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

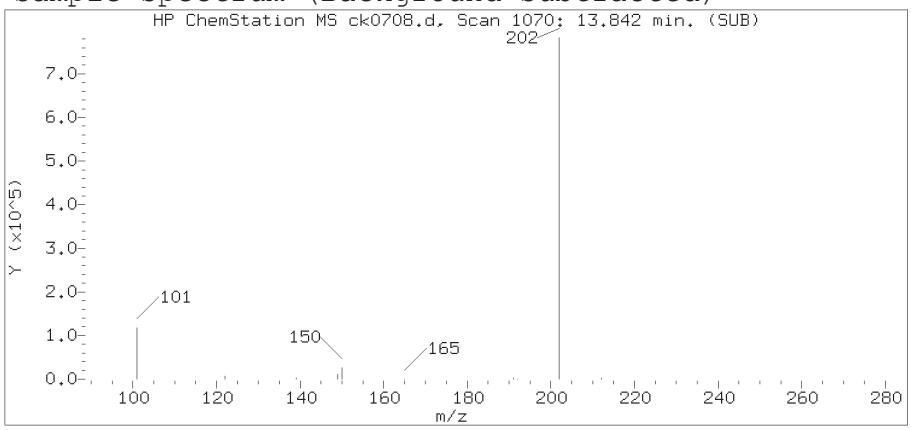
Reference Standard Spectrum for Fluoranthene

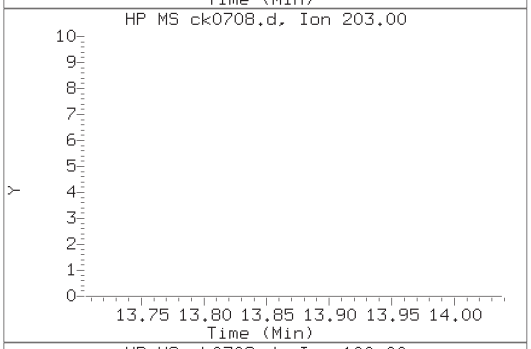




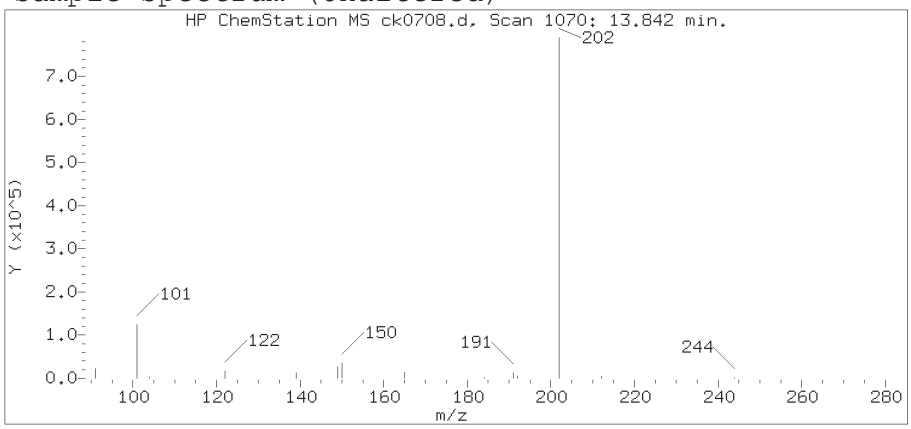


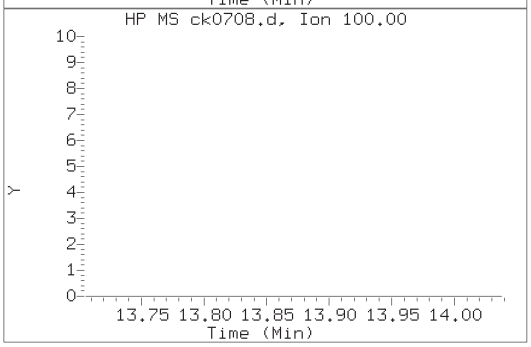
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

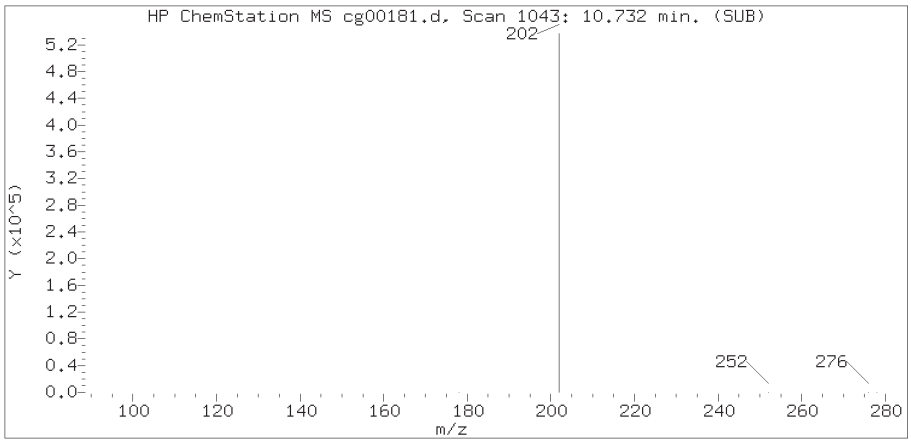
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

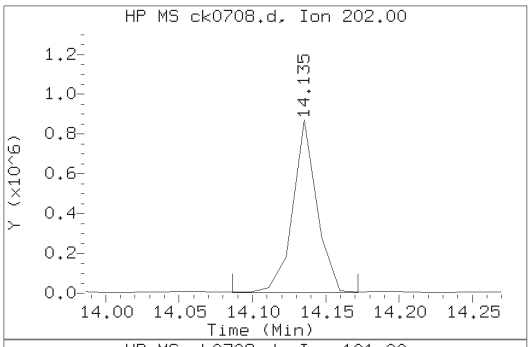
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 37
Compound Name	: Fluoranthene
Scan Number	: 1070
Retention Time (minutes)	: 13.842
Relative Retention Time	: 0.00106
Quant Ion	: 202.00
Area (flag)	: 1070229
On-column Amount (ng/ul)	: 5.5519

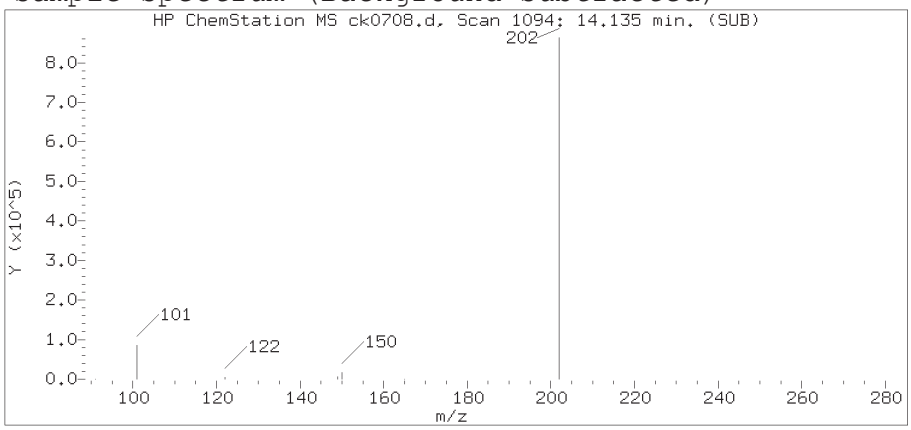
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

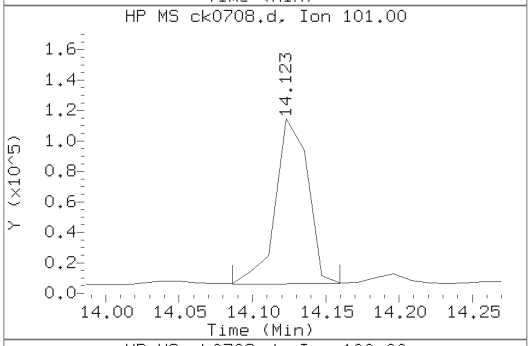
Reference Standard Spectrum for Pyrene

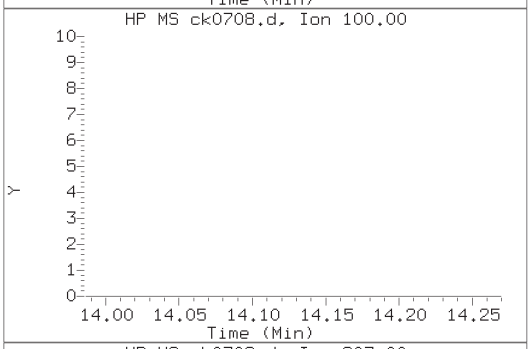




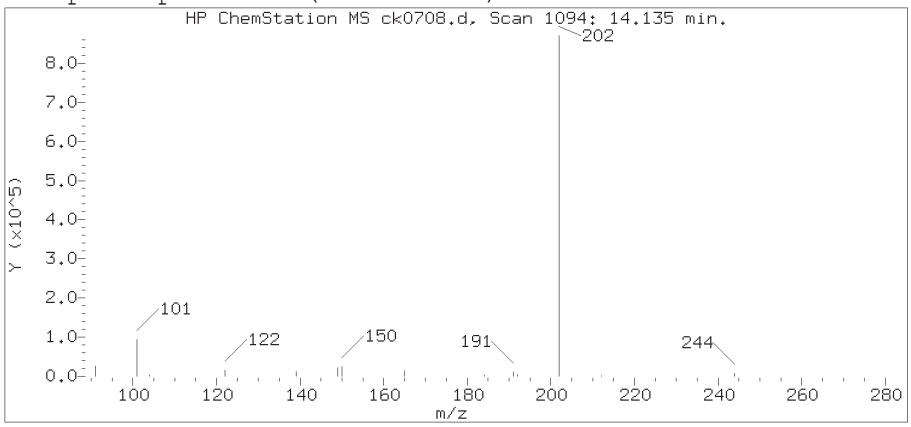
Sample Spectrum (Background Subtracted)

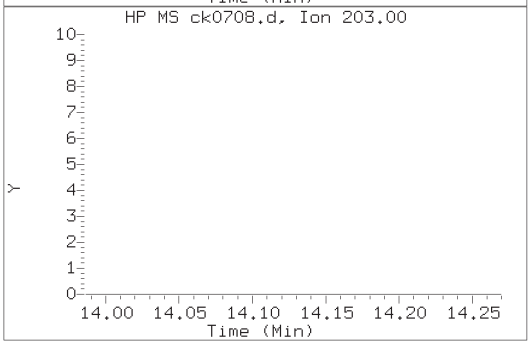






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

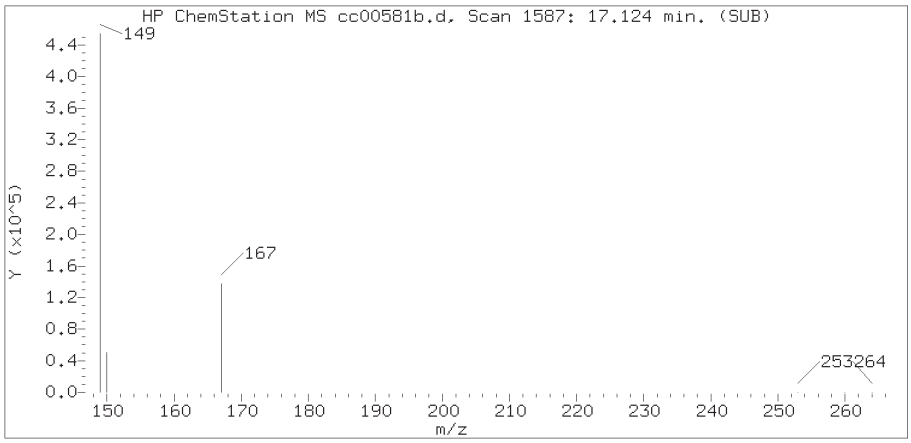
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

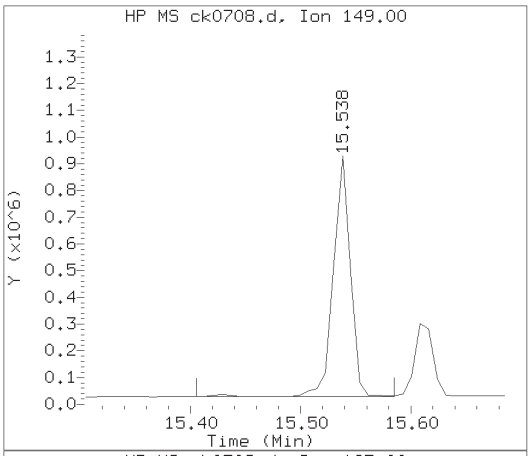
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 39
Compound Name	: Pyrene
Scan Number	: 1094
Retention Time (minutes)	: 14.135
Relative Retention Time	: 0.00058
Quant Ion	: 202.00
Area (flag)	: 993275
On-column Amount (ng/ul)	: 4.9787

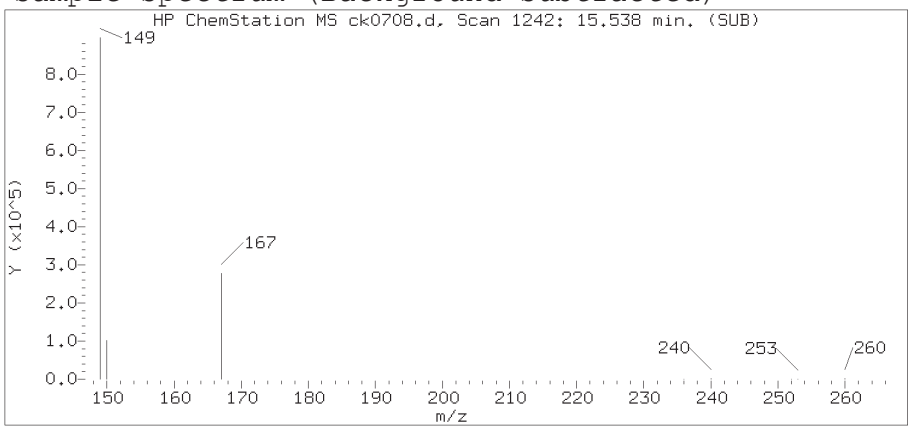
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

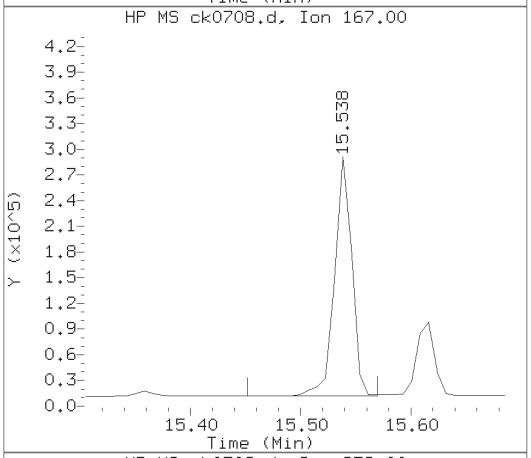
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



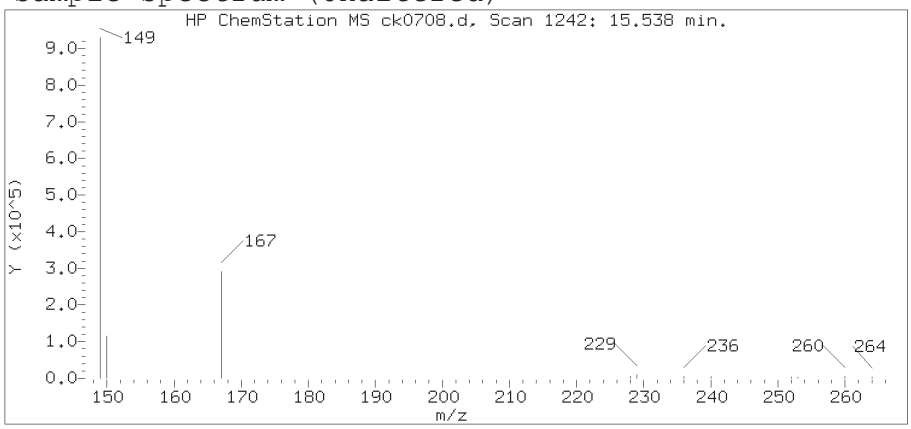


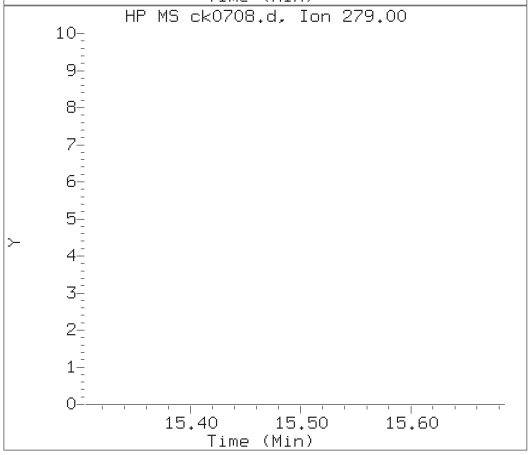
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

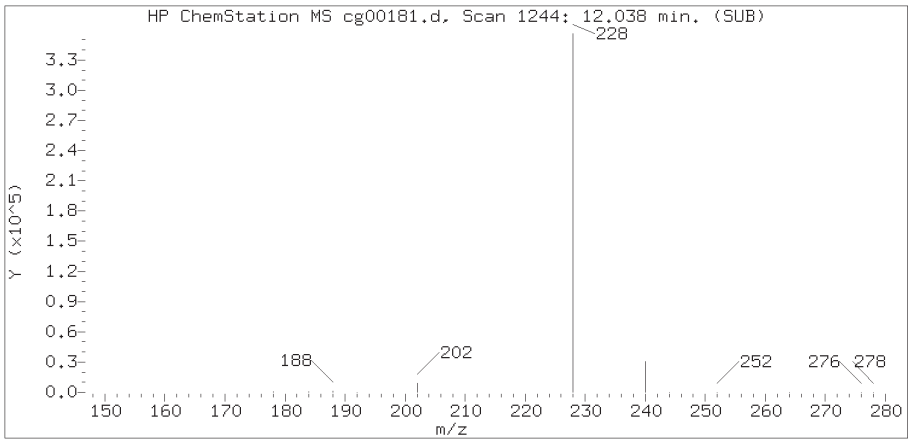
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

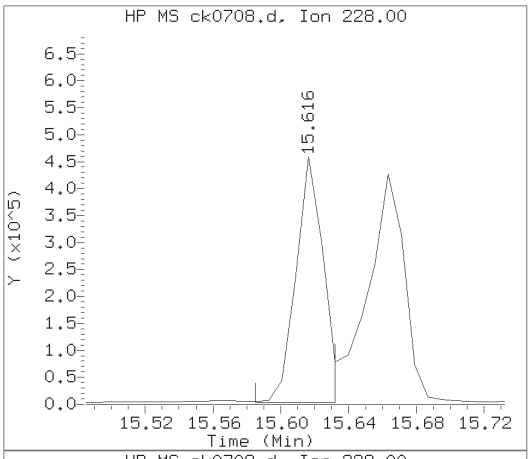
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 41
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1242
Retention Time (minutes)	: 15.538
Relative Retention Time	: 0.00049
Quant Ion	: 149.00
Area (flag)	: 972339
On-column Amount (ng/ul)	: 6.7486

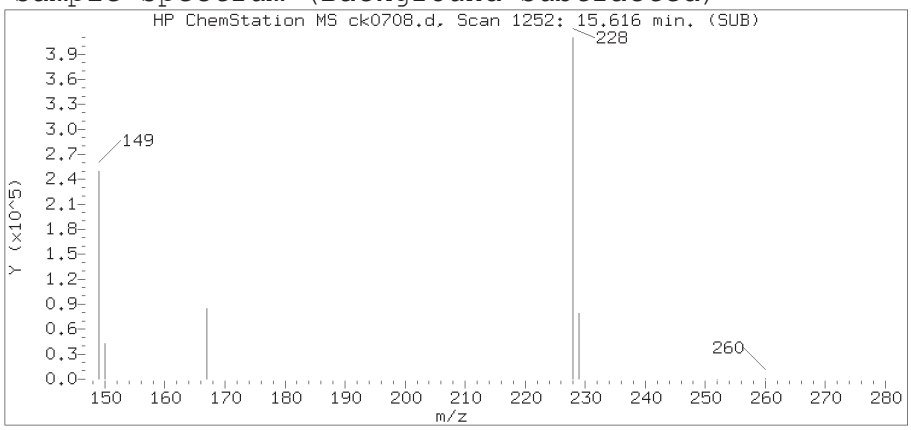
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

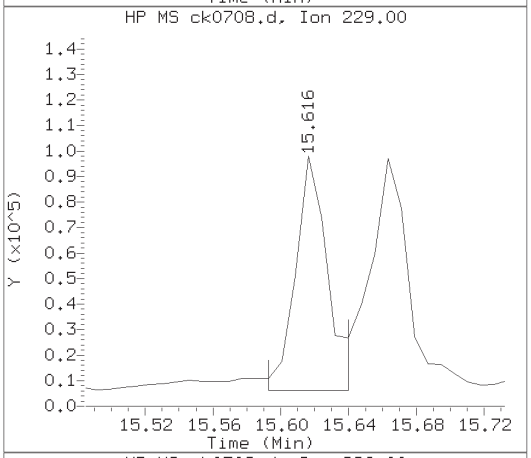
Reference Standard Spectrum for Benzo(a)anthracene



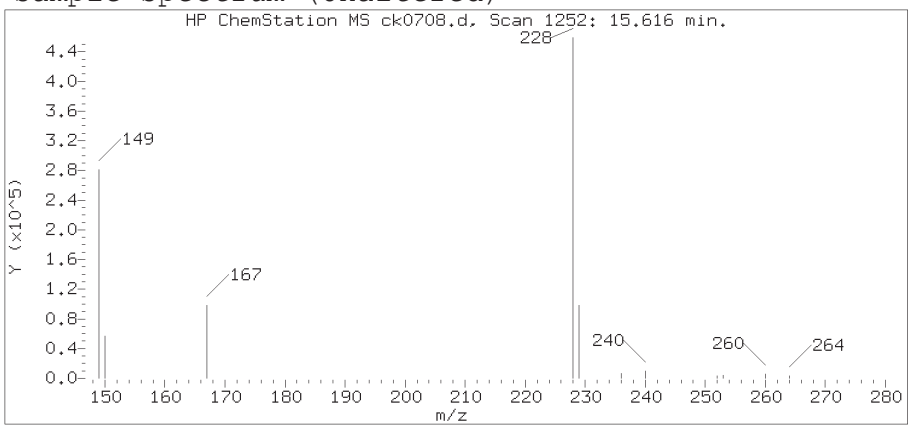


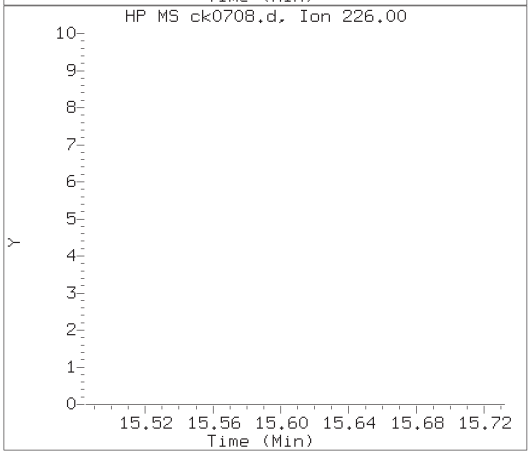
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

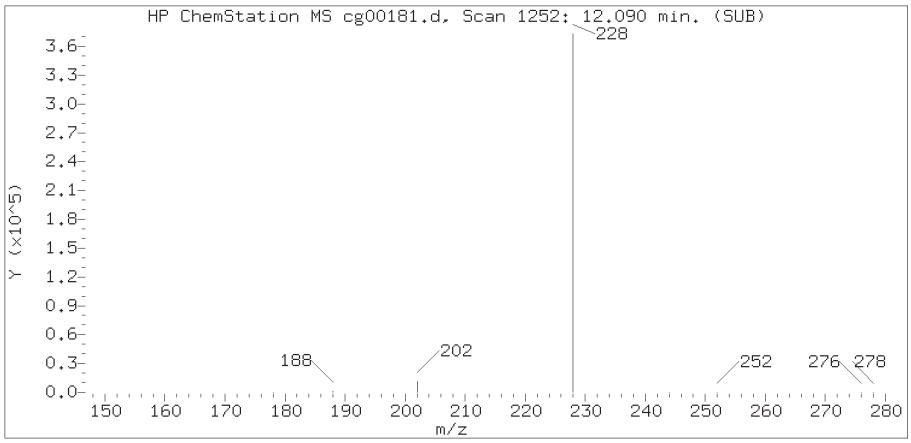
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

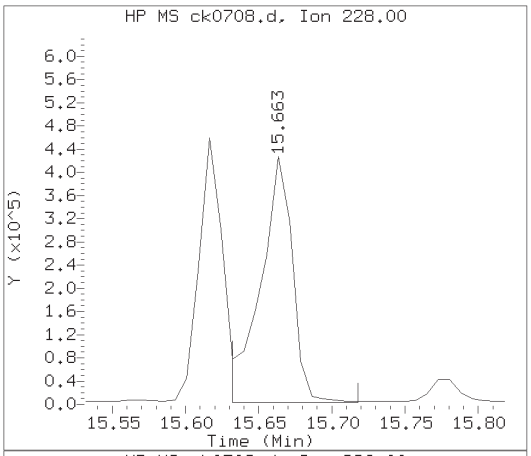
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 42
Compound Name	: Benzo(a)anthracene
Scan Number	: 1252
Retention Time (minutes)	: 15.616
Relative Retention Time	:-0.00000
Quant Ion	: 228.00
Area (flag)	: 497143
On-column Amount (ng/ul)	: 3.0946

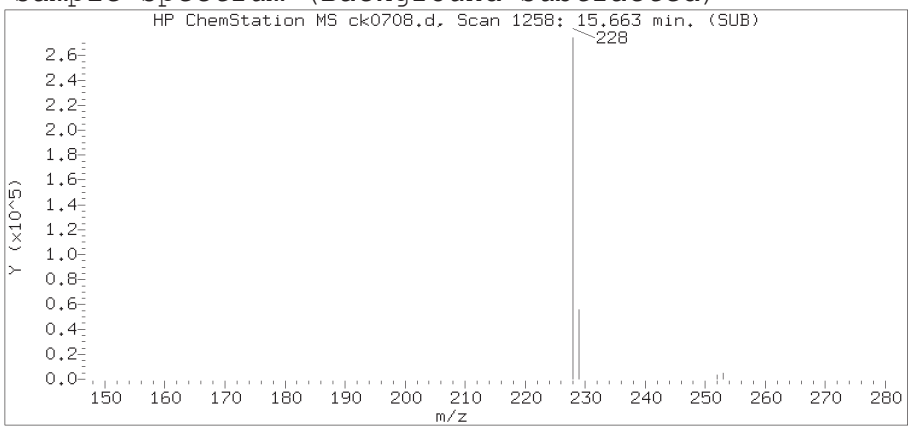
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

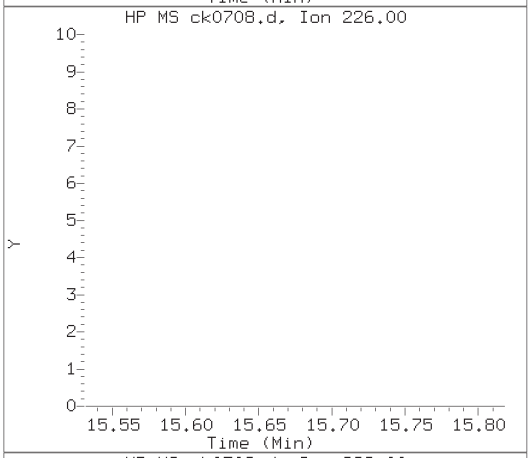
Reference Standard Spectrum for Chrysene



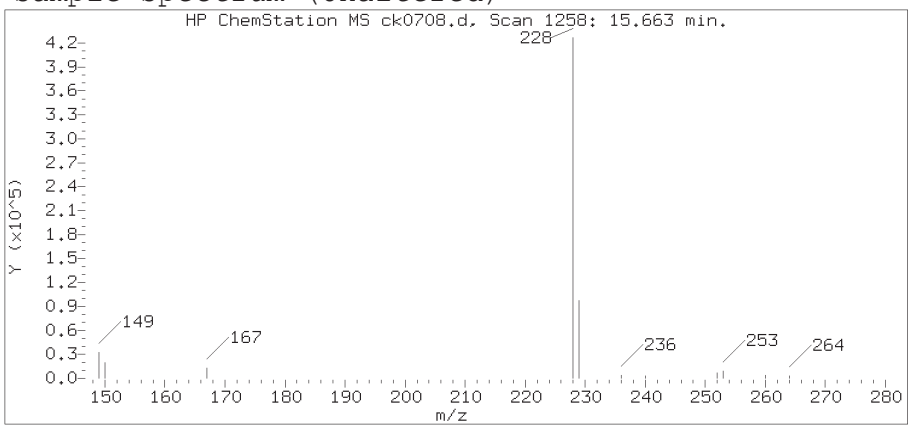


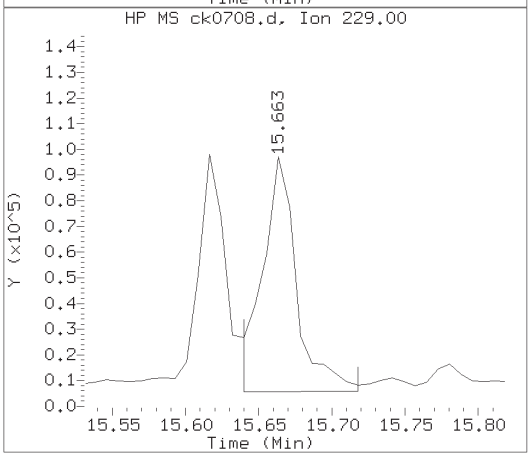
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

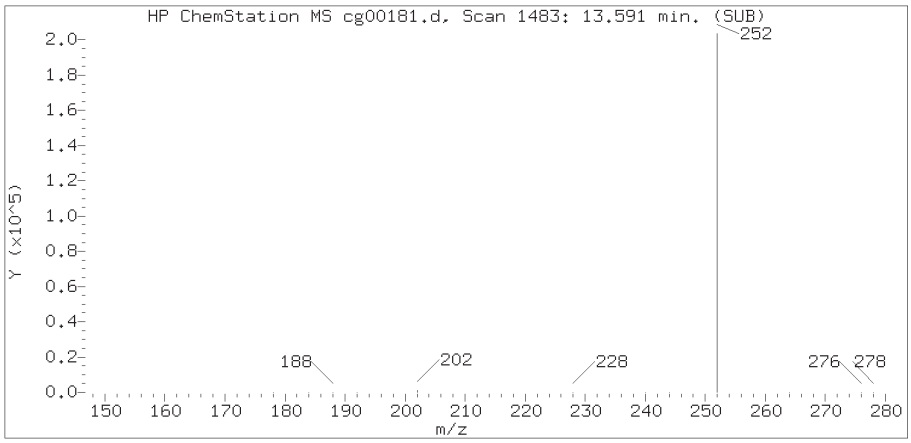
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

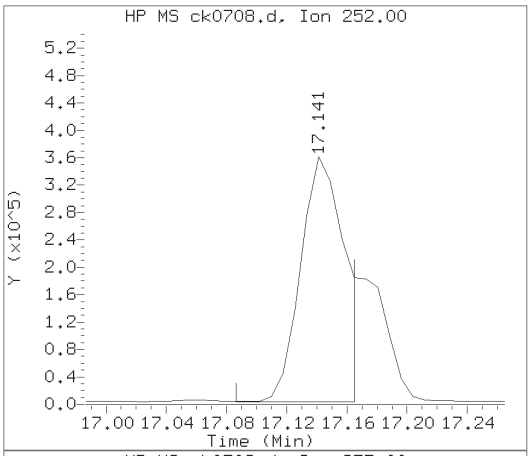
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 44
Compound Name	: Chrysene
Scan Number	: 1258
Retention Time (minutes)	: 15.663
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 640029
On-column Amount (ng/ul)	: 3.8886

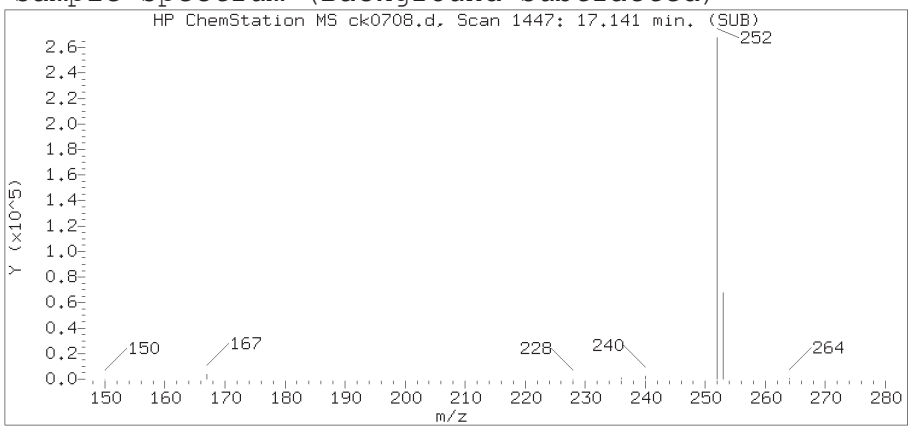
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

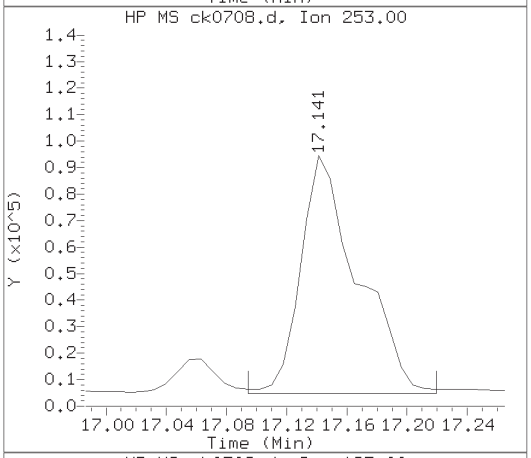
Reference Standard Spectrum for Benzo(b)fluoranthene



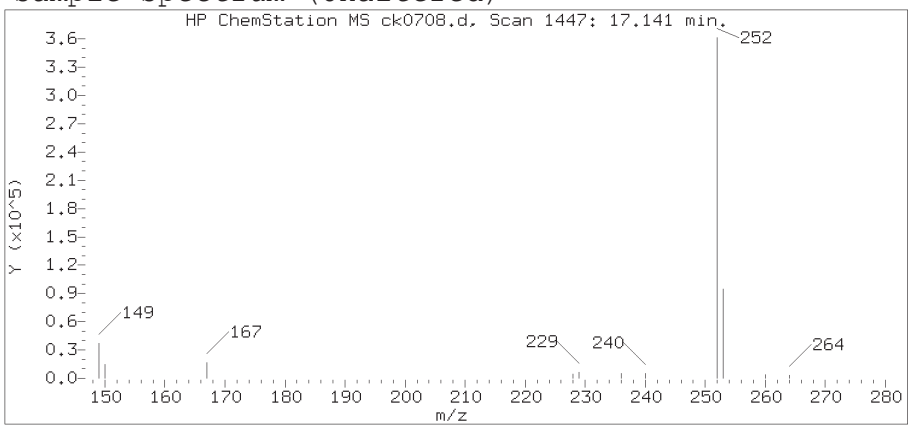


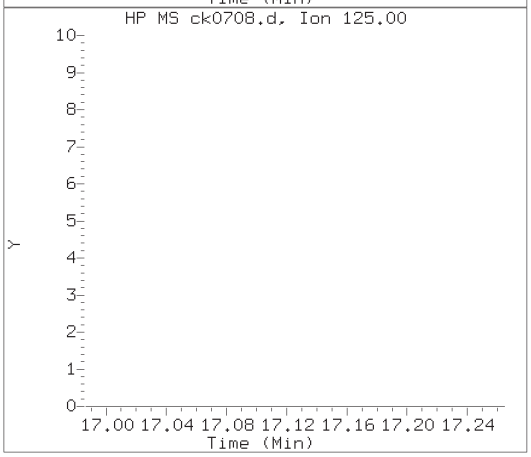
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

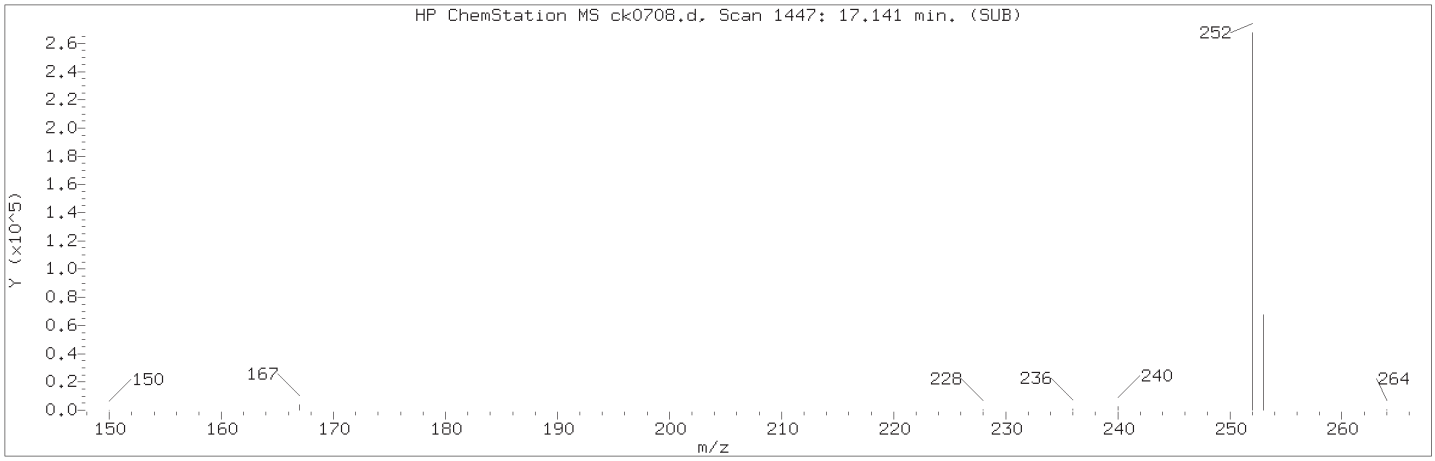
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1003RE Lab Sample ID: 9867762RE

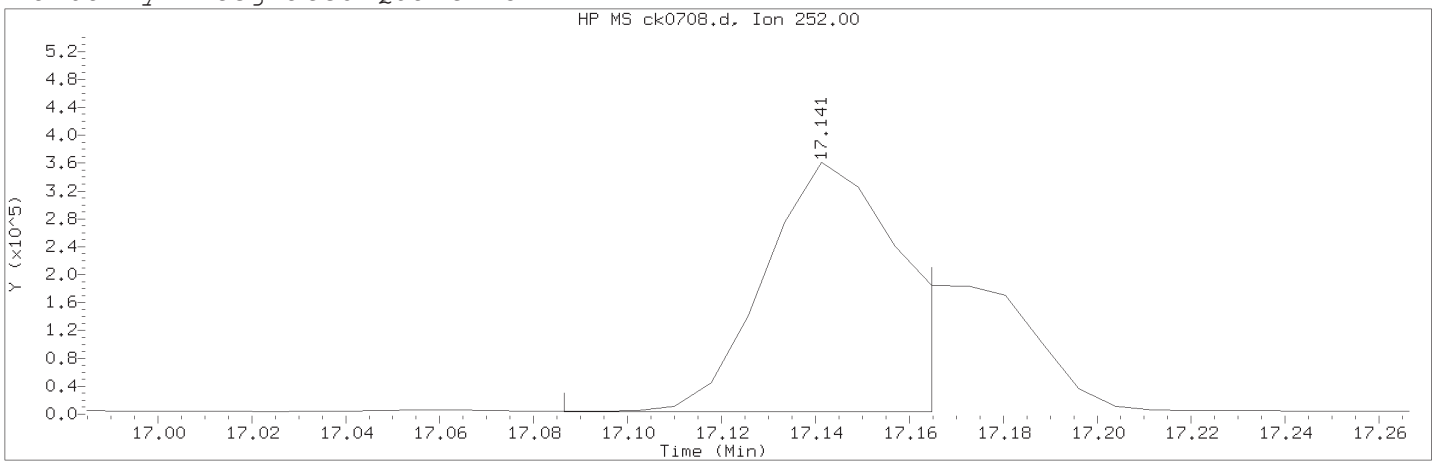
Compound Number	: 46
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1447
Retention Time (minutes)	: 17.141
Relative Retention Time	:-0.00009
Quant Ion	: 252.00
Area (flag)	: 732348M
On-column Amount (ng/ul)	: 5.8139

Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1003RE Lab Sample ID: 9867762RE

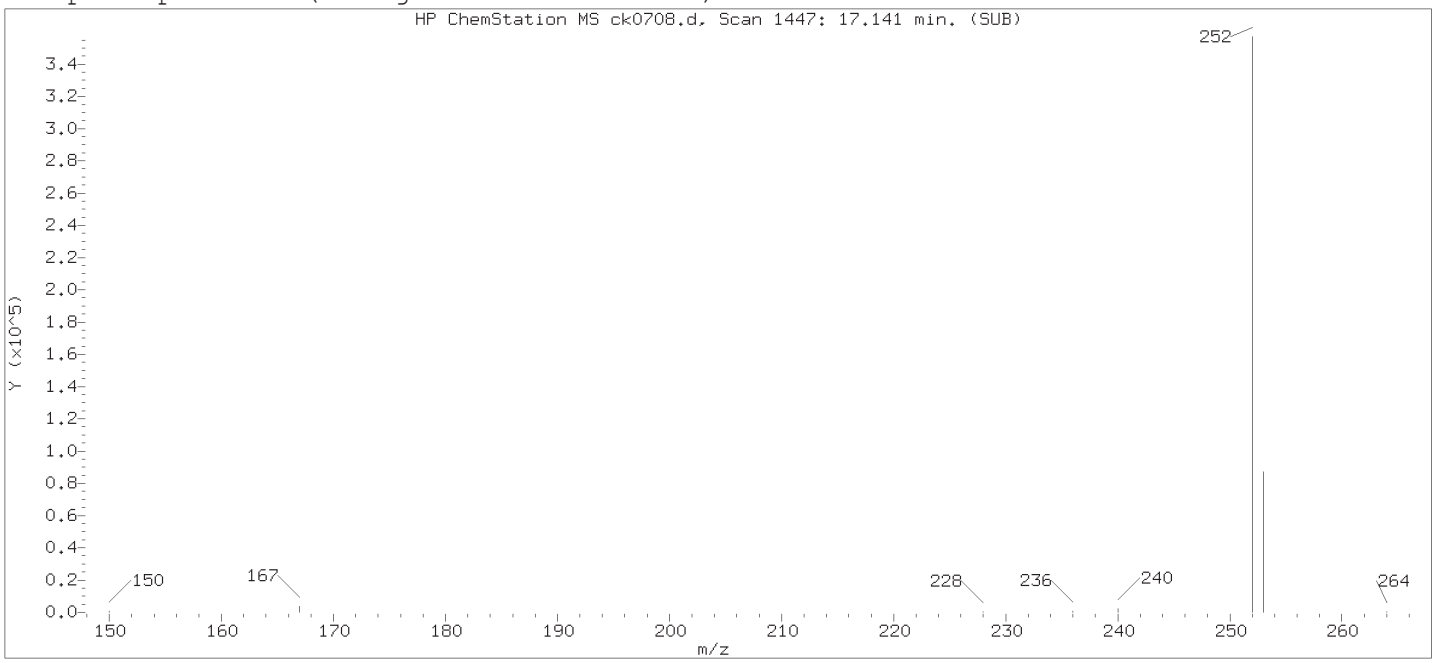
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1447
Retention Time (minutes) : 17.141
Quant Ion : 252.00
Area (flag) : 732348M
On-column Amount (ng/ul) : 5.8139
Integration start scan : 1439 Integration stop scan: 1449
Y at integration start : 3327 Y at integration end: 3347

Reason for manual integration: improper integration

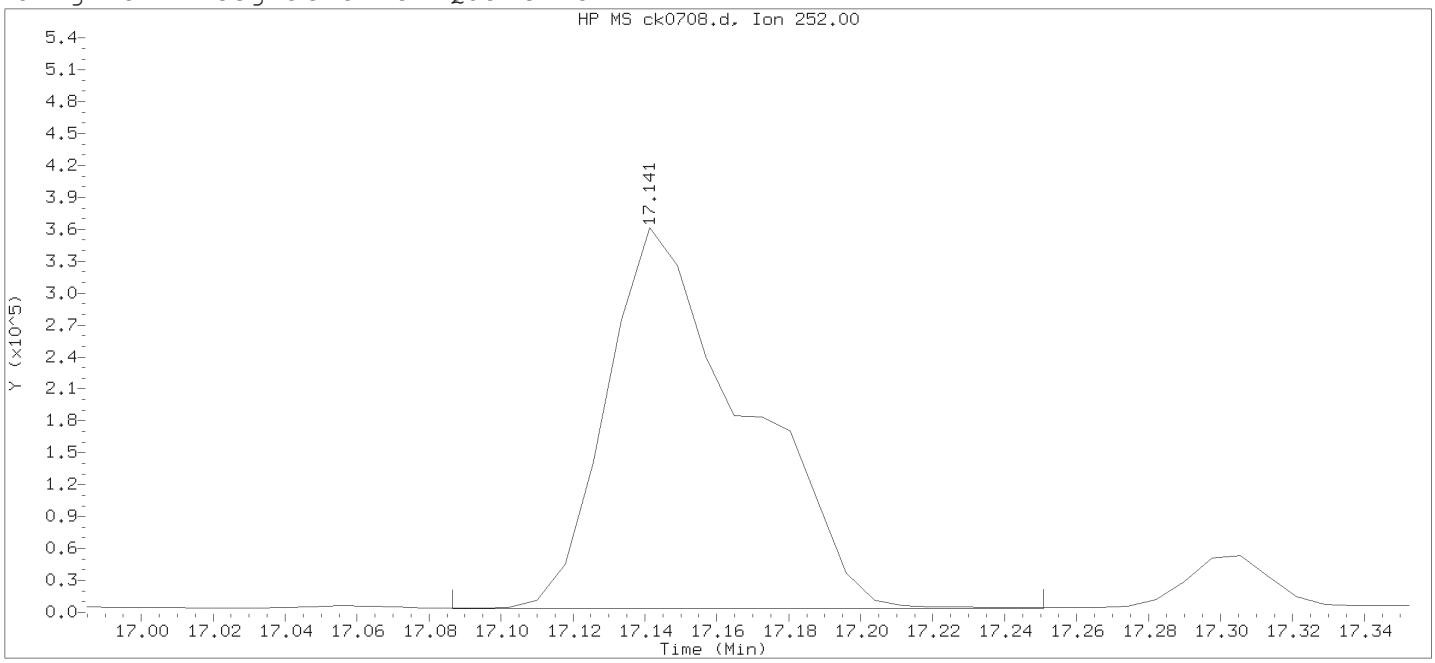
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

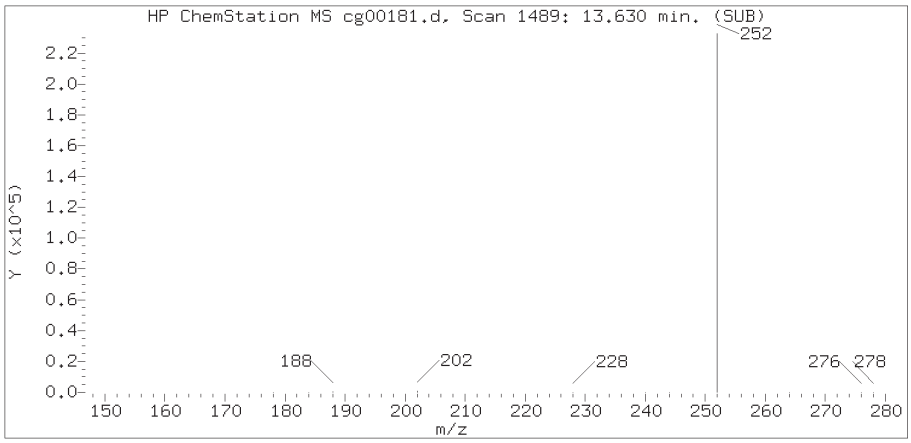
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 10:53 Automation

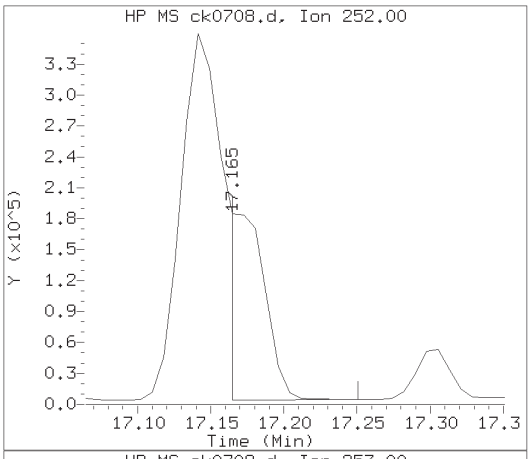
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	:	46
Compound Name	:	Benzo(b)fluoranthene
Scan Number	:	1447
Retention Time (minutes)	:	17.141
Quant Ion	:	252.00
Area	:	965505
On-column Amount (ng/ul)	:	7.6648
Integration start scan	:	1439 Integration stop scan: 1460
Y at integration start	:	3327 Y at integration end: 3371

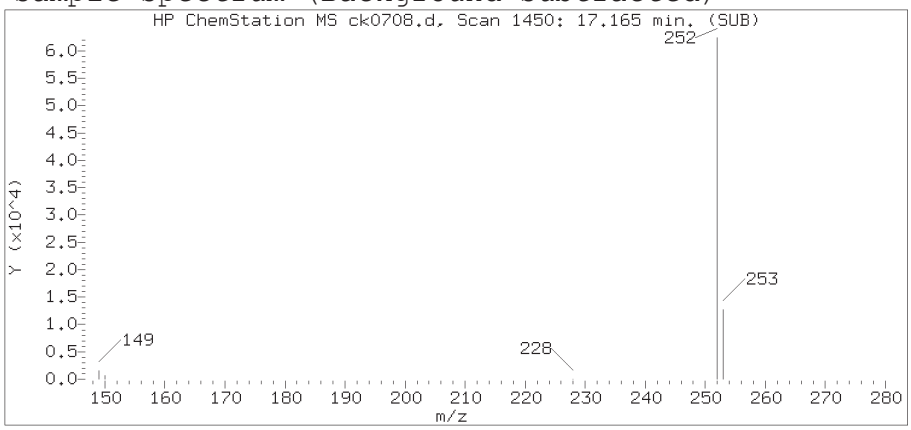
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs0194

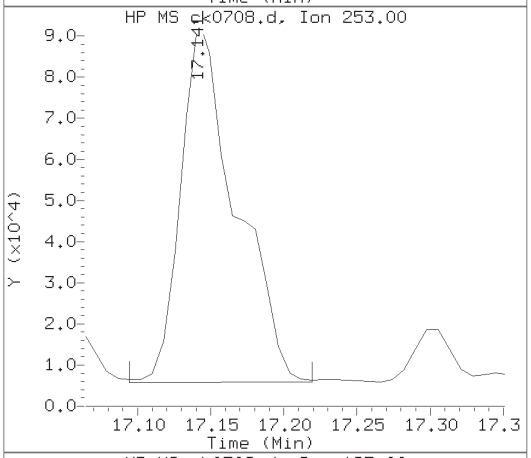
Reference Standard Spectrum for Benzo(k)fluoranthene



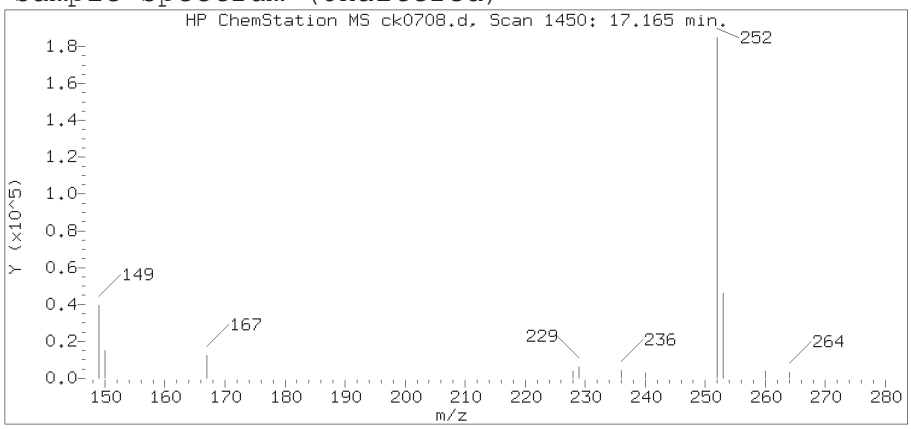


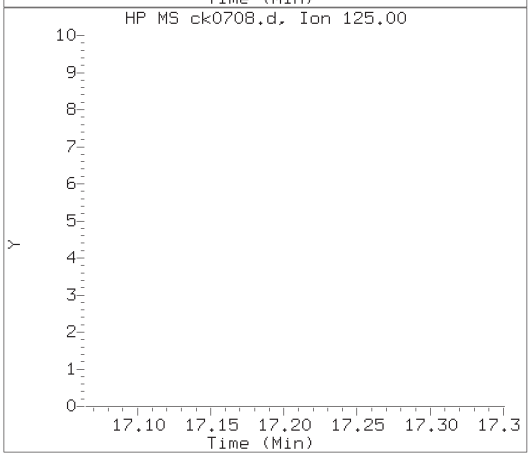
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

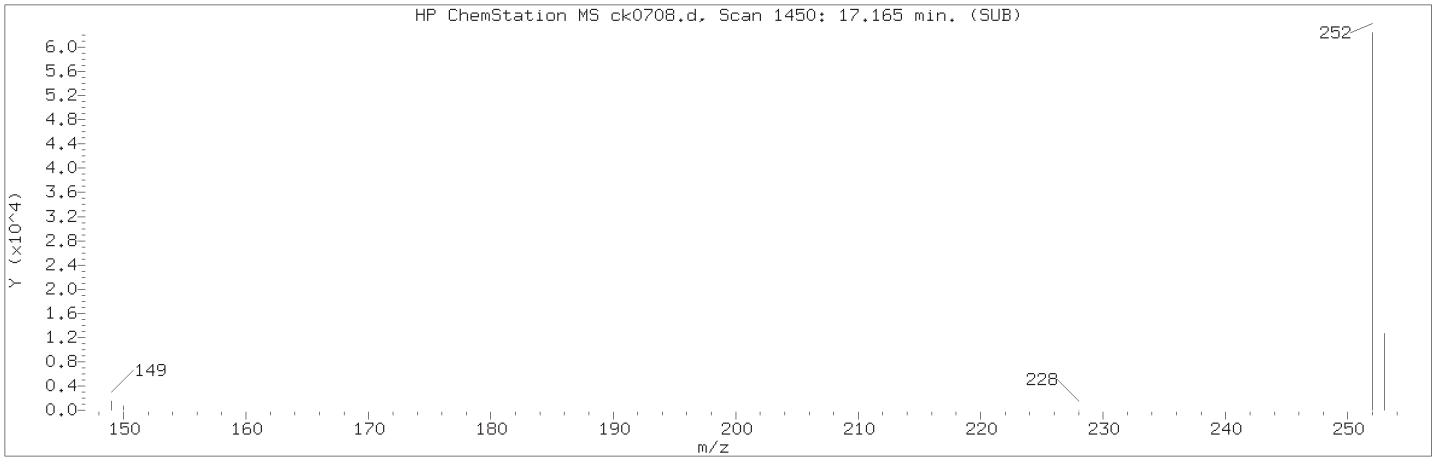
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1003RE Lab Sample ID: 9867762RE

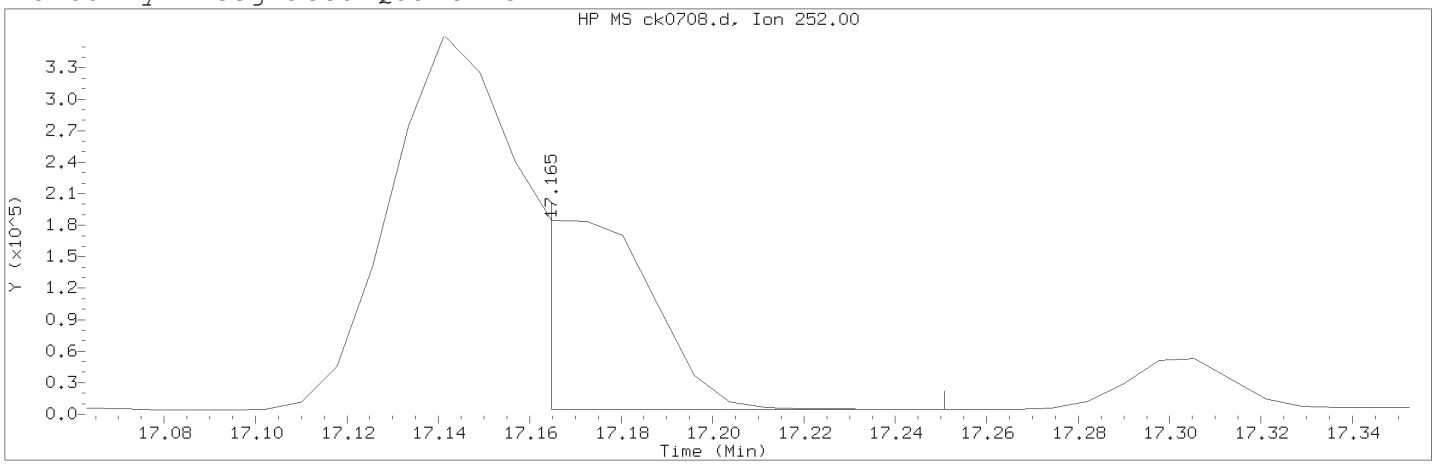
Compound Number	: 47
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1450
Retention Time (minutes)	: 17.165
Relative Retention Time	: 0.00079
Quant Ion	: 252.00
Area (flag)	: 312991M
On-column Amount (ng/ul)	: 2.3138

Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1003RE Lab Sample ID: 9867762RE

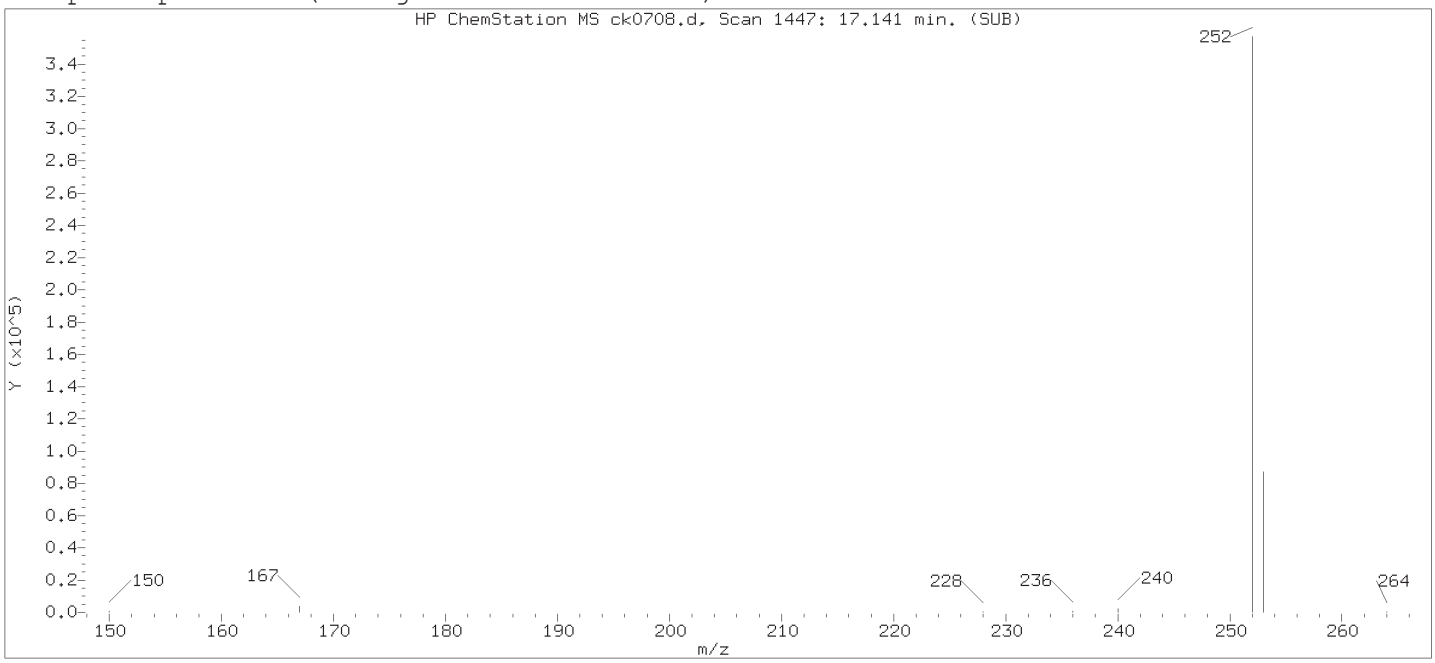
Compound Number : 47
Compound Name : Benzo(k)fluoranthene
Scan Number : 1450
Retention Time (minutes) : 17.165
Quant Ion : 252.00
Area (flag) : 312991M
On-column Amount (ng/ul) : 2.3138
Integration start scan : 1449 Integration stop scan: 1460
Y at integration start : 4330 Y at integration end: 4443

Reason for manual integration: improper integration

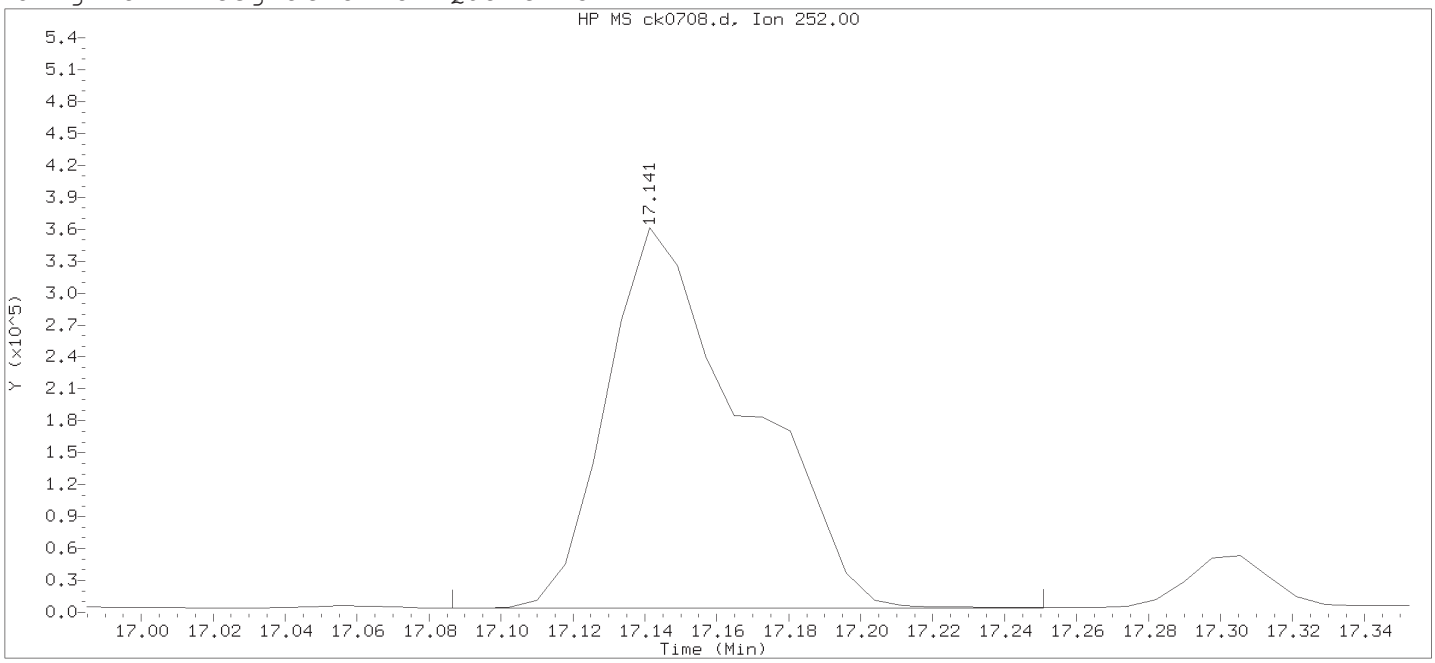
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

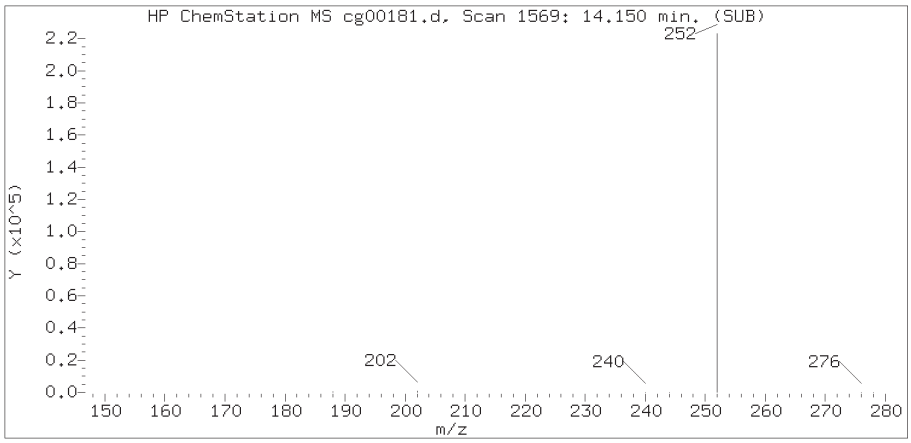
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 10:53 Automation

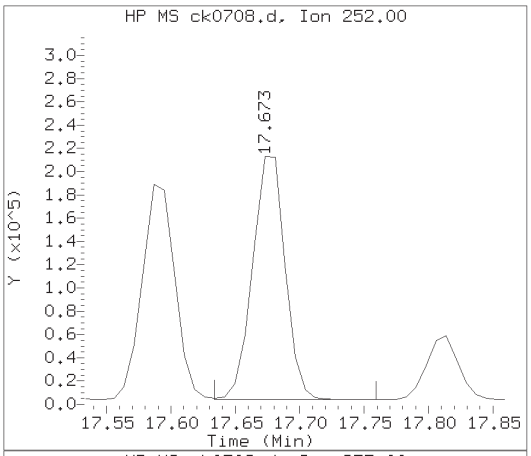
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	:	47
Compound Name	:	Benzo(k)fluoranthene
Scan Number	:	1447
Retention Time (minutes)	:	17.141
Quant Ion	:	252.00
Area	:	959854
On-column Amount (ng/ul)	:	7.0958
Integration start scan	:	1439 Integration stop scan: 1460
Y at integration start	:	3856 Y at integration end: 3989

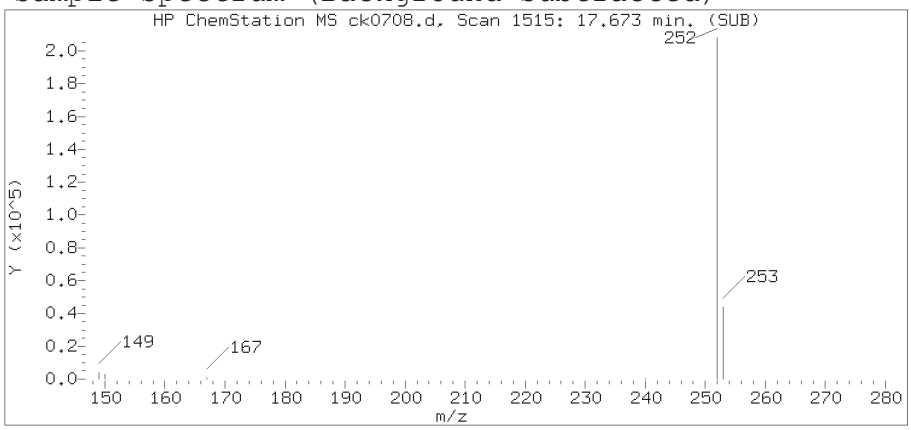
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: [illegible]

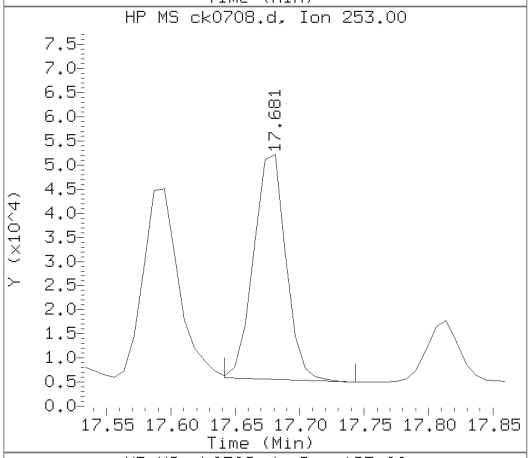
Reference Standard Spectrum for Benzo(a)pyrene



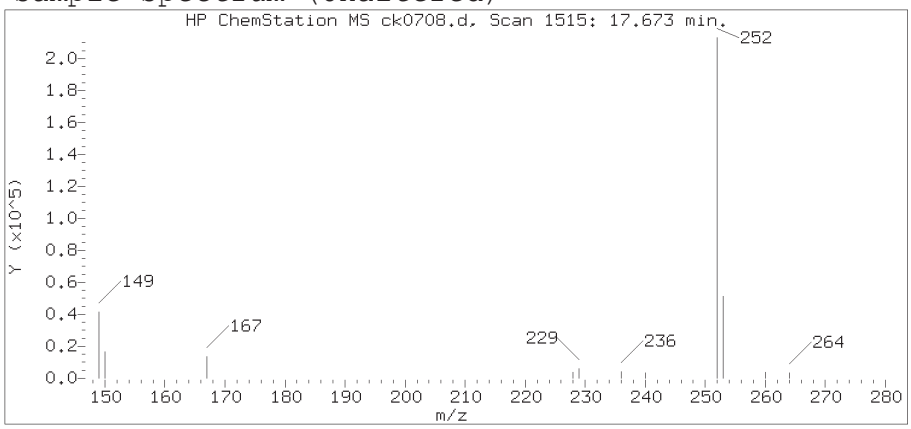


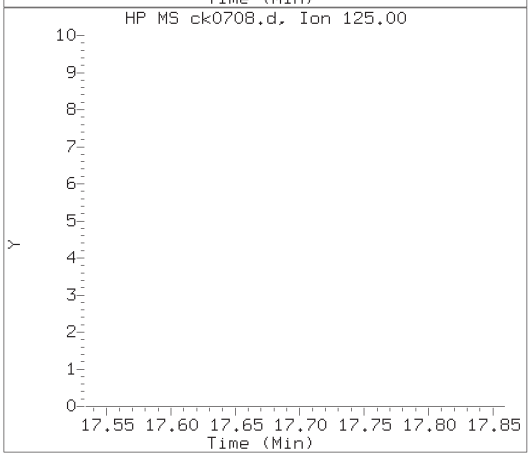
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

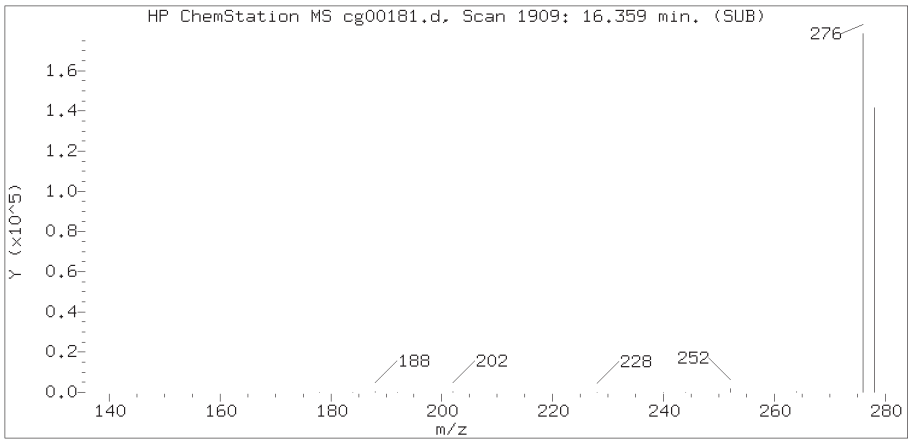
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

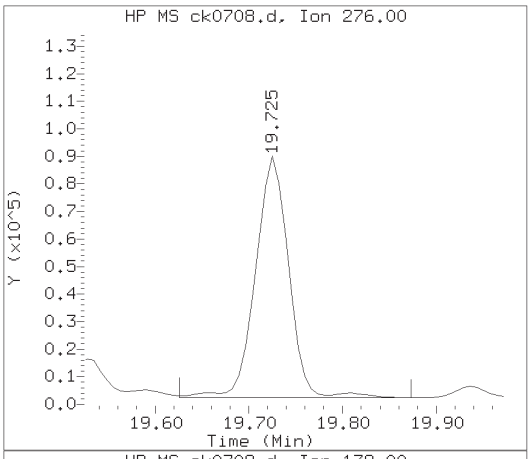
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 50
Compound Name	: Benzo(a)pyrene
Scan Number	: 1515
Retention Time (minutes)	: 17.673
Relative Retention Time	:-0.00001
Quant Ion	: 252.00
Area (flag)	: 368816
On-column Amount (ng/ul)	: 3.2093

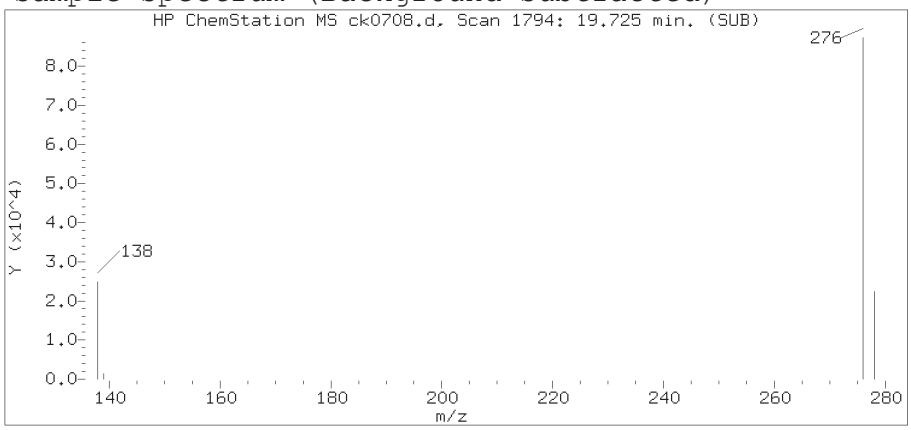
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

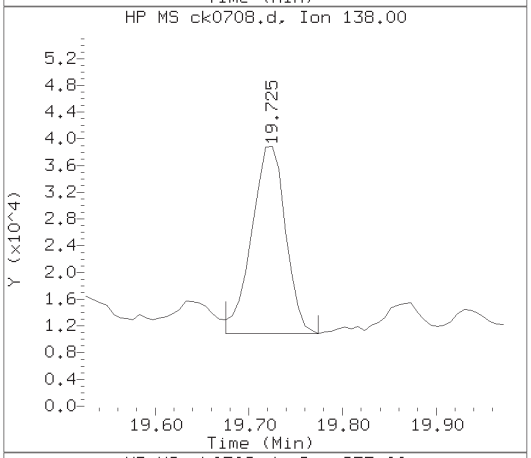
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



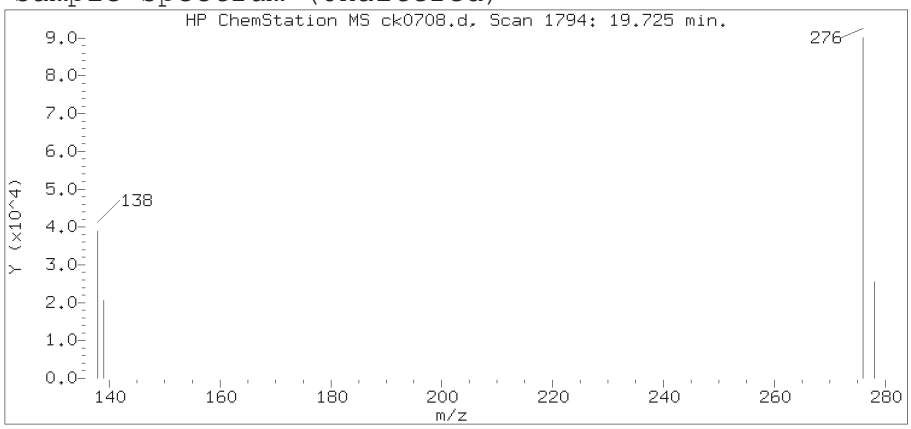


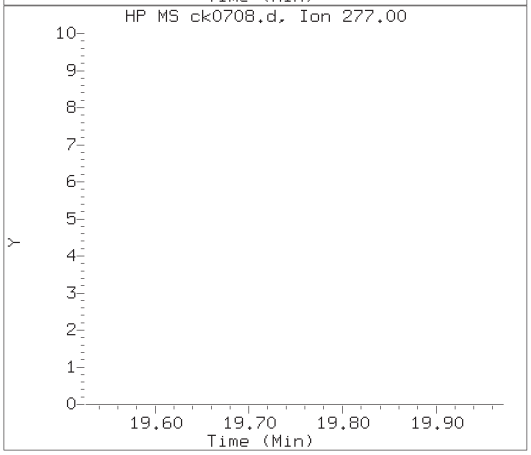
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

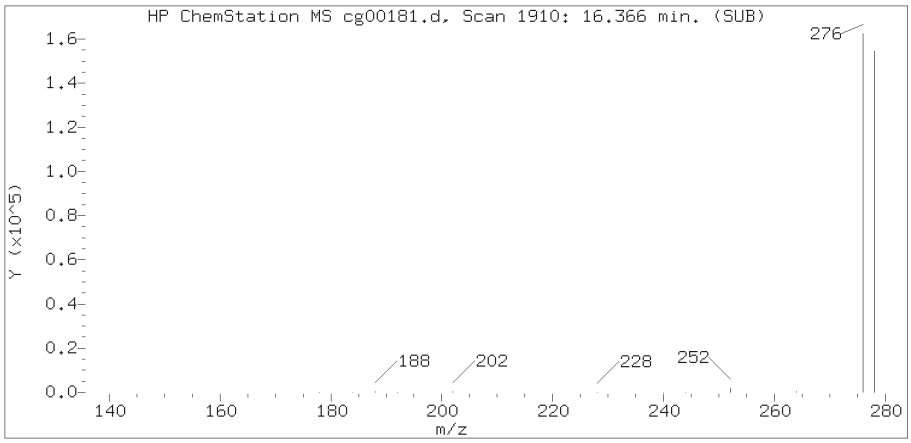
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

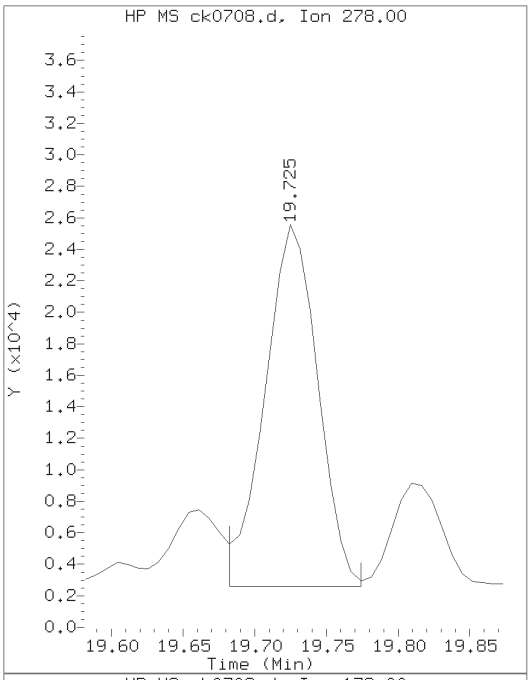
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 53
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 1794
Retention Time (minutes)	: 19.725
Relative Retention Time	:-0.00144
Quant Ion	: 276.00
Area (flag)	: 217798
On-column Amount (ng/ul)	: 1.9106

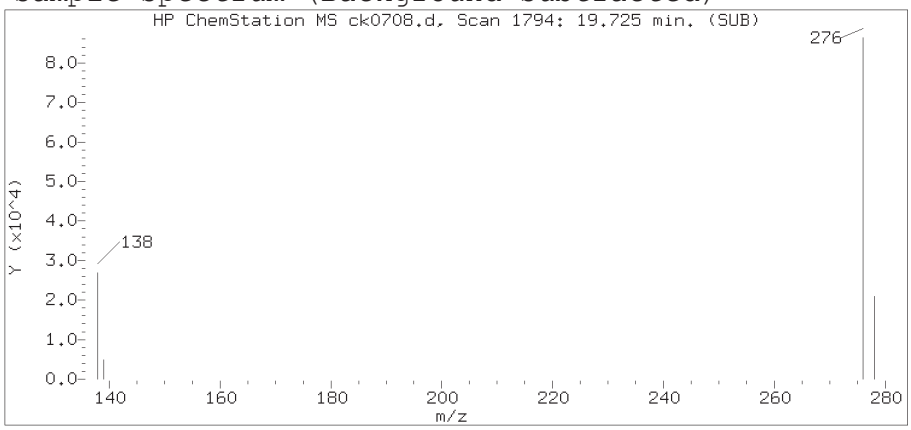
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

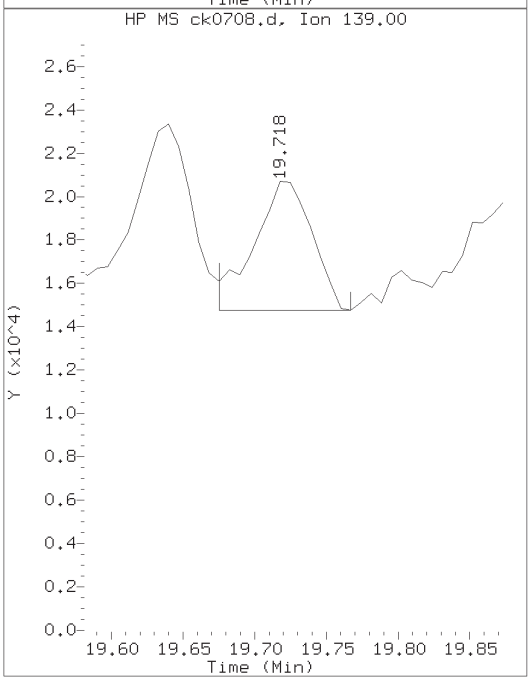
Reference Standard Spectrum for Dibenz(a,h)anthracene



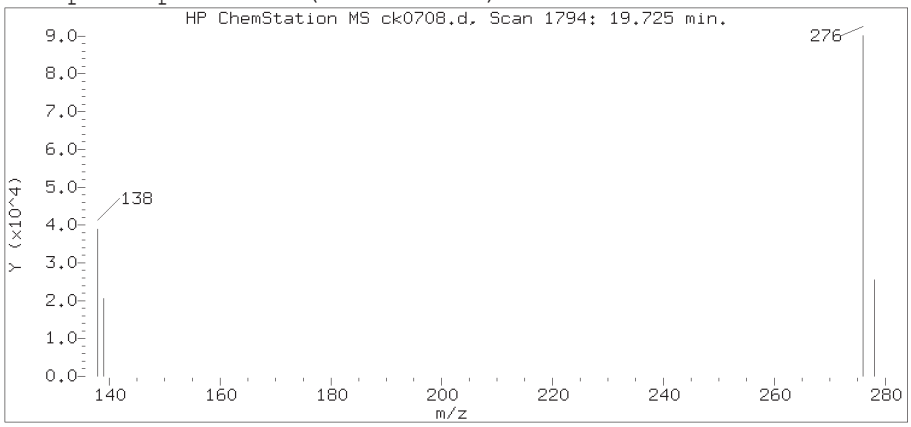


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

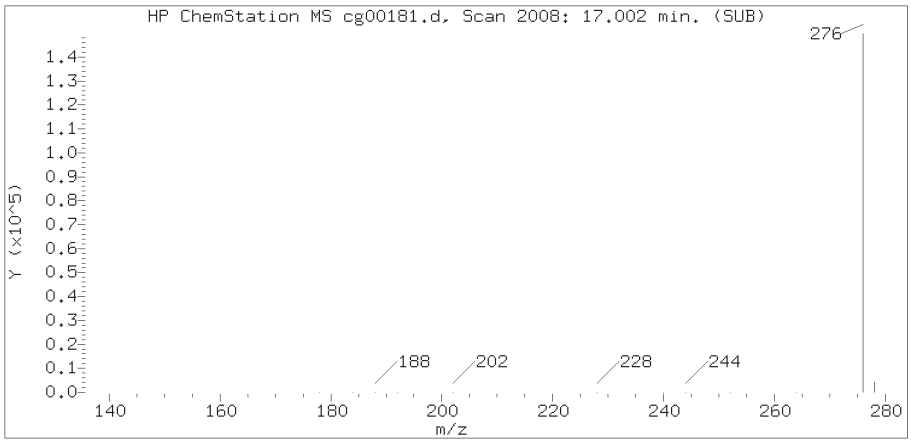
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

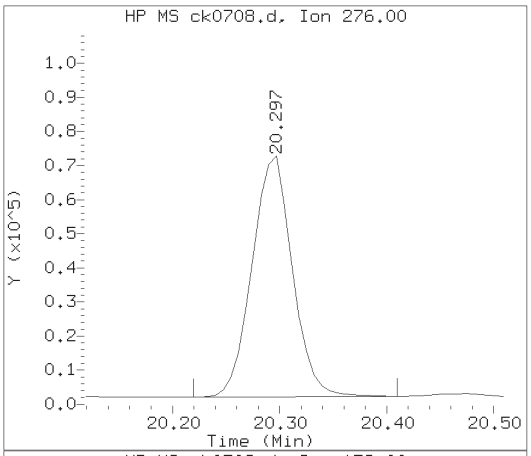
Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 54
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 1794
Retention Time (minutes)	: 19.725
Relative Retention Time	:-0.00105
Quant Ion	: 278.00
Area (flag)	: 58621
On-column Amount (ng/ul)	: 0.6203

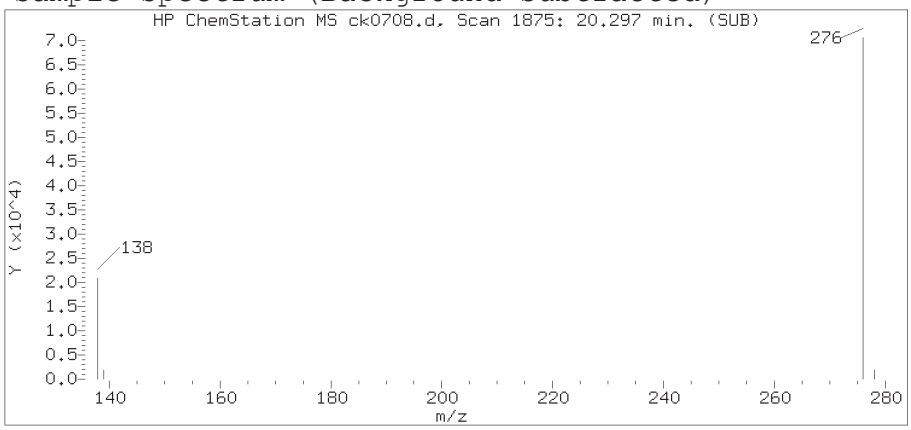
Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

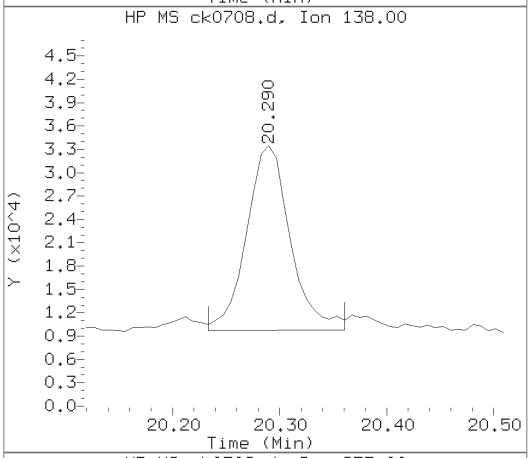
Reference Standard Spectrum for Benzo(g,h,i)perylene



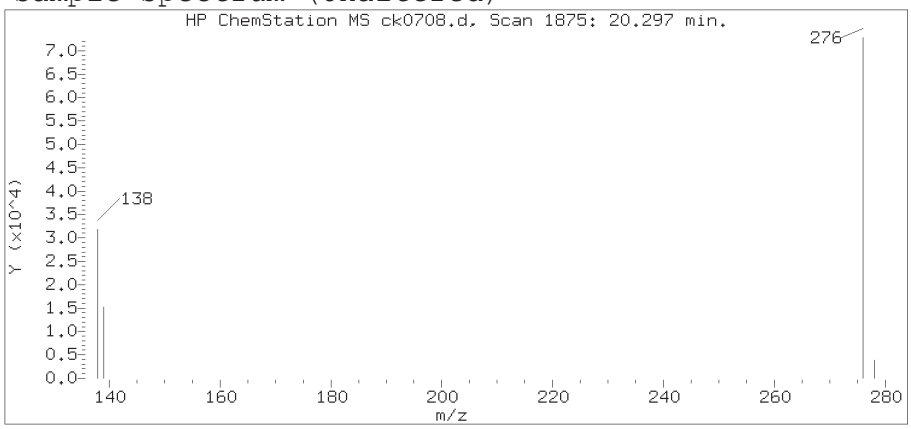


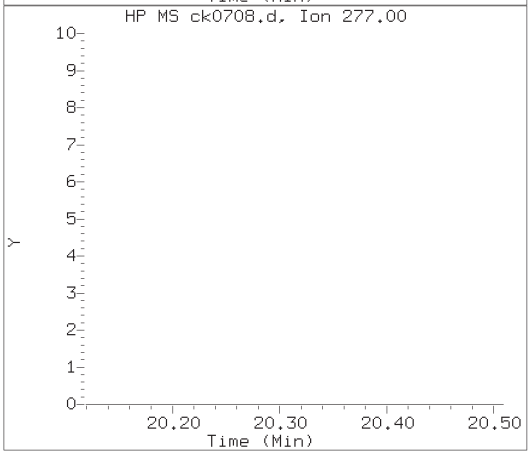
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0708.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:26 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1003RE Lab Sample ID: 9867762RE

Compound Number	: 55
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 1875
Retention Time (minutes)	: 20.297
Relative Retention Time	:-0.00256
Quant Ion	: 276.00
Area (flag)	: 184876
On-column Amount (ng/ul)	: 1.7377

Digitally signed by William H Saadeh on 11/16/2018 at 12:56.
Target 3.5 esignature user ID: whs02991

T1004 Lancaster Laboratories, Inc. 9867766
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10976.i/18nov08.b/ik0359.d Injection date and time: **08-NOV-2018 11:34**
Data file Sample Info. Line: T1004;9867766;2;0;SAMPLE;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov08.b/ik0351.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.16 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.794	(0.000)	499	152	72138	(2)	1.00	
10) Naphthalene-d8	8.306	(0.000)	613	136	257089	(-2)	1.00	
20) Acenaphthene-d10	10.478	(-0.011)	801	164	167004	(4)	1.00	
31) Phenanthrene-d10	12.323	(-0.011)	966	188	357397	(2)	1.00	
43) Chrysene-d12	15.613	(-0.016)	1267	240	382174	(5)	1.00	
51) Perylene-d12	17.584	(-0.047)	1519	264	224329	(-38)	1.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.262	(-0.001)	152	131400	0.838	84%		61 - 111
36) Fluoranthene-d10	(4)	13.807	(0.001)	212	364892	0.823	82%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.459	(0.000)	264	146818	0.685	69%		54 - 122

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.154	(-0.016)	88	3331A	0.077	2.56			0.02
11) Naphthalene	(2)	8.333	(0.000)	128	344120	1.300	43.10	31.312	B	0.04
19) Acenaphthylene	(3)	10.304	(-0.000)	152	71391	0.223	7.40			0.01
21) Acenaphthene	(3)	10.511	(0.001)	154	19558	0.093	3.08	1.723	B	0.02
26) Fluorene	(3)	11.154	(0.000)	166	24102	0.093	3.09	1.949	B	0.02
32) Phenanthrene	(4)	12.357	(0.000)	178	689704	1.786	59.22	2.56	B	0.02
33) Anthracene	(4)	12.413	(0.000)	178	132602M	0.343	11.37	0.732	B	0.02
35) Di-n-butylphthalate	(4)	13.002	(-0.000)	149	1767799	4.785	158.65			0.2
37) Fluoranthene	(4)	13.832	(0.001)	202	2044813	4.253	141.03			0.02
39) Pyrene	(5)	14.124	(0.000)	202	1771699	3.349	111.05			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.550	(-0.000)	149	371799	1.479	49.04			0.3
42) Benzo(a)anthracene	(5)	15.597	(-0.000)	228	990287	2.014	66.78			0.02
44) Chrysene	(5)	15.644	(0.000)	228	1441299	3.069	101.75			0.01
46) Benzo(b)fluoranthene	(6)	17.005	(0.000)	252	1395301M	5.001	165.82			0.02
47) Benzo(k)fluoranthene	(6)	17.036	(0.000)	252	643230MA	2.459	81.54			0.02
50) Benzo(a)pyrene	(6)	17.498	(-0.000)	252	550114	2.301	76.28			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.381	(-0.001)	276	311336	1.104	36.61			0.02
54) Dibenz(a,h)anthracene	(6)	19.381	(-0.000)	278	90595	0.393	13.05			0.02
55) Benzo(g,h,i)perylene	(6)	19.876	(-0.001)	276	245225	0.989	32.80			0.02

A = User selected an alternate peak. B = Compound detected in referenced method blank. M = Compound was manually integrated.

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34. Target 3.5 esignature user ID: apb10206

Data file: /chem/HP10976.i/18nov08.b/ik0359.d Injection date and time: **08-NOV-2018 11:34**
Data file Sample Info. Line: T1004;9867766;2;0;SAMPLE;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov08.b/ik0351.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

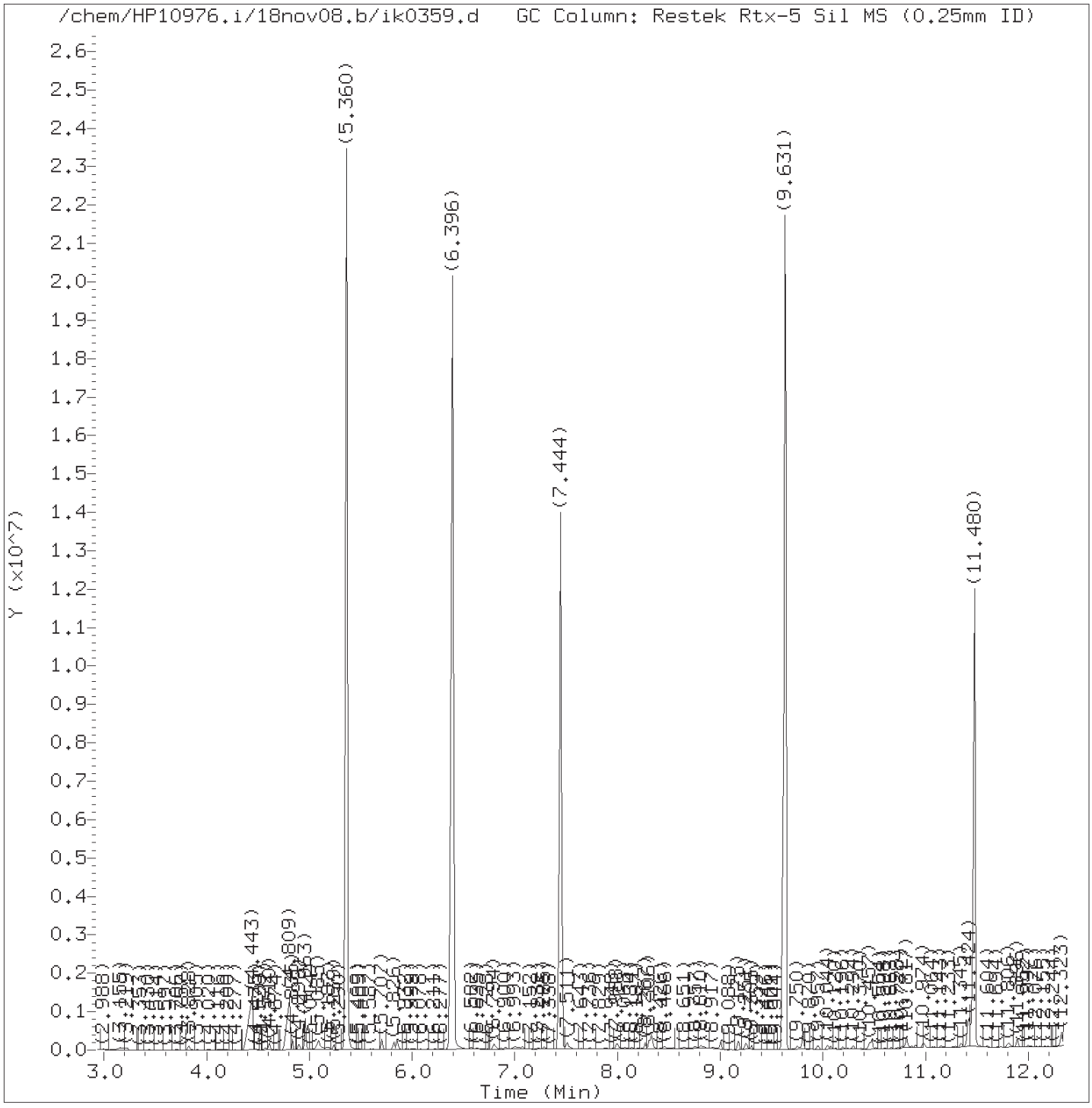
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.16 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

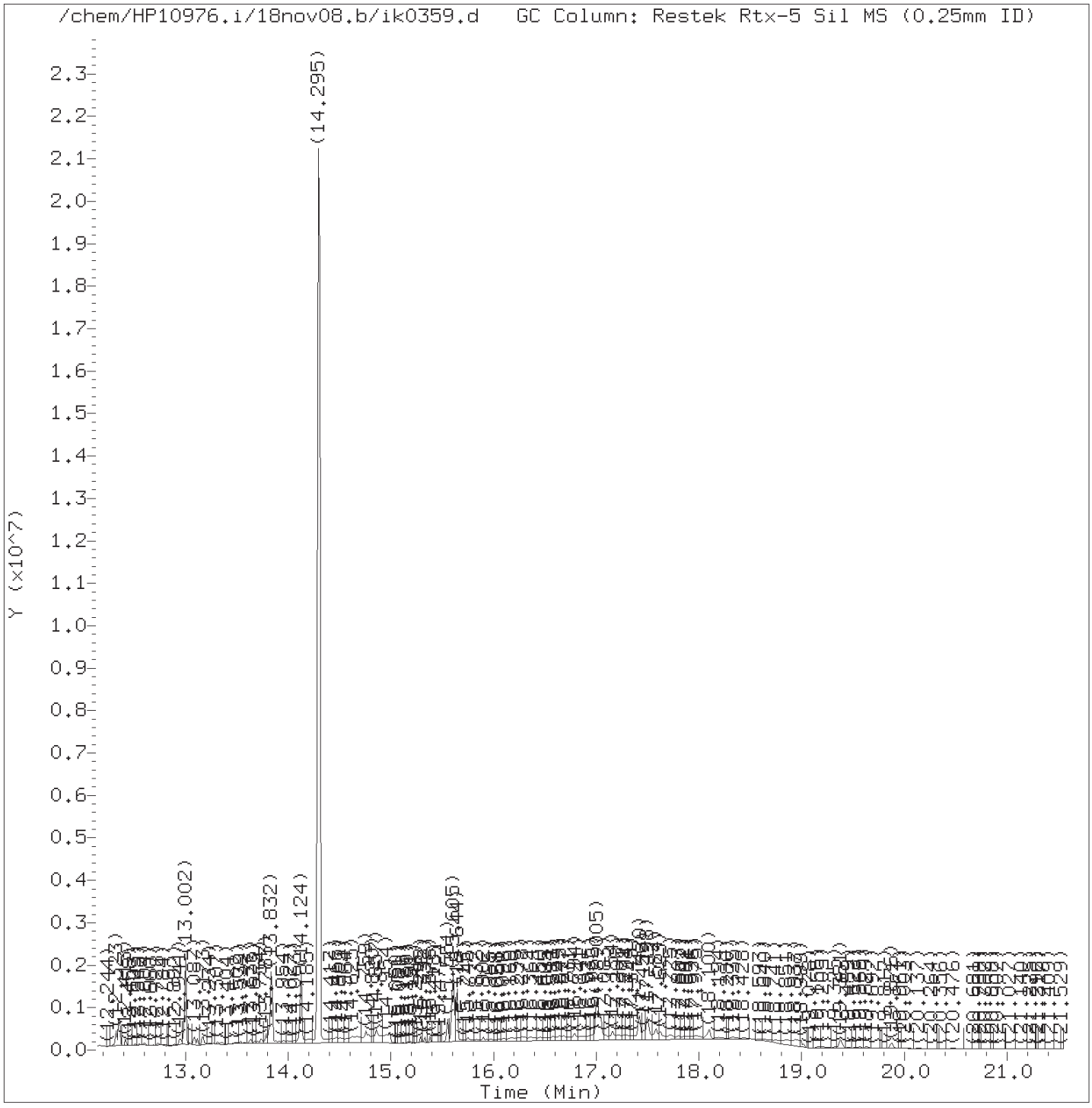
Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1004 Lab Sample ID: 9867766

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1004 Lab Sample ID: 9867766

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

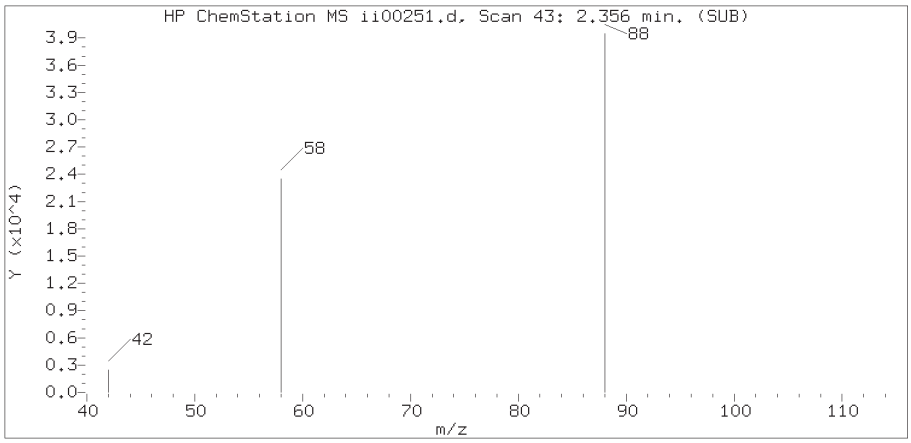
Sample Name: T1004 Lab Sample ID: 9867766

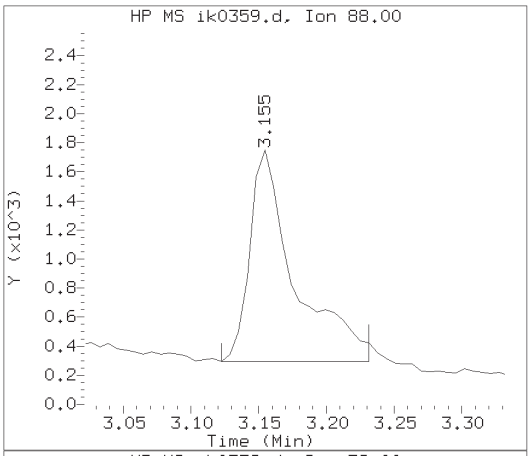
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.155	88	3331A	0.077
6)*1,4-Dichlorobenzene-d4	(1)	6.794	152	72138	1.000
10)*Naphthalene-d8	(2)	8.306	136	257089	1.000
11) Naphthalene	(2)	8.333	128	344120	1.300
14)$1-Methylnaphthalene-d10	(2)	9.262	152	131400	0.838
19) Acenaphthylene	(3)	10.304	152	71391	0.223
20)*Acenaphthene-d10	(3)	10.478	164	167004	1.000
21) Acenaphthene	(3)	10.511	154	19558	0.093
26) Fluorene	(3)	11.154	166	24102	0.093
31)*Phenanthrene-d10	(4)	12.323	188	357397	1.000
32) Phenanthrene	(4)	12.357	178	689704	1.786
33) Anthracene	(4)	12.413	178	132602M	0.343
35) Di-n-butylphthalate	(4)	13.002	149	1767799	4.785
36)$Fluoranthene-d10	(4)	13.807	212	364892	0.823
37) Fluoranthene	(4)	13.832	202	2044813	4.253
39) Pyrene	(5)	14.124	202	1771699	3.349
41) bis(2-Ethylhexyl)phthalate	(5)	15.551	149	371799	1.479
42) Benzo(a)anthracene	(5)	15.597	228	990287	2.014
43)*Chrysene-d12	(5)	15.613	240	382174	1.000
44) Chrysene	(5)	15.644	228	1441299	3.069
46) Benzo(b)fluoranthene	(6)	17.005	252	1395301M	5.001
47) Benzo(k)fluoranthene	(6)	17.036	252	643230MA	2.459
49)$Benzo(a)pyrene-d12	(6)	17.459	264	146818	0.685
50) Benzo(a)pyrene	(6)	17.498	252	550114	2.301
51)*Perylene-d12	(6)	17.584	264	224329	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.381	276	311336	1.104
54) Dibenz(a,h)anthracene	(6)	19.381	278	90595	0.393
55) Benzo(g,h,i)perylene	(6)	19.876	276	245225	0.989

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

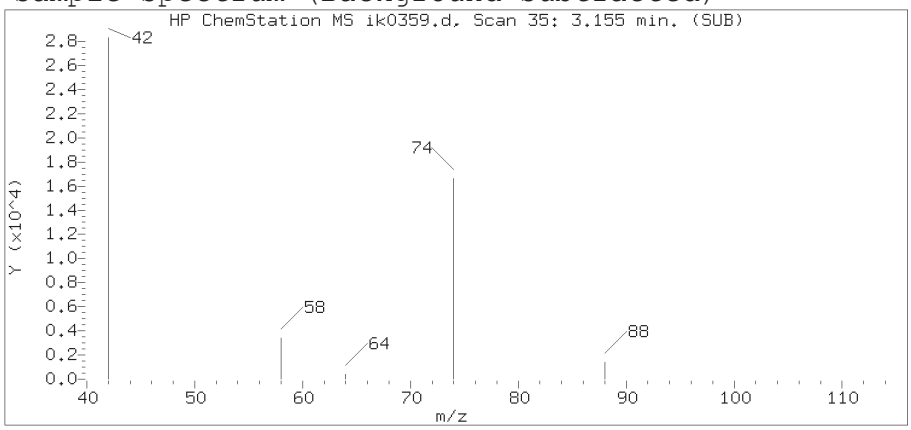
Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

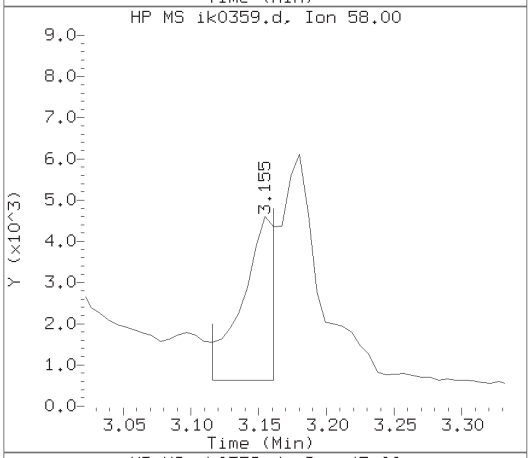
Reference Standard Spectrum for 1,4-Dioxane



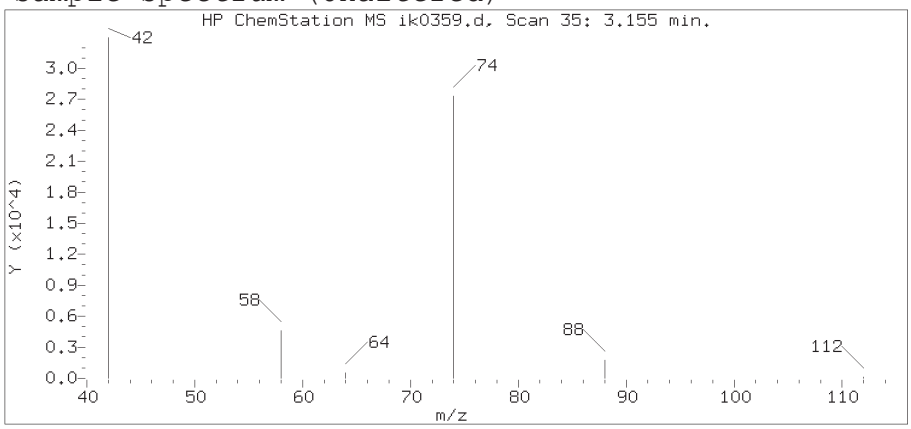


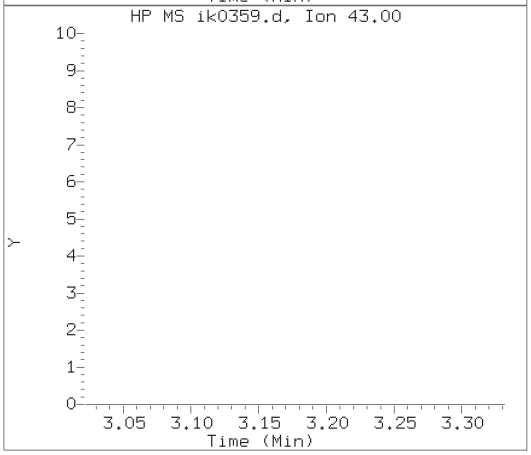
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

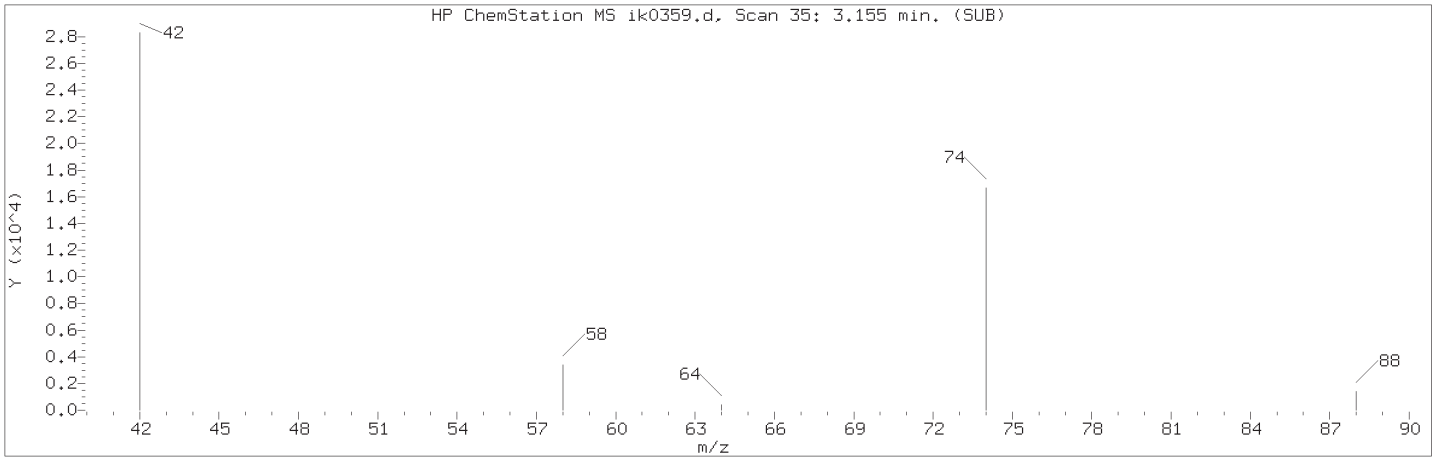
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1004 Lab Sample ID: 9867766

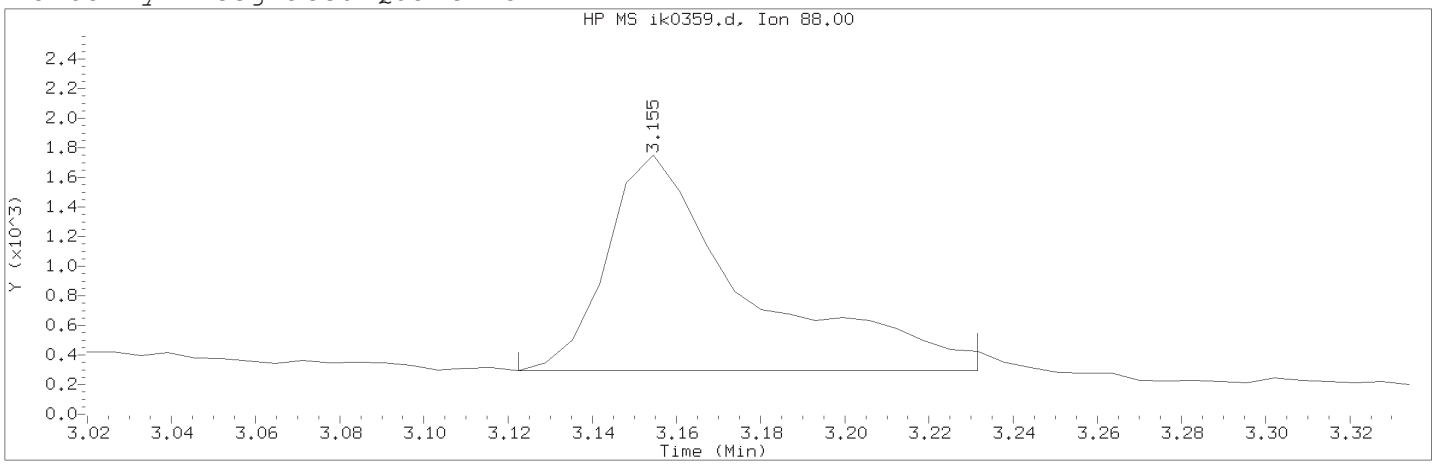
Compound Number	: 1
Compound Name	: 1,4-Dioxane
Scan Number	: 35
Retention Time (minutes)	: 3.155
Relative Retention Time	:-0.01605
Quant Ion	: 88.00
Area (flag)	: 3331A
On-column Amount (ng/ul)	: 0.0771

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1004 Lab Sample ID: 9867766

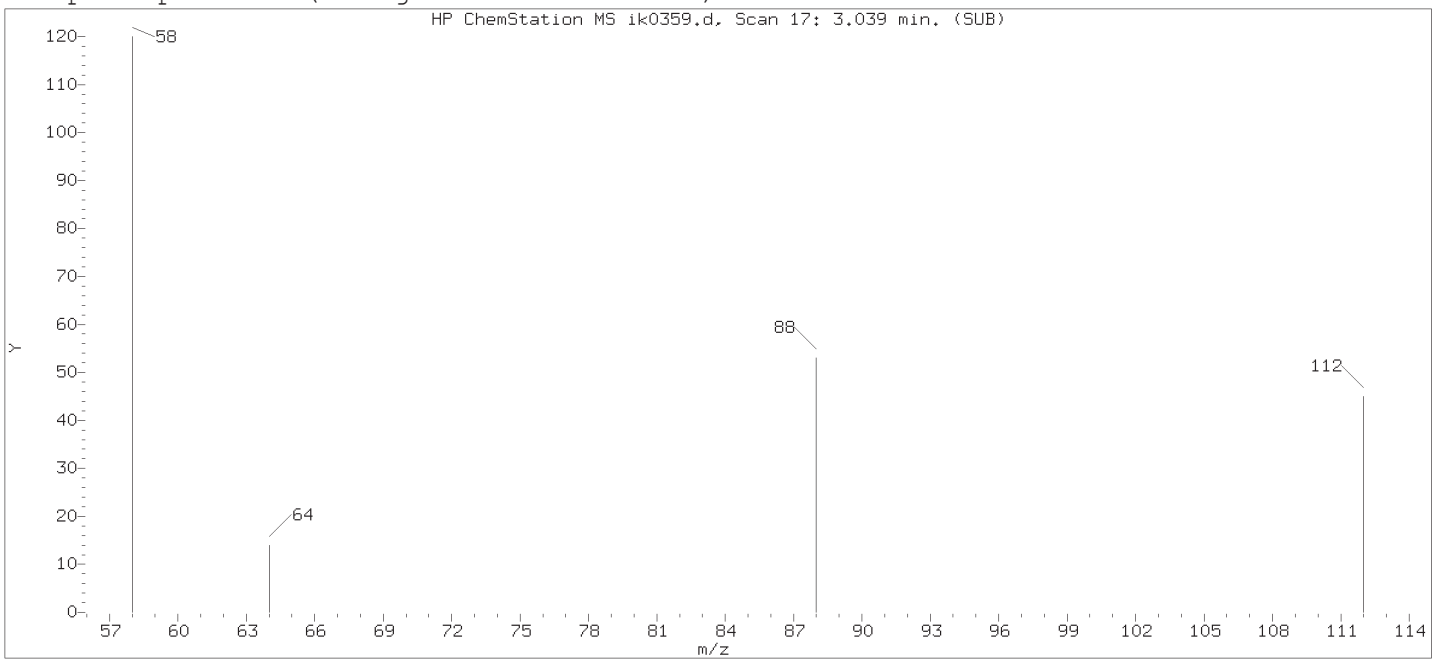
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 35		
Retention Time (minutes)	: 3.155		
Quant Ion	: 88.00		
Area (flag)	: 3331A		
On-column Amount (ng/ul)	: 0.0771		
Integration start scan	: 29	Integration stop scan:	46
Y at integration start	: 295	Y at integration end:	295

Reason for manual integration: improper integration

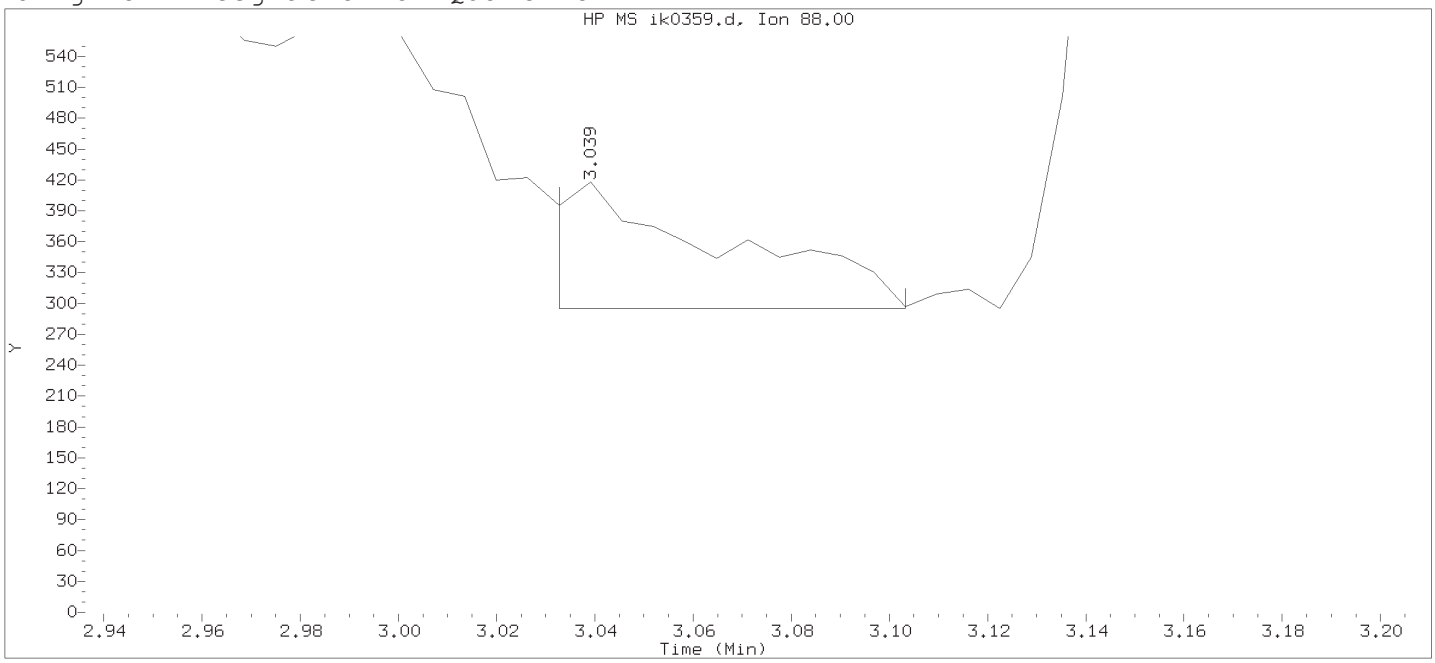
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

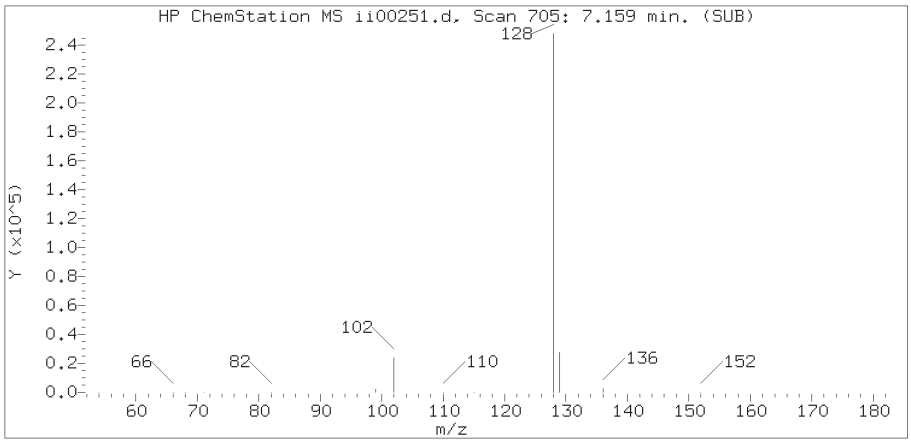
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:01 Automation

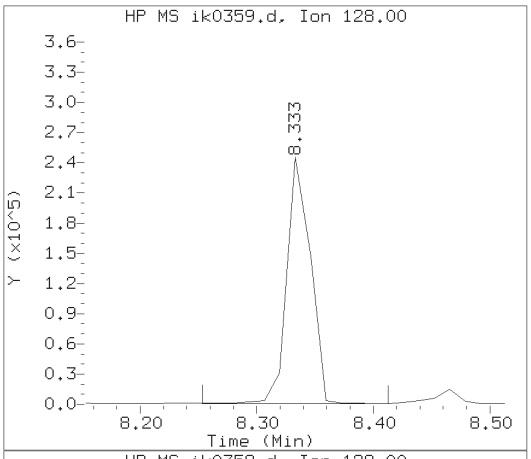
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 17		
Retention Time (minutes)	: 3.039		
Quant Ion	: 88.00		
Area	: 274		
On-column Amount (ng/ul)	: 0.0064		
Integration start scan	: 15	Integration stop scan:	26
Y at integration start	: 295	Y at integration end:	295

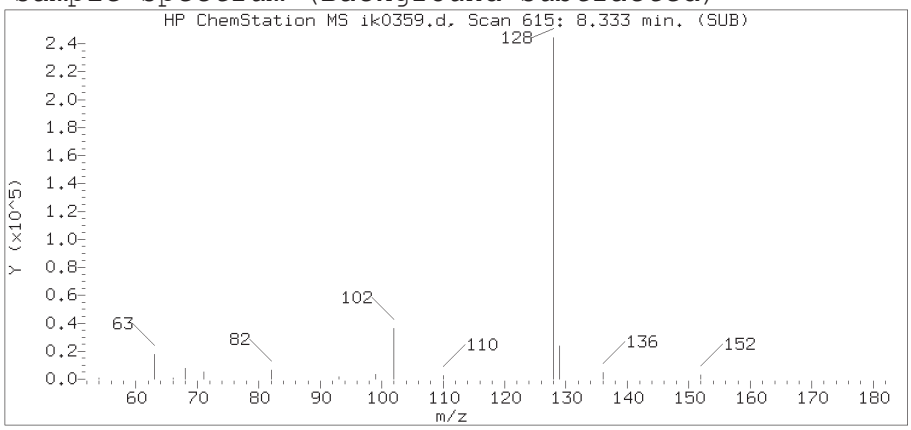
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature used [illegible]

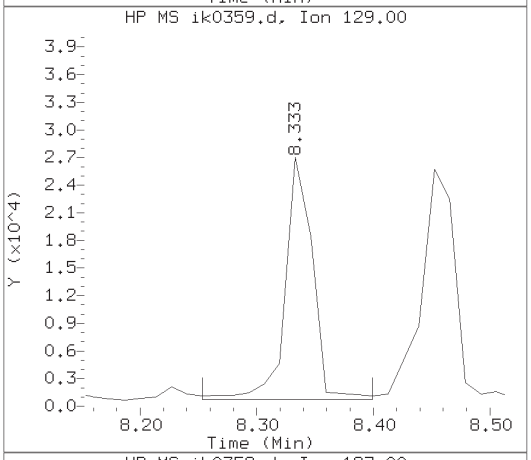
Reference Standard Spectrum for Naphthalene



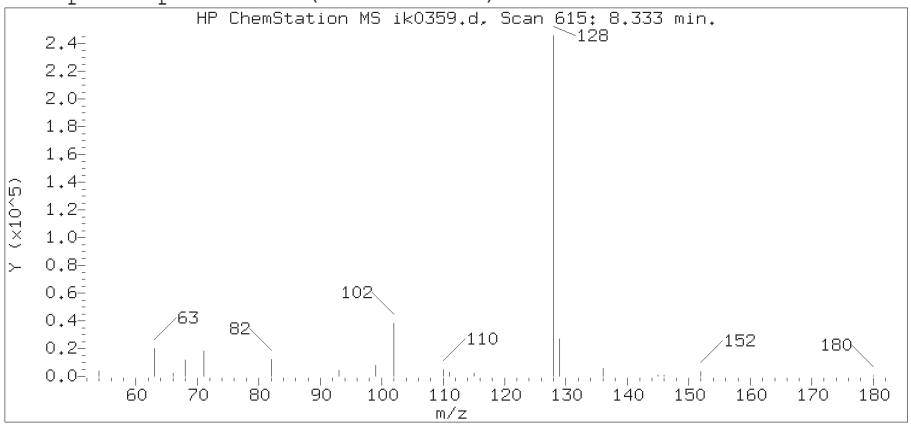


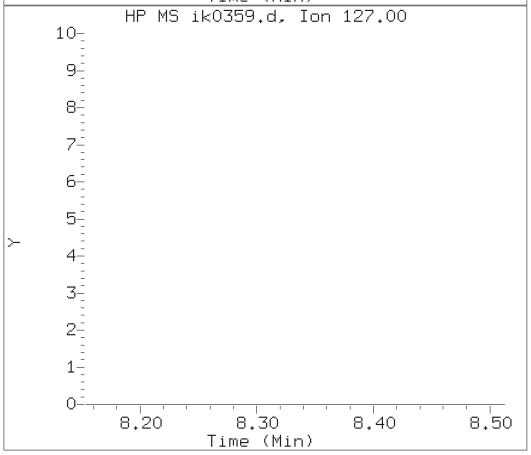
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

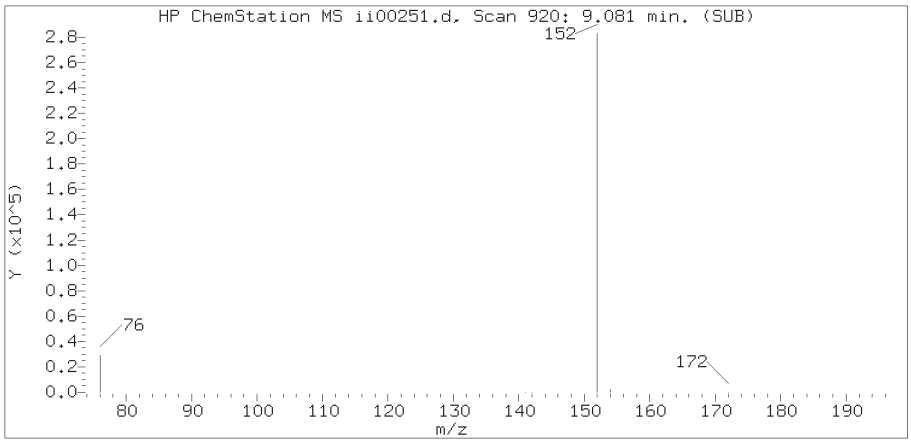
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

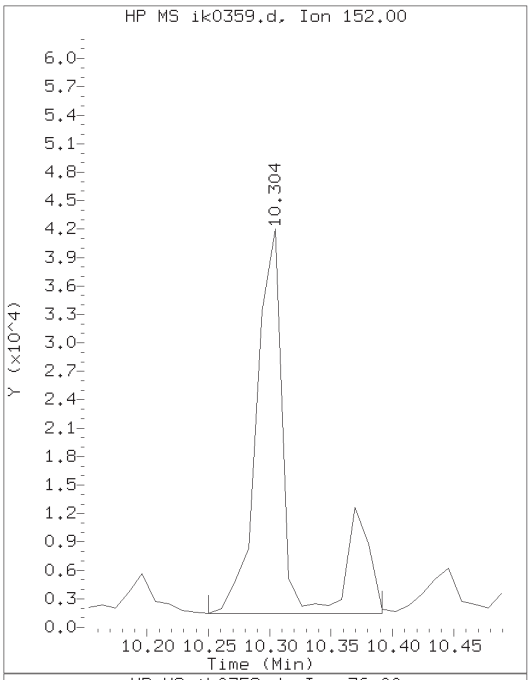
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 11
Compound Name	: Naphthalene
Scan Number	: 615
Retention Time (minutes)	: 8.333
Relative Retention Time	: 0.00000
Quant Ion	: 128.00
Area (flag)	: 344120
On-column Amount (ng/ul)	: 1.2998

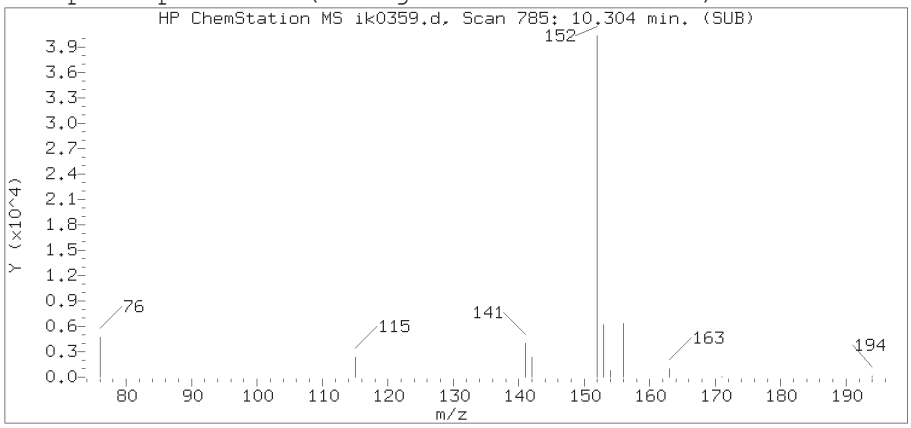
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

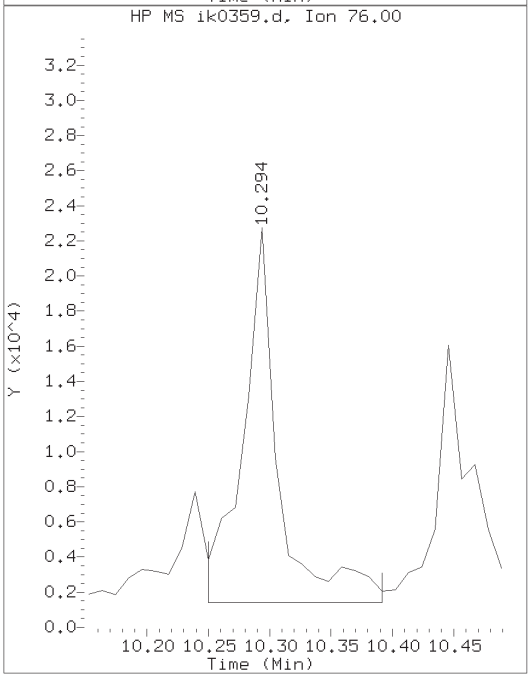
Reference Standard Spectrum for Acenaphthylene



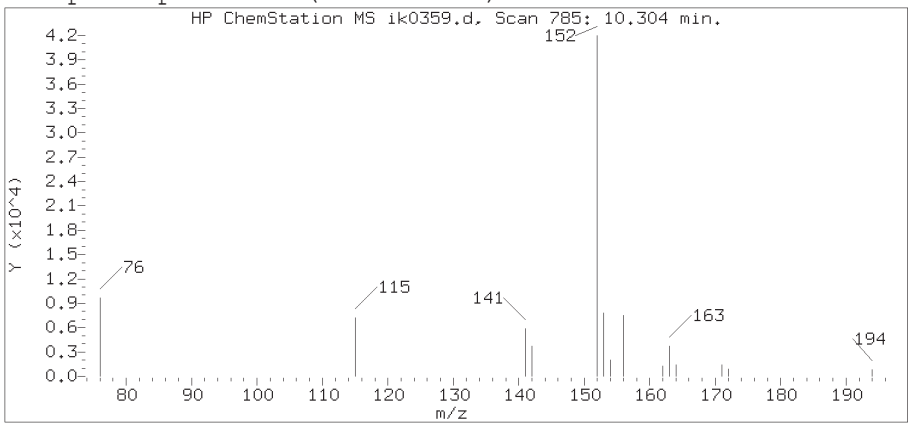


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

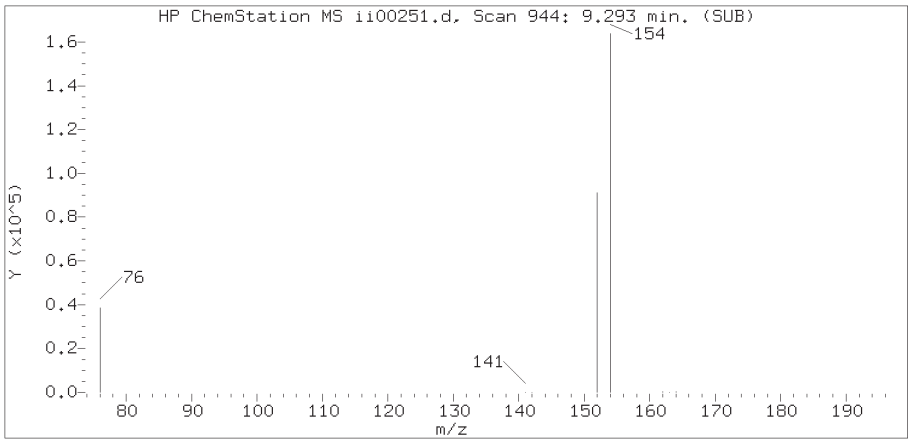
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

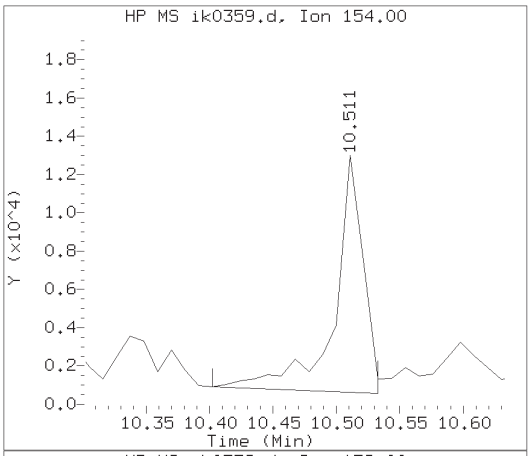
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 19
Compound Name	: Acenaphthylene
Scan Number	: 785
Retention Time (minutes)	: 10.304
Relative Retention Time	:-0.00002
Quant Ion	: 152.00
Area (flag)	: 71391
On-column Amount (ng/ul)	: 0.2232

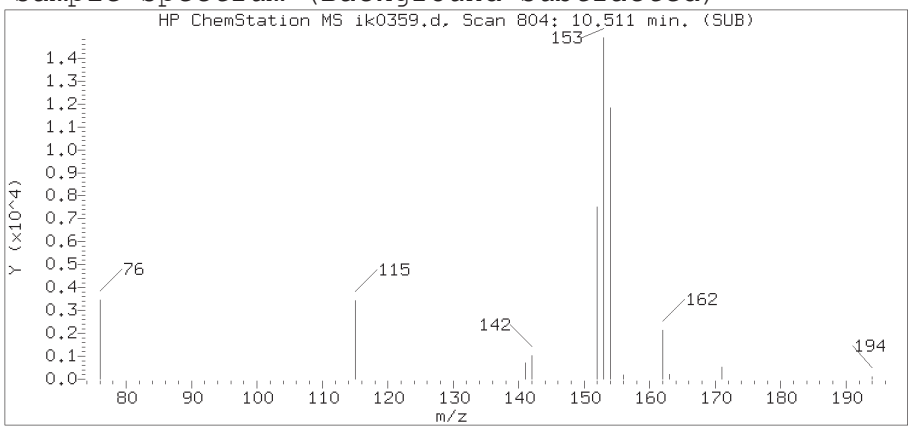
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

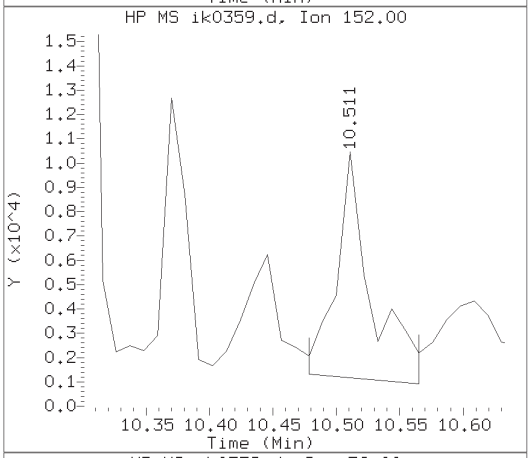
Reference Standard Spectrum for Acenaphthene



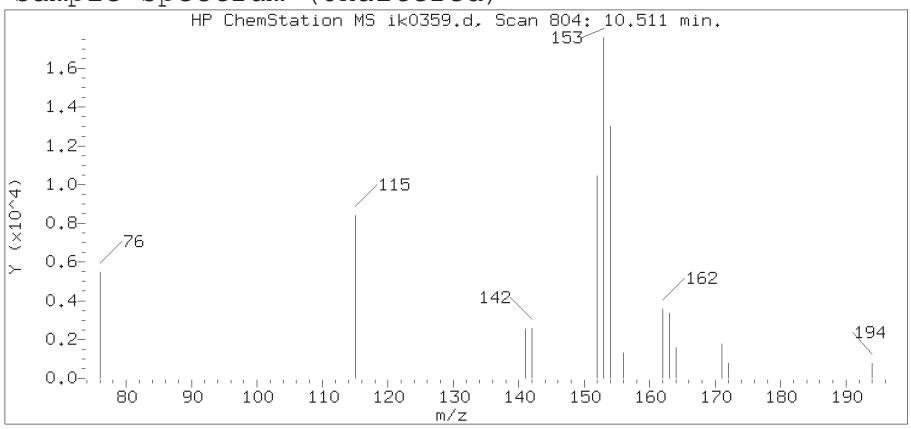


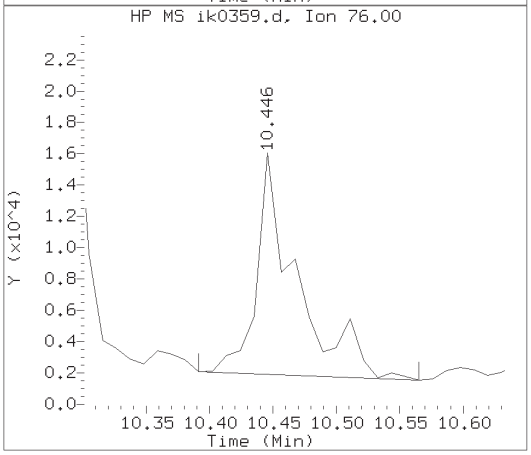
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

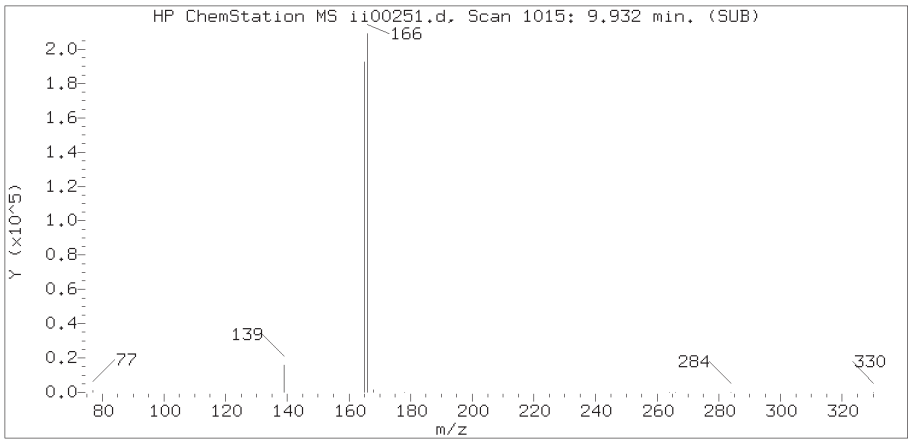
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

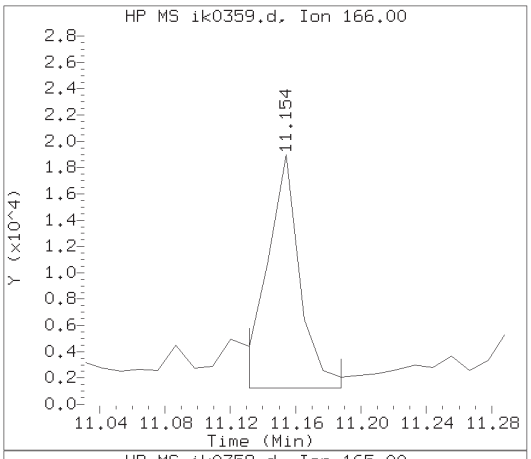
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 21
Compound Name	: Acenaphthene
Scan Number	: 804
Retention Time (minutes)	: 10.511
Relative Retention Time	: 0.00104
Quant Ion	: 154.00
Area (flag)	: 19558
On-column Amount (ng/ul)	: 0.0930

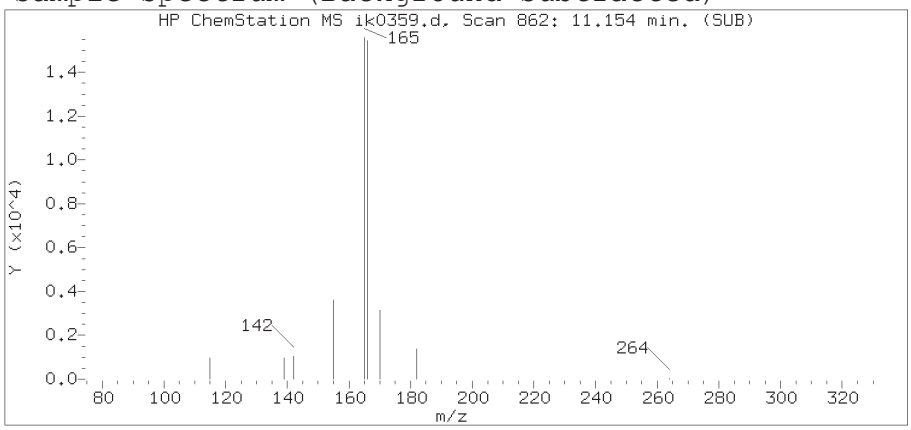
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

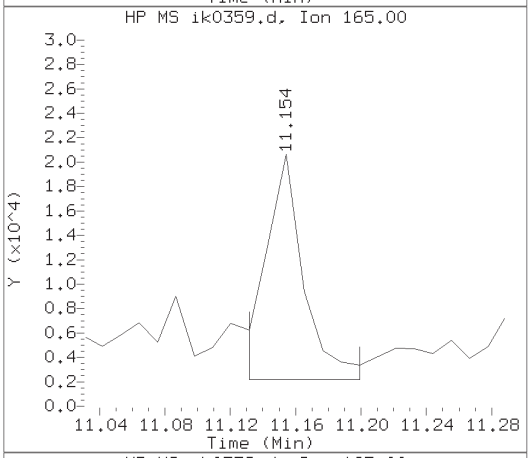
Reference Standard Spectrum for Fluorene



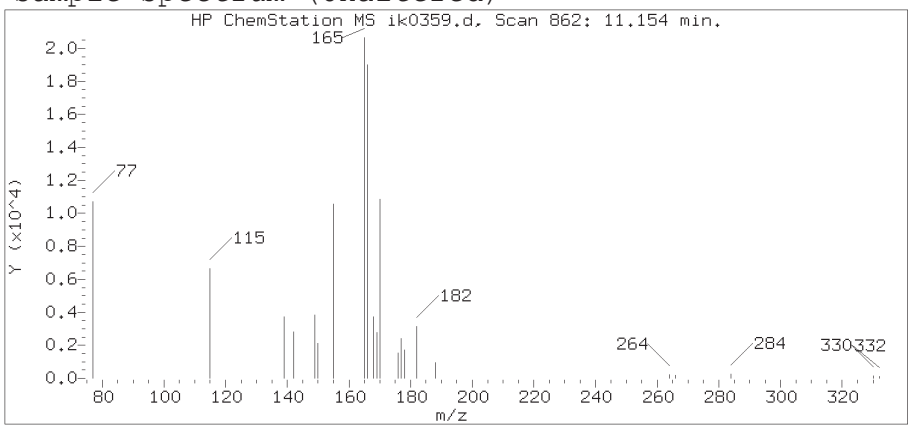


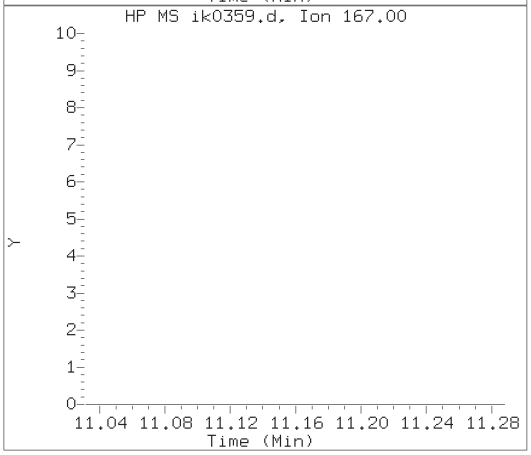
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

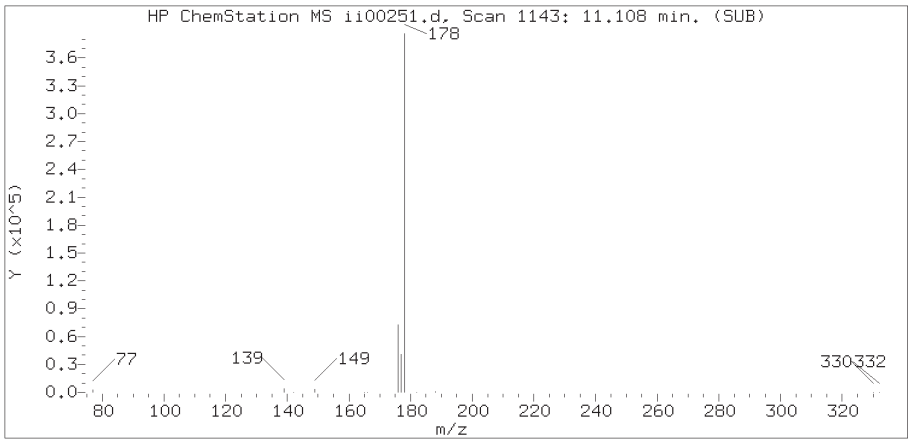
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

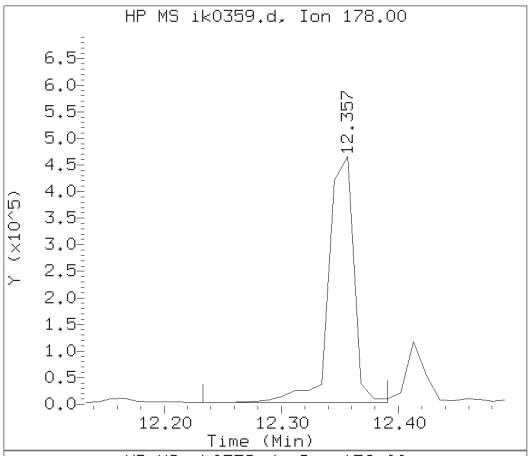
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 26
Compound Name	: Fluorene
Scan Number	: 862
Retention Time (minutes)	: 11.154
Relative Retention Time	: 0.00003
Quant Ion	: 166.00
Area (flag)	: 24102
On-column Amount (ng/ul)	: 0.0931

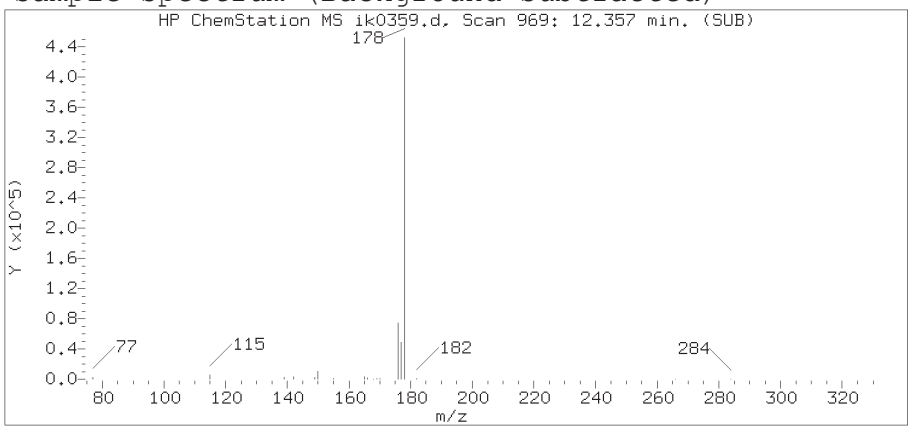
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

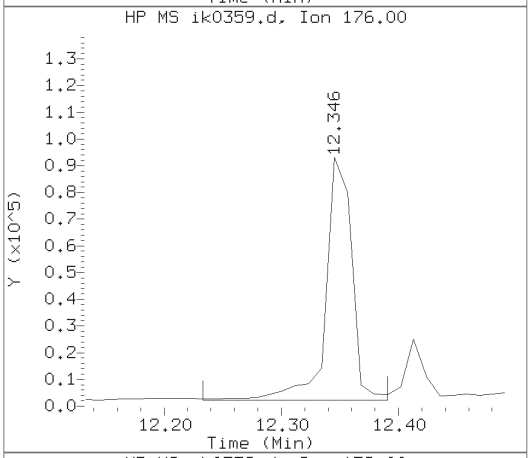
Reference Standard Spectrum for Phenanthrene



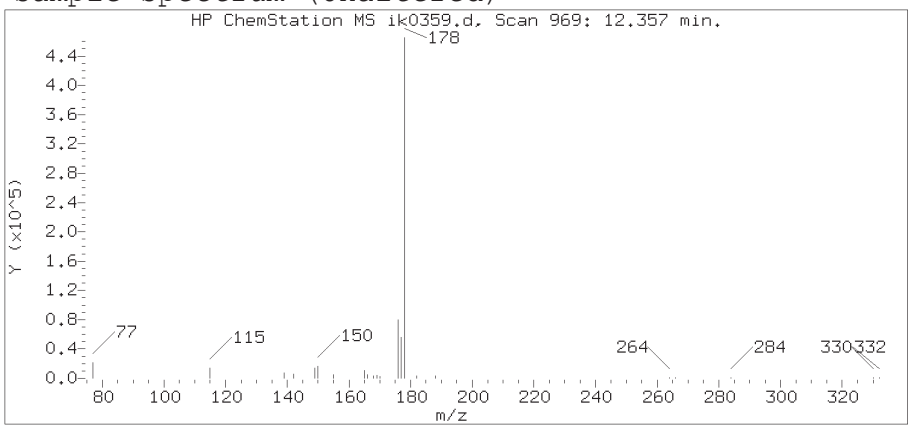


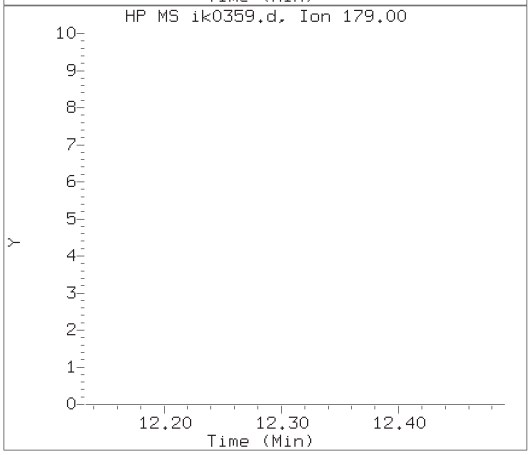
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

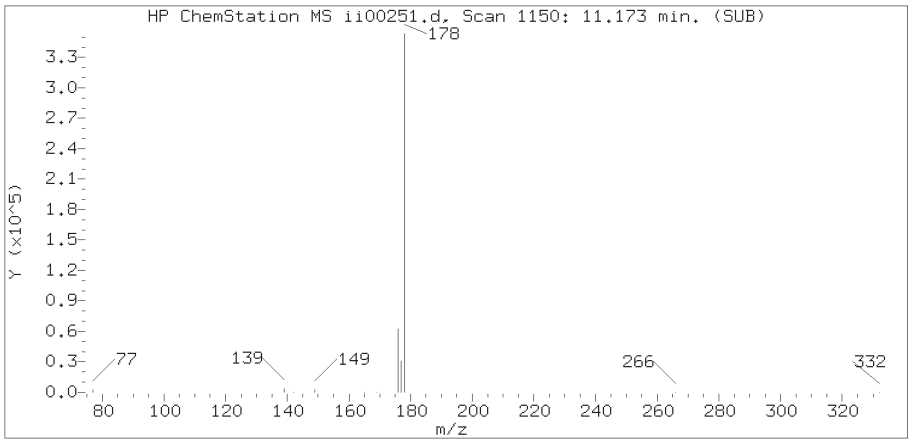
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

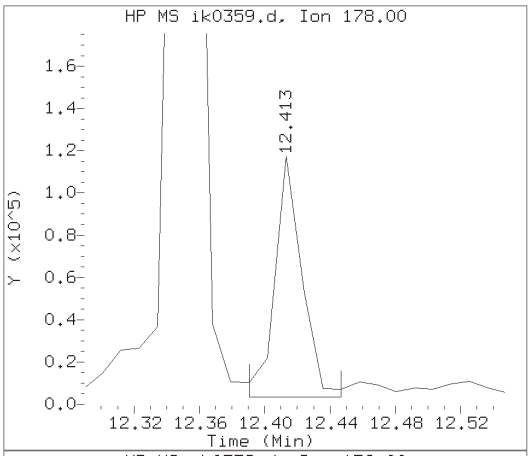
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 32
Compound Name	: Phenanthrene
Scan Number	: 969
Retention Time (minutes)	: 12.357
Relative Retention Time	: 0.00000
Quant Ion	: 178.00
Area (flag)	: 689704
On-column Amount (ng/ul)	: 1.7862

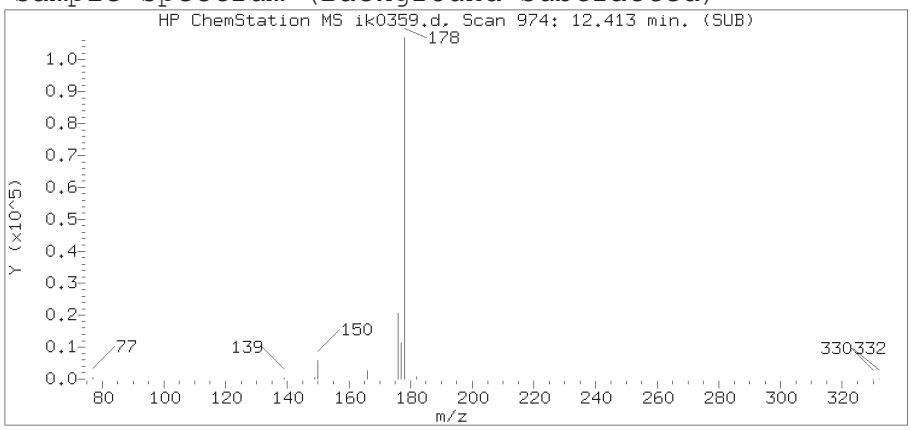
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

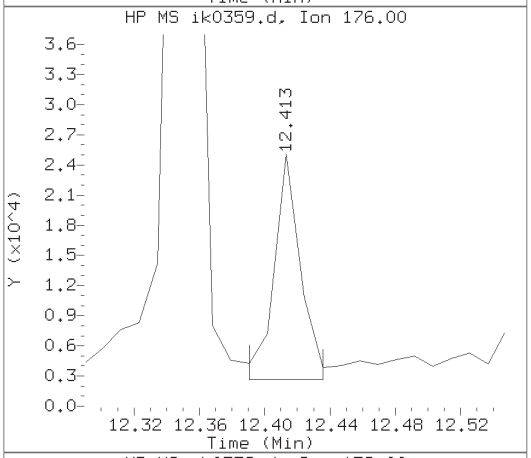
Reference Standard Spectrum for Anthracene



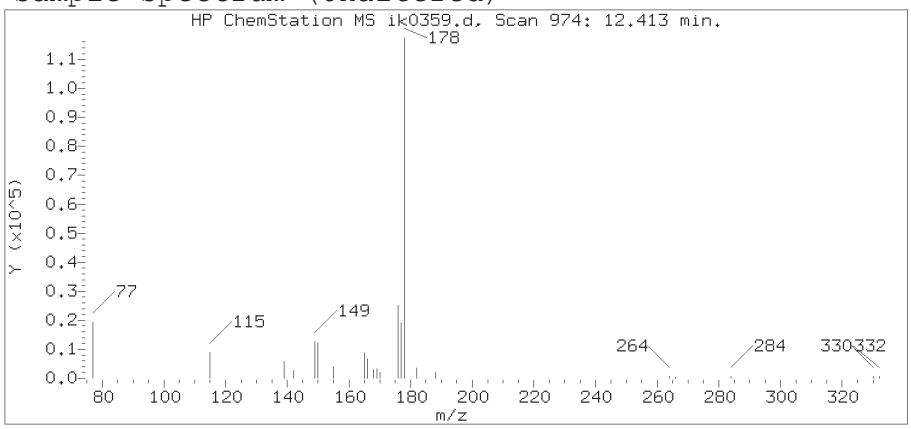


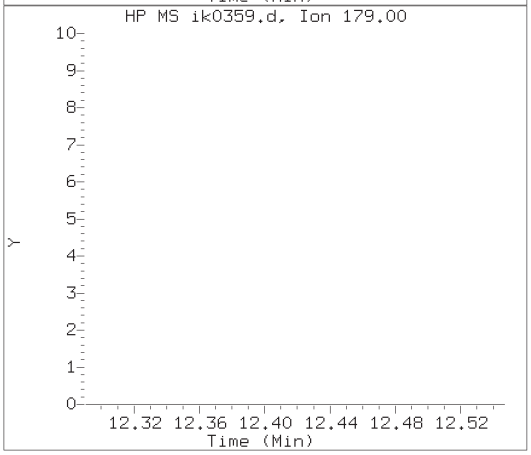
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

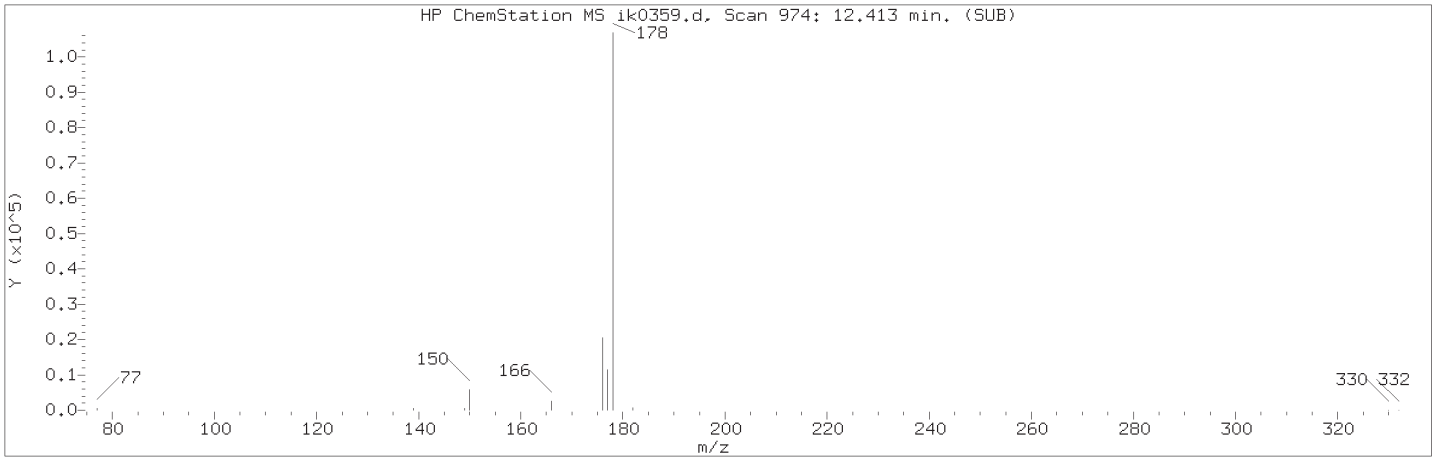
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1004 Lab Sample ID: 9867766

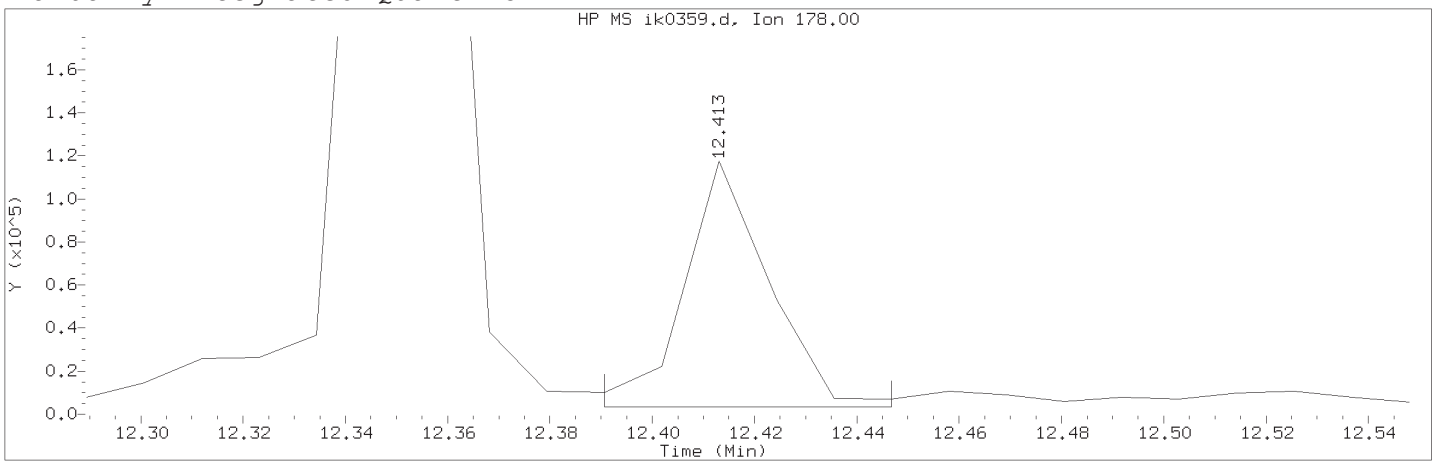
Compound Number	: 33
Compound Name	: Anthracene
Scan Number	: 974
Retention Time (minutes)	: 12.413
Relative Retention Time	: 0.00092
Quant Ion	: 178.00
Area (flag)	: 132602M
On-column Amount (ng/ul)	: 0.3429

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1004 Lab Sample ID: 9867766

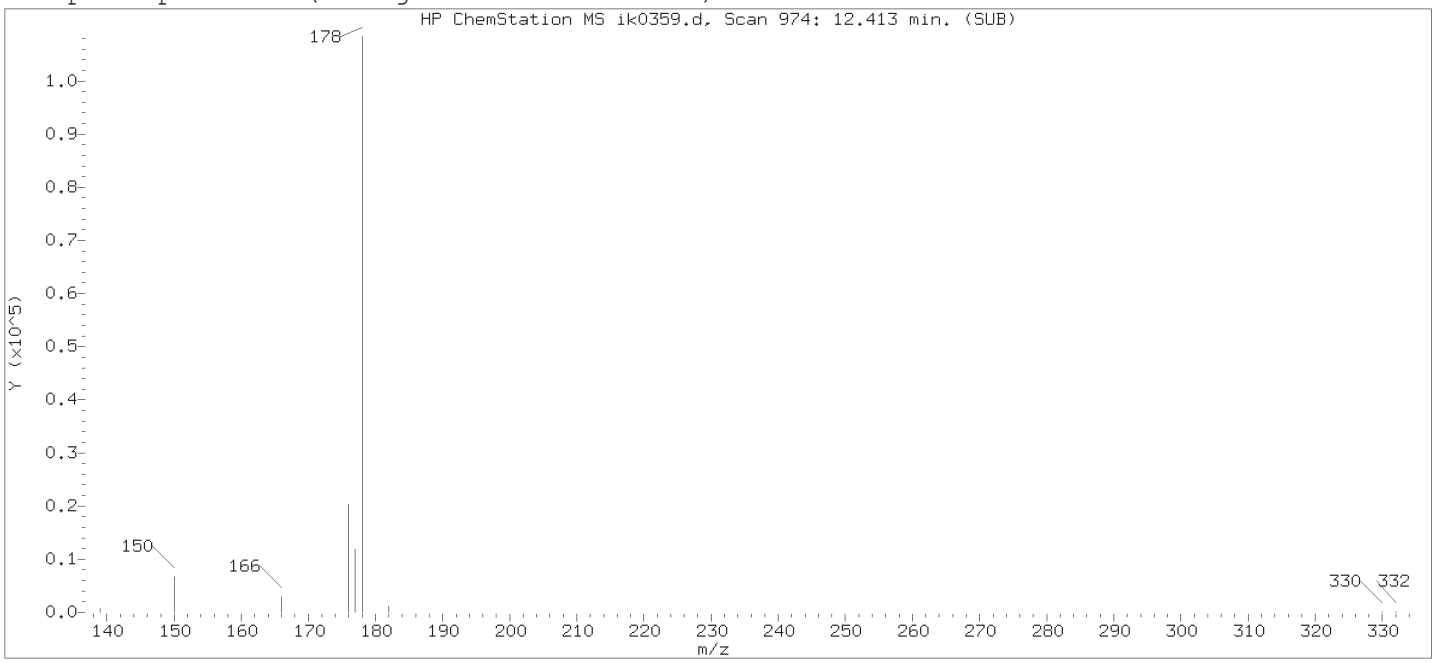
Compound Number	: 33		
Compound Name	: Anthracene		
Scan Number	: 974		
Retention Time (minutes)	: 12.413		
Quant Ion	: 178.00		
Area (flag)	: 132602M		
On-column Amount (ng/ul)	: 0.3429		
Integration start scan	: 971	Integration stop scan:	976
Y at integration start	: 3468	Y at integration end:	3468

Reason for manual integration: improper integration

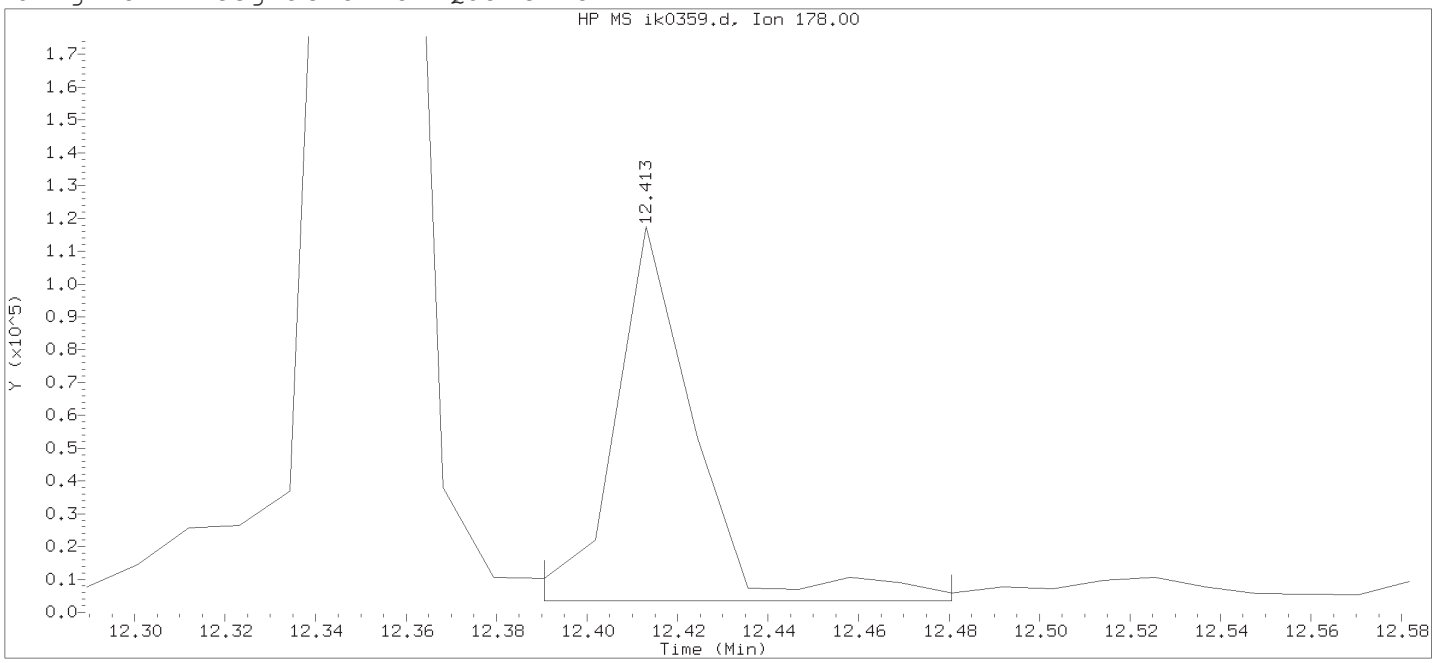
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

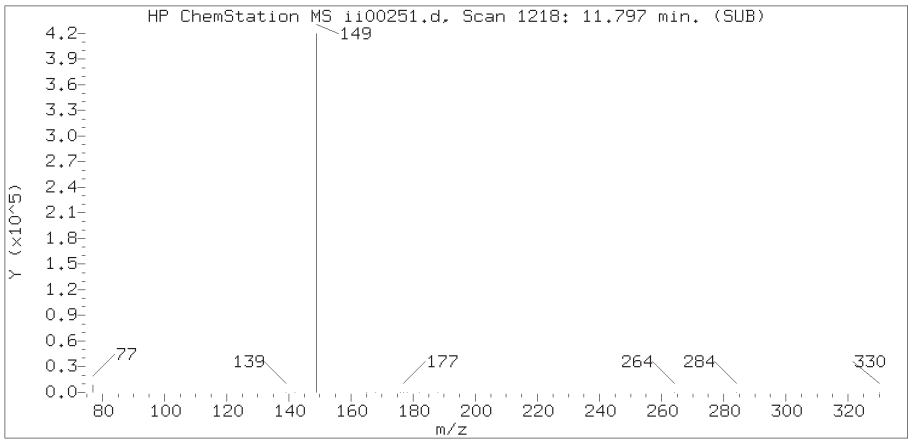
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:01 Automation

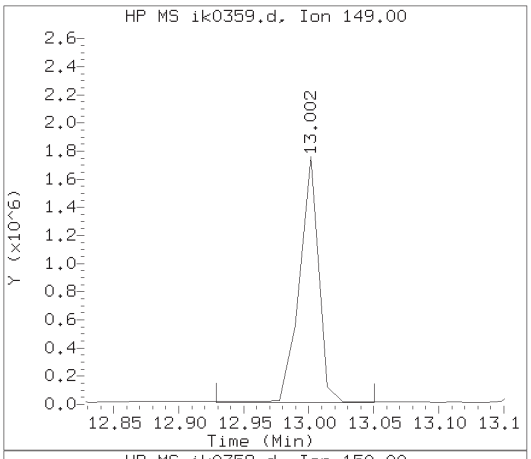
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 33		
Compound Name	: Anthracene		
Scan Number	: 974		
Retention Time (minutes)	: 12.413		
Quant Ion	: 178.00		
Area	: 139780		
On-column Amount (ng/ul)	: 0.3615		
Integration start scan	: 971	Integration stop scan:	979
Y at integration start	: 3468	Y at integration end:	3468

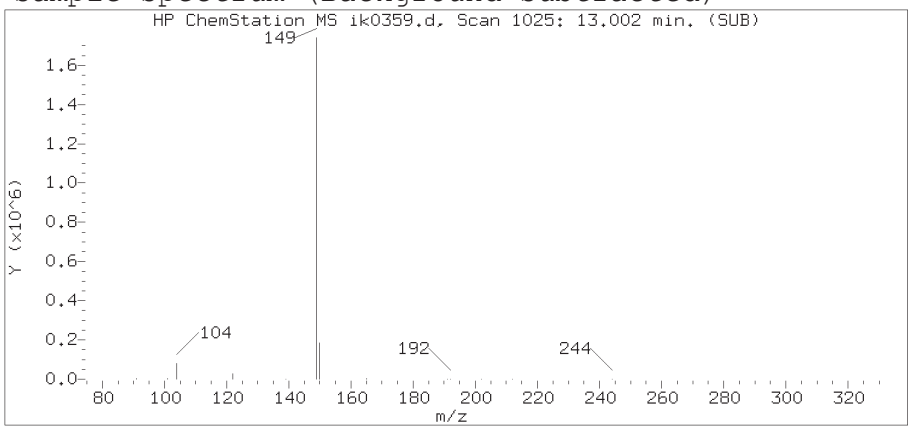
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature used [illegible]

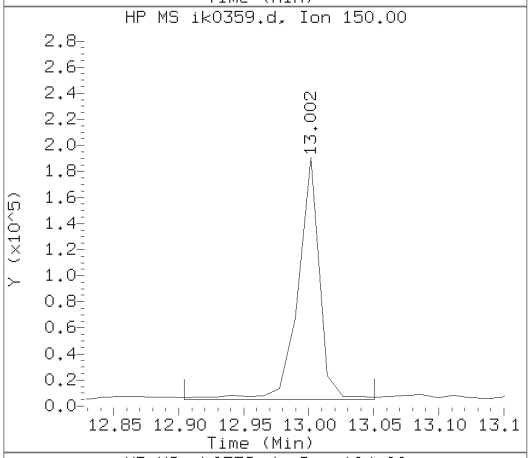
Reference Standard Spectrum for Di-n-butylphthalate



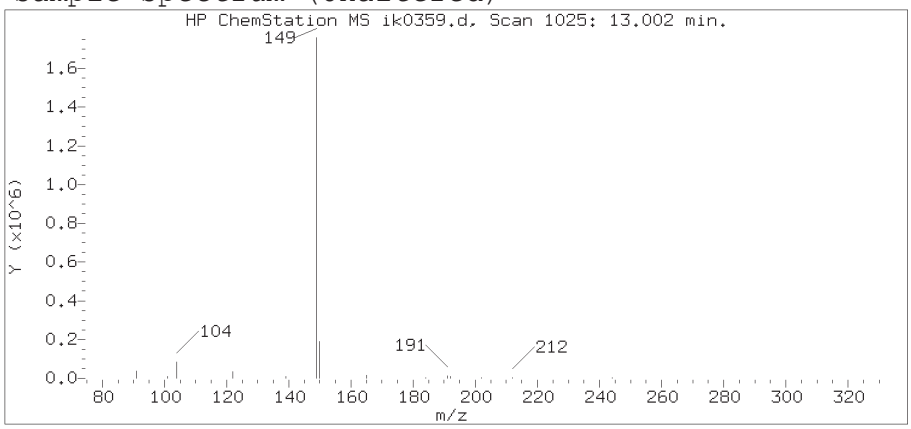


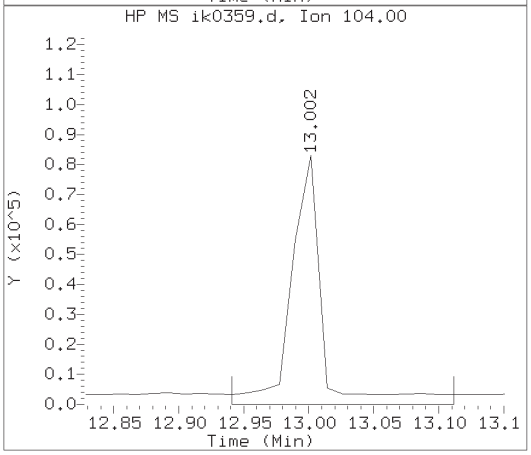
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

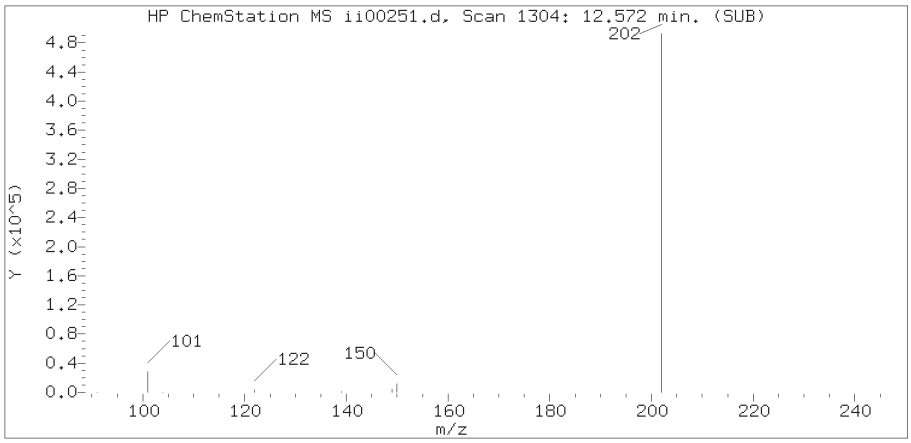
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

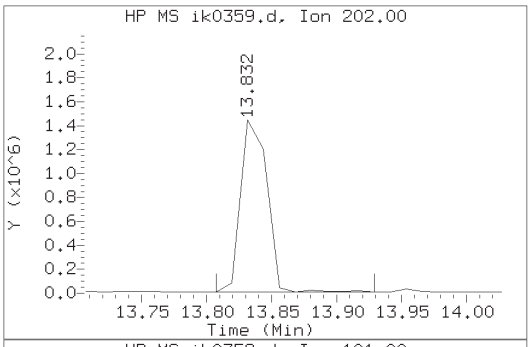
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 35
Compound Name	: Di-n-butylphthalate
Scan Number	: 1025
Retention Time (minutes)	: 13.002
Relative Retention Time	:-0.00003
Quant Ion	: 149.00
Area (flag)	: 1767799
On-column Amount (ng/ul)	: 4.7849

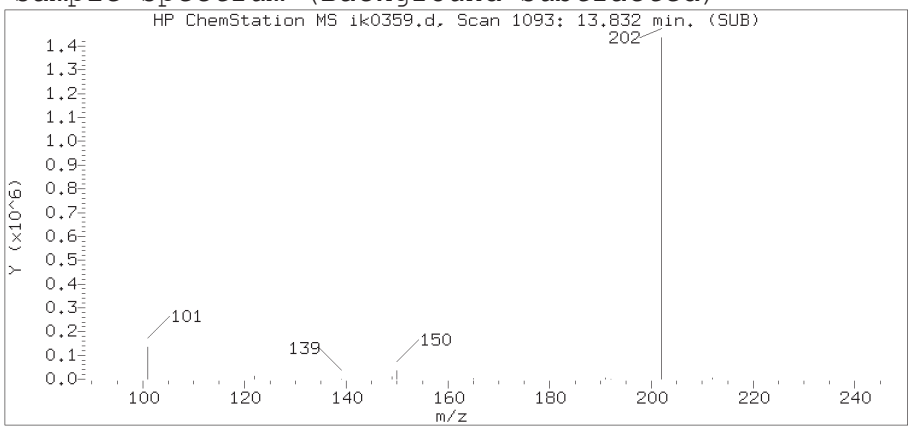
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

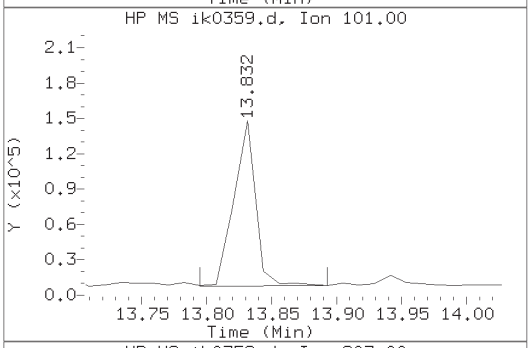
Reference Standard Spectrum for Fluoranthene

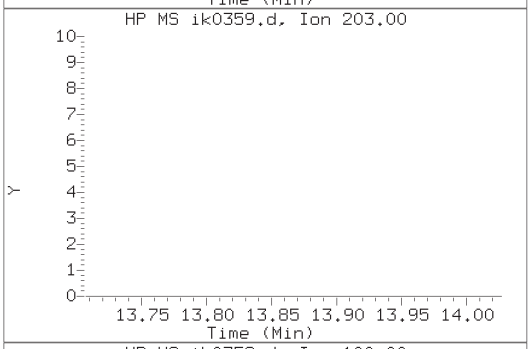




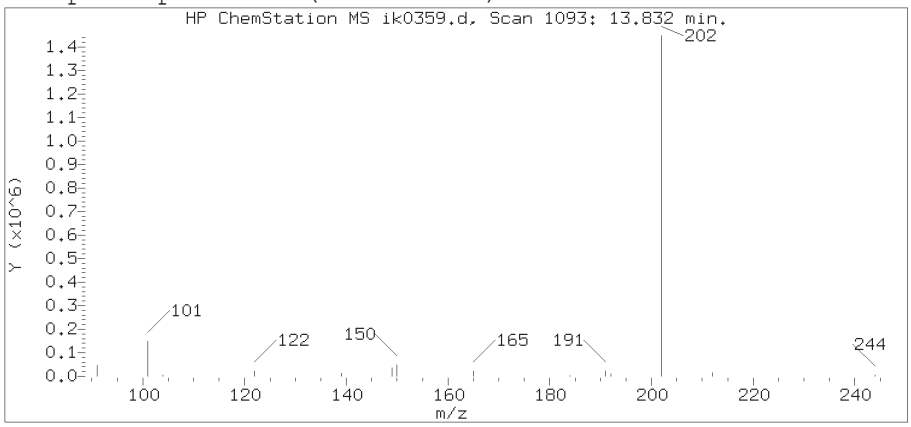
Sample Spectrum (Background Subtracted)

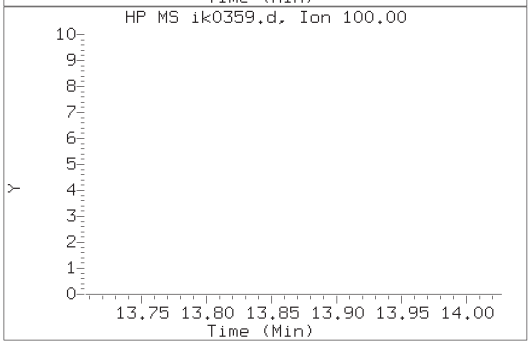






Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

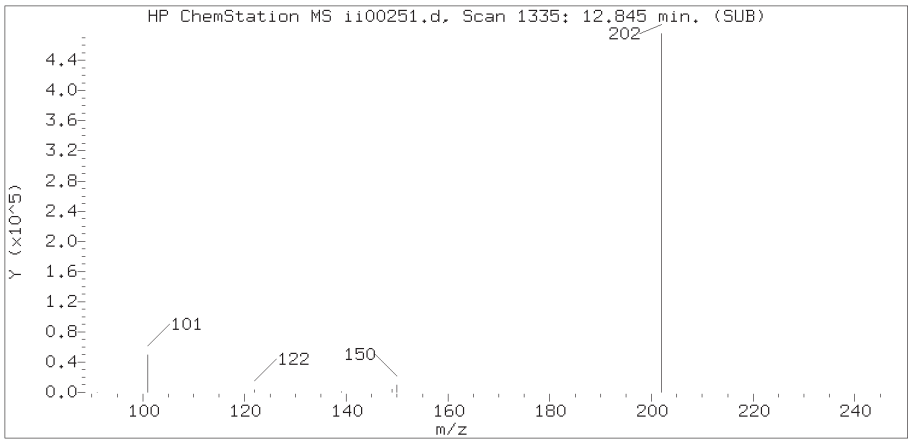
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1004 Lab Sample ID: 9867766

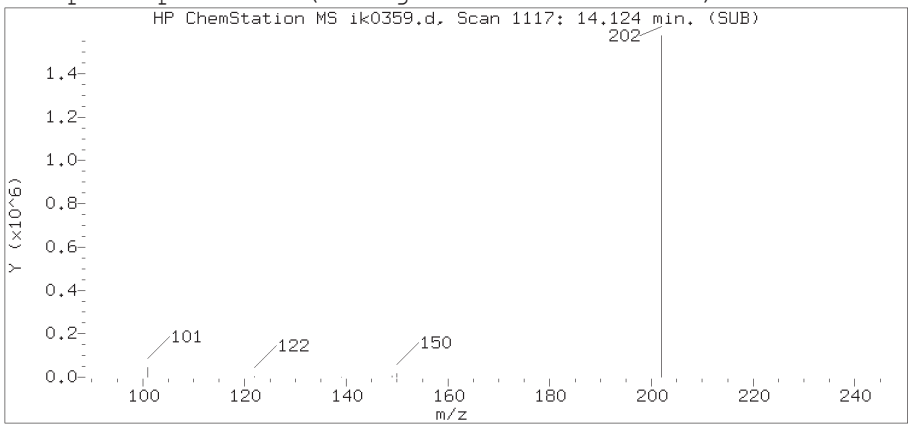
Compound Number	: 37
Compound Name	: Fluoranthene
Scan Number	: 1093
Retention Time (minutes)	: 13.832
Relative Retention Time	: 0.00103
Quant Ion	: 202.00
Area (flag)	: 2044813
On-column Amount (ng/ul)	: 4.2534

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

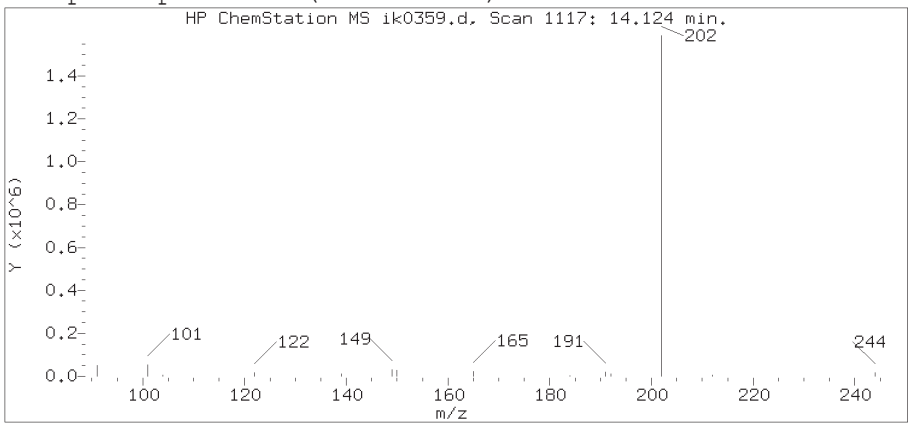
Reference Standard Spectrum for Pyrene

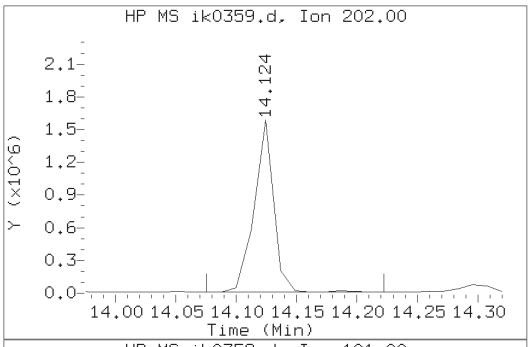


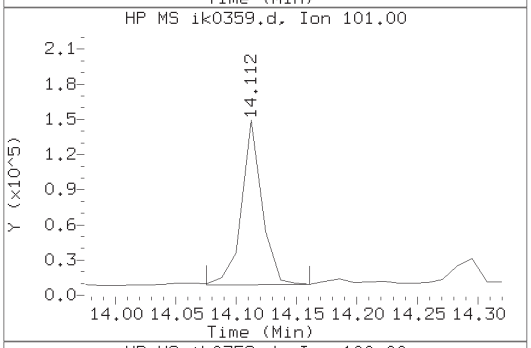
Sample Spectrum (Background Subtracted)

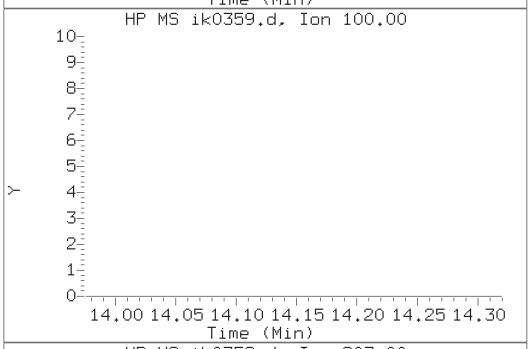


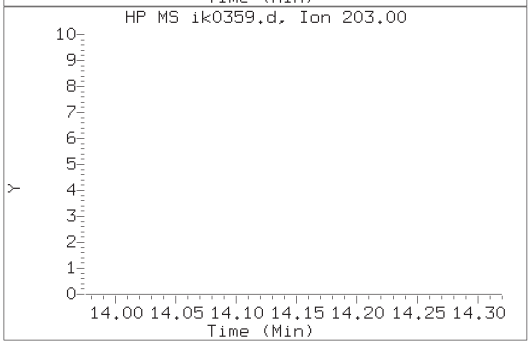
Sample Spectrum (Unaltered)











Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

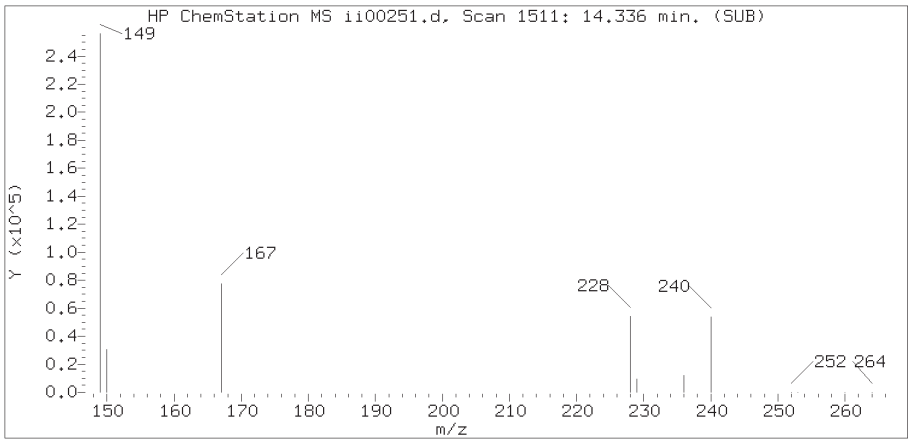
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

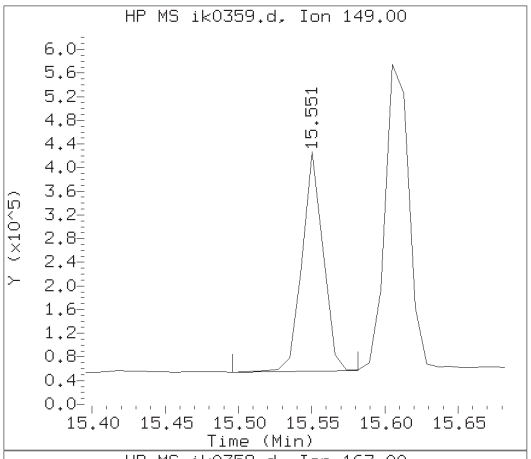
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 39
Compound Name	: Pyrene
Scan Number	: 1117
Retention Time (minutes)	: 14.124
Relative Retention Time	: 0.00012
Quant Ion	: 202.00
Area (flag)	: 1771699
On-column Amount (ng/ul)	: 3.3492

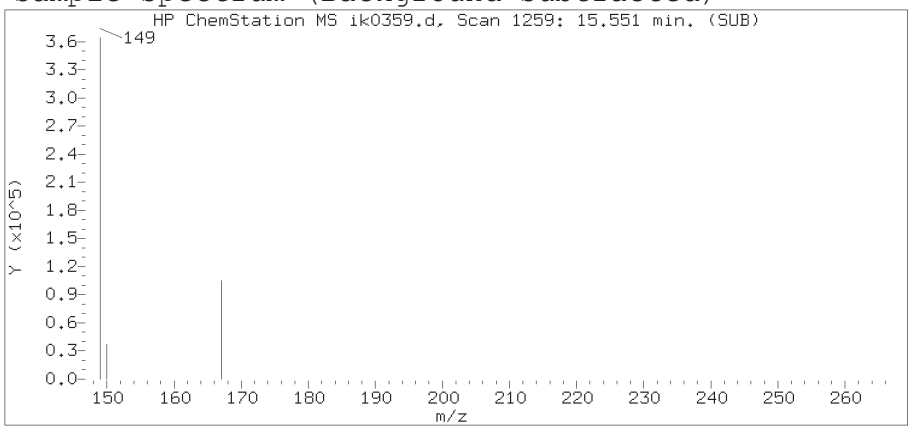
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

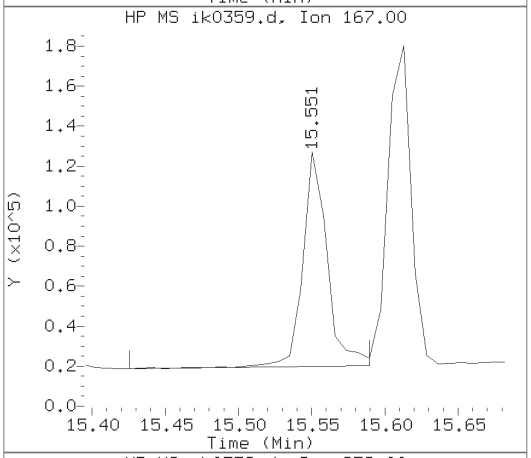
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



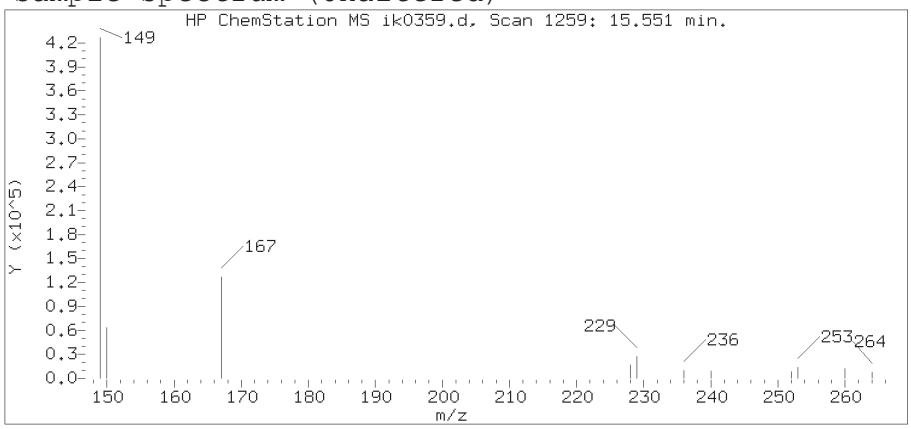


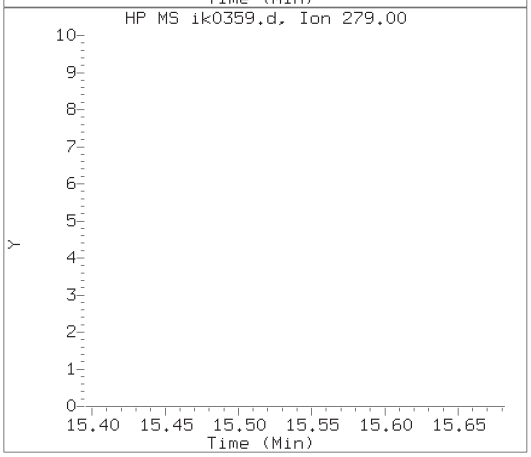
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

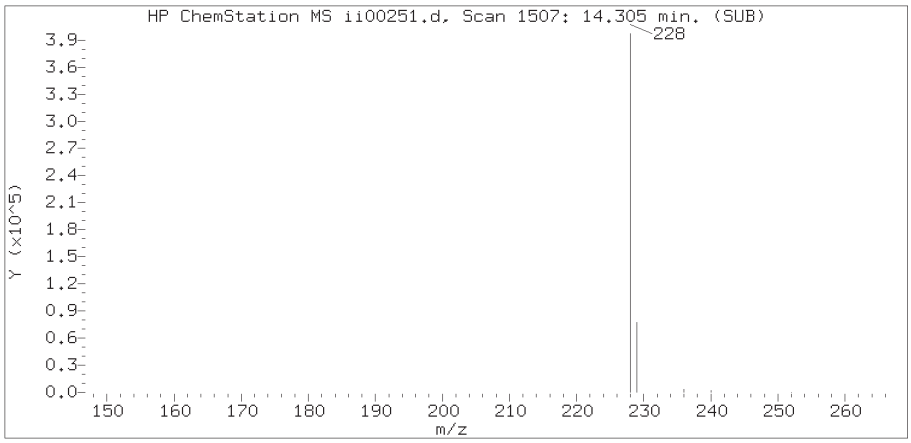
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

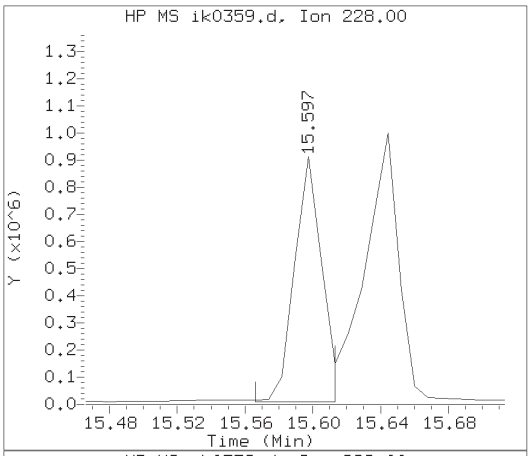
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 41
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1259
Retention Time (minutes)	: 15.551
Relative Retention Time	:-0.00000
Quant Ion	: 149.00
Area (flag)	: 371799
On-column Amount (ng/ul)	: 1.4789

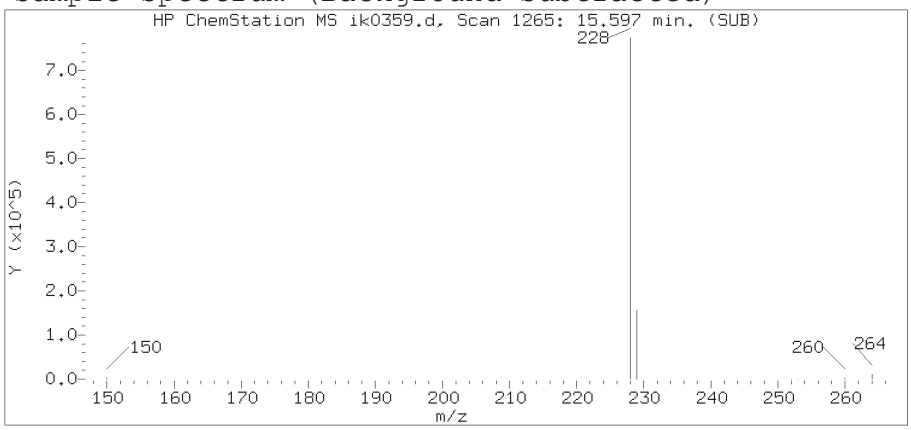
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

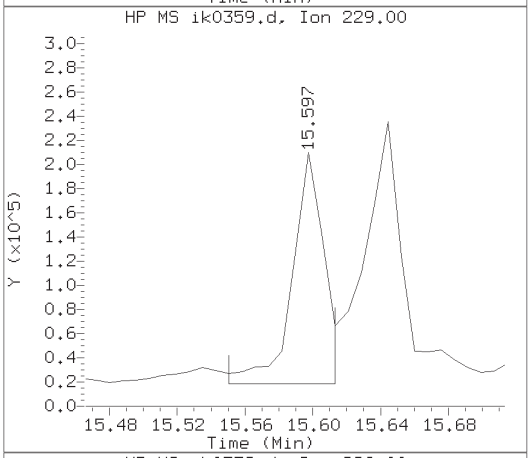
Reference Standard Spectrum for Benzo(a)anthracene



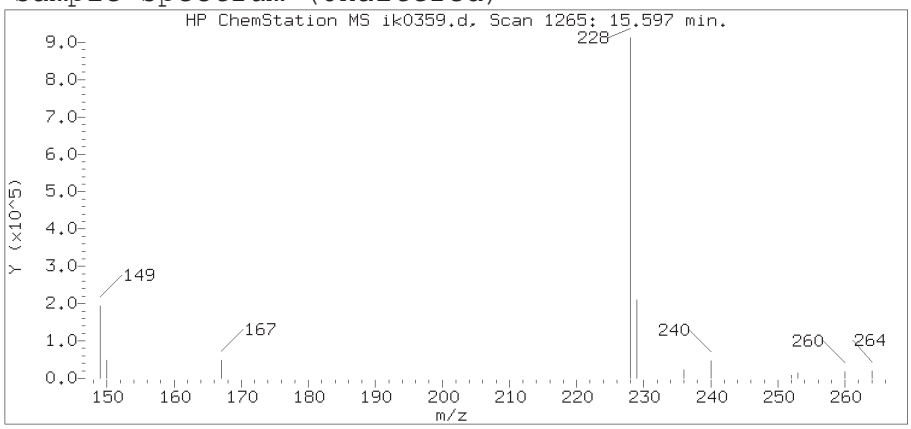


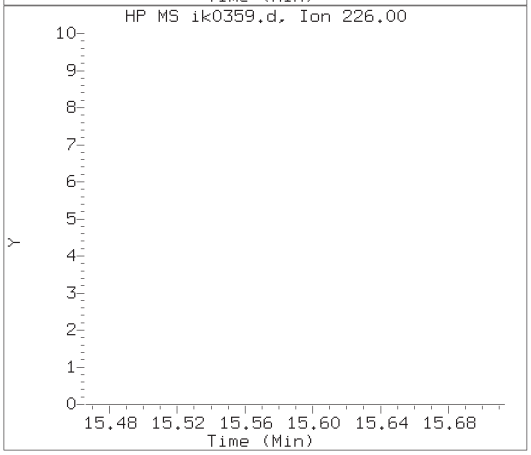
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

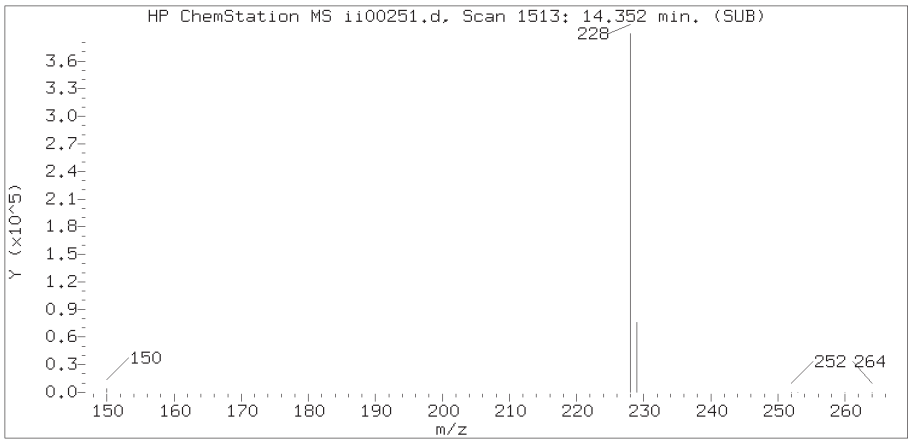
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

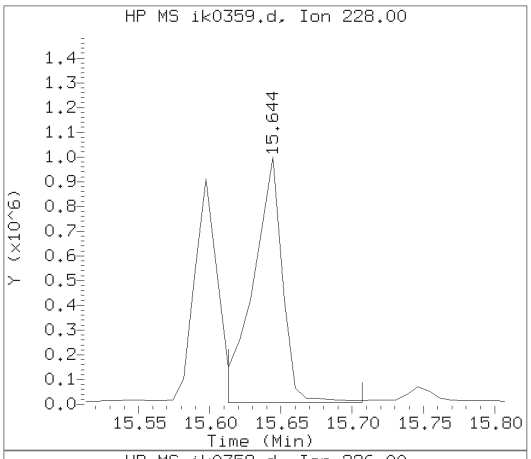
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 42
Compound Name	: Benzo(a)anthracene
Scan Number	: 1265
Retention Time (minutes)	: 15.597
Relative Retention Time	:-0.00000
Quant Ion	: 228.00
Area (flag)	: 990287
On-column Amount (ng/ul)	: 2.0141

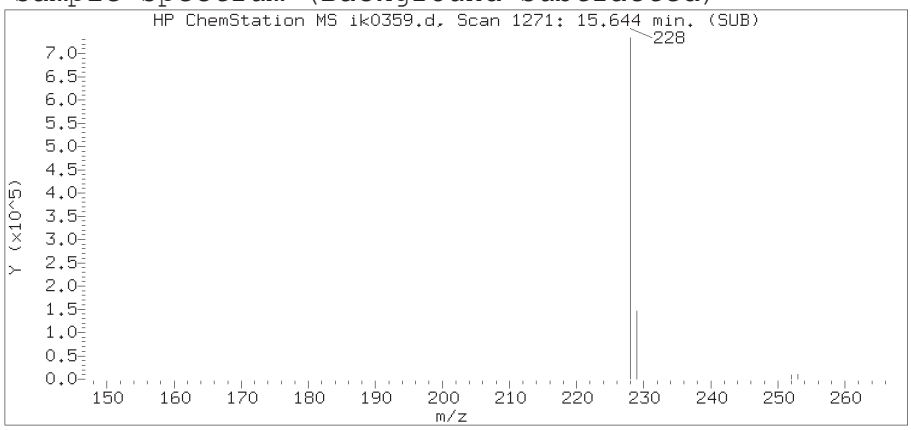
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

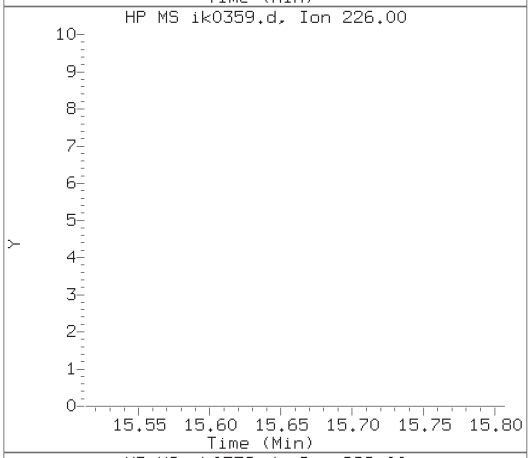
Reference Standard Spectrum for Chrysene



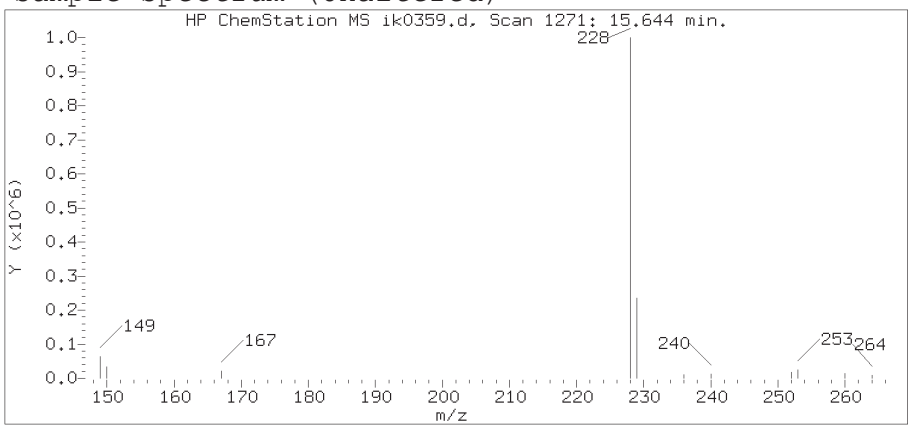


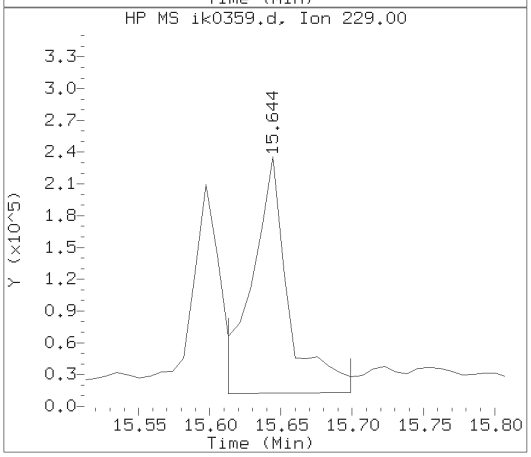
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

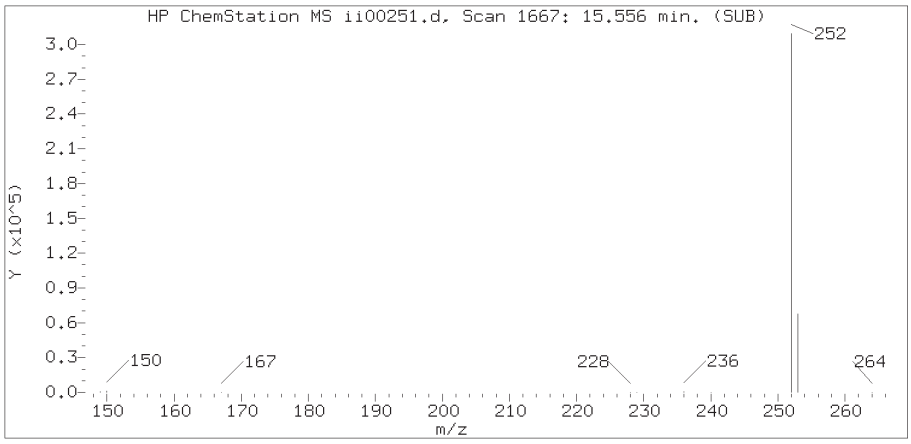
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

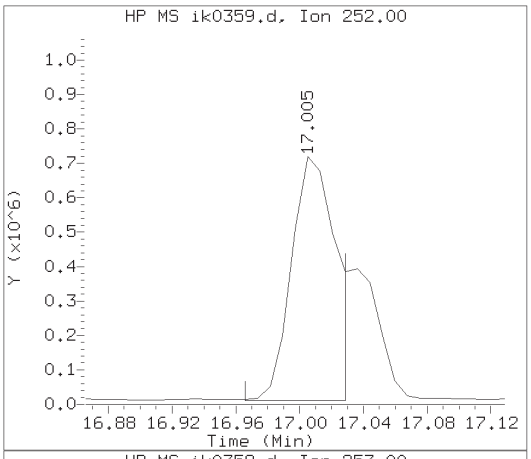
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 44
Compound Name	: Chrysene
Scan Number	: 1271
Retention Time (minutes)	: 15.644
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 1441299
On-column Amount (ng/ul)	: 3.0687

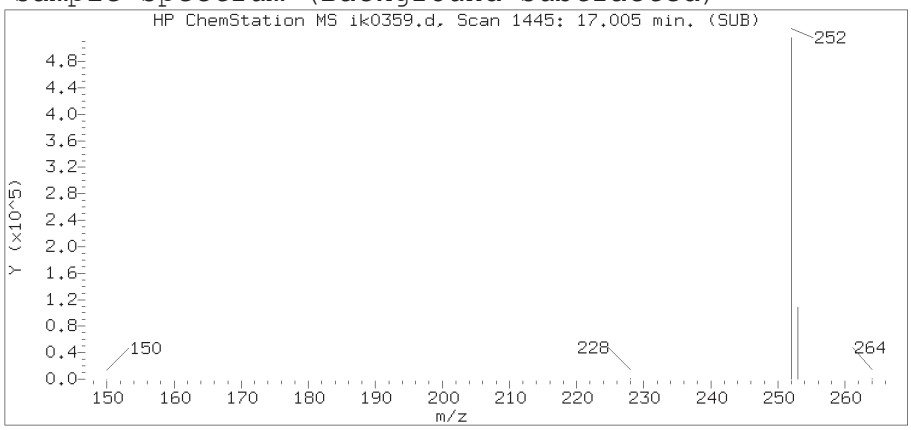
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

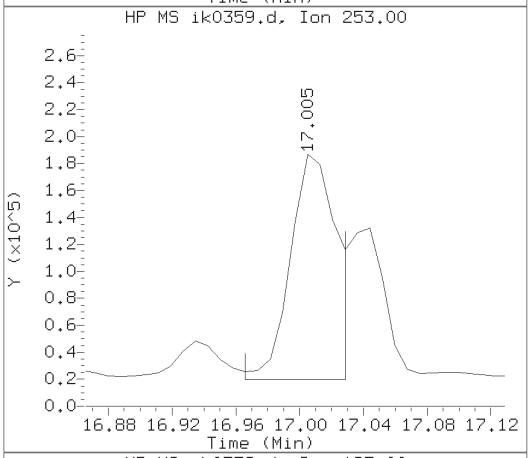
Reference Standard Spectrum for Benzo(b)fluoranthene



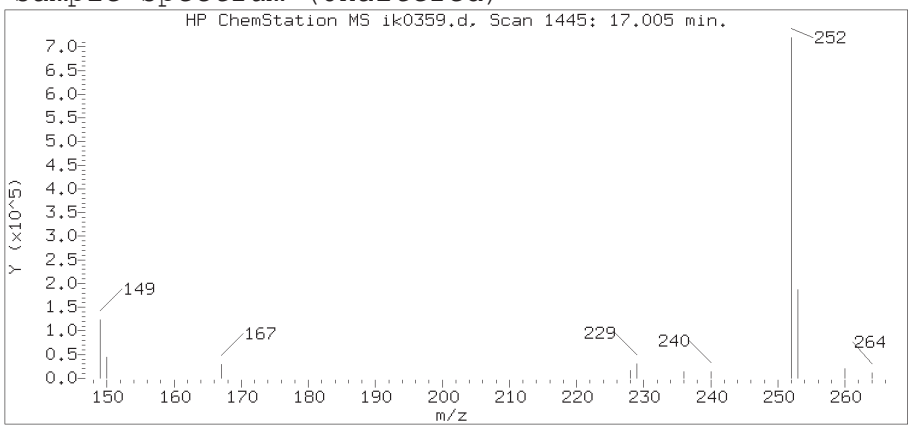


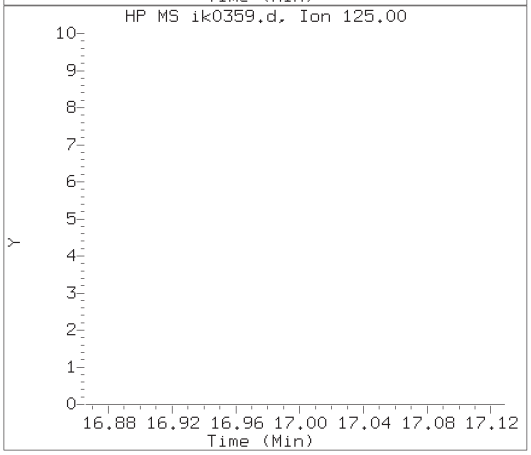
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

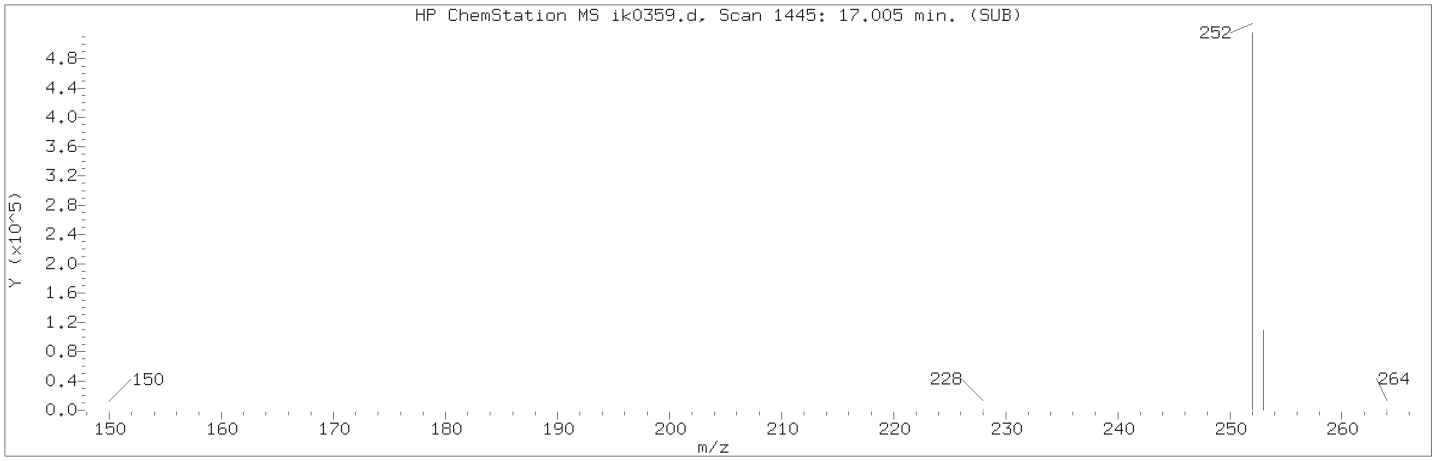
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1004 Lab Sample ID: 9867766

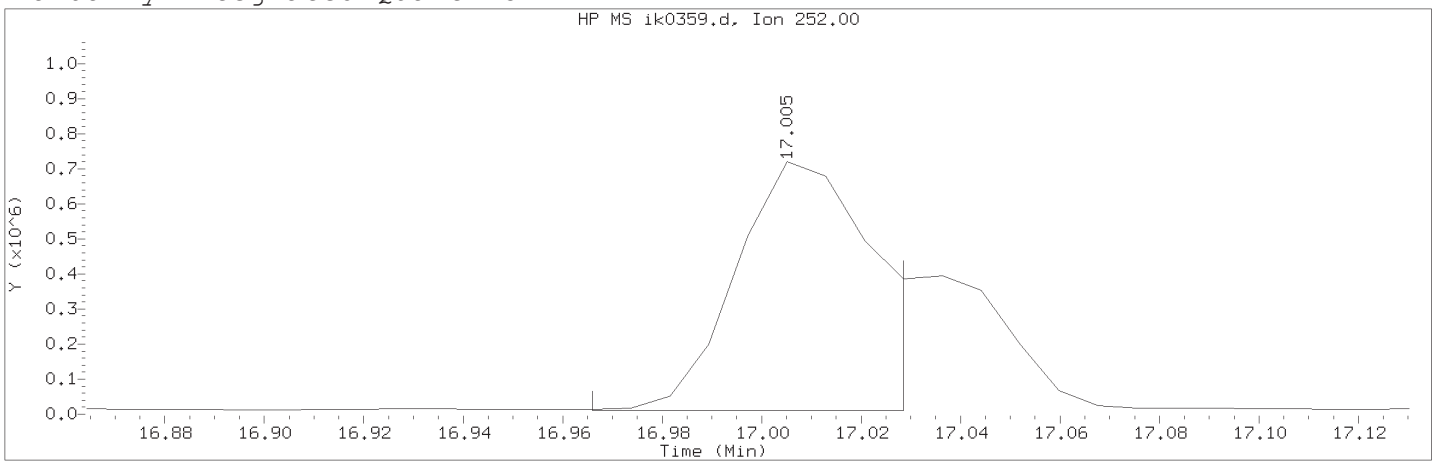
Compound Number	: 46
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1445
Retention Time (minutes)	: 17.005
Relative Retention Time	: 0.00036
Quant Ion	: 252.00
Area (flag)	: 1395301M
On-column Amount (ng/ul)	: 5.0011

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1004 Lab Sample ID: 9867766

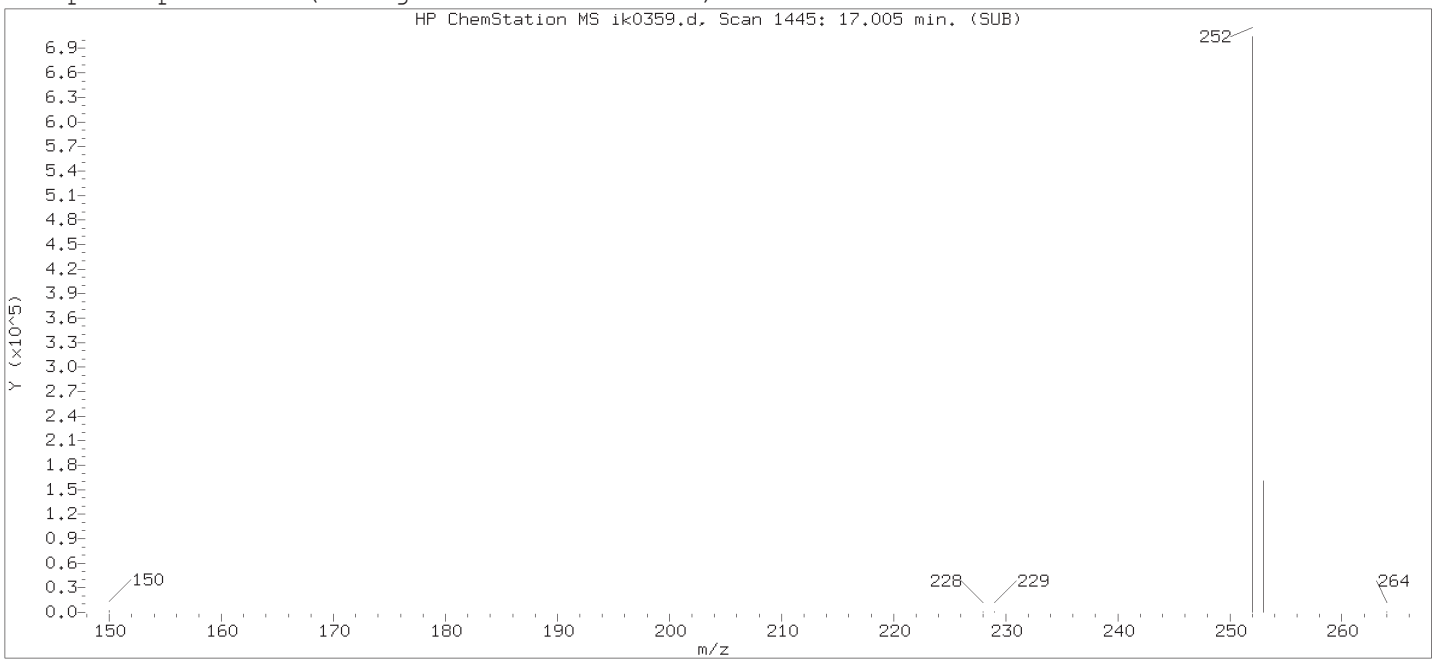
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1445
Retention Time (minutes) : 17.005
Quant Ion : 252.00
Area (flag) : 1395301M
On-column Amount (ng/ul) : 5.0011
Integration start scan : 1439 Integration stop scan: 1447
Y at integration start : 10785 Y at integration end: 10869

Reason for manual integration: improper integration

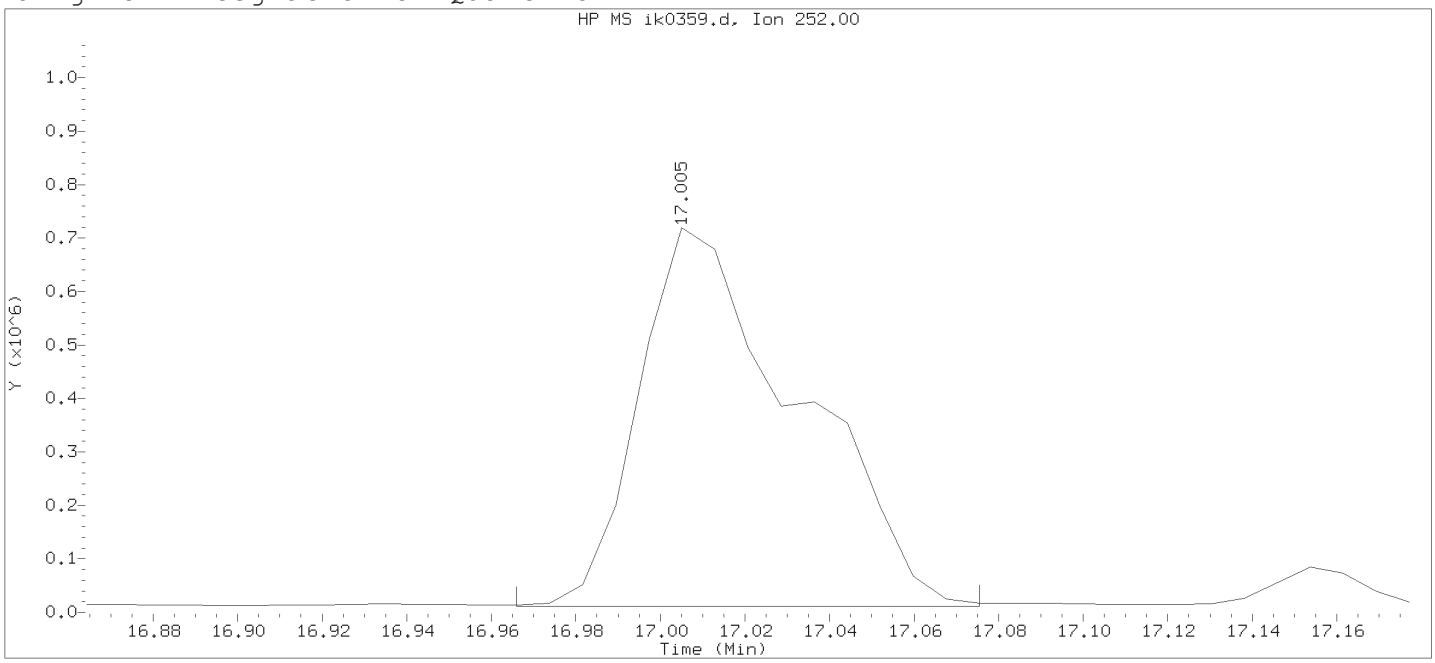
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

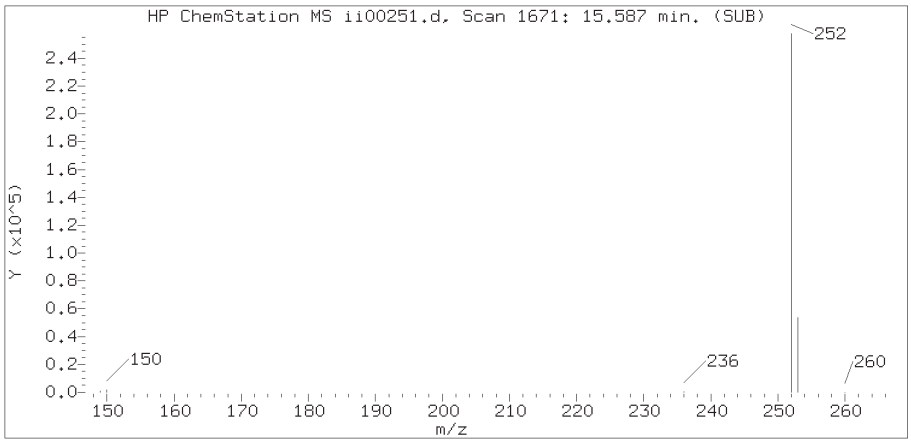
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:01 Automation

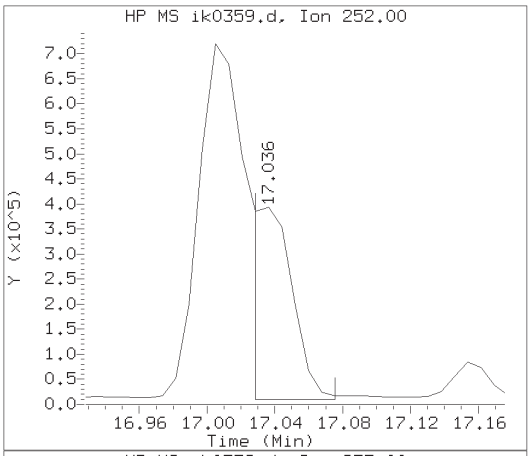
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 46
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1445
Retention Time (minutes)	: 17.005
Quant Ion	: 252.00
Area	: 1857567
On-column Amount (ng/ul)	: 6.6579
Integration start scan	: 1439 Integration stop scan: 1453
Y at integration start	: 10785 Y at integration end: 10933

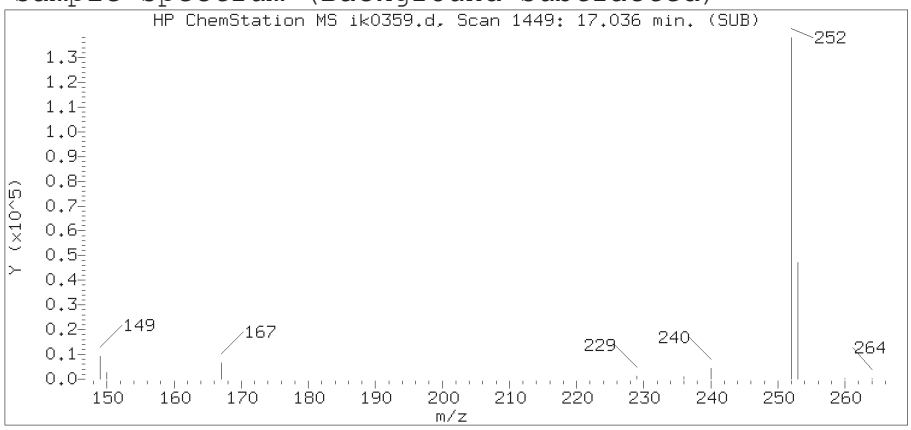
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature used in this report

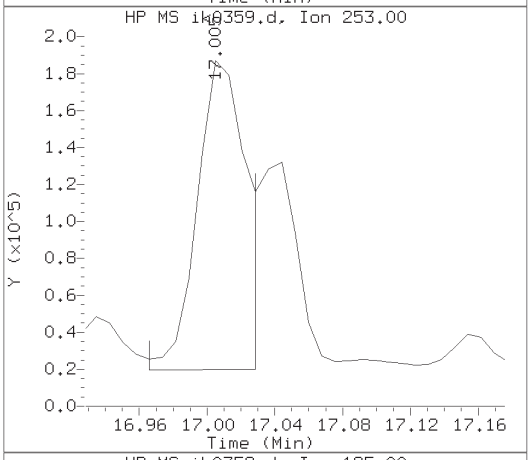
Reference Standard Spectrum for Benzo(k)fluoranthene



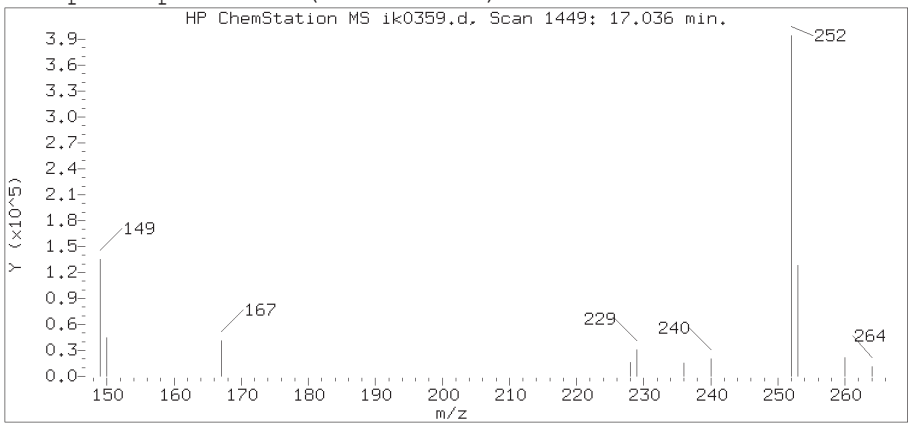


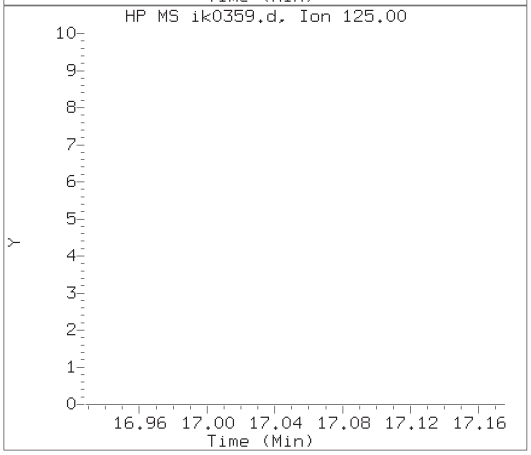
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

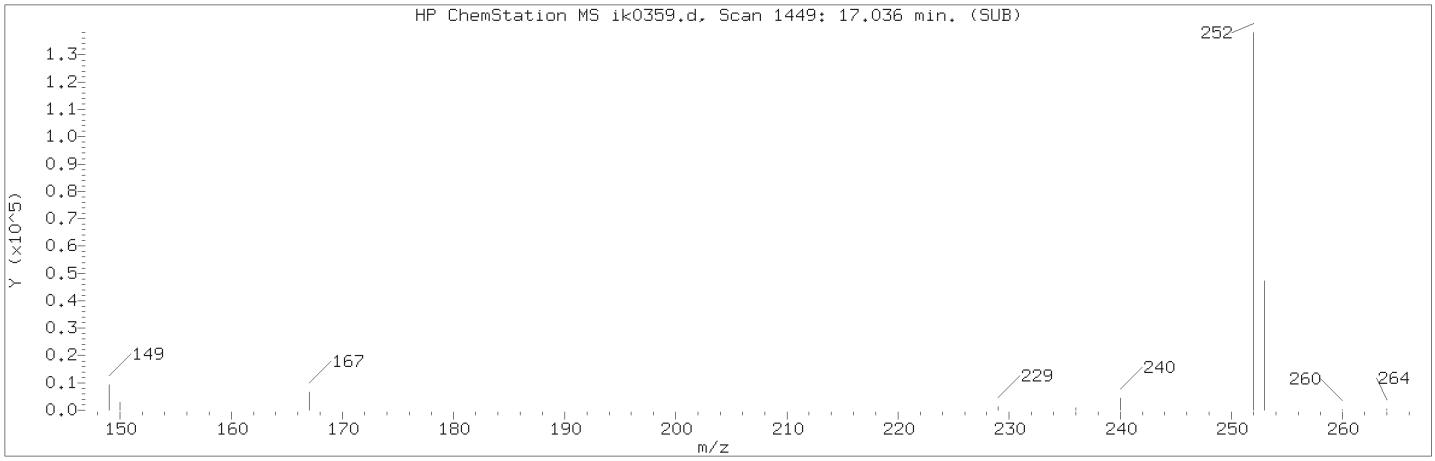
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1004 Lab Sample ID: 9867766

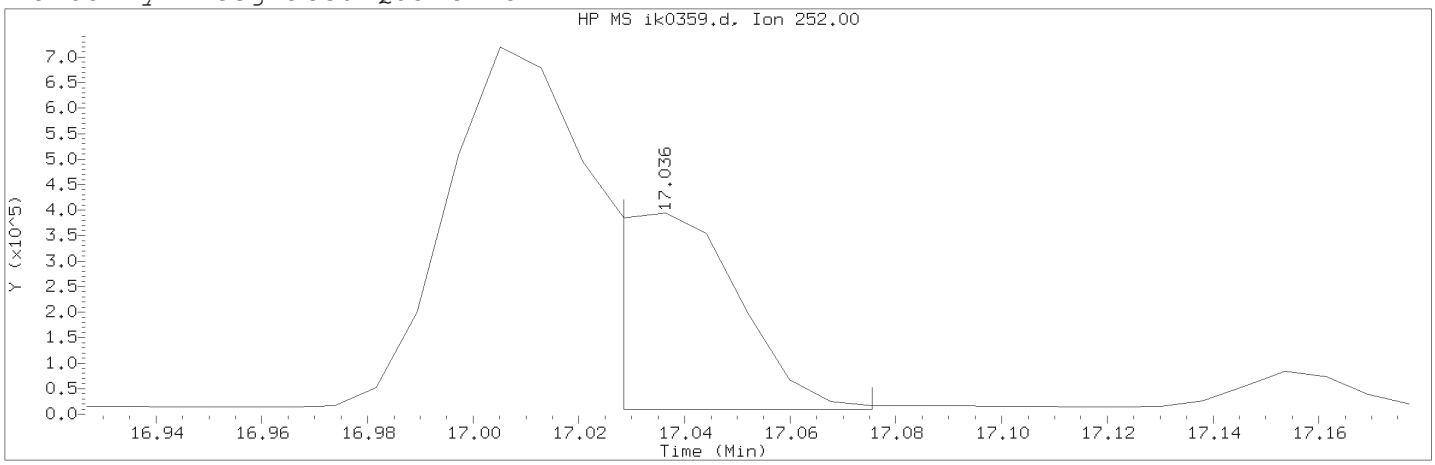
Compound Number	: 47
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1449
Retention Time (minutes)	: 17.036
Relative Retention Time	: 0.00081
Quant Ion	: 252.00
Area (flag)	: 643230AM
On-column Amount (ng/ul)	: 2.4594

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1004 Lab Sample ID: 9867766

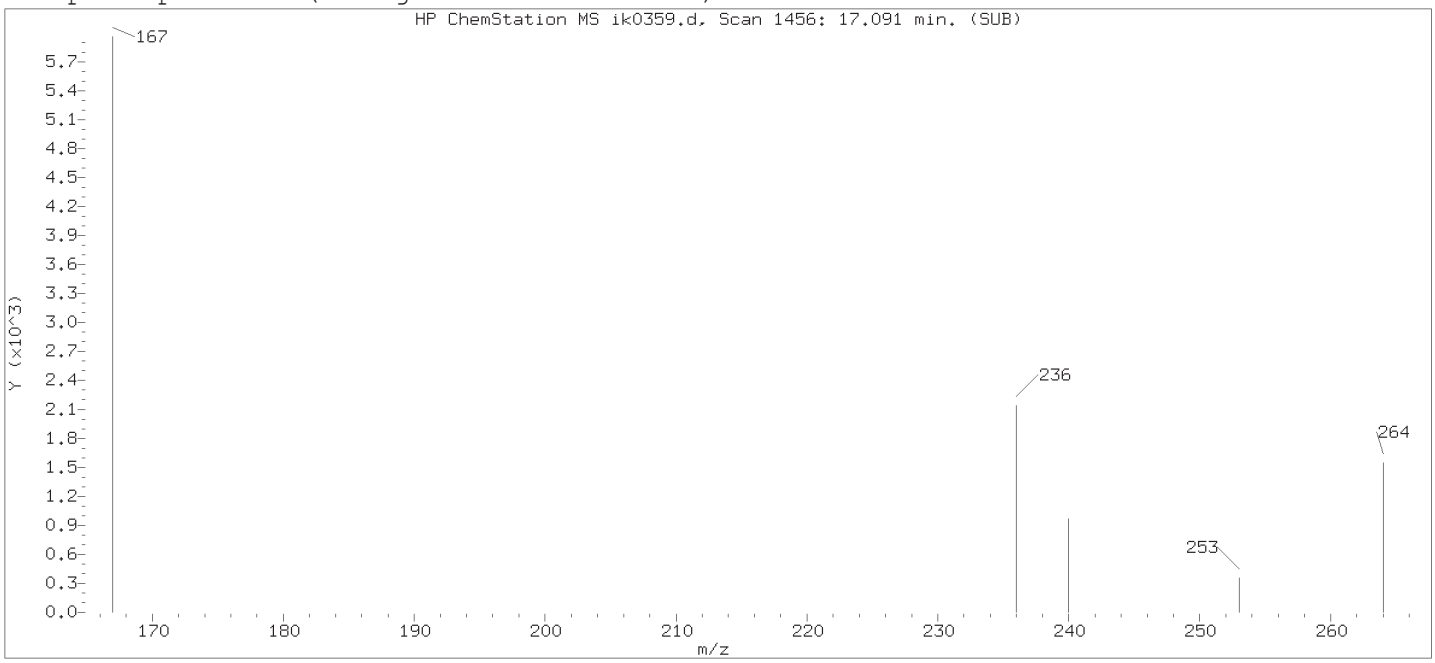
Compound Number : 47
Compound Name : Benzo(k)fluoranthene
Scan Number : 1449
Retention Time (minutes) : 17.036
Quant Ion : 252.00
Area (flag) : 643230AM
On-column Amount (ng/ul) : 2.4594
Integration start scan : 1447 Integration stop scan: 1453
Y at integration start : 9951 Y at integration end: 9951

Reason for manual integration: improper integration

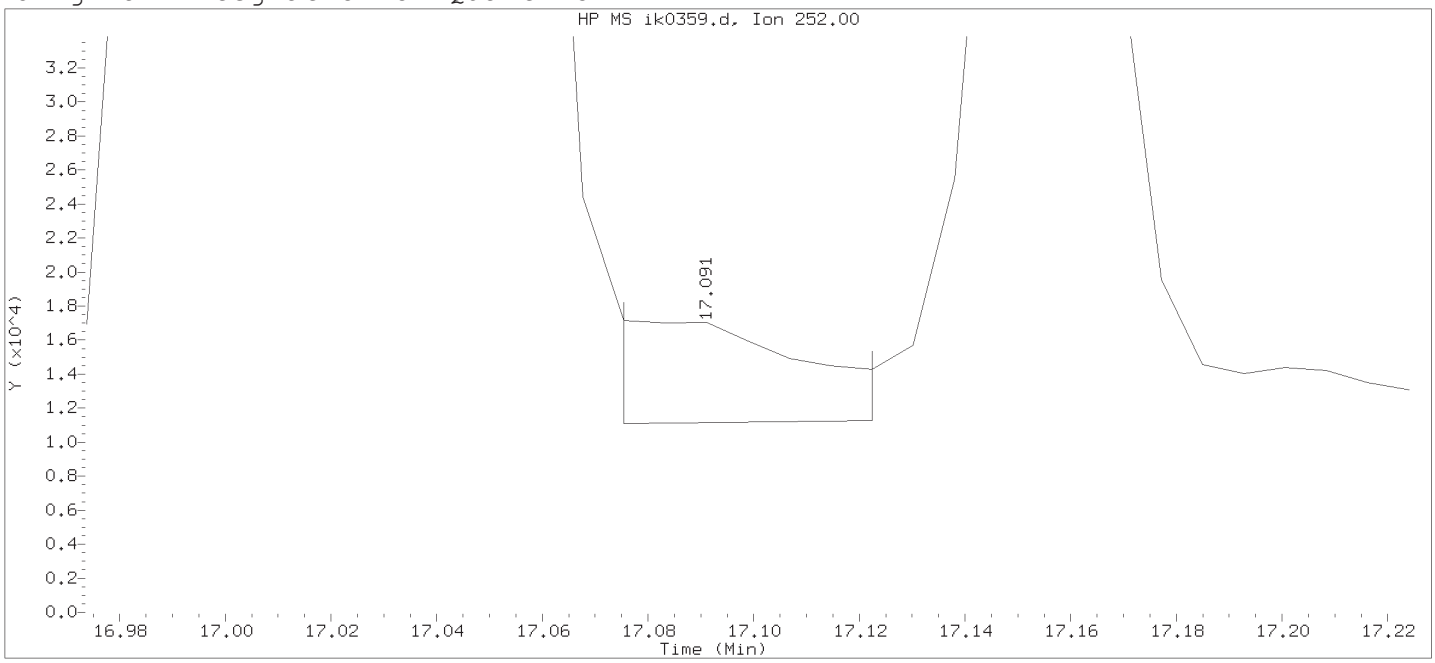
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

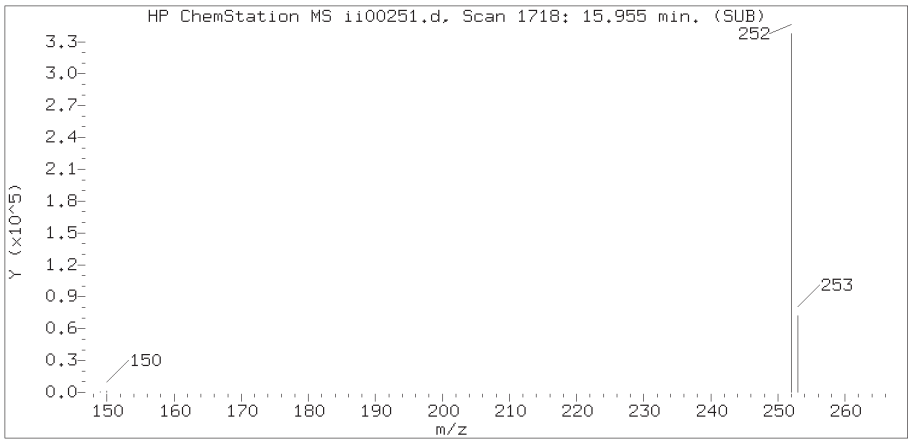
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:01 Automation

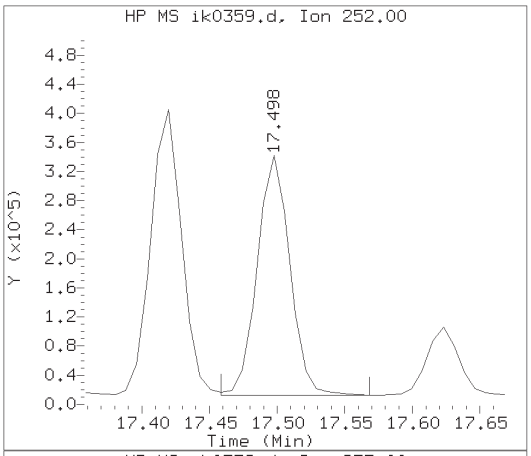
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 47
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1456
Retention Time (minutes)	: 17.091
Quant Ion	: 252.00
Area	: 13155
On-column Amount (ng/ul)	: 0.0503
Integration start scan	: 1453 Integration stop scan: 1459
Y at integration start	: 11083 Y at integration end: 11268

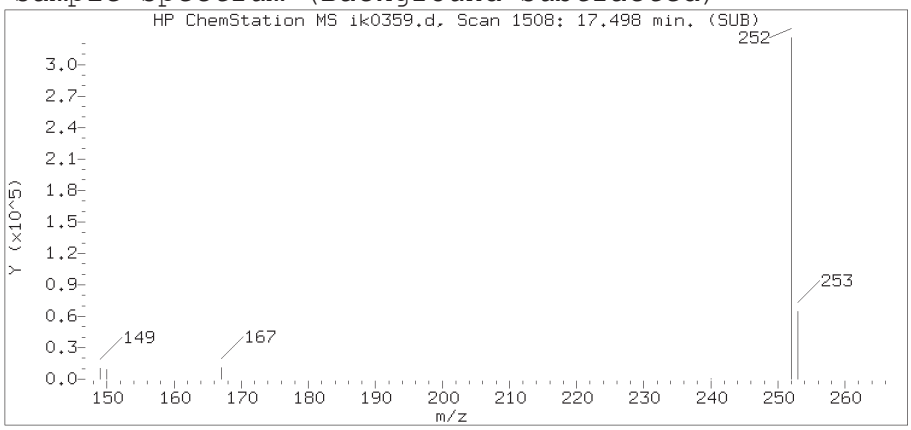
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature used in this report

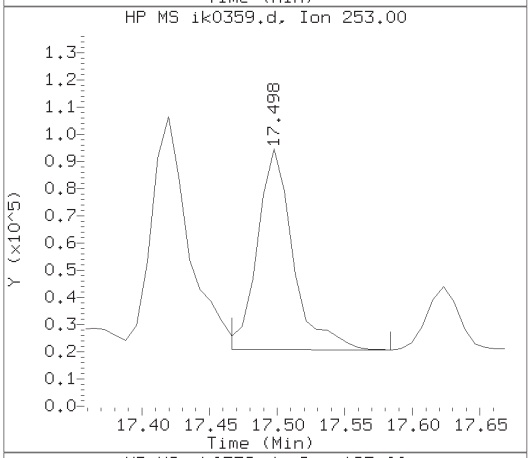
Reference Standard Spectrum for Benzo(a)pyrene



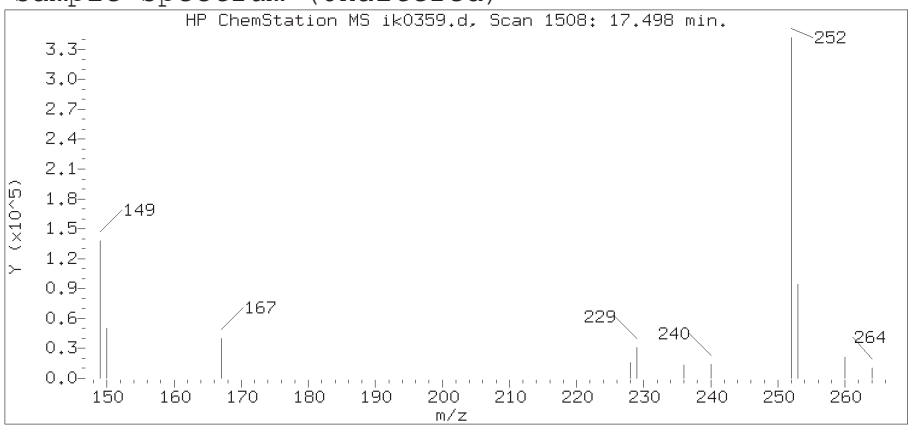


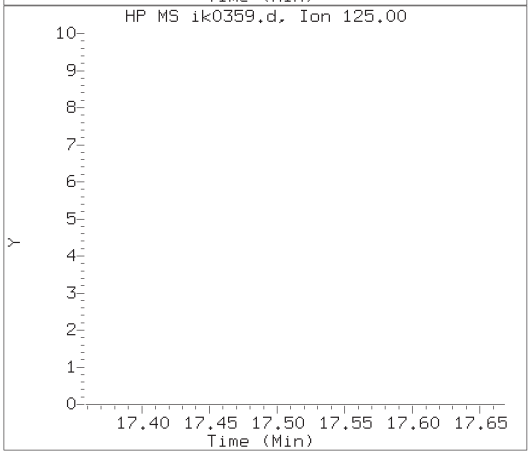
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

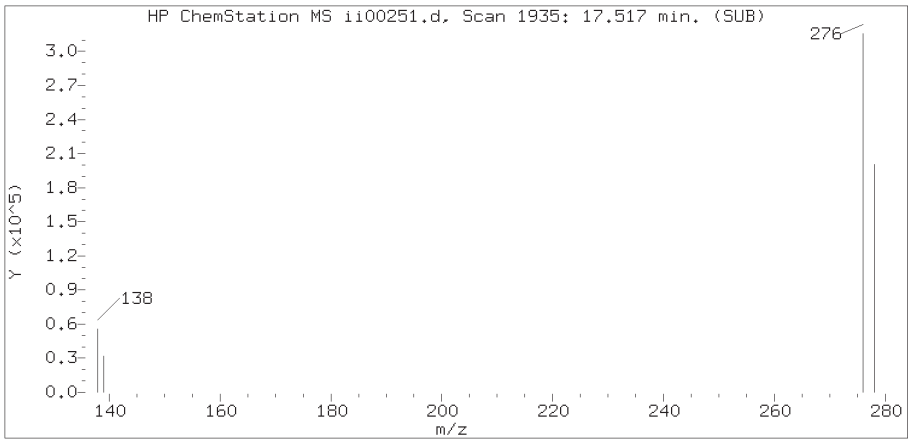
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

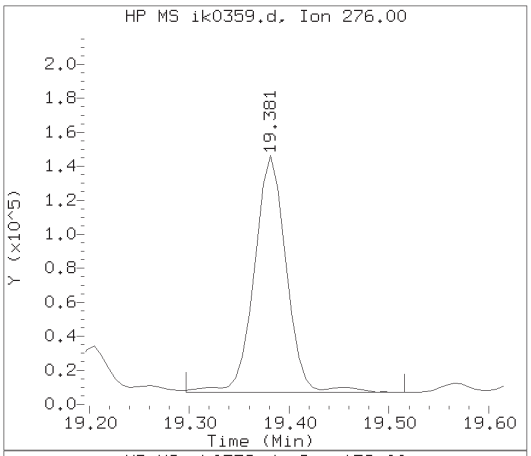
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 50
Compound Name	: Benzo(a)pyrene
Scan Number	: 1508
Retention Time (minutes)	: 17.498
Relative Retention Time	:-0.00001
Quant Ion	: 252.00
Area (flag)	: 550114
On-column Amount (ng/ul)	: 2.3007

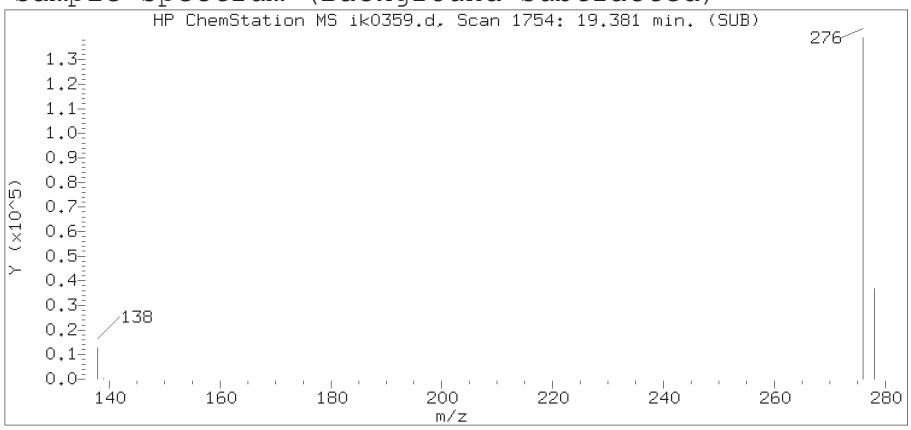
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

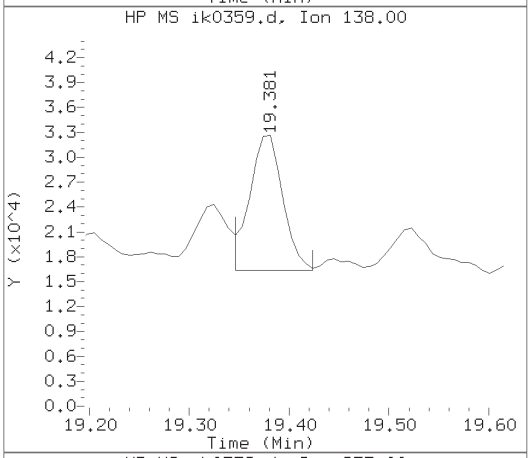
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



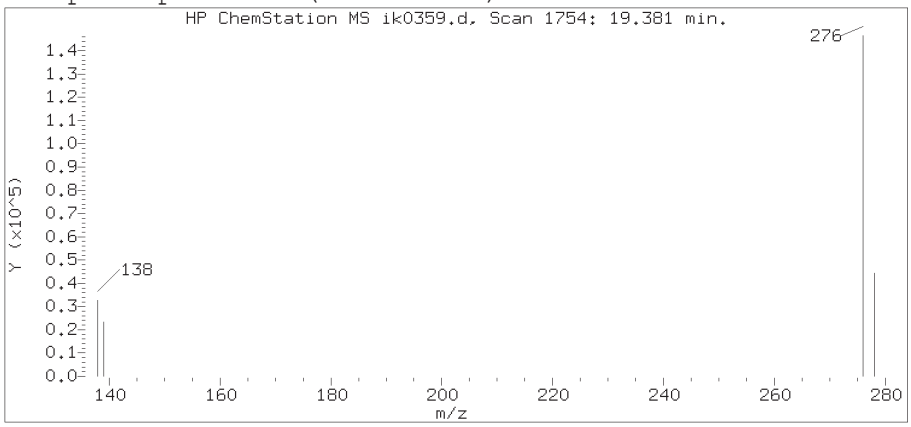


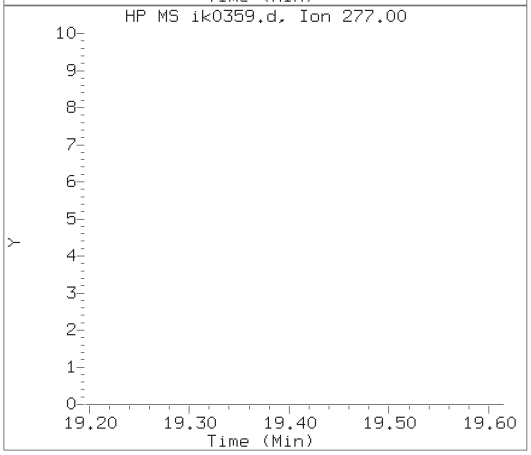
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

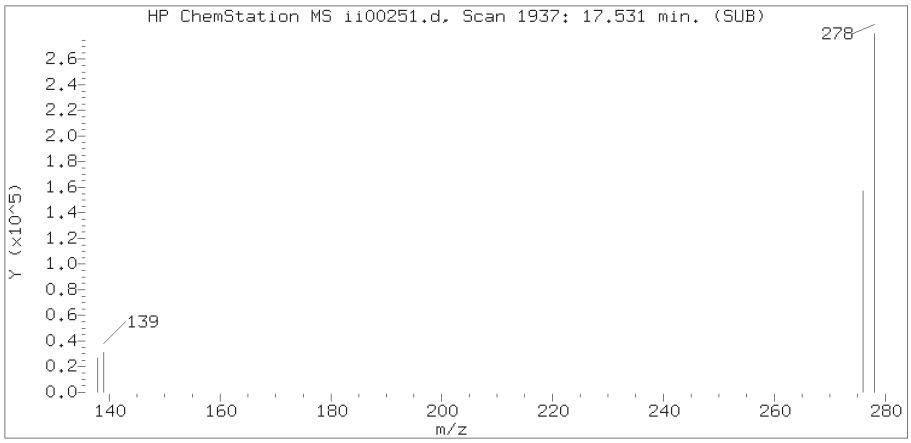
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

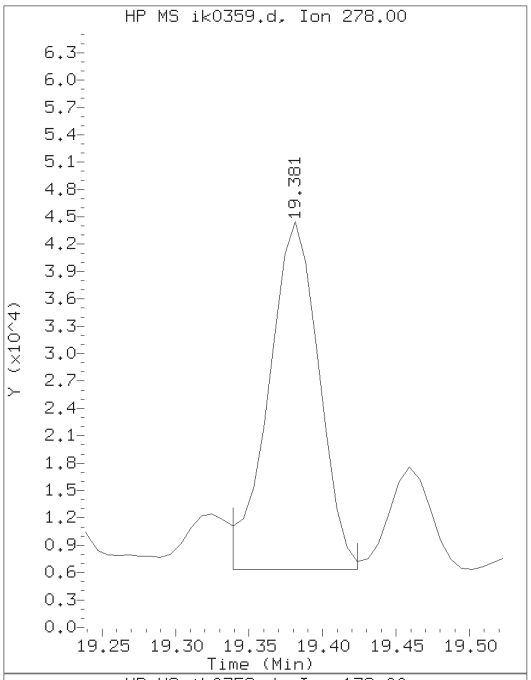
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 53
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 1754
Retention Time (minutes)	: 19.381
Relative Retention Time	:-0.00108
Quant Ion	: 276.00
Area (flag)	: 311336
On-column Amount (ng/ul)	: 1.1041

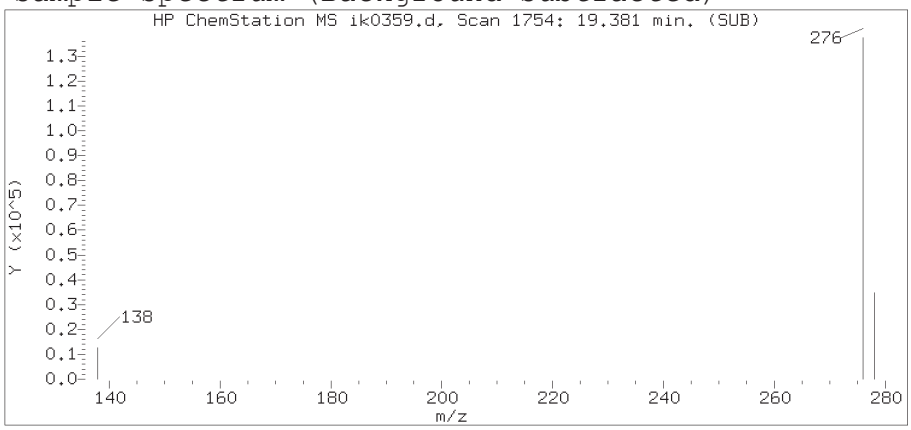
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

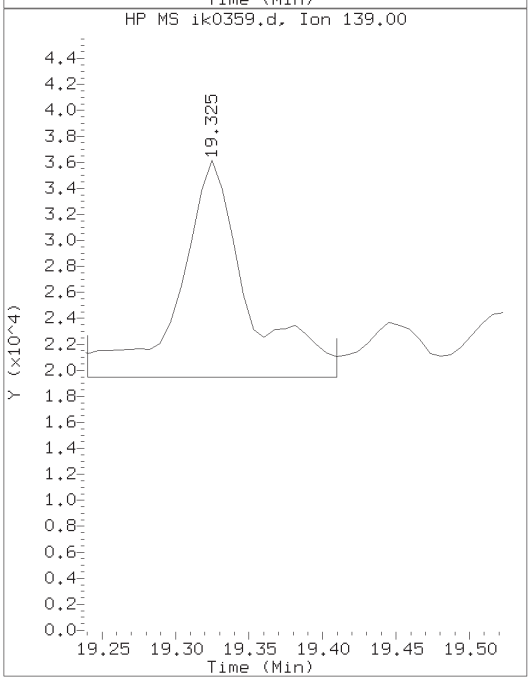
Reference Standard Spectrum for Dibenz(a,h)anthracene



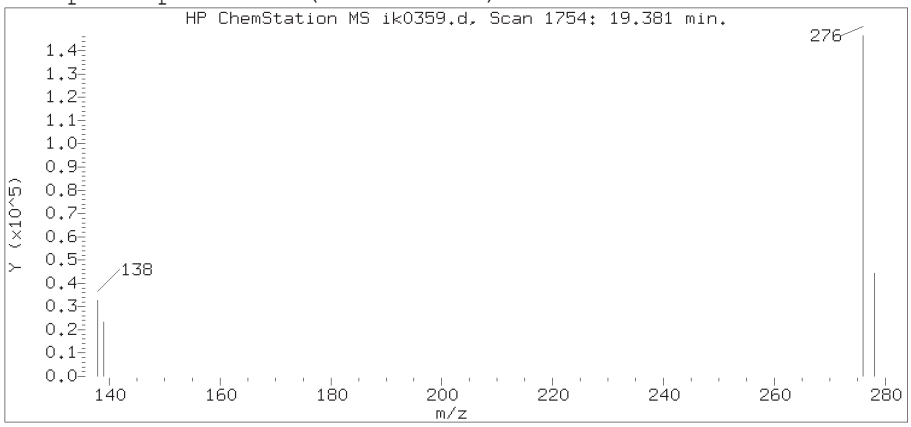


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

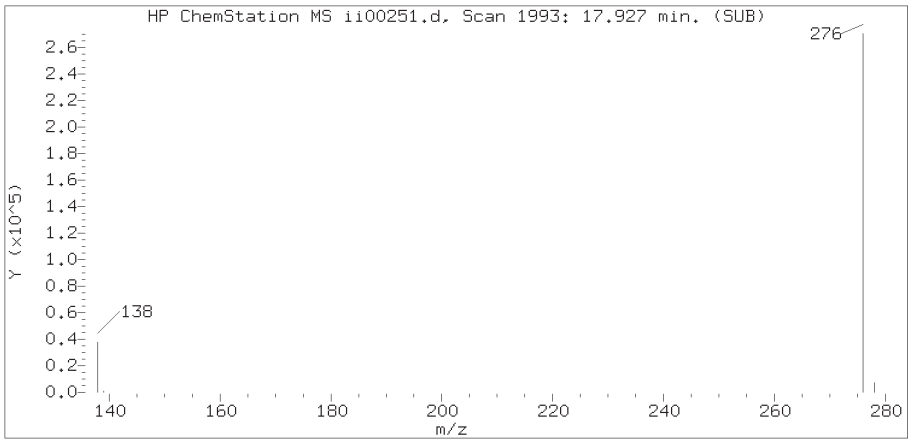
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

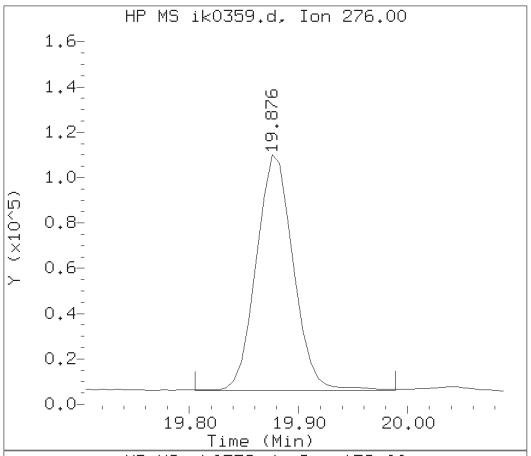
Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 54
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 1754
Retention Time (minutes)	: 19.381
Relative Retention Time	:-0.00067
Quant Ion	: 278.00
Area (flag)	: 90595
On-column Amount (ng/ul)	: 0.3935

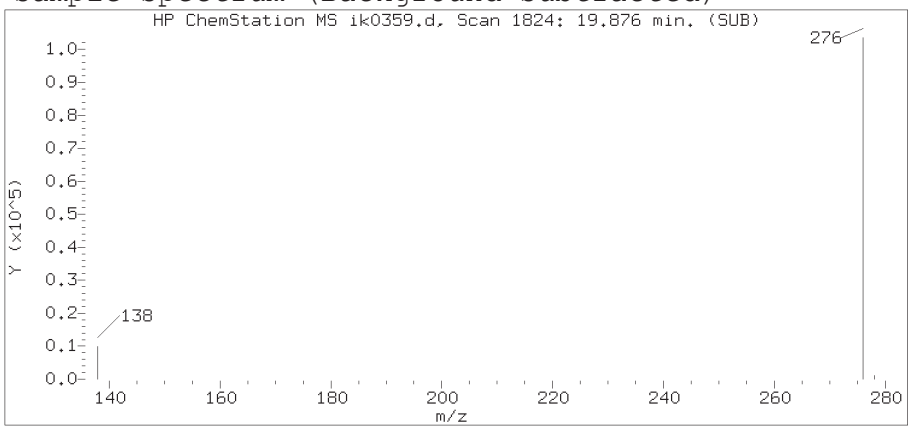
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

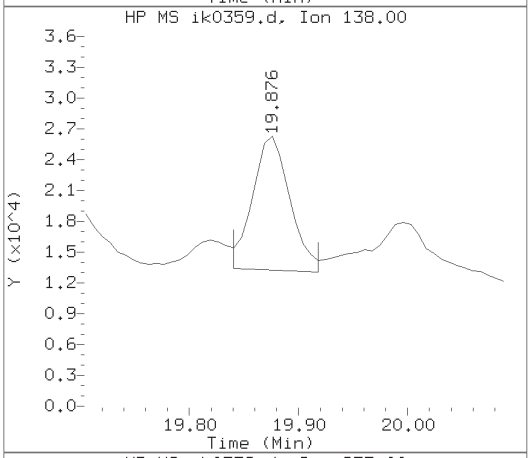
Reference Standard Spectrum for Benzo(g,h,i)perylene



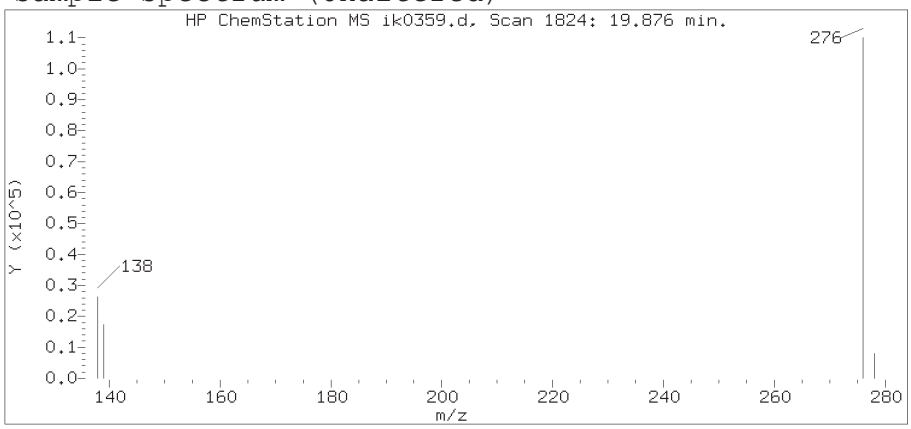


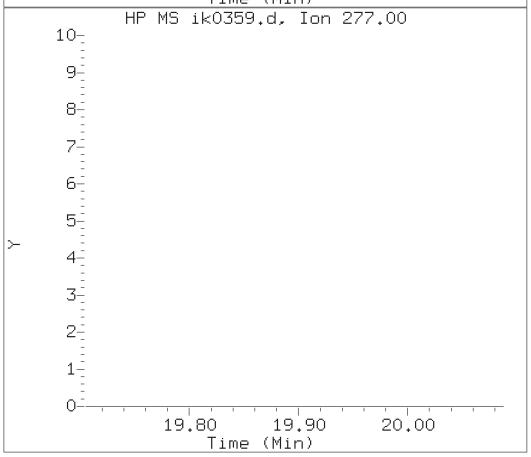
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0359.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 11:34 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1004 Lab Sample ID: 9867766

Compound Number	: 55
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 1824
Retention Time (minutes)	: 19.876
Relative Retention Time	:-0.00100
Quant Ion	: 276.00
Area (flag)	: 245225
On-column Amount (ng/ul)	: 0.9891

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:34.
Target 3.5 esignature user ID: apb10206

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/18nov16.b/ck0705.d Injection date and time: **16-NOV-2018 08:53**
Data file Sample Info. Line: T1004RE;9867766RE;2;0;SAMPLE;;DOD26;T2 Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.2 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.764	(0.000)	473	152	62117	(-9)	1.00	
10) Naphthalene-d8	8.289	(0.000)	588	136	245840	(-7)	1.00	
20) Acenaphthene-d10	10.459	(0.000)	774	164	120701	(0)	1.00	
31) Phenanthrene-d10	12.316	(-0.011)	940	188	202414	(-12)	1.00	
43) Chrysene-d12	15.624	(-0.016)	1253	240	135178	(-23)	1.00	
51) Perylene-d12	17.759	(-0.039)	1526	264	101644	(-34)	1.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.231	(0.000)	152	120730	0.972	97%		61 - 111
36) Fluoranthene-d10	(4)	13.806	(0.001)	212	152693M	0.831	83%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.626	(0.000)	264	65821	0.705	70%		54 - 122

M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.350	(-0.017)	88	2822A	0.071	2.34			0.02
11) Naphthalene	(2)	8.316	(-0.000)	128	341720	1.309	43.35			0.04
19) Acenaphthylene	(3)	10.274	(-0.000)	152	48439	0.202	6.69	0.335	B	0.01
21) Acenaphthene	(3)	10.491	(-0.000)	154	8593M	0.052	1.73			0.02
26) Fluorene	(3)	11.136	(-0.000)	166	13971	0.080	2.64			0.02
32) Phenanthrene	(4)	12.338	(0.000)	178	339599	1.406	46.56			0.02
33) Anthracene	(4)	12.406	(0.000)	178	74672	0.322	10.65			0.02
35) Di-n-butylphthalate	(4)	12.968	(0.000)	149	1924237	7.438	246.30			0.2
37) Fluoranthene	(4)	13.830	(0.001)	202	699654M	2.948	97.62			0.02
39) Pyrene	(5)	14.123	(0.000)	202	608593	2.797	92.62			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.530	(0.000)	149	233833	1.584	52.47	18.477	B	0.3
42) Benzo(a)anthracene	(5)	15.609	(-0.000)	228	285987	1.632	54.05			0.02
44) Chrysene	(5)	15.656	(0.000)	228	414256	2.308	76.42			0.01
46) Benzo(b)fluoranthene	(6)	17.134	(-0.000)	252	483162M	3.709	122.81			0.02
47) Benzo(k)fluoranthene	(6)	17.157	(0.000)	252	164606M	1.177	38.96			0.02
50) Benzo(a)pyrene	(6)	17.666	(-0.000)	252	200576	1.688	55.88			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.718	(-0.001)	276	129565	1.099	36.39			0.02
54) Dibenz(a,h)anthracene	(6)	19.718	(-0.001)	278	34814	0.356	11.79			0.02
55) Benzo(g,h,i)perylene	(6)	20.283	(-0.002)	276	116690	1.061	35.12			0.02

A = User selected an alternate peak. B = Compound detected in referenced method blank. M = Compound was manually integrated.

Digitally signed by William H Saadeh on 11/16/2018 at 12:34. Target 3.5 esignature user ID: whs02991

Data file: /chem/HP10623.i/18nov16.b/ck0705.d Injection date and time: **16-NOV-2018 08:53**
Data file Sample Info. Line: T1004RE;9867766RE;2;0;SAMPLE;;DOD26;T2 Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

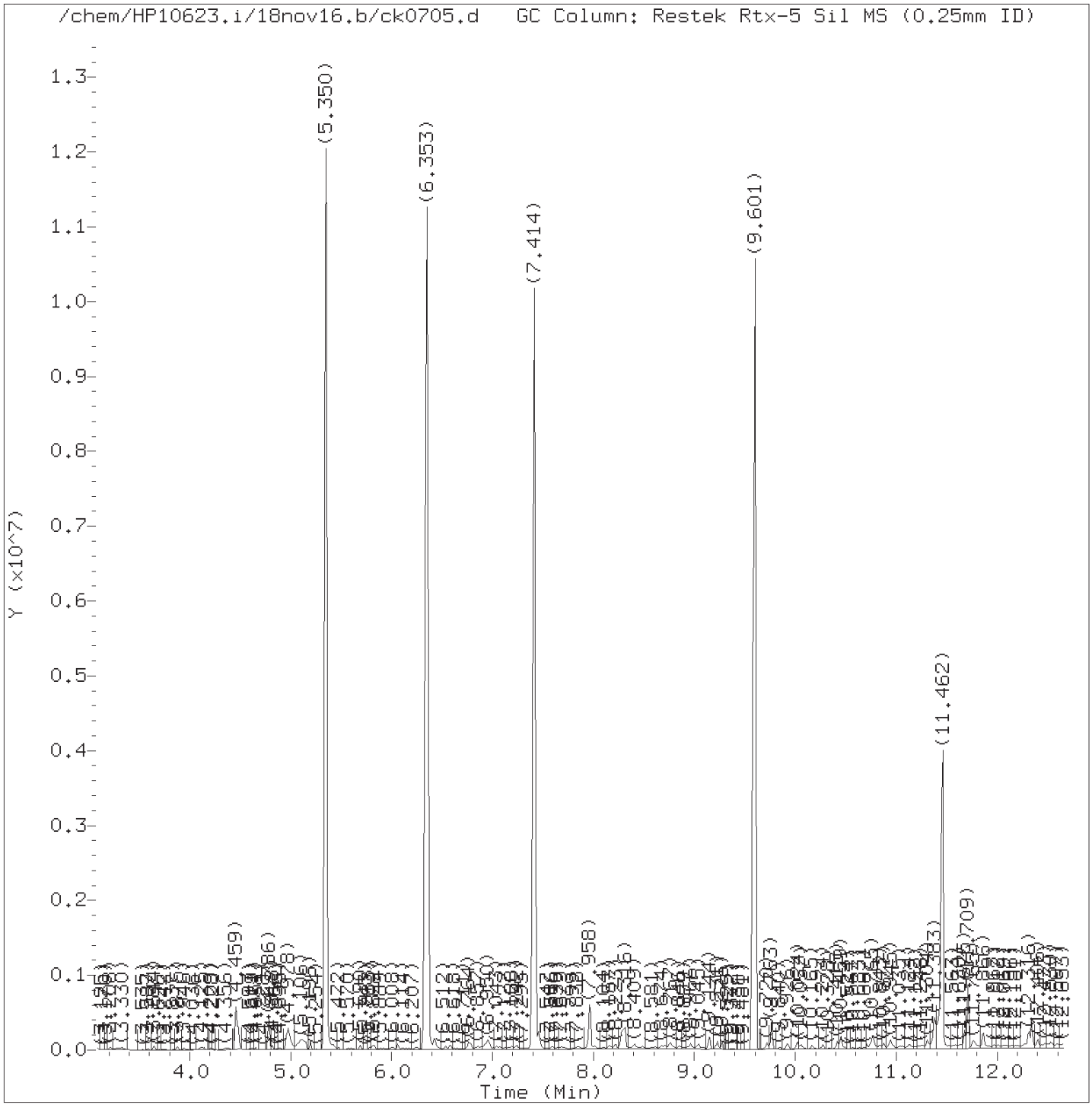
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.2 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by William H Saadeh on 11/16/2018 at 12:34. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

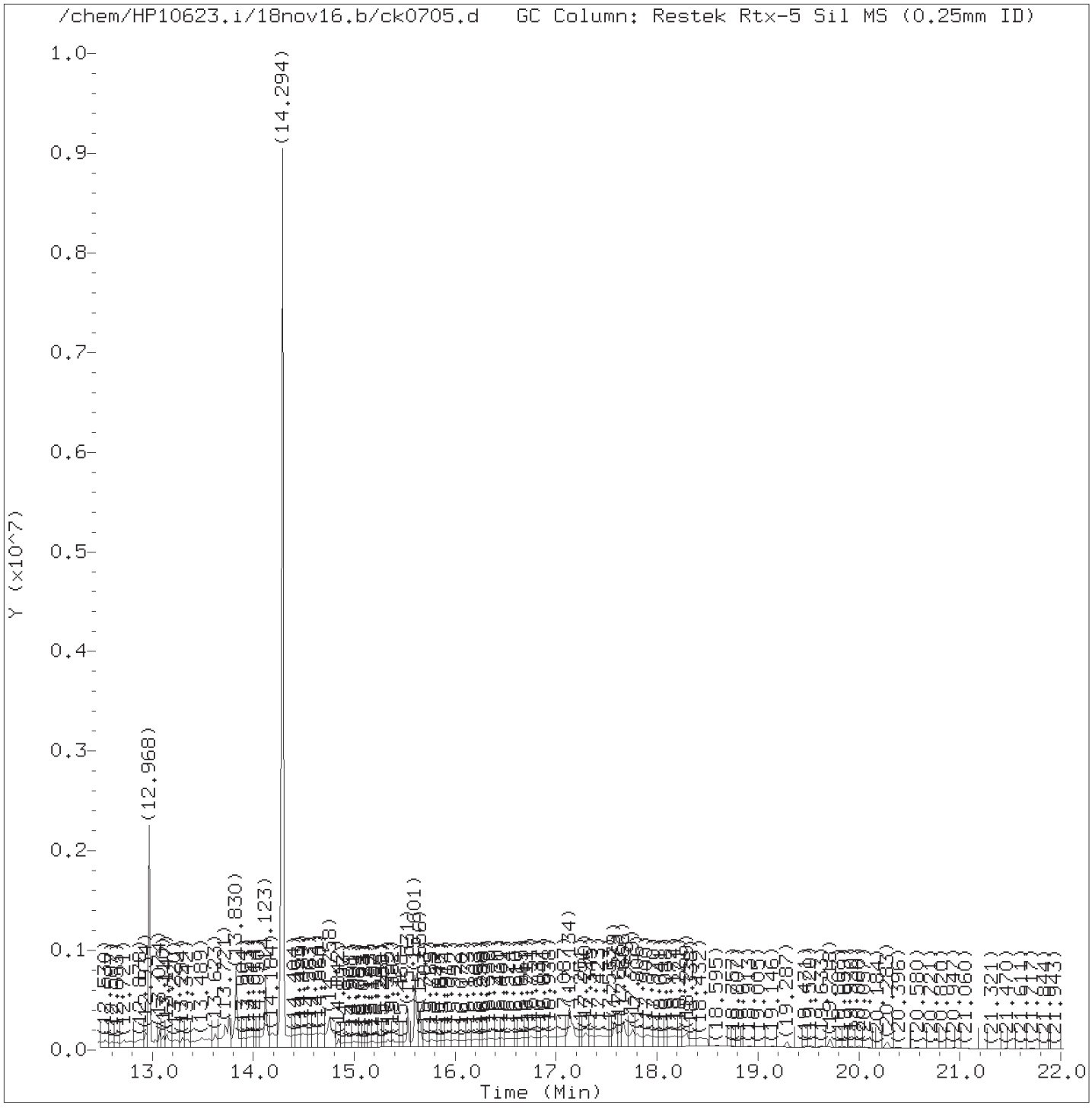
Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

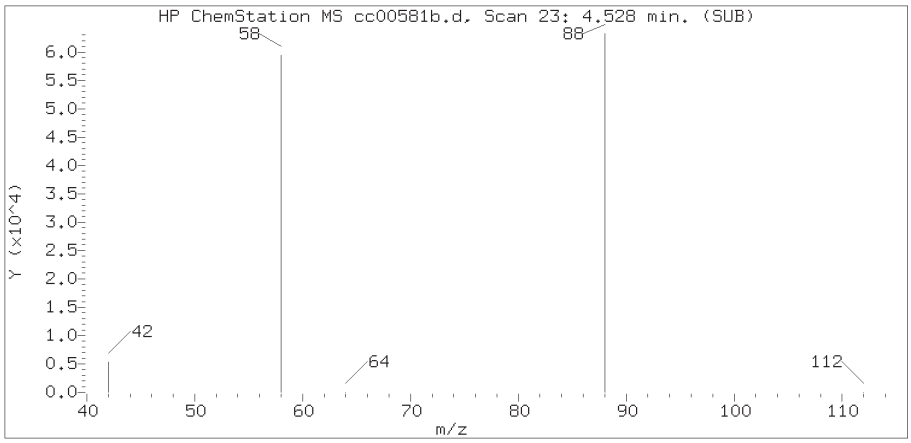
Sample Name: T1004RE Lab Sample ID: 9867766RE

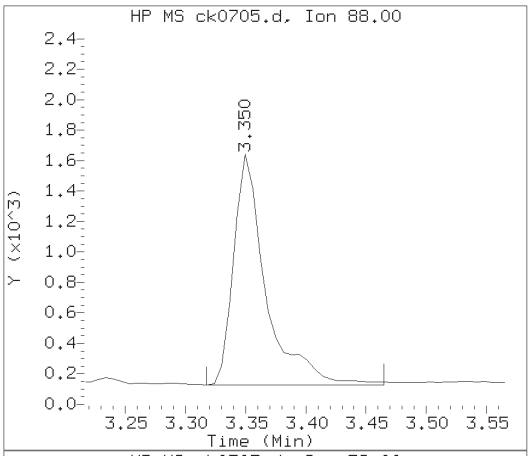
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.350	88	2822A	0.071
6)*1,4-Dichlorobenzene-d4	(1)	6.764	152	62117	1.000
10)*Naphthalene-d8	(2)	8.289	136	245840	1.000
11) Naphthalene	(2)	8.316	128	341720	1.309
14)$1-Methylnaphthalene-d10	(2)	9.231	152	120730	0.972
19) Acenaphthylene	(3)	10.274	152	48439	0.202
20)*Acenaphthene-d10	(3)	10.459	164	120701	1.000
21) Acenaphthene	(3)	10.491	154	8593M	0.052
26) Fluorene	(3)	11.136	166	13971	0.080
31)*Phenanthrene-d10	(4)	12.316	188	202414	1.000
32) Phenanthrene	(4)	12.338	178	339599	1.406
33) Anthracene	(4)	12.406	178	74672	0.322
35) Di-n-butylphthalate	(4)	12.968	149	1924237	7.438
36)$Fluoranthene-d10	(4)	13.806	212	152693M	0.831
37) Fluoranthene	(4)	13.830	202	699654M	2.948
39) Pyrene	(5)	14.123	202	608593	2.797
41) bis(2-Ethylhexyl)phthalate	(5)	15.531	149	233833	1.584
42) Benzo(a)anthracene	(5)	15.609	228	285987	1.632
43)*Chrysene-d12	(5)	15.624	240	135178	1.000
44) Chrysene	(5)	15.656	228	414256	2.308
46) Benzo(b)fluoranthene	(6)	17.134	252	483162M	3.709
47) Benzo(k)fluoranthene	(6)	17.157	252	164606M	1.177
49)$Benzo(a)pyrene-d12	(6)	17.626	264	65821	0.705
50) Benzo(a)pyrene	(6)	17.666	252	200576	1.688
51)*Perylene-d12	(6)	17.759	264	101644	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.718	276	129565	1.099
54) Dibenz(a,h)anthracene	(6)	19.718	278	34814	0.356
55) Benzo(g,h,i)perylene	(6)	20.283	276	116690	1.061

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

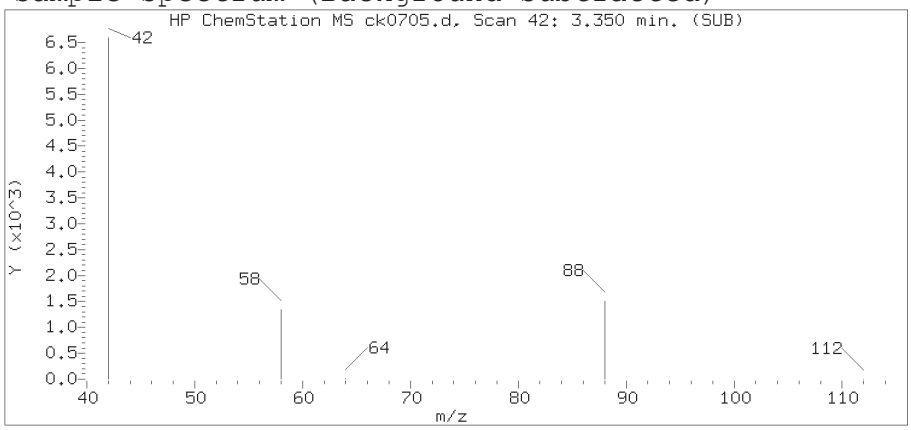
Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

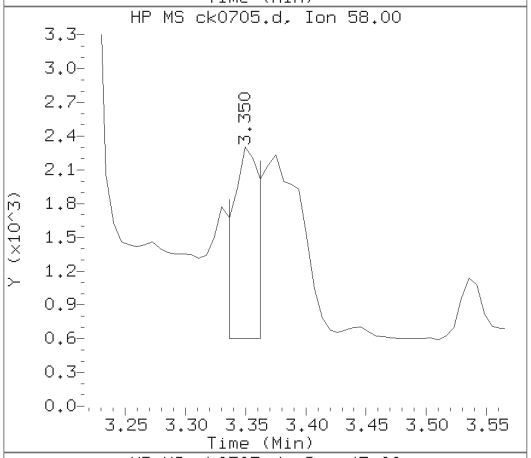
Reference Standard Spectrum for 1,4-Dioxane



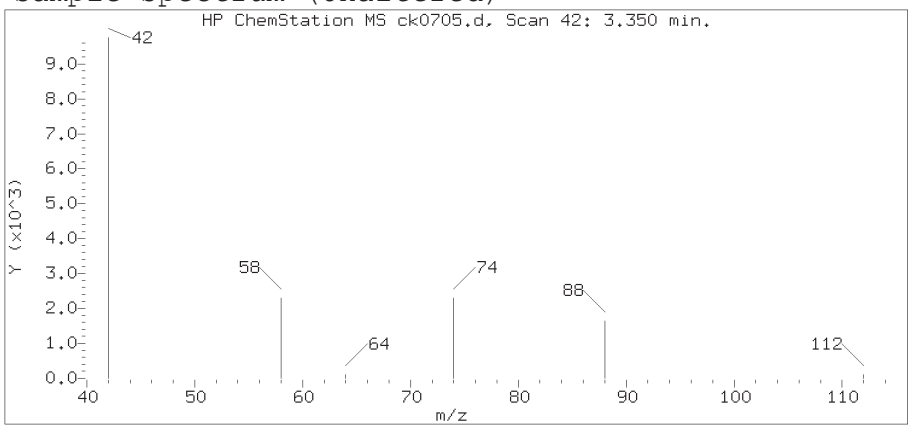


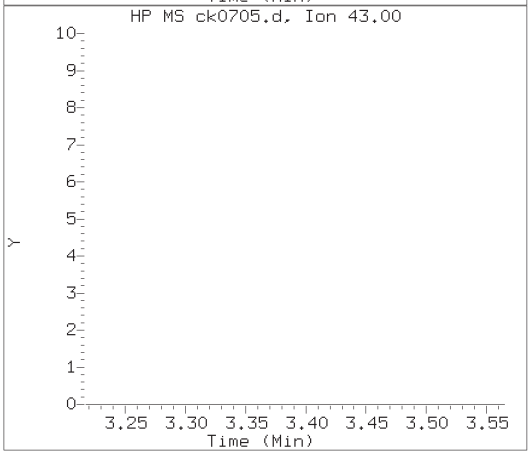
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

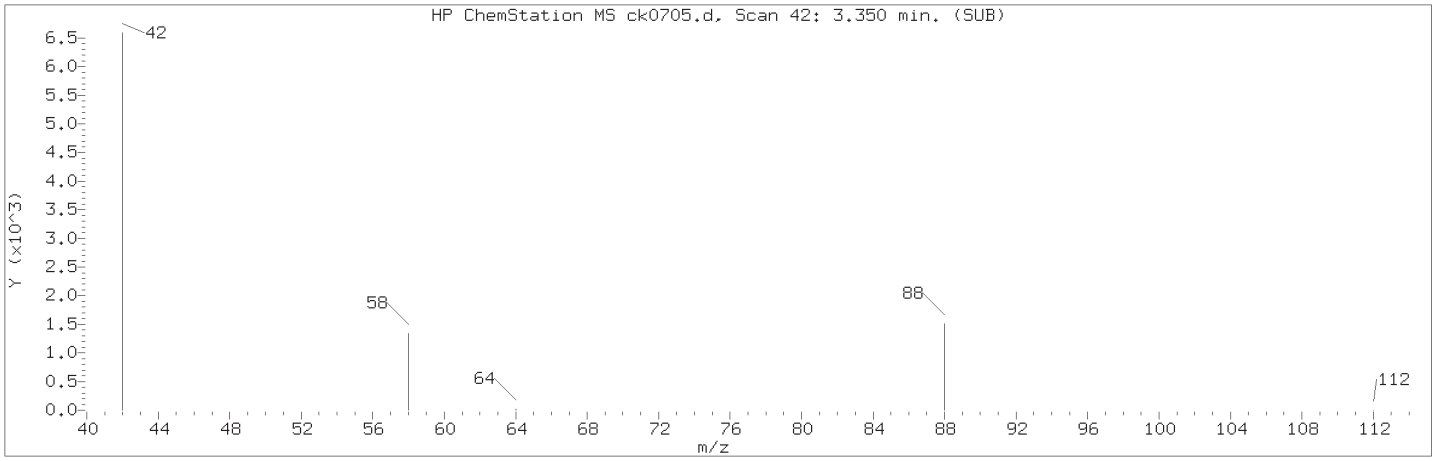
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

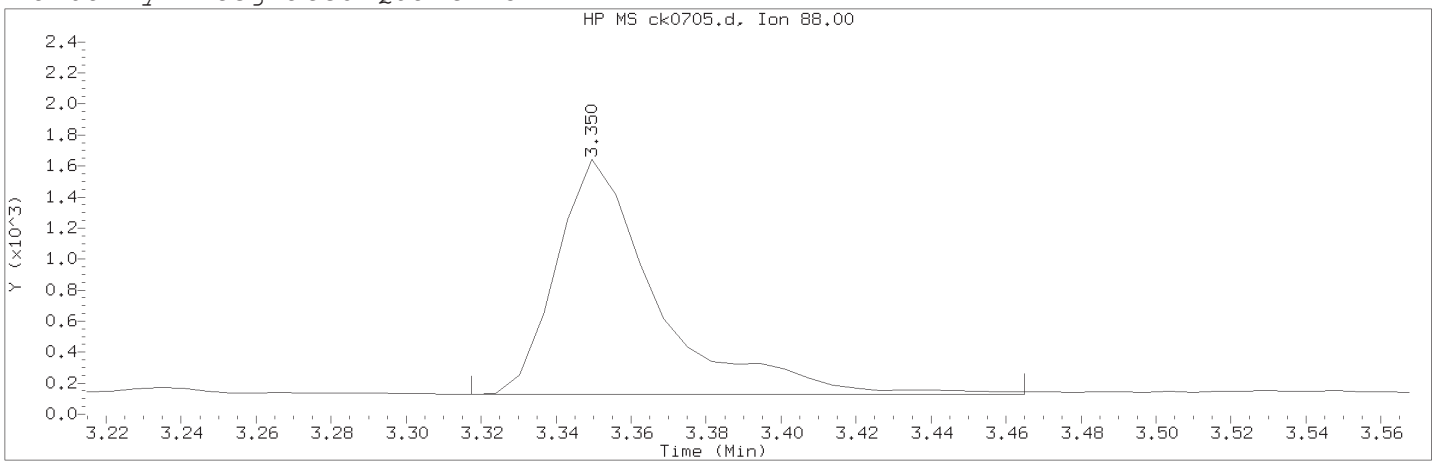
Compound Number	: 1
Compound Name	: 1,4-Dioxane
Scan Number	: 42
Retention Time (minutes)	: 3.350
Relative Retention Time	:-0.01709
Quant Ion	: 88.00
Area (flag)	: 2822A
On-column Amount (ng/ul)	: 0.0707

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

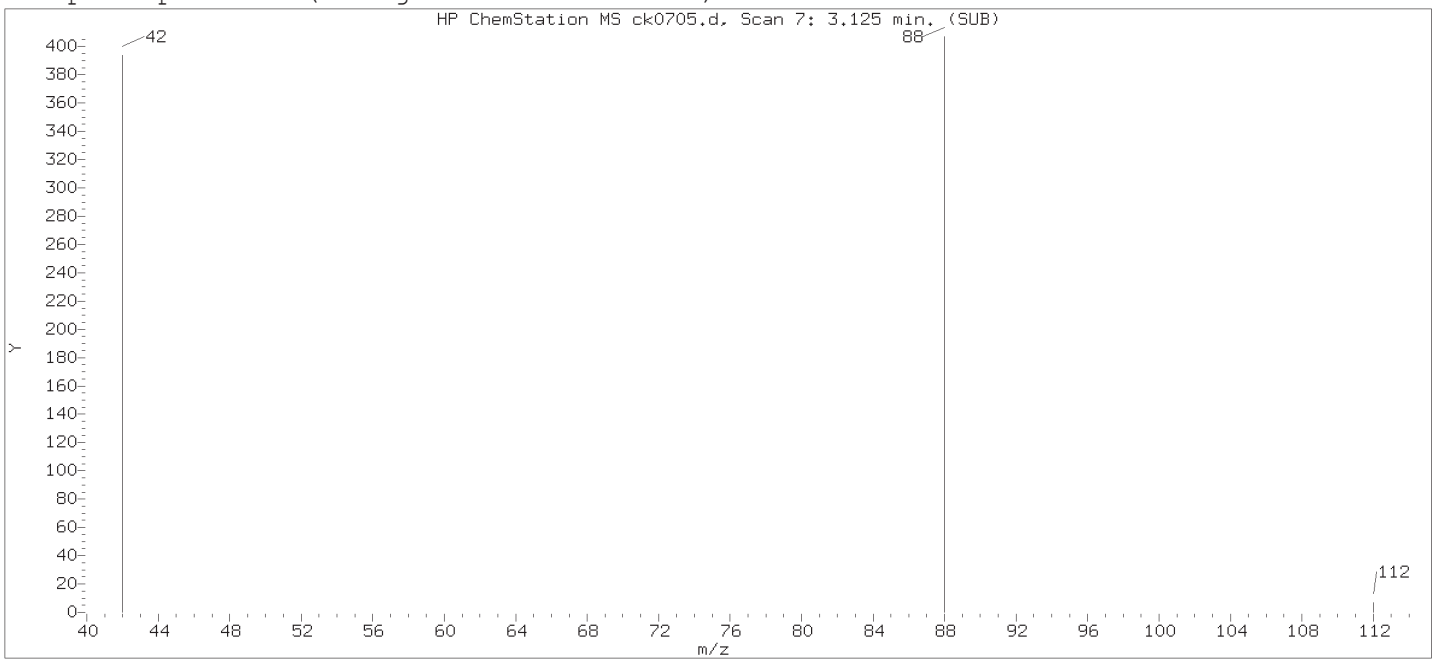
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 42
Retention Time (minutes) : 3.350
Quant Ion : 88.00
Area (flag) : 2822A
On-column Amount (ng/ul) : 0.0707
Integration start scan : 36 Integration stop scan: 59
Y at integration start : 128 Y at integration end: 128

Reason for manual integration: improper integration

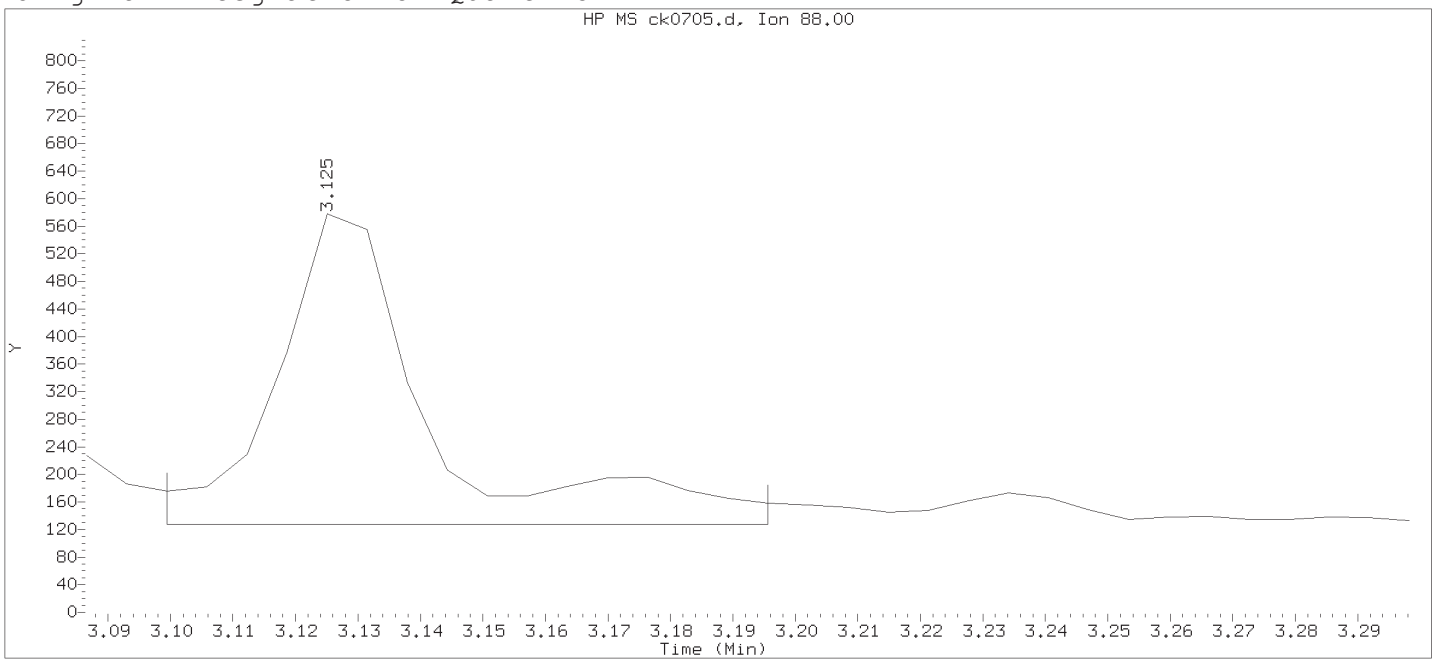
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

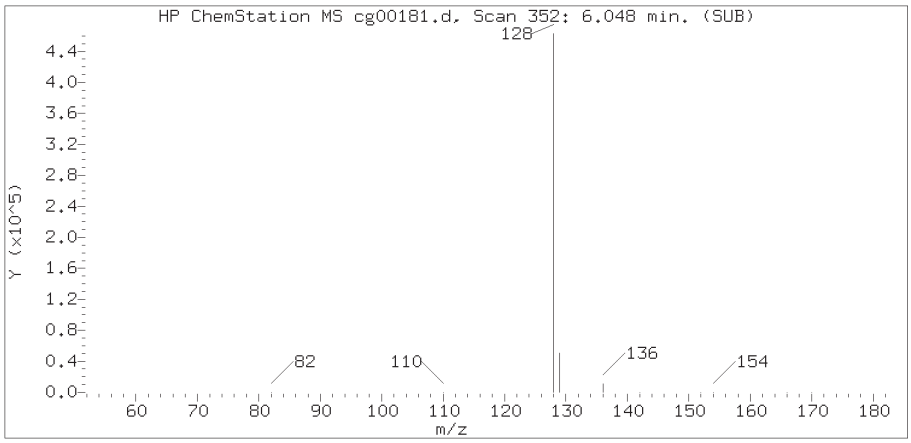
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:20 Automation

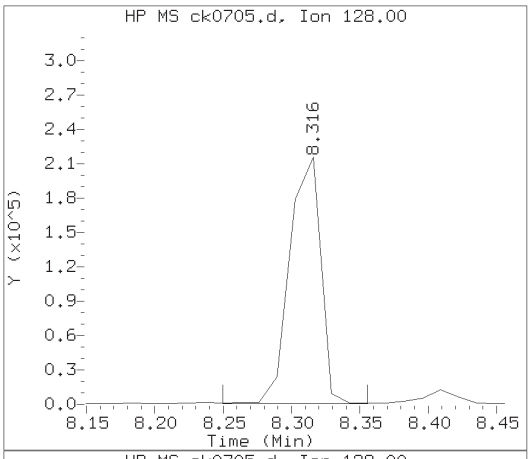
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 7		
Retention Time (minutes)	: 3.125		
Quant Ion	: 88.00		
Area	: 754		
On-column Amount (ng/ul)	: 0.0189		
Integration start scan	: 2	Integration stop scan:	17
Y at integration start	: 128	Y at integration end:	128

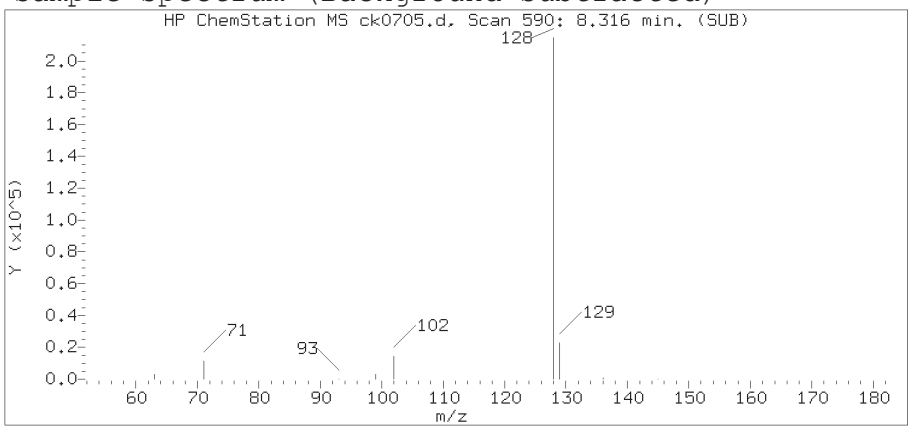
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature used 11/16/2018

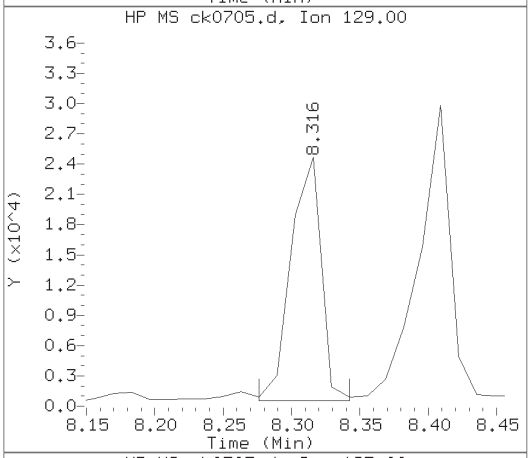
Reference Standard Spectrum for Naphthalene



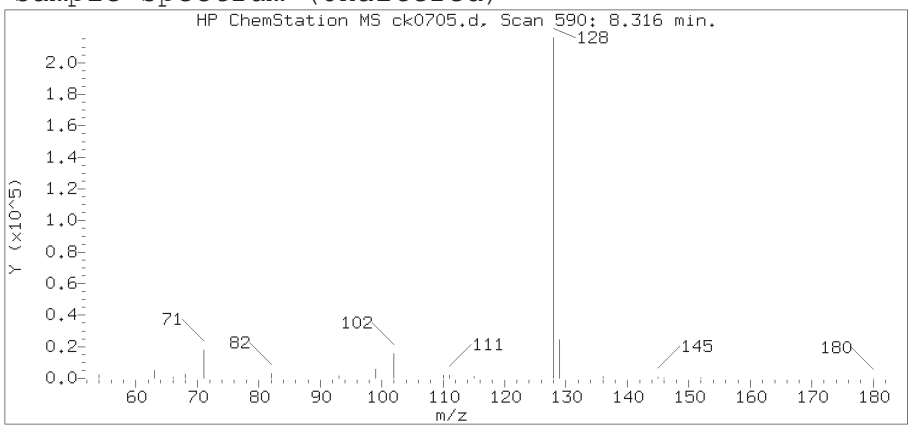


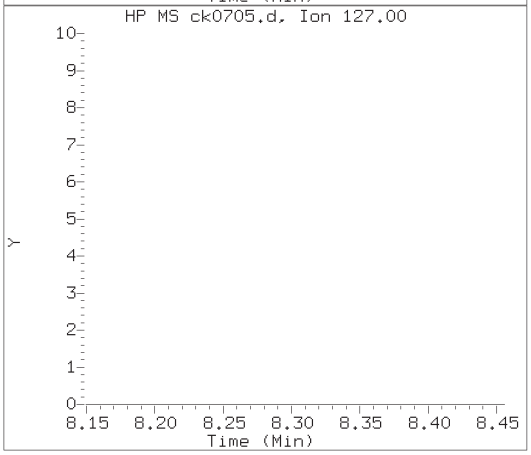
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

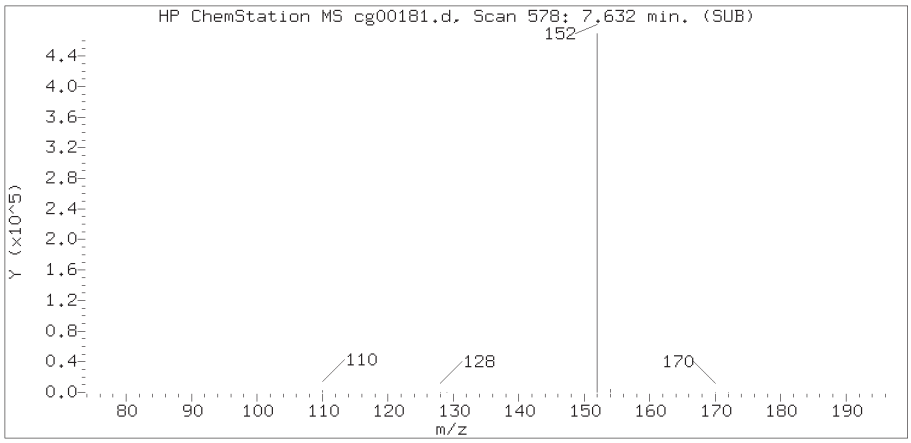
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

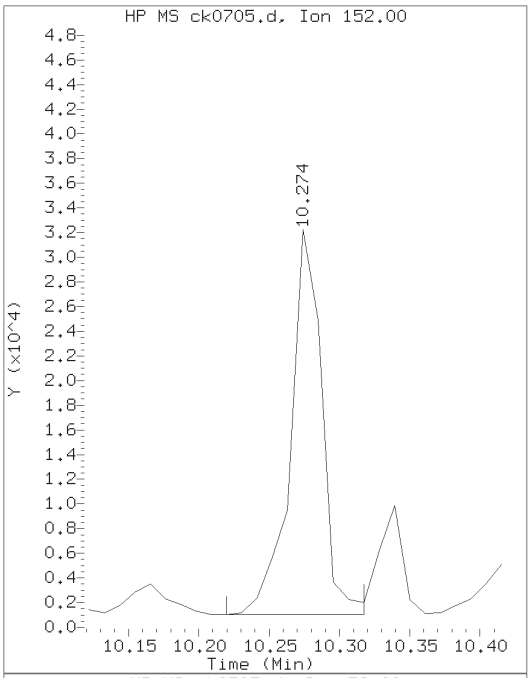
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 11
Compound Name	: Naphthalene
Scan Number	: 590
Retention Time (minutes)	: 8.316
Relative Retention Time	:-0.00000
Quant Ion	: 128.00
Area (flag)	: 341720
On-column Amount (ng/ul)	: 1.3091

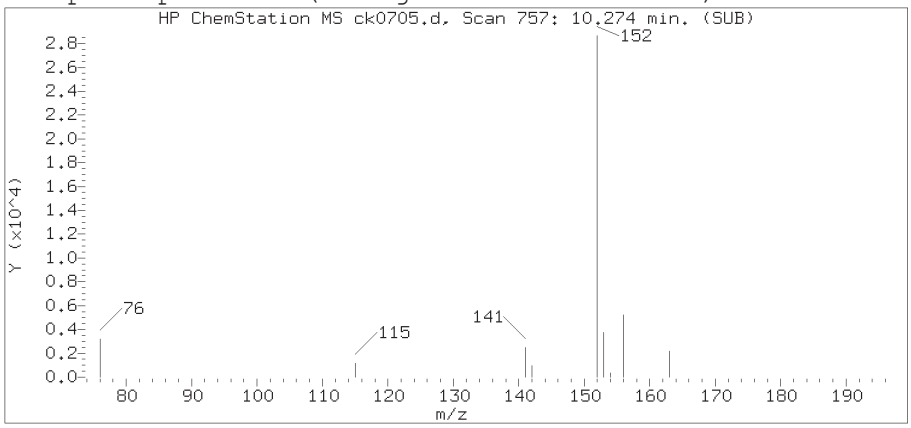
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02001

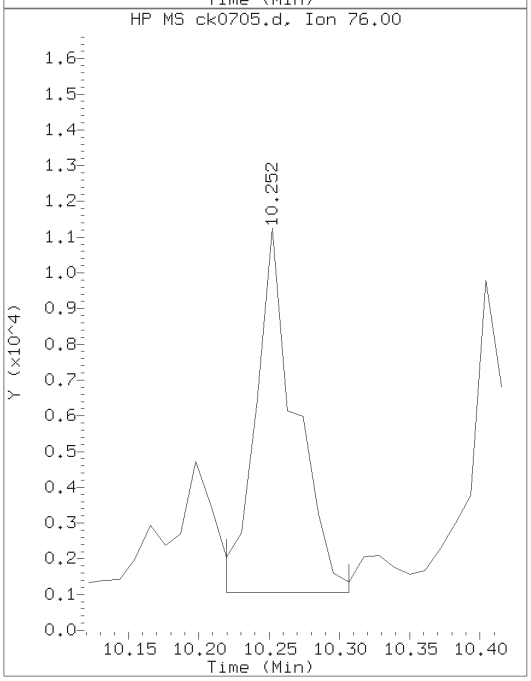
Reference Standard Spectrum for Acenaphthylene



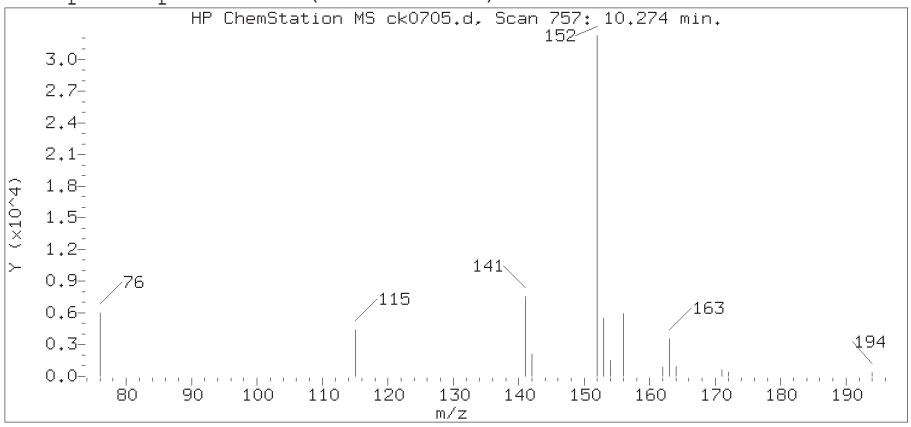


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

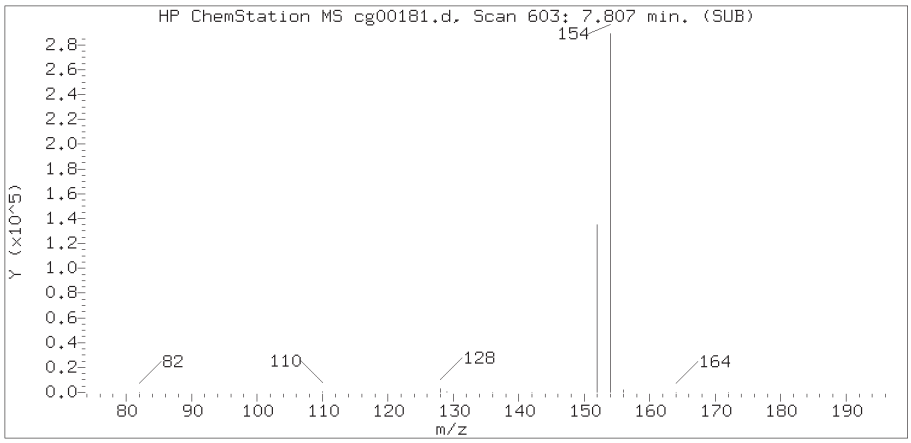
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

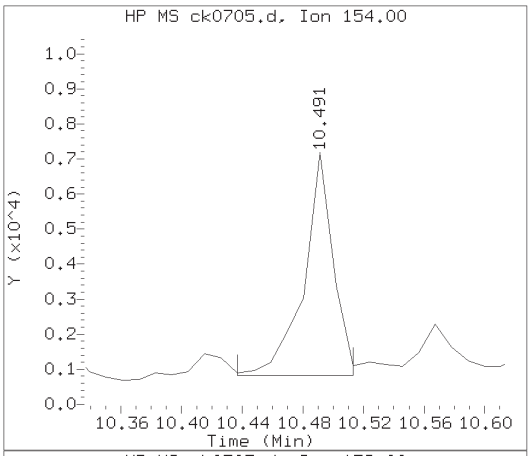
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 19
Compound Name	: Acenaphthylene
Scan Number	: 757
Retention Time (minutes)	: 10.274
Relative Retention Time	:-0.00000
Quant Ion	: 152.00
Area (flag)	: 48439
On-column Amount (ng/ul)	: 0.2022

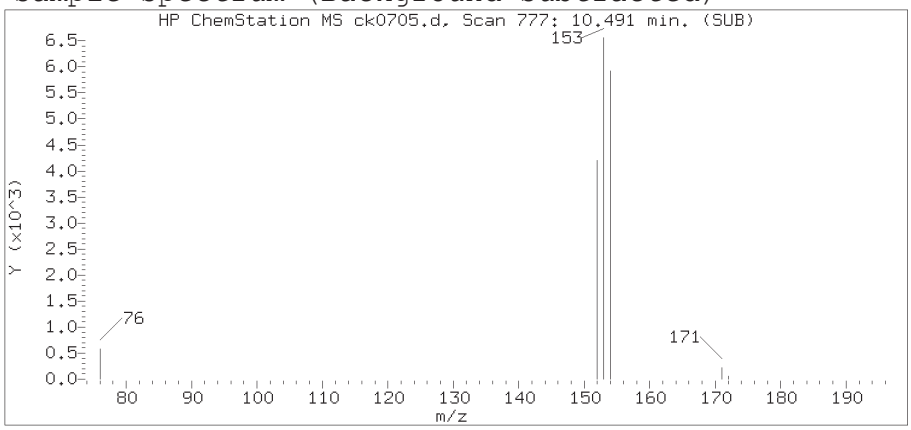
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02001

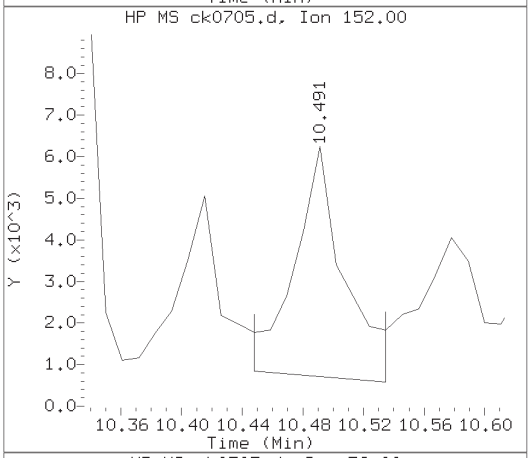
Reference Standard Spectrum for Acenaphthene



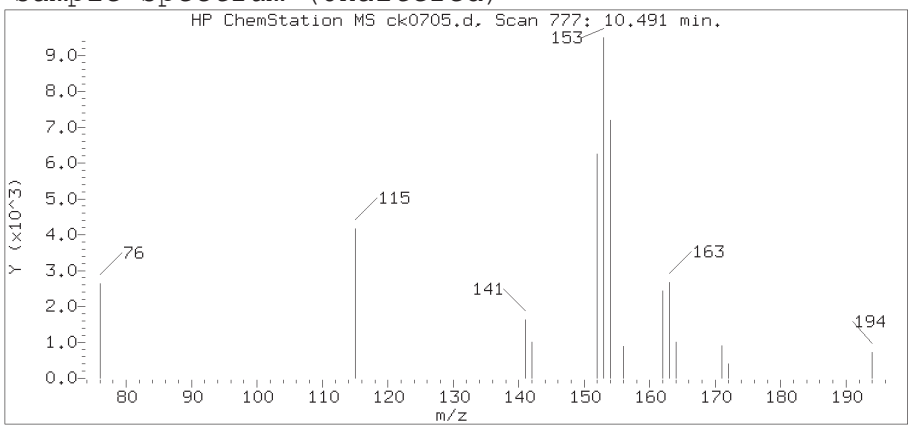


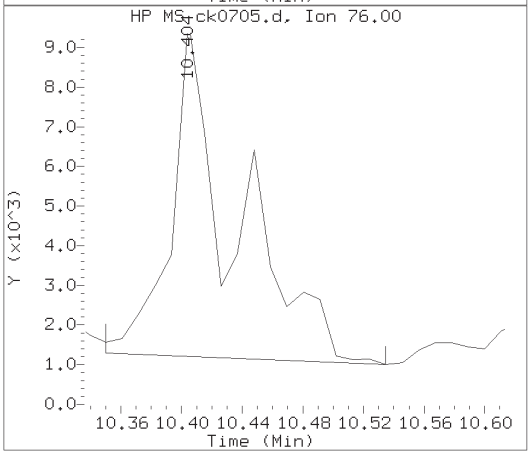
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

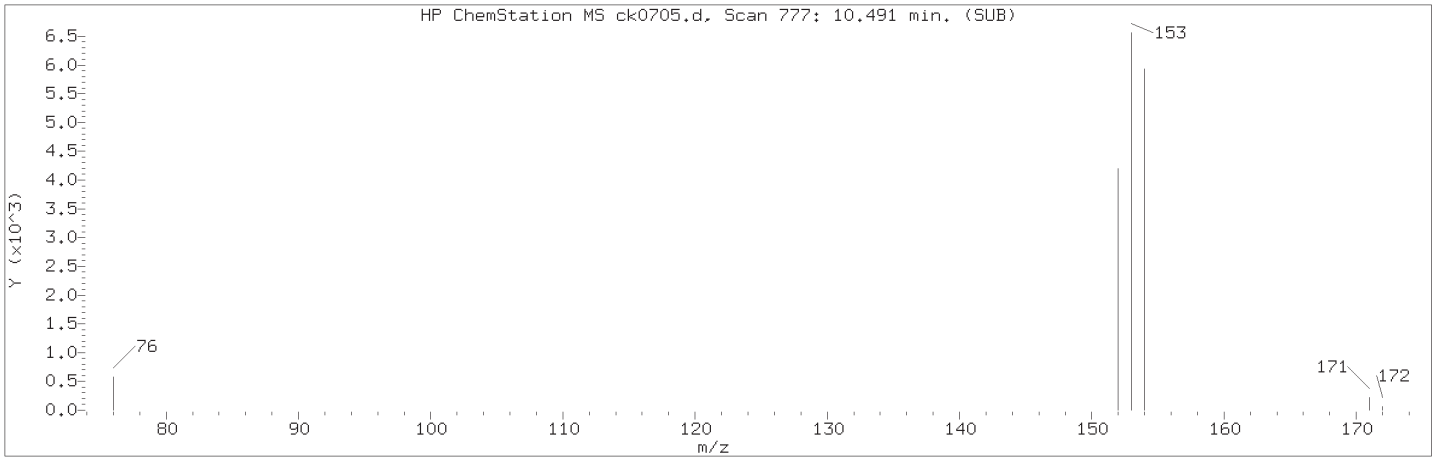
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

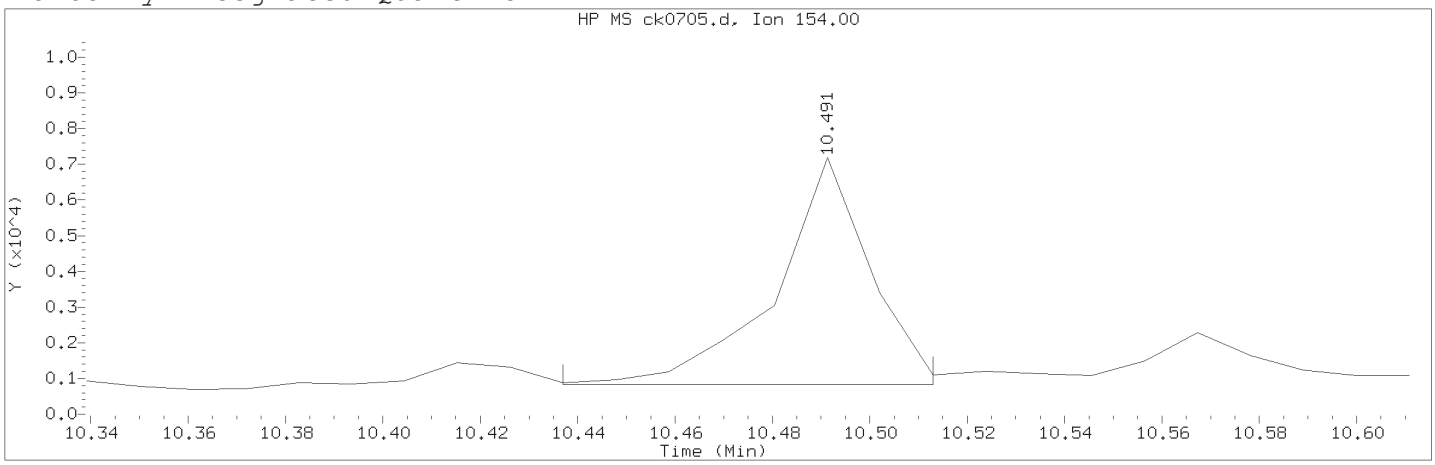
Compound Number	: 21
Compound Name	: Acenaphthene
Scan Number	: 777
Retention Time (minutes)	: 10.491
Relative Retention Time	:-0.00000
Quant Ion	: 154.00
Area (flag)	: 8593M
On-column Amount (ng/ul)	: 0.0524

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

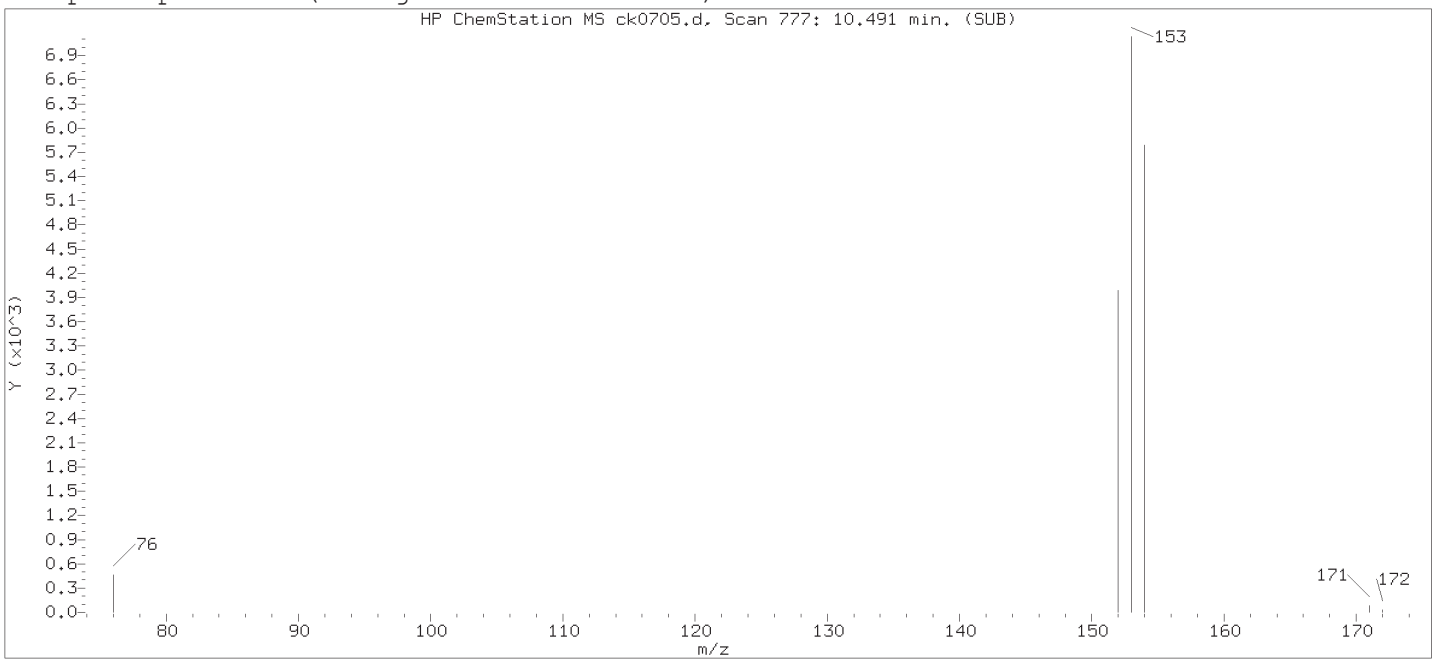
Compound Number : 21
Compound Name : Acenaphthene
Scan Number : 777
Retention Time (minutes) : 10.491
Quant Ion : 154.00
Area (flag) : 8593M
On-column Amount (ng/ul) : 0.0524
Integration start scan : 771 Integration stop scan: 778
Y at integration start : 832 Y at integration end: 832

Reason for manual integration: improper integration

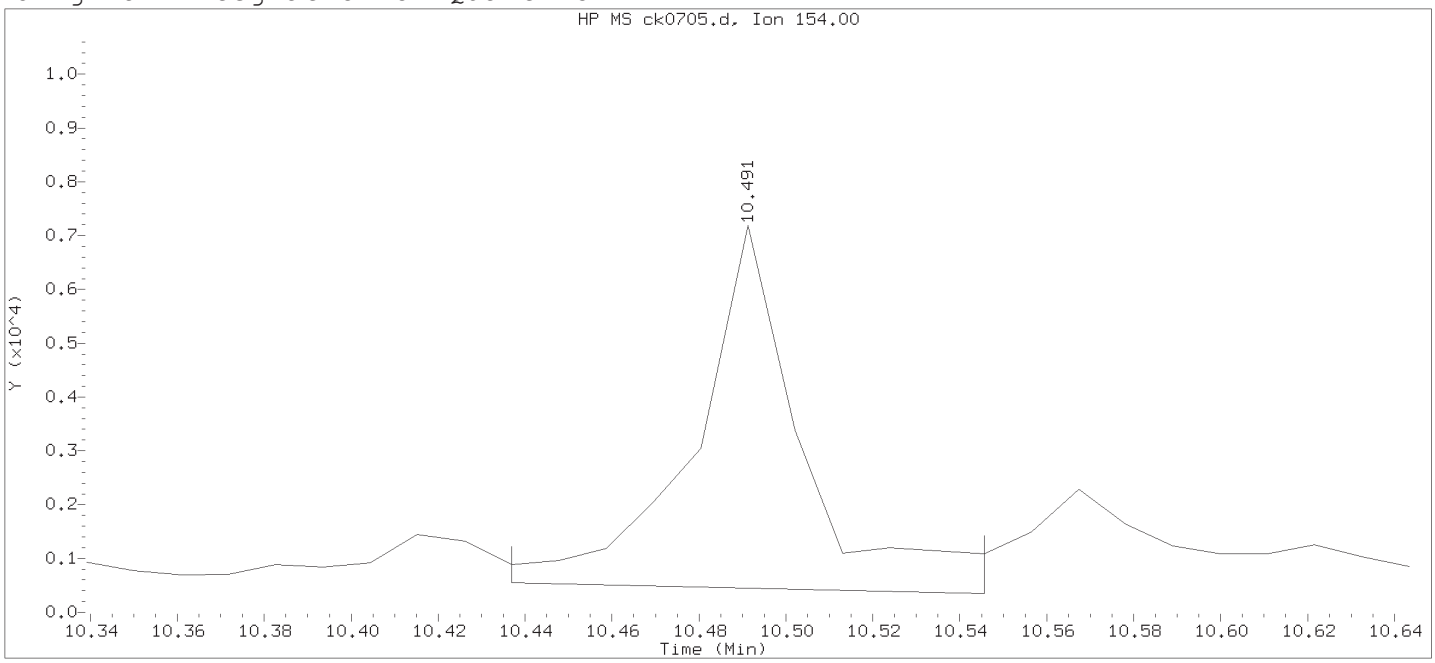
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

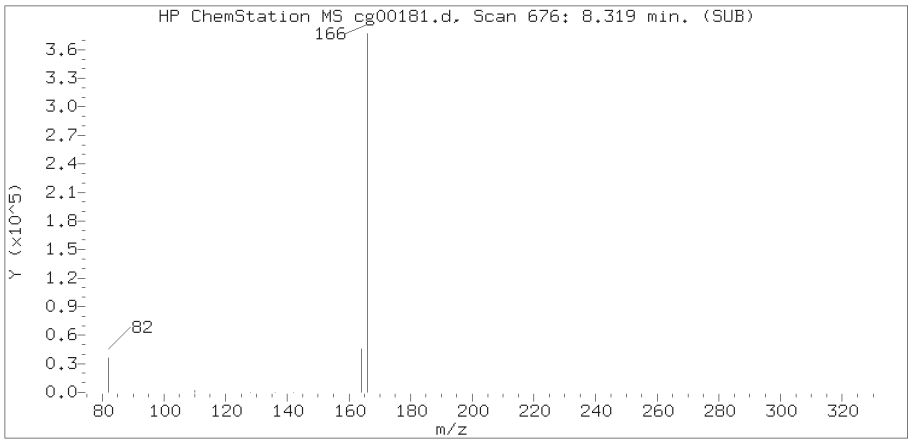
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:20 Automation

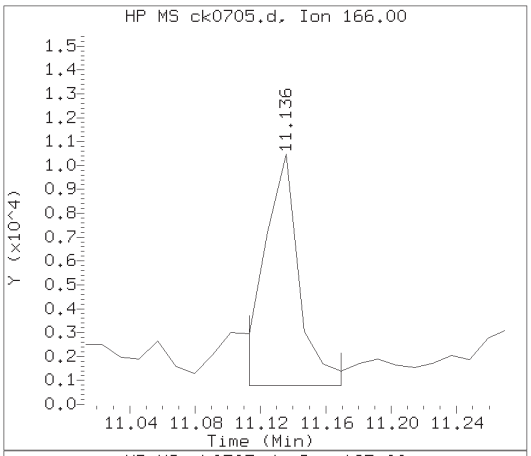
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 777		
Retention Time (minutes)	: 10.491		
Quant Ion	: 154.00		
Area	: 11599		
On-column Amount (ng/ul)	: 0.0707		
Integration start scan	: 771	Integration stop scan:	781
Y at integration start	: 552	Y at integration end:	348

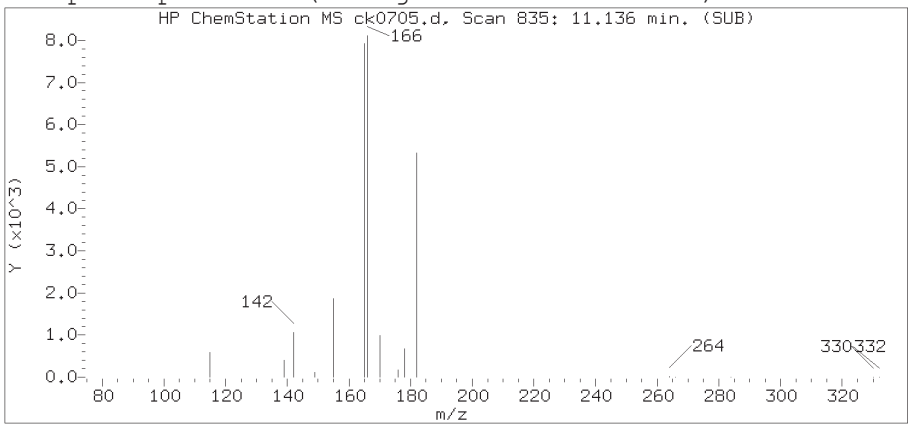
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature used 21 CFR Part 11

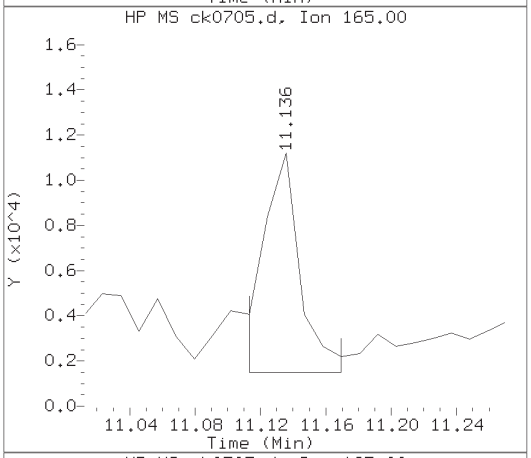
Reference Standard Spectrum for Fluorene



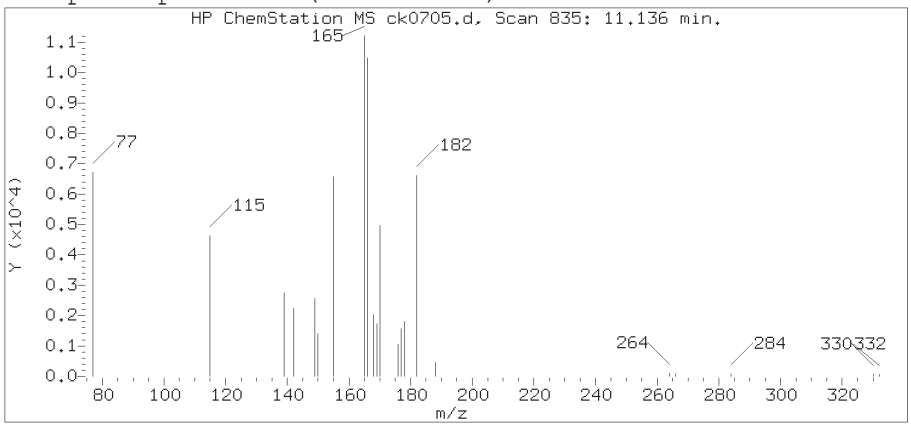


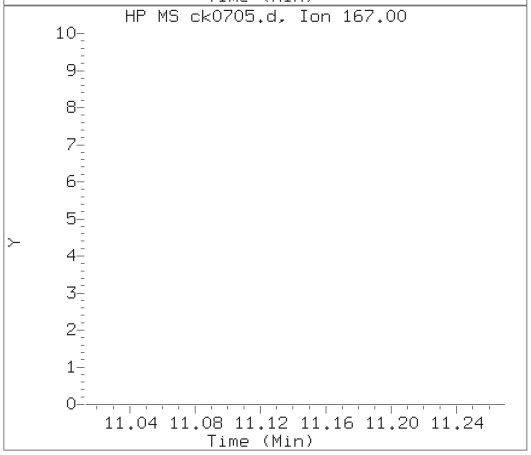
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

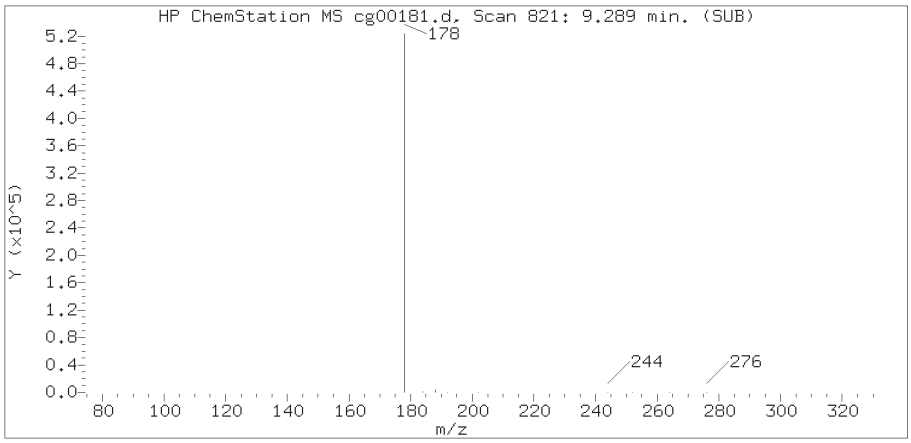
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

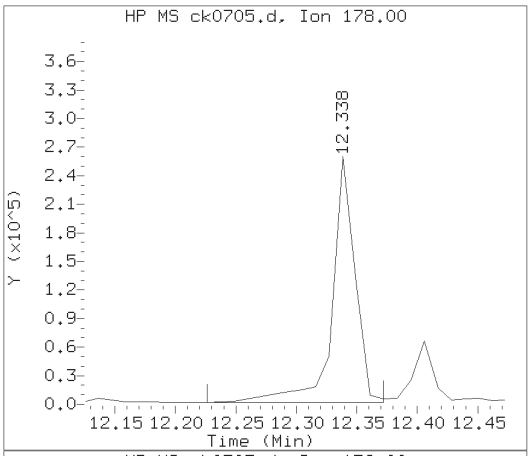
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 26
Compound Name	: Fluorene
Scan Number	: 835
Retention Time (minutes)	: 11.136
Relative Retention Time	:-0.00000
Quant Ion	: 166.00
Area (flag)	: 13971
On-column Amount (ng/ul)	: 0.0797

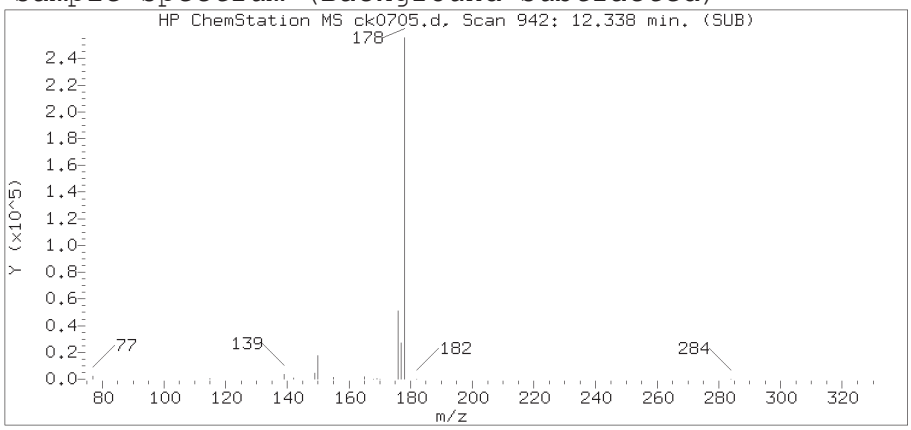
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

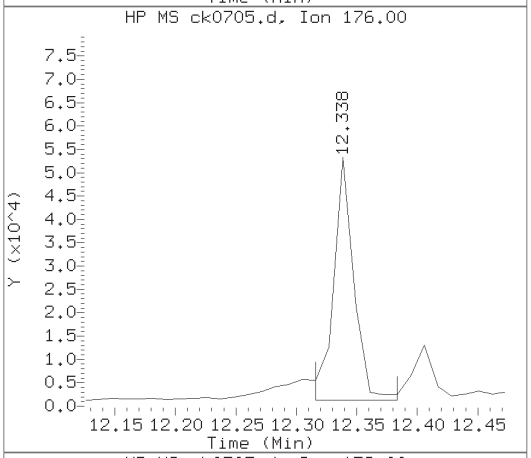
Reference Standard Spectrum for Phenanthrene



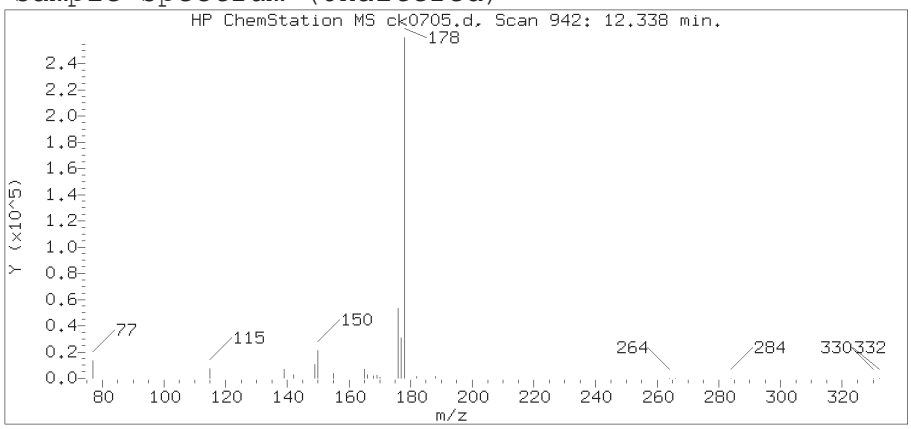


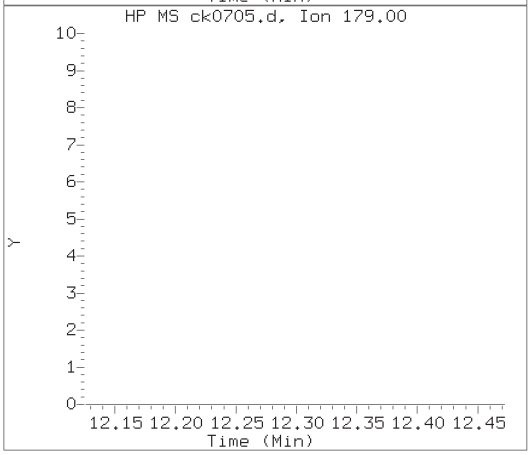
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

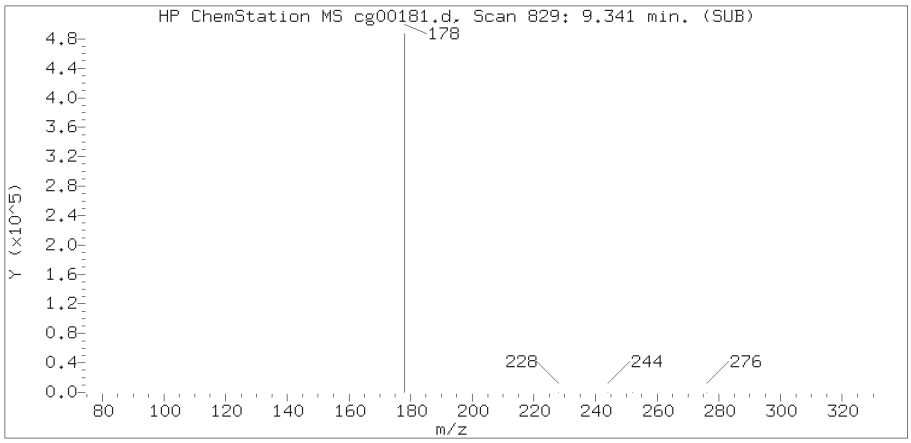
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

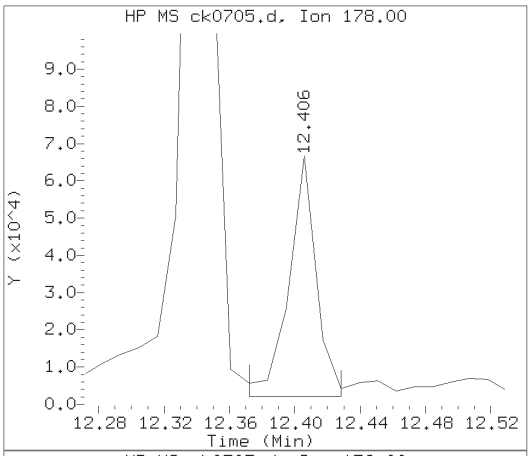
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 32
Compound Name	: Phenanthrene
Scan Number	: 942
Retention Time (minutes)	: 12.338
Relative Retention Time	: 0.00092
Quant Ion	: 178.00
Area (flag)	: 339599
On-column Amount (ng/ul)	: 1.4061

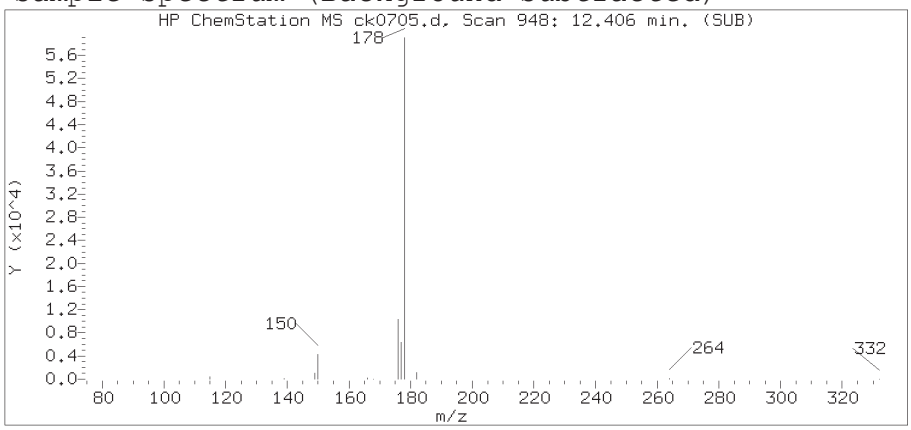
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02001

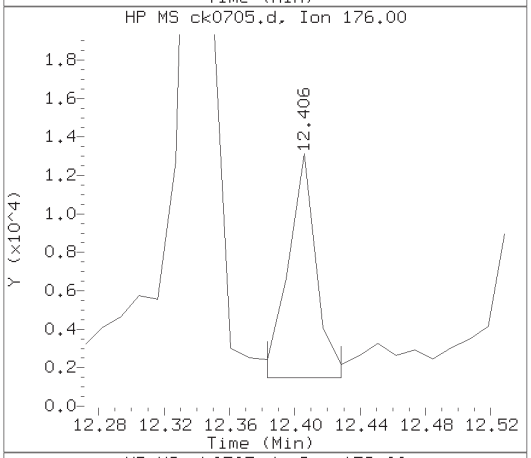
Reference Standard Spectrum for Anthracene



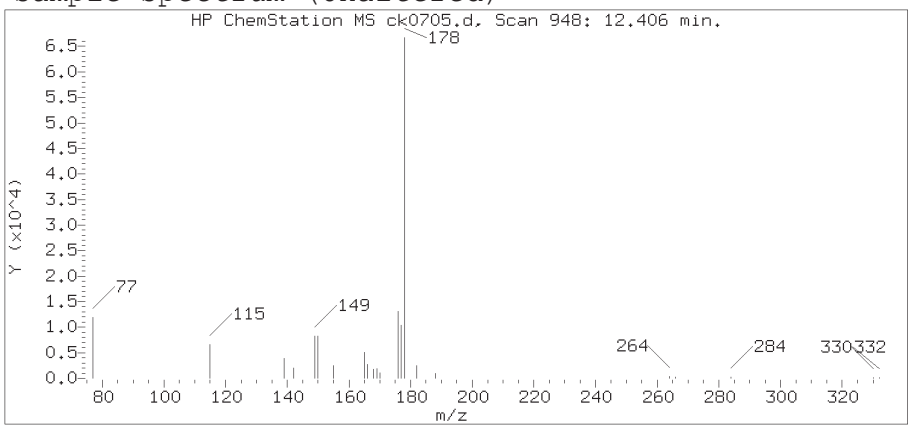


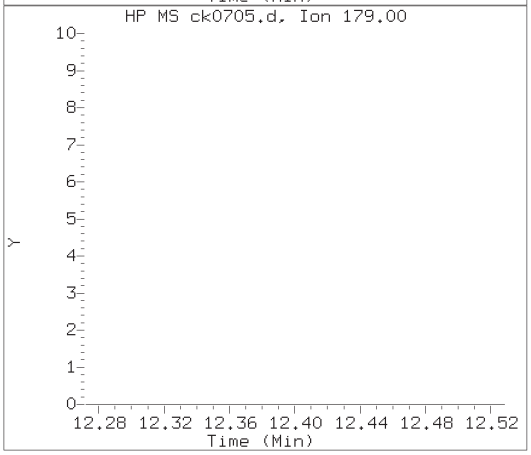
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

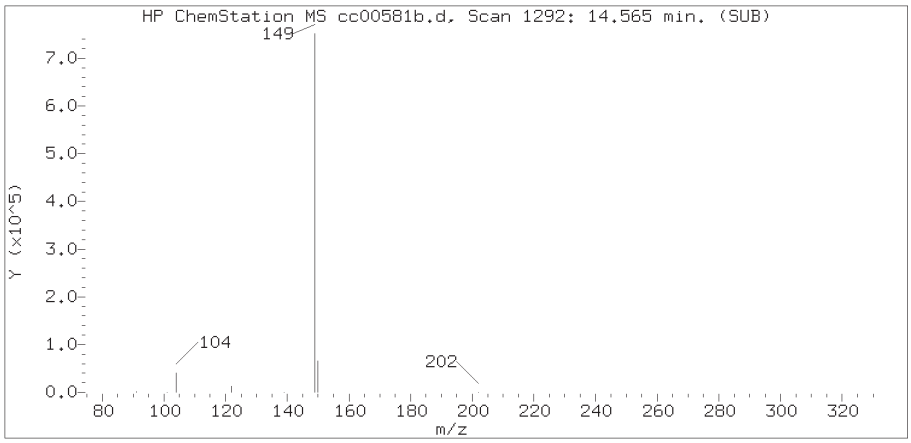
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

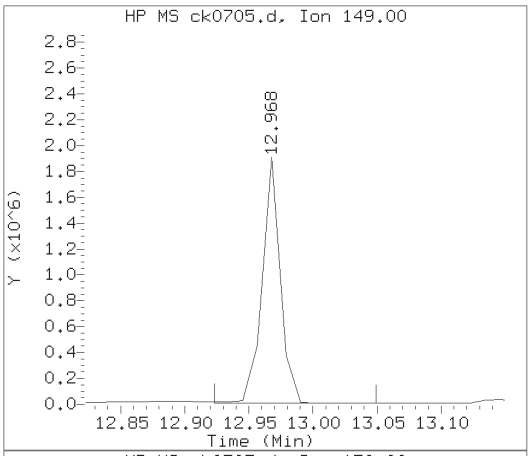
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 33
Compound Name	: Anthracene
Scan Number	: 948
Retention Time (minutes)	: 12.406
Relative Retention Time	: 0.00092
Quant Ion	: 178.00
Area (flag)	: 74672
On-column Amount (ng/ul)	: 0.3215

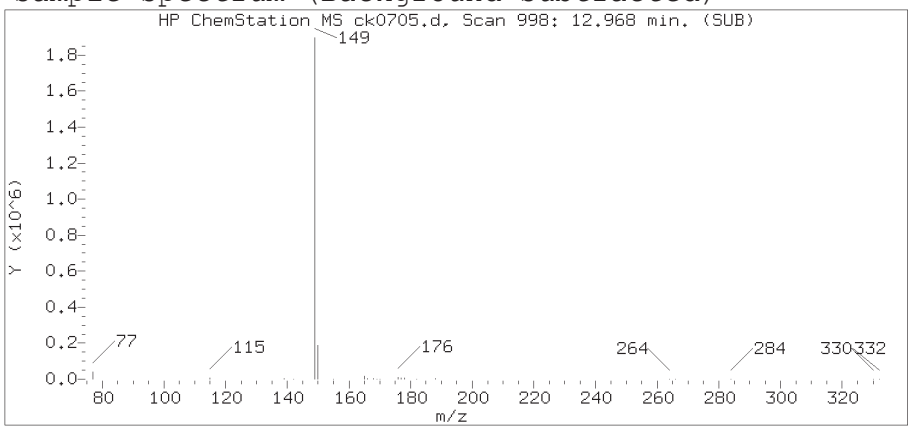
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02001

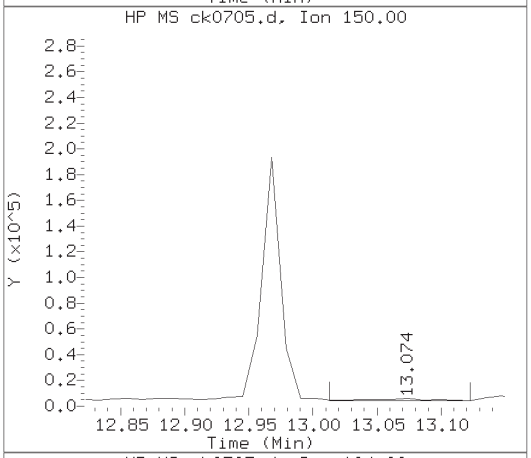
Reference Standard Spectrum for Di-n-butylphthalate



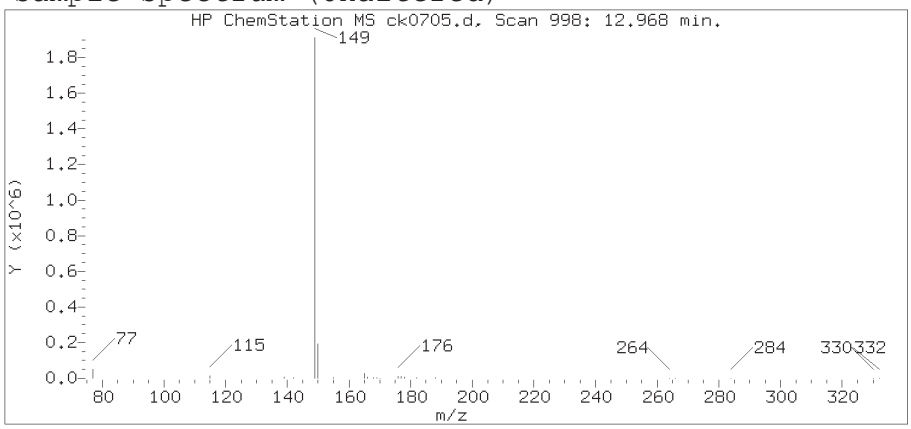


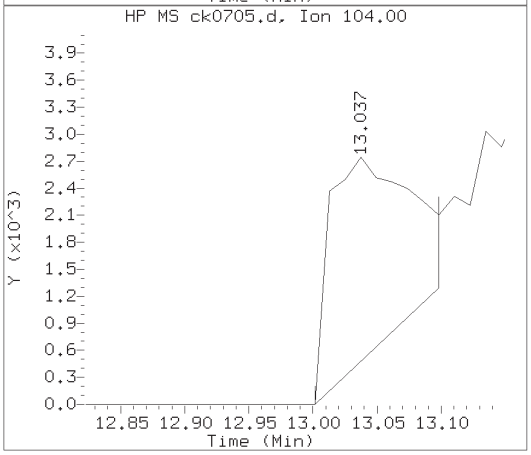
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

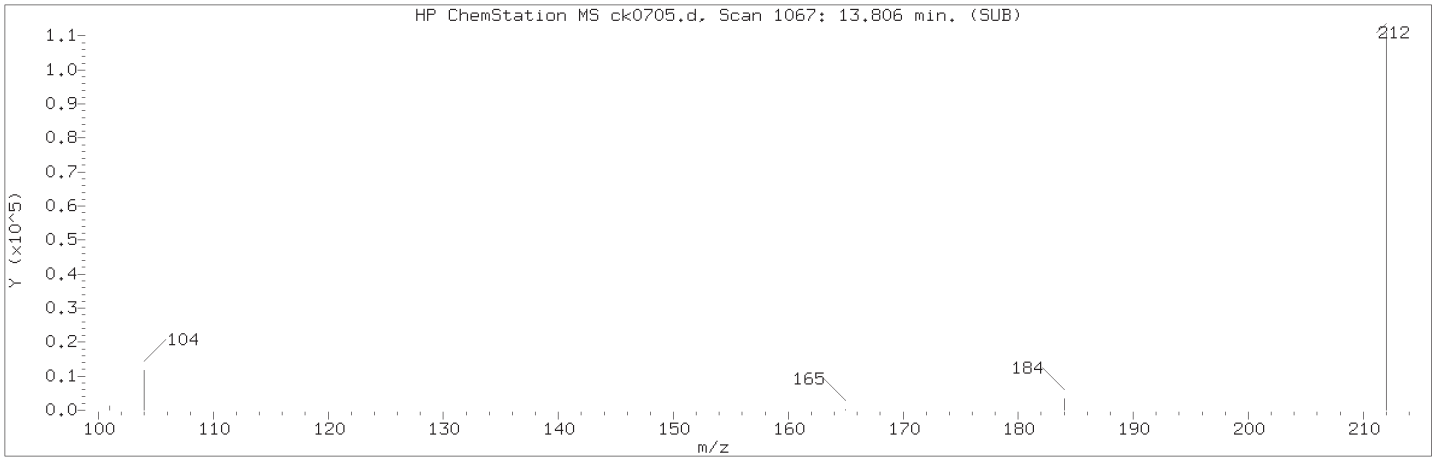
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

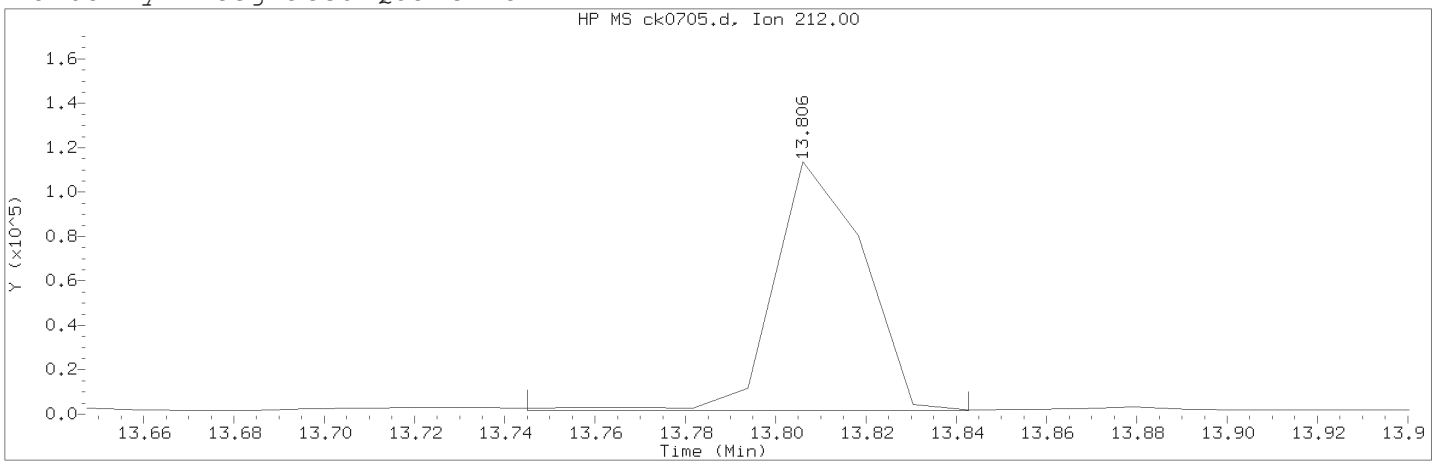
Compound Number	: 35
Compound Name	: Di-n-butylphthalate
Scan Number	: 998
Retention Time (minutes)	: 12.968
Relative Retention Time	: 0.00096
Quant Ion	: 149.00
Area (flag)	: 1924237
On-column Amount (ng/ul)	: 7.4381

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

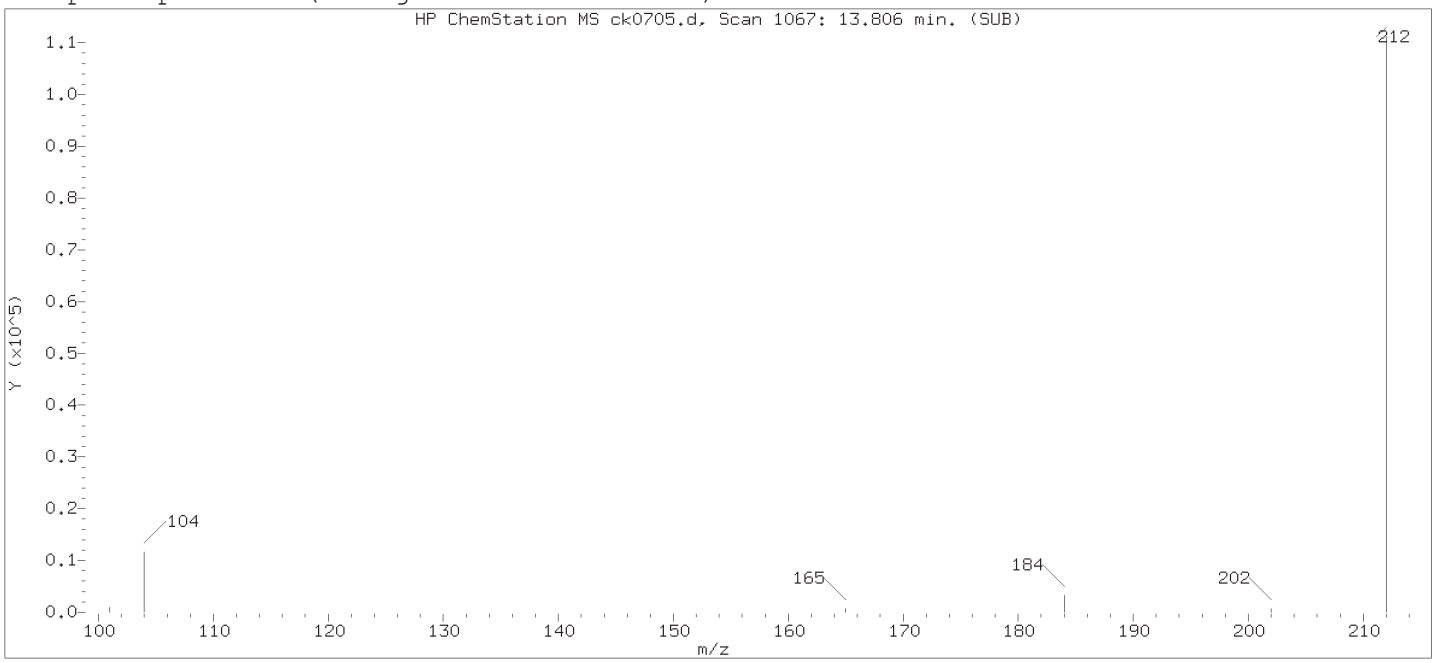
Compound Number : 36
Compound Name : Fluoranthene-d10
Scan Number : 1067
Retention Time (minutes) : 13.806
Quant Ion : 212.00
Area (flag) : 152693M
On-column Amount (ng/ul) : 0.8315
Integration start scan : 1061 Integration stop scan: 1069
Y at integration start : 1625 Y at integration end: 1683

Reason for manual integration: improper integration

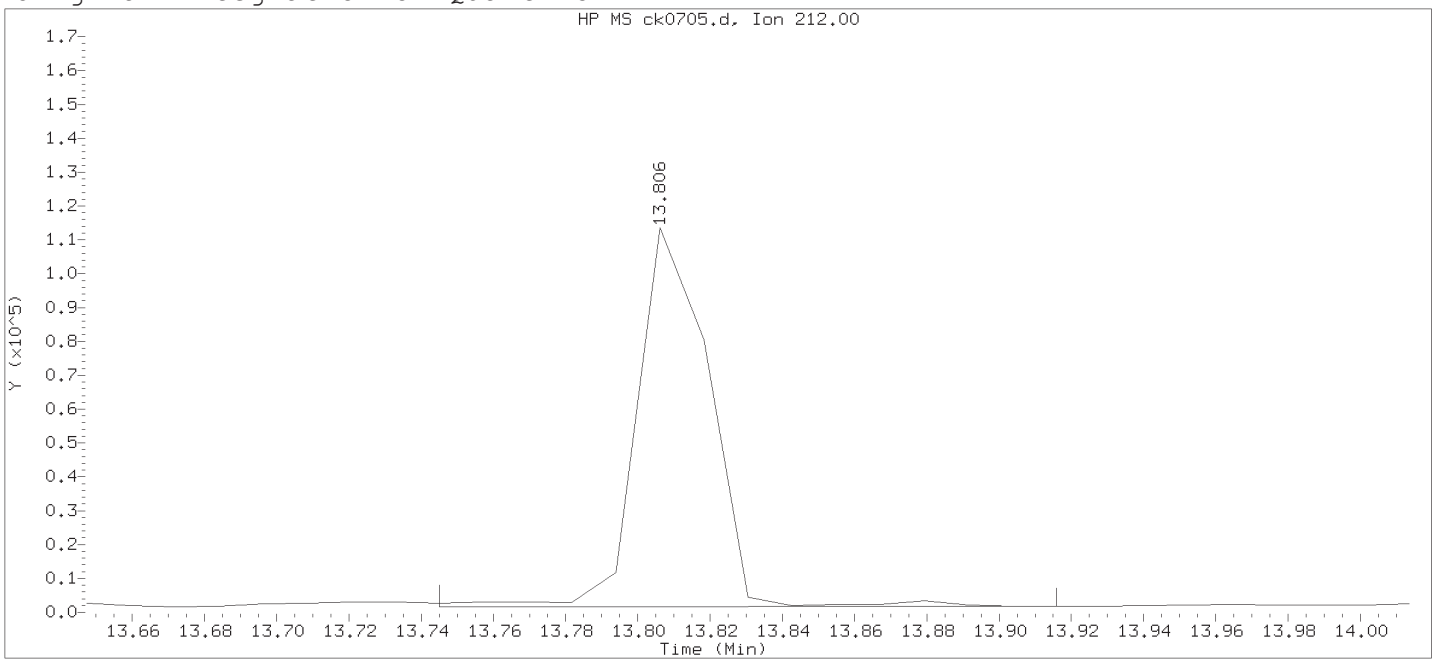
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

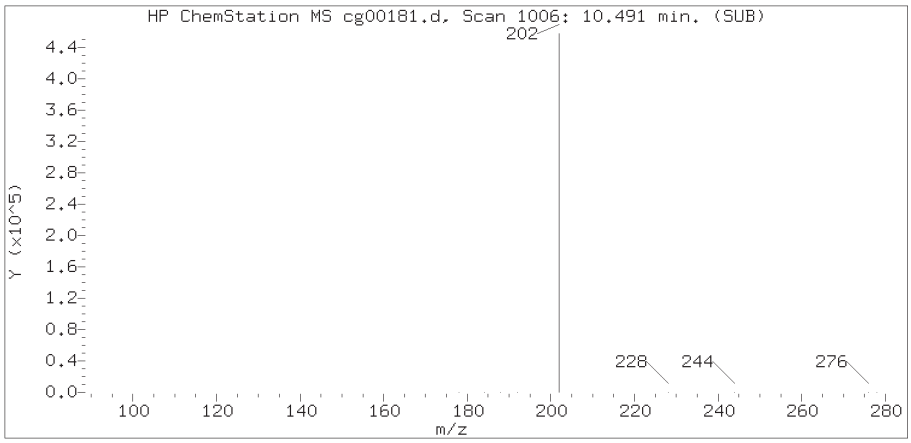
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:20 Automation

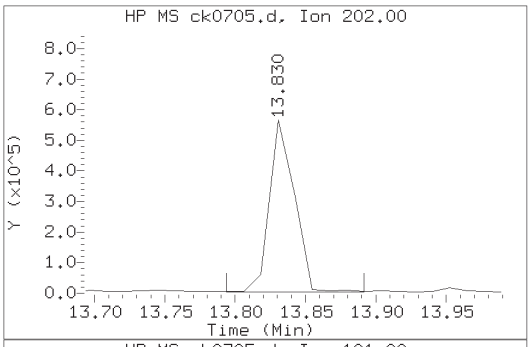
Sample Name: T1004RE Lab Sample ID: 9867766RE

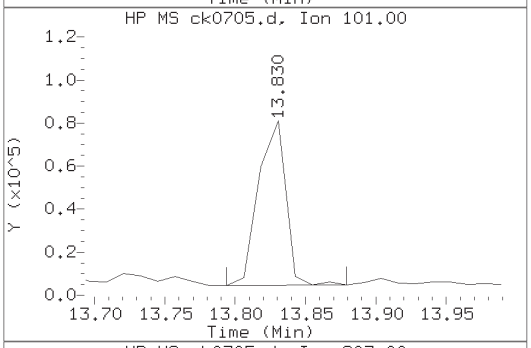
Compound Number	: 36		
Compound Name	: Fluoranthene-d10		
Scan Number	: 1067		
Retention Time (minutes)	: 13.806		
Quant Ion	: 212.00		
Area	: 154892		
On-column Amount (ng/ul)	: 0.8434		
Integration start scan	: 1061	Integration stop scan:	1075
Y at integration start	: 1625	Y at integration end:	1728

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature used 21 CFR Part 11

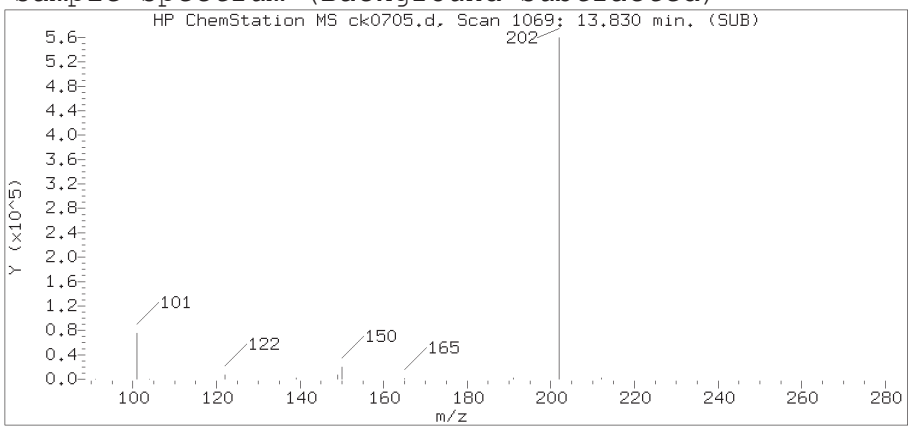
Reference Standard Spectrum for Fluoranthene

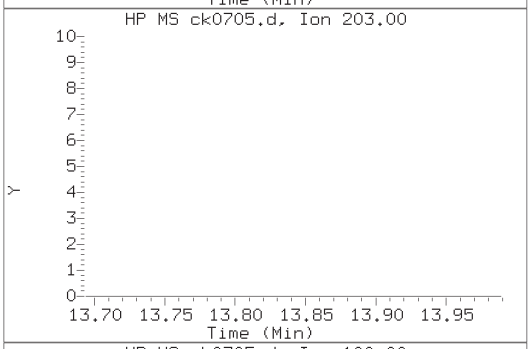




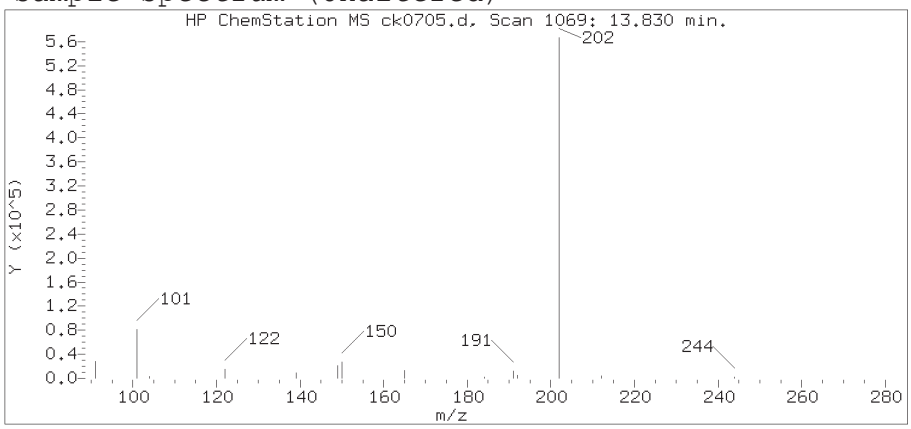


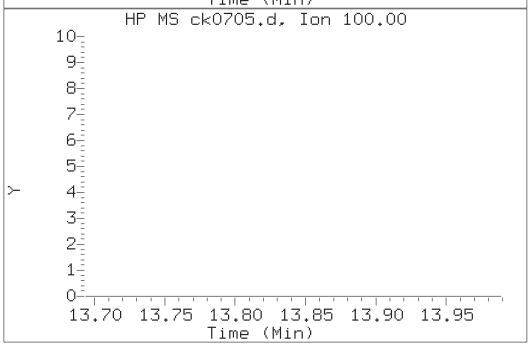
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

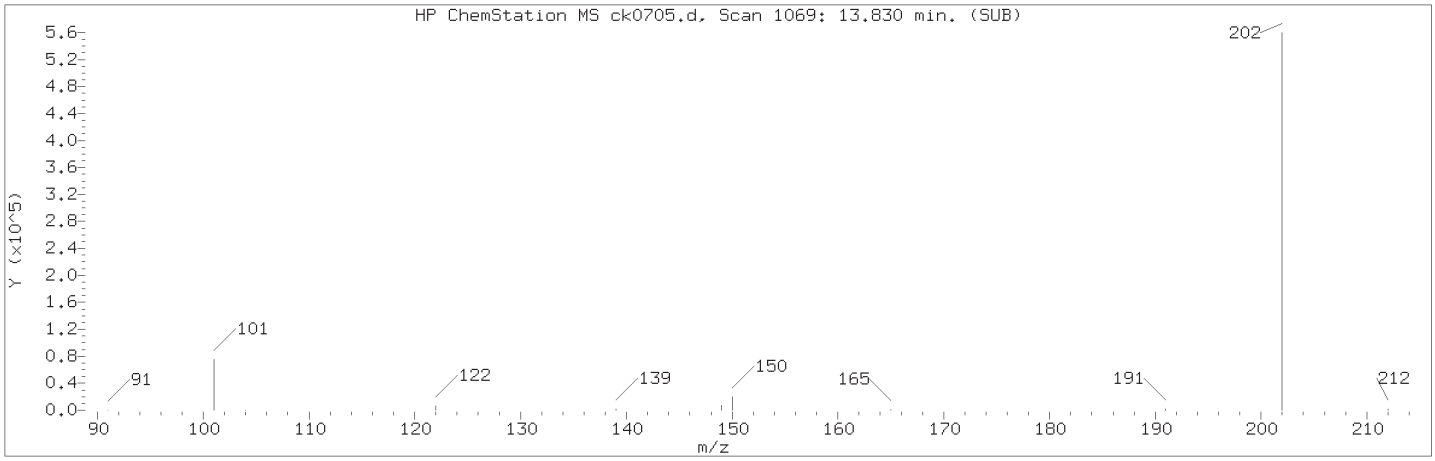
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

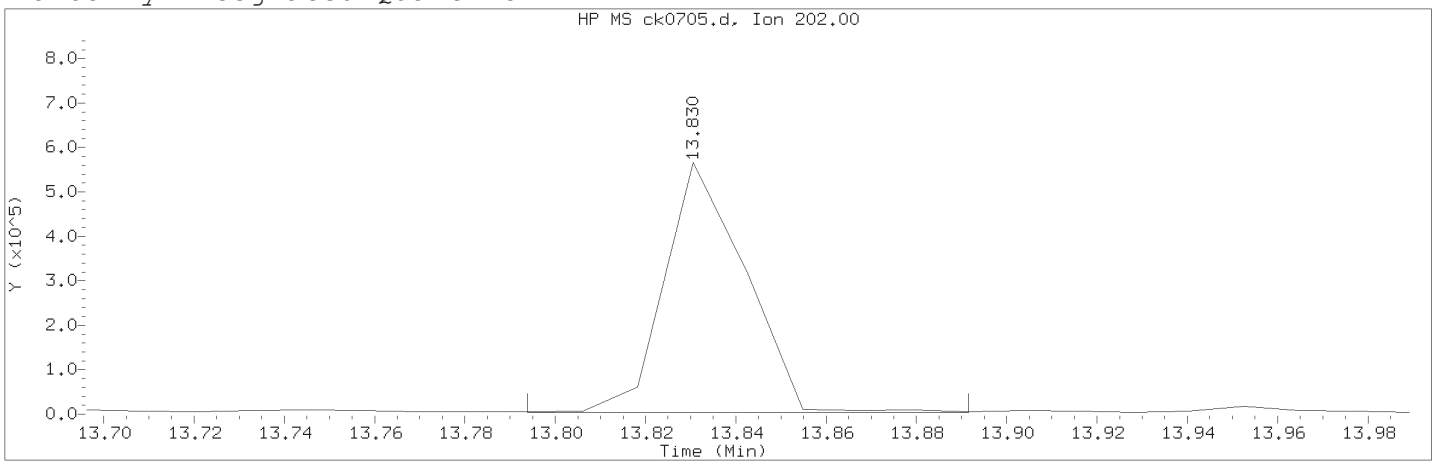
Compound Number	: 37
Compound Name	: Fluoranthene
Scan Number	: 1069
Retention Time (minutes)	: 13.830
Relative Retention Time	: 0.00103
Quant Ion	: 202.00
Area (flag)	: 699654M
On-column Amount (ng/ul)	: 2.9482

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02001

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

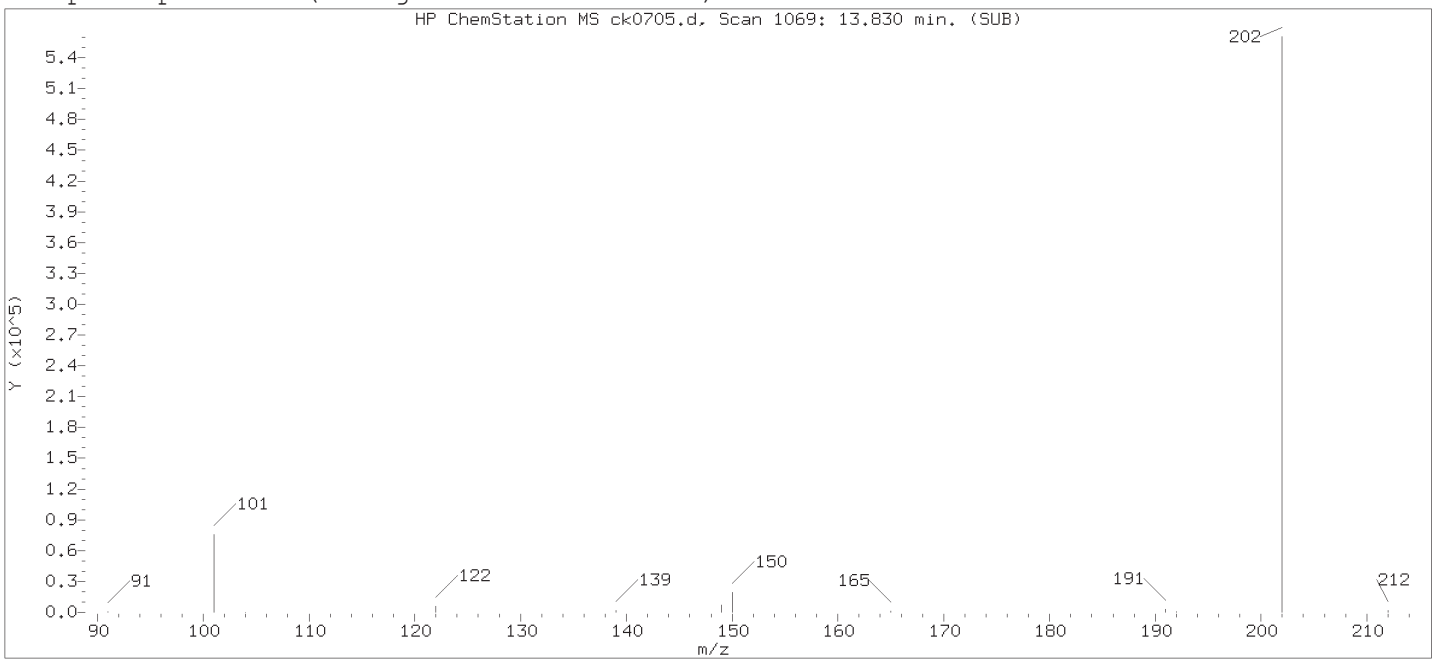
Compound Number : 37
Compound Name : Fluoranthene
Scan Number : 1069
Retention Time (minutes) : 13.830
Quant Ion : 202.00
Area (flag) : 699654M
On-column Amount (ng/ul) : 2.9482
Integration start scan : 1065 Integration stop scan: 1073
Y at integration start : 3798 Y at integration end: 3748

Reason for manual integration: improper integration

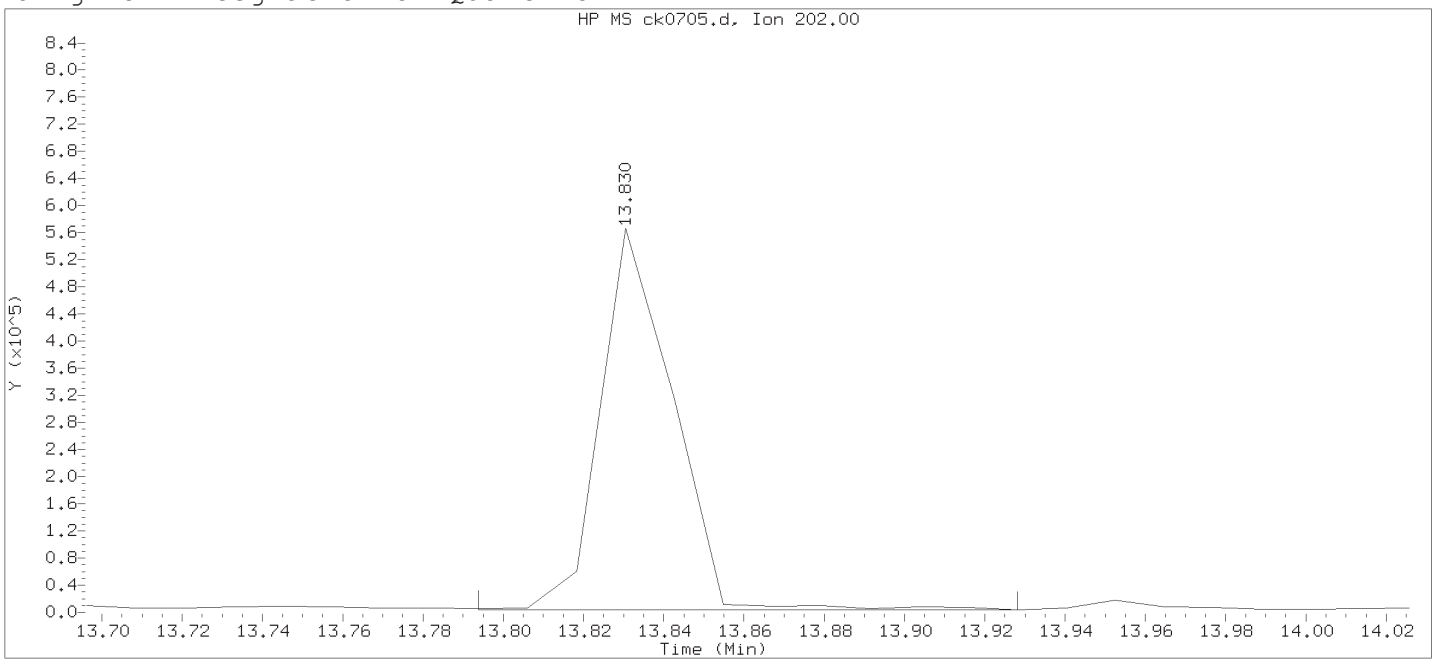
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

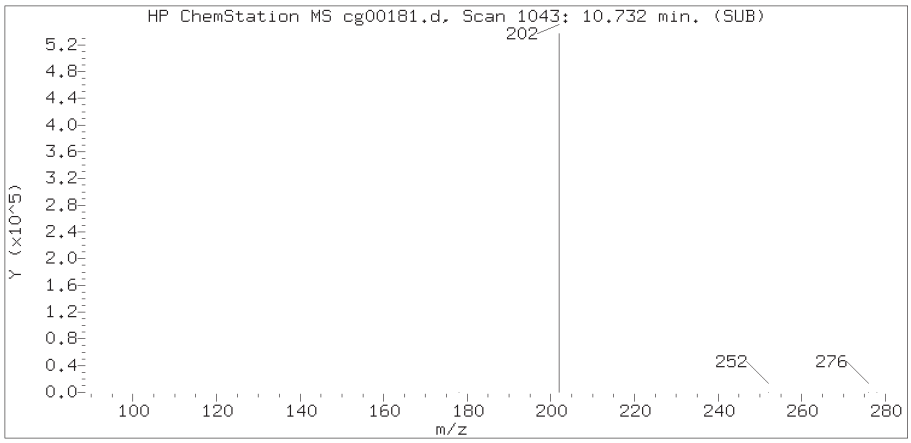
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:20 Automation

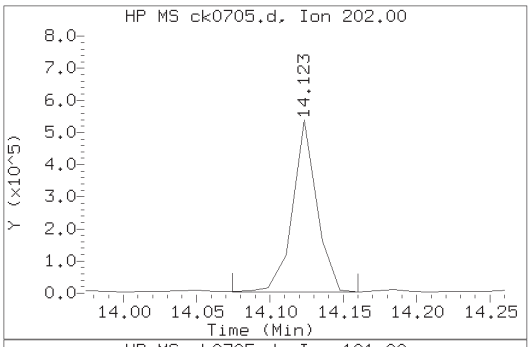
Sample Name: T1004RE Lab Sample ID: 9867766RE

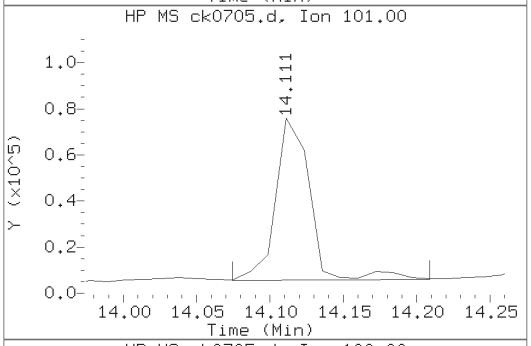
Compound Number	:	37
Compound Name	:	Fluoranthene
Scan Number	:	1069
Retention Time (minutes)	:	13.830
Quant Ion	:	202.00
Area	:	704208
On-column Amount (ng/ul)	:	2.9674
Integration start scan	:	1065 Integration stop scan: 1076
Y at integration start	:	3798 Y at integration end: 3728

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs0002

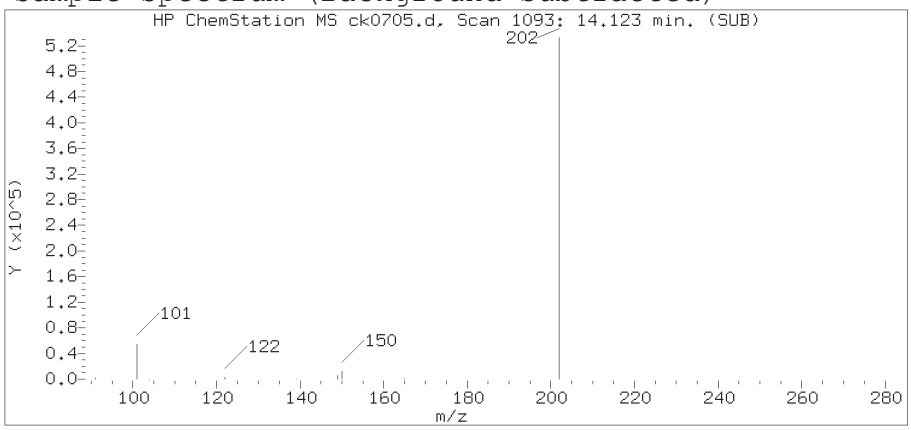
Reference Standard Spectrum for Pyrene

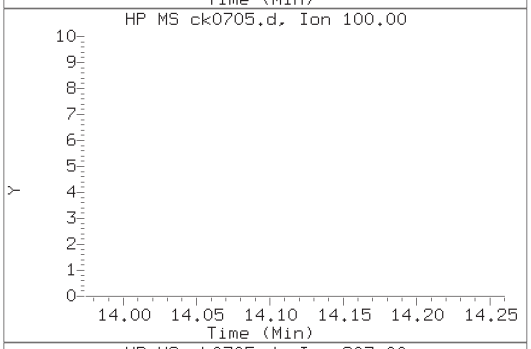




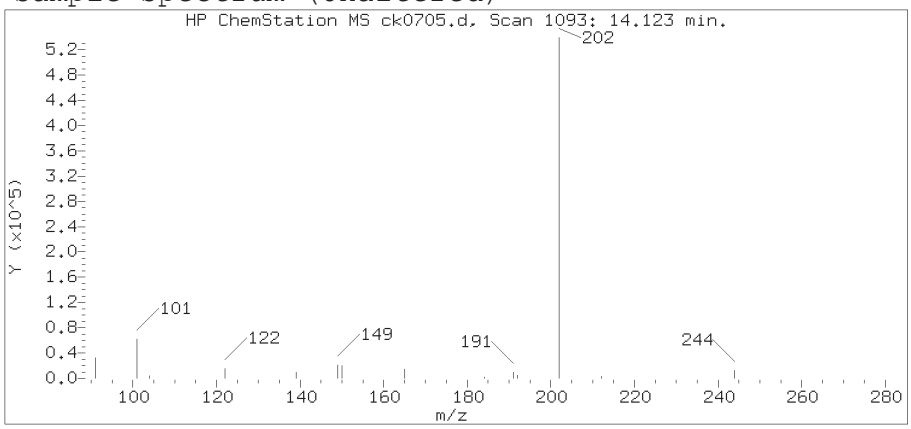


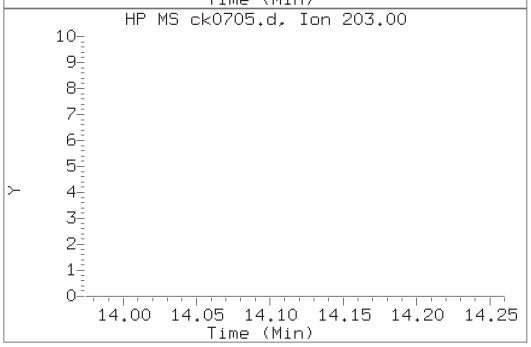
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

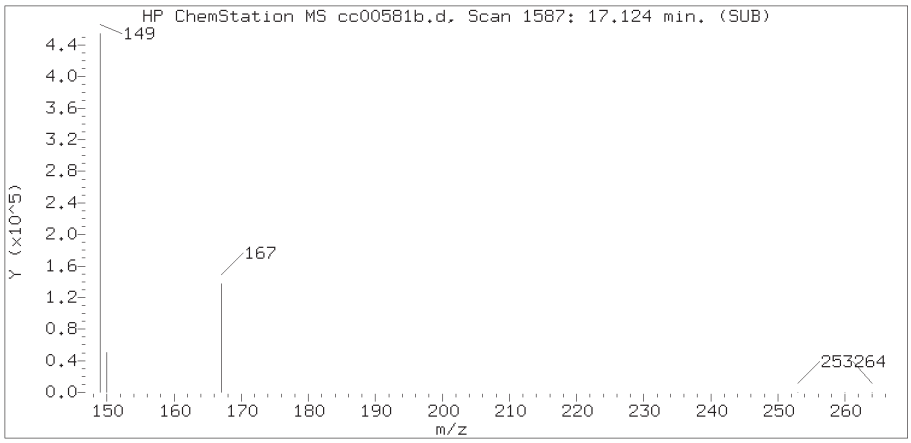
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

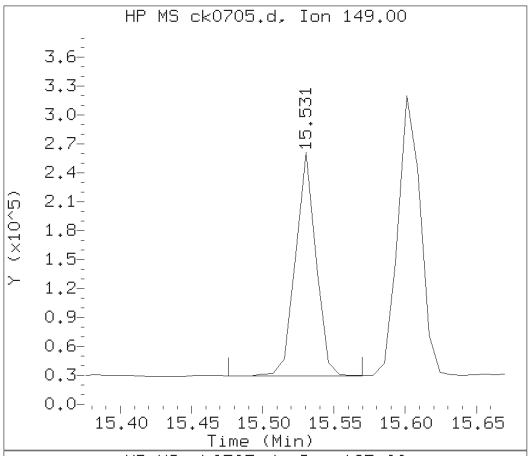
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 39
Compound Name	: Pyrene
Scan Number	: 1093
Retention Time (minutes)	: 14.123
Relative Retention Time	: 0.00090
Quant Ion	: 202.00
Area (flag)	: 608593
On-column Amount (ng/ul)	: 2.7973

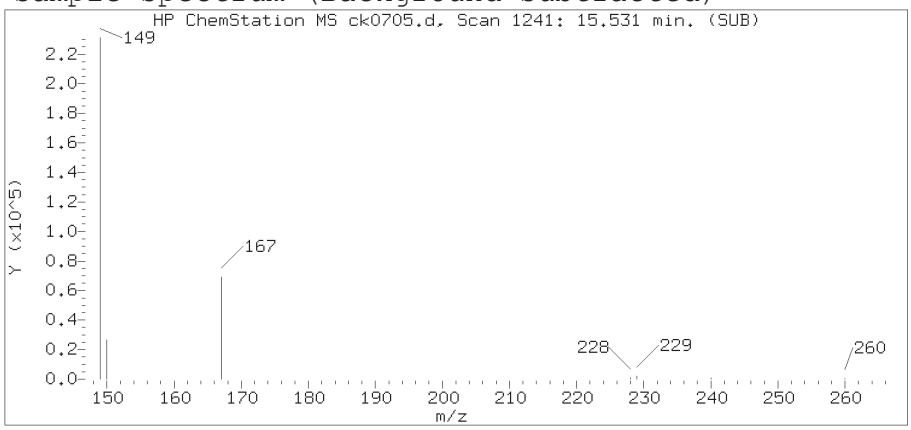
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02001

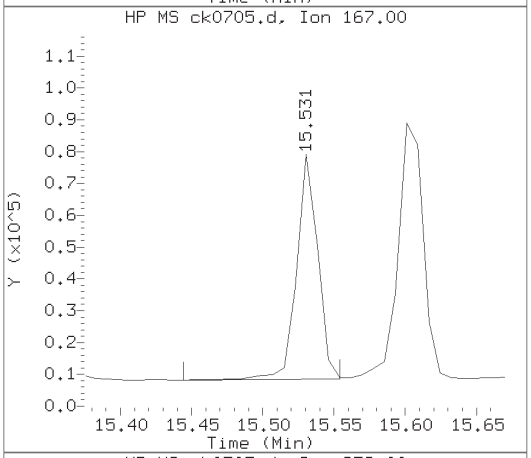
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



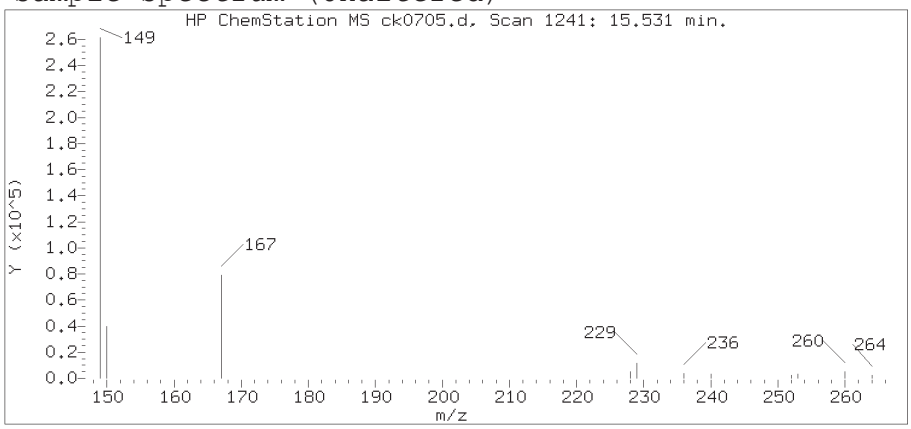


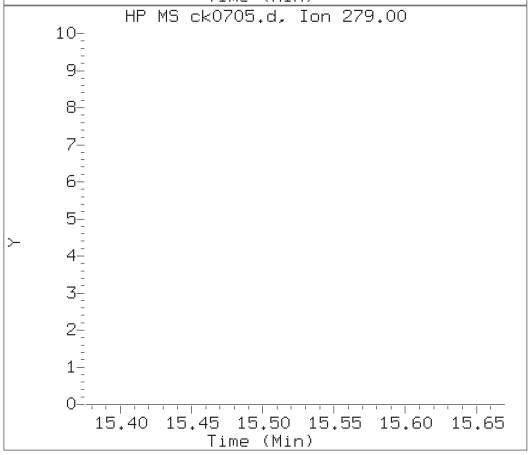
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

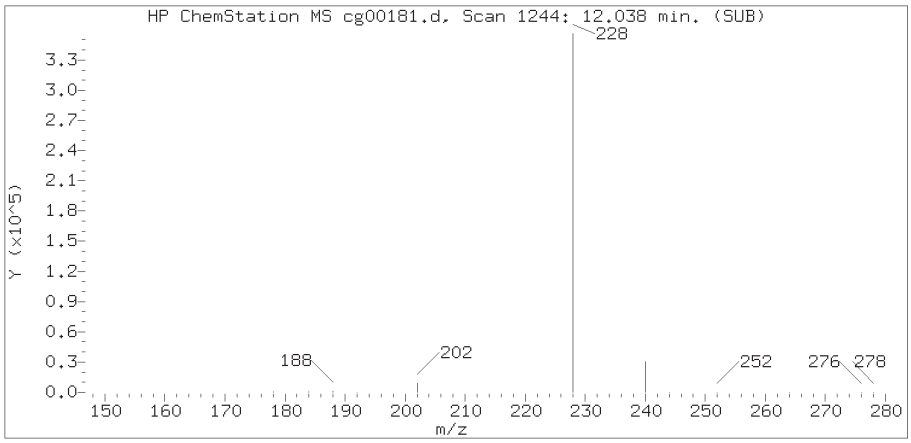
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

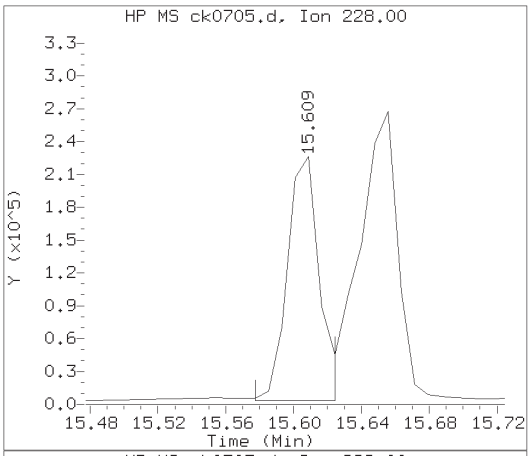
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 41
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1241
Retention Time (minutes)	: 15.531
Relative Retention Time	: 0.00050
Quant Ion	: 149.00
Area (flag)	: 233833
On-column Amount (ng/ul)	: 1.5845

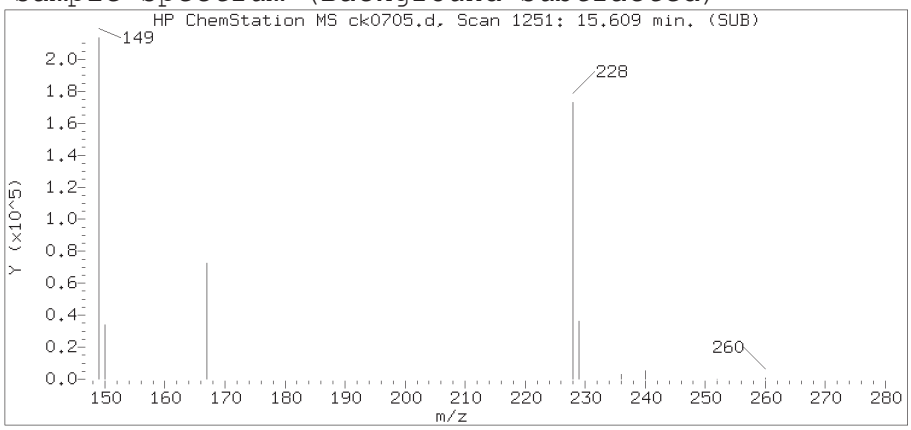
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02001

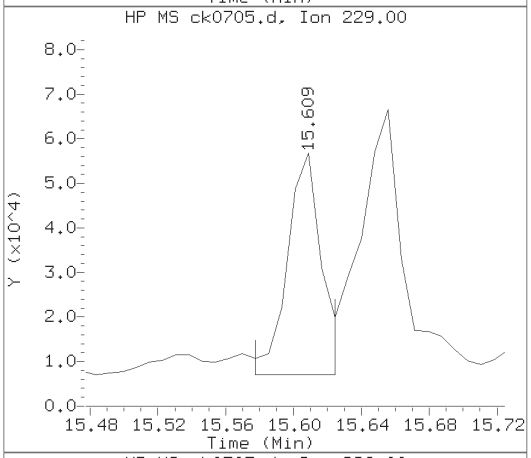
Reference Standard Spectrum for Benzo(a)anthracene



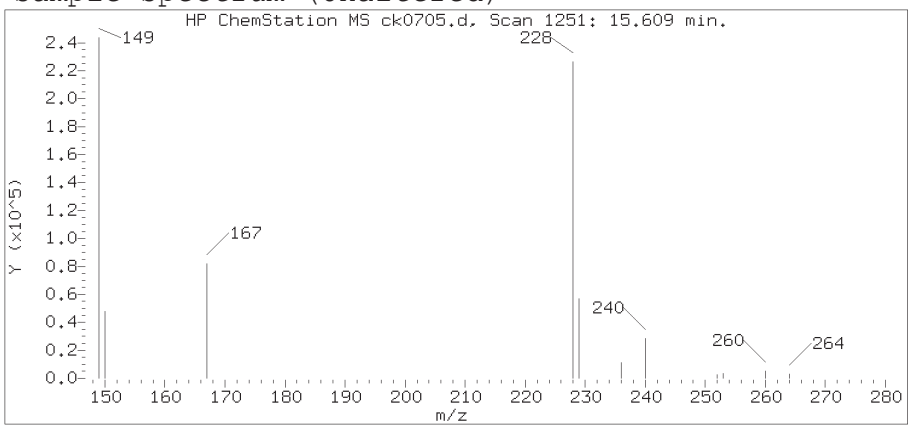


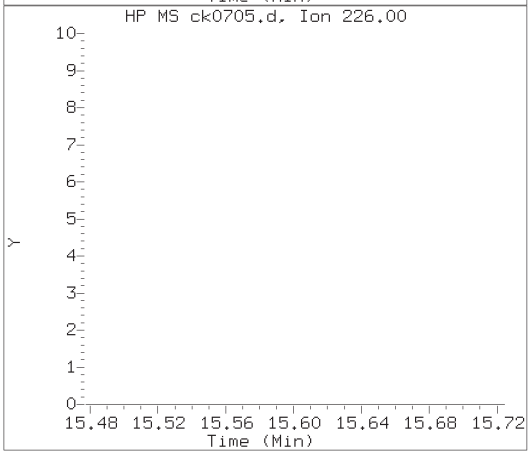
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

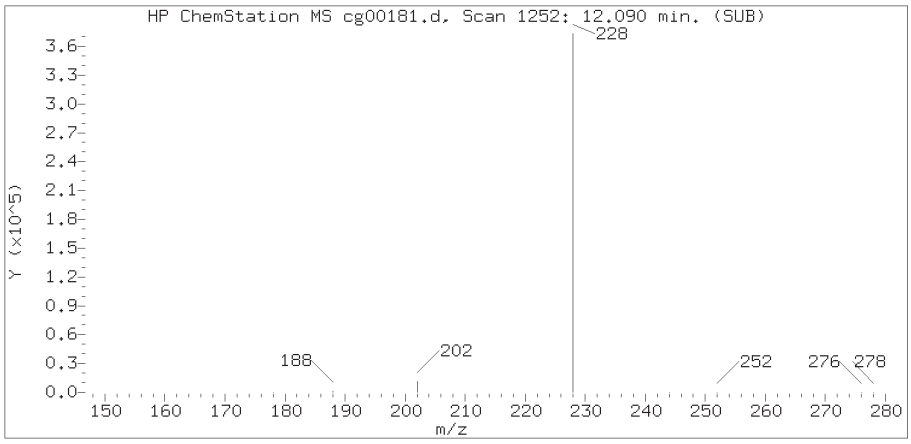
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

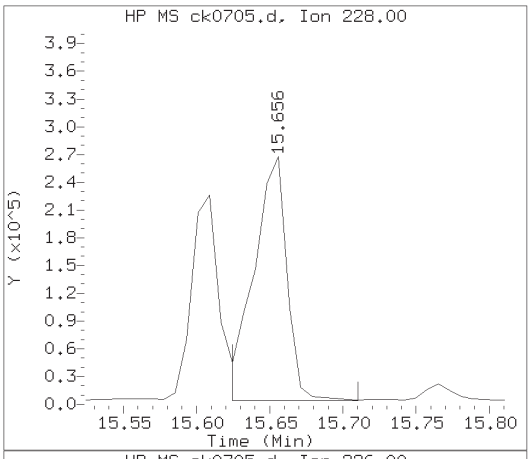
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 42
Compound Name	: Benzo(a)anthracene
Scan Number	: 1251
Retention Time (minutes)	: 15.609
Relative Retention Time	:-0.00000
Quant Ion	: 228.00
Area (flag)	: 285987
On-column Amount (ng/ul)	: 1.6324

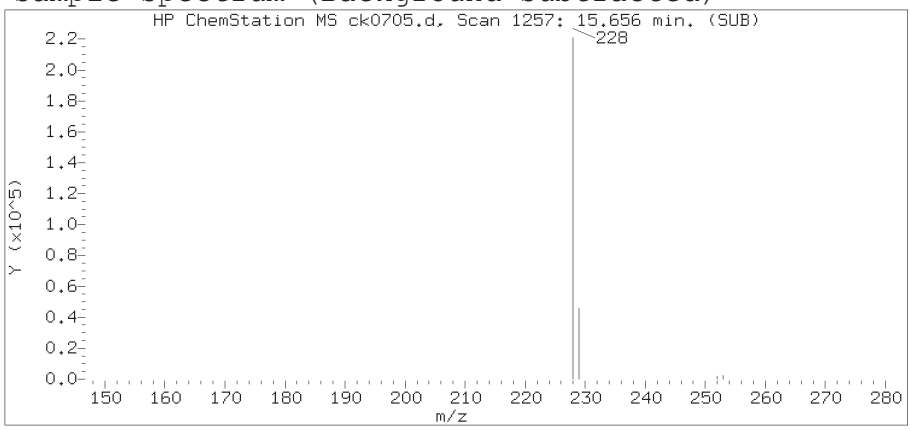
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02001

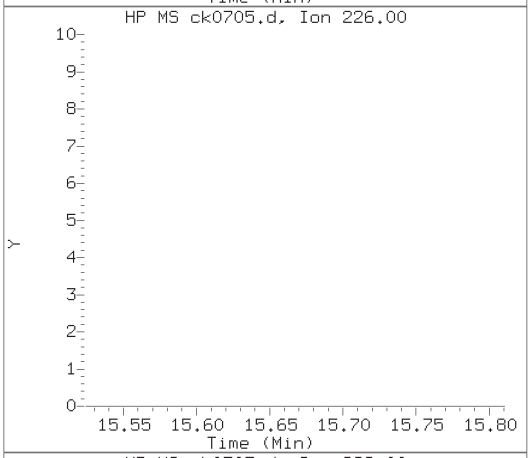
Reference Standard Spectrum for Chrysene



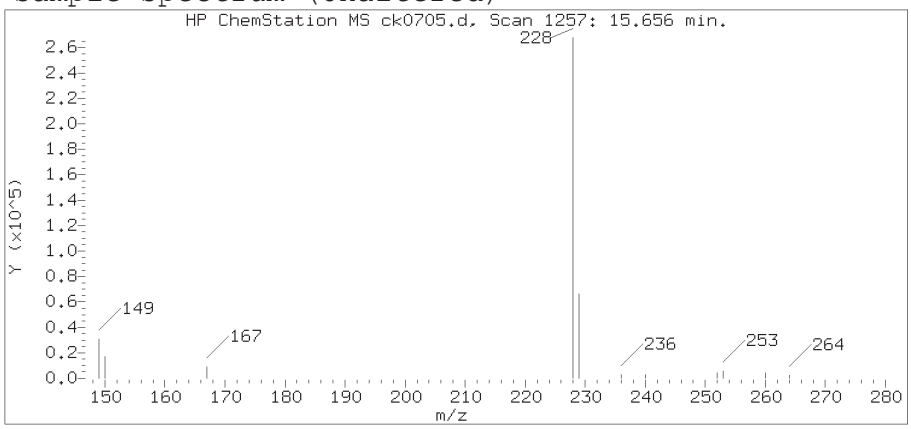


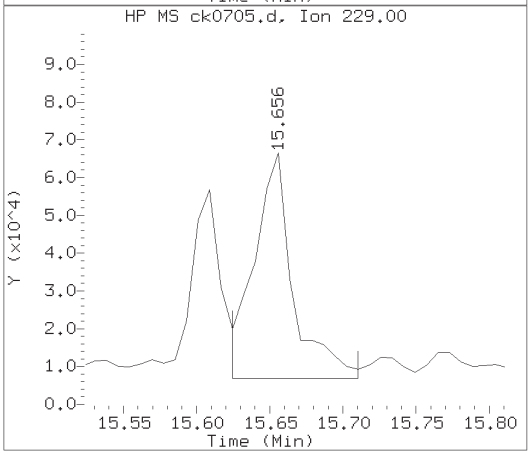
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

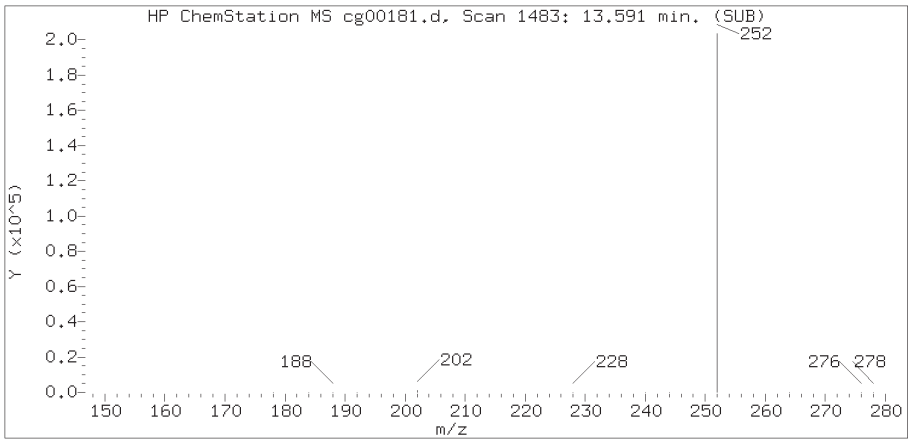
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

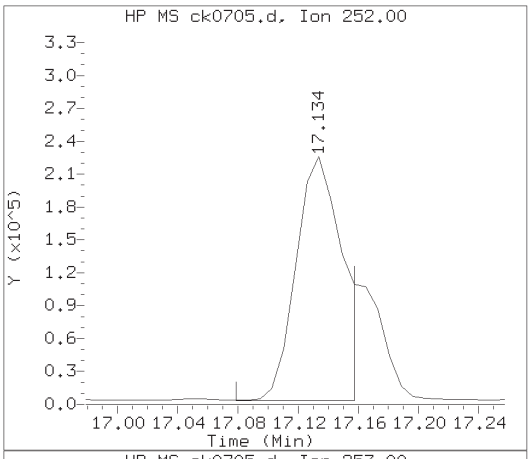
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 44
Compound Name	: Chrysene
Scan Number	: 1257
Retention Time (minutes)	: 15.656
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 414256
On-column Amount (ng/ul)	: 2.3079

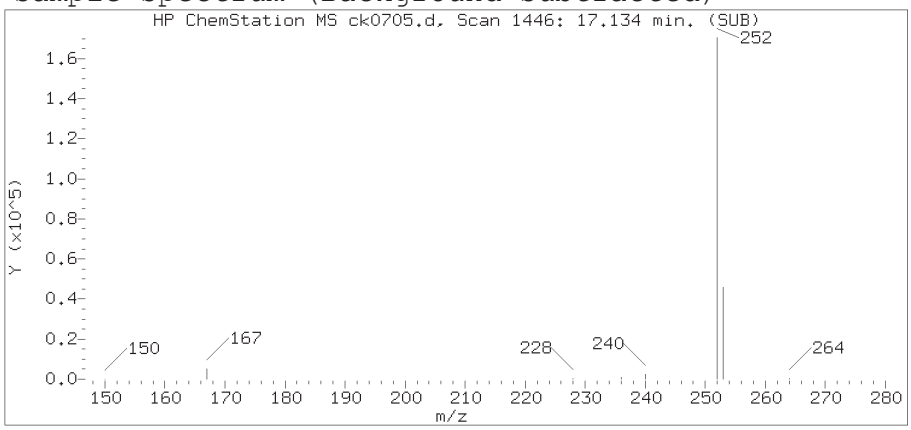
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02001

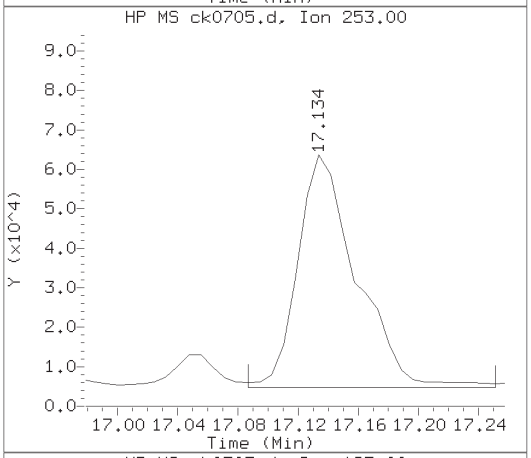
Reference Standard Spectrum for Benzo(b)fluoranthene



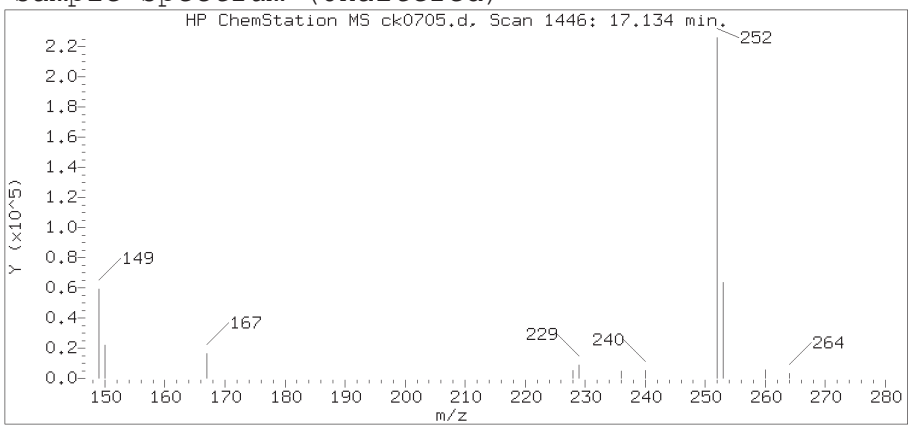


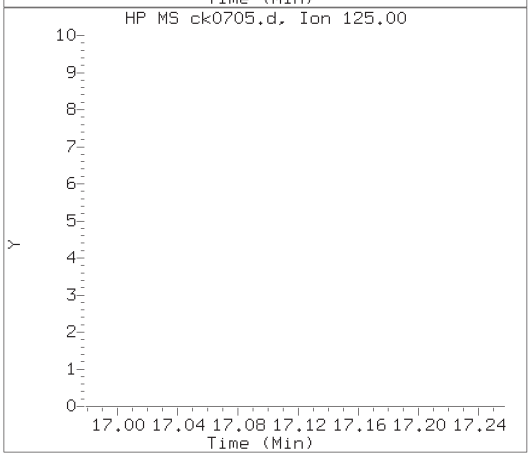
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

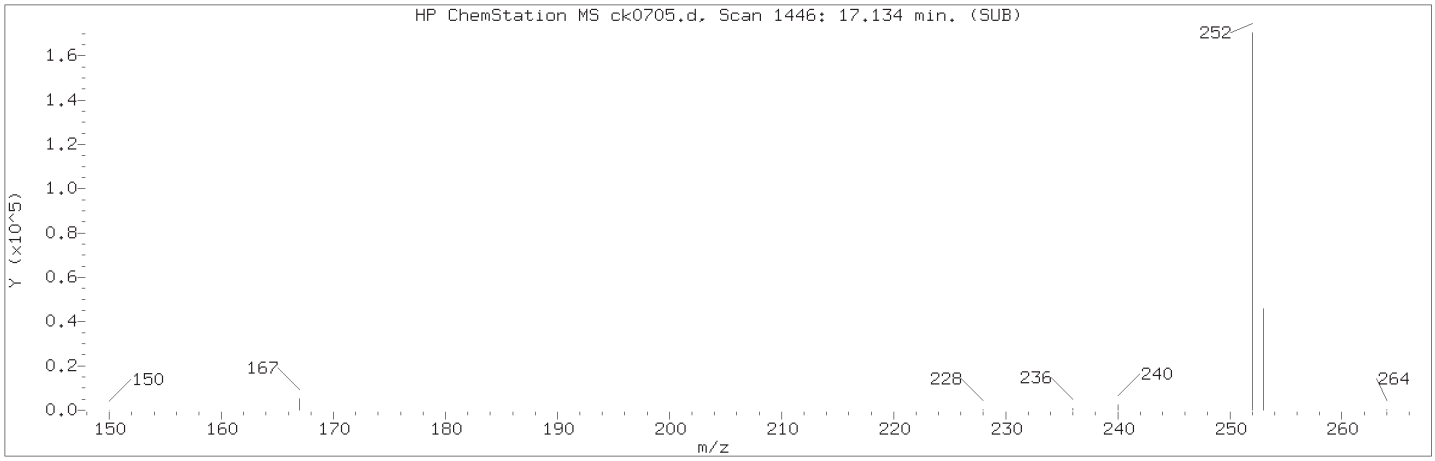
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

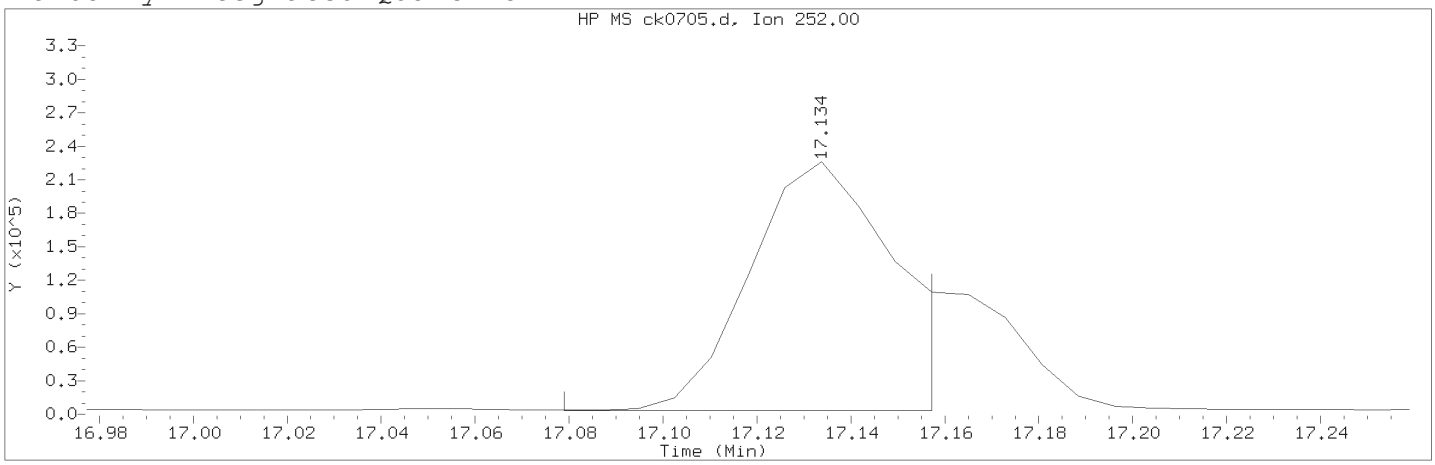
Compound Number	: 46
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1446
Retention Time (minutes)	: 17.134
Relative Retention Time	:-0.00008
Quant Ion	: 252.00
Area (flag)	: 483162M
On-column Amount (ng/ul)	: 3.7088

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

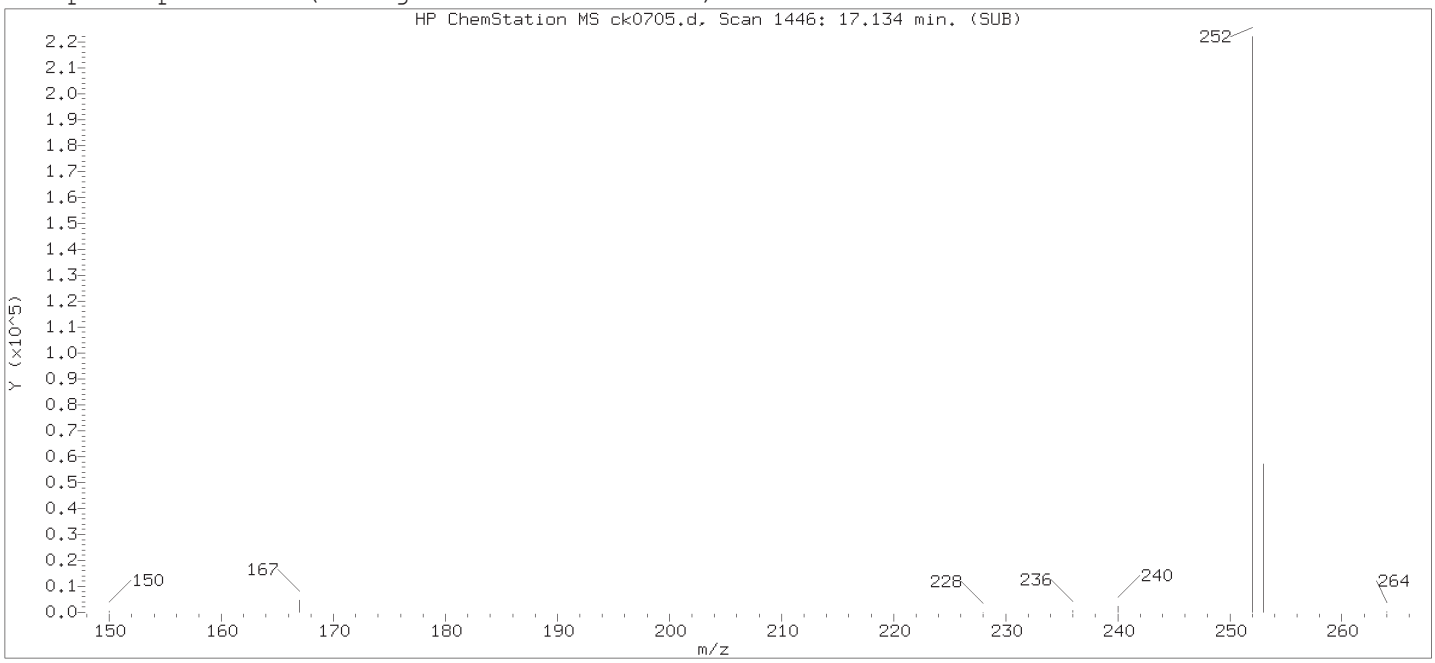
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1446
Retention Time (minutes) : 17.134
Quant Ion : 252.00
Area (flag) : 483162M
On-column Amount (ng/ul) : 3.7088
Integration start scan : 1438 Integration stop scan: 1448
Y at integration start : 3103 Y at integration end: 3127

Reason for manual integration: improper integration

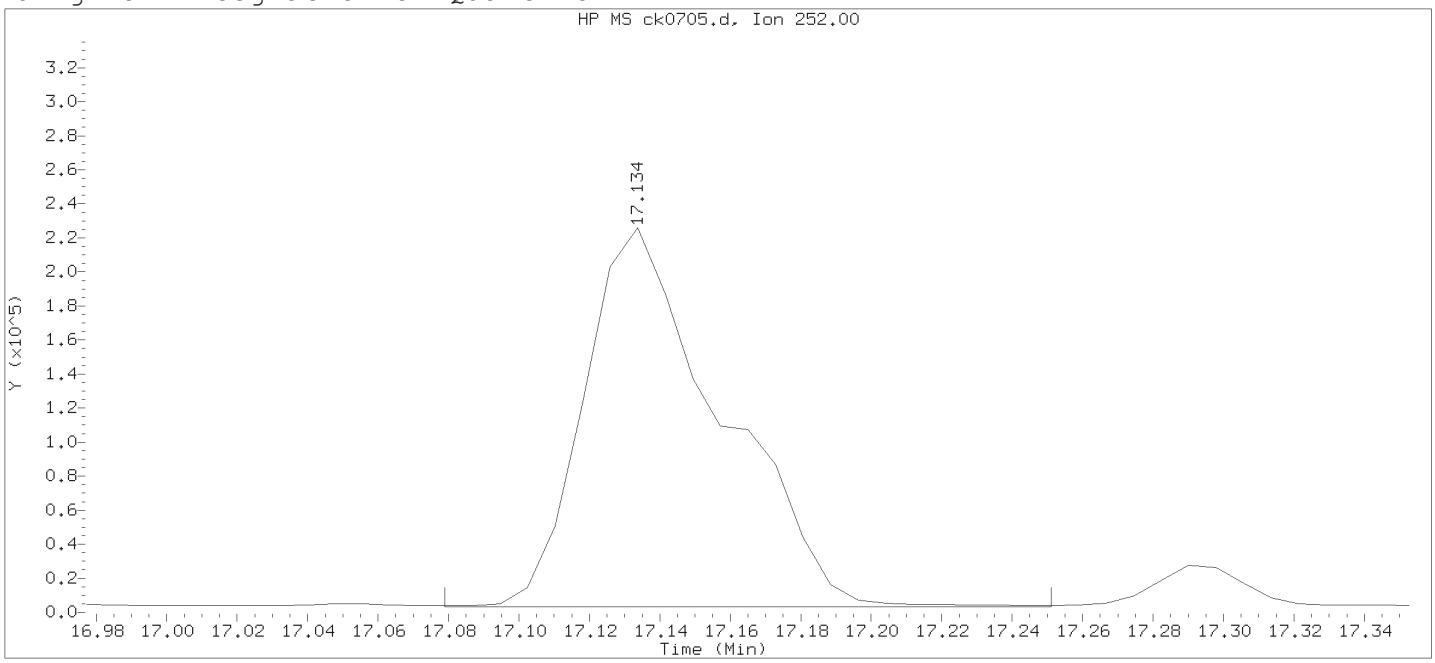
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

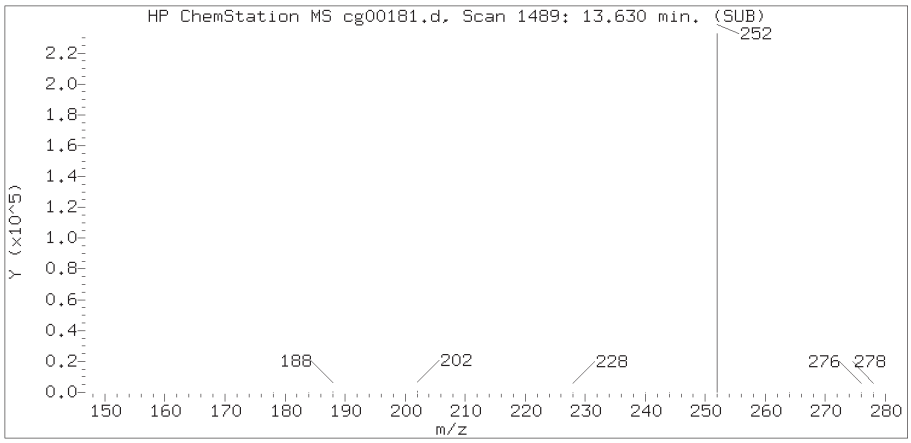
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:20 Automation

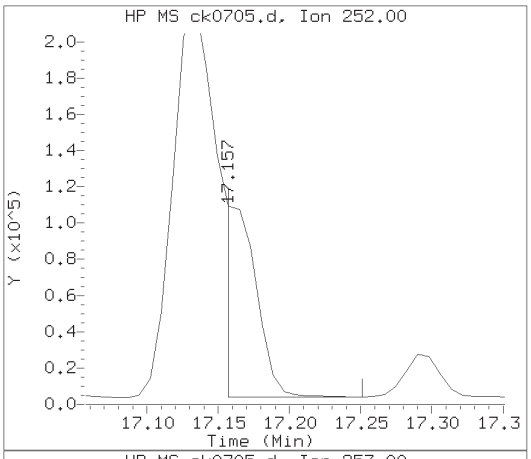
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1446
Retention Time (minutes) : 17.134
Quant Ion : 252.00
Area : 602606
On-column Amount (ng/ul) : 4.6257
Integration start scan : 1438 Integration stop scan: 1460
Y at integration start : 3103 Y at integration end: 3158

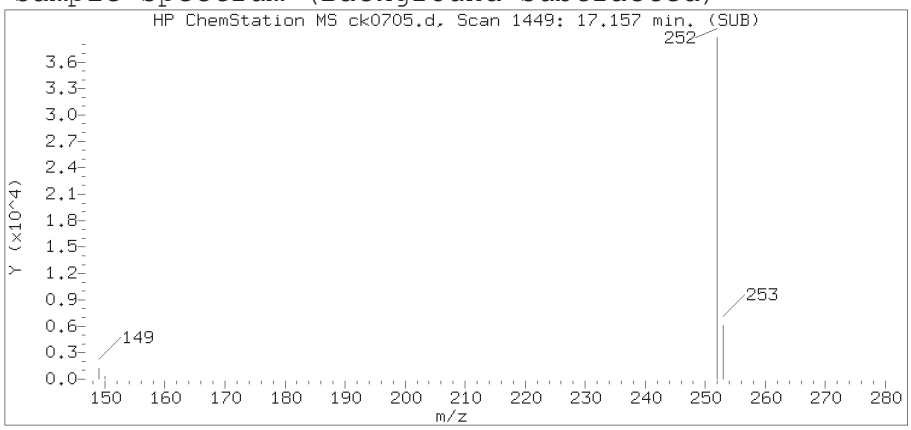
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: [illegible]

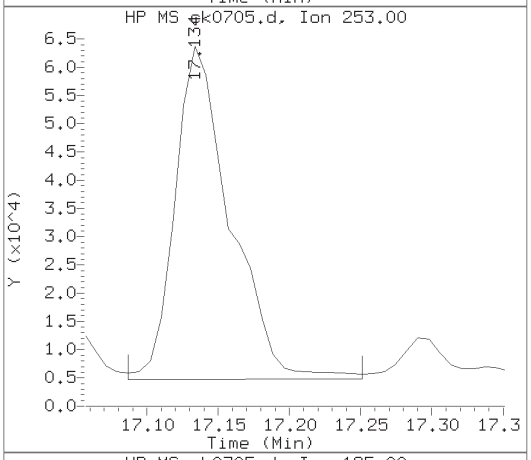
Reference Standard Spectrum for Benzo(k)fluoranthene



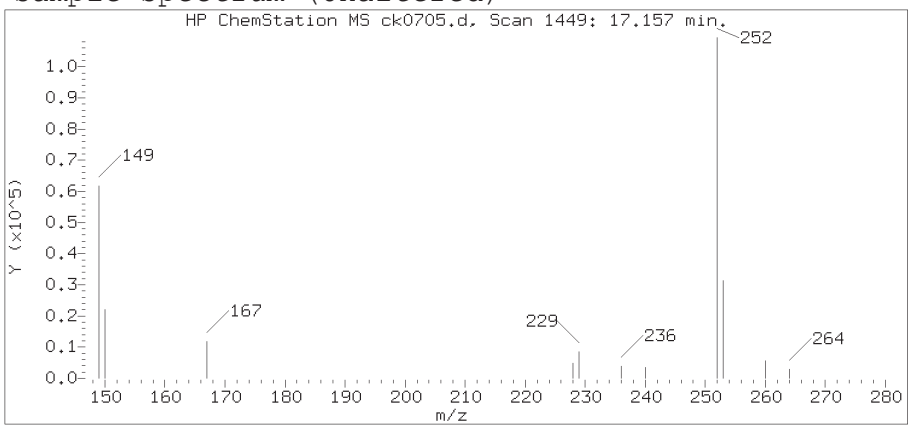


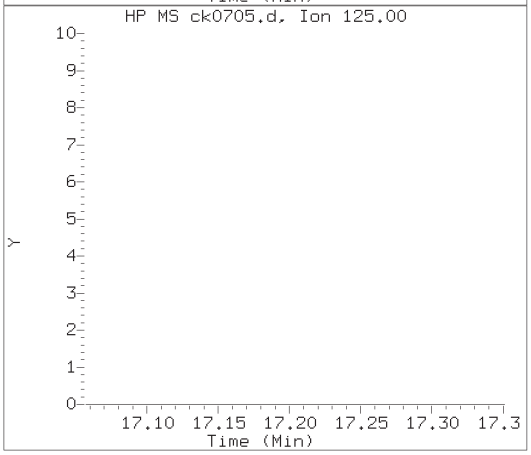
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

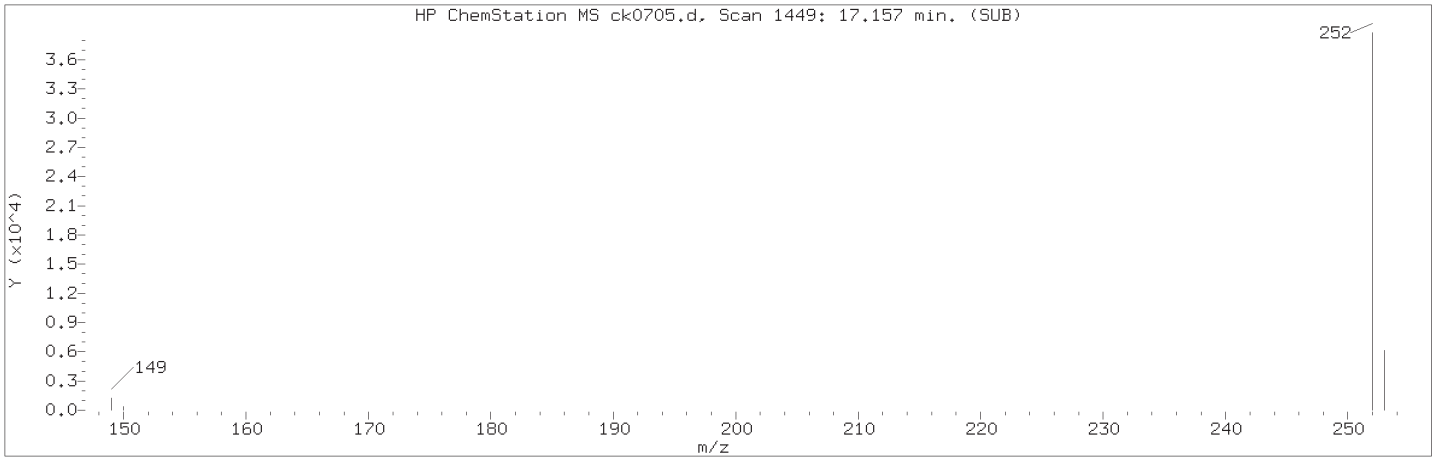
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

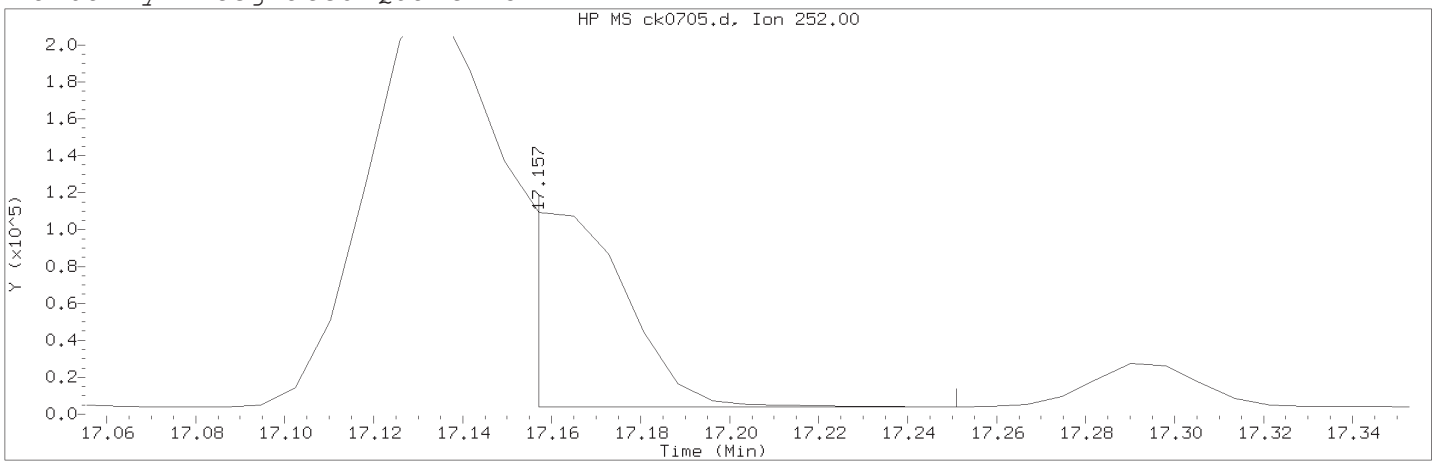
Compound Number	: 47
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1449
Retention Time (minutes)	: 17.157
Relative Retention Time	: 0.00081
Quant Ion	: 252.00
Area (flag)	: 164606M
On-column Amount (ng/ul)	: 1.1766

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

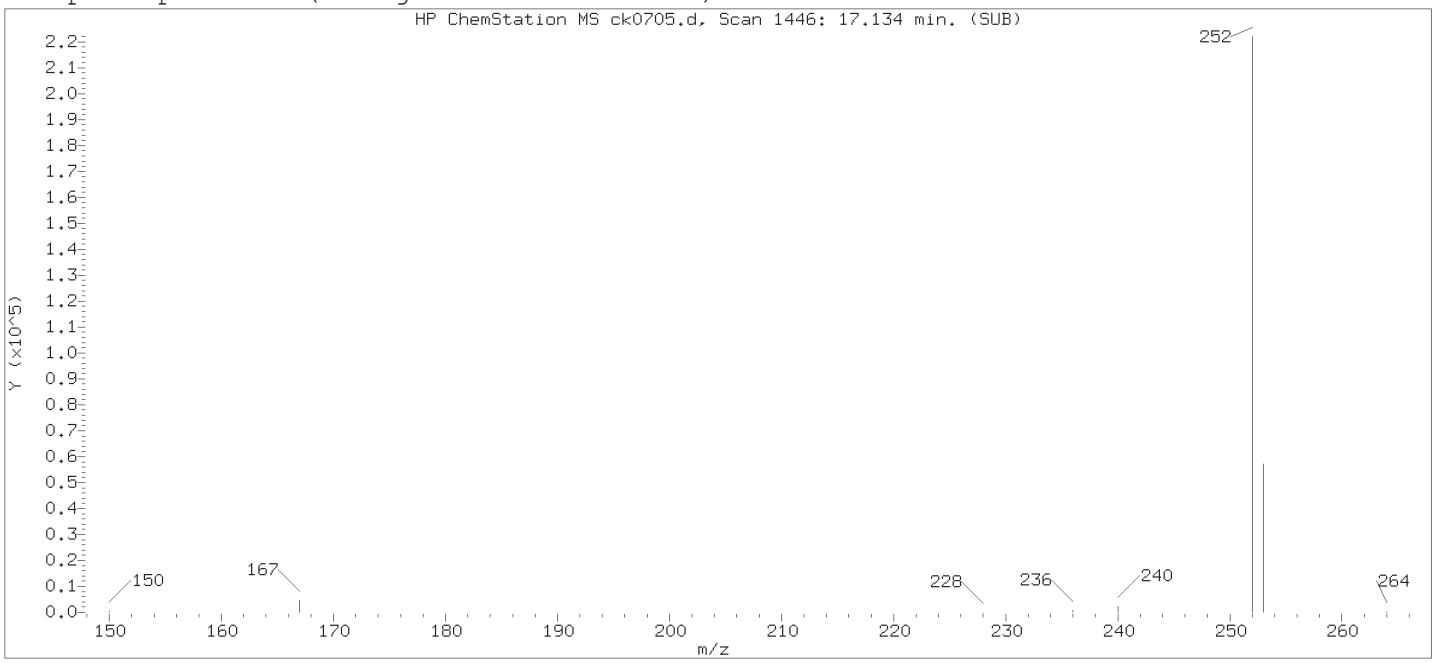
Compound Number : 47
Compound Name : Benzo(k)fluoranthene
Scan Number : 1449
Retention Time (minutes) : 17.157
Quant Ion : 252.00
Area (flag) : 164606M
On-column Amount (ng/ul) : 1.1766
Integration start scan : 1448 Integration stop scan: 1460
Y at integration start : 3970 Y at integration end: 3970

Reason for manual integration: improper integration

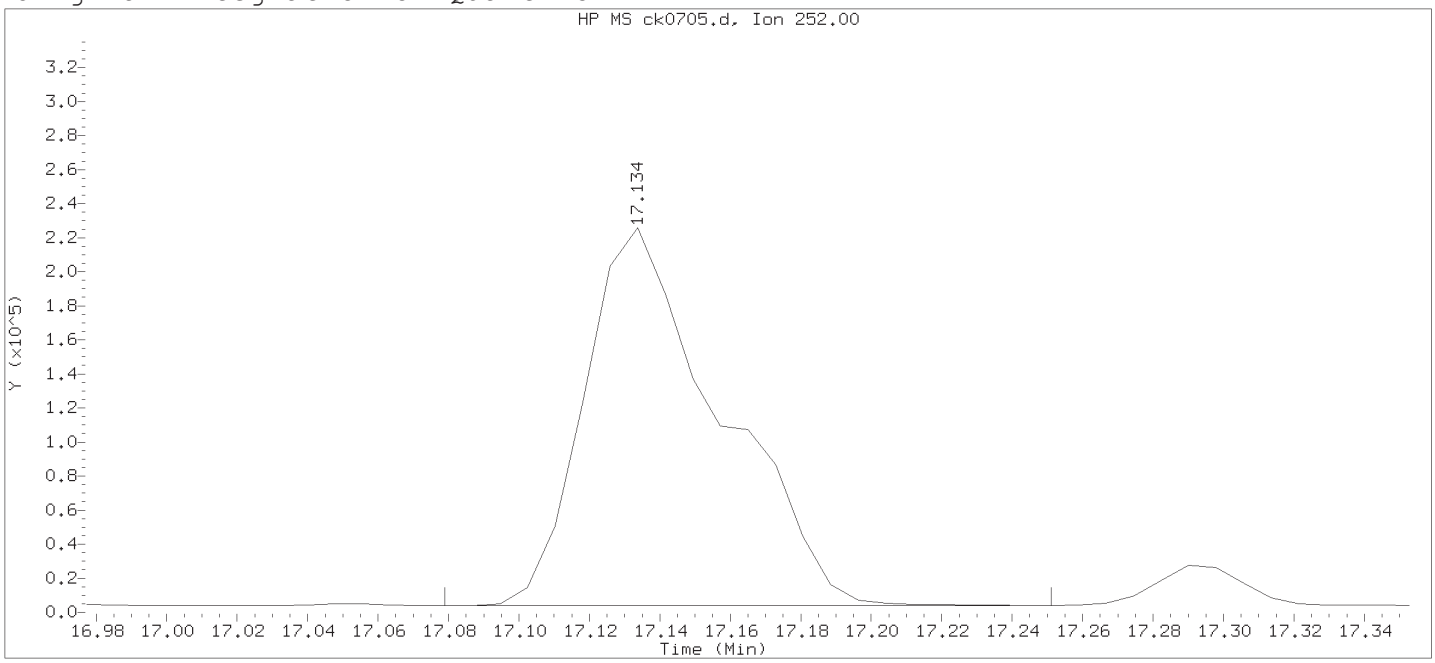
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

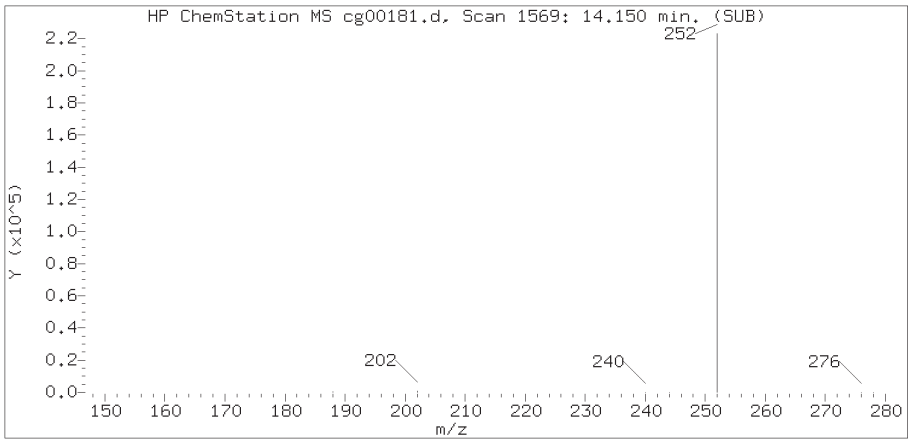
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:20 Automation

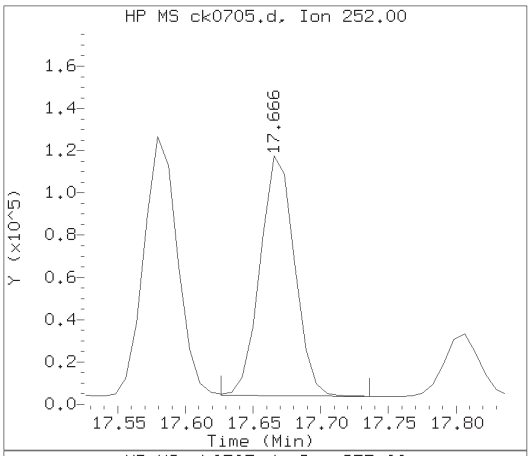
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	:	47
Compound Name	:	Benzo(k)fluoranthene
Scan Number	:	1446
Retention Time (minutes)	:	17.134
Quant Ion	:	252.00
Area	:	594647
On-column Amount (ng/ul)	:	4.2506
Integration start scan	:	1438 Integration stop scan: 1460
Y at integration start	:	3770 Y at integration end: 4033

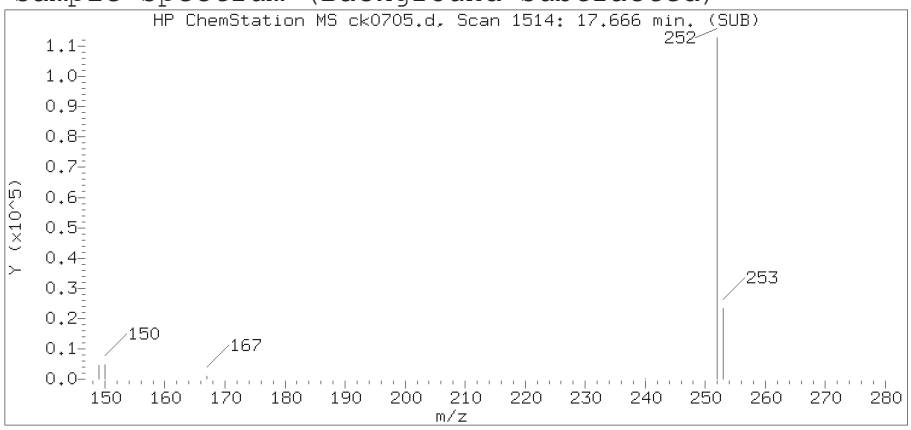
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: [illegible]

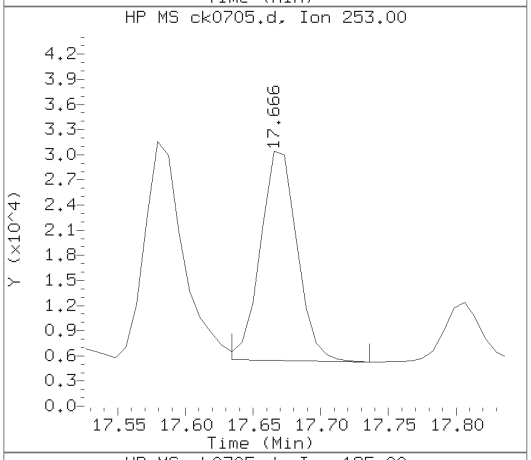
Reference Standard Spectrum for Benzo(a)pyrene



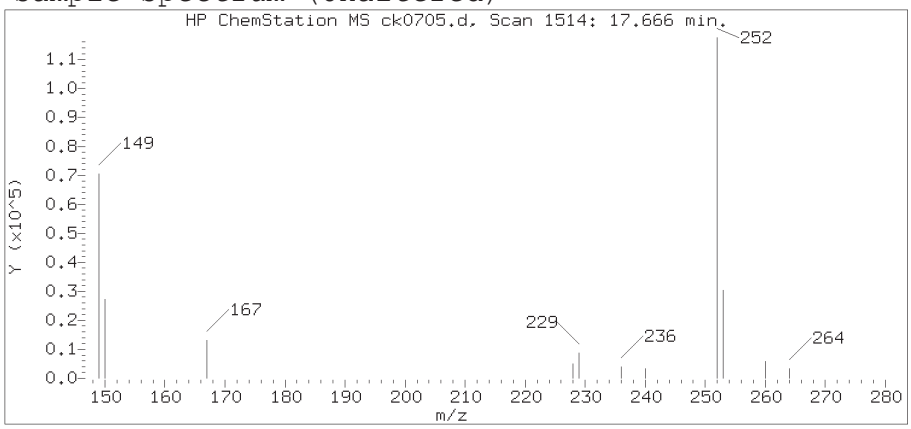


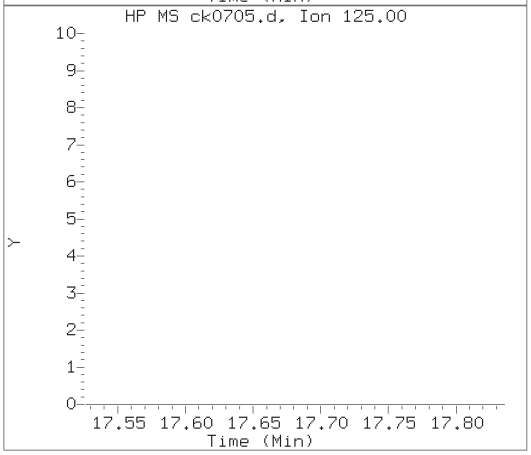
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

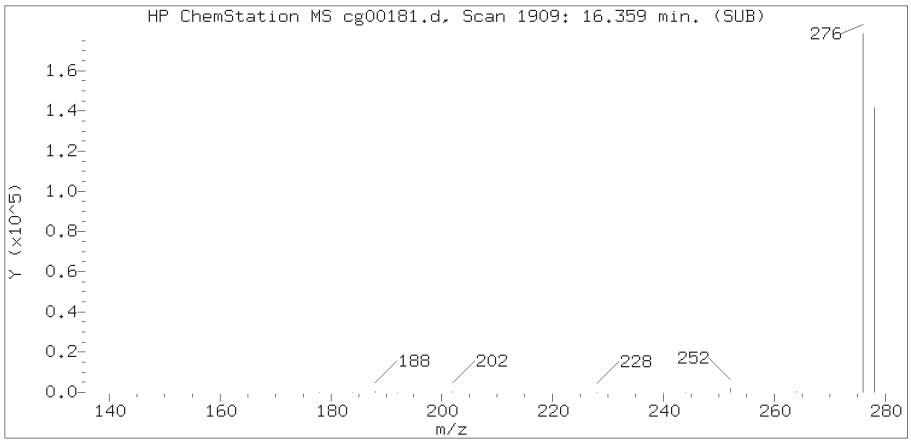
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

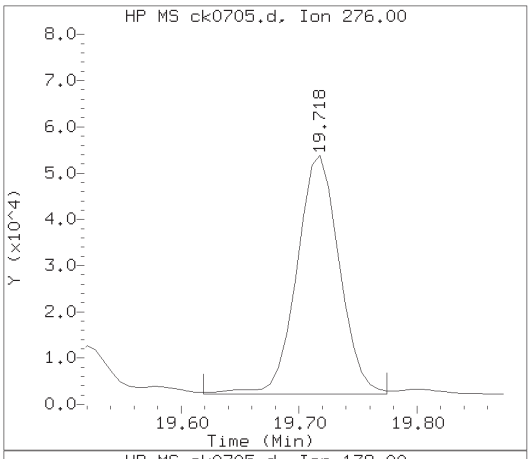
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 50
Compound Name	: Benzo(a)pyrene
Scan Number	: 1514
Retention Time (minutes)	: 17.666
Relative Retention Time	:-0.00001
Quant Ion	: 252.00
Area (flag)	: 200576
On-column Amount (ng/ul)	: 1.6876

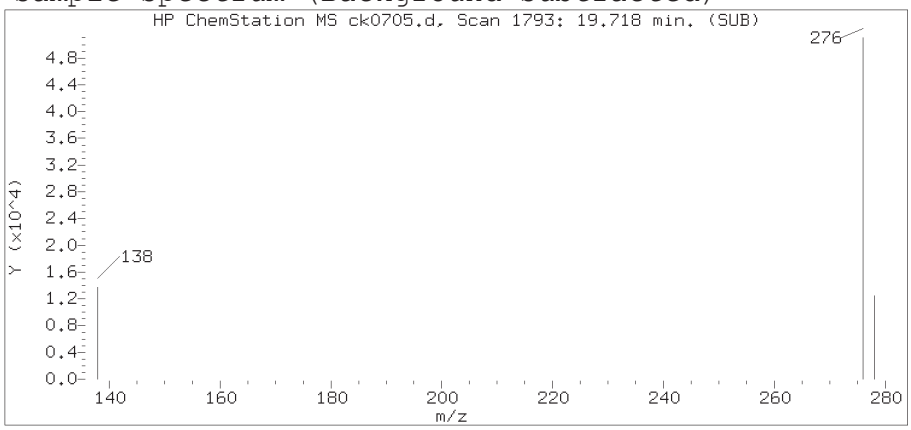
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

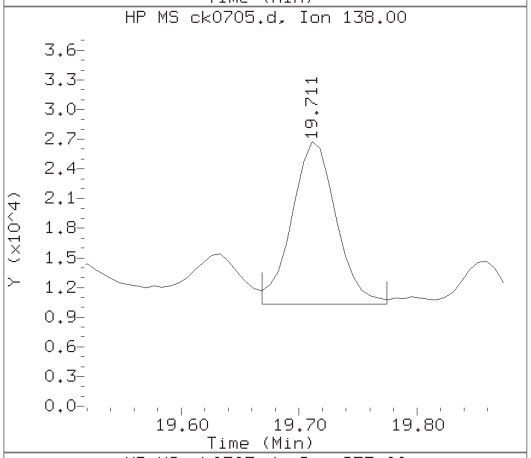
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



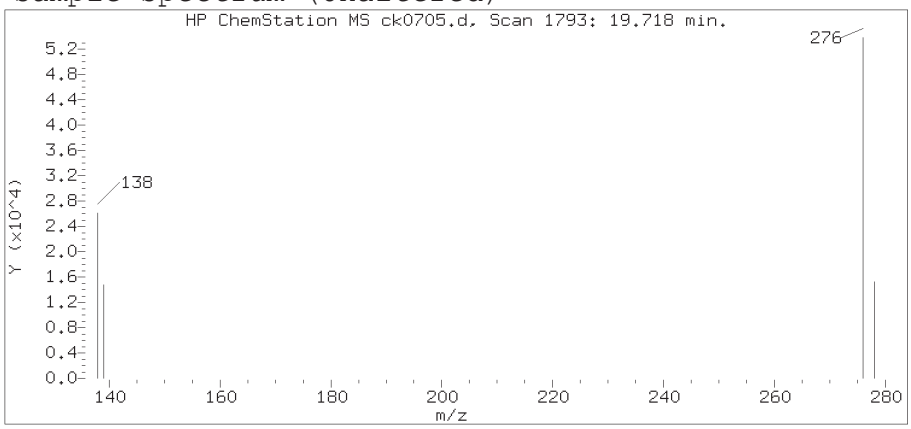


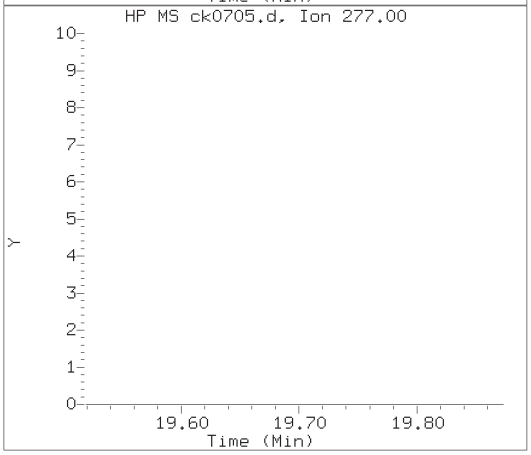
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

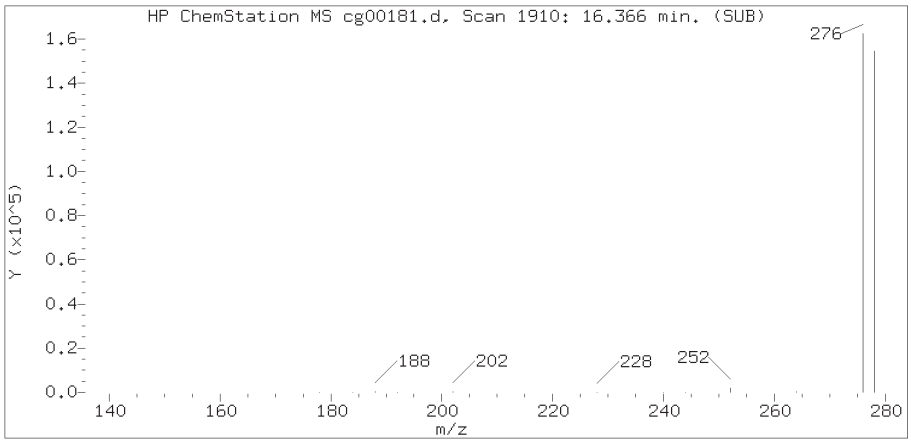
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

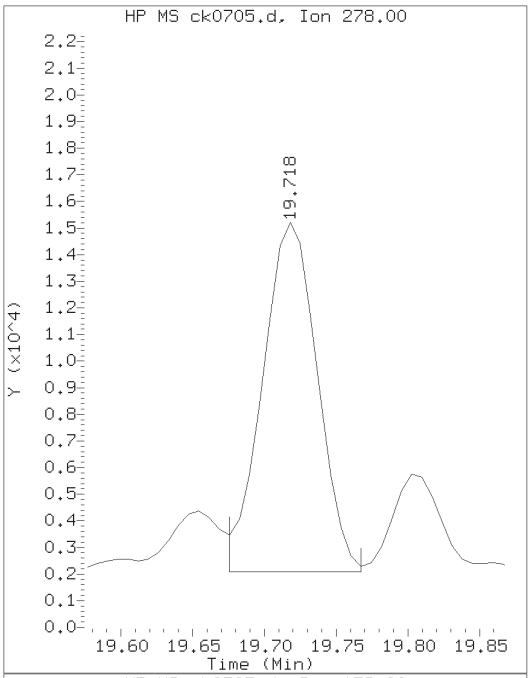
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 53
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 1793
Retention Time (minutes)	: 19.718
Relative Retention Time	:-0.00153
Quant Ion	: 276.00
Area (flag)	: 129565
On-column Amount (ng/ul)	: 1.0990

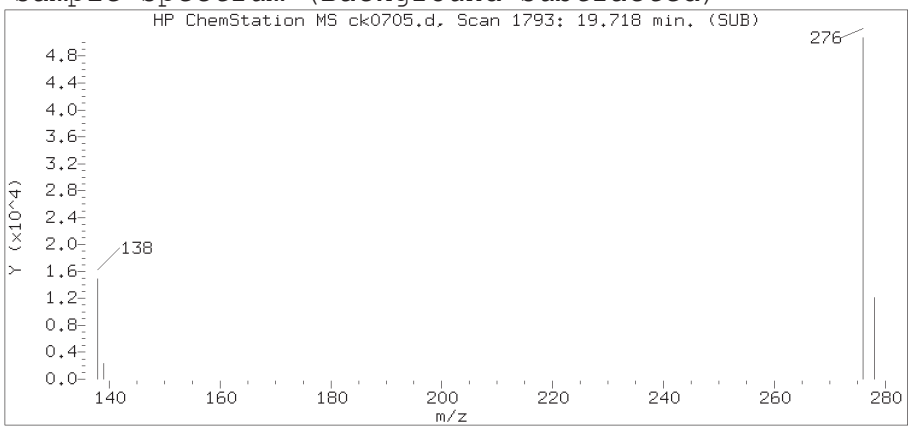
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

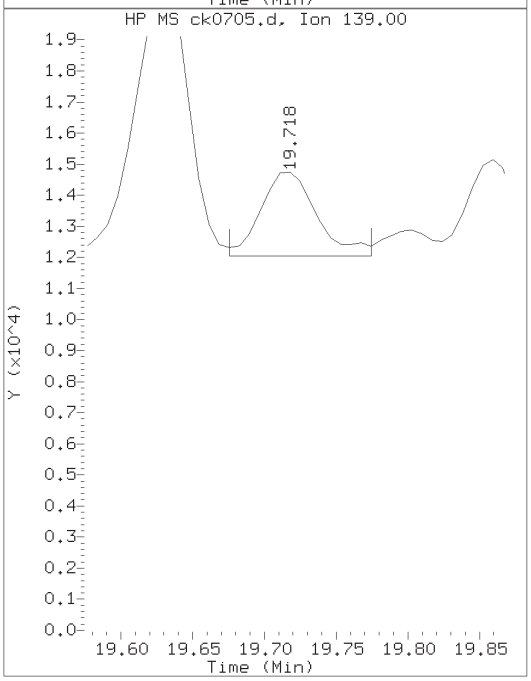
Reference Standard Spectrum for Dibenz(a,h)anthracene



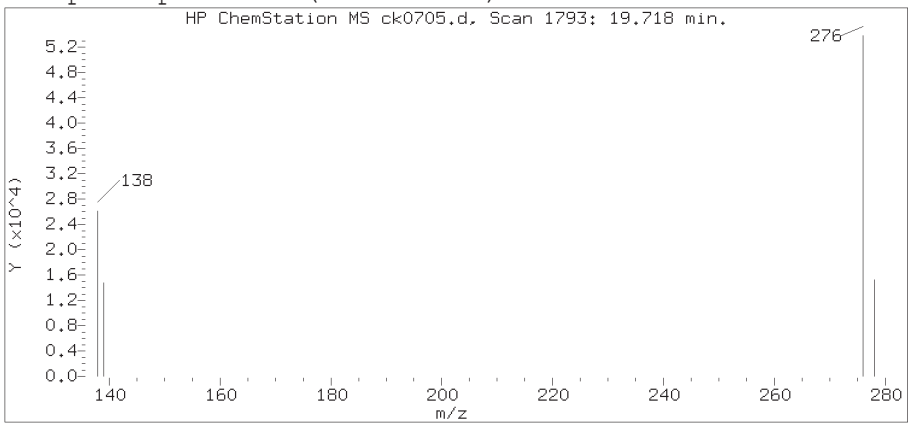


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

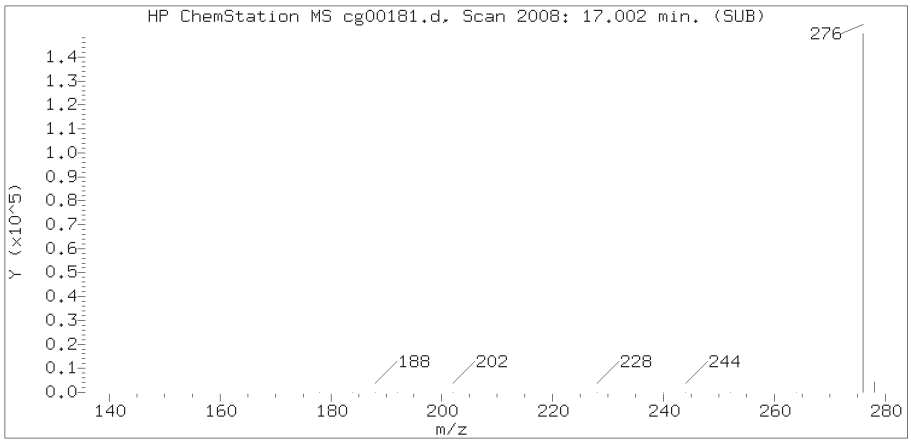
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

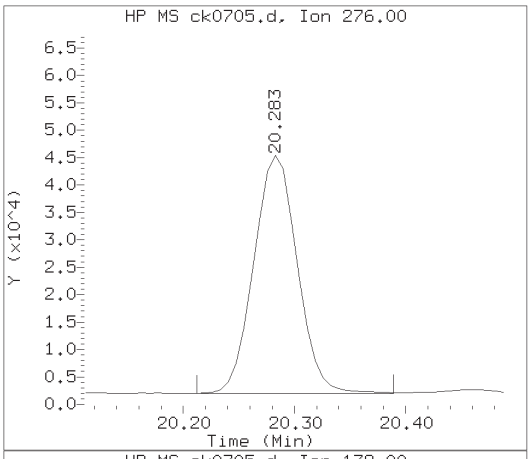
Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 54
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 1793
Retention Time (minutes)	: 19.718
Relative Retention Time	:-0.00113
Quant Ion	: 278.00
Area (flag)	: 34814
On-column Amount (ng/ul)	: 0.3562

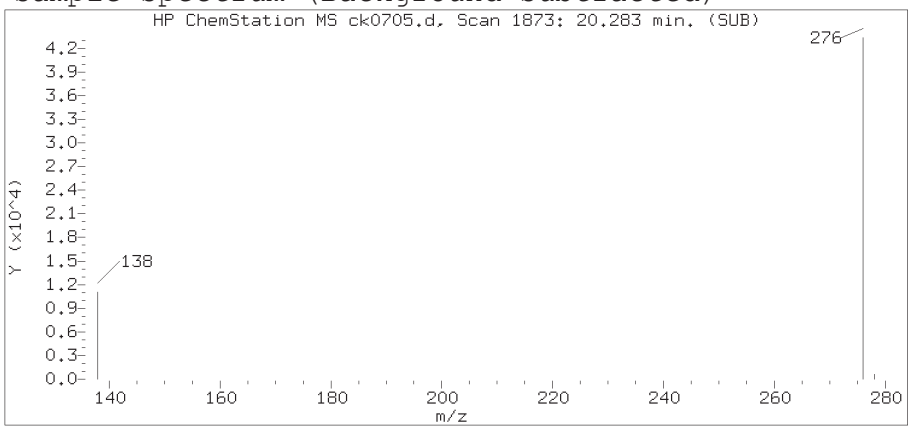
Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

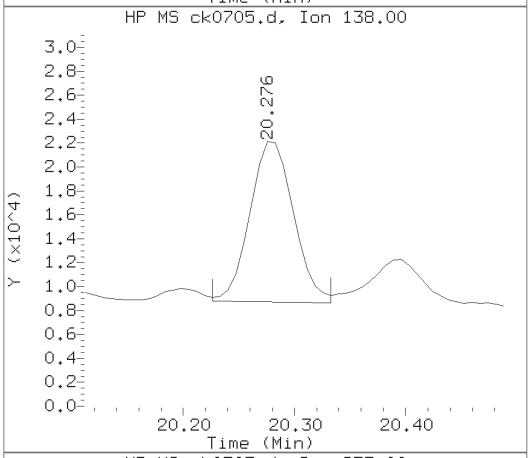
Reference Standard Spectrum for Benzo(g,h,i)perylene



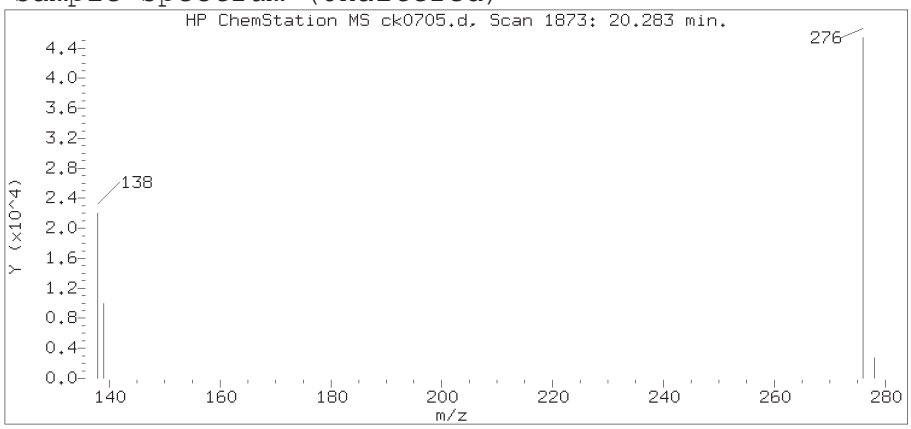


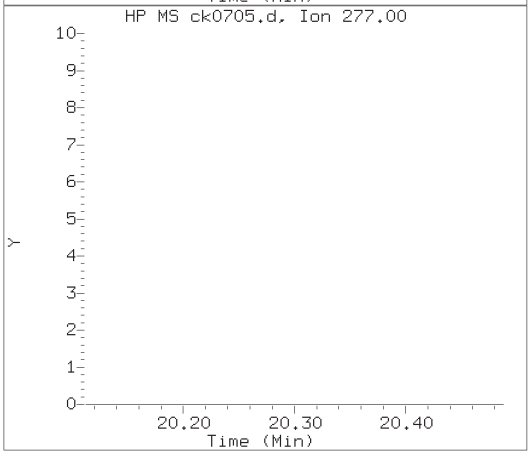
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0705.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 08:53 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:18 whs02991

Sample Name: T1004RE Lab Sample ID: 9867766RE

Compound Number	: 55
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 1873
Retention Time (minutes)	: 20.283
Relative Retention Time	:-0.00226
Quant Ion	: 276.00
Area (flag)	: 116690
On-column Amount (ng/ul)	: 1.0605

Digitally signed by William H Saadeh on 11/16/2018 at 12:34.
Target 3.5 esignature user ID: whs02991

T1005 Lancaster Laboratories, Inc. 9867767
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10976.i/18nov07.b/ik0309.d Injection date and time: **07-NOV-2018 22:44**
Data file Sample Info. Line: T1005;9867767;2;0;SAMPLE;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 07-NOV-2018 18:18
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov07.b/ik0301.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.39 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.808(0.000)	500	152	45748 (4)	1.00	
10) Naphthalene-d8	8.333(-0.013)	615	136	171805 (7)	1.00	
20) Acenaphthene-d10	10.498(-0.011)	803	164	113934 (13)	1.00	
31) Phenanthrene-d10	12.253(0.079)	960	188	298981 (34)	1.00	
43) Chrysene-d12	15.677(-0.063)	1275	240	247122MA(8)	1.00	
51) Perylene-d12	17.686(-0.117)	1532	264	94968MA(-59)	1.00	*

*** = Internal Standard area outside QC limits M = Internal Standard was manually integrated A = User selected an alternate peak**

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.281(0.000)	152	79469	0.759	76%		61 - 111
36) Fluoranthene-d10	(4)	13.853(-0.010)	212	249056M	0.672	67%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.561(0.000)	264	63177A	0.696	70%		54 - 122

M = Surrogate Standard was manually integrated. A = User selected an alternate peak.

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.148(-0.015)	88	9257A	0.338	11.12			0.02
11) Naphthalene	(2)	8.359(0.000)	128	120051	0.679	22.33	31.312	B	0.04
19) Acenaphthylene	(3)	10.324(-0.000)	152	35284	0.162	5.32			0.01
21) Acenaphthene	(3)	10.541(-0.001)	154	7231M	0.050	1.66	1.723	B	0.02
26) Fluorene	(3)	11.174(0.000)	166	13677M	0.077	2.55	1.949	B	0.02
32) Phenanthrene	(4)	12.377(-0.007)	178	417862A	1.294	42.57	2.56	B	0.02
33) Anthracene	(4)	12.444(-0.008)	178	115055A	0.356	11.70	0.732	B	0.02
35) Di-n-butylphthalate	(4)	13.035(-0.008)	149	446636M	1.445	47.55			0.2
37) Fluoranthene	(4)	13.877(-0.010)	202	1415358M	3.519	115.81			0.02
39) Pyrene	(5)	14.170(0.001)	202	1414098M	4.134	136.03			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.614(0.000)	149	8572437M	52.735	1735.27		E	0.3
42) Benzo(a)anthracene	(5)	15.669(-0.000)	228	653329A	2.055	67.62			0.02
44) Chrysene	(5)	15.708(0.000)	228	1797744A	5.919	194.78			0.01
46) Benzo(b)fluoranthene	(6)	17.100(0.000)	252	1763855A	14.934	491.40		E	0.02
47) Benzo(k)fluoranthene	(6)			Not Detected					0.02
50) Benzo(a)pyrene	(6)	17.600(-0.000)	252	344580A	3.404	112.01			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.467(0.000)	276	236792A	1.984	65.27			0.02
54) Dibenz(a,h)anthracene	(6)	19.467(0.000)	278	59188A	0.607	19.98			0.02
55) Benzo(g,h,i)perylene	(6)	19.962(0.000)	276	182423A	1.738	57.19			0.02

A = User selected an alternate peak. B = Compound detected in referenced method blank. M = Compound was manually integrated.
E = Compound concentration above calibration range.

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP10976.i/18nov07.b/ik0309.d Injection date and time: **07-NOV-2018 22:44**
Data file Sample Info. Line: T1005;9867767;2;0;SAMPLE;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 07-NOV-2018 18:18
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov07.b/ik0301.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

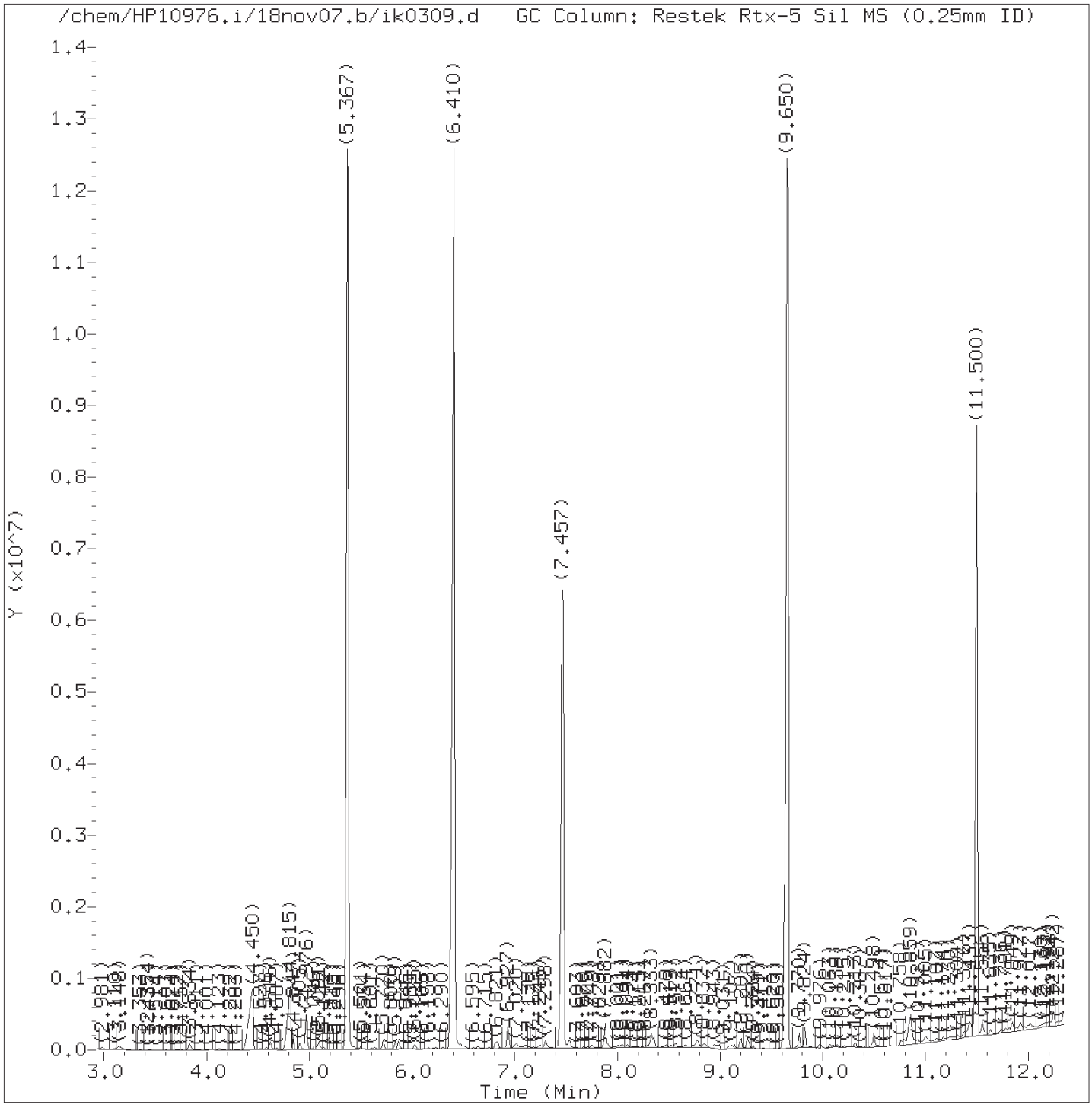
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.39 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

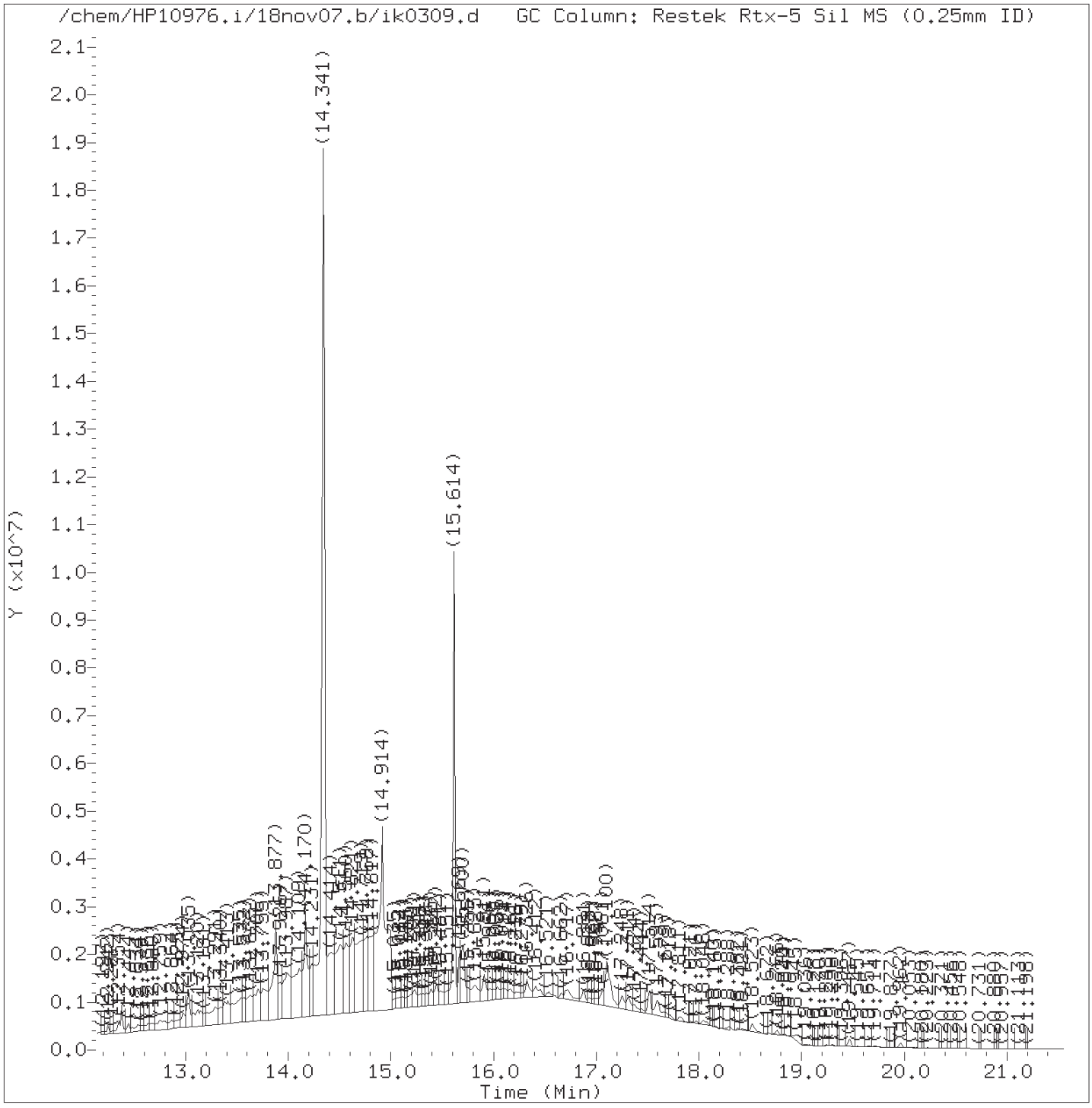
Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

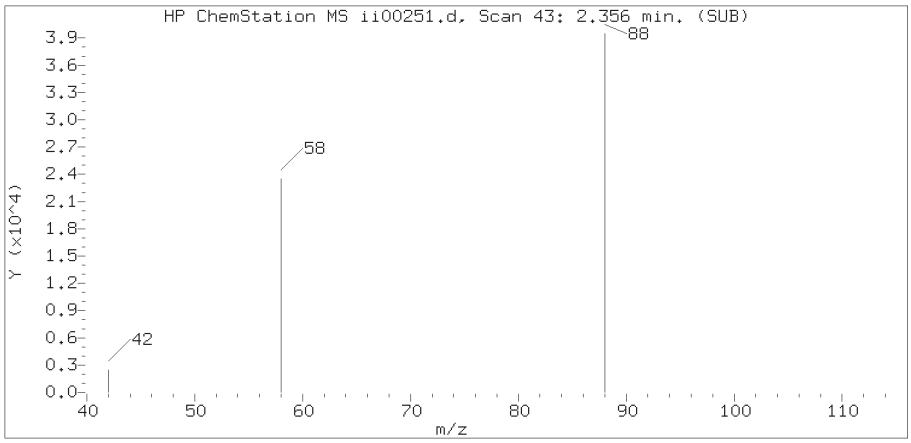
Sample Name: T1005 Lab Sample ID: 9867767

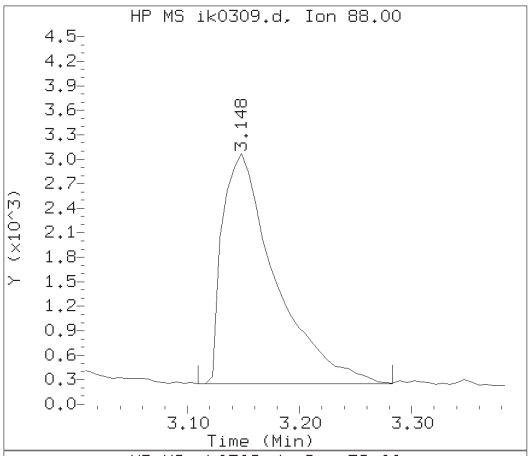
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.148	88	9257A	0.338
6)*1,4-Dichlorobenzene-d4	(1)	6.808	152	45748	1.000
10)*Naphthalene-d8	(2)	8.333	136	171805	1.000
11) Naphthalene	(2)	8.359	128	120051	0.679
14)$1-Methylnaphthalene-d10	(2)	9.281	152	79469	0.759
19) Acenaphthylene	(3)	10.324	152	35284	0.162
20)*Acenaphthene-d10	(3)	10.498	164	113934	1.000
21) Acenaphthene	(3)	10.541	154	7231M	0.050
26) Fluorene	(3)	11.174	166	13677M	0.077
31)*Phenanthrene-d10	(4)	12.253	188	298981	1.000
32) Phenanthrene	(4)	12.377	178	417862A	1.294
33) Anthracene	(4)	12.444	178	115055A	0.356
35) Di-n-butylphthalate	(4)	13.035	149	446636M	1.445
36)$Fluoranthene-d10	(4)	13.853	212	249056M	0.672
37) Fluoranthene	(4)	13.877	202	1415358M	3.519
39) Pyrene	(5)	14.170	202	1414098M	4.134
41) bis(2-Ethylhexyl)phthalate	(5)	15.614	149	8572437M	52.735
42) Benzo(a)anthracene	(5)	15.669	228	653329A	2.055
43)*Chrysene-d12	(5)	15.677	240	247122MA	1.000
44) Chrysene	(5)	15.708	228	1797744A	5.919
46) Benzo(b)fluoranthene	(6)	17.100	252	1763855A	14.934
49)$Benzo(a)pyrene-d12	(6)	17.561	264	63177A	0.696
50) Benzo(a)pyrene	(6)	17.600	252	344580A	3.404
51)*Perylene-d12	(6)	17.686	264	94968MA	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.467	276	236792A	1.984
54) Dibenz(a,h)anthracene	(6)	19.467	278	59188A	0.607
55) Benzo(g,h,i)perylene	(6)	19.962	276	182423A	1.738

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

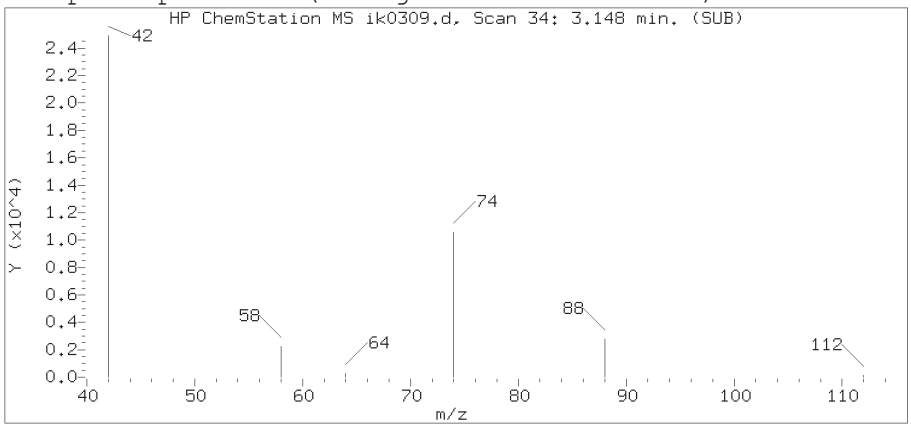
Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

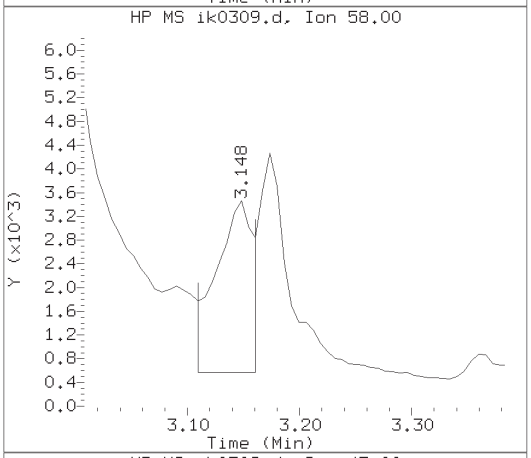
Reference Standard Spectrum for 1,4-Dioxane



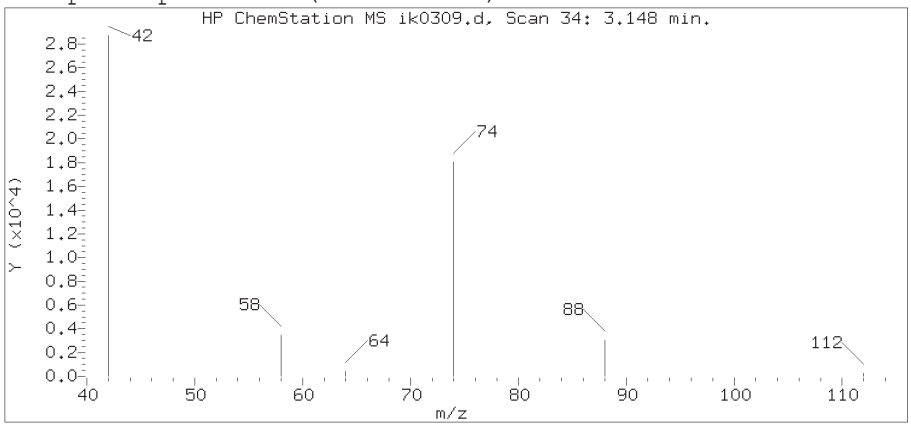


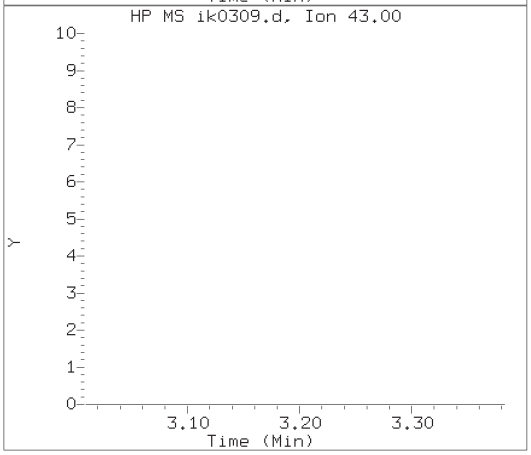
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

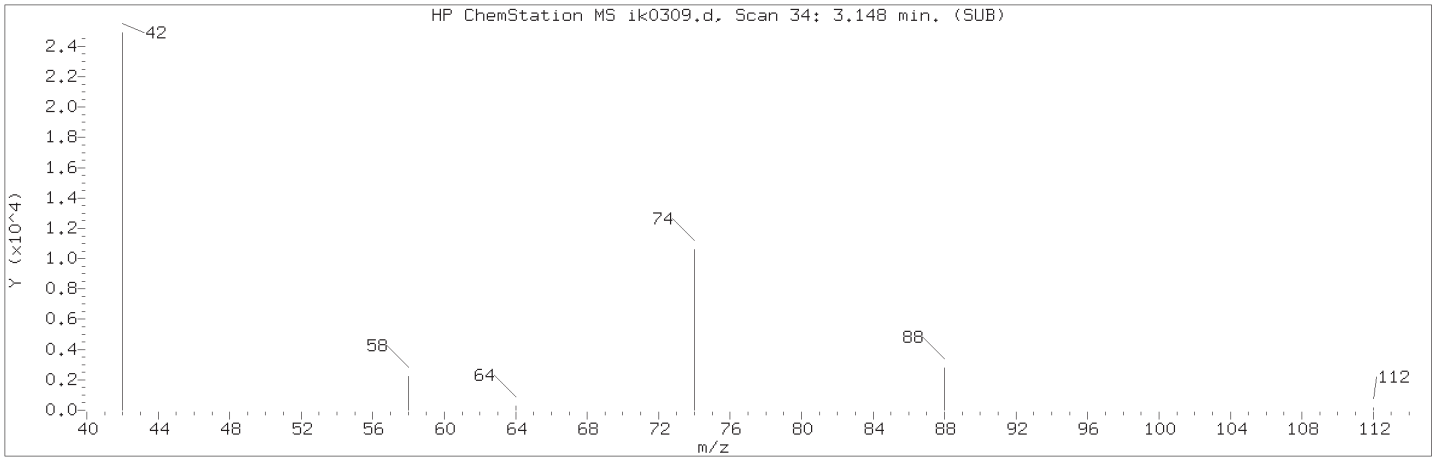
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

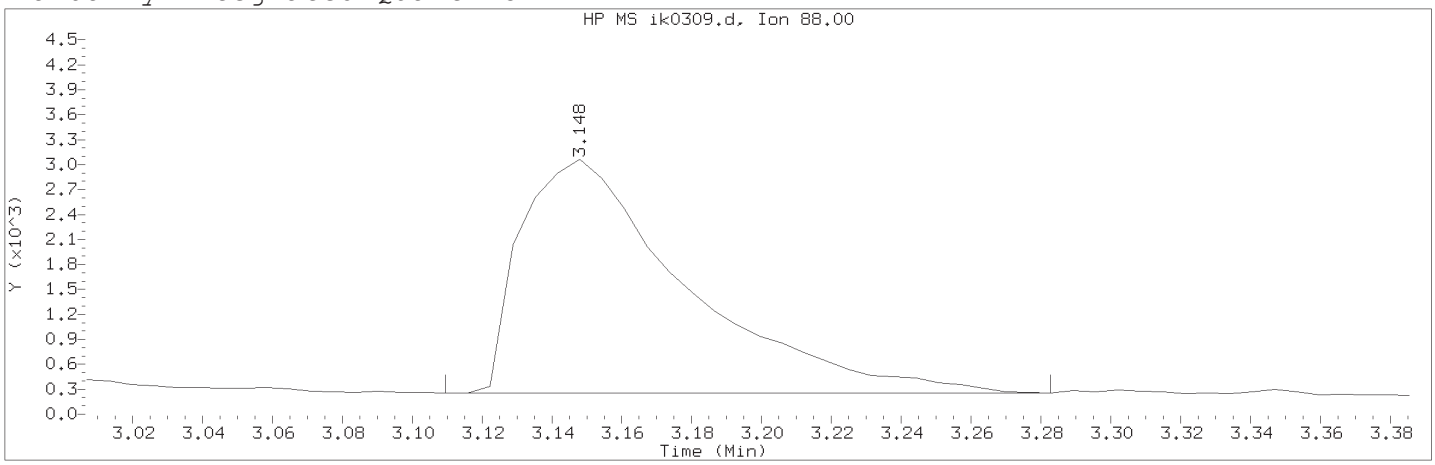
Compound Number	: 1
Compound Name	: 1,4-Dioxane
Scan Number	: 34
Retention Time (minutes)	: 3.148
Relative Retention Time	:-0.01507
Quant Ion	: 88.00
Area (flag)	: 9257A
On-column Amount (ng/ul)	: 0.3380

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

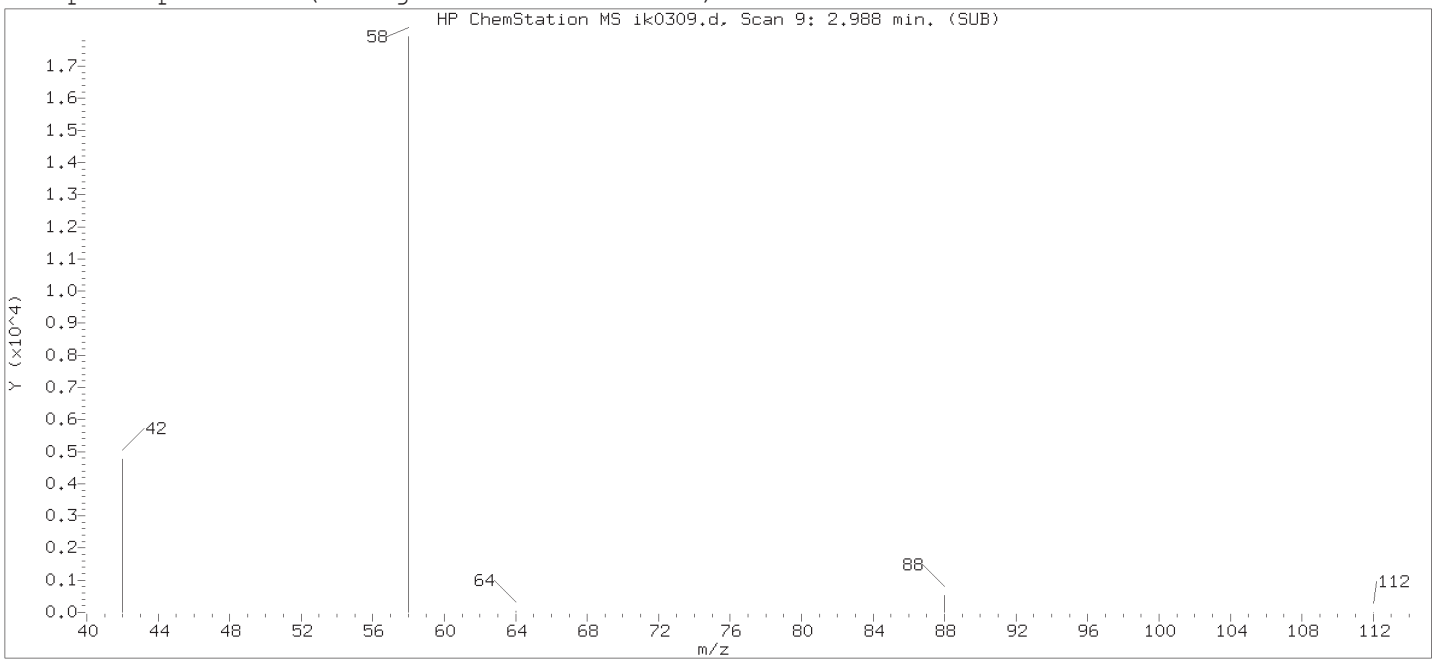
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 34
Retention Time (minutes) : 3.148
Quant Ion : 88.00
Area (flag) : 9257A
On-column Amount (ng/ul) : 0.3380
Integration start scan : 27 Integration stop scan: 54
Y at integration start : 253 Y at integration end: 253

Reason for manual integration: improper integration

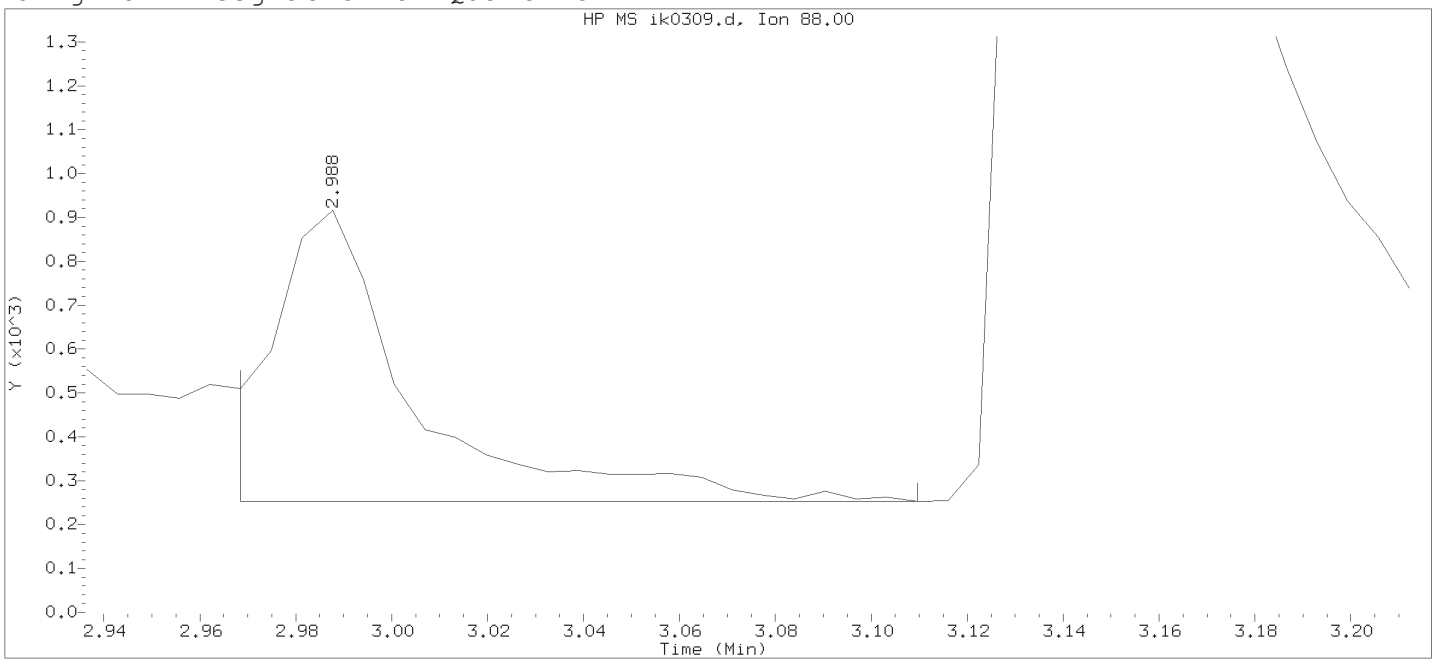
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

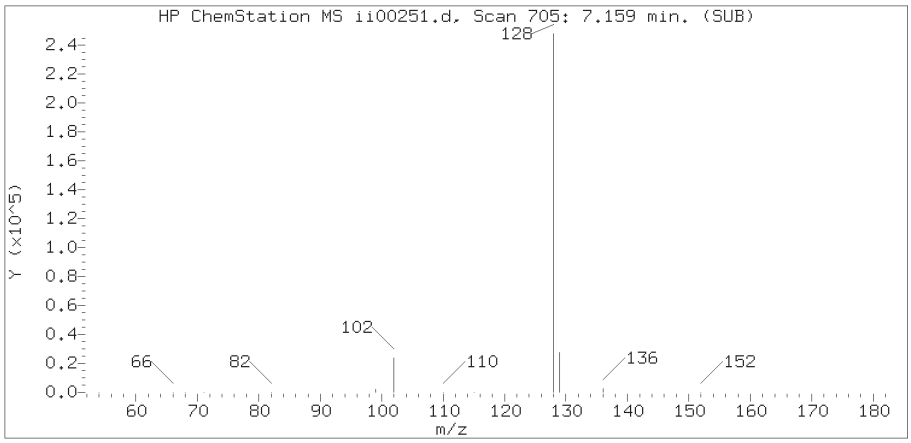
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

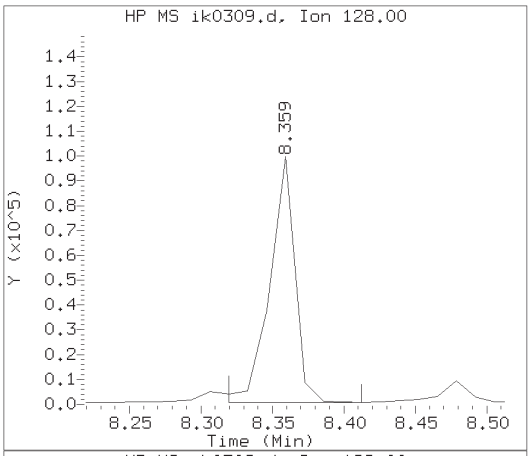
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 9
Retention Time (minutes) : 2.988
Quant Ion : 88.00
Area : 1334
On-column Amount (ng/ul) : 0.0487
Integration start scan : 5 Integration stop scan: 27
Y at integration start : 253 Y at integration end: 253

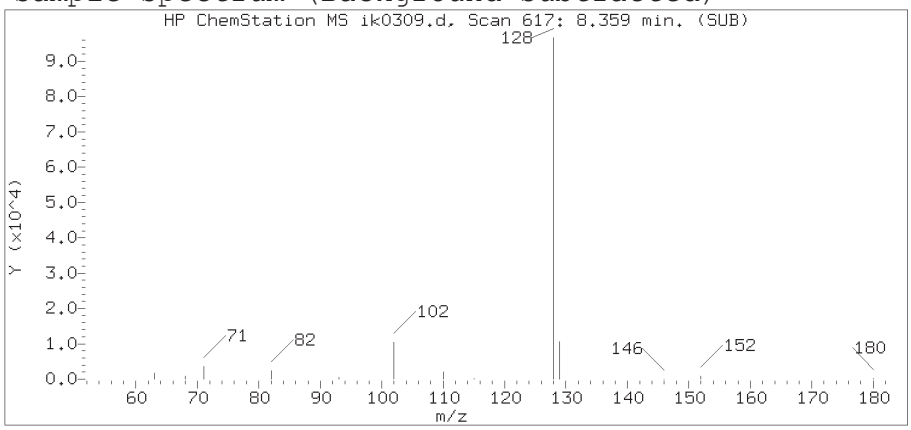
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

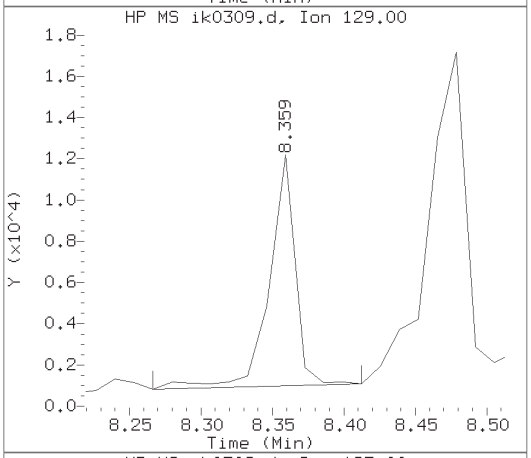
Reference Standard Spectrum for Naphthalene



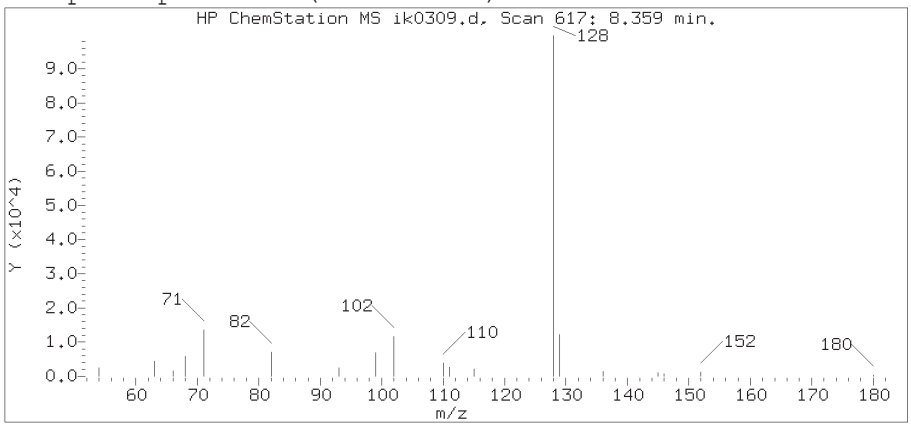


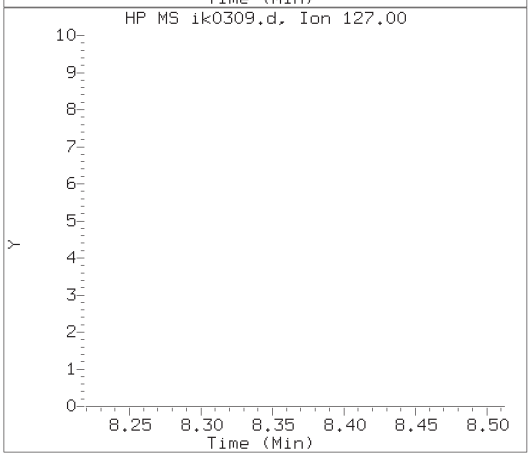
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

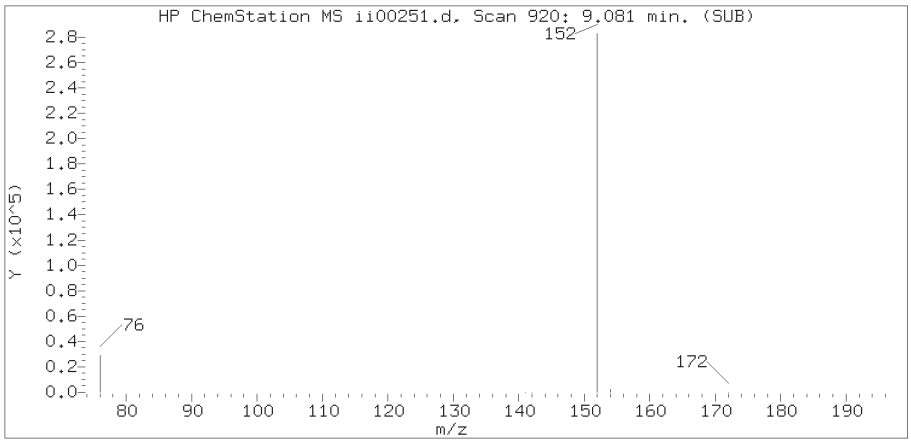
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

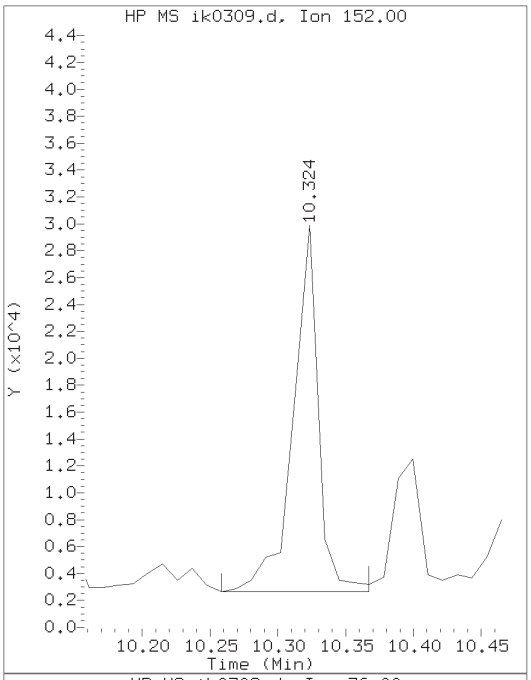
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number	: 11
Compound Name	: Naphthalene
Scan Number	: 617
Retention Time (minutes)	: 8.359
Relative Retention Time	: 0.00000
Quant Ion	: 128.00
Area (flag)	: 120051
On-column Amount (ng/ul)	: 0.6786

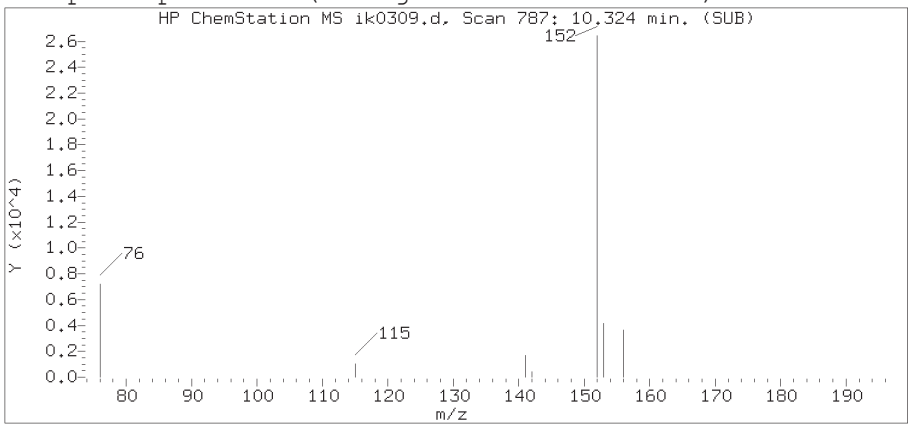
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

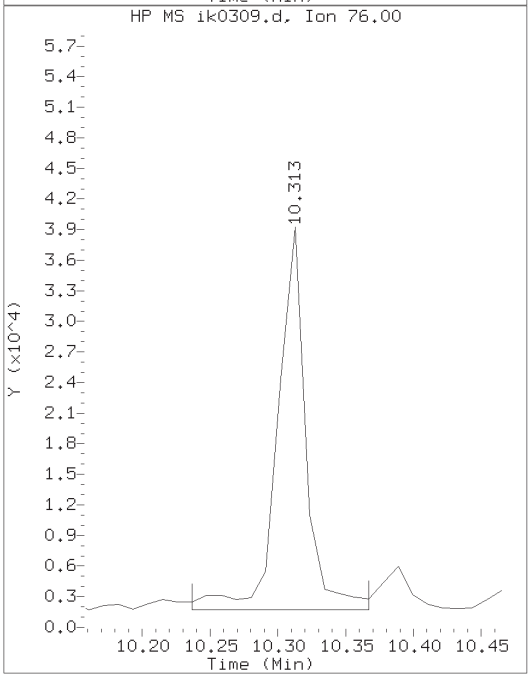
Reference Standard Spectrum for Acenaphthylene



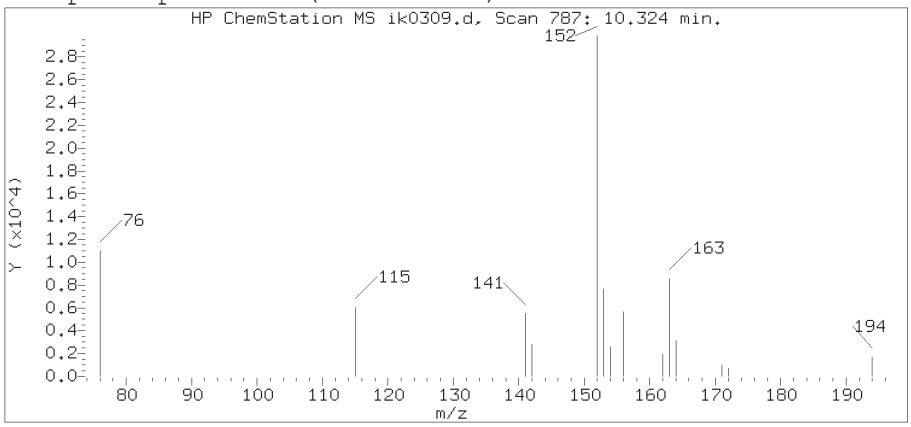


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

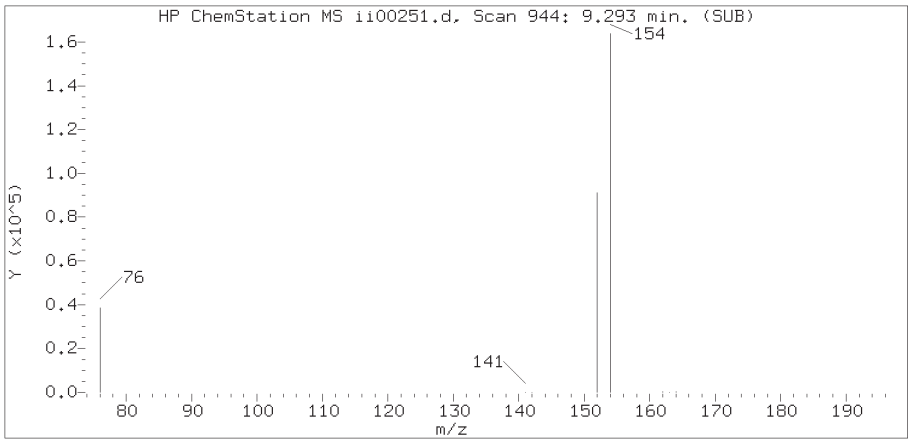
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

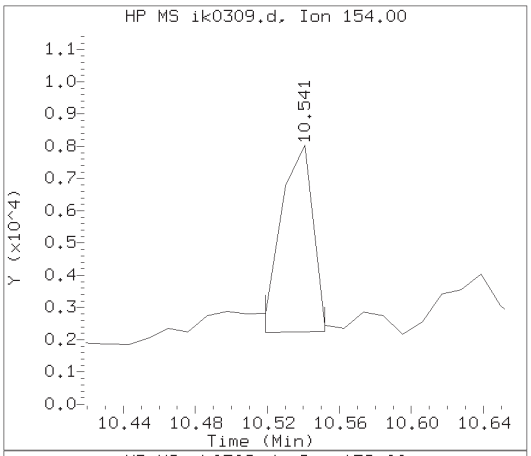
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number	: 19
Compound Name	: Acenaphthylene
Scan Number	: 787
Retention Time (minutes)	: 10.324
Relative Retention Time	:-0.00002
Quant Ion	: 152.00
Area (flag)	: 35284
On-column Amount (ng/ul)	: 0.1617

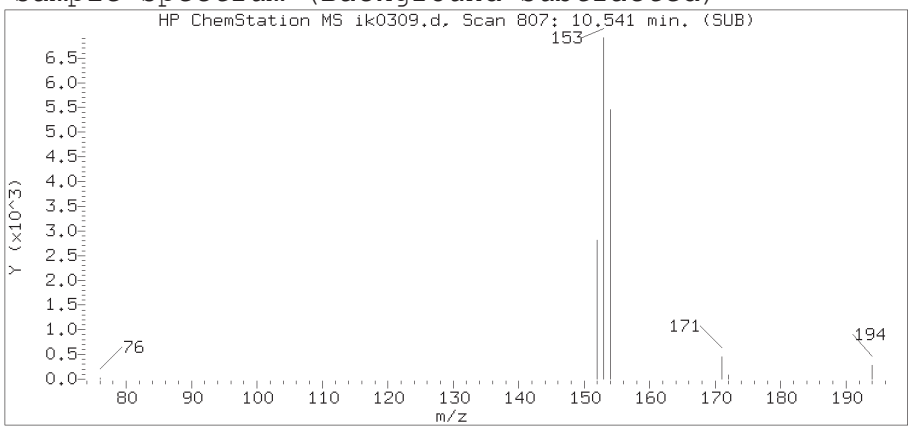
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

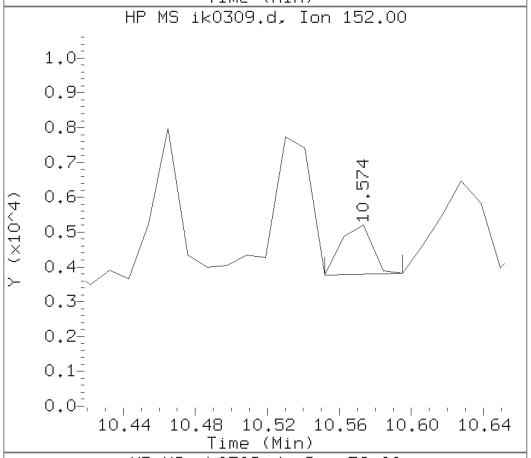
Reference Standard Spectrum for Acenaphthene



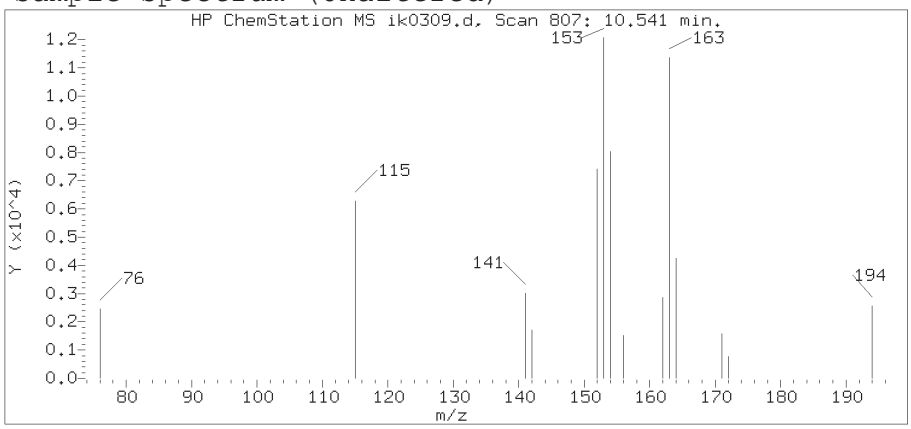


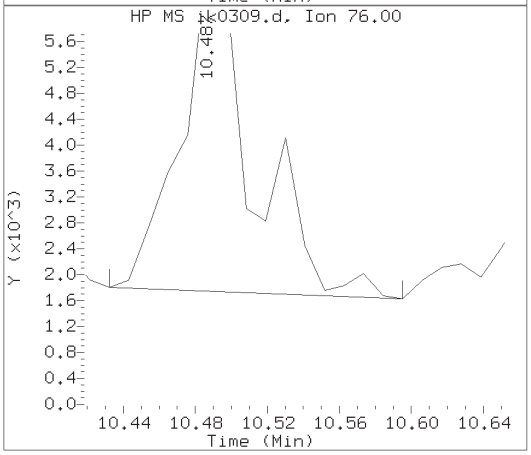
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

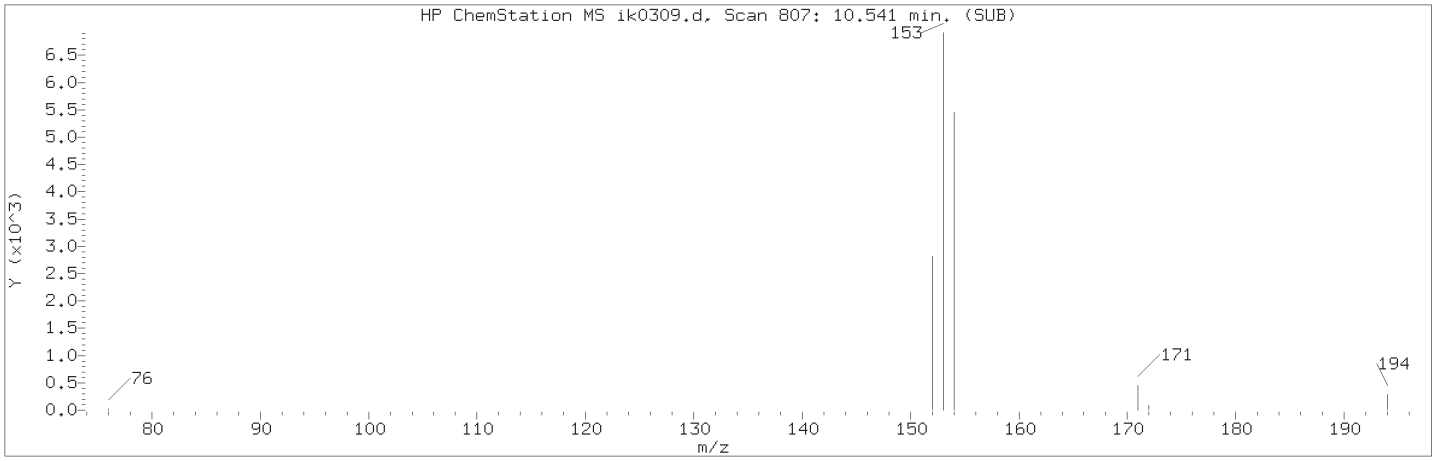
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

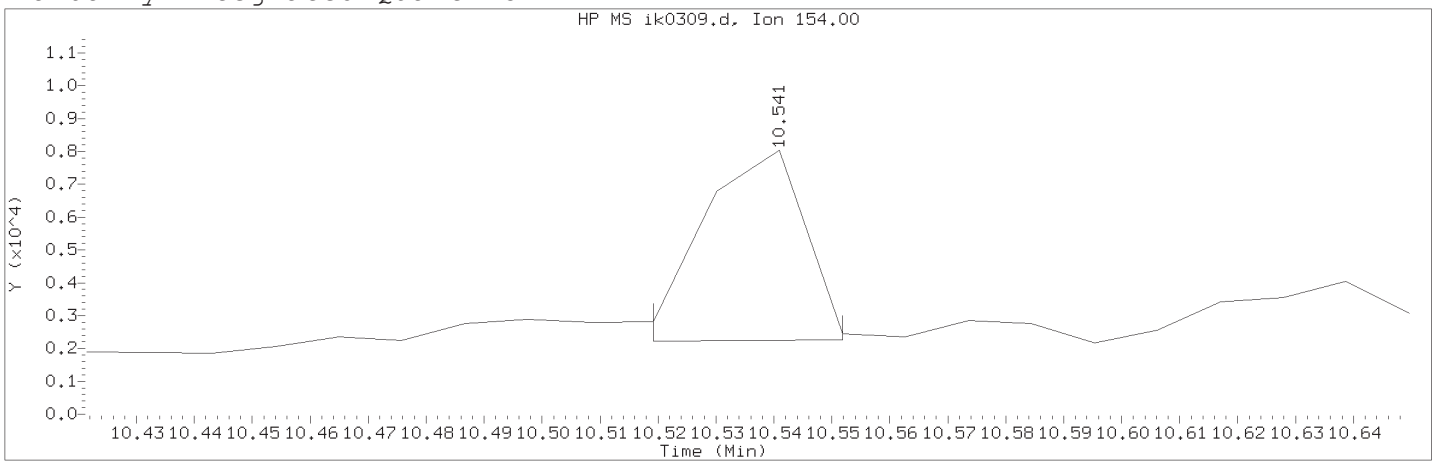
Compound Number	: 21
Compound Name	: Acenaphthene
Scan Number	: 807
Retention Time (minutes)	: 10.541
Relative Retention Time	:-0.00103
Quant Ion	: 154.00
Area (flag)	: 7231M
On-column Amount (ng/ul)	: 0.0504

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

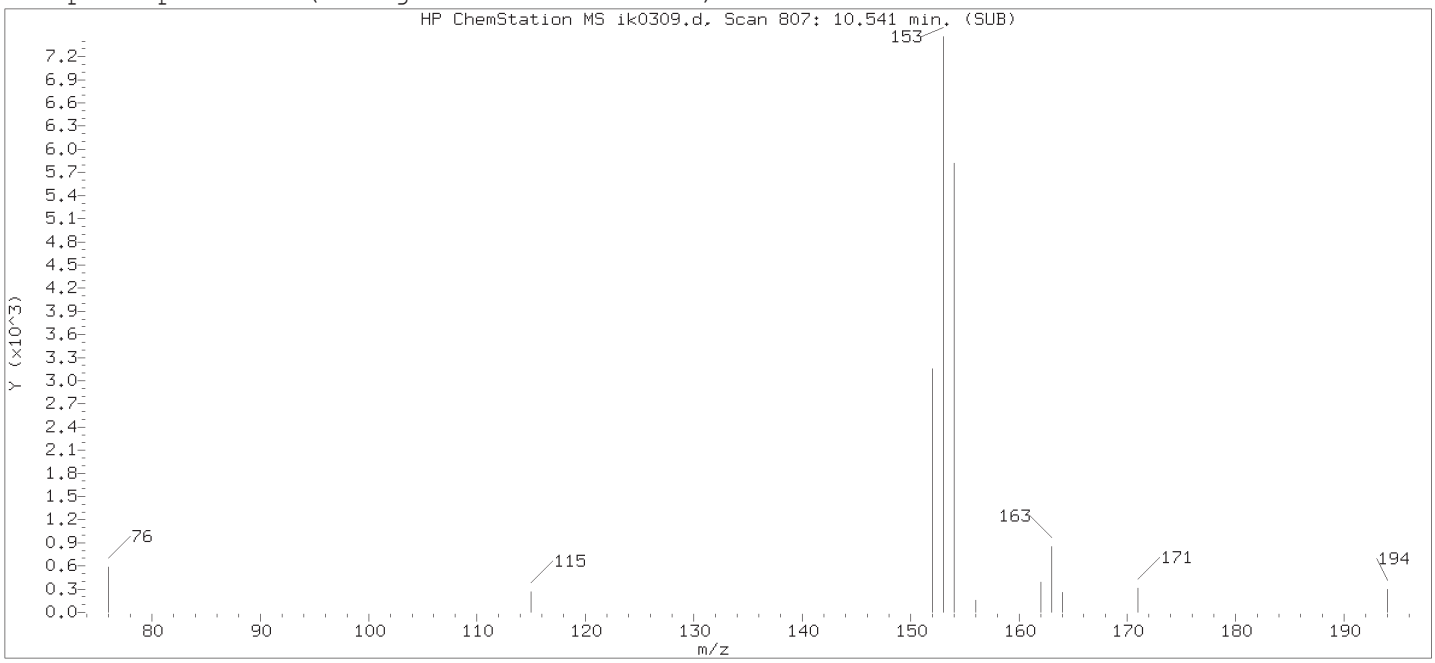
Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 807		
Retention Time (minutes)	: 10.541		
Quant Ion	: 154.00		
Area (flag)	: 7231M		
On-column Amount (ng/ul)	: 0.0504		
Integration start scan	: 804	Integration stop scan:	807
Y at integration start	: 2230	Y at integration end:	2266

Reason for manual integration: improper integration

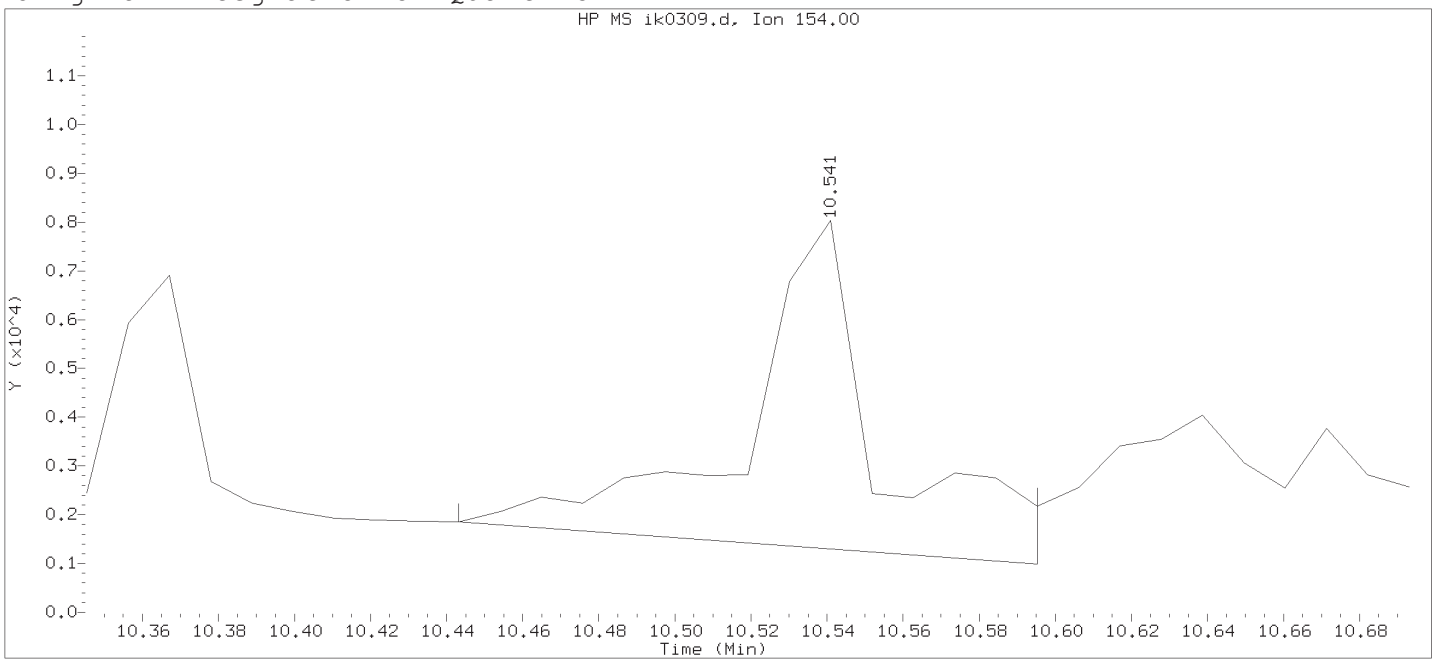
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

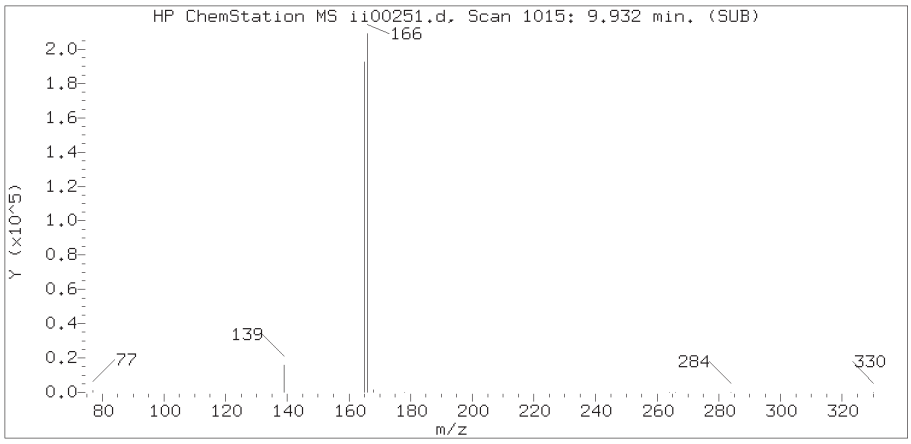
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

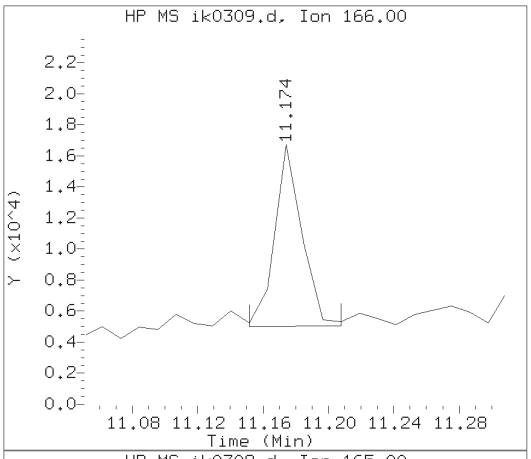
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 807		
Retention Time (minutes)	: 10.541		
Quant Ion	: 154.00		
Area	: 16448		
On-column Amount (ng/ul)	: 0.1146		
Integration start scan	: 797	Integration stop scan:	811
Y at integration start	: 1859	Y at integration end:	992

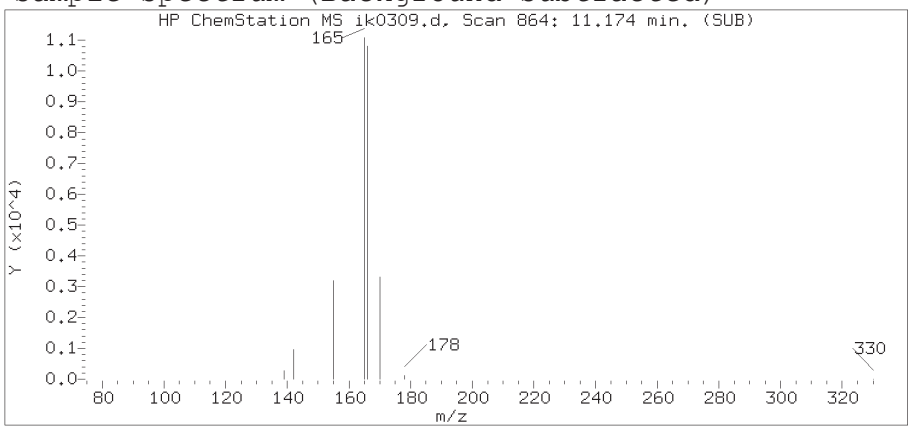
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

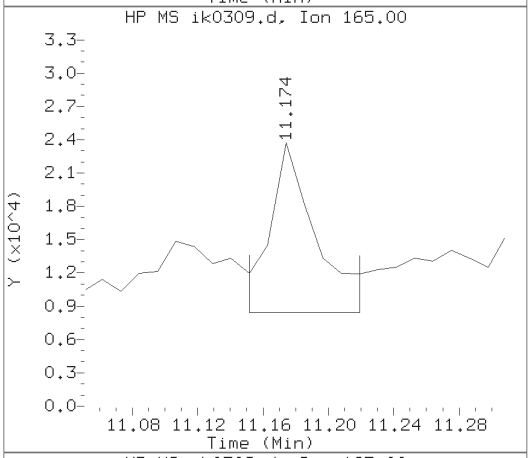
Reference Standard Spectrum for Fluorene



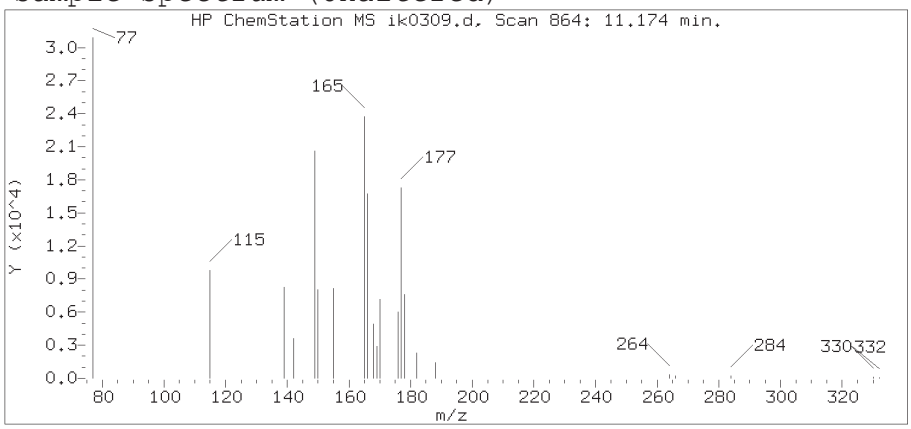


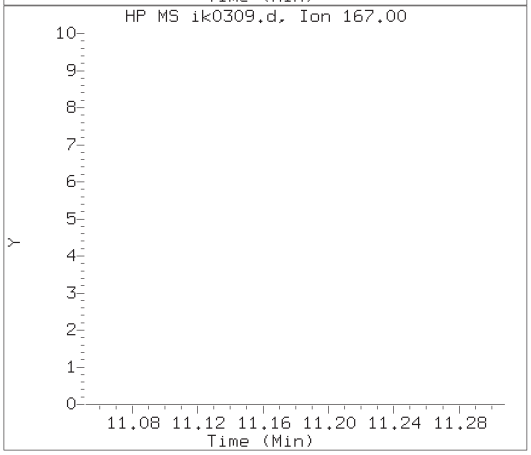
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

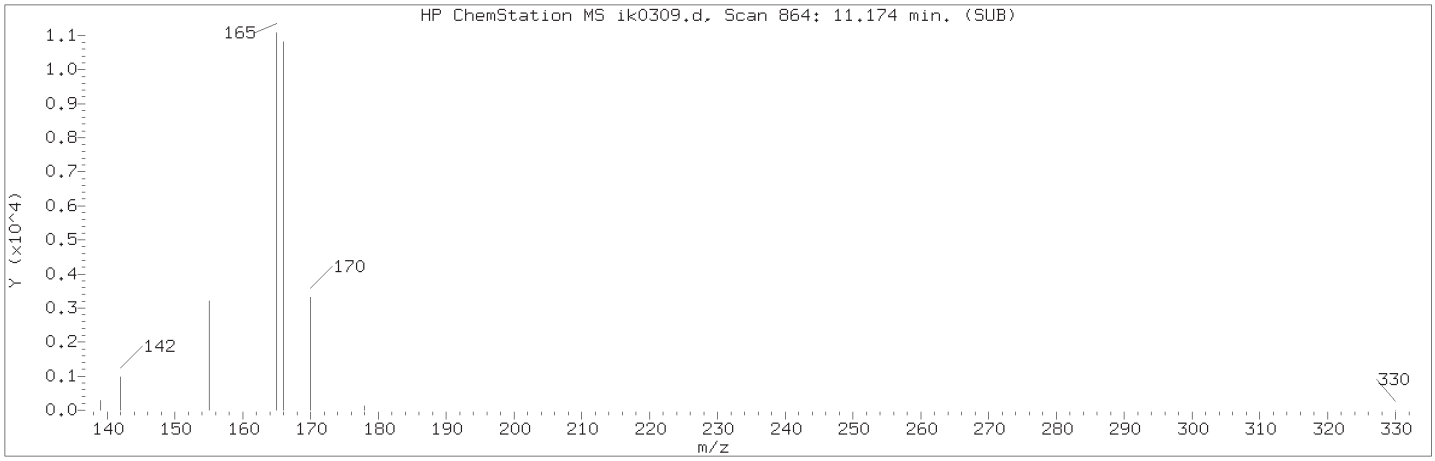
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

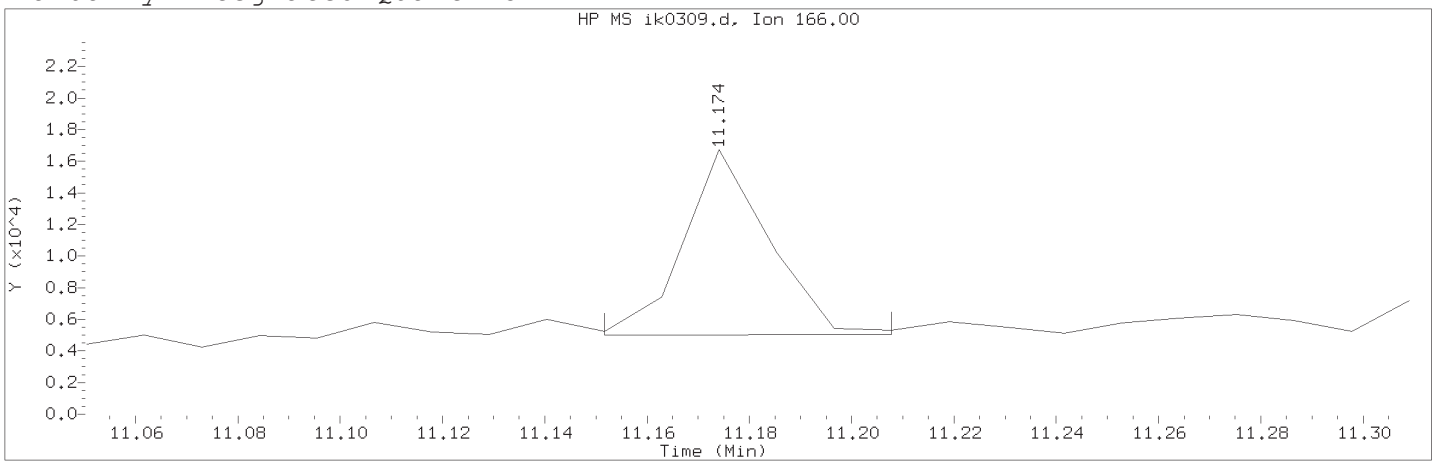
Compound Number	: 26
Compound Name	: Fluorene
Scan Number	: 864
Retention Time (minutes)	: 11.174
Relative Retention Time	: 0.00003
Quant Ion	: 166.00
Area (flag)	: 13677M
On-column Amount (ng/ul)	: 0.0775

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

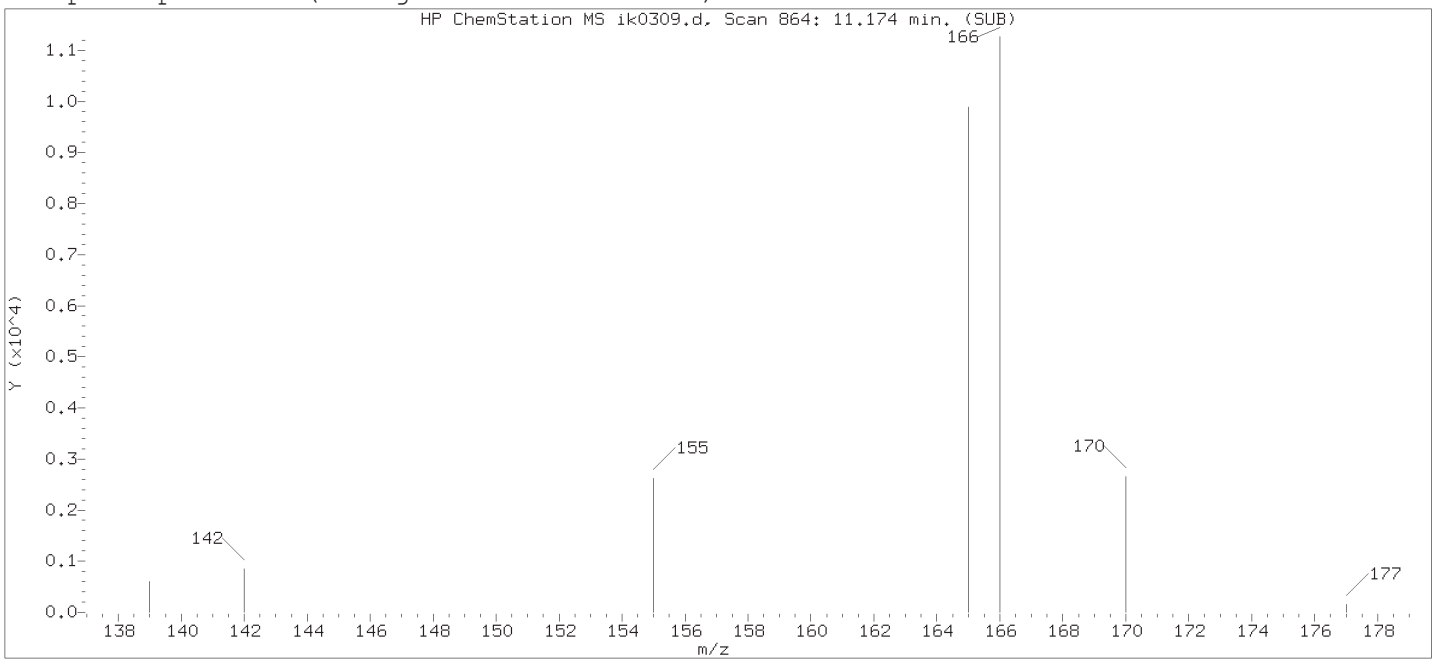
Compound Number	: 26		
Compound Name	: Fluorene		
Scan Number	: 864		
Retention Time (minutes)	: 11.174		
Quant Ion	: 166.00		
Area (flag)	: 13677M		
On-column Amount (ng/ul)	: 0.0775		
Integration start scan	: 861	Integration stop scan:	866
Y at integration start	: 4994	Y at integration end:	5032

Reason for manual integration: improper integration

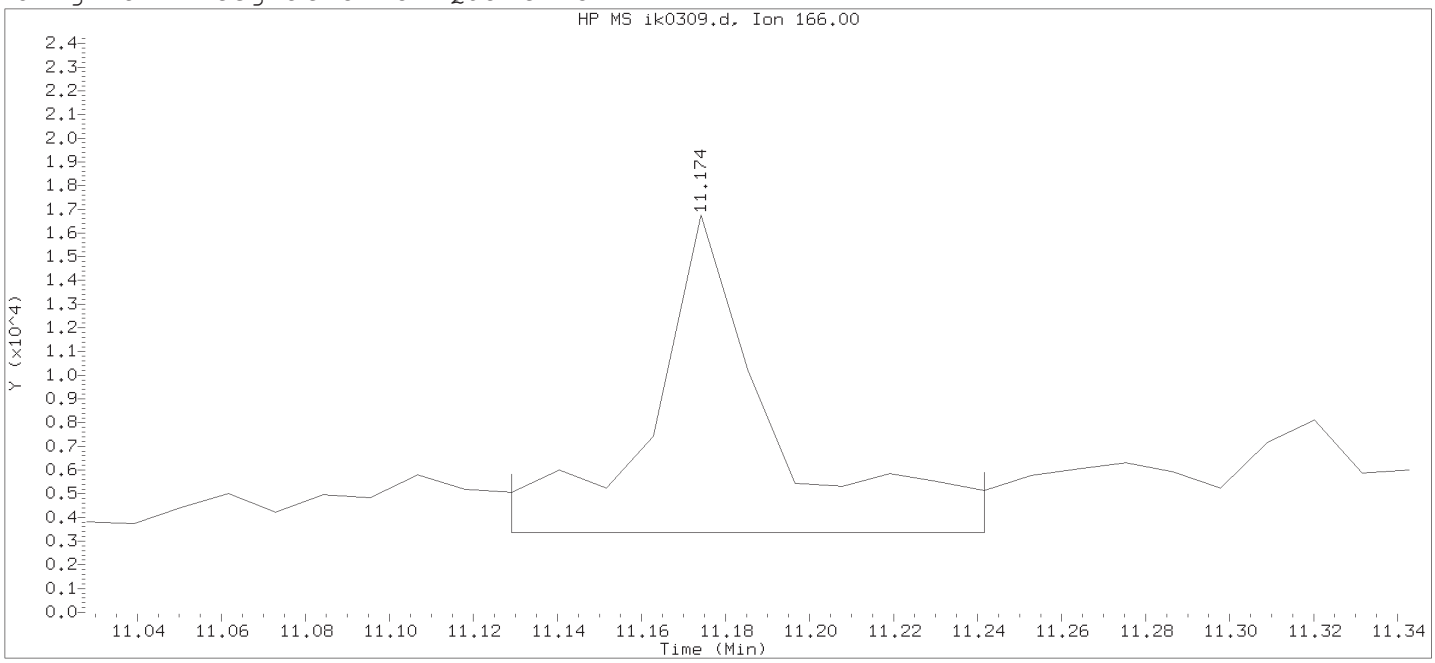
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

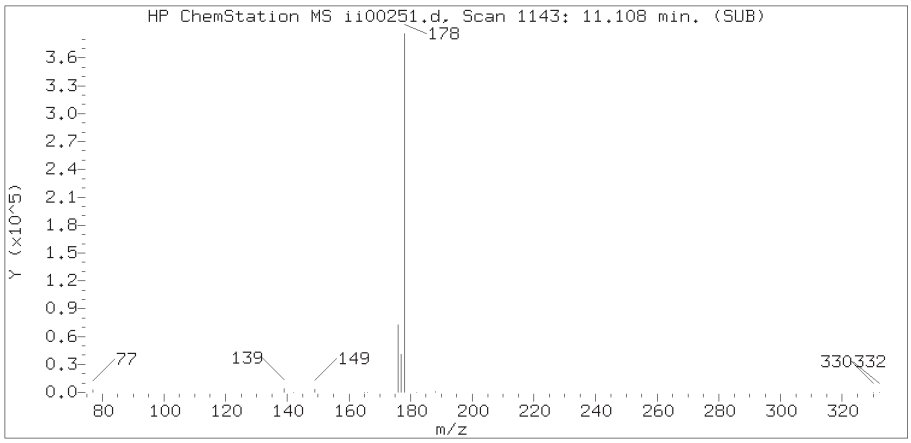
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

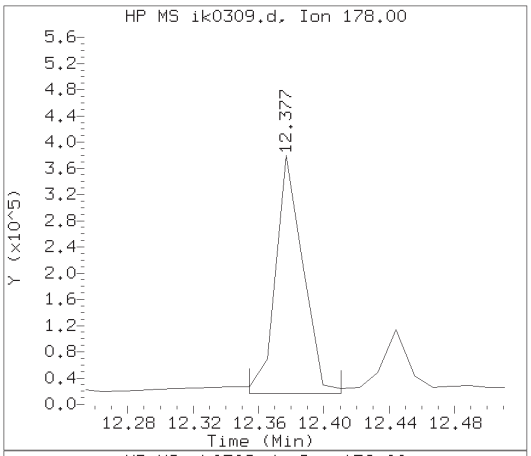
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number : 26
Compound Name : Fluorene
Scan Number : 864
Retention Time (minutes) : 11.174
Quant Ion : 166.00
Area : 26413
On-column Amount (ng/ul) : 0.1496
Integration start scan : 859 Integration stop scan: 869
Y at integration start : 3368 Y at integration end: 3368

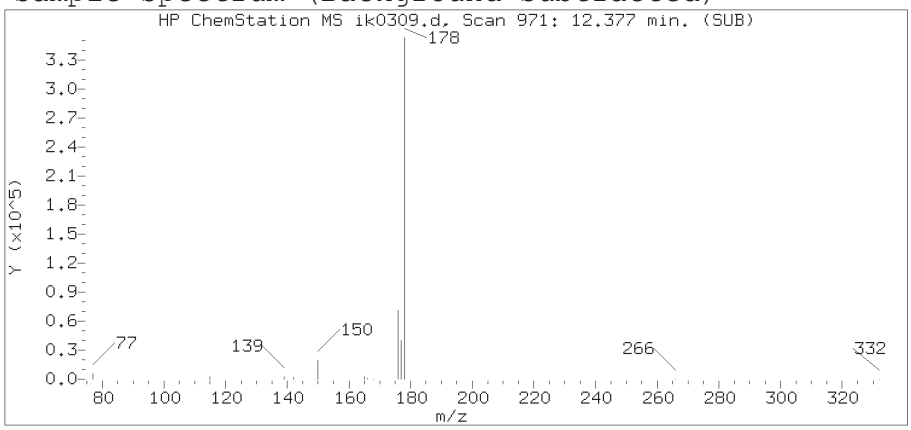
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

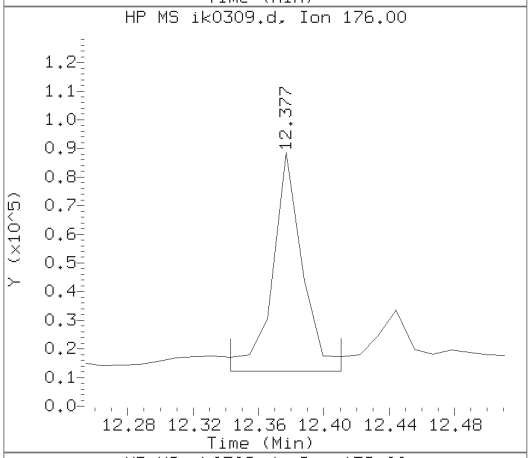
Reference Standard Spectrum for Phenanthrene



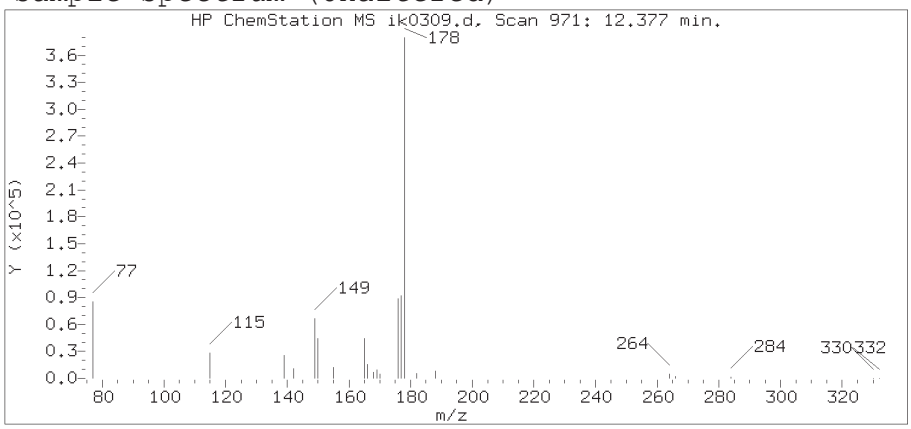


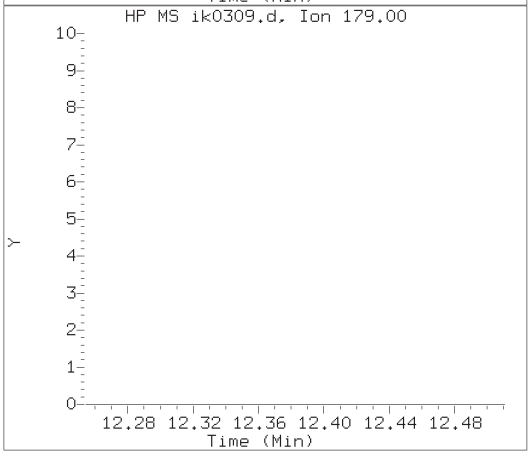
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

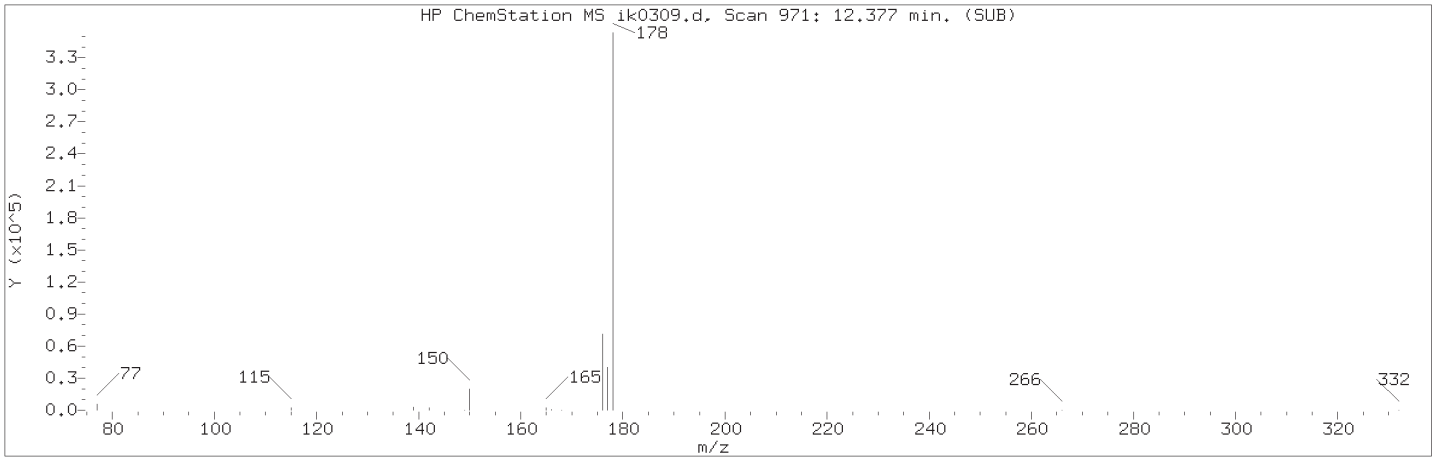
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

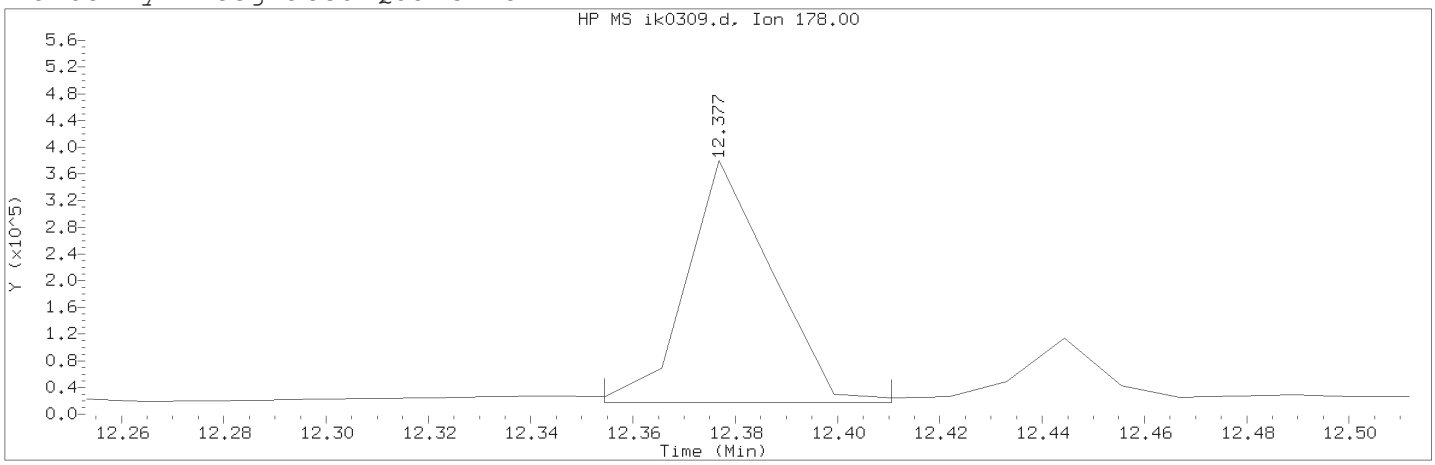
Compound Number	: 32
Compound Name	: Phenanthrene
Scan Number	: 971
Retention Time (minutes)	: 12.377
Relative Retention Time	:-0.00736
Quant Ion	: 178.00
Area (flag)	: 417862A
On-column Amount (ng/ul)	: 1.2936

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

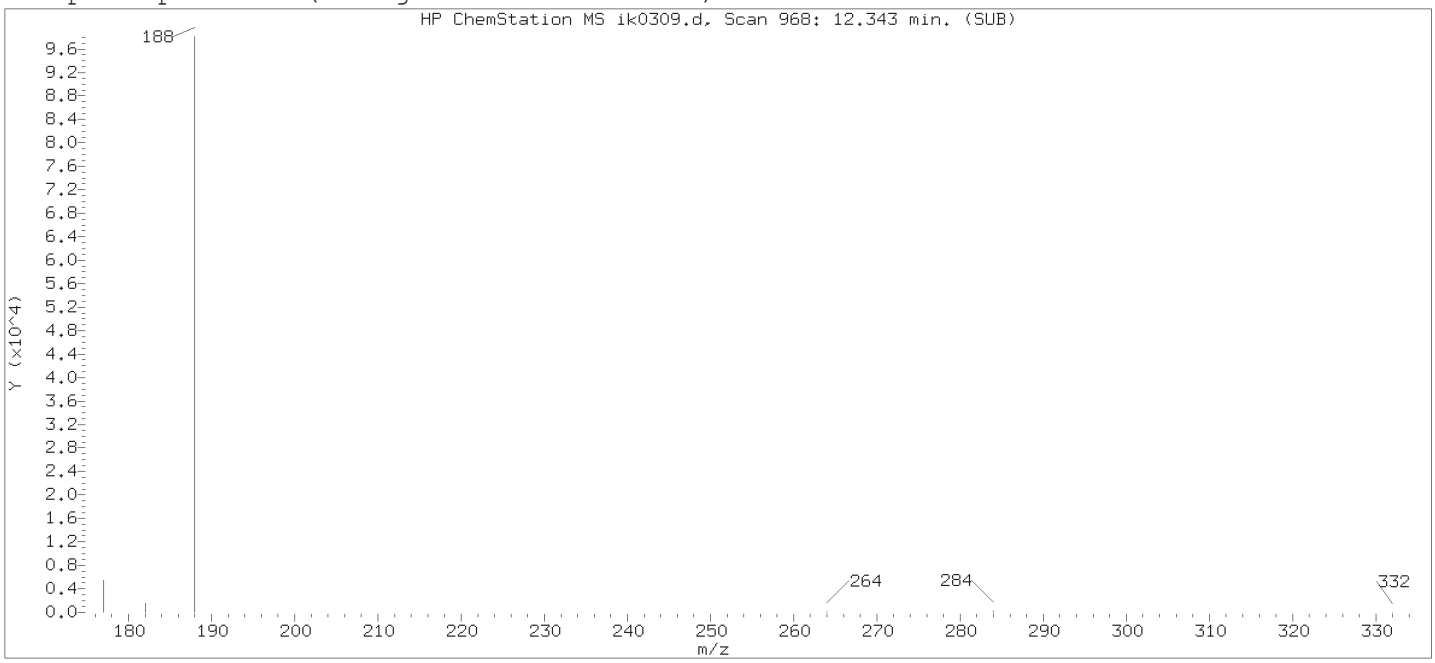
Compound Number : 32
Compound Name : Phenanthrene
Scan Number : 971
Retention Time (minutes) : 12.377
Quant Ion : 178.00
Area (flag) : 417862A
On-column Amount (ng/ul) : 1.2936
Integration start scan : 968 Integration stop scan: 973
Y at integration start : 16744 Y at integration end: 16744

Reason for manual integration: improper integration

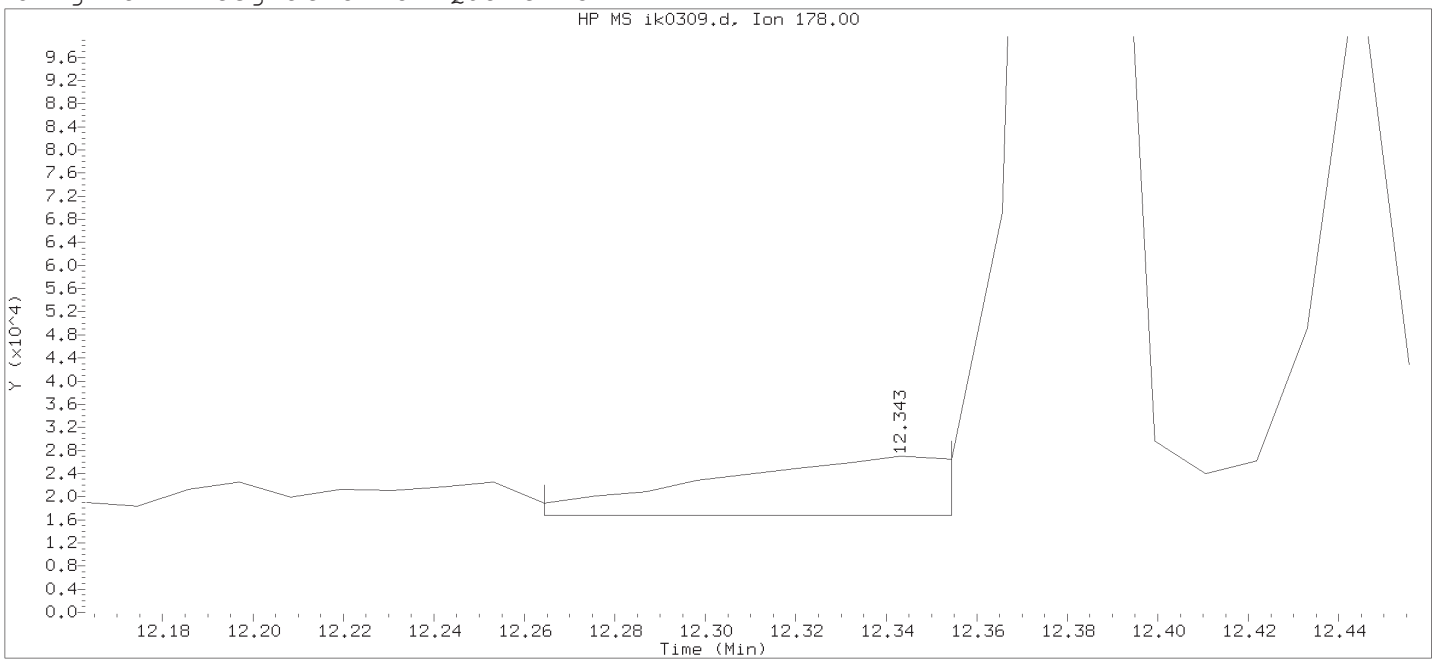
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

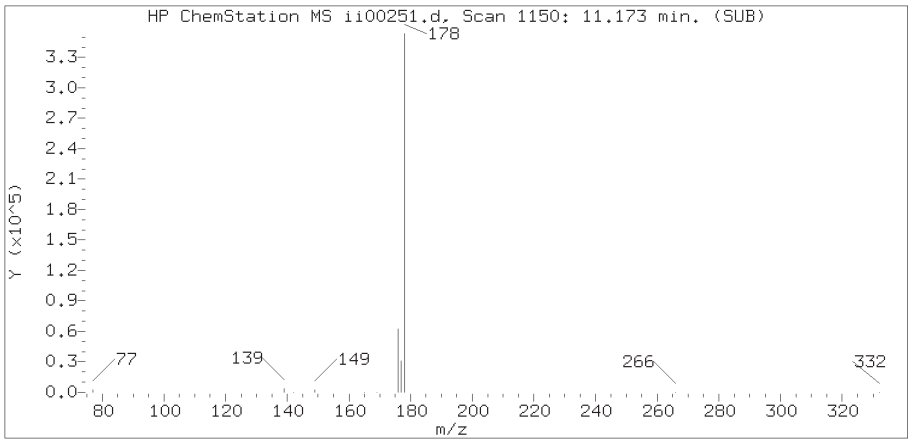
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

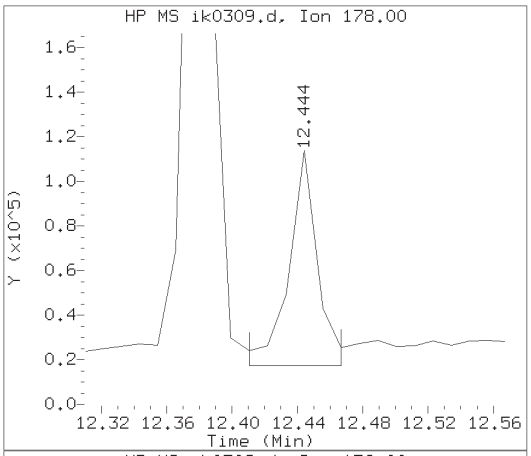
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number : 32
Compound Name : Phenanthrene
Scan Number : 968
Retention Time (minutes) : 12.343
Quant Ion : 178.00
Area : 36479
On-column Amount (ng/ul) : 0.1129
Integration start scan : 960 Integration stop scan: 968
Y at integration start : 16744 Y at integration end: 16744

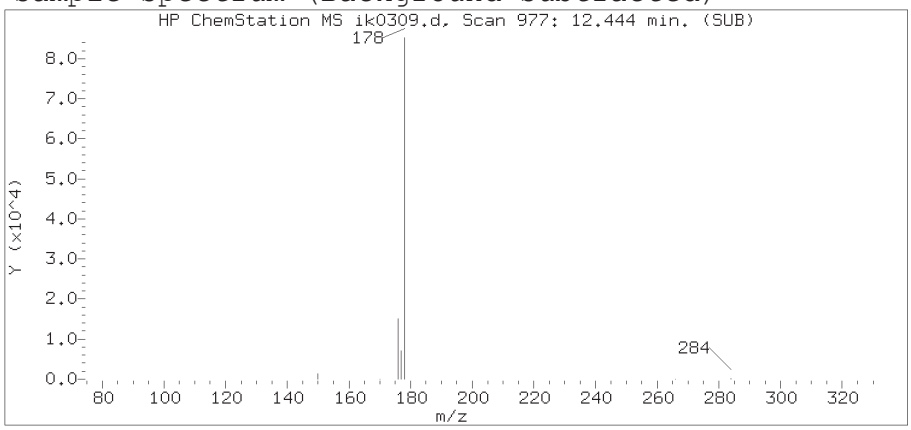
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

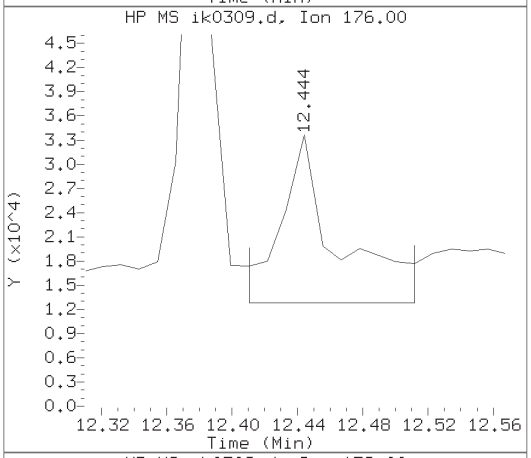
Reference Standard Spectrum for Anthracene



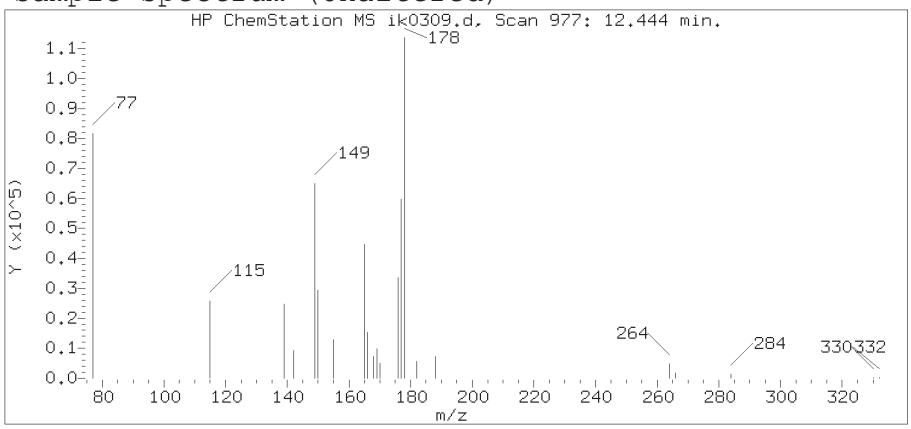


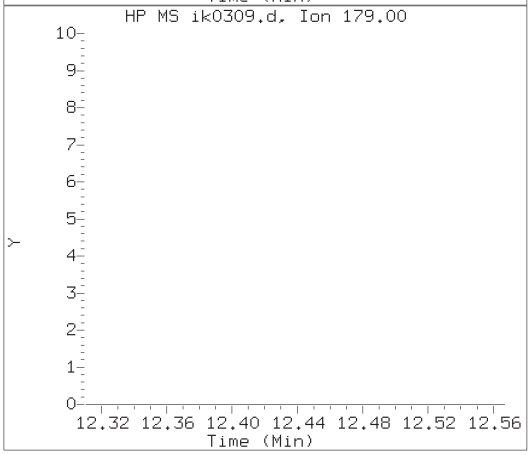
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

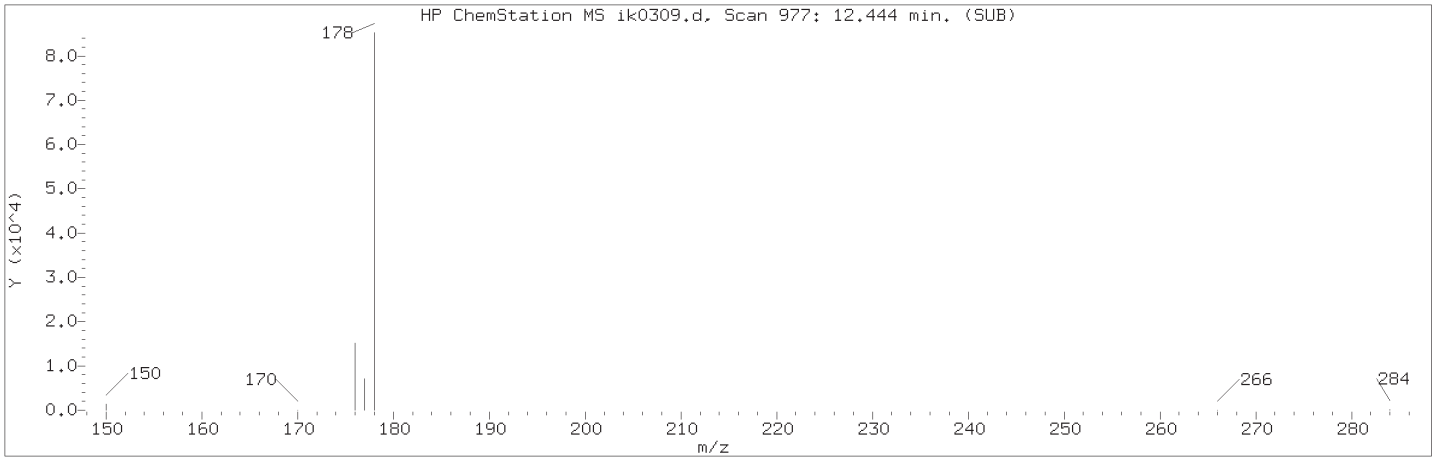
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

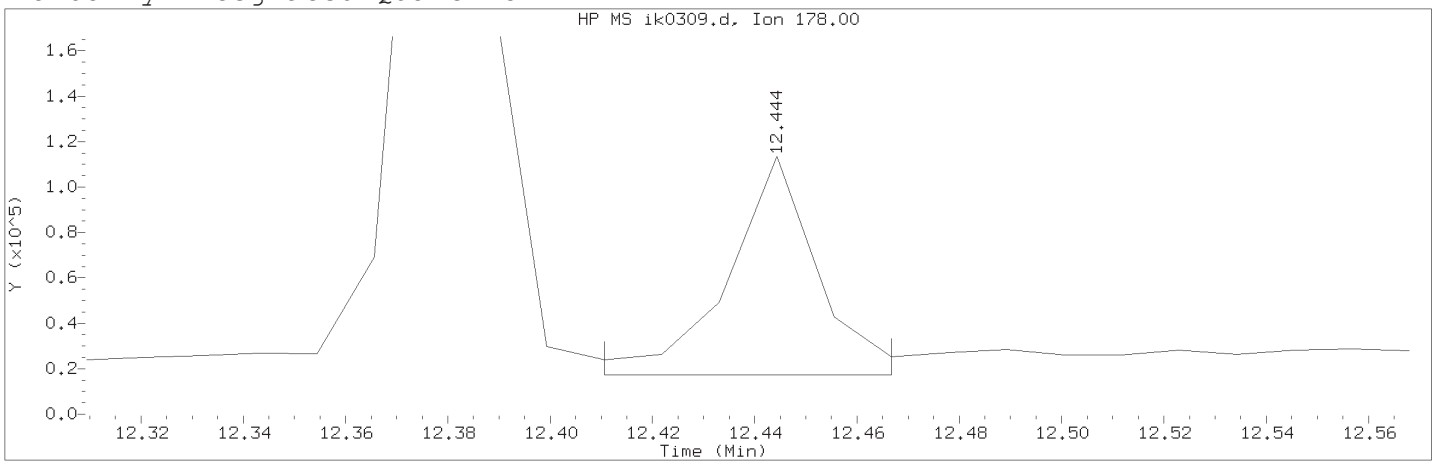
Compound Number	: 33
Compound Name	: Anthracene
Scan Number	: 977
Retention Time (minutes)	: 12.444
Relative Retention Time	:-0.00830
Quant Ion	: 178.00
Area (flag)	: 115055A
On-column Amount (ng/ul)	: 0.3557

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

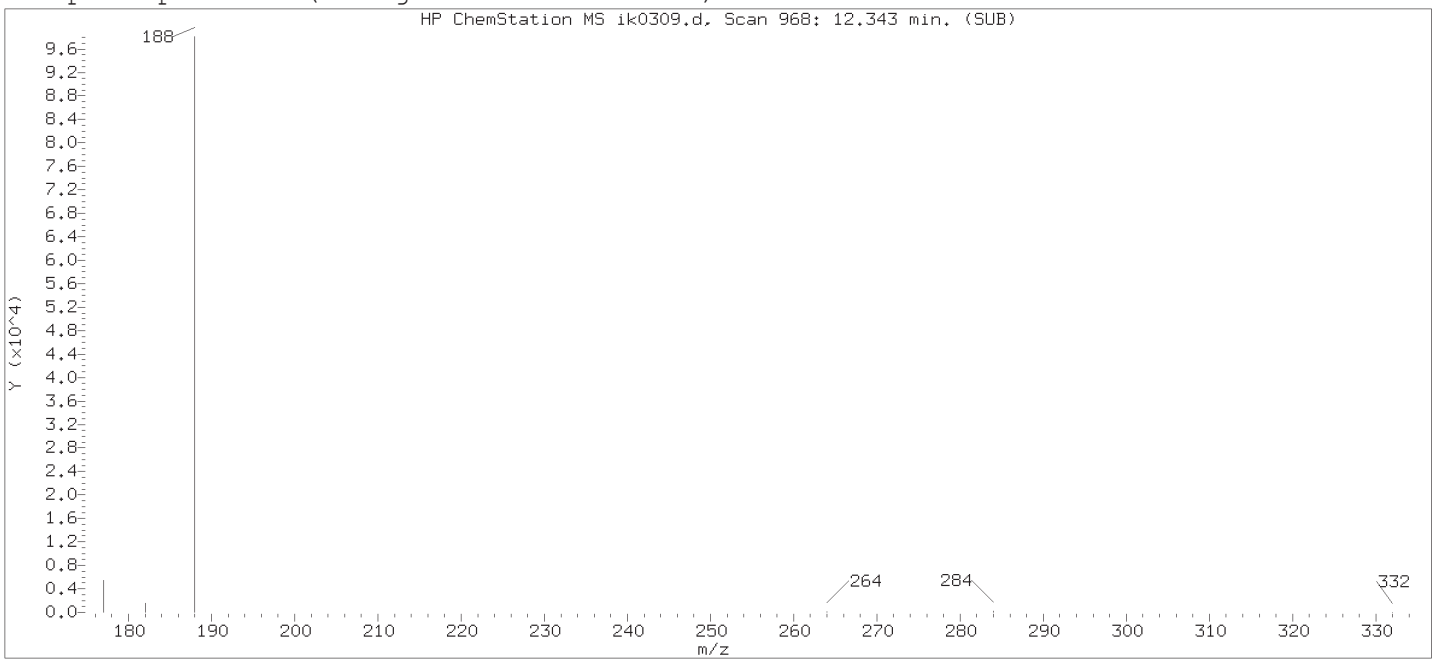
Compound Number : 33
Compound Name : Anthracene
Scan Number : 977
Retention Time (minutes) : 12.444
Quant Ion : 178.00
Area (flag) : 115055A
On-column Amount (ng/ul) : 0.3557
Integration start scan : 973 Integration stop scan: 978
Y at integration start : 17200 Y at integration end: 17200

Reason for manual integration: improper integration

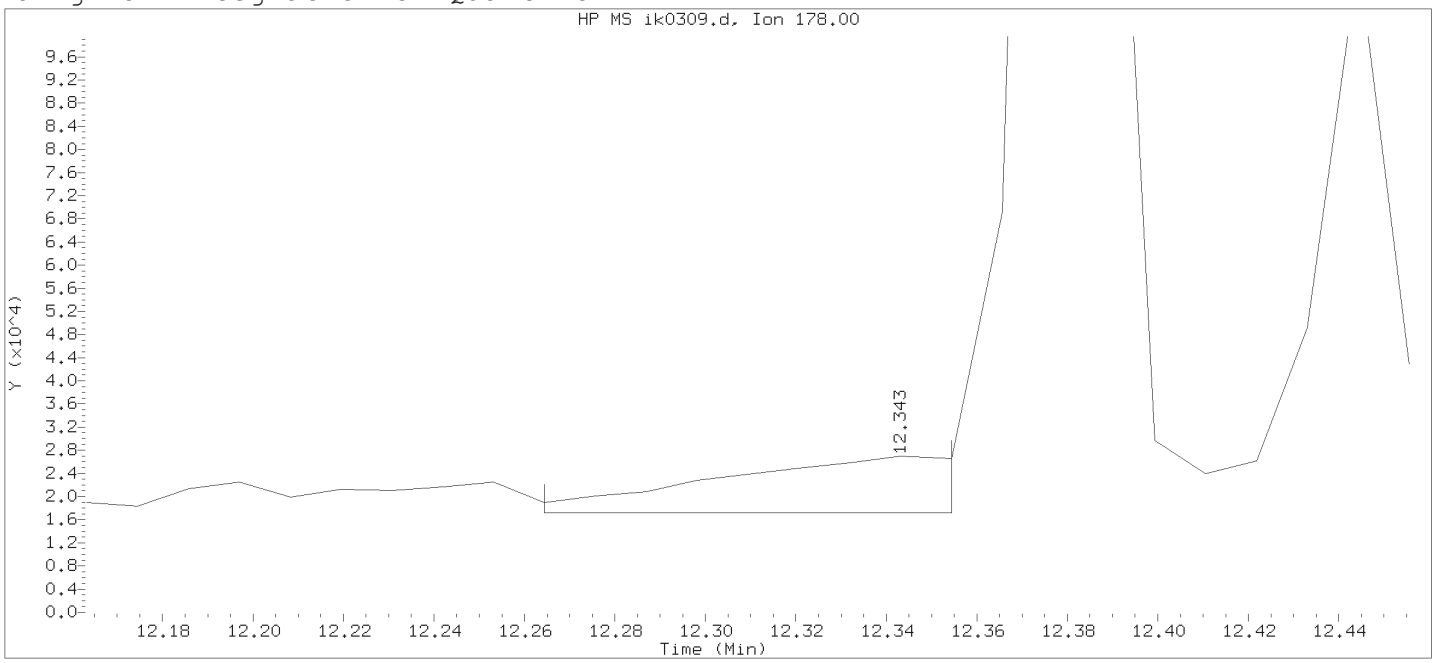
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

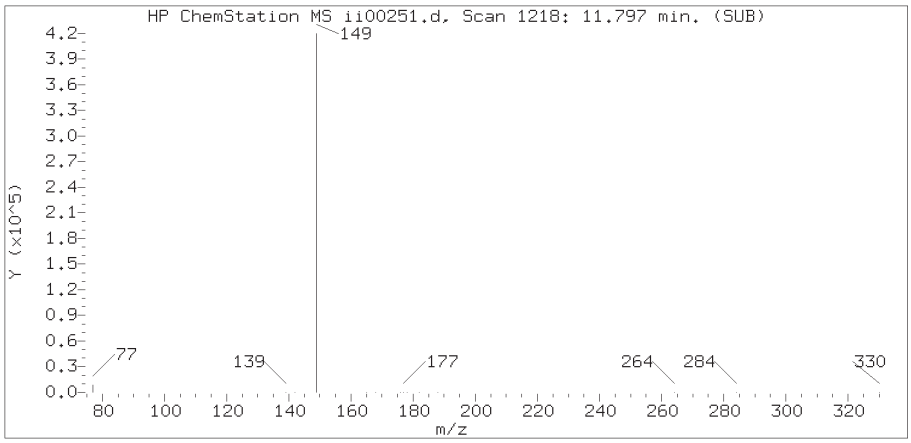
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

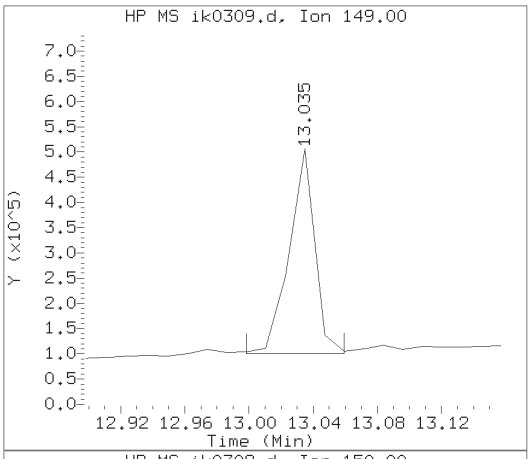
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number	:	33
Compound Name	:	Anthracene
Scan Number	:	968
Retention Time (minutes)	:	12.343
Quant Ion	:	178.00
Area	:	34018
On-column Amount (ng/ul)	:	0.1052
Integration start scan	:	960
Integration stop scan	:	968
Y at integration start	:	17200
Y at integration end	:	17200

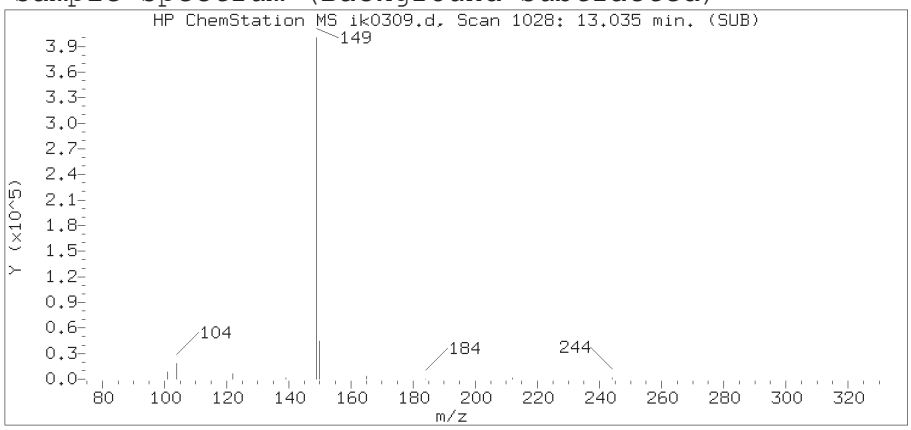
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

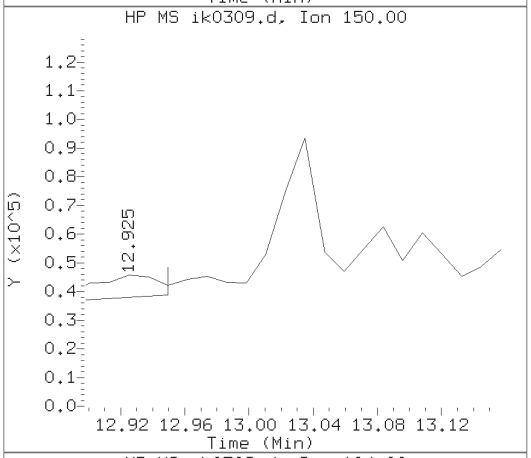
Reference Standard Spectrum for Di-n-butylphthalate



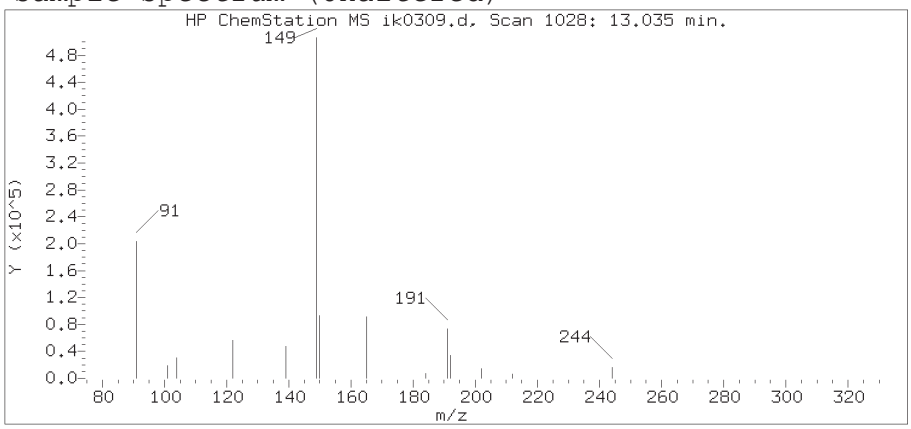


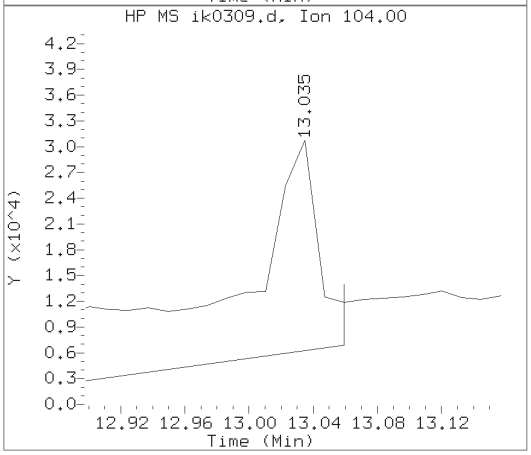
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

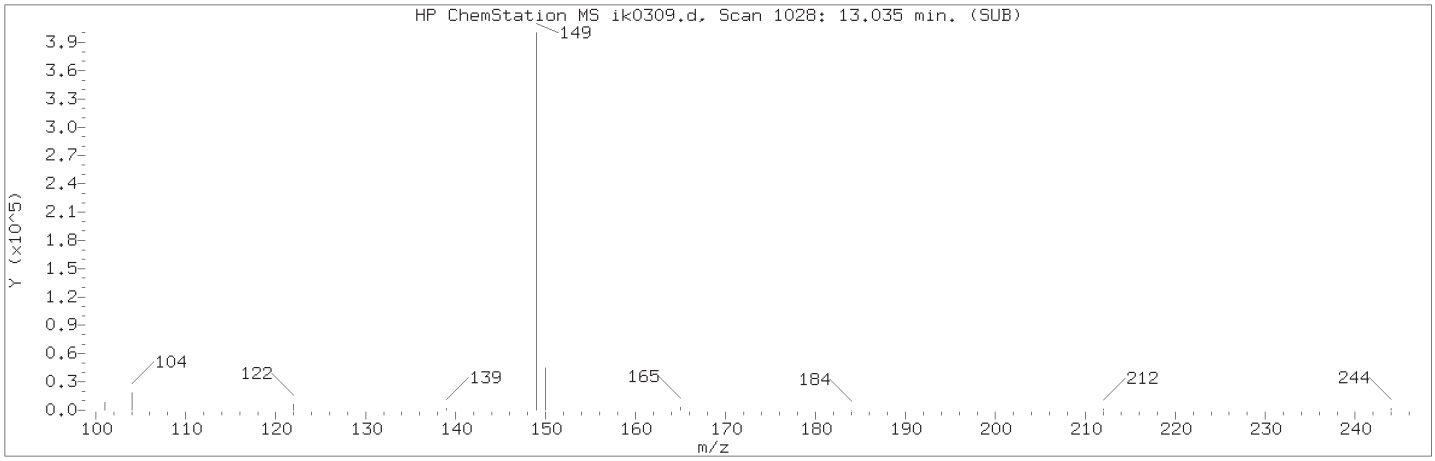
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

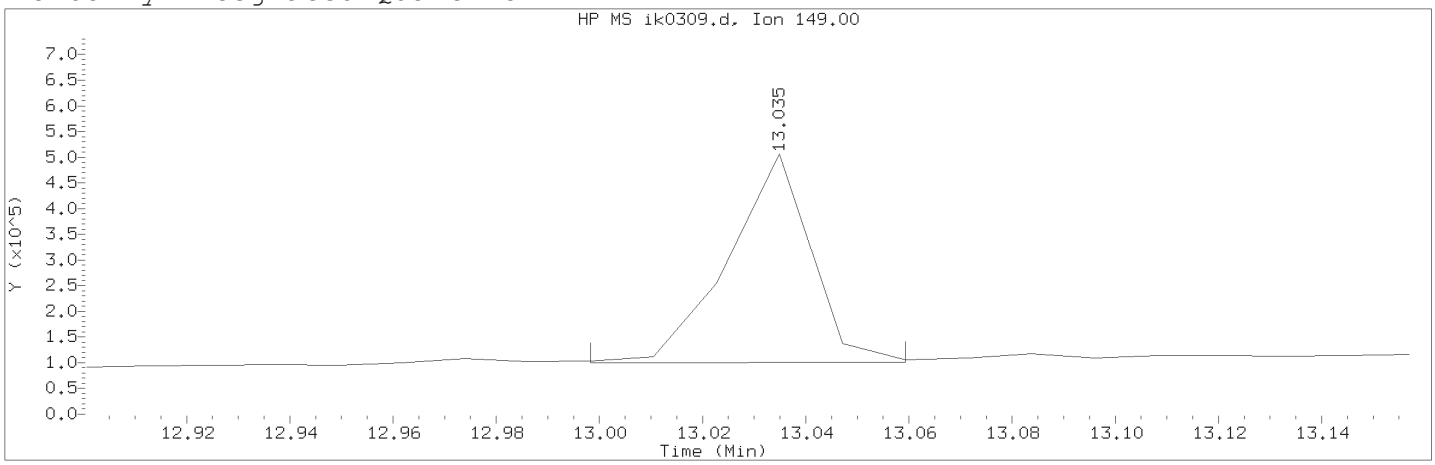
Compound Number	: 35
Compound Name	: Di-n-butylphthalate
Scan Number	: 1028
Retention Time (minutes)	: 13.035
Relative Retention Time	:-0.00877
Quant Ion	: 149.00
Area (flag)	: 446636M
On-column Amount (ng/ul)	: 1.4451

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

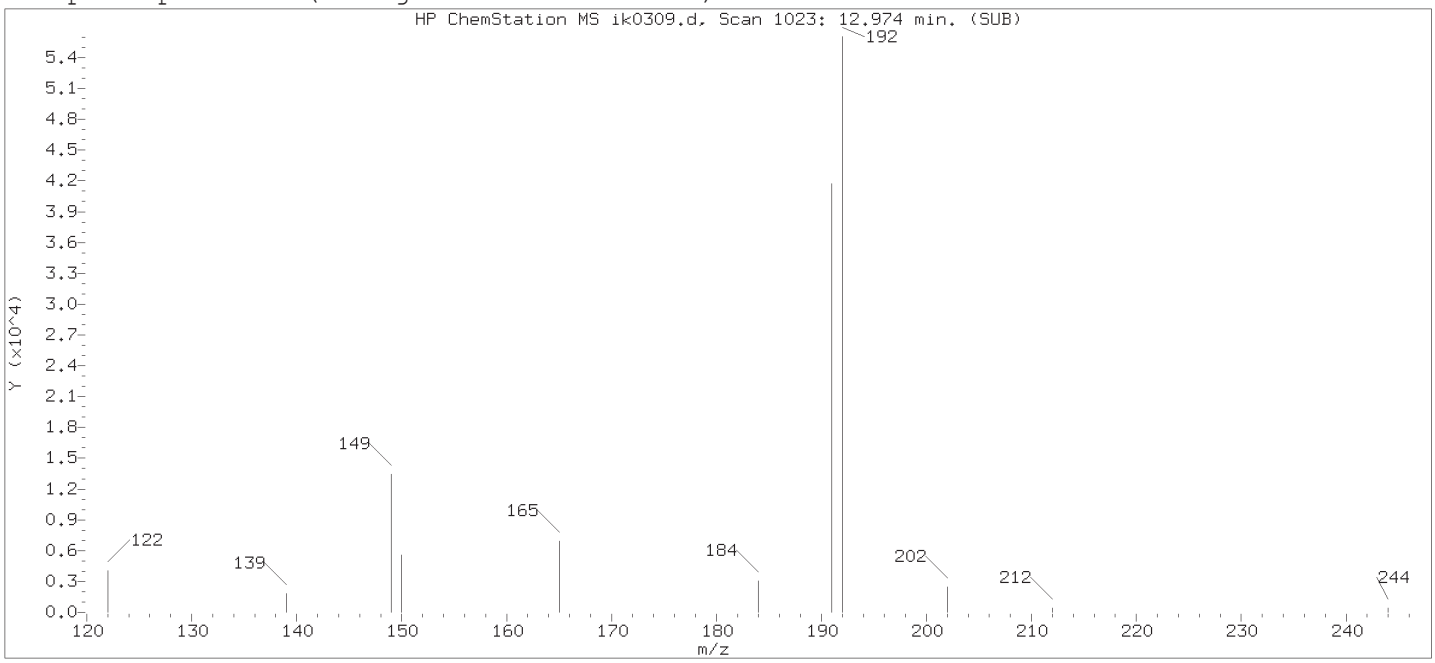
Compound Number : 35
Compound Name : Di-n-butylphthalate
Scan Number : 1028
Retention Time (minutes) : 13.035
Quant Ion : 149.00
Area (flag) : 446636M
On-column Amount (ng/ul) : 1.4451
Integration start scan : 1024 Integration stop scan: 1029
Y at integration start : 100420 Y at integration end: 100931

Reason for manual integration: improper integration

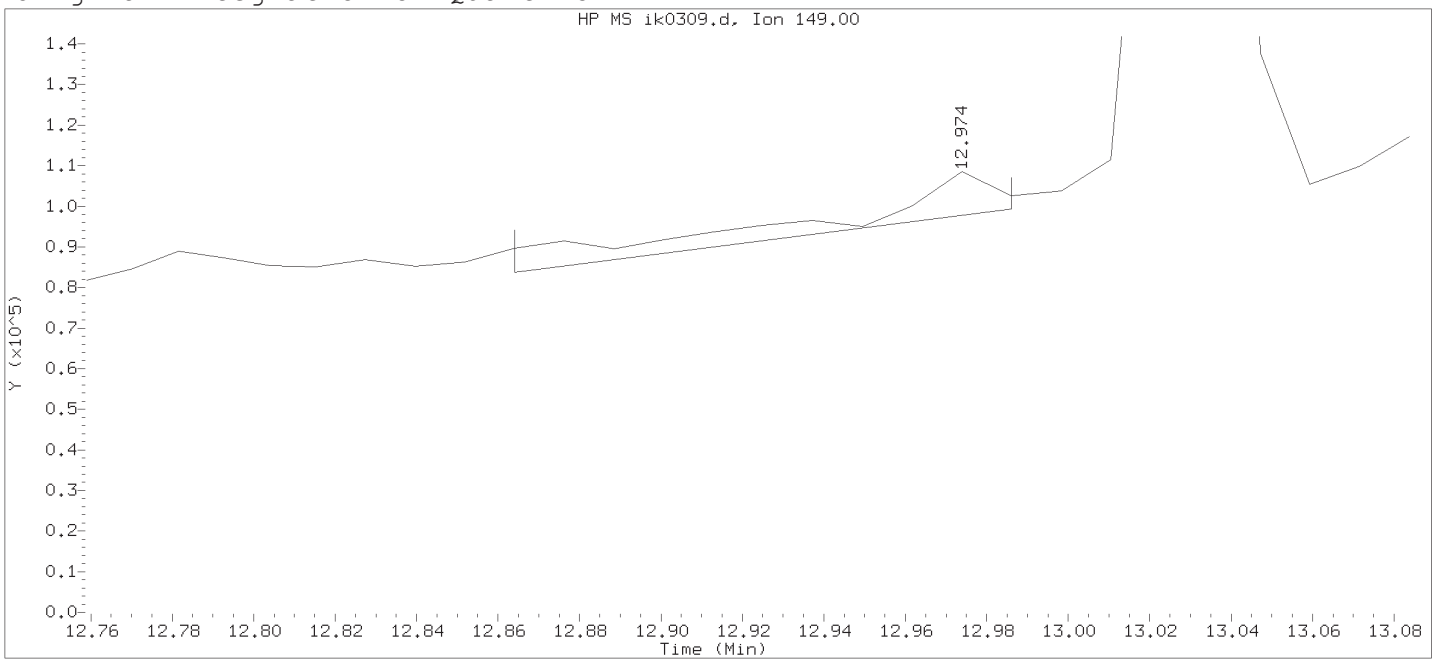
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

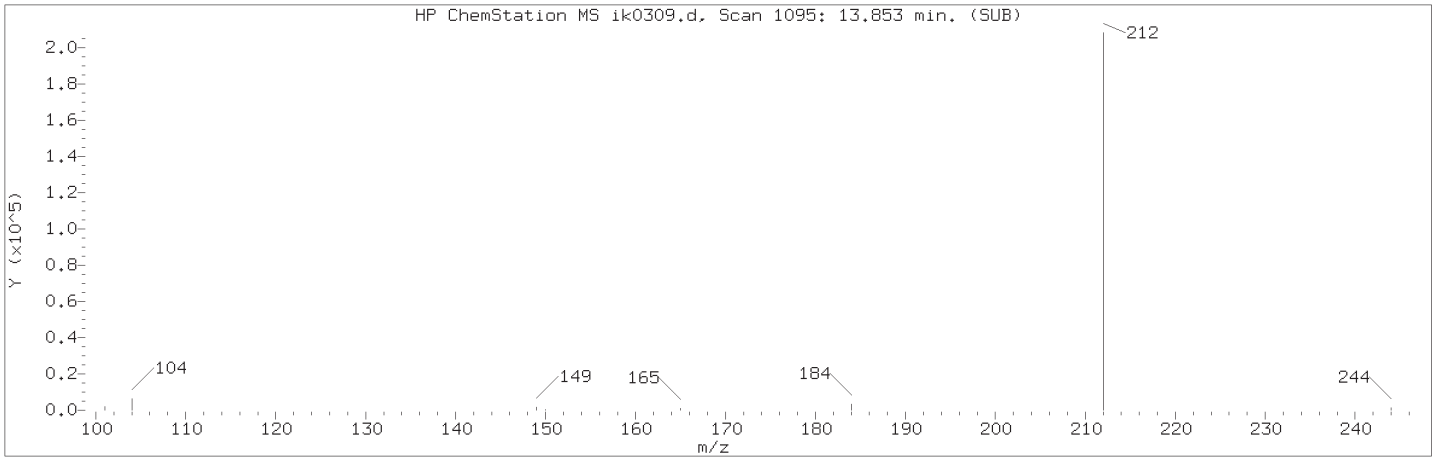
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

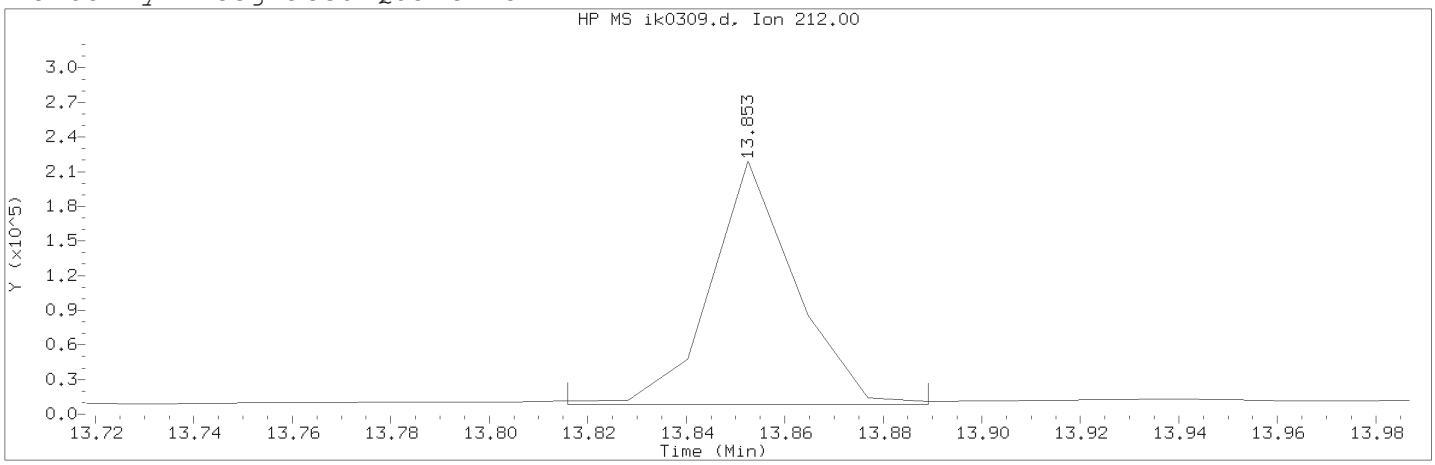
Compound Number : 35
Compound Name : Di-n-butylphthalate
Scan Number : 1023
Retention Time (minutes) : 12.974
Quant Ion : 149.00
Area : 30153
On-column Amount (ng/ul) : 0.0976
Integration start scan : 1013 Integration stop scan: 1023
Y at integration start : 83774 Y at integration end: 99407

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

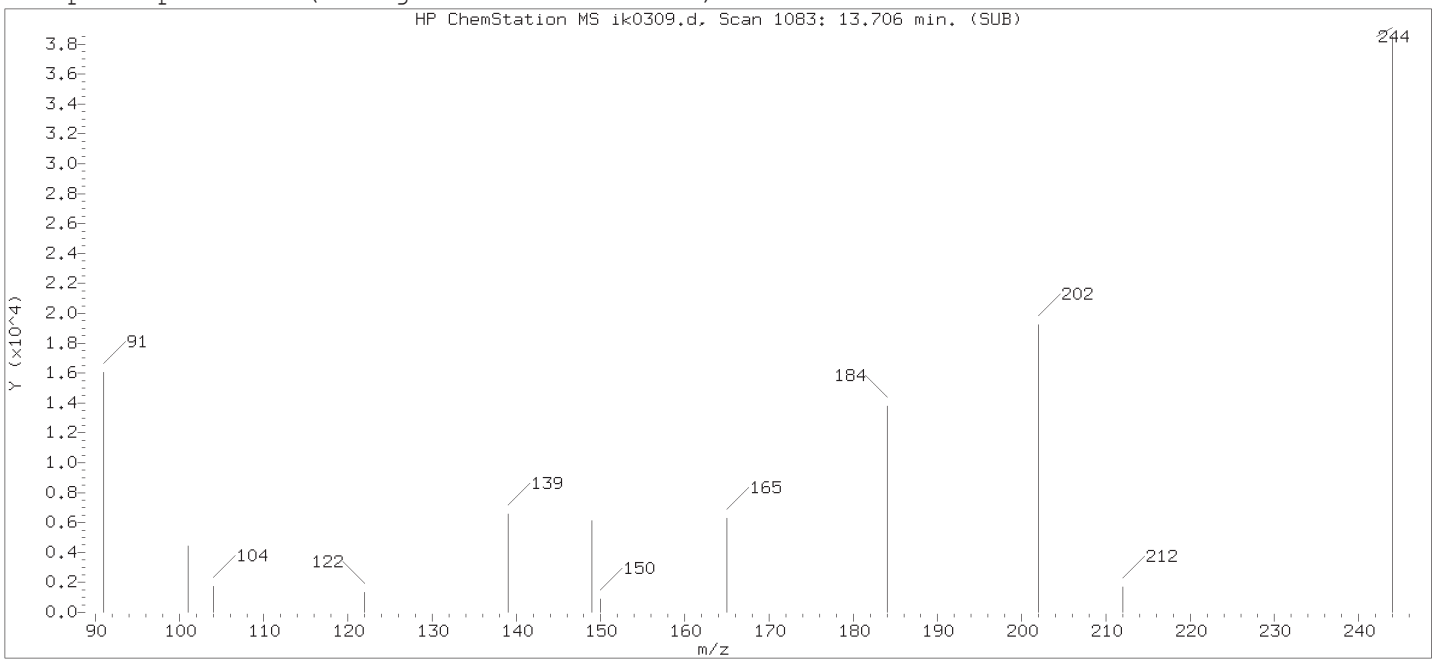
Compound Number : 36
Compound Name : Fluoranthene-d10
Scan Number : 1095
Retention Time (minutes) : 13.853
Quant Ion : 212.00
Area (flag) : 249056M
On-column Amount (ng/ul) : 0.6718
Integration start scan : 1091 Integration stop scan: 1097
Y at integration start : 8602 Y at integration end: 8602

Reason for manual integration: improper integration

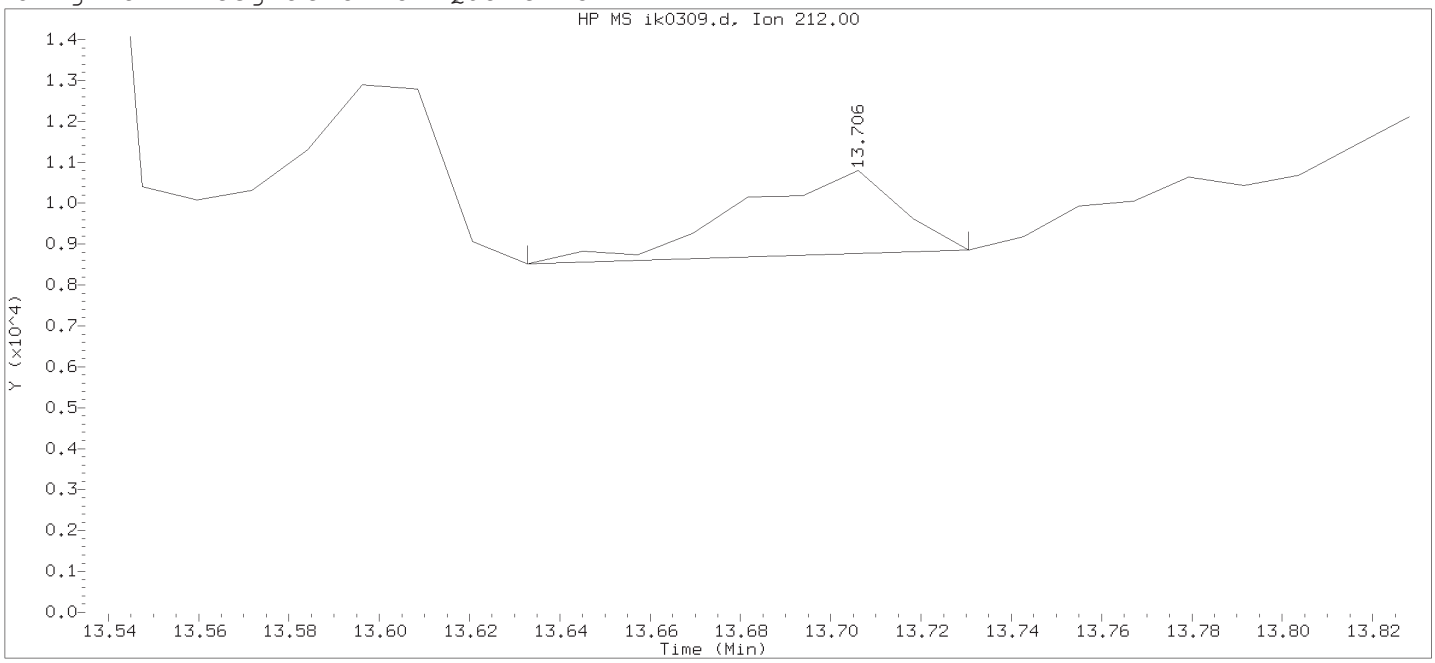
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

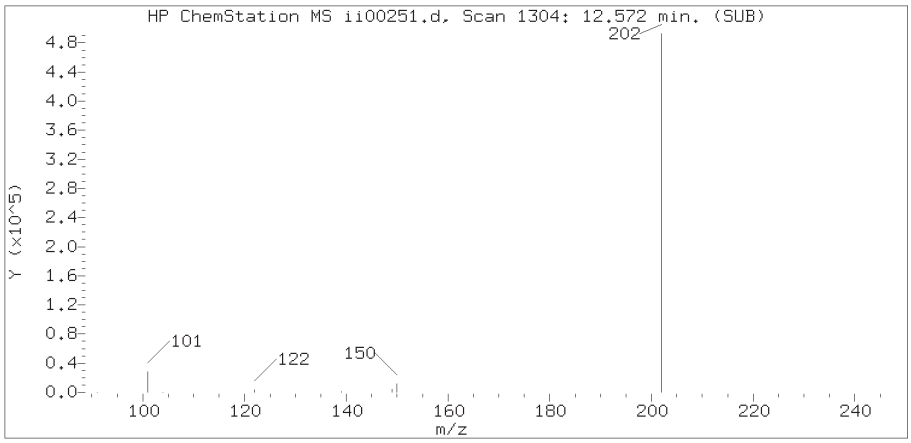
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

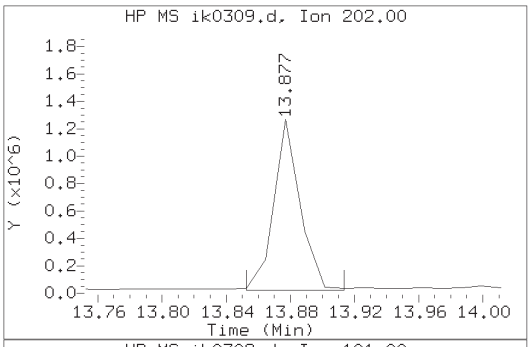
Sample Name: T1005 Lab Sample ID: 9867767

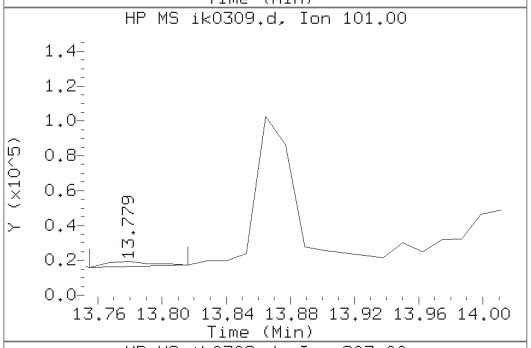
Compound Number	:	36
Compound Name	:	Fluoranthene-d10
Scan Number	:	1083
Retention Time (minutes)	:	13.706
Quant Ion	:	212.00
Area	:	4978
On-column Amount (ng/ul)	:	0.0134
Integration start scan	:	1076 Integration stop scan: 1084
Y at integration start	:	8519 Y at integration end: 8855

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

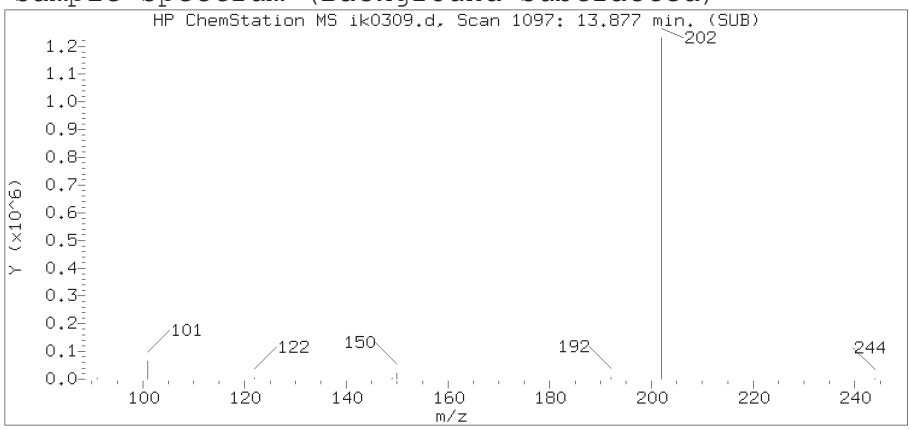
Reference Standard Spectrum for Fluoranthene

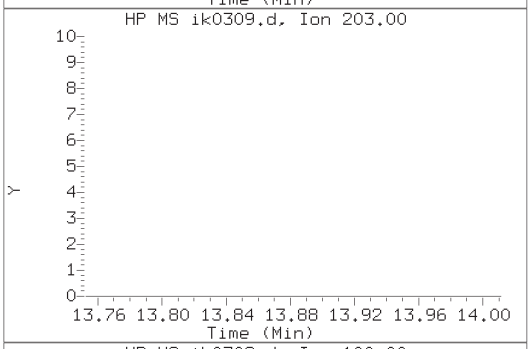




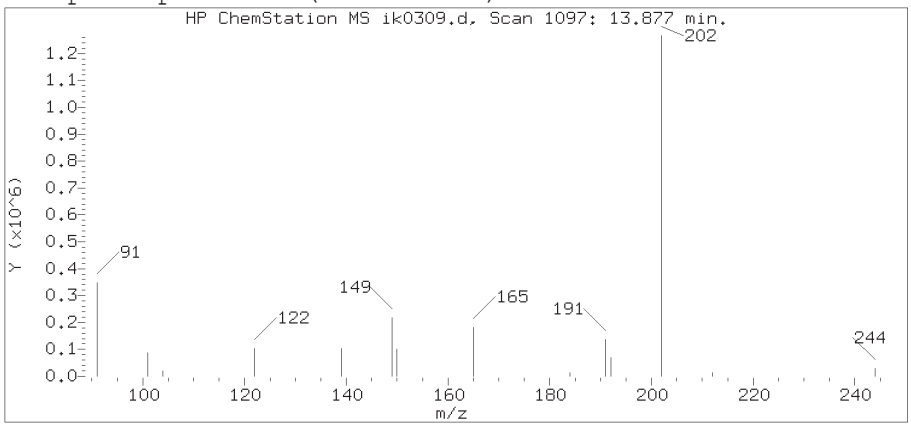


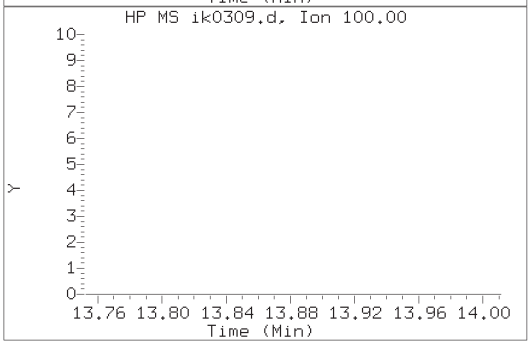
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

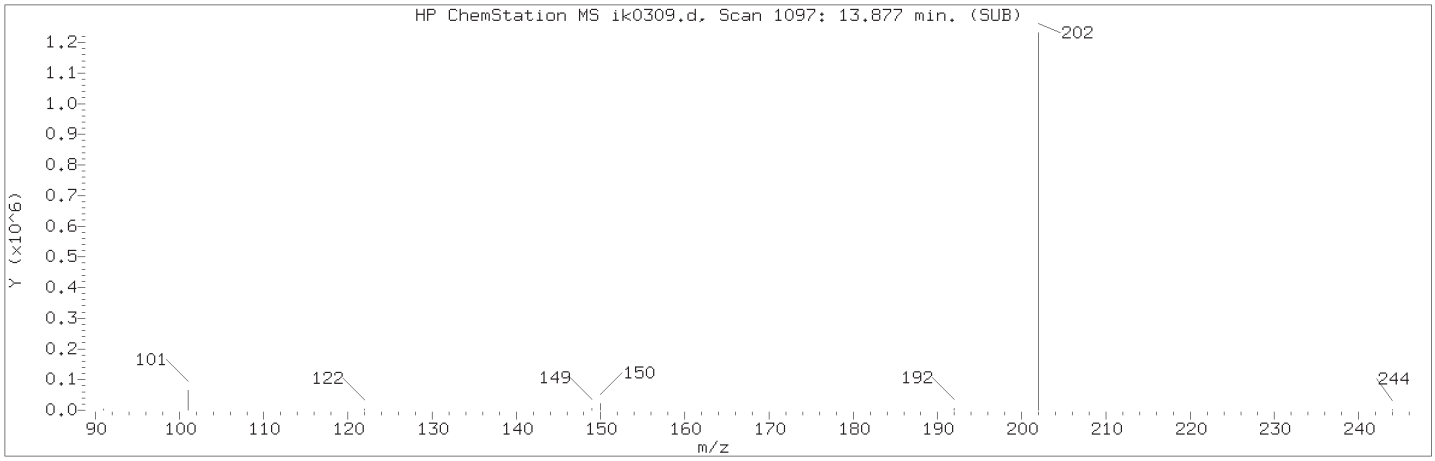
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

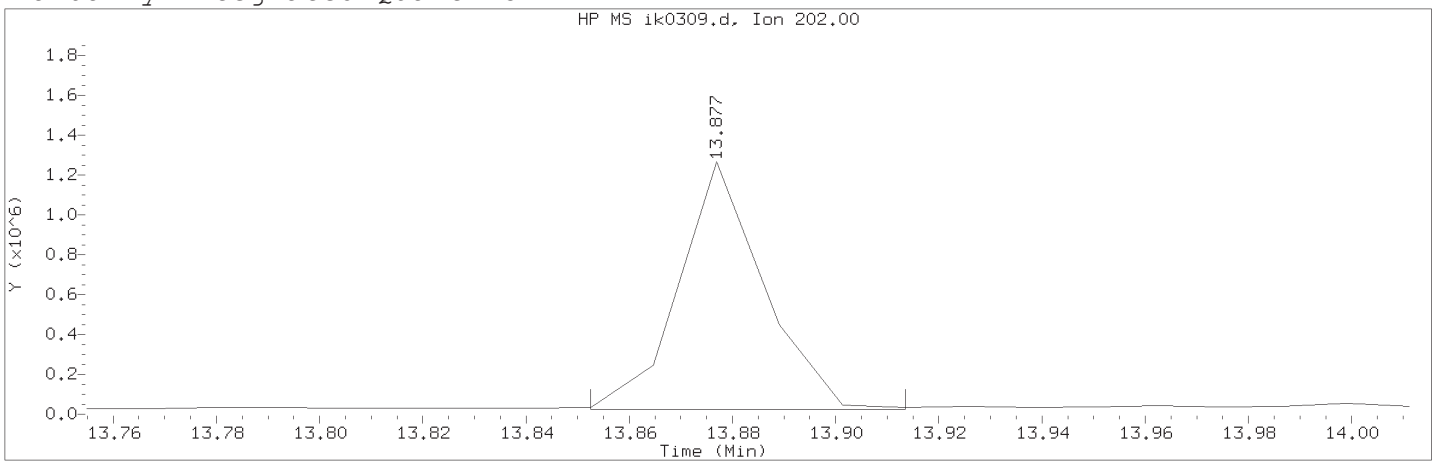
Compound Number	: 37
Compound Name	: Fluoranthene
Scan Number	: 1097
Retention Time (minutes)	: 13.877
Relative Retention Time	:-0.01020
Quant Ion	: 202.00
Area (flag)	: 1415358M
On-column Amount (ng/ul)	: 3.5193

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

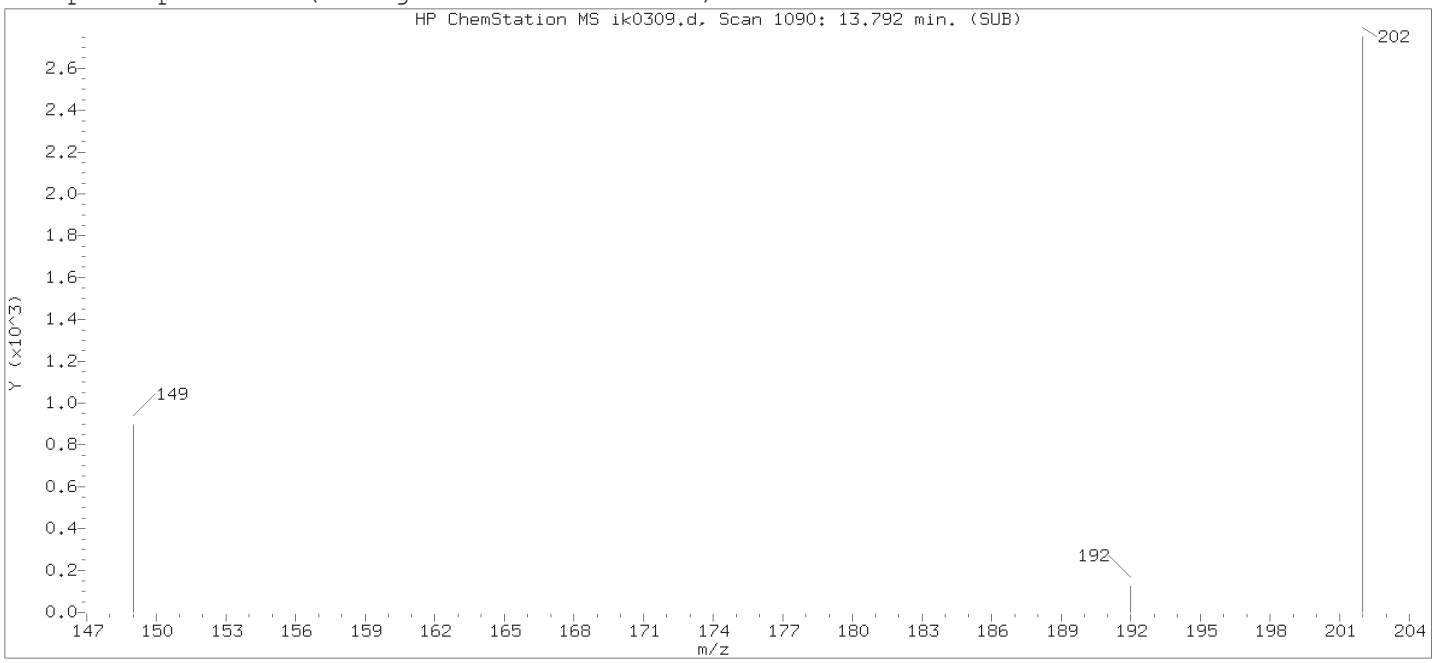
Compound Number : 37
Compound Name : Fluoranthene
Scan Number : 1097
Retention Time (minutes) : 13.877
Quant Ion : 202.00
Area (flag) : 1415358M
On-column Amount (ng/ul) : 3.5193
Integration start scan : 1094 Integration stop scan: 1099
Y at integration start : 23416 Y at integration end: 23416

Reason for manual integration: improper integration

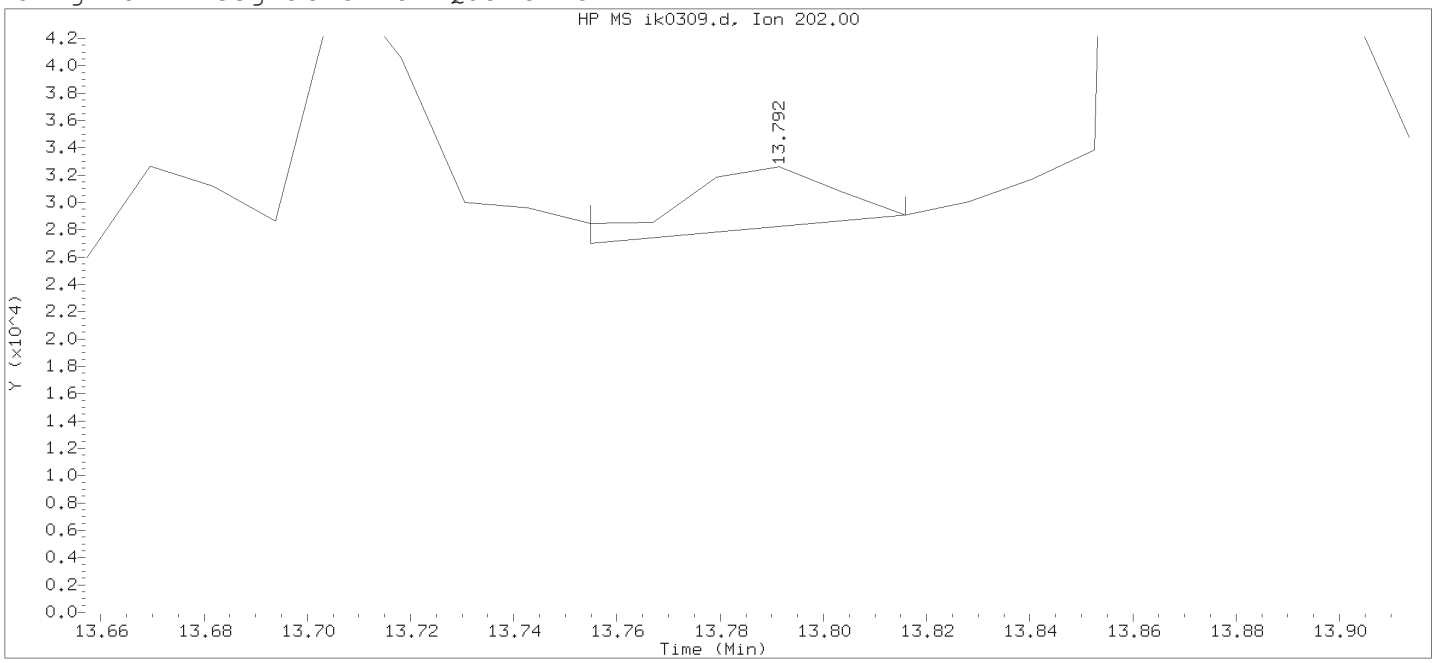
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

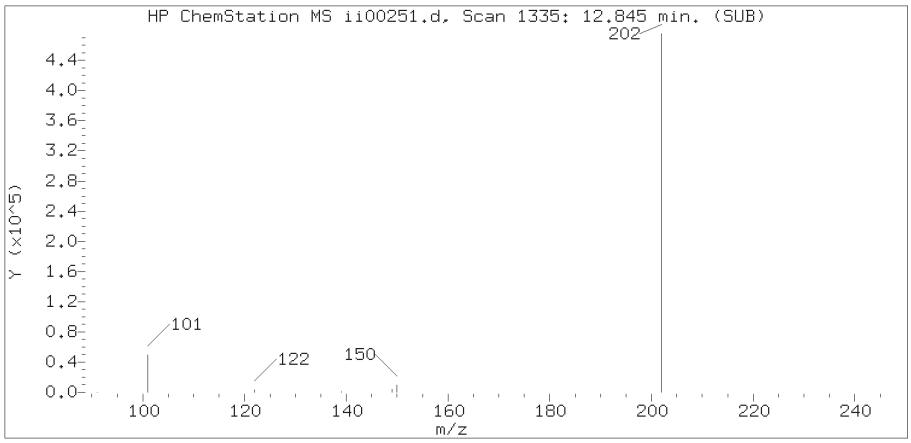
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

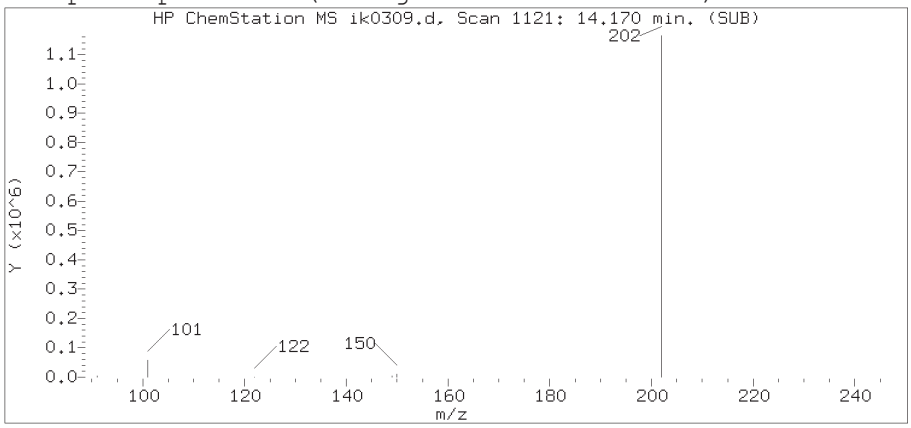
Compound Number : 37
Compound Name : Fluoranthene
Scan Number : 1090
Retention Time (minutes) : 13.792
Quant Ion : 202.00
Area : 9065
On-column Amount (ng/ul) : 0.0225
Integration start scan : 1086 Integration stop scan: 1091
Y at integration start : 27001 Y at integration end: 29056

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

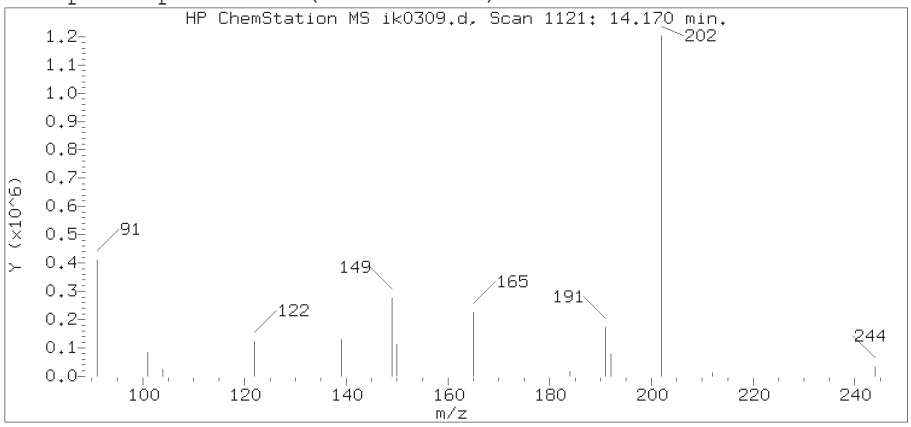
Reference Standard Spectrum for Pyrene

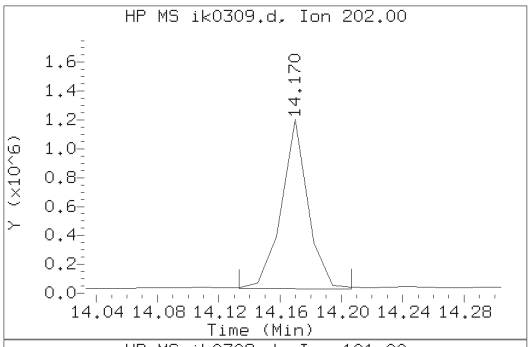


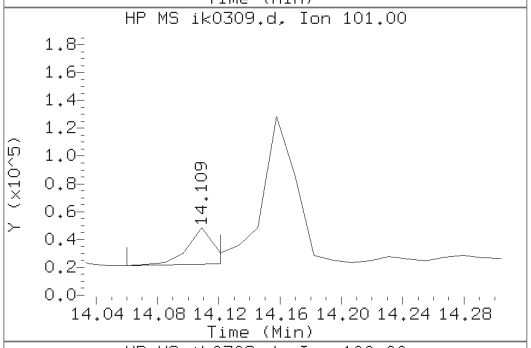
Sample Spectrum (Background Subtracted)

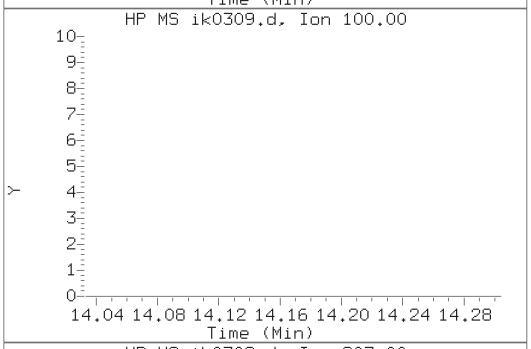


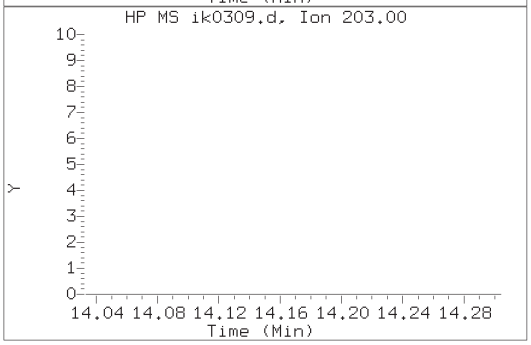
Sample Spectrum (Unaltered)











Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

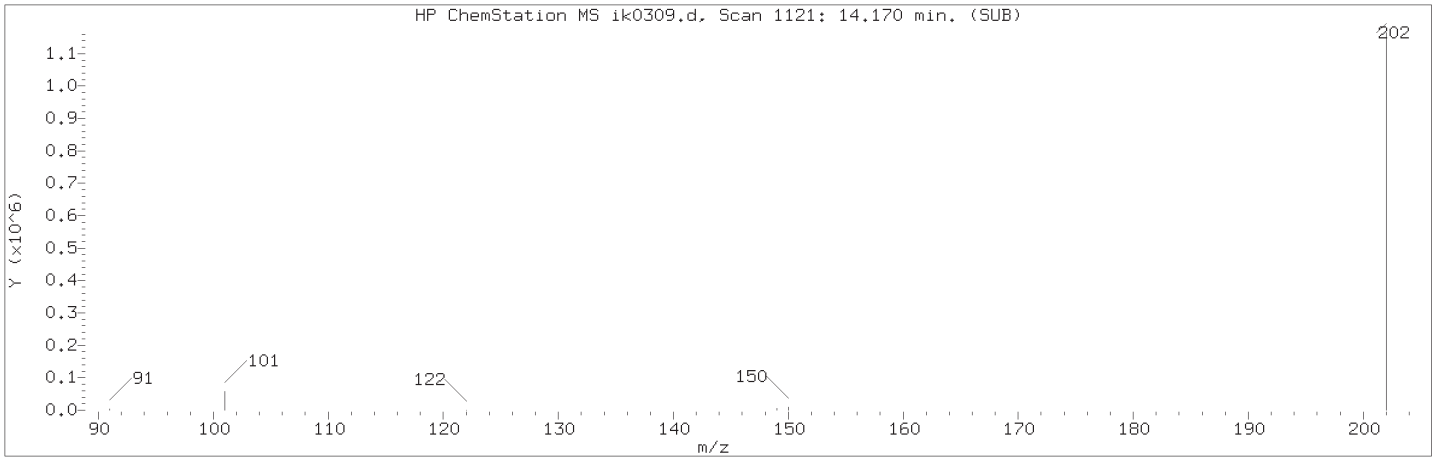
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

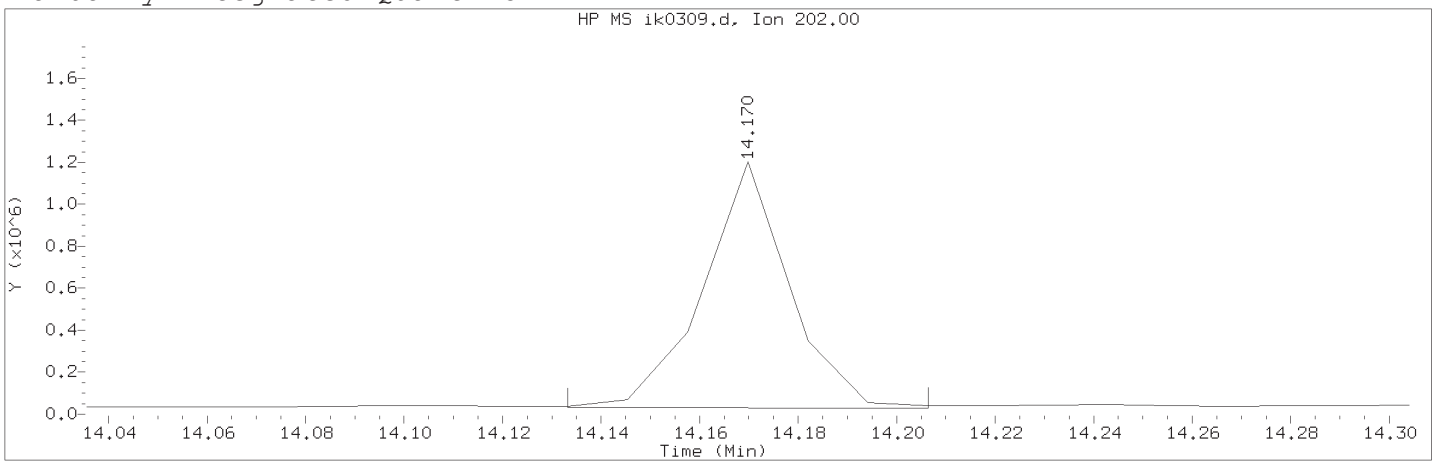
Compound Number	: 39
Compound Name	: Pyrene
Scan Number	: 1121
Retention Time (minutes)	: 14.170
Relative Retention Time	: 0.00128
Quant Ion	: 202.00
Area (flag)	: 1414098M
On-column Amount (ng/ul)	: 4.1341

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

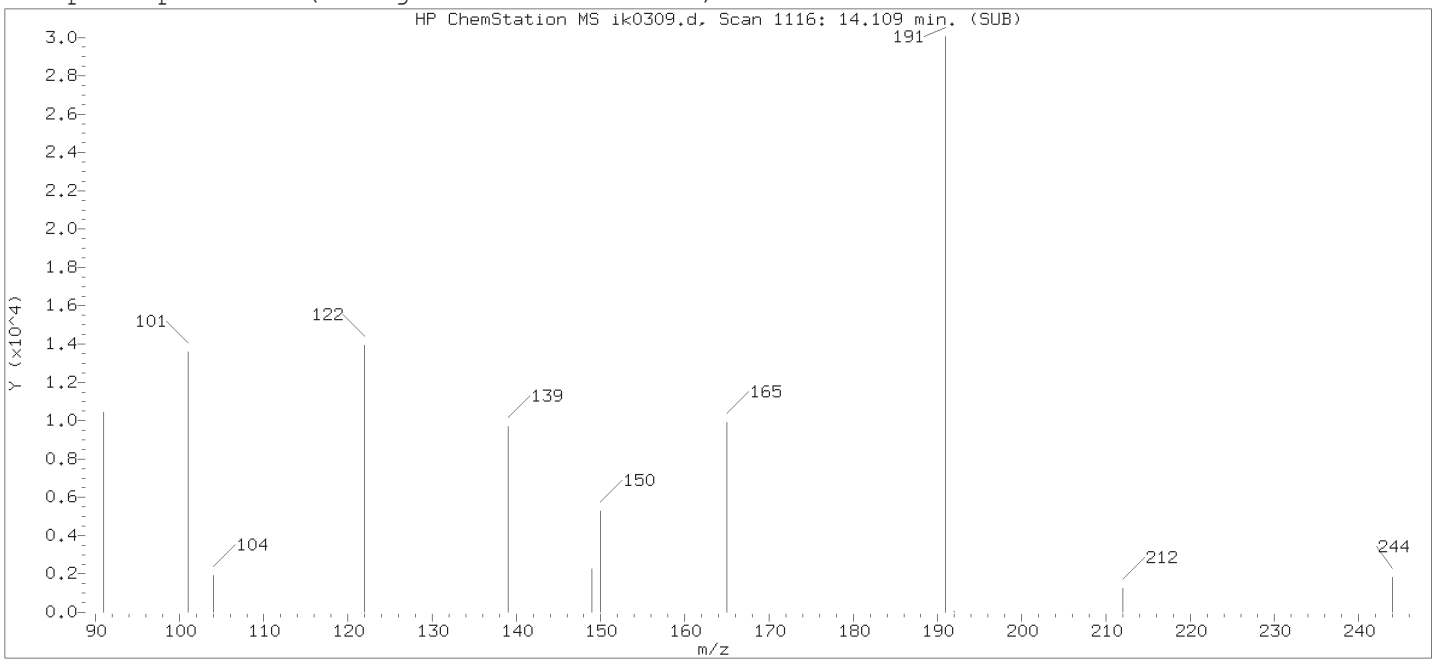
Compound Number : 39
Compound Name : Pyrene
Scan Number : 1121
Retention Time (minutes) : 14.170
Quant Ion : 202.00
Area (flag) : 1414098M
On-column Amount (ng/ul) : 4.1341
Integration start scan : 1117 Integration stop scan: 1123
Y at integration start : 31535 Y at integration end: 29368

Reason for manual integration: improper integration

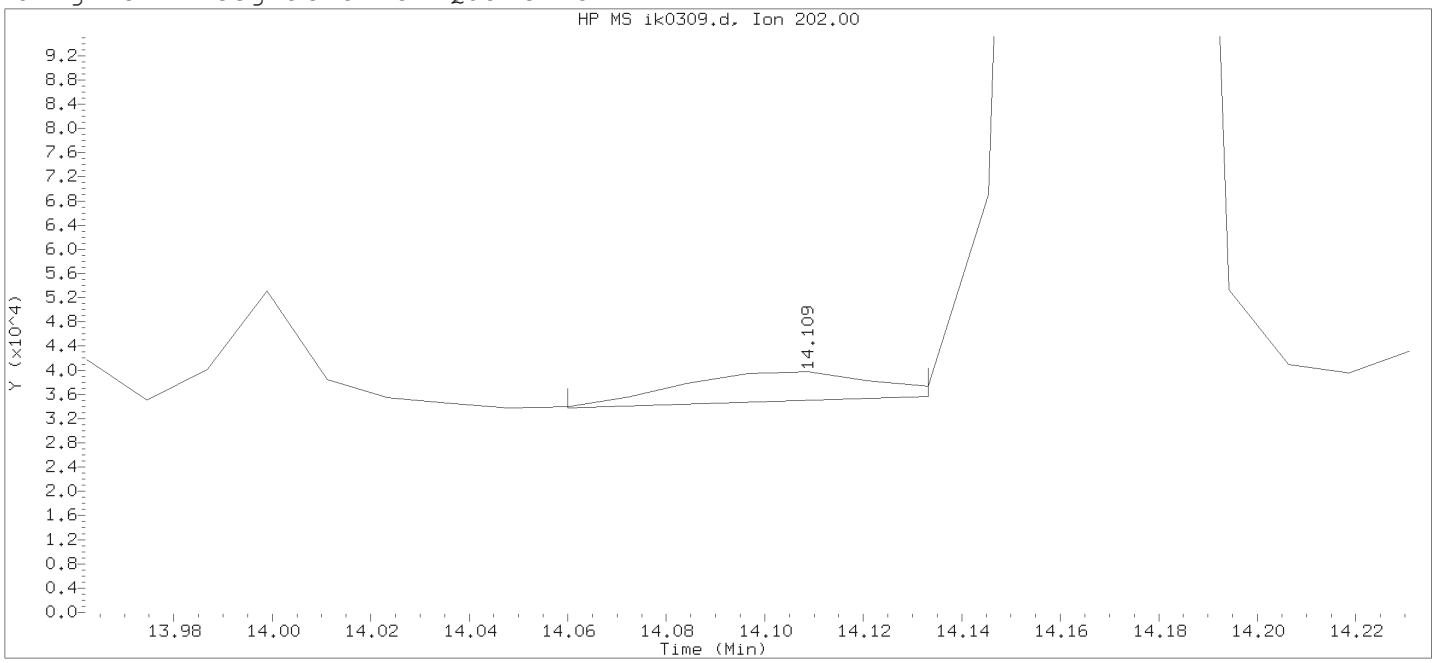
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

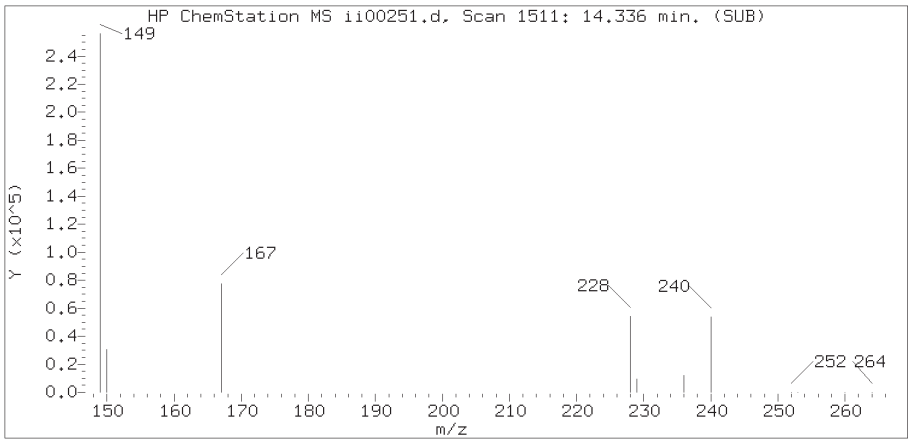
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

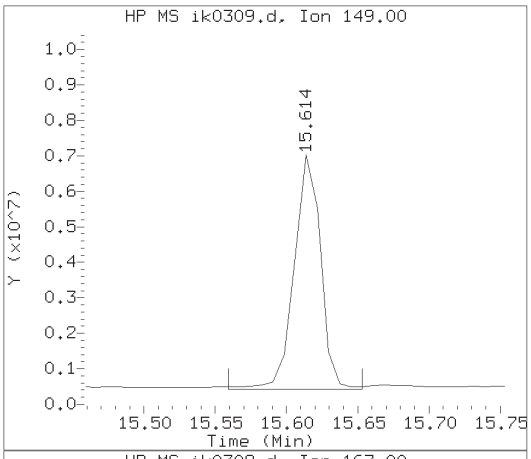
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number	:	39
Compound Name	:	Pyrene
Scan Number	:	1116
Retention Time (minutes)	:	14.109
Quant Ion	:	202.00
Area	:	13463
On-column Amount (ng/ul)	:	0.9976
Integration start scan	:	1111 Integration stop scan: 1117
Y at integration start	:	33768 Y at integration end: 35640

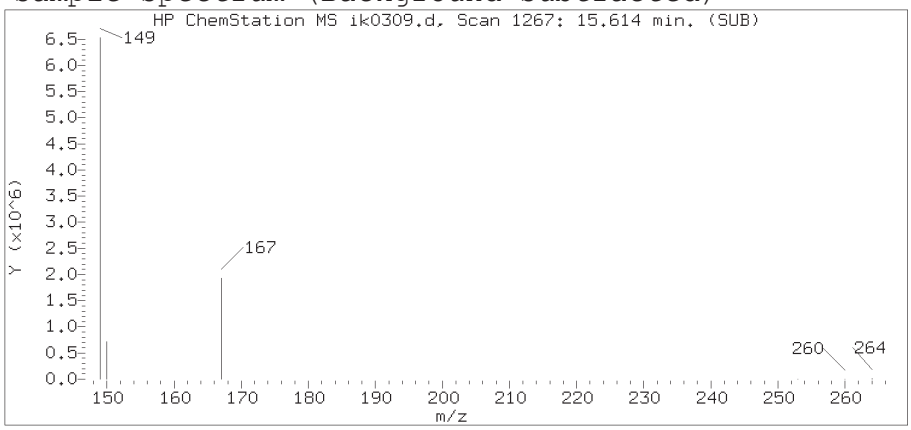
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

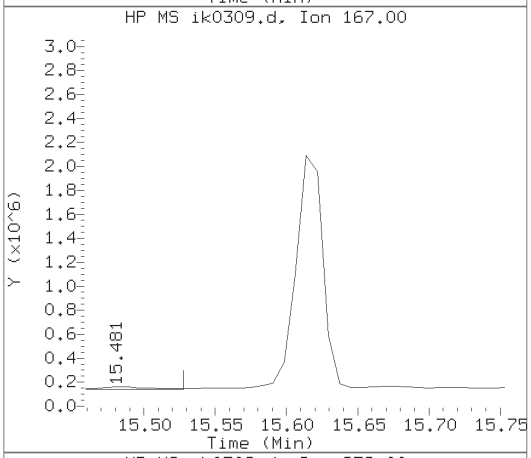
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



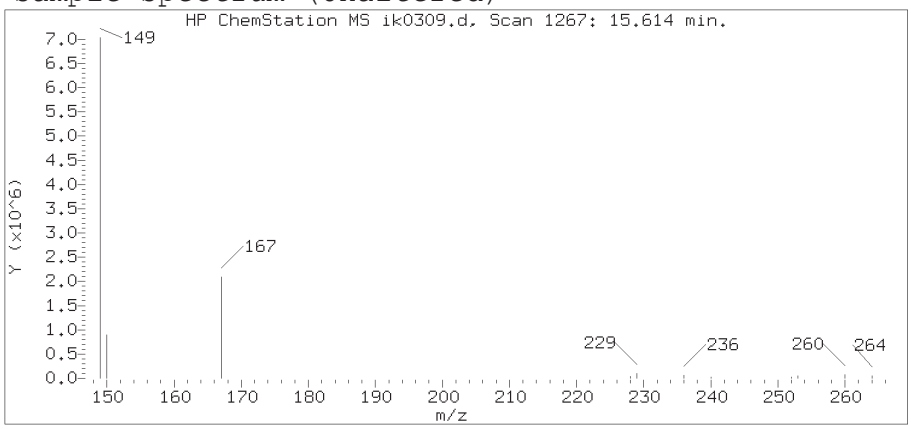


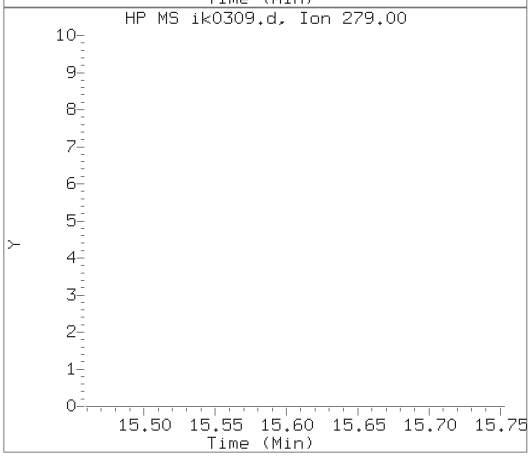
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

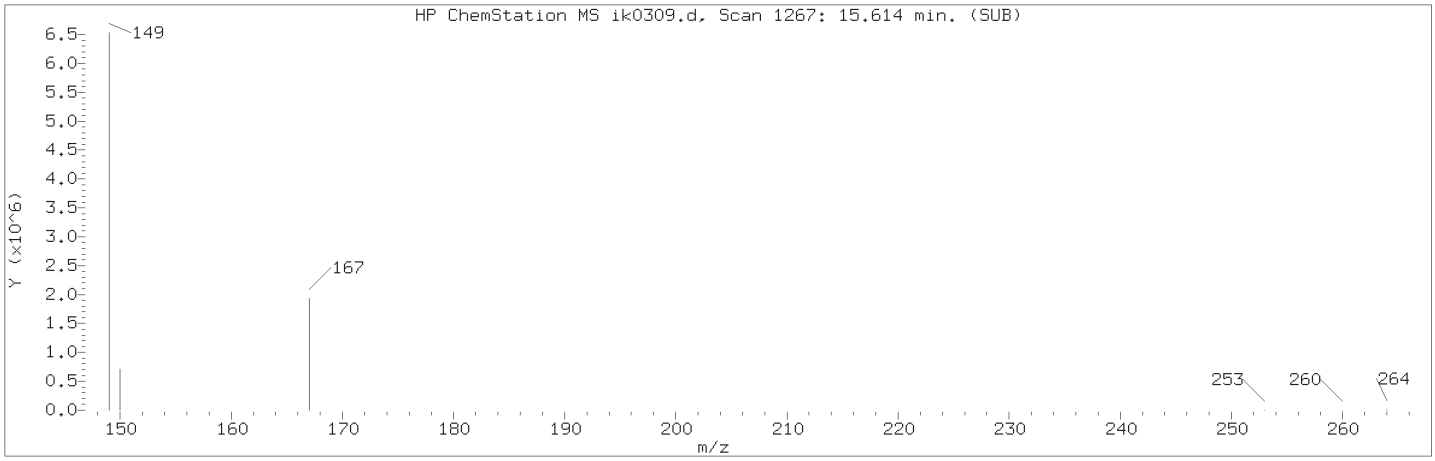
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

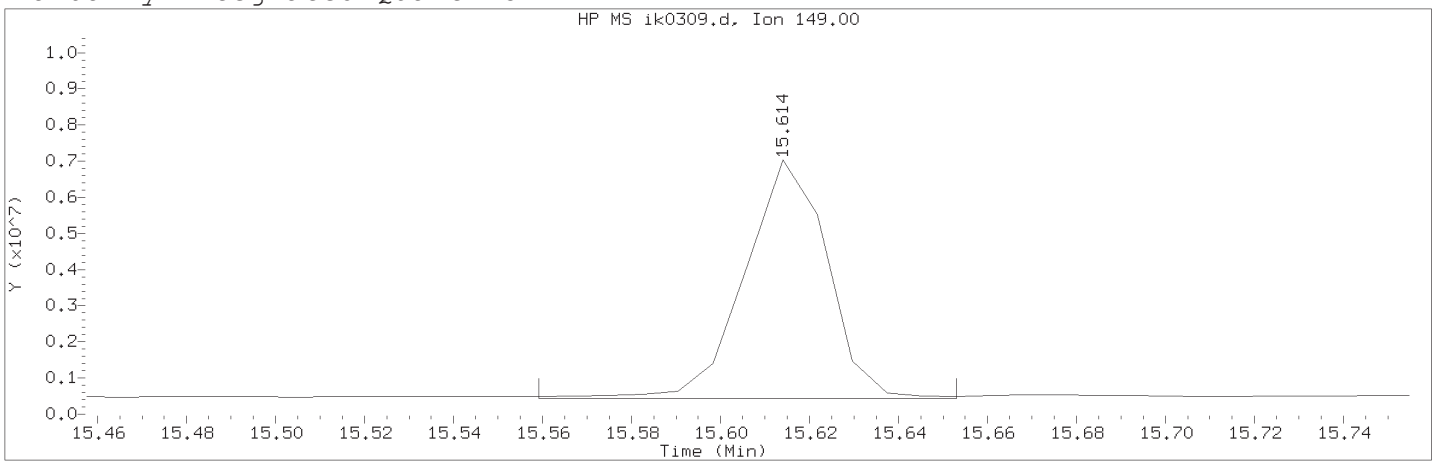
Compound Number	: 41
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1267
Retention Time (minutes)	: 15.614
Relative Retention Time	: 0.00048
Quant Ion	: 149.00
Area (flag)	: 8572437M
On-column Amount (ng/ul)	: 52.7348

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

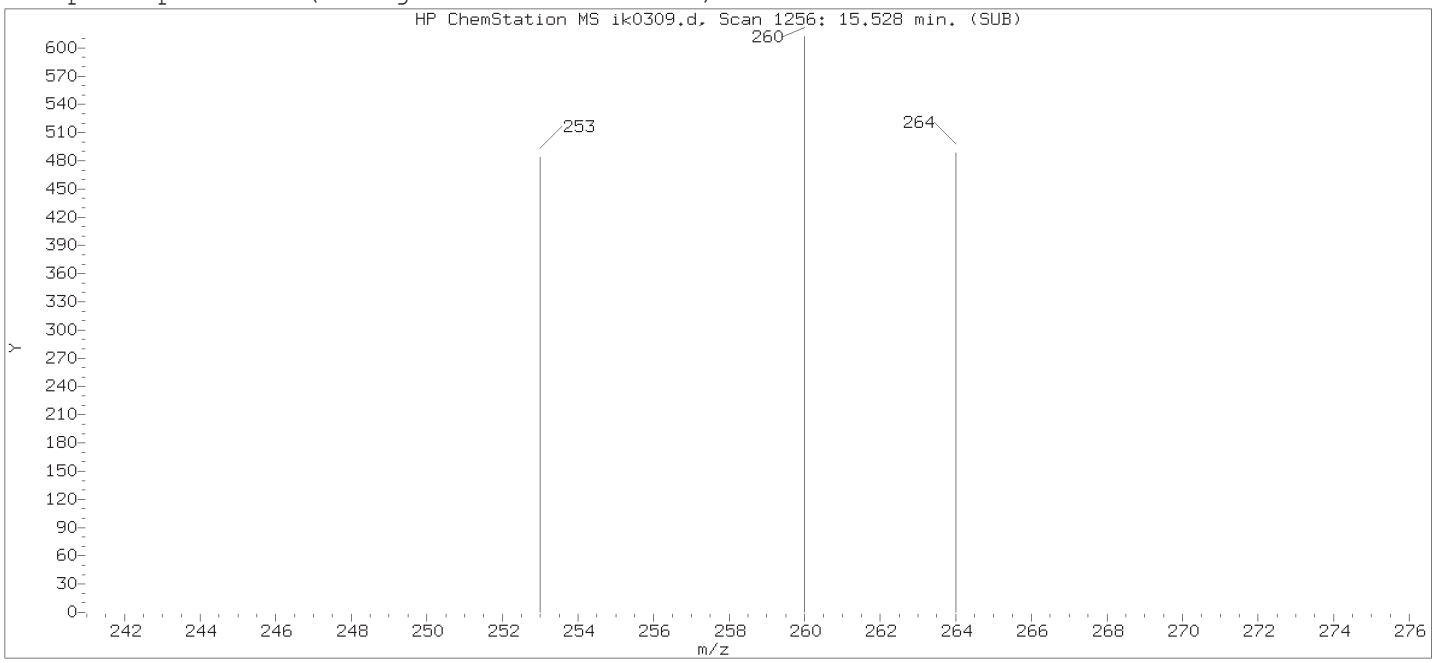
Compound Number : 41
Compound Name : bis(2-Ethylhexyl)phthalate
Scan Number : 1267
Retention Time (minutes) : 15.614
Quant Ion : 149.00
Area (flag) : 8572437M
On-column Amount (ng/ul) : 52.7348
Integration start scan : 1259 Integration stop scan: 1271
Y at integration start : 429248 Y at integration end: 429248

Reason for manual integration: improper integration

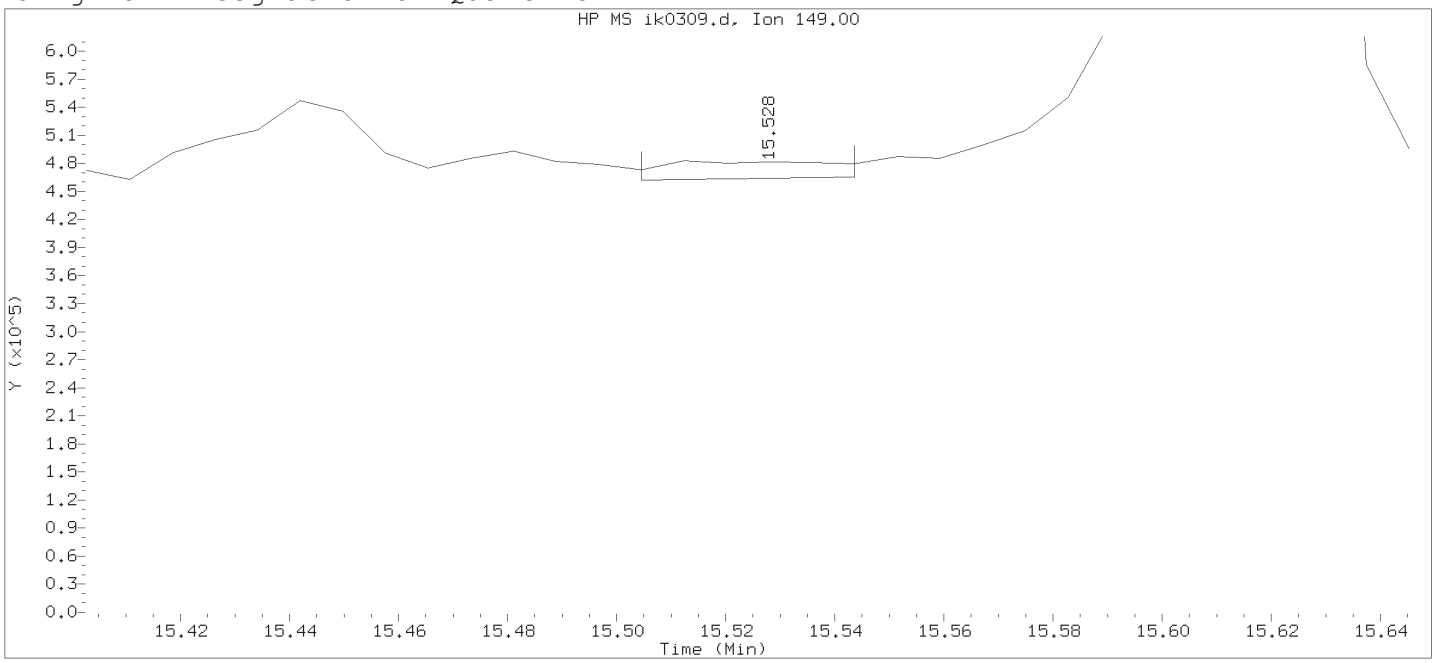
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

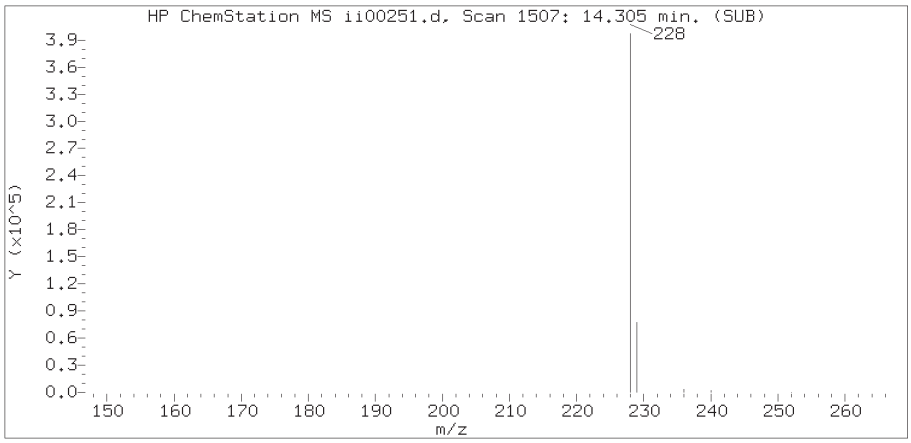
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

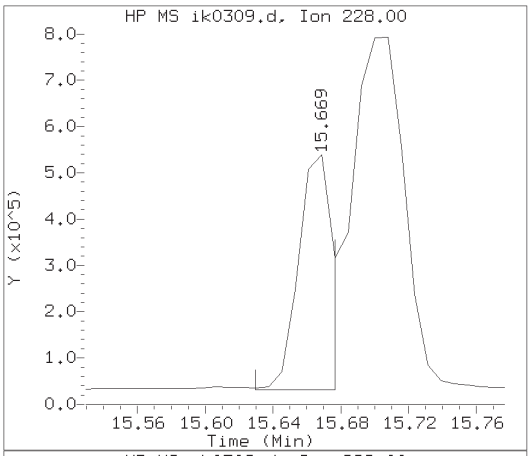
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number : 41
Compound Name : bis(2-Ethylhexyl)phthalate
Scan Number : 1256
Retention Time (minutes) : 15.528
Quant Ion : 149.00
Area : 39054
On-column Amount (ng/ul) : 6.0896
Integration start scan : 1252 Integration stop scan: 1257
Y at integration start : 461832 Y at integration end: 465591

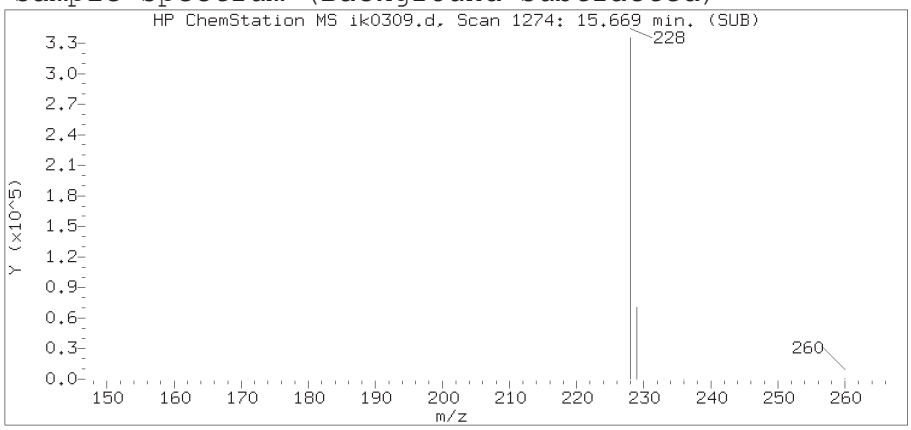
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature used.

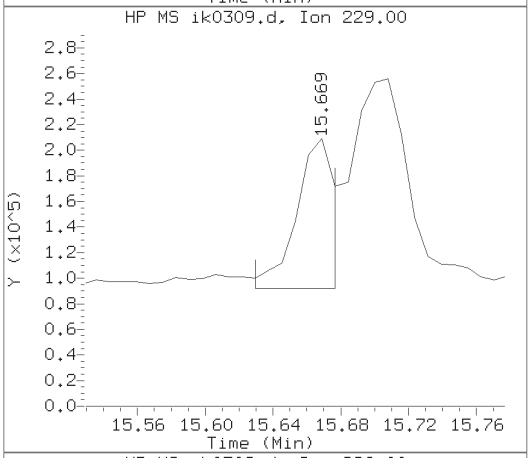
Reference Standard Spectrum for Benzo(a)anthracene



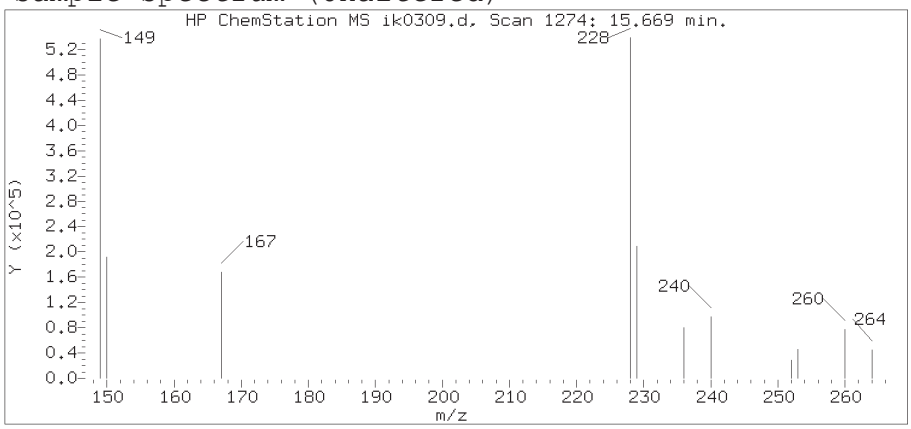


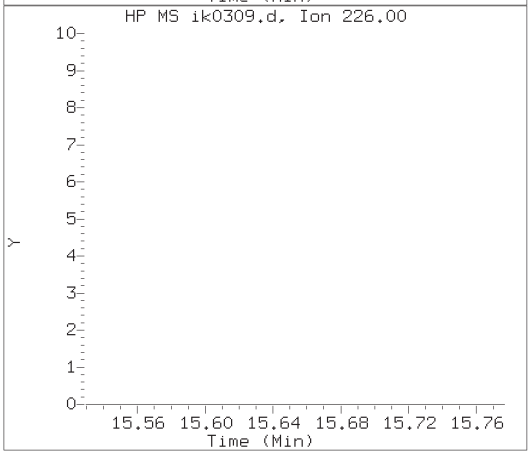
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

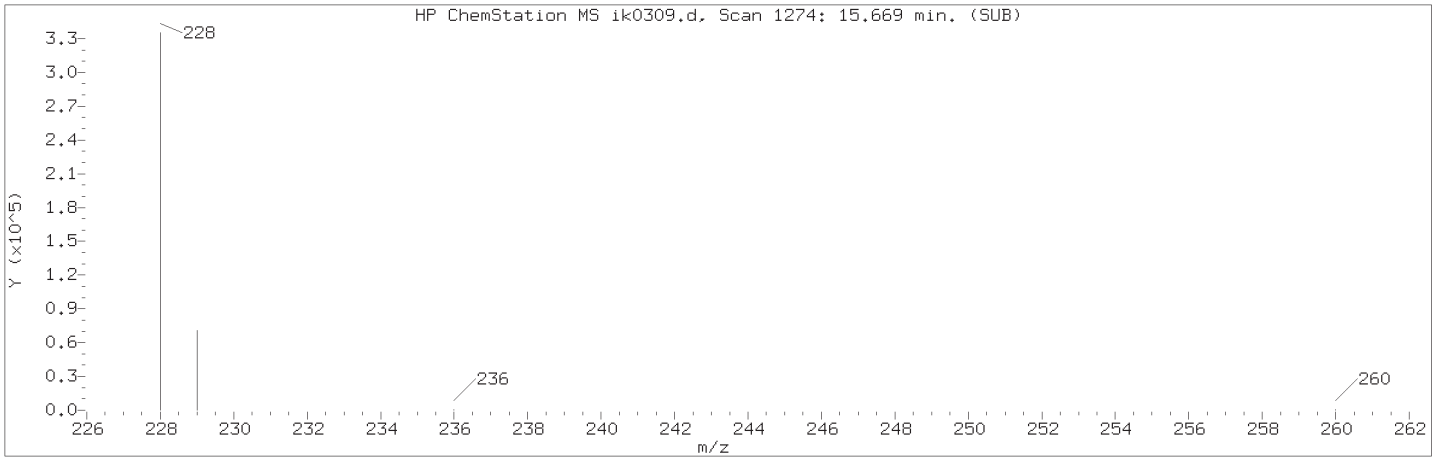
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

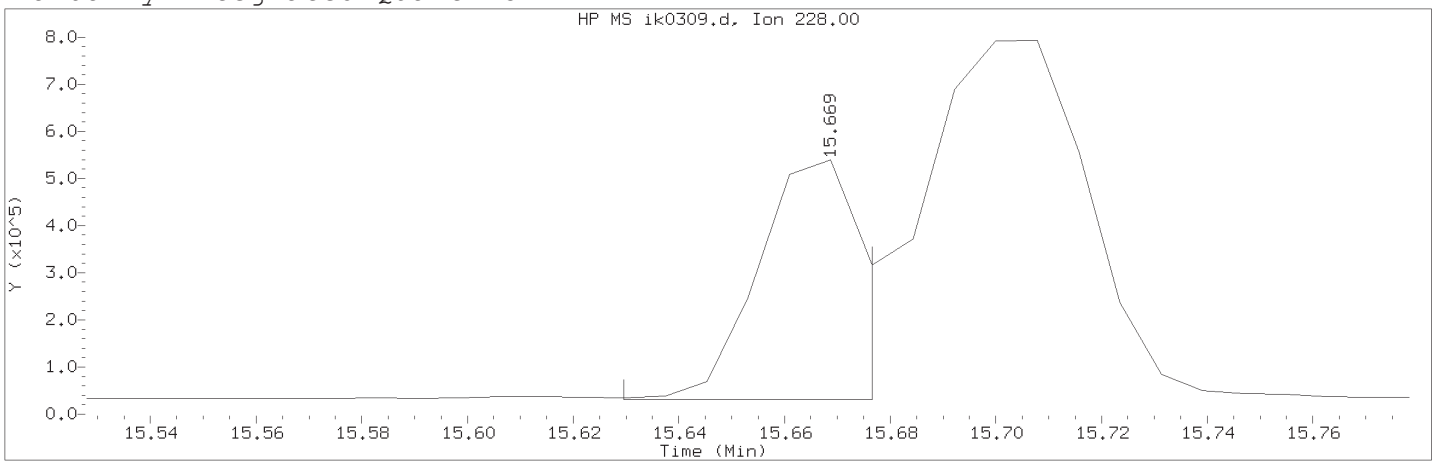
Compound Number	: 42
Compound Name	: Benzo(a)anthracene
Scan Number	: 1274
Retention Time (minutes)	: 15.669
Relative Retention Time	:-0.00050
Quant Ion	: 228.00
Area (flag)	: 653329A
On-column Amount (ng/ul)	: 2.0550

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

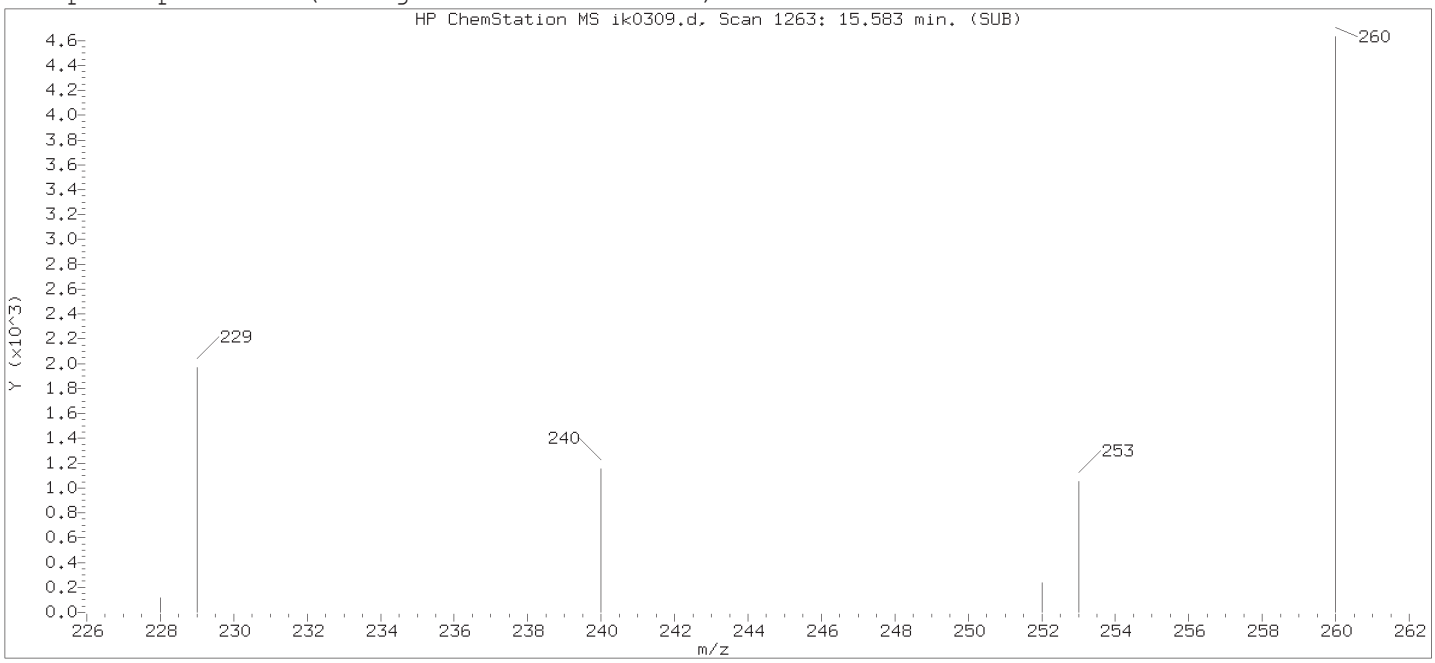
Compound Number : 42
Compound Name : Benzo(a)anthracene
Scan Number : 1274
Retention Time (minutes) : 15.669
Quant Ion : 228.00
Area (flag) : 653329A
On-column Amount (ng/ul) : 2.0550
Integration start scan : 1268 Integration stop scan: 1274
Y at integration start : 30968 Y at integration end: 30968

Reason for manual integration: improper integration

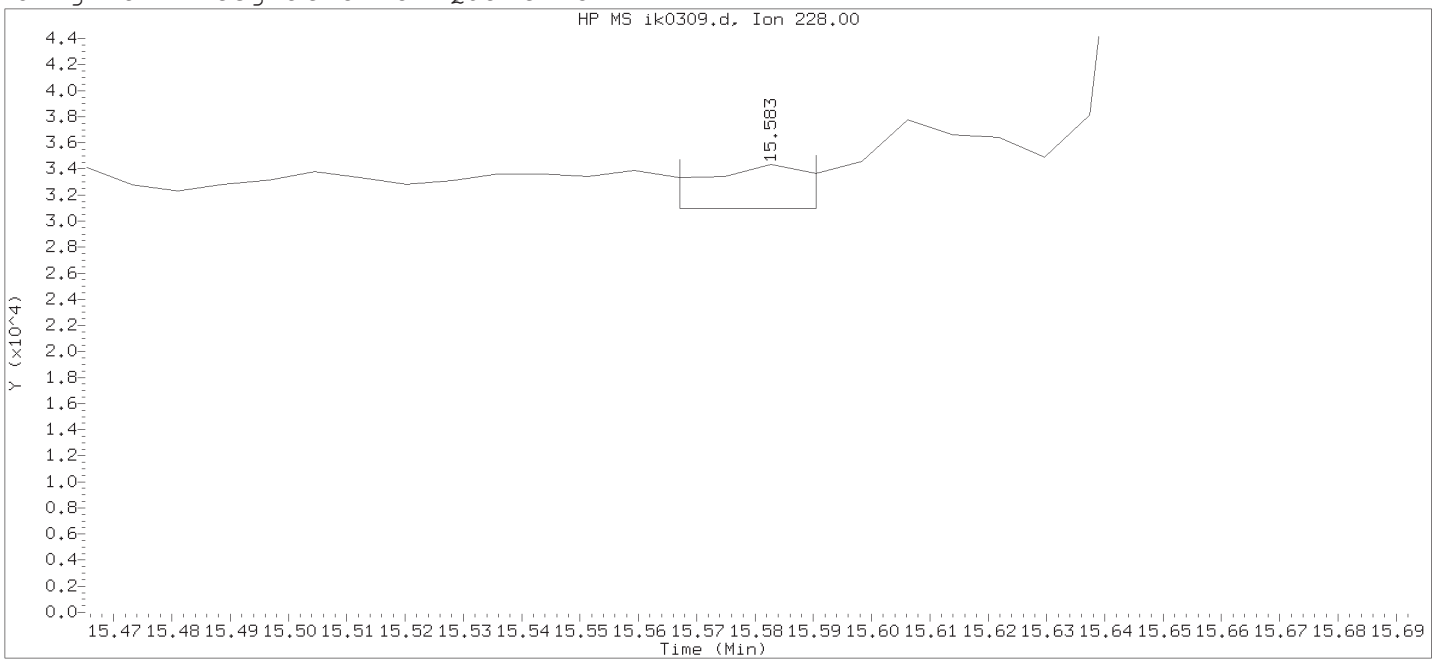
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

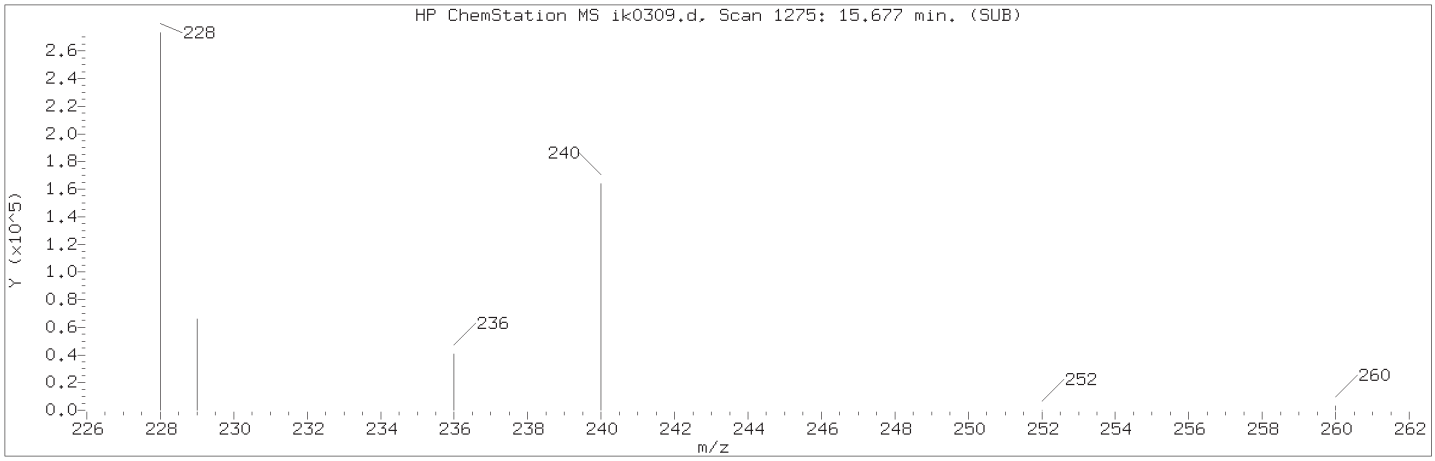
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

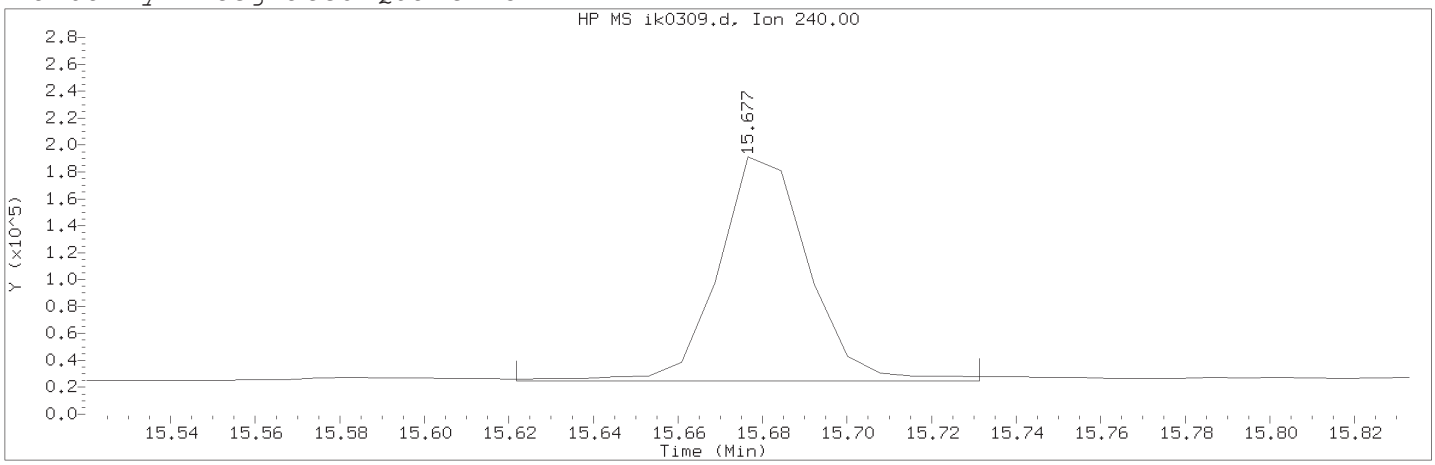
Compound Number : 42
Compound Name : Benzo(a)anthracene
Scan Number : 1263
Retention Time (minutes) : 15.583
Quant Ion : 228.00
Area : 3920
On-column Amount (ng/ul) : 0.3126
Integration start scan : 1260 Integration stop scan: 1263
Y at integration start : 30968 Y at integration end: 30968

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

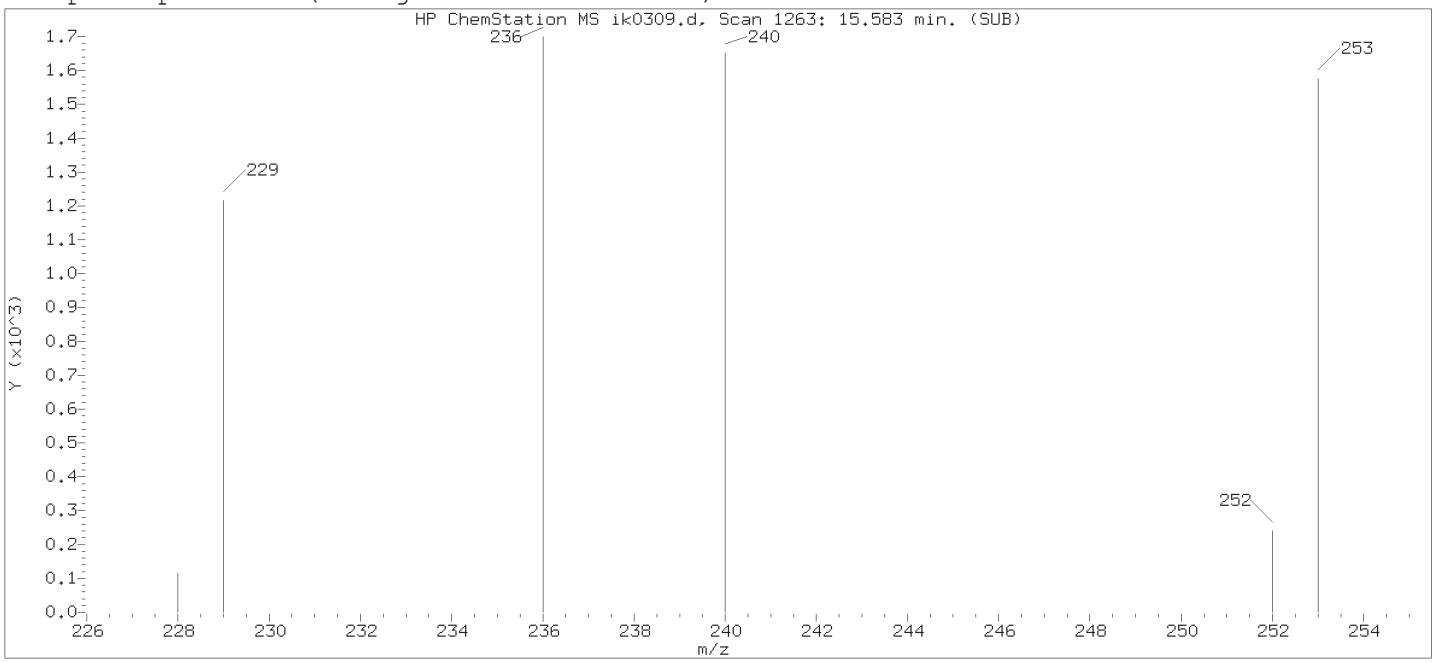
Compound Number : 43
Compound Name : Chrysene-d12
Scan Number : 1275
Retention Time (minutes) : 15.677
Quant Ion : 240.00
Area (flag) : 247122AM
On-column Amount (ng/ul) : 1.0000
Integration start scan : 1267 Integration stop scan: 1281
Y at integration start : 24520 Y at integration end: 24877

Reason for manual integration: improper integration

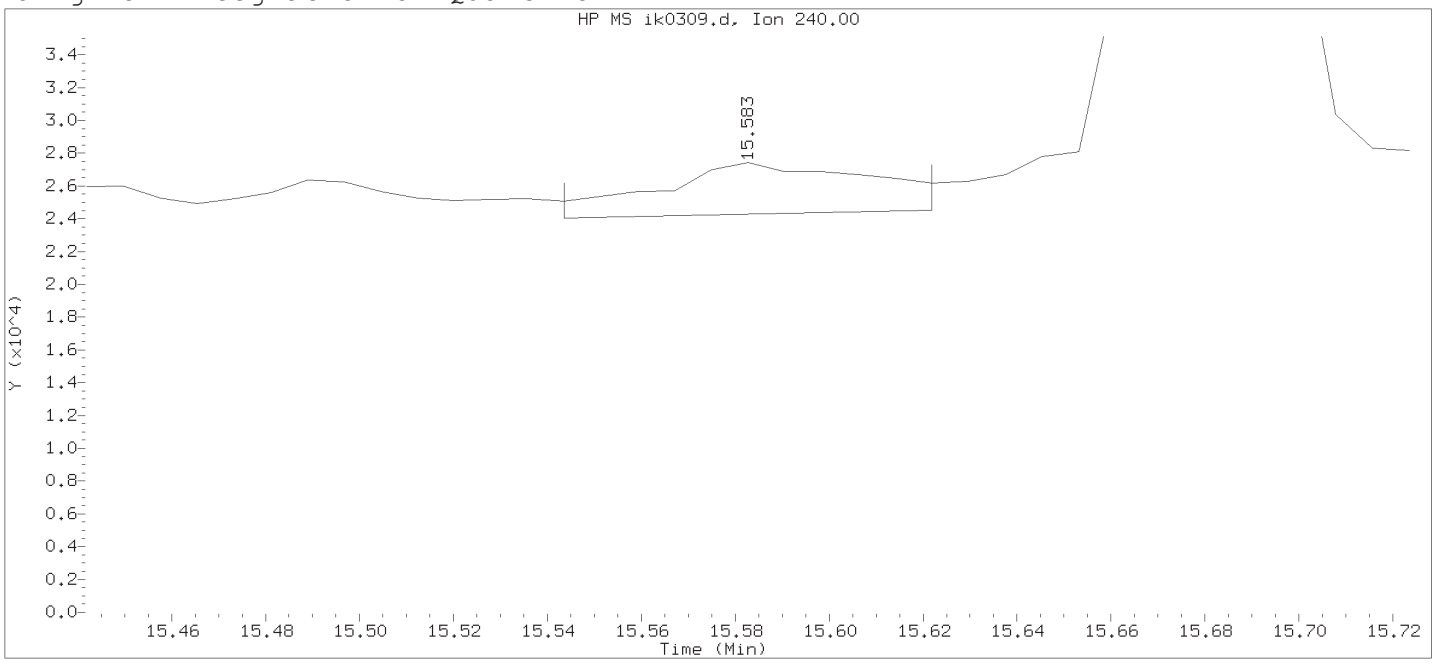
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

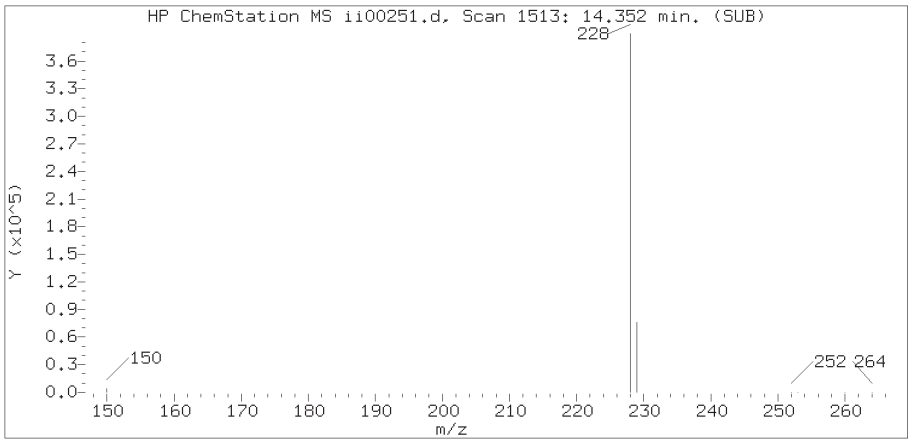
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

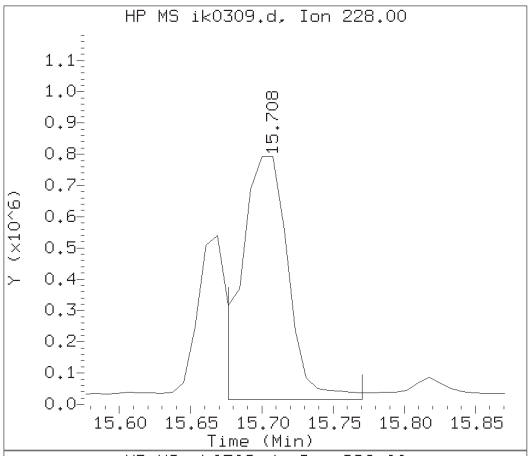
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number : 43
Compound Name : Chrysene-d12
Scan Number : 1263
Retention Time (minutes) : 15.583
Quant Ion : 240.00
Area : 9749
On-column Amount (ng/ul) : 1.0000
Integration start scan : 1257 Integration stop scan: 1267
Y at integration start : 24045 Y at integration end: 24520

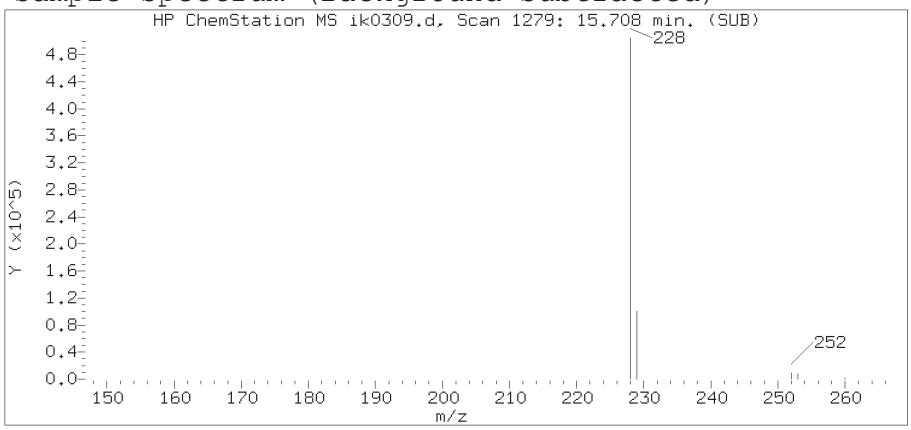
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

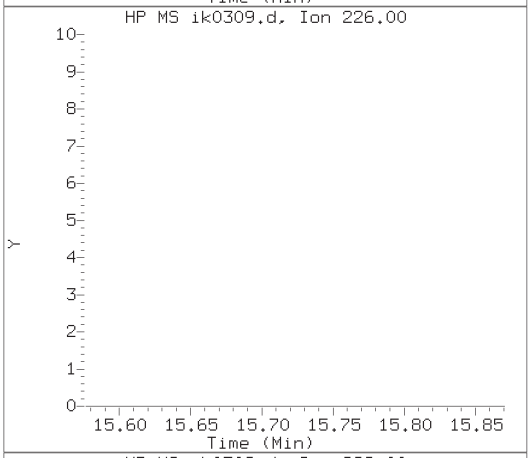
Reference Standard Spectrum for Chrysene



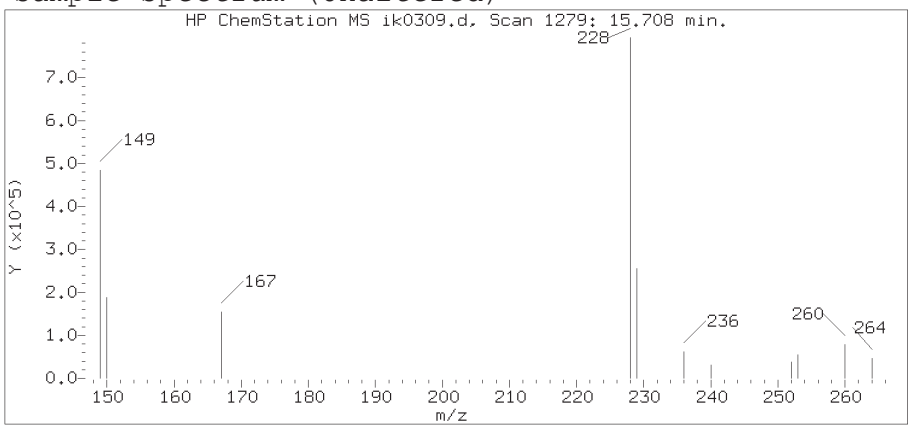


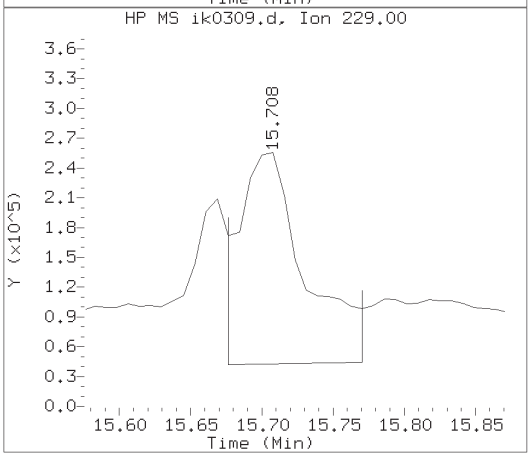
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

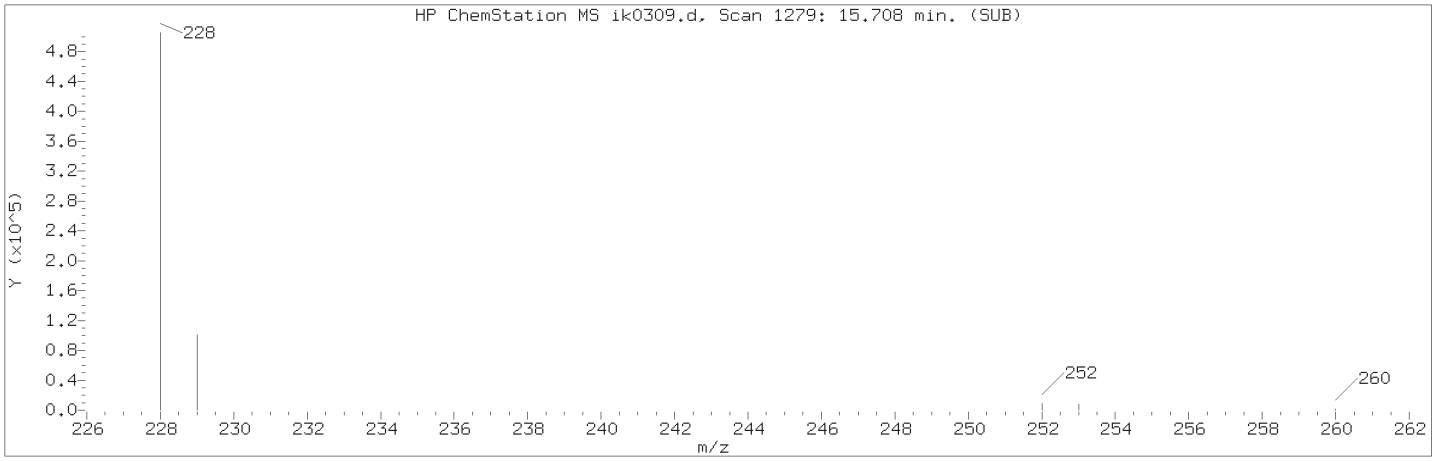
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

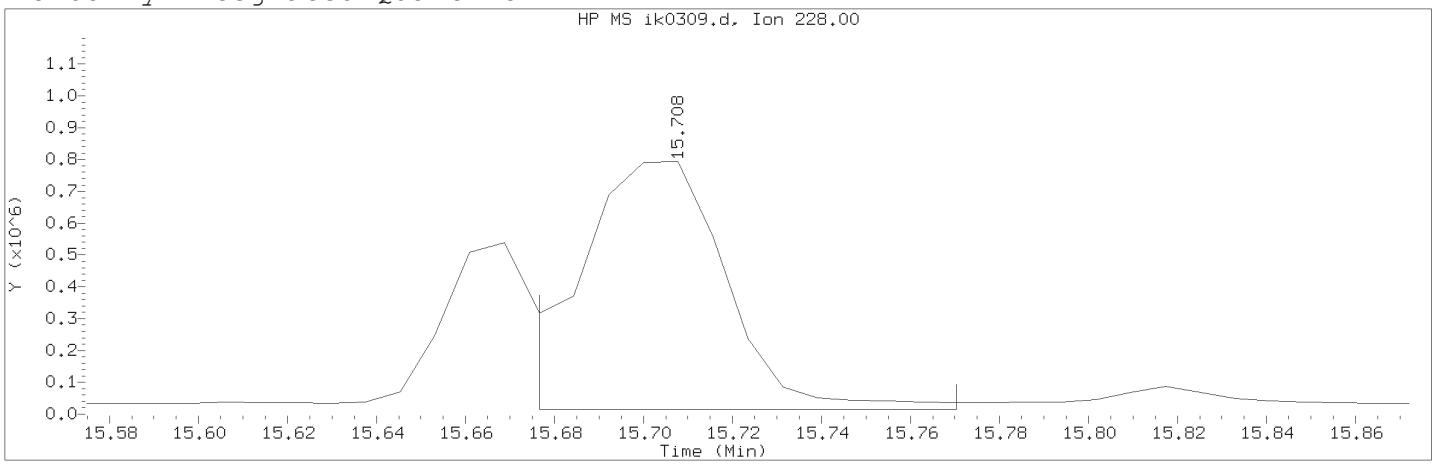
Compound Number	: 44
Compound Name	: Chrysene
Scan Number	: 1279
Retention Time (minutes)	: 15.708
Relative Retention Time	: 0.00001
Quant Ion	: 228.00
Area (flag)	: 1797744A
On-column Amount (ng/ul)	: 5.9195

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

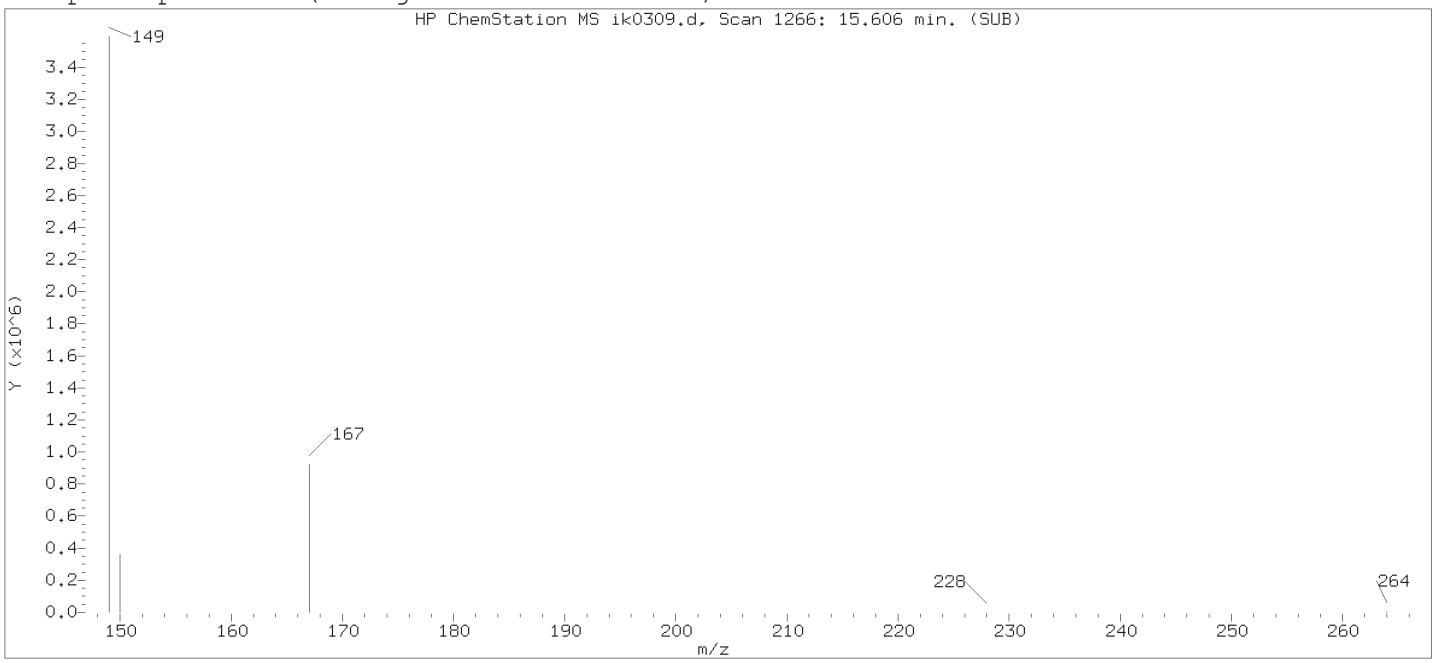
Compound Number : 44
Compound Name : Chrysene
Scan Number : 1279
Retention Time (minutes) : 15.708
Quant Ion : 228.00
Area (flag) : 1797744A
On-column Amount (ng/ul) : 5.9195
Integration start scan : 1274 Integration stop scan: 1286
Y at integration start : 14490 Y at integration end: 15233

Reason for manual integration: improper integration

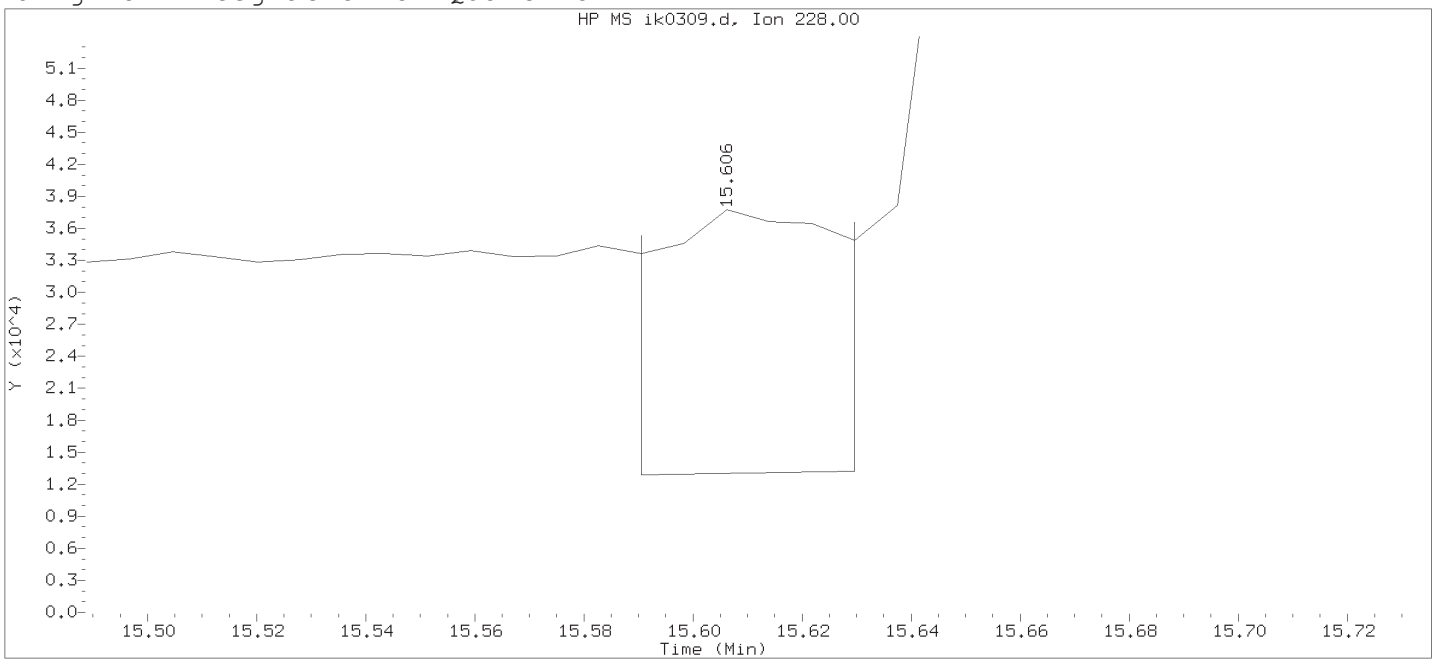
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

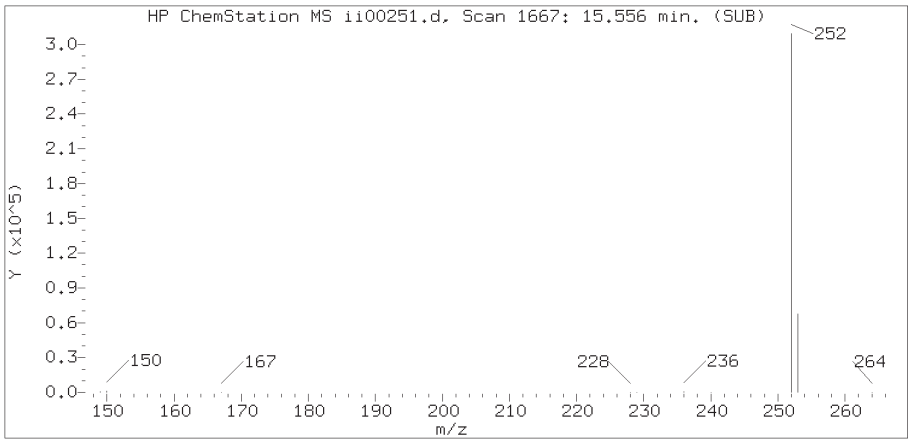
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

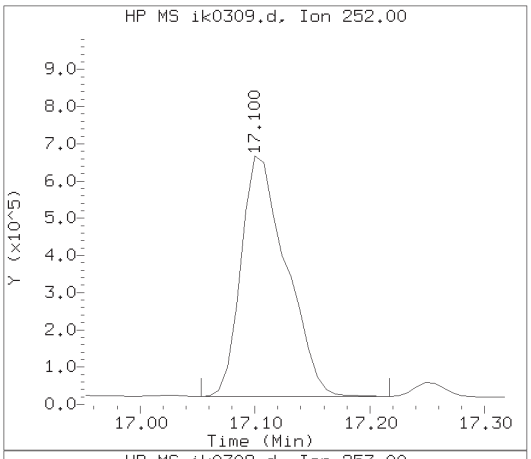
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number : 44
Compound Name : Chrysene
Scan Number : 1266
Retention Time (minutes) : 15.606
Quant Ion : 228.00
Area : 55616
On-column Amount (ng/ul) : 4.6417
Integration start scan : 1263 Integration stop scan: 1268
Y at integration start : 12881 Y at integration end: 13235

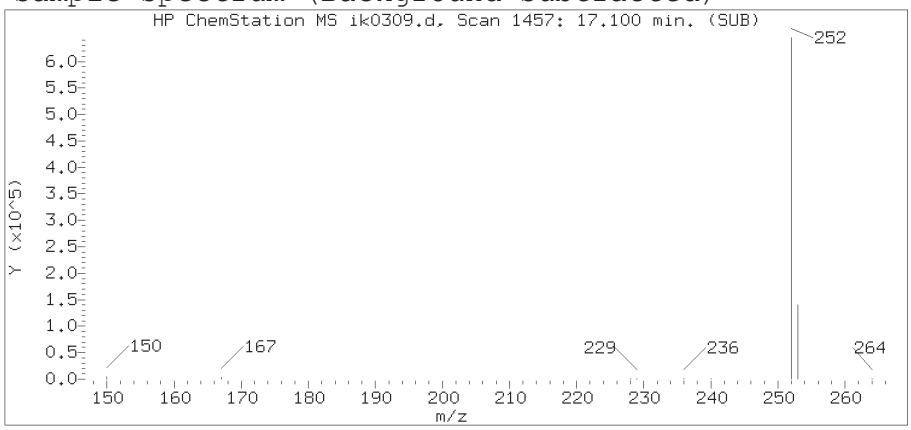
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

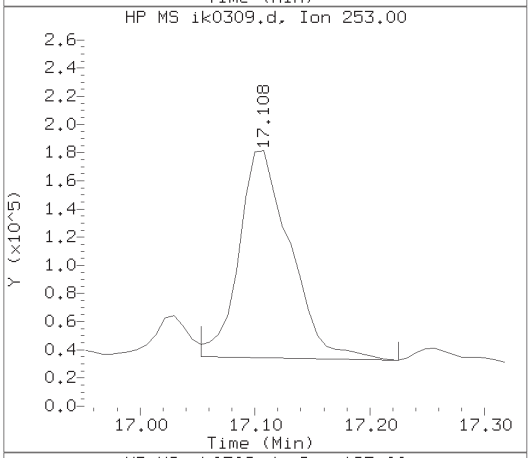
Reference Standard Spectrum for Benzo(b)fluoranthene



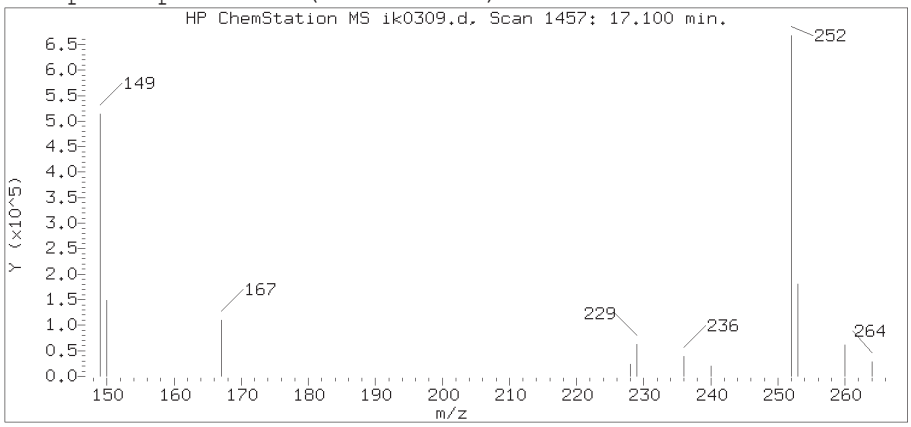


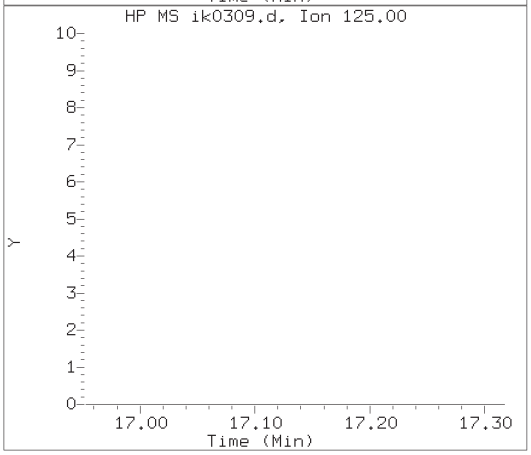
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

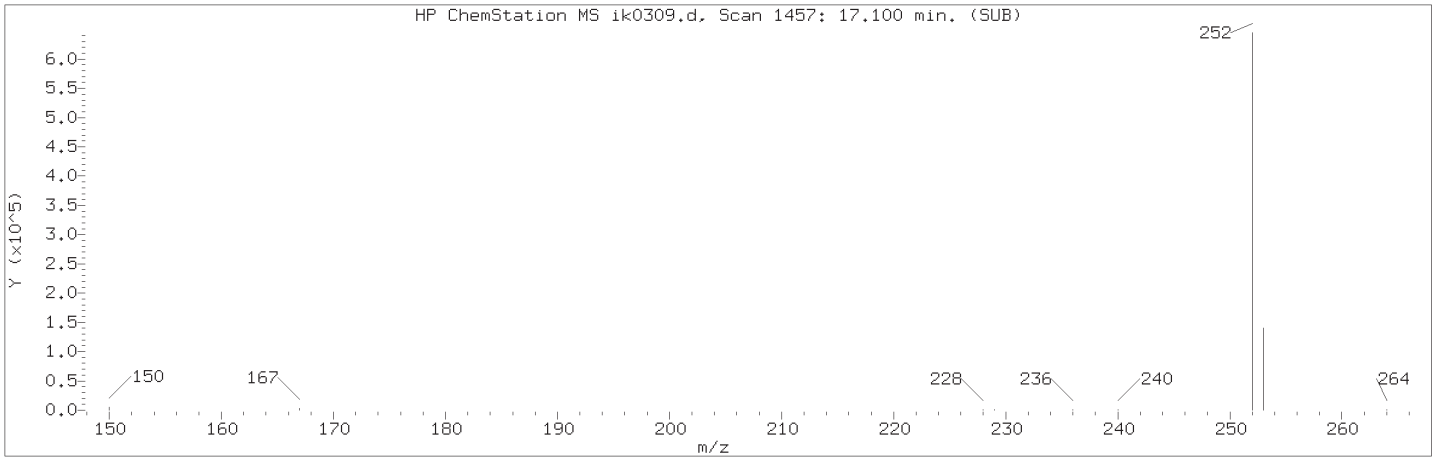
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

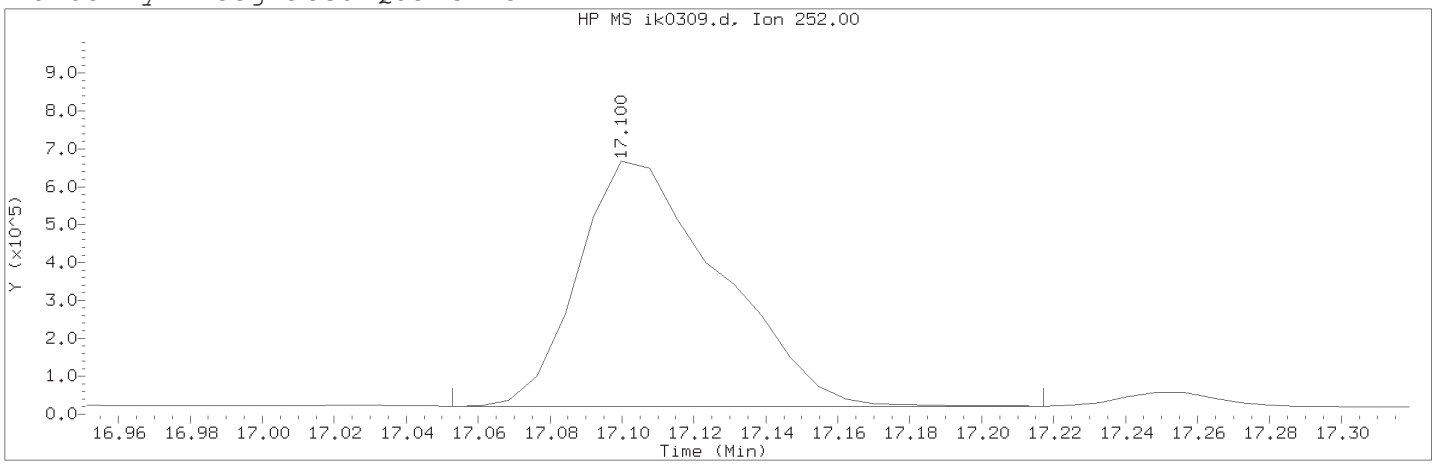
Compound Number	: 46
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1457
Retention Time (minutes)	: 17.100
Relative Retention Time	: 0.00022
Quant Ion	: 252.00
Area (flag)	: 1763855A
On-column Amount (ng/ul)	: 14.9336

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

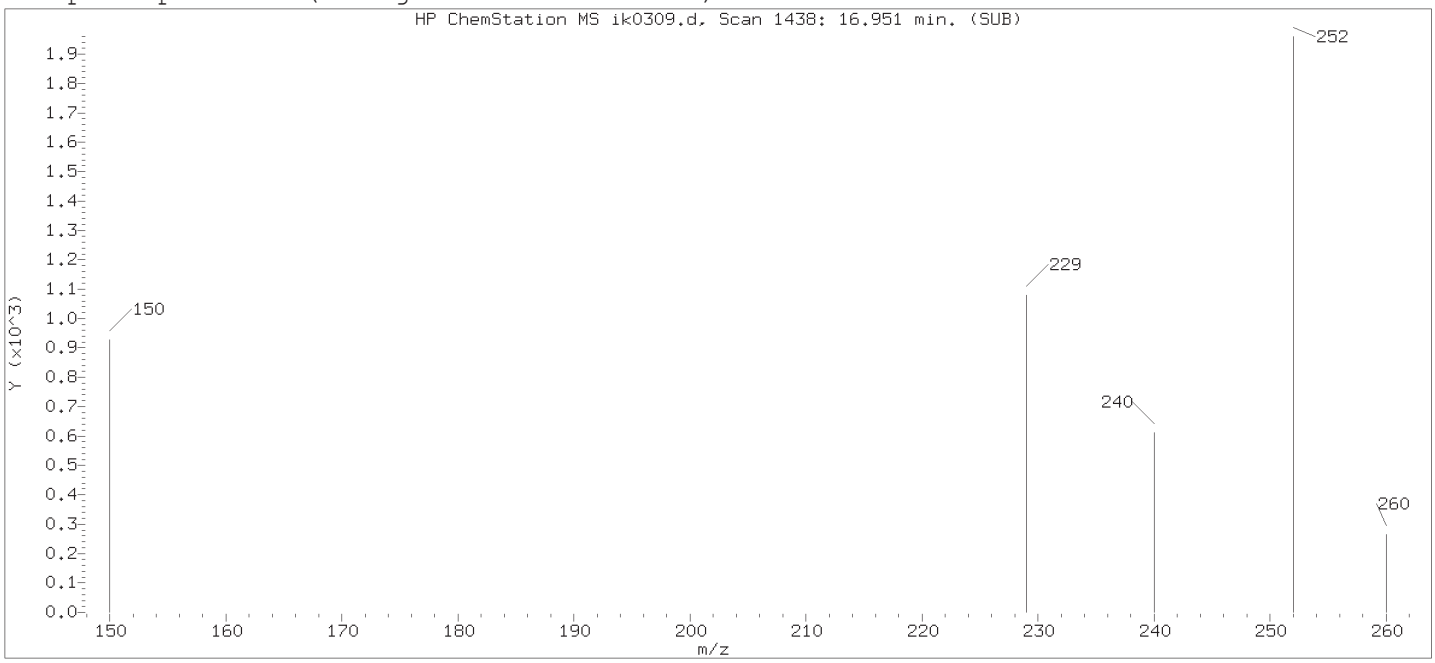
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1457
Retention Time (minutes) : 17.100
Quant Ion : 252.00
Area (flag) : 1763855A
On-column Amount (ng/ul) : 14.9336
Integration start scan : 1450 Integration stop scan: 1471
Y at integration start : 21246 Y at integration end: 21058

Reason for manual integration: improper integration

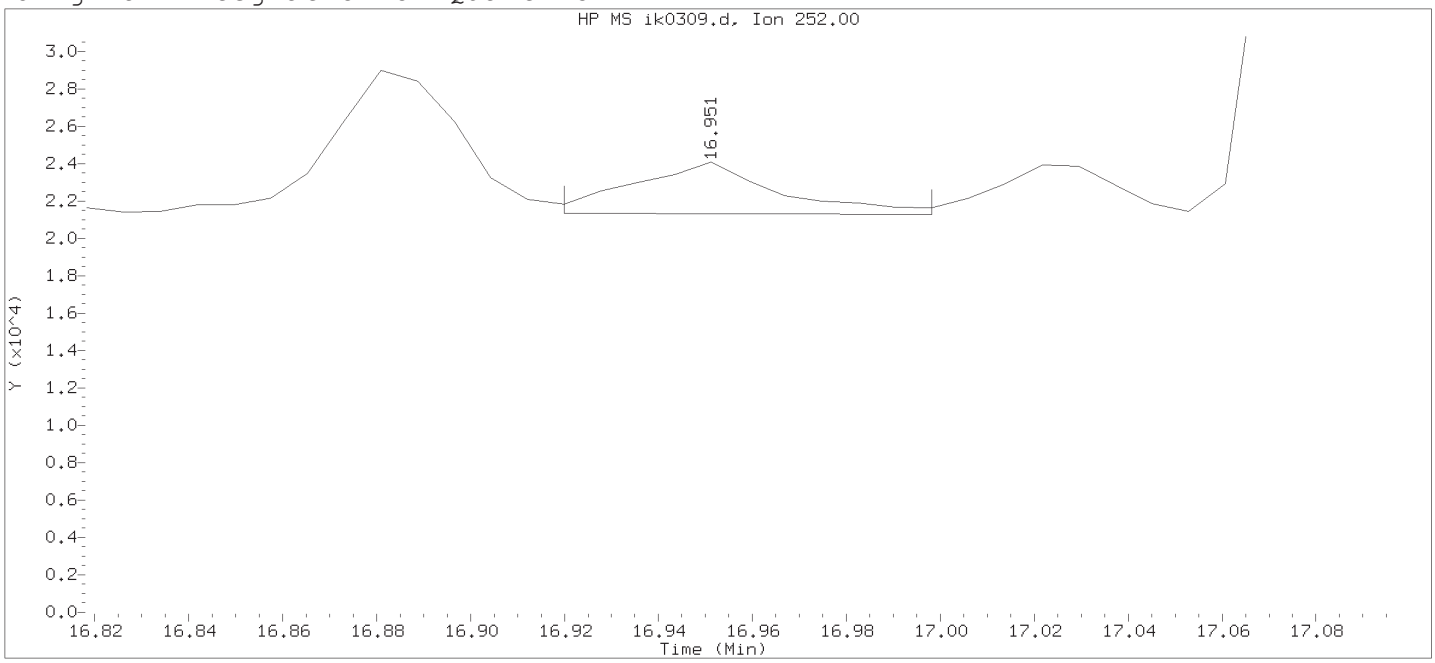
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

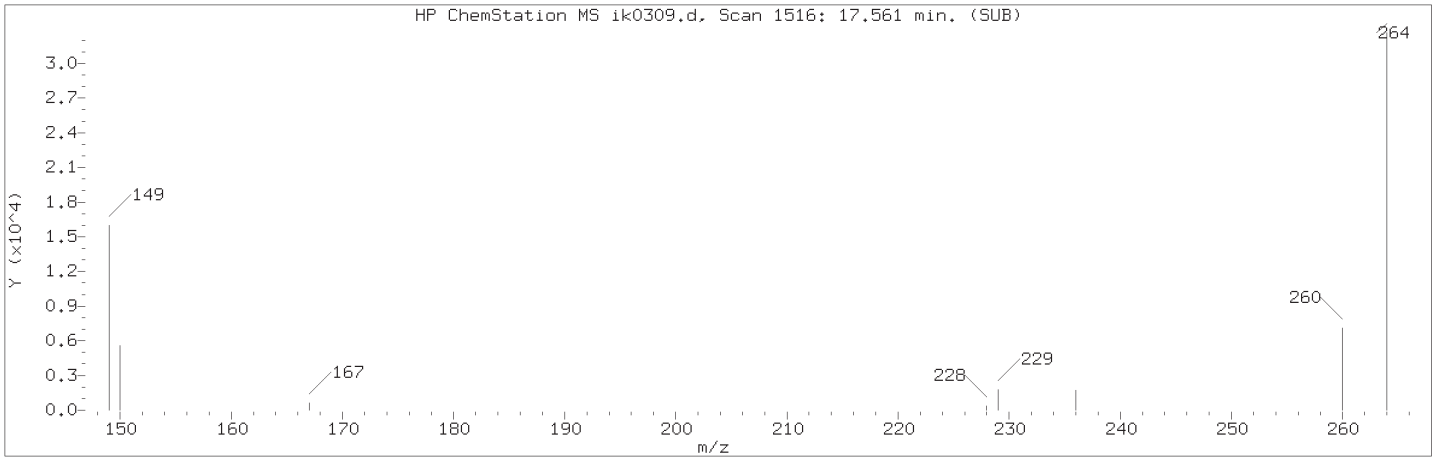
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

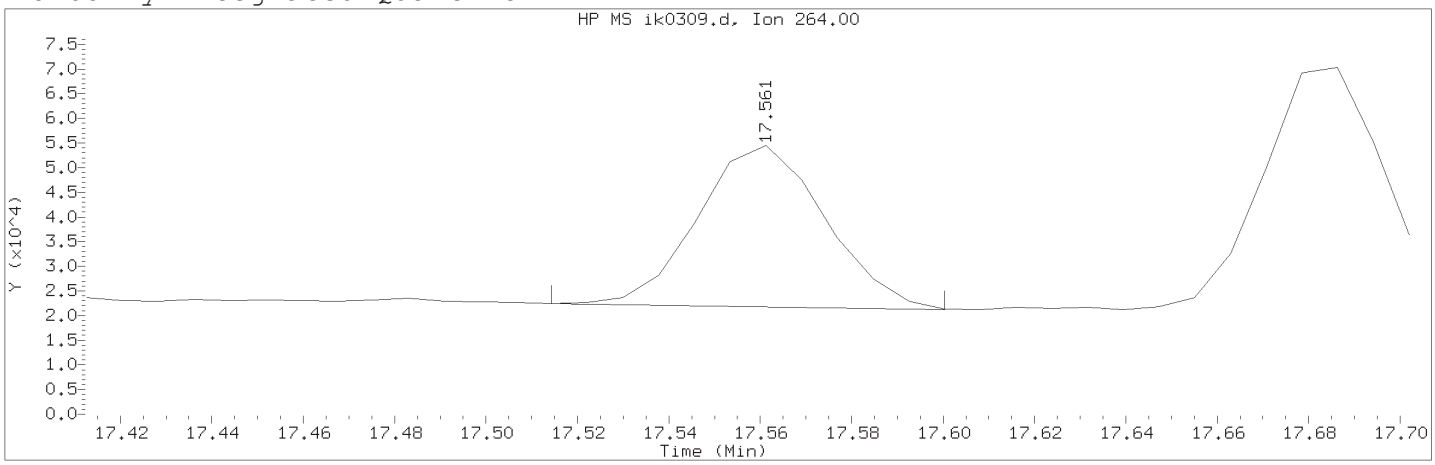
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1438
Retention Time (minutes) : 16.951
Quant Ion : 252.00
Area : 5851
On-column Amount (ng/ul) : 0.0743
Integration start scan : 1433 Integration stop scan: 1443
Y at integration start : 21344 Y at integration end: 21297

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

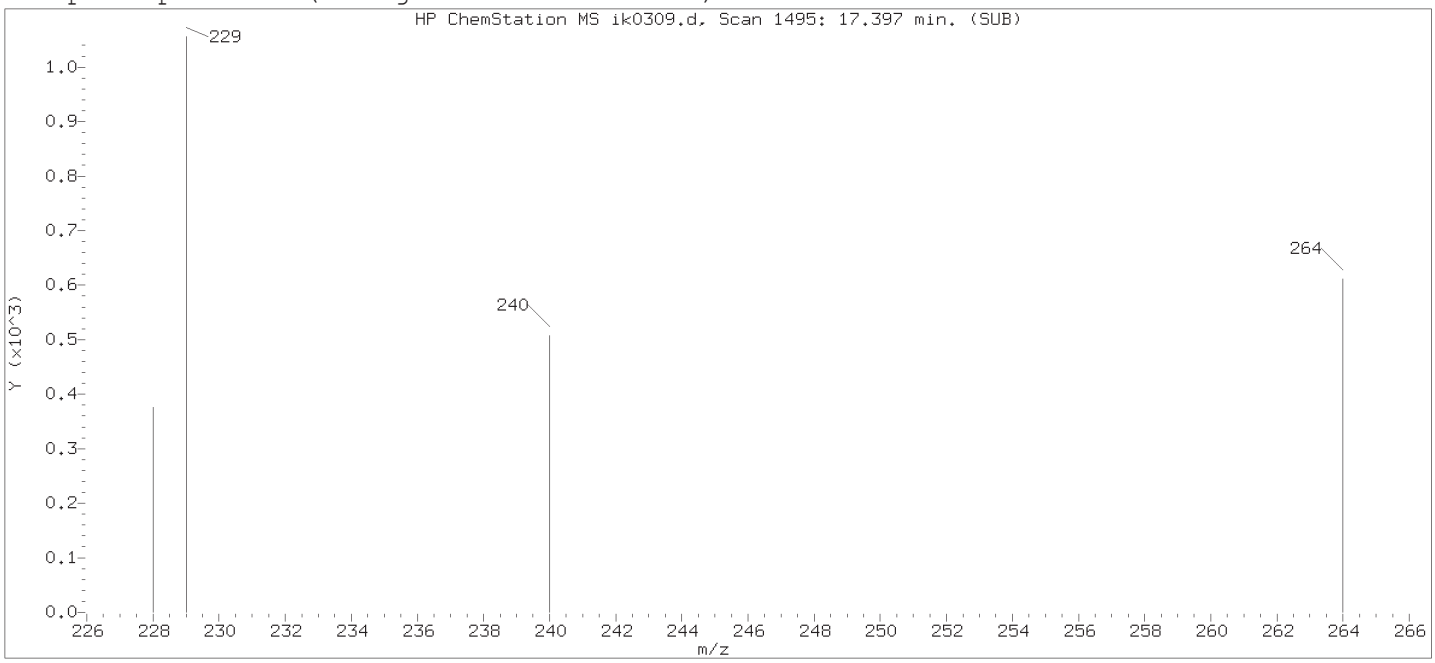
Compound Number : 49
Compound Name : Benzo(a)pyrene-d12
Scan Number : 1516
Retention Time (minutes) : 17.561
Quant Ion : 264.00
Area (flag) : 63177A
On-column Amount (ng/ul) : 0.6964
Integration start scan : 1509 Integration stop scan: 1520
Y at integration start : 22440 Y at integration end: 21160

Reason for manual integration: improper integration

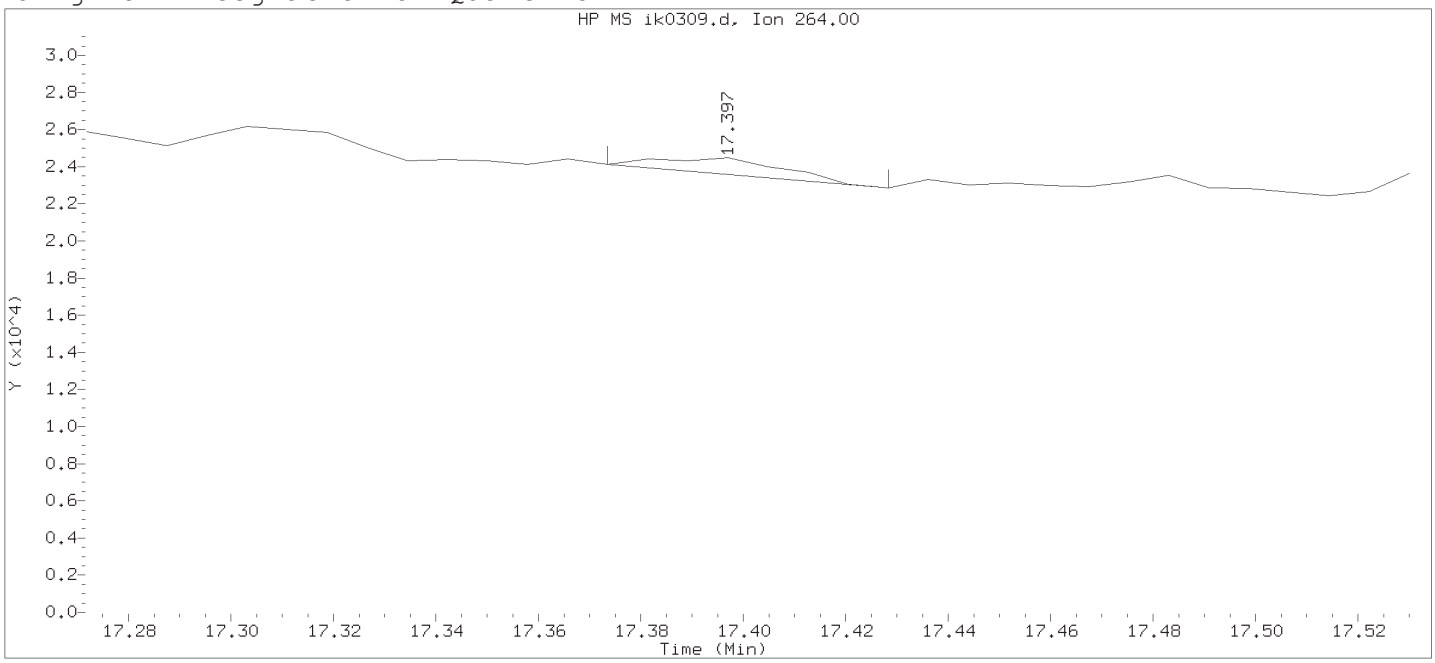
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

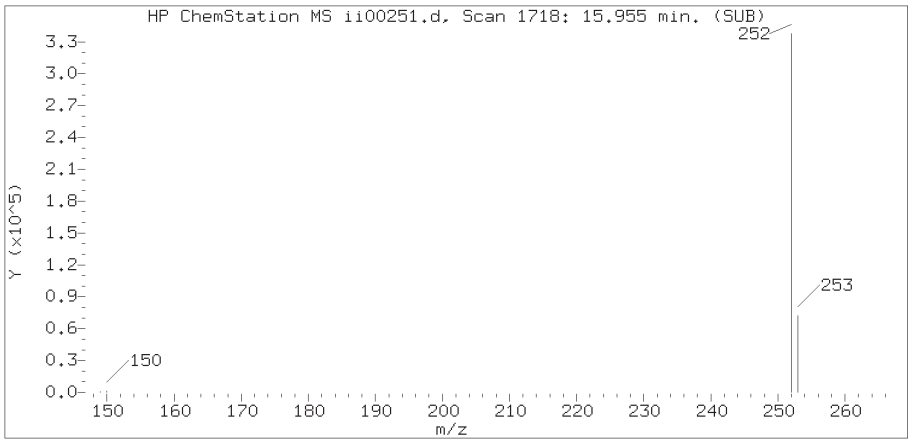
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

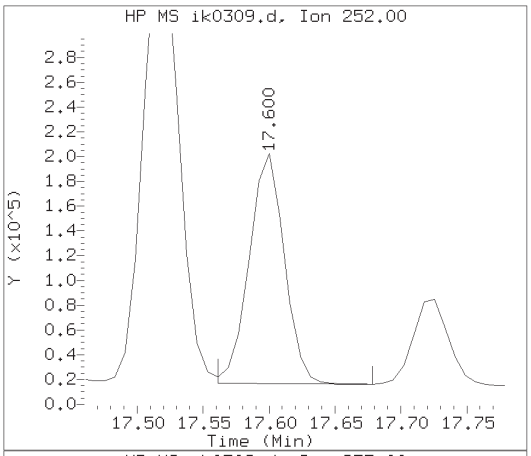
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number : 49
Compound Name : Benzo(a)pyrene-d12
Scan Number : 1495
Retention Time (minutes) : 17.397
Quant Ion : 264.00
Area : 1411
On-column Amount (ng/ul) : 0.0233
Integration start scan : 1491 Integration stop scan: 1498
Y at integration start : 24120 Y at integration end: 22856

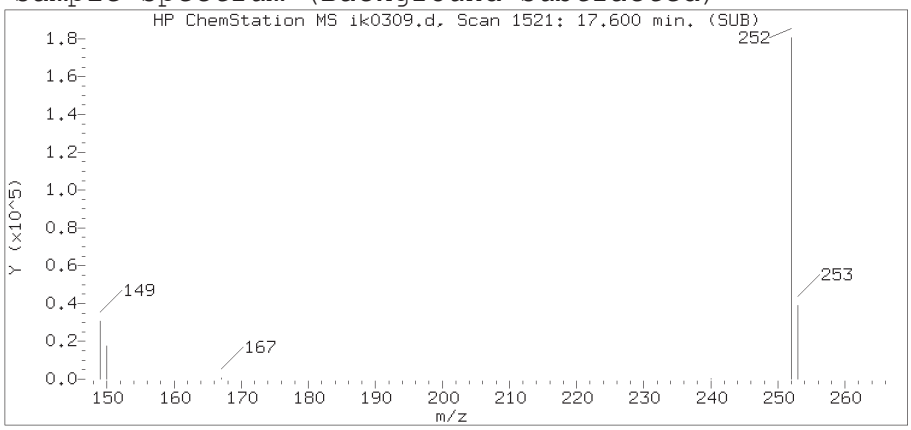
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

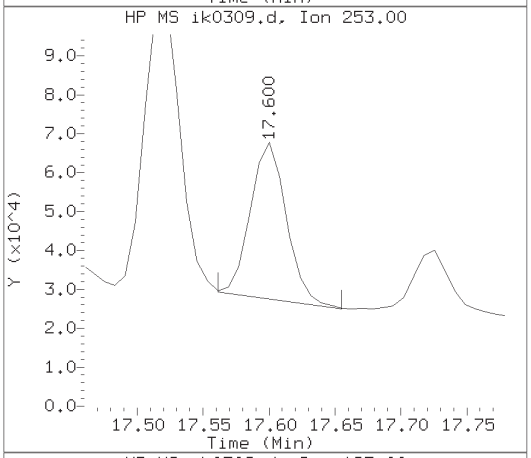
Reference Standard Spectrum for Benzo(a)pyrene



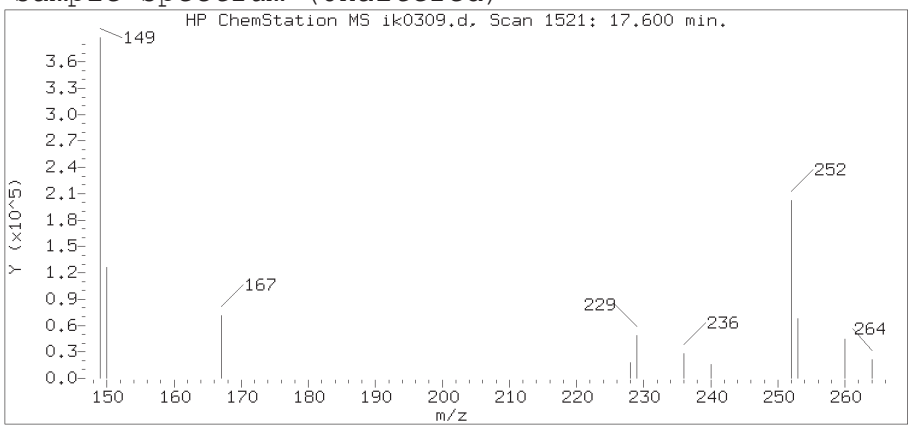


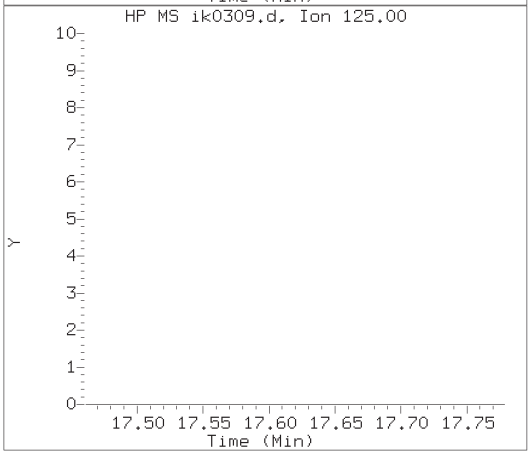
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

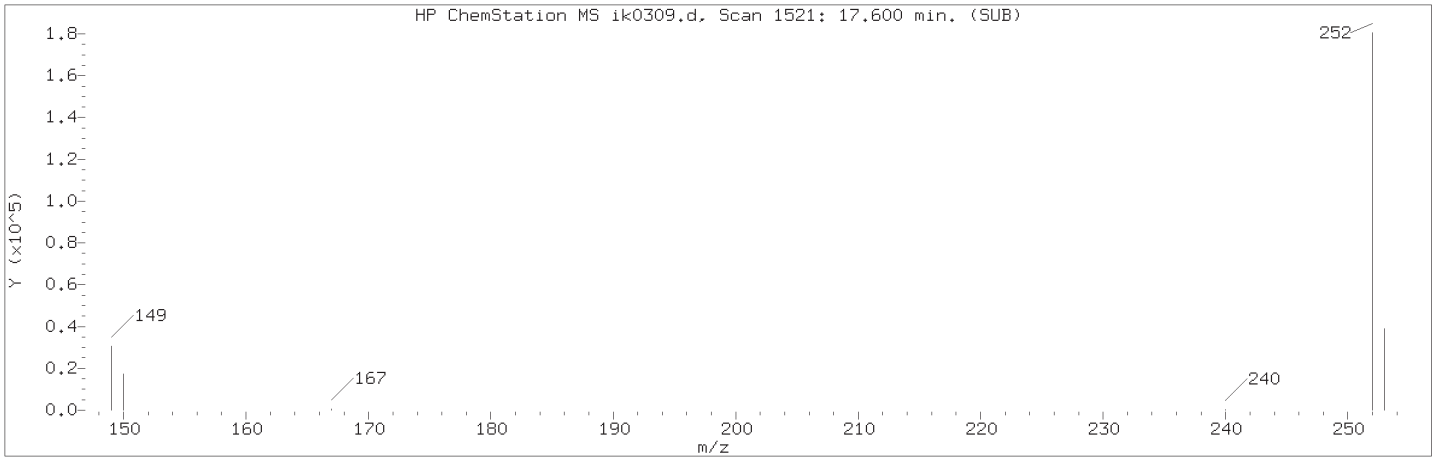
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

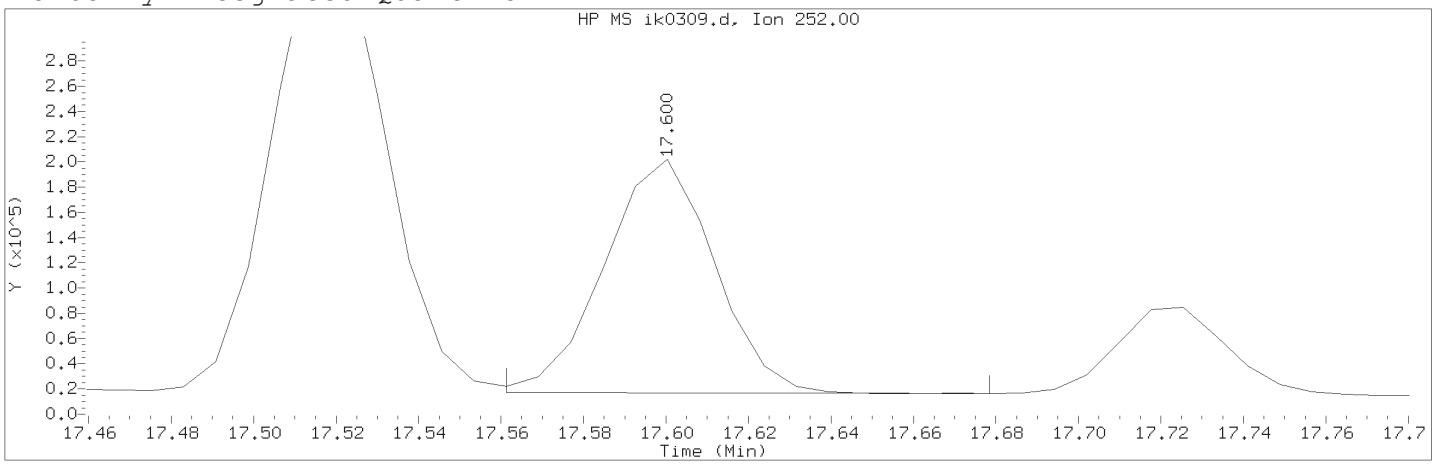
Compound Number	: 50
Compound Name	: Benzo(a)pyrene
Scan Number	: 1521
Retention Time (minutes)	: 17.600
Relative Retention Time	:-0.00003
Quant Ion	: 252.00
Area (flag)	: 344580A
On-column Amount (ng/ul)	: 3.4041

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

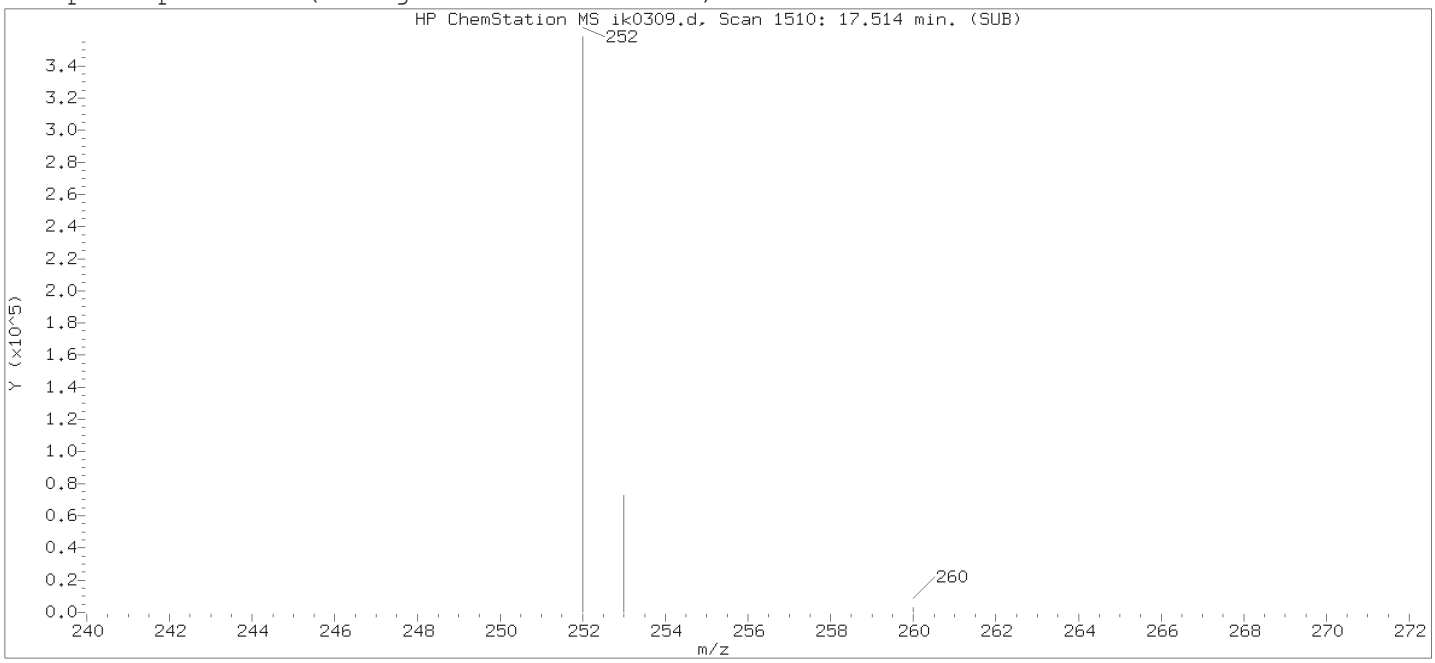
Compound Number : 50
Compound Name : Benzo(a)pyrene
Scan Number : 1521
Retention Time (minutes) : 17.600
Quant Ion : 252.00
Area (flag) : 344580A
On-column Amount (ng/ul) : 3.4041
Integration start scan : 1515 Integration stop scan: 1530
Y at integration start : 17026 Y at integration end: 16147

Reason for manual integration: improper integration

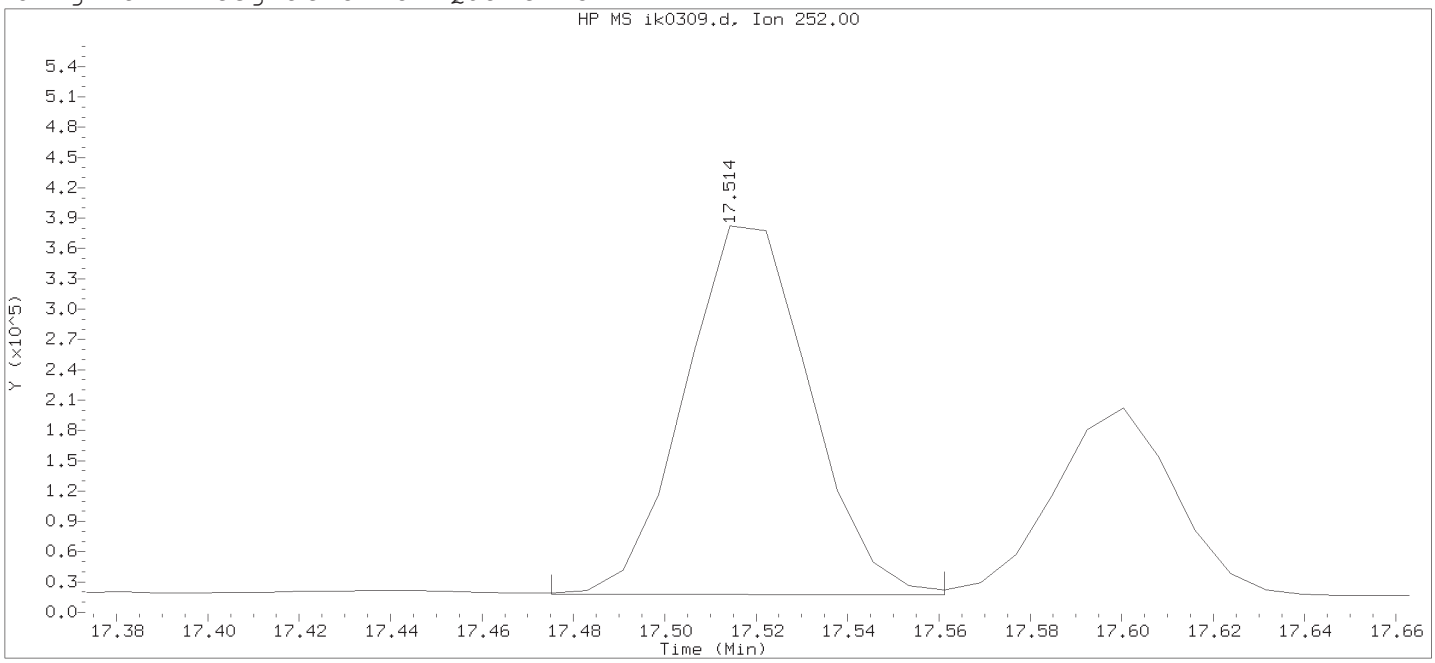
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

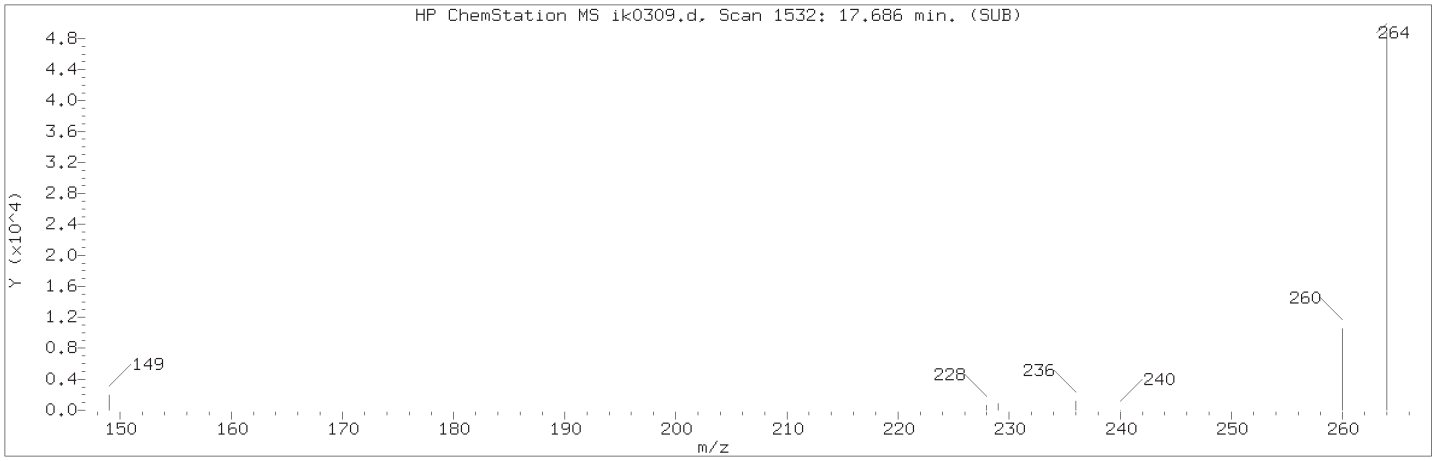
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

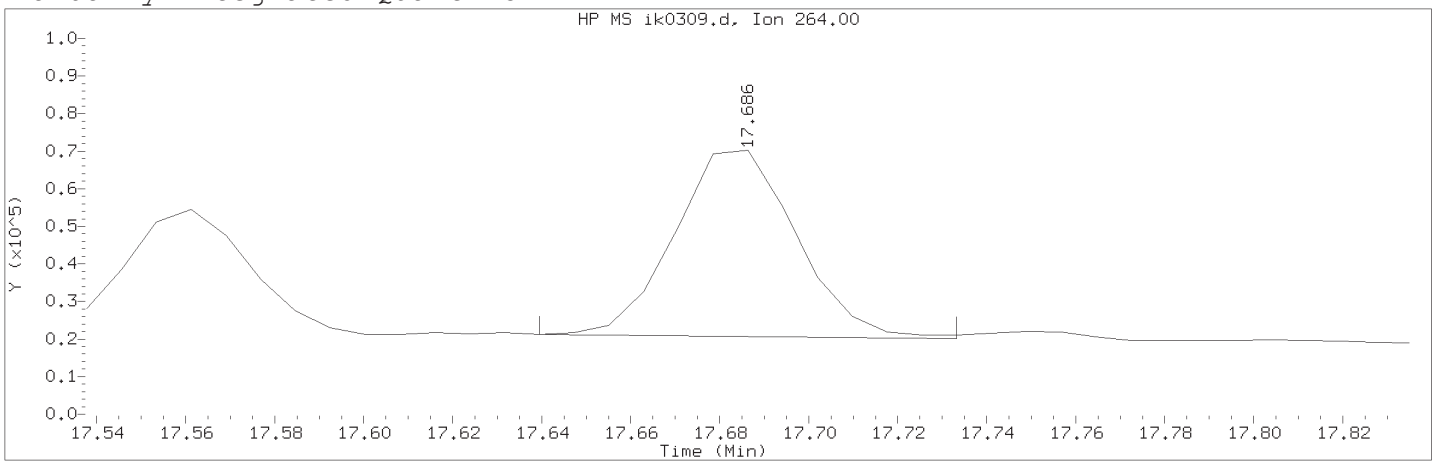
Compound Number : 50
Compound Name : Benzo(a)pyrene
Scan Number : 1510
Retention Time (minutes) : 17.514
Quant Ion : 252.00
Area : 694089
On-column Amount (ng/ul) : 10.2833
Integration start scan : 1504 Integration stop scan: 1515
Y at integration start : 17672 Y at integration end: 17026

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

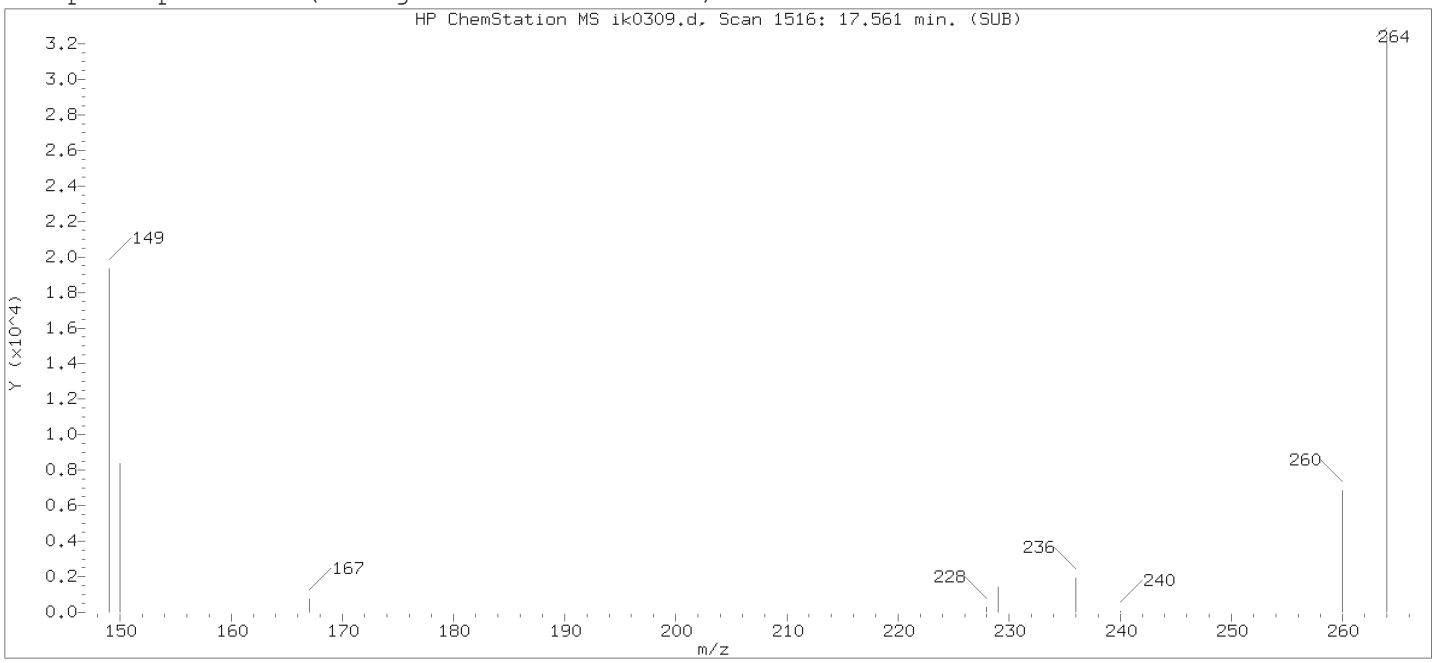
Compound Number : 51
Compound Name : Perylene-d12
Scan Number : 1532
Retention Time (minutes) : 17.686
Quant Ion : 264.00
Area (flag) : 94968AM
On-column Amount (ng/ul) : 1.0000
Integration start scan : 1525 Integration stop scan: 1537
Y at integration start : 21160 Y at integration end: 20074

Reason for manual integration: improper integration

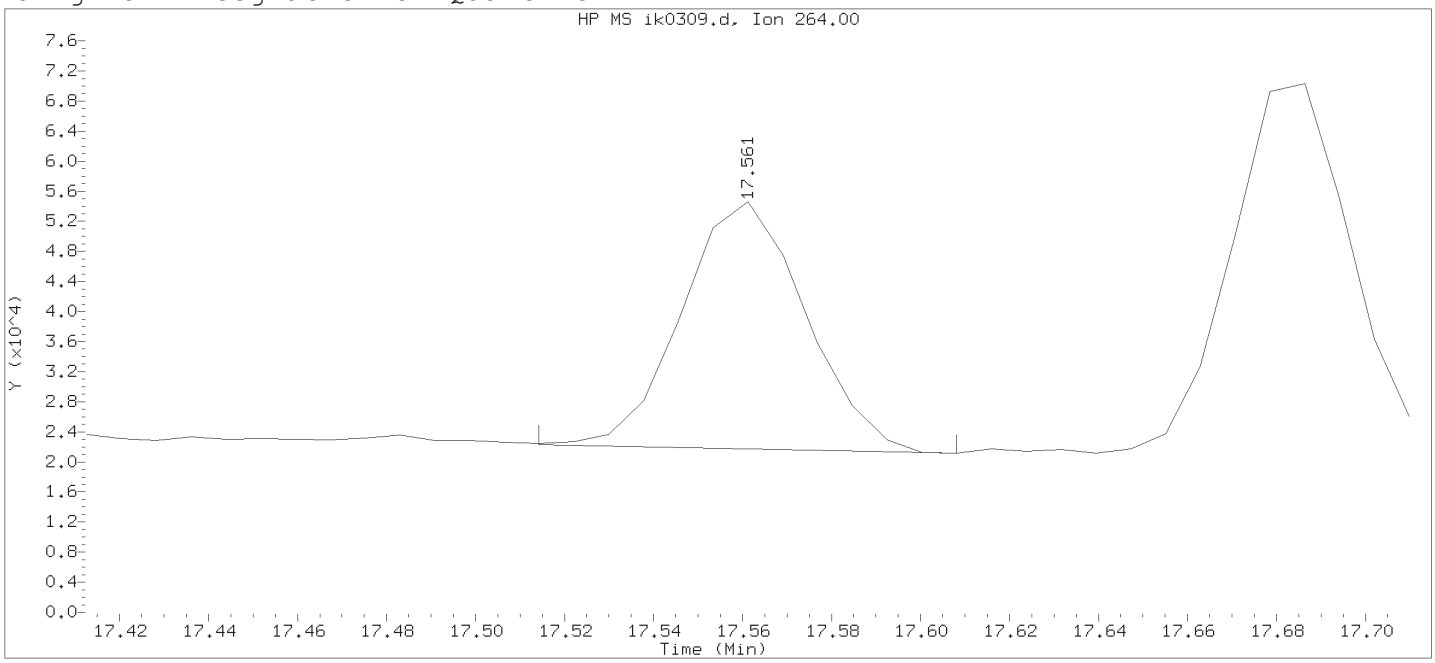
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

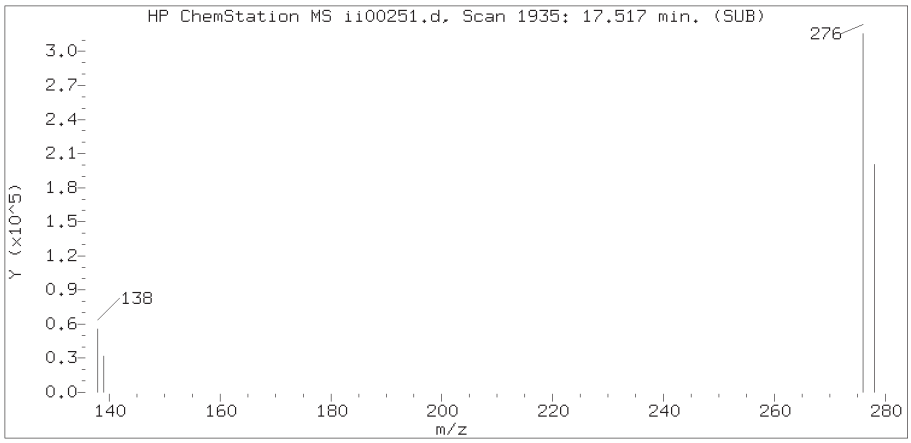
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

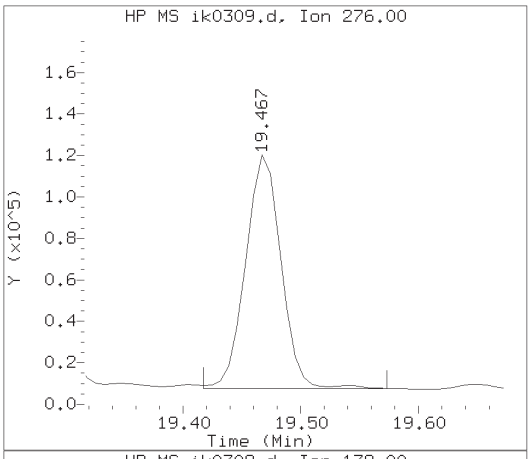
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number	:	51
Compound Name	:	Perylene-d12
Scan Number	:	1516
Retention Time (minutes)	:	17.561
Quant Ion	:	264.00
Area	:	63324
On-column Amount (ng/ul)	:	1.0000
Integration start scan	:	1509 Integration stop scan: 1521
Y at integration start	:	22292 Y at integration end: 21160

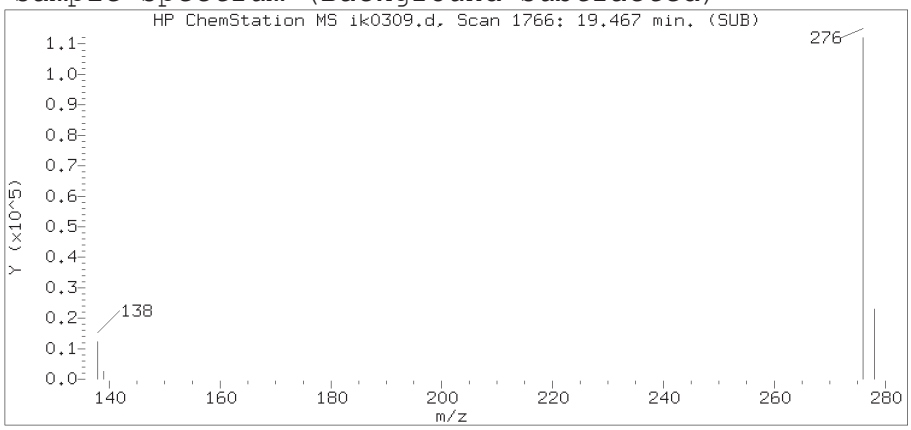
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature used: D10 Page 2070

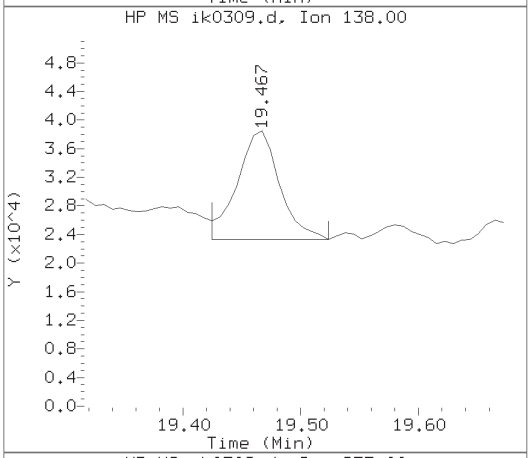
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



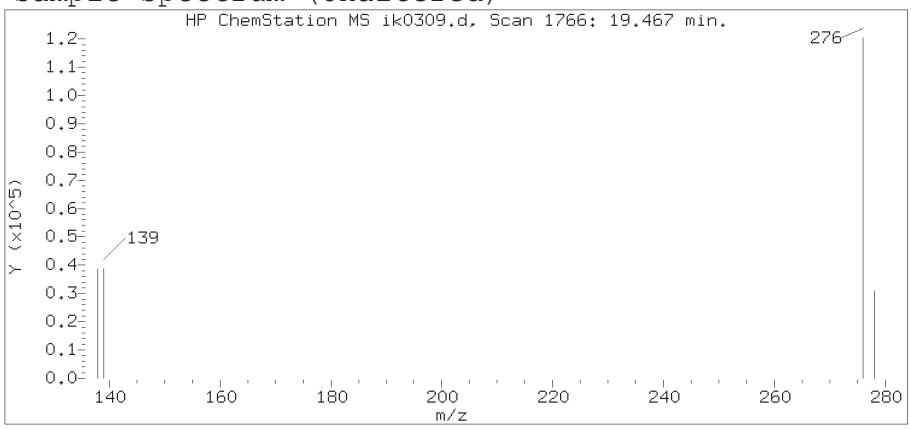


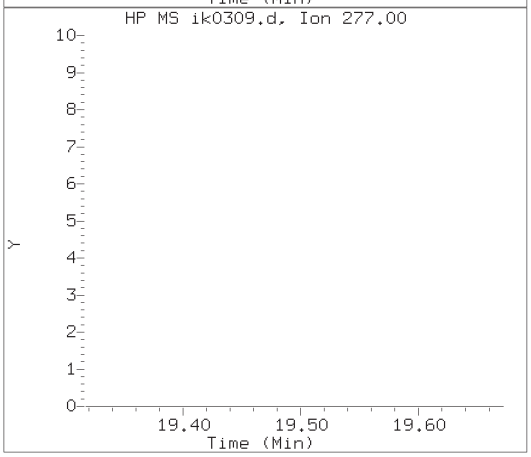
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

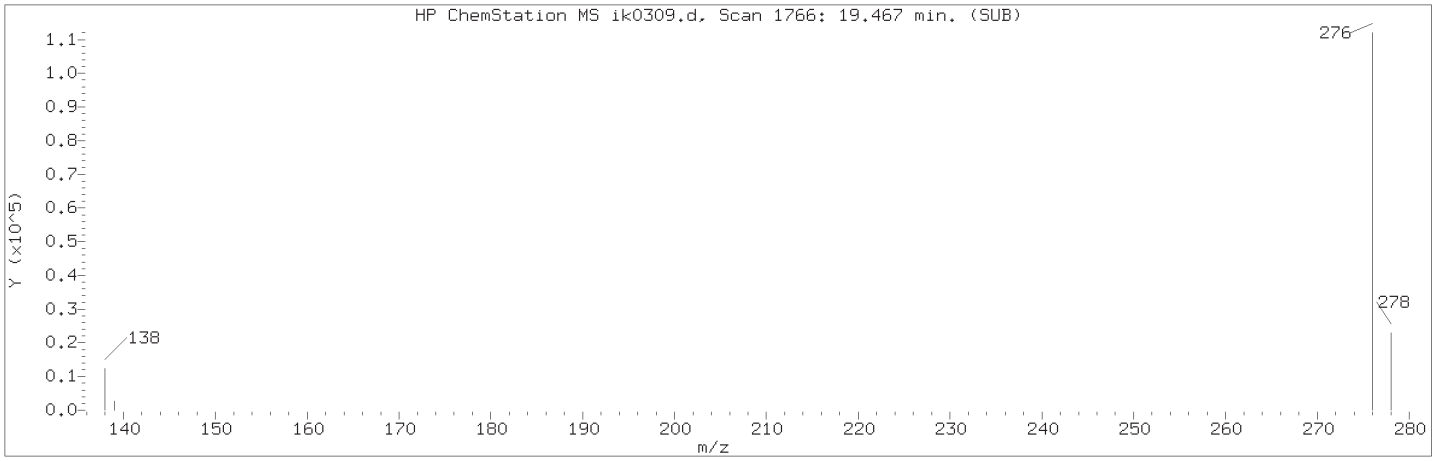
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

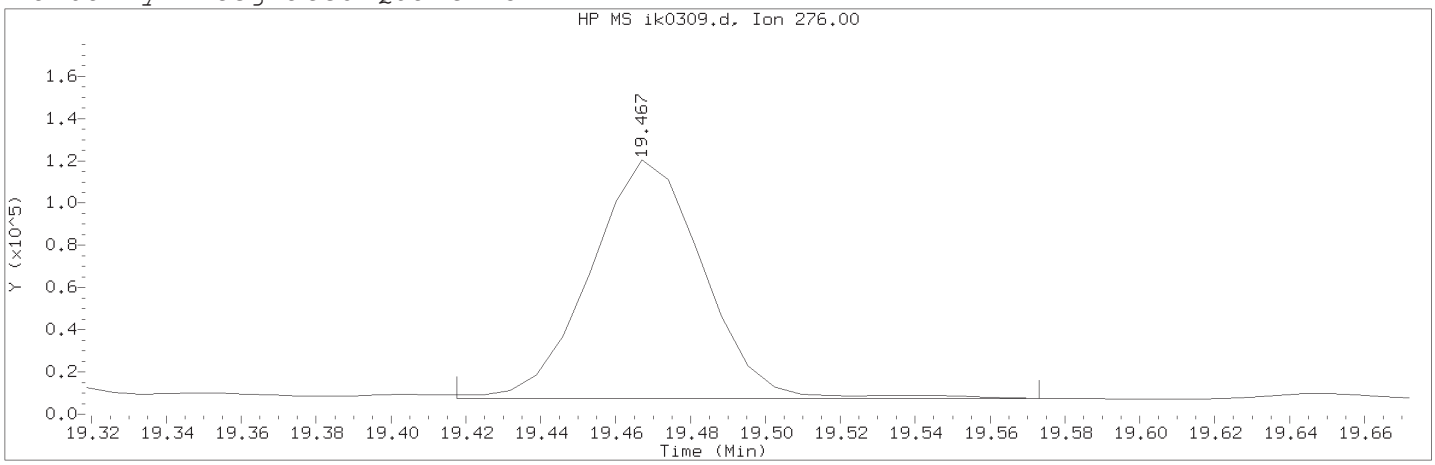
Compound Number	: 53
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 1766
Retention Time (minutes)	: 19.467
Relative Retention Time	: 0.00051
Quant Ion	: 276.00
Area (flag)	: 236792A
On-column Amount (ng/ul)	: 1.9836

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

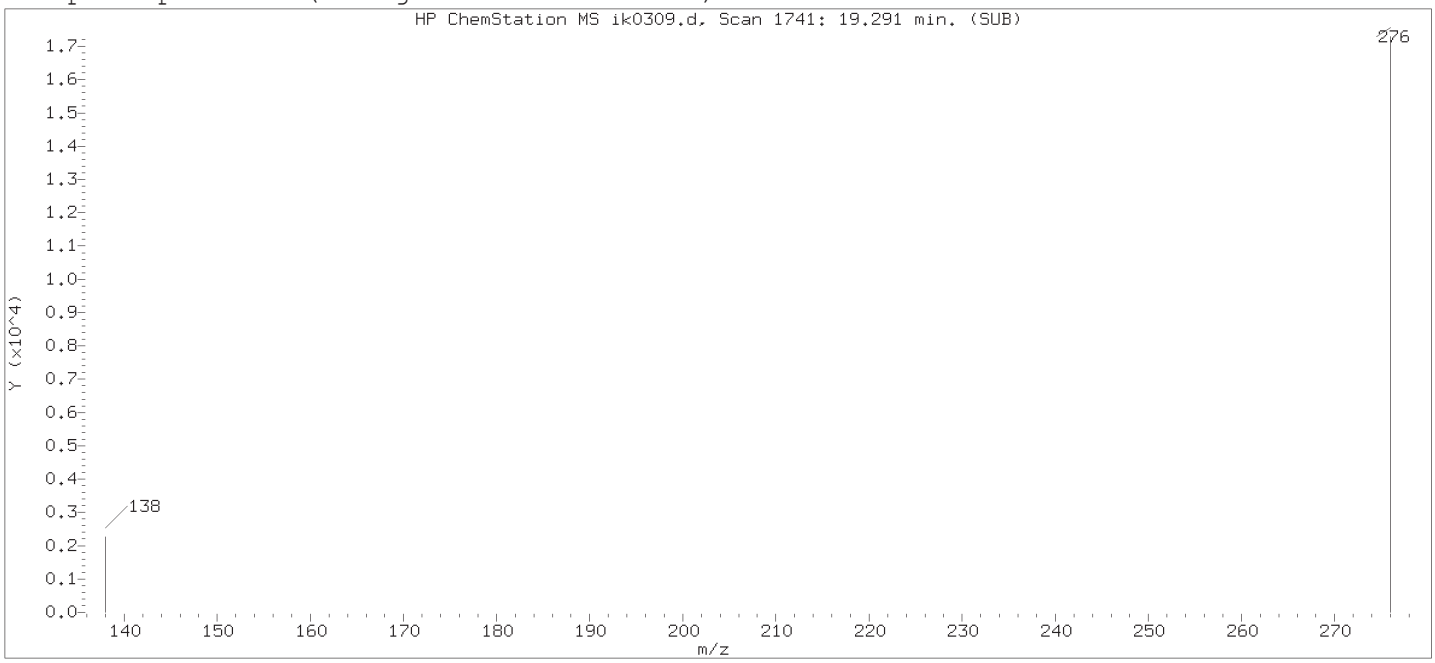
Compound Number	: 53		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 1766		
Retention Time (minutes)	: 19.467		
Quant Ion	: 276.00		
Area (flag)	: 236792A		
On-column Amount (ng/ul)	: 1.9836		
Integration start scan	: 1758	Integration stop scan:	1780
Y at integration start	: 7473	Y at integration end:	7473

Reason for manual integration: improper integration

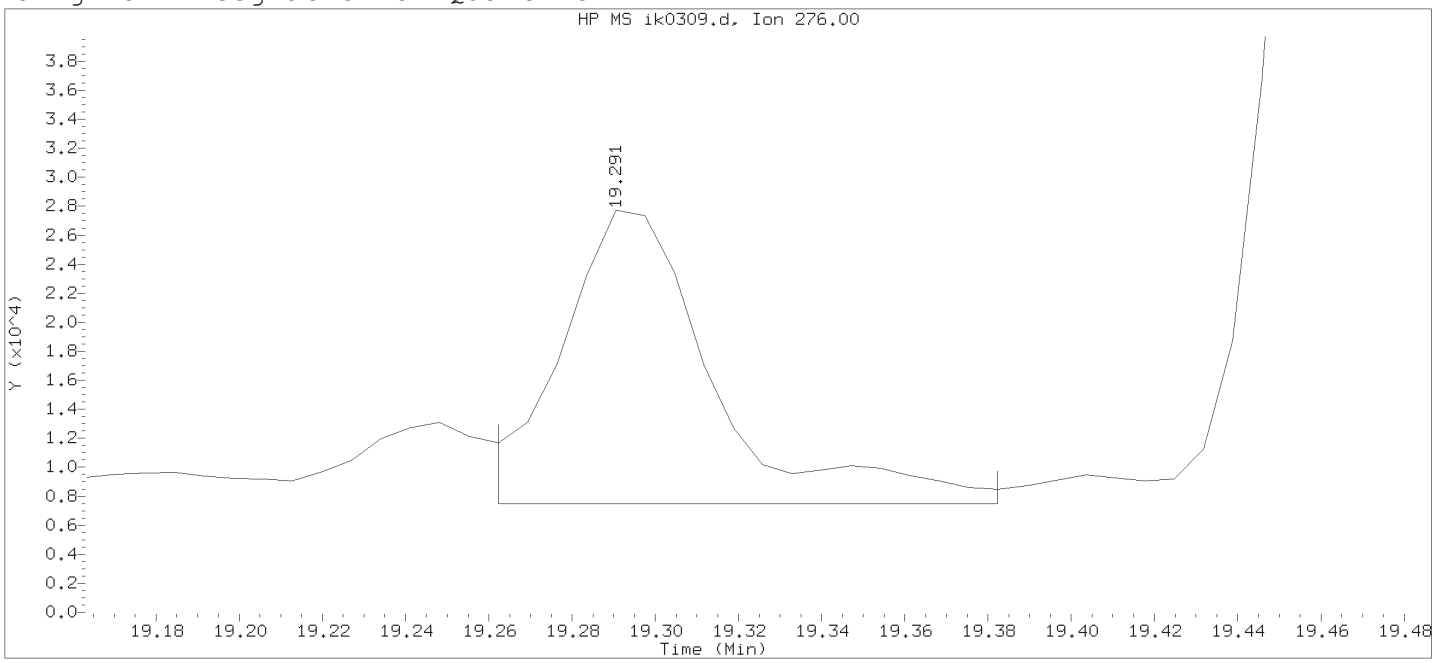
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

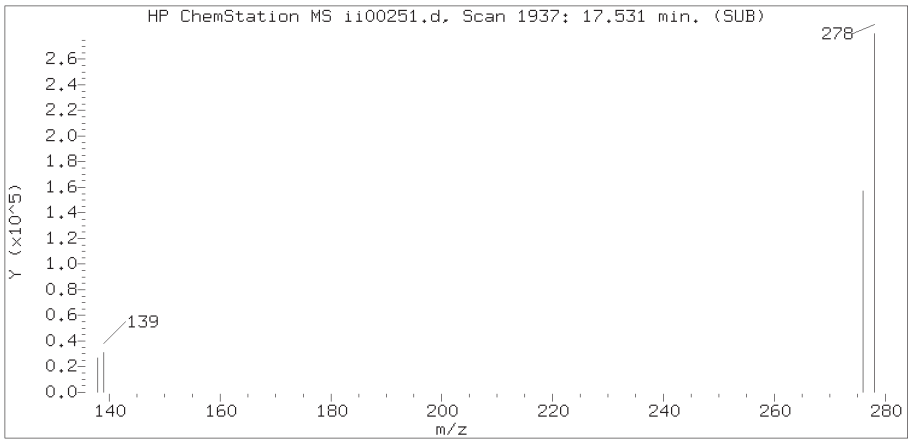
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

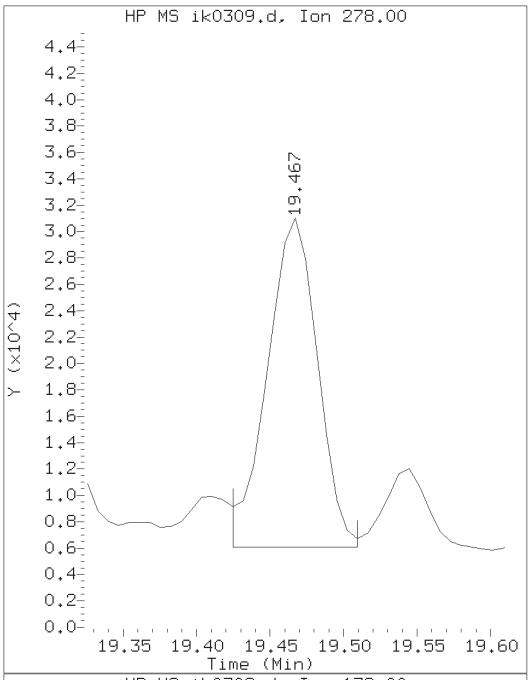
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number	: 53		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 1741		
Retention Time (minutes)	: 19.291		
Quant Ion	: 276.00		
Area	: 51442		
On-column Amount (ng/ul)	: 0.6463		
Integration start scan	: 1736	Integration stop scan:	1753
Y at integration start	: 7473	Y at integration end:	7473

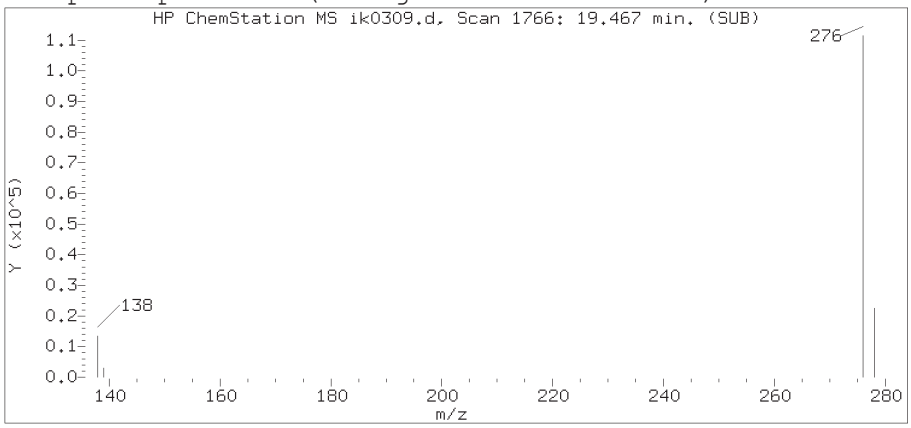
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature used: D10 Page 2073

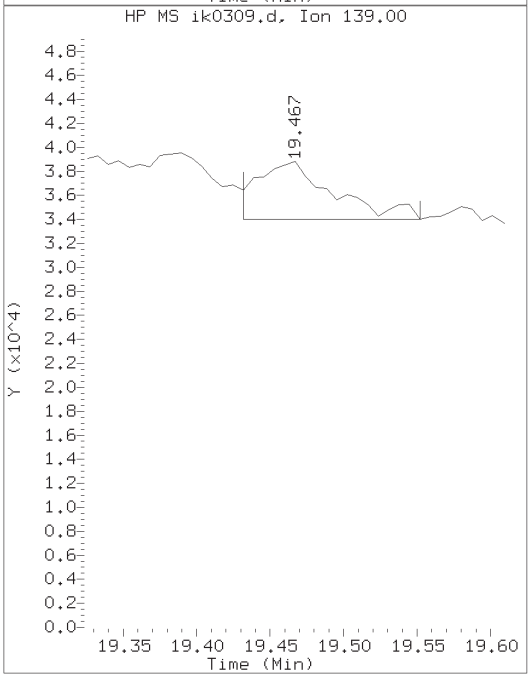
Reference Standard Spectrum for Dibenz(a,h)anthracene



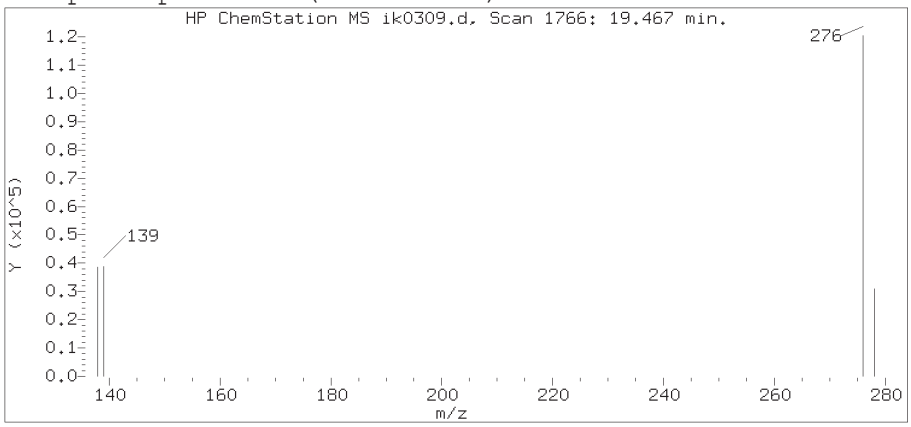


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

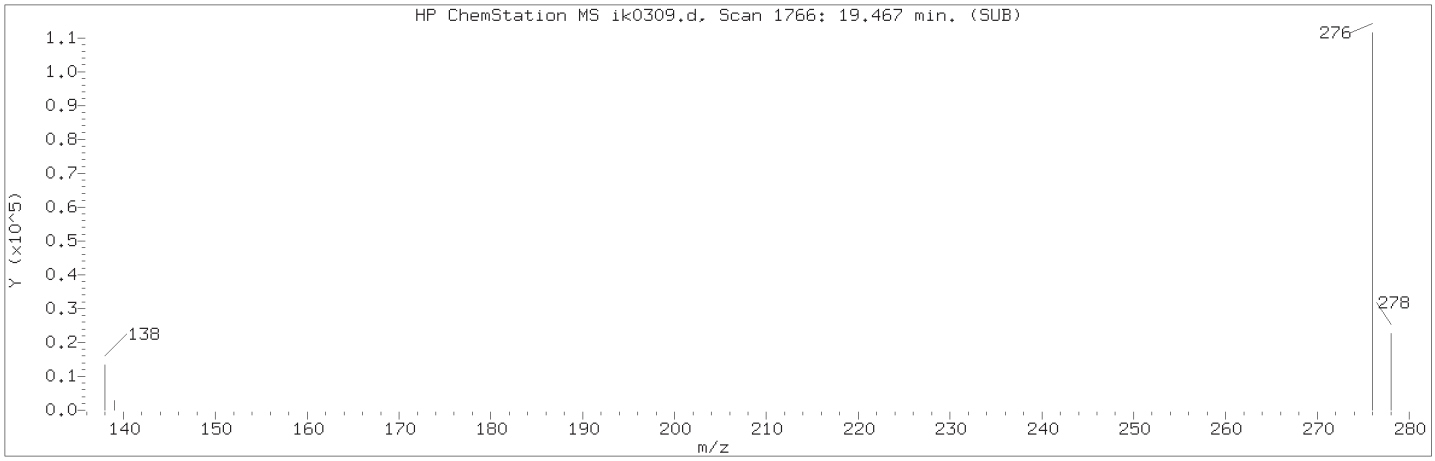
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

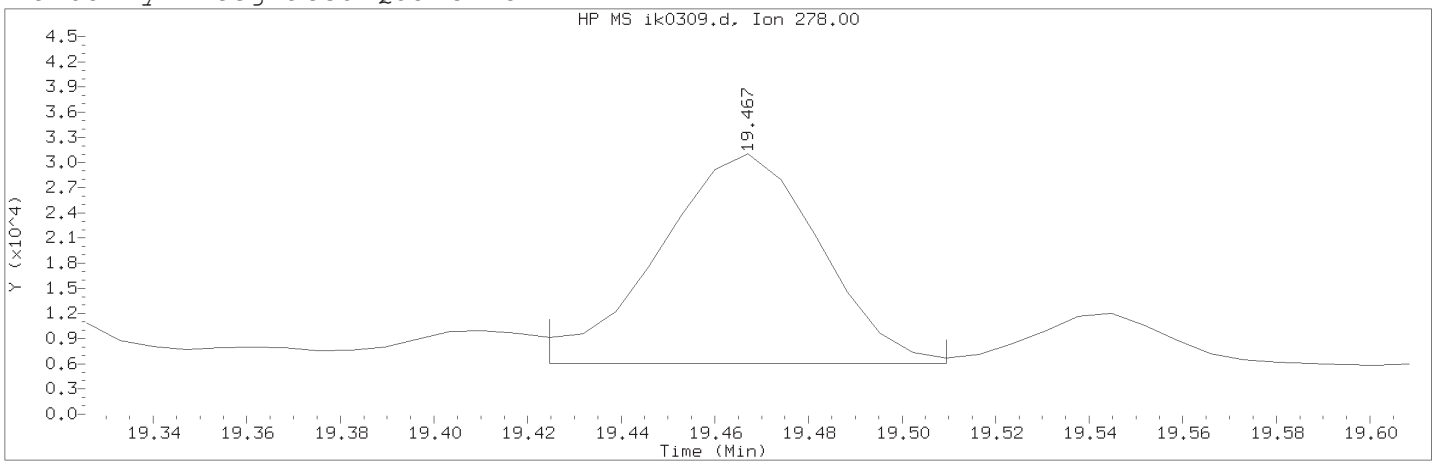
Compound Number	: 54
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 1766
Retention Time (minutes)	: 19.467
Relative Retention Time	: 0.00092
Quant Ion	: 278.00
Area (flag)	: 59188A
On-column Amount (ng/ul)	: 0.6073

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

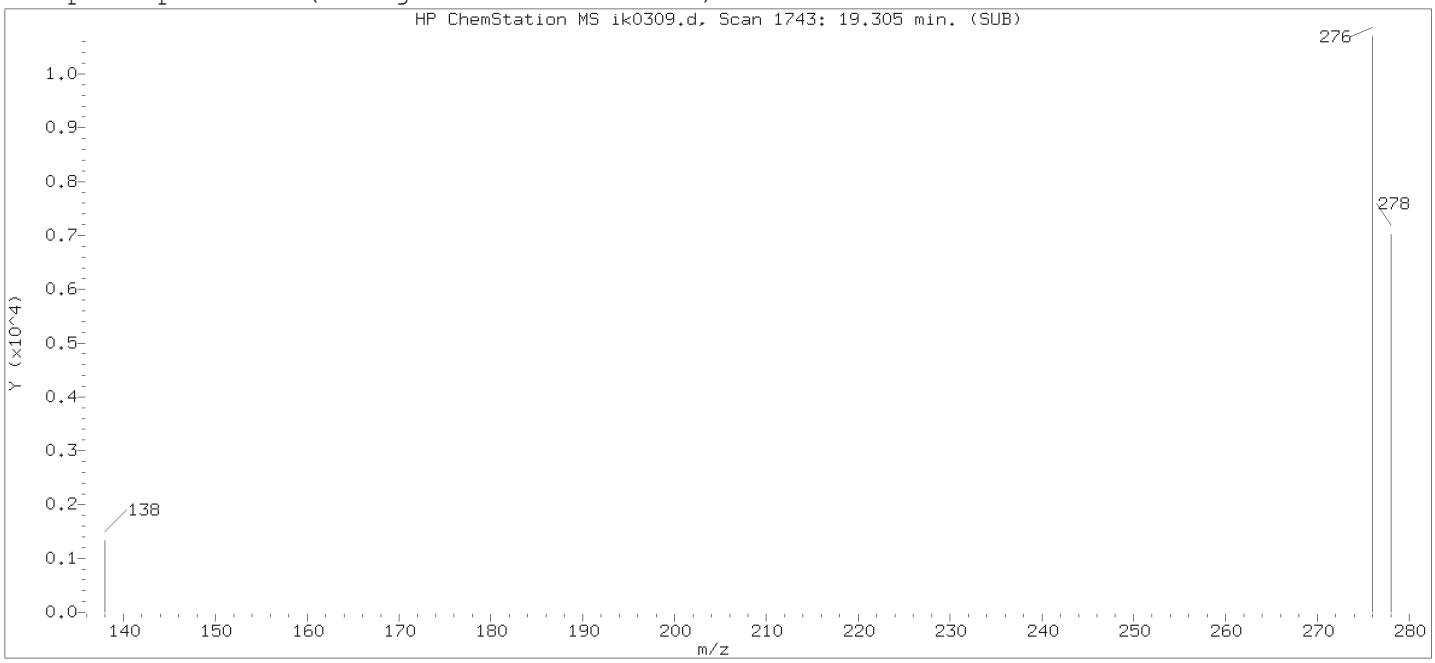
Compound Number	: 54		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 1766		
Retention Time (minutes)	: 19.467		
Quant Ion	: 278.00		
Area (flag)	: 59188A		
On-column Amount (ng/ul)	: 0.6073		
Integration start scan	: 1759	Integration stop scan:	1771
Y at integration start	: 6057	Y at integration end:	6057

Reason for manual integration: improper integration

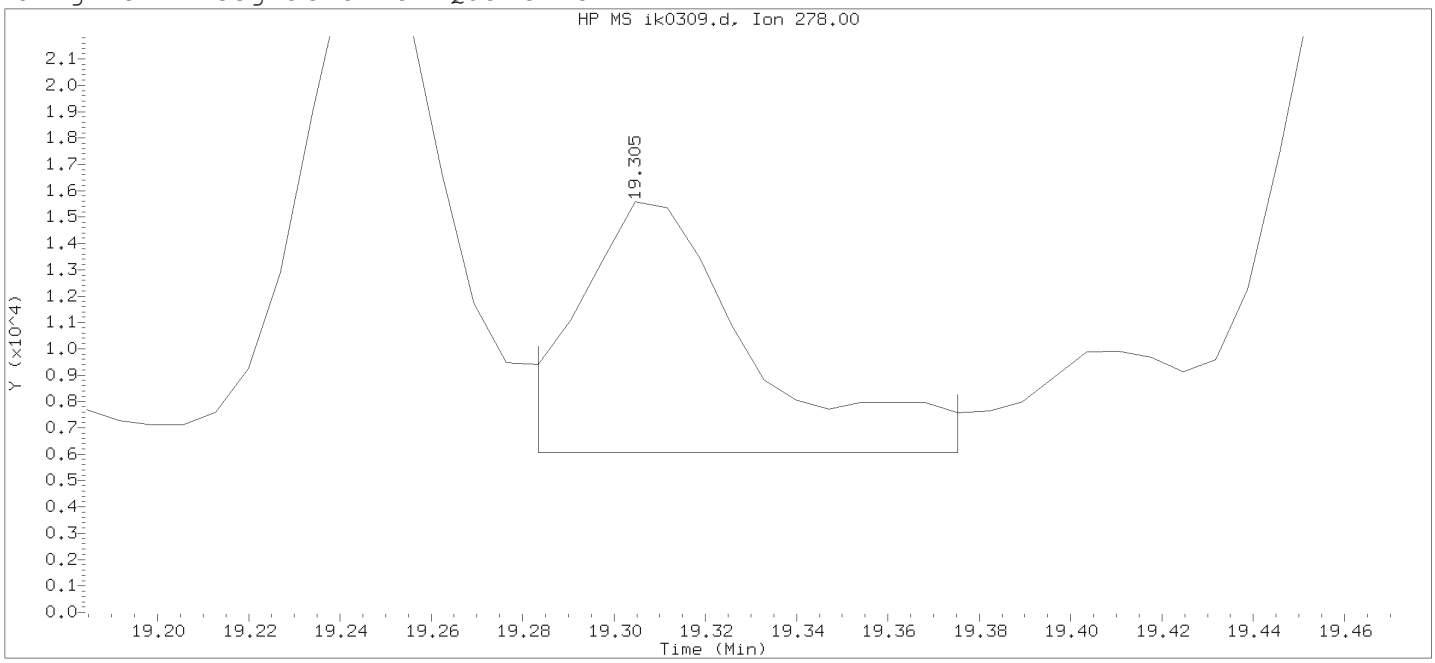
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

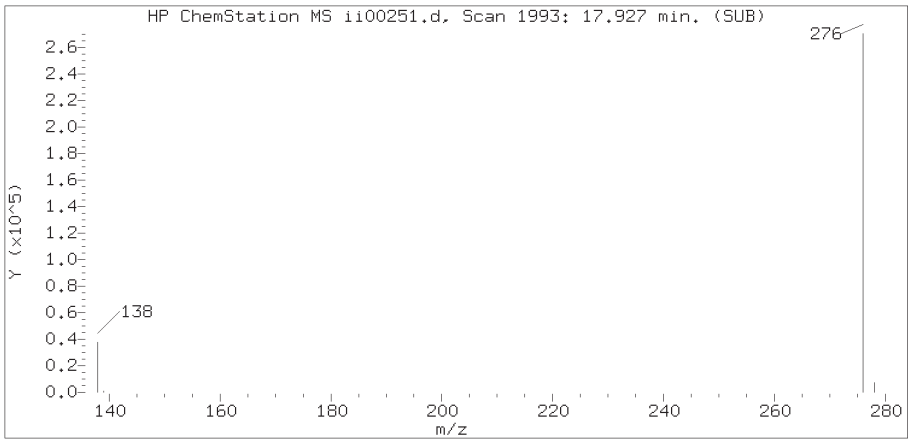
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

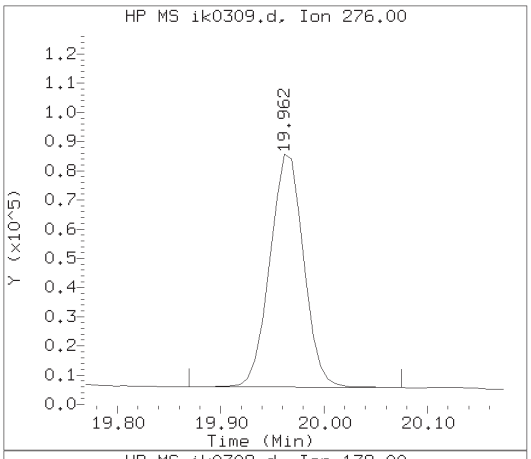
Sample Name: T1005 Lab Sample ID: 9867767

Compound Number	:	54
Compound Name	:	Dibenz(a,h)anthracene
Scan Number	:	1743
Retention Time (minutes)	:	19.305
Quant Ion	:	278.00
Area	:	24561
On-column Amount (ng/ul)	:	0.3779
Integration start scan	:	1739 Integration stop scan: 1752
Y at integration start	:	6057 Y at integration end: 6057

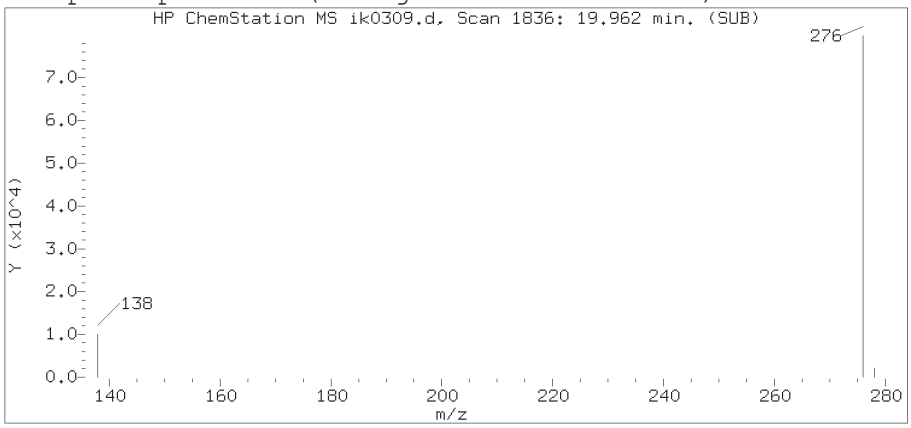
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

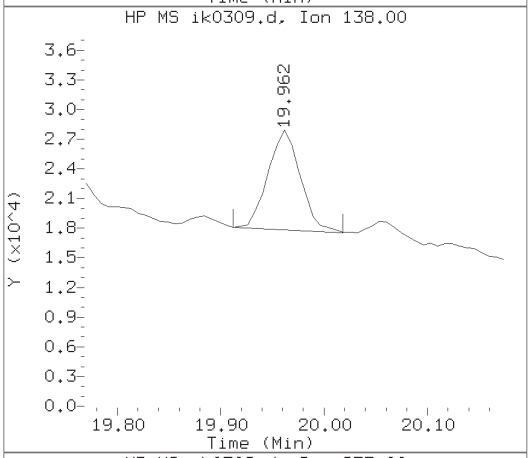
Reference Standard Spectrum for Benzo(g,h,i)perylene



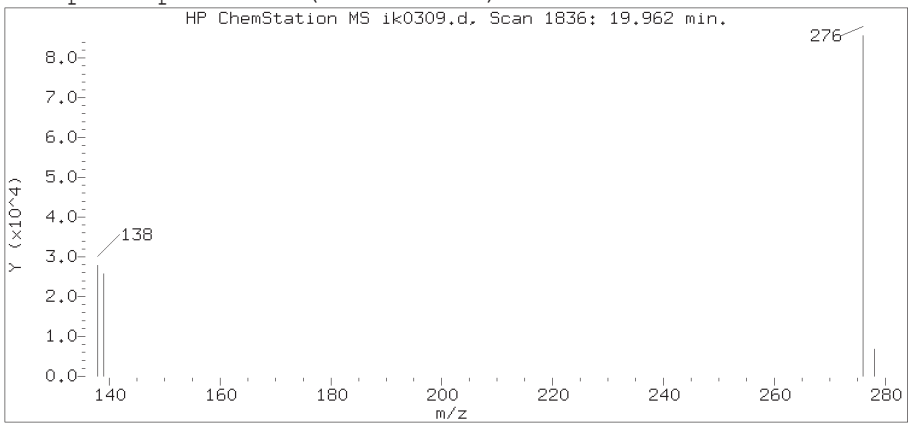


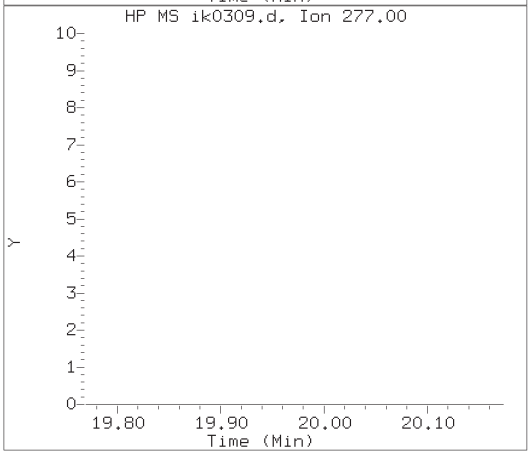
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

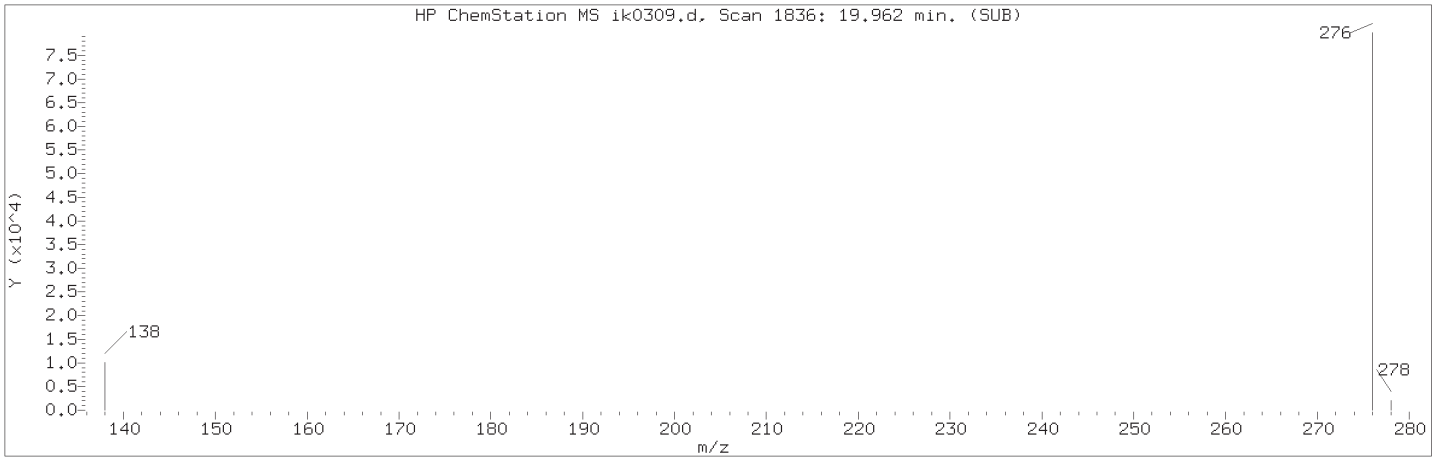
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

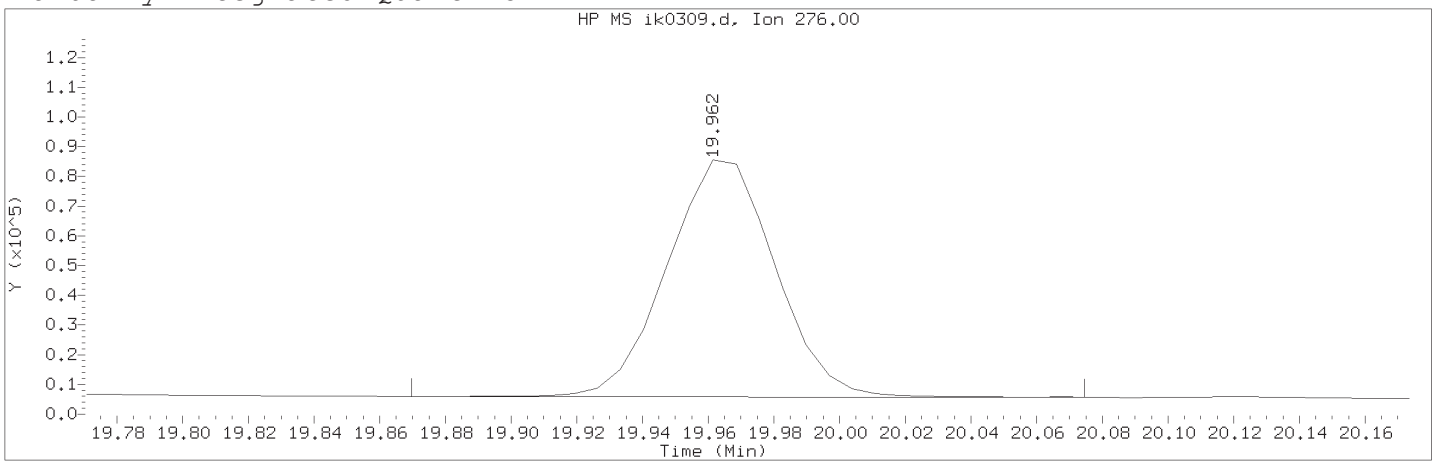
Compound Number	: 55
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 1836
Retention Time (minutes)	: 19.962
Relative Retention Time	: 0.00070
Quant Ion	: 276.00
Area (flag)	: 182423A
On-column Amount (ng/ul)	: 1.7381

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:24 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

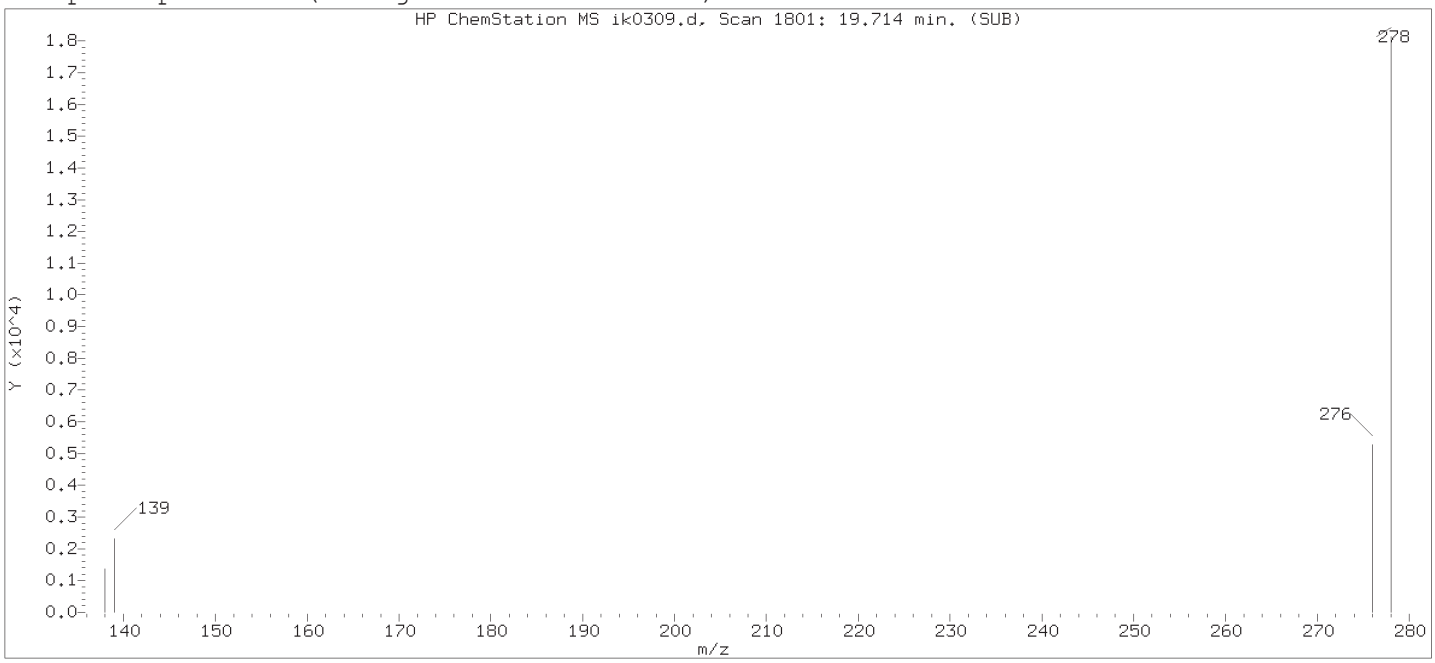
Compound Number	: 55		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 1836		
Retention Time (minutes)	: 19.962		
Quant Ion	: 276.00		
Area (flag)	: 182423A		
On-column Amount (ng/ul)	: 1.7381		
Integration start scan	: 1822	Integration stop scan:	1851
Y at integration start	: 5927	Y at integration end:	5728

Reason for manual integration: improper integration

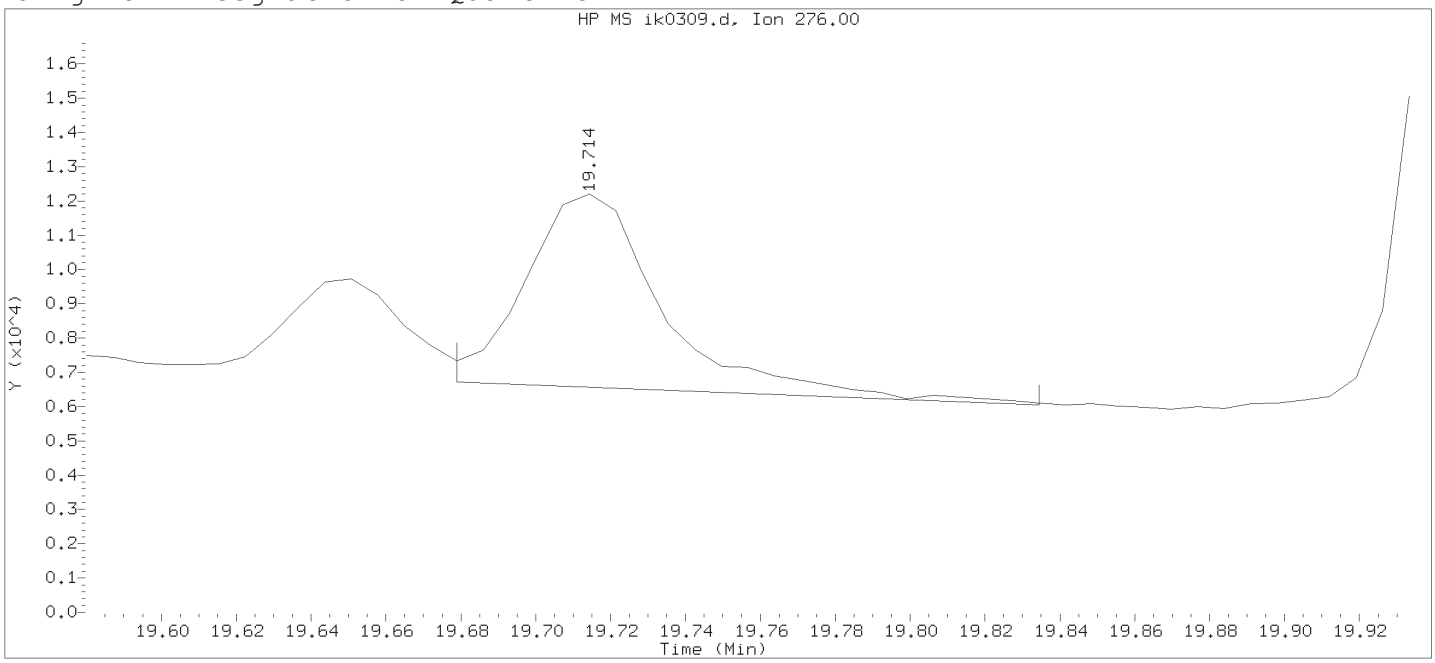
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0309.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 22:44 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1005 Lab Sample ID: 9867767

Compound Number	: 55	
Compound Name	: Benzo(g,h,i)perylene	
Scan Number	: 1801	
Retention Time (minutes)	: 19.714	
Quant Ion	: 276.00	
Area	: 14222	
On-column Amount (ng/ul)	: 0.2032	
Integration start scan	: 1795	Integration stop scan: 1817
Y at integration start	: 6711	Y at integration end: 6056

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature used.

T1005RE

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

9867767RE

Data file: /chem/HP10976.i/18nov08.b/ik0360.d
Data file Sample Info. Line: T1005RE;9867767RE;2;0;SAMPLE;;DOD26;
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Injection date and time: **08-NOV-2018 12:05**
Instrument ID: **HP10976.i** Batch: **18302SLH**

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov08.b/ik0351.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1
Final Extract Volume (Vt): 500 ul
GpcCleanup (No = 0, Yes = 1): 1
Volume Injected (Vi): 1 ul
Unit Correction Factor (Uf): 1
Sample Weight (Ws): 30.39 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.794	(0.000)	499	152	76149	(8)	1.00	
10) Naphthalene-d8	8.320	(-0.013)	614	136	276127	(6)	1.00	
20) Acenaphthene-d10	10.478	(-0.011)	801	164	168741	(5)	1.00	
31) Phenanthrene-d10	12.334	(-0.023)	967	188	373441M	(7)	1.00	
43) Chrysene-d12	15.660	(-0.063)	1273	240	444222A	(22)	1.00	
51) Perylene-d12	17.662	(-0.125)	1529	264	158058MA	(-56)	1.00	*

*** = Internal Standard area outside QC limits M = Internal Standard was manually integrated A = User selected an alternate peak**

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.262	(0.000)	152	126496	0.751	75%		61 - 111
36) Fluoranthene-d10	(4)	13.832	(0.000)	212	416185	0.899	90%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.537	(0.000)	264	106833MA	0.708	71%		54 - 122

M = Surrogate Standard was manually integrated. A = User selected an alternate peak.

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.135	(-0.013)	88	8638M	0.189	6.24			0.02
11) Naphthalene	(2)	8.346	(0.000)	128	218345	0.768	25.27	31.312	B	0.04
19) Acenaphthylene	(3)	10.304	(-0.000)	152	52185	0.161	5.31			0.01
21) Acenaphthene	(3)	10.522	(0.000)	154	11793M	0.055	1.83	1.723	B	0.02
26) Fluorene	(3)	11.154	(0.000)	166	24945M	0.095	3.14	1.949	B	0.02
32) Phenanthrene	(4)	12.357	(0.000)	178	677602	1.679	55.26	2.56	B	0.02
33) Anthracene	(4)	12.424	(0.000)	178	173185	0.429	14.10	0.732	B	0.02
35) Di-n-butylphthalate	(4)	13.014	(-0.000)	149	730731M	1.893	62.29			0.2
37) Fluoranthene	(4)	13.856	(0.000)	202	2326803	4.632	152.42			0.02
39) Pyrene	(5)	14.149	(0.001)	202	2302589A	3.745	123.22			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.597	(-0.000)	149	12430276A	42.539	1399.77		E	0.3
42) Benzo(a)anthracene	(5)	15.644	(-0.000)	228	1280697A	2.241	73.74			0.02
44) Chrysene	(5)	15.683	(0.000)	228	2821136MA	5.168	170.04			0.01
46) Benzo(b)fluoranthene	(6)	17.083	(0.000)	252	3216873MA	16.364	538.48		E	0.02
47) Benzo(k)fluoranthene	(6)				Not Detected					0.02
50) Benzo(a)pyrene	(6)	17.576	(-0.000)	252	575951A	3.419	112.49			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.438	(0.000)	276	420412A	2.116	69.63			0.02
54) Dibenz(a,h)anthracene	(6)	19.438	(0.001)	278	98872MA	0.610	20.06			0.02
55) Benzo(g,h,i)perylene	(6)	19.932	(0.000)	276	315616A	1.807	59.45			0.02

M = Compound was manually integrated. B = Compound detected in referenced method blank. A = User selected an alternate peak.
E = Compound concentration above calibration range.

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP10976.i/18nov08.b/ik0360.d Injection date and time: **08-NOV-2018 12:05**
Data file Sample Info. Line: T1005RE;9867767RE;2;0;SAMPLE;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov08.b/ik0351.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

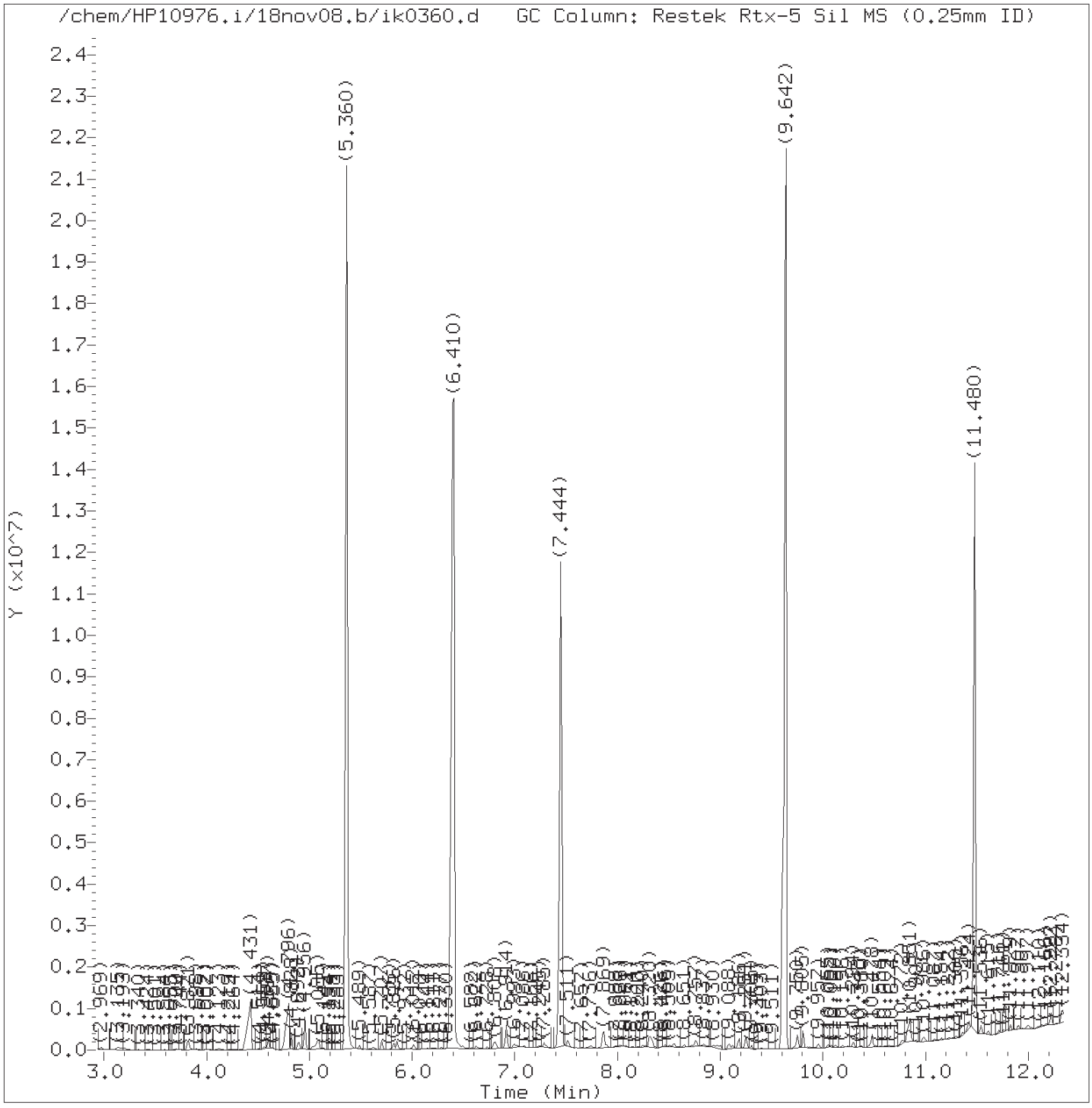
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.39 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

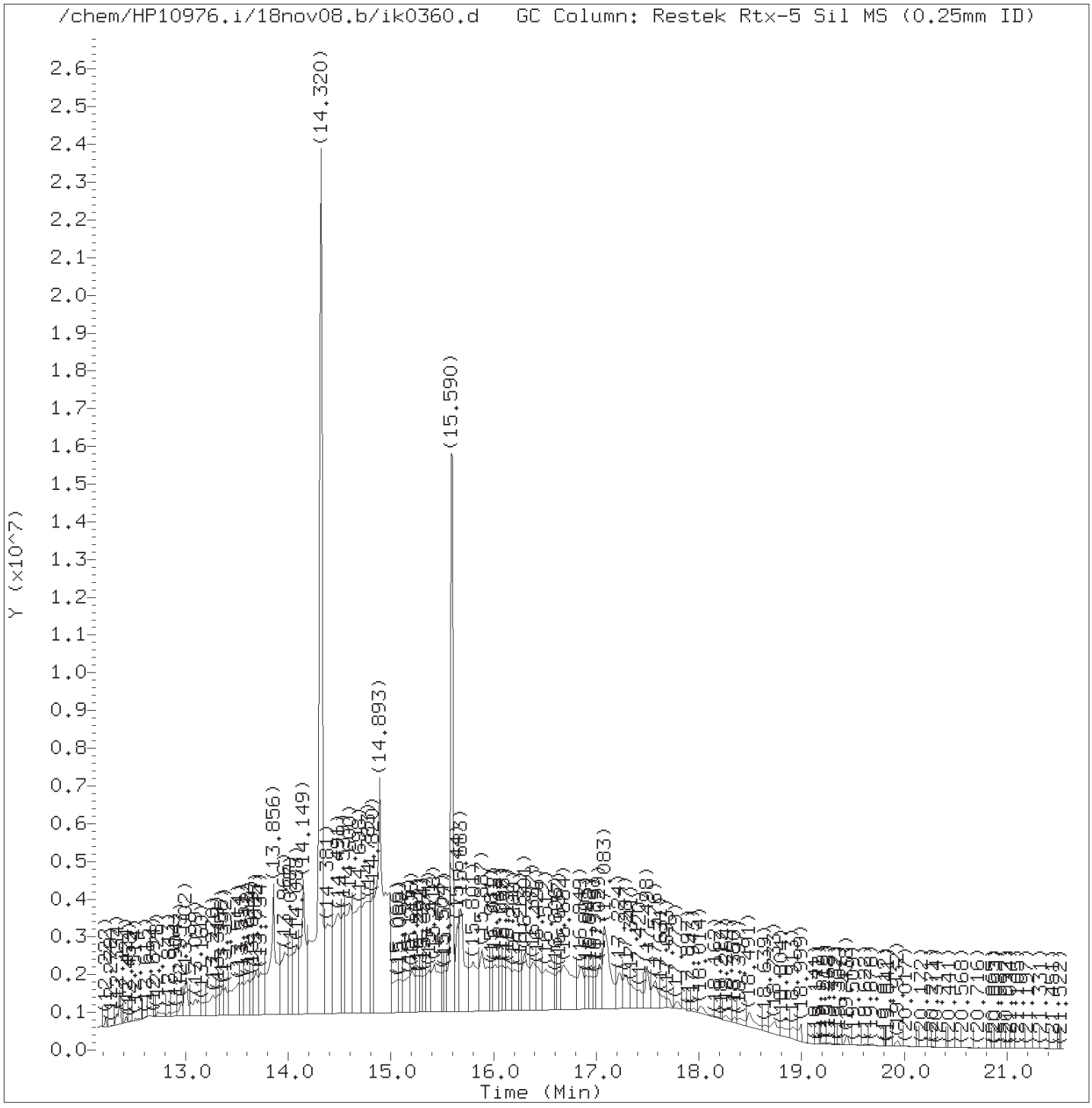
Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

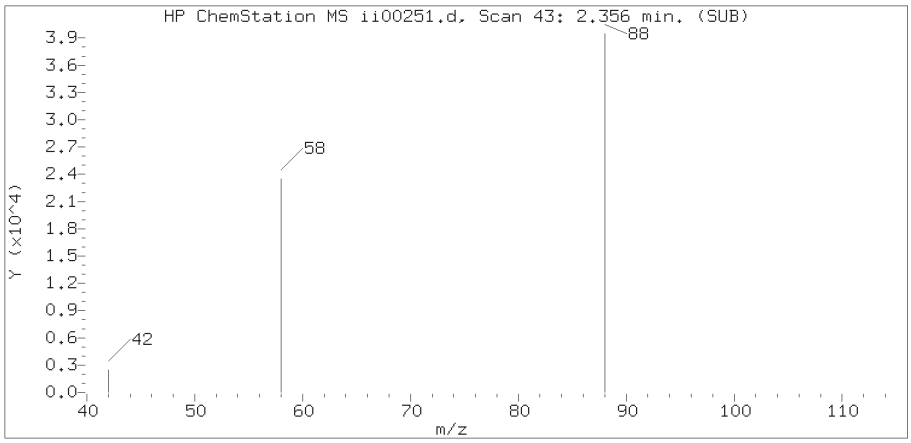
Sample Name: T1005RE Lab Sample ID: 9867767RE

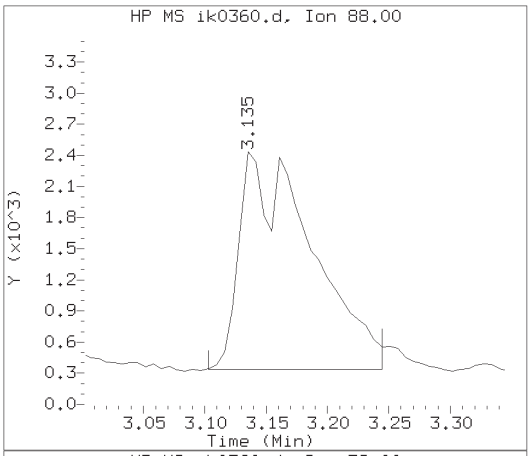
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.135	88	8638M	0.189
6)*1,4-Dichlorobenzene-d4	(1)	6.794	152	76149	1.000
10)*Naphthalene-d8	(2)	8.320	136	276127	1.000
11) Naphthalene	(2)	8.346	128	218345	0.768
14)$1-Methylnaphthalene-d10	(2)	9.262	152	126496	0.751
19) Acenaphthylene	(3)	10.304	152	52185	0.161
20)*Acenaphthene-d10	(3)	10.478	164	168741	1.000
21) Acenaphthene	(3)	10.522	154	11793M	0.055
26) Fluorene	(3)	11.154	166	24945M	0.095
31)*Phenanthrene-d10	(4)	12.334	188	373441M	1.000
32) Phenanthrene	(4)	12.357	178	677602	1.679
33) Anthracene	(4)	12.424	178	173185	0.429
35) Di-n-butylphthalate	(4)	13.014	149	730731M	1.893
36)$Fluoranthene-d10	(4)	13.832	212	416185	0.899
37) Fluoranthene	(4)	13.856	202	2326803	4.632
39) Pyrene	(5)	14.149	202	2302589A	3.745
41) bis(2-Ethylhexyl)phthalate	(5)	15.597	149	12430276A	42.539
42) Benzo(a)anthracene	(5)	15.644	228	1280697A	2.241
43)*Chrysene-d12	(5)	15.660	240	444222A	1.000
44) Chrysene	(5)	15.683	228	2821136MA	5.168
46) Benzo(b)fluoranthene	(6)	17.083	252	3216873MA	16.364
49)$Benzo(a)pyrene-d12	(6)	17.537	264	106833MA	0.708
50) Benzo(a)pyrene	(6)	17.576	252	575951A	3.419
51)*Perylene-d12	(6)	17.662	264	158058MA	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.438	276	420412A	2.116
54) Dibenz(a,h)anthracene	(6)	19.438	278	98872MA	0.610
55) Benzo(g,h,i)perylene	(6)	19.932	276	315616A	1.807

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

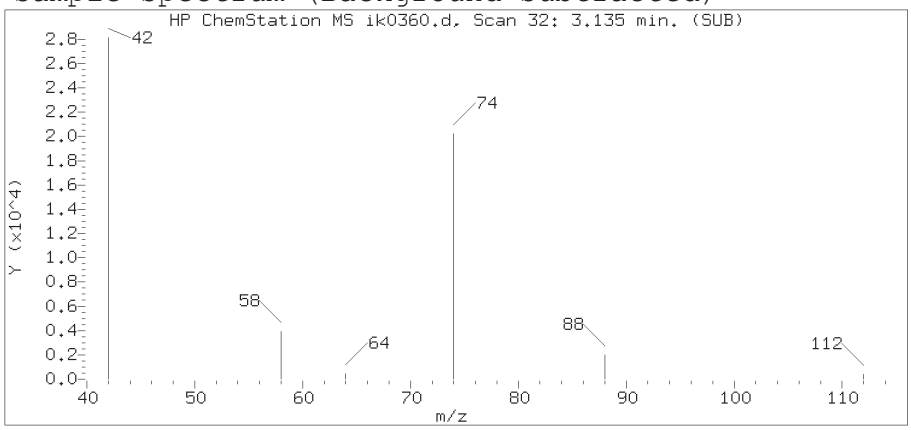
Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

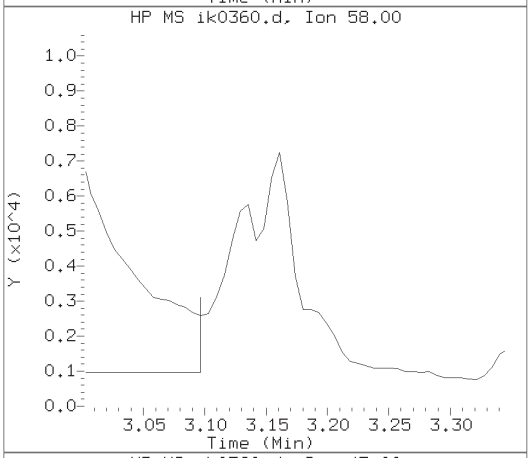
Reference Standard Spectrum for 1,4-Dioxane



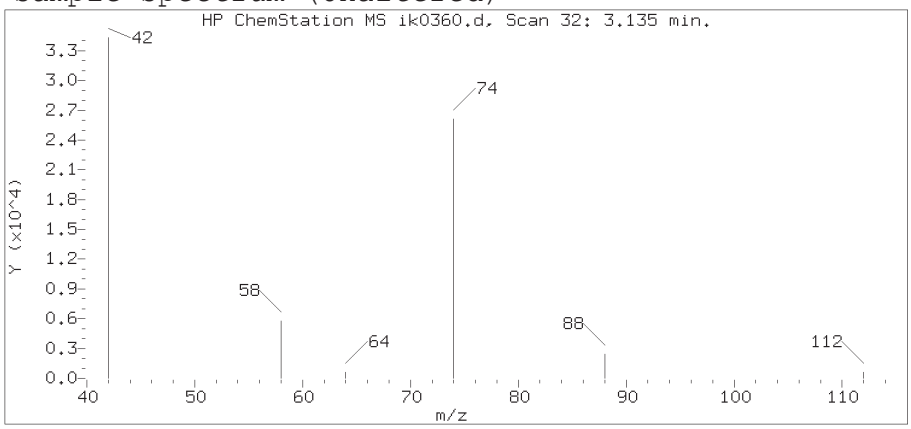


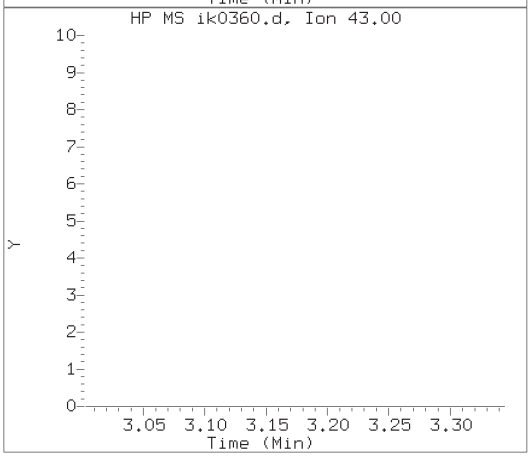
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

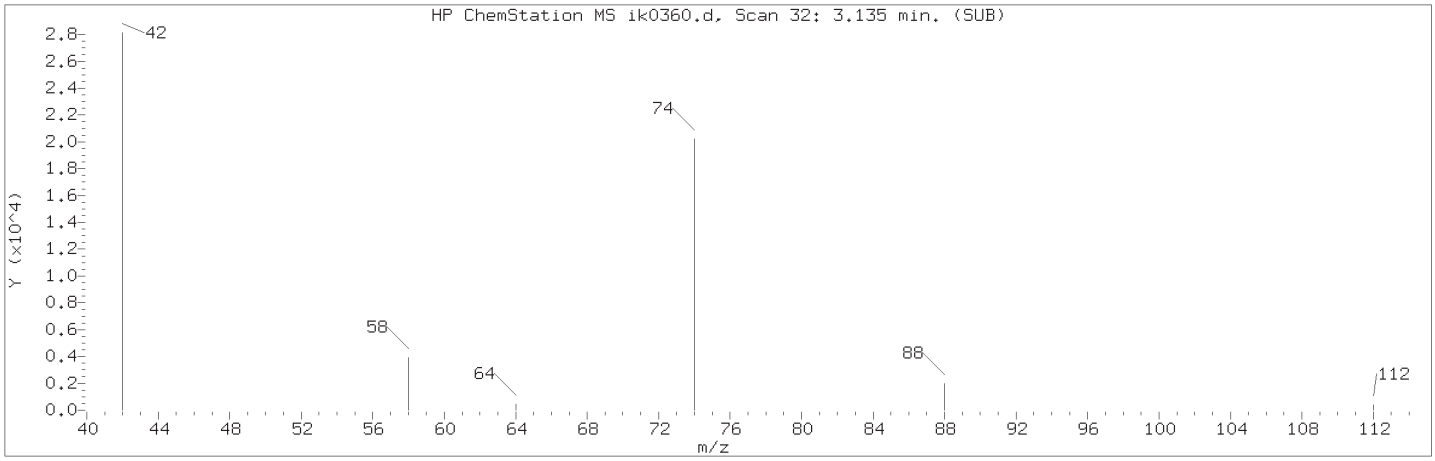
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

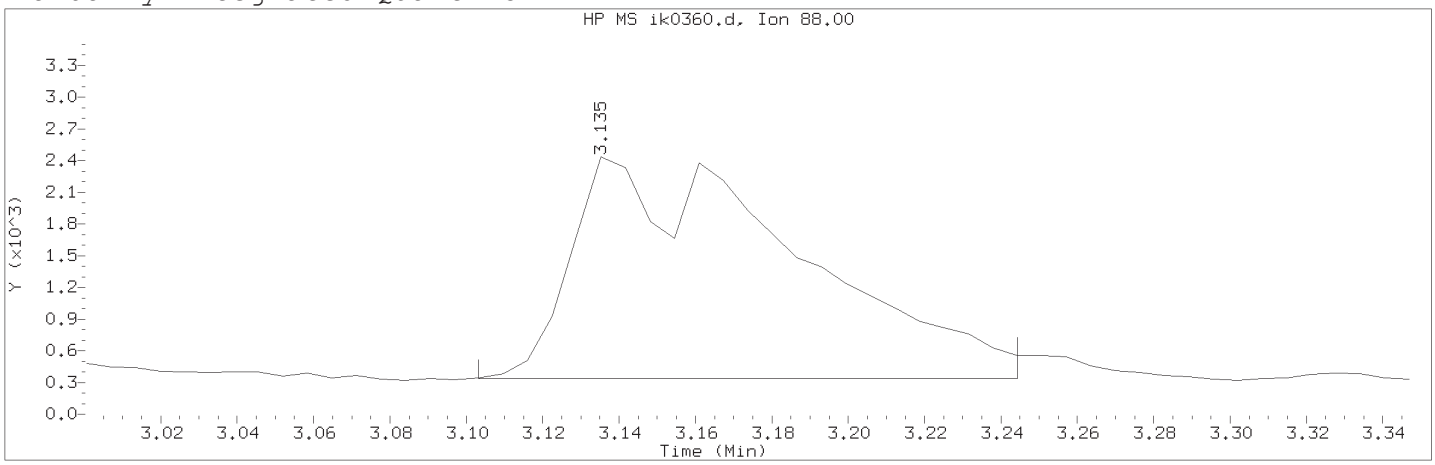
Compound Number	: 1
Compound Name	: 1,4-Dioxane
Scan Number	: 32
Retention Time (minutes)	: 3.135
Relative Retention Time	:-0.01321
Quant Ion	: 88.00
Area (flag)	: 8638M
On-column Amount (ng/ul)	: 0.1895

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

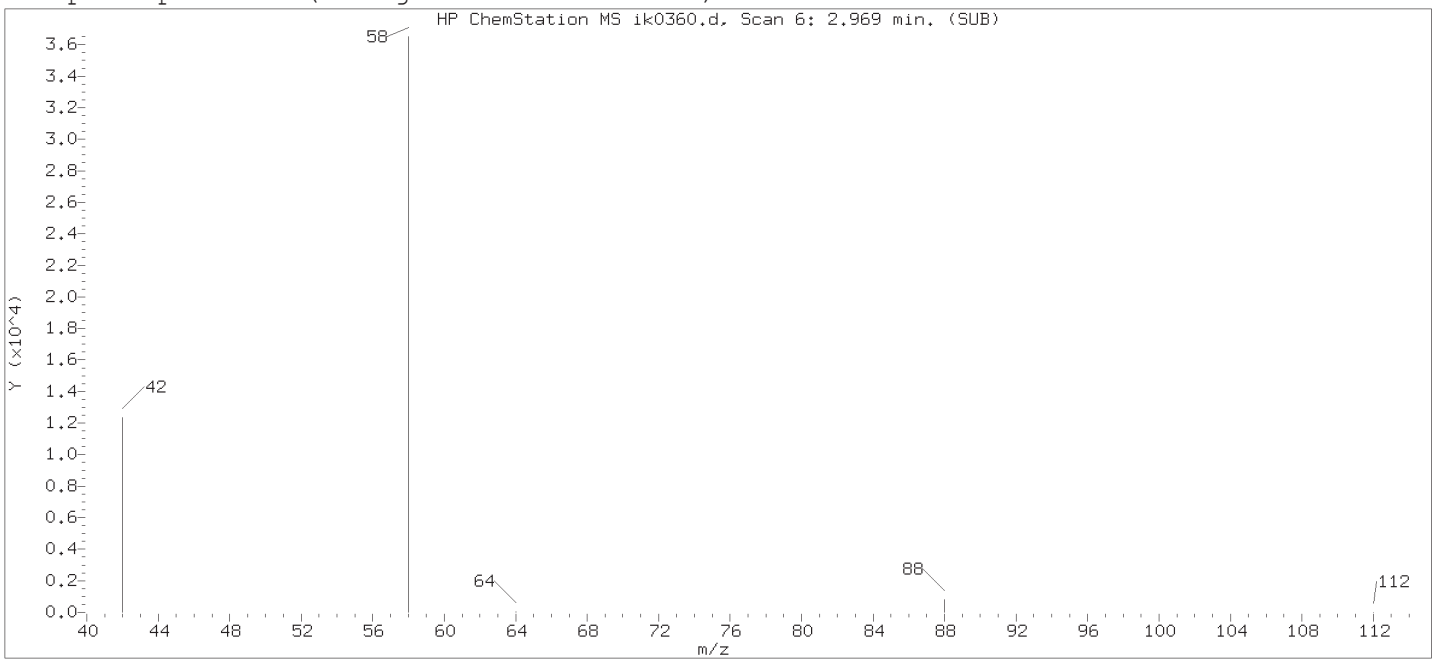
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 32		
Retention Time (minutes)	: 3.135		
Quant Ion	: 88.00		
Area (flag)	: 8638M		
On-column Amount (ng/ul)	: 0.1895		
Integration start scan	: 26	Integration stop scan:	48
Y at integration start	: 338	Y at integration end:	338

Reason for manual integration: improper integration

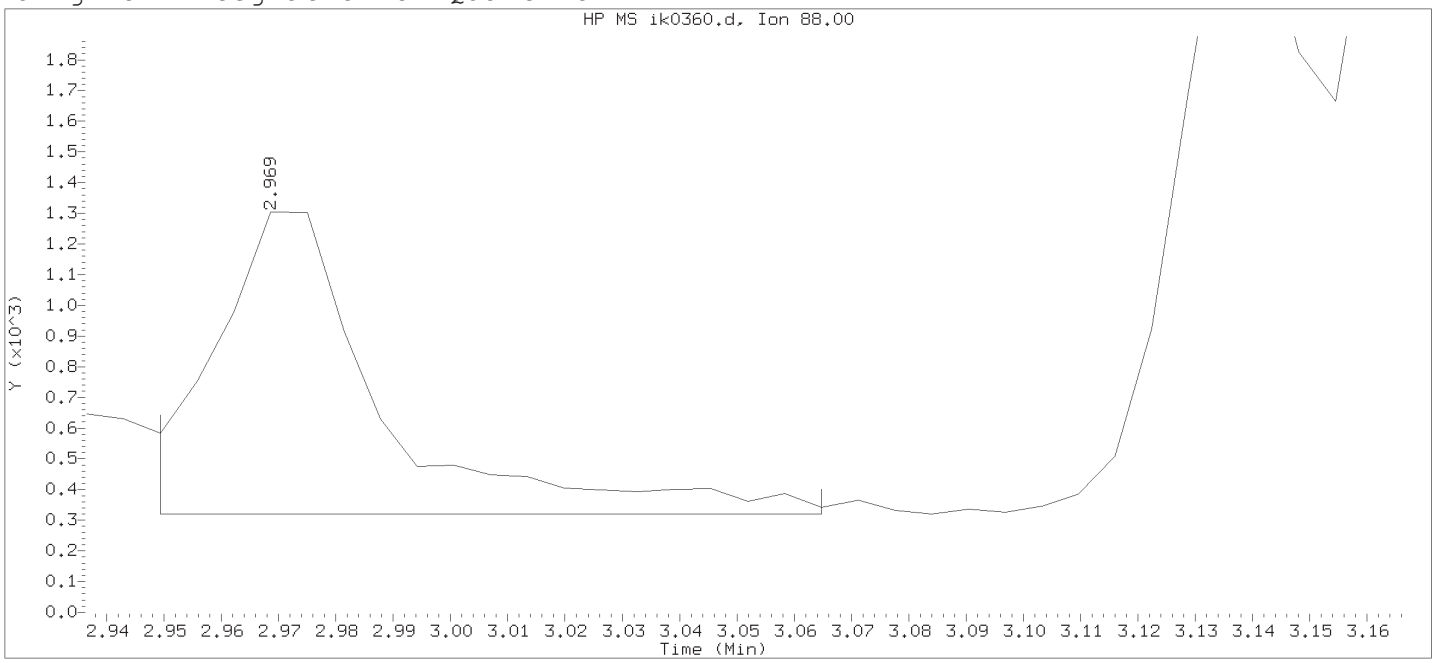
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

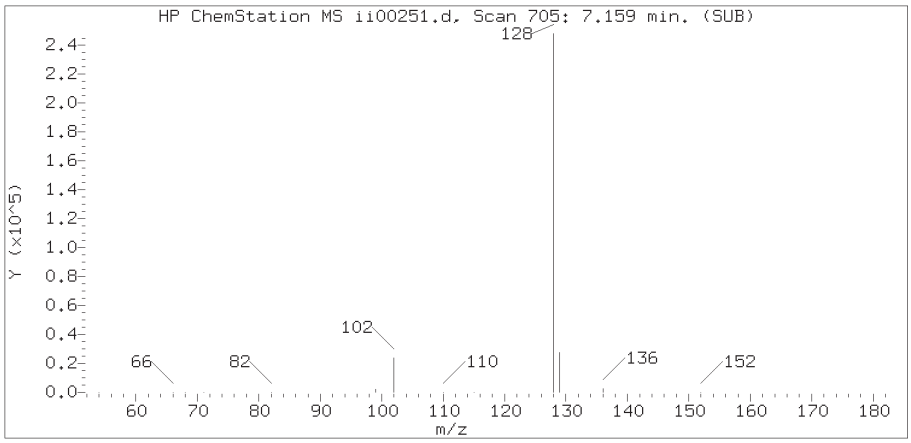
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

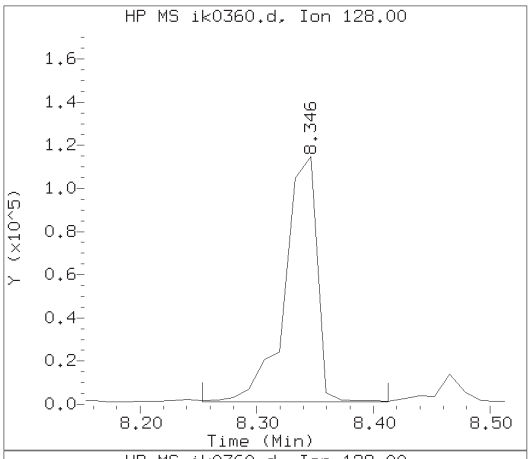
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 6		
Retention Time (minutes)	: 2.969		
Quant Ion	: 88.00		
Area	: 1985		
On-column Amount (ng/ul)	: 0.0436		
Integration start scan	: 2	Integration stop scan:	20
Y at integration start	: 321	Y at integration end:	321

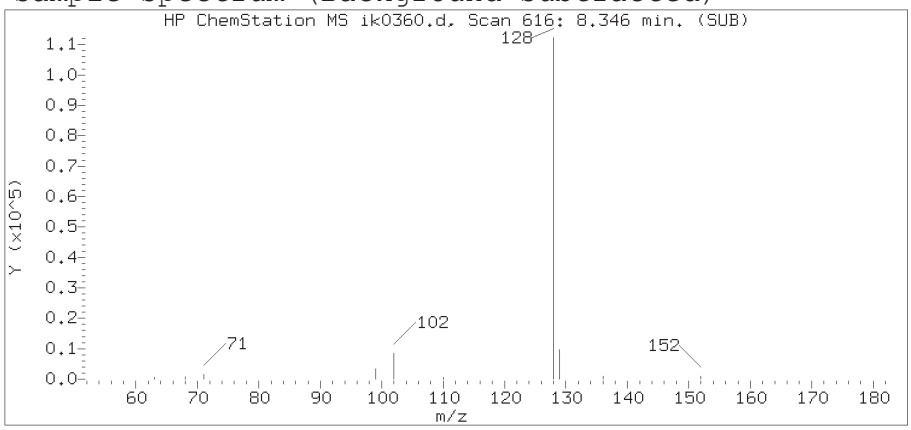
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

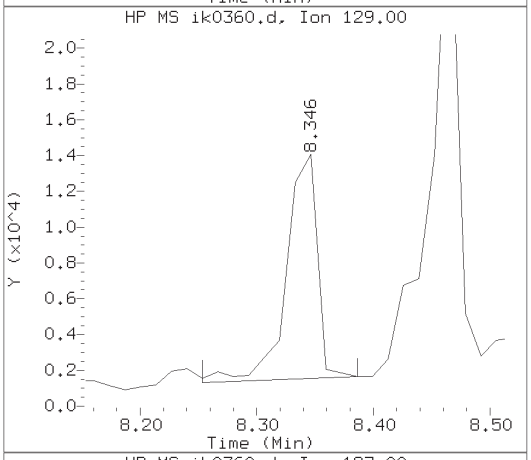
Reference Standard Spectrum for Naphthalene



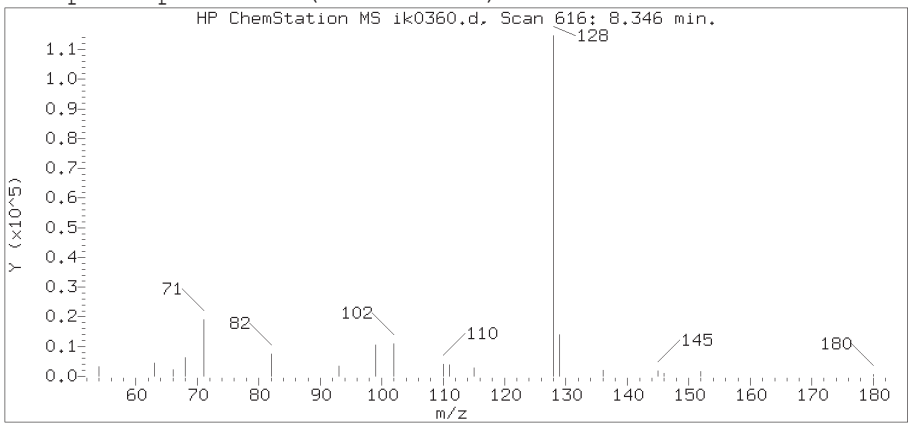


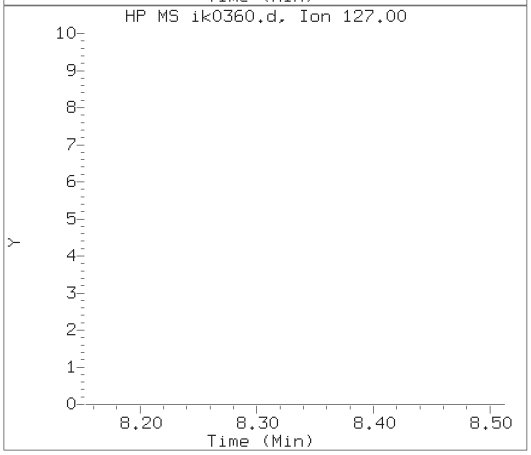
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

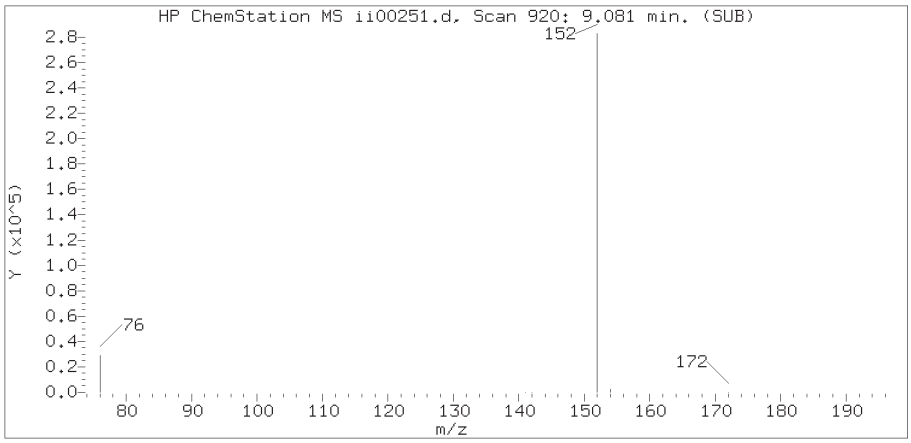
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

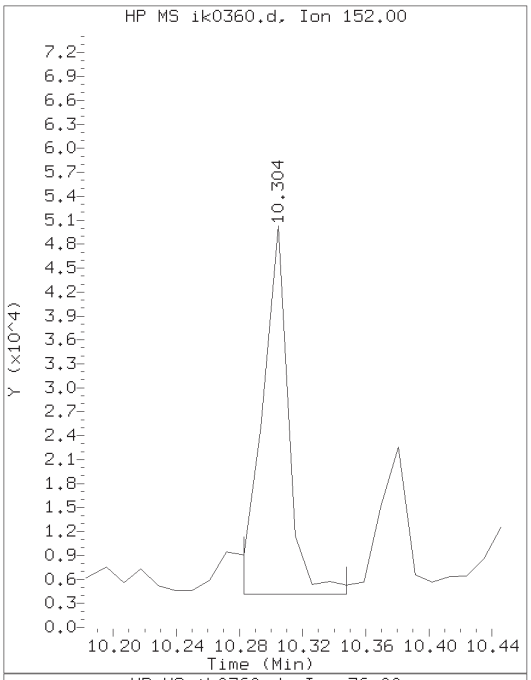
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	: 11
Compound Name	: Naphthalene
Scan Number	: 616
Retention Time (minutes)	: 8.346
Relative Retention Time	: 0.00001
Quant Ion	: 128.00
Area (flag)	: 218345
On-column Amount (ng/ul)	: 0.7679

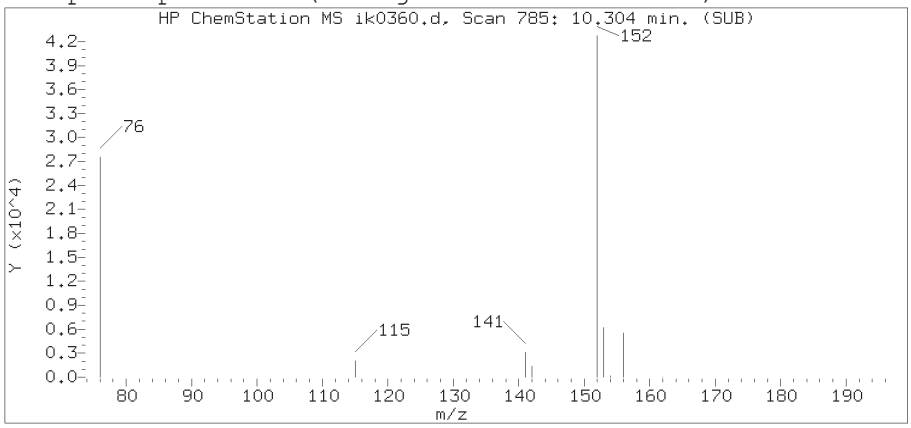
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

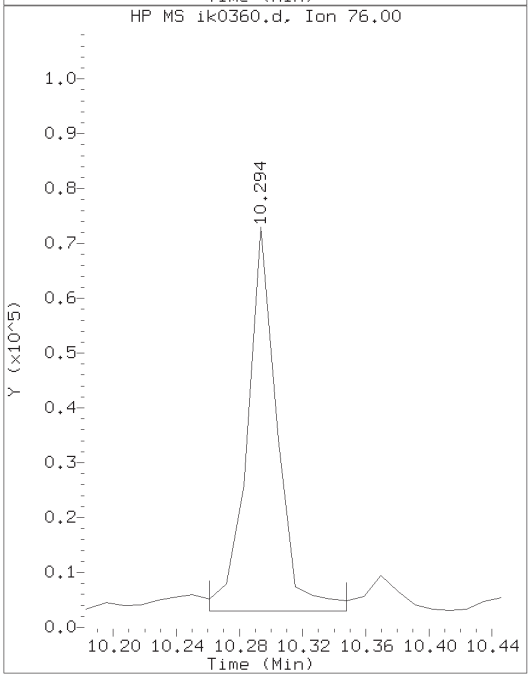
Reference Standard Spectrum for Acenaphthylene



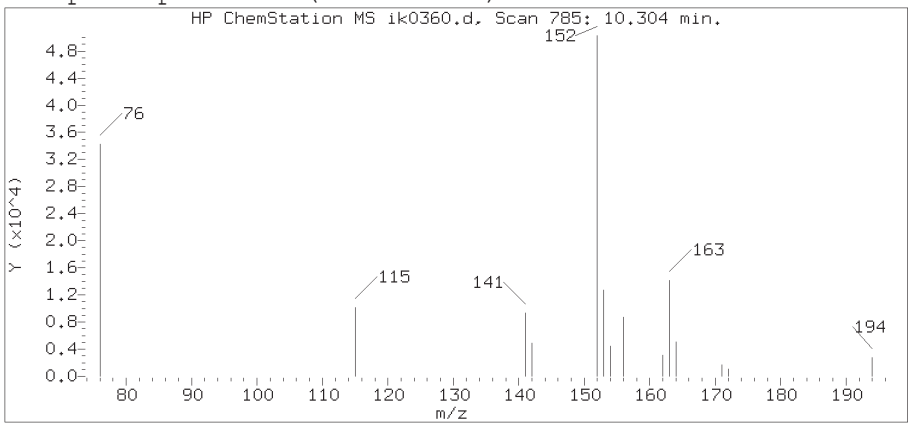


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

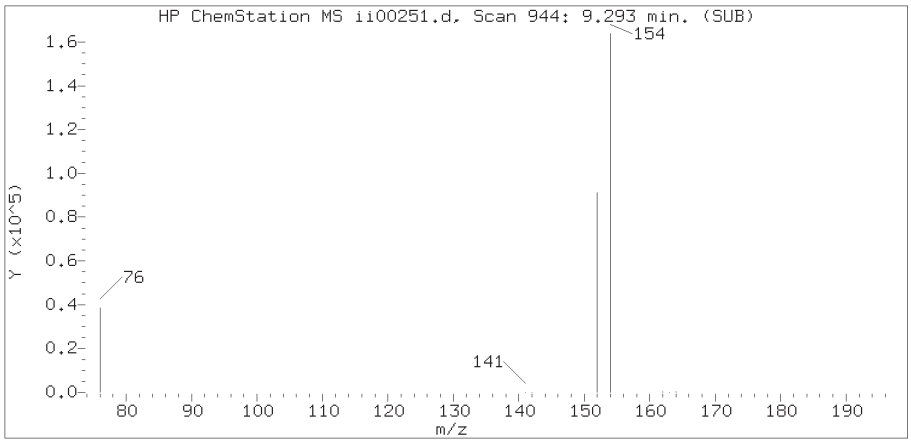
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

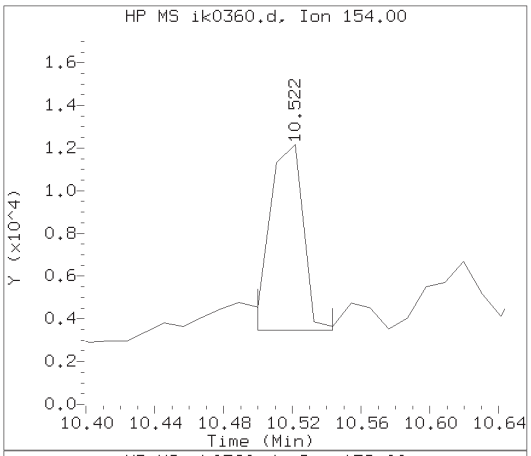
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	: 19
Compound Name	: Acenaphthylene
Scan Number	: 785
Retention Time (minutes)	: 10.304
Relative Retention Time	:-0.00002
Quant Ion	: 152.00
Area (flag)	: 52185
On-column Amount (ng/ul)	: 0.1615

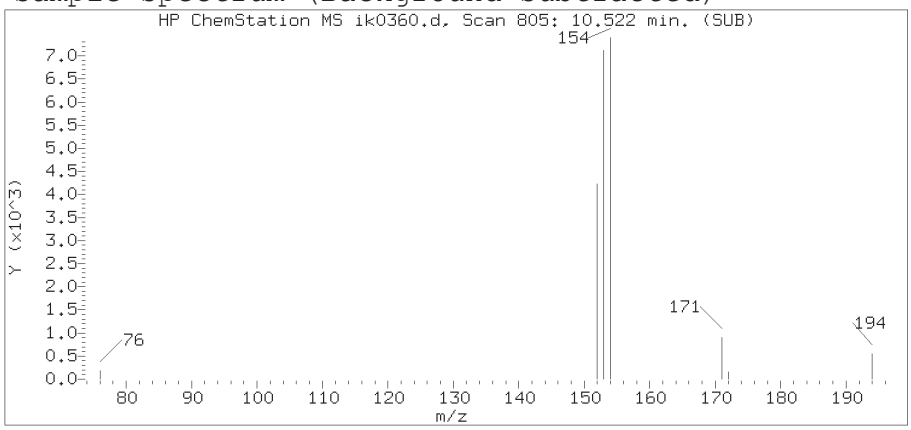
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

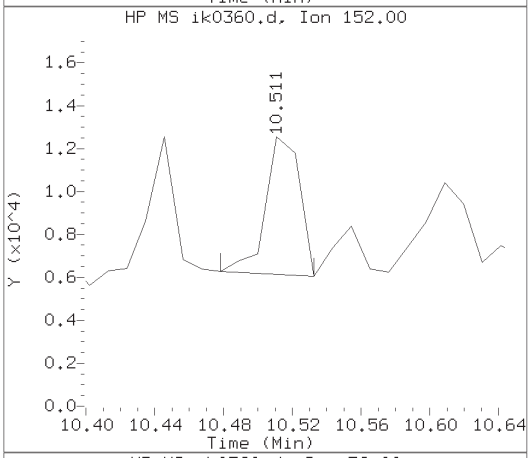
Reference Standard Spectrum for Acenaphthene



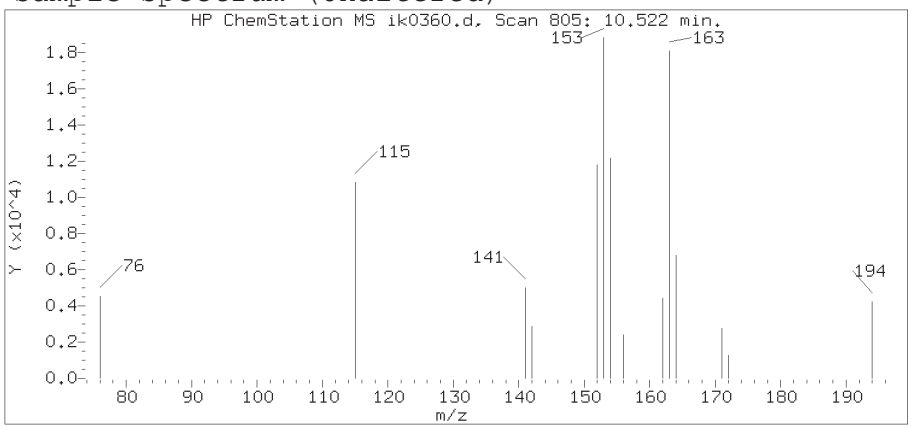


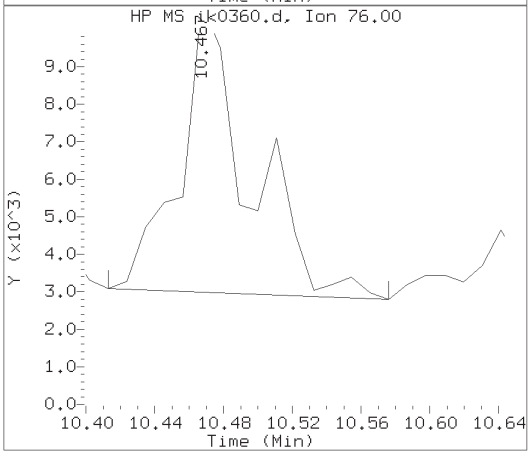
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

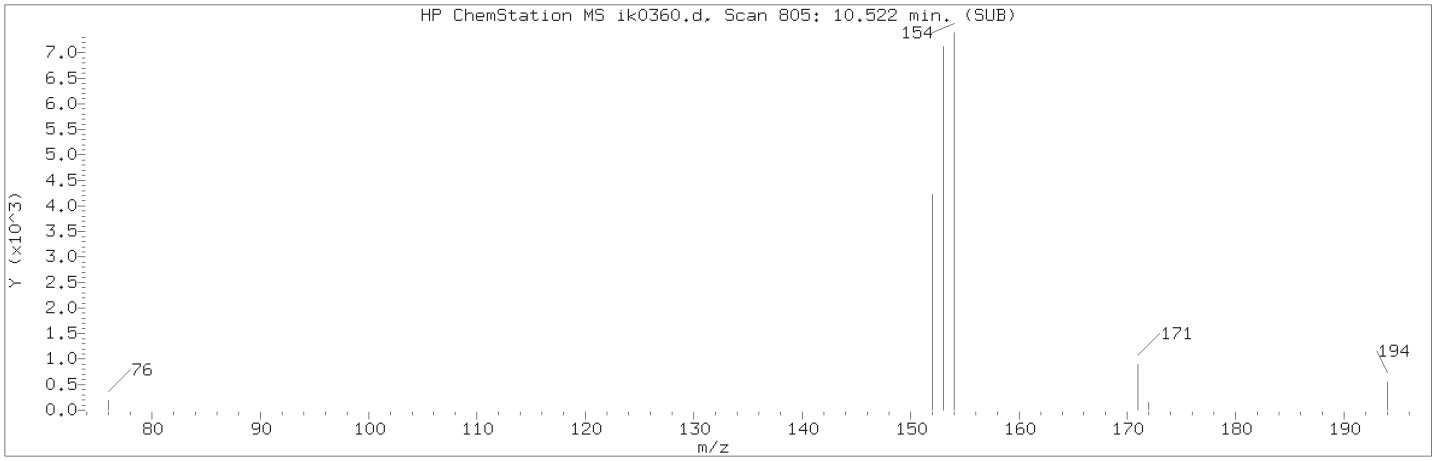
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

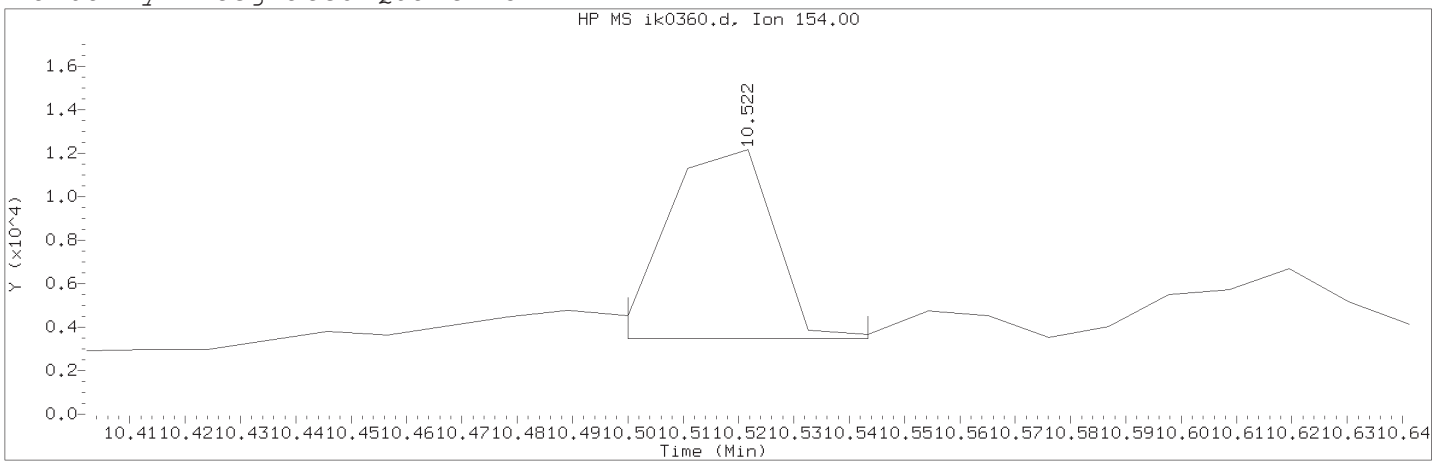
Compound Number	: 21
Compound Name	: Acenaphthene
Scan Number	: 805
Retention Time (minutes)	: 10.522
Relative Retention Time	: 0.00000
Quant Ion	: 154.00
Area (flag)	: 11793M
On-column Amount (ng/ul)	: 0.0555

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

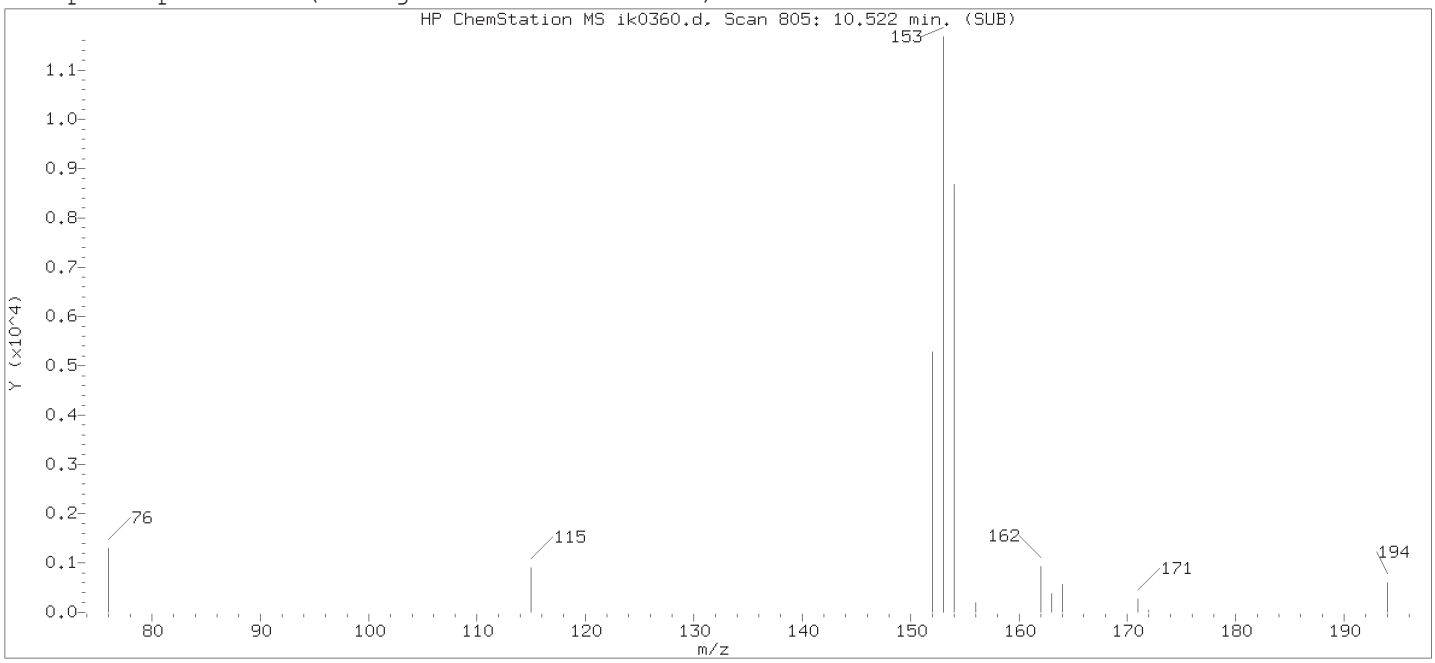
Compound Number : 21
Compound Name : Acenaphthene
Scan Number : 805
Retention Time (minutes) : 10.522
Quant Ion : 154.00
Area (flag) : 11793M
On-column Amount (ng/ul) : 0.0555
Integration start scan : 802 Integration stop scan: 806
Y at integration start : 3485 Y at integration end: 3485

Reason for manual integration: improper integration

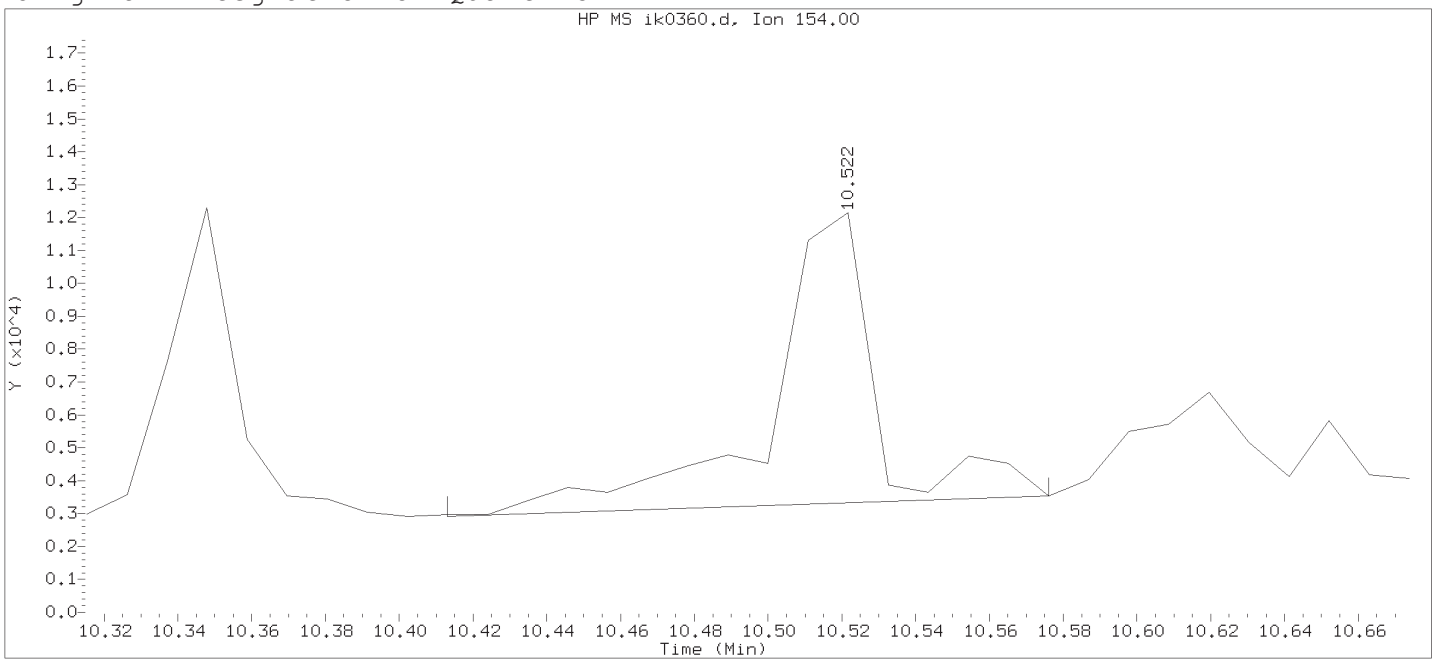
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

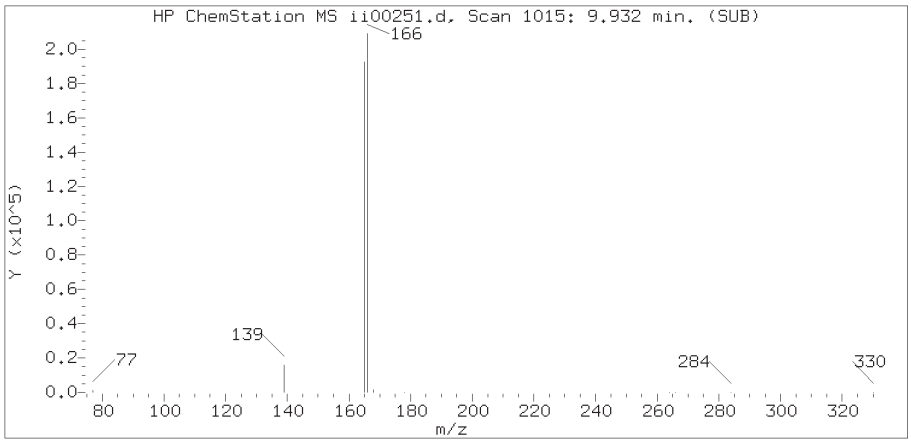
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

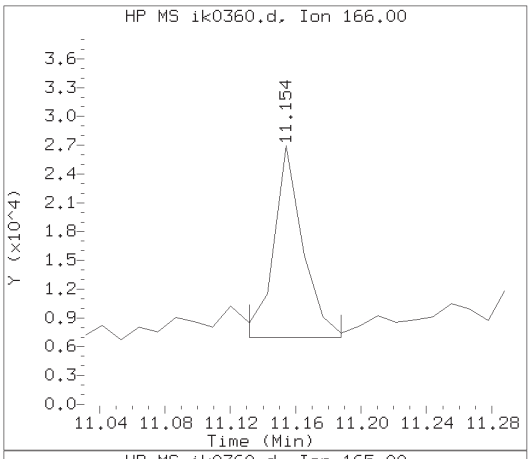
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 805		
Retention Time (minutes)	: 10.522		
Quant Ion	: 154.00		
Area	: 17449		
On-column Amount (ng/ul)	: 0.0821		
Integration start scan	: 794	Integration stop scan:	809
Y at integration start	: 2919	Y at integration end:	3535

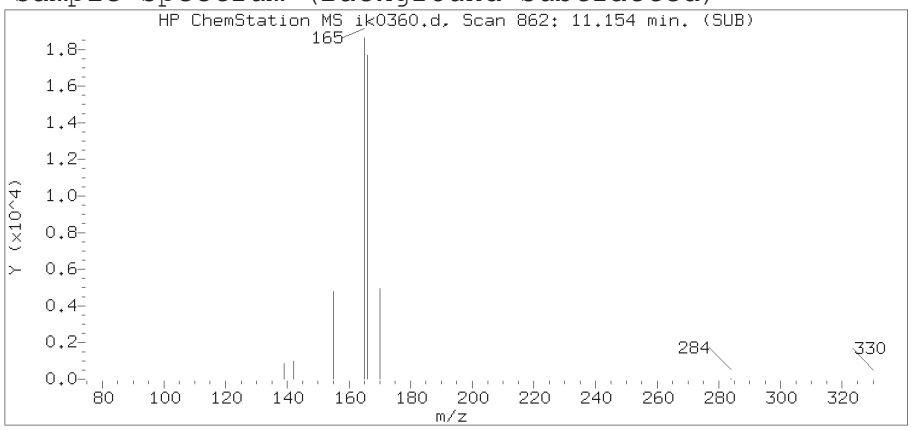
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature used 11/13/2018

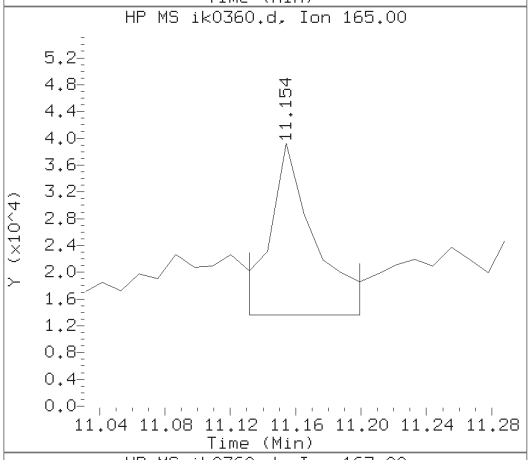
Reference Standard Spectrum for Fluorene



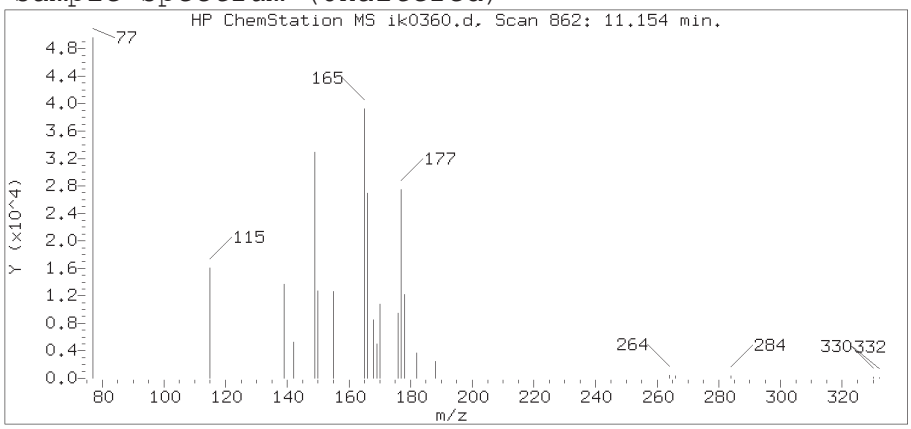


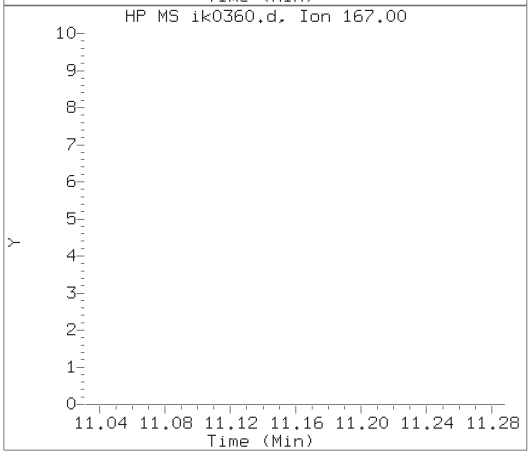
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

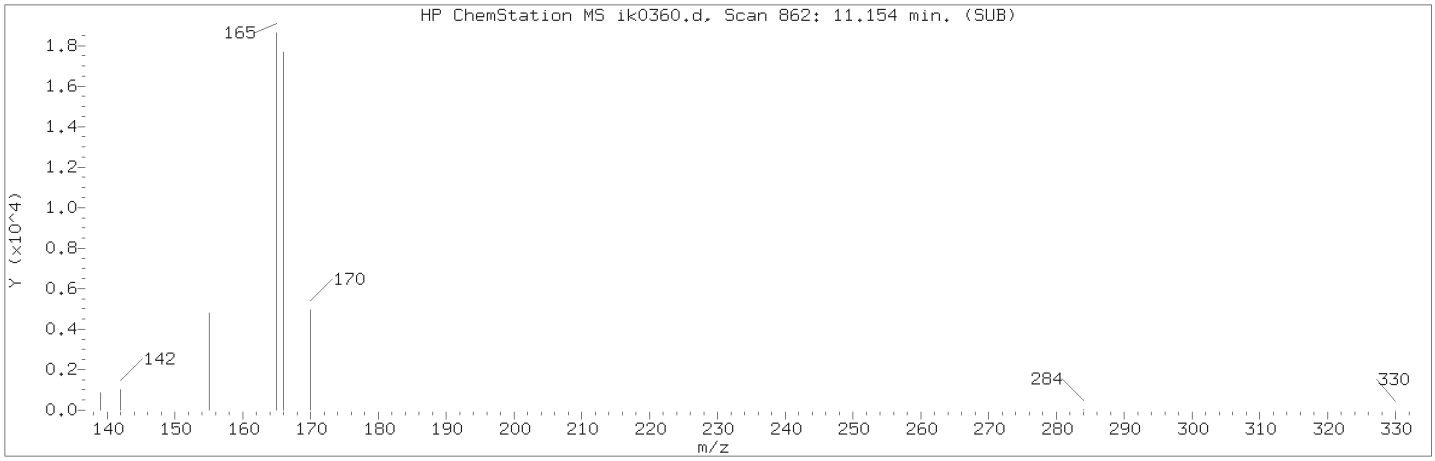
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

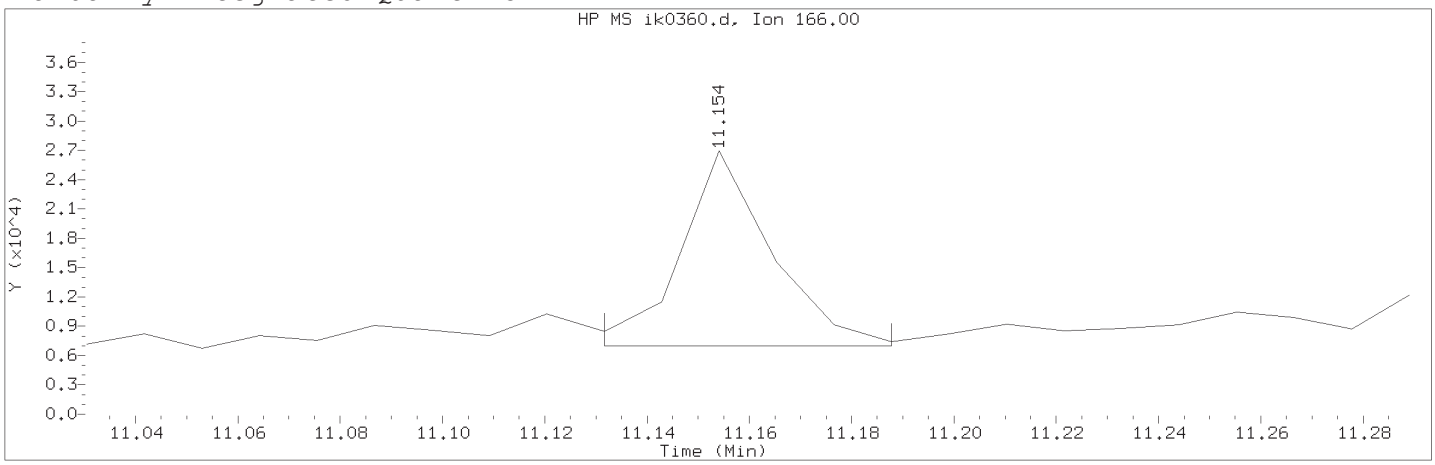
Compound Number	: 26
Compound Name	: Fluorene
Scan Number	: 862
Retention Time (minutes)	: 11.154
Relative Retention Time	: 0.00003
Quant Ion	: 166.00
Area (flag)	: 24945M
On-column Amount (ng/ul)	: 0.0954

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

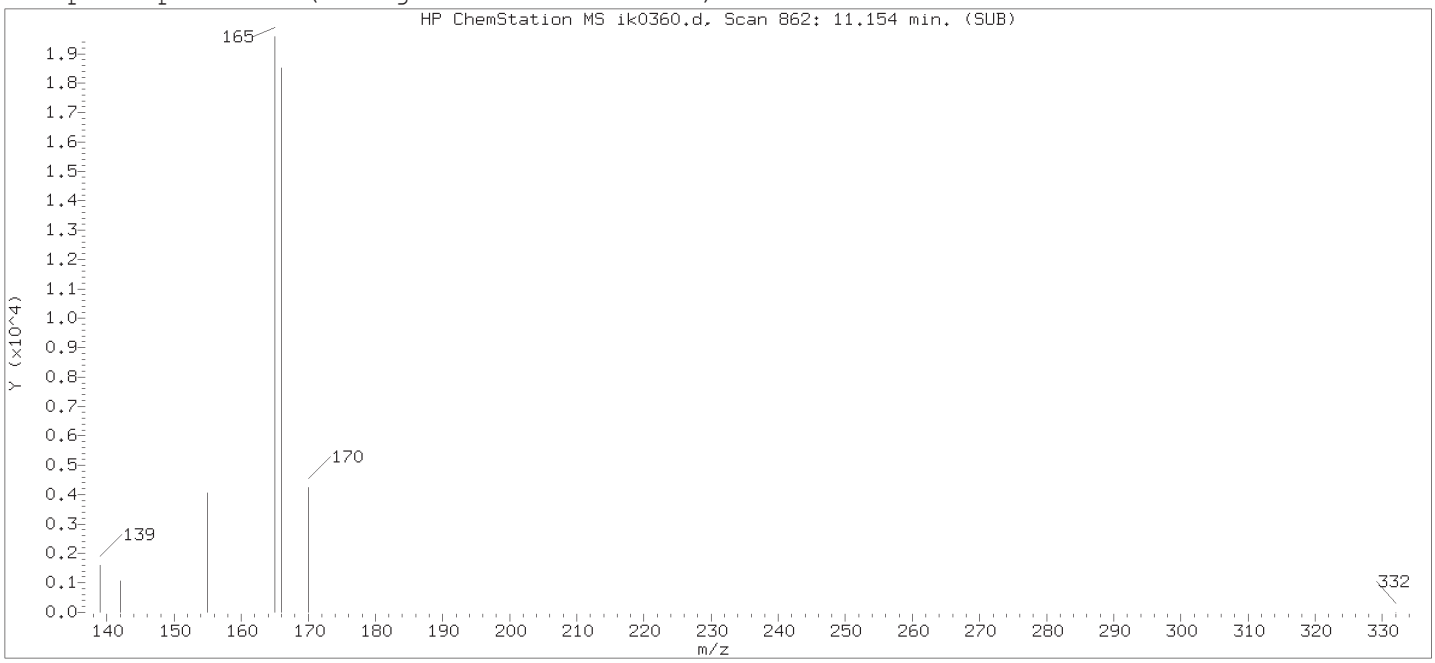
Compound Number : 26
Compound Name : Fluorene
Scan Number : 862
Retention Time (minutes) : 11.154
Quant Ion : 166.00
Area (flag) : 24945M
On-column Amount (ng/ul) : 0.0954
Integration start scan : 859 Integration stop scan: 864
Y at integration start : 6994 Y at integration end: 6994

Reason for manual integration: improper integration

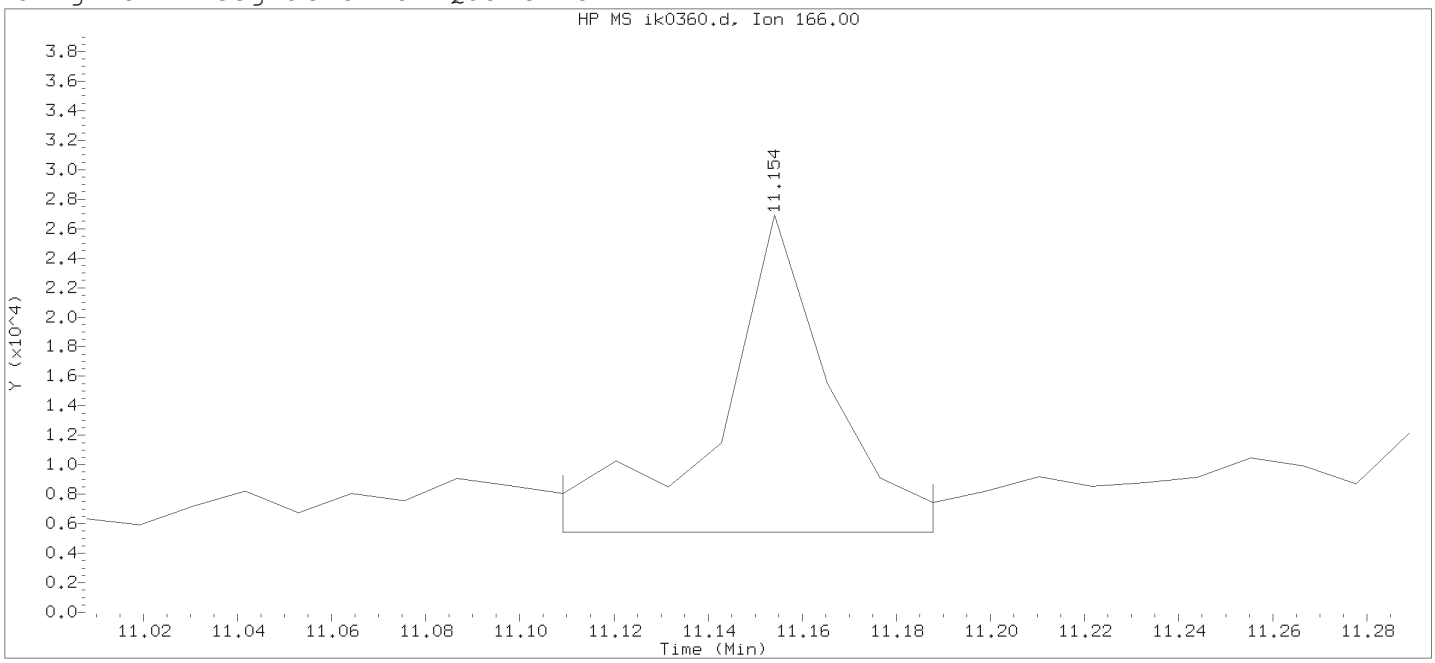
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

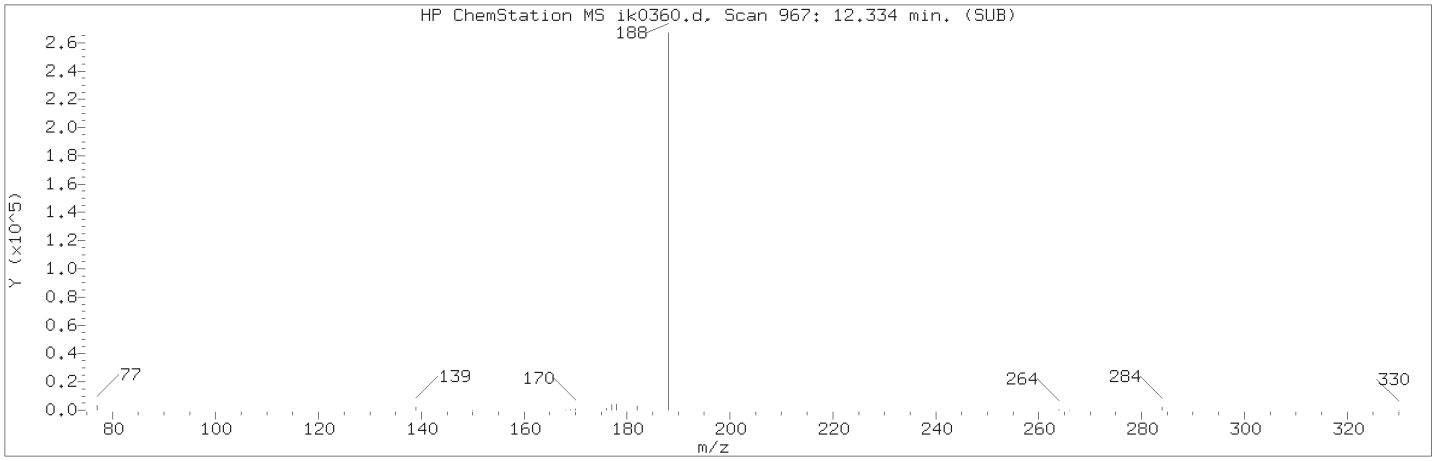
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

Sample Name: T1005RE Lab Sample ID: 9867767RE

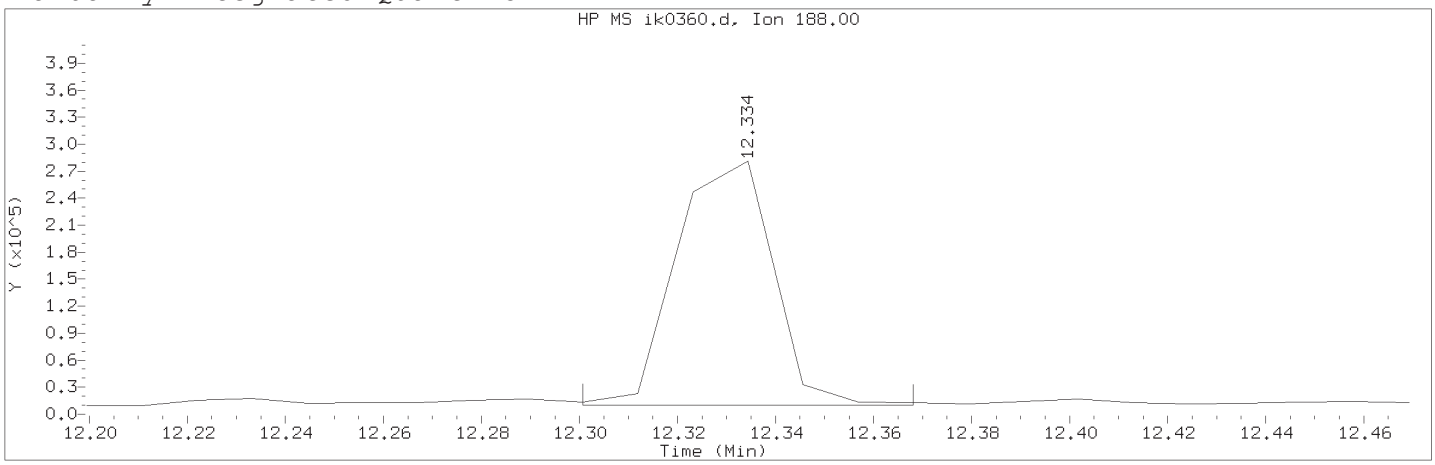
Compound Number	:	26
Compound Name	:	Fluorene
Scan Number	:	862
Retention Time (minutes)	:	11.154
Quant Ion	:	166.00
Area	:	34716
On-column Amount (ng/ul)	:	0.1327
Integration start scan	:	857 Integration stop scan: 864
Y at integration start	:	5434 Y at integration end: 5434

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

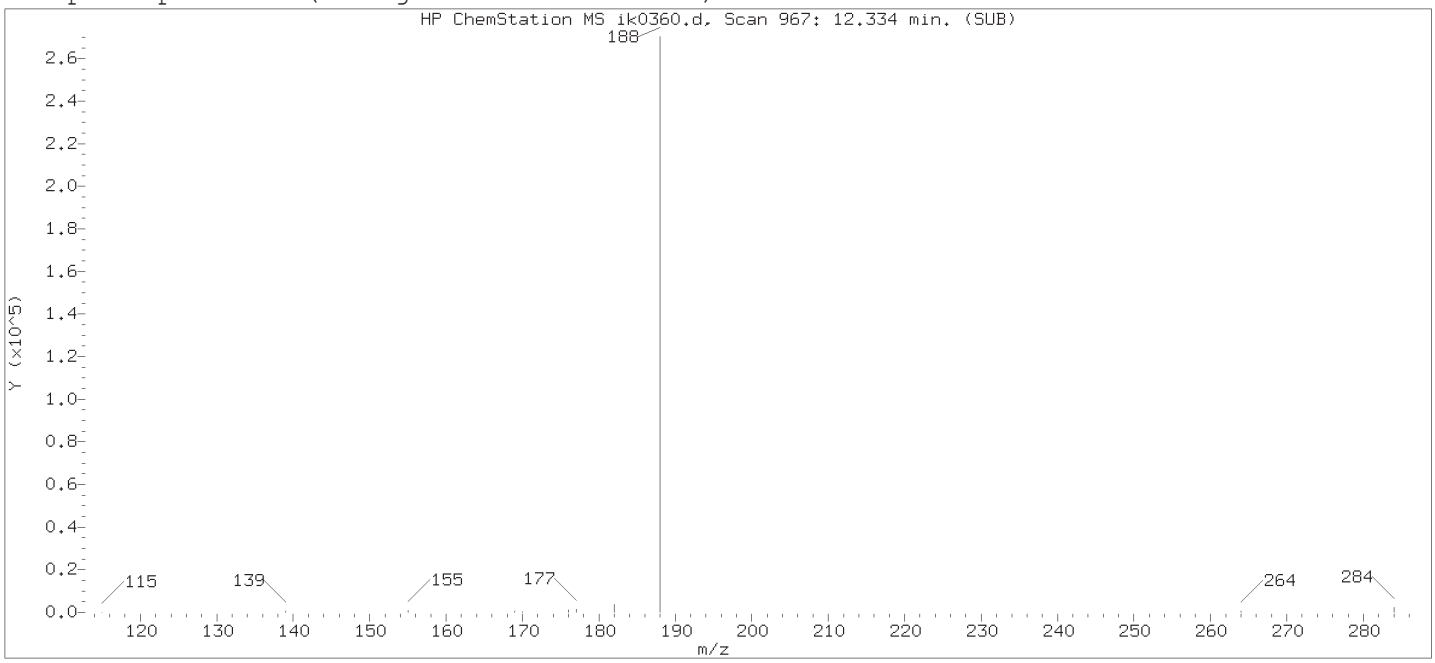
Compound Number : 31
Compound Name : Phenanthrene-d10
Scan Number : 967
Retention Time (minutes) : 12.334
Quant Ion : 188.00
Area (flag) : 373441M
On-column Amount (ng/ul) : 1.0000
Integration start scan : 963 Integration stop scan: 969
Y at integration start : 9981 Y at integration end: 9981

Reason for manual integration: improper integration

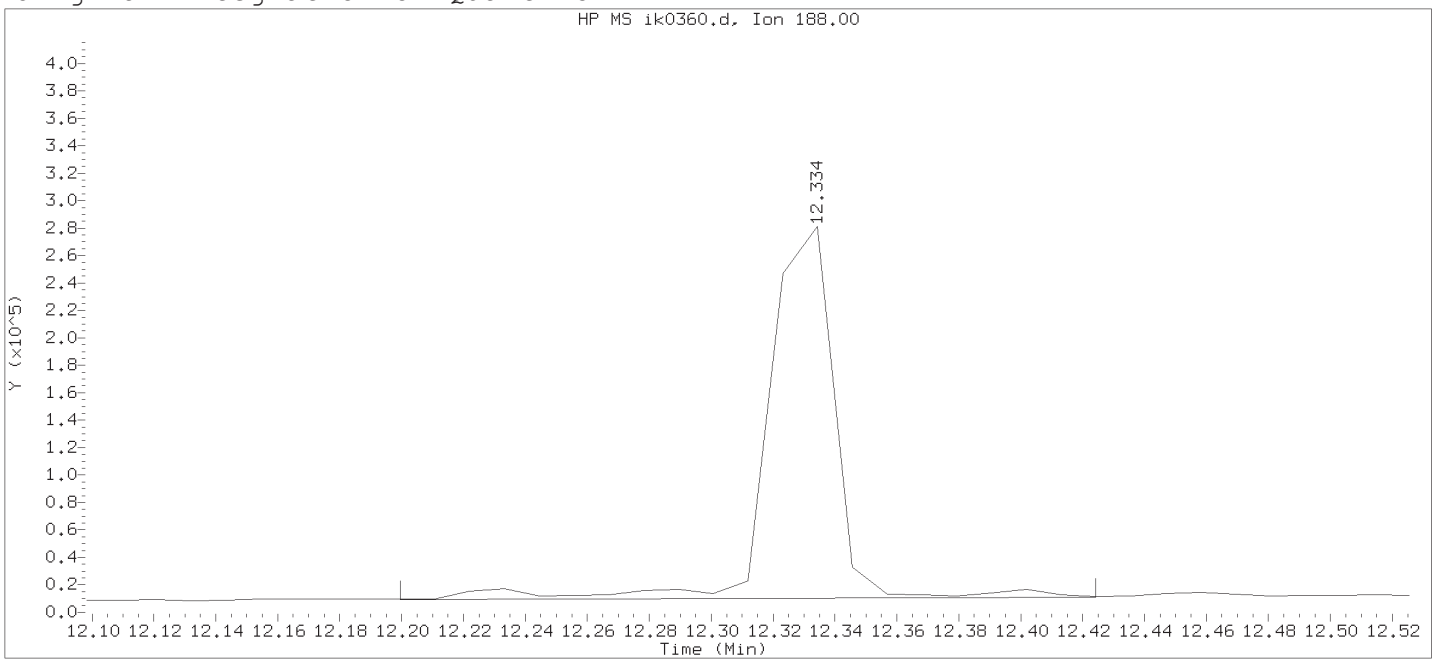
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

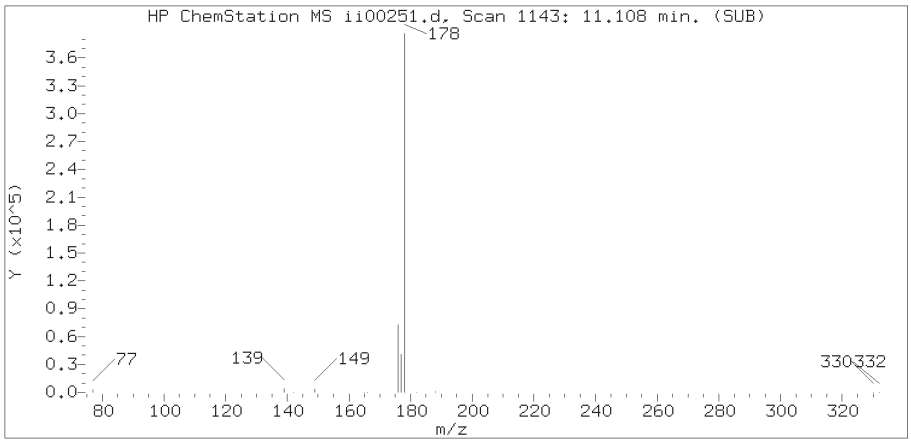
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

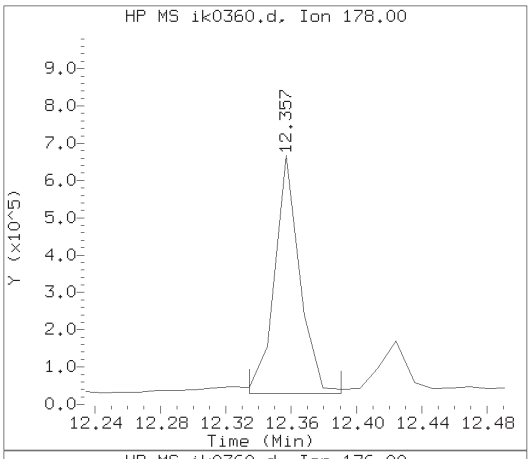
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	: 31		
Compound Name	: Phenanthrene-d10		
Scan Number	: 967		
Retention Time (minutes)	: 12.334		
Quant Ion	: 188.00		
Area	: 404369		
On-column Amount (ng/ul)	: 1.0000		
Integration start scan	: 954	Integration stop scan:	974
Y at integration start	: 9311	Y at integration end:	10824

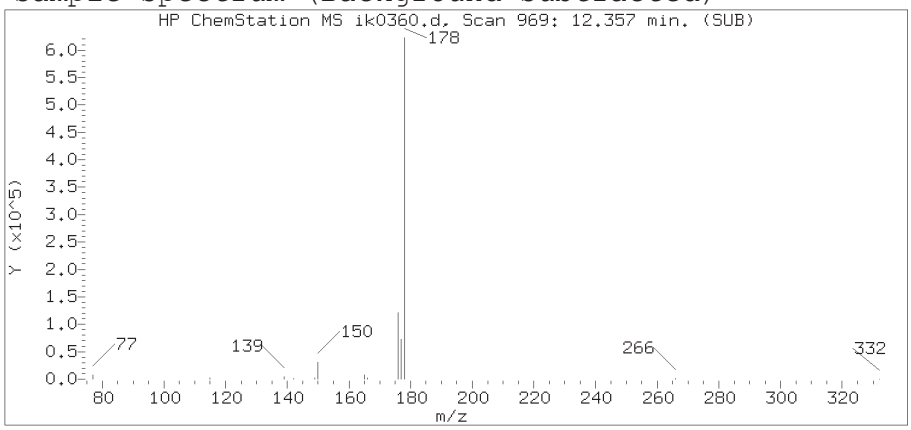
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature used: D10 Page 2097

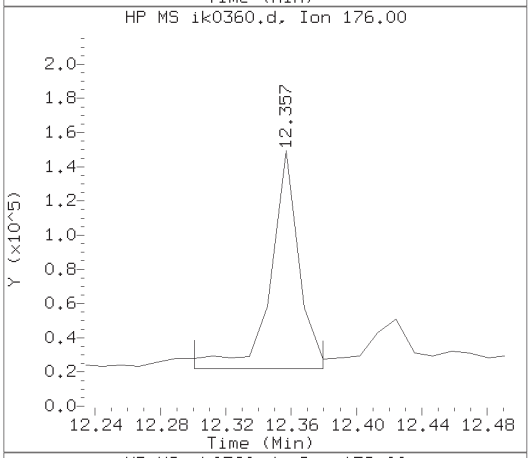
Reference Standard Spectrum for Phenanthrene



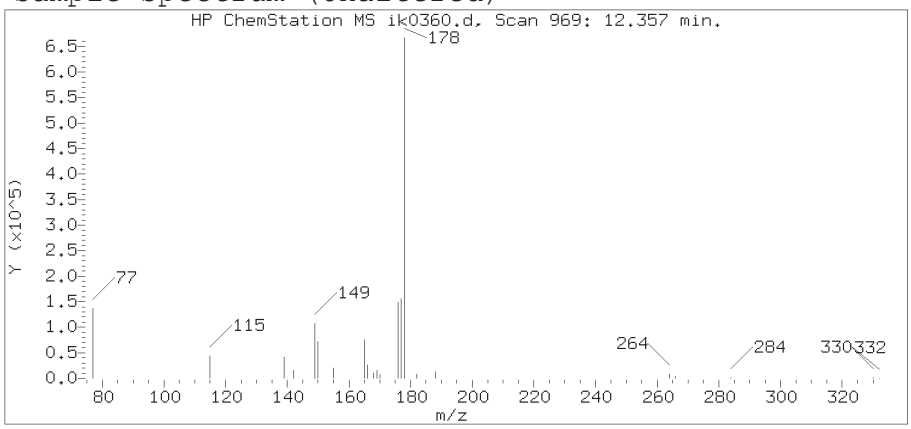


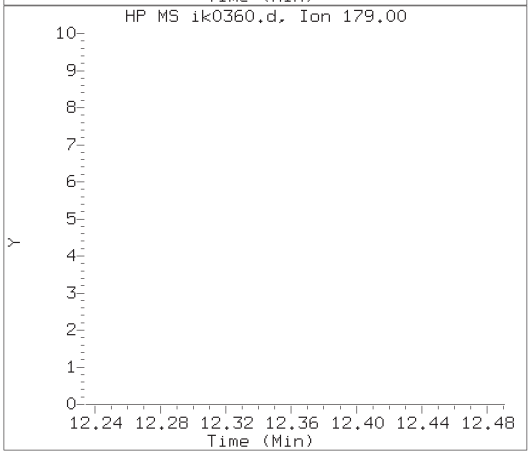
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

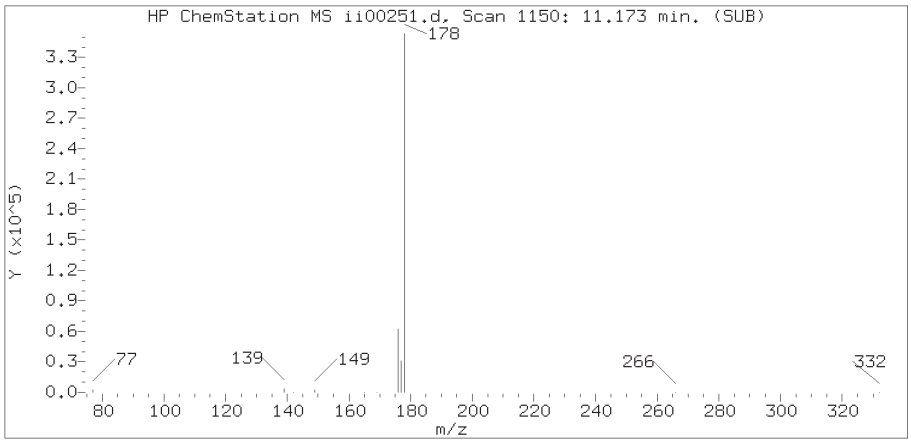
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

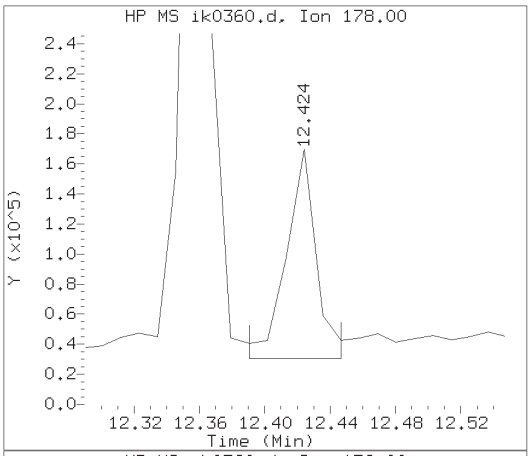
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	: 32
Compound Name	: Phenanthrene
Scan Number	: 969
Retention Time (minutes)	: 12.357
Relative Retention Time	: 0.00092
Quant Ion	: 178.00
Area (flag)	: 677602
On-column Amount (ng/ul)	: 1.6795

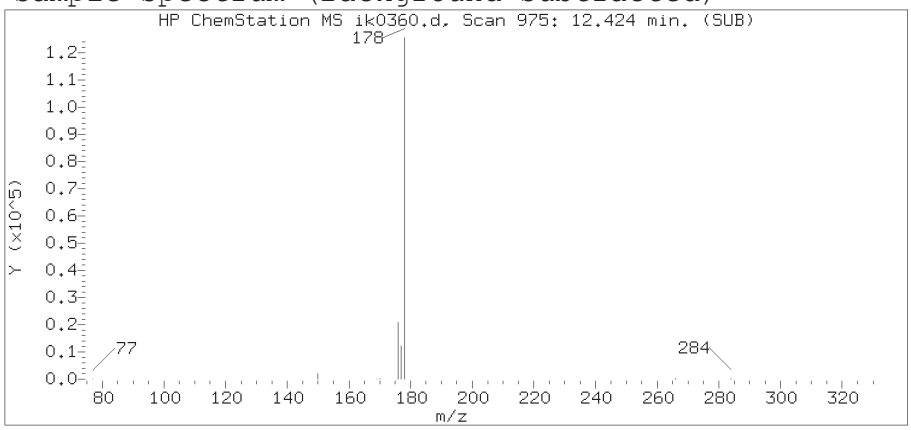
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

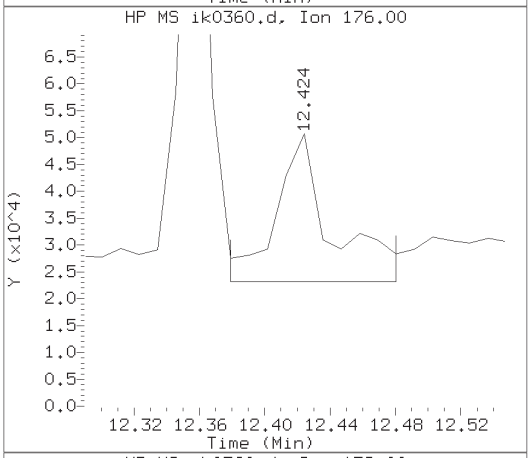
Reference Standard Spectrum for Anthracene



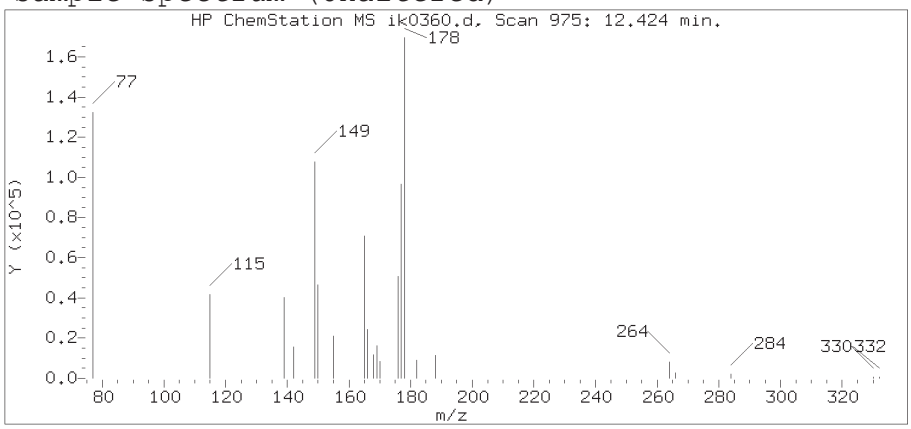


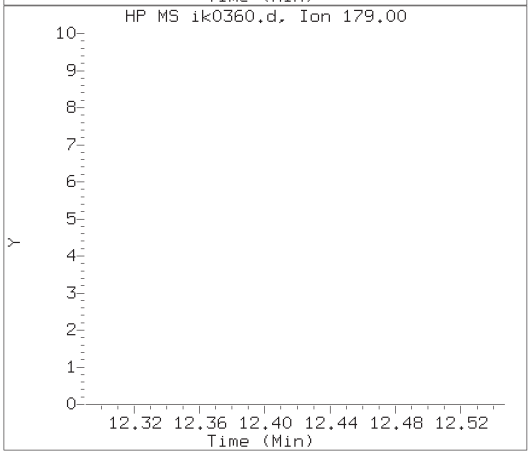
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

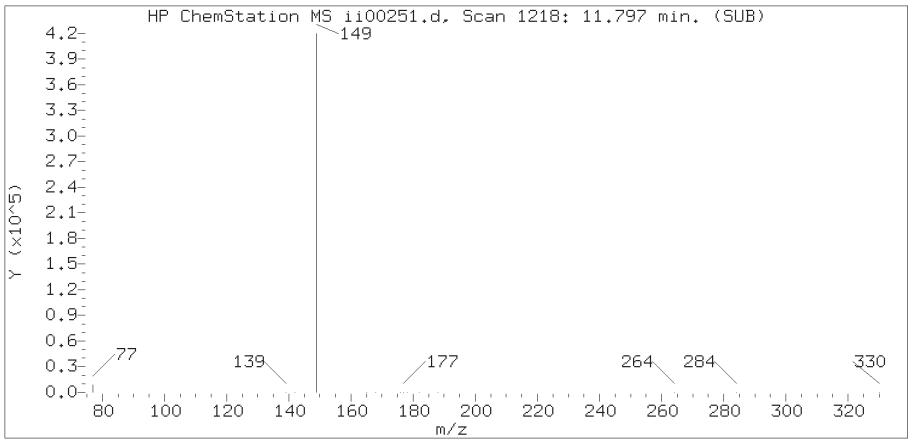
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

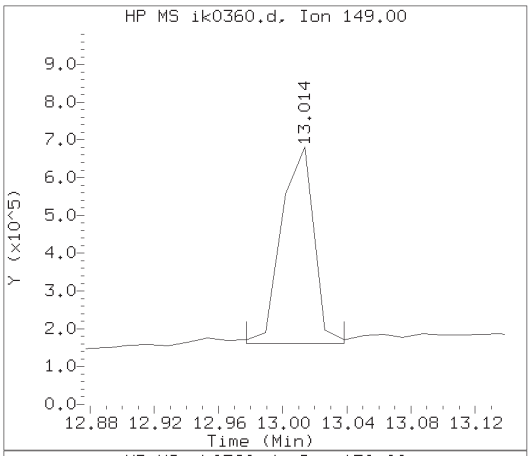
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	: 33
Compound Name	: Anthracene
Scan Number	: 975
Retention Time (minutes)	: 12.424
Relative Retention Time	: 0.00093
Quant Ion	: 178.00
Area (flag)	: 173185
On-column Amount (ng/ul)	: 0.4286

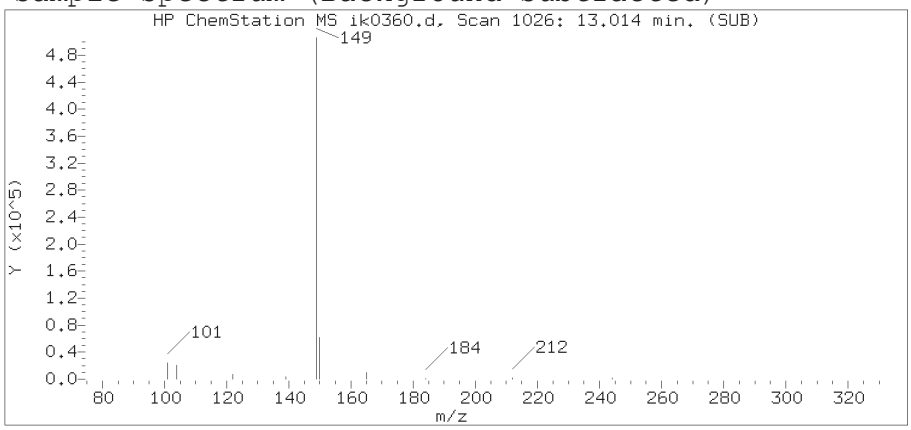
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

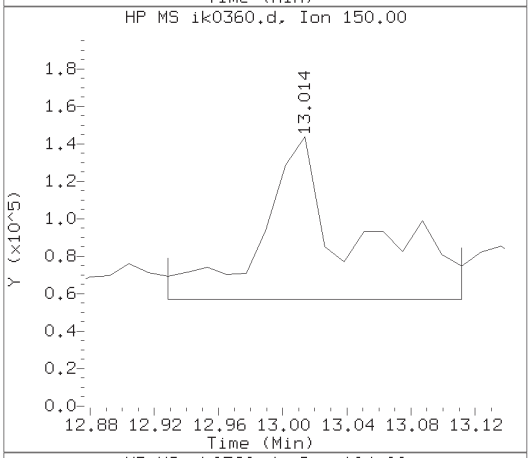
Reference Standard Spectrum for Di-n-butylphthalate



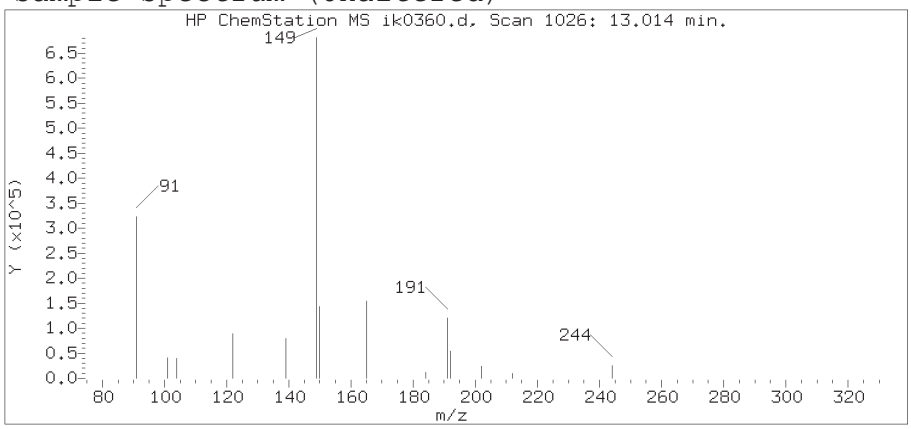


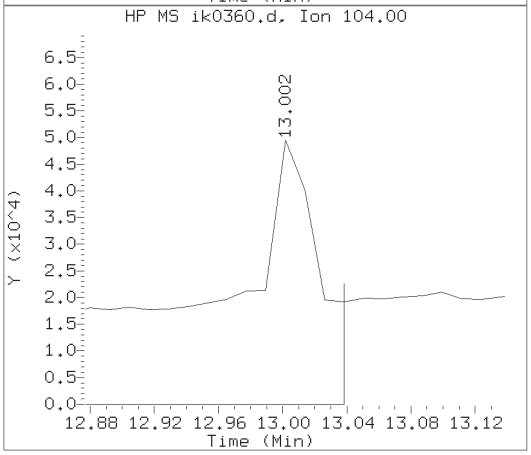
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

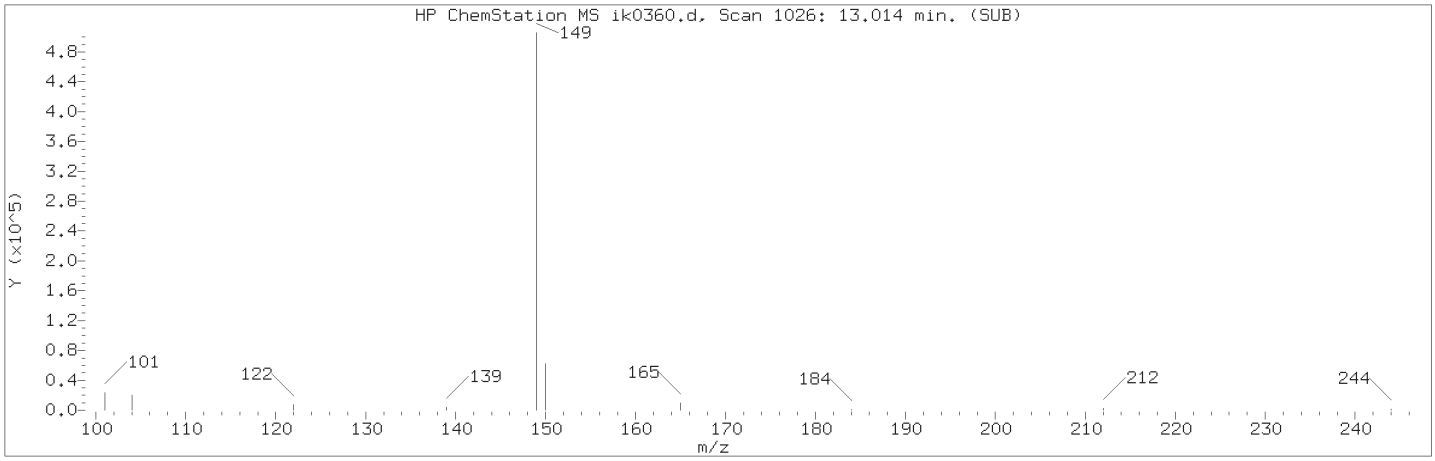
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

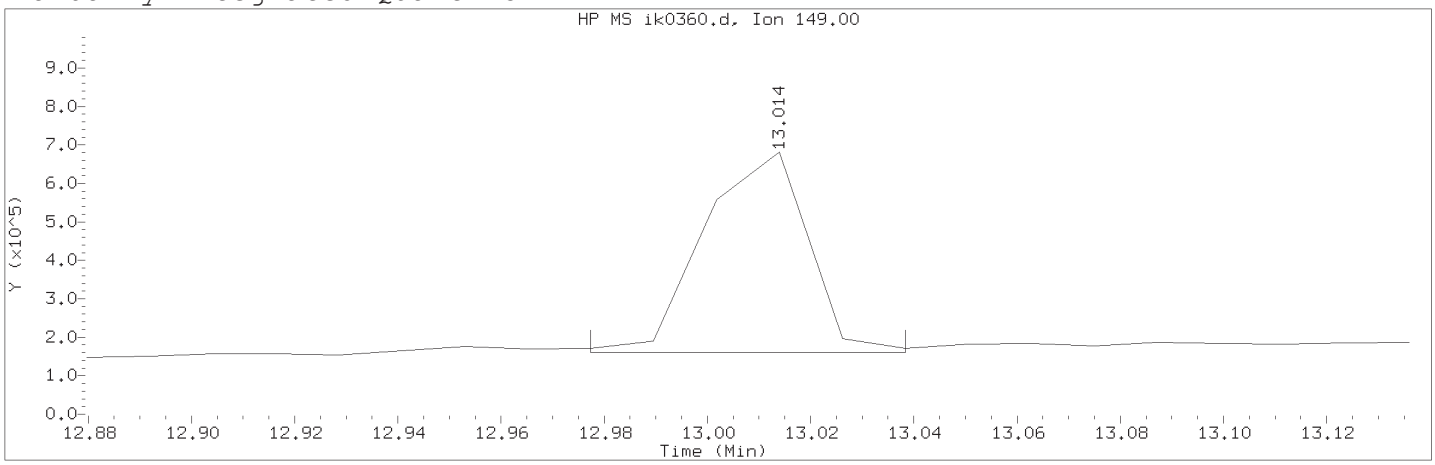
Compound Number	: 35
Compound Name	: Di-n-butylphthalate
Scan Number	: 1026
Retention Time (minutes)	: 13.014
Relative Retention Time	:-0.00006
Quant Ion	: 149.00
Area (flag)	: 730731M
On-column Amount (ng/ul)	: 1.8929

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

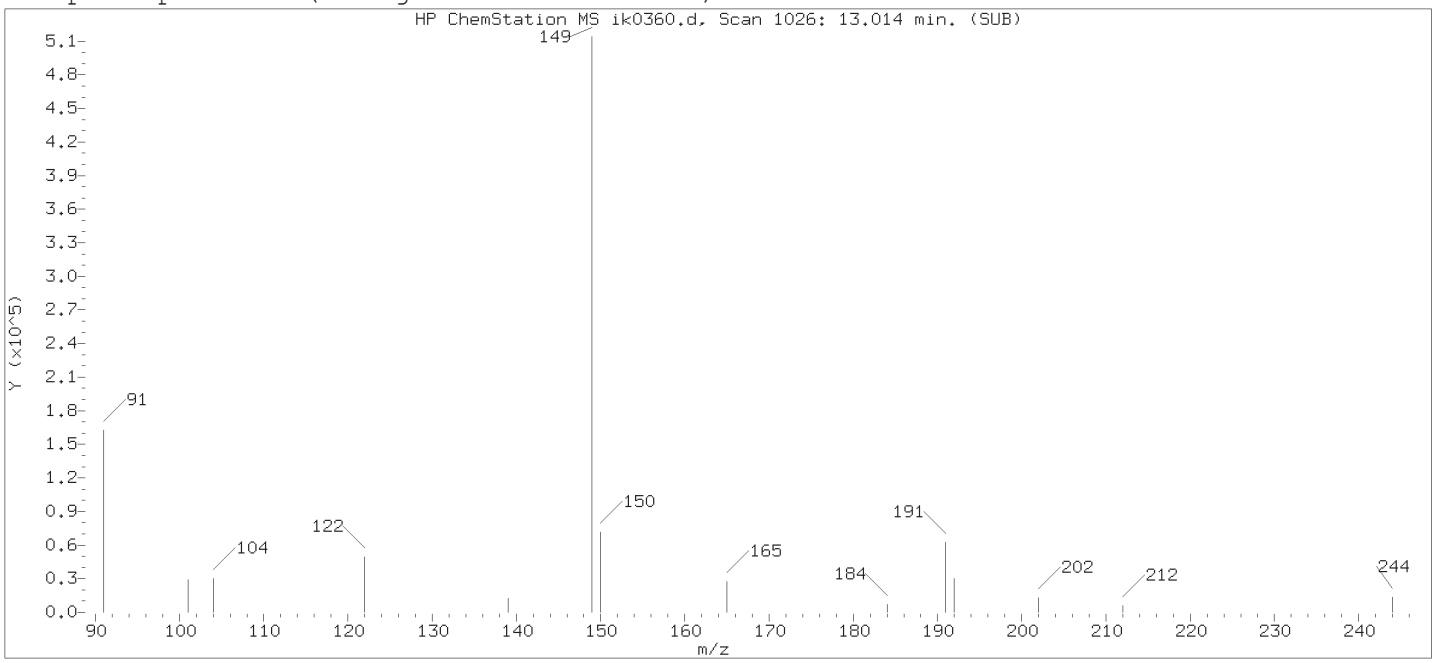
Compound Number : 35
Compound Name : Di-n-butylphthalate
Scan Number : 1026
Retention Time (minutes) : 13.014
Quant Ion : 149.00
Area (flag) : 730731M
On-column Amount (ng/ul) : 1.8929
Integration start scan : 1022 Integration stop scan: 1027
Y at integration start : 160823 Y at integration end: 160823

Reason for manual integration: improper integration

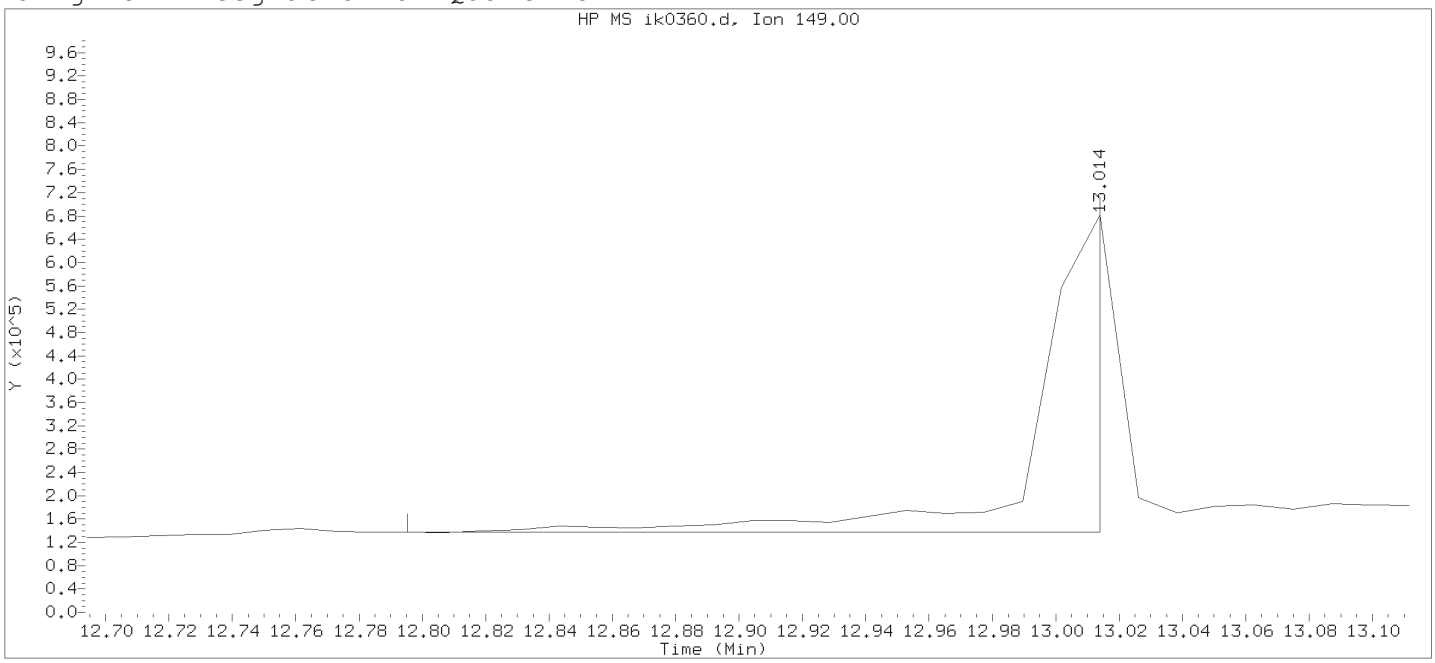
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

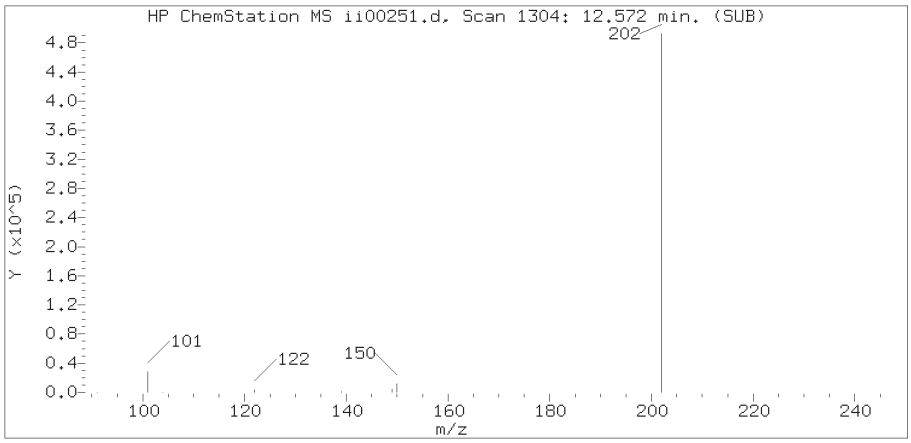
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

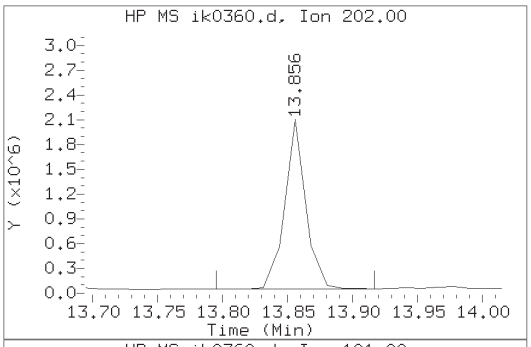
Sample Name: T1005RE Lab Sample ID: 9867767RE

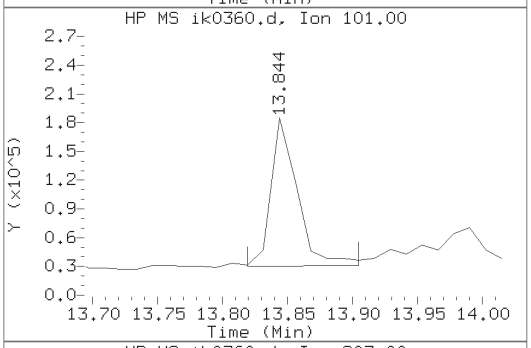
Compound Number : 35
Compound Name : Di-n-butylphthalate
Scan Number : 1026
Retention Time (minutes) : 13.014
Quant Ion : 149.00
Area : 718401
On-column Amount (ng/ul) : 1.7186
Integration start scan : 1007 Integration stop scan: 1025
Y at integration start : 137344 Y at integration end: 137344

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

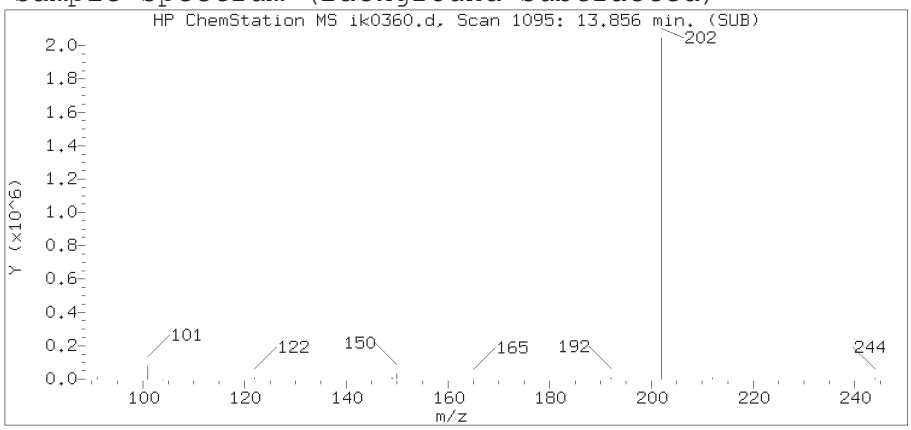
Reference Standard Spectrum for Fluoranthene

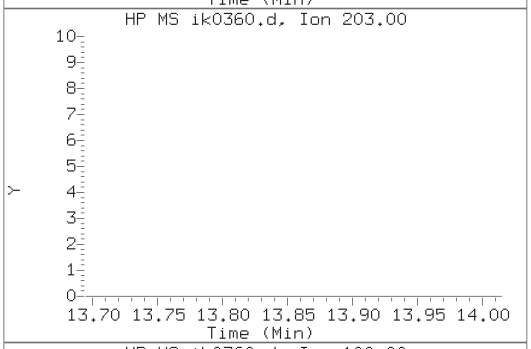




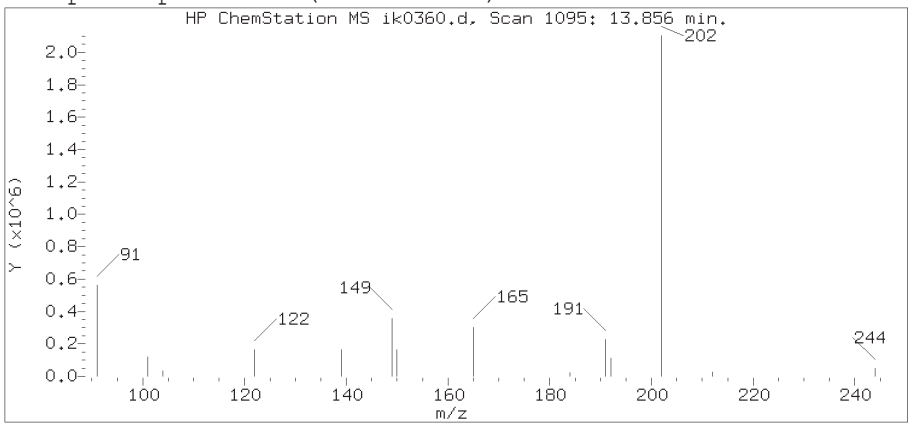


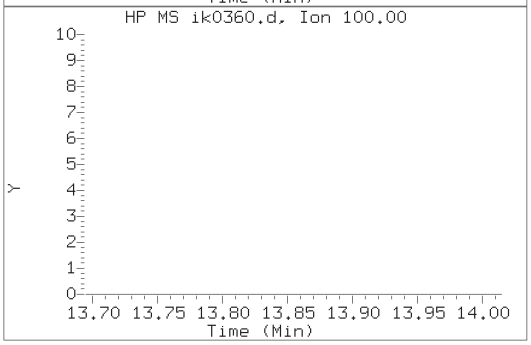
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

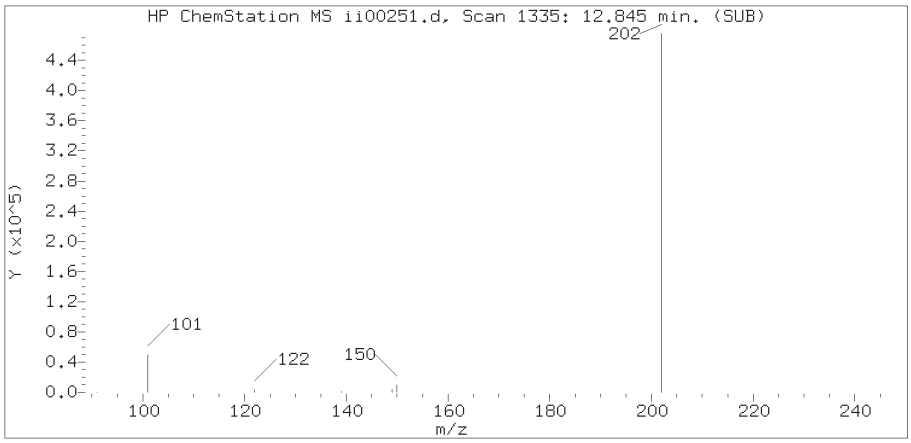
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

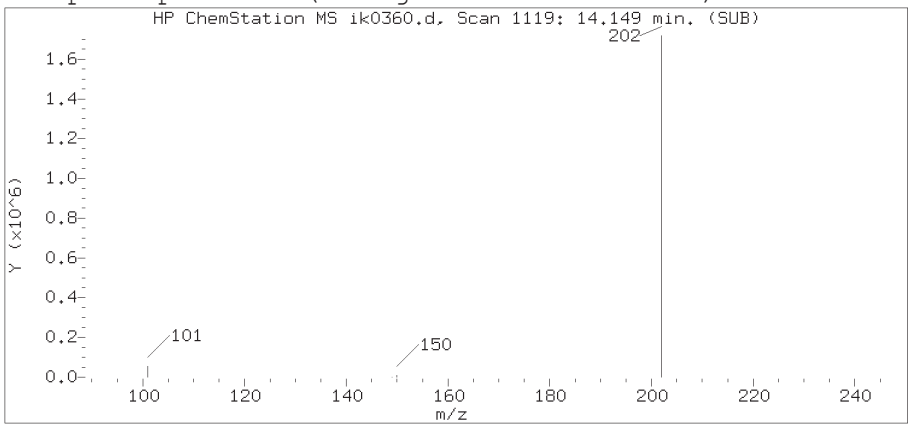
Compound Number	: 37
Compound Name	: Fluoranthene
Scan Number	: 1095
Retention Time (minutes)	: 13.856
Relative Retention Time	: 0.00007
Quant Ion	: 202.00
Area (flag)	: 2326803
On-column Amount (ng/ul)	: 4.6321

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

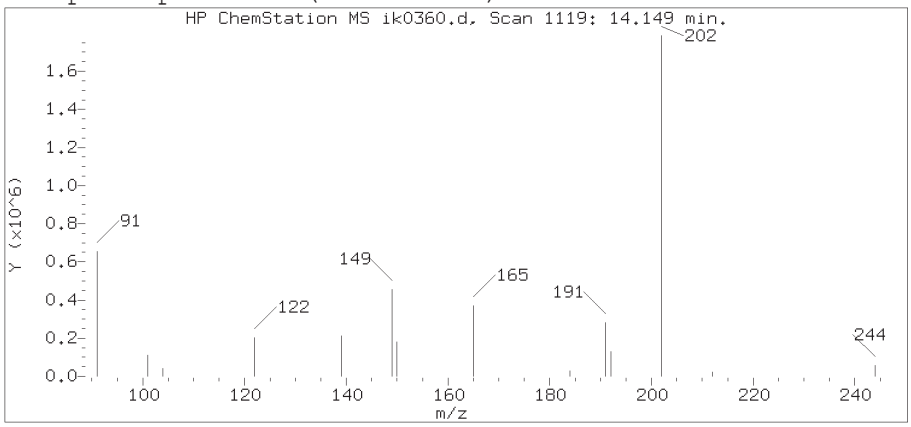
Reference Standard Spectrum for Pyrene

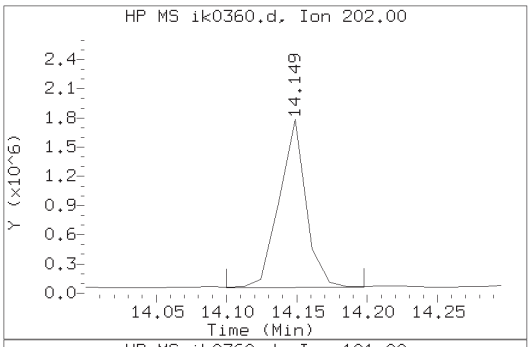


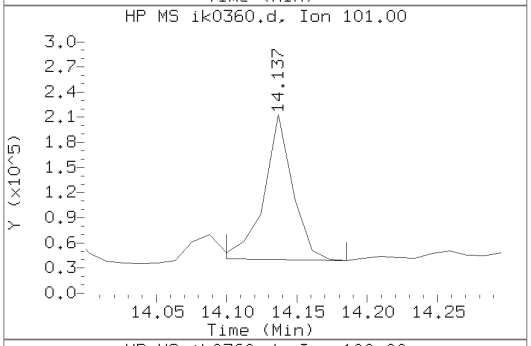
Sample Spectrum (Background Subtracted)

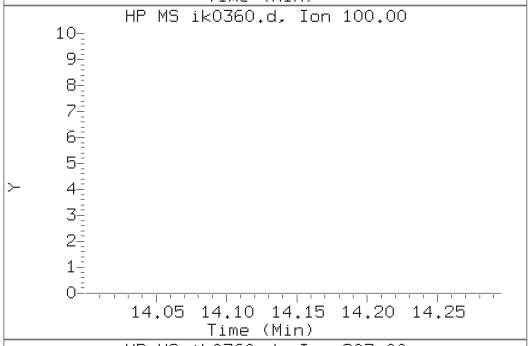


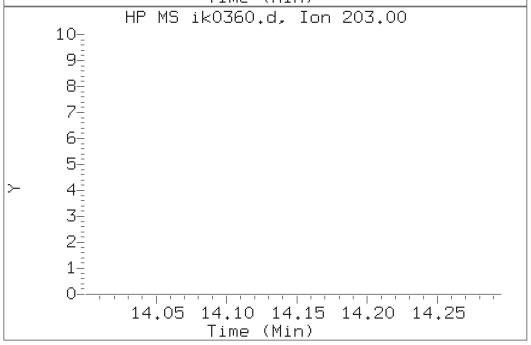
Sample Spectrum (Unaltered)











Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

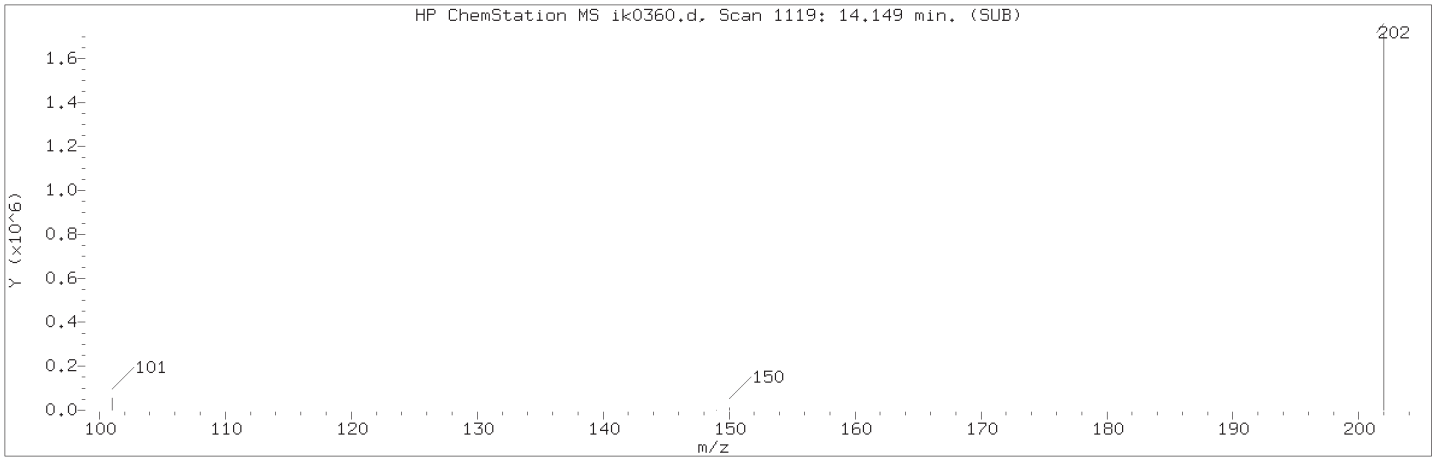
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

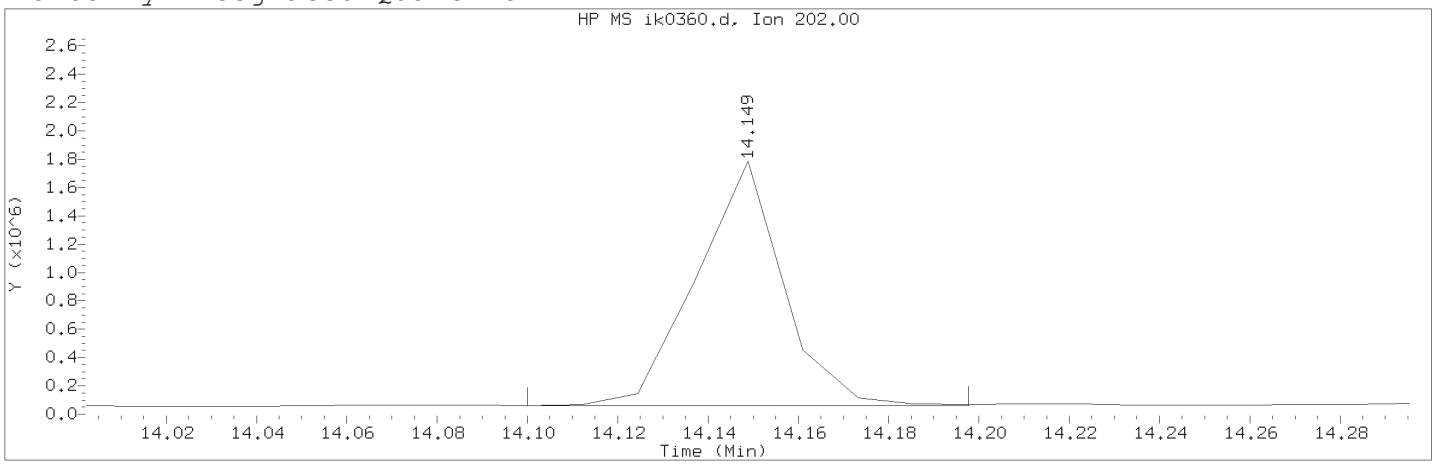
Compound Number	: 39
Compound Name	: Pyrene
Scan Number	: 1119
Retention Time (minutes)	: 14.149
Relative Retention Time	: 0.00128
Quant Ion	: 202.00
Area (flag)	: 2302589A
On-column Amount (ng/ul)	: 3.7448

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

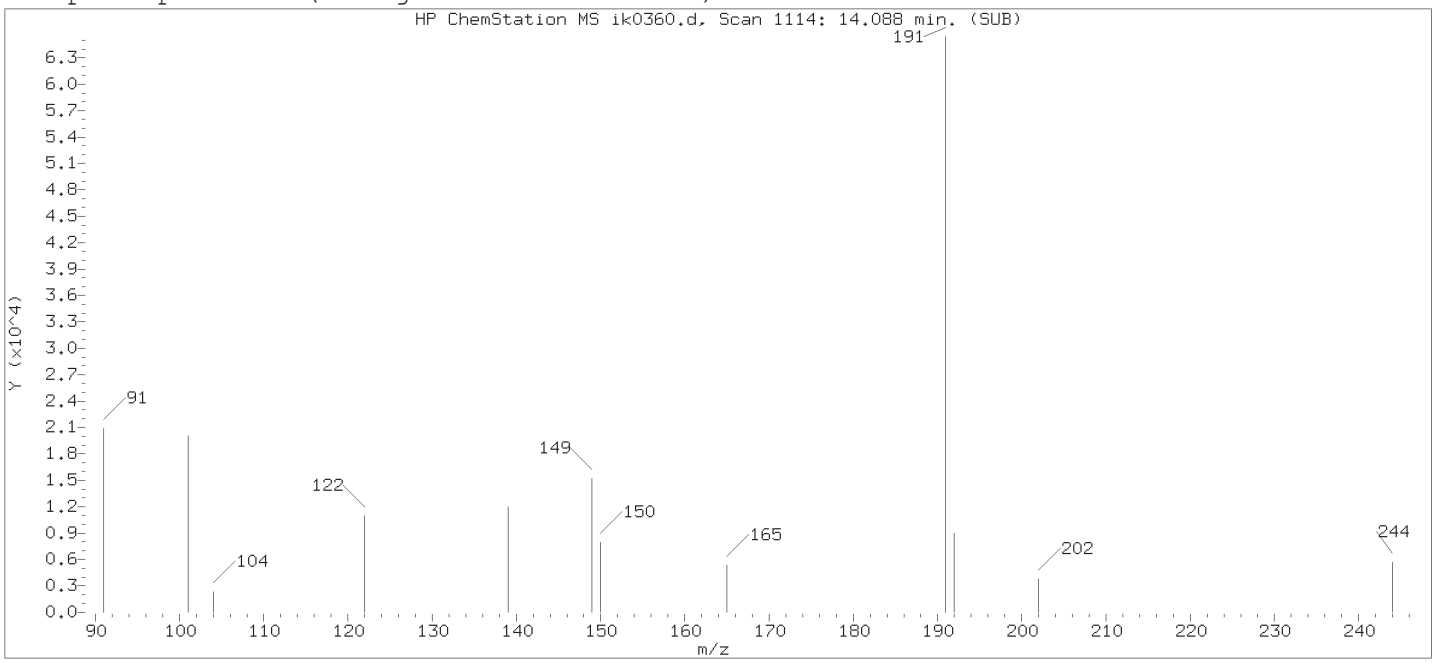
Compound Number : 39
Compound Name : Pyrene
Scan Number : 1119
Retention Time (minutes) : 14.149
Quant Ion : 202.00
Area (flag) : 2302589A
On-column Amount (ng/ul) : 3.7448
Integration start scan : 1114 Integration stop scan: 1122
Y at integration start : 58657 Y at integration end: 59691

Reason for manual integration: improper integration

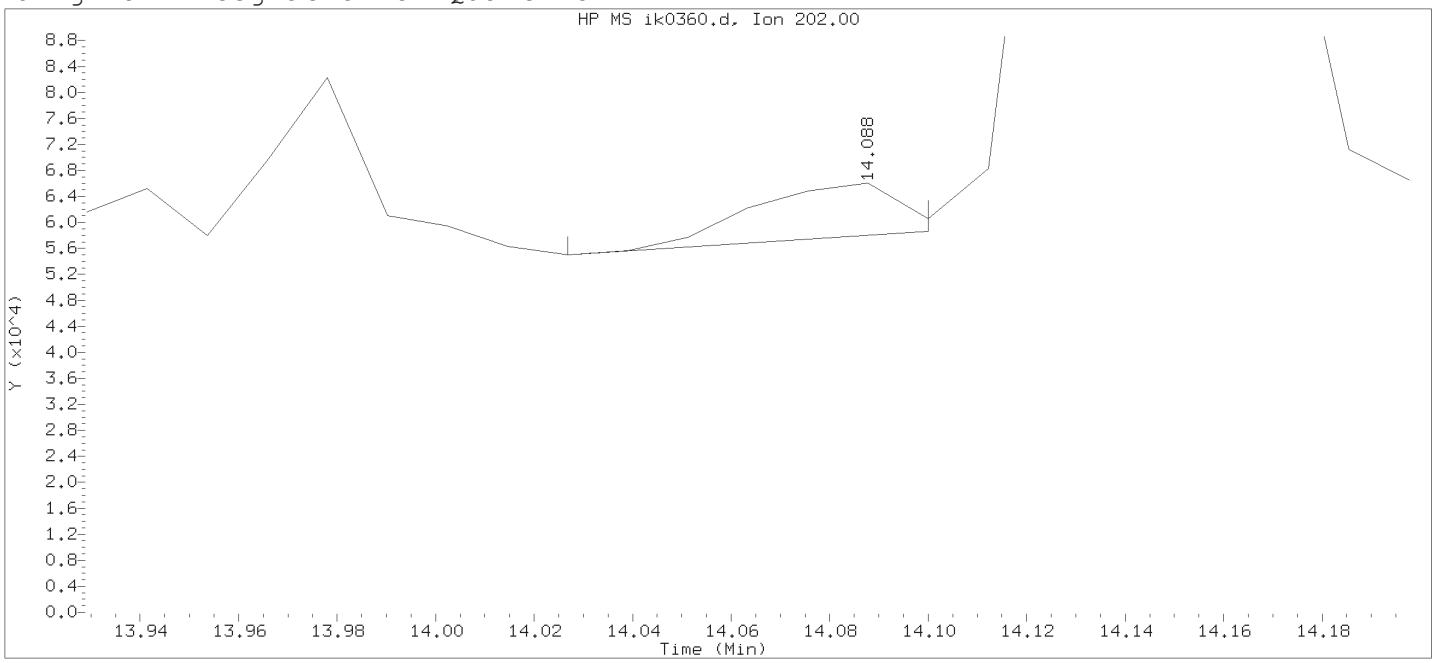
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

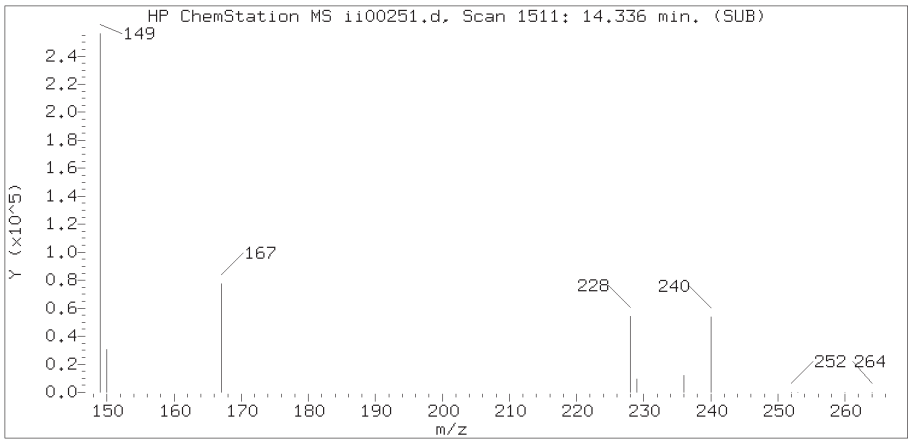
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

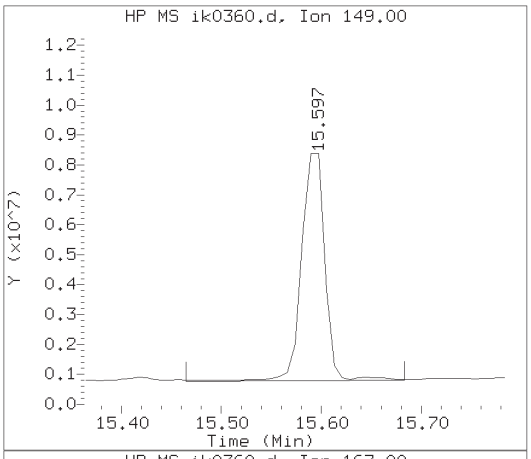
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	: 39		
Compound Name	: Pyrene		
Scan Number	: 1114		
Retention Time (minutes)	: 14.088		
Quant Ion	: 202.00		
Area	: 17057		
On-column Amount (ng/ul)	: 1.1966		
Integration start scan	: 1108	Integration stop scan:	1114
Y at integration start	: 55024	Y at integration end:	58657

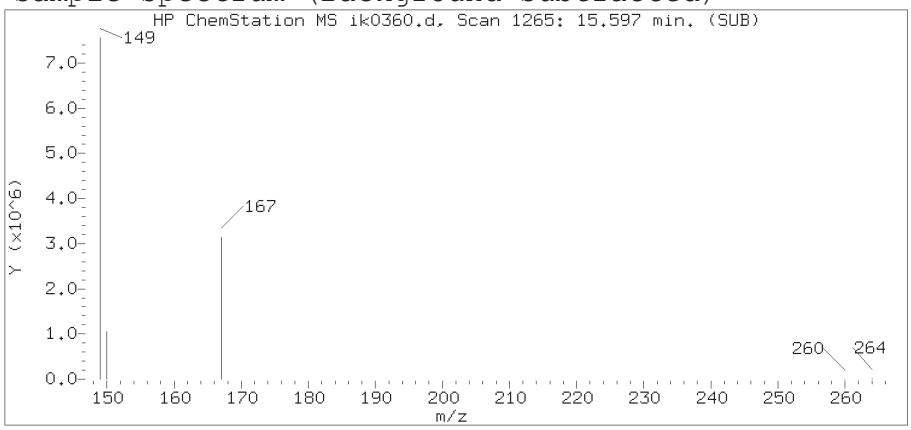
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature used: D10 Page 2106

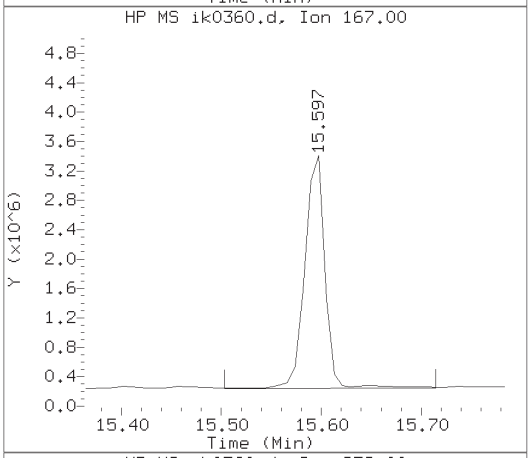
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



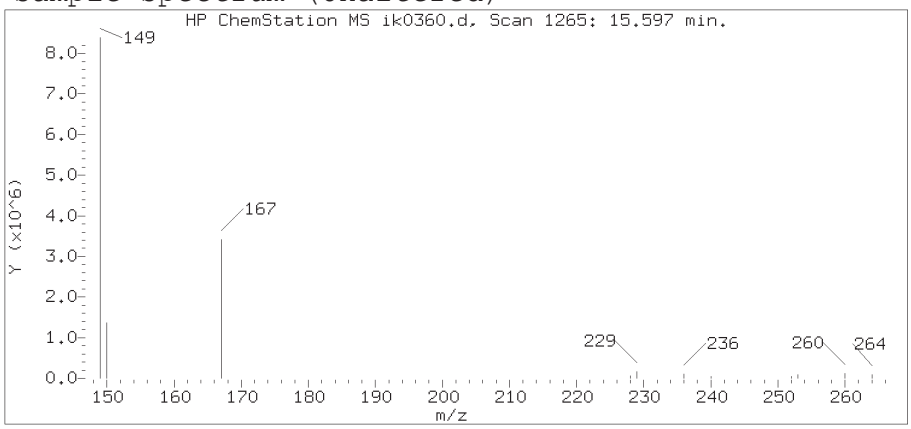


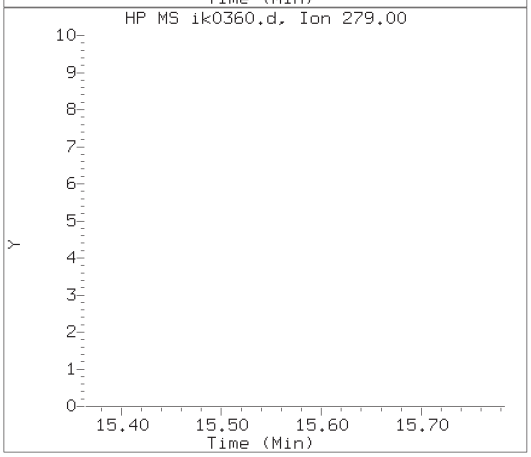
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

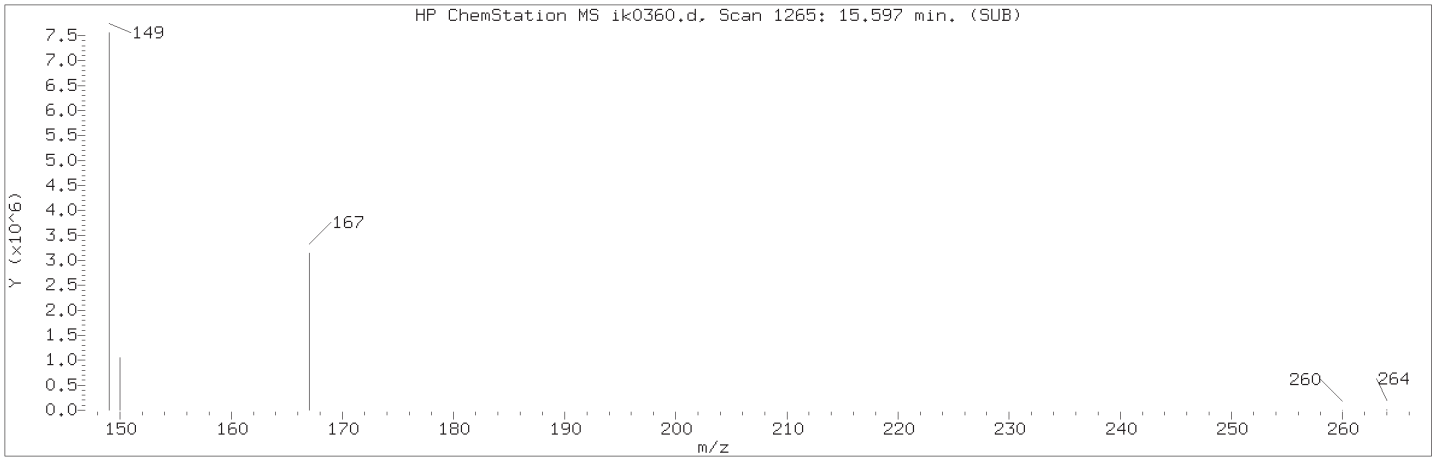
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

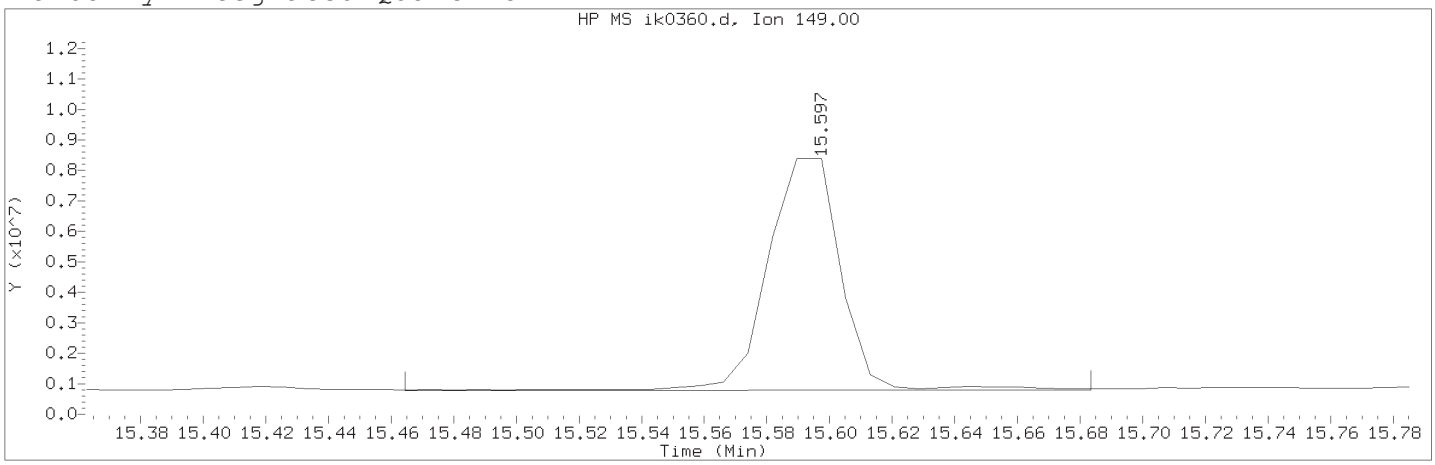
Compound Number	: 41
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1265
Retention Time (minutes)	: 15.597
Relative Retention Time	:-0.00002
Quant Ion	: 149.00
Area (flag)	: 12430276A
On-column Amount (ng/ul)	: 42.5389

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

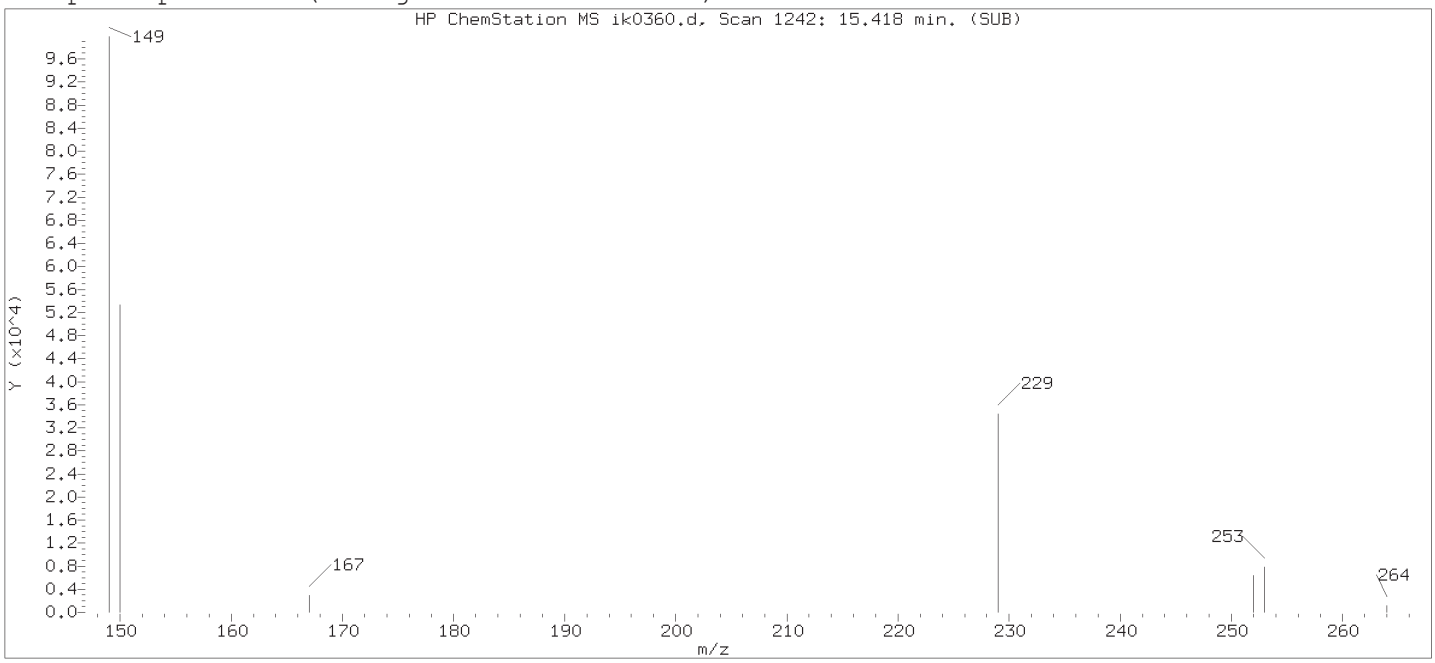
Compound Number : 41
Compound Name : bis(2-Ethylhexyl)phthalate
Scan Number : 1265
Retention Time (minutes) : 15.597
Quant Ion : 149.00
Area (flag) : 12430276A
On-column Amount (ng/ul) : 42.5389
Integration start scan : 1247 Integration stop scan: 1275
Y at integration start : 772606 Y at integration end: 797335

Reason for manual integration: improper integration

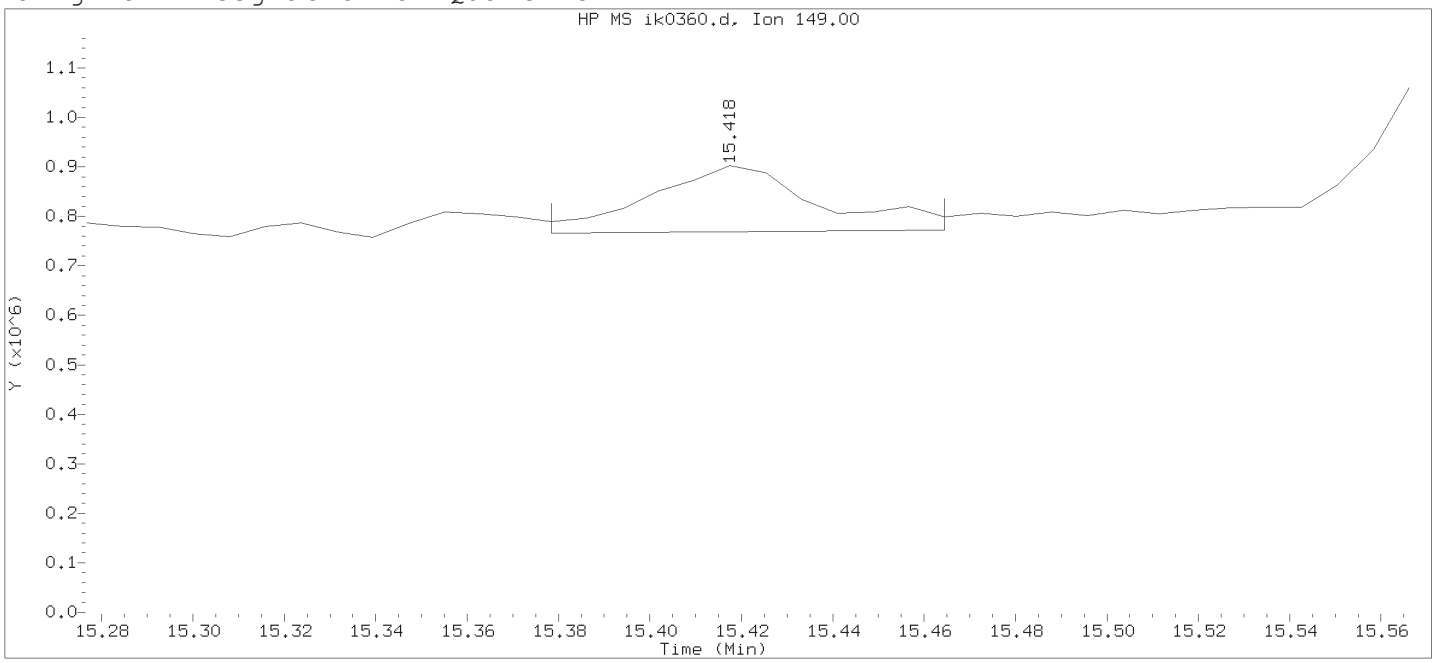
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

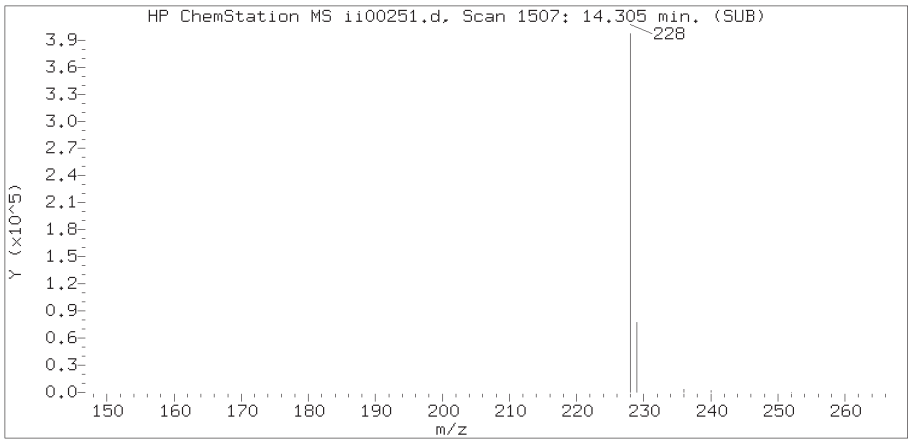
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

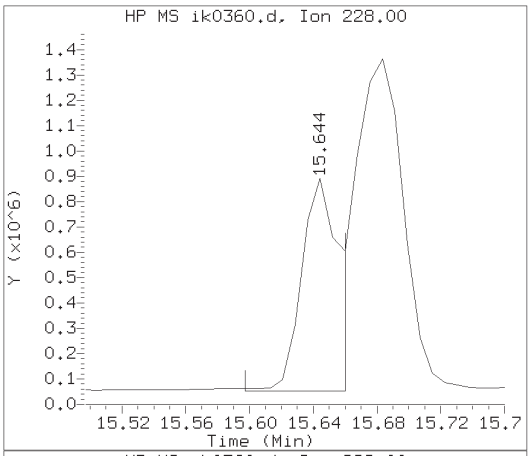
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number : 41
Compound Name : bis(2-Ethylhexyl)phthalate
Scan Number : 1242
Retention Time (minutes) : 15.418
Quant Ion : 149.00
Area : 343182
On-column Amount (ng/ul) : 50.6577
Integration start scan : 1236 Integration stop scan: 1247
Y at integration start : 765642 Y at integration end: 772606

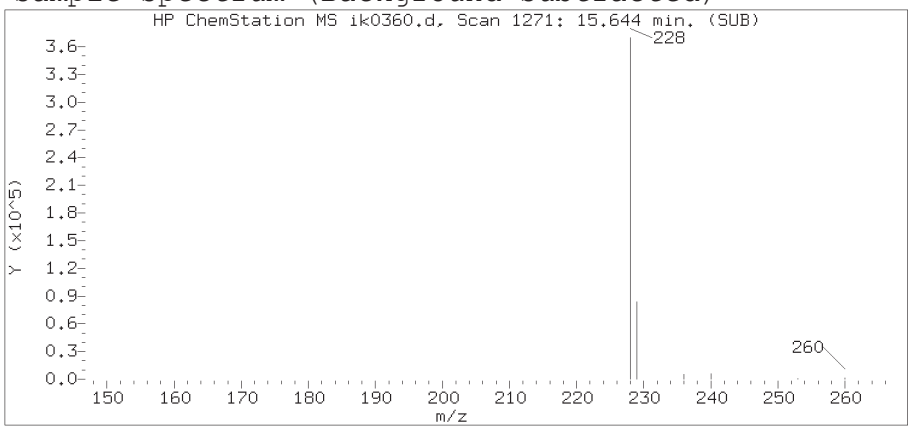
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

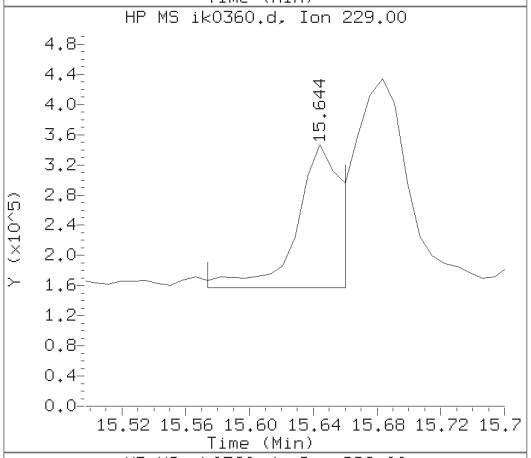
Reference Standard Spectrum for Benzo(a)anthracene



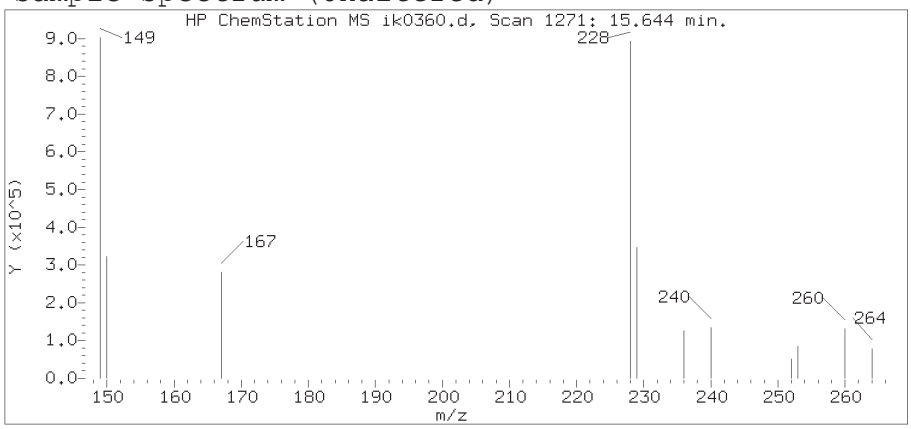


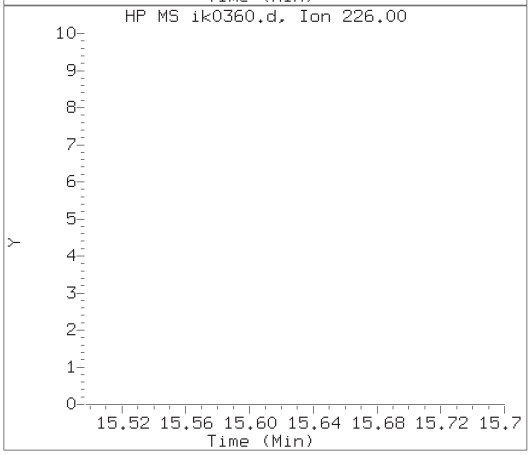
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

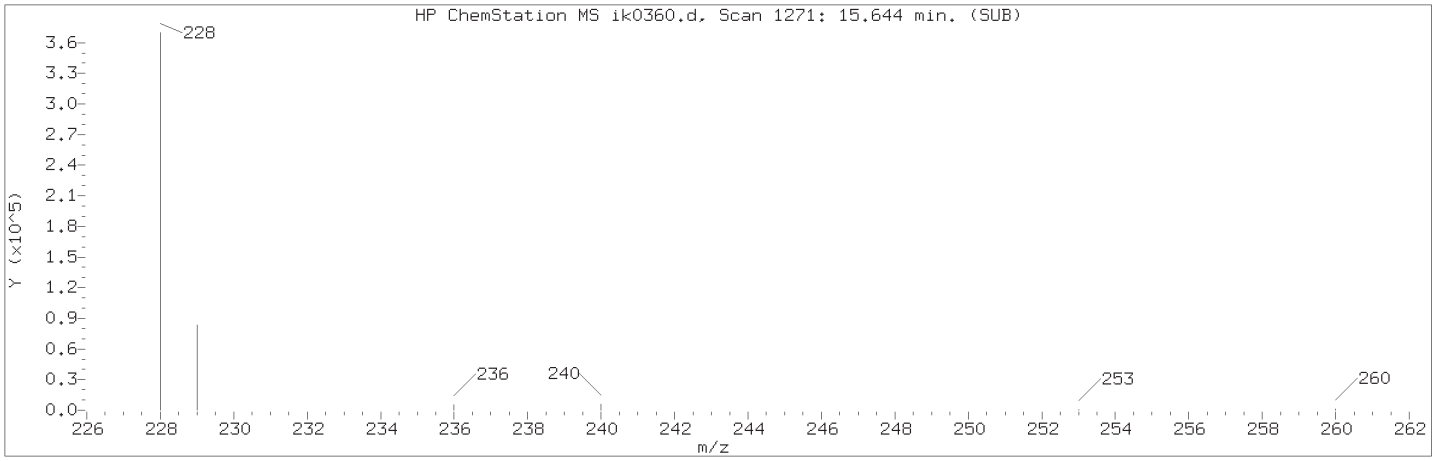
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

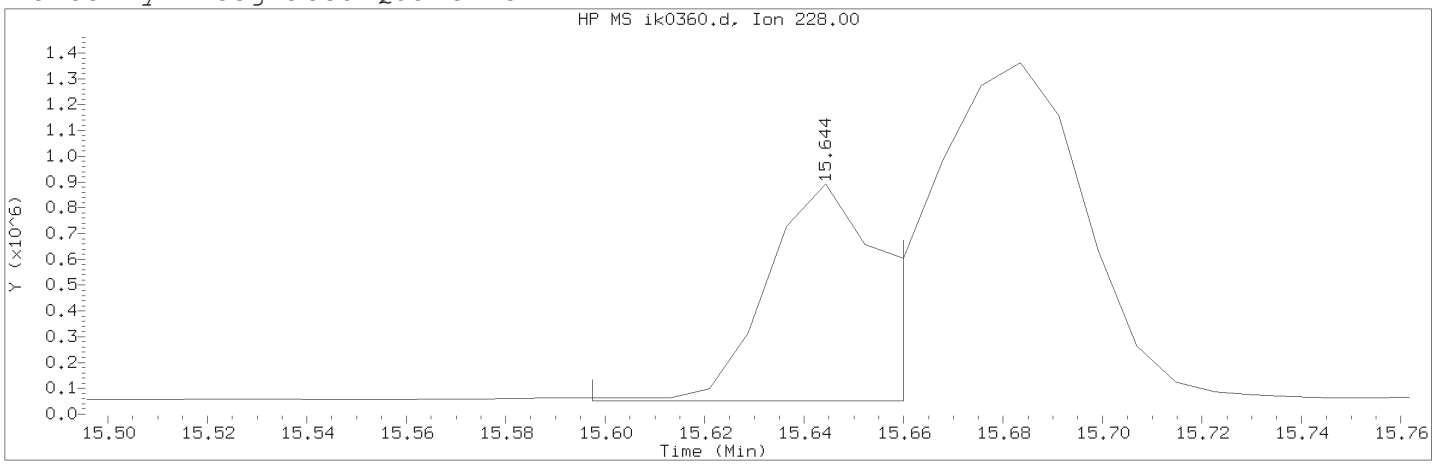
Compound Number	: 42
Compound Name	: Benzo(a)anthracene
Scan Number	: 1271
Retention Time (minutes)	: 15.644
Relative Retention Time	:-0.00000
Quant Ion	: 228.00
Area (flag)	: 1280697A
On-column Amount (ng/ul)	: 2.2409

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

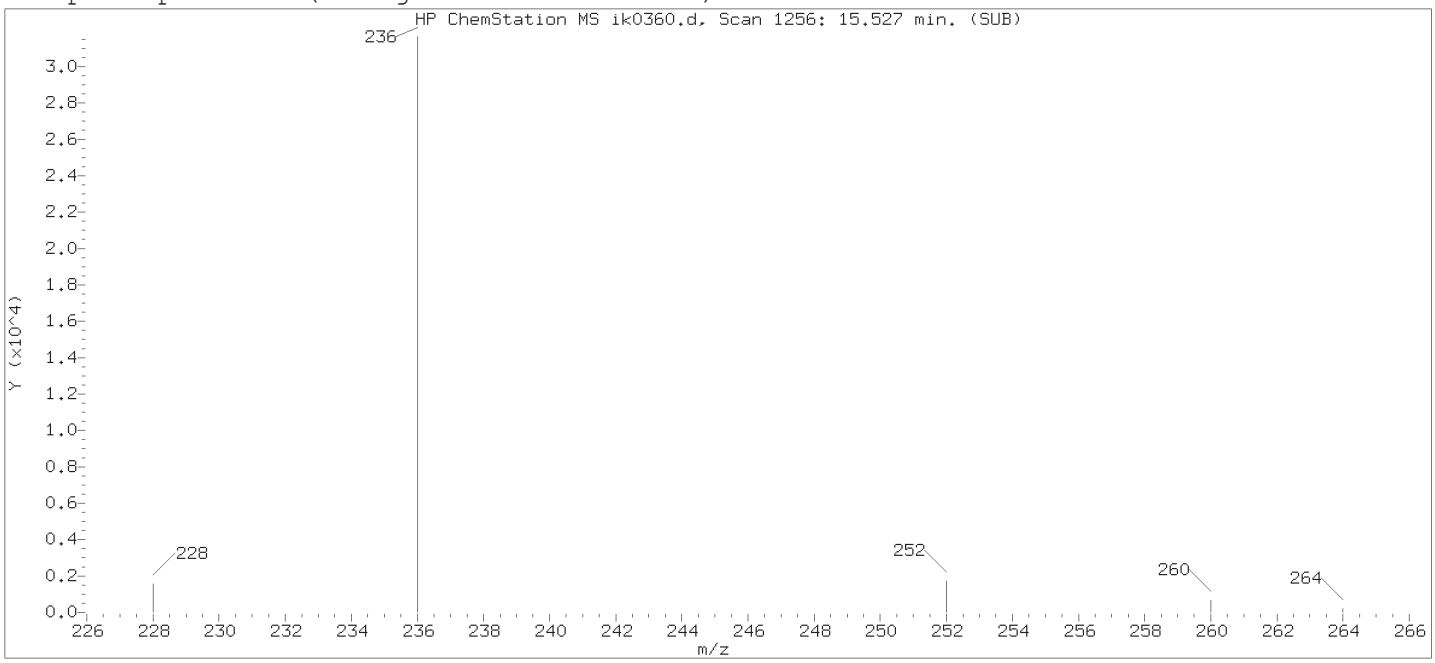
Compound Number : 42
Compound Name : Benzo(a)anthracene
Scan Number : 1271
Retention Time (minutes) : 15.644
Quant Ion : 228.00
Area (flag) : 1280697A
On-column Amount (ng/ul) : 2.2409
Integration start scan : 1264 Integration stop scan: 1272
Y at integration start : 52392 Y at integration end: 52392

Reason for manual integration: improper integration

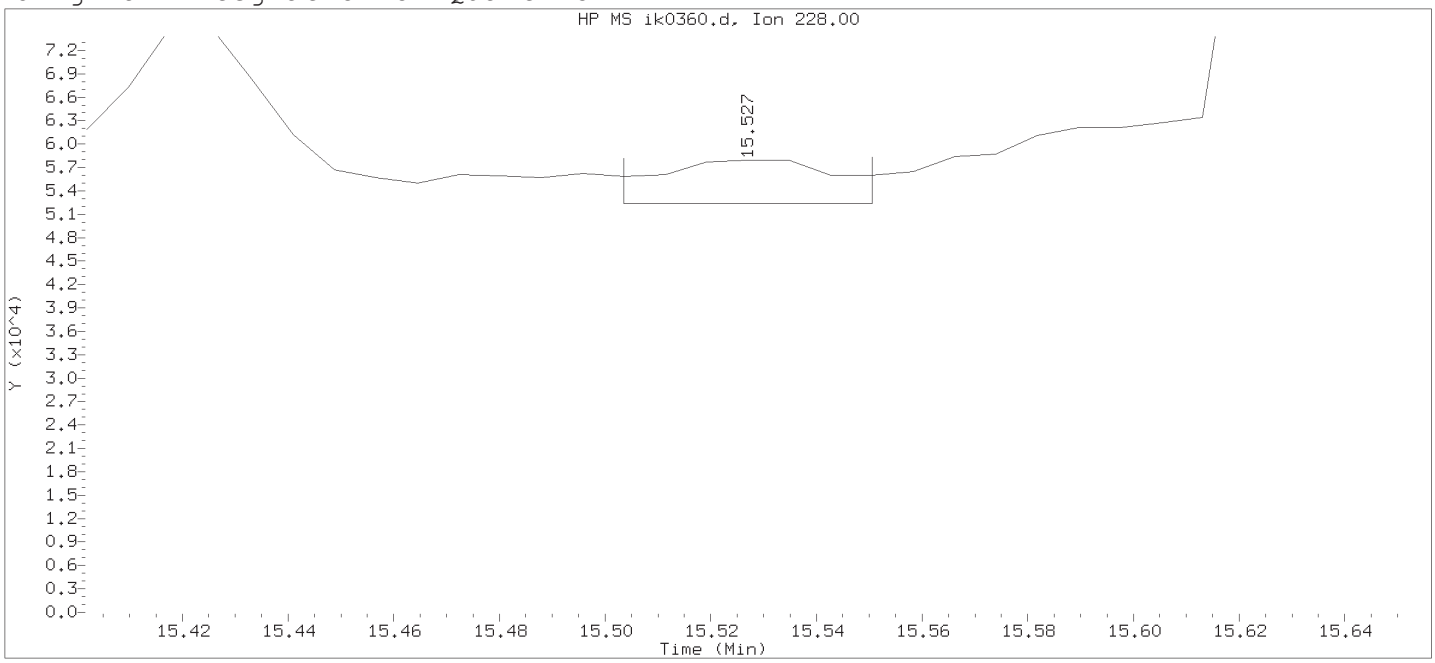
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

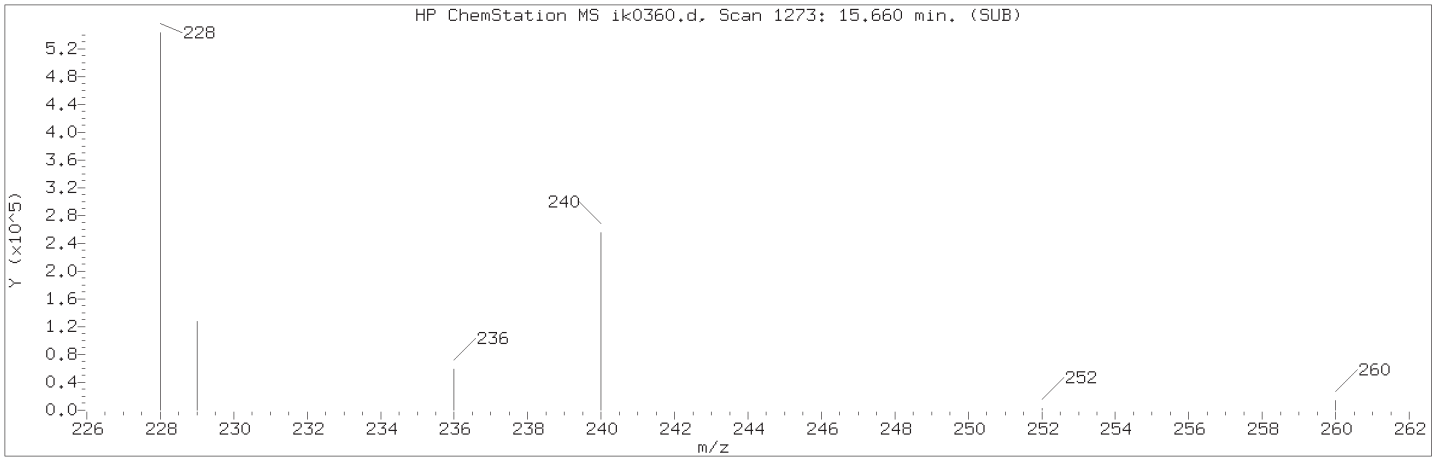
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

Sample Name: T1005RE Lab Sample ID: 9867767RE

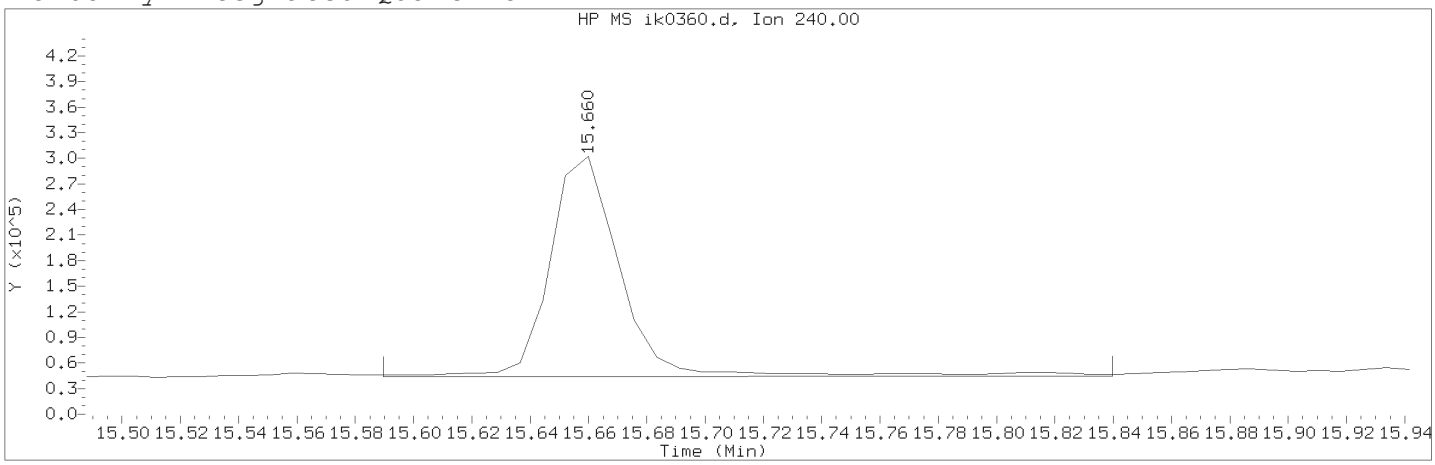
Compound Number : 42
Compound Name : Benzo(a)anthracene
Scan Number : 1256
Retention Time (minutes) : 15.527
Quant Ion : 228.00
Area : 12734
On-column Amount (ng/ul) : 0.9611
Integration start scan : 1252 Integration stop scan: 1258
Y at integration start : 52392 Y at integration end: 52392

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

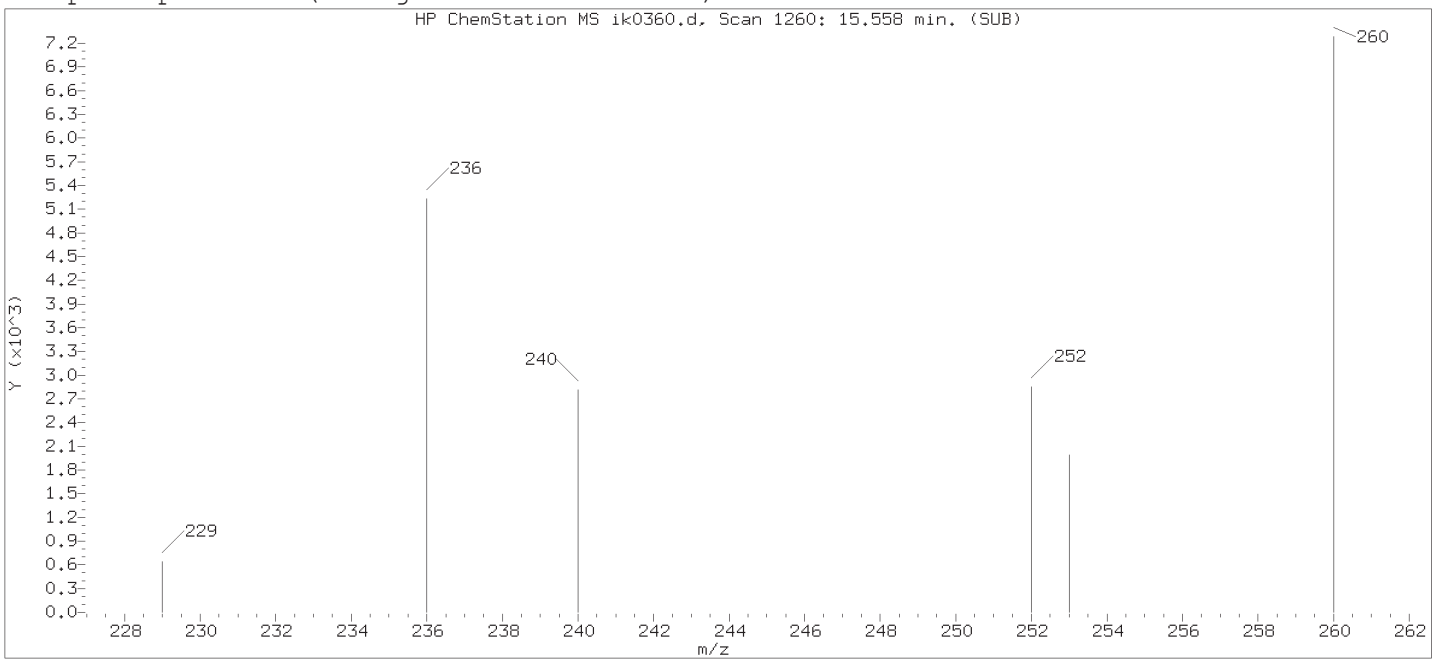
Compound Number : 43
Compound Name : Chrysene-d12
Scan Number : 1273
Retention Time (minutes) : 15.660
Quant Ion : 240.00
Area (flag) : 444222A
On-column Amount (ng/ul) : 1.0000
Integration start scan : 1263 Integration stop scan: 1295
Y at integration start : 43655 Y at integration end: 44583

Reason for manual integration: improper integration

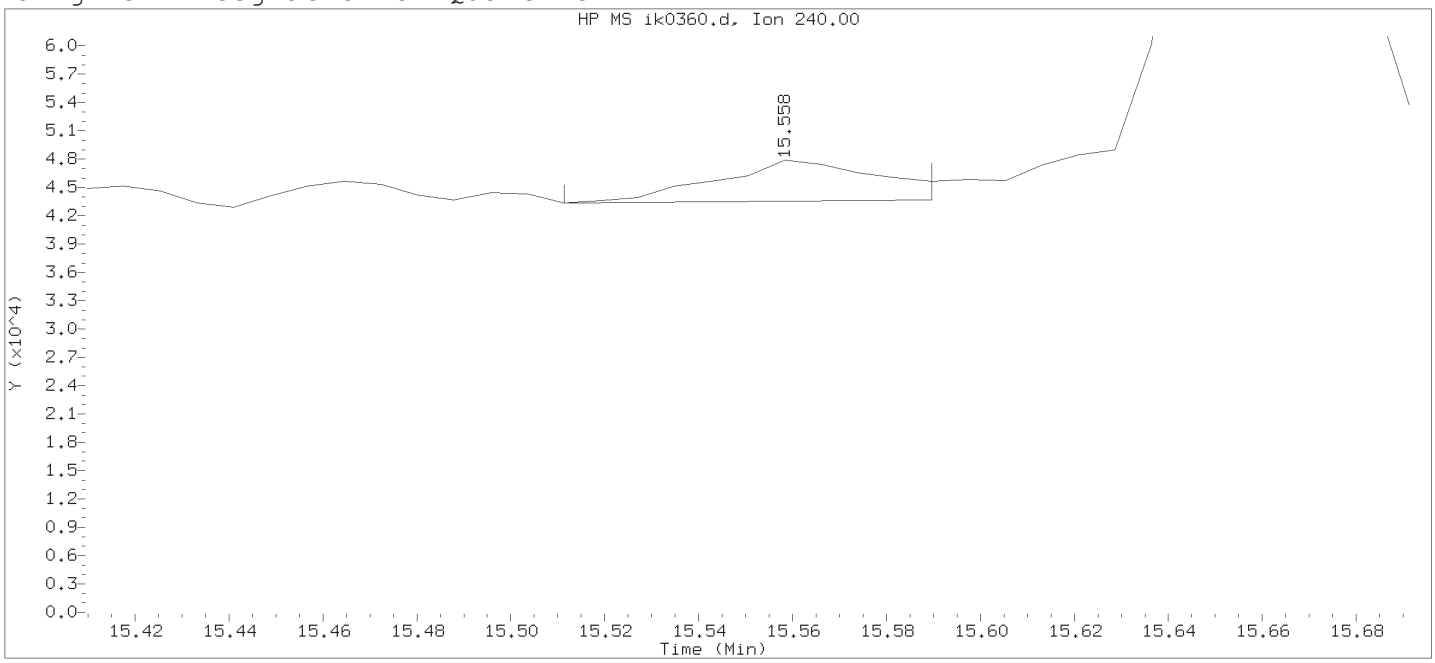
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

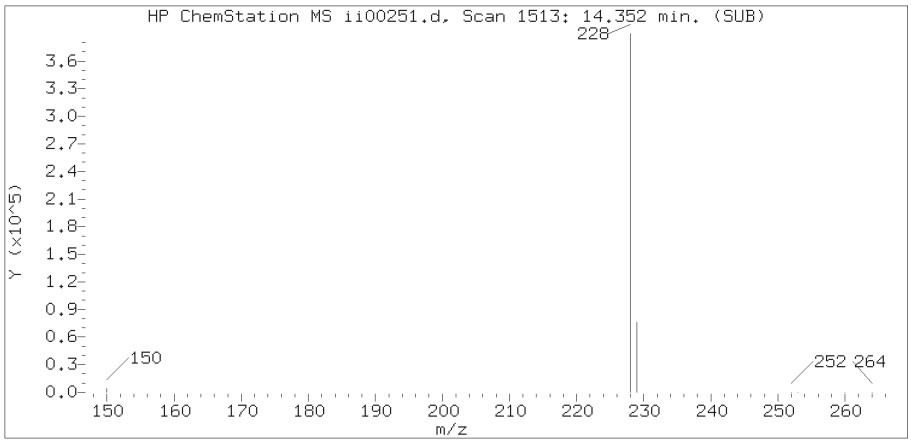
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

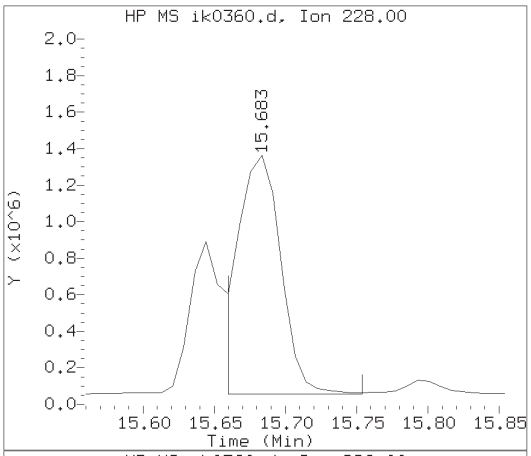
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number : 43
Compound Name : Chrysene-d12
Scan Number : 1260
Retention Time (minutes) : 15.558
Quant Ion : 240.00
Area : 10298
On-column Amount (ng/ul) : 1.0000
Integration start scan : 1253 Integration stop scan: 1263
Y at integration start : 43352 Y at integration end: 43655

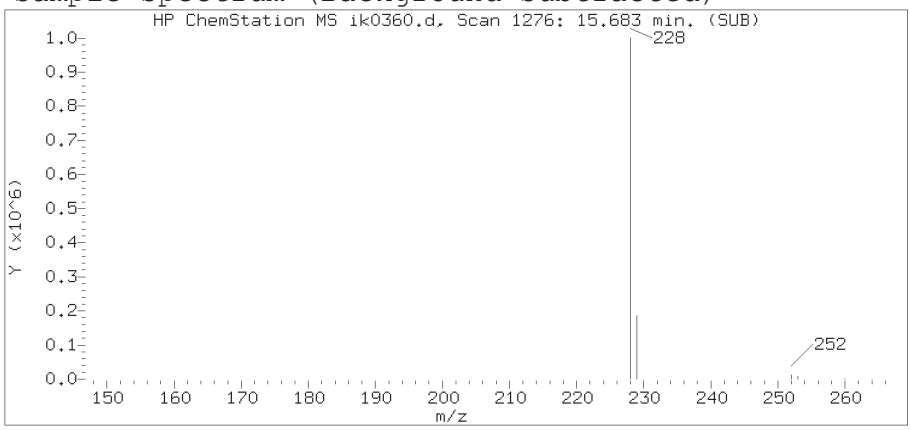
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

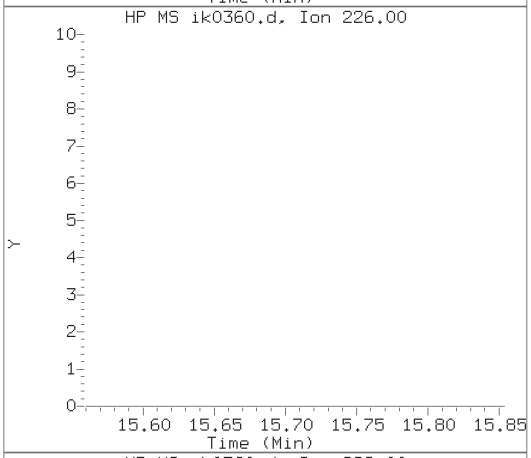
Reference Standard Spectrum for Chrysene



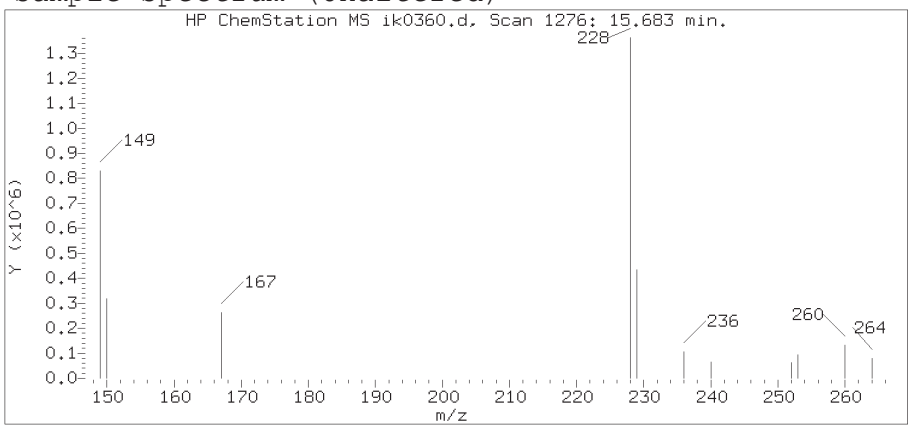


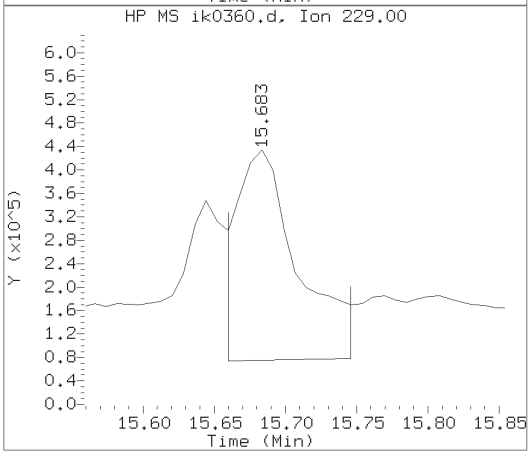
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

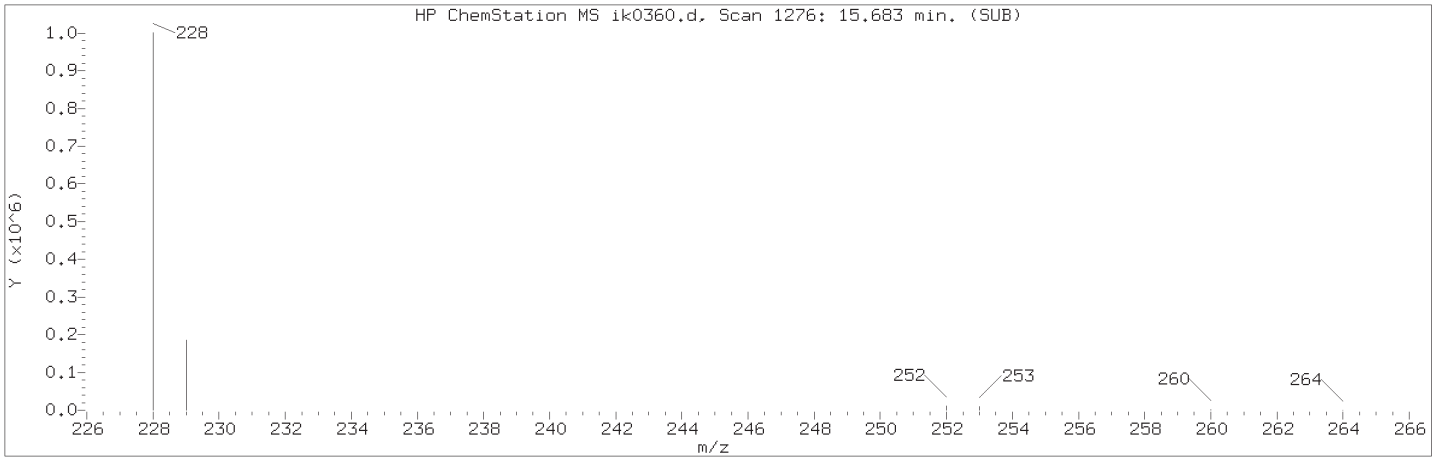
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

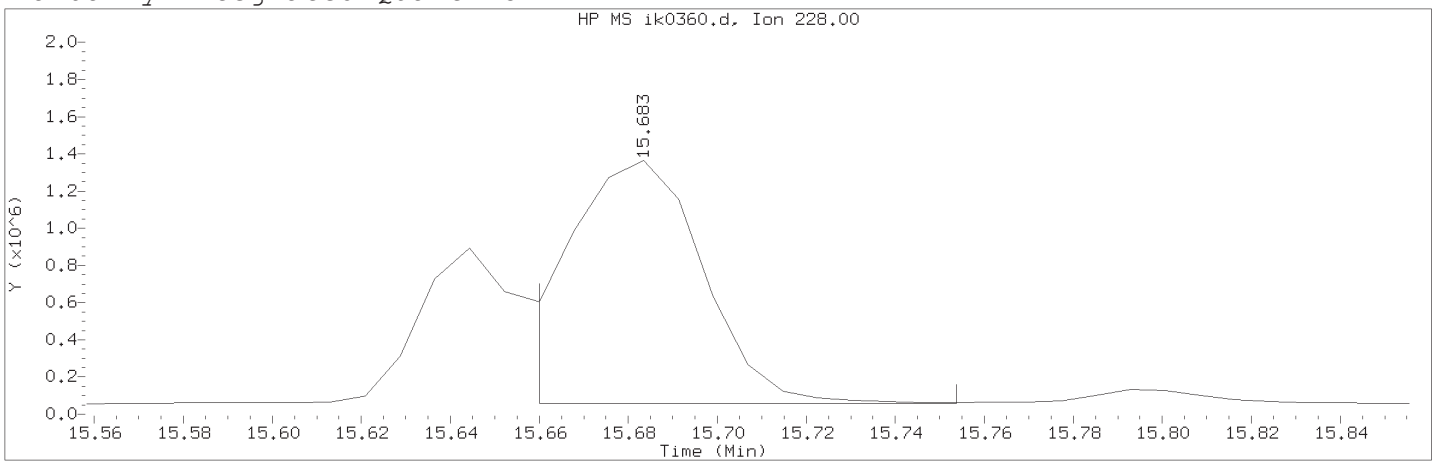
Compound Number	: 44
Compound Name	: Chrysene
Scan Number	: 1276
Retention Time (minutes)	: 15.683
Relative Retention Time	: 0.00051
Quant Ion	: 228.00
Area (flag)	: 2821136AM
On-column Amount (ng/ul)	: 5.1676

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

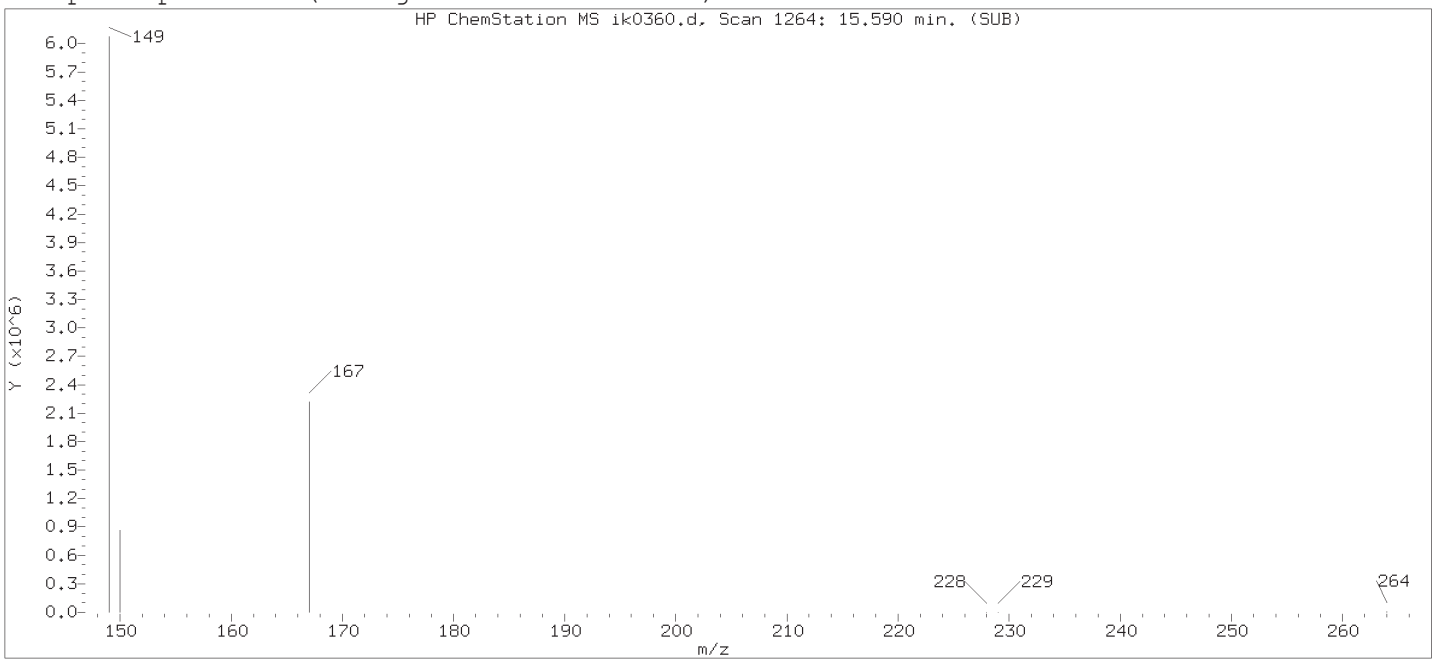
Compound Number : 44
Compound Name : Chrysene
Scan Number : 1276
Retention Time (minutes) : 15.683
Quant Ion : 228.00
Area (flag) : 2821136AM
On-column Amount (ng/ul) : 5.1676
Integration start scan : 1272 Integration stop scan: 1284
Y at integration start : 57460 Y at integration end: 57460

Reason for manual integration: improper integration

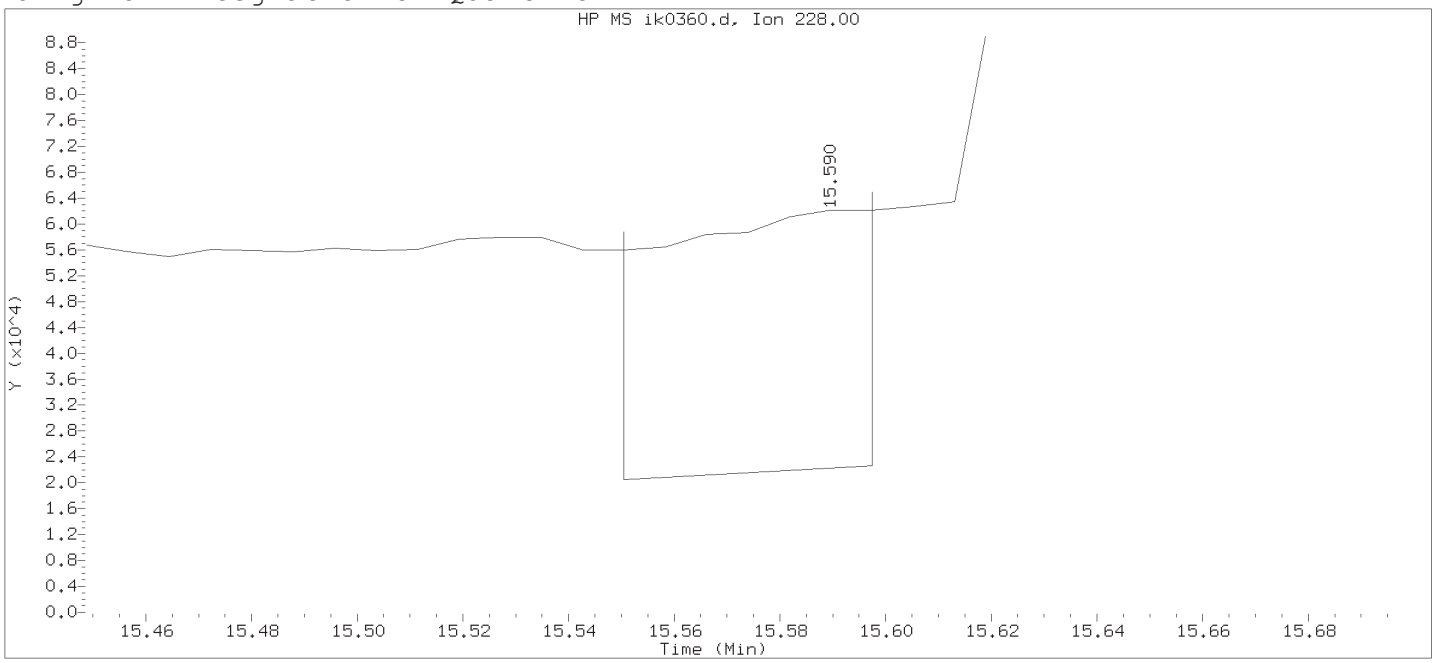
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

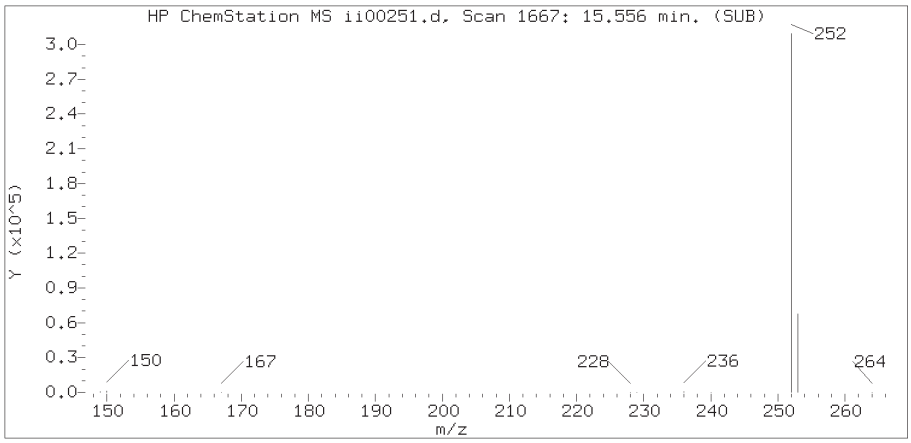
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

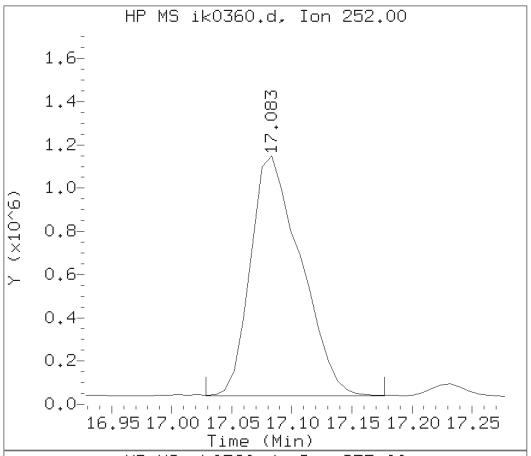
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number : 44
Compound Name : Chrysene
Scan Number : 1264
Retention Time (minutes) : 15.590
Quant Ion : 228.00
Area : 110491
On-column Amount (ng/ul) : 8.7300
Integration start scan : 1258 Integration stop scan: 1264
Y at integration start : 20496 Y at integration end: 22593

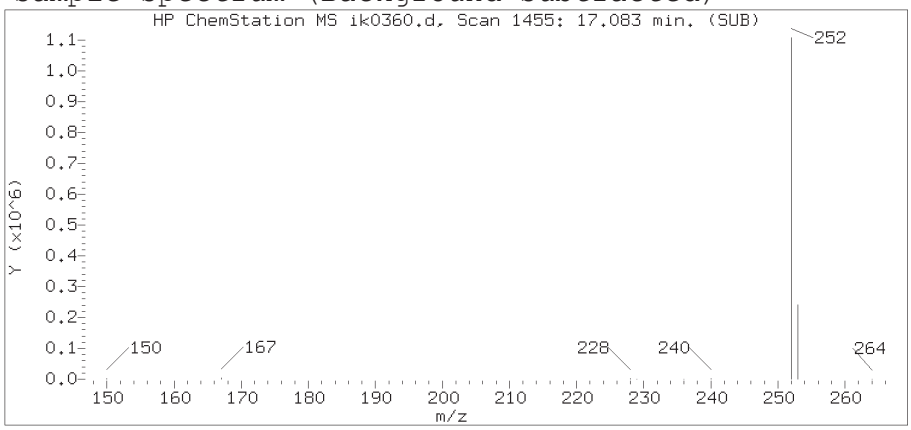
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

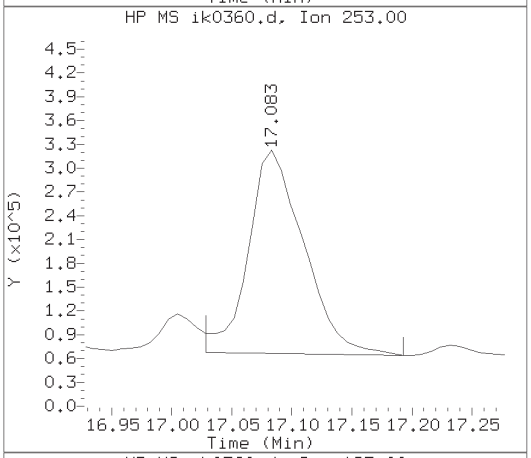
Reference Standard Spectrum for Benzo(b)fluoranthene



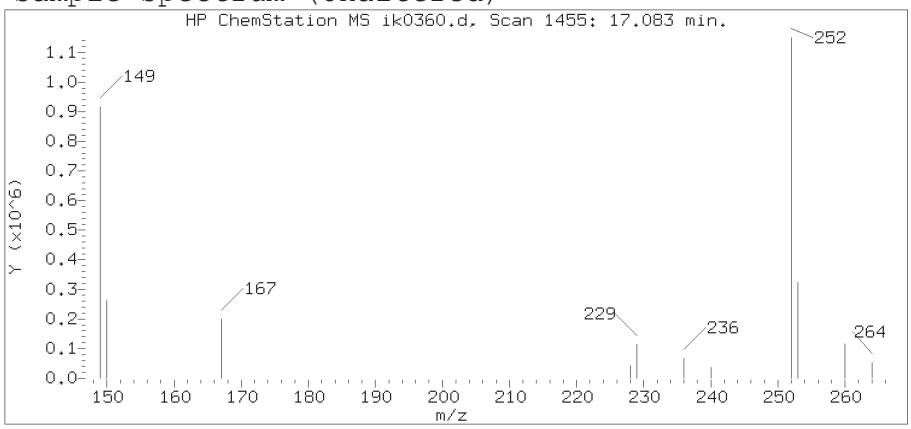


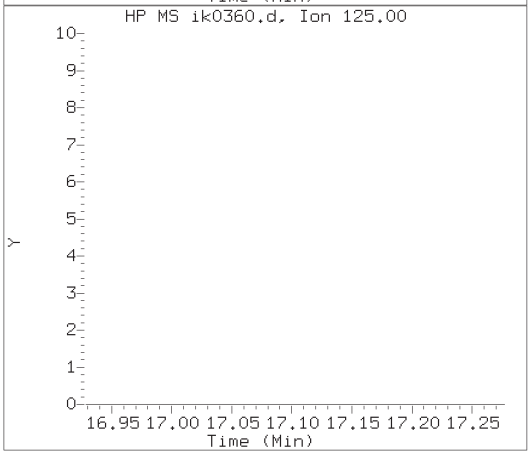
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

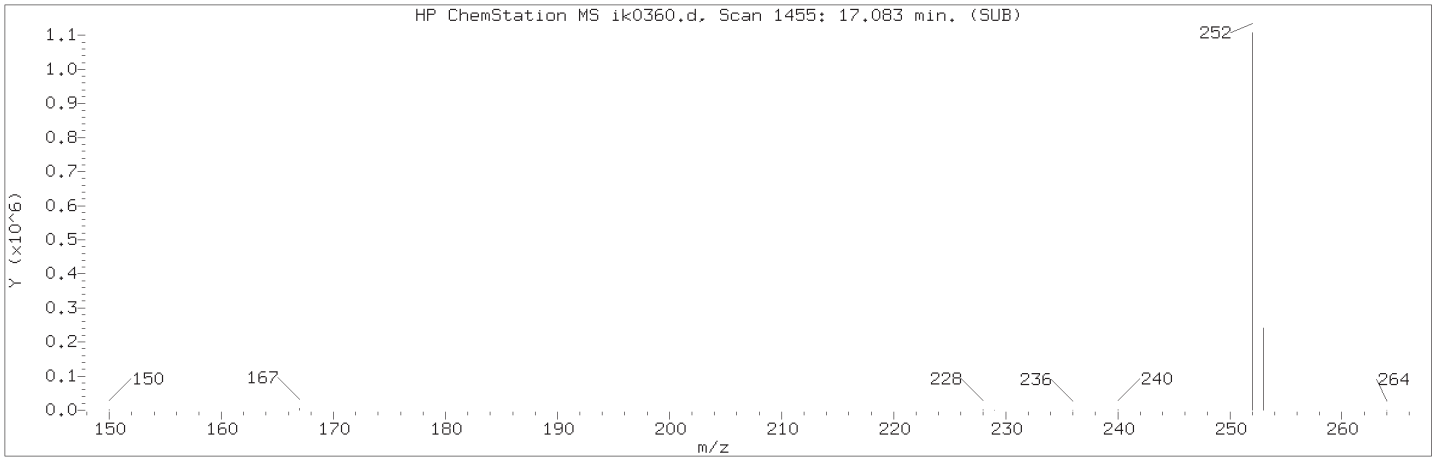
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

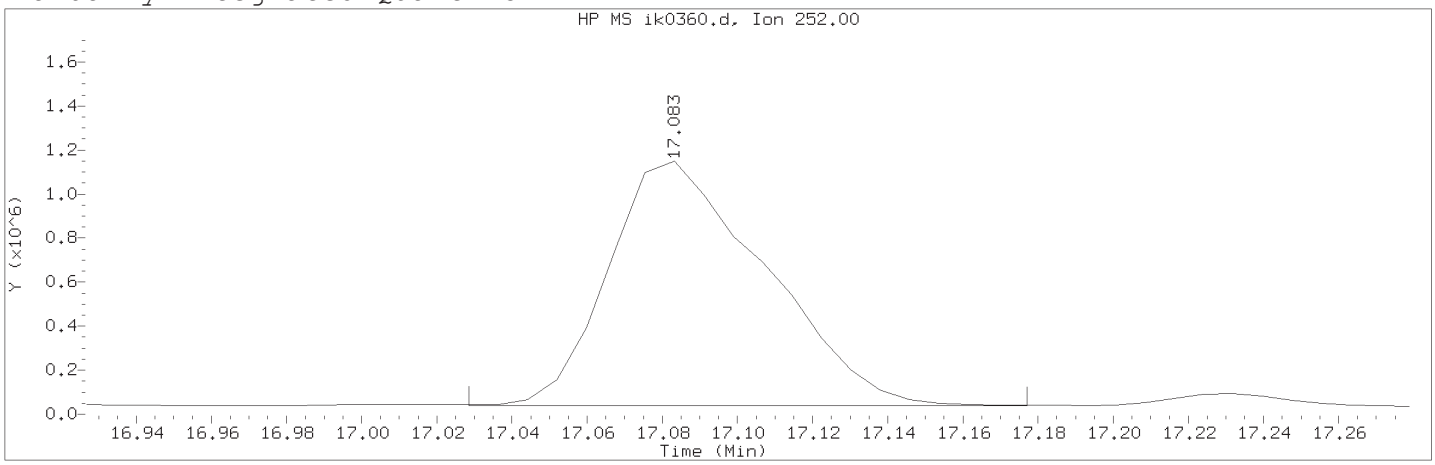
Compound Number	: 46
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1455
Retention Time (minutes)	: 17.083
Relative Retention Time	: 0.00021
Quant Ion	: 252.00
Area (flag)	: 3216873AM
On-column Amount (ng/ul)	: 16.3644

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

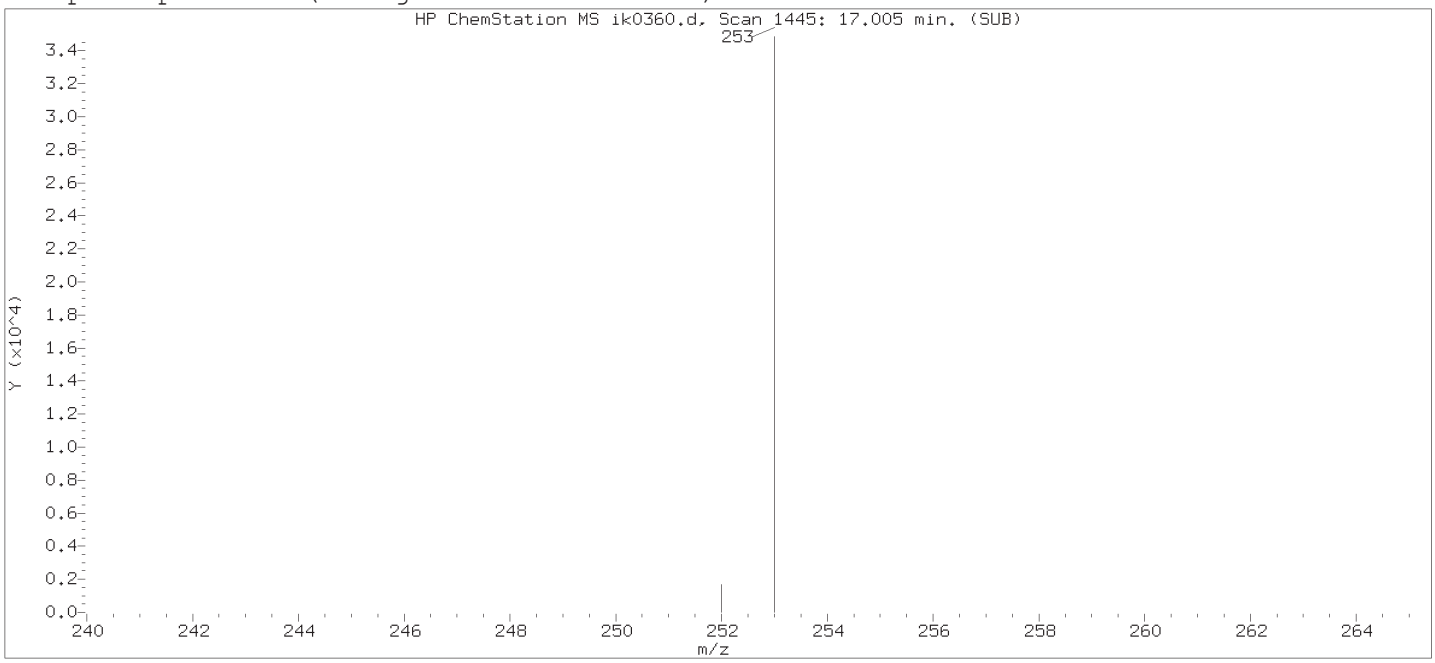
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1455
Retention Time (minutes) : 17.083
Quant Ion : 252.00
Area (flag) : 3216873AM
On-column Amount (ng/ul) : 16.3644
Integration start scan : 1447 Integration stop scan: 1466
Y at integration start : 39177 Y at integration end: 39177

Reason for manual integration: improper integration

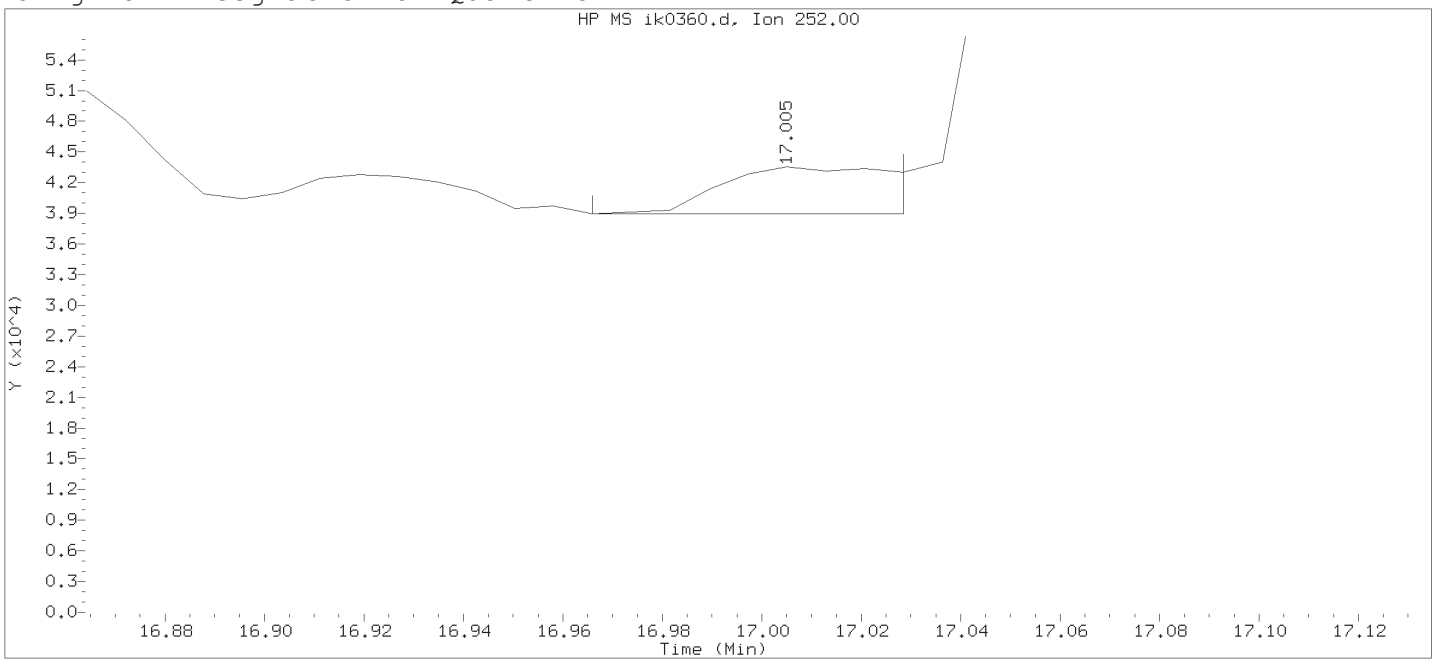
Analyst responsible for change: Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

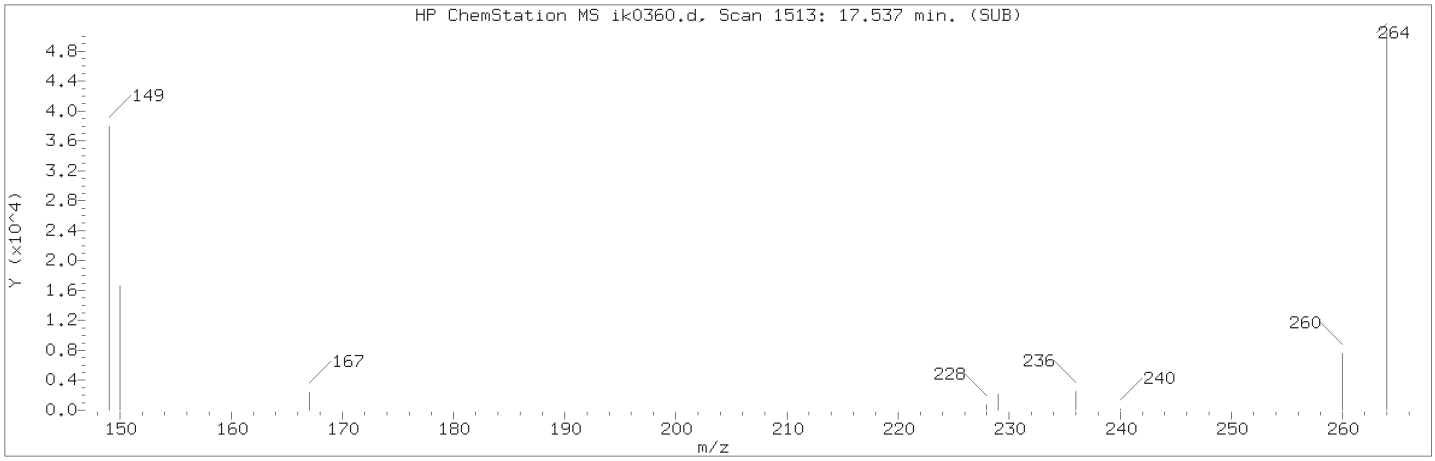
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

Sample Name: T1005RE Lab Sample ID: 9867767RE

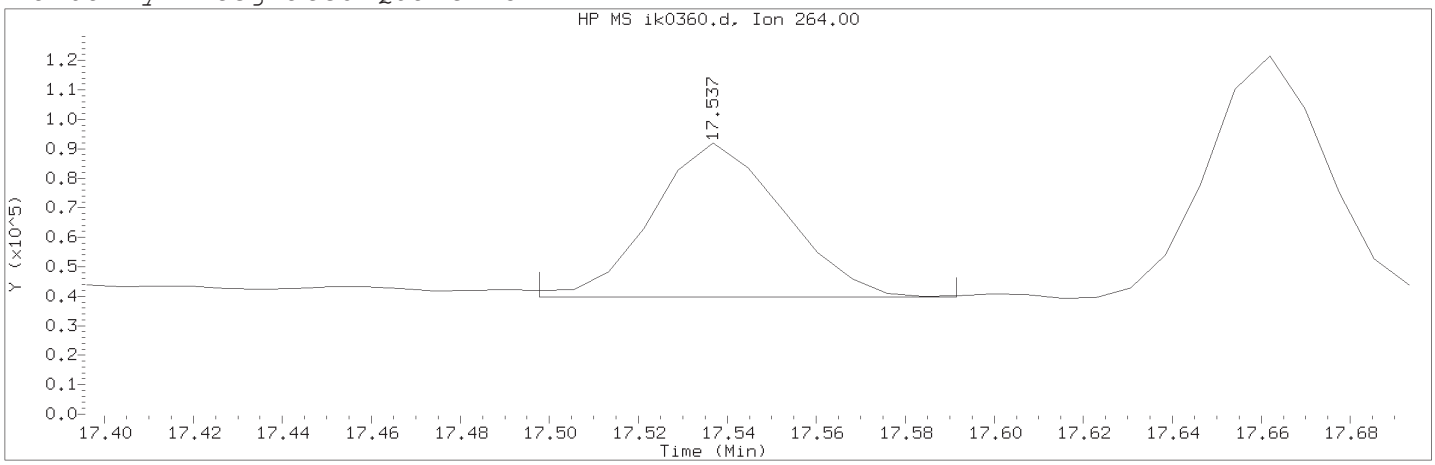
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1445
Retention Time (minutes) : 17.005
Quant Ion : 252.00
Area : 10392
On-column Amount (ng/ul) : 0.0801
Integration start scan : 1439 Integration stop scan: 1447
Y at integration start : 38944 Y at integration end: 38940

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

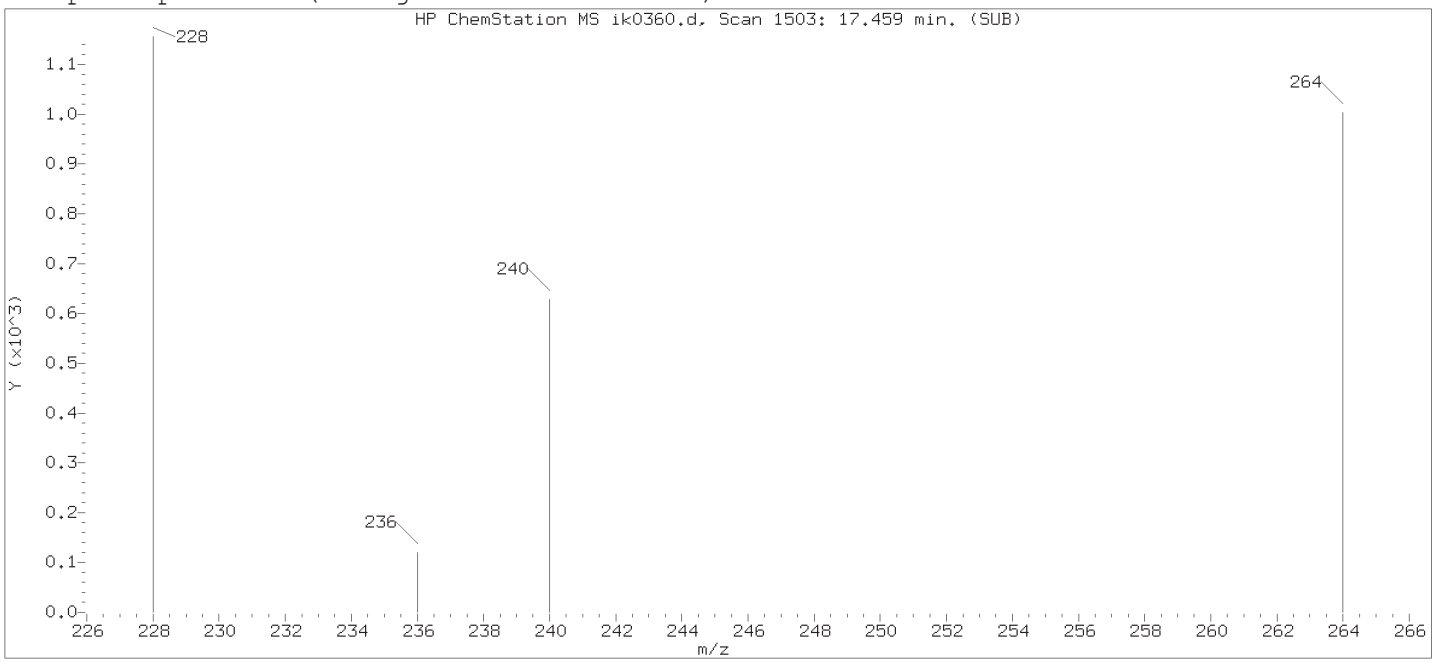
Compound Number : 49
Compound Name : Benzo(a)pyrene-d12
Scan Number : 1513
Retention Time (minutes) : 17.537
Quant Ion : 264.00
Area (flag) : 106833AM
On-column Amount (ng/ul) : 0.7076
Integration start scan : 1507 Integration stop scan: 1519
Y at integration start : 39783 Y at integration end: 39783

Reason for manual integration: improper integration

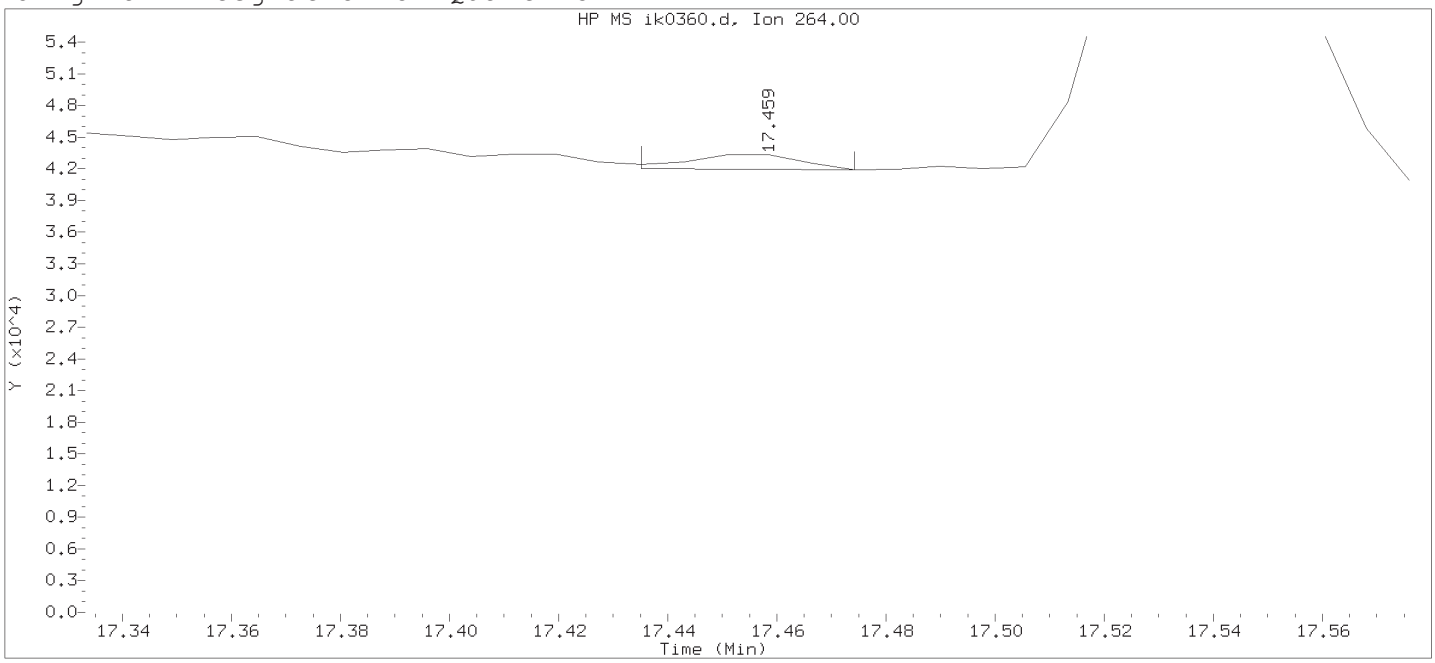
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

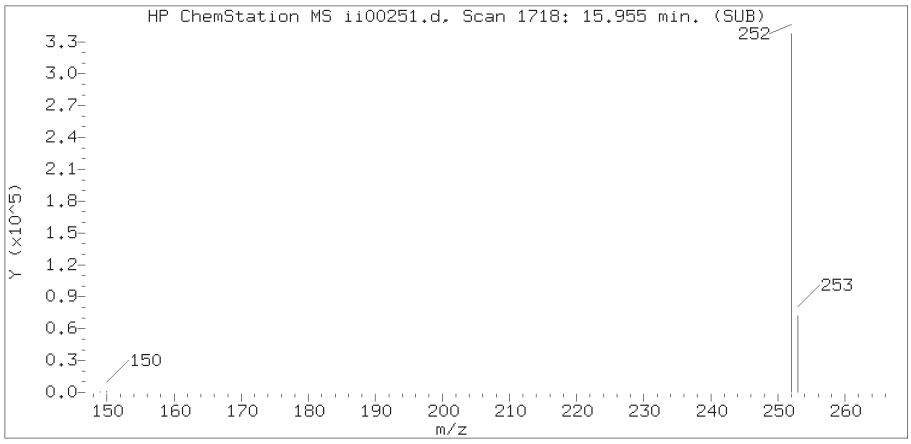
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

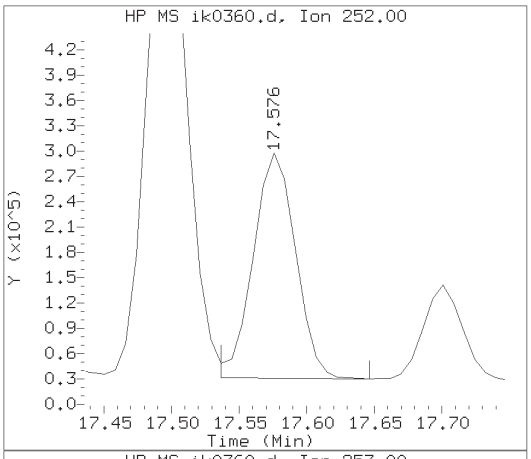
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	:	49
Compound Name	:	Benzo(a)pyrene-d12
Scan Number	:	1503
Retention Time (minutes)	:	17.459
Quant Ion	:	264.00
Area	:	1995
On-column Amount (ng/ul)	:	0.0200
Integration start scan	:	1499 Integration stop scan: 1504
Y at integration start	:	42004 Y at integration end: 41880

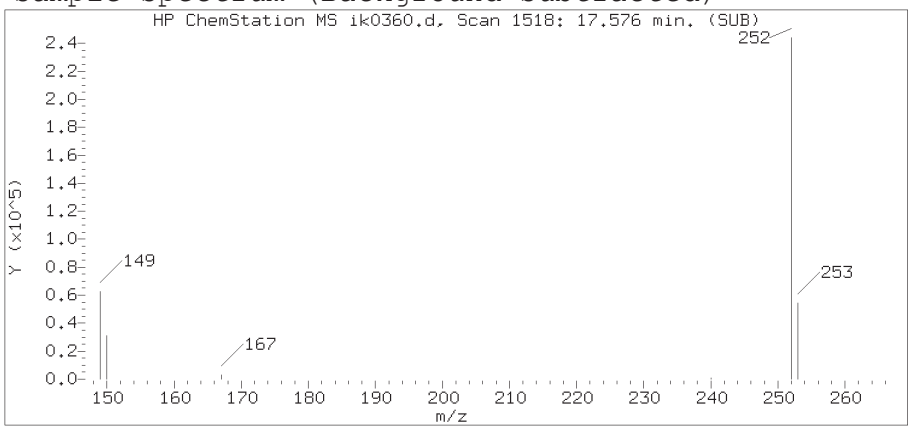
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

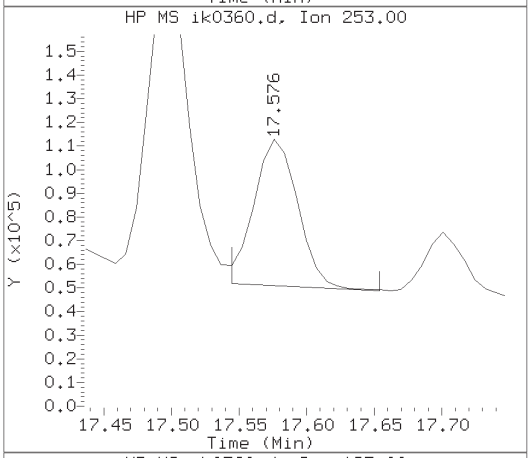
Reference Standard Spectrum for Benzo(a)pyrene



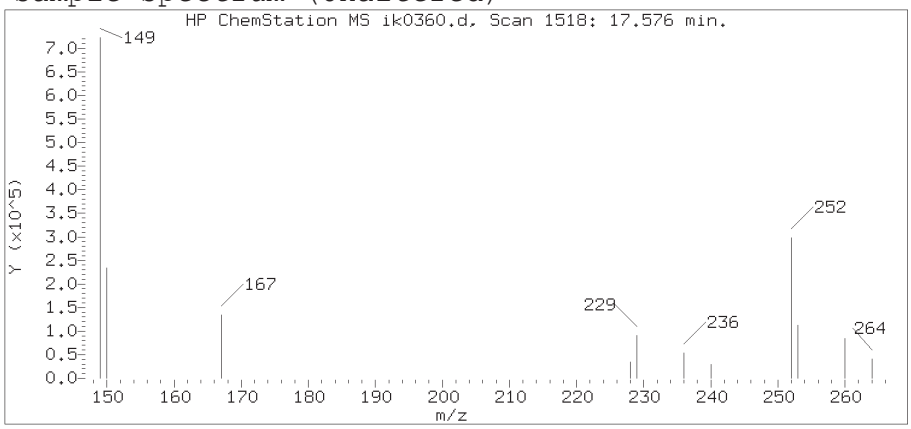


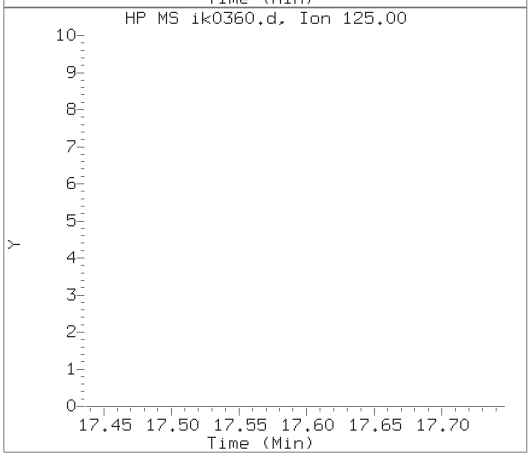
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

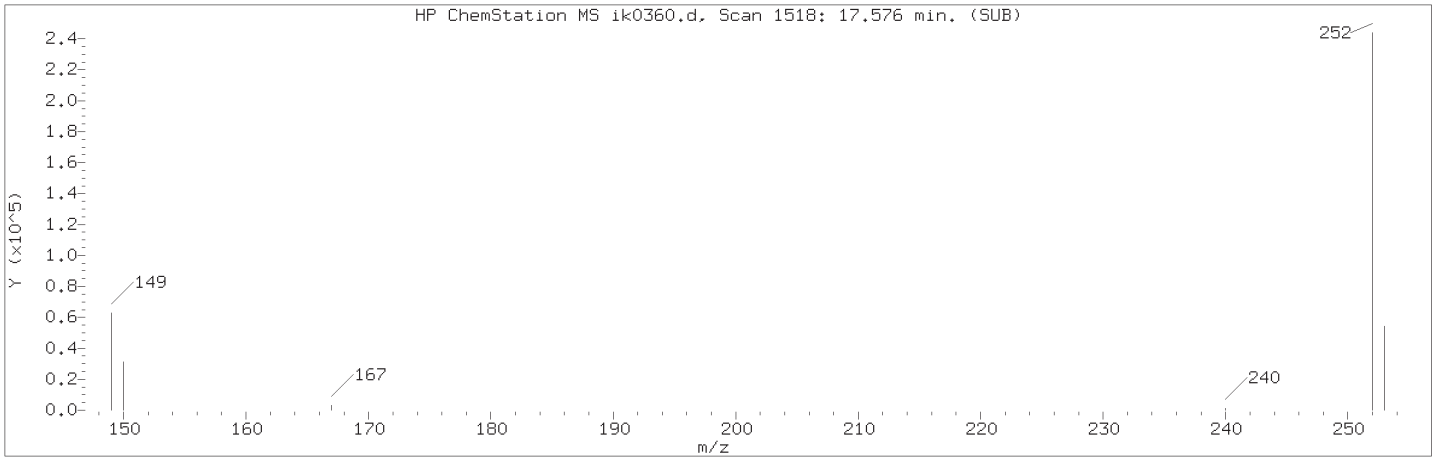
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

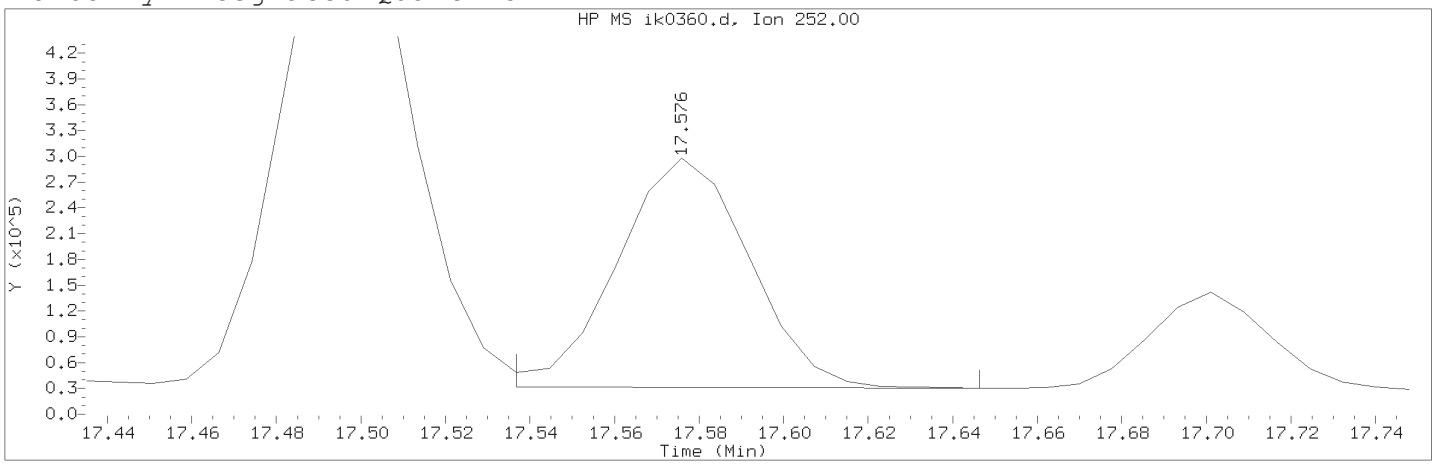
Compound Number	: 50
Compound Name	: Benzo(a)pyrene
Scan Number	: 1518
Retention Time (minutes)	: 17.576
Relative Retention Time	:-0.00003
Quant Ion	: 252.00
Area (flag)	: 575951A
On-column Amount (ng/ul)	: 3.4187

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

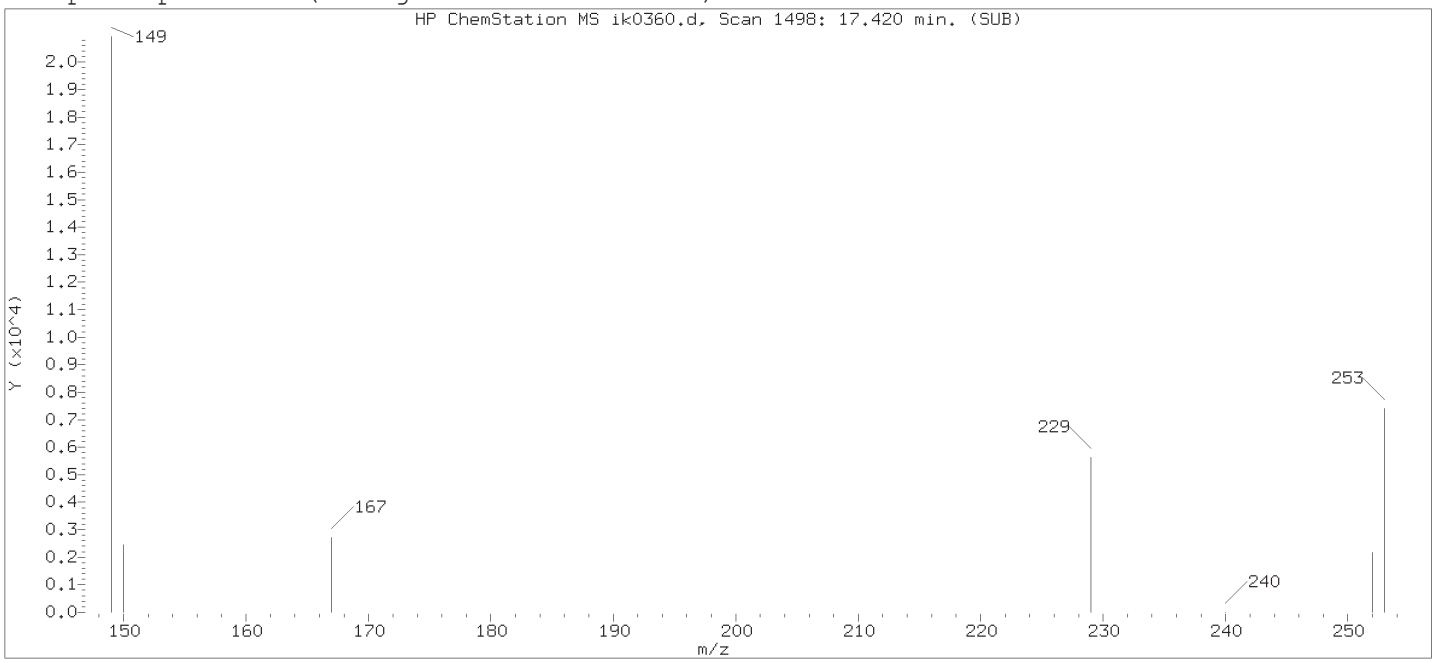
Compound Number : 50
Compound Name : Benzo(a)pyrene
Scan Number : 1518
Retention Time (minutes) : 17.576
Quant Ion : 252.00
Area (flag) : 575951A
On-column Amount (ng/ul) : 3.4187
Integration start scan : 1512 Integration stop scan: 1526
Y at integration start : 31514 Y at integration end: 30288

Reason for manual integration: improper integration

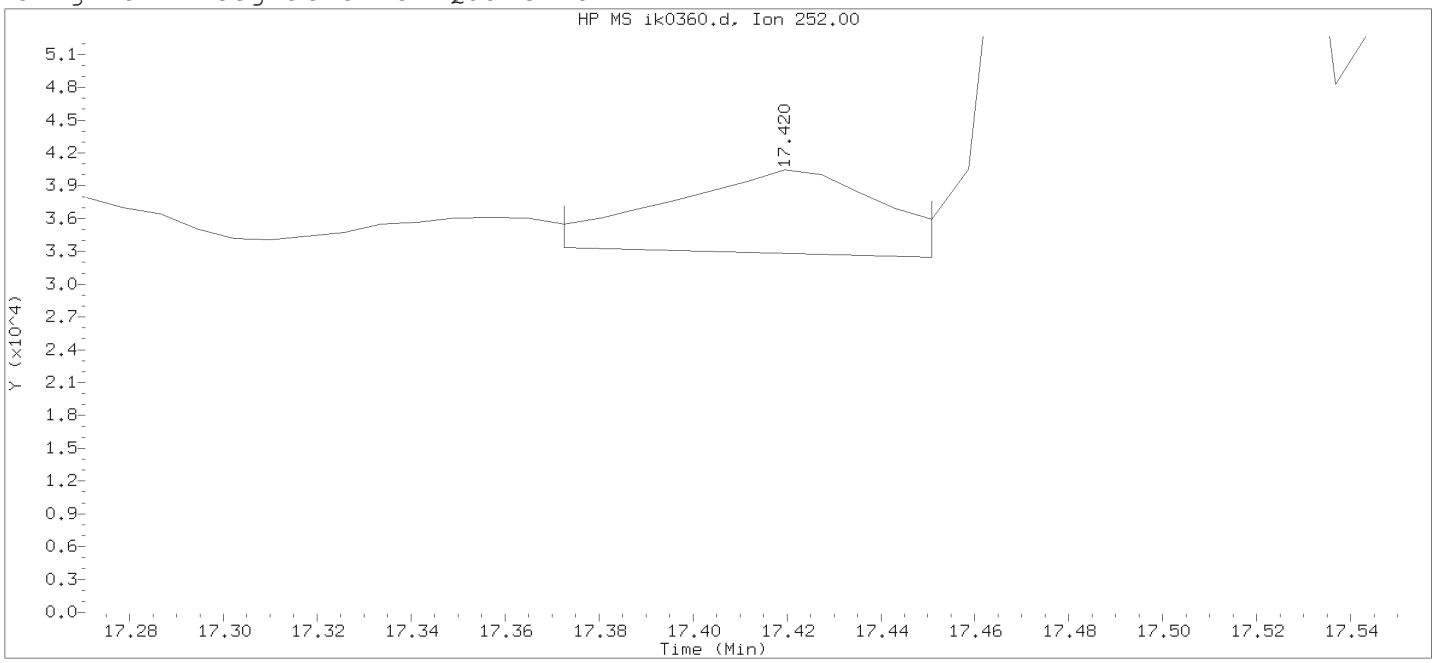
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

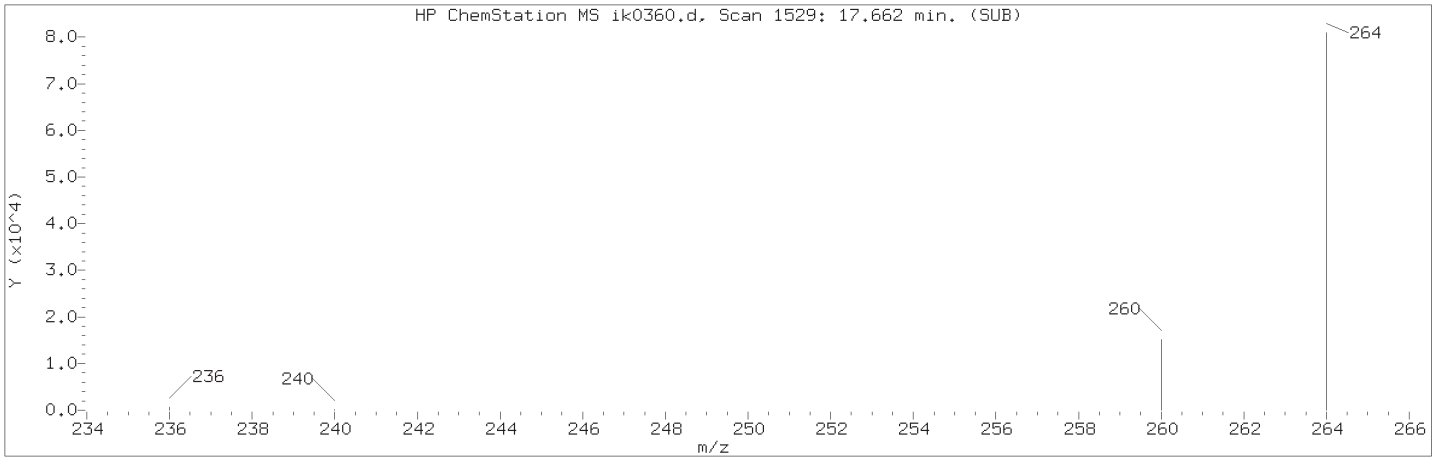
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

Sample Name: T1005RE Lab Sample ID: 9867767RE

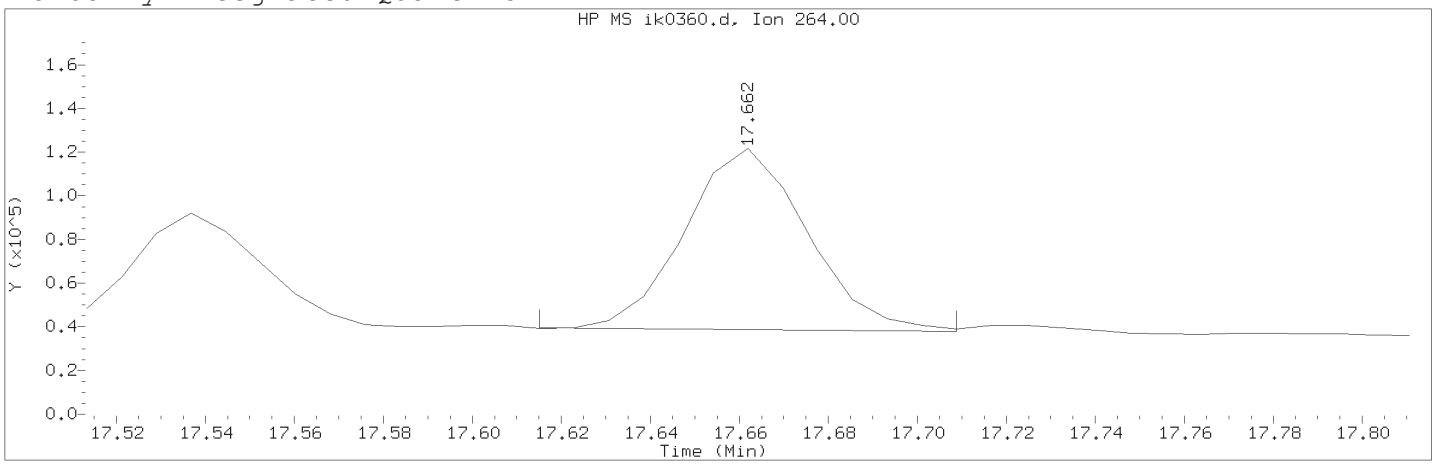
Compound Number : 50
Compound Name : Benzo(a)pyrene
Scan Number : 1498
Retention Time (minutes) : 17.420
Quant Ion : 252.00
Area : 23884
On-column Amount (ng/ul) : 0.2147
Integration start scan : 1491 Integration stop scan: 1501
Y at integration start : 33338 Y at integration end: 32478

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

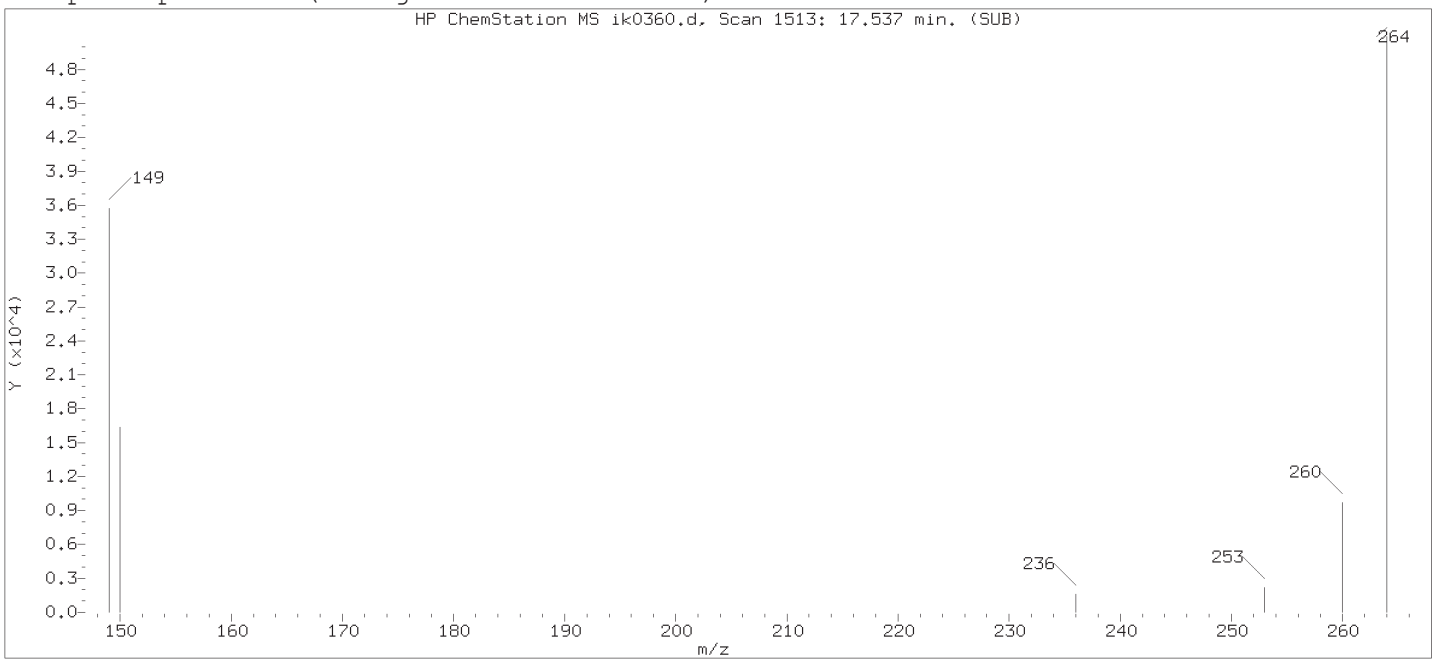
Compound Number : 51
Compound Name : Perylene-d12
Scan Number : 1529
Retention Time (minutes) : 17.662
Quant Ion : 264.00
Area (flag) : 158058AM
On-column Amount (ng/ul) : 1.0000
Integration start scan : 1522 Integration stop scan: 1534
Y at integration start : 39455 Y at integration end: 38017

Reason for manual integration: improper integration

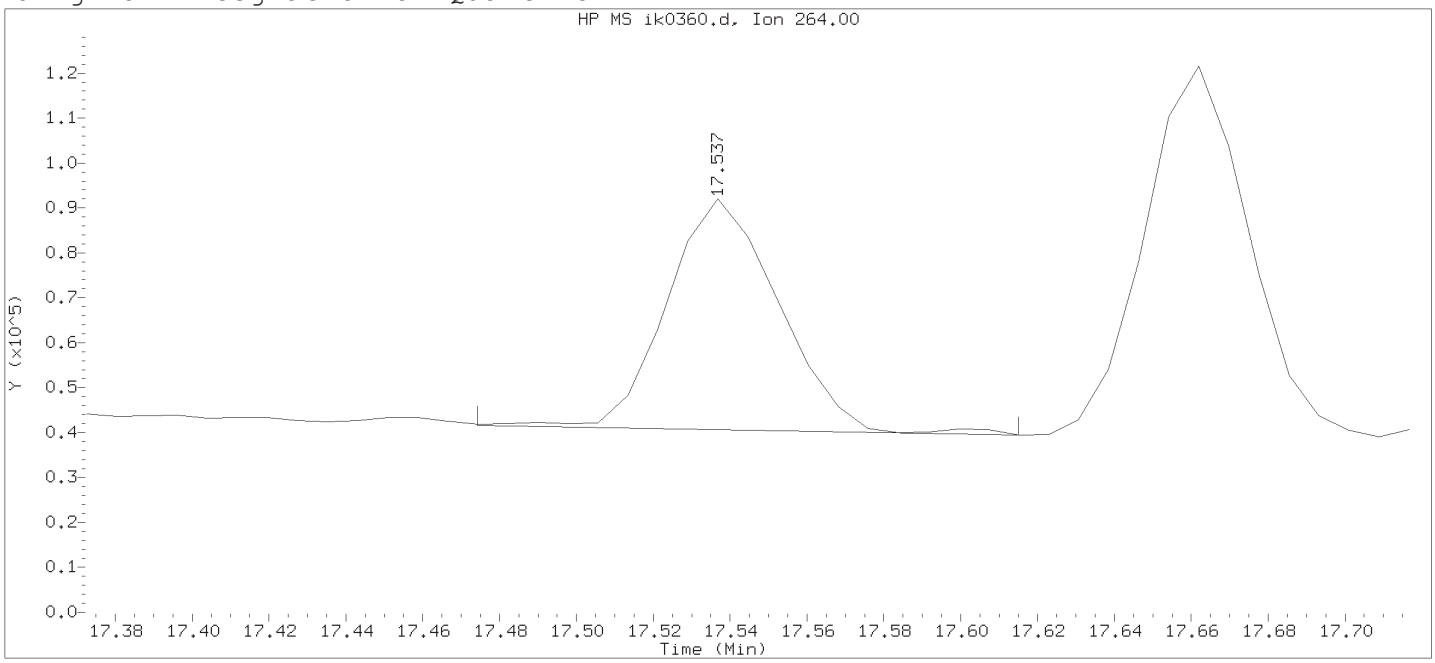
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

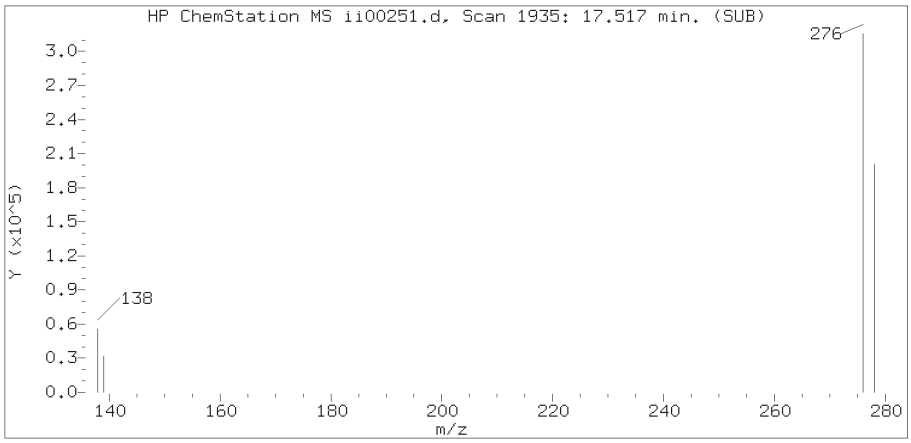
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

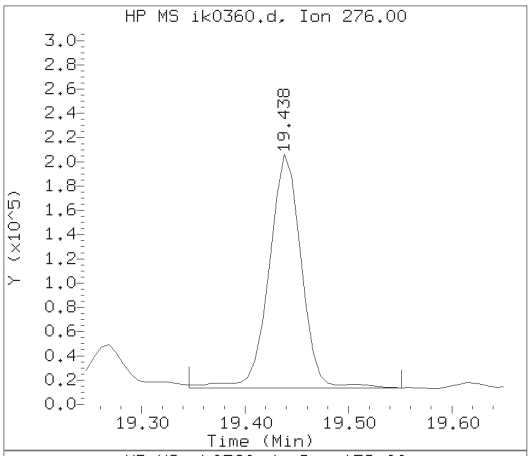
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number : 51
Compound Name : Perylene-d12
Scan Number : 1513
Retention Time (minutes) : 17.537
Quant Ion : 264.00
Area : 104371
On-column Amount (ng/ul) : 1.0000
Integration start scan : 1504 Integration stop scan: 1522
Y at integration start : 41566 Y at integration end: 39400

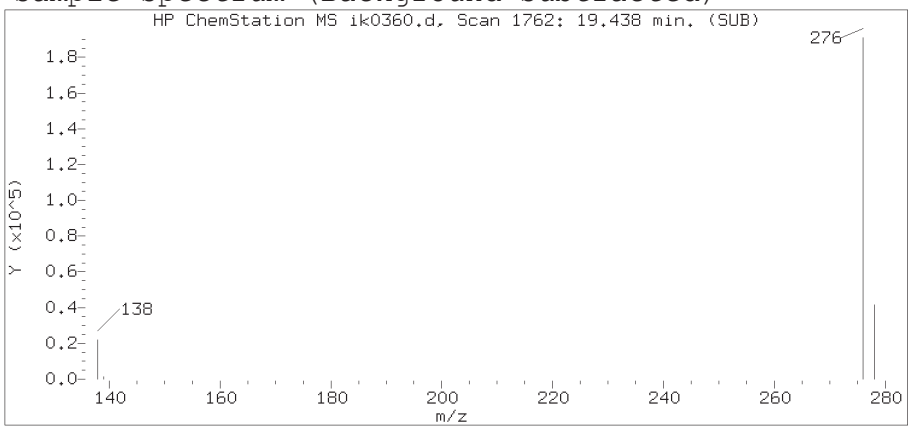
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

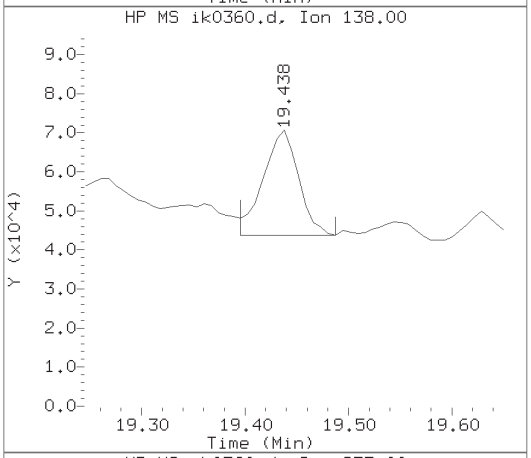
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



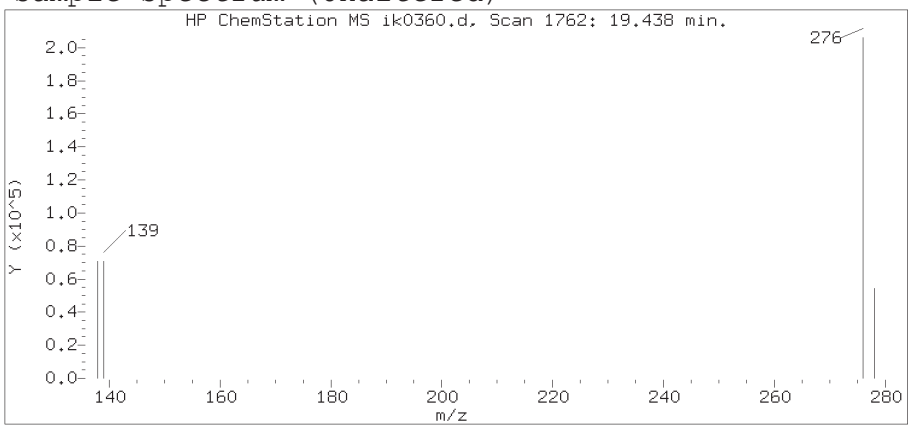


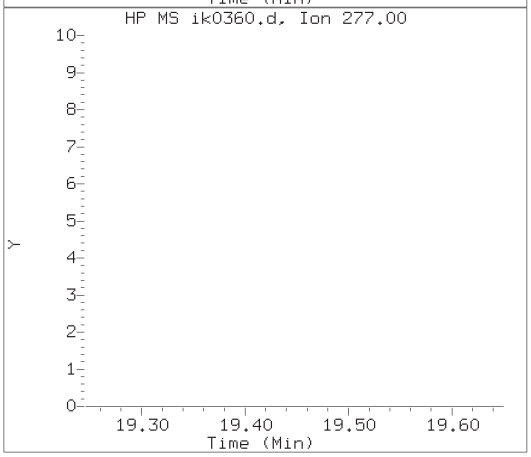
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

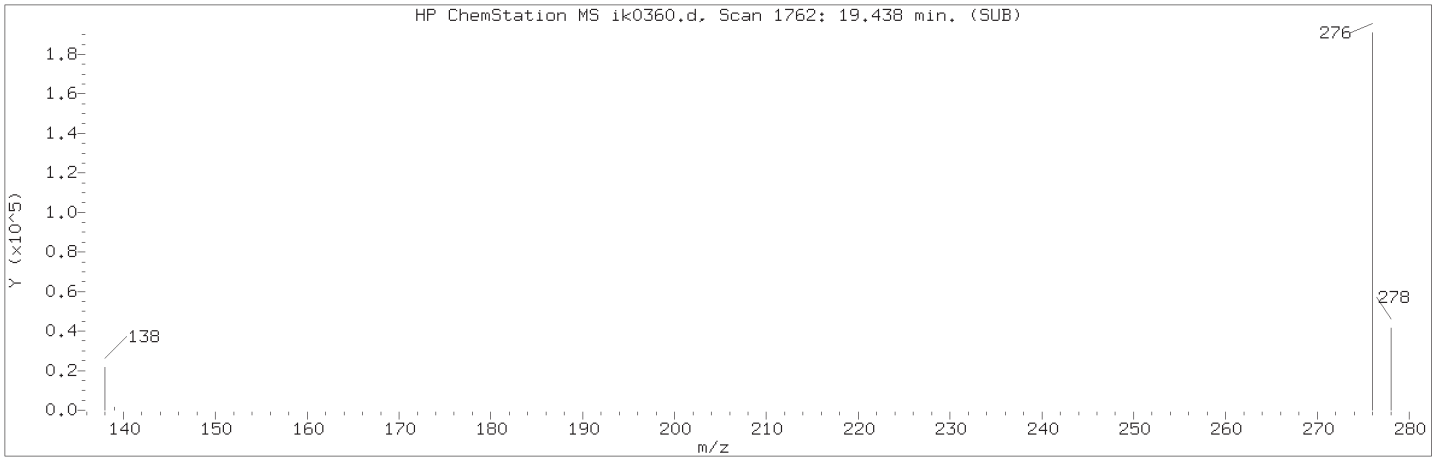
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

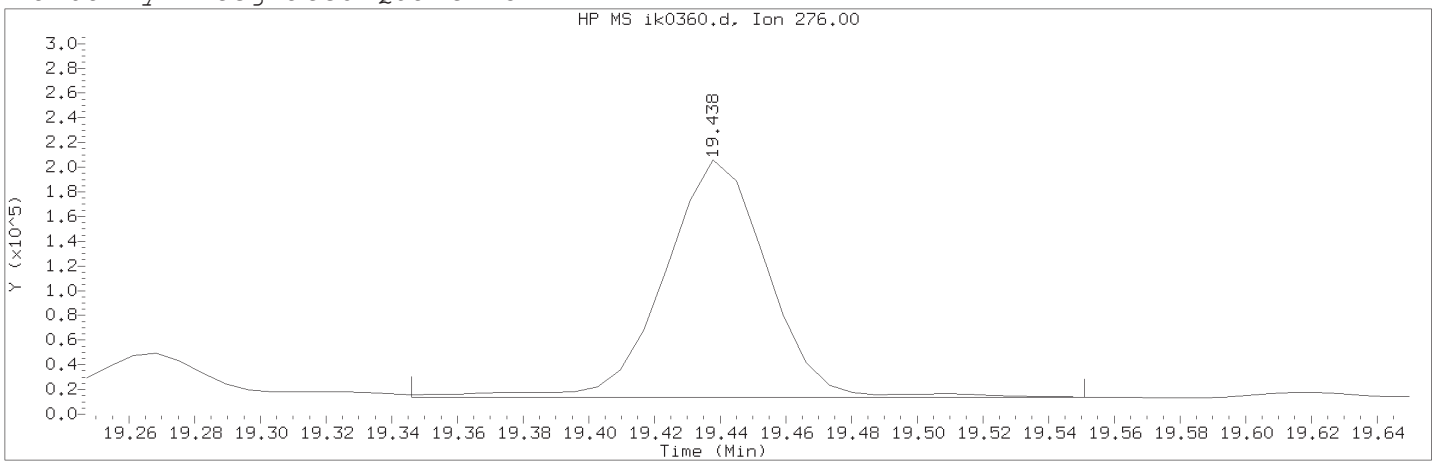
Compound Number	: 53
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 1762
Retention Time (minutes)	: 19.438
Relative Retention Time	: 0.00060
Quant Ion	: 276.00
Area (flag)	: 420412A
On-column Amount (ng/ul)	: 2.1160

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

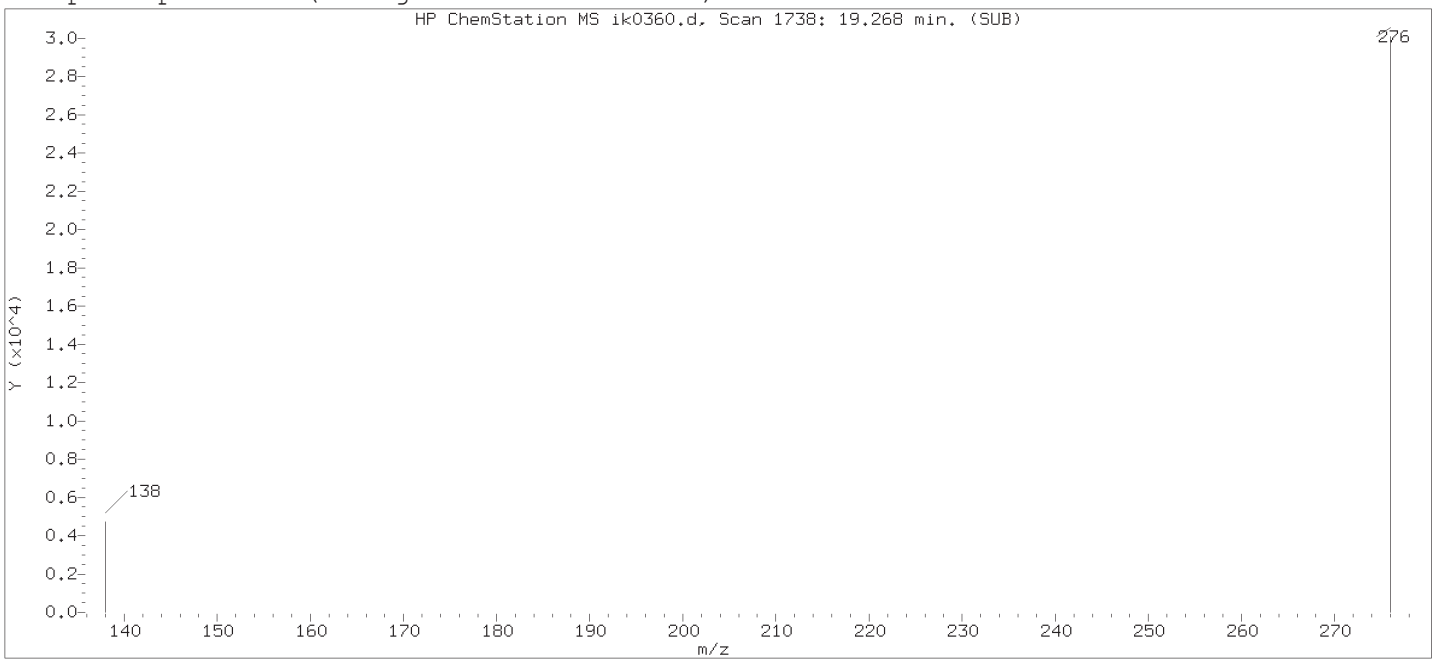
Compound Number : 53
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 1762
Retention Time (minutes) : 19.438
Quant Ion : 276.00
Area (flag) : 420412A
On-column Amount (ng/ul) : 2.1160
Integration start scan : 1748 Integration stop scan: 1777
Y at integration start : 13580 Y at integration end: 13580

Reason for manual integration: improper integration

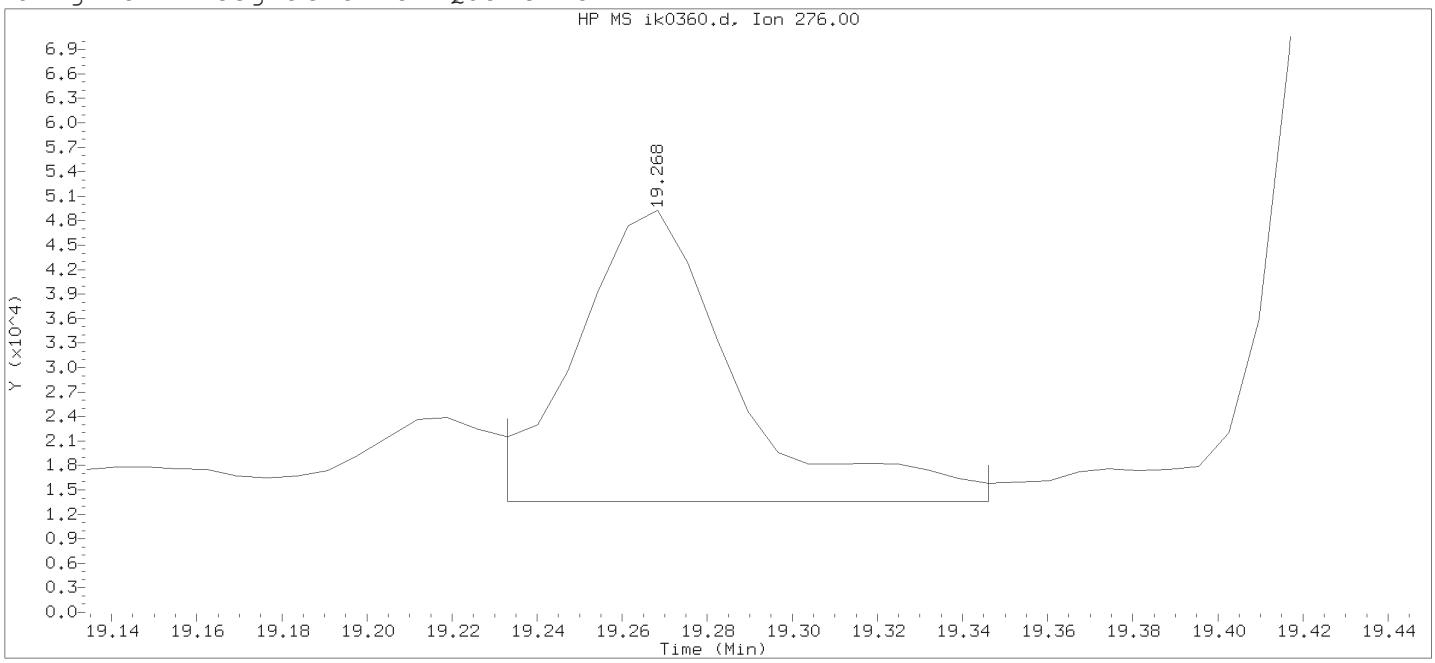
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

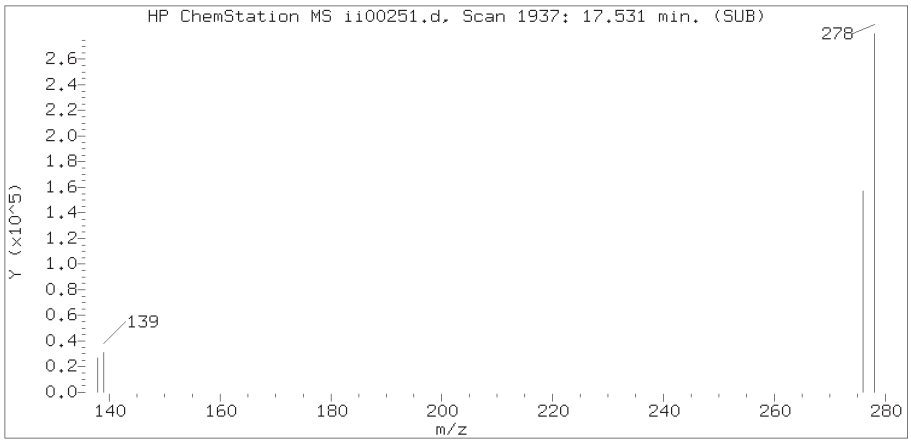
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

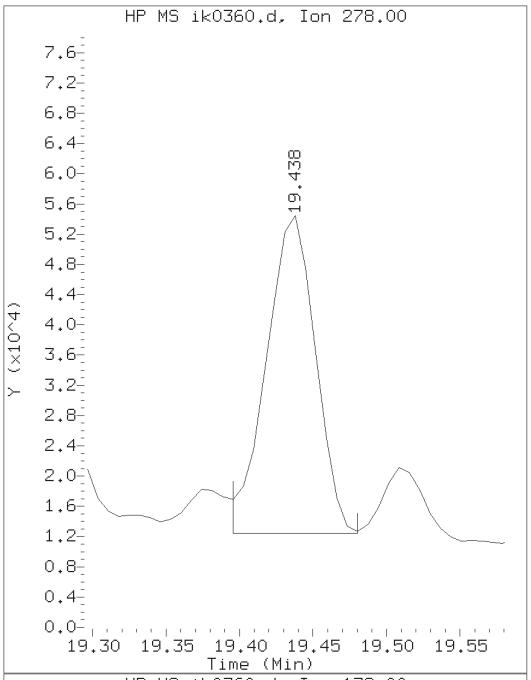
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	: 53
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 1738
Retention Time (minutes)	: 19.268
Quant Ion	: 276.00
Area	: 91940
On-column Amount (ng/ul)	: 0.7008
Integration start scan	: 1732 Integration stop scan: 1748
Y at integration start	: 13580 Y at integration end: 13580

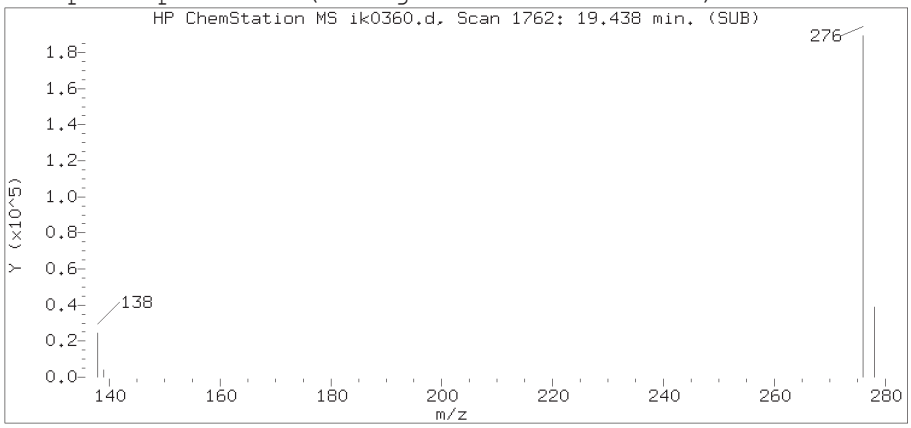
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature used: D10 Page 2130

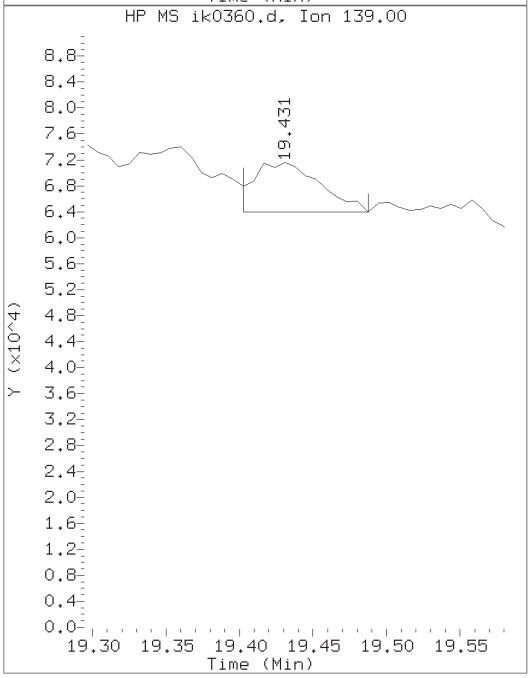
Reference Standard Spectrum for Dibenz(a,h)anthracene



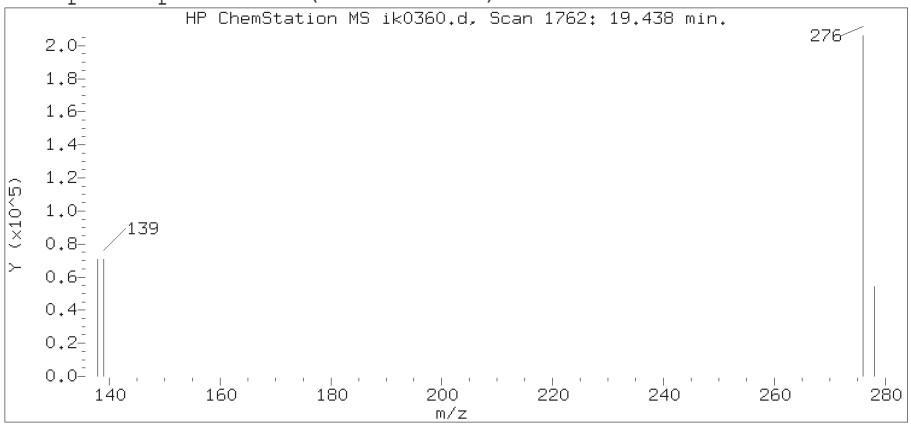


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

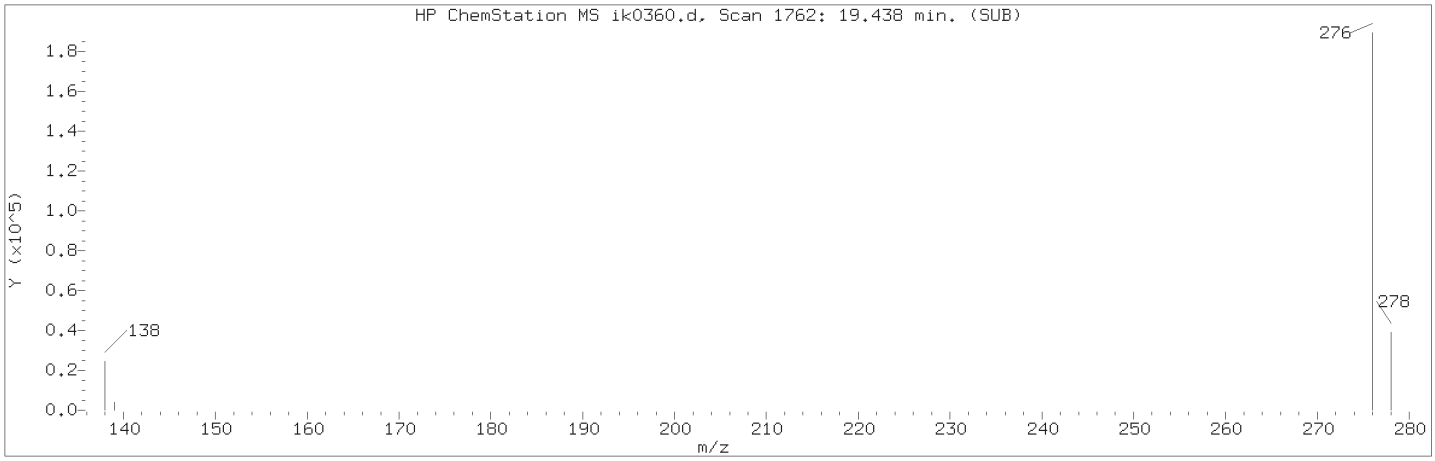
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

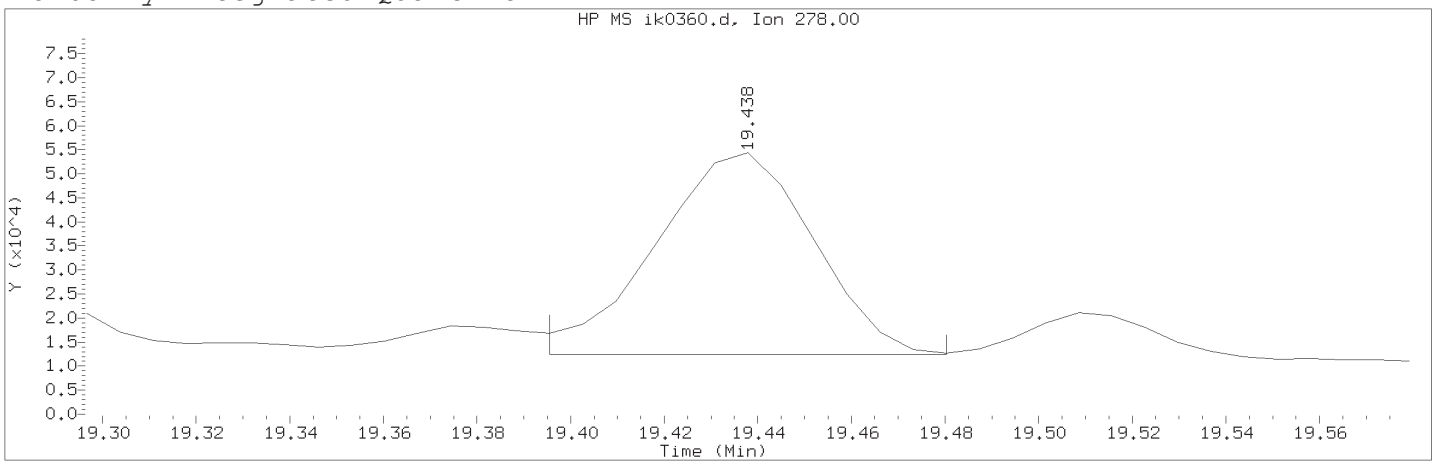
Compound Number	: 54
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 1762
Retention Time (minutes)	: 19.438
Relative Retention Time	: 0.00101
Quant Ion	: 278.00
Area (flag)	: 98872AM
On-column Amount (ng/ul)	: 0.6095

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

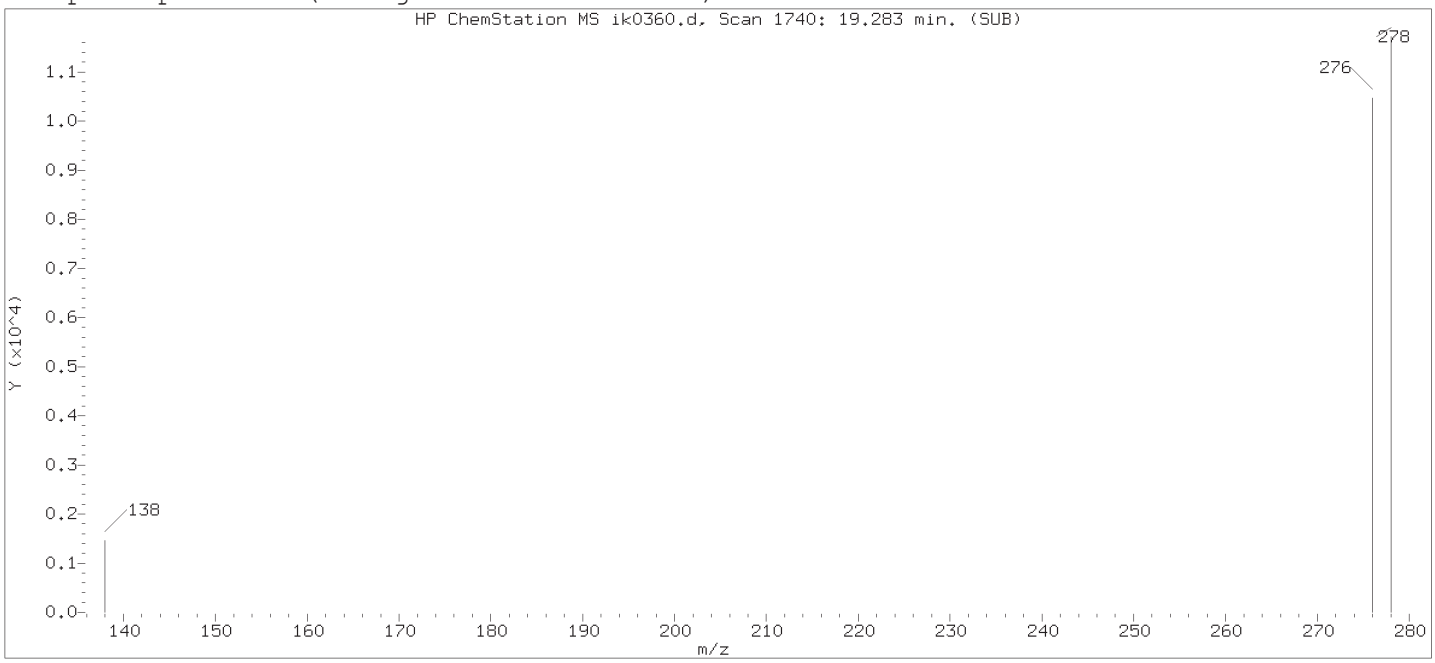
Compound Number : 54
Compound Name : Dibenz(a,h)anthracene
Scan Number : 1762
Retention Time (minutes) : 19.438
Quant Ion : 278.00
Area (flag) : 98872AM
On-column Amount (ng/ul) : 0.6095
Integration start scan : 1755 Integration stop scan: 1767
Y at integration start : 12404 Y at integration end: 12404

Reason for manual integration: improper integration

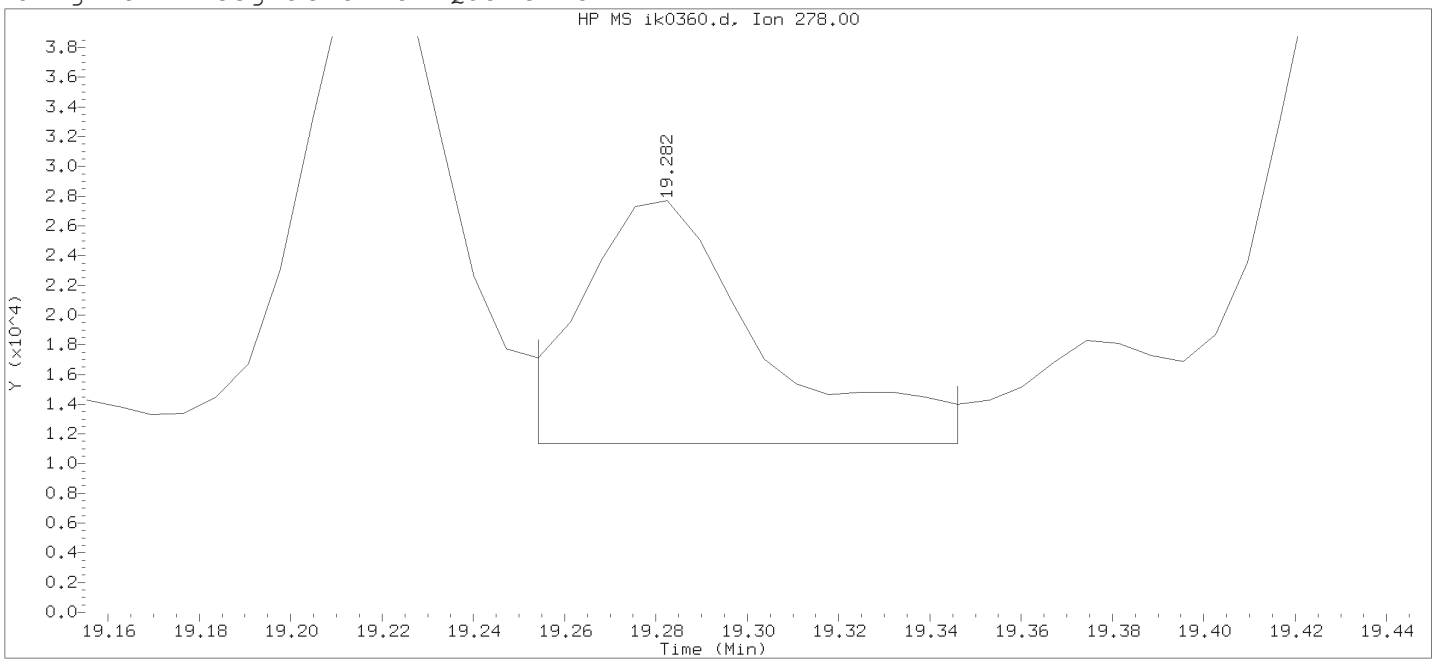
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

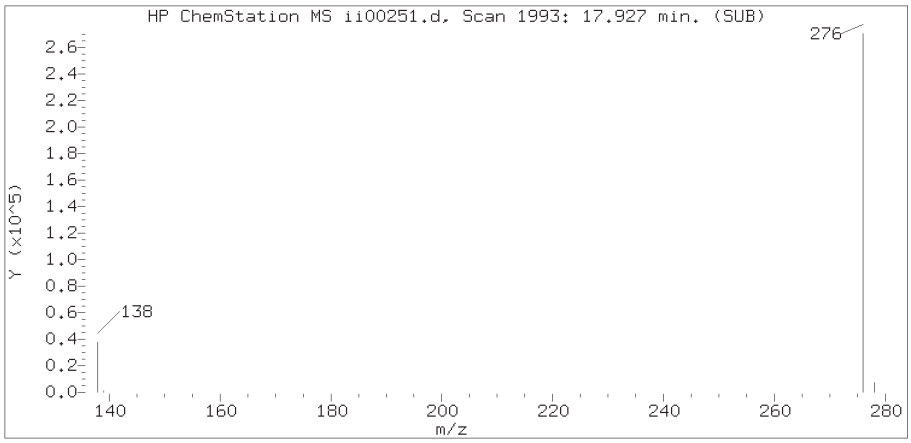
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

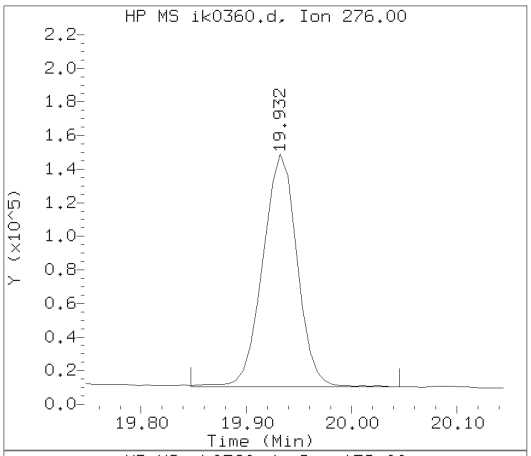
Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	:	54
Compound Name	:	Dibenz(a,h)anthracene
Scan Number	:	1740
Retention Time (minutes)	:	19.282
Quant Ion	:	278.00
Area	:	43772
On-column Amount (ng/ul)	:	0.4086
Integration start scan	:	1735 Integration stop scan: 1748
Y at integration start	:	11371 Y at integration end: 11371

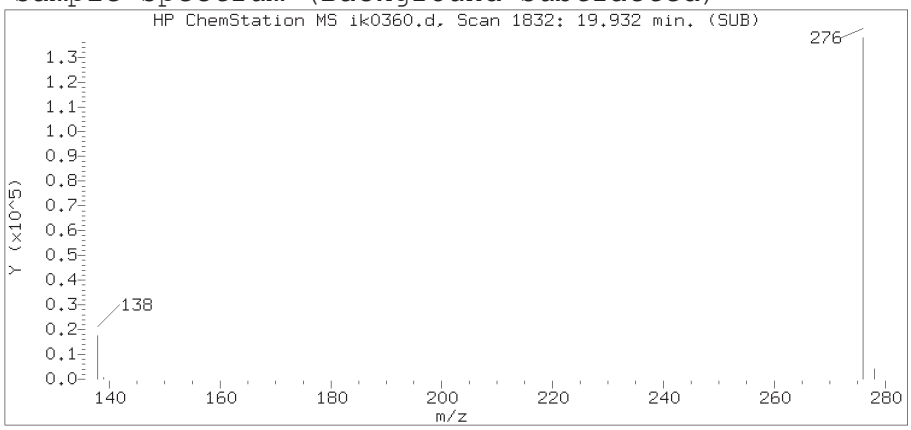
Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature used: D10 Page 2133

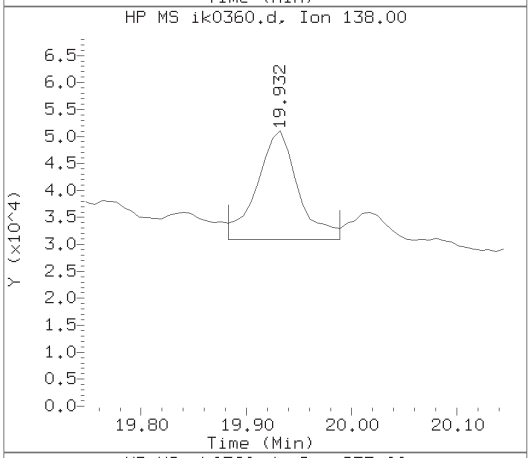
Reference Standard Spectrum for Benzo(g,h,i)perylene



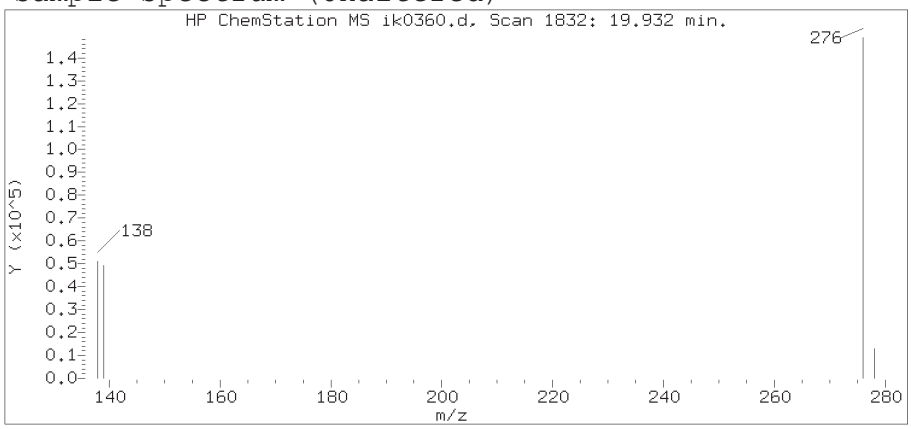


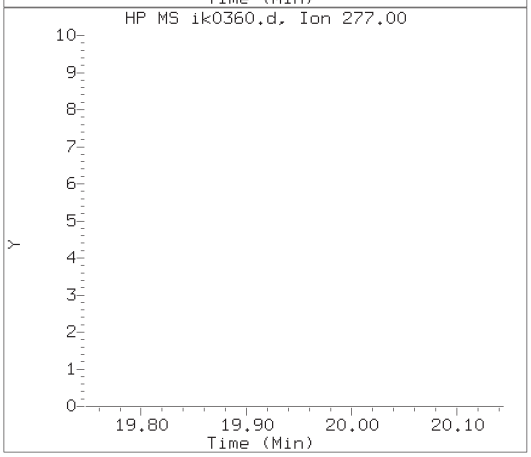
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

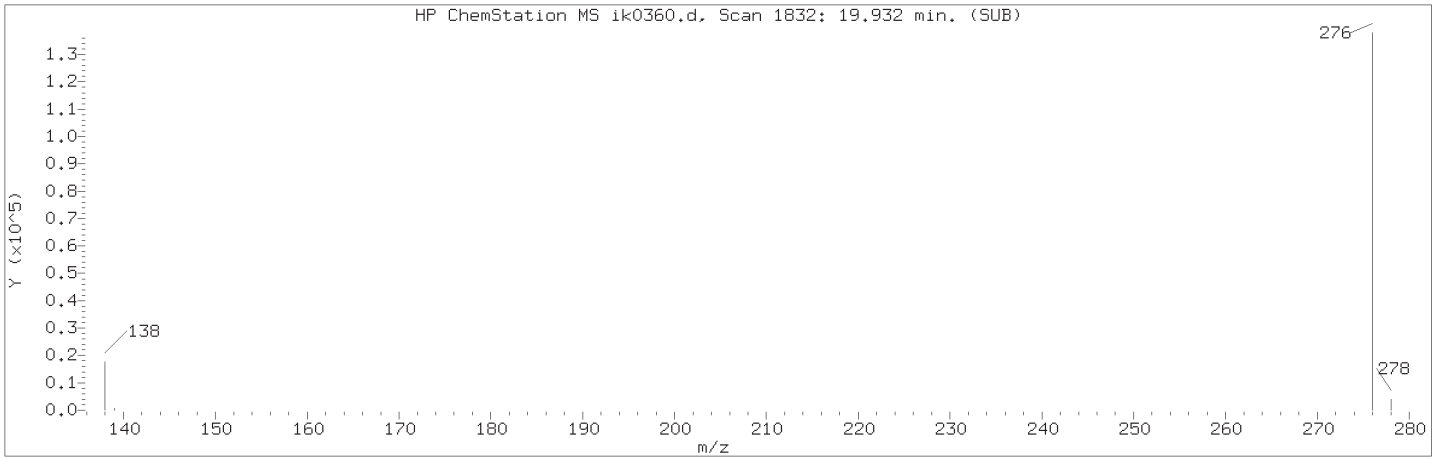
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

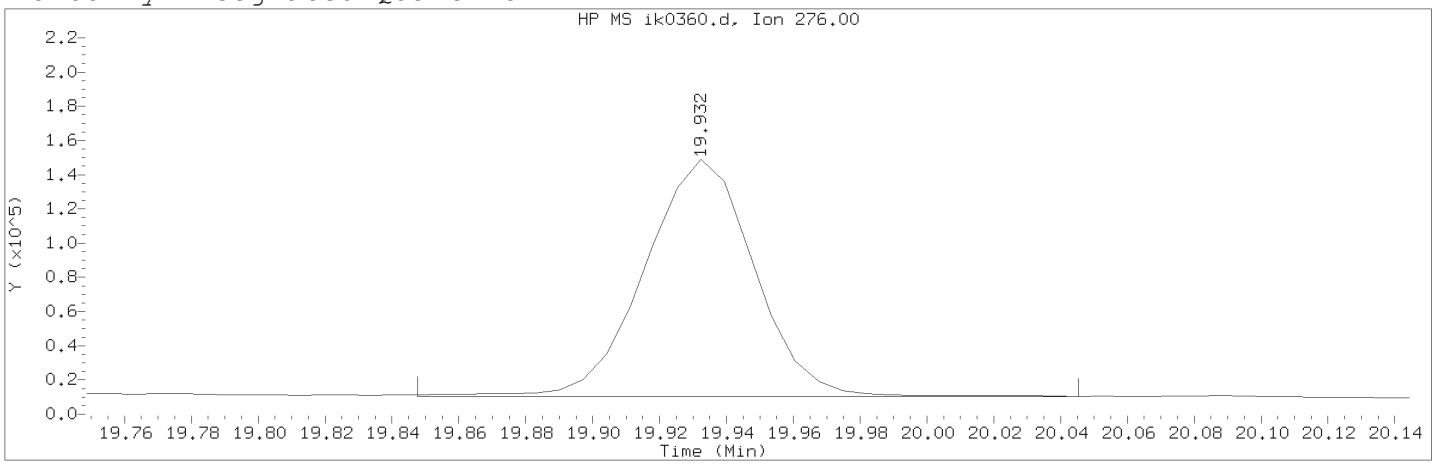
Compound Number	: 55
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 1832
Retention Time (minutes)	: 19.932
Relative Retention Time	: 0.00080
Quant Ion	: 276.00
Area (flag)	: 315616A
On-column Amount (ng/ul)	: 1.8068

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:35 apb10206

Sample Name: T1005RE Lab Sample ID: 9867767RE

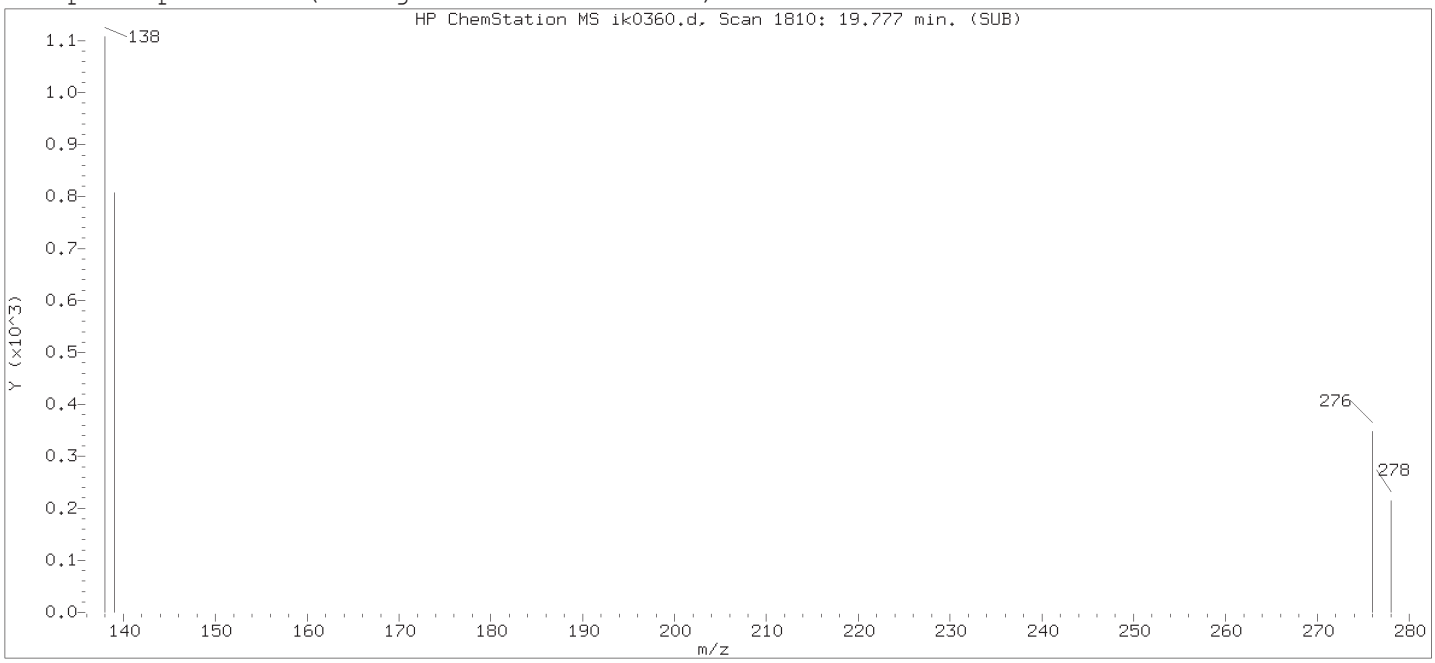
Compound Number : 55
Compound Name : Benzo(g,h,i)perylene
Scan Number : 1832
Retention Time (minutes) : 19.932
Quant Ion : 276.00
Area (flag) : 315616A
On-column Amount (ng/ul) : 1.8068
Integration start scan : 1819 Integration stop scan: 1847
Y at integration start : 10396 Y at integration end: 10396

Reason for manual integration: improper integration

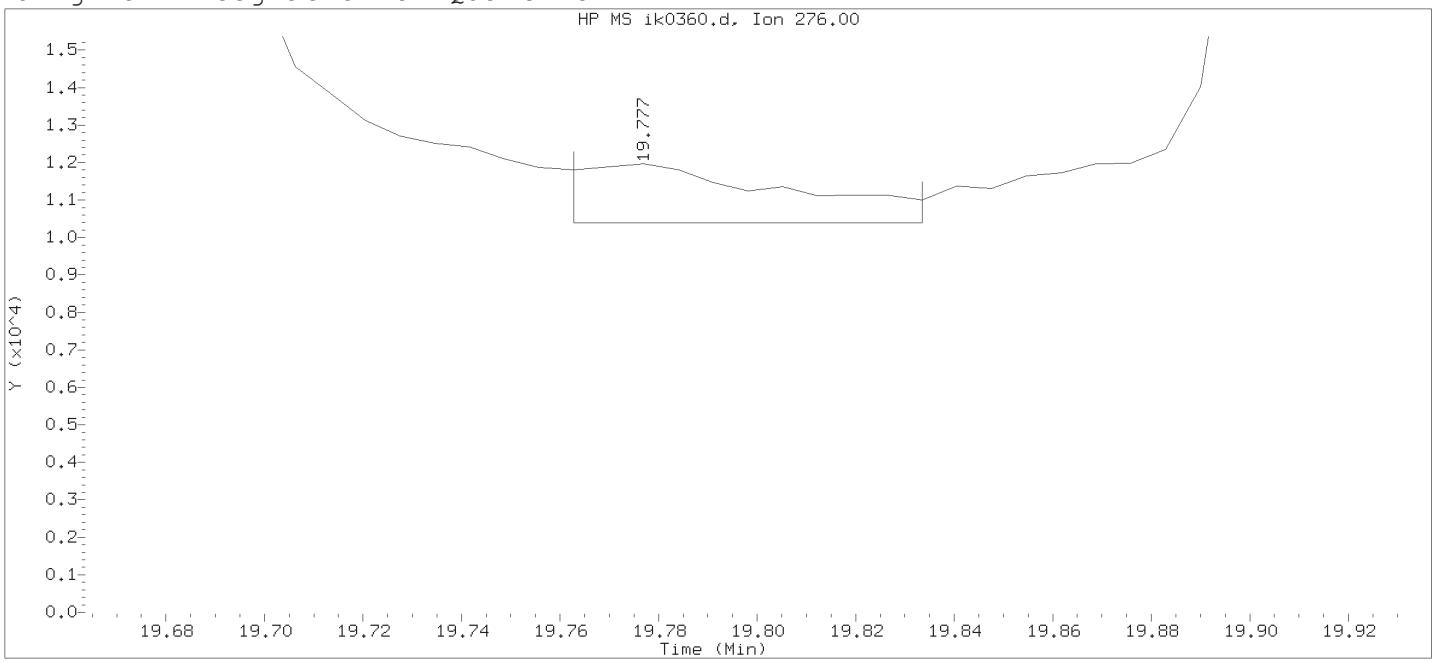
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/14/2018 at 07:38.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0360.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:05 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 12:31 Automation

Sample Name: T1005RE Lab Sample ID: 9867767RE

Compound Number	: 55
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 1810
Retention Time (minutes)	: 19.777
Quant Ion	: 276.00
Area	: 4465
On-column Amount (ng/ul)	: 0.0387
Integration start scan	: 1807 Integration stop scan: 1817
Y at integration start	: 10396 Y at integration end: 10396

Digitally signed by Joseph M. Gambler on 11/13/2018 at 07:47.
Target 3.5 esignature used: D10 Page 2136

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10976.i/18nov08.b/ik0361.d Injection date and time: **08-NOV-2018 12:35**
Data file Sample Info. Line: T1005DL;9867767DL;2;0;SAMPLE;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov08.b/ik0351.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 10 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.39 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.794	(0.000)	499	152	72641	(3)	1.00	
10) Naphthalene-d8	8.320	(-0.013)	614	136	262701	(1)	1.00	
20) Acenaphthene-d10	10.478	(-0.011)	801	164	170283	(6)	1.00	
31) Phenanthrene-d10	12.323	(-0.011)	966	188	377331	(8)	1.00	
43) Chrysene-d12	15.613	(-0.016)	1267	240	415172	(14)	1.00	
51) Perylene-d12	17.584	(-0.047)	1519	264	274561	(-24)	1.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.261	(0.000)	152	13564MA	0.085	85%		61 - 111
36) Fluoranthene-d10	(4)	13.819	(0.000)	212	39062M	0.083	83%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.458	(0.000)	264	18292	0.070	70%		54 - 122

M = Surrogate Standard was manually integrated. A = User selected an alternate peak.

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)				Not Detected					0.02
11) Naphthalene	(2)	8.346	(0.000)	128	21254	0.079	25.85	31.312	B	0.04
19) Acenaphthylene	(3)	10.304	(-0.000)	152	6233	0.019	6.29			0.01
21) Acenaphthene	(3)				Not Detected					0.02
26) Fluorene	(3)				Not Detected					0.02
32) Phenanthrene	(4)	12.357	(0.000)	178	73094	0.179	59.00	2.56	B	0.02
33) Anthracene	(4)	12.413	(0.000)	178	20256	0.050	16.33	0.732	B	0.02
35) Di-n-butylphthalate	(4)				Not Detected					0.2
37) Fluoranthene	(4)	13.844	(0.000)	202	223604M	0.441	144.96			0.02
39) Pyrene	(5)	14.124	(0.000)	202	219570	0.382	125.73			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.550	(-0.000)	149	1478560	5.414	1781.50			0.3
42) Benzo(a)anthracene	(5)	15.597	(-0.000)	228	139387	0.261	85.87			0.02
44) Chrysene	(5)	15.628	(0.001)	228	314568	0.617	202.87			0.01
46) Benzo(b)fluoranthene	(6)	17.005	(0.000)	252	370302M	1.084	356.84			0.02
47) Benzo(k)fluoranthene	(6)	17.028	(0.001)	252	135601M	0.424	139.39			0.02
50) Benzo(a)pyrene	(6)	17.498	(-0.000)	252	95757	0.327	107.67			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.367	(-0.000)	276	82473M	0.239	78.63			0.02
54) Dibenz(a,h)anthracene	(6)	19.367	(0.000)	278	21997	0.078	25.69			0.02
55) Benzo(g,h,i)perylene	(6)	19.862	(-0.000)	276	64955	0.214	70.44			0.02

B = Compound detected in referenced method blank. M = Compound was manually integrated.

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36. Target 3.5 esignature user ID: apb10206

Data file: /chem/HP10976.i/18nov08.b/ik0361.d Injection date and time: **08-NOV-2018 12:35**
Data file Sample Info. Line: T1005DL;9867767DL;2;0;SAMPLE;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov08.b/ik0351.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

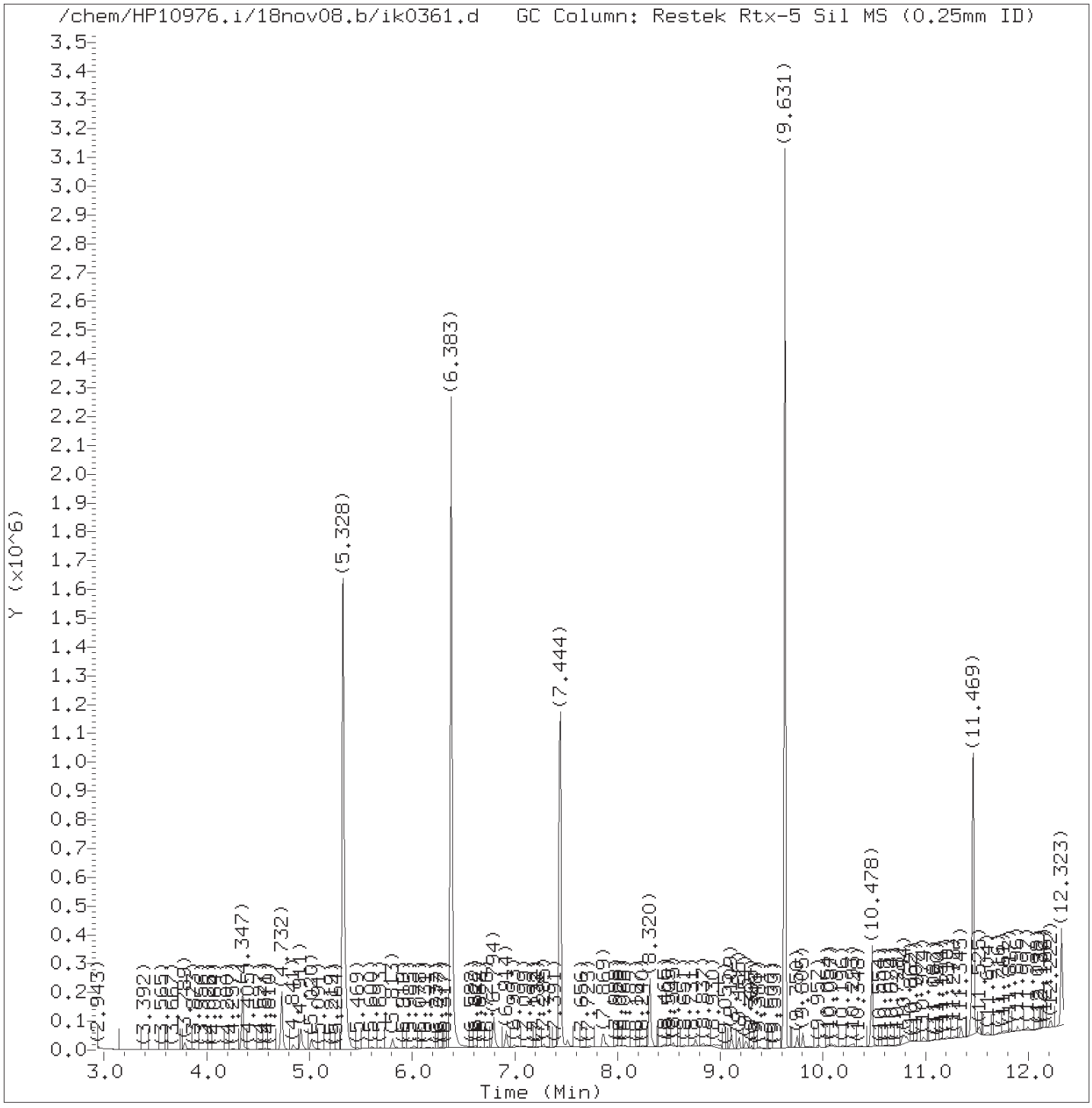
Dilution Factor (DF): 10 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.39 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

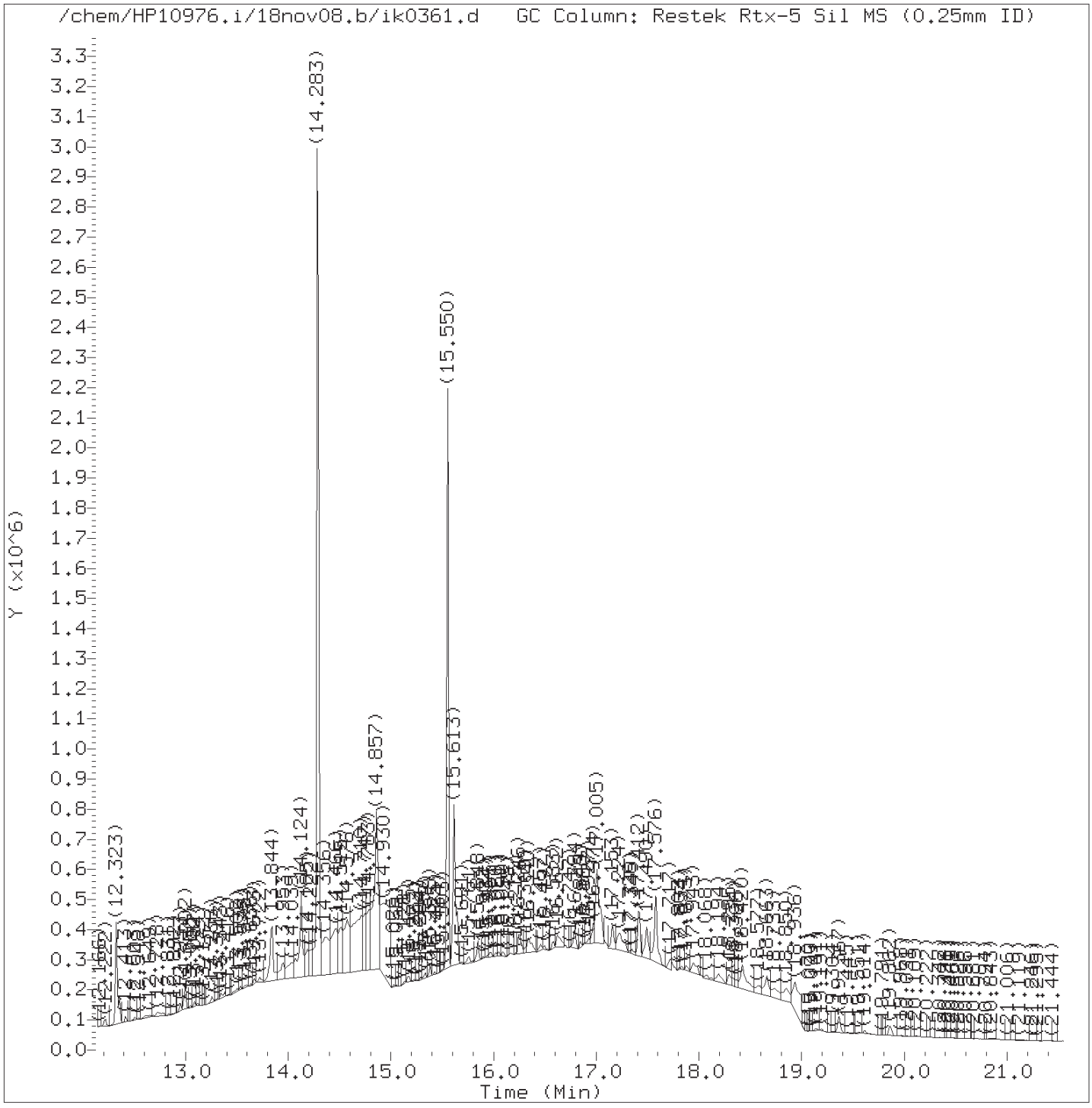
Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

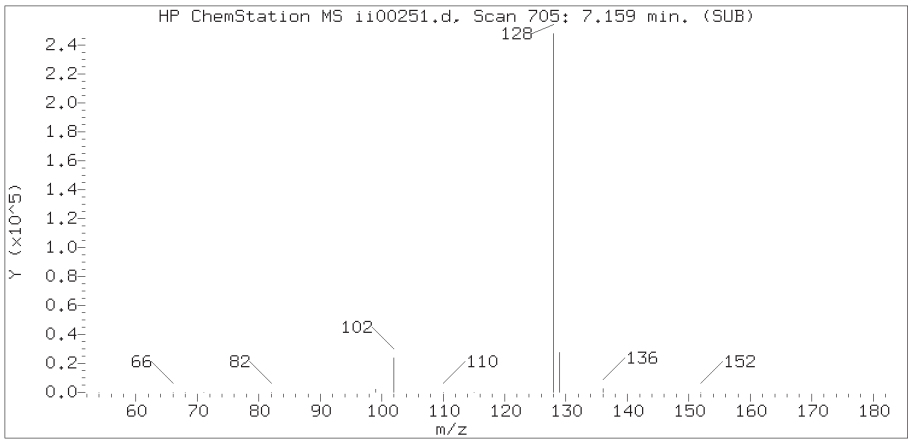
Sample Name: T1005DL Lab Sample ID: 9867767DL

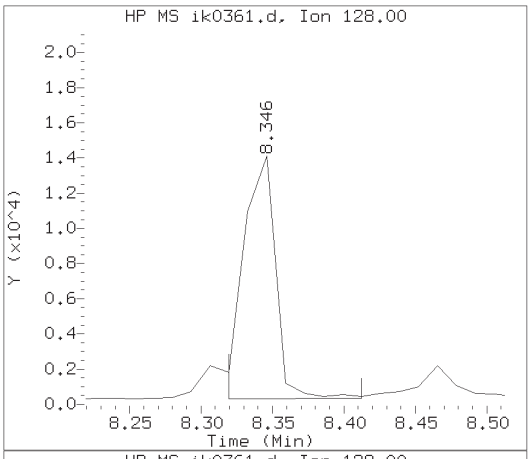
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
6)*1,4-Dichlorobenzene-d4	(1)	6.794	152	72641	1.000
10)*Naphthalene-d8	(2)	8.320	136	262701	1.000
11) Naphthalene	(2)	8.346	128	21254	0.079
14)$1-Methylnaphthalene-d10	(2)	9.261	152	13564MA	0.085
19) Acenaphthylene	(3)	10.304	152	6233	0.019
20)*Acenaphthene-d10	(3)	10.478	164	170283	1.000
31)*Phenanthrene-d10	(4)	12.323	188	377331	1.000
32) Phenanthrene	(4)	12.357	178	73094	0.179
33) Anthracene	(4)	12.413	178	20256	0.050
36)$Fluoranthene-d10	(4)	13.819	212	39062M	0.083
37) Fluoranthene	(4)	13.844	202	223604M	0.441
39) Pyrene	(5)	14.124	202	219570	0.382
41) bis(2-Ethylhexyl)phthalate	(5)	15.550	149	1478560	5.414
42) Benzo(a)anthracene	(5)	15.597	228	139387	0.261
43)*Chrysene-d12	(5)	15.613	240	415172	1.000
44) Chrysene	(5)	15.629	228	314568	0.617
46) Benzo(b)fluoranthene	(6)	17.005	252	370302M	1.084
47) Benzo(k)fluoranthene	(6)	17.028	252	135601M	0.424
49)$Benzo(a)pyrene-d12	(6)	17.458	264	18292	0.070
50) Benzo(a)pyrene	(6)	17.498	252	95757	0.327
51)*Perylene-d12	(6)	17.584	264	274561	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.367	276	82473M	0.239
54) Dibenz(a,h)anthracene	(6)	19.367	278	21997	0.078
55) Benzo(g,h,i)perylene	(6)	19.862	276	64955	0.214

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

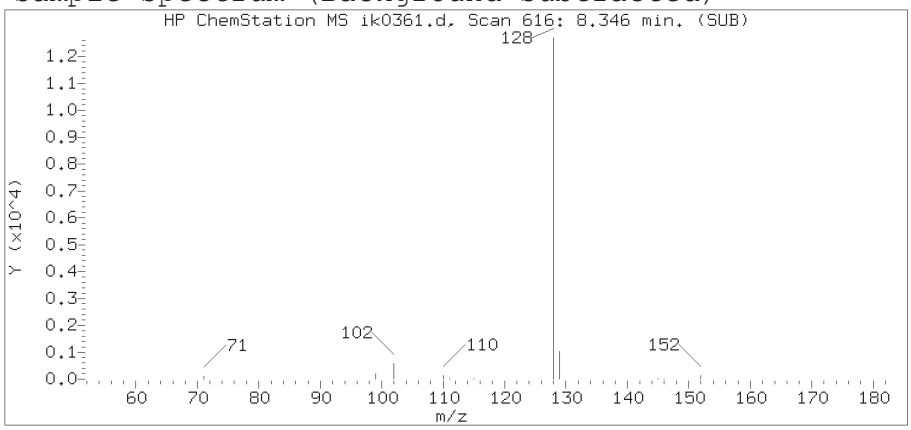
Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

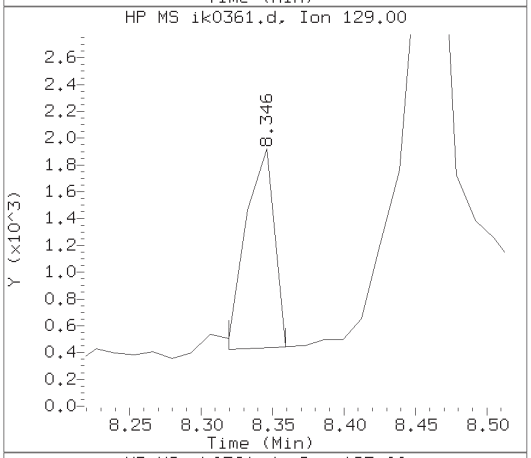
Reference Standard Spectrum for Naphthalene



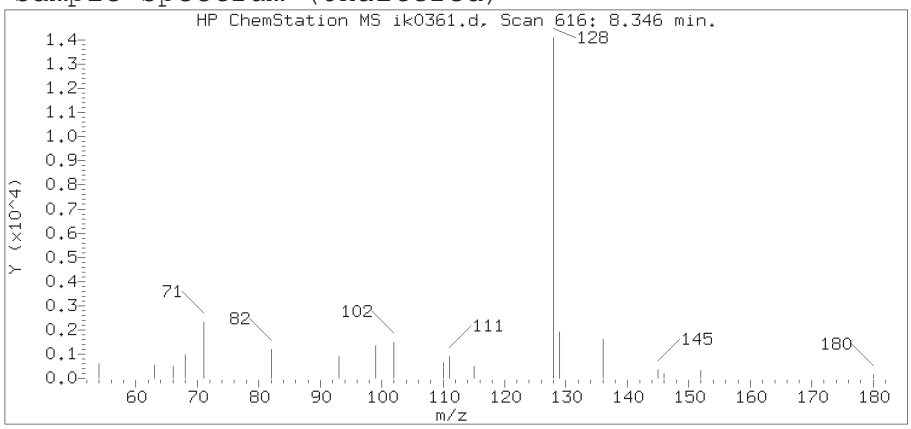


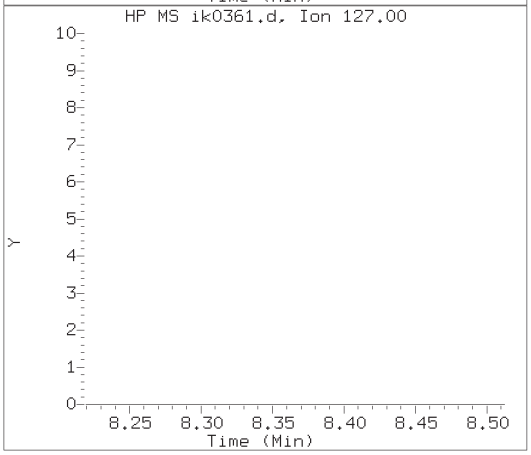
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

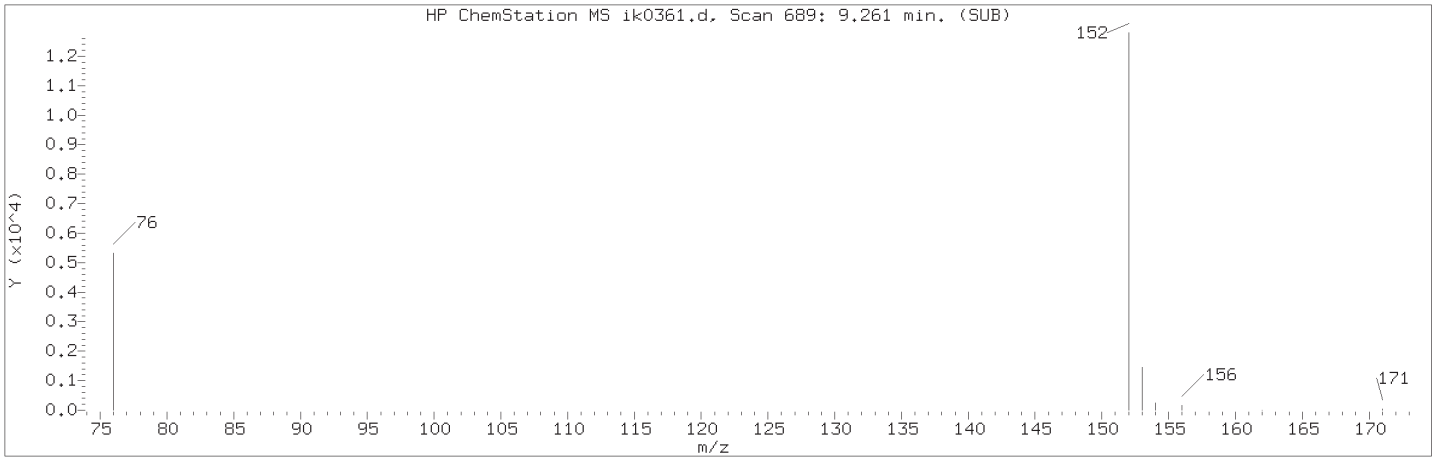
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

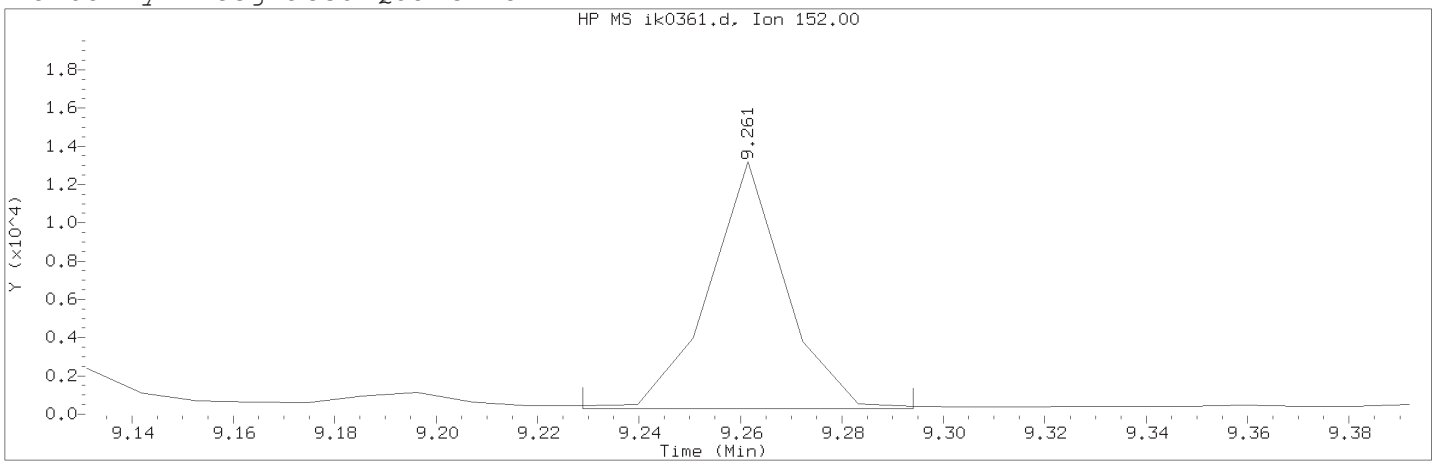
Compound Number	: 11
Compound Name	: Naphthalene
Scan Number	: 616
Retention Time (minutes)	: 8.346
Relative Retention Time	: 0.00001
Quant Ion	: 128.00
Area (flag)	: 21254
On-column Amount (ng/ul)	: 0.0786

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

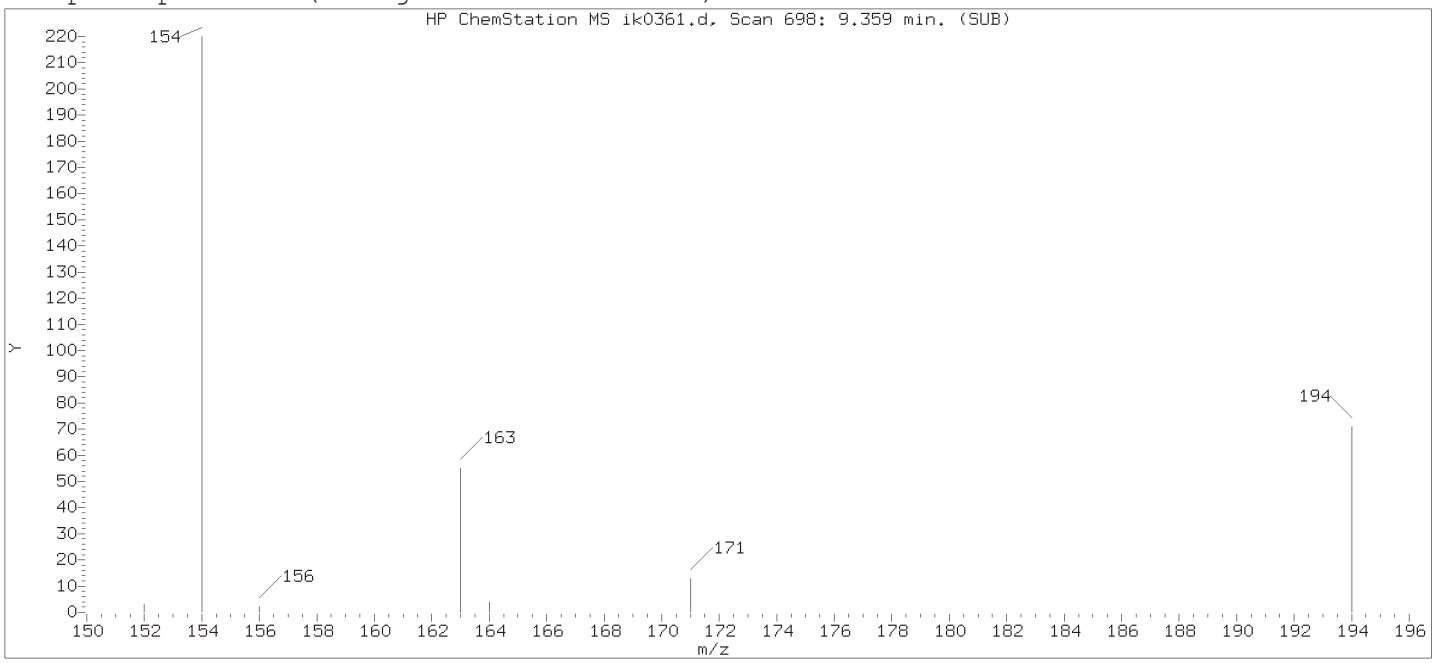
Compound Number	: 14		
Compound Name	: 1-Methylnaphthalene-d10		
Scan Number	: 689		
Retention Time (minutes)	: 9.261		
Quant Ion	: 152.00		
Area (flag)	: 13564AM		
On-column Amount (ng/ul)	: 0.0847		
Integration start scan	: 685	Integration stop scan:	691
Y at integration start	: 296	Y at integration end:	296

Reason for manual integration: improper integration

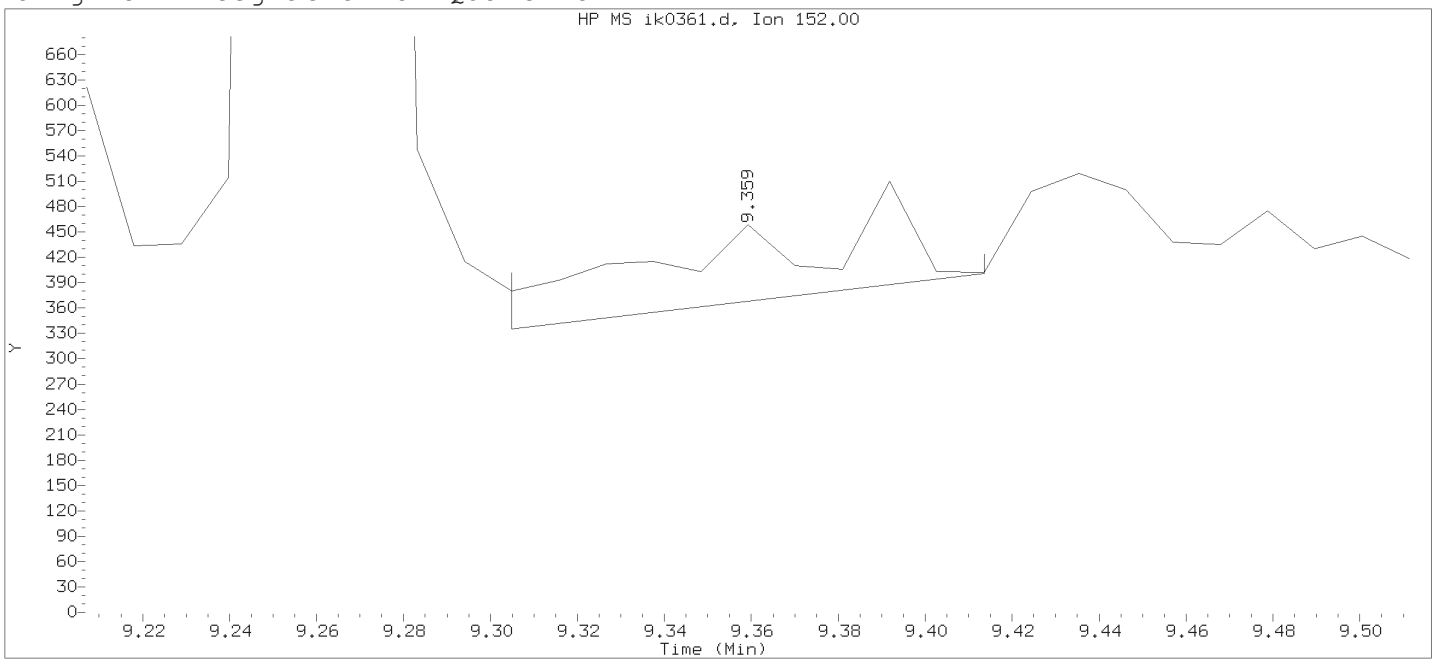
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

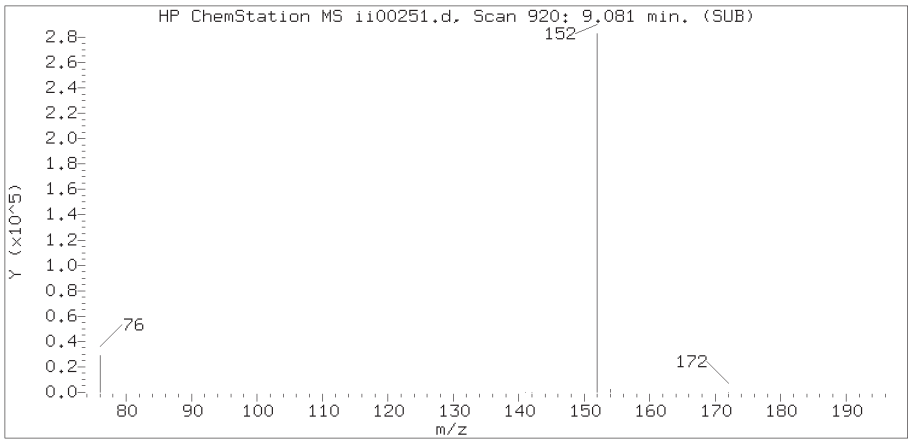
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 13:01 Automation

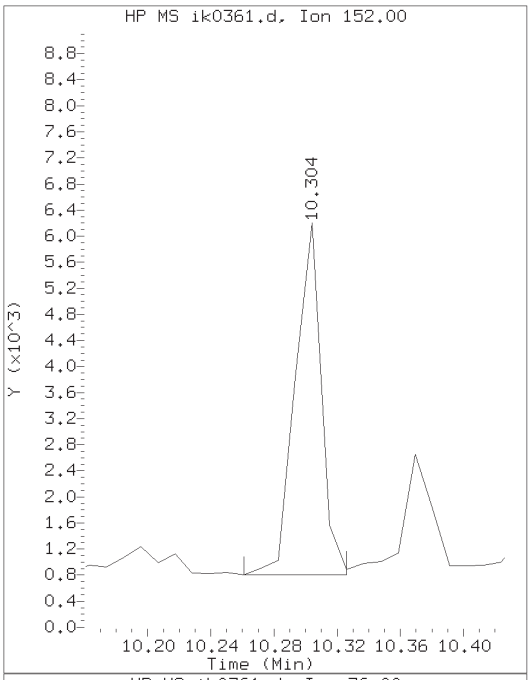
Sample Name: T1005DL Lab Sample ID: 9867767DL

Compound Number	: 14		
Compound Name	: 1-Methylnaphthalene-d10		
Scan Number	: 698		
Retention Time (minutes)	: 9.359		
Quant Ion	: 152.00		
Area	: 341		
On-column Amount (ng/ul)	: 0.0021		
Integration start scan	: 692	Integration stop scan:	702
Y at integration start	: 335	Y at integration end:	401

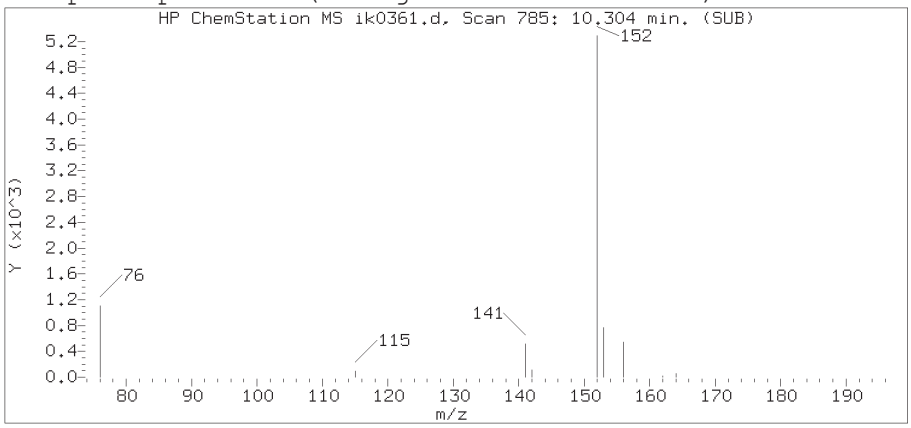
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature used [illegible]

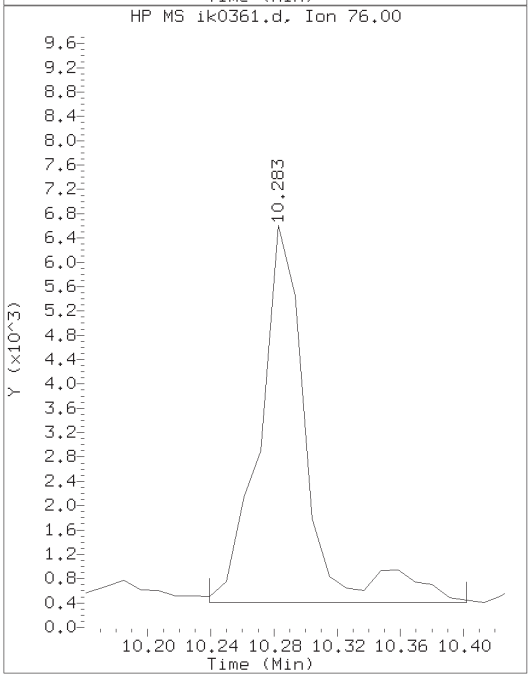
Reference Standard Spectrum for Acenaphthylene



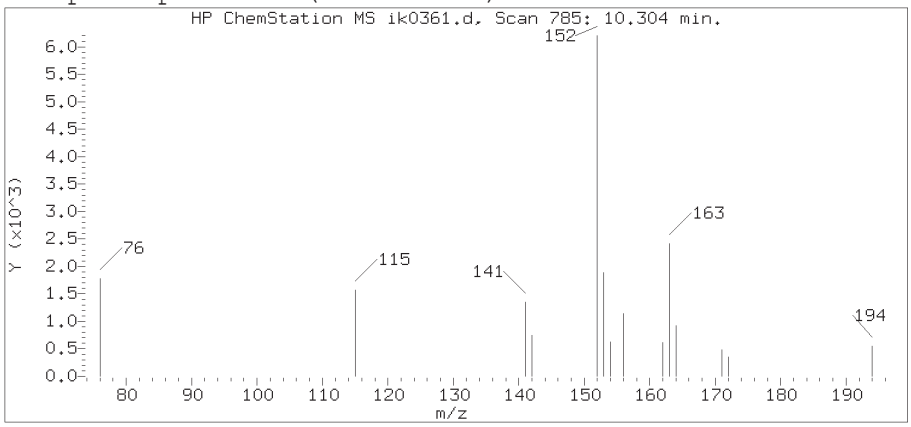


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

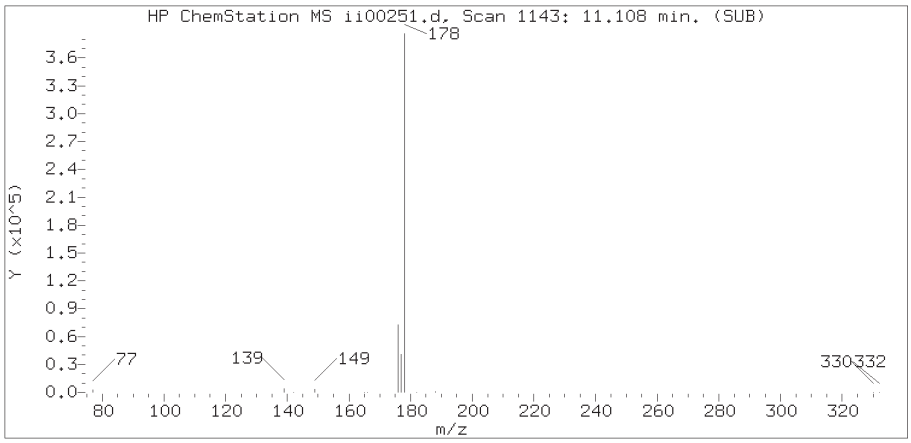
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

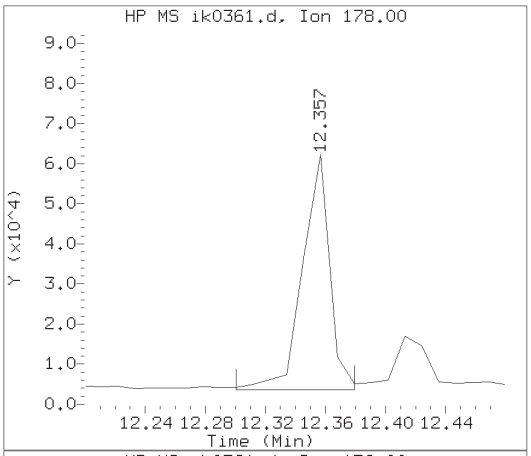
Sample Name: T1005DL Lab Sample ID: 9867767DL

Compound Number	: 19
Compound Name	: Acenaphthylene
Scan Number	: 785
Retention Time (minutes)	: 10.304
Relative Retention Time	:-0.00002
Quant Ion	: 152.00
Area (flag)	: 6233
On-column Amount (ng/ul)	: 0.0191

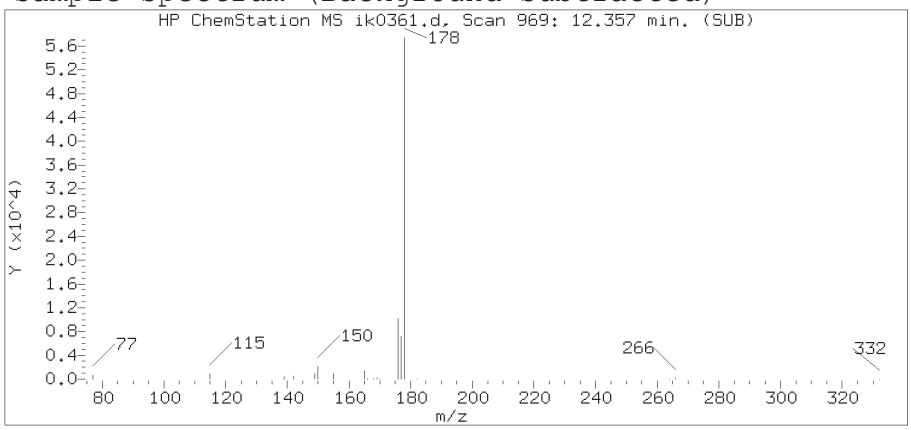
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

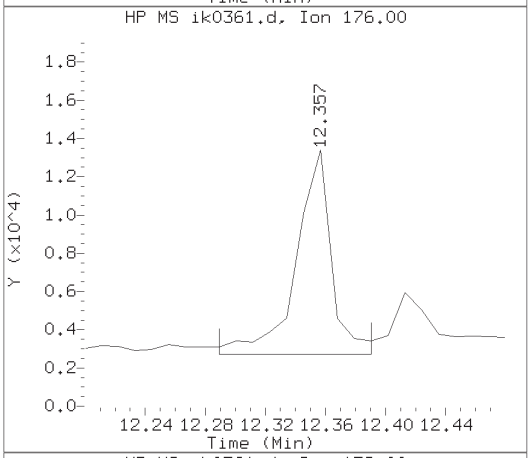
Reference Standard Spectrum for Phenanthrene



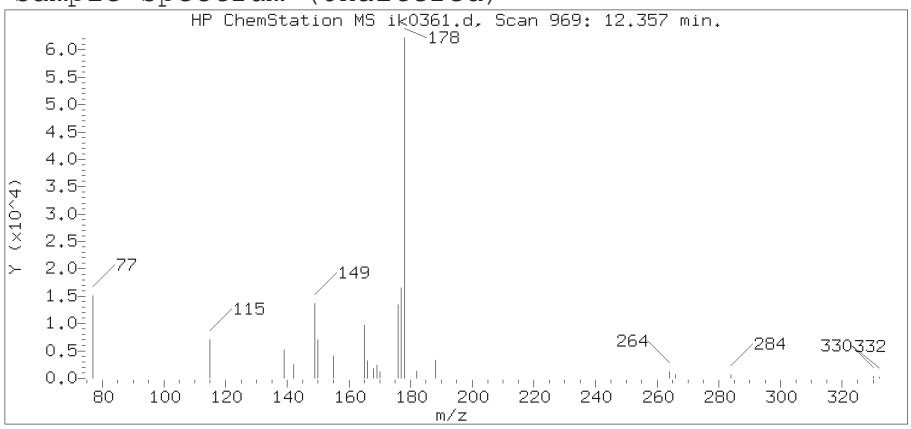


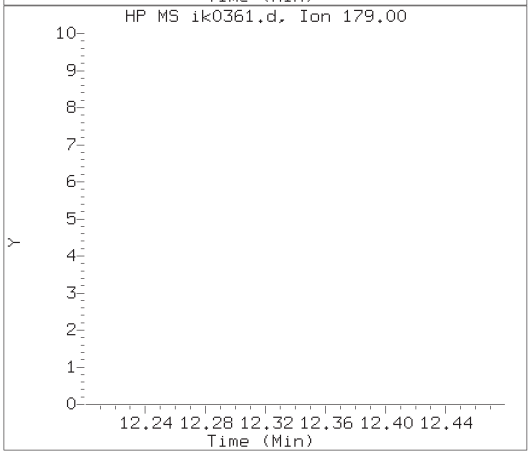
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

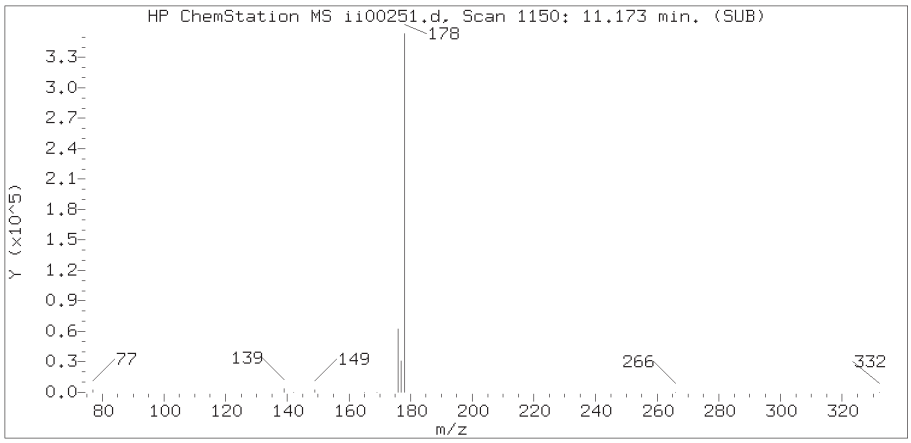
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

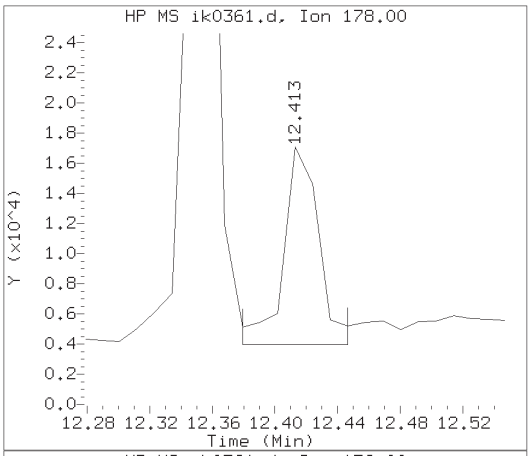
Sample Name: T1005DL Lab Sample ID: 9867767DL

Compound Number	: 32
Compound Name	: Phenanthrene
Scan Number	: 969
Retention Time (minutes)	: 12.357
Relative Retention Time	: 0.00000
Quant Ion	: 178.00
Area (flag)	: 73094
On-column Amount (ng/ul)	: 0.1793

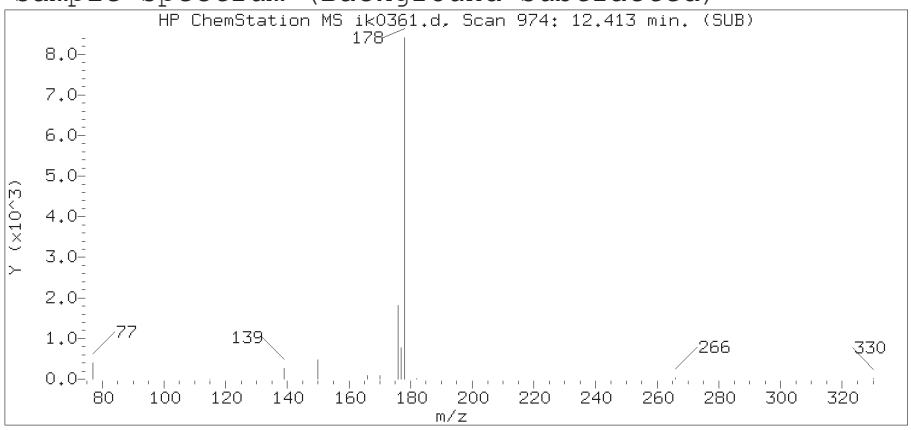
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

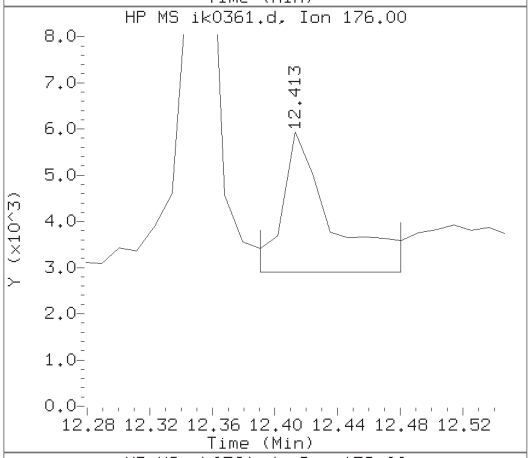
Reference Standard Spectrum for Anthracene



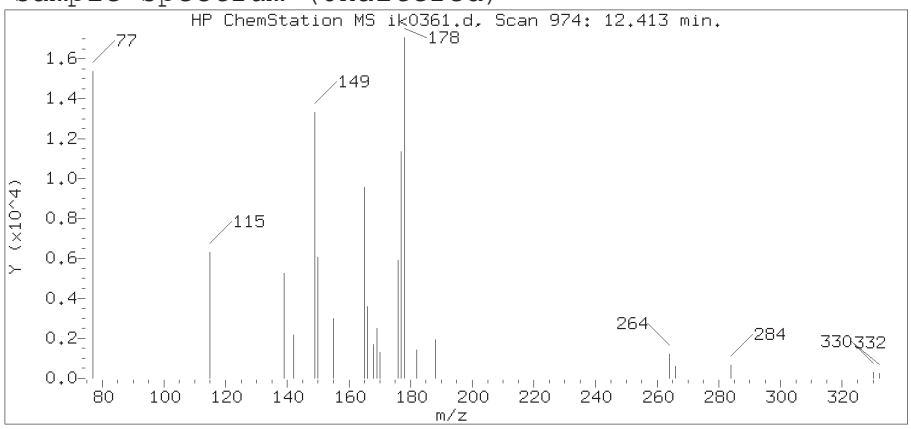


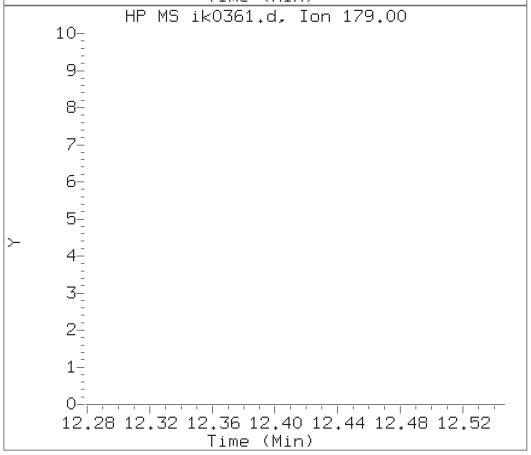
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

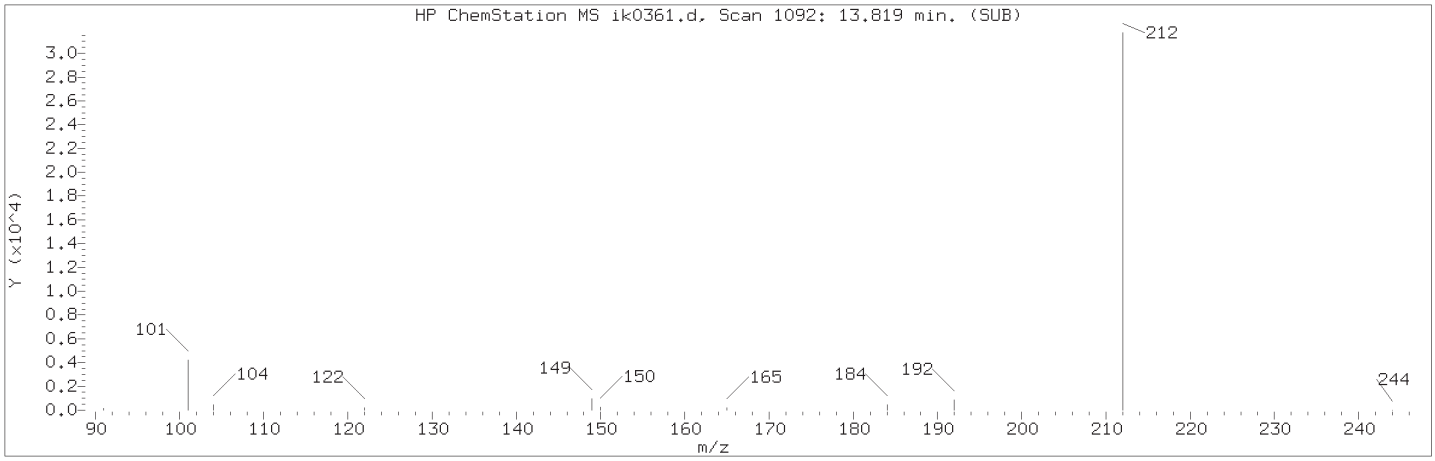
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

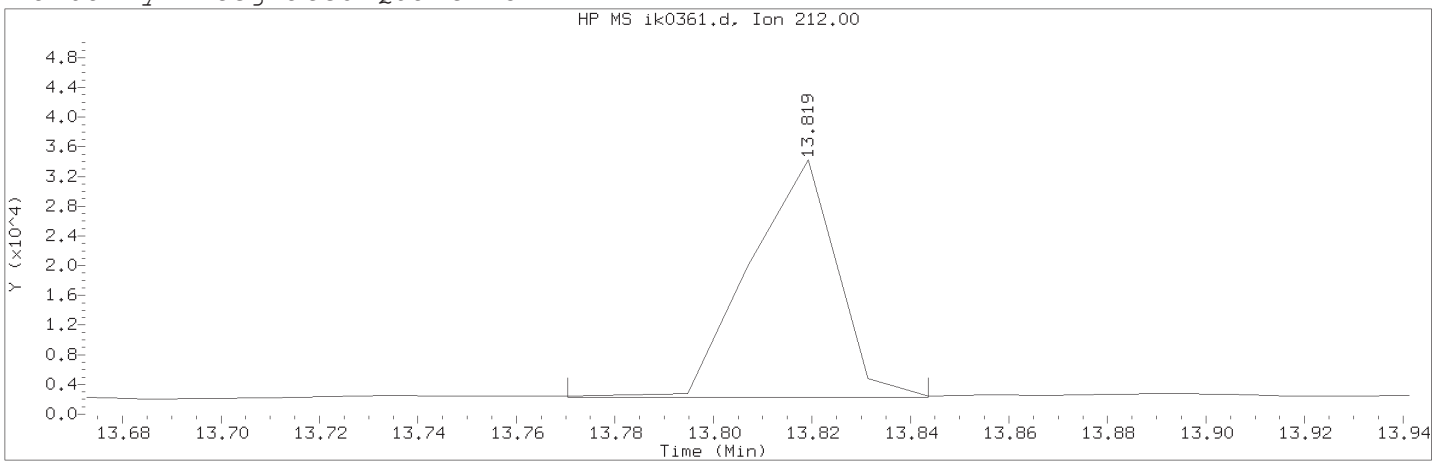
Compound Number	: 33
Compound Name	: Anthracene
Scan Number	: 974
Retention Time (minutes)	: 12.413
Relative Retention Time	: 0.00092
Quant Ion	: 178.00
Area (flag)	: 20256
On-column Amount (ng/ul)	: 0.0496

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

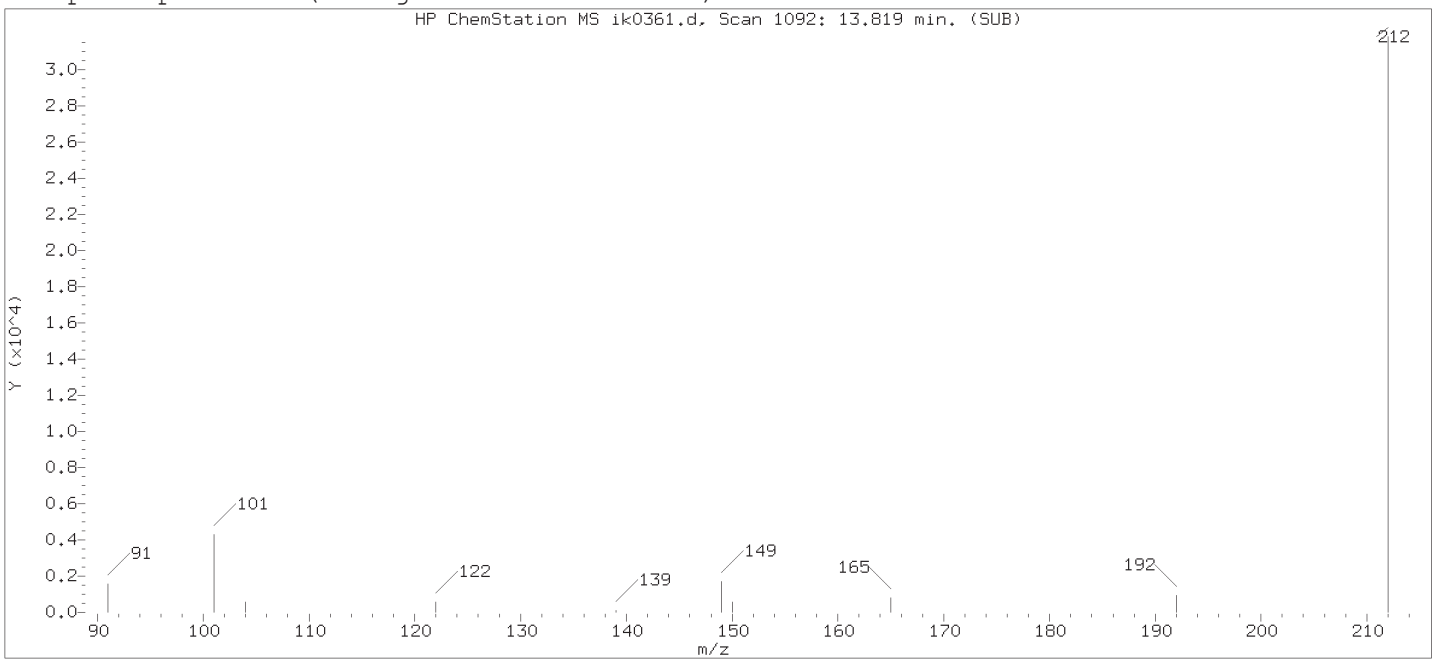
Compound Number : 36
Compound Name : Fluoranthene-d10
Scan Number : 1092
Retention Time (minutes) : 13.819
Quant Ion : 212.00
Area (flag) : 39062M
On-column Amount (ng/ul) : 0.0835
Integration start scan : 1087 Integration stop scan: 1093
Y at integration start : 2281 Y at integration end: 2281

Reason for manual integration: improper integration

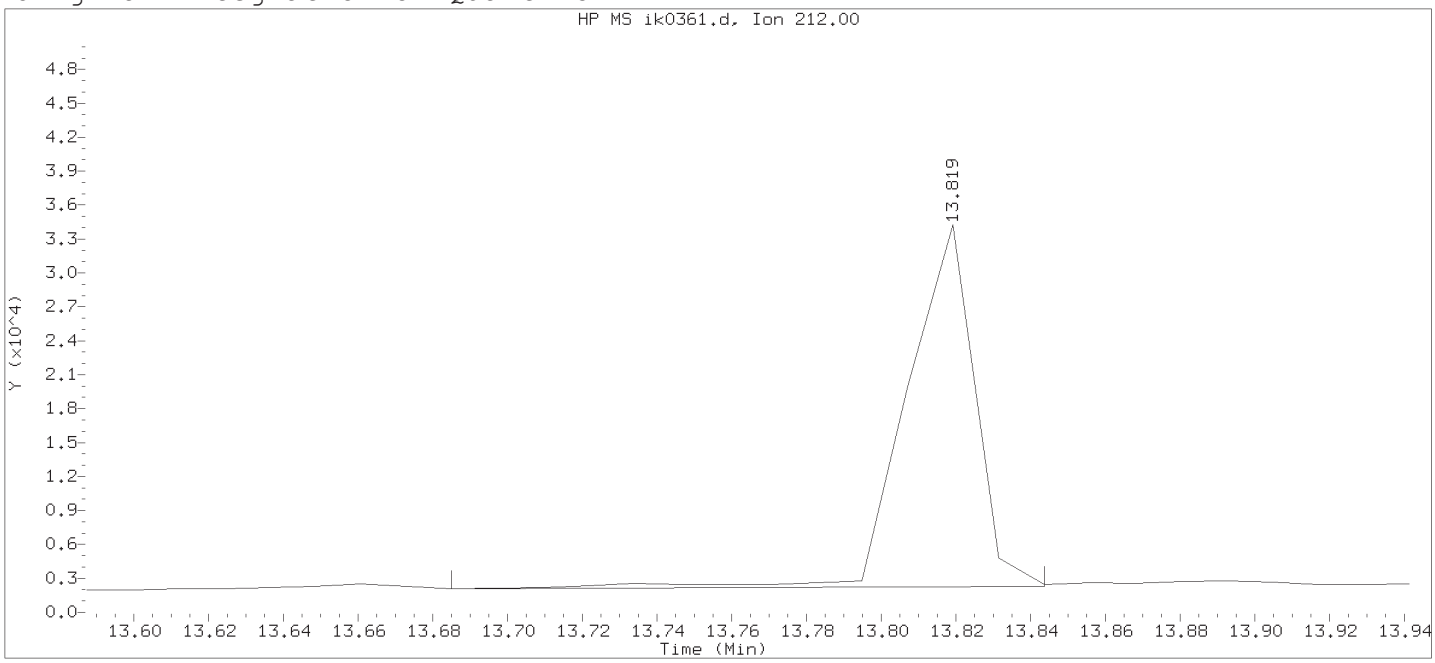
Analyst responsible for change: Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

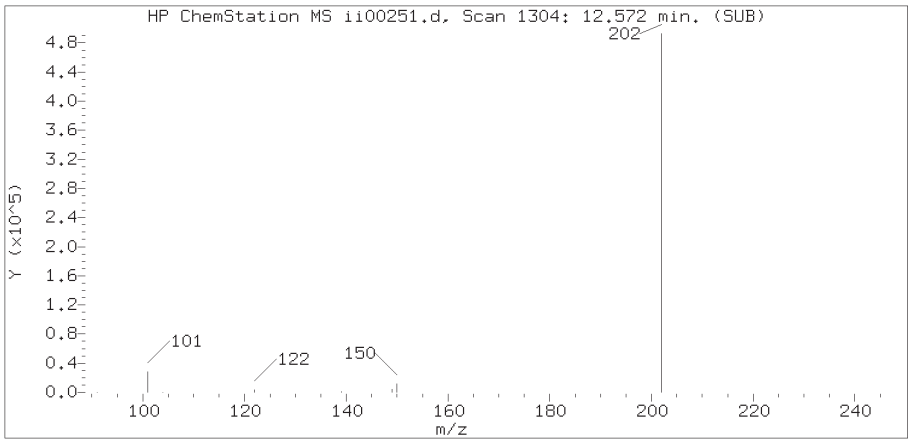
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 13:01 Automation

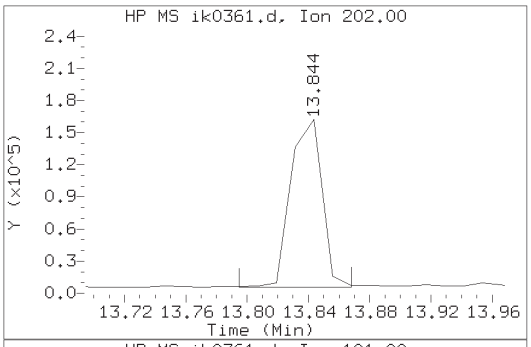
Sample Name: T1005DL Lab Sample ID: 9867767DL

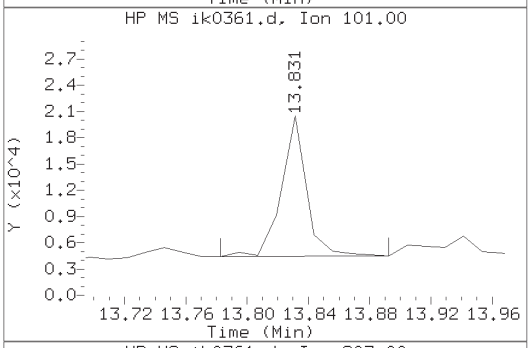
Compound Number	: 36		
Compound Name	: Fluoranthene-d10		
Scan Number	: 1092		
Retention Time (minutes)	: 13.819		
Quant Ion	: 212.00		
Area	: 40297		
On-column Amount (ng/ul)	: 0.0861		
Integration start scan	: 1080	Integration stop scan:	1093
Y at integration start	: 2053	Y at integration end:	2291

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature used [illegible]

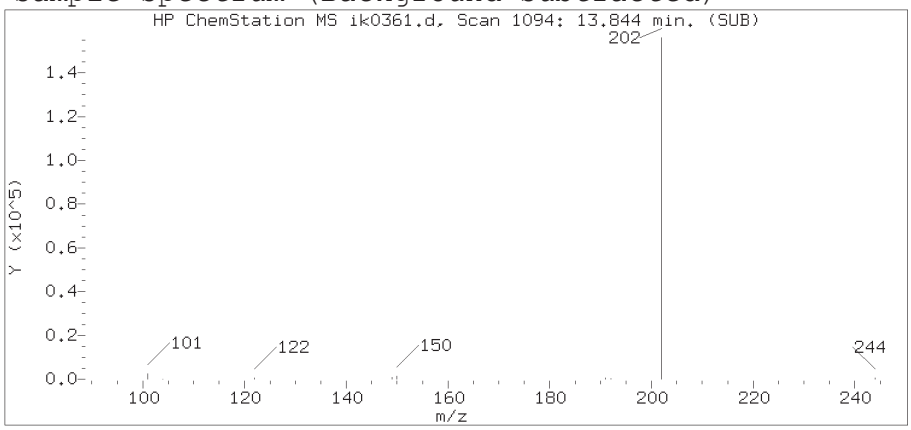
Reference Standard Spectrum for Fluoranthene

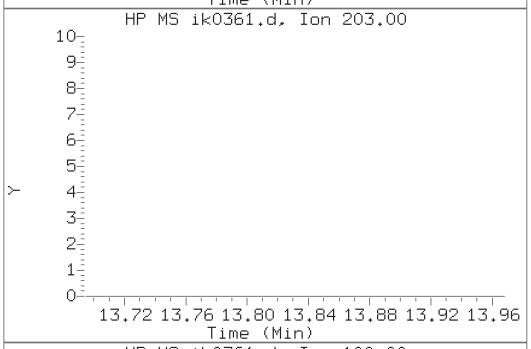




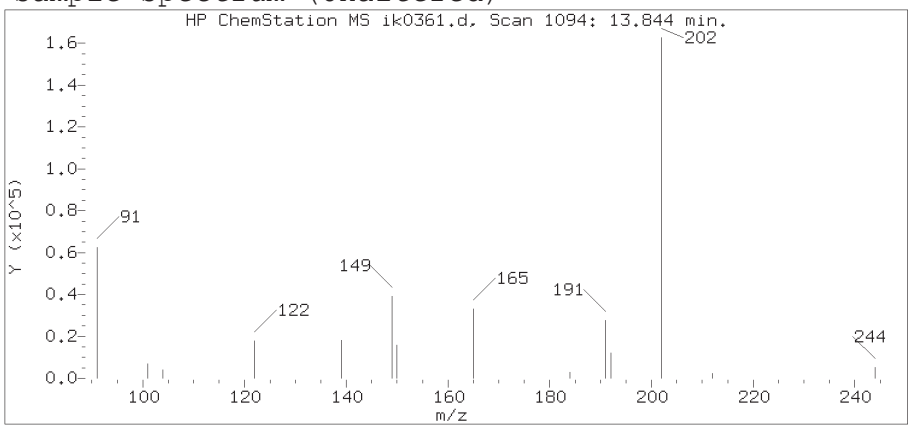


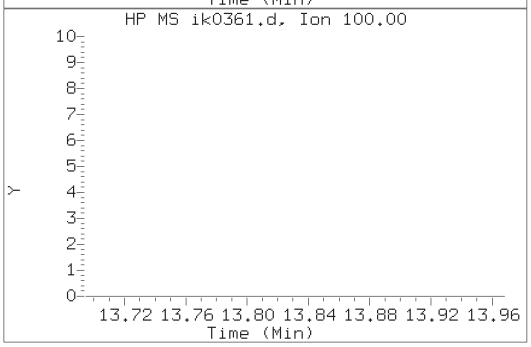
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

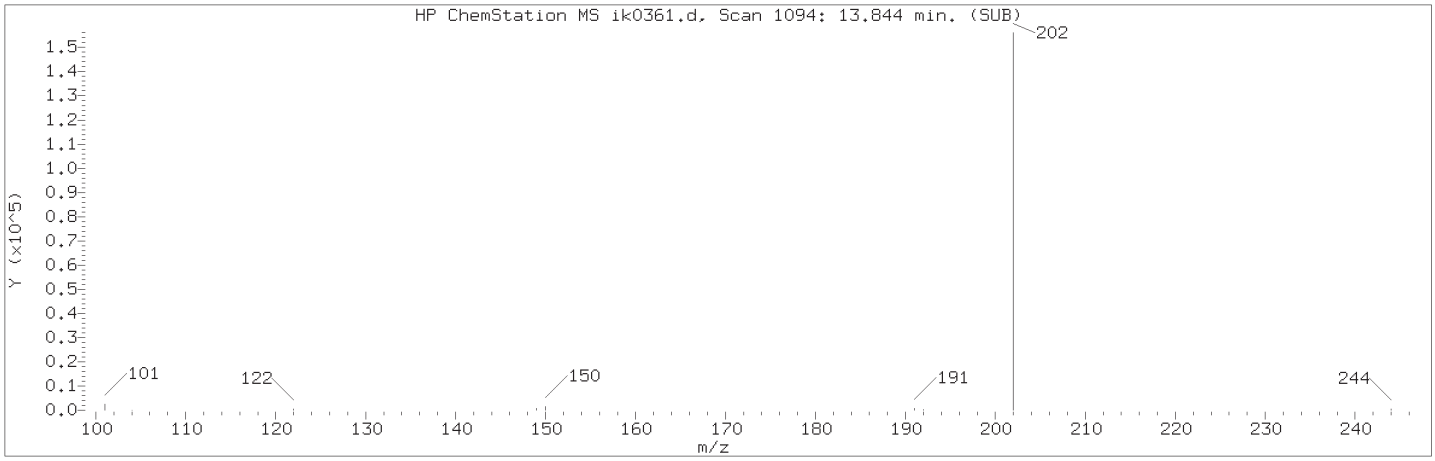
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

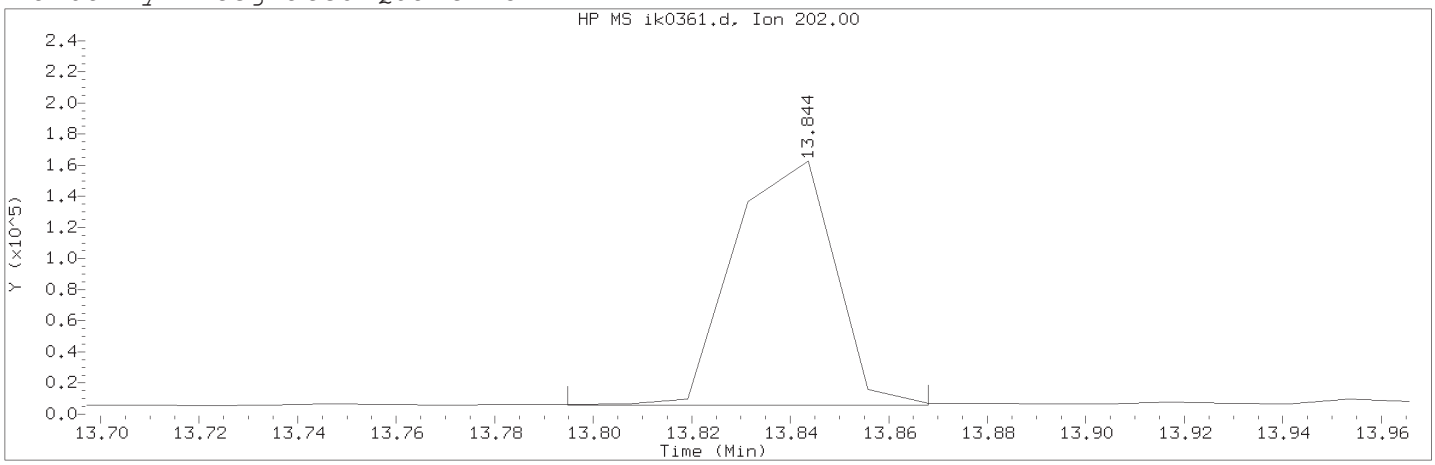
Compound Number	: 37
Compound Name	: Fluoranthene
Scan Number	: 1094
Retention Time (minutes)	: 13.844
Relative Retention Time	: 0.00003
Quant Ion	: 202.00
Area (flag)	: 223604M
On-column Amount (ng/ul)	: 0.4405

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

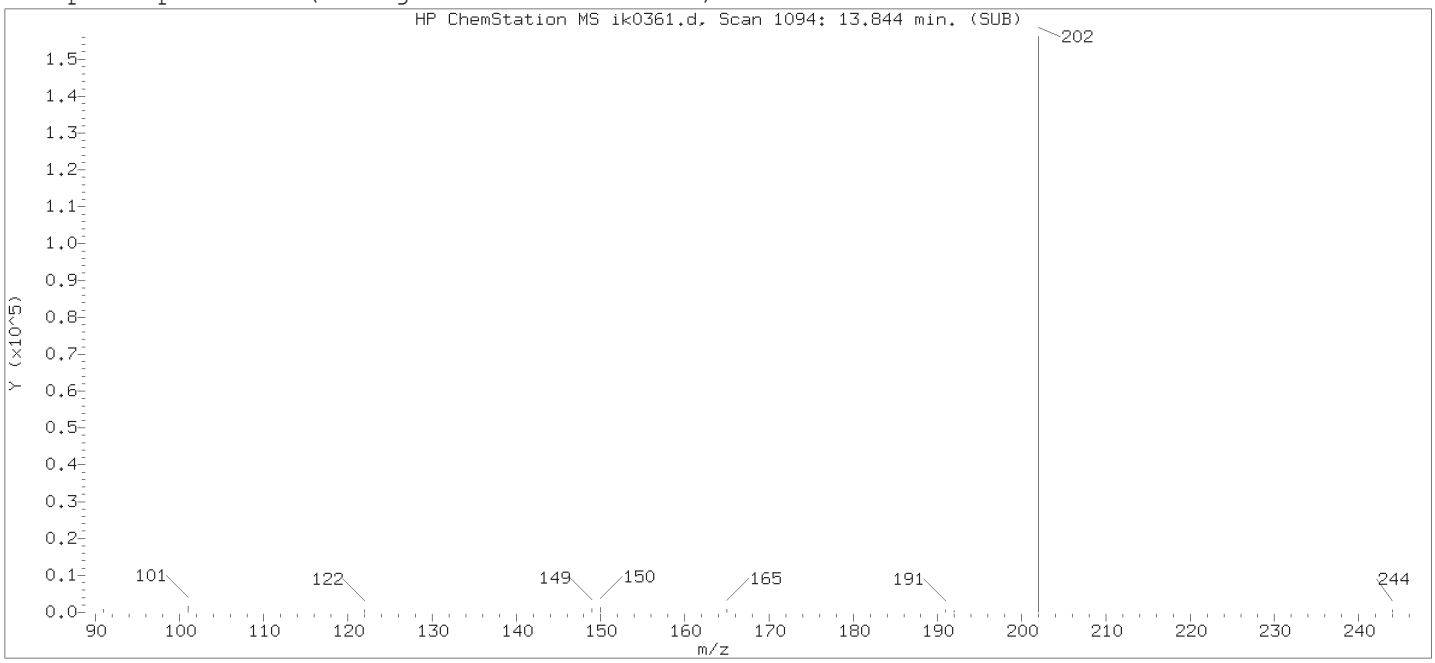
Compound Number : 37
Compound Name : Fluoranthene
Scan Number : 1094
Retention Time (minutes) : 13.844
Quant Ion : 202.00
Area (flag) : 223604M
On-column Amount (ng/ul) : 0.4405
Integration start scan : 1089 Integration stop scan: 1095
Y at integration start : 5704 Y at integration end: 5704

Reason for manual integration: improper integration

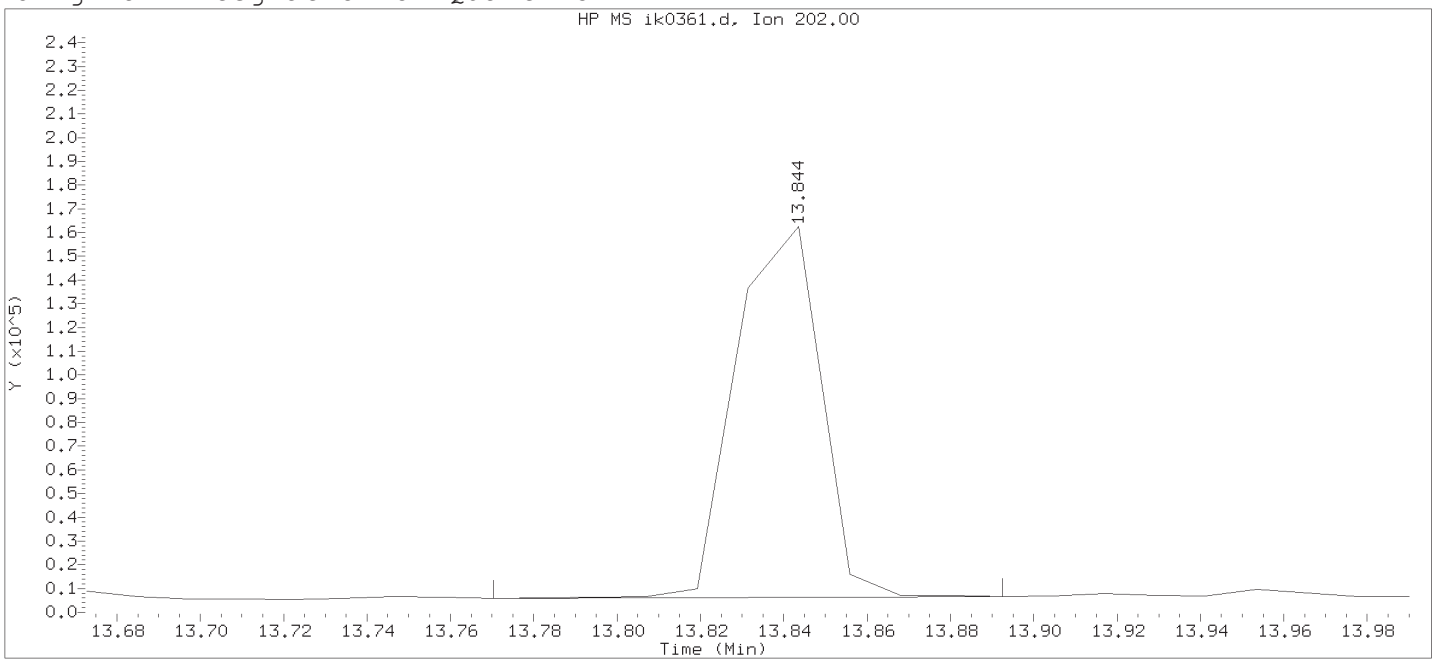
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

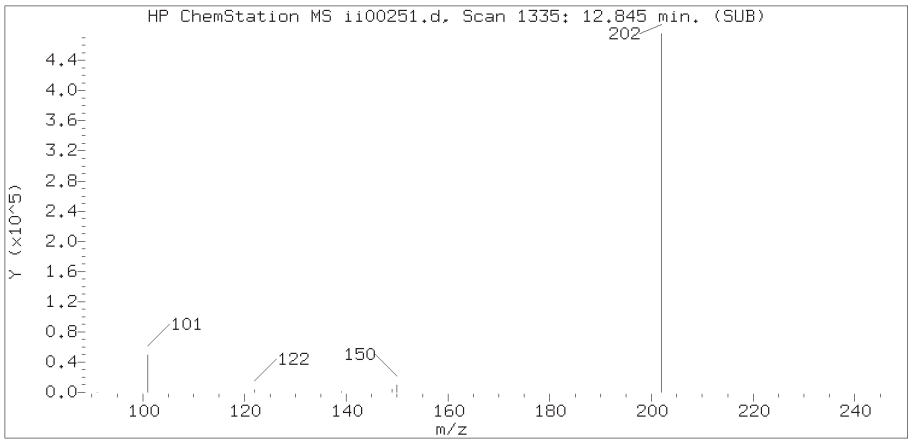
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 13:01 Automation

Sample Name: T1005DL Lab Sample ID: 9867767DL

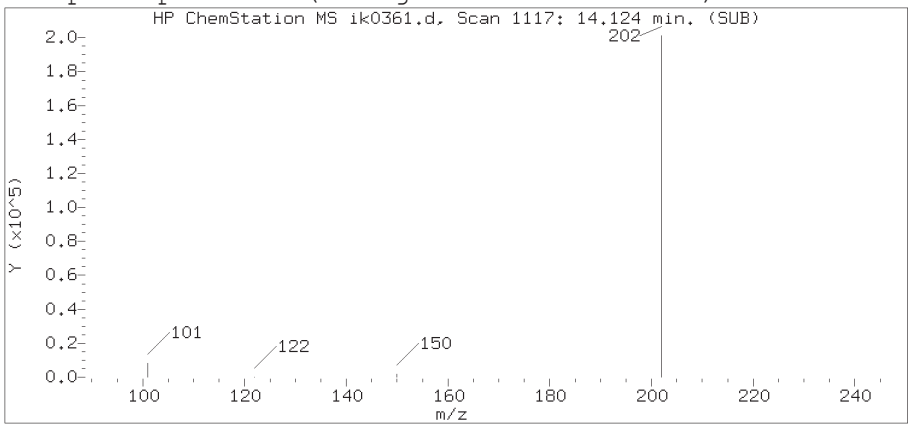
Compound Number	: 37		
Compound Name	: Fluoranthene		
Scan Number	: 1094		
Retention Time (minutes)	: 13.844		
Quant Ion	: 202.00		
Area	: 221494		
On-column Amount (ng/ul)	: 0.4364		
Integration start scan	: 1087	Integration stop scan:	1097
Y at integration start	: 5782	Y at integration end:	6661

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature used [illegible]

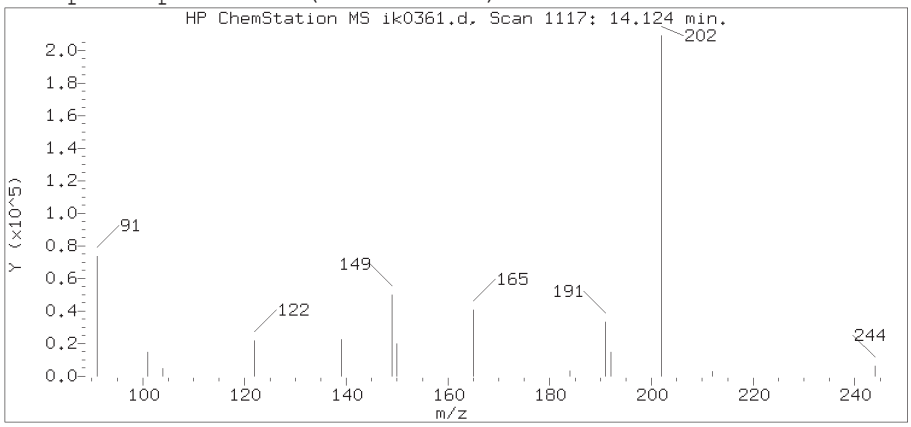
Reference Standard Spectrum for Pyrene

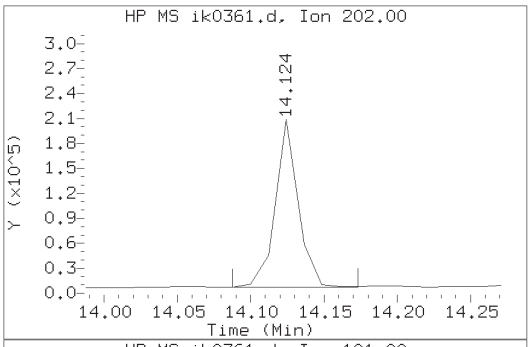


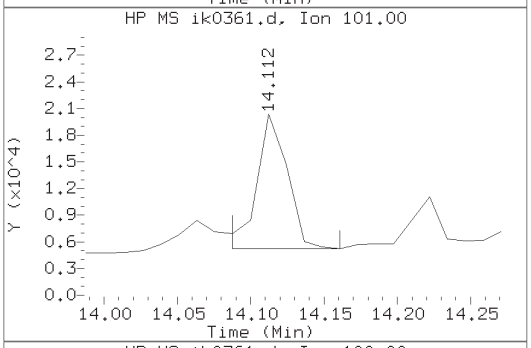
Sample Spectrum (Background Subtracted)

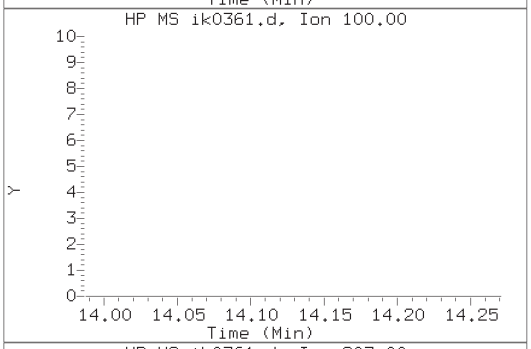


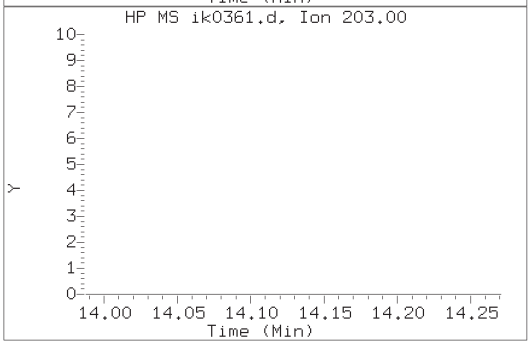
Sample Spectrum (Unaltered)











Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

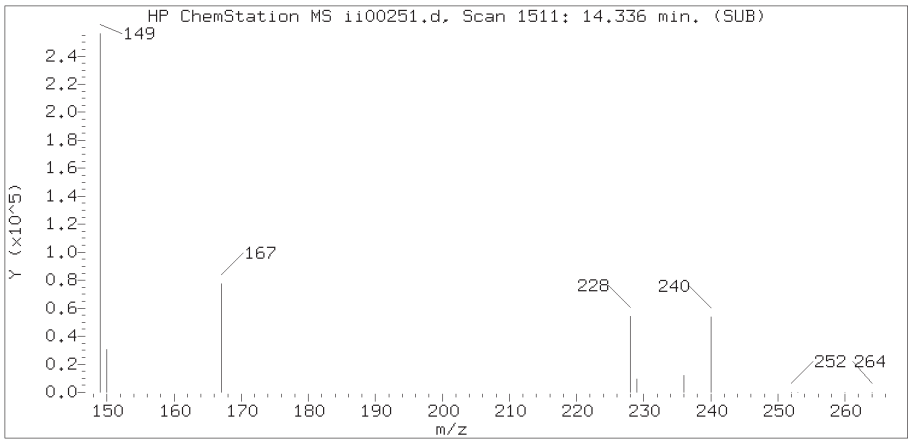
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

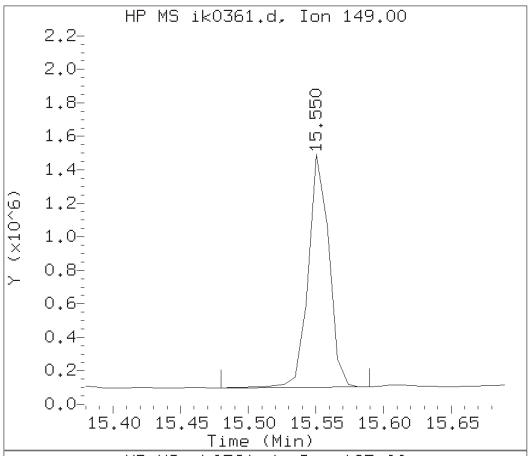
Sample Name: T1005DL Lab Sample ID: 9867767DL

Compound Number	: 39
Compound Name	: Pyrene
Scan Number	: 1117
Retention Time (minutes)	: 14.124
Relative Retention Time	: 0.00013
Quant Ion	: 202.00
Area (flag)	: 219570
On-column Amount (ng/ul)	: 0.3821

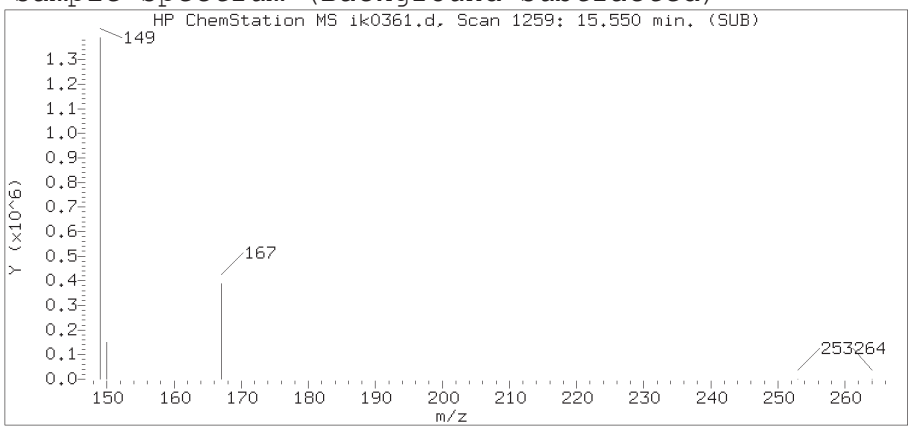
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

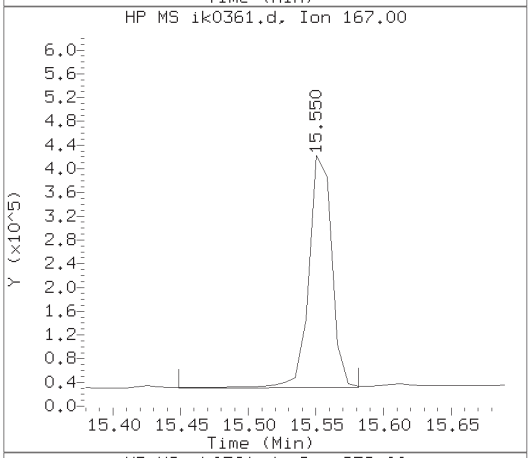
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



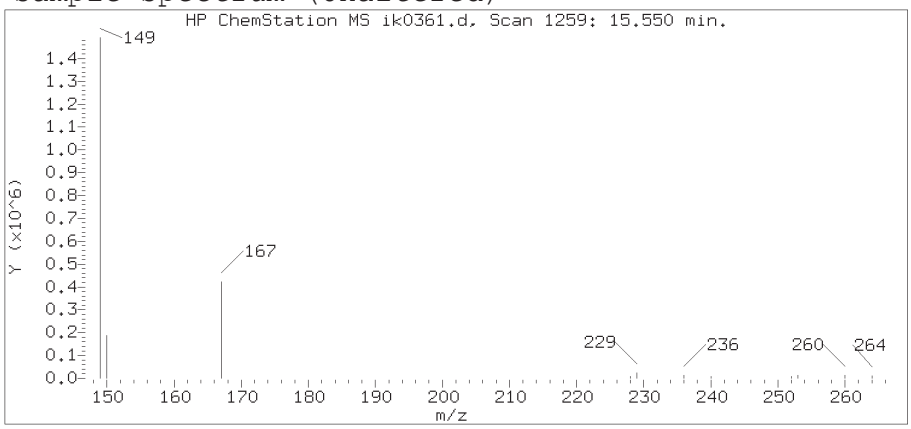


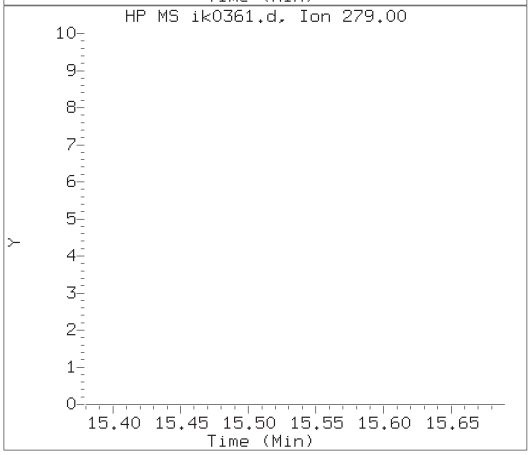
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

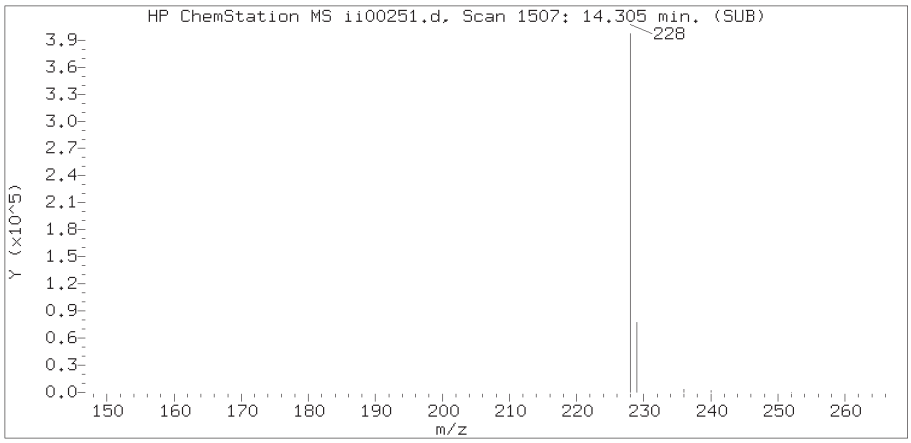
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

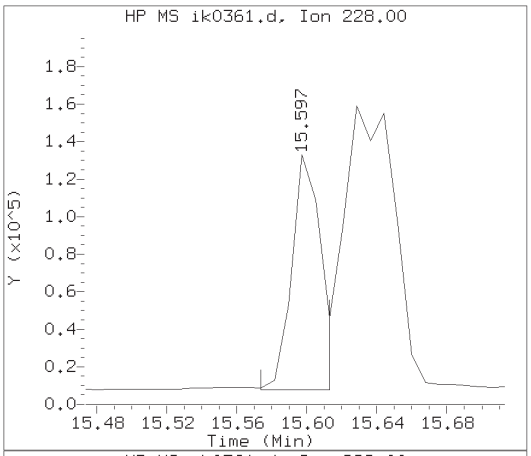
Sample Name: T1005DL Lab Sample ID: 9867767DL

Compound Number	: 41
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1259
Retention Time (minutes)	: 15.550
Relative Retention Time	:-0.00000
Quant Ion	: 149.00
Area (flag)	: 1478560
On-column Amount (ng/ul)	: 5.4140

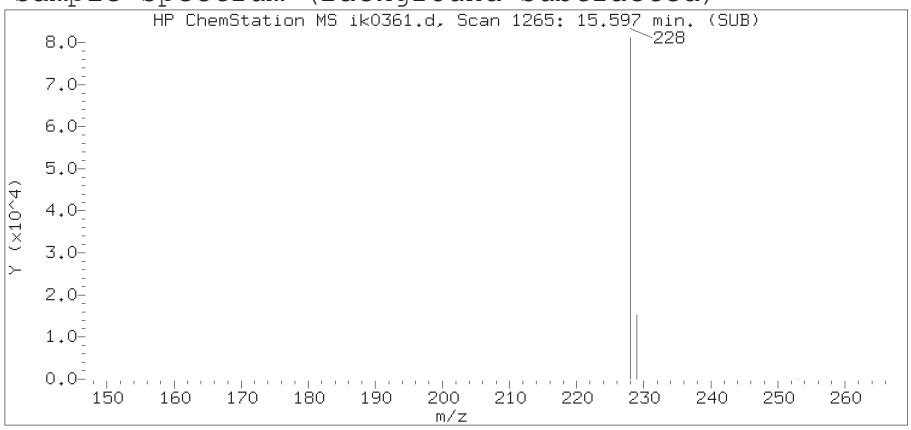
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

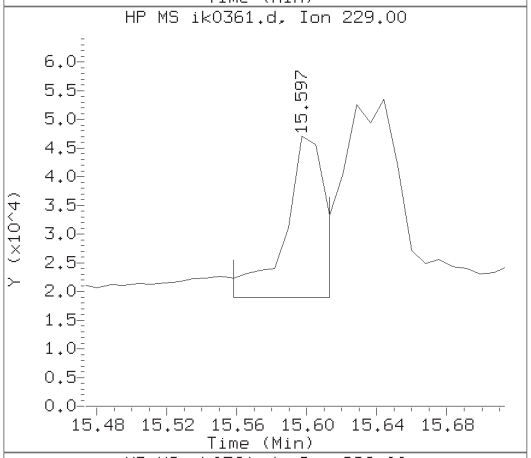
Reference Standard Spectrum for Benzo(a)anthracene



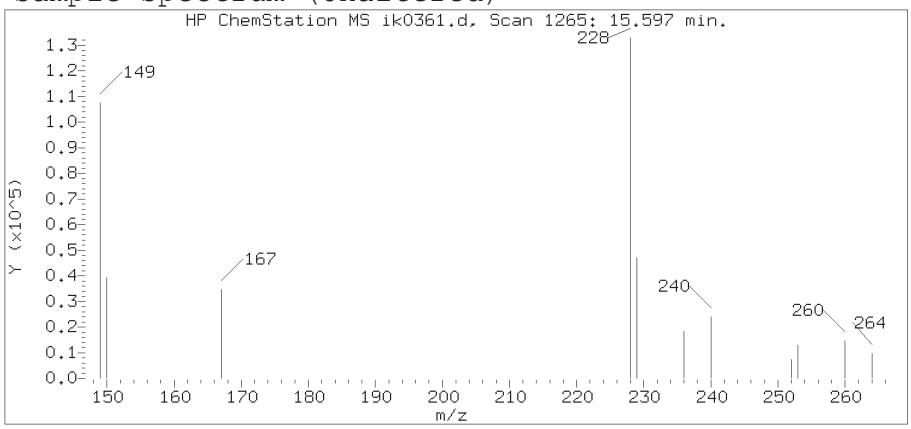


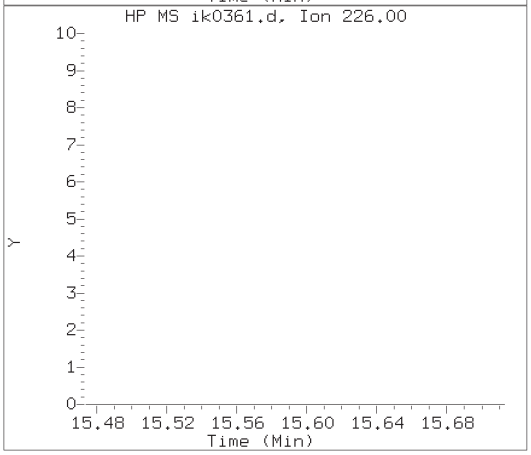
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

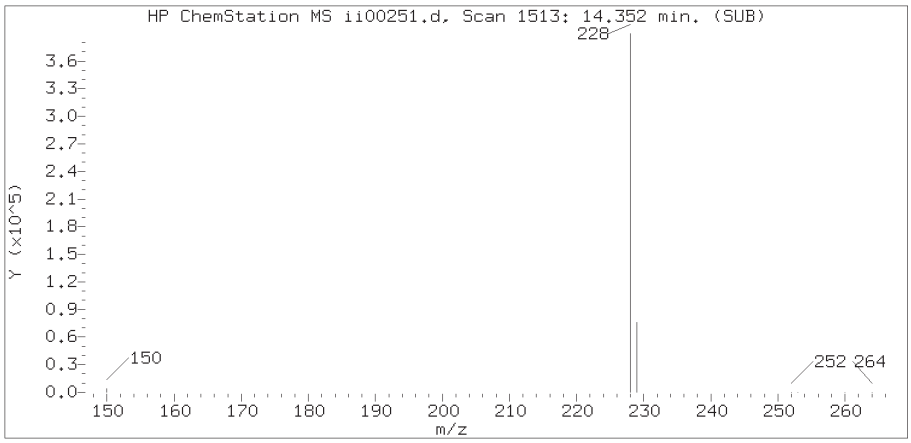
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

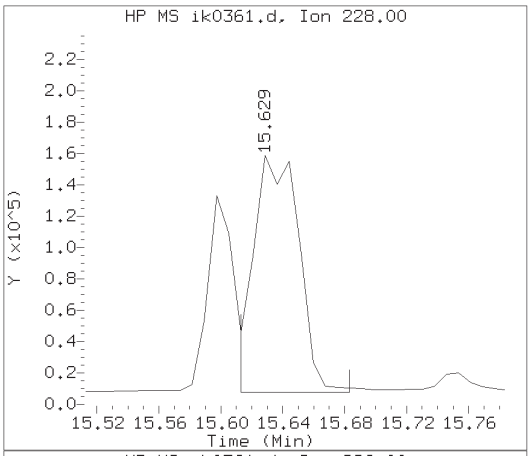
Sample Name: T1005DL Lab Sample ID: 9867767DL

Compound Number	: 42
Compound Name	: Benzo(a)anthracene
Scan Number	: 1265
Retention Time (minutes)	: 15.597
Relative Retention Time	:-0.00000
Quant Ion	: 228.00
Area (flag)	: 139387
On-column Amount (ng/ul)	: 0.2610

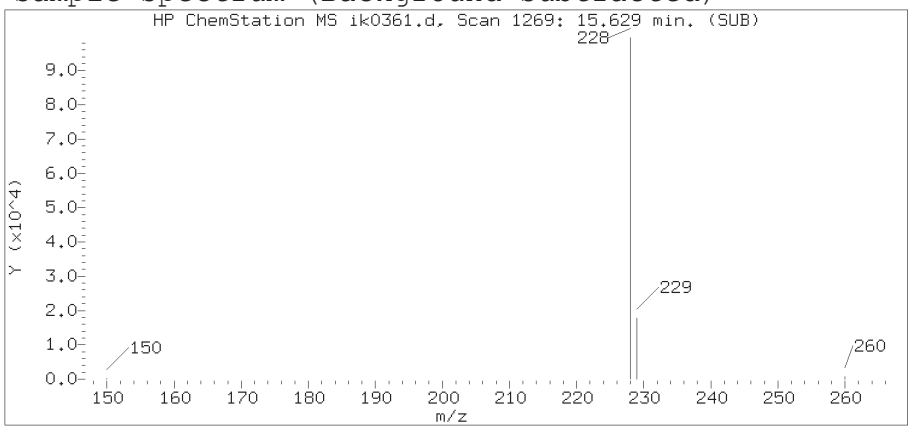
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

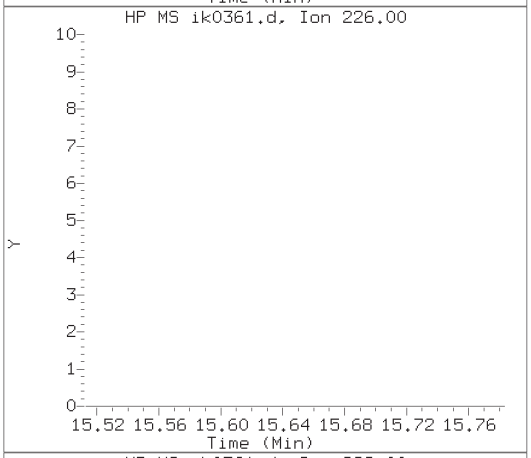
Reference Standard Spectrum for Chrysene



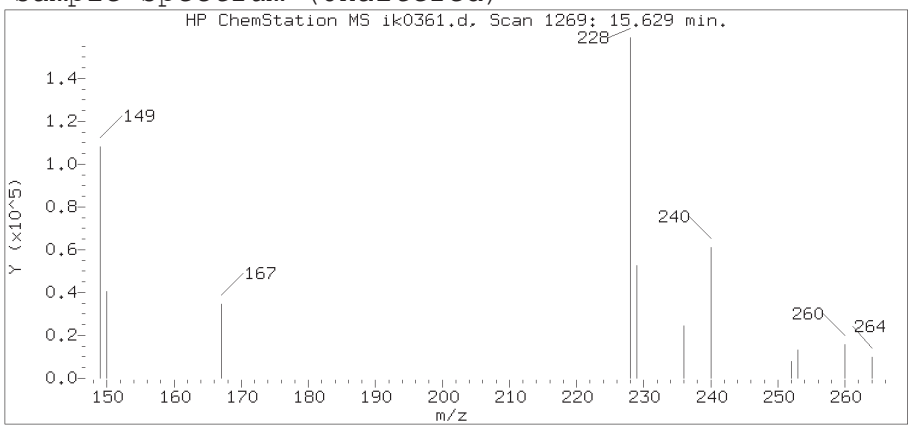


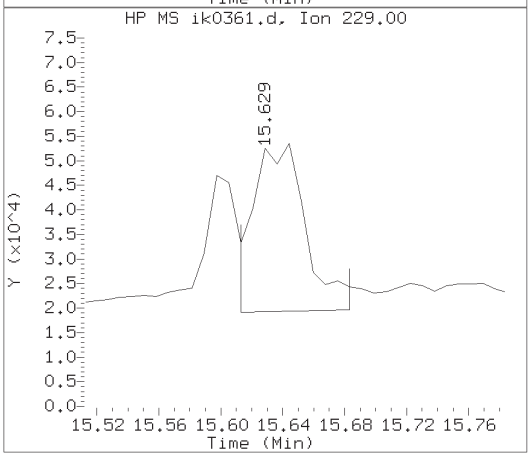
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

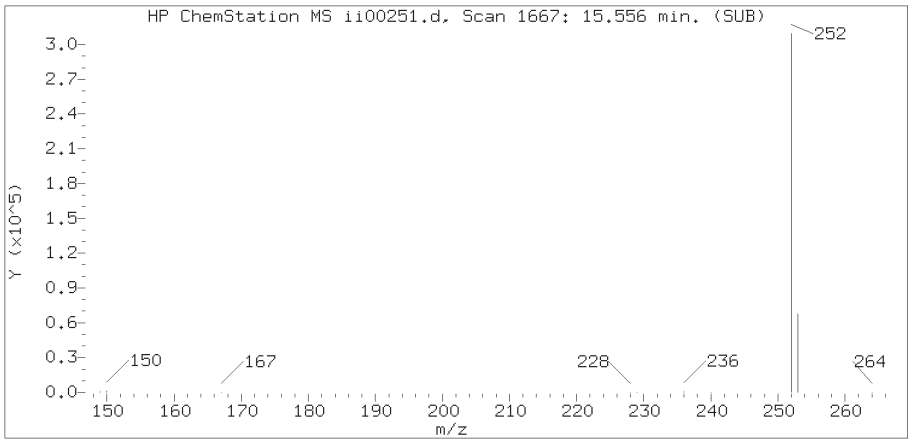
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

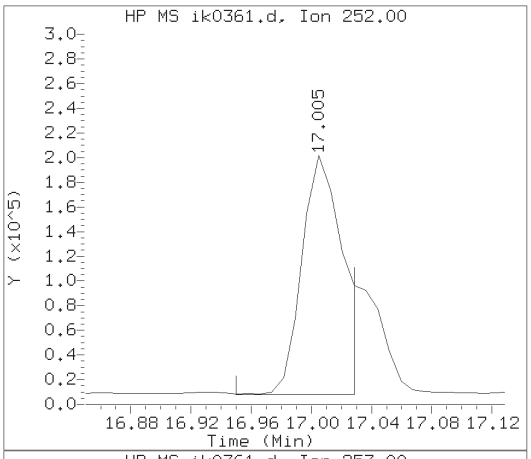
Sample Name: T1005DL Lab Sample ID: 9867767DL

Compound Number	: 44
Compound Name	: Chrysene
Scan Number	: 1269
Retention Time (minutes)	: 15.629
Relative Retention Time	: 0.00100
Quant Ion	: 228.00
Area (flag)	: 314568
On-column Amount (ng/ul)	: 0.6165

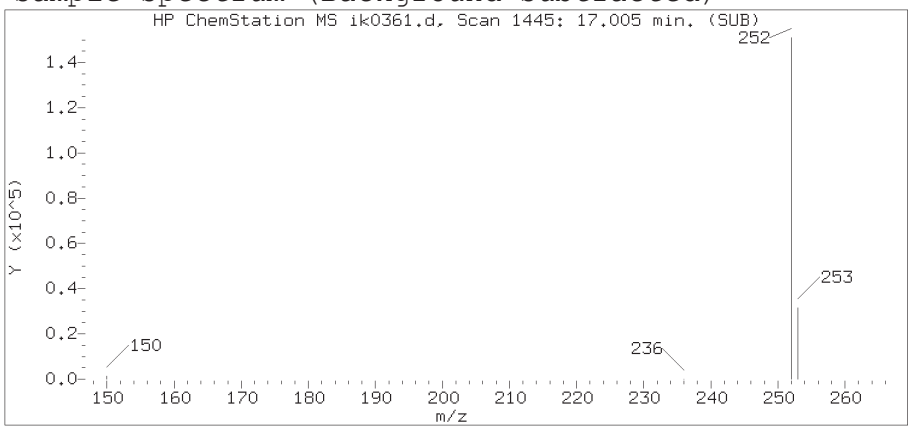
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

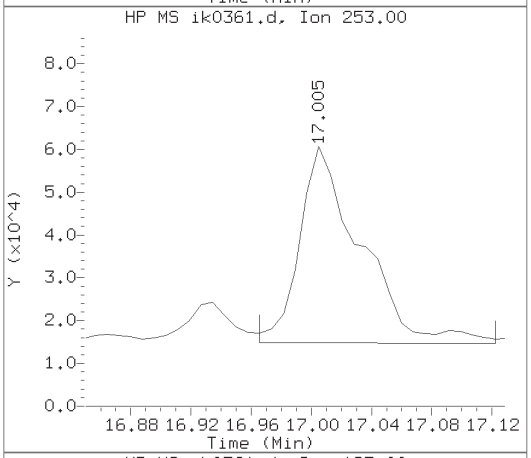
Reference Standard Spectrum for Benzo(b)fluoranthene



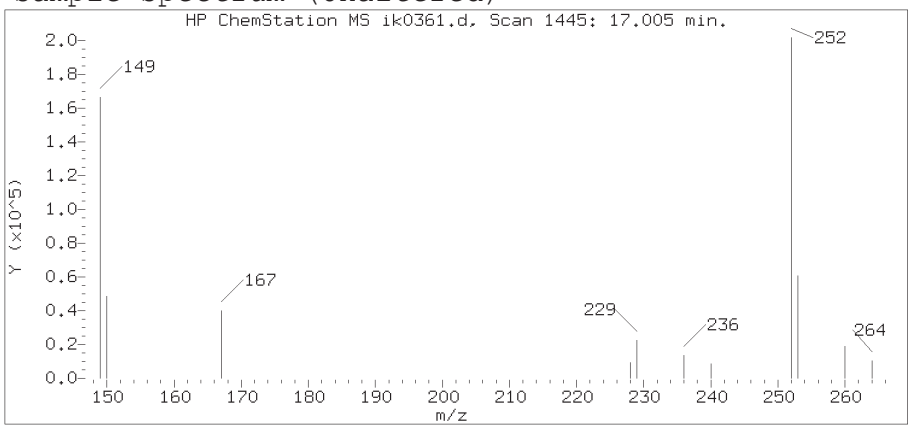


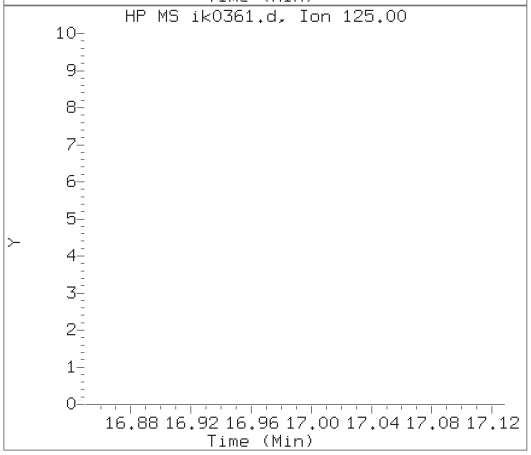
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

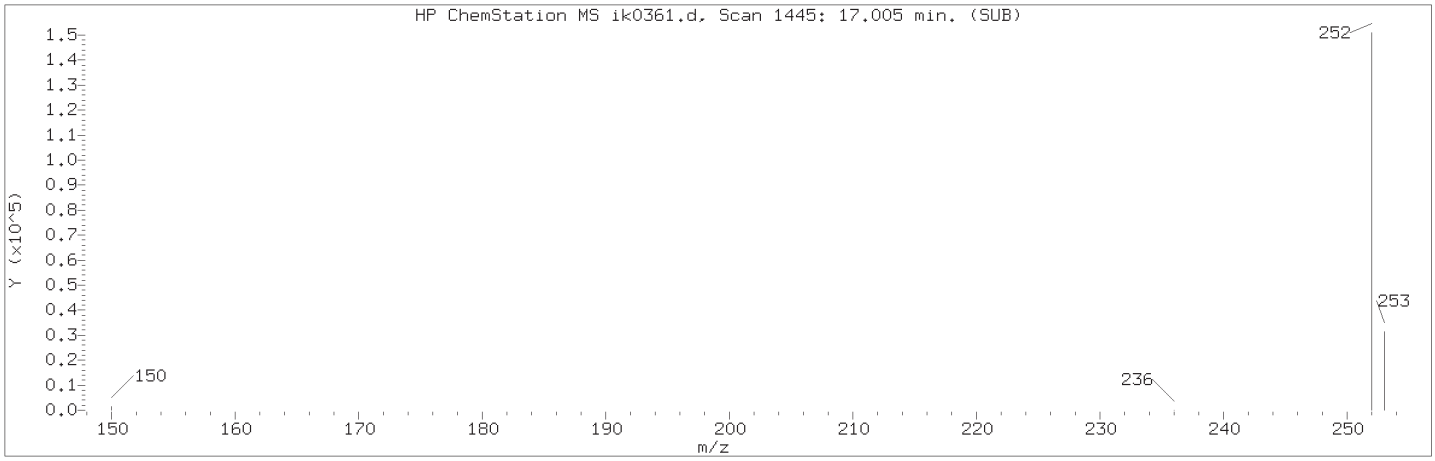
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

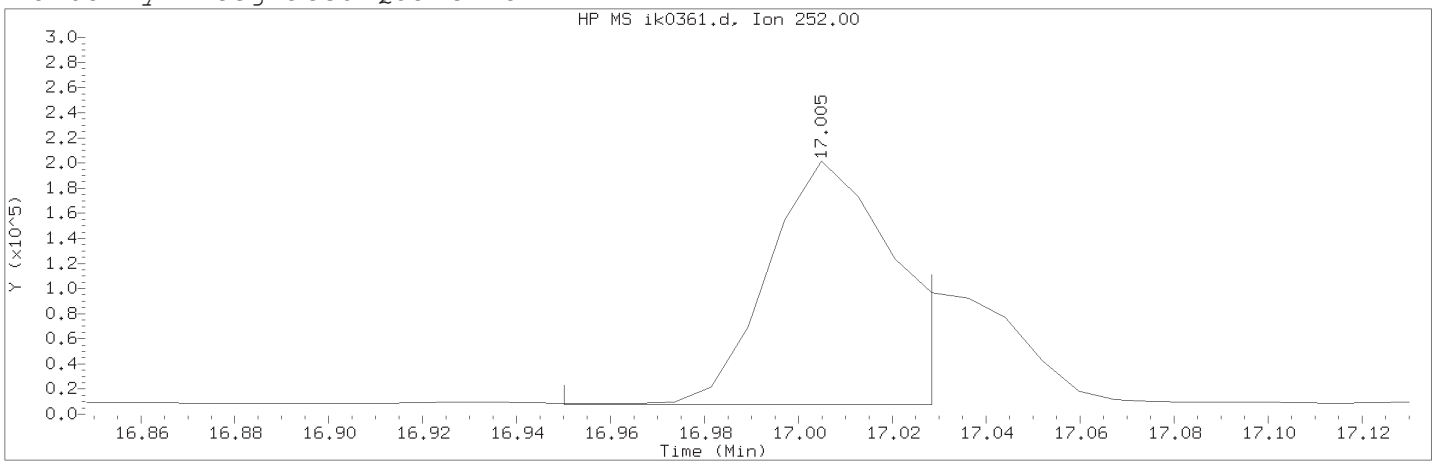
Compound Number	: 46
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1445
Retention Time (minutes)	: 17.005
Relative Retention Time	: 0.00036
Quant Ion	: 252.00
Area (flag)	: 370302M
On-column Amount (ng/ul)	: 1.0844

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

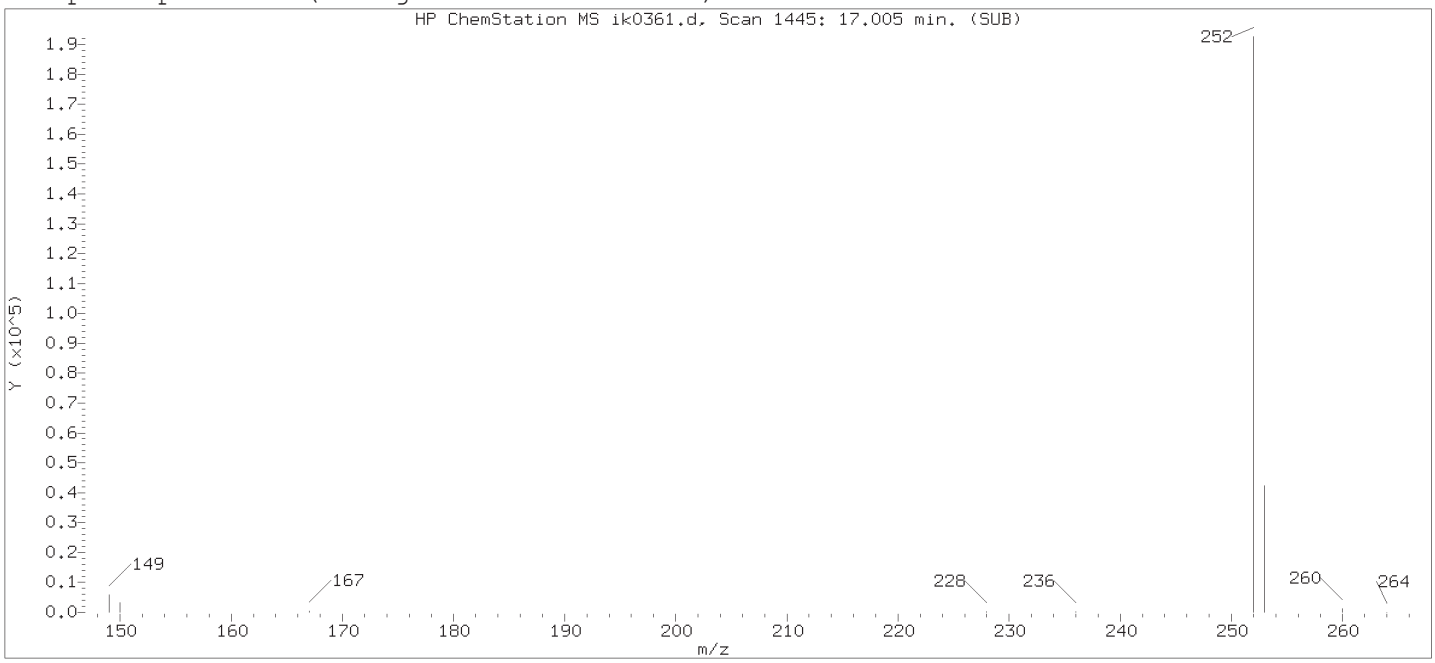
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1445
Retention Time (minutes) : 17.005
Quant Ion : 252.00
Area (flag) : 370302M
On-column Amount (ng/ul) : 1.0844
Integration start scan : 1437 Integration stop scan: 1447
Y at integration start : 7896 Y at integration end: 7886

Reason for manual integration: improper integration

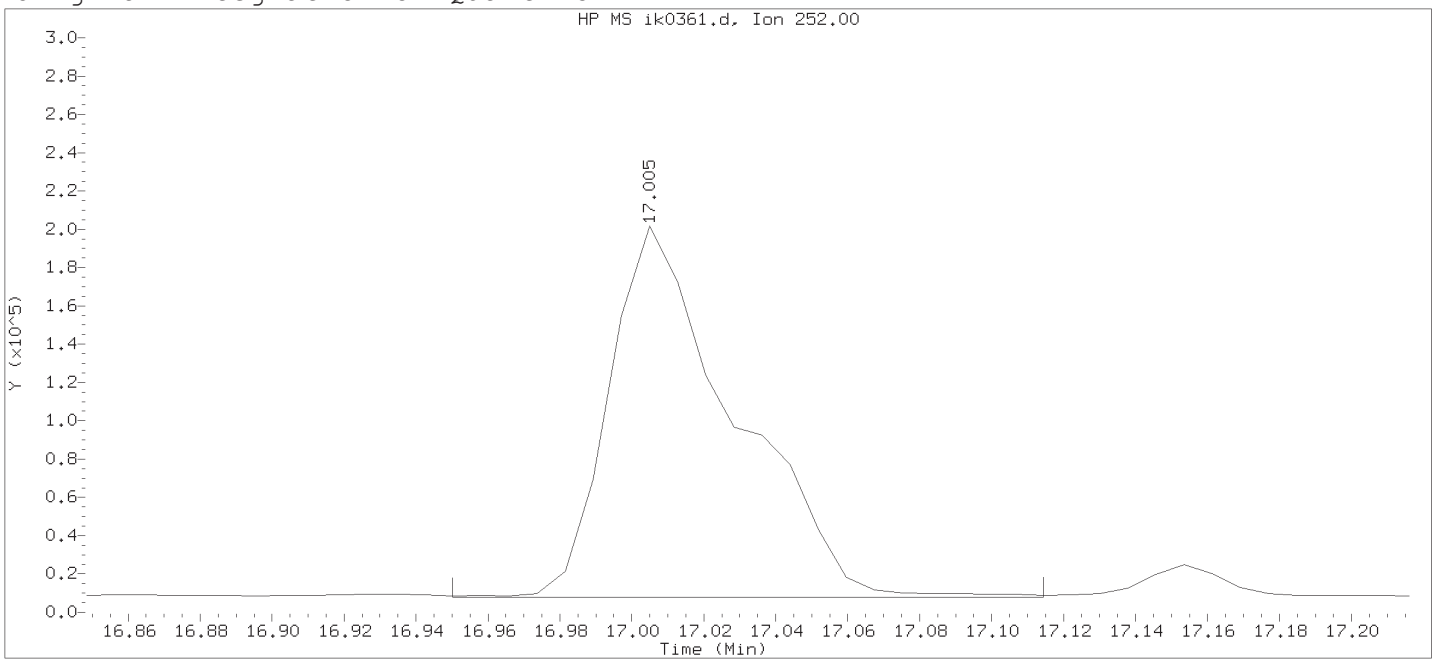
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

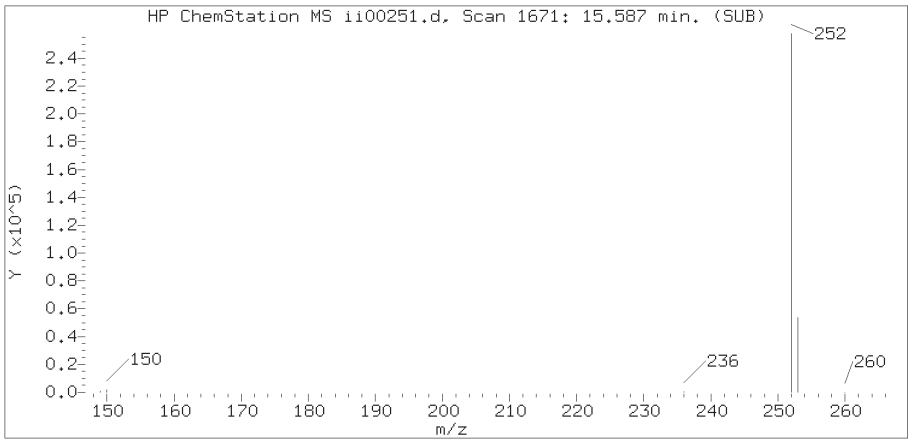
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 13:01 Automation

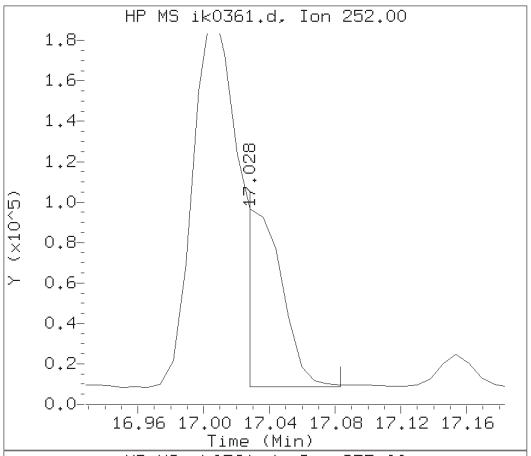
Sample Name: T1005DL Lab Sample ID: 9867767DL

Compound Number	: 46		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1445		
Retention Time (minutes)	: 17.005		
Quant Ion	: 252.00		
Area	: 469772		
On-column Amount (ng/ul)	: 1.3757		
Integration start scan	: 1437	Integration stop scan:	1458
Y at integration start	: 7896	Y at integration end:	7874

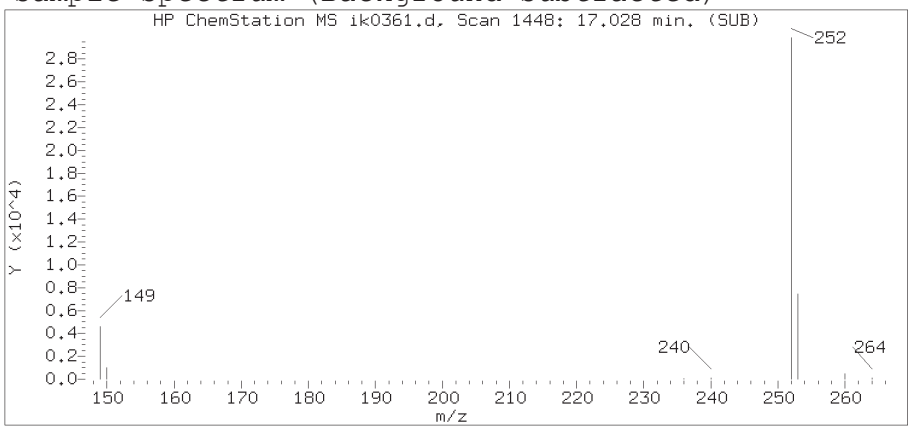
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature used [illegible]

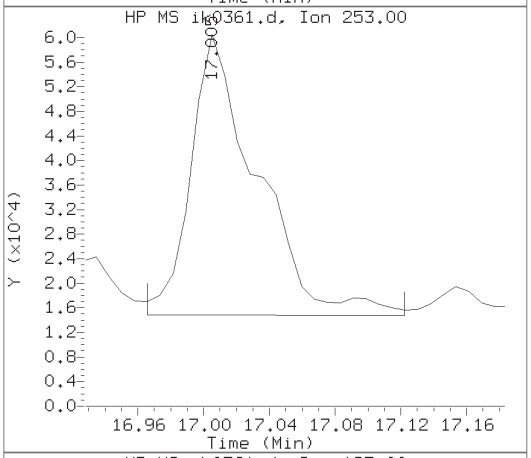
Reference Standard Spectrum for Benzo(k)fluoranthene



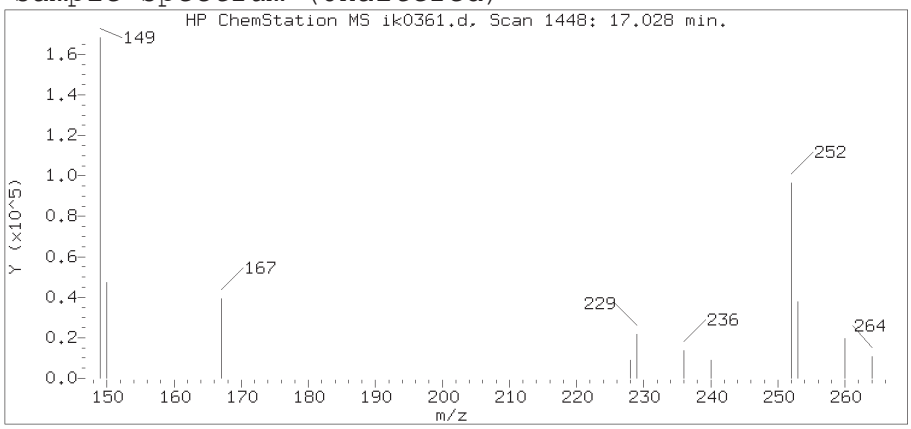


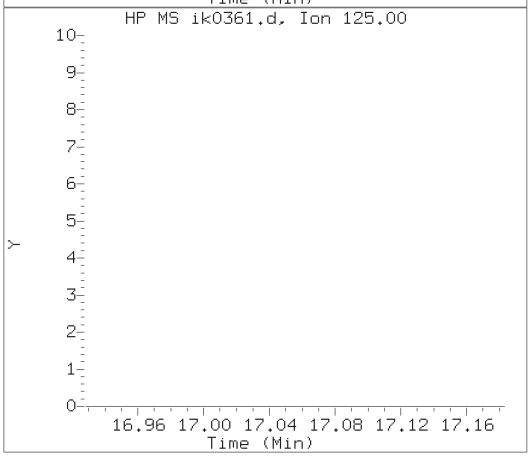
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

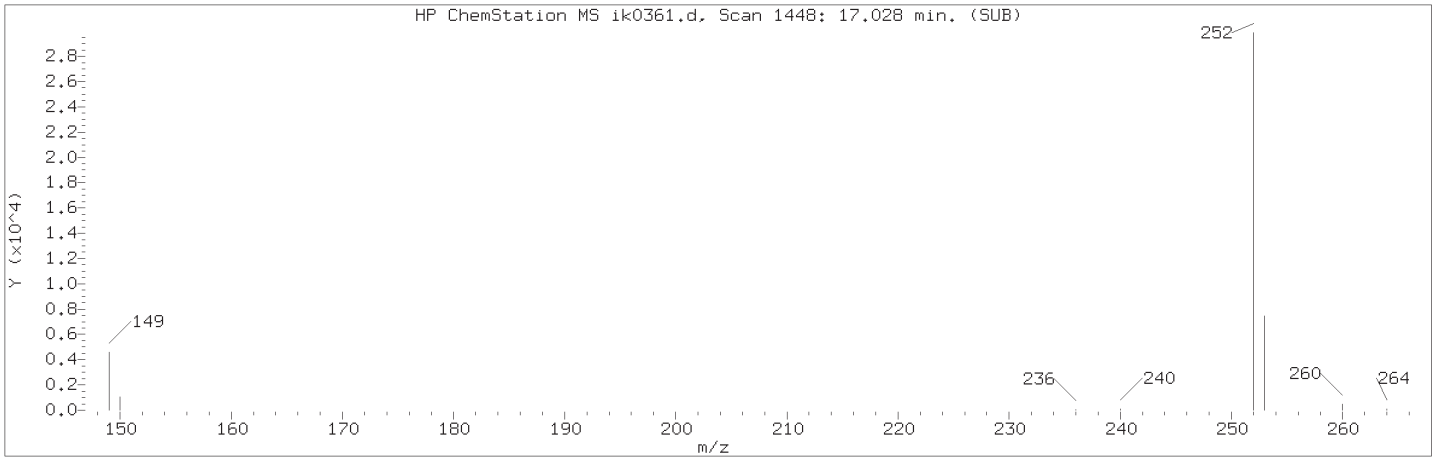
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

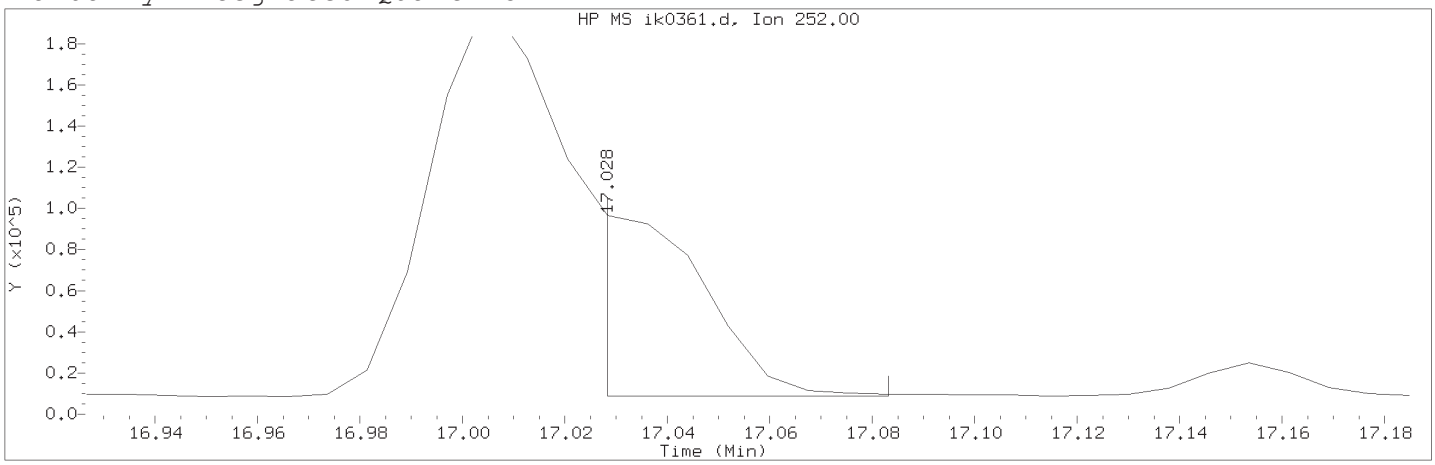
Compound Number	: 47
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1448
Retention Time (minutes)	: 17.028
Relative Retention Time	: 0.00125
Quant Ion	: 252.00
Area (flag)	: 135601M
On-column Amount (ng/ul)	: 0.4236

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

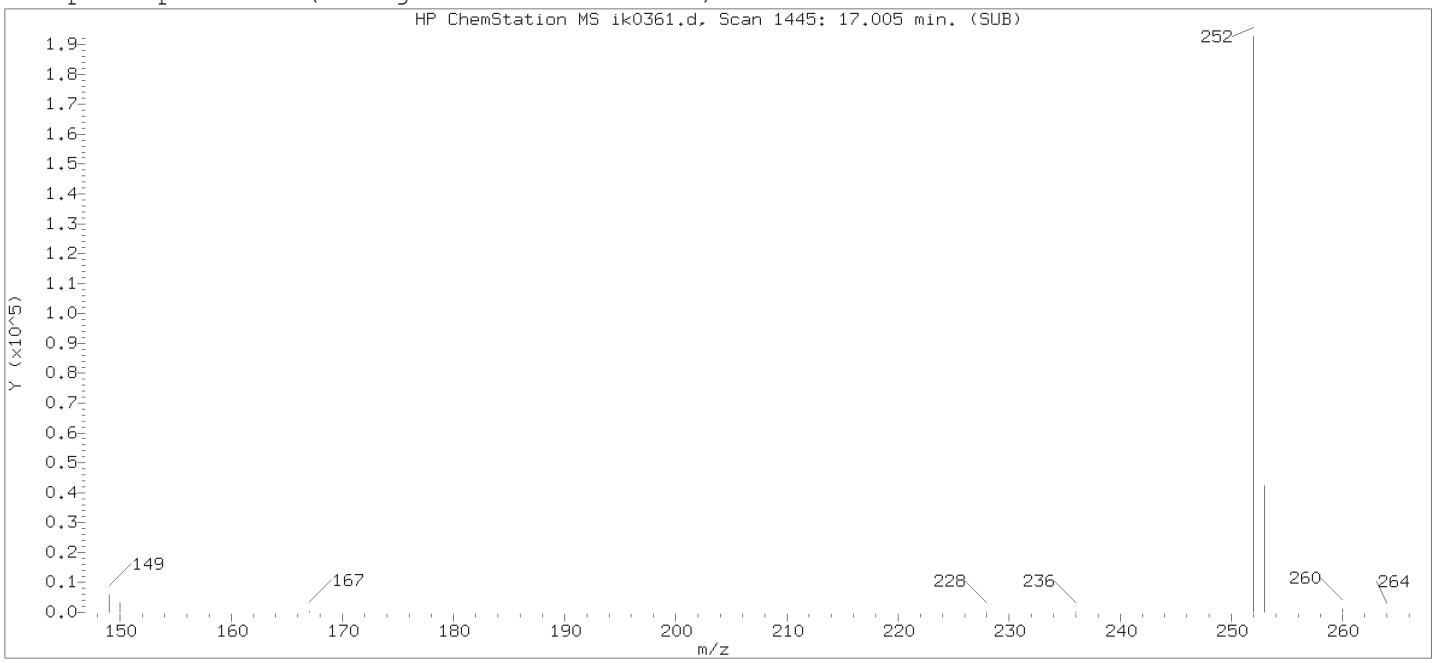
Compound Number : 47
Compound Name : Benzo(k)fluoranthene
Scan Number : 1448
Retention Time (minutes) : 17.028
Quant Ion : 252.00
Area (flag) : 135601M
On-column Amount (ng/ul) : 0.4236
Integration start scan : 1447 Integration stop scan: 1454
Y at integration start : 8705 Y at integration end: 8705

Reason for manual integration: improper integration

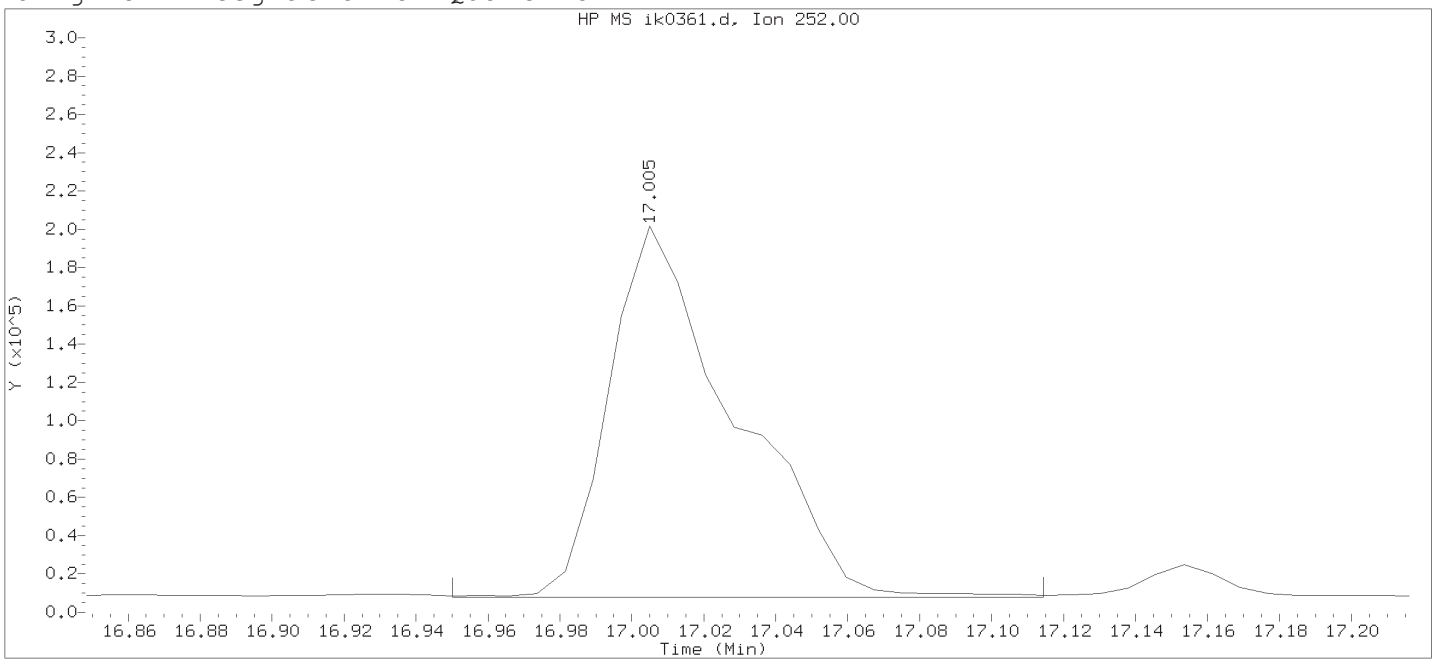
Analyst responsible for change: Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

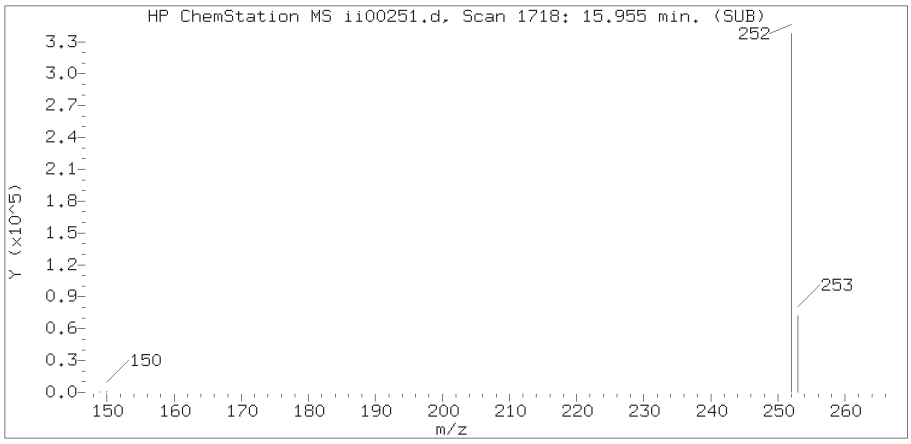
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 13:01 Automation

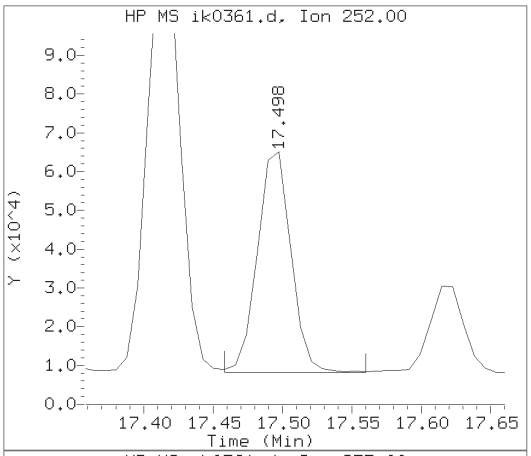
Sample Name: T1005DL Lab Sample ID: 9867767DL

Compound Number	: 47		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1445		
Retention Time (minutes)	: 17.005		
Quant Ion	: 252.00		
Area	: 469772		
On-column Amount (ng/ul)	: 1.4675		
Integration start scan	: 1437	Integration stop scan:	1458
Y at integration start	: 7896	Y at integration end:	7874

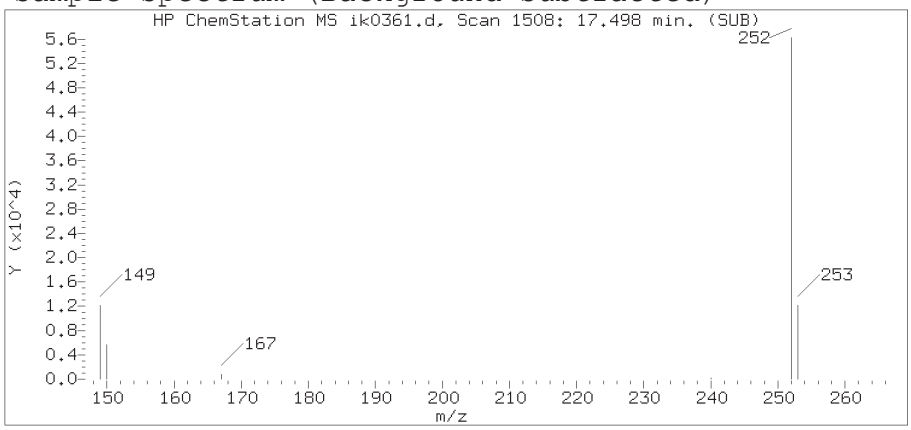
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature used [illegible]

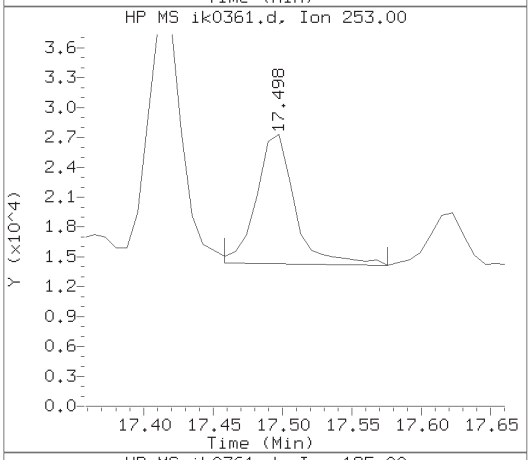
Reference Standard Spectrum for Benzo(a)pyrene



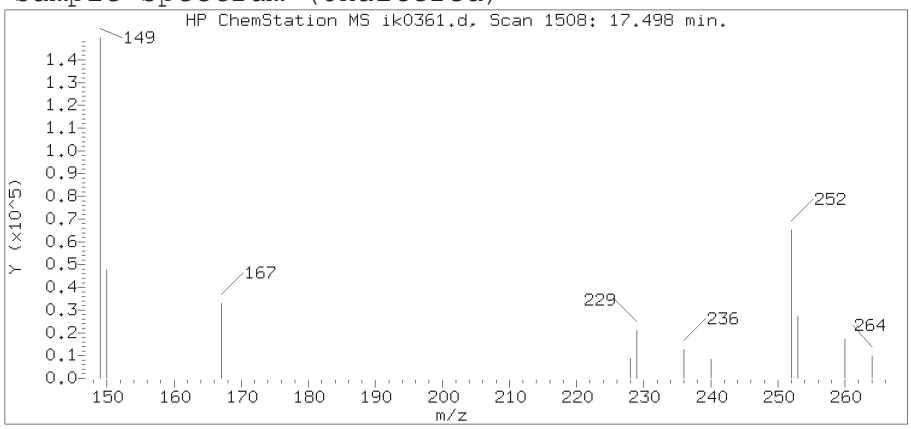


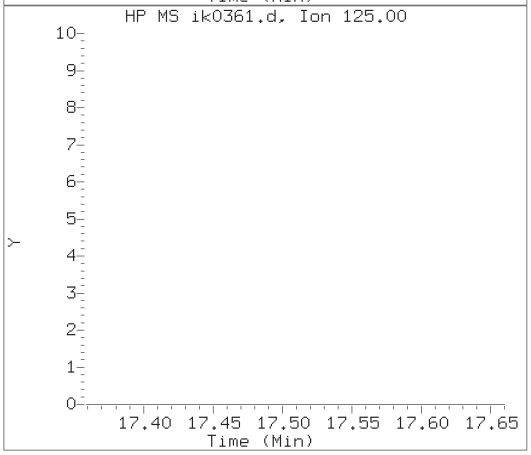
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

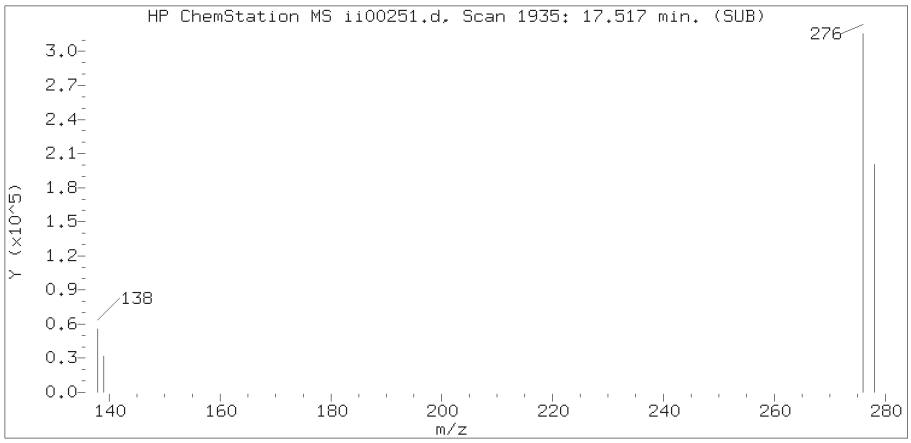
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

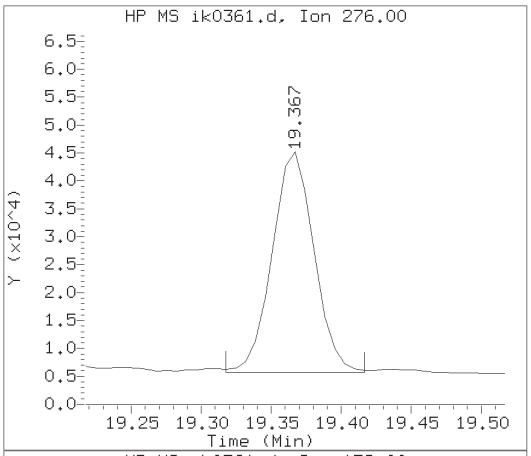
Sample Name: T1005DL Lab Sample ID: 9867767DL

Compound Number	: 50
Compound Name	: Benzo(a)pyrene
Scan Number	: 1508
Retention Time (minutes)	: 17.498
Relative Retention Time	:-0.00001
Quant Ion	: 252.00
Area (flag)	: 95757
On-column Amount (ng/ul)	: 0.3272

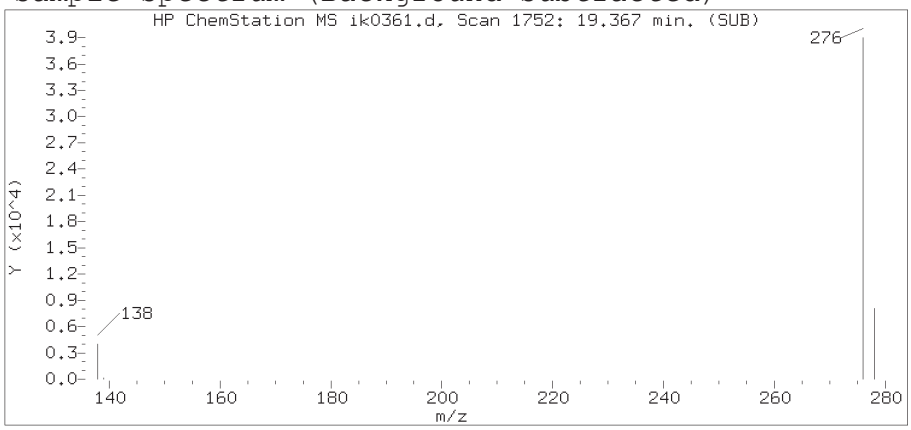
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

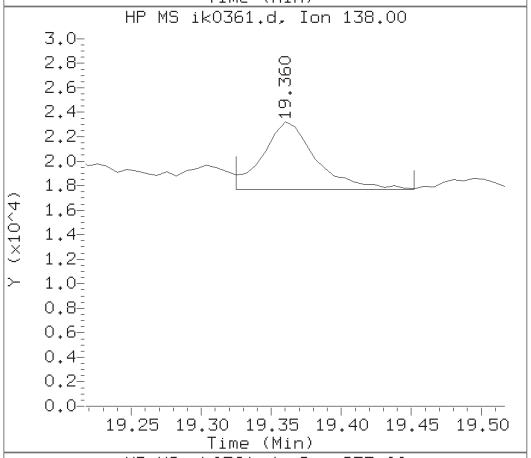
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



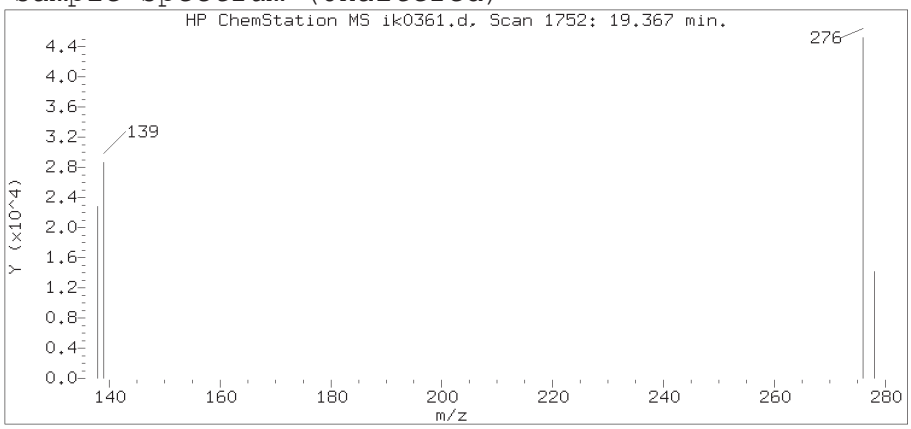


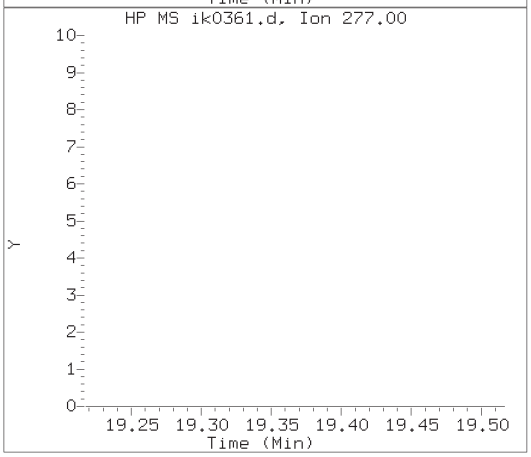
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

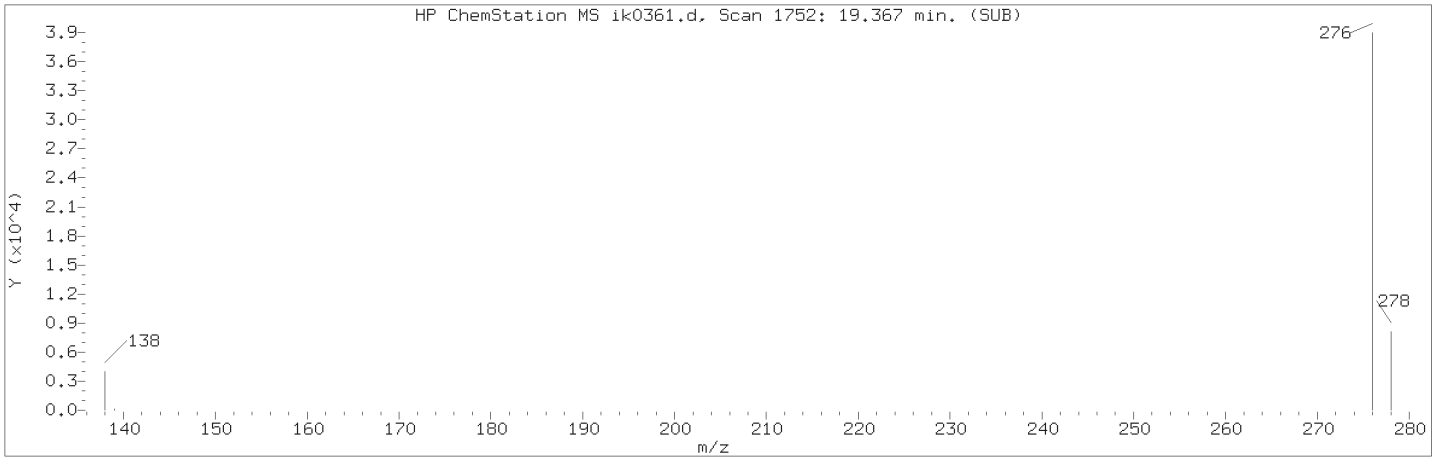
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

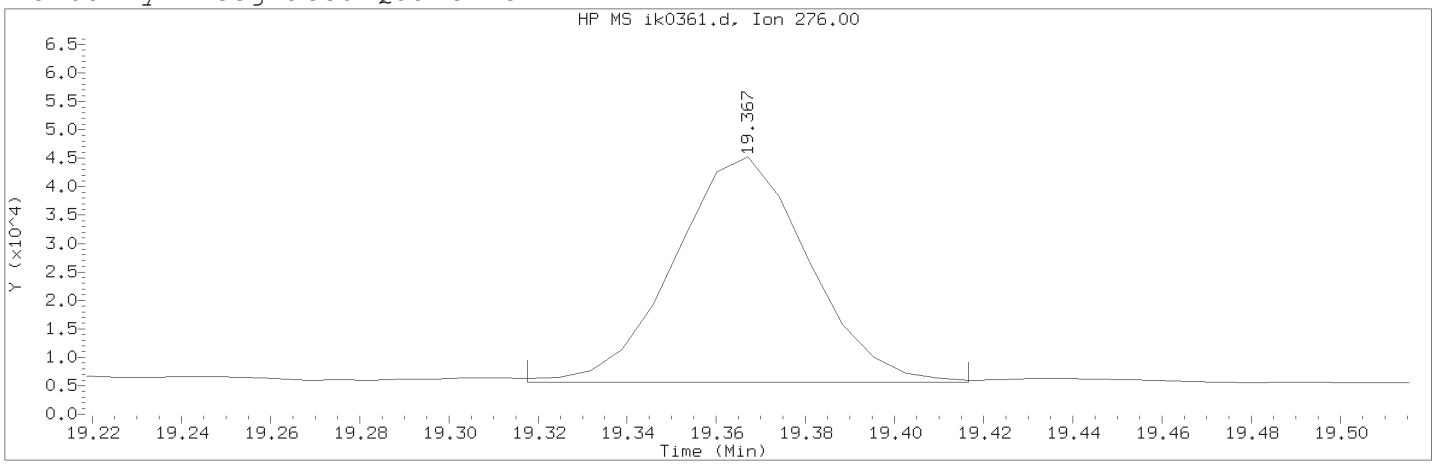
Compound Number	: 53
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 1752
Retention Time (minutes)	: 19.367
Relative Retention Time	:-0.00028
Quant Ion	: 276.00
Area (flag)	: 82473M
On-column Amount (ng/ul)	: 0.2390

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

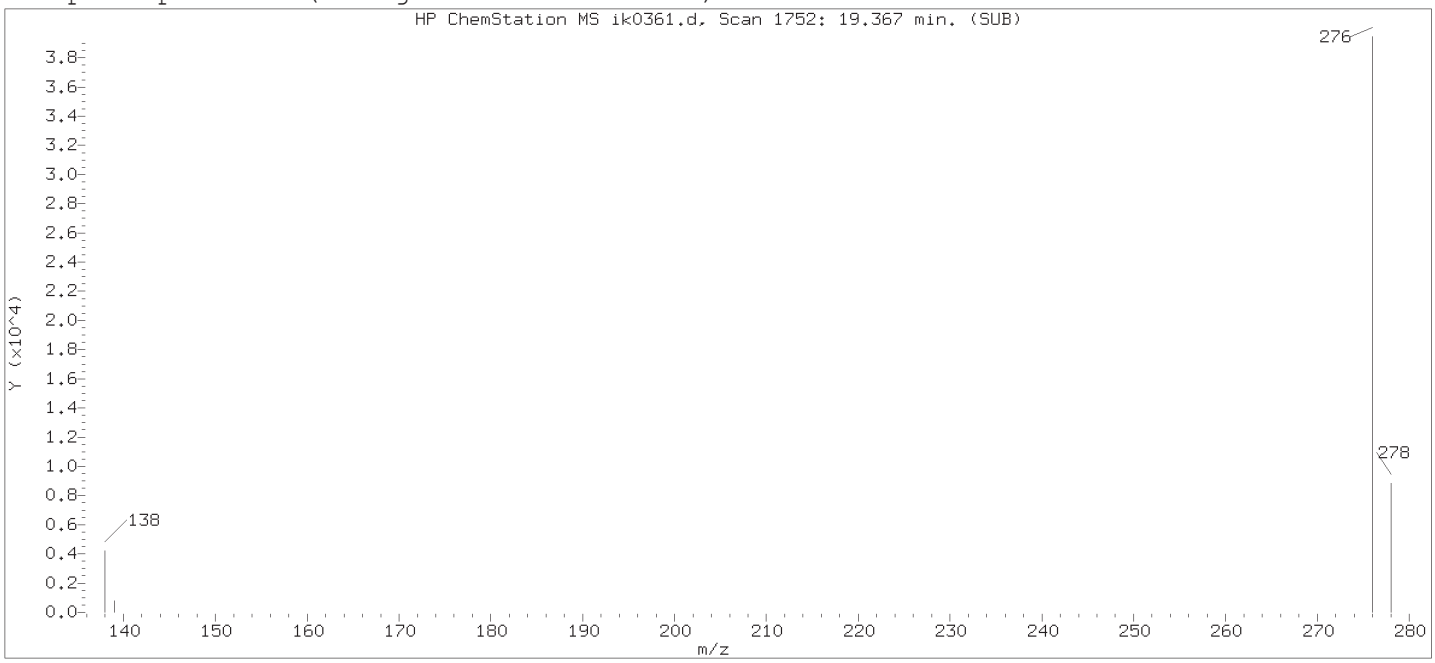
Compound Number : 53
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 1752
Retention Time (minutes) : 19.367
Quant Ion : 276.00
Area (flag) : 82473M
On-column Amount (ng/ul) : 0.2390
Integration start scan : 1744 Integration stop scan: 1758
Y at integration start : 5674 Y at integration end: 5674

Reason for manual integration: improper integration

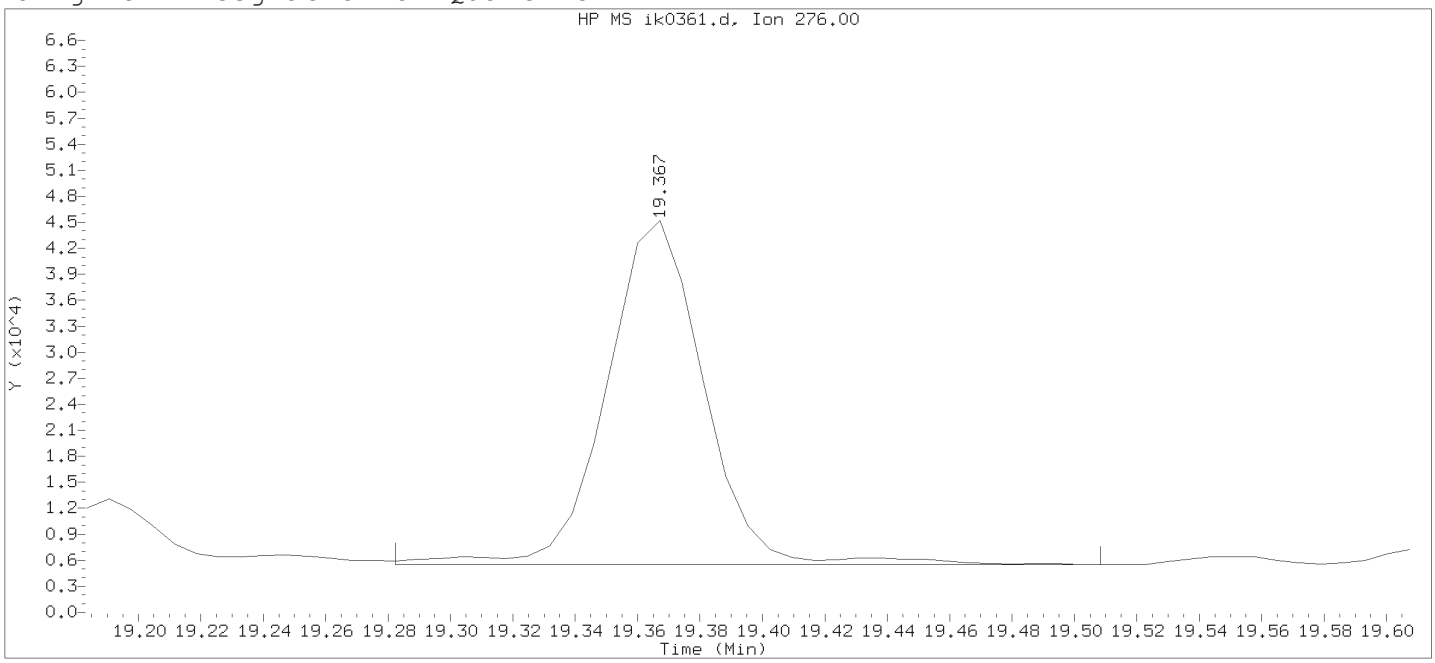
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:10.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

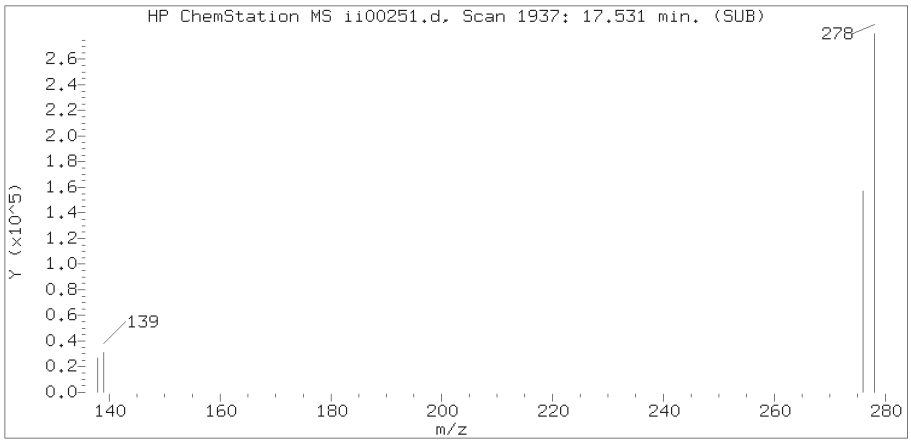
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 13:01 Automation

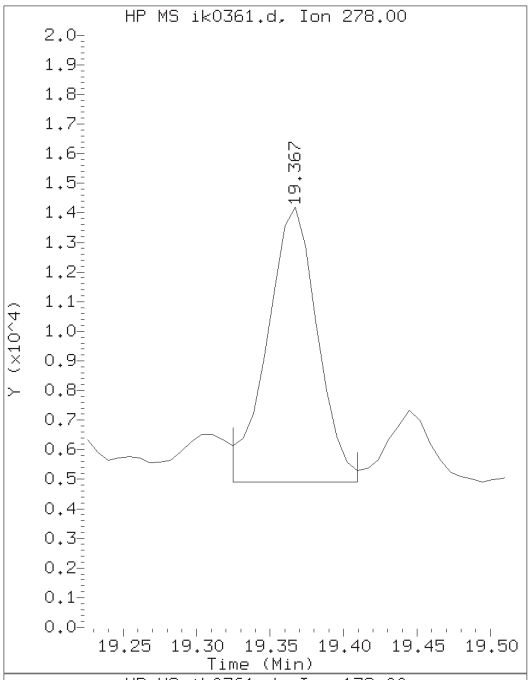
Sample Name: T1005DL Lab Sample ID: 9867767DL

Compound Number	: 53	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 1752	
Retention Time (minutes)	: 19.367	
Quant Ion	: 276.00	
Area	: 87197	
On-column Amount (ng/ul)	: 0.2527	
Integration start scan	: 1739	Integration stop scan: 1771
Y at integration start	: 5473	Y at integration end: 5473

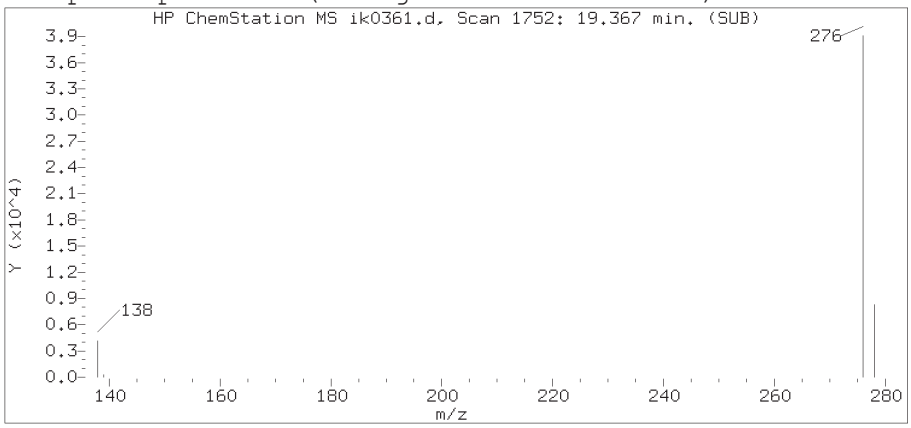
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature used [illegible]

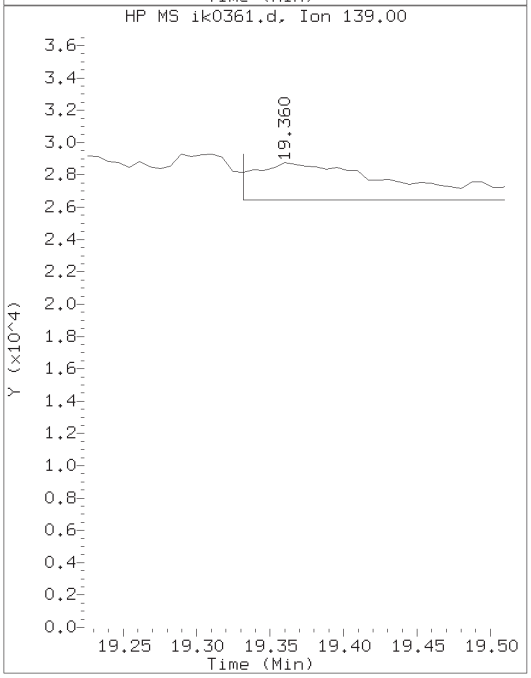
Reference Standard Spectrum for Dibenz(a,h)anthracene



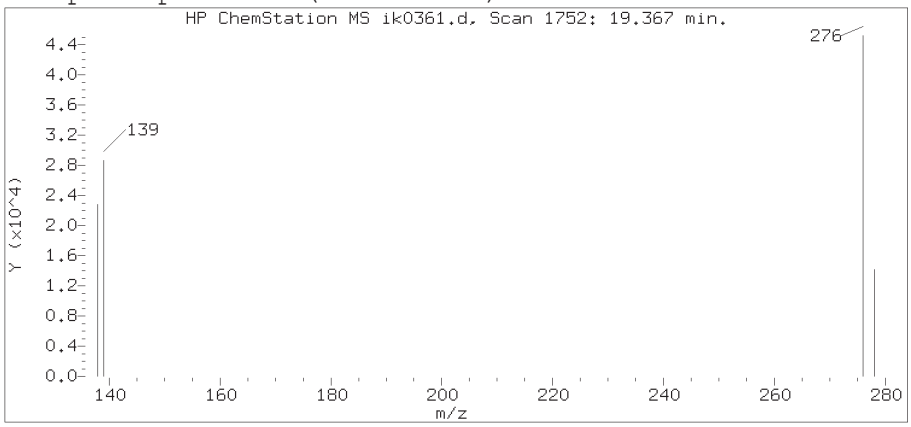


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

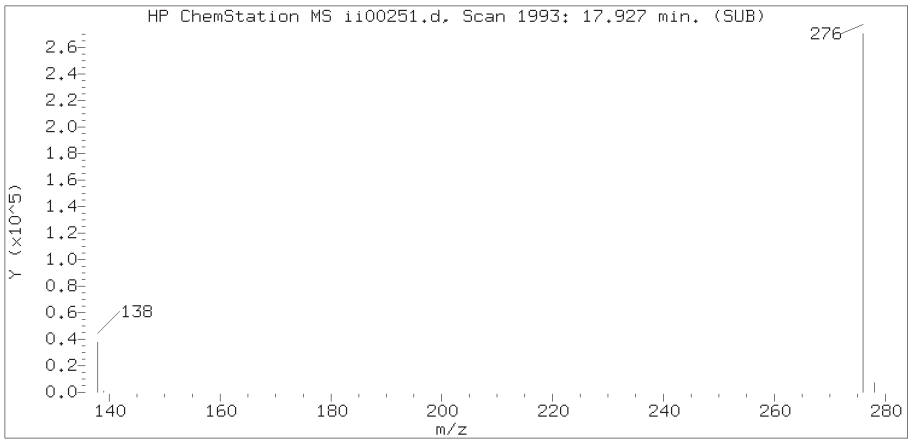
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

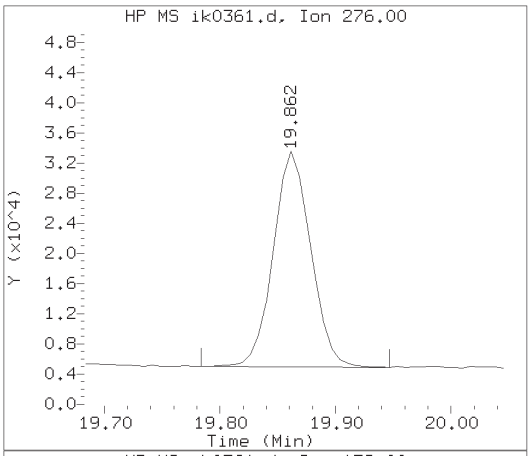
Sample Name: T1005DL Lab Sample ID: 9867767DL

Compound Number	: 54
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 1752
Retention Time (minutes)	: 19.367
Relative Retention Time	: 0.00013
Quant Ion	: 278.00
Area (flag)	: 21997
On-column Amount (ng/ul)	: 0.0781

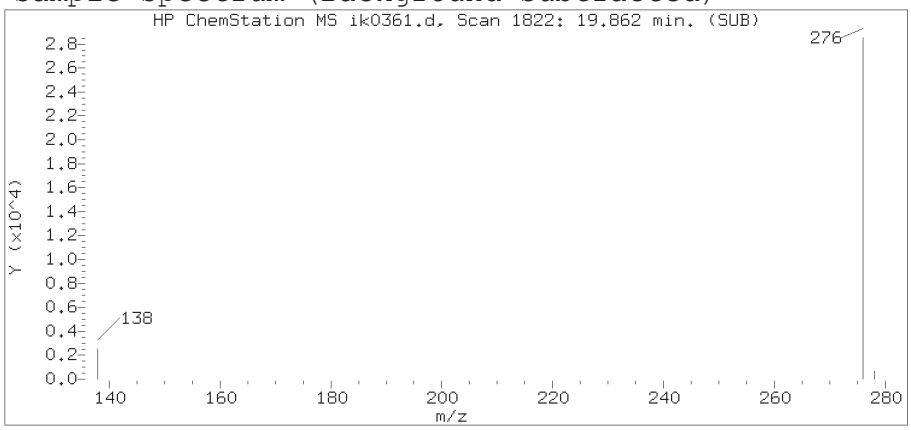
Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

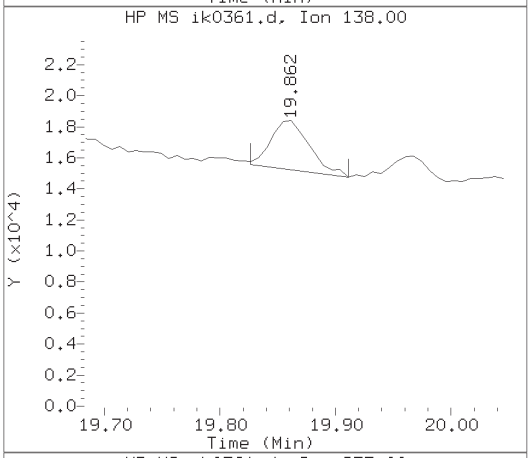
Reference Standard Spectrum for Benzo(g,h,i)perylene



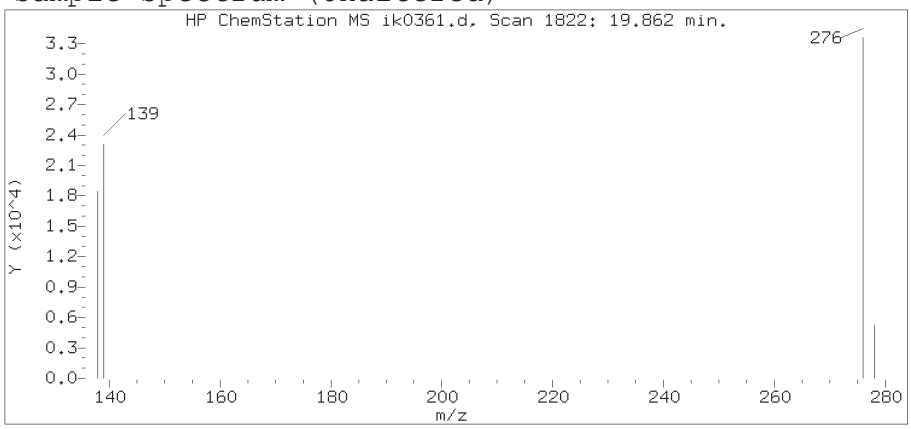


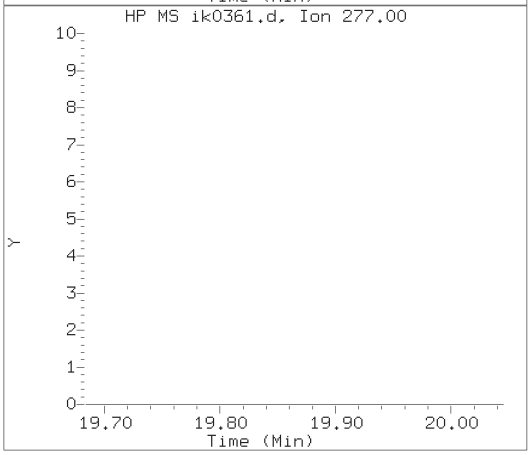
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov08.b/ik0361.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 12:35 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 12-Nov-2018 02:34 apb10206

Sample Name: T1005DL Lab Sample ID: 9867767DL

Compound Number	: 55
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 1822
Retention Time (minutes)	: 19.862
Relative Retention Time	:-0.00020
Quant Ion	: 276.00
Area (flag)	: 64955
On-column Amount (ng/ul)	: 0.2141

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:36.
Target 3.5 esignature user ID: apb10206

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/18nov16.b/ck0706.d Injection date and time: **16-NOV-2018 09:24**
Data file Sample Info. Line: T1005RE2;9867767RE2;2;0;SAMPLE;;DOD26;T4 Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:Comment 112

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.777(-0.013)	474	152	55596 (-19)	1.00	
10) Naphthalene-d8	8.289(0.000)	588	136	239131 (-9)	1.00	
20) Acenaphthene-d10	10.459(0.000)	774	164	91975M (-24)	1.00	
31) Phenanthrene-d10	12.327(-0.023)	941	188	145562M (-36)	1.00	
43) Chrysene-d12	15.679(-0.070)	1260	240	97625 (-44)	1.00	
51) Perylene-d12	17.884(-0.164)	1542	264	67653A (-56)	1.00	*

*** = Internal Standard area outside QC limits M = Internal Standard was manually integrated A = User selected an alternate peak**

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.242(-0.001)	152	82649MA	0.684	68%		61 - 111
36) Fluoranthene-d10	(4)	13.830(0.000)	212	110417A	0.836	84%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.744(0.000)	264	36000A	0.579	58%		54 - 122

M = Surrogate Standard was manually integrated. A = User selected an alternate peak.

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.330(-0.013)	88	33831A	0.947	31.56			0.02
11) Naphthalene	(2)	8.316(-0.000)	128	378427	1.490	49.68			0.04
19) Acenaphthylene	(3)	10.285(-0.001)	152	57133	0.313	10.43	0.335	B	0.01
21) Acenaphthene	(3)	10.502(-0.001)	154	9629M	0.077	2.57			0.02
26) Fluorene	(3)	11.147(-0.001)	166	20384M	0.153	5.08			0.02
32) Phenanthrene	(4)	12.350(0.000)	178	399543M	2.300	76.68			0.02
33) Anthracene	(4)	12.417(0.000)	178	113740A	0.681	22.70			0.02
35) Di-n-butylphthalate	(4)	12.990(0.000)	149	303028M	1.629	54.29			0.2
37) Fluoranthene	(4)	13.855(0.000)	202	647200A	3.792	126.41			0.02
39) Pyrene	(5)	14.160(0.001)	202	624661	3.976	132.52			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.585(0.000)	149	3878392	33.677	1122.56	18.477	B E	0.3
42) Benzo(a)anthracene	(5)	15.663(-0.000)	228	265805	2.101	70.03			0.02
44) Chrysene	(5)	15.702(0.000)	228	715058	5.516	183.87			0.01
46) Benzo(b)fluoranthene	(6)	17.243(0.000)	252	1056168A	12.181	406.02		E	0.02
47) Benzo(k)fluoranthene	(6)			Not Detected					0.02
50) Benzo(a)pyrene	(6)	17.790(-0.000)	252	235270A	2.974	99.14			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.831(-0.000)	276	191046A	2.435	81.15			0.02
54) Dibenz(a,h)anthracene	(6)	19.831(0.000)	278	42732A	0.657	21.90			0.02
55) Benzo(g,h,i)perylene	(6)	20.396(-0.000)	276	161455A	2.205	73.49			0.02

A = User selected an alternate peak. B = Compound detected in referenced method blank. M = Compound was manually integrated.
E = Compound concentration above calibration range.

Digitally signed by William H Saadeh on 11/16/2018 at 12:55. Target 3.5 esignature user ID: whs02991

Data file: /chem/HP10623.i/18nov16.b/ck0706.d Injection date and time: **16-NOV-2018 09:24**
Data file Sample Info. Line: T1005RE2;9867767RE2;2;0;SAMPLE;;DOD26;T4 Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

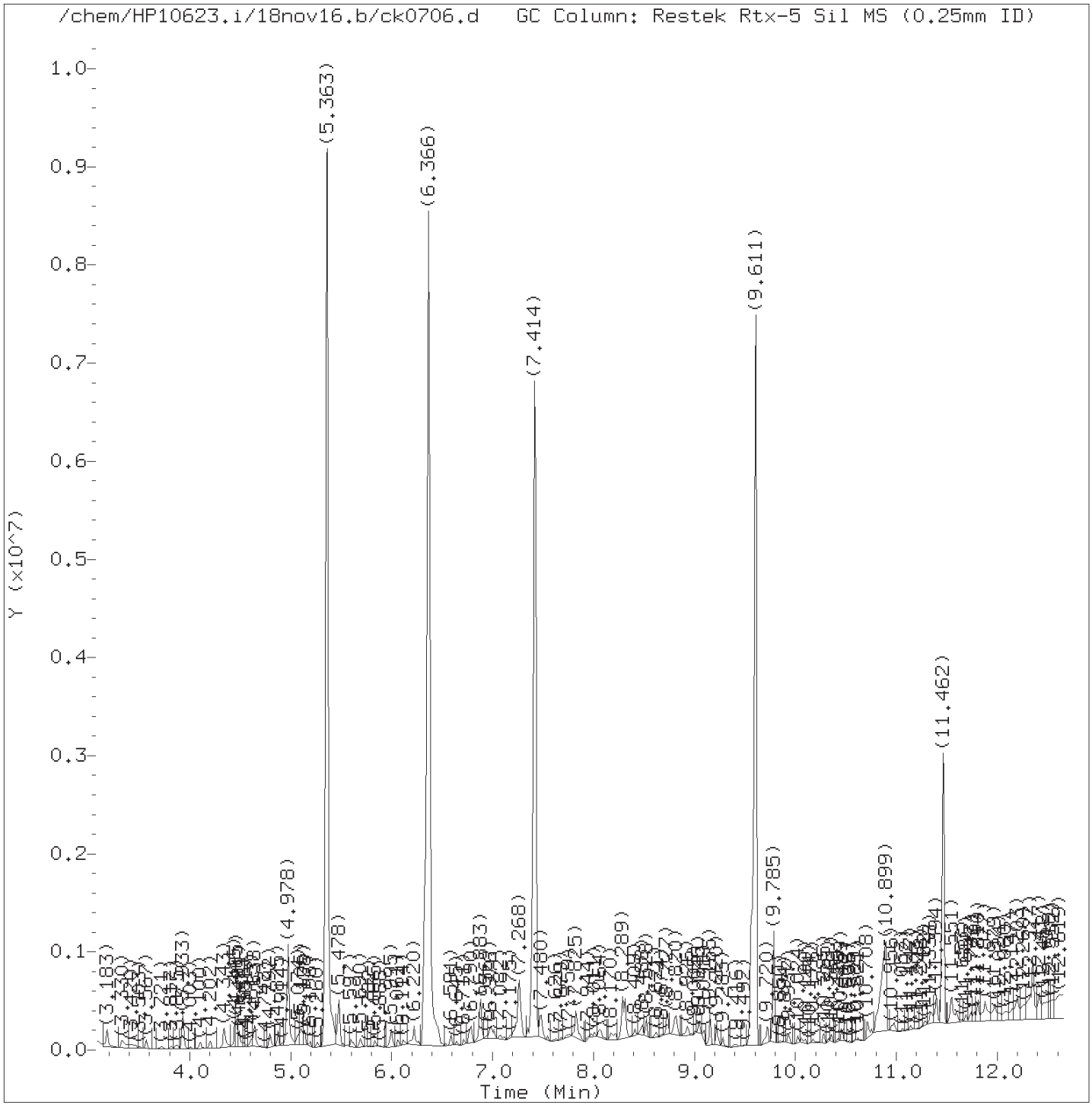
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by William H Saadeh on 11/16/2018 at 12:55. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

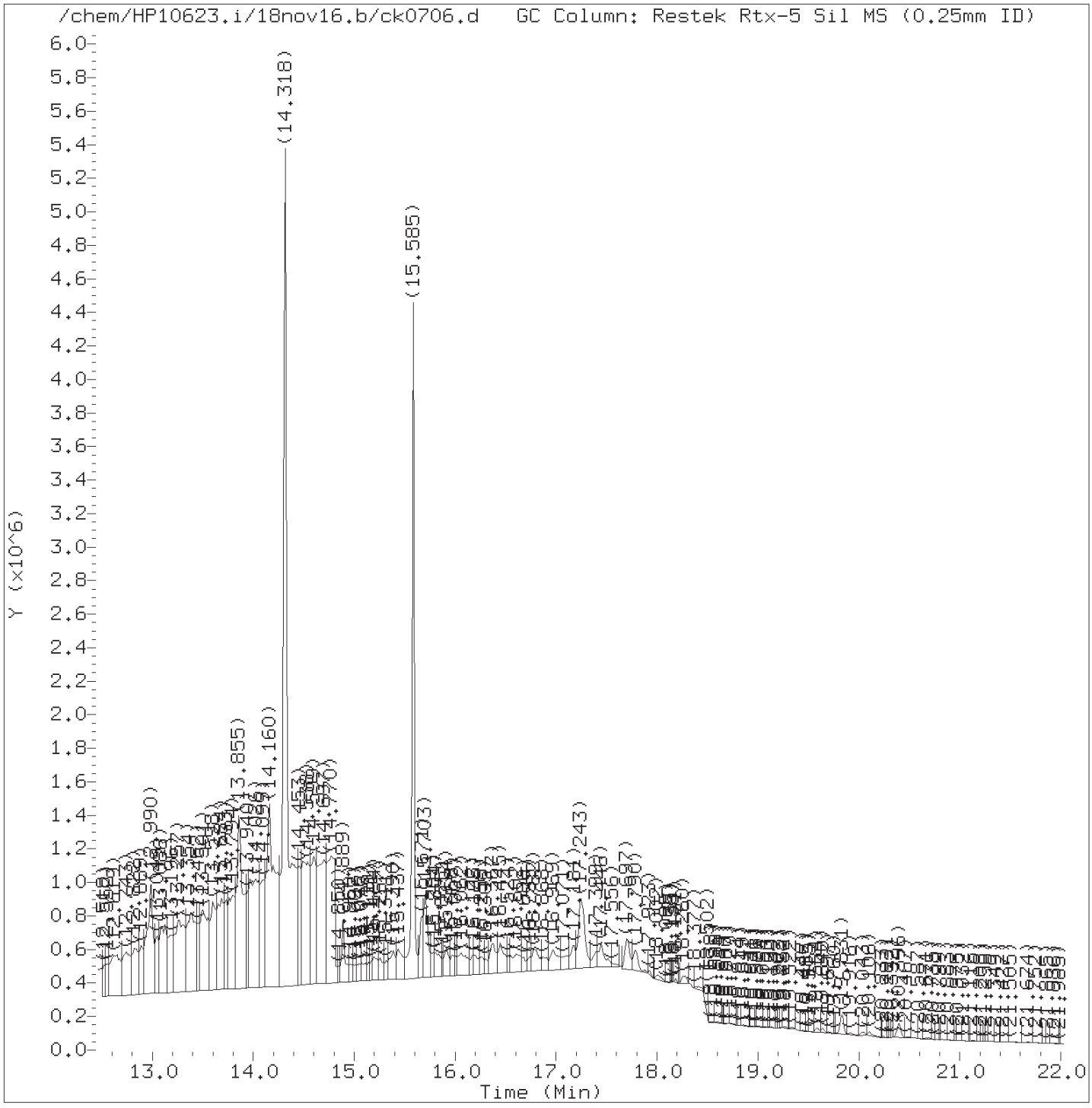
Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

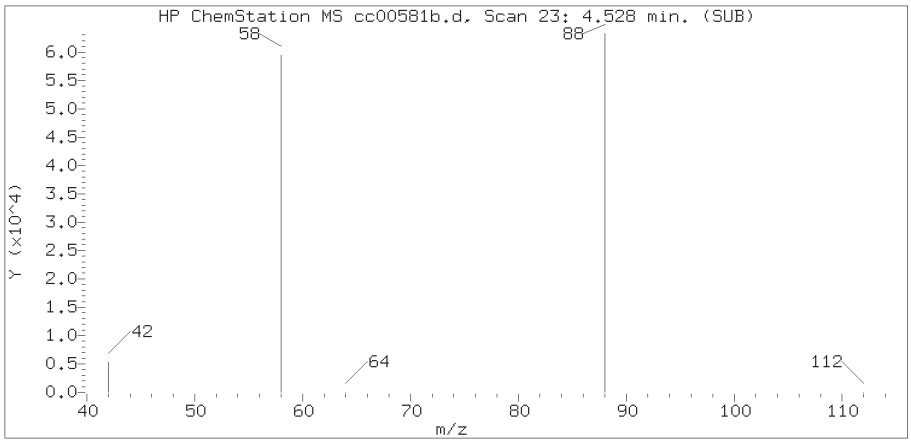
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

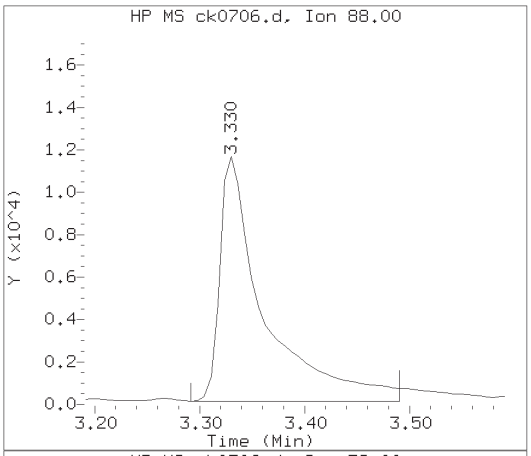
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.330	88	33831A	0.947
6)*1,4-Dichlorobenzene-d4	(1)	6.777	152	55596	1.000
10)*Naphthalene-d8	(2)	8.289	136	239131	1.000
11) Naphthalene	(2)	8.316	128	378427	1.490
14)$1-Methylnaphthalene-d10	(2)	9.242	152	82649MA	0.684
19) Acenaphthylene	(3)	10.285	152	57133	0.313
20)*Acenaphthene-d10	(3)	10.459	164	91975M	1.000
21) Acenaphthene	(3)	10.502	154	9629M	0.077
26) Fluorene	(3)	11.147	166	20384M	0.153
31)*Phenanthrene-d10	(4)	12.327	188	145562M	1.000
32) Phenanthrene	(4)	12.350	178	399543M	2.300
33) Anthracene	(4)	12.417	178	113740A	0.681
35) Di-n-butylphthalate	(4)	12.990	149	303028M	1.629
36)$Fluoranthene-d10	(4)	13.830	212	110417A	0.836
37) Fluoranthene	(4)	13.855	202	647200A	3.792
39) Pyrene	(5)	14.160	202	624661	3.976
41) bis(2-Ethylhexyl)phthalate	(5)	15.585	149	3878392	33.677
42) Benzo(a)anthracene	(5)	15.663	228	265805	2.101
43)*Chrysene-d12	(5)	15.679	240	97625	1.000
44) Chrysene	(5)	15.703	228	715058	5.516
46) Benzo(b)fluoranthene	(6)	17.243	252	1056168A	12.181
49)$Benzo(a)pyrene-d12	(6)	17.744	264	36000A	0.579
50) Benzo(a)pyrene	(6)	17.790	252	235270A	2.974
51)*Perylene-d12	(6)	17.884	264	67653A	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.831	276	191046A	2.435
54) Dibenz(a,h)anthracene	(6)	19.831	278	42732A	0.657
55) Benzo(g,h,i)perylene	(6)	20.396	276	161455A	2.205

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

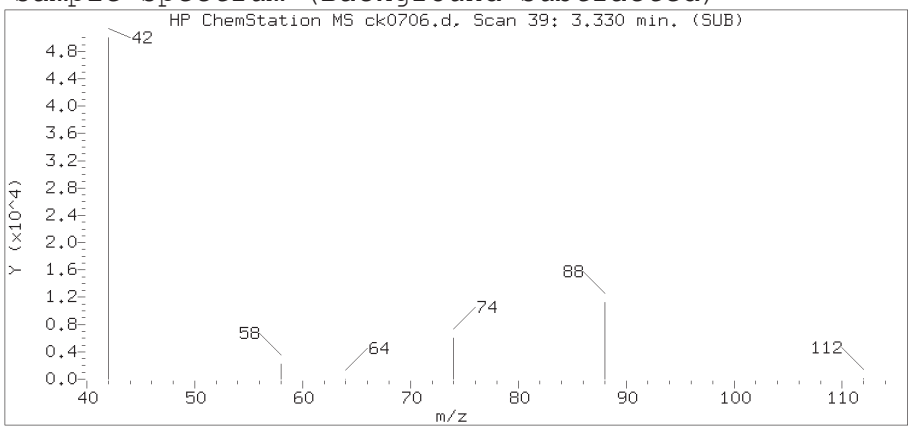
Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

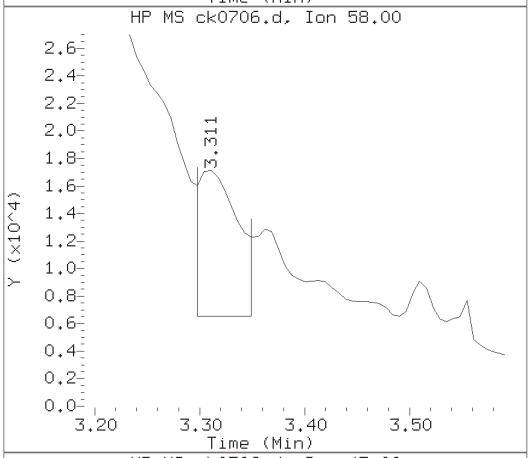
Reference Standard Spectrum for 1,4-Dioxane



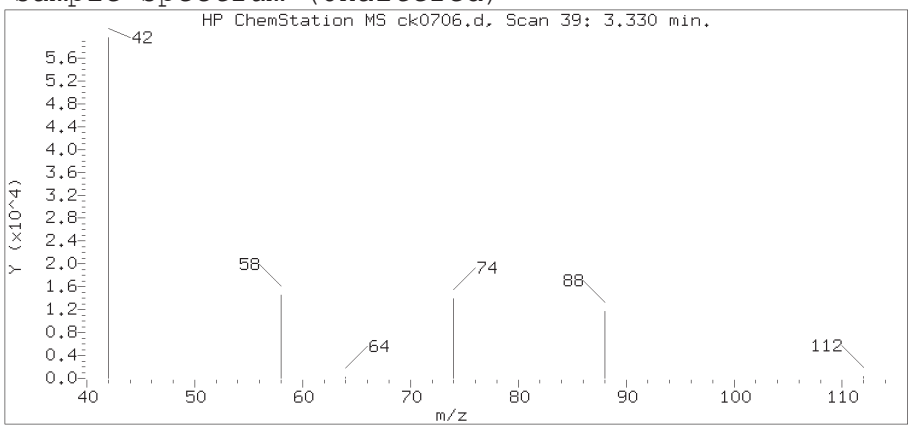


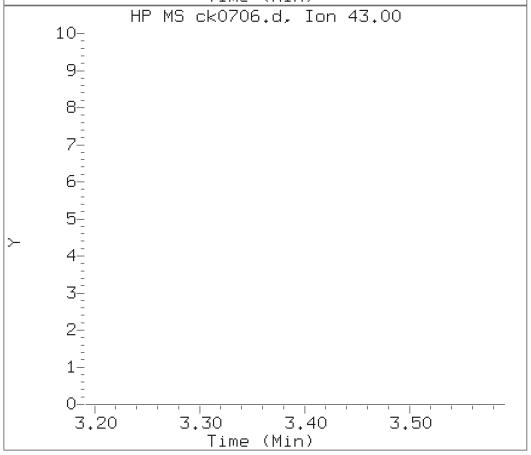
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

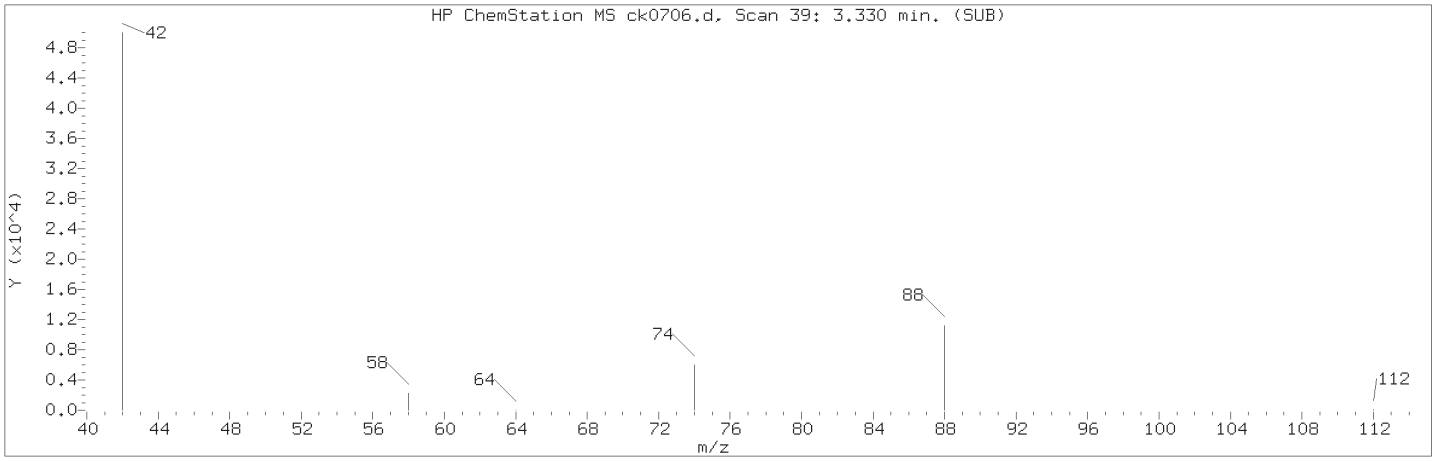
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

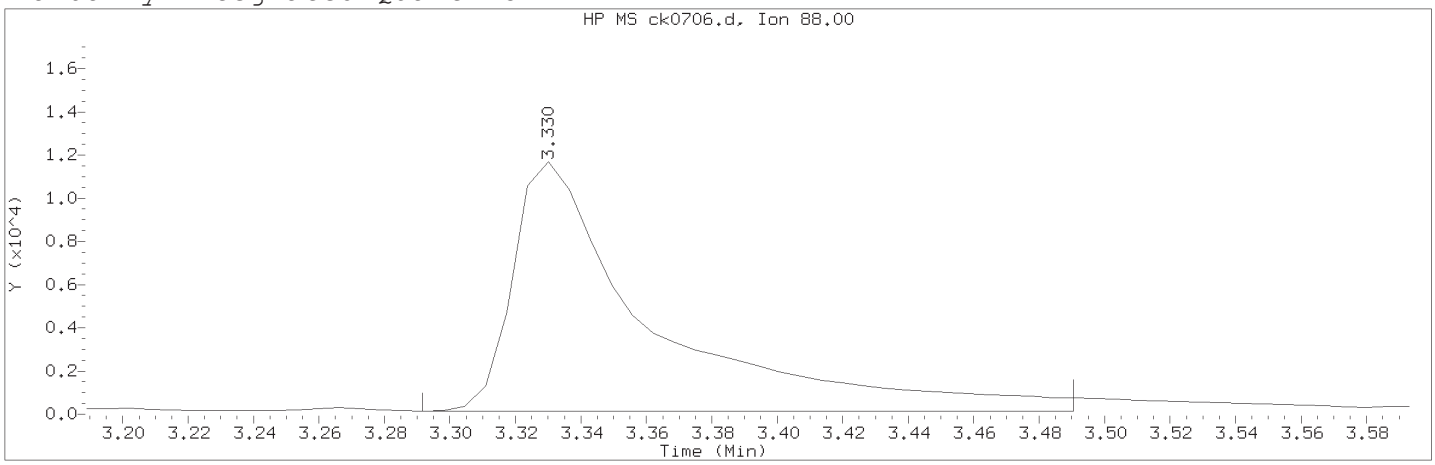
Compound Number	: 1
Compound Name	: 1,4-Dioxane
Scan Number	: 39
Retention Time (minutes)	: 3.330
Relative Retention Time	:-0.01327
Quant Ion	: 88.00
Area (flag)	: 33831A
On-column Amount (ng/ul)	: 0.9468

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

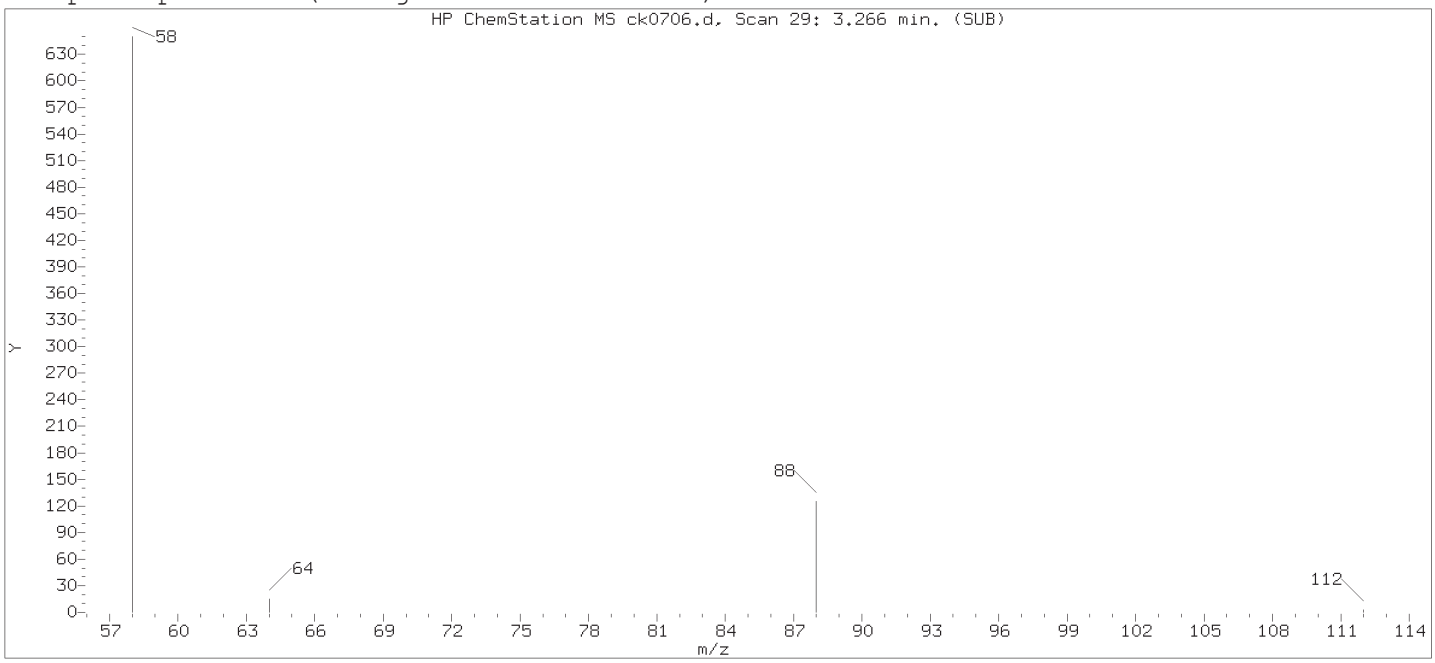
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 39
Retention Time (minutes) : 3.330
Quant Ion : 88.00
Area (flag) : 33831A
On-column Amount (ng/ul) : 0.9468
Integration start scan : 32 Integration stop scan: 63
Y at integration start : 150 Y at integration end: 150

Reason for manual integration: improper integration

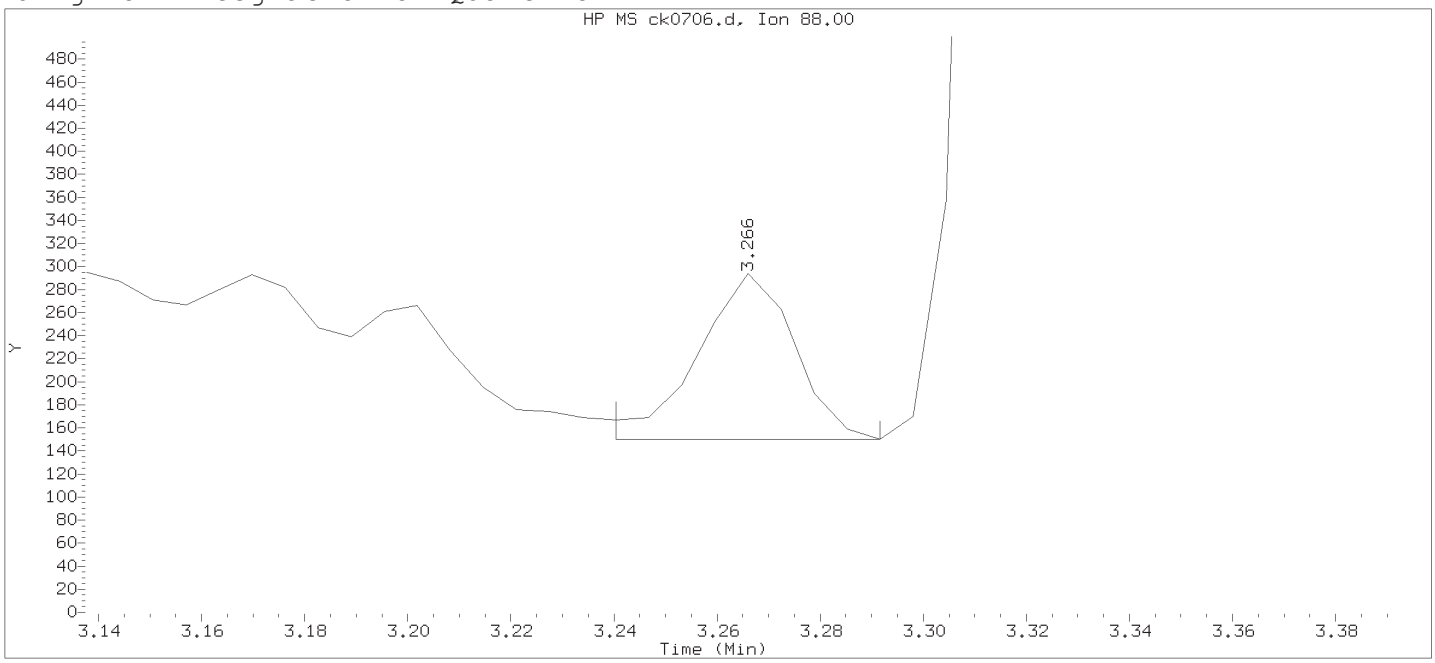
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

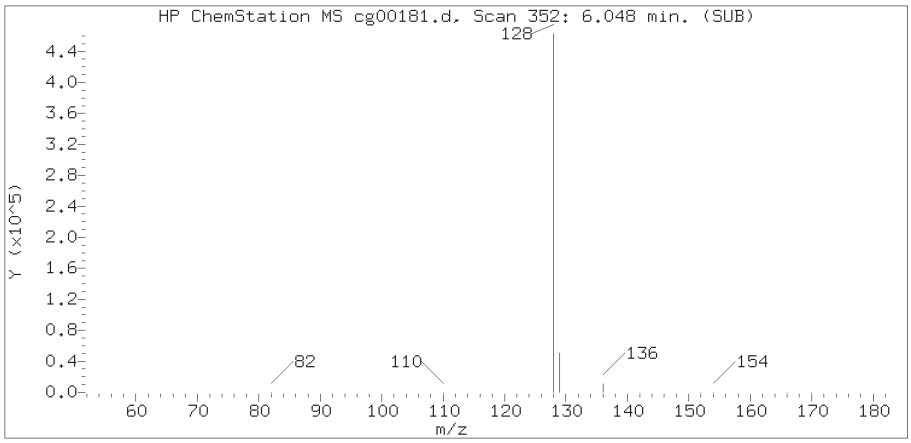
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

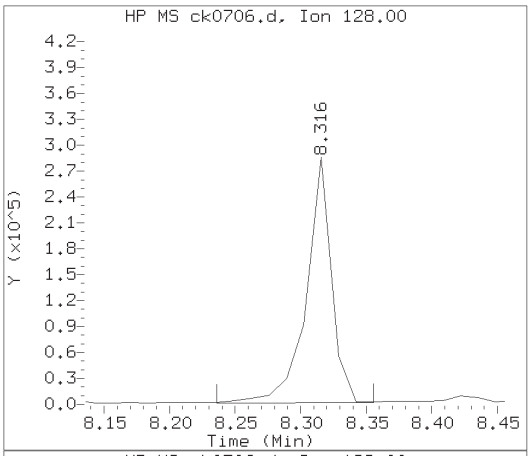
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 29
Retention Time (minutes) : 3.266
Quant Ion : 88.00
Area : 185
On-column Amount (ng/ul) : 0.0052
Integration start scan : 24 Integration stop scan: 32
Y at integration start : 150 Y at integration end: 150

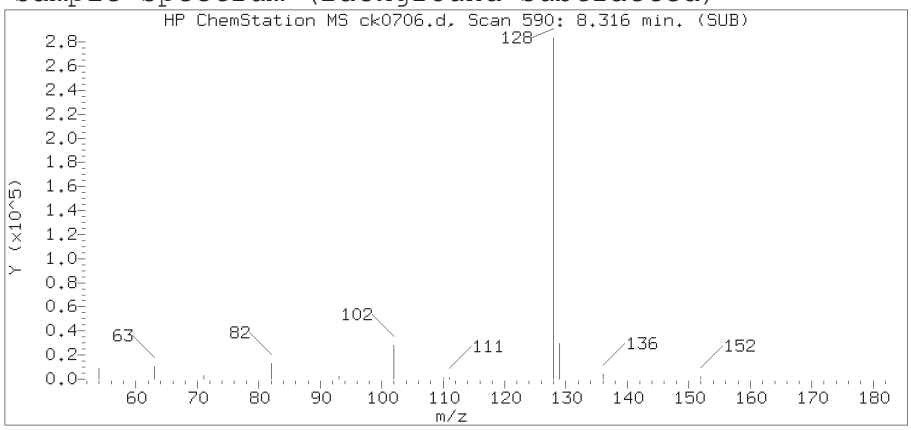
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: [illegible]

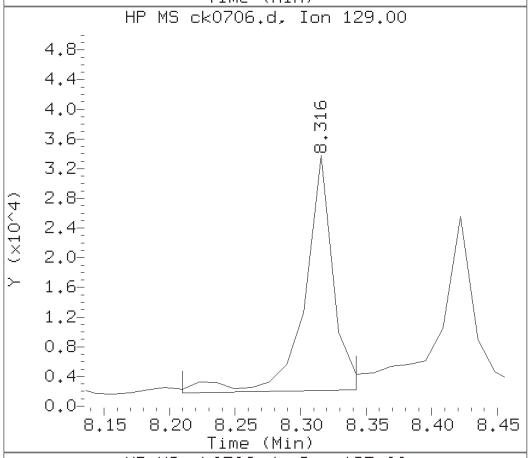
Reference Standard Spectrum for Naphthalene



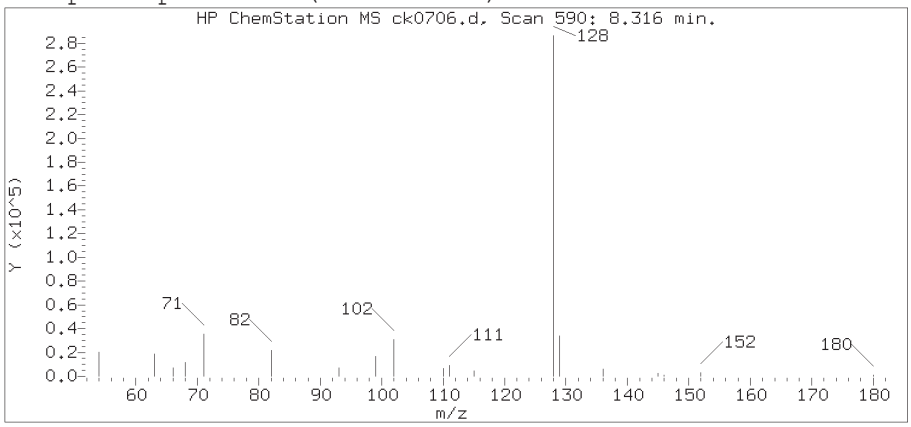


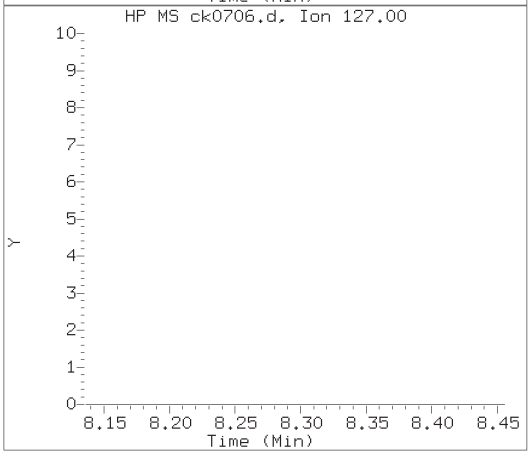
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

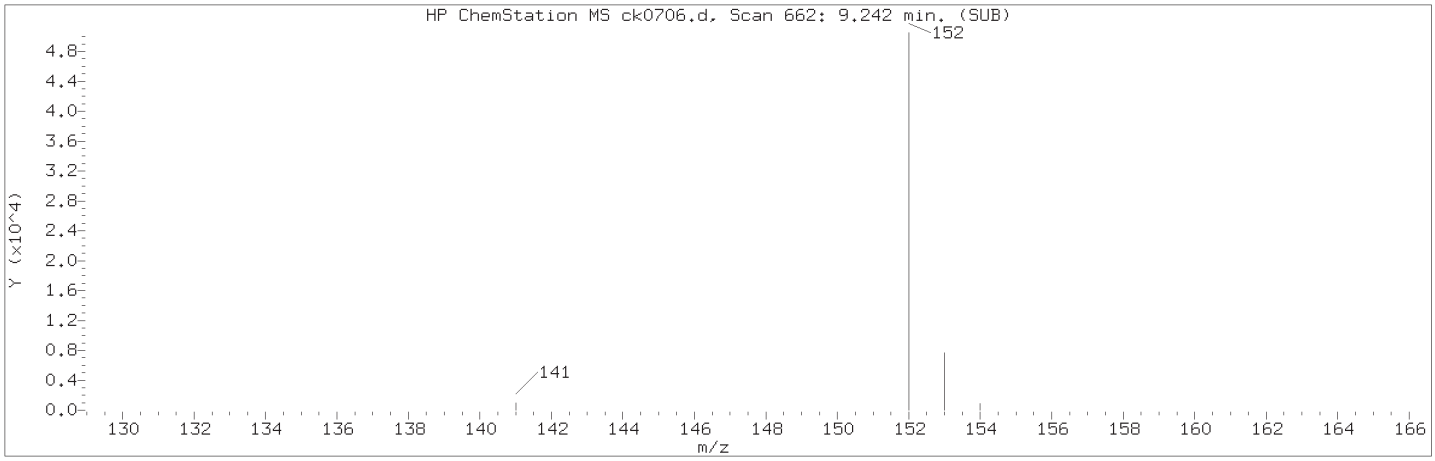
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

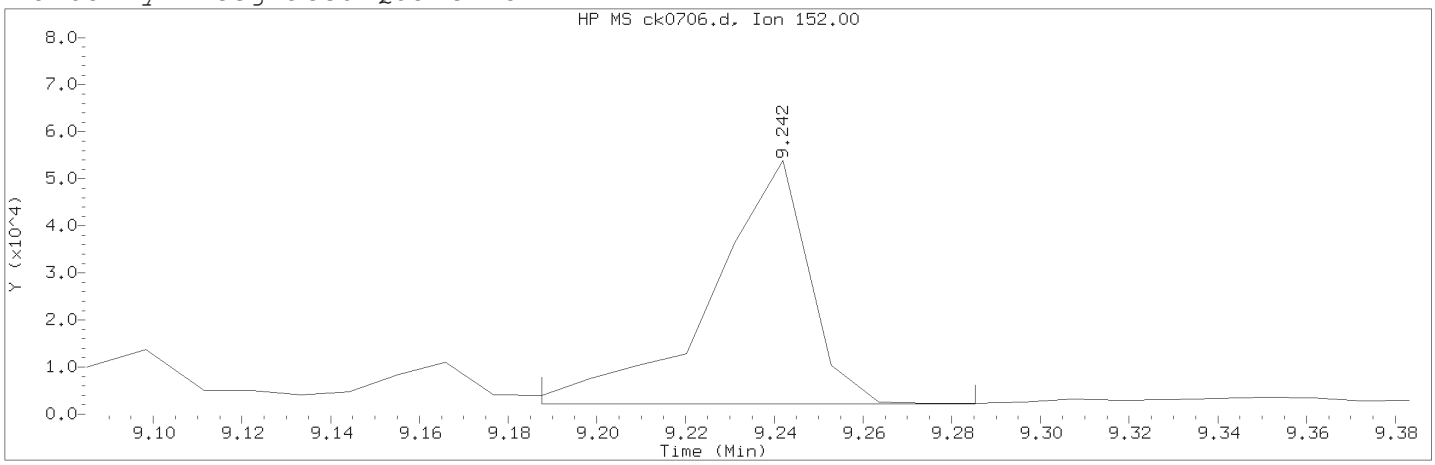
Compound Number	: 11
Compound Name	: Naphthalene
Scan Number	: 590
Retention Time (minutes)	: 8.316
Relative Retention Time	:-0.00000
Quant Ion	: 128.00
Area (flag)	: 378427
On-column Amount (ng/ul)	: 1.4904

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

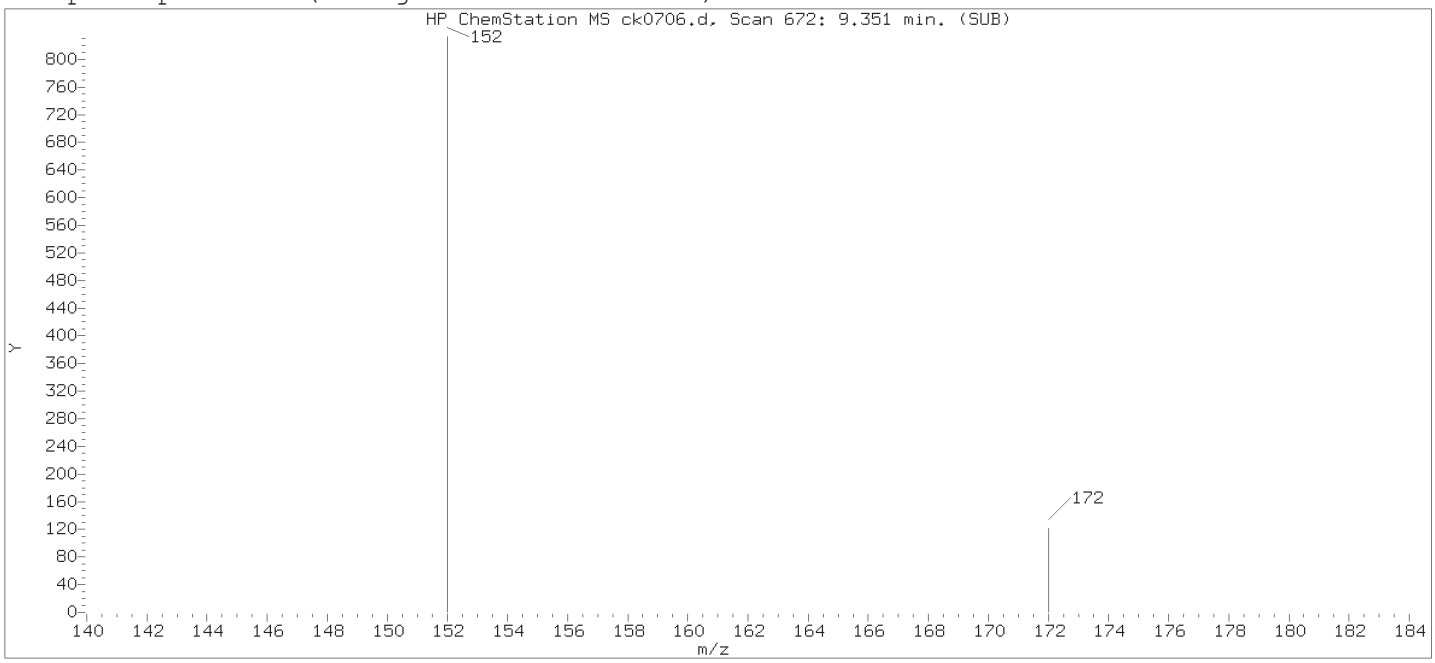
Compound Number : 14
Compound Name : 1-Methylnaphthalene-d10
Scan Number : 662
Retention Time (minutes) : 9.242
Quant Ion : 152.00
Area (flag) : 82649AM
On-column Amount (ng/ul) : 0.6841
Integration start scan : 656 Integration stop scan: 665
Y at integration start : 2240 Y at integration end: 2240

Reason for manual integration: improper integration

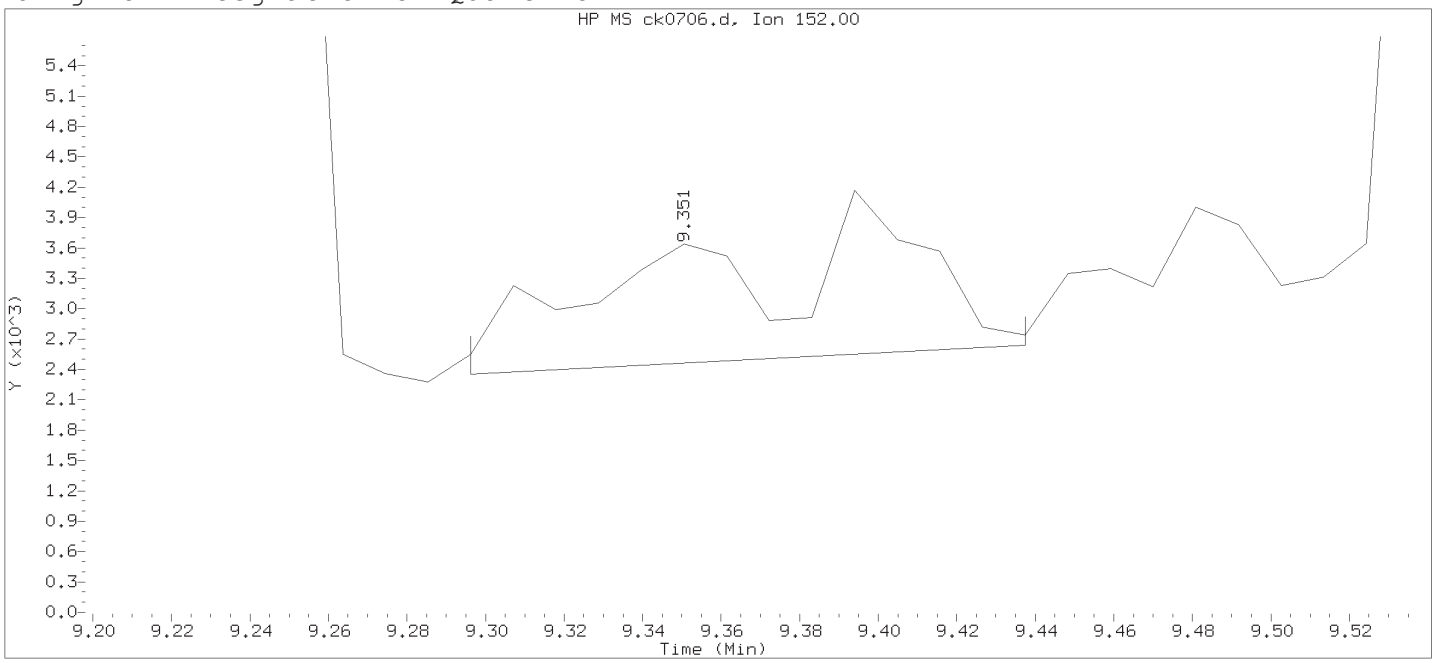
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

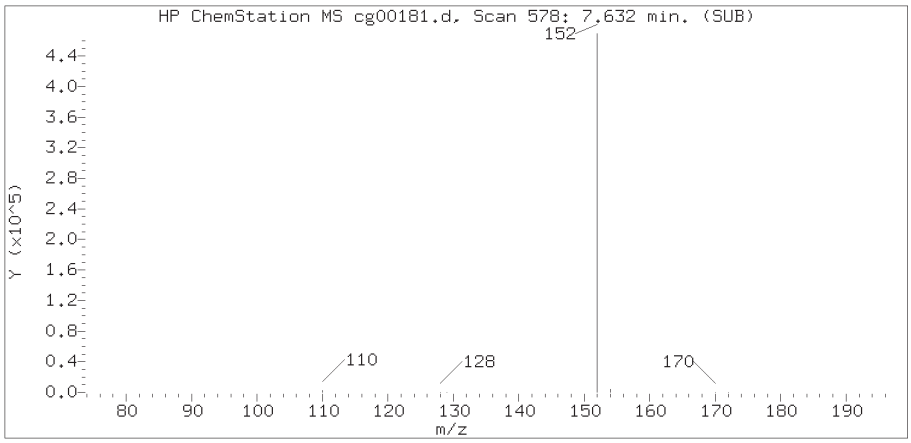
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

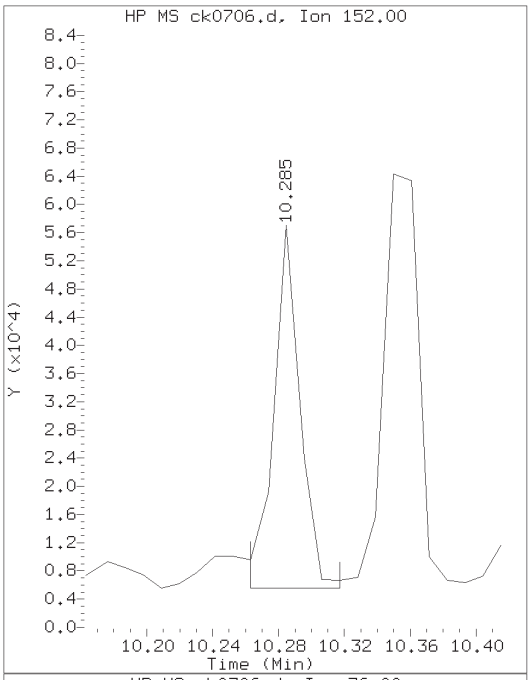
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number : 14
Compound Name : 1-Methylnaphthalene-d10
Scan Number : 672
Retention Time (minutes) : 9.351
Quant Ion : 152.00
Area : 6906
On-column Amount (ng/ul) : 0.0572
Integration start scan : 666 Integration stop scan: 679
Y at integration start : 2350 Y at integration end: 2636

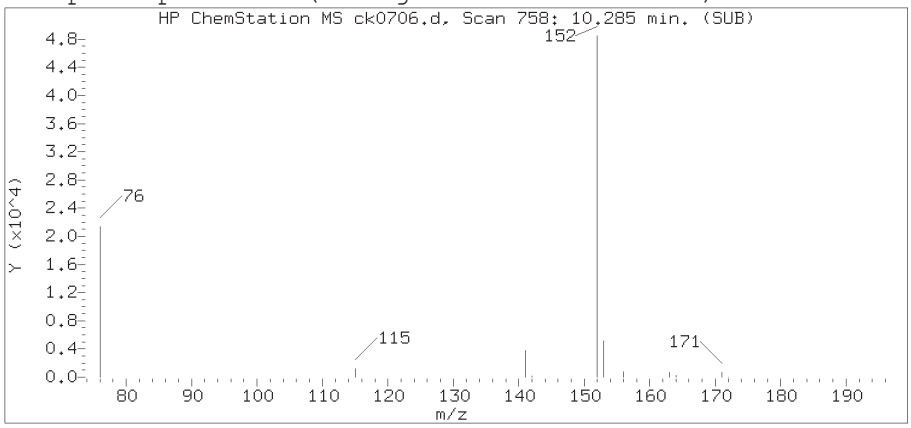
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: [illegible]

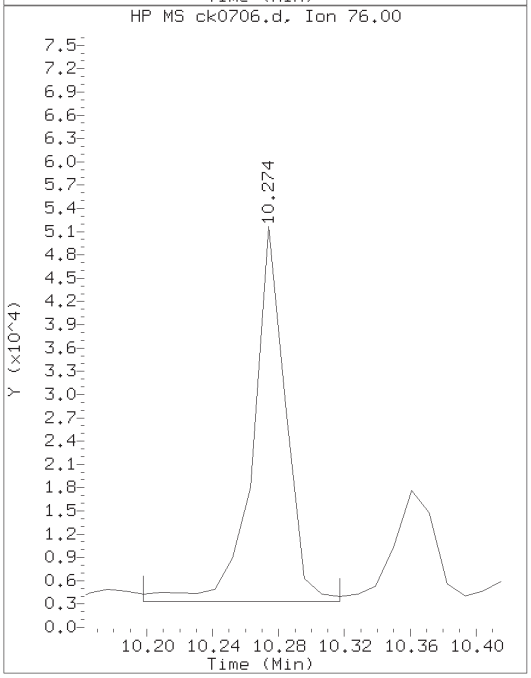
Reference Standard Spectrum for Acenaphthylene



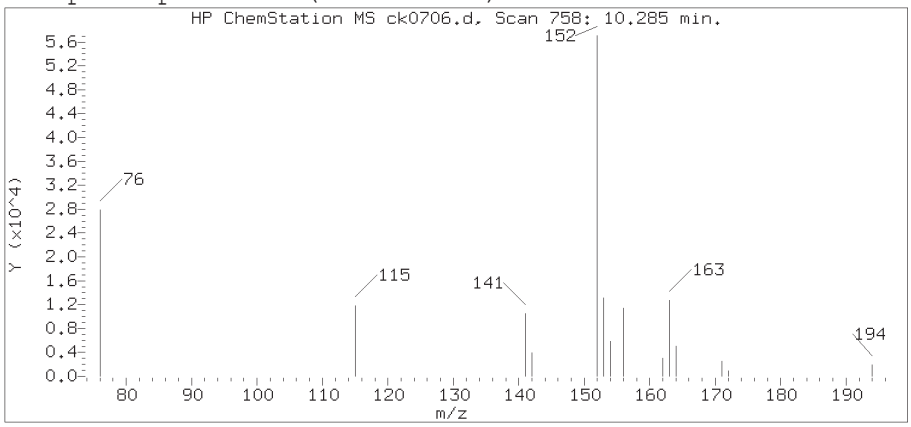


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

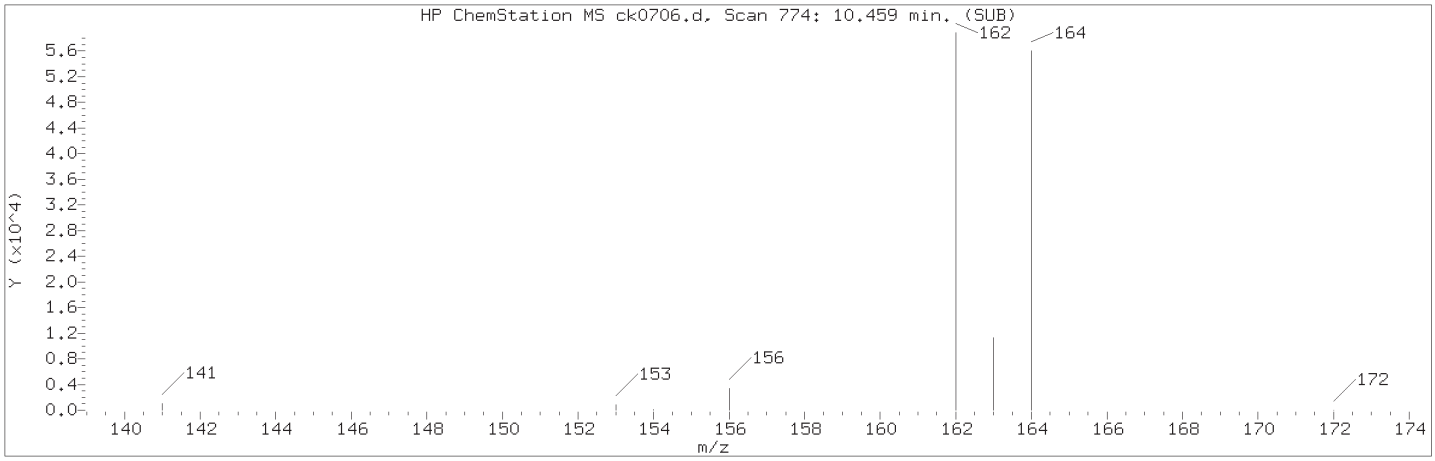
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

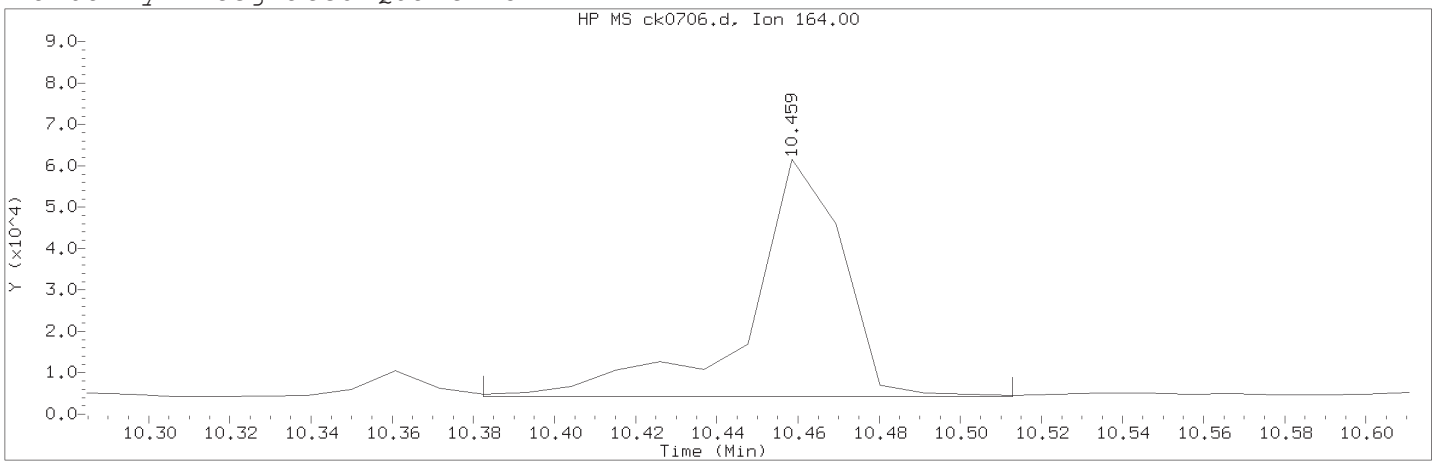
Compound Number	: 19
Compound Name	: Acenaphthylene
Scan Number	: 758
Retention Time (minutes)	: 10.285
Relative Retention Time	:-0.00104
Quant Ion	: 152.00
Area (flag)	: 57133
On-column Amount (ng/ul)	: 0.3129

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

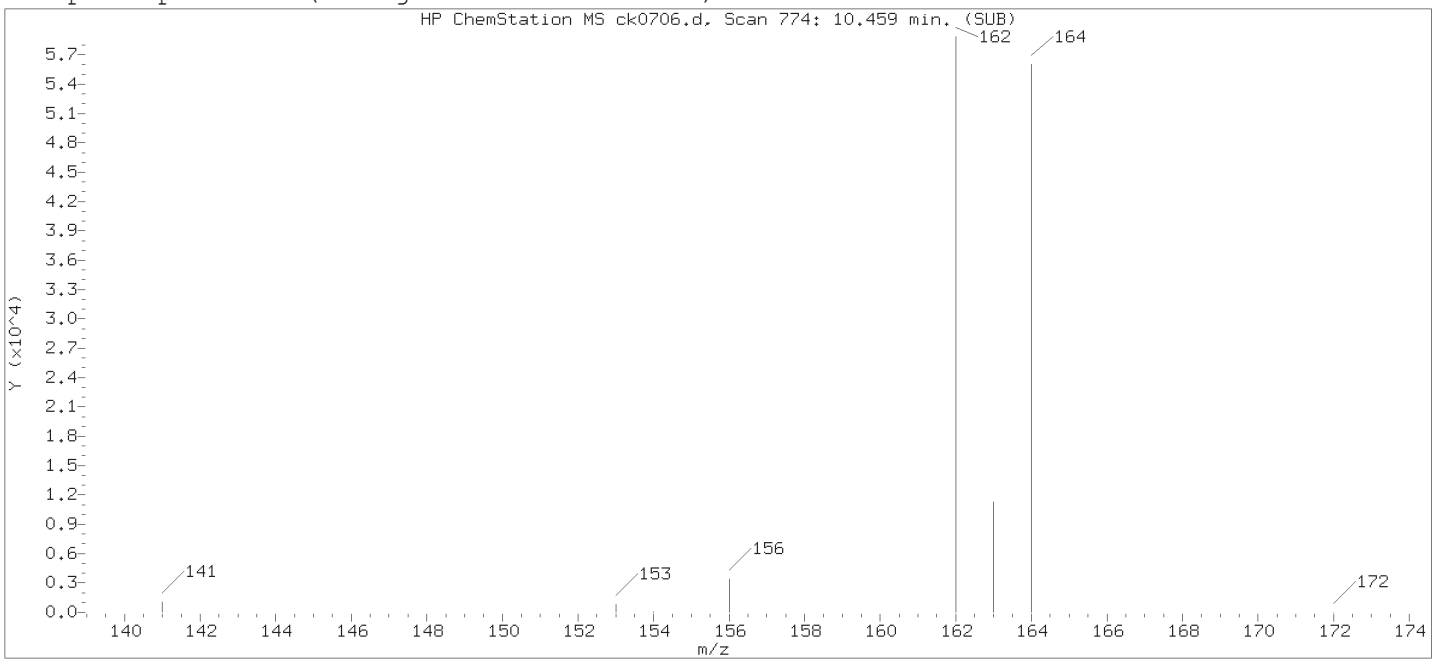
Compound Number : 20
Compound Name : Acenaphthene-d10
Scan Number : 774
Retention Time (minutes) : 10.459
Quant Ion : 164.00
Area (flag) : 91975M
On-column Amount (ng/ul) : 1.0000
Integration start scan : 766 Integration stop scan: 778
Y at integration start : 4288 Y at integration end: 4288

Reason for manual integration: improper integration

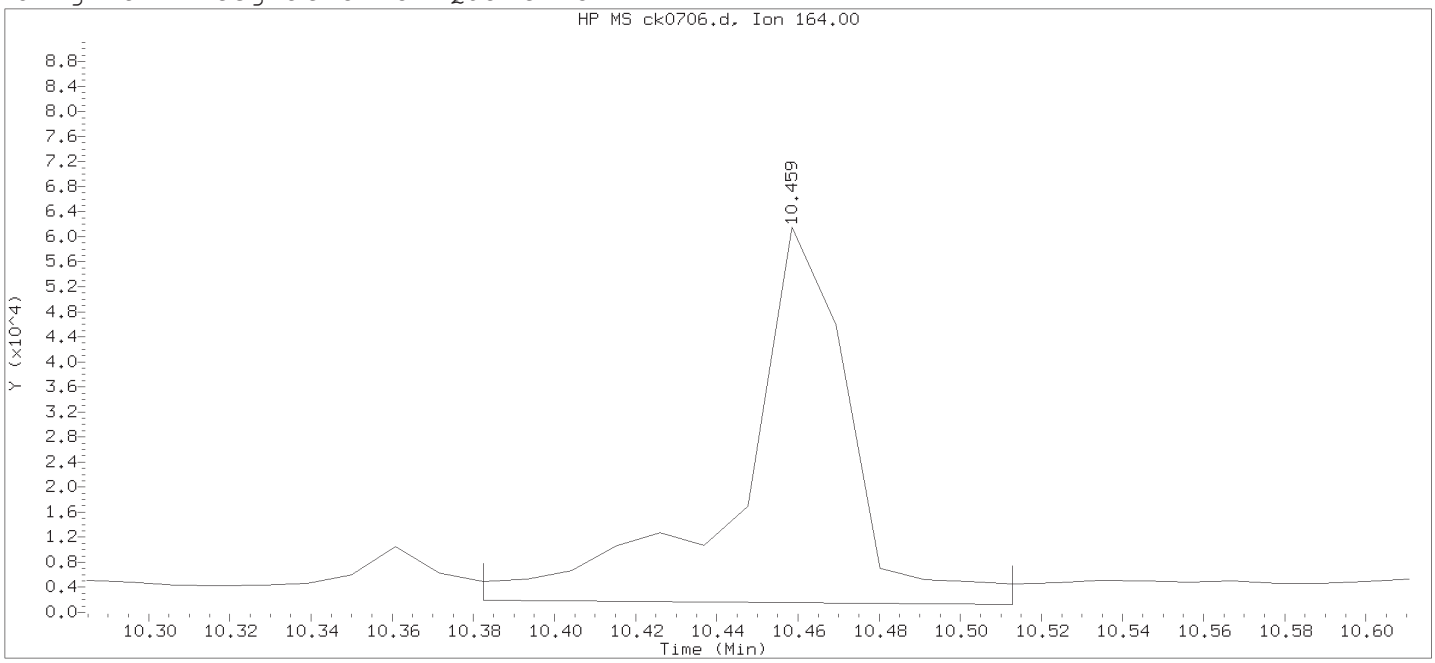
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

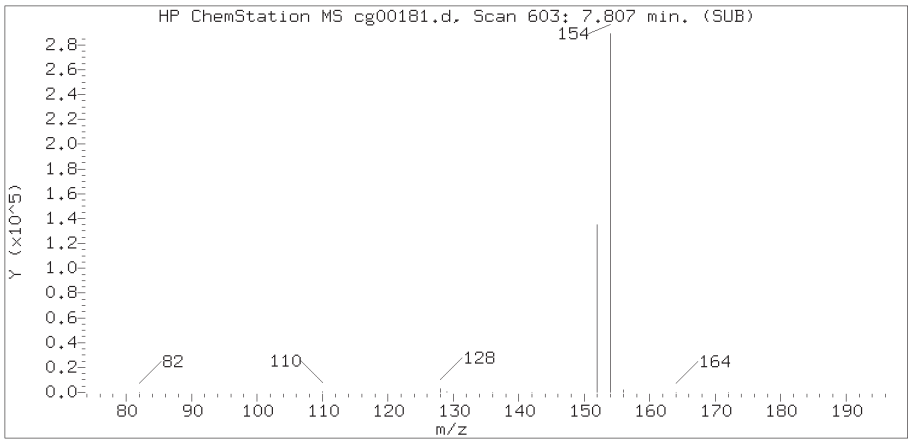
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

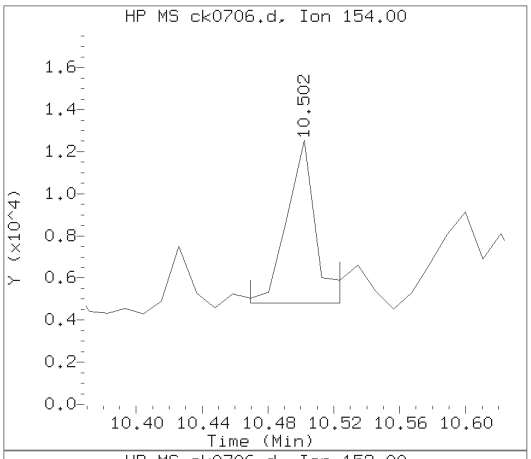
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number	:	20
Compound Name	:	Acenaphthene-d10
Scan Number	:	774
Retention Time (minutes)	:	10.459
Quant Ion	:	164.00
Area	:	113822
On-column Amount (ng/ul)	:	1.0000
Integration start scan	:	766 Integration stop scan: 778
Y at integration start	:	1887 Y at integration end: 1279

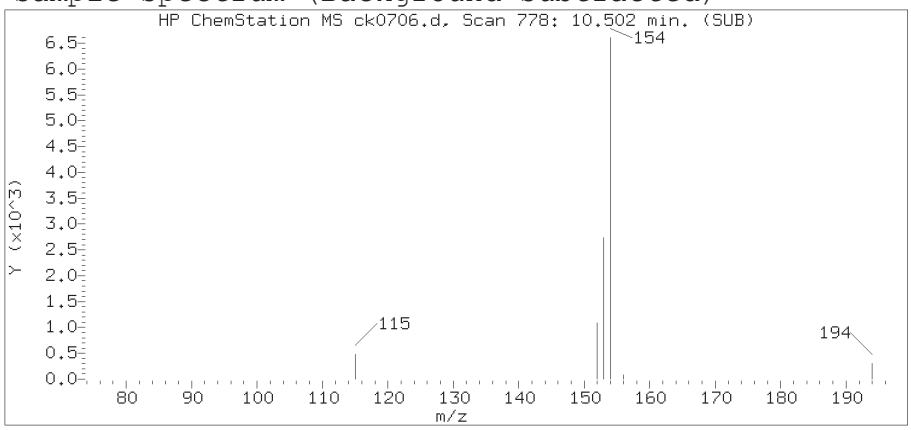
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: [illegible]

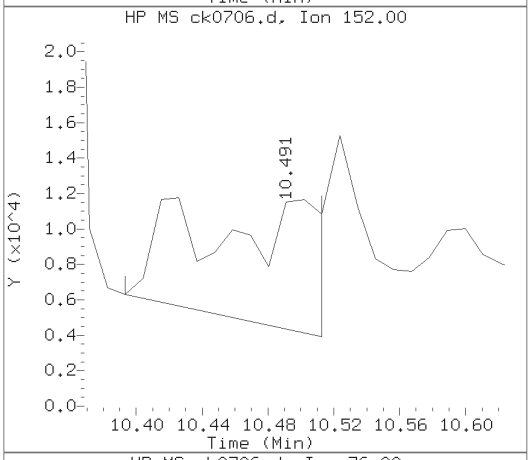
Reference Standard Spectrum for Acenaphthene



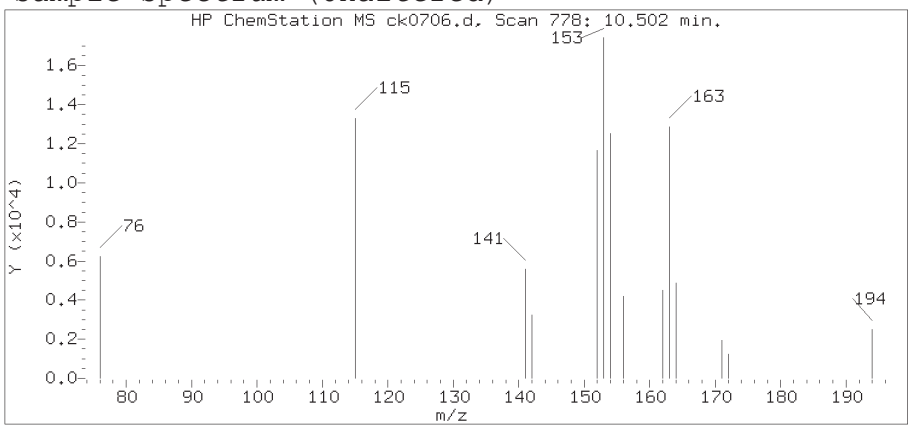


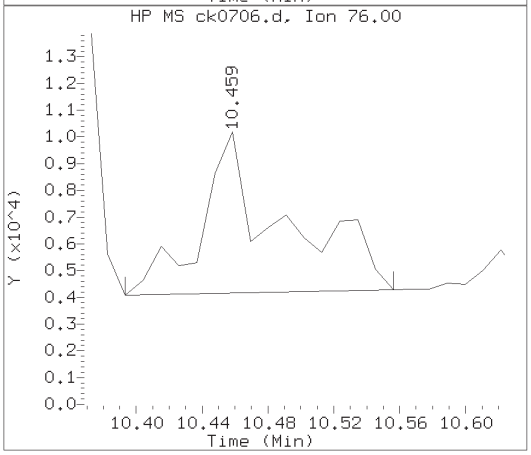
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

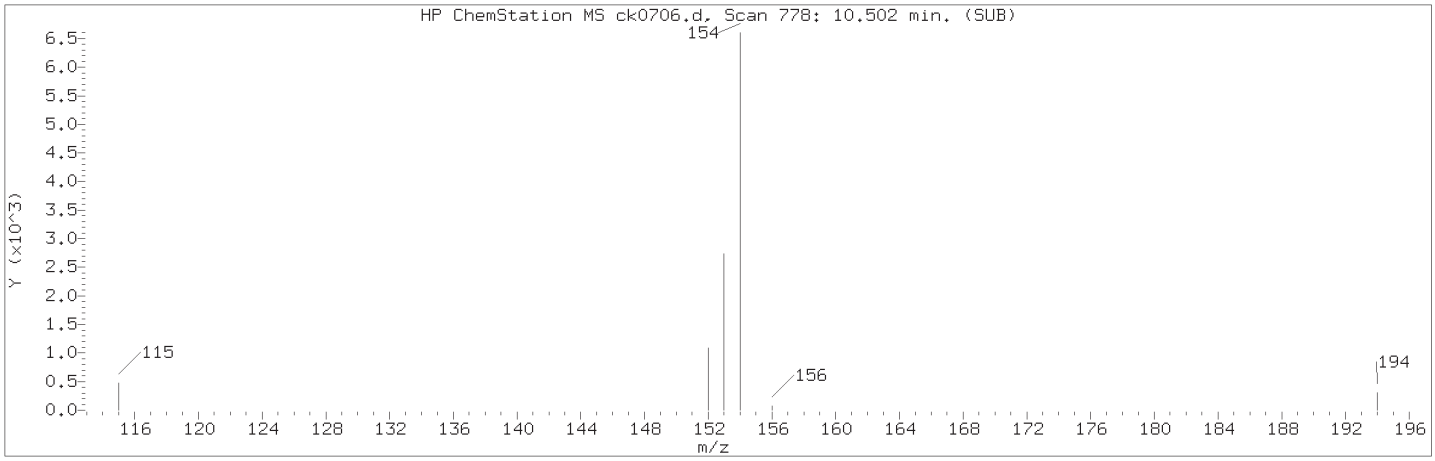
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

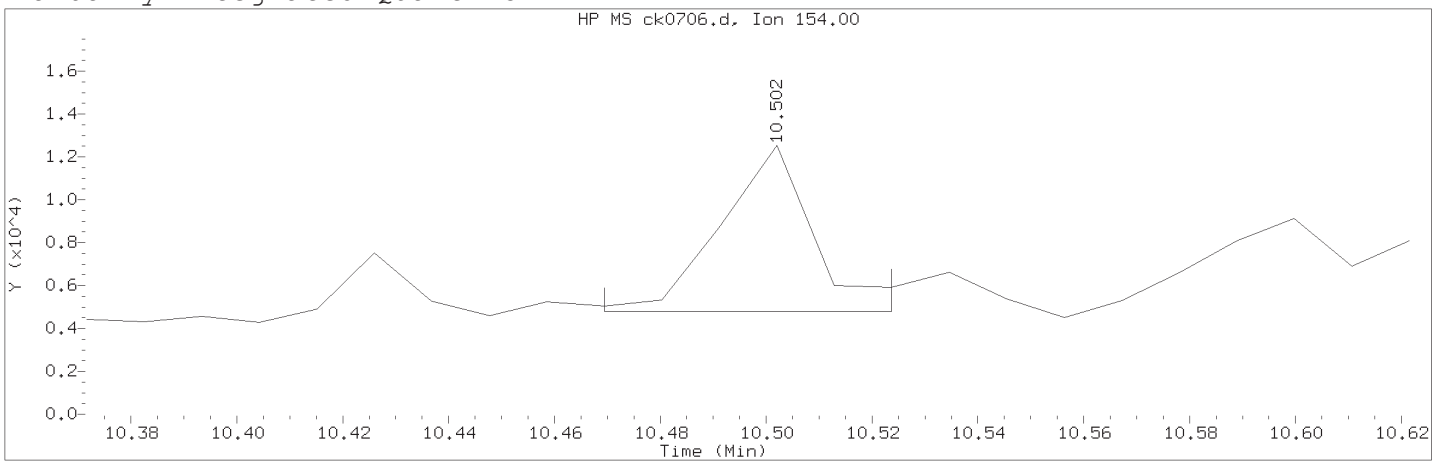
Compound Number	: 21
Compound Name	: Acenaphthene
Scan Number	: 778
Retention Time (minutes)	: 10.502
Relative Retention Time	:-0.00104
Quant Ion	: 154.00
Area (flag)	: 9629M
On-column Amount (ng/ul)	: 0.0770

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

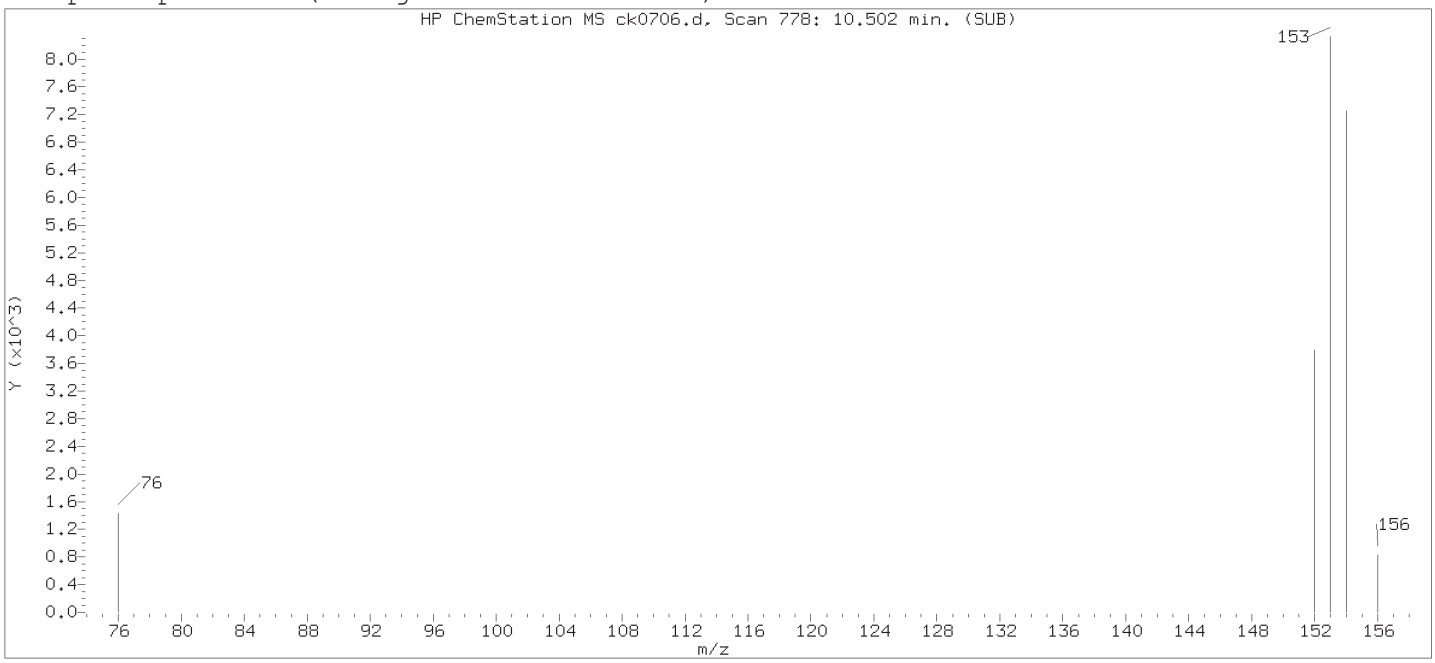
Compound Number : 21
Compound Name : Acenaphthene
Scan Number : 778
Retention Time (minutes) : 10.502
Quant Ion : 154.00
Area (flag) : 9629M
On-column Amount (ng/ul) : 0.0770
Integration start scan : 774 Integration stop scan: 779
Y at integration start : 4797 Y at integration end: 4797

Reason for manual integration: improper integration

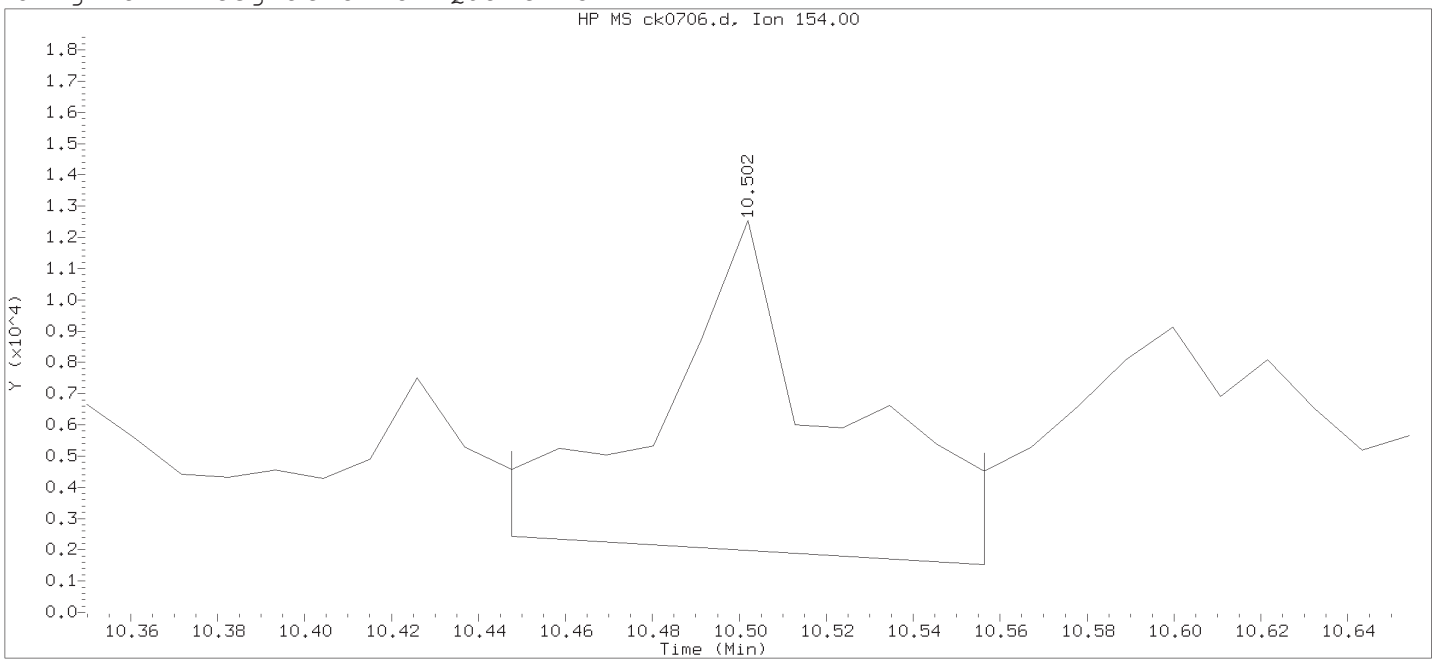
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

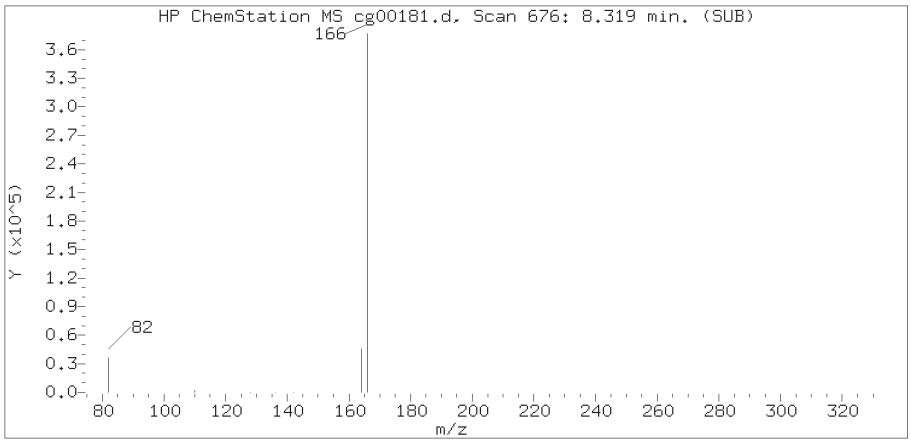
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

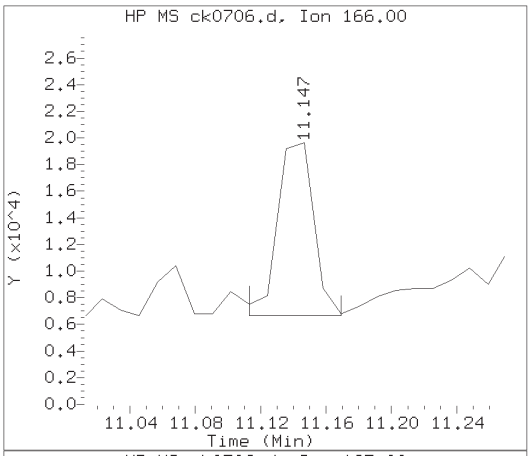
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number	:	21
Compound Name	:	Acenaphthene
Scan Number	:	778
Retention Time (minutes)	:	10.502
Quant Ion	:	154.00
Area	:	29743
On-column Amount (ng/ul)	:	0.1923
Integration start scan	:	772 Integration stop scan: 782
Y at integration start	:	2427 Y at integration end: 1531

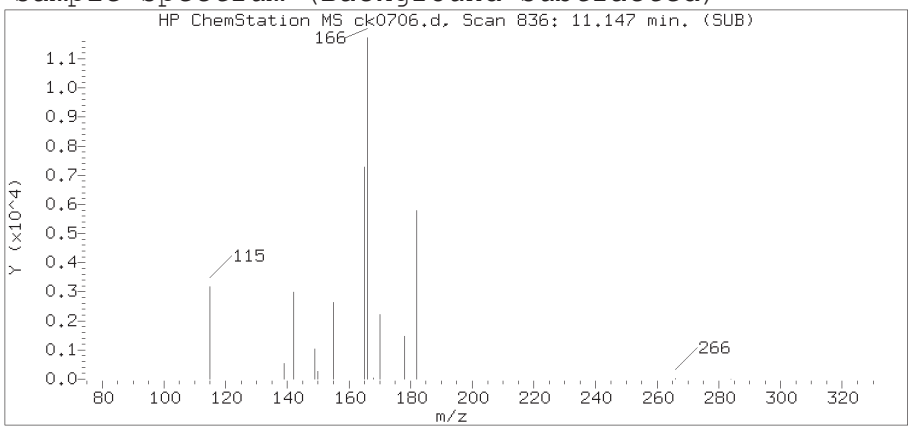
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs0195

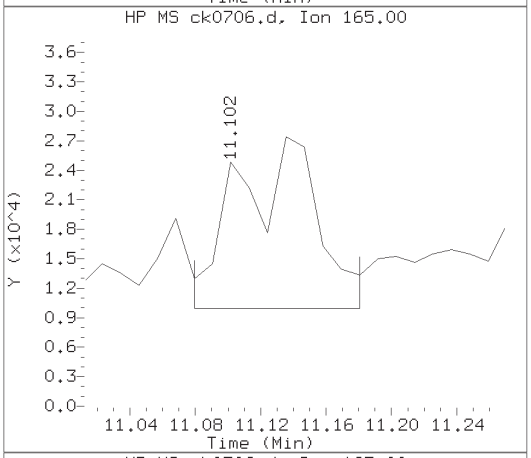
Reference Standard Spectrum for Fluorene



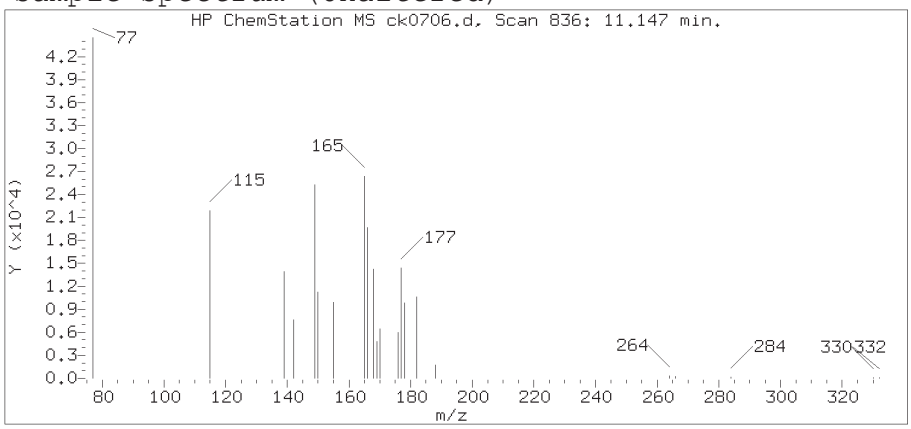


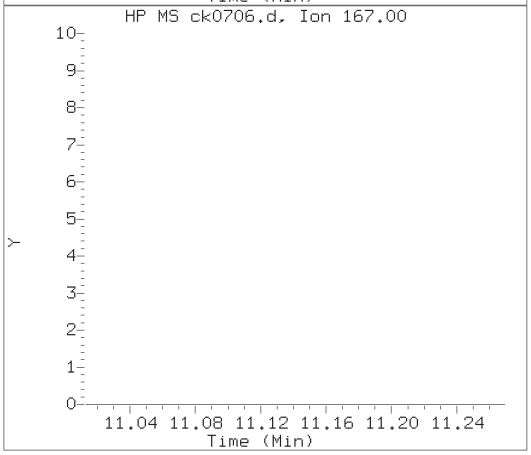
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

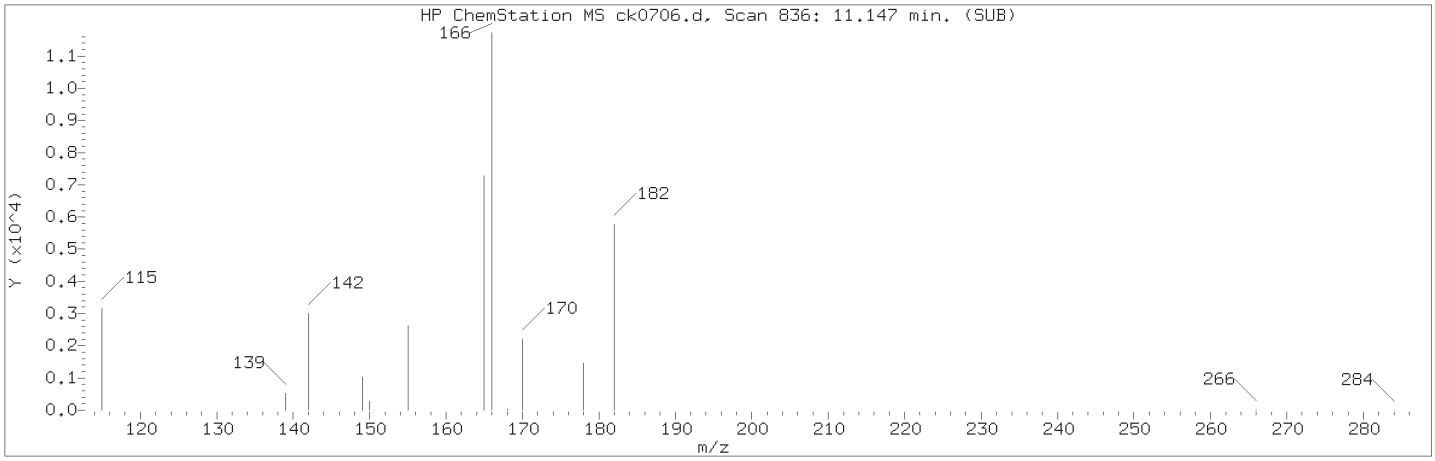
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

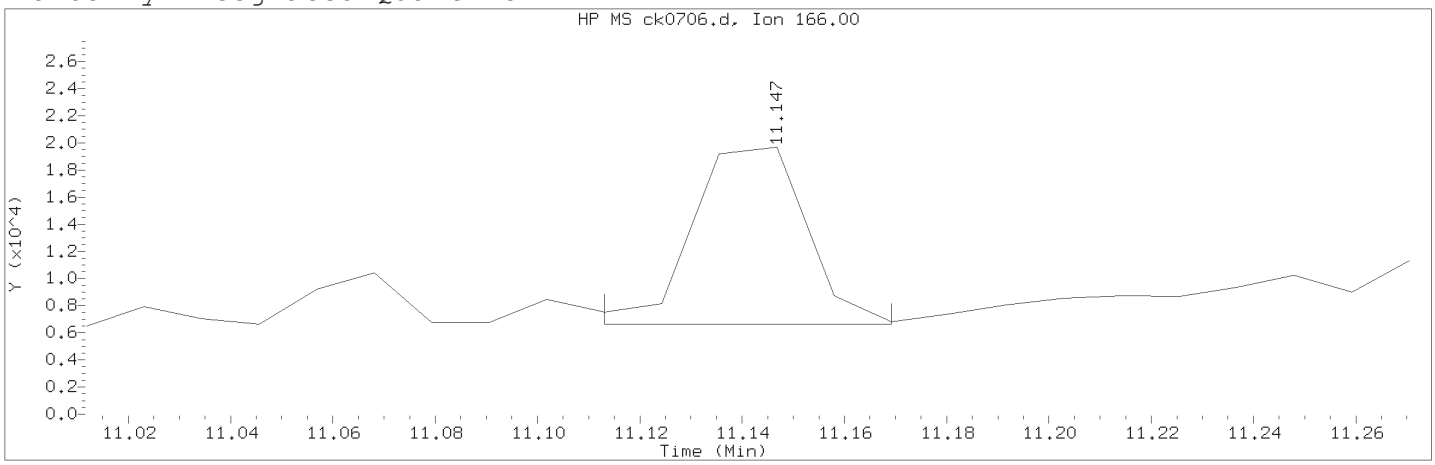
Compound Number	: 26
Compound Name	: Fluorene
Scan Number	: 836
Retention Time (minutes)	: 11.147
Relative Retention Time	:-0.00107
Quant Ion	: 166.00
Area (flag)	: 20384M
On-column Amount (ng/ul)	: 0.1525

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

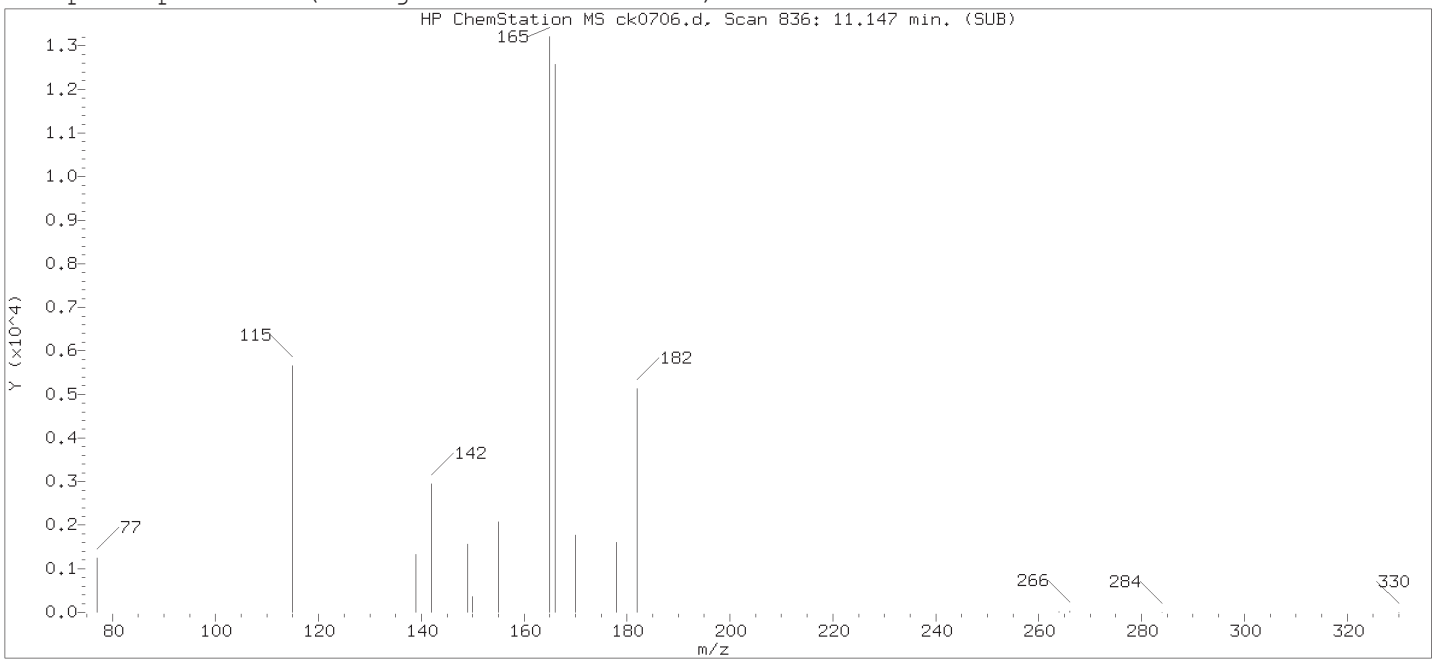
Compound Number : 26
Compound Name : Fluorene
Scan Number : 836
Retention Time (minutes) : 11.147
Quant Ion : 166.00
Area (flag) : 20384M
On-column Amount (ng/ul) : 0.1525
Integration start scan : 832 Integration stop scan: 837
Y at integration start : 6645 Y at integration end: 6645

Reason for manual integration: improper integration

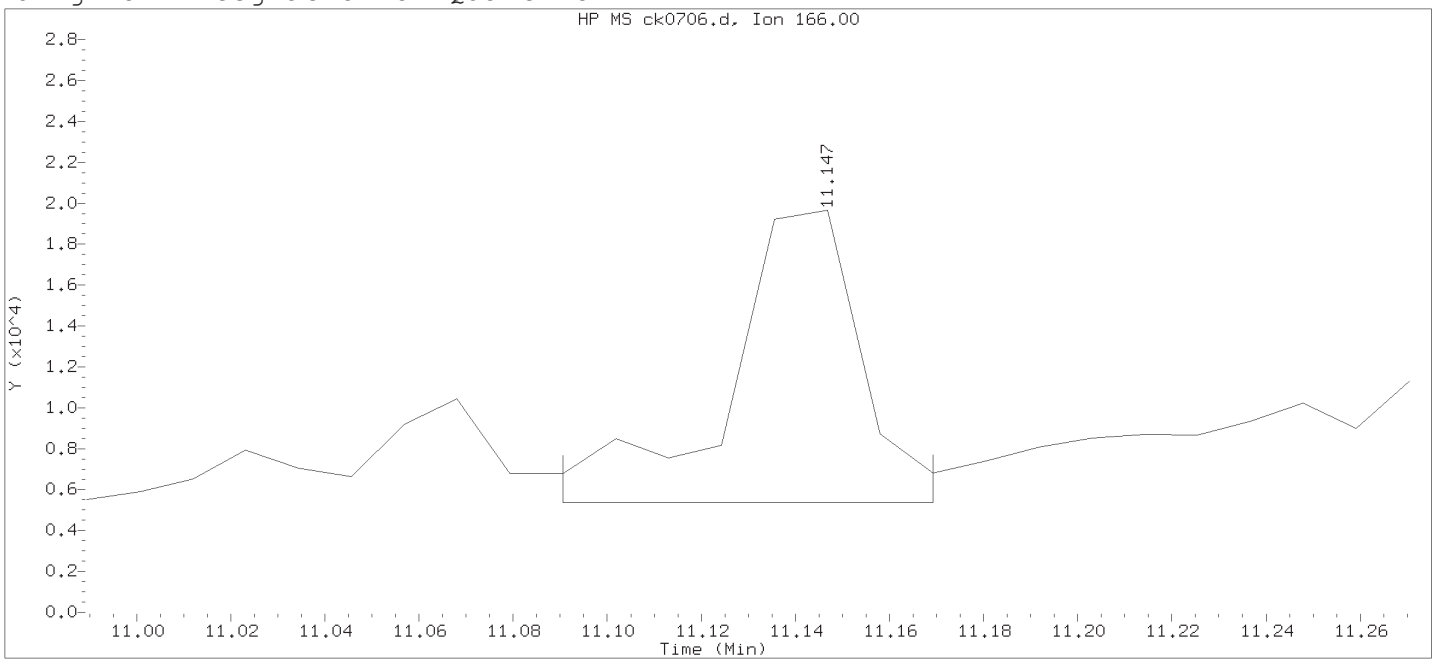
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

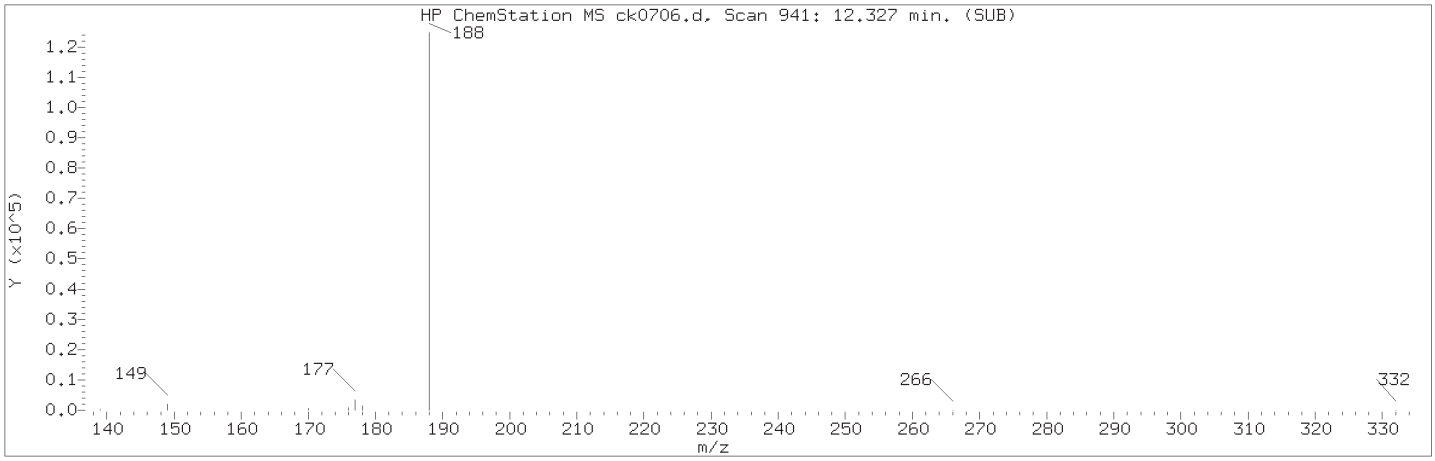
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

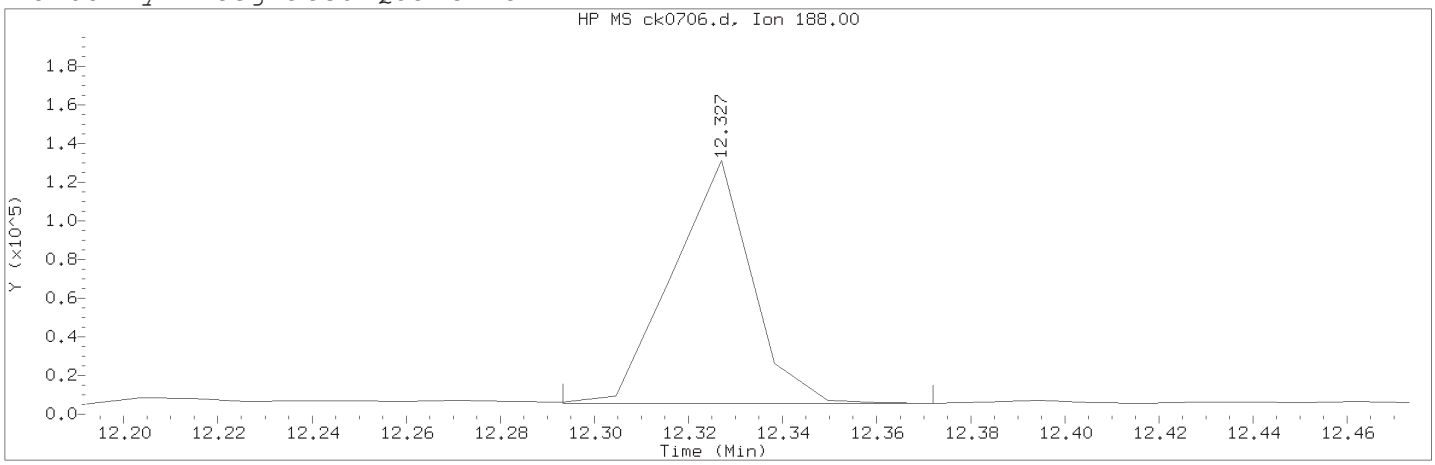
Compound Number	:	26
Compound Name	:	Fluorene
Scan Number	:	836
Retention Time (minutes)	:	11.147
Quant Ion	:	166.00
Area	:	27616
On-column Amount (ng/ul)	:	0.1670
Integration start scan	:	830 Integration stop scan: 837
Y at integration start	:	5374 Y at integration end: 5374

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: wh0198

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

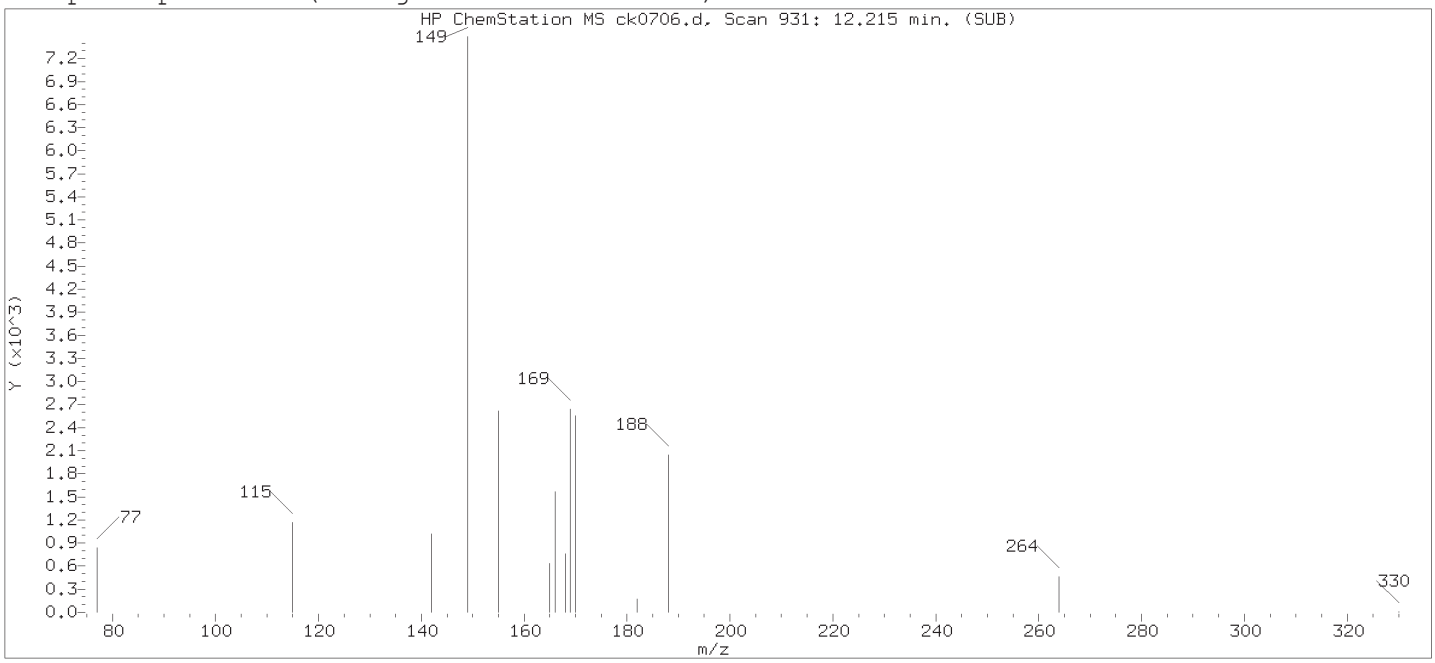
Compound Number : 31
Compound Name : Phenanthrene-d10
Scan Number : 941
Retention Time (minutes) : 12.327
Quant Ion : 188.00
Area (flag) : 145562M
On-column Amount (ng/ul) : 1.0000
Integration start scan : 937 Integration stop scan: 944
Y at integration start : 5548 Y at integration end: 5548

Reason for manual integration: improper integration

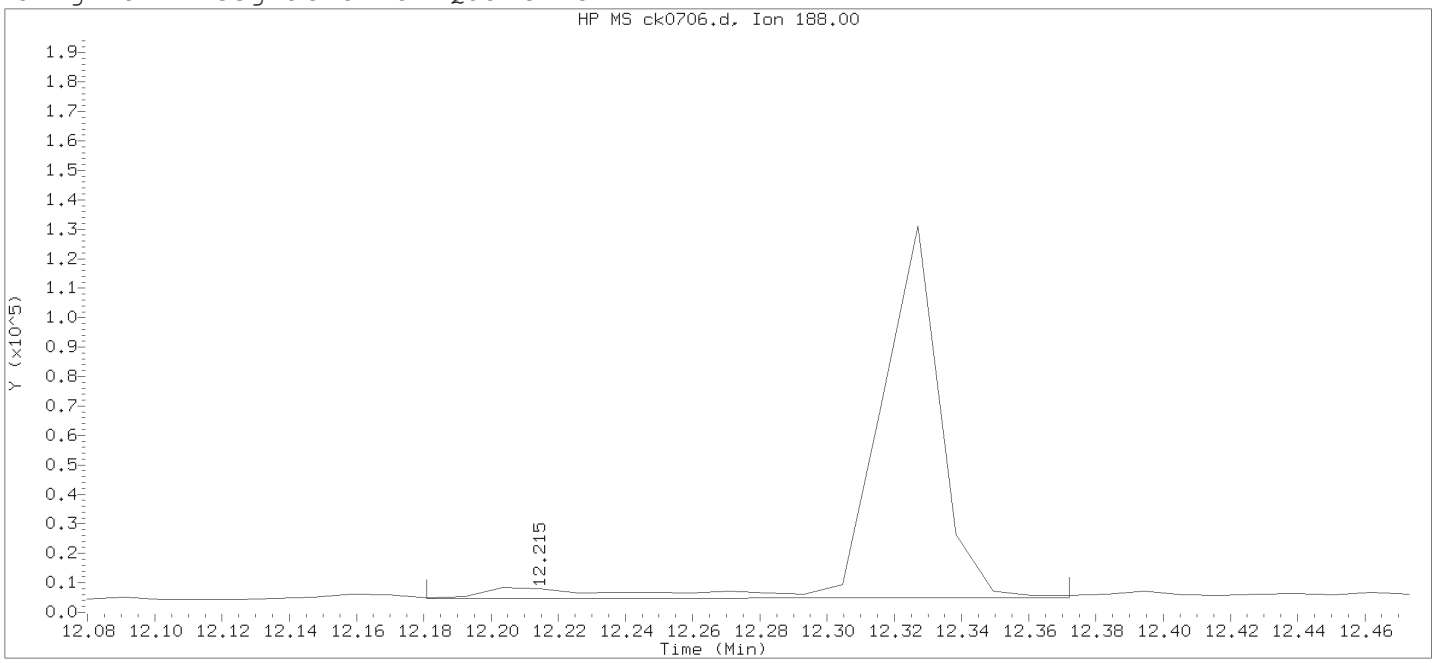
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

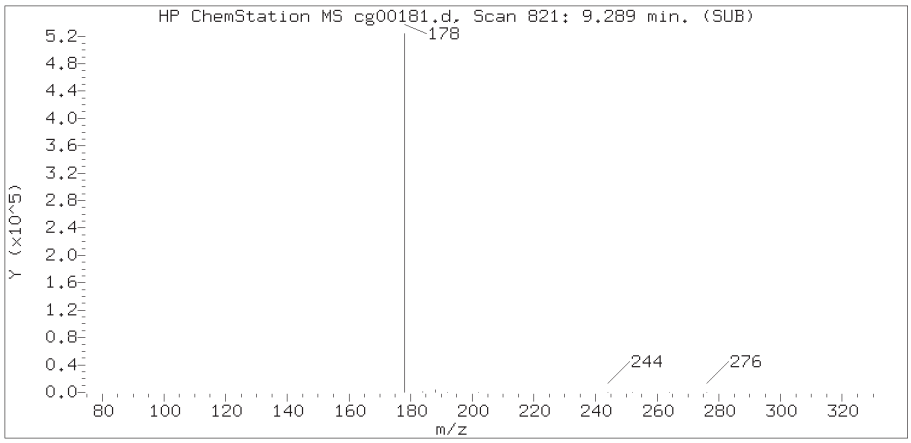
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

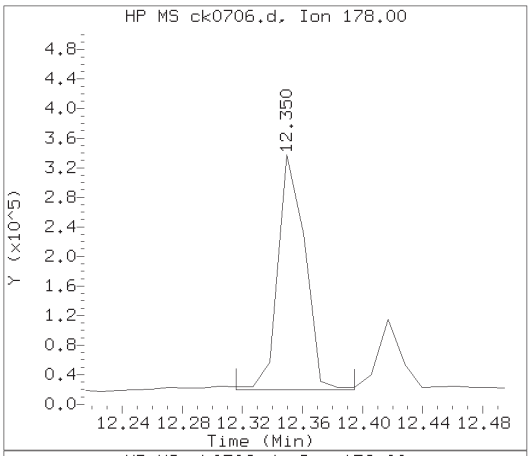
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number	:	31
Compound Name	:	Phenanthrene-d10
Scan Number	:	931
Retention Time (minutes)	:	12.215
Quant Ion	:	188.00
Area	:	161462
On-column Amount (ng/ul)	:	1.0000
Integration start scan	:	927 Integration stop scan: 944
Y at integration start	:	4769 Y at integration end: 4955

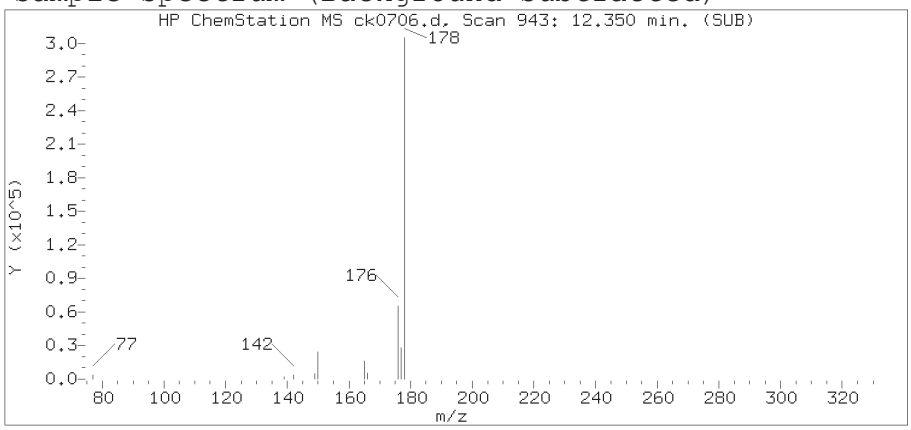
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: [illegible]

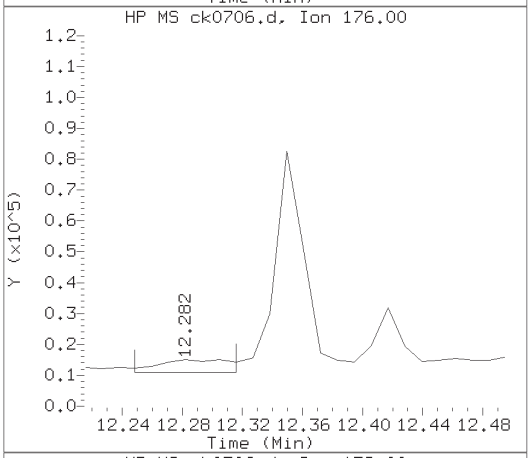
Reference Standard Spectrum for Phenanthrene



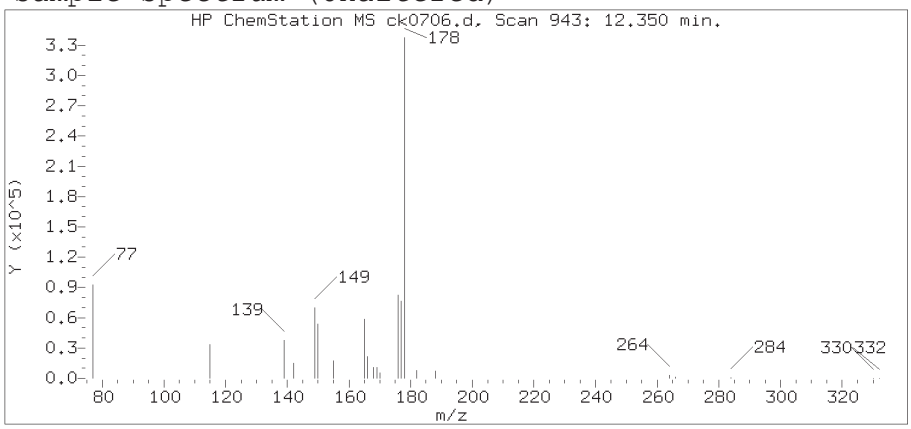


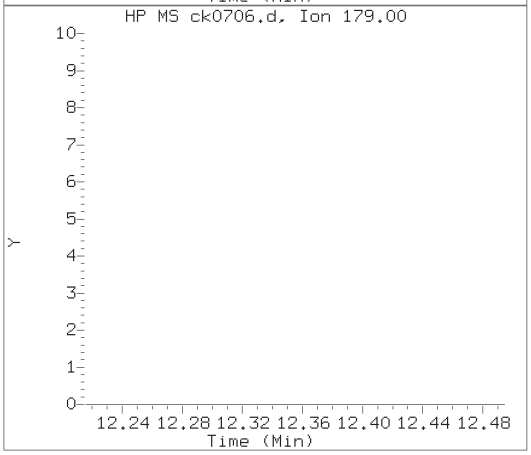
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

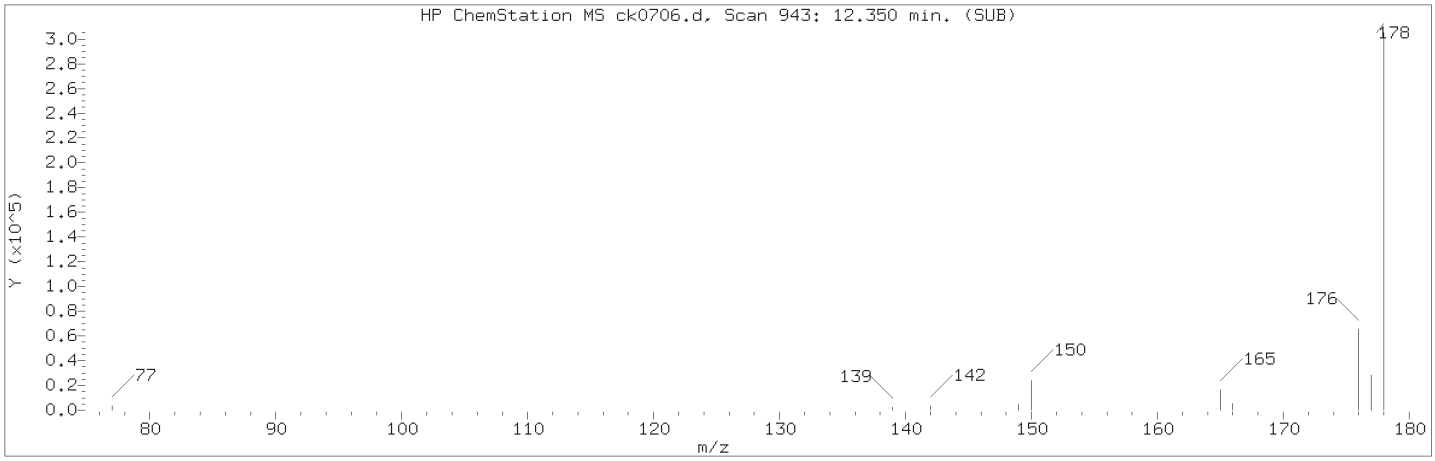
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

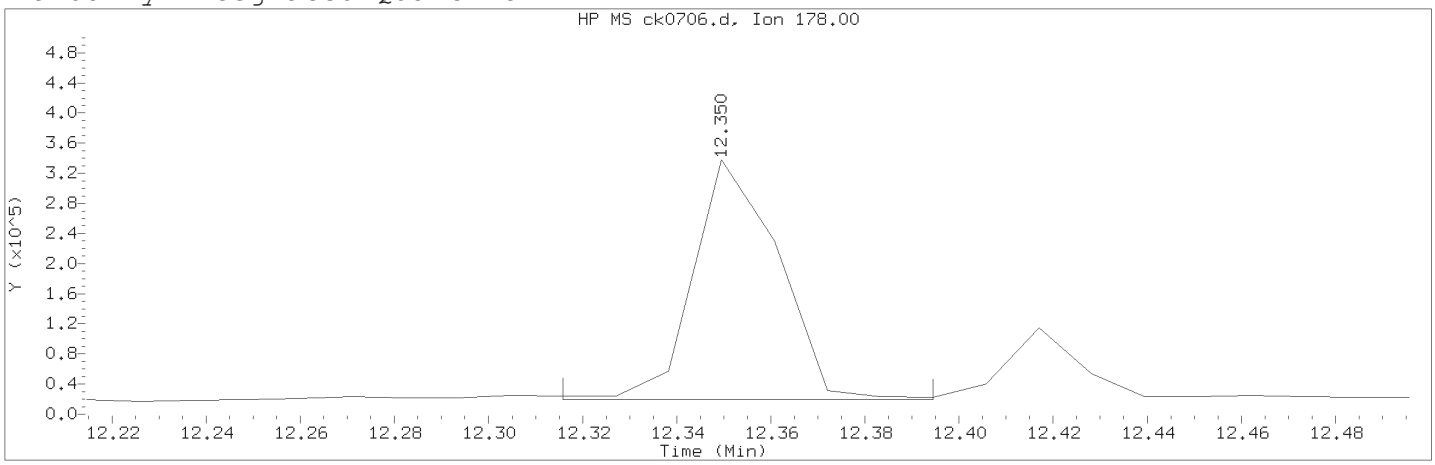
Compound Number	: 32
Compound Name	: Phenanthrene
Scan Number	: 943
Retention Time (minutes)	: 12.350
Relative Retention Time	: 0.00092
Quant Ion	: 178.00
Area (flag)	: 399543M
On-column Amount (ng/ul)	: 2.3004

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

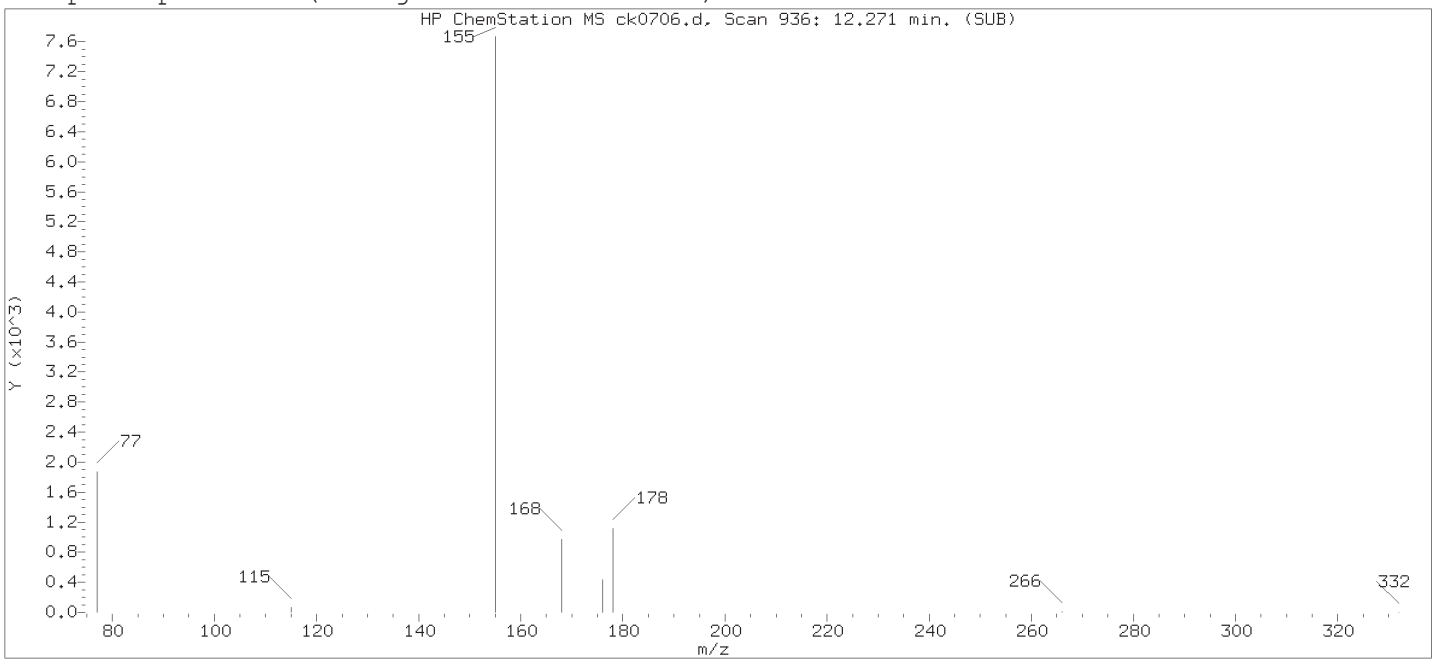
Compound Number : 32
Compound Name : Phenanthrene
Scan Number : 943
Retention Time (minutes) : 12.350
Quant Ion : 178.00
Area (flag) : 399543M
On-column Amount (ng/ul) : 2.3004
Integration start scan : 939 Integration stop scan: 946
Y at integration start : 19611 Y at integration end: 19611

Reason for manual integration: improper integration

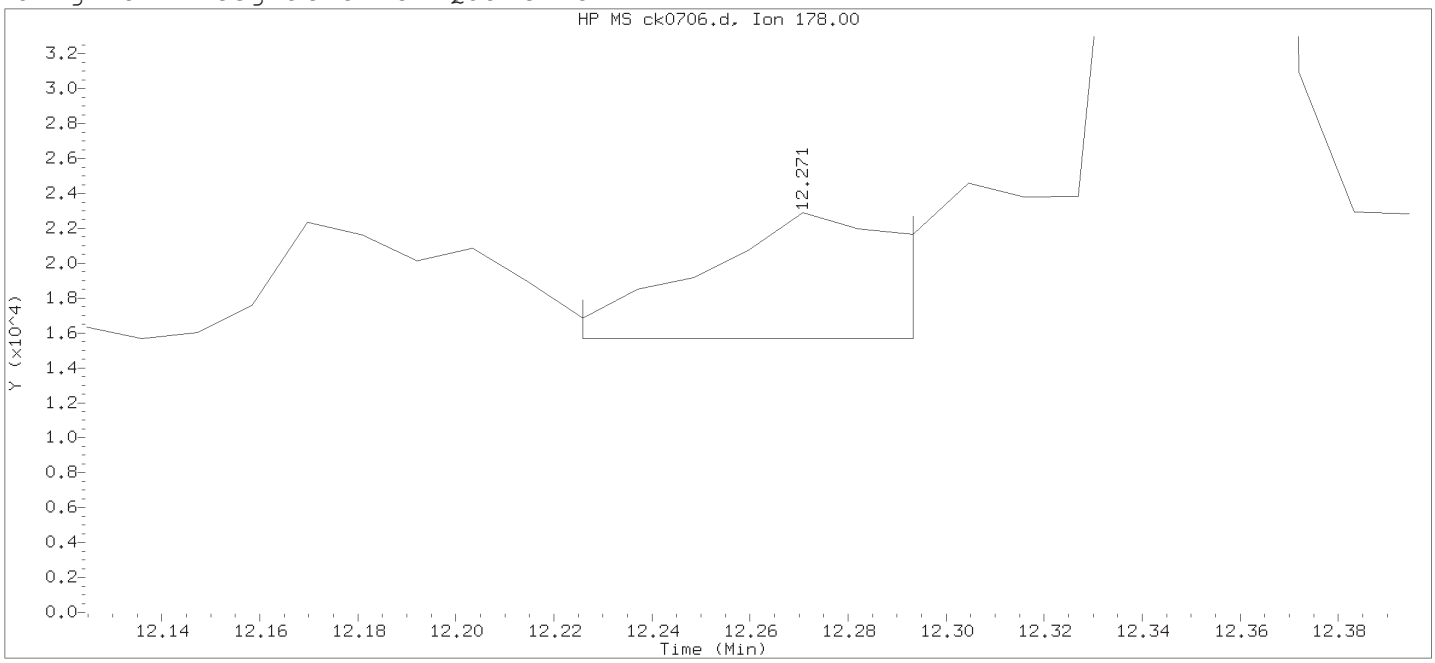
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

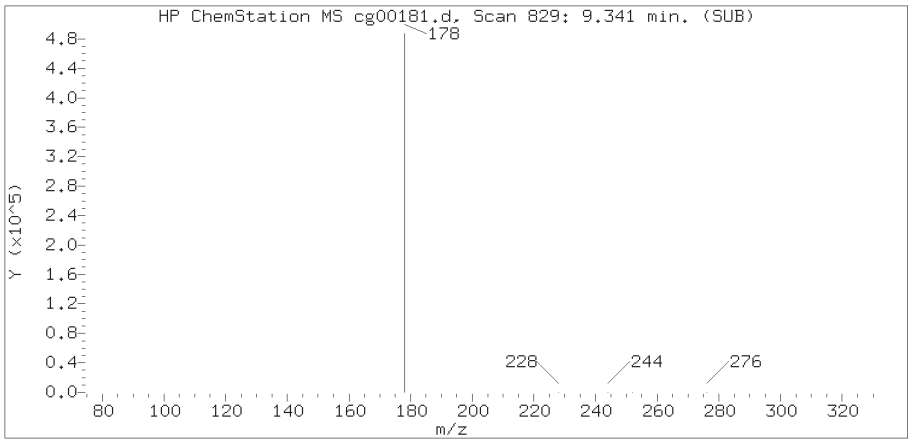
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

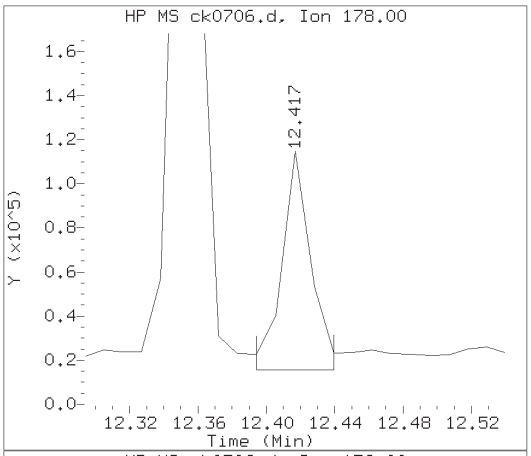
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number : 32
Compound Name : Phenanthrene
Scan Number : 936
Retention Time (minutes) : 12.271
Quant Ion : 178.00
Area : 19198
On-column Amount (ng/ul) : 0.0997
Integration start scan : 931 Integration stop scan: 937
Y at integration start : 15677 Y at integration end: 15677

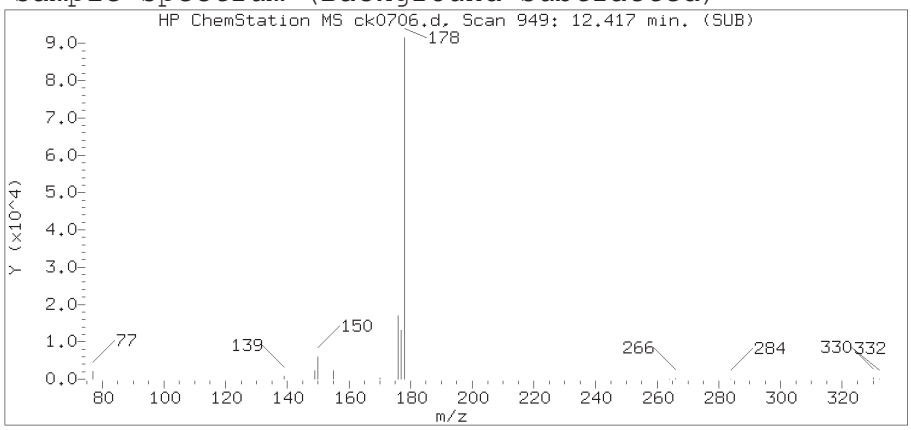
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: [illegible]

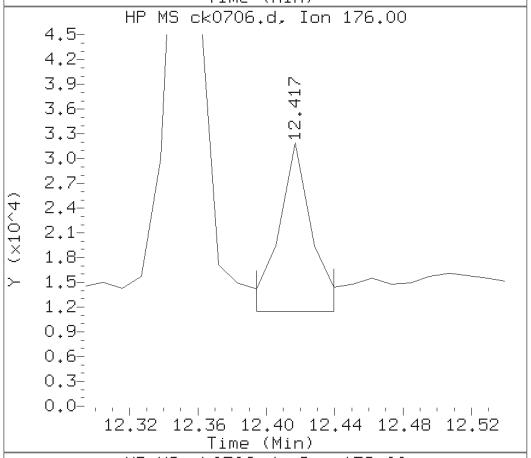
Reference Standard Spectrum for Anthracene



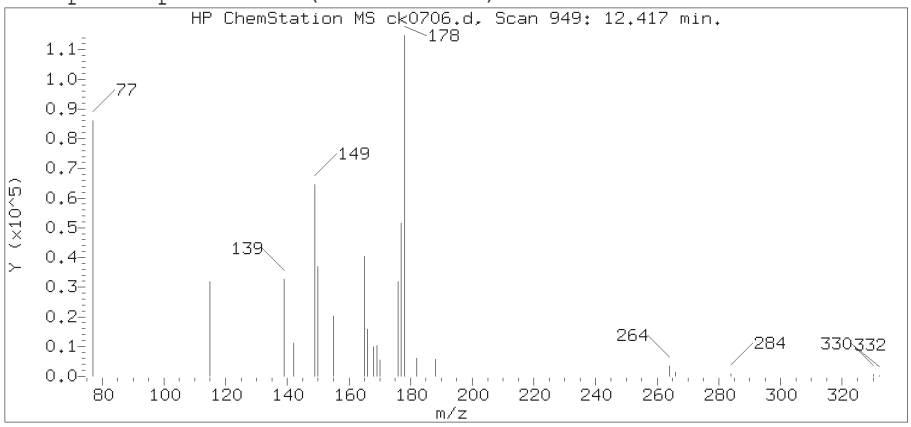


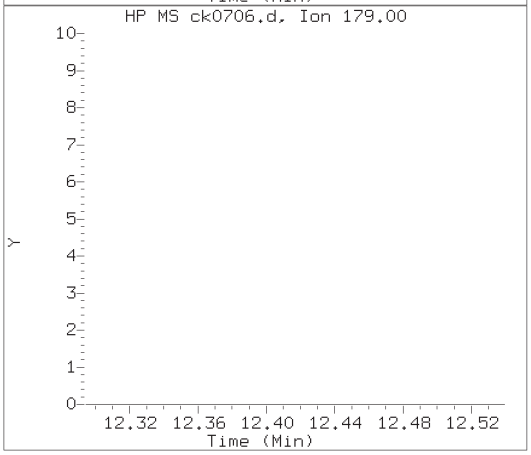
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

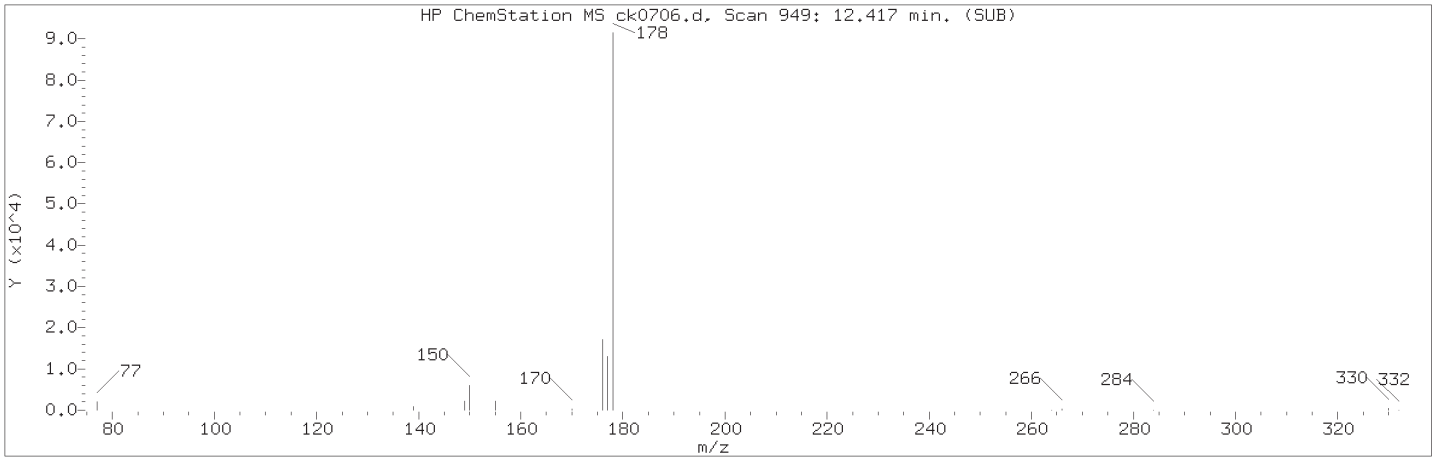
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

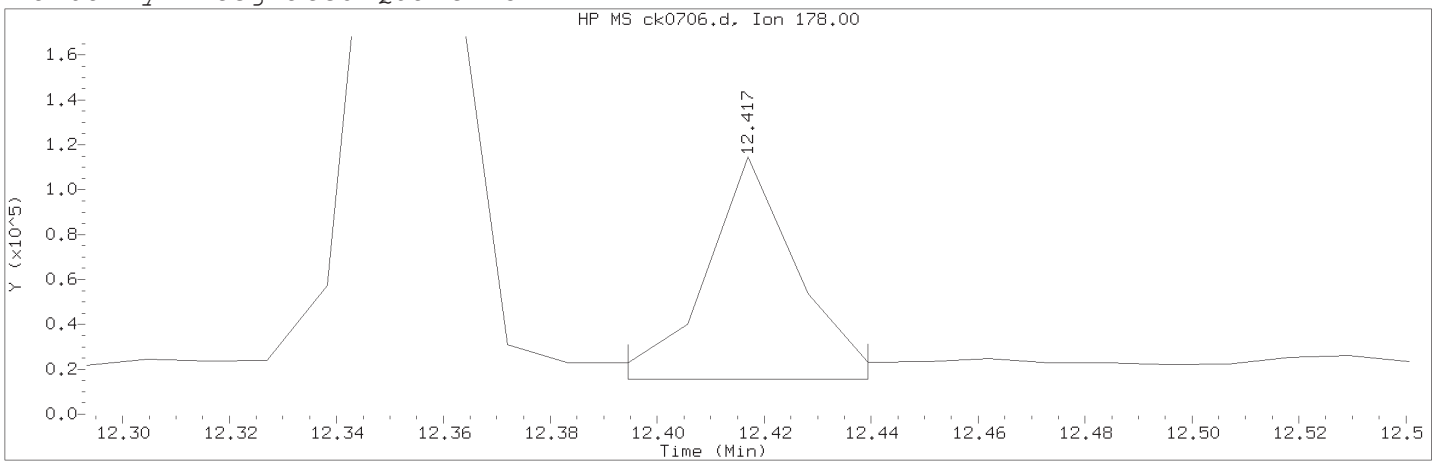
Compound Number	: 33
Compound Name	: Anthracene
Scan Number	: 949
Retention Time (minutes)	: 12.417
Relative Retention Time	: 0.00093
Quant Ion	: 178.00
Area (flag)	: 113740A
On-column Amount (ng/ul)	: 0.6810

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

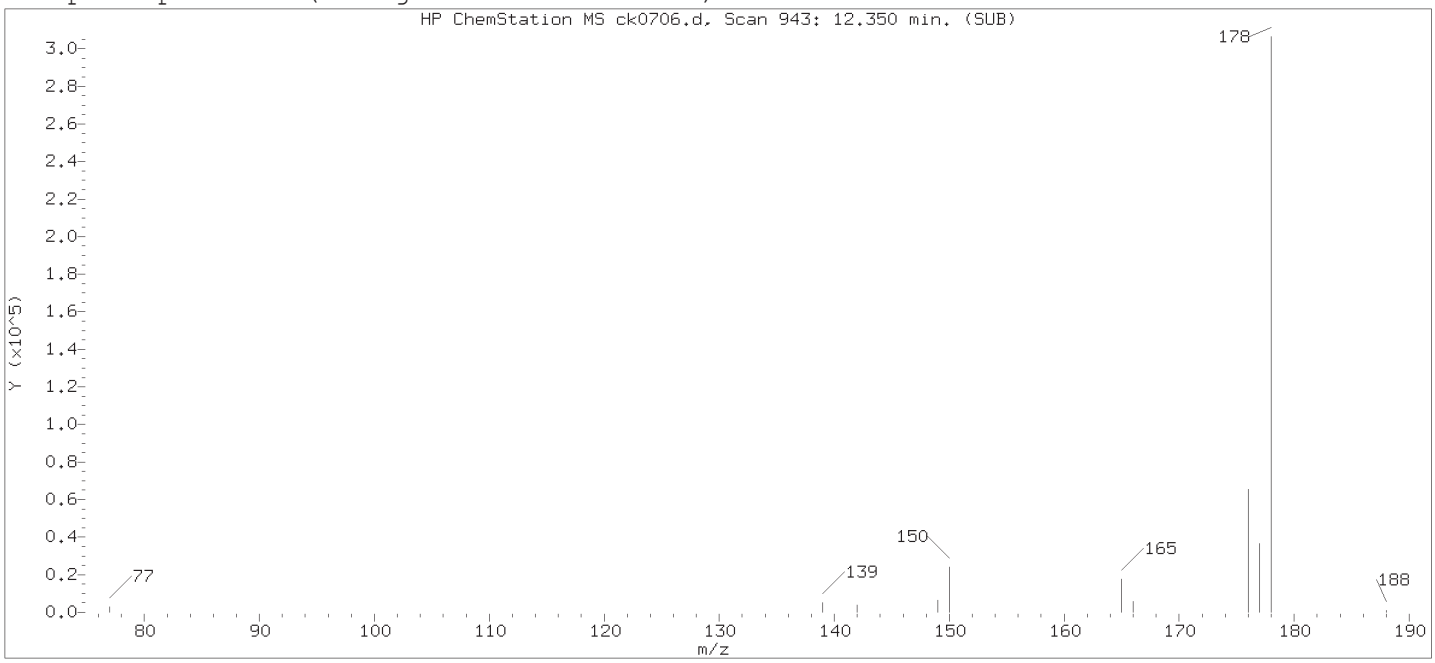
Compound Number : 33
Compound Name : Anthracene
Scan Number : 949
Retention Time (minutes) : 12.417
Quant Ion : 178.00
Area (flag) : 113740A
On-column Amount (ng/ul) : 0.6810
Integration start scan : 946 Integration stop scan: 950
Y at integration start : 15677 Y at integration end: 15677

Reason for manual integration: improper integration

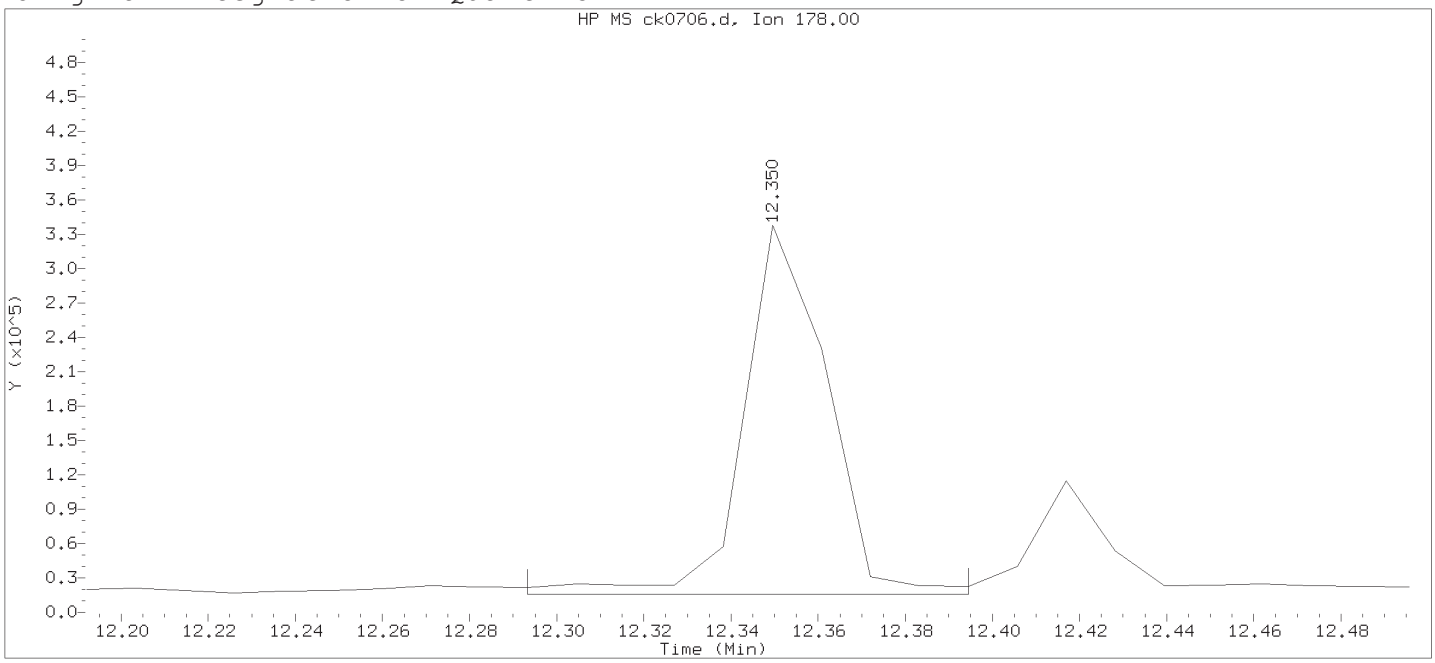
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

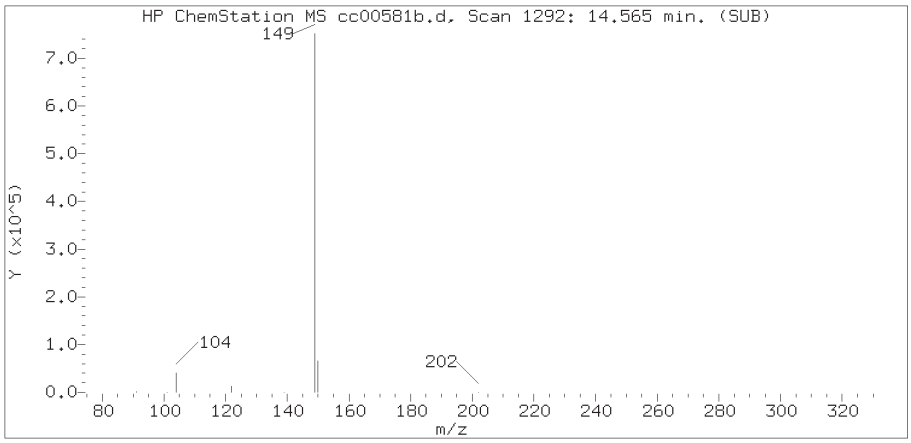
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

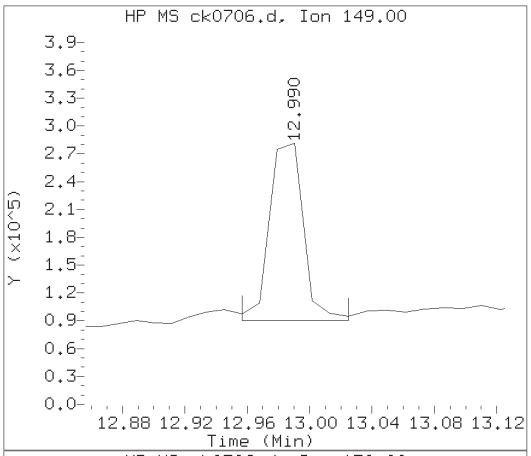
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number	:	33
Compound Name	:	Anthracene
Scan Number	:	943
Retention Time (minutes)	:	12.350
Quant Ion	:	178.00
Area	:	426413
On-column Amount (ng/ul)	:	2.3017
Integration start scan	:	937
Integration stop scan	:	946
Y at integration start	:	15677
Y at integration end	:	15677

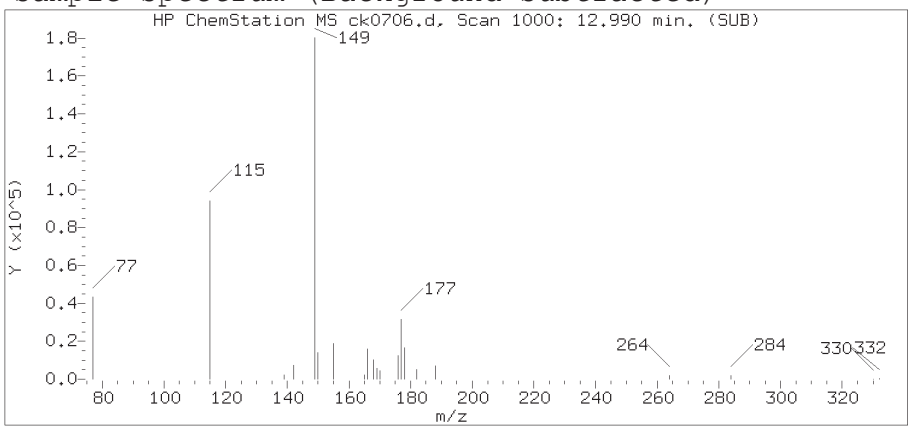
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: [illegible]

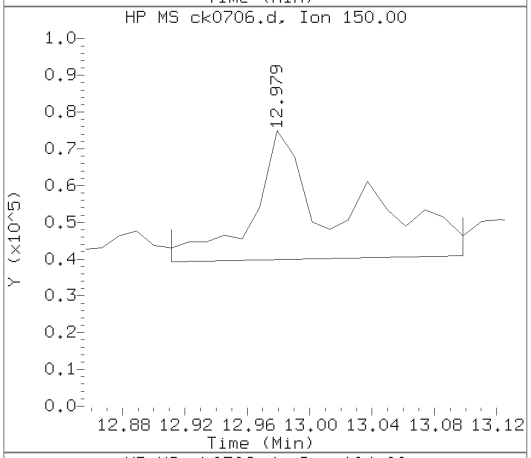
Reference Standard Spectrum for Di-n-butylphthalate



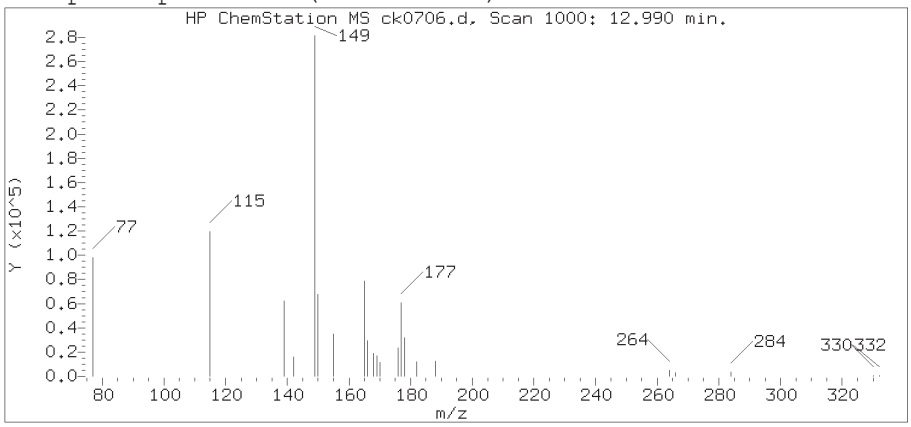


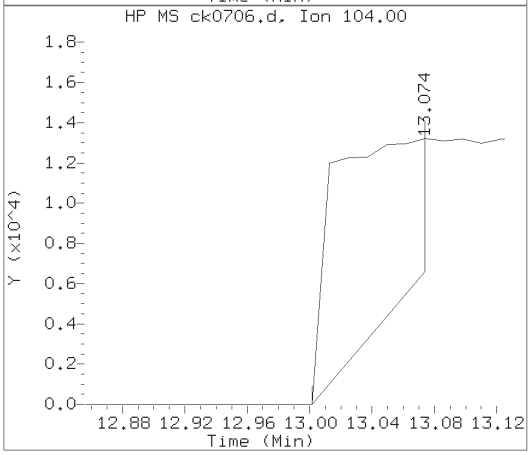
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

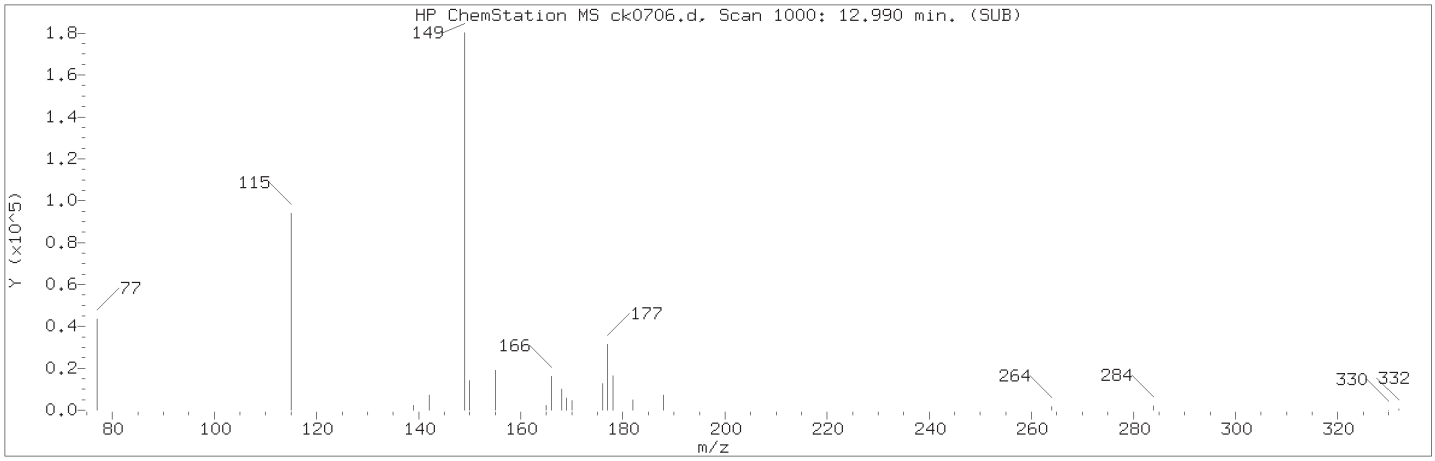
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

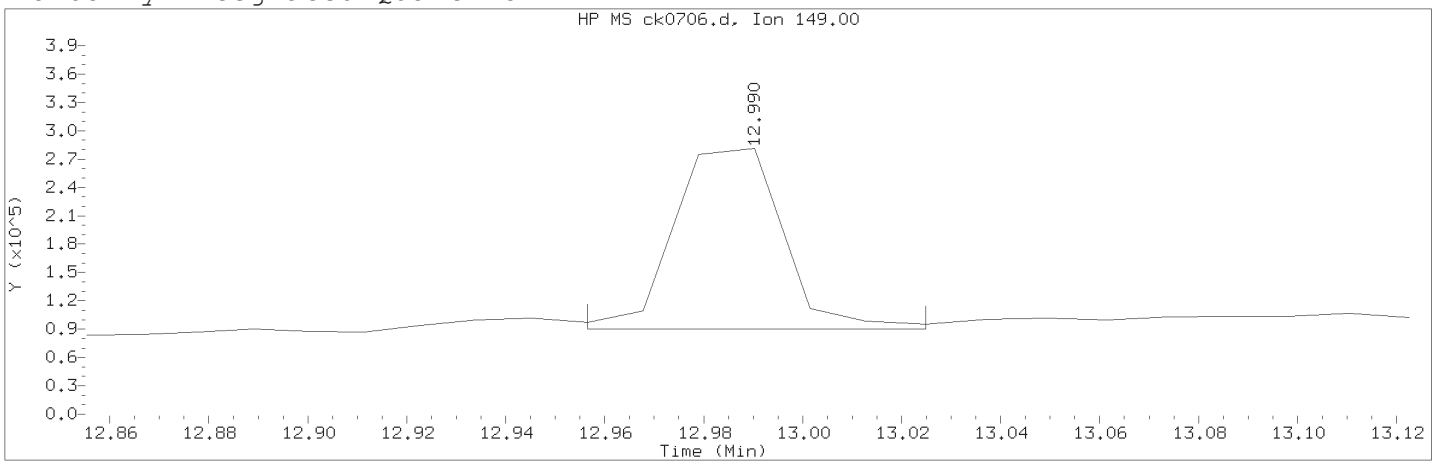
Compound Number	: 35
Compound Name	: Di-n-butylphthalate
Scan Number	: 1000
Retention Time (minutes)	: 12.990
Relative Retention Time	: 0.00010
Quant Ion	: 149.00
Area (flag)	: 303028M
On-column Amount (ng/ul)	: 1.6288

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

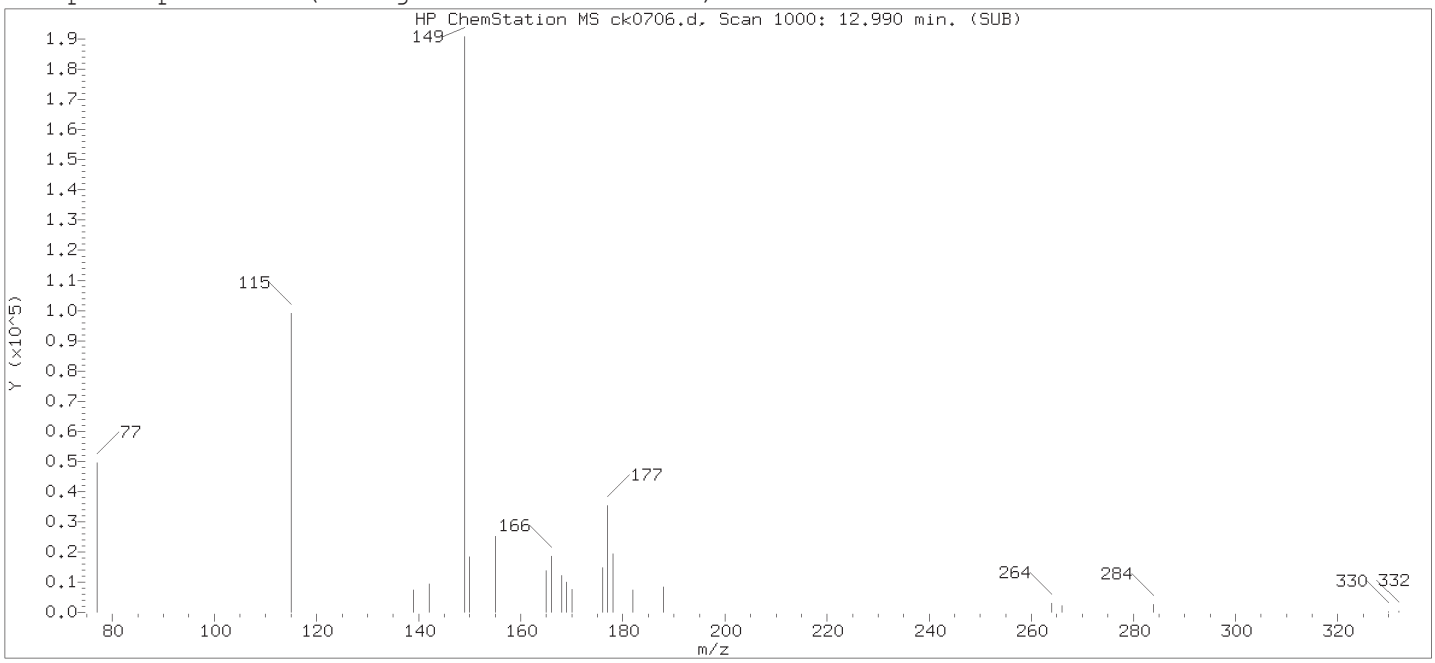
Compound Number : 35
Compound Name : Di-n-butylphthalate
Scan Number : 1000
Retention Time (minutes) : 12.990
Quant Ion : 149.00
Area (flag) : 303028M
On-column Amount (ng/ul) : 1.6288
Integration start scan : 996 Integration stop scan: 1002
Y at integration start : 90421 Y at integration end: 90421

Reason for manual integration: improper integration

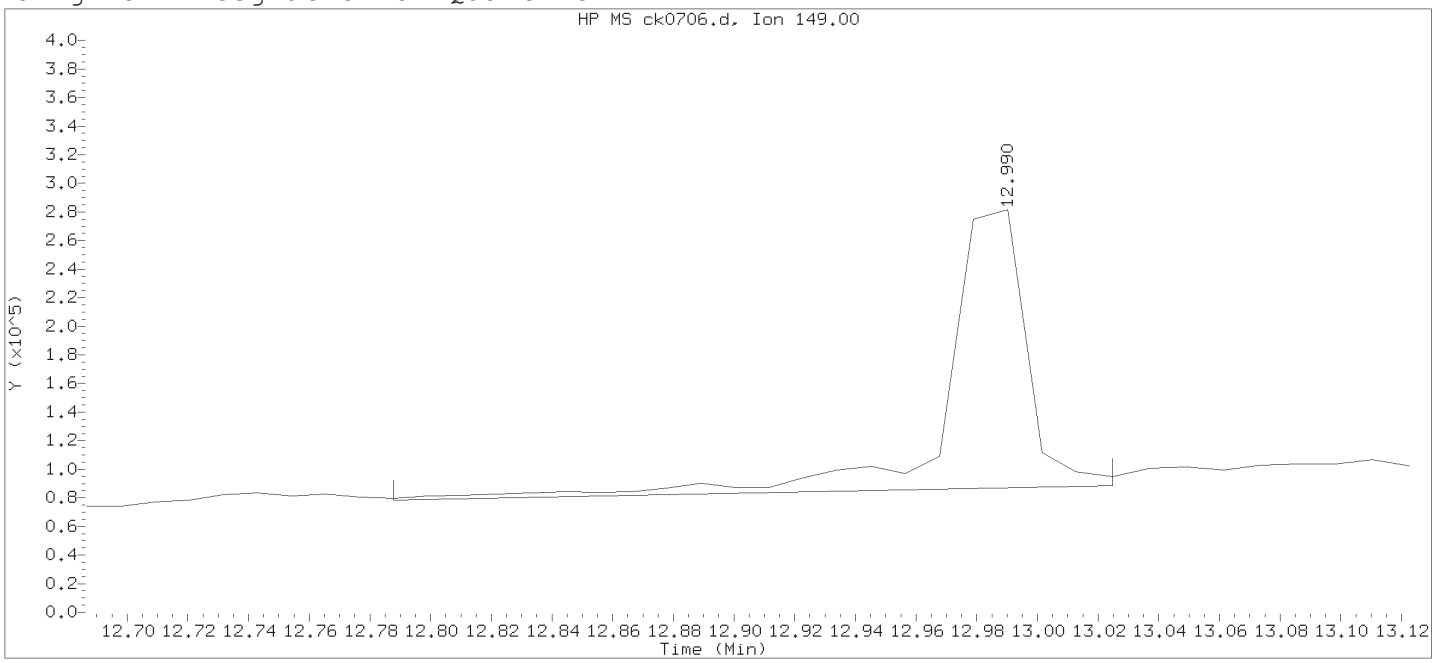
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

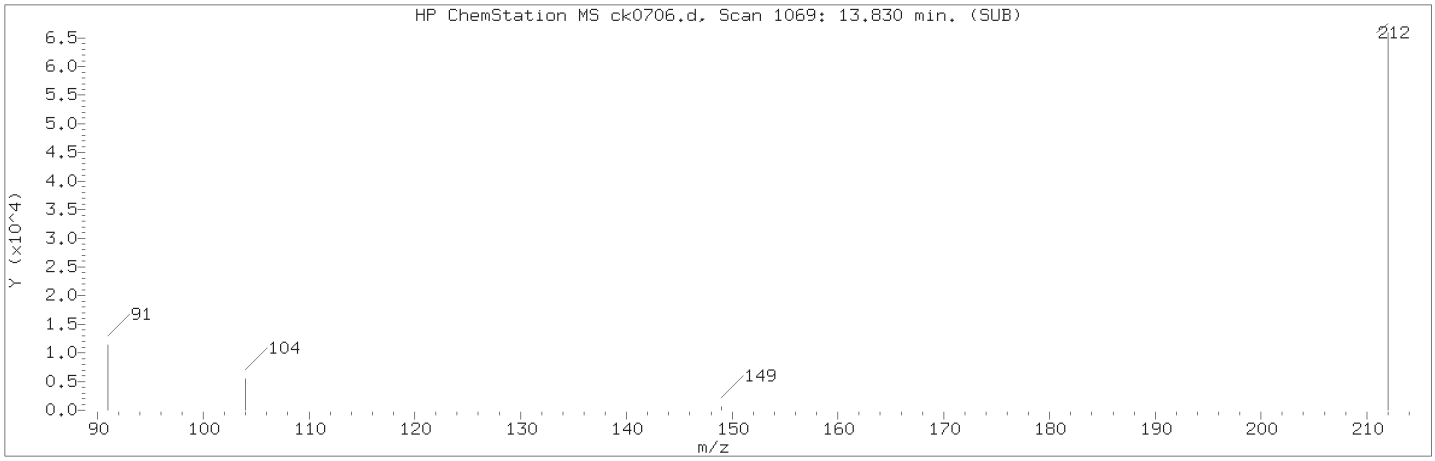
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

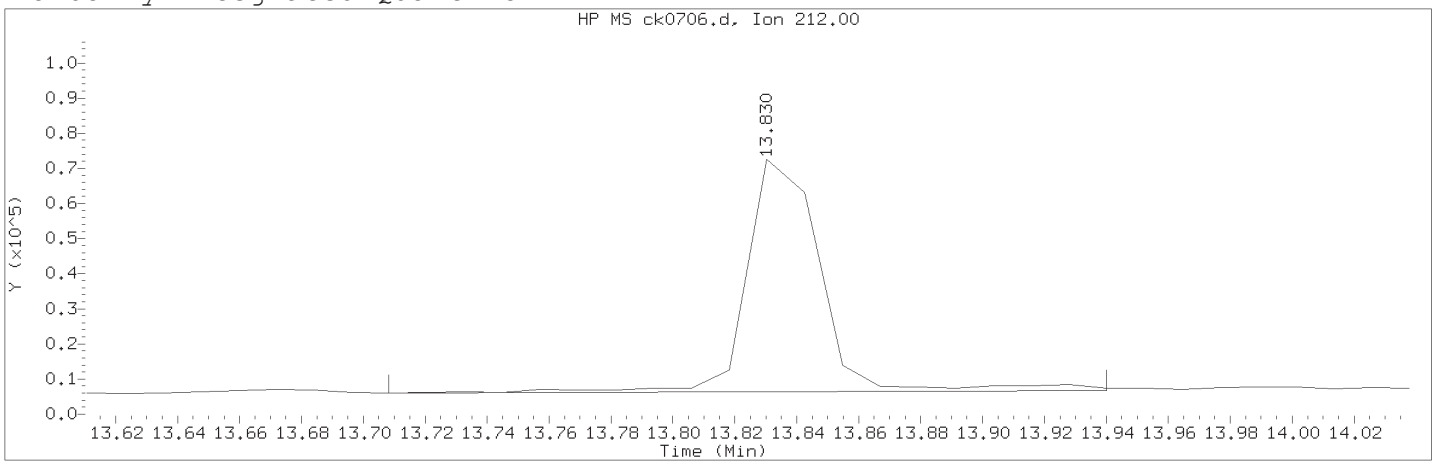
Compound Number : 35
Compound Name : Di-n-butylphthalate
Scan Number : 1000
Retention Time (minutes) : 12.990
Quant Ion : 149.00
Area : 368183
On-column Amount (ng/ul) : 1.7842
Integration start scan : 981 Integration stop scan: 1002
Y at integration start : 78328 Y at integration end: 88607

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

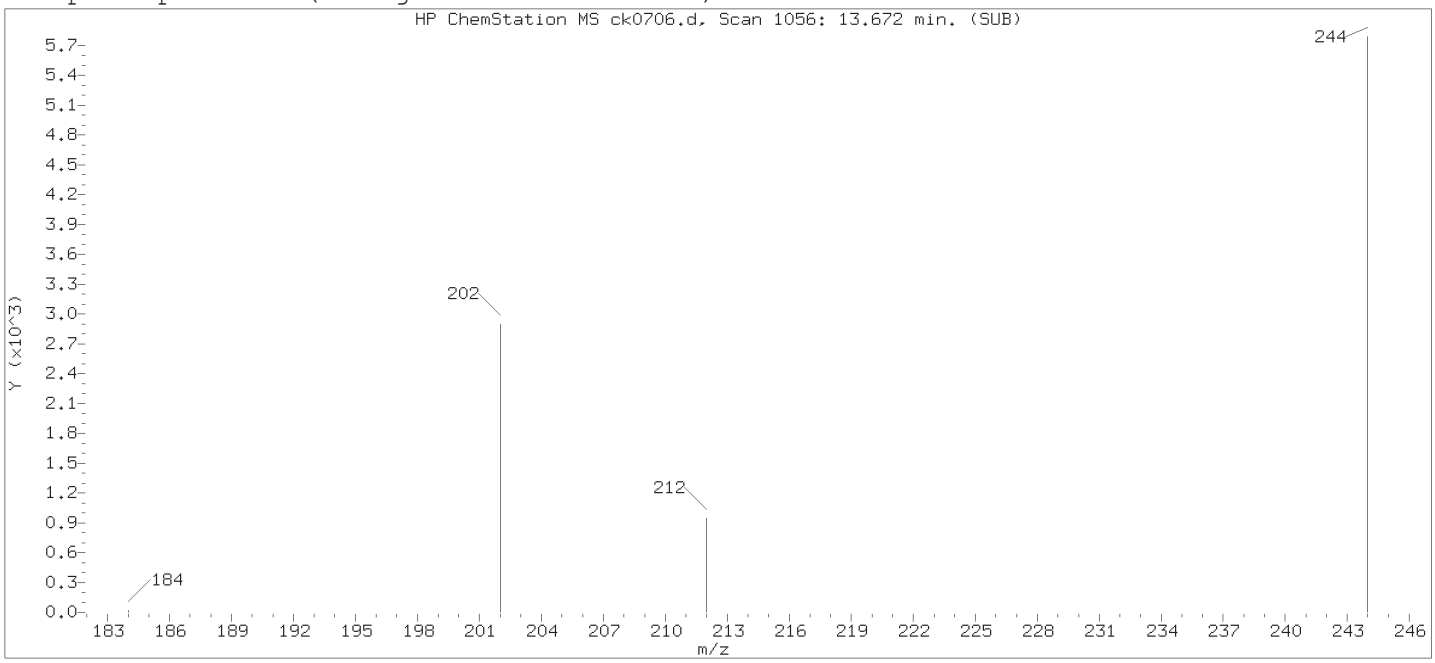
Compound Number : 36
Compound Name : Fluoranthene-d10
Scan Number : 1069
Retention Time (minutes) : 13.830
Quant Ion : 212.00
Area (flag) : 110417A
On-column Amount (ng/ul) : 0.8361
Integration start scan : 1058 Integration stop scan: 1077
Y at integration start : 6006 Y at integration end: 6659

Reason for manual integration: improper integration

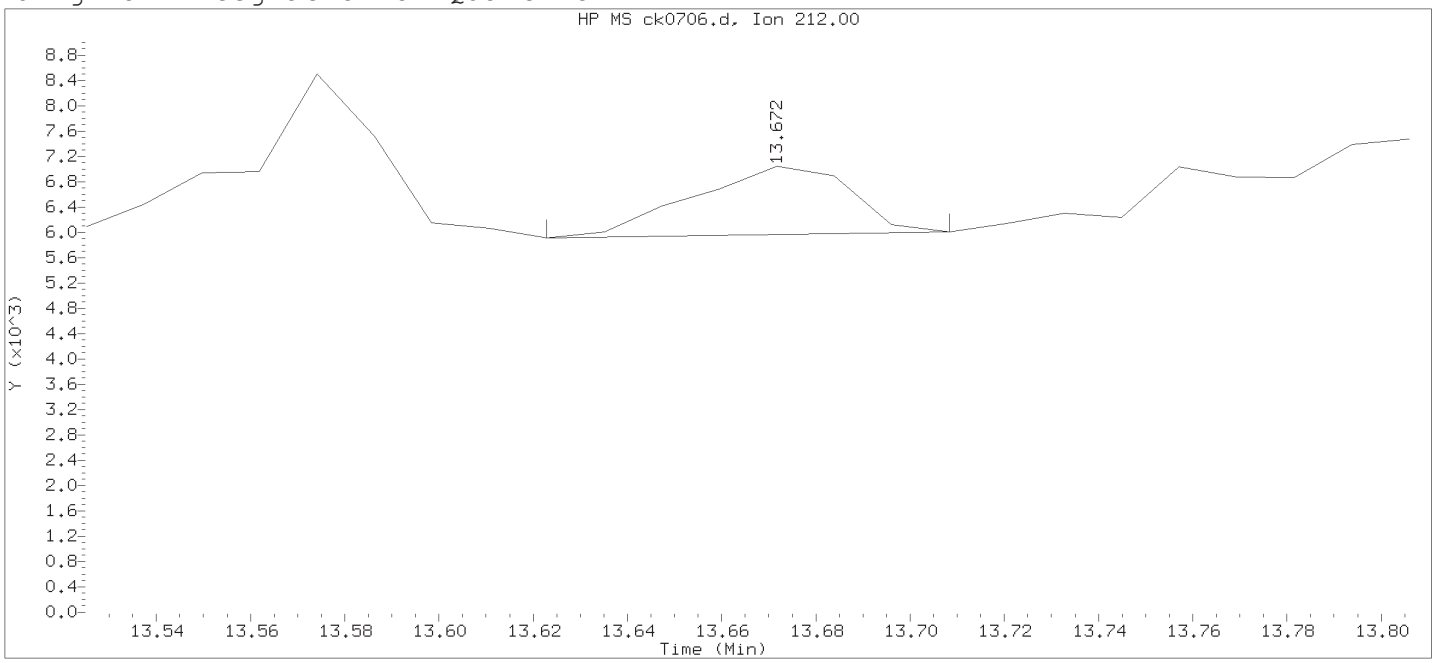
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

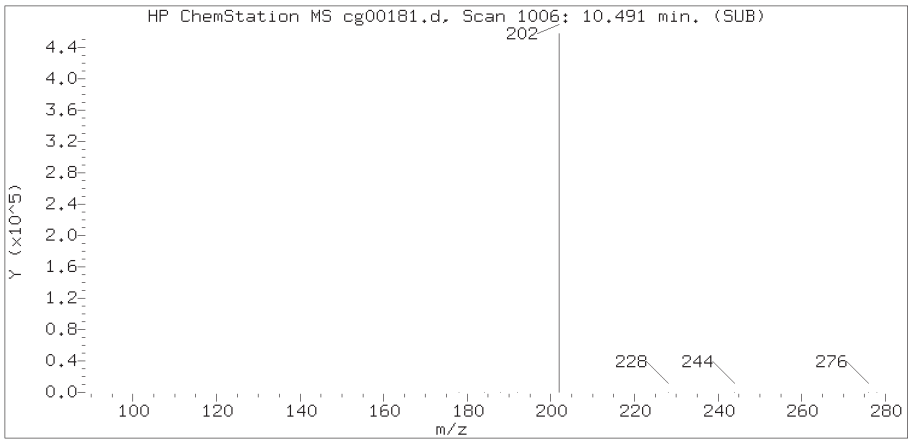
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

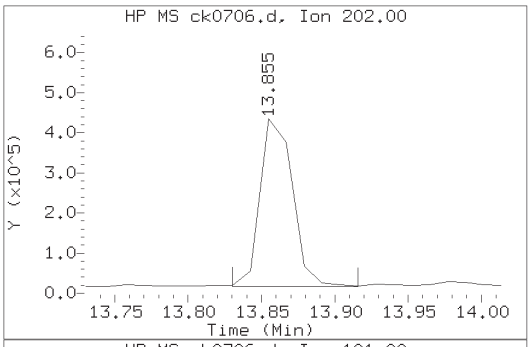
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

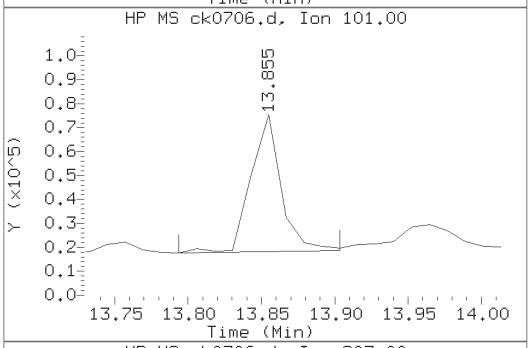
Compound Number	:	36
Compound Name	:	Fluoranthene-d10
Scan Number	:	1056
Retention Time (minutes)	:	13.672
Quant Ion	:	212.00
Area	:	2503
On-column Amount (ng/ul)	:	0.0171
Integration start scan	:	1051 Integration stop scan: 1058
Y at integration start	:	5916 Y at integration end: 6006

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs0201

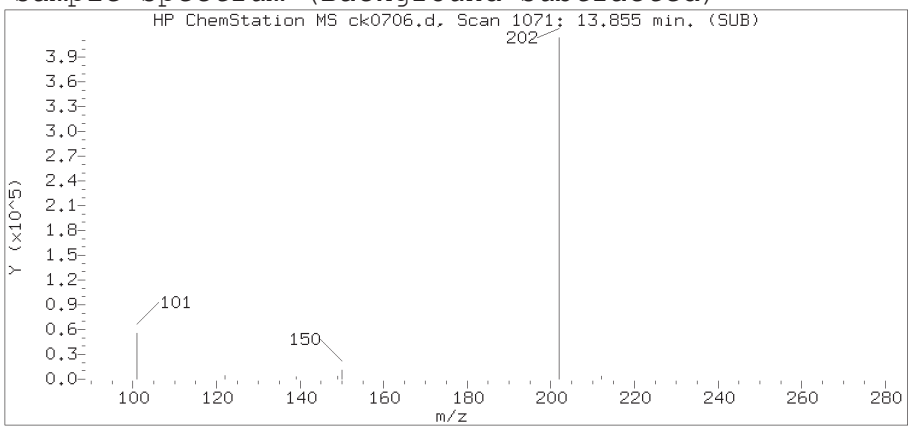
Reference Standard Spectrum for Fluoranthene

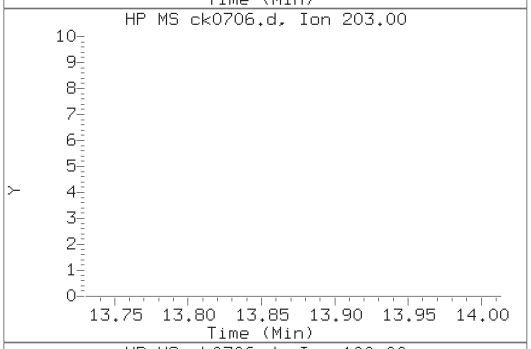




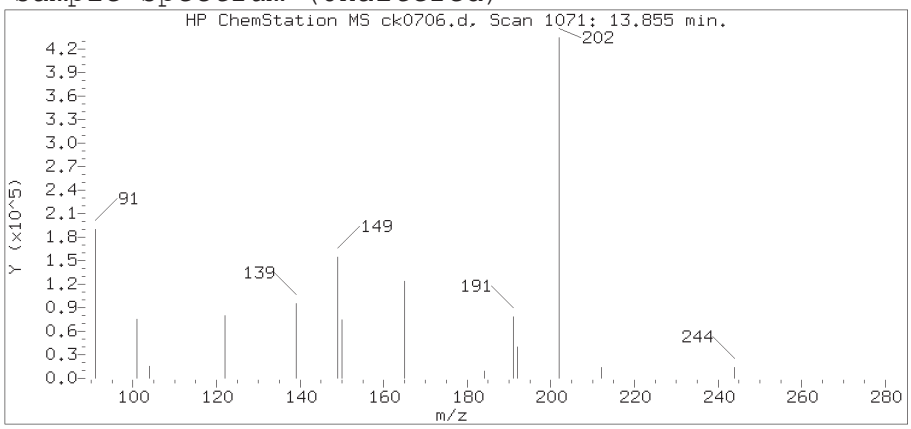


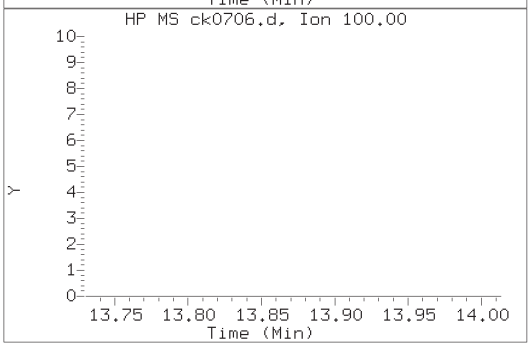
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

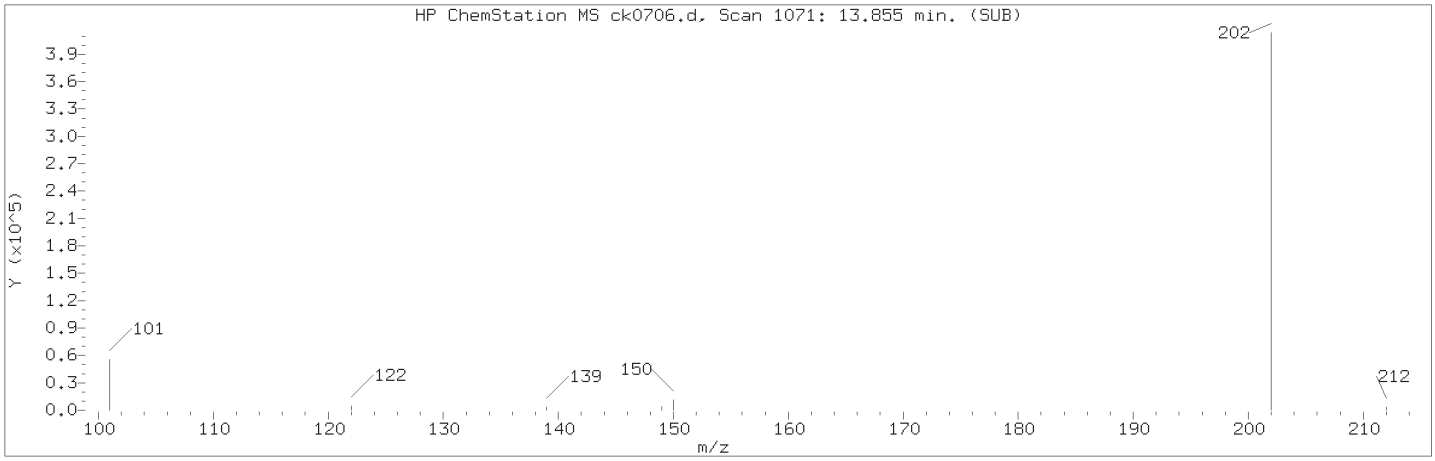
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

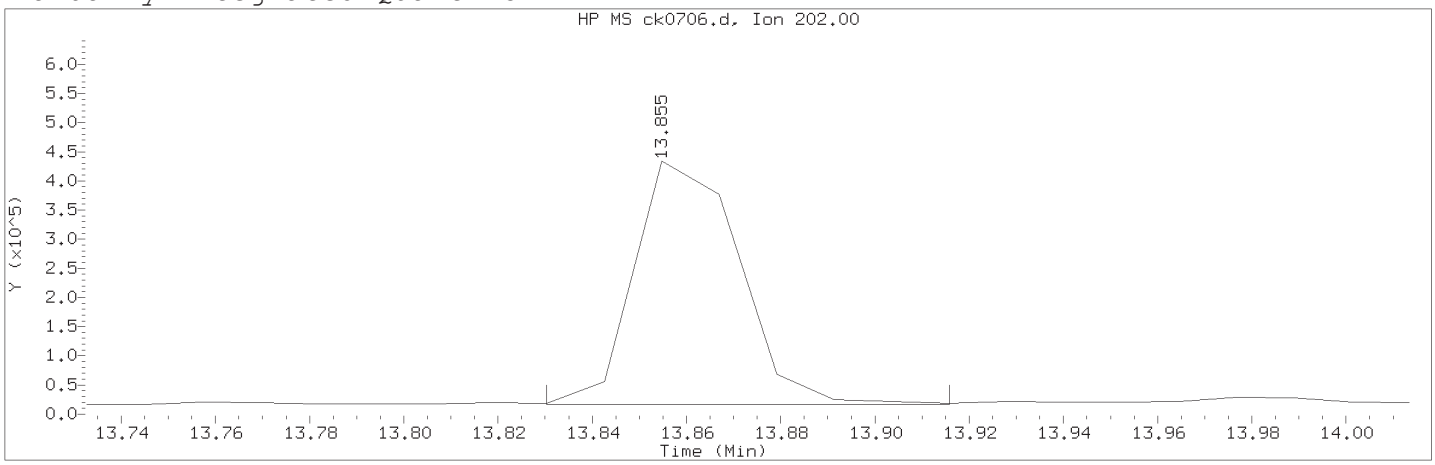
Compound Number	: 37
Compound Name	: Fluoranthene
Scan Number	: 1071
Retention Time (minutes)	: 13.855
Relative Retention Time	: 0.00007
Quant Ion	: 202.00
Area (flag)	: 647200A
On-column Amount (ng/ul)	: 3.7923

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

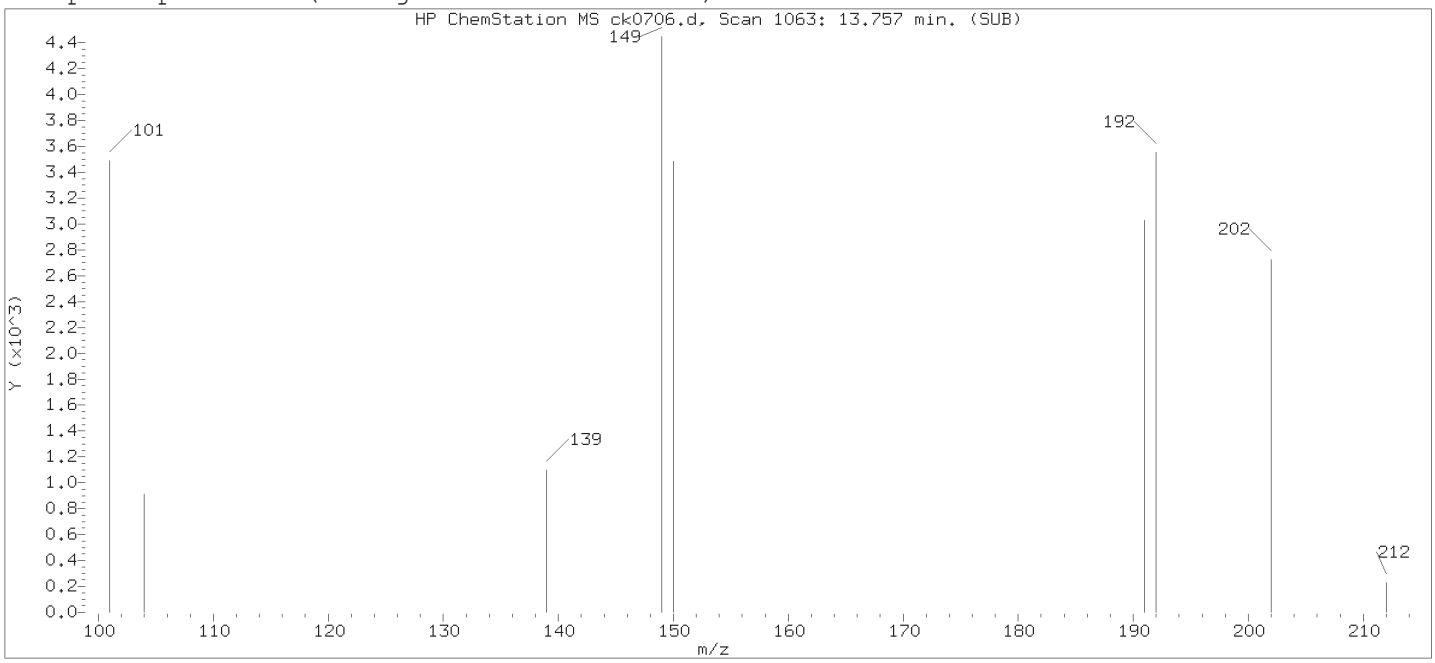
Compound Number : 37
Compound Name : Fluoranthene
Scan Number : 1071
Retention Time (minutes) : 13.855
Quant Ion : 202.00
Area (flag) : 647200A
On-column Amount (ng/ul) : 3.7923
Integration start scan : 1068 Integration stop scan: 1075
Y at integration start : 16592 Y at integration end: 16683

Reason for manual integration: improper integration

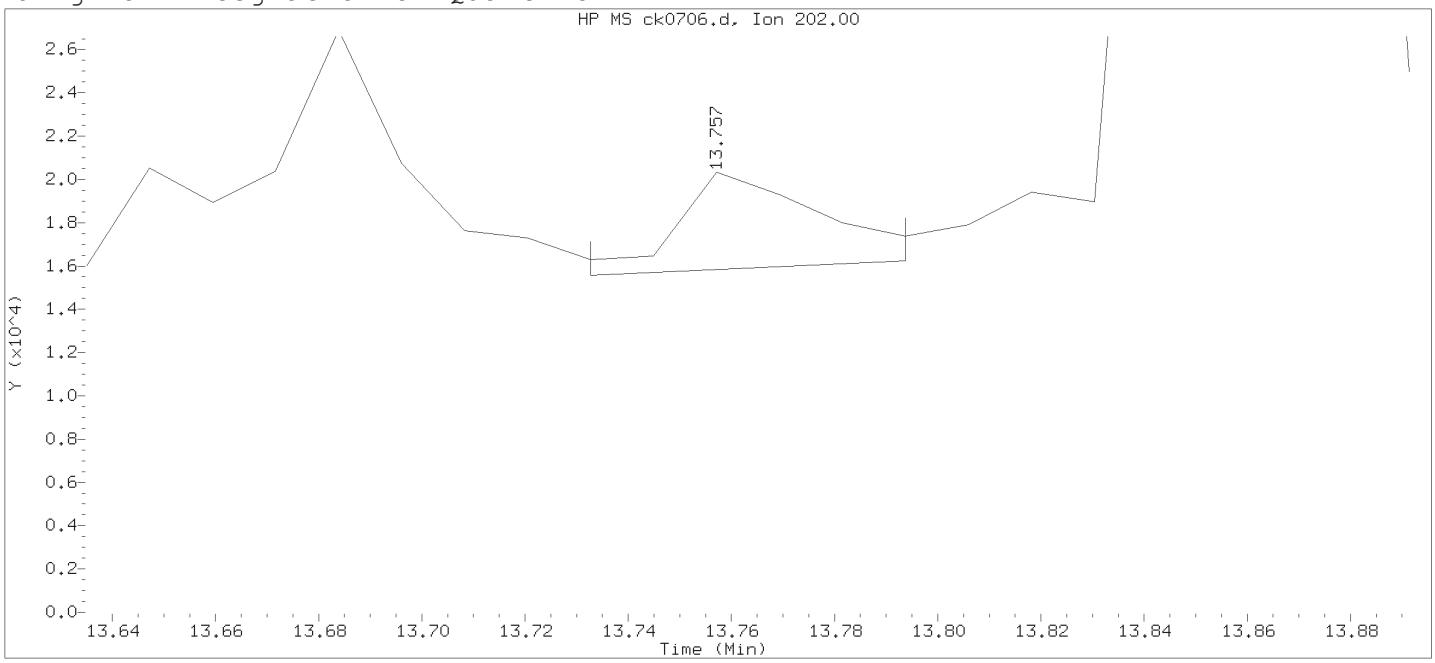
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

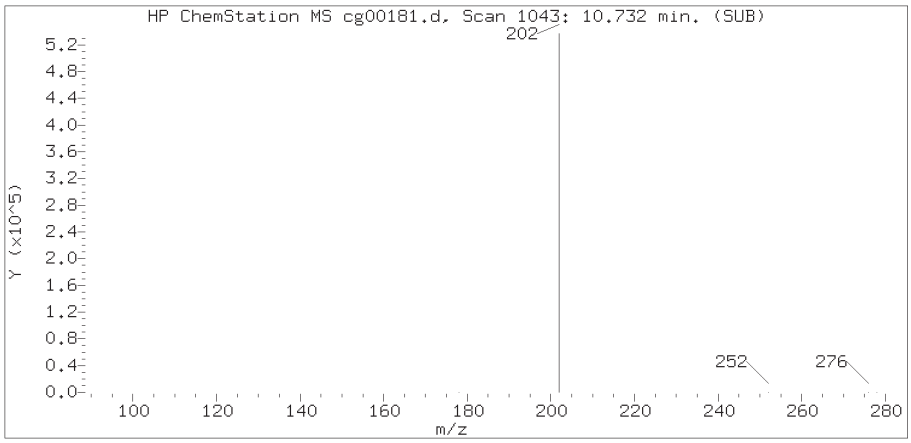
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

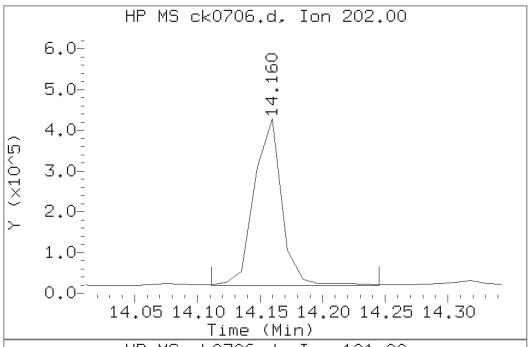
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number : 37
Compound Name : Fluoranthene
Scan Number : 1063
Retention Time (minutes) : 13.757
Quant Ion : 202.00
Area : 8305
On-column Amount (ng/ul) : 0.0439
Integration start scan : 1060 Integration stop scan: 1065
Y at integration start : 15576 Y at integration end: 16251

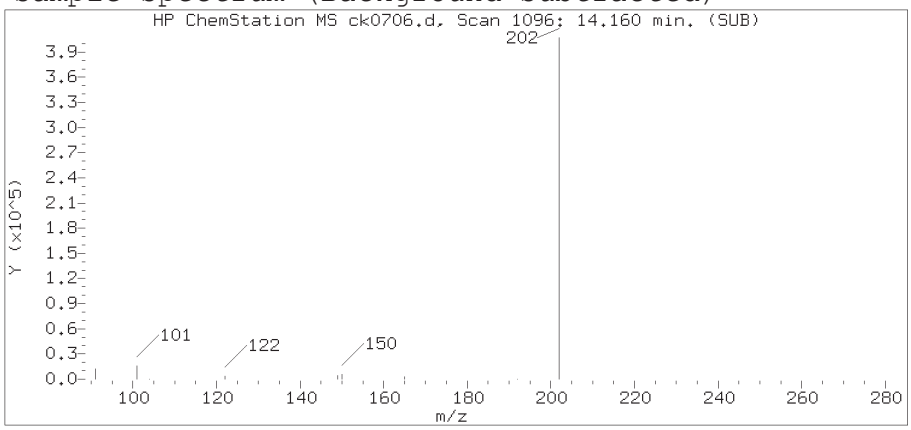
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: [illegible]

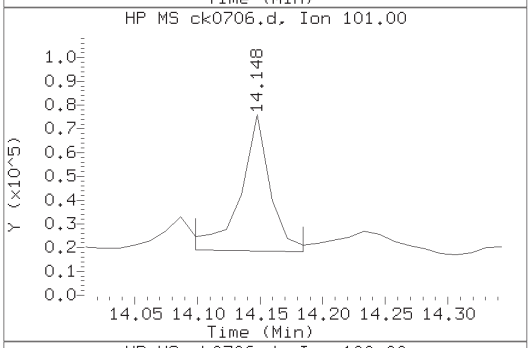
Reference Standard Spectrum for Pyrene

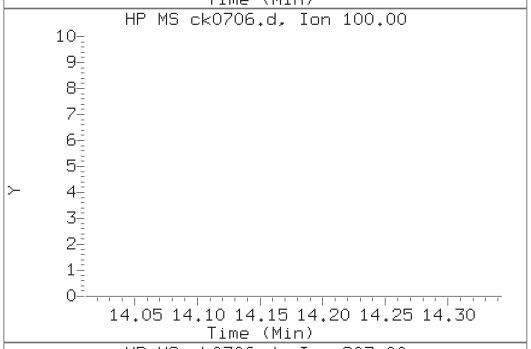




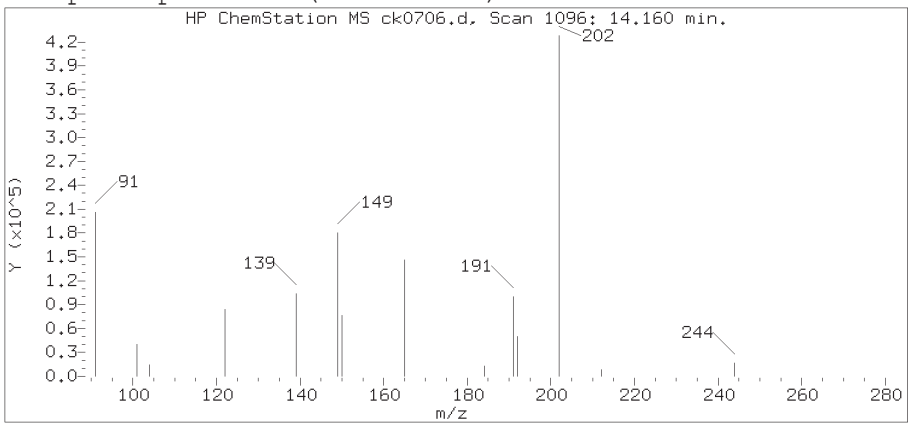
Sample Spectrum (Background Subtracted)

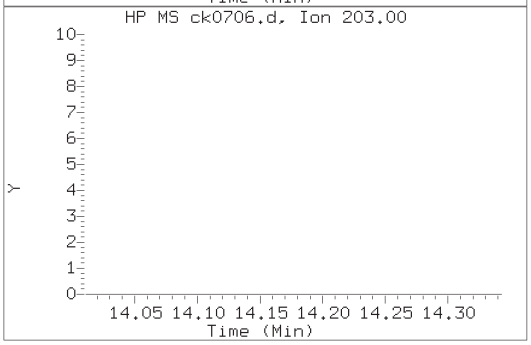






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

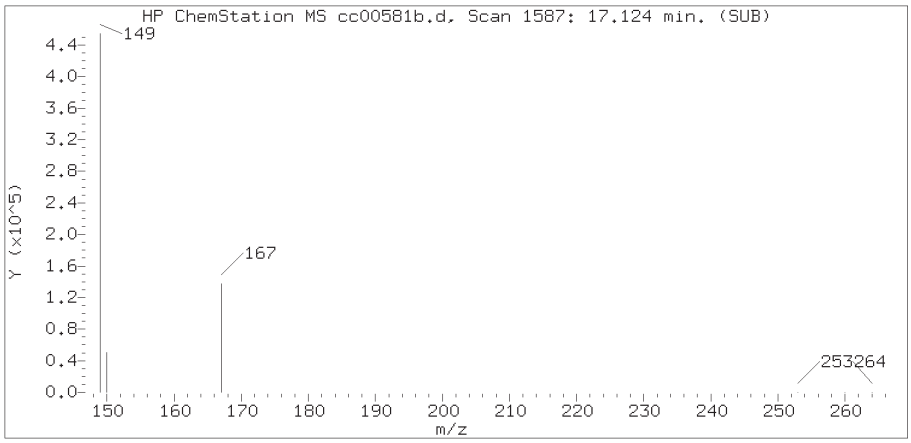
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

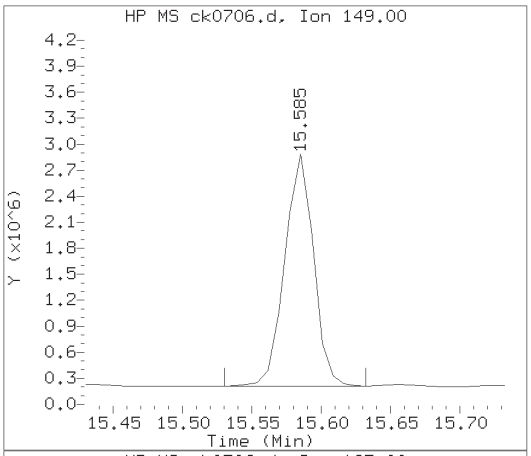
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number	: 39
Compound Name	: Pyrene
Scan Number	: 1096
Retention Time (minutes)	: 14.160
Relative Retention Time	: 0.00173
Quant Ion	: 202.00
Area (flag)	: 624661
On-column Amount (ng/ul)	: 3.9755

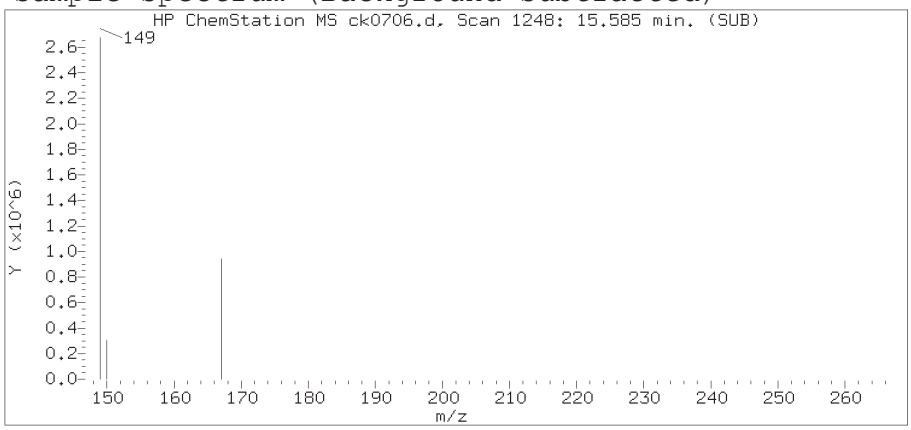
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

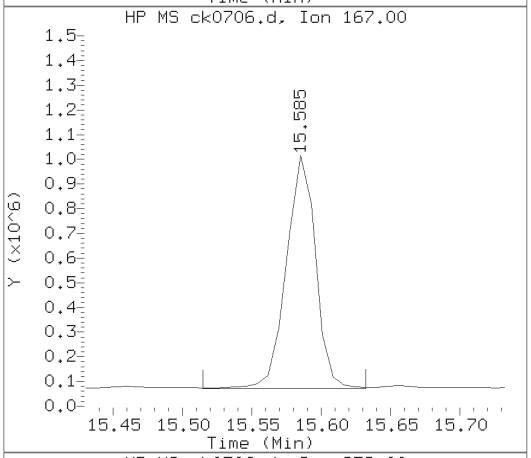
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



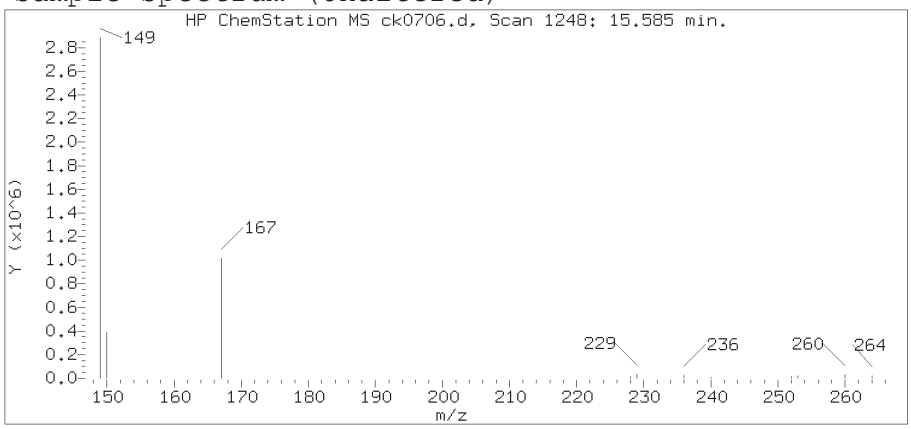


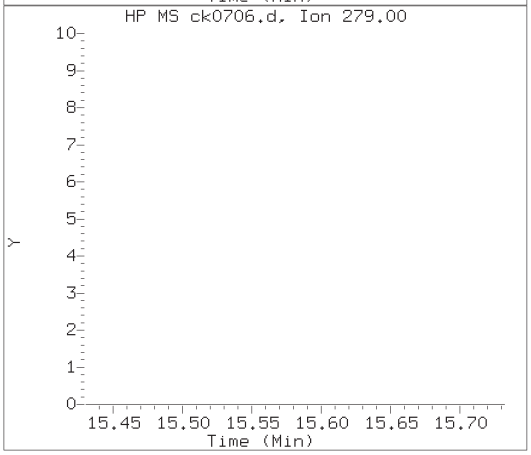
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

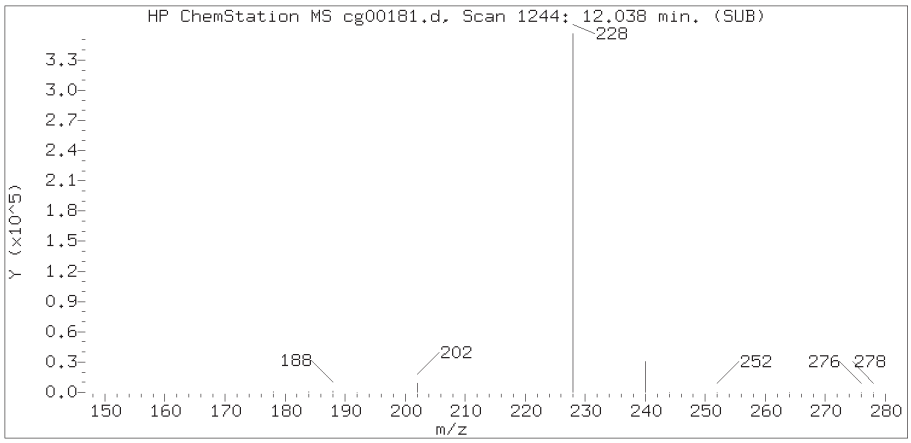
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

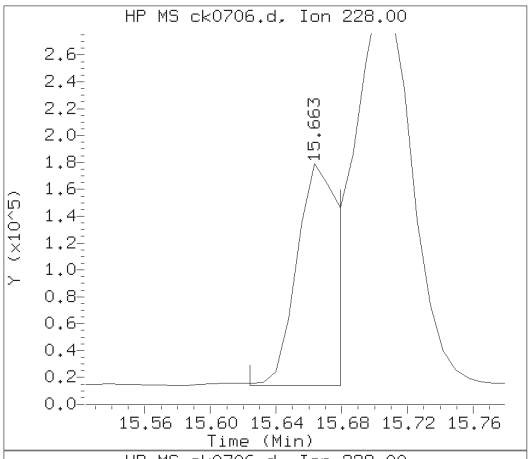
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number	: 41
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1248
Retention Time (minutes)	: 15.585
Relative Retention Time	: 0.00047
Quant Ion	: 149.00
Area (flag)	: 3878392
On-column Amount (ng/ul)	: 33.6768

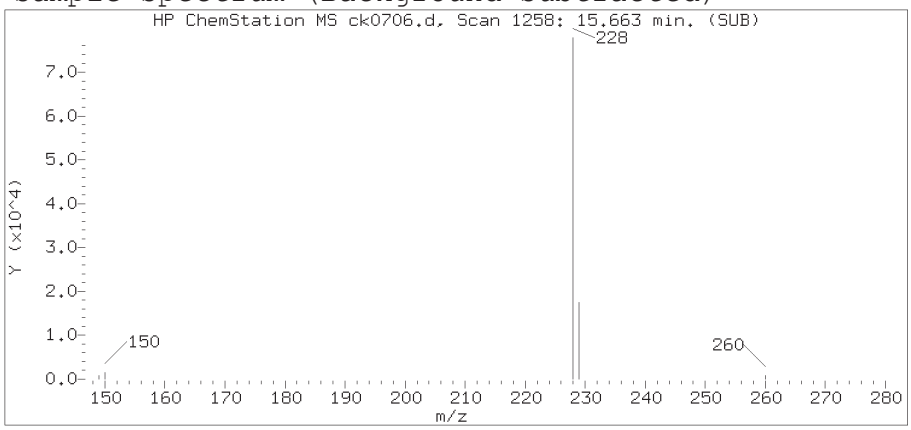
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

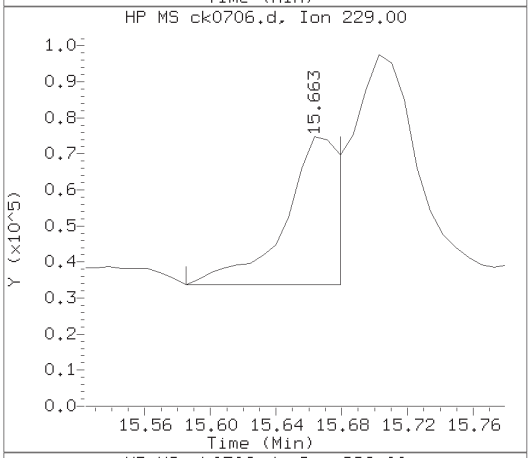
Reference Standard Spectrum for Benzo(a)anthracene



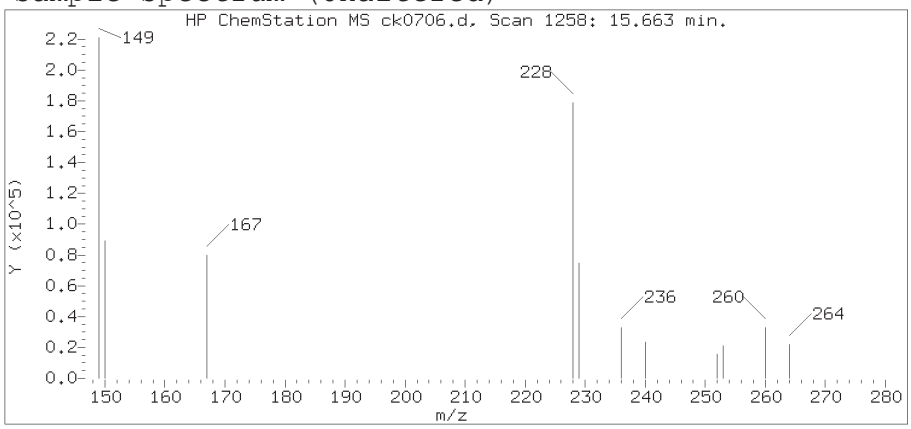


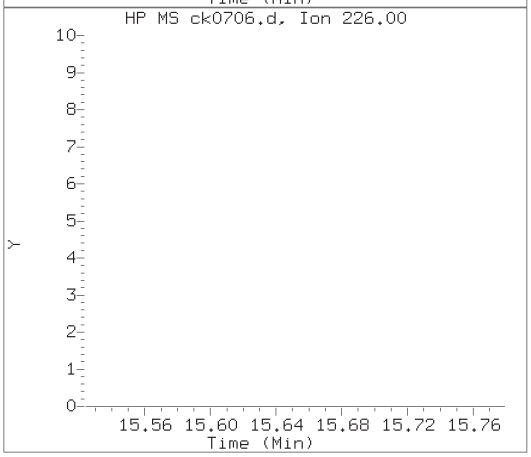
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

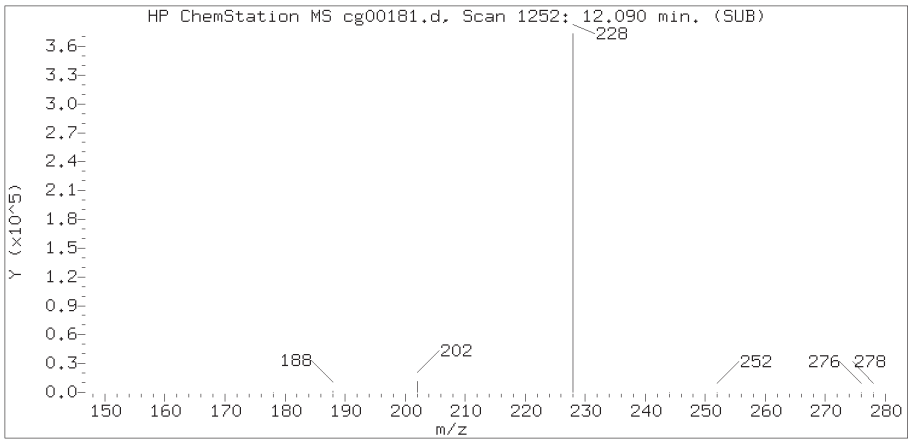
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

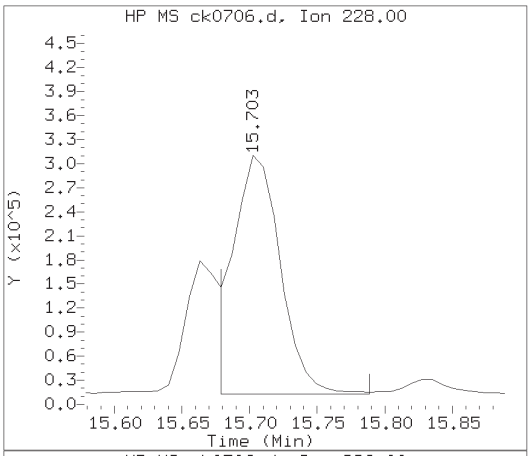
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number	: 42
Compound Name	: Benzo(a)anthracene
Scan Number	: 1258
Retention Time (minutes)	: 15.663
Relative Retention Time	:-0.00000
Quant Ion	: 228.00
Area (flag)	: 265805
On-column Amount (ng/ul)	: 2.1008

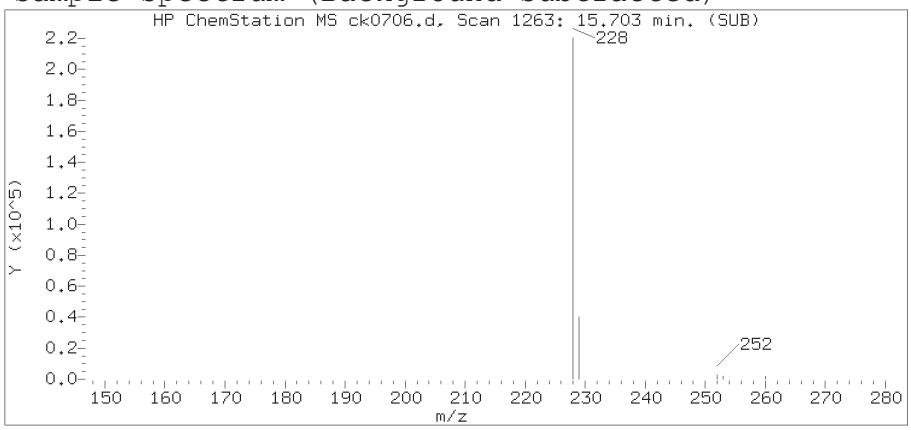
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

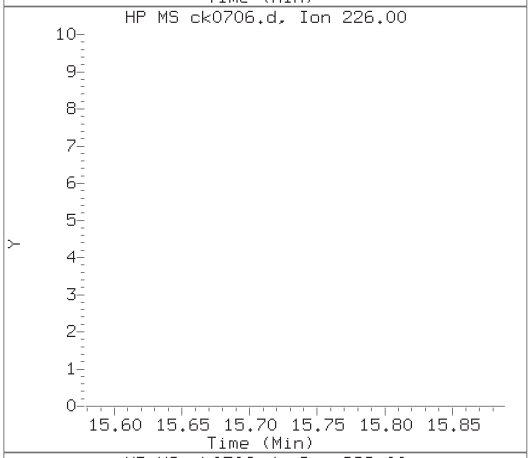
Reference Standard Spectrum for Chrysene



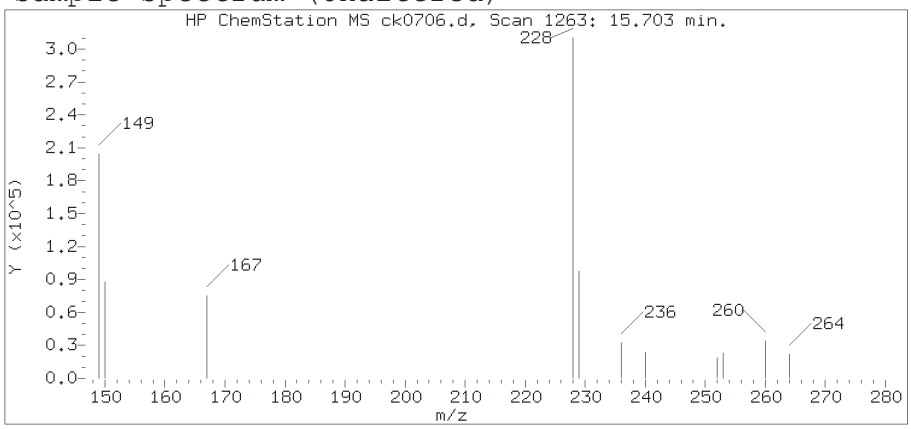


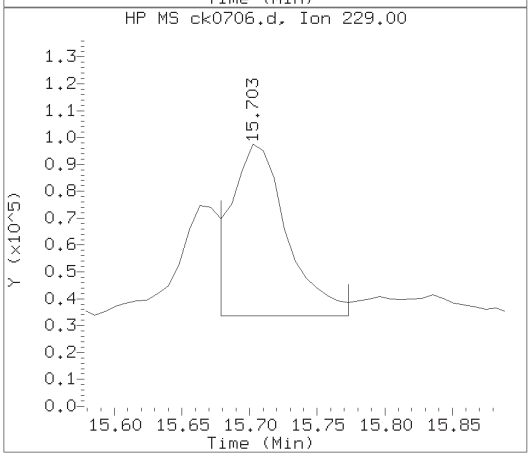
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

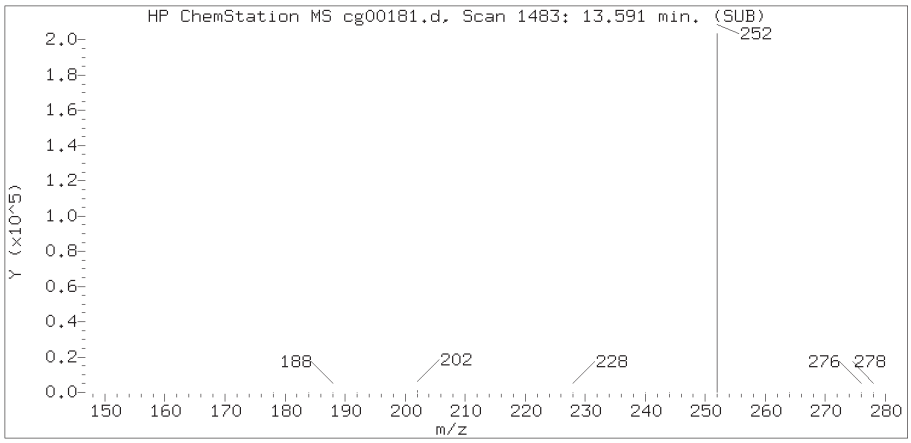
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

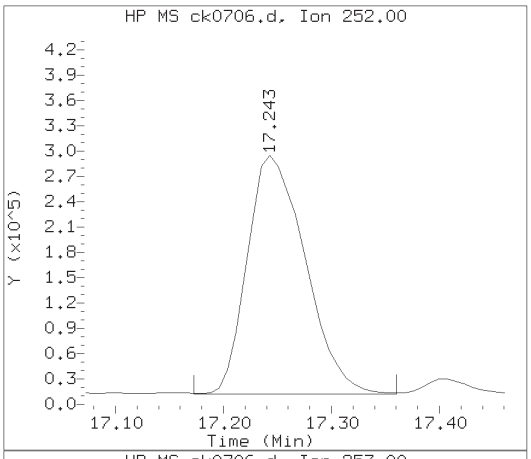
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number	: 44
Compound Name	: Chrysene
Scan Number	: 1263
Retention Time (minutes)	: 15.703
Relative Retention Time	: 0.00051
Quant Ion	: 228.00
Area (flag)	: 715058
On-column Amount (ng/ul)	: 5.5162

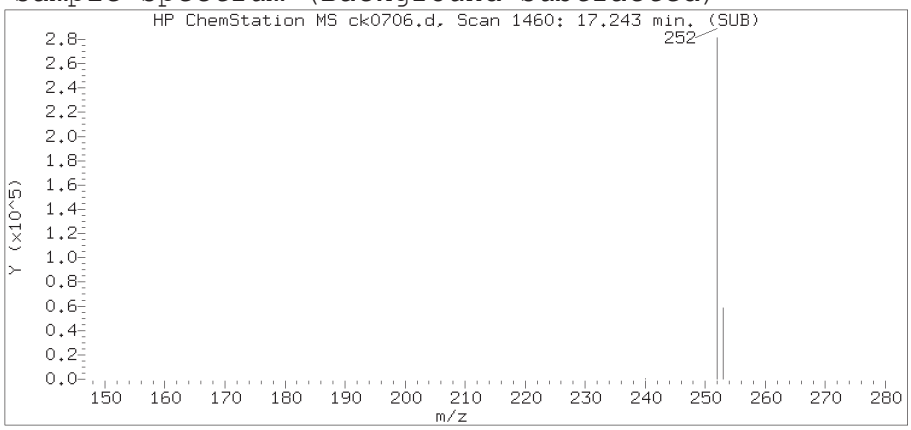
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

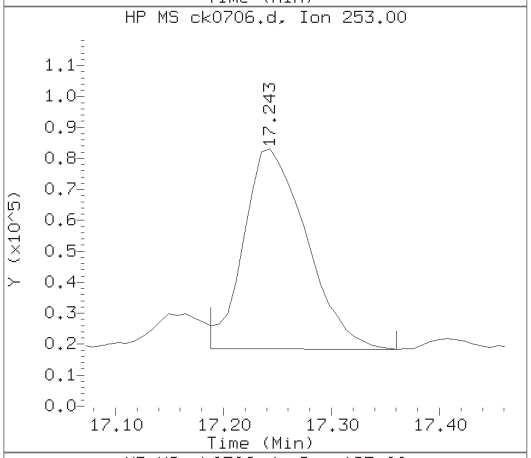
Reference Standard Spectrum for Benzo(b)fluoranthene



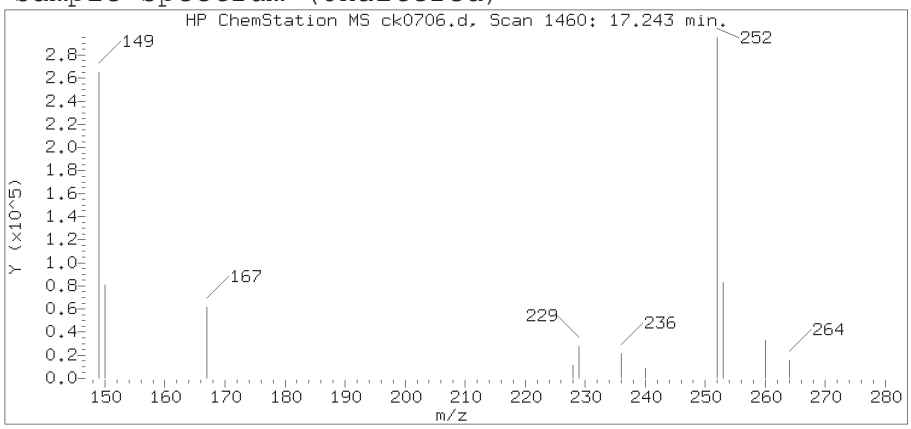


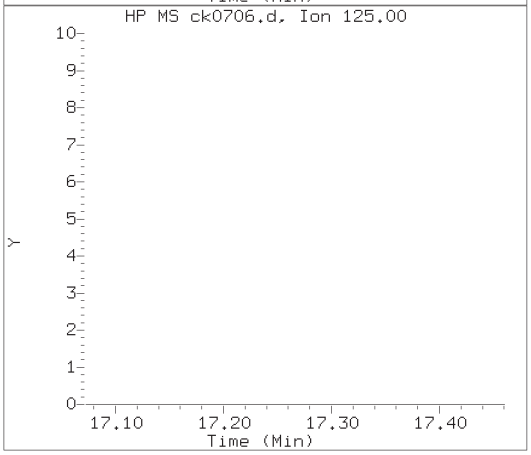
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

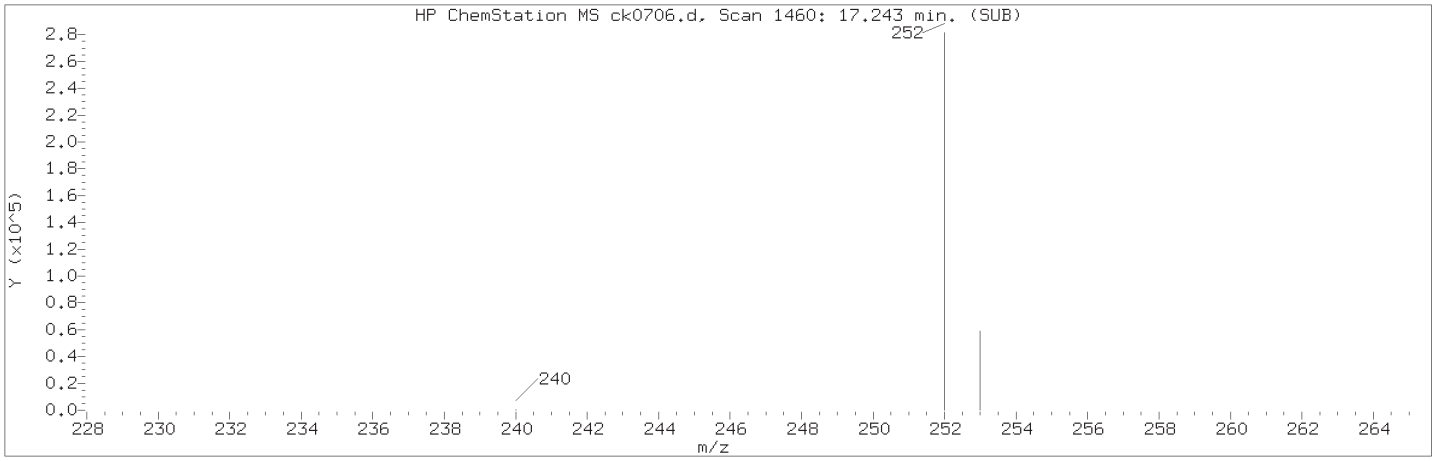
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

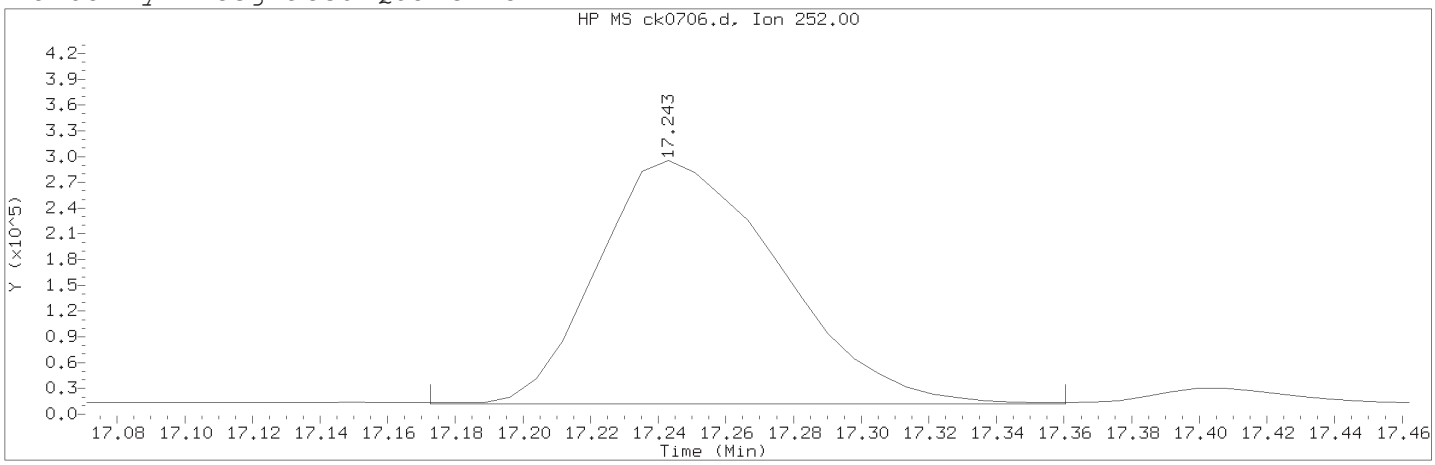
Compound Number	: 46
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1460
Retention Time (minutes)	: 17.243
Relative Retention Time	: 0.00055
Quant Ion	: 252.00
Area (flag)	: 1056168A
On-column Amount (ng/ul)	: 12.1806

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

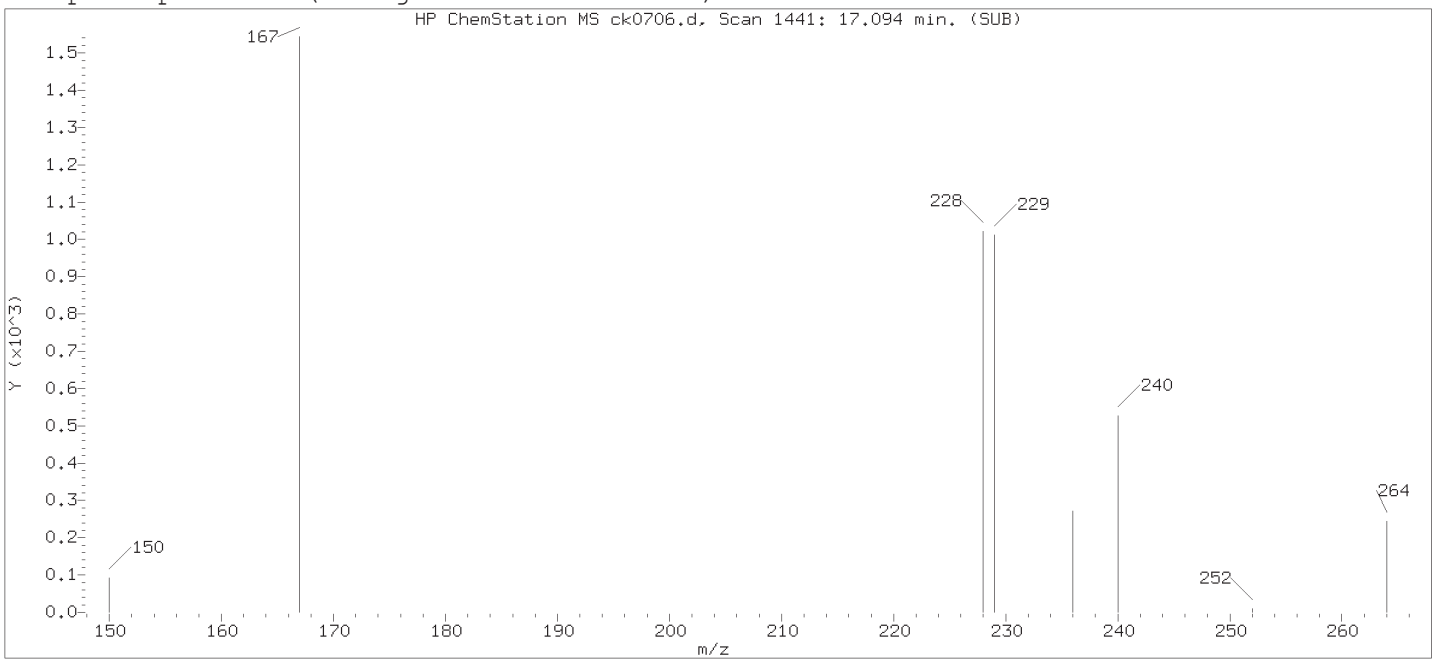
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1460
Retention Time (minutes) : 17.243
Quant Ion : 252.00
Area (flag) : 1056168A
On-column Amount (ng/ul) : 12.1806
Integration start scan : 1450 Integration stop scan: 1474
Y at integration start : 12112 Y at integration end: 12084

Reason for manual integration: improper integration

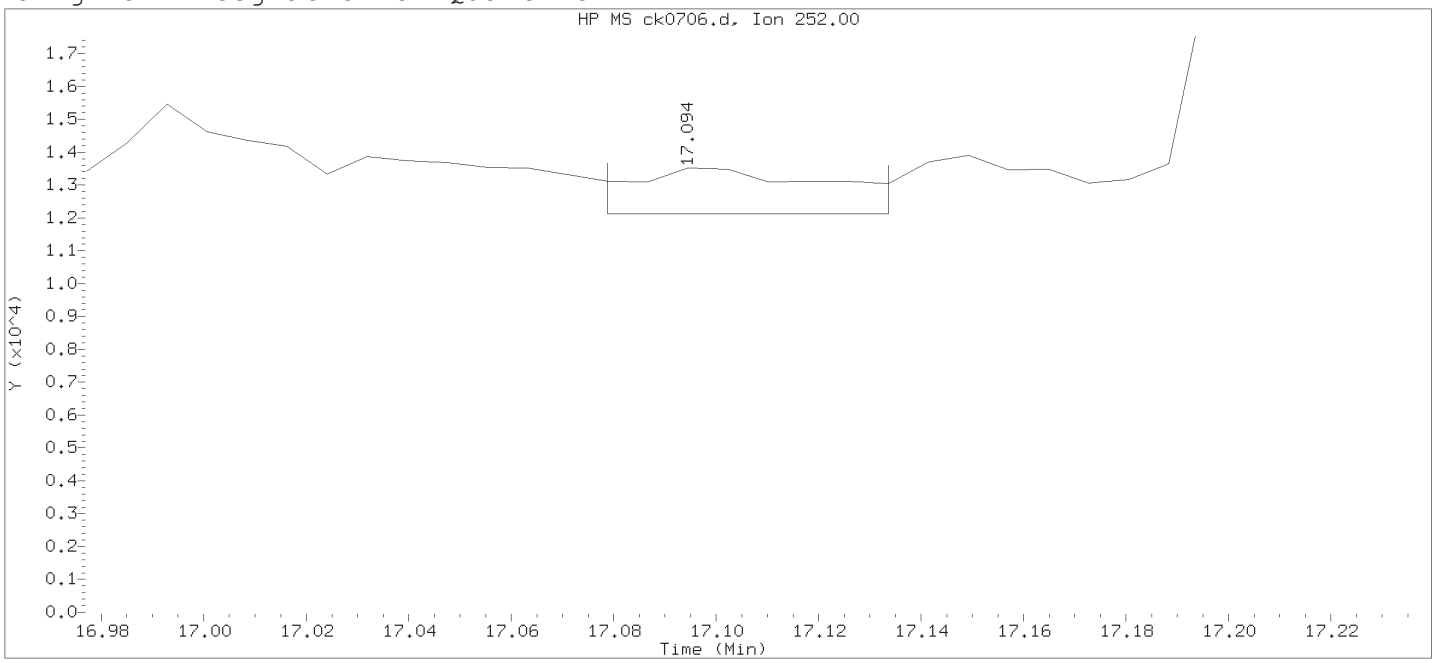
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

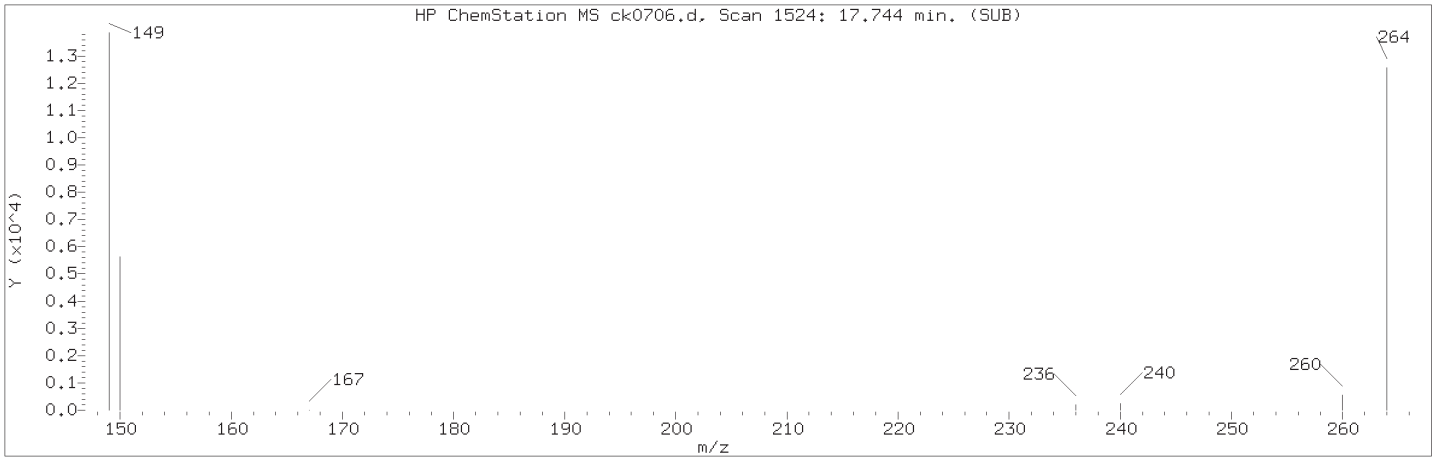
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

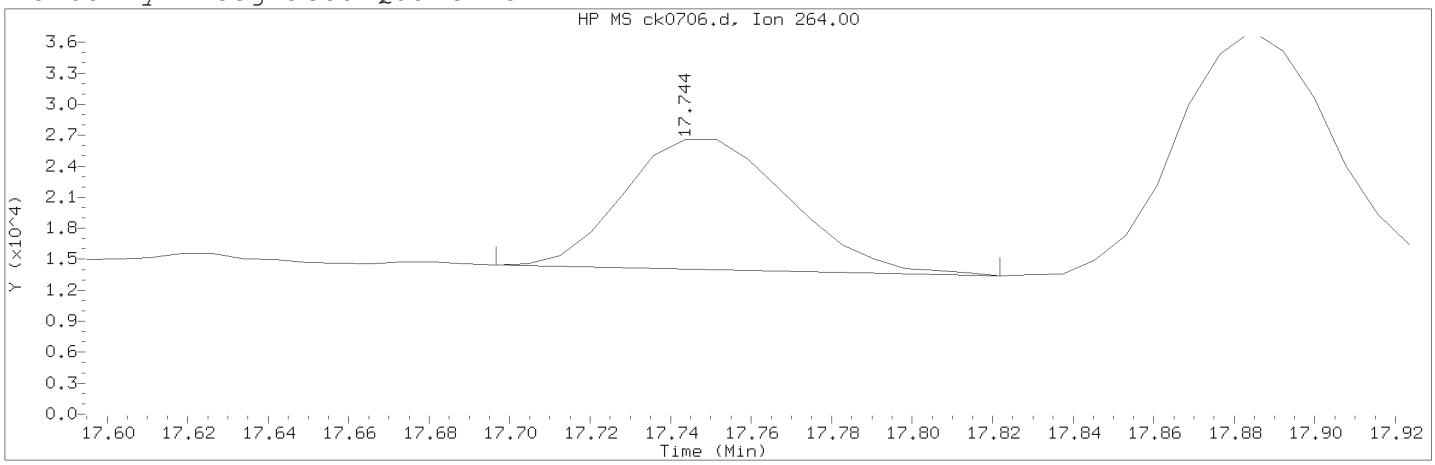
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1441
Retention Time (minutes) : 17.094
Quant Ion : 252.00
Area : 3591
On-column Amount (ng/ul) : 0.0778
Integration start scan : 1438 Integration stop scan: 1445
Y at integration start : 12126 Y at integration end: 12118

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

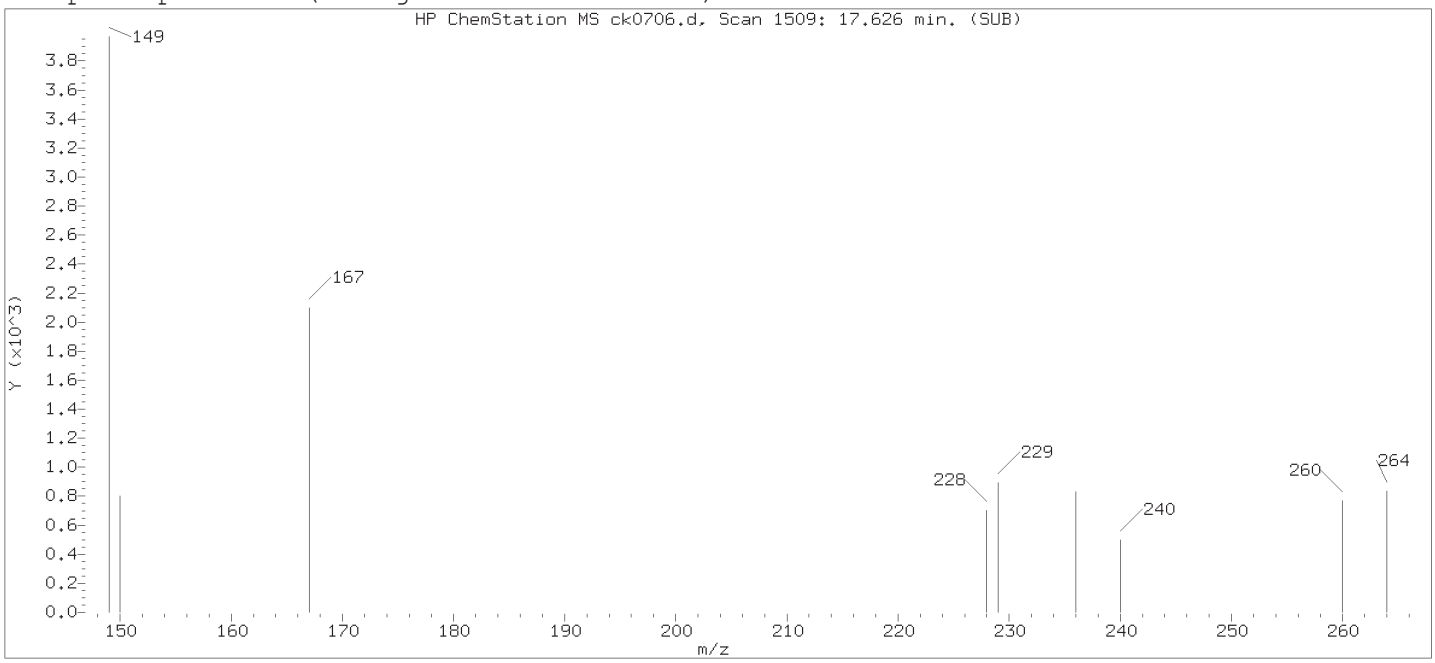
Compound Number : 49
Compound Name : Benzo(a)pyrene-d12
Scan Number : 1524
Retention Time (minutes) : 17.744
Quant Ion : 264.00
Area (flag) : 36000A
On-column Amount (ng/ul) : 0.5790
Integration start scan : 1517 Integration stop scan: 1533
Y at integration start : 14433 Y at integration end: 13387

Reason for manual integration: improper integration

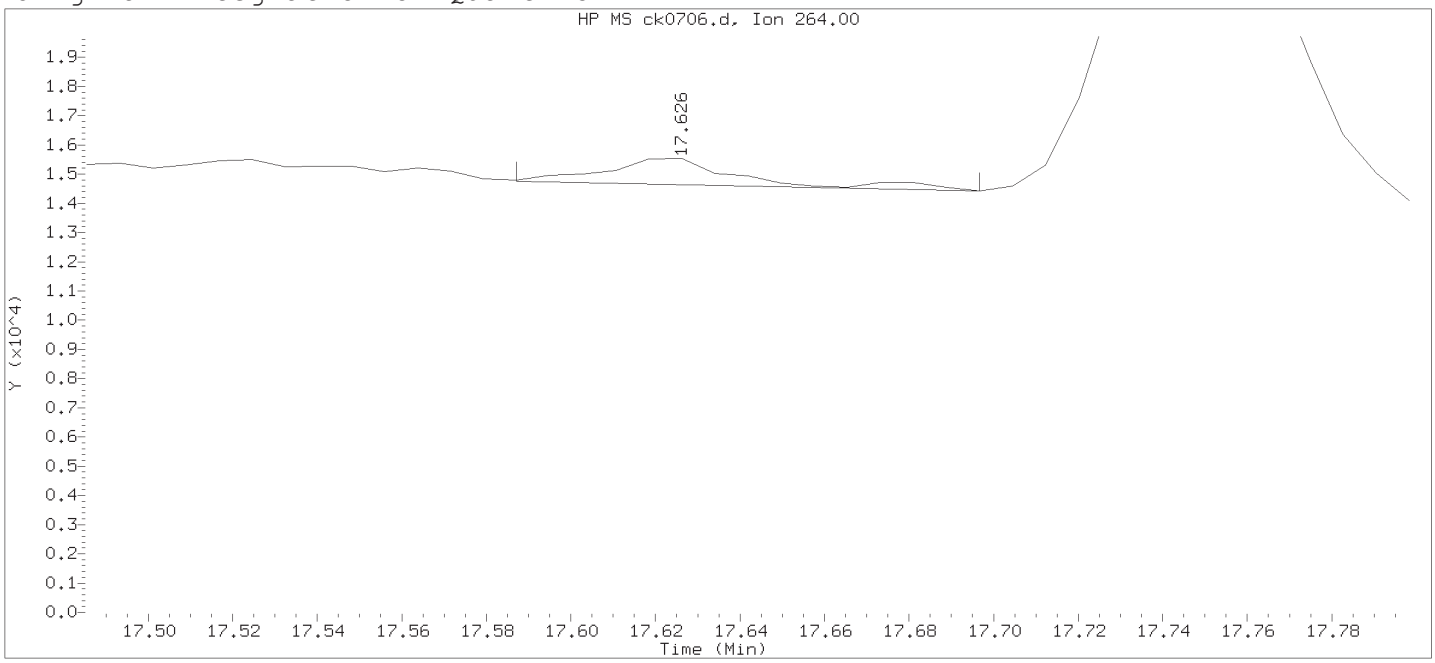
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

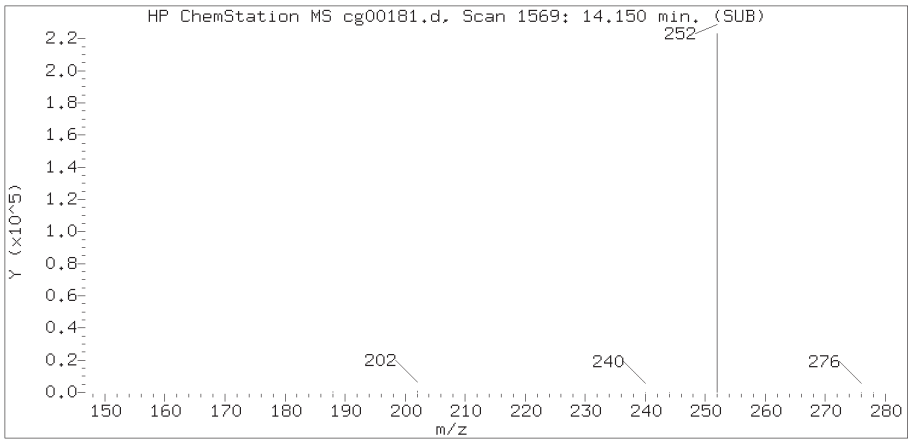
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

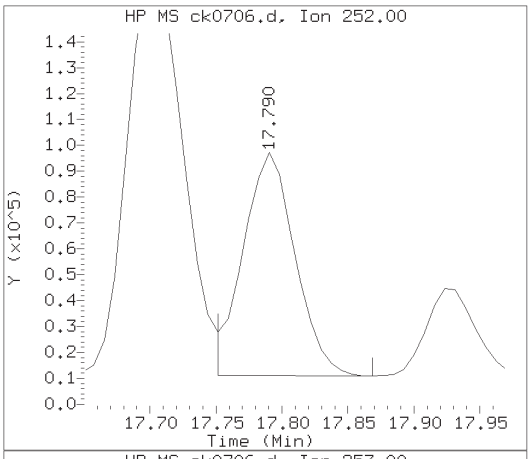
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number : 49
Compound Name : Benzo(a)pyrene-d12
Scan Number : 1509
Retention Time (minutes) : 17.626
Quant Ion : 264.00
Area : 1968
On-column Amount (ng/ul) : 0.0595
Integration start scan : 1503 Integration stop scan: 1517
Y at integration start : 14764 Y at integration end: 14433

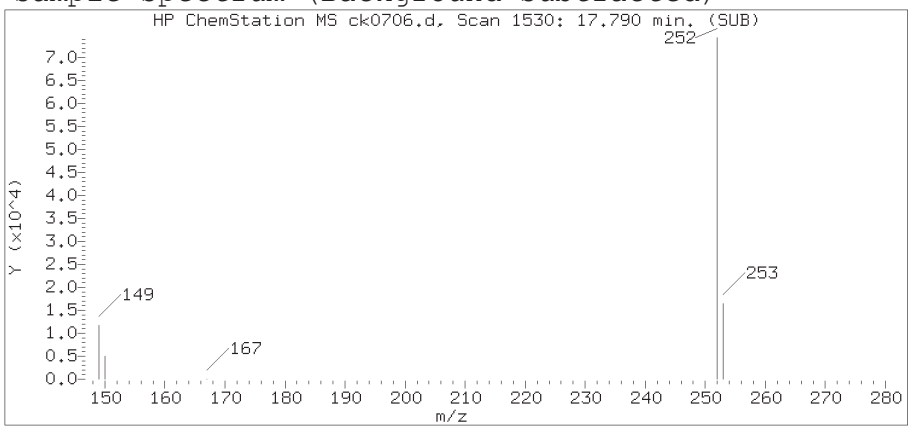
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: [illegible]

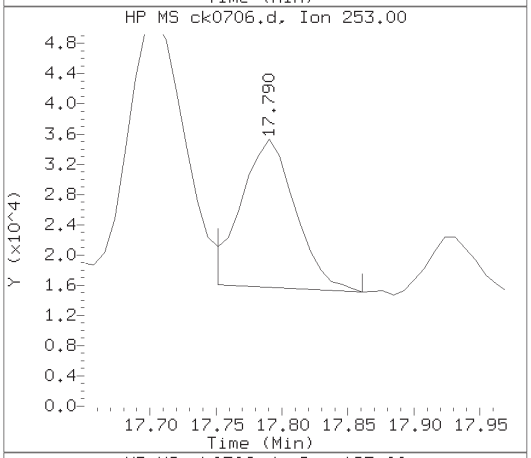
Reference Standard Spectrum for Benzo(a)pyrene



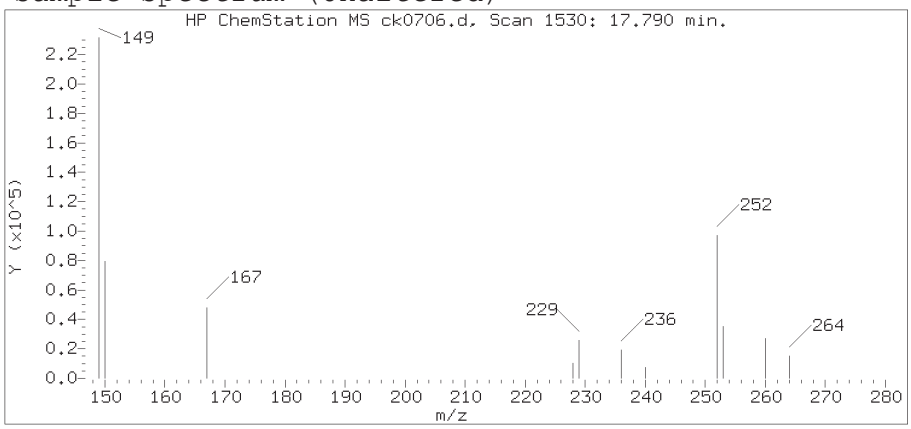


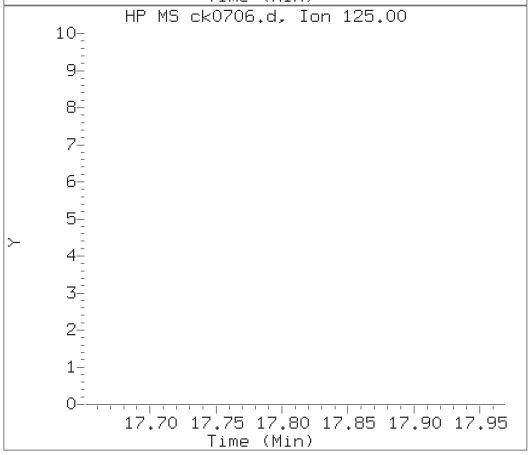
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

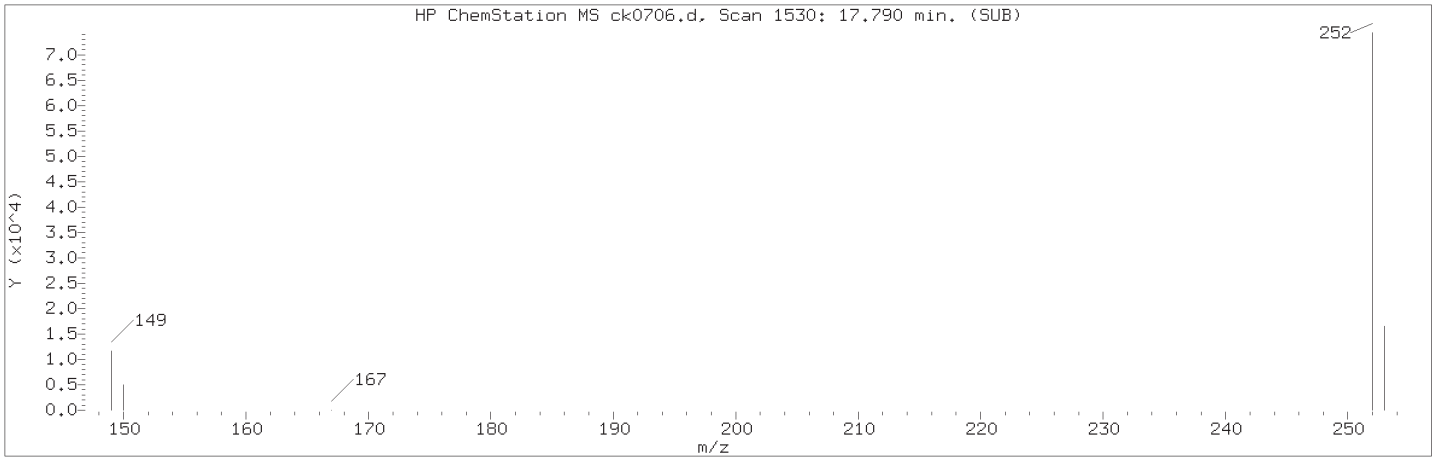
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

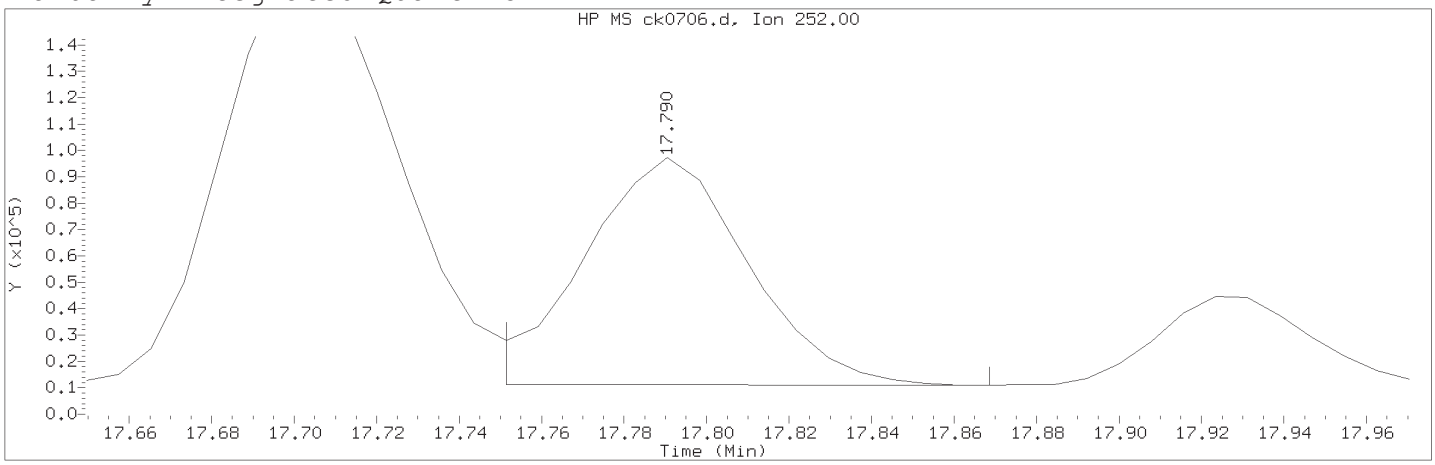
Compound Number	: 50
Compound Name	: Benzo(a)pyrene
Scan Number	: 1530
Retention Time (minutes)	: 17.790
Relative Retention Time	:-0.00005
Quant Ion	: 252.00
Area (flag)	: 235270A
On-column Amount (ng/ul)	: 2.9741

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

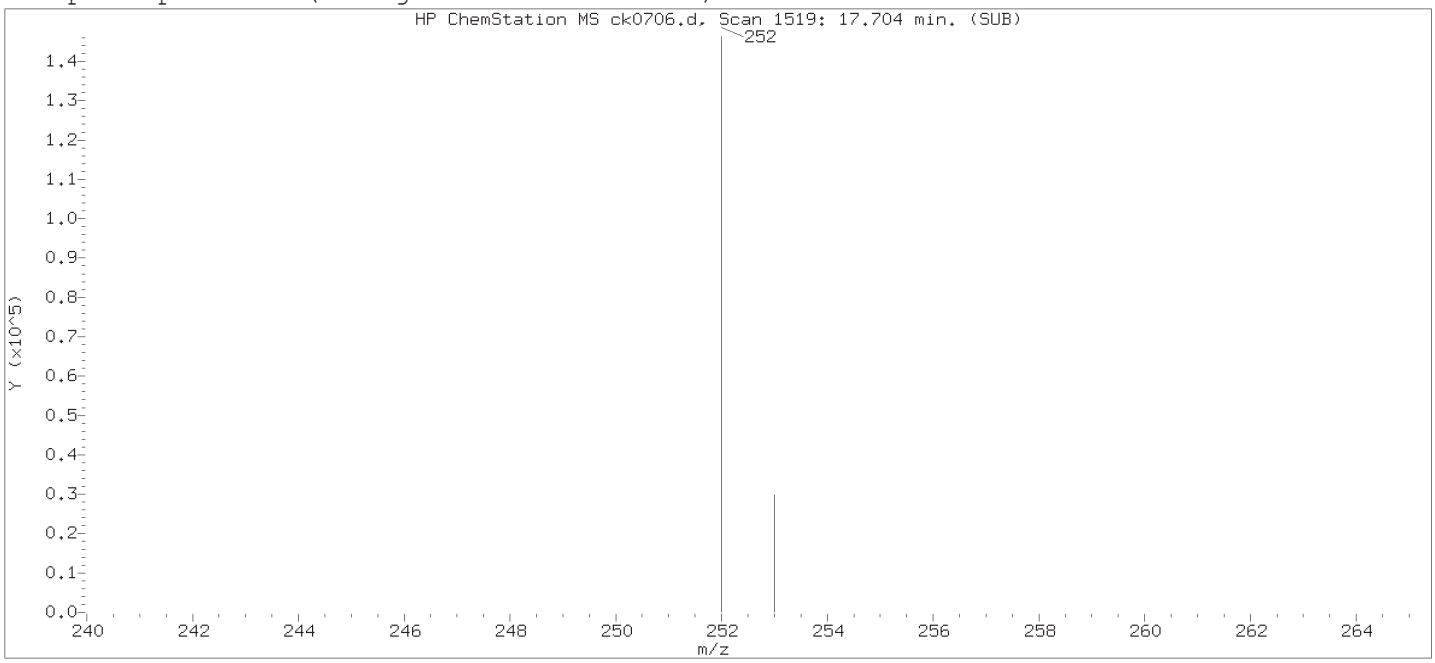
Compound Number : 50
Compound Name : Benzo(a)pyrene
Scan Number : 1530
Retention Time (minutes) : 17.790
Quant Ion : 252.00
Area (flag) : 235270A
On-column Amount (ng/ul) : 2.9741
Integration start scan : 1524 Integration stop scan: 1539
Y at integration start : 11272 Y at integration end: 10913

Reason for manual integration: improper integration

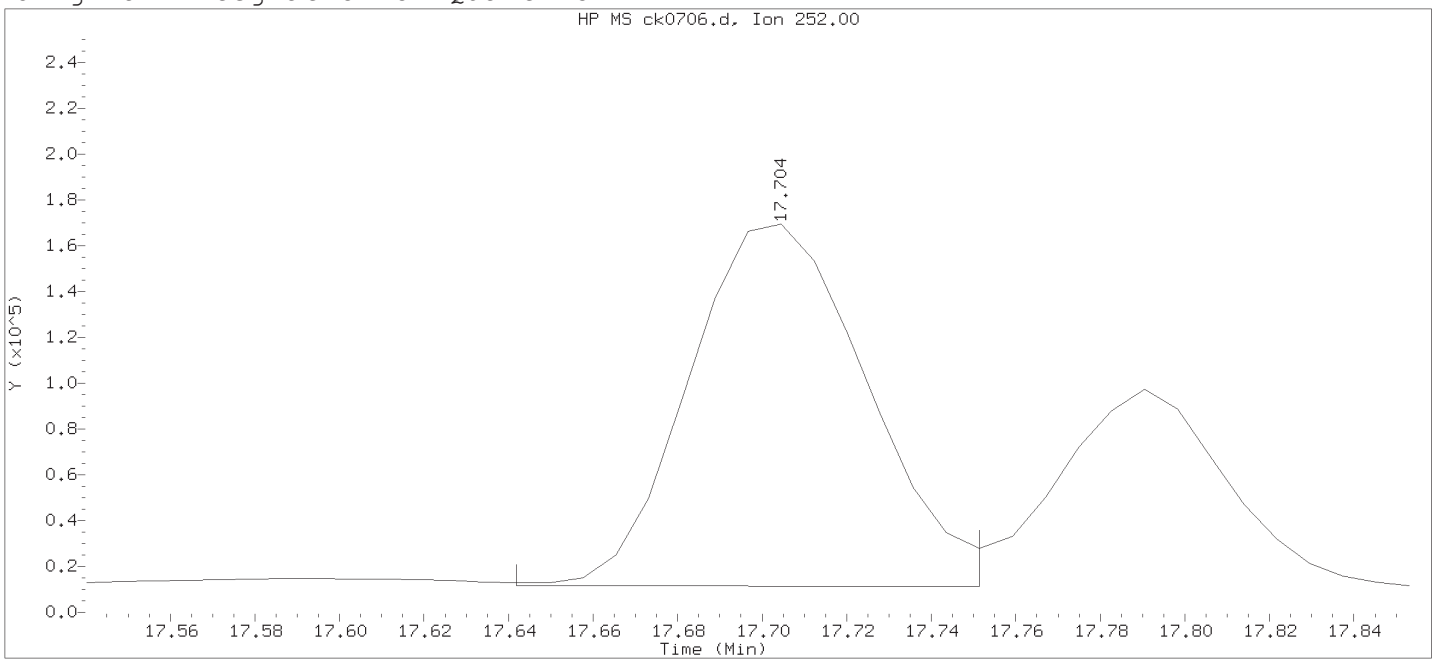
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

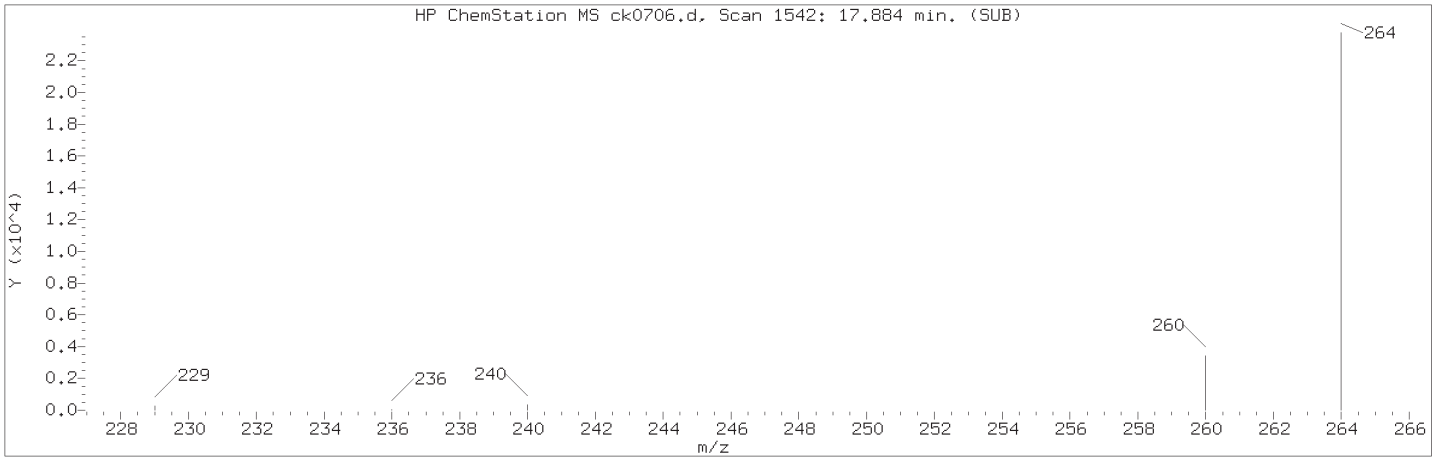
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

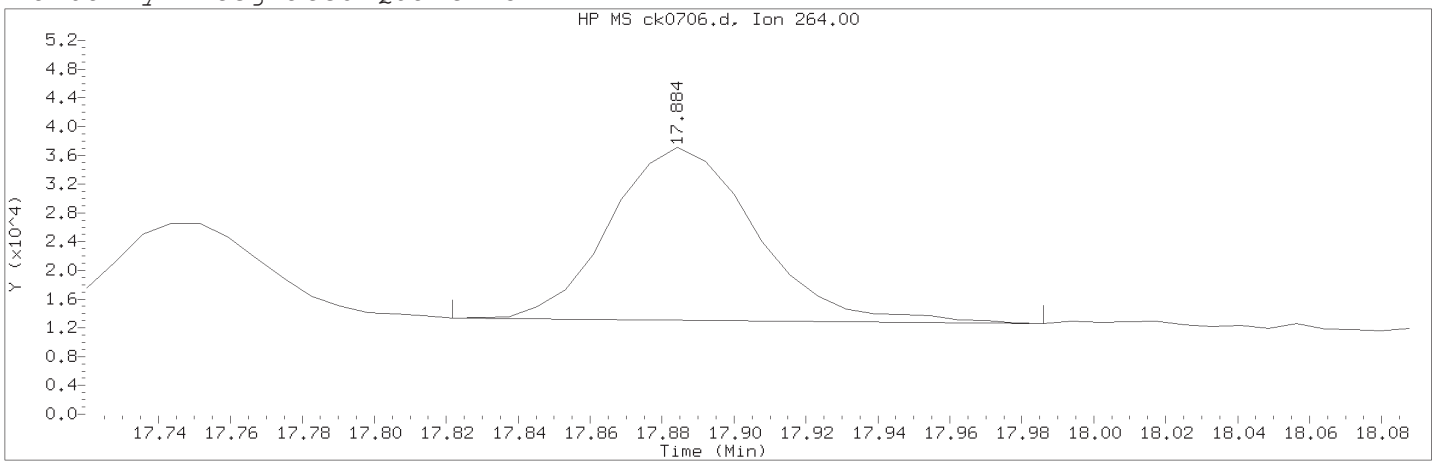
Compound Number : 50
Compound Name : Benzo(a)pyrene
Scan Number : 1519
Retention Time (minutes) : 17.704
Quant Ion : 252.00
Area : 459430
On-column Amount (ng/ul) : 10.9143
Integration start scan : 1510 Integration stop scan: 1524
Y at integration start : 11608 Y at integration end: 11272

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

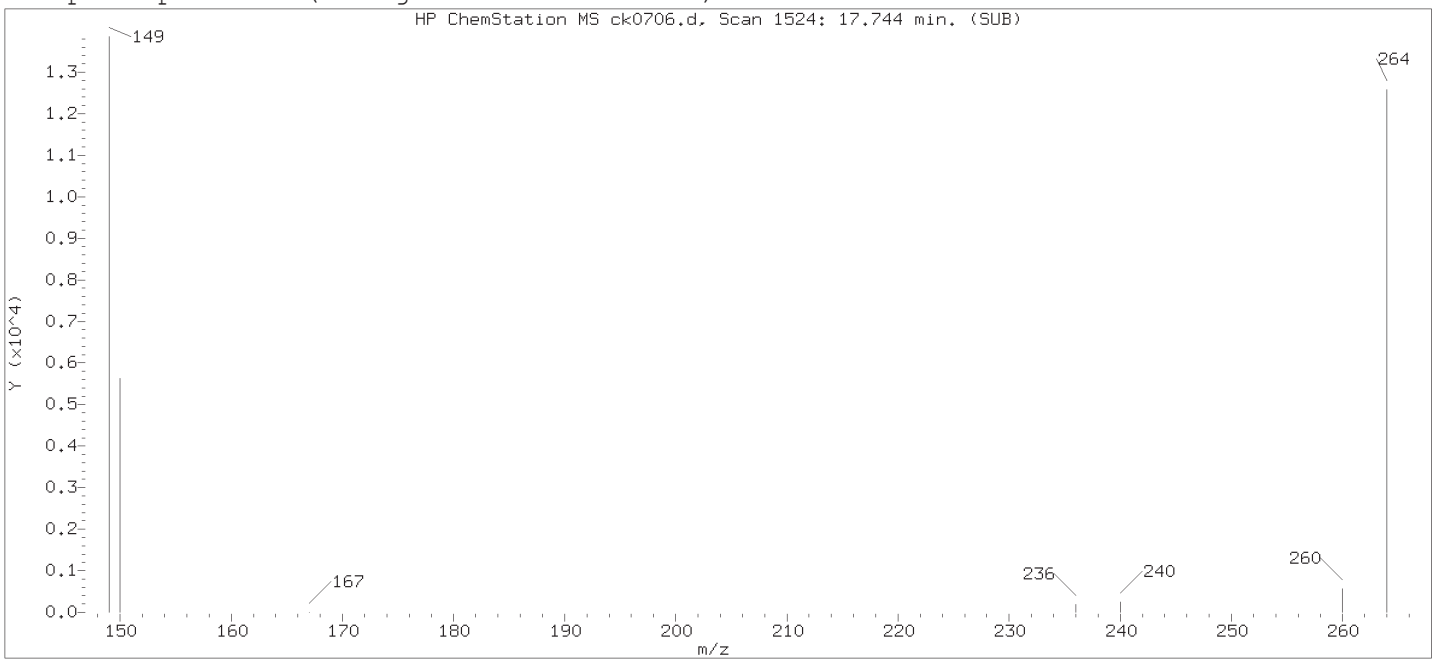
Compound Number : 51
Compound Name : Perylene-d12
Scan Number : 1542
Retention Time (minutes) : 17.884
Quant Ion : 264.00
Area (flag) : 67653A
On-column Amount (ng/ul) : 1.0000
Integration start scan : 1533 Integration stop scan: 1554
Y at integration start : 13387 Y at integration end: 12572

Reason for manual integration: improper integration

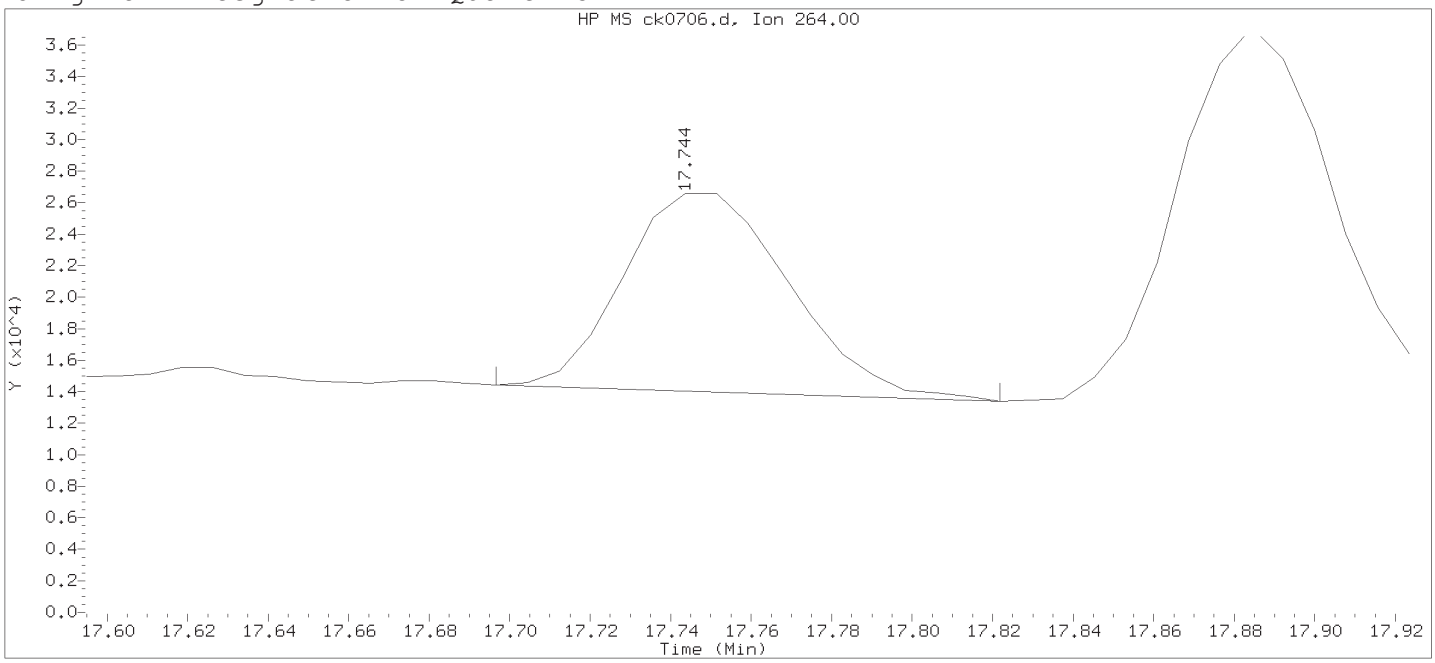
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

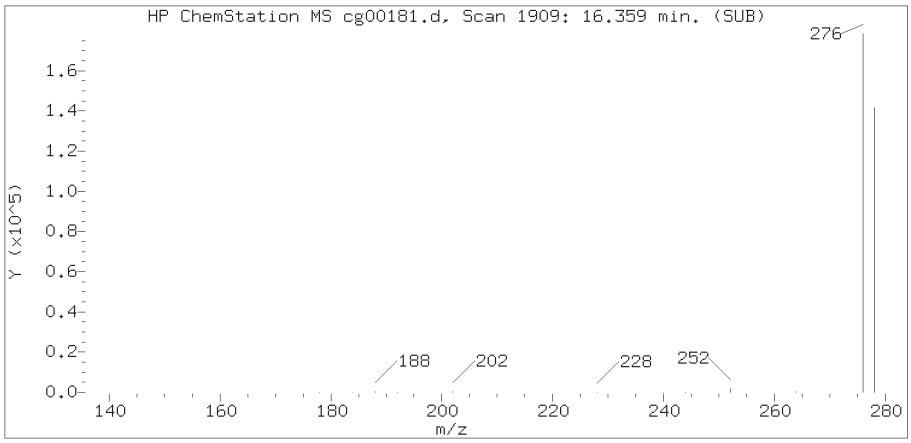
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

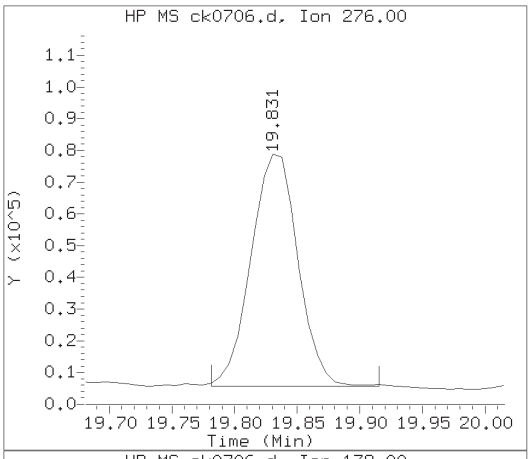
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number : 51
Compound Name : Perylene-d12
Scan Number : 1524
Retention Time (minutes) : 17.744
Quant Ion : 264.00
Area : 35999
On-column Amount (ng/ul) : 1.0000
Integration start scan : 1517 Integration stop scan: 1533
Y at integration start : 14433 Y at integration end: 13387

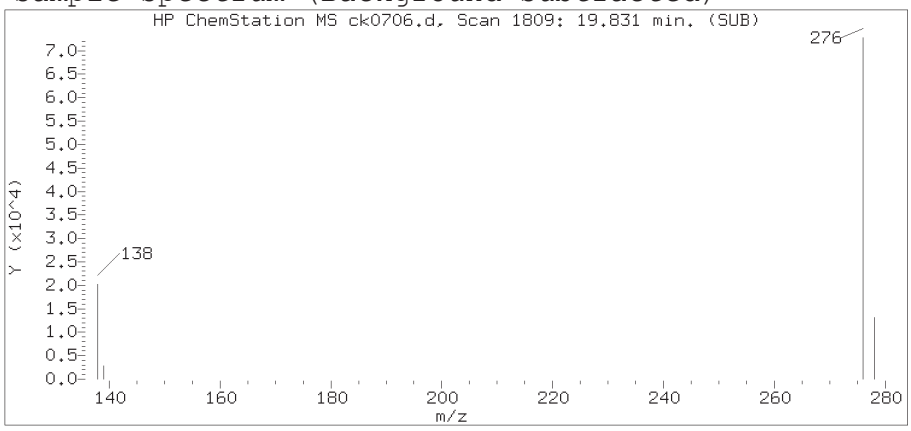
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs0219

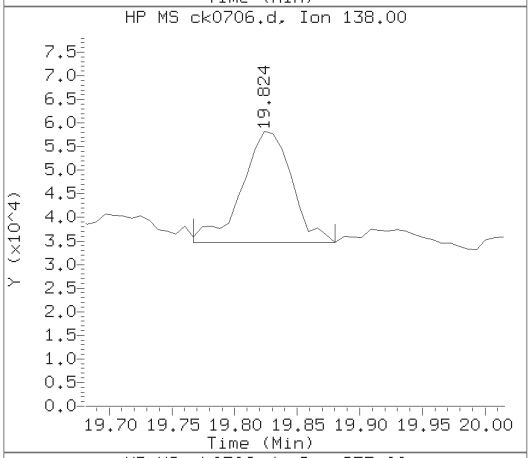
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



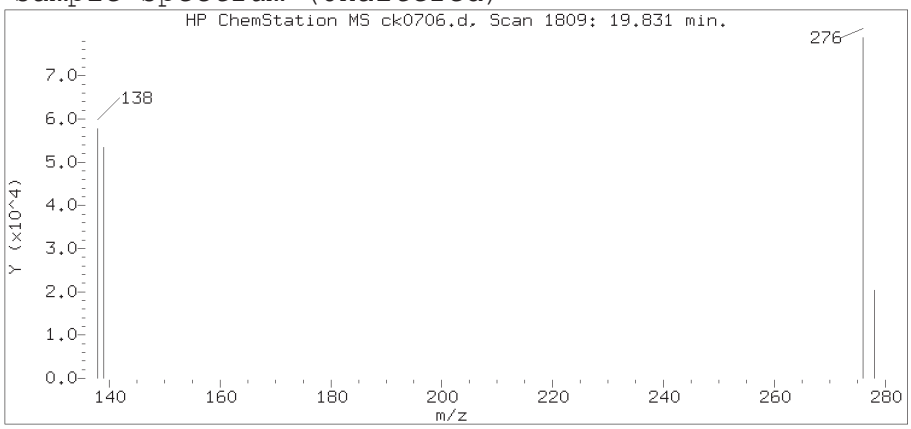


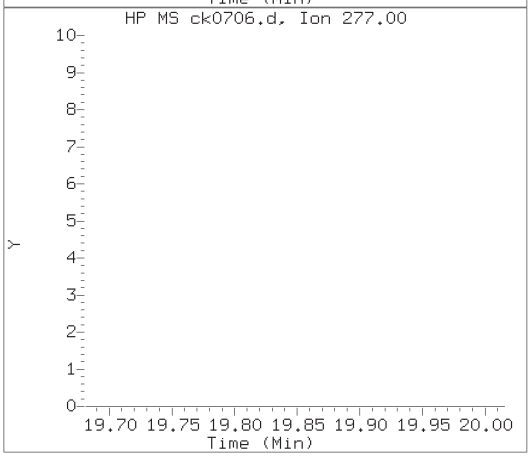
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

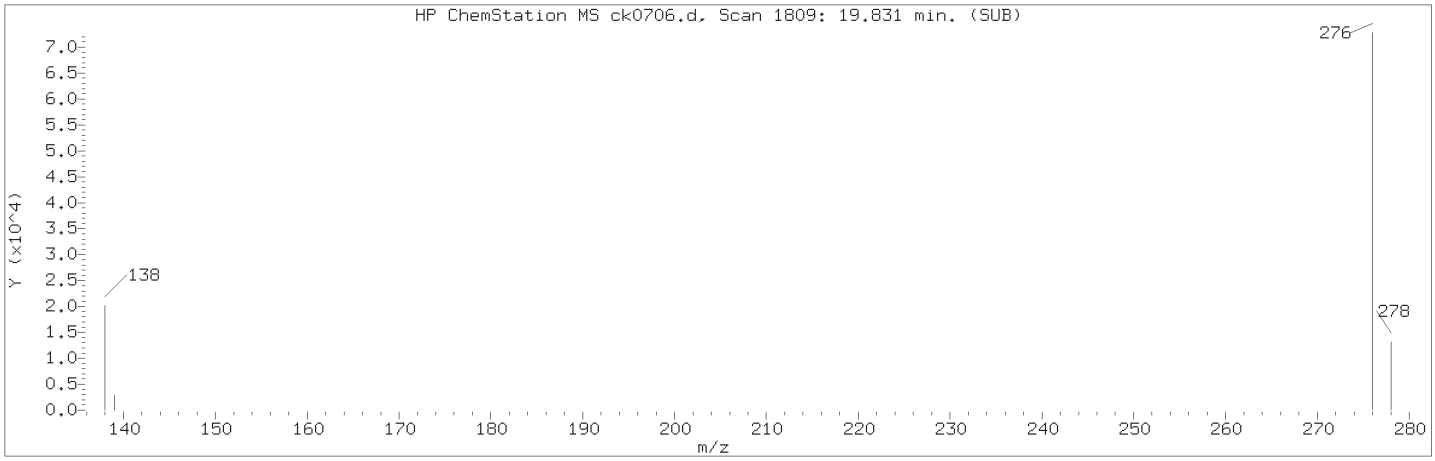
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

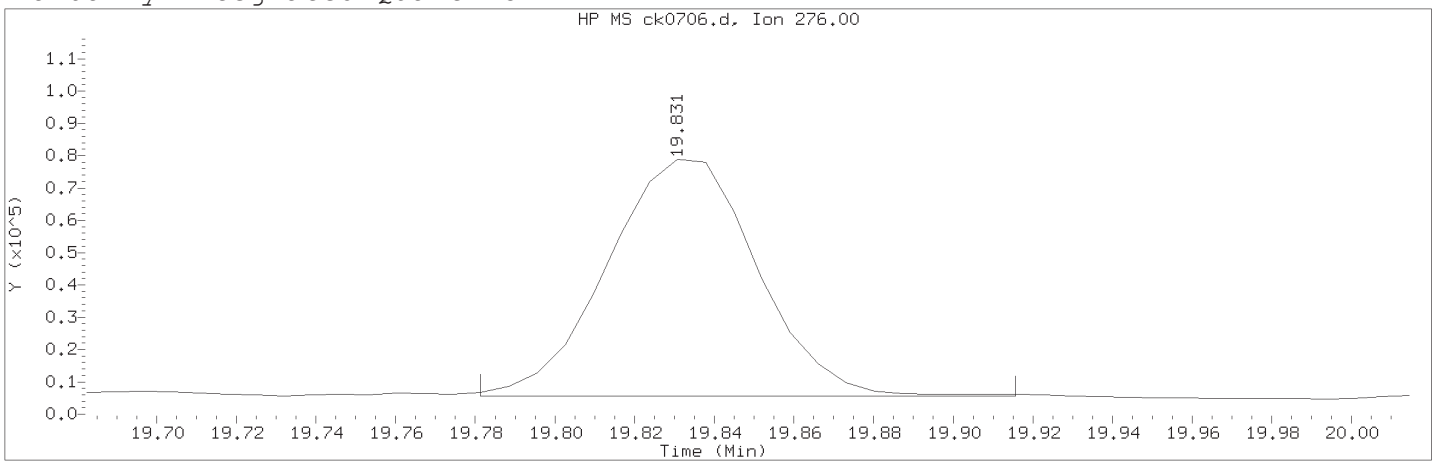
Compound Number	: 53
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 1809
Retention Time (minutes)	: 19.831
Relative Retention Time	:-0.00009
Quant Ion	: 276.00
Area (flag)	: 191046A
On-column Amount (ng/ul)	: 2.4346

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

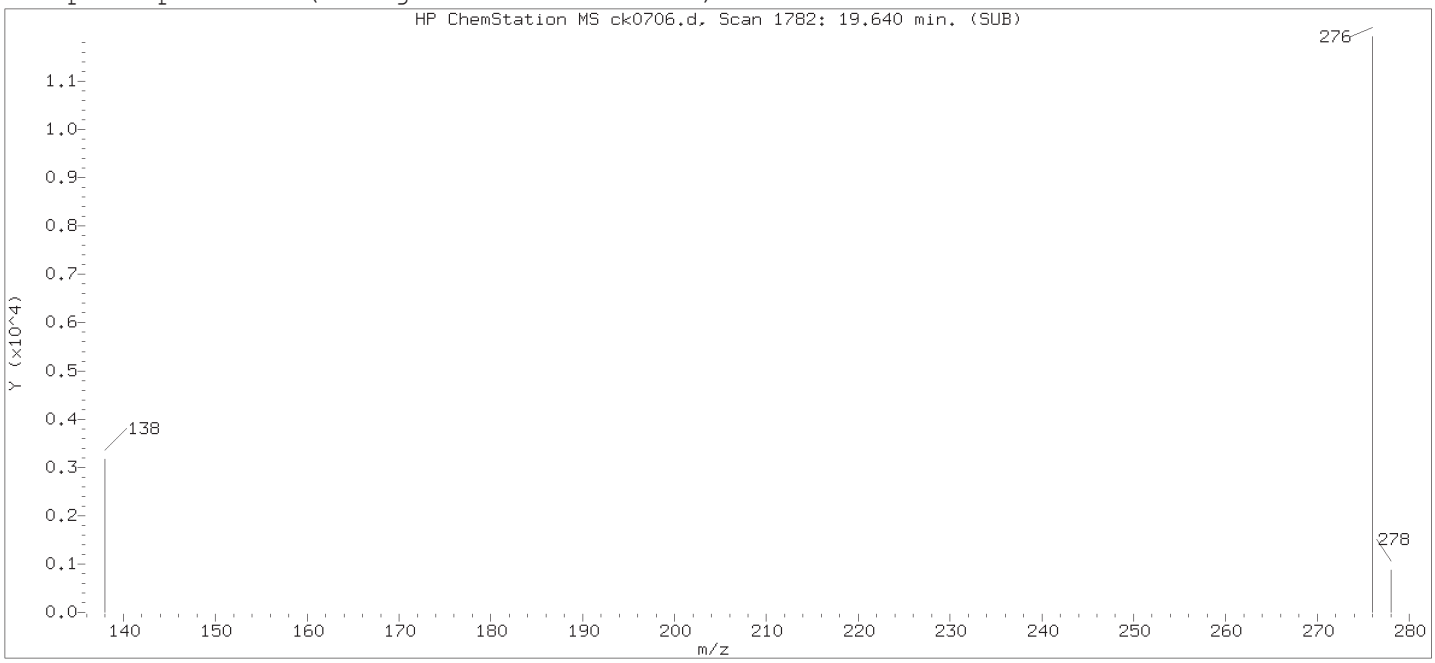
Compound Number : 53
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 1809
Retention Time (minutes) : 19.831
Quant Ion : 276.00
Area (flag) : 191046A
On-column Amount (ng/ul) : 2.4346
Integration start scan : 1801 Integration stop scan: 1820
Y at integration start : 5635 Y at integration end: 5635

Reason for manual integration: improper integration

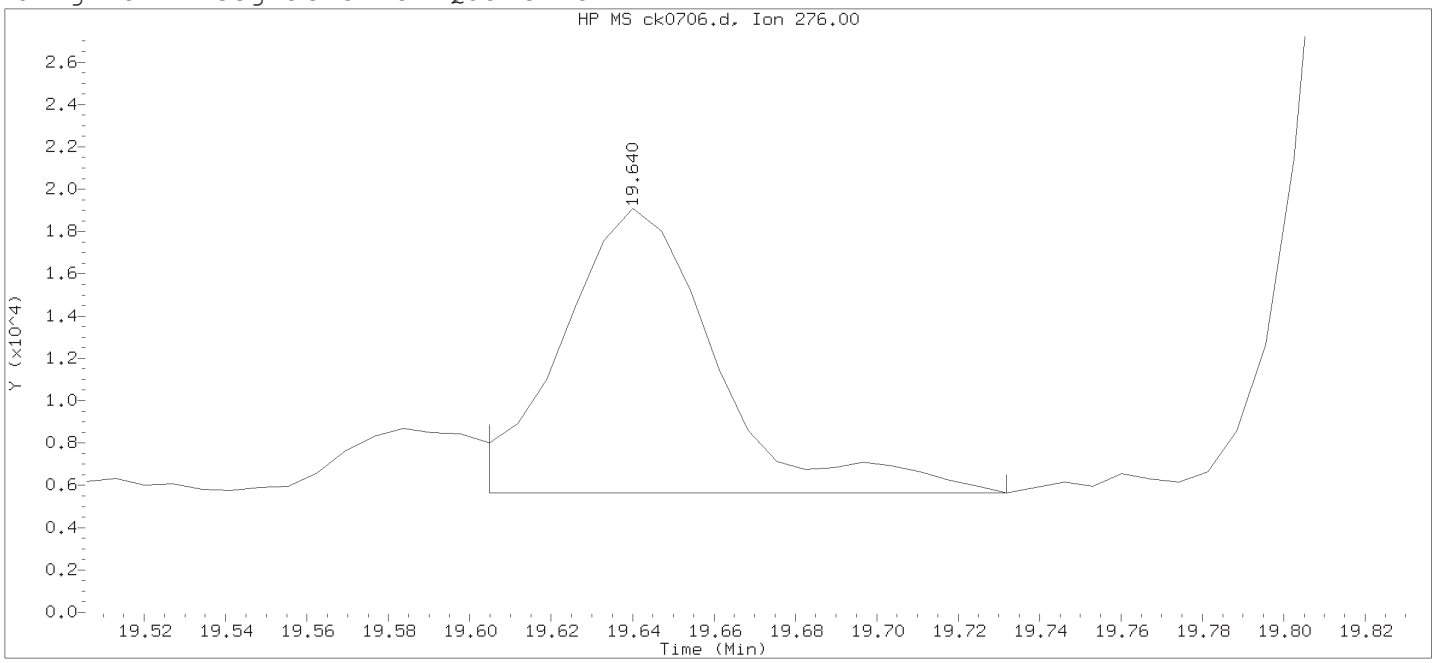
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

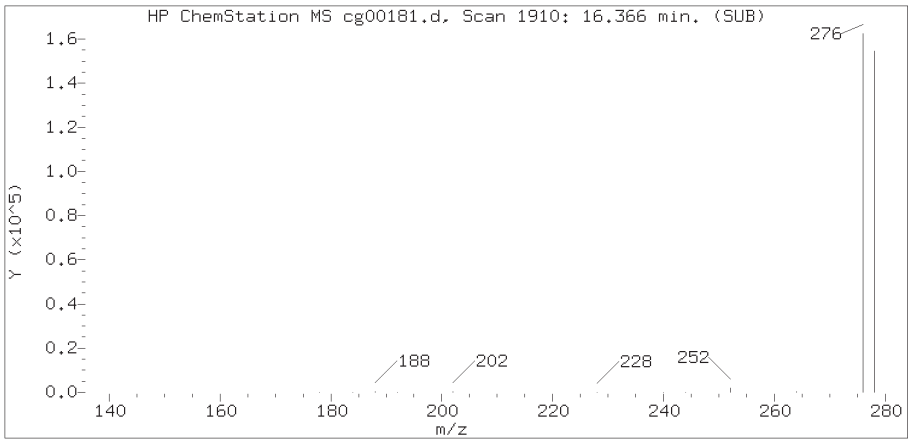
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

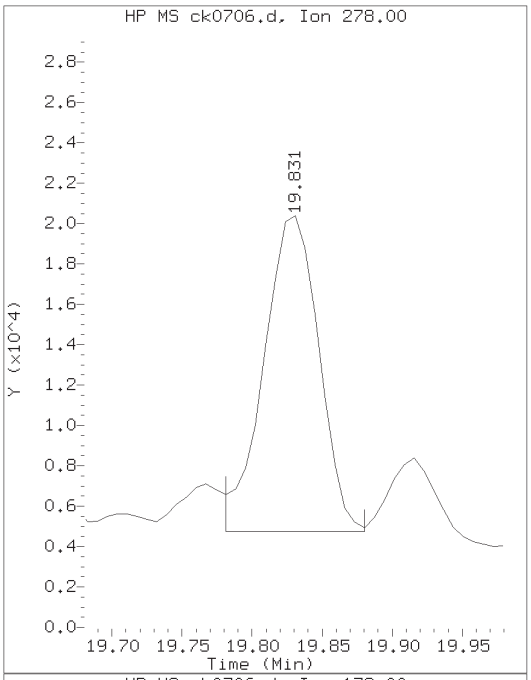
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number	:	53
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	1782
Retention Time (minutes)	:	19.640
Quant Ion	:	276.00
Area	:	35305
On-column Amount (ng/ul)	:	0.8455
Integration start scan	:	1776 Integration stop scan: 1794
Y at integration start	:	5635 Y at integration end: 5635

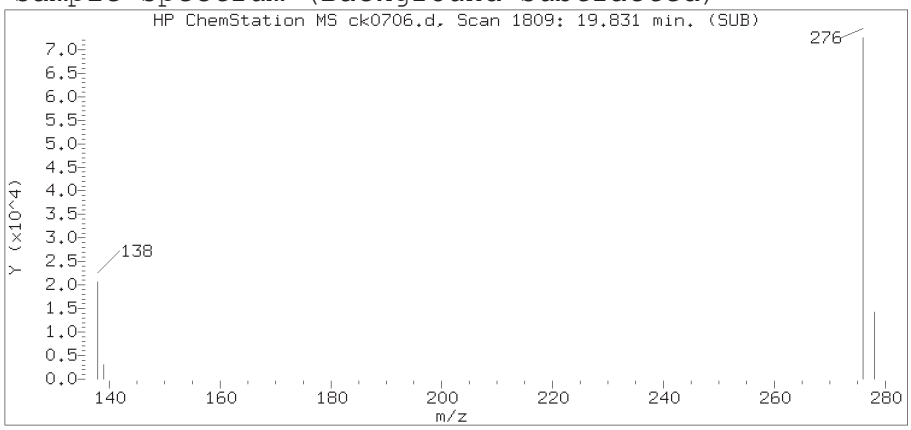
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs0221

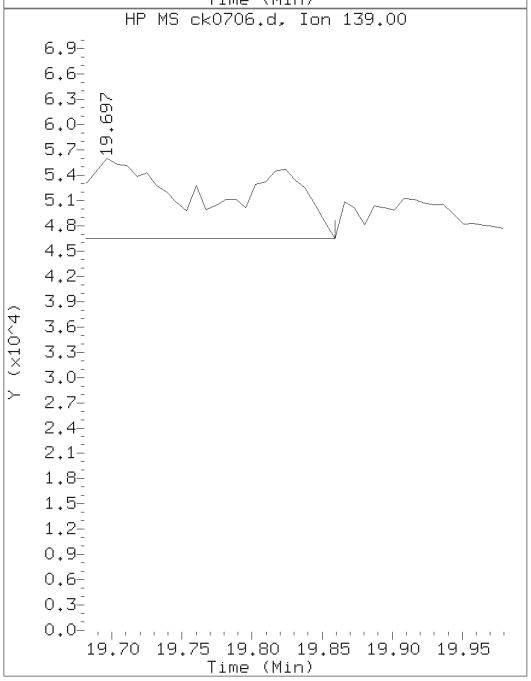
Reference Standard Spectrum for Dibenz(a,h)anthracene



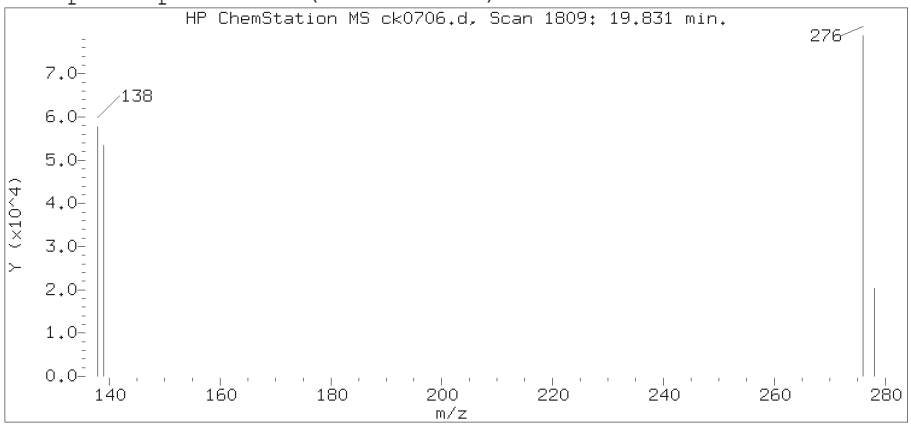


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

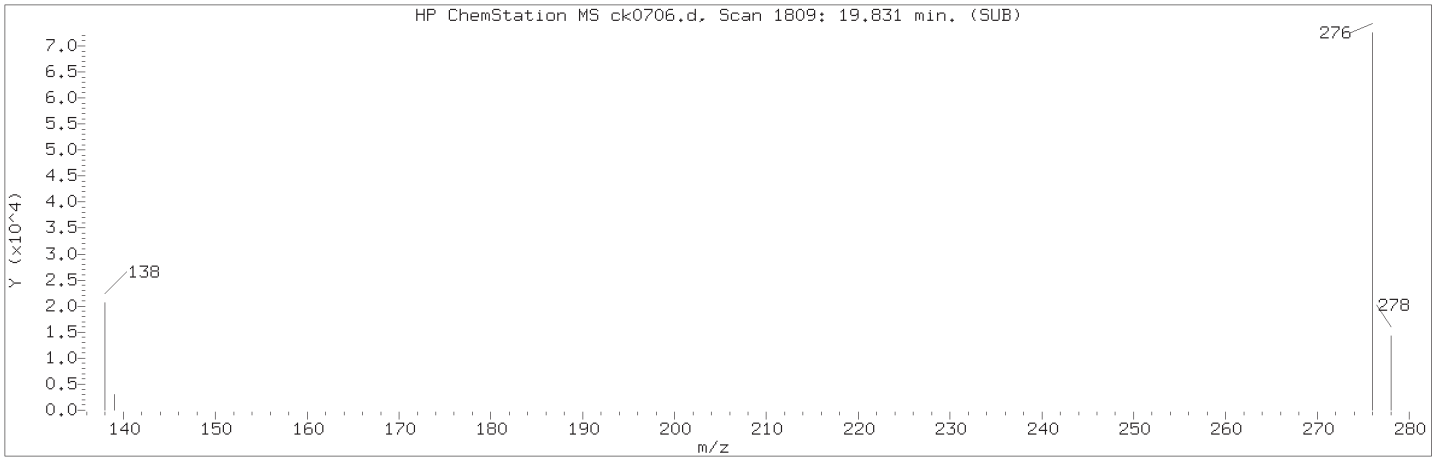
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

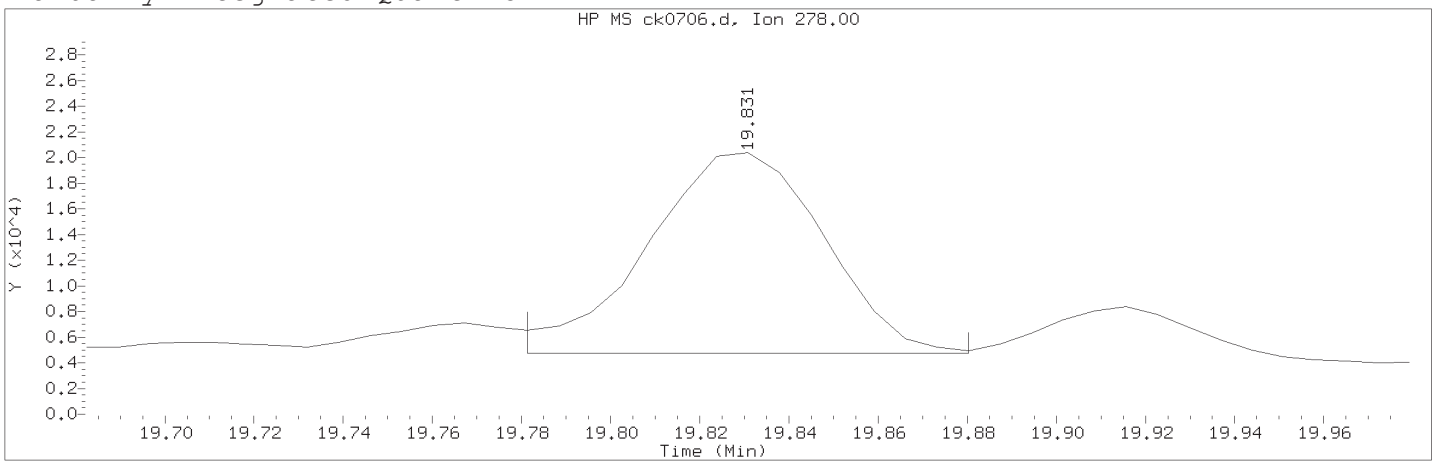
Compound Number	: 54
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 1809
Retention Time (minutes)	: 19.831
Relative Retention Time	: 0.00031
Quant Ion	: 278.00
Area (flag)	: 42732A
On-column Amount (ng/ul)	: 0.6569

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

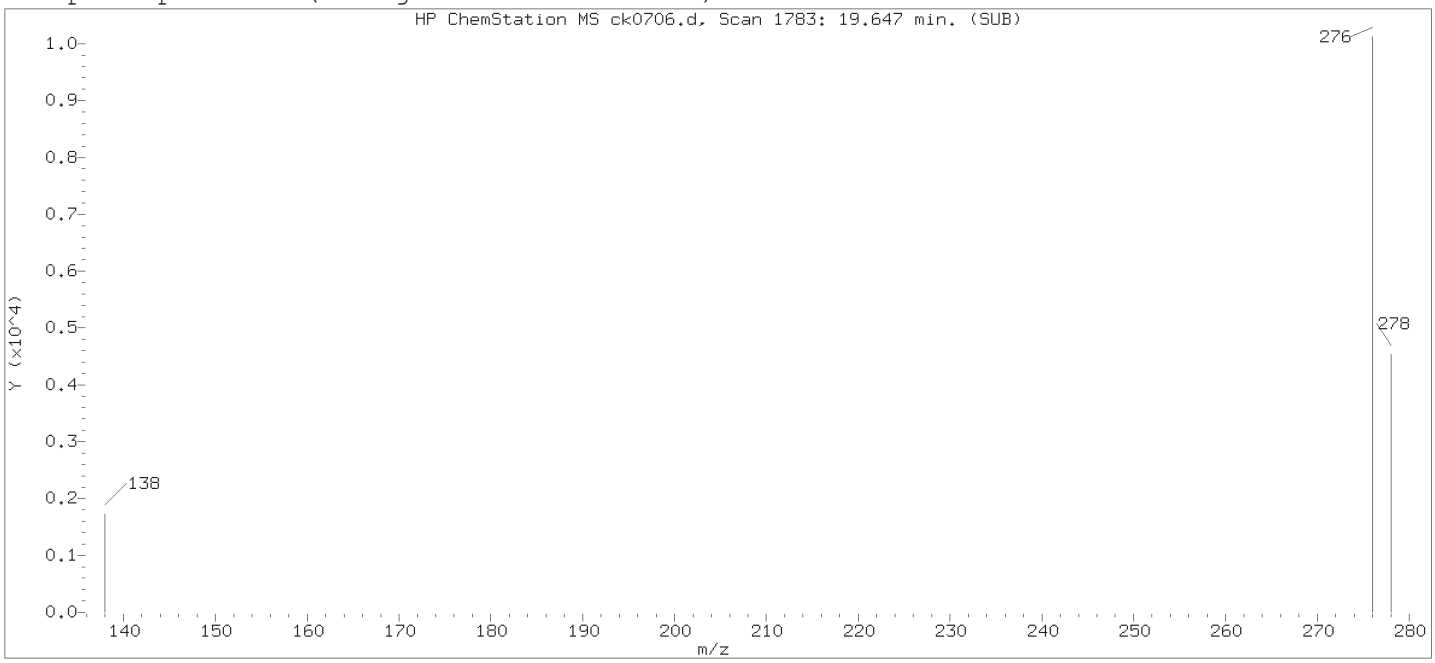
Compound Number	: 54		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 1809		
Retention Time (minutes)	: 19.831		
Quant Ion	: 278.00		
Area (flag)	: 42732A		
On-column Amount (ng/ul)	: 0.6569		
Integration start scan	: 1801	Integration stop scan:	1815
Y at integration start	: 4742	Y at integration end:	4742

Reason for manual integration: improper integration

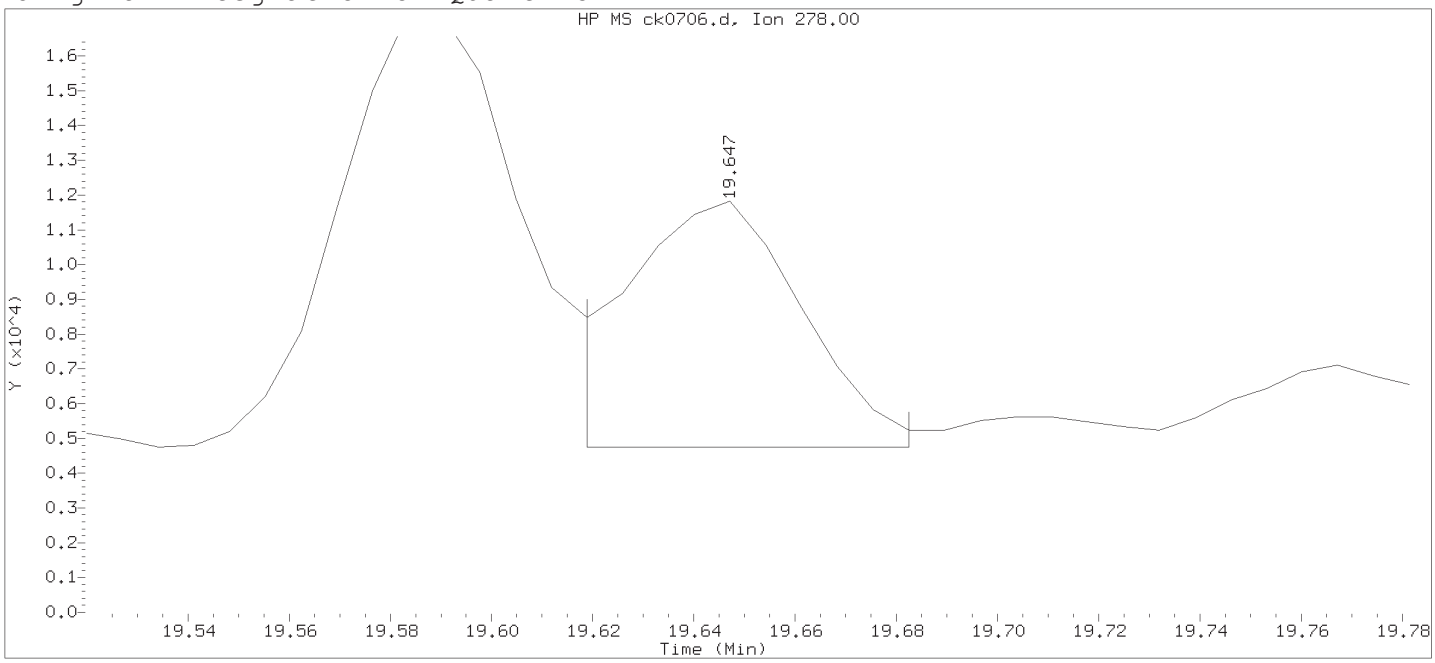
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

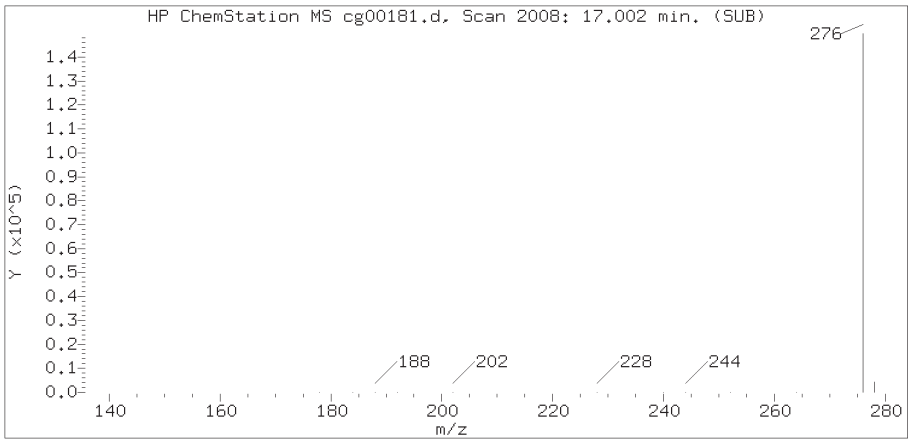
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

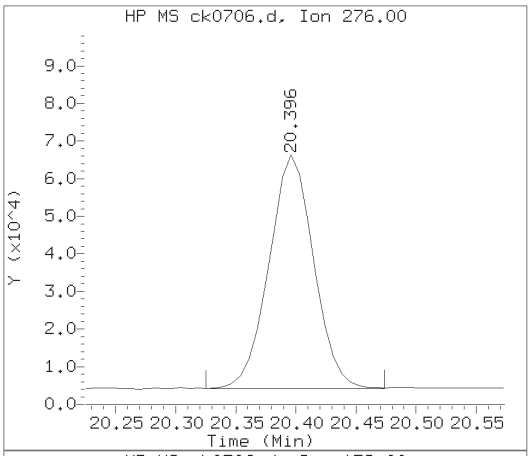
Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number	:	54
Compound Name	:	Dibenz(a,h)anthracene
Scan Number	:	1783
Retention Time (minutes)	:	19.647
Quant Ion	:	278.00
Area	:	16683
On-column Amount (ng/ul)	:	0.4820
Integration start scan	:	1778 Integration stop scan: 1787
Y at integration start	:	4742 Y at integration end: 4742

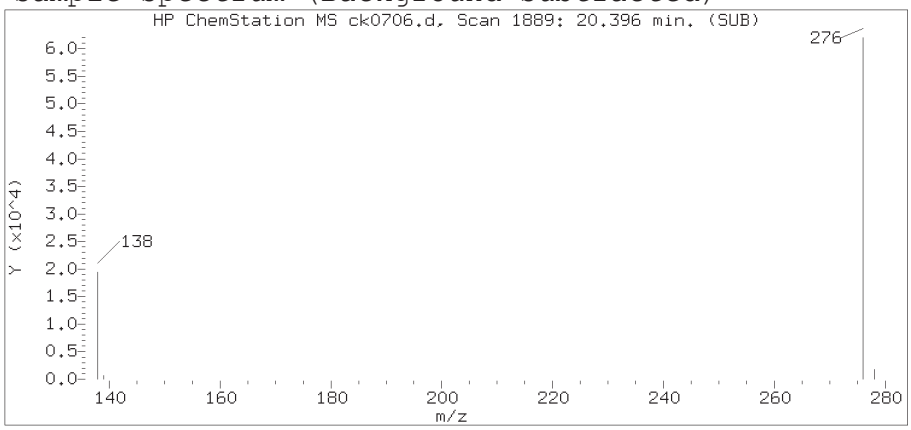
Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: [illegible]

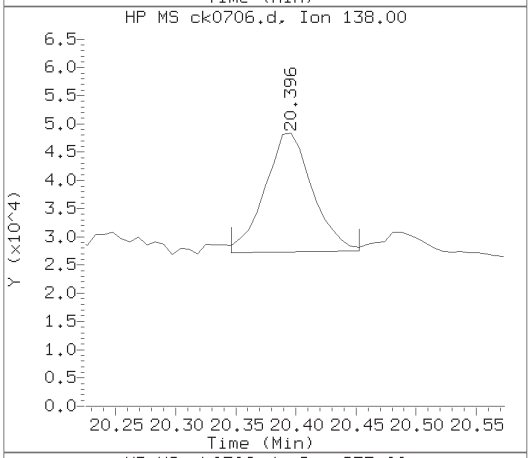
Reference Standard Spectrum for Benzo(g,h,i)perylene



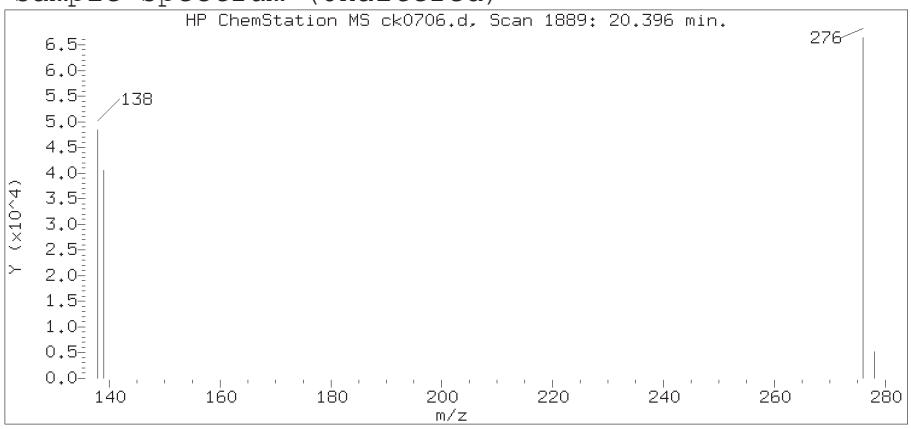


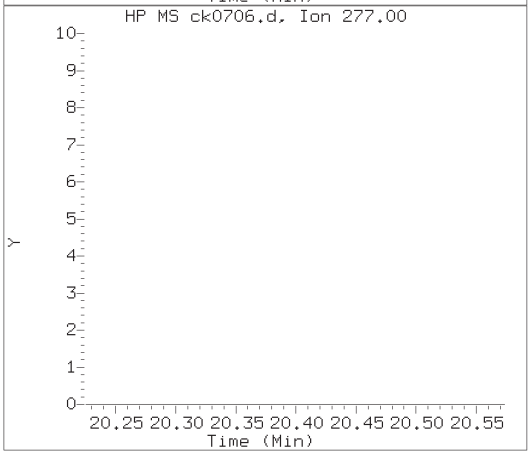
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

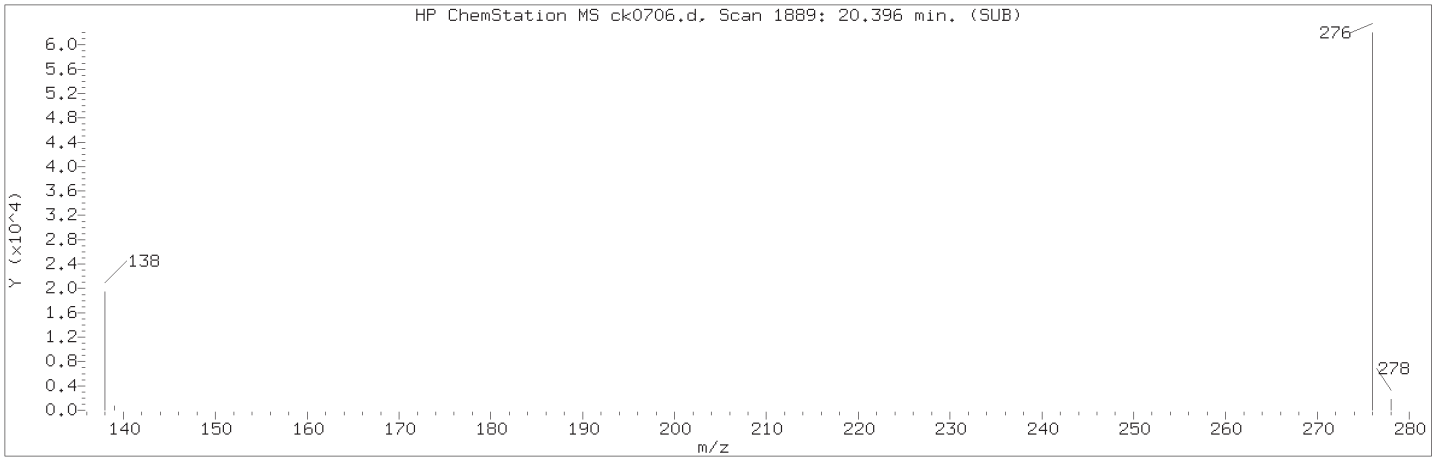
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

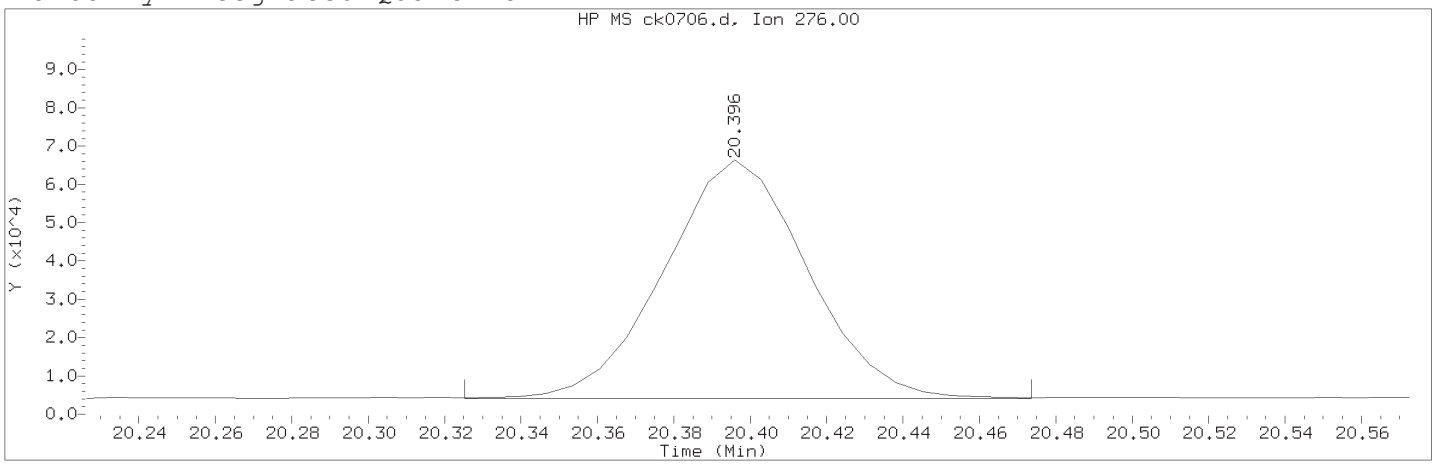
Compound Number	: 55
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 1889
Retention Time (minutes)	: 20.396
Relative Retention Time	:-0.00059
Quant Ion	: 276.00
Area (flag)	: 161455A
On-column Amount (ng/ul)	: 2.2046

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:54 whs02991

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

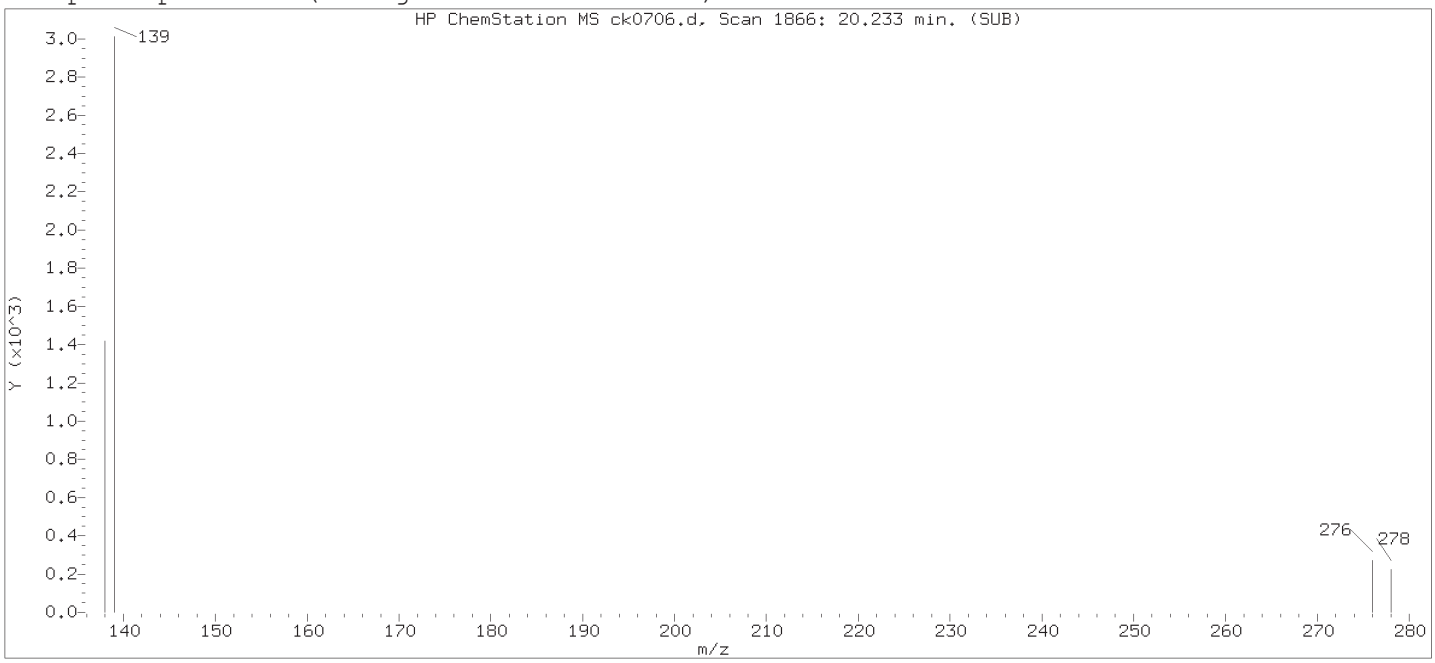
Compound Number	: 55		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 1889		
Retention Time (minutes)	: 20.396		
Quant Ion	: 276.00		
Area (flag)	: 161455A		
On-column Amount (ng/ul)	: 2.2046		
Integration start scan	: 1878	Integration stop scan:	1899
Y at integration start	: 4136	Y at integration end:	4166

Reason for manual integration: improper integration

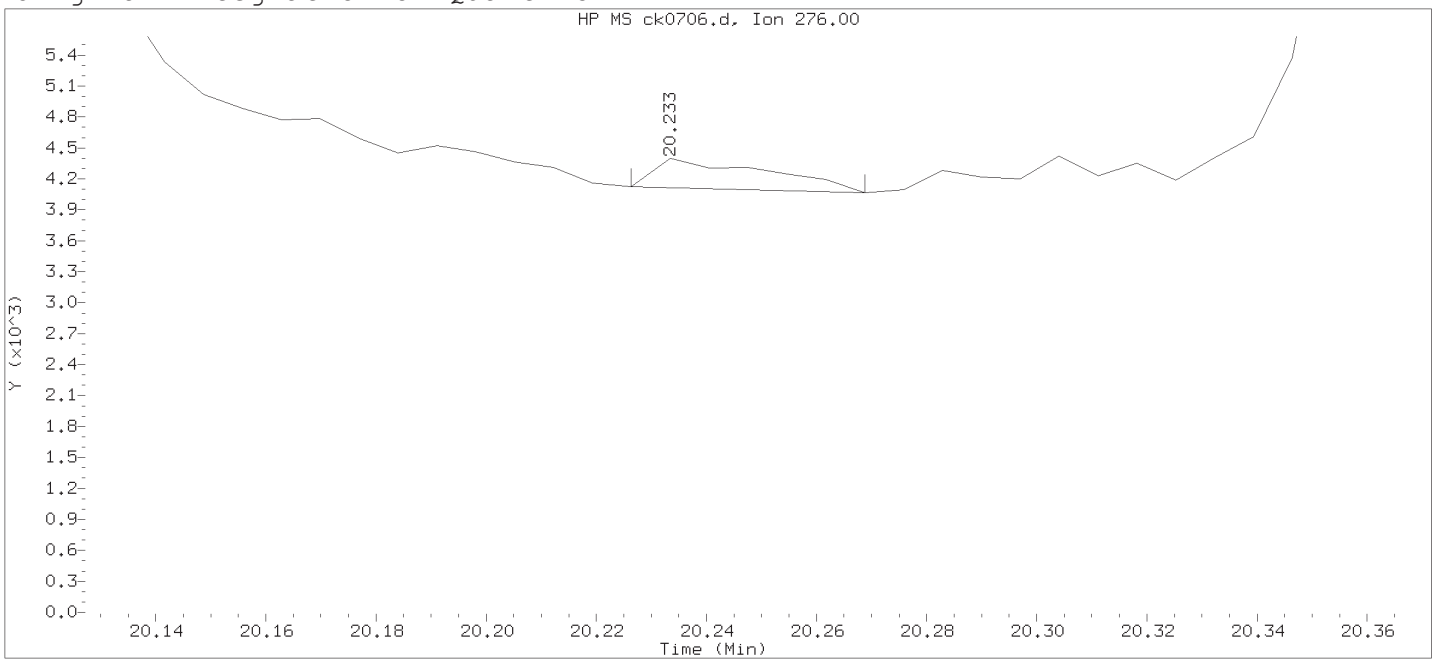
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0706.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 09:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 09:51 Automation

Sample Name: T1005RE2 Lab Sample ID: 9867767RE2

Compound Number	: 55	
Compound Name	: Benzo(g,h,i)perylene	
Scan Number	: 1866	
Retention Time (minutes)	: 20.233	
Quant Ion	: 276.00	
Area	: 412	
On-column Amount (ng/ul)	: 0.0106	
Integration start scan	: 1864	Integration stop scan: 1870
Y at integration start	: 4125	Y at integration end: 4068

Digitally signed by William H Saadeh on 11/16/2018 at 12:55.
Target 3.5 esignature user ID: [illegible]

Standards Data

Semivolatiles by GC/MS-SIM

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP10623 **HP #03**

Data Directory Path is - C:\msdchem\1\data\18oct06d\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
apb10206	CJ0280d.D	DFTPP2408	10/06/2018	23:06		
apb10206	CJ0281d.D	SIM2598	10/06/2018	23:27		
apb10206	CJ0282d.D	SIM2598	10/07/2018	00:04		
apb10206	CJ0283d.D	SIM2598	10/07/2018	00:35		
apb10206	CJ0284d.D	SIM2598	10/07/2018	01:07		
apb10206	CJ0285d.D	SIM2598	10/07/2018	01:39		
apb10206	CJ0286d.D	SIM2598	10/07/2018	02:10		
apb10206	CJ0287d.D	SIM2598	10/07/2018	02:42		
apb10206	CJ0288d.D	SIM2598	10/07/2018	03:13		
apb10206	CJ0289d.D	SIM2598	10/07/2018	03:45		
apb10206	CJ0290d.D	SICV1908	10/07/2018	04:16		

Data File: /chem/HP10623.i/18nov16.b/ck0711.d
Report Date: 11/16/2018 12:30

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP10623.i
Client ID: SECC1.0
Lab Sample ID: SIM2598
Sublist used: 25804.sub

Injection Date and Time: 16-NOV-2018 11:59
Initial Calibration Date(s): 06-OCT-2018 07-OCT-2018
Initial Calibration Time(s): 23:27 02:42
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
1,4-Dioxane	0.64270	0.56644	0.010	11.9	20.0
Naphthalene	1.06181	1.08613	0.010	-2.3	20.0
Acenaphthylene	1.98516	2.14971	0.010	-8.3	20.0
Acenaphthene	1.35887	1.34781	0.010	0.8	20.0
Fluorene	1.45319	1.42115	0.010	2.2	20.0
Phenanthrene	1.19319	1.18276	0.010	0.9	20.0
Anthracene	1.14738	1.30174	0.010	-13.5	20.0
Di-n-butylphthalate	1.27807	1.52046	0.010	-19.0	20.0
Fluoranthene	1.17242	1.25602	0.010	-7.1	20.0
Pyrene	1.60949	1.66964	0.010	-3.7	20.0
bis(2-Ethylhexyl)phthalate	1.000	1.299	0.010	-29.9	20.0
Benzo(a)anthracene	1.29603	1.43208	0.010	-10.5	20.0
Chrysene	1.32783	1.40040	0.010	-5.5	20.0
Benzo(b)fluoranthene	1.28167	1.44935	0.010	-13.1	20.0
Benzo(k)fluoranthene	1.37635	1.58874	0.010	-15.4	20.0
Benzo(a)pyrene	1.16931	1.32323	0.010	-13.2	20.0
Indeno(1,2,3-cd)pyrene	1.15990	0.94087	0.010	18.9	20.0
Dibenz(a,h)anthracene	0.96159	0.88682	0.010	7.8	20.0
Benzo(g,h,i)perylene	1.08250	0.73170	0.010	32.4	20.0

Surrogate Standards	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
1-Methylnaphthalene-d10	0.50524	0.56842	0.010	-12.5	20.0
Fluoranthene-d10	0.90728	1.01249	0.010	-11.6	20.0
Benzo(a)pyrene-d12	0.91904	1.03817	0.010	-13.0	20.0

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP10976 **HP #09**

Data Directory Path is - D:\msdchem\1\data\18sep04a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
apb10206	II0101s.D	SIM1288	09/04/2018	16:45		
apb10206	II0101w.D	SIM1288	09/04/2018	17:22		
apb10206	II0100.D	DFTPP1598	09/04/2018	17:56		
apb10206	II0100a.D	DFTPP1598	09/04/2018	18:19		
apb10206	II0100b.D	DFTPP1598	09/04/2018	18:34		
apb10206	II0100d.D	DFTPP1598	09/04/2018	18:49		
apb10206	II0100e.D	DFTPP1598	09/04/2018	19:02		
apb10206	II0100f.D	DFTPP1598	09/04/2018	19:19		
apb10206	II0101.D	SIM1288	09/04/2018	19:41		
apb10206	II0102.D	SIM1288	09/04/2018	20:12		
apb10206	II0103.D	SIM1288	09/04/2018	20:43		
apb10206	II0104.D	SIM1288	09/04/2018	21:14		
apb10206	II0105.D	SIM1288	09/04/2018	21:45		
apb10206	II0106.D	SIM1288	09/04/2018	22:16		
apb10206	II0107.D	SIM1288	09/04/2018	22:47		
apb10206	II0108.D	SIM1288	09/04/2018	23:18		
apb10206	II0109.D	SIM1288	09/04/2018	23:49		
apb10206	II0110.D	SICV1908	09/05/2018	00:19		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP10976 **HP #09**

Data Directory Path is - D:\msdchem\1\data\18nov07\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
apb10206	IK0300.D	DFTPP2408	11/07/2018	17:14		
apb10206	IK0301.D	SIM2598	11/07/2018	17:32		
apb10206	IK0302.D	SBLKLH302	11/07/2018	18:15	18302SLH	
apb10206	IK0302x.D	iblank	11/07/2018	18:46		
apb10206	IK0302a.D	SBLKLH302	11/07/2018	19:16	18302SLH	
apb10206	IK0303.D	302LHLCS	11/07/2018	19:46	18302SLH	
apb10206	IK0304.D	9867761	11/07/2018	20:15	18302SLH	
apb10206	IK0305.D	9867762	11/07/2018	20:45	18302SLH	
apb10206	IK0306.D	9867763	11/07/2018	21:15	18302SLH	
apb10206	IK0307.D	9867764	11/07/2018	21:45	18302SLH	
apb10206	IK0308.D	9867766	11/07/2018	22:14	18302SLH	
apb10206	IK0309.D	9867767	11/07/2018	22:44	18302SLH	
apb10206	IK0310.D	9872064	11/07/2018	23:14	18302SLH	10
apb10206	IK0311.D	9872065	11/07/2018	23:43	18302SLH	
apb10206	IK0312.D	SIM2598	11/08/2018	00:13		
apb10206	IK0313.D	9878781	11/08/2018	00:43	18306SLB	
apb10206	IK0314.D	9878782	11/08/2018	01:13	18306SLB	
apb10206	IK0315.D	blank	11/08/2018	01:43		
apb10206	IK0316.D	blank	11/08/2018	02:13		
apb10206	IK0317.D	blank	11/08/2018	02:43		
apb10206	IK0318.D	blank	11/08/2018	03:12		
apb10206	IK0319.D	blank	11/08/2018	03:42		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP10976 **HP #09**

Data Directory Path is - D:\msdchem\1\data\18nov08\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
jmg00346	IK0350.D	DFTPP2408	11/08/2018	06:43		
jmg00346	IK0351.D	SIM2598	11/08/2018	07:03		
jmg00346	IK0352.D	SBLKLH302	11/08/2018	08:03	18302SLH	
jmg00346	IK0353.D	302LHLCS	11/08/2018	08:33	18302SLH	
jmg00346	IK0354.D	9867761	11/08/2018	09:03	18302SLH	
jmg00346	IK0355.D	9867762	11/08/2018	09:33	18302SLH	
jmg00346	IK0356.D	9867762DL	11/08/2018	10:03	18302SLH	10
jmg00346	IK0357.D	9867763	11/08/2018	10:33	18302SLH	
jmg00346	IK0358.D	9867764	11/08/2018	11:04	18302SLH	
jmg00346	IK0359.D	9867766	11/08/2018	11:34	18302SLH	
jmg00346	IK0360.D	9867767	11/08/2018	12:05	18302SLH	
jmg00346	IK0361.D	9867767DL	11/08/2018	12:35	18302SLH	10
jmg00346	IK0362.D	9872064	11/08/2018	13:04	18302SLH	10
jmg00346	IK0363.D	9872064DL	11/08/2018	13:34	18302SLH	100
jmg00346	IK0364.D	9872065	11/08/2018	14:04	18302SLH	
jmg00346	IK0365.D	9872065DL	11/08/2018	14:34	18302SLH	10
jmg00346	IK0366.D	SIM2598	11/08/2018	15:04		
apb10206	IK0356a.D	9867762DL2	11/08/2018	17:03	18302SLH	50
apb10206	IK0366a.D	SIM2598	11/08/2018	17:32		

Data File: /chem/HP10623.i/18oct06d.b/cj0280d.d

Date : 06-OCT-2018 23:06

Client ID: DFTPP050

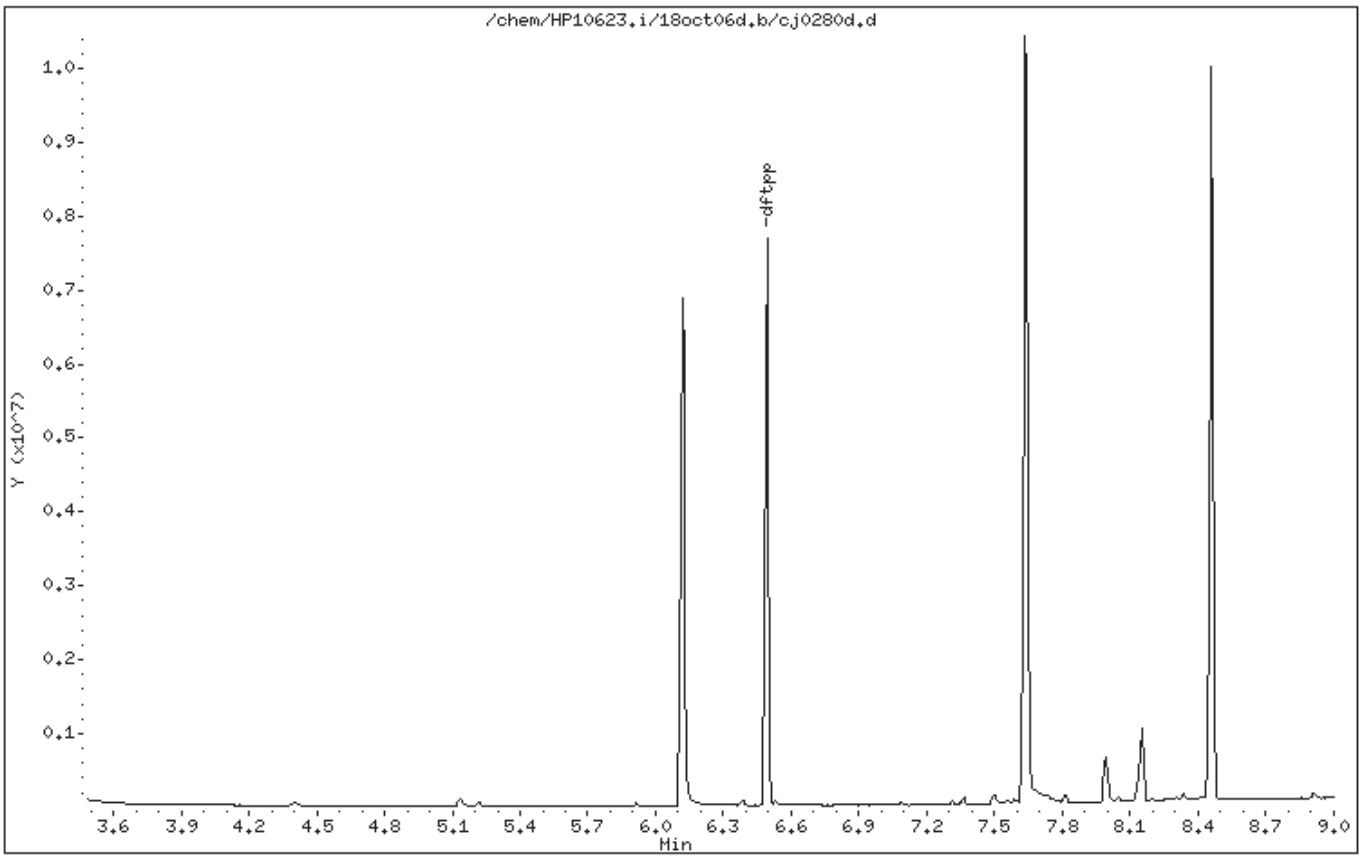
Instrument: HP10623.i

Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Anthony P. Bauer on 10/07/2018 at 23:13.
Target 3.5 esignature user ID: apb10206

Data File: /chem/HP10623.i/18oct06d.b/cj0280d.d

Date : 06-OCT-2018 23:06

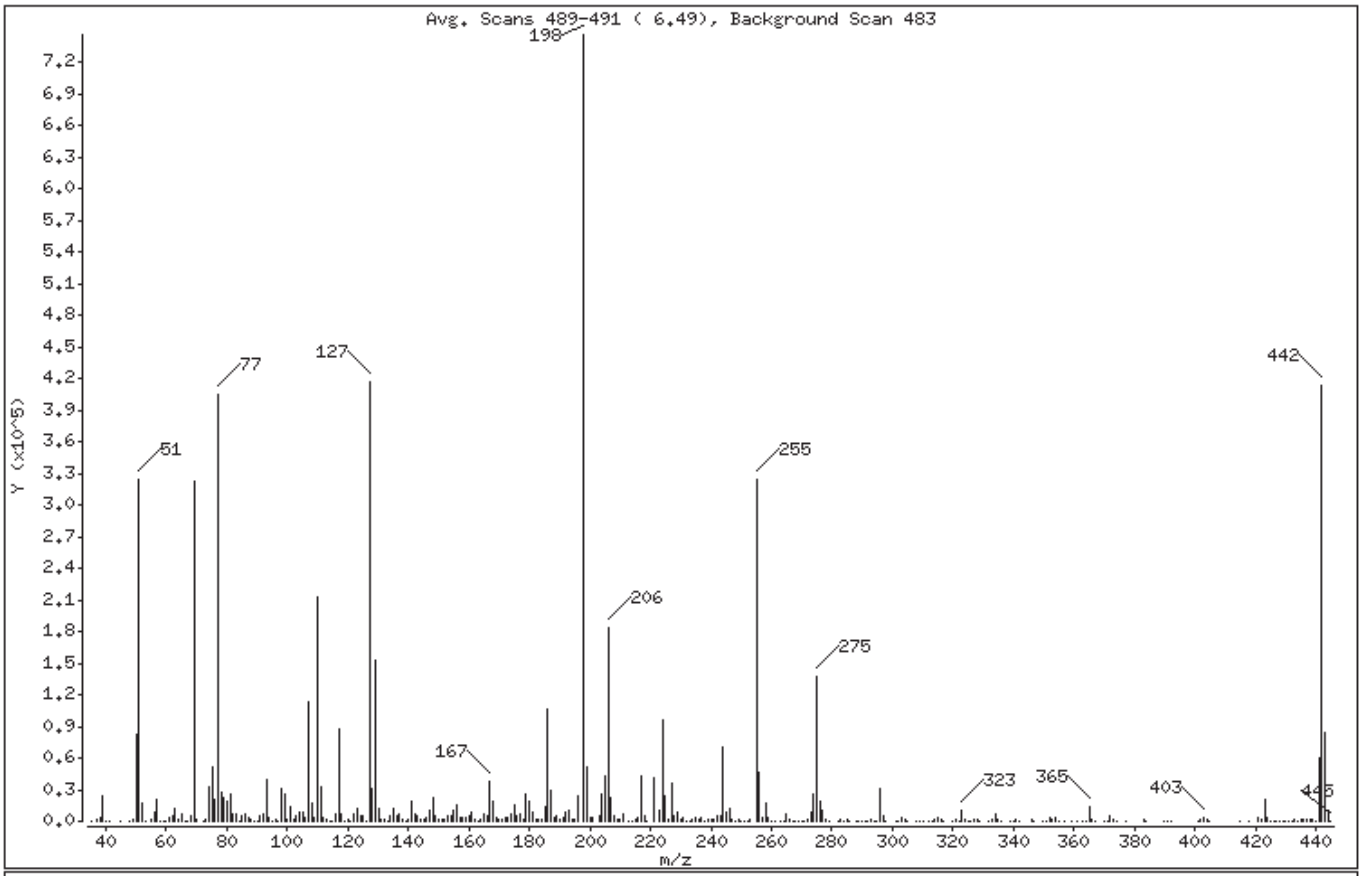
Client ID: DFTPP050 Instrument: HP10623.i

Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	43.48
68	Less than 2.00% of mass 69	0.76 (1.76)
69	Mass 69 relative abundance	43.20
70	Less than 2.00% of mass 69	0.21 (0.49)
127	10.00 - 80.00% of mass 198	55.88
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.86
275	10.00 - 60.00% of mass 198	18.45
365	Greater than 1.00% of mass 198	1.74
441	0.01 - 24.00% of mass 442	8.00 (14.45)
442	50.00 - 99.99% of mass 198	55.35
443	15.00 - 24.00% of mass 442	11.26 (20.35)

Digitally signed by Anthony P. Bauer on 10/07/2018 at 23:13.
Target 3.5 esignature user ID: apb10206

Date : 06-OCT-2018 23:06

Client ID: DFTPP050 Instrument: HP10623.i

Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

Data File: cj0280d.d
Spectrum: Avg. Scans 489-491 (6.49), Background Scan 483
Location of Maximum: 198.00
Number of points: 338

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	63	128.00	30552	216.00	3798	313.00	300
37.00	1396	129.00	153280	217.00	42648	314.00	1747
38.00	3625	130.00	12694	218.00	5459	315.00	3428
39.00	23328	131.00	2382	219.00	593	316.00	2154
40.00	657	132.00	1234	221.00	41816	317.00	363
41.00	42	133.00	192	223.00	10328	320.00	88
45.00	314	134.00	4370	224.00	95488	321.00	966
48.00	67	135.00	12024	225.00	23544	322.00	656
49.00	1339	136.00	5013	226.00	2563	323.00	10520
50.00	83048	137.00	6388	227.00	35176	324.00	1949
51.00	324416	138.00	1401	228.00	5283	325.00	202
52.00	16324	139.00	752	229.00	7833	326.00	142
53.00	554	140.00	1827	230.00	1176	327.00	1868
55.00	1117	141.00	18496	231.00	3348	328.00	1009
56.00	8857	142.00	6235	232.00	635	329.00	78
57.00	21112	143.00	4418	233.00	664	332.00	819
58.00	849	144.00	1187	234.00	2240	333.00	1102
59.00	352	145.00	1080	235.00	2580	334.00	6874
60.00	95	146.00	3252	236.00	1915	335.00	1760
61.00	3833	147.00	9771	237.00	2850	336.00	228
62.00	4536	148.00	21584	238.00	526	339.00	100
63.00	12387	149.00	4619	239.00	1452	340.00	232
64.00	1967	150.00	1400	240.00	1152	341.00	1121
65.00	6438	151.00	2484	241.00	2104	342.00	331
66.00	563	152.00	1568	242.00	4818	346.00	2422
67.00	323	153.00	5771	243.00	5333	347.00	368
68.00	5673	154.00	4512	244.00	70112	350.00	51
69.00	322304	155.00	10549	245.00	9222	351.00	119
70.00	1577	156.00	16019	246.00	11706	352.00	3055
72.00	203	157.00	3191	247.00	2550	353.00	2235
73.00	2182	158.00	3202	248.00	730	354.00	3330
74.00	32416	159.00	2775	249.00	2336	355.00	696
75.00	52104	160.00	5683	250.00	552	357.00	50
76.00	19816	161.00	8361	251.00	650	359.00	194
77.00	405440	162.00	2313	252.00	809	361.00	116

Digitally signed by Anthony P. Bauer on 10/07/2018 at 23:13.
Target 3.5 esignature user ID: apb10206

Date : 06-OCT-2018 23:06

Client ID: DFTPP050 Instrument: HP10623.i

Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

Data File: cj0280d.d
Spectrum: Avg. Scans 489-491 (6.49), Background Scan 483
Location of Maximum: 198.00
Number of points: 338

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	28000	163.00	628	253.00	1890	363.00	183
79.00	22736	164.00	1098	255.00	324160	364.00	75
80.00	18080	165.00	6245	256.00	46888	365.00	12973
81.00	25440	166.00	5471	257.00	3820	366.00	1836
82.00	6650	167.00	38520	258.00	17032	367.00	78
83.00	6129	168.00	18296	259.00	2709	370.00	242
84.00	320	169.00	3184	260.00	472	371.00	850
85.00	5199	170.00	1134	261.00	632	372.00	5080
86.00	6682	171.00	1565	263.00	241	373.00	1356
87.00	3489	172.00	3315	264.00	563	374.00	211
88.00	1273	173.00	4097	265.00	6635	377.00	94
89.00	680	174.00	7688	266.00	1042	383.00	1340
90.00	125	175.00	14895	267.00	244	384.00	383
91.00	5854	176.00	4621	268.00	10	390.00	702
92.00	6461	177.00	6636	269.00	89	391.00	464
93.00	39072	178.00	2371	270.00	420	392.00	425
94.00	2868	179.00	26488	271.00	766	401.00	248
95.00	831	180.00	18560	272.00	1224	402.00	2307
96.00	1993	181.00	8652	273.00	9199	403.00	2865
97.00	572	182.00	1323	274.00	25440	404.00	1010
98.00	30936	183.00	921	275.00	137600	405.00	126
99.00	25336	184.00	2270	276.00	18544	415.00	90
100.00	2294	185.00	13042	277.00	10815	418.00	60
101.00	14215	186.00	105992	278.00	1814	421.00	2903
102.00	916	187.00	28776	279.00	398	422.00	2552
103.00	4729	188.00	2770	282.00	351	423.00	20120
104.00	9024	189.00	5932	283.00	1256	424.00	4138
105.00	8165	190.00	949	284.00	832	425.00	464
106.00	3027	191.00	2911	285.00	1904	426.00	153
107.00	113656	192.00	8462	286.00	346	427.00	121
108.00	17784	193.00	9591	288.00	119	428.00	199
109.00	3666	194.00	2223	289.00	401	429.00	286
110.00	212864	195.00	1423	290.00	352	430.00	250
111.00	31824	196.00	23400	291.00	261	431.00	384
112.00	3847	198.00	746112	292.00	530	432.00	558

Digitally signed by Anthony P. Bauer on 10/07/2018 at 23:13.
Target 3.5 esignature user ID: apb10206

Date : 06-OCT-2018 23:06

Client ID: DFTPP050 Instrument: HP10623.i

Sample Info: DFTPP050;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

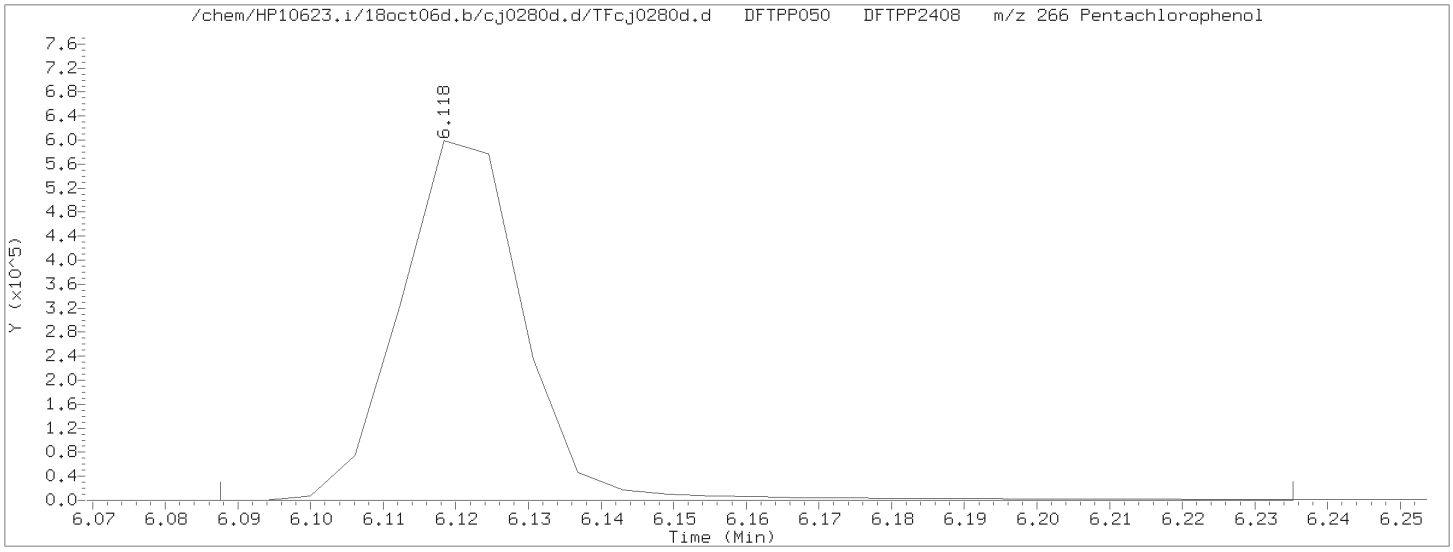
Data File: cj0280d.d
Spectrum: Avg. Scans 489-491 (6.49), Background Scan 483
Location of Maximum: 198.00
Number of points: 338

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	1257	199.00	51176	293.00	2521	433.00	865
114.00	363	200.00	3613	294.00	771	434.00	288
115.00	333	201.00	3588	295.00	673	435.00	972
116.00	6502	203.00	4947	296.00	31088	436.00	1286
117.00	87248	204.00	25208	297.00	4742	437.00	1292
118.00	6679	205.00	42368	298.00	318	438.00	2134
119.00	779	206.00	183488	301.00	446	439.00	1277
120.00	1184	207.00	23096	302.00	605	440.00	150
121.00	653	208.00	5688	303.00	4066	441.00	59680
122.00	7524	209.00	1846	304.00	1263	442.00	412992
123.00	11292	210.00	1598	305.00	113	443.00	84048
124.00	5033	211.00	7057	308.00	482	444.00	7774
125.00	4900	213.00	475	309.00	208	445.00	414
126.00	621	214.00	283	310.00	497		
127.00	416896	215.00	1814	312.00	76		

Digitally signed by Anthony P. Bauer on 10/07/2018 at 23:13.
Target 3.5 esignature user ID: apb10206

Assessment of GC Column Performance and Injection Port Inertness for

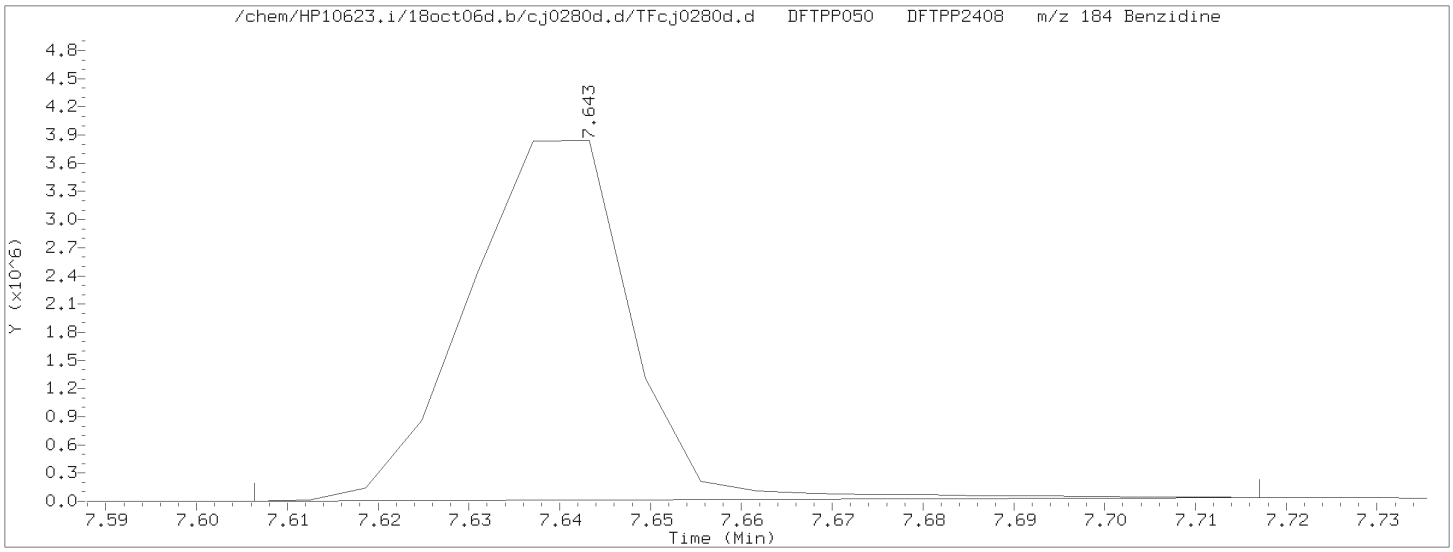
Instrument ID: HP10623.i Injection Date: 06-OCT-2018 23:06 Operator: apb10206



Pentachlorophenol EICP peak height = 599232 EICP peak height at 10% = 59923 Pentachlorophenol EICP area = 711135

Pentachlorophenol EICP peak apex (min.) = 6.118
RT at 10% of front half of EICP (min.) = 6.105 'Front' peak width (min.) = 0.0135500000
RT at 10% of back half of EICP (min.) = 6.136 'Tailing' peak width (min.) = 0.0179833333

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0179833333}{0.0135500000} = 1.327$$



Benzidine EICP peak height = 3830813 EICP peak height at 10% = 383081 Benzidine EICP area = 4755658

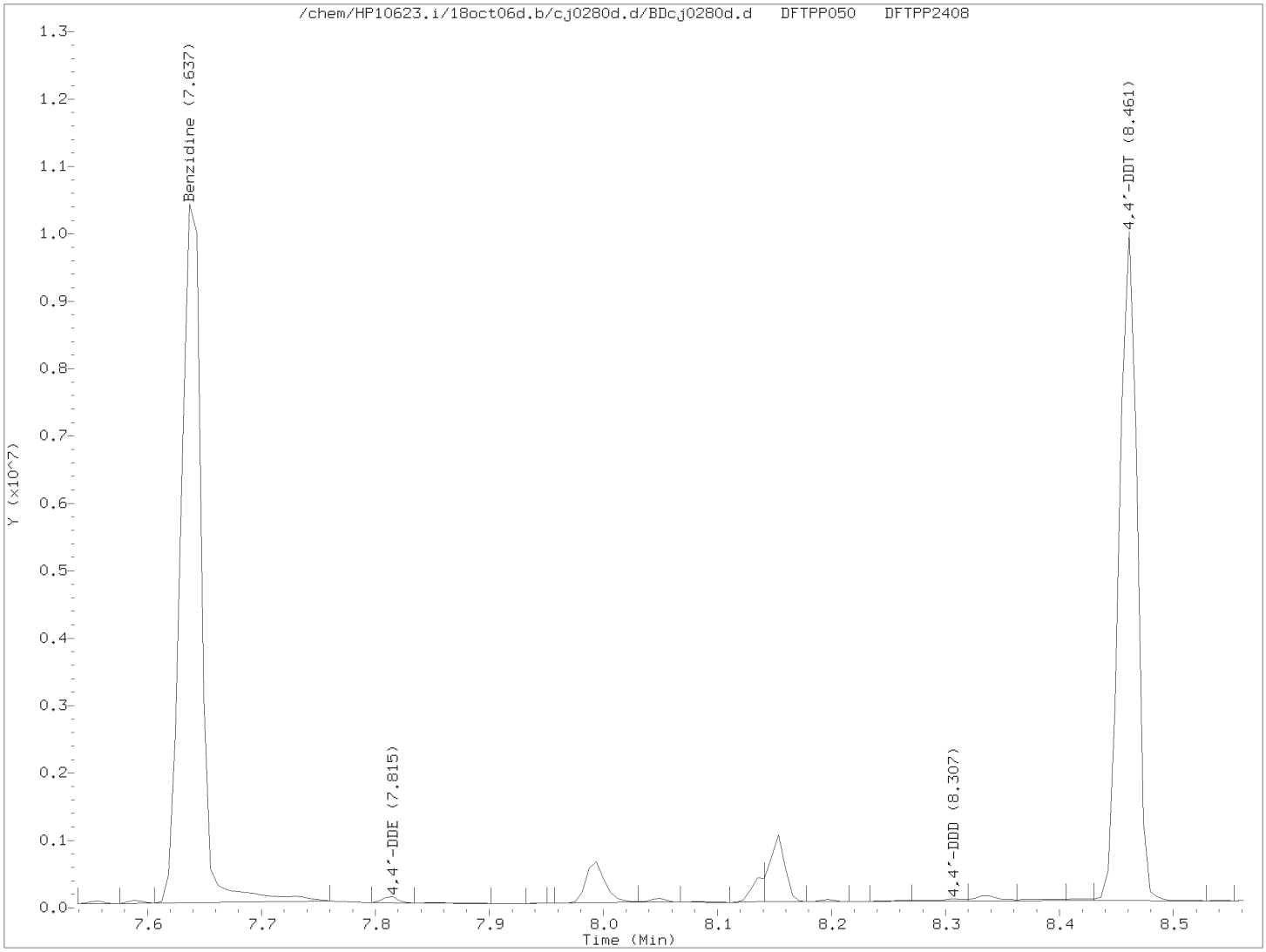
Benzidine EICP peak apex (min.) = 7.643
RT at 10% of front half of EICP (min.) = 7.621 'Front' peak width (min.) = 0.0223833333
RT at 10% of back half of EICP (min.) = 7.655 'Tailing' peak width (min.) = 0.0112500000

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0112500000}{0.0223833333} = 0.503$$

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:14. PARALLAX ID: cam01237

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP10623.i Injection Date: 06-OCT-2018 23:06 Operator: apb10206

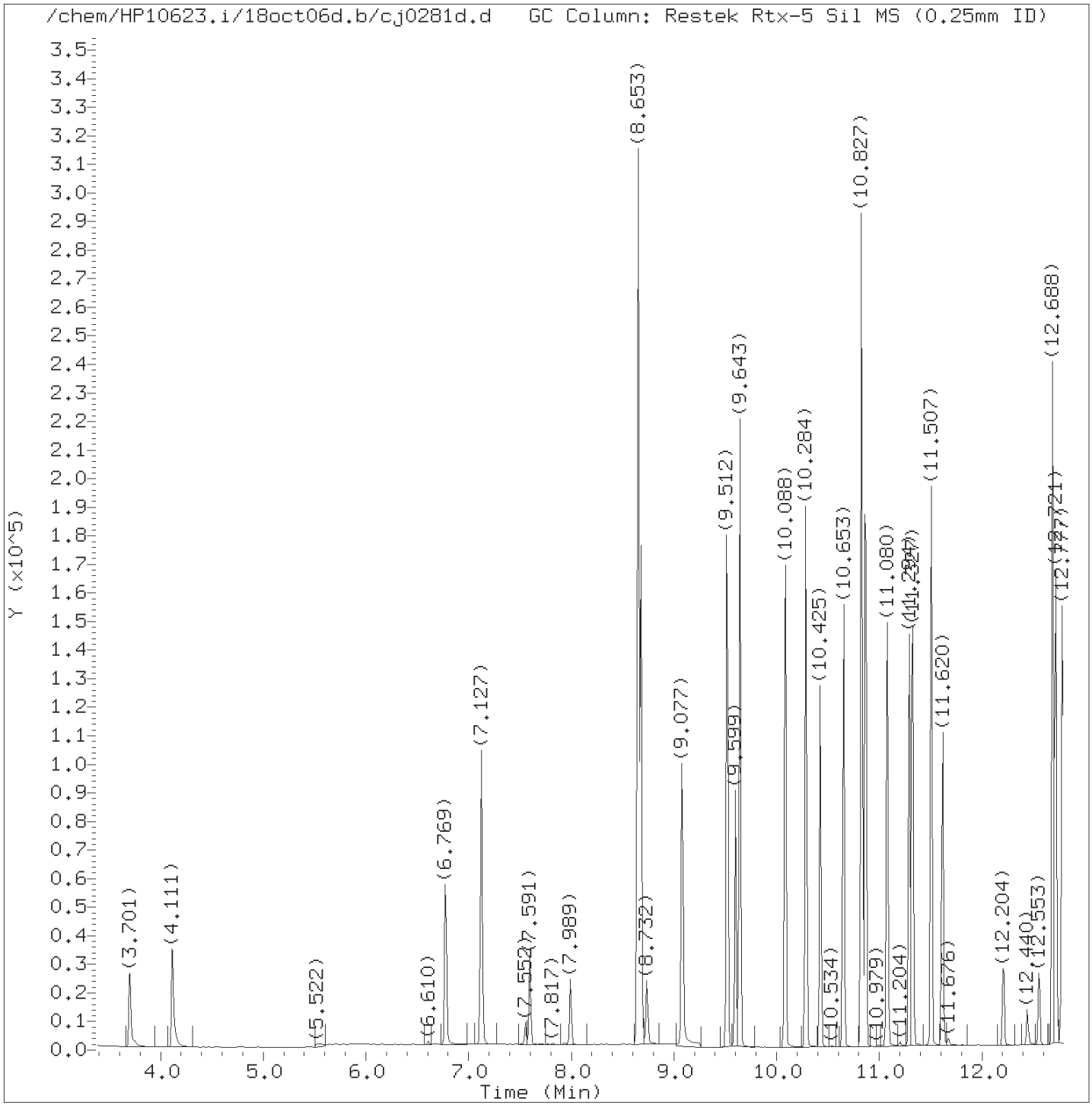


$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{80588 + 47588}{80588 + 47588 + 10715843} \times 100 = 1.2$$

printed on 10/07/2018 at 23:13

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:14. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

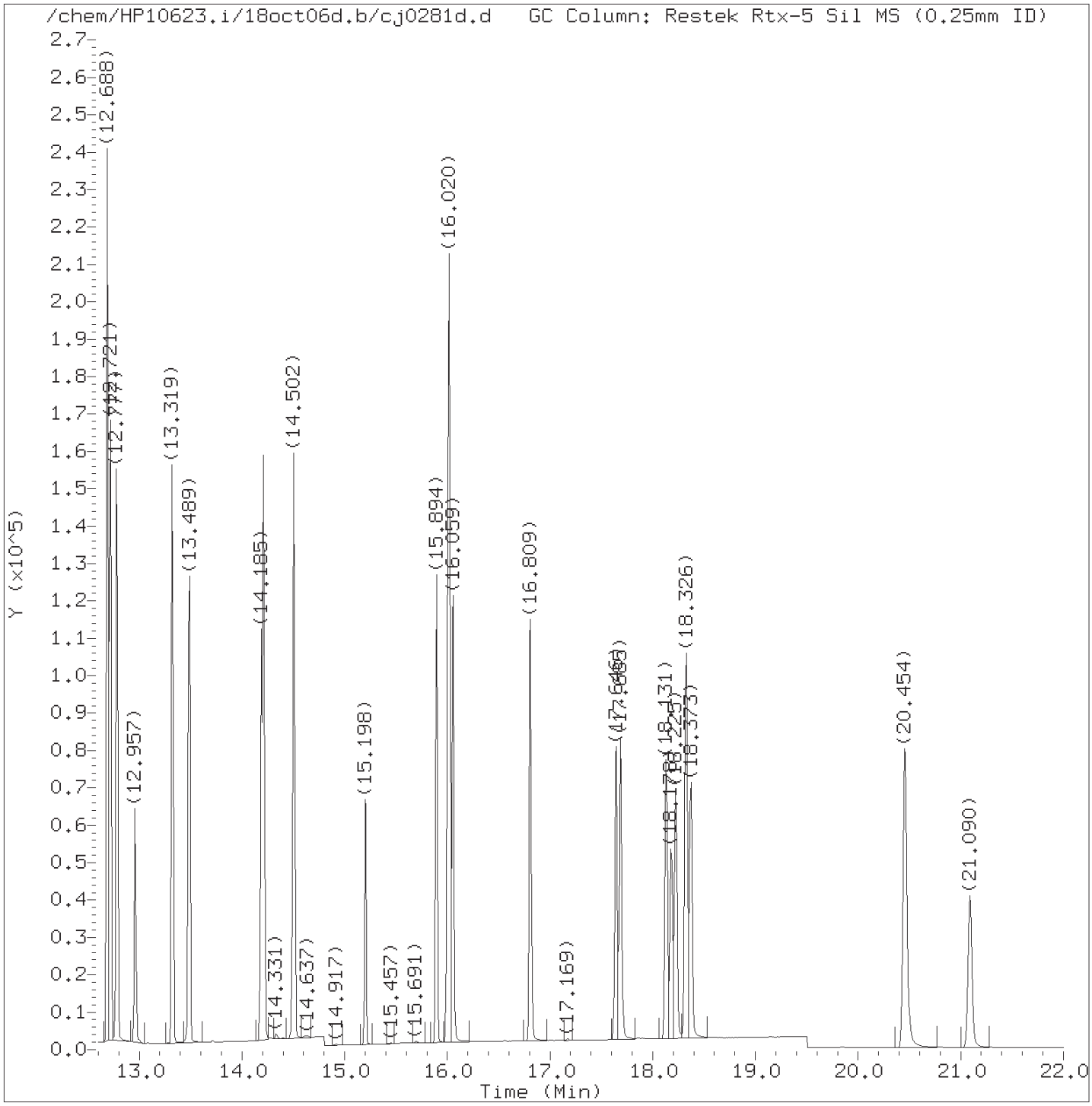
Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0281d.d Instrument ID: HP10623.i
Injection date and time: 06-OCT-2018 23:27 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.5 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:25.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0281d.d Instrument ID: HP10623.i
Injection date and time: 06-OCT-2018 23:27 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.5 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:25.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0281d.d Instrument ID: HP10623.i
Injection date and time: 06-OCT-2018 23:27 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.5 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.701	88	23365	0.500
2) N-Nitrosodimethylamine	(1)	4.118	74	30008	0.500
5) bis(2-Chloroethyl)ether	(1)	6.782	93	46939M	0.500
6)*1,4-Dichlorobenzene-d4	(1)	7.127	152	73266	1.000
10)*Naphthalene-d8	(2)	8.653	136	298915	1.000
11) Naphthalene	(2)	8.679	128	160506	0.500
12) Quinoline	(2)	9.077	129	94205	0.500
13) 2-Methylnaphthalene	(2)	9.512	142	100073	0.500
14)$1-Methylnaphthalene-d10	(2)	9.599	152	76776	0.500
15) 1-Methylnaphthalene	(2)	9.643	142	101176	0.500
18) Dimethylphthalate	(3)	10.425	163	100169	0.500
19) Acenaphthylene	(3)	10.653	152	139683	0.500
20)*Acenaphthene-d10	(3)	10.827	164	137445	1.000
21) Acenaphthene	(3)	10.870	154	94663	0.500
22) Dibenzofuran	(3)	11.080	168	130081	0.500
23) Diethylphthalate	(3)	11.294	149	97919M	0.500
26) Fluorene	(3)	11.507	166	102925	0.500
28) NDPA as diphenylamine	(4)	11.620	169	65290	0.500
27) N-Nitrosodiphenylamine	(4)	11.620	169	65290	0.500
29) Hexachlorobenzene	(4)	12.215	284	22288	0.500
31)*Phenanthrene-d10	(4)	12.688	188	254258	1.000
32) Phenanthrene	(4)	12.721	178	152998	0.500
33) Anthracene	(4)	12.777	178	149680	0.500
35) Di-n-butylphthalate	(4)	13.319	149	157280	0.500
36)$Fluoranthene-d10	(4)	14.185	212	119907	0.500
37) Fluoranthene	(4)	14.209	202	153883	0.500
39) Pyrene	(5)	14.502	202	158872	0.500
40) Butylbenzylphthalate	(5)	15.198	149	67793	0.500
41) bis(2-Ethylhexyl)phthalate	(5)	15.894	149	91618	0.500
42) Benzo(a)anthracene	(5)	16.004	228	128412	0.500
43)*Chrysene-d12	(5)	16.020	240	189562	1.000
44) Chrysene	(5)	16.059	228	133154	0.500
45) Di-n-octylphthalate	(6)	16.809	149	146906	0.500
46) Benzo(b)fluoranthene	(6)	17.646	252	104334	0.500
47) Benzo(k)fluoranthene	(6)	17.685	252	117144	0.500
48) Benzo(e)pyrene	(6)	18.131	252	105600	0.500
49)$Benzo(a)pyrene-d12	(6)	18.178	264	73603	0.500
50) Benzo(a)pyrene	(6)	18.225	252	97235	0.500
51)*Perylene-d12	(6)	18.326	264	150250	1.000
52) Perylene	(6)	18.373	252	99985	0.500

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:25.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0281d.d Instrument ID: HP10623.i
Injection date and time: 06-OCT-2018 23:27 Analyst ID: apb10206

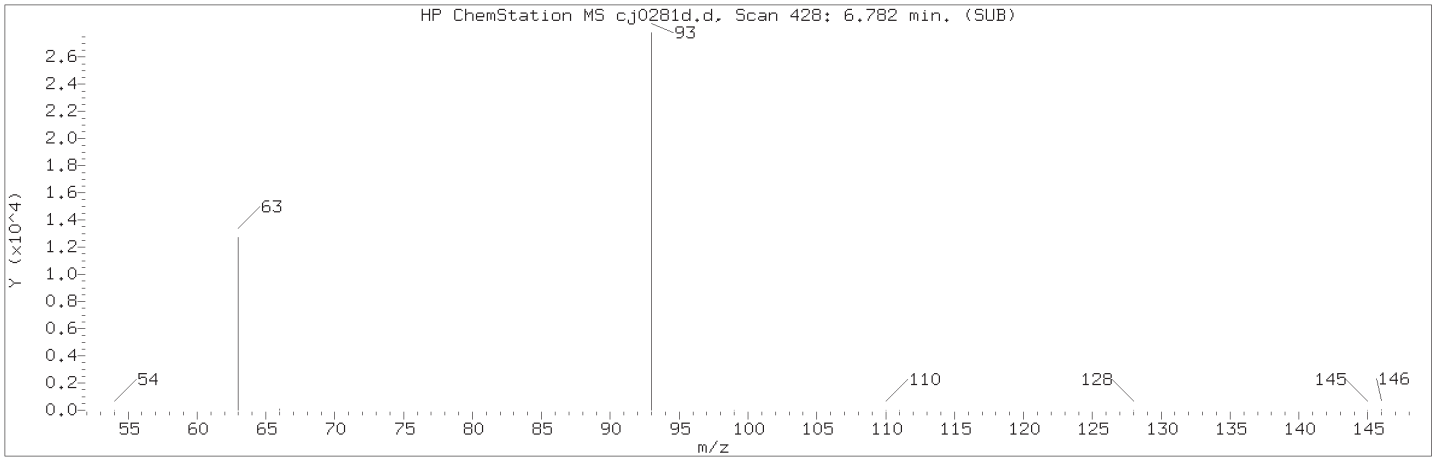
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.5 Lab Sample ID: SIM2598

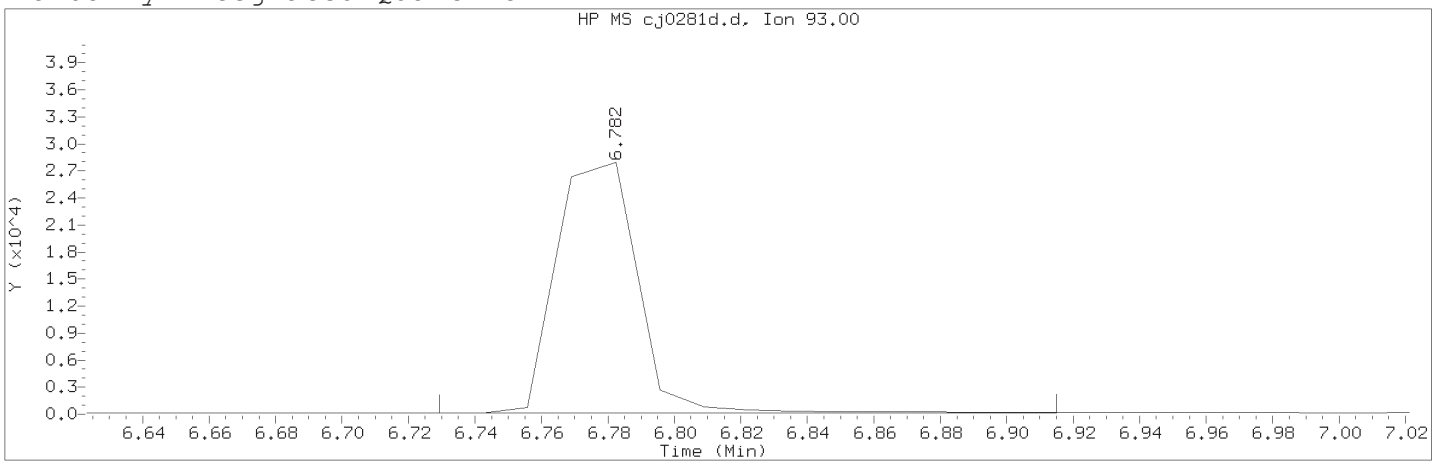
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.454	276	91164	0.500
54) Dibenz(a,h)anthracene	(6)	20.461	278	79170	0.500
55) Benzo(g,h,i)perylene	(6)	21.090	276	84595	0.500

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:25.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0281d.d Instrument ID: HP10623.i
Injection date and time: 06-OCT-2018 23:27 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.5 Lab Sample ID: SIM2598

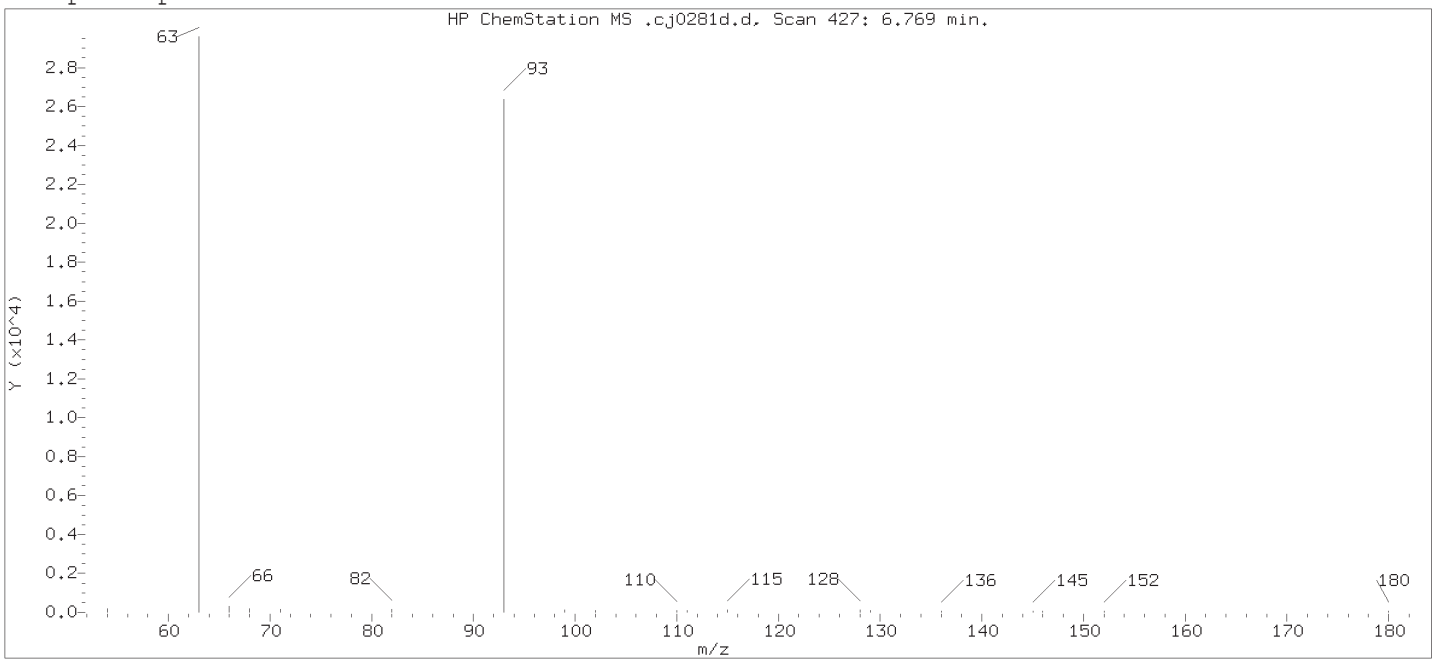
Compound Number	: 5		
Compound Name	: bis(2-Chloroethyl)ether		
Scan Number	: 428		
Retention Time (minutes)	: 6.782		
Quant Ion	: 93.00		
Area (flag)	: 46939M		
On-Column Amount (ng/ul)	: 0.5000		
Integration start scan	: 423	Integration stop scan:	437
Y at integration start	: 133	Y at integration end:	133

Reason for manual integration: missed peak

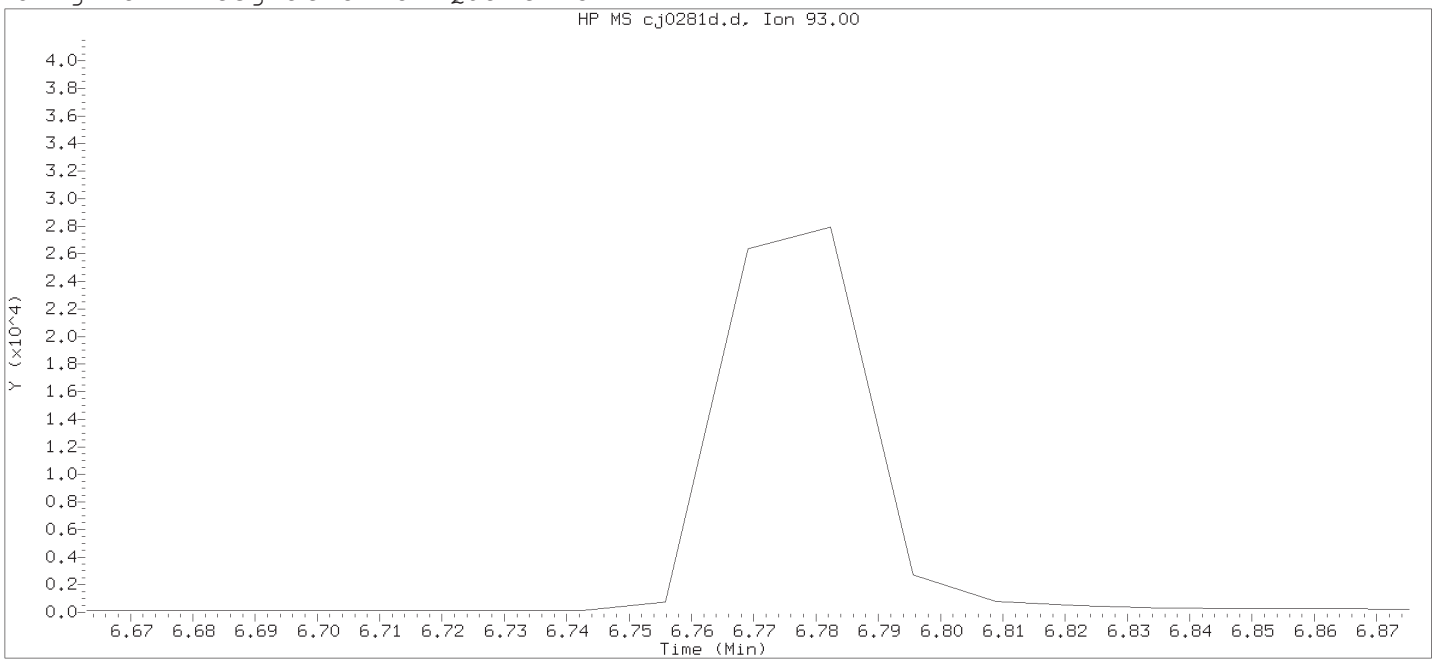
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:25.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0281d.d Instrument ID: HP10623.i
Injection date and time: 06-OCT-2018 23:27 Analyst ID: apb10206

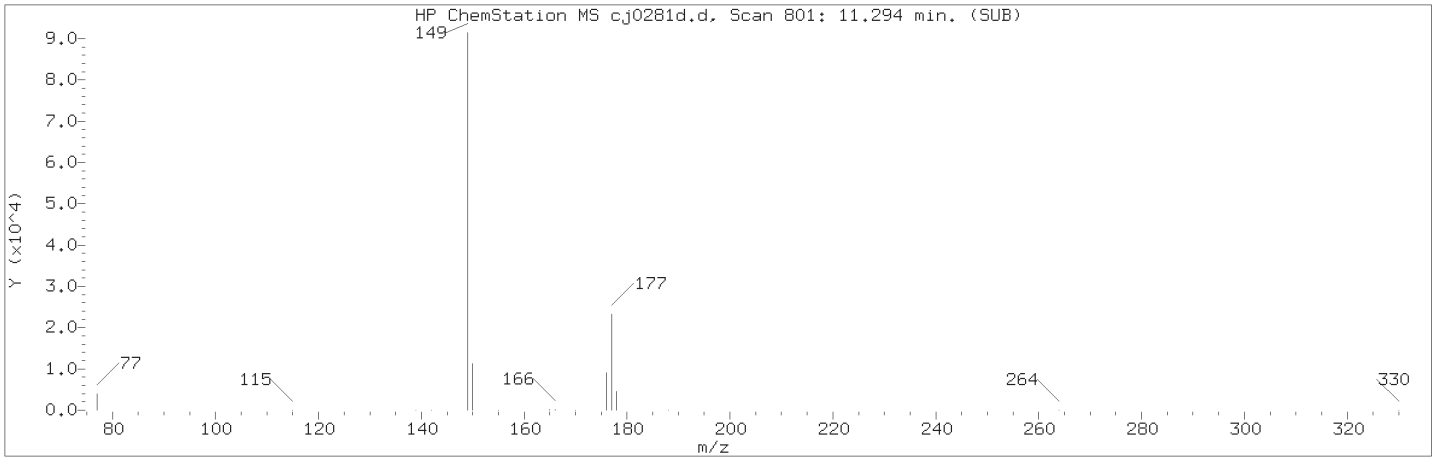
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:00
Date, time and analyst ID of latest file update: 07-Oct-2018 21:00 apb10206

Sample Name: SSTD0.5 Lab Sample ID: SIM2598

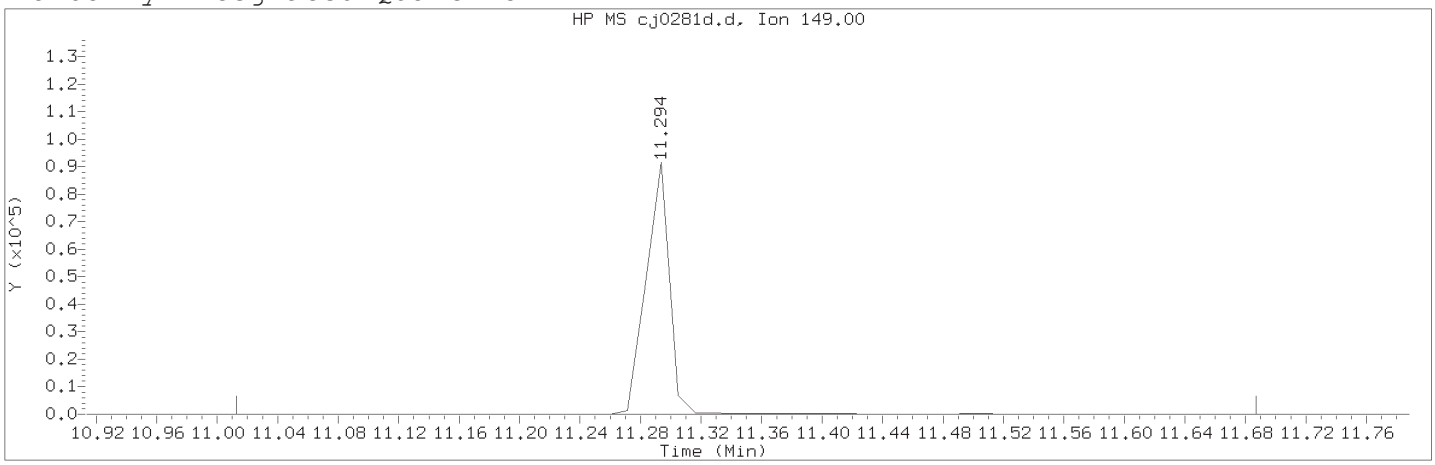
Compound Number : 5
Compound Name : bis(2-Chloroethyl)ether
Expected RT (minutes) : 6.769
Quant Ion : 93.00

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:25.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0281d.d Instrument ID: HP10623.i
Injection date and time: 06-OCT-2018 23:27 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.5 Lab Sample ID: SIM2598

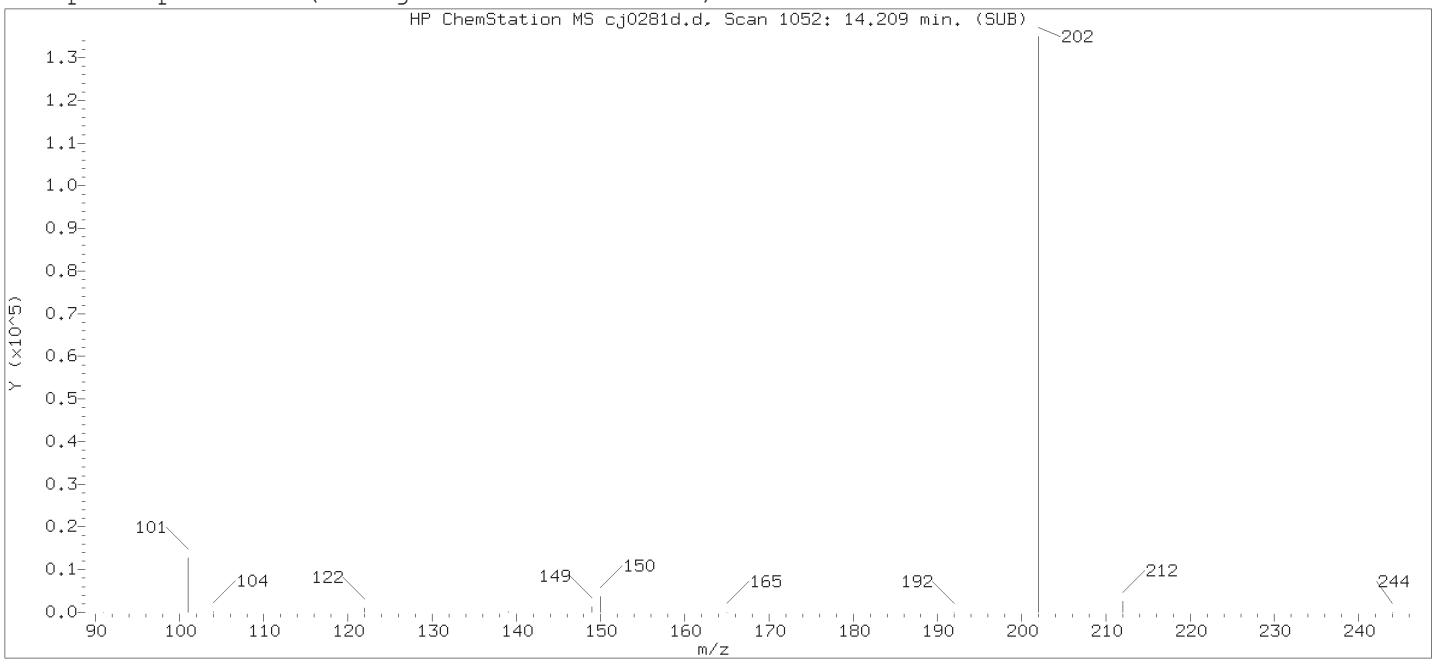
Compound Number	: 23		
Compound Name	: Diethylphthalate		
Scan Number	: 801		
Retention Time (minutes)	: 11.294		
Quant Ion	: 149.00		
Area (flag)	: 97919M		
On-Column Amount (ng/ul)	: 0.5000		
Integration start scan	: 775	Integration stop scan:	835
Y at integration start	: 80	Y at integration end:	88

Reason for manual integration: improper integration

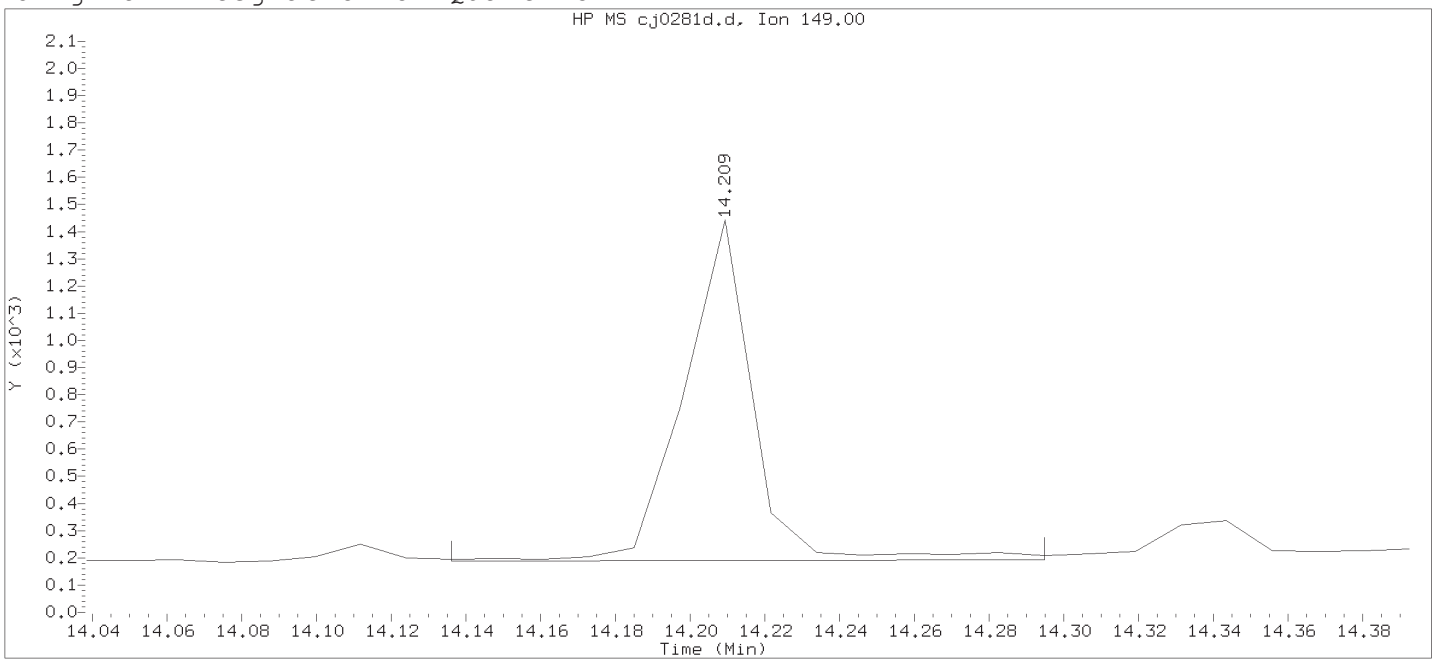
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:25.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



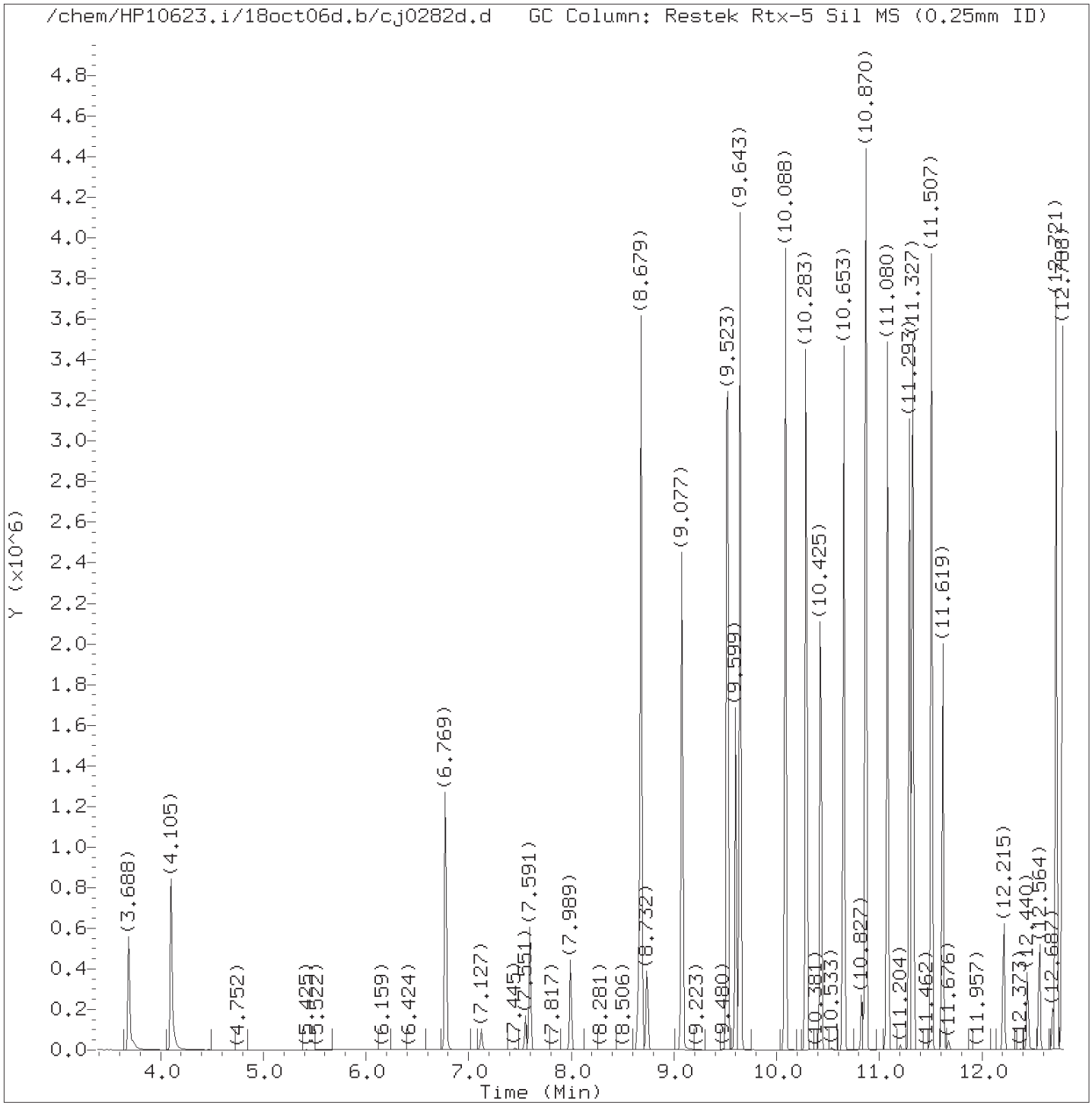
Data File: /chem/HP10623.i/18oct06d.b/cj0281d.d Instrument ID: HP10623.i
Injection date and time: 06-OCT-2018 23:27 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:00
Date, time and analyst ID of latest file update: 07-Oct-2018 21:00 apb10206

Sample Name: SSTD0.5 Lab Sample ID: SIM2598

Compound Number	: 23		
Compound Name	: Diethylphthalate		
Scan Number	: 1052		
Retention Time (minutes)	: 14.209		
Quant Ion	: 149.00		
Area	: 1603		
On-column Amount (ng/ul)	: 0.0000		
Integration start scan	: 1045	Integration stop scan:	1058
Y at integration start	: 189	Y at integration end:	193

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:25.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

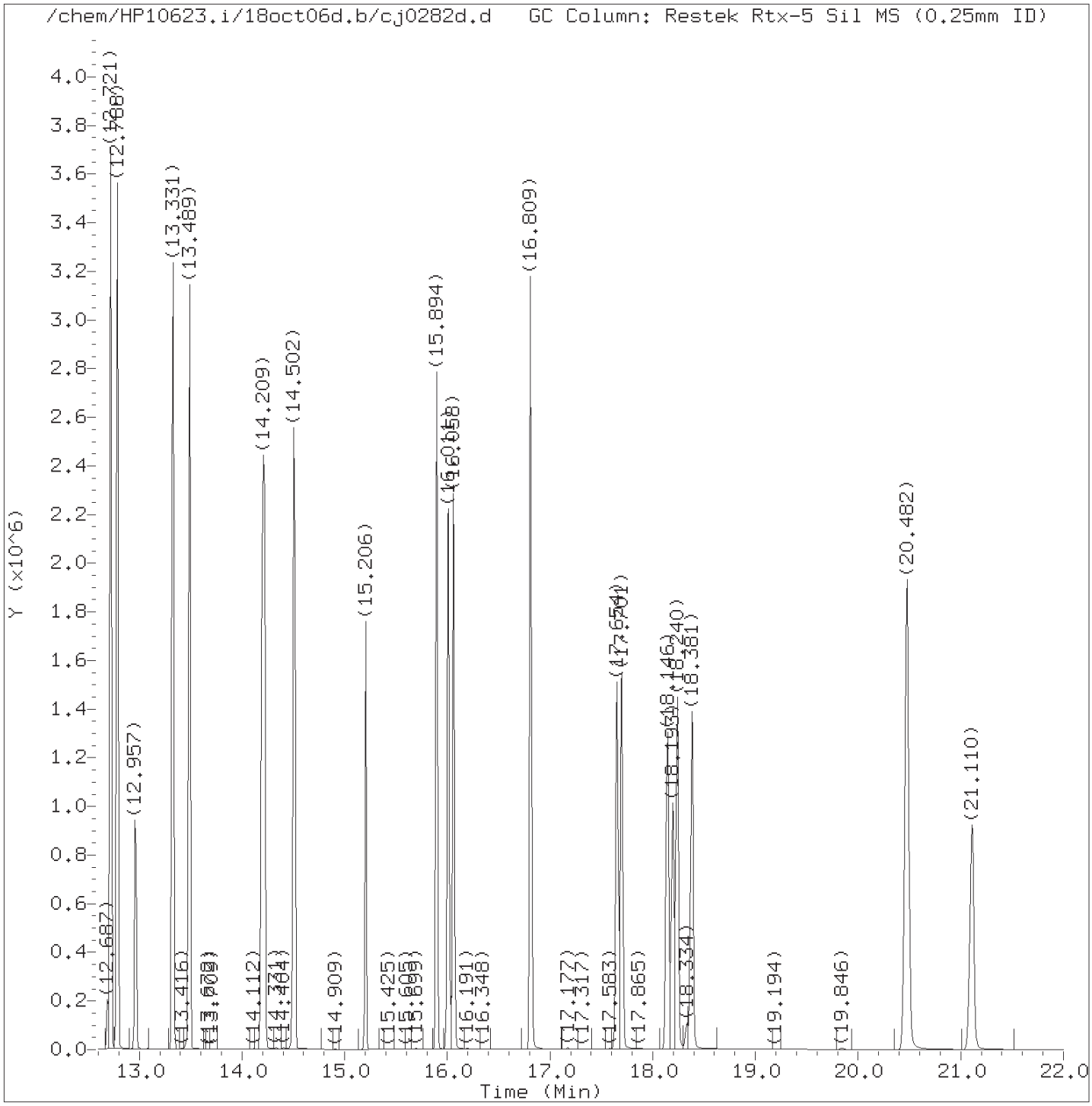
Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0282d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 00:04 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD010 Lab Sample ID: SIM2598

Digitally signed by Linda M. Hartenstine
on 10/09/2018 at 12:15.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0282d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 00:04 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD010 Lab Sample ID: SIM2598

Digitally signed by Linda M. Hartenstine
on 10/09/2018 at 12:15.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0282d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 00:04 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD010 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.688	88	463969	10.069
2) N-Nitrosodimethylamine	(1)	4.105	74	650852	10.509
5) bis(2-Chloroethyl)ether	(1)	6.769	93	980777	10.323
6)*1,4-Dichlorobenzene-d4	(1)	7.127	152	71753	1.000
10)*Naphthalene-d8	(2)	8.652	136	308079	1.000
11) Naphthalene	(2)	8.679	128	3167180	9.782
12) Quinoline	(2)	9.077	129	1949825	10.020
13) 2-Methylnaphthalene	(2)	9.523	142	2060526	9.994
14)$1-Methylnaphthalene-d10	(2)	9.599	152	1495843	9.718
15) 1-Methylnaphthalene	(2)	9.643	142	2016101	9.831
18) Dimethylphthalate	(3)	10.425	163	2057082	10.254
19) Acenaphthylene	(3)	10.653	152	2943585	10.383
20)*Acenaphthene-d10	(3)	10.827	164	134145	1.000
21) Acenaphthene	(3)	10.870	154	1855867	10.022
22) Dibenzofuran	(3)	11.080	168	2512582	9.947
23) Diethylphthalate	(3)	11.293	149	2055948	10.364
26) Fluorene	(3)	11.507	166	2002488	9.984
28) NDPA as diphenylamine	(4)	11.619	169	1048704	9.069
27) N-Nitrosodiphenylamine	(4)	11.619	169	1048704	9.069
29) Hexachlorobenzene	(4)	12.215	284	448538	10.193
31)*Phenanthrene-d10	(4)	12.687	188	246146	1.000
32) Phenanthrene	(4)	12.721	178	2958048	9.993
33) Anthracene	(4)	12.788	178	3066571	10.282
35) Di-n-butylphthalate	(4)	13.331	149	3627117	10.872
36)$Fluoranthene-d10	(4)	14.197	212	2334580	10.028
37) Fluoranthene	(4)	14.221	202	3021868	10.071
39) Pyrene	(5)	14.502	202	3119818	9.995
40) Butylbenzylphthalate	(5)	15.206	149	1571712	10.823
41) bis(2-Ethylhexyl)phthalate	(5)	15.894	149	2177451	10.947
42) Benzo(a)anthracene	(5)	16.004	228	2567894	10.086
43)*Chrysene-d12	(5)	16.027	240	186307	1.000
44) Chrysene	(5)	16.058	228	2501420	9.774
45) Di-n-octylphthalate	(6)	16.809	149	3692480	10.679
46) Benzo(b)fluoranthene	(6)	17.654	252	2255405	9.927
47) Benzo(k)fluoranthene	(6)	17.701	252	2131312	9.067
48) Benzo(e)pyrene	(6)	18.146	252	2092605	9.492
49)$Benzo(a)pyrene-d12	(6)	18.193	264	1562767	9.837
50) Benzo(a)pyrene	(6)	18.240	252	2049784	9.801
51)*Perylene-d12	(6)	18.334	264	164798	1.000
52) Perylene	(6)	18.381	252	2085269	9.747

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 10/09/2018 at 12:15.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

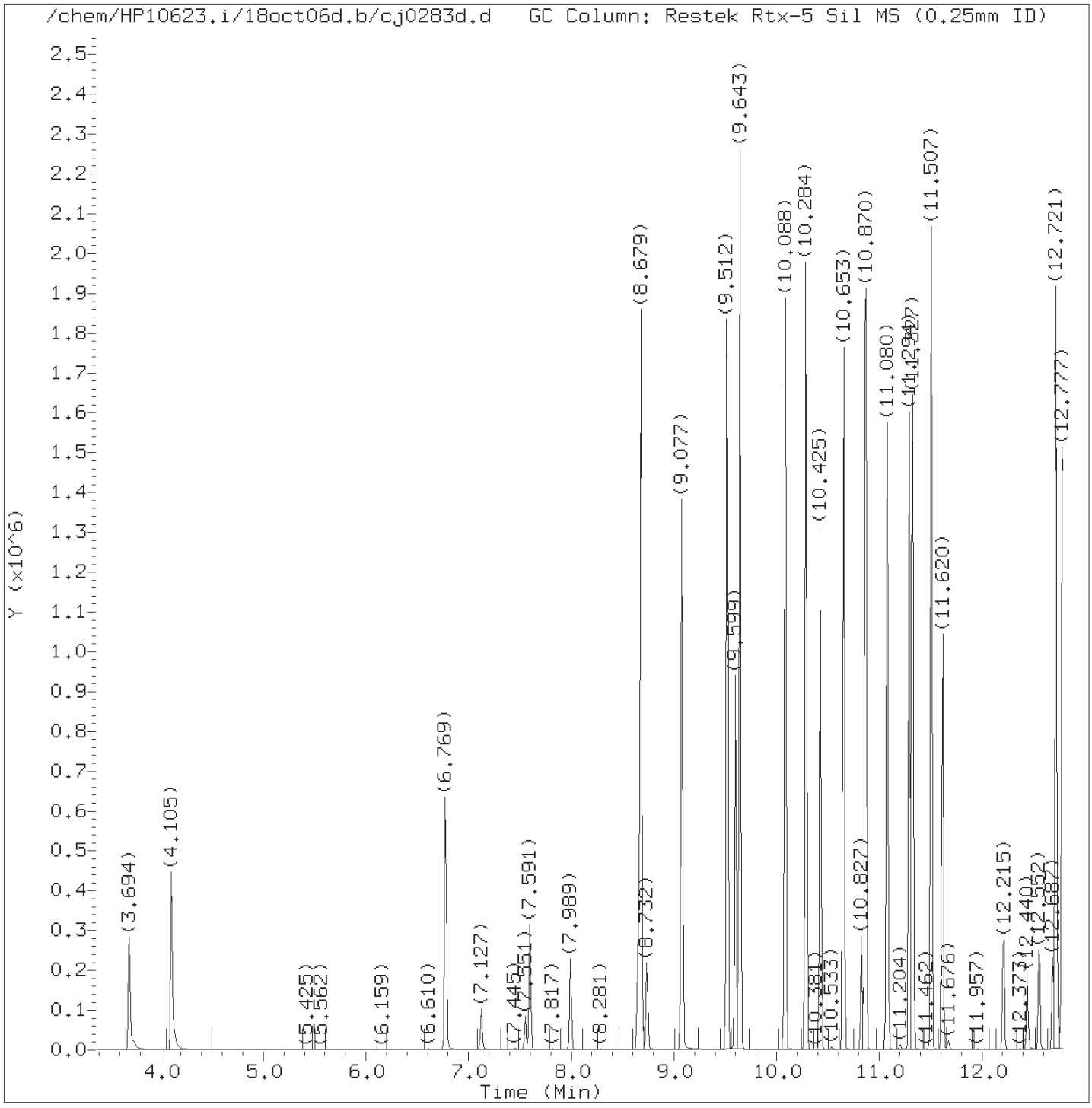
Data File: /chem/HP10623.i/18oct06d.b/cj0282d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 00:04 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD010 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.475	276	2013410	10.034
54) Dibenz(a,h)anthracene	(6)	20.482	278	1740492	10.011
55) Benzo(g,h,i)perylene	(6)	21.110	276	1909635	10.143

Digitally signed by Linda M. Hartenstine
on 10/09/2018 at 12:15.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

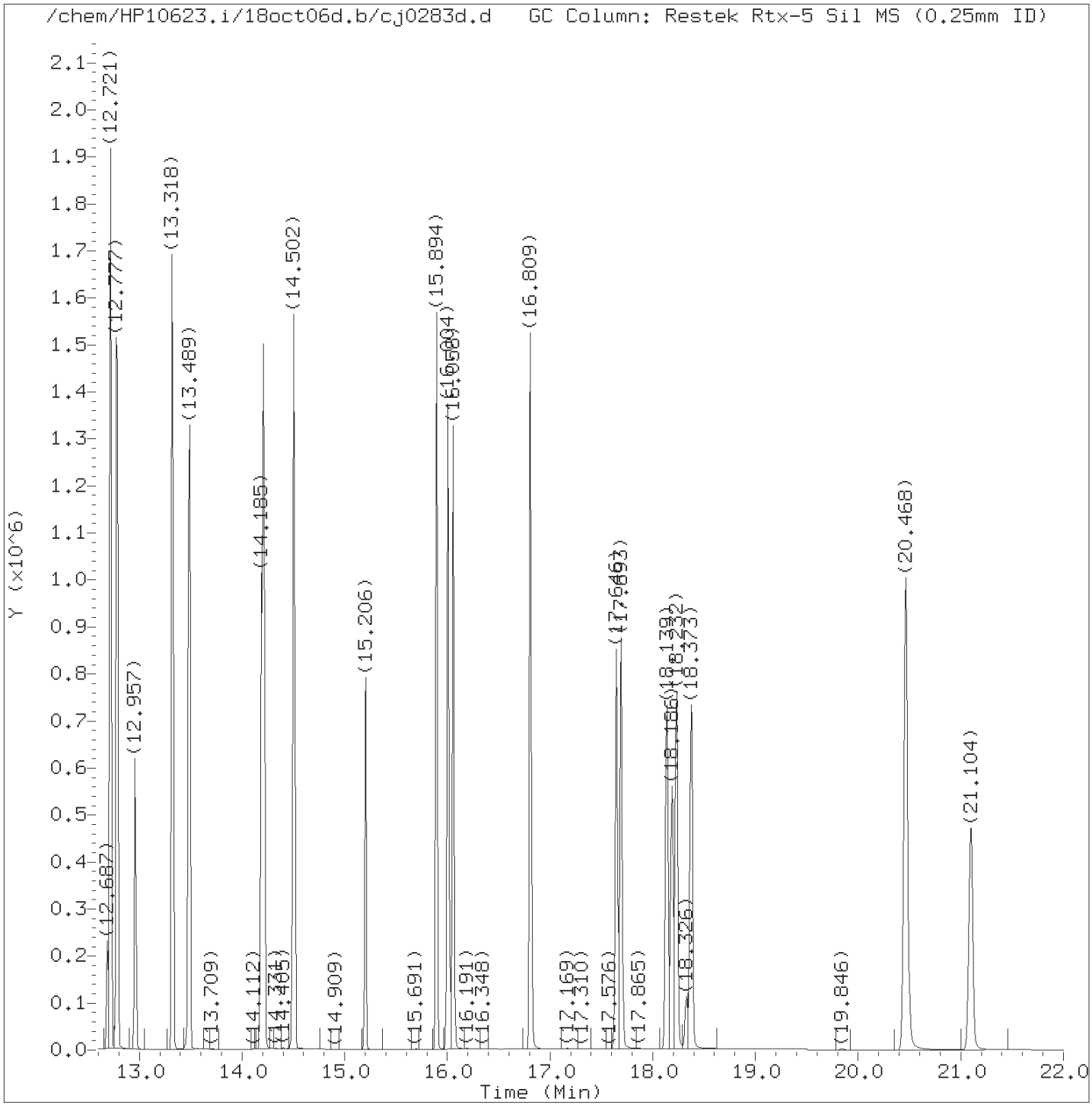
Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0283d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 00:35 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD005 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0283d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 00:35 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD005 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0283d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 00:35 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD005 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.694	88	239732	5.133
2) N-Nitrosodimethylamine	(1)	4.105	74	330106	5.215
5) bis(2-Chloroethyl)ether	(1)	6.769	93	503818M	5.198
6)*1,4-Dichlorobenzene-d4	(1)	7.127	152	71753	1.000
10)*Naphthalene-d8	(2)	8.652	136	293967	1.000
11) Naphthalene	(2)	8.679	128	1646604	5.215
12) Quinoline	(2)	9.077	129	1006781	5.274
13) 2-Methylnaphthalene	(2)	9.512	142	1065425	5.270
14)$1-Methylnaphthalene-d10	(2)	9.599	152	801315	5.295
15) 1-Methylnaphthalene	(2)	9.643	142	1059638	5.269
18) Dimethylphthalate	(3)	10.425	163	1055752	5.171
19) Acenaphthylene	(3)	10.653	152	1544682	5.289
20)*Acenaphthene-d10	(3)	10.827	164	134194	1.000
21) Acenaphthene	(3)	10.870	154	959362	5.118
22) Dibenzofuran	(3)	11.080	168	1308310	5.117
23) Diethylphthalate	(3)	11.294	149	1061984	5.229
26) Fluorene	(3)	11.507	166	1065939	5.204
28) NDPA as diphenylamine	(4)	11.620	169	604256	5.110
27) N-Nitrosodiphenylamine	(4)	11.620	169	604256	5.110
29) Hexachlorobenzene	(4)	12.215	284	230452	5.118
31)*Phenanthrene-d10	(4)	12.687	188	248906	1.000
32) Phenanthrene	(4)	12.721	178	1581620	5.186
33) Anthracene	(4)	12.789	178	1609228	5.219
35) Di-n-butylphthalate	(4)	13.318	149	1820462	5.257
36)$Fluoranthene-d10	(4)	14.185	212	1218613	5.116
37) Fluoranthene	(4)	14.209	202	1569825	5.114
39) Pyrene	(5)	14.502	202	1638380	5.118
40) Butylbenzylphthalate	(5)	15.206	149	795085	5.261
41) bis(2-Ethylhexyl)phthalate	(5)	15.894	149	1095137	5.280
42) Benzo(a)anthracene	(5)	16.004	228	1344603	5.138
43)*Chrysene-d12	(5)	16.019	240	188840	1.000
44) Chrysene	(5)	16.058	228	1353637	5.143
45) Di-n-octylphthalate	(6)	16.809	149	1831638	5.173
46) Benzo(b)fluoranthene	(6)	17.646	252	1166933	5.069
47) Benzo(k)fluoranthene	(6)	17.693	252	1190085	5.021
48) Benzo(e)pyrene	(6)	18.139	252	1104607M	4.986
49)$Benzo(a)pyrene-d12	(6)	18.186	264	819422	5.083
50) Benzo(a)pyrene	(6)	18.232	252	1063239	5.034
51)*Perylene-d12	(6)	18.326	264	165846	1.000
52) Perylene	(6)	18.373	252	1095986	5.060

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0283d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 00:35 Analyst ID: apb10206

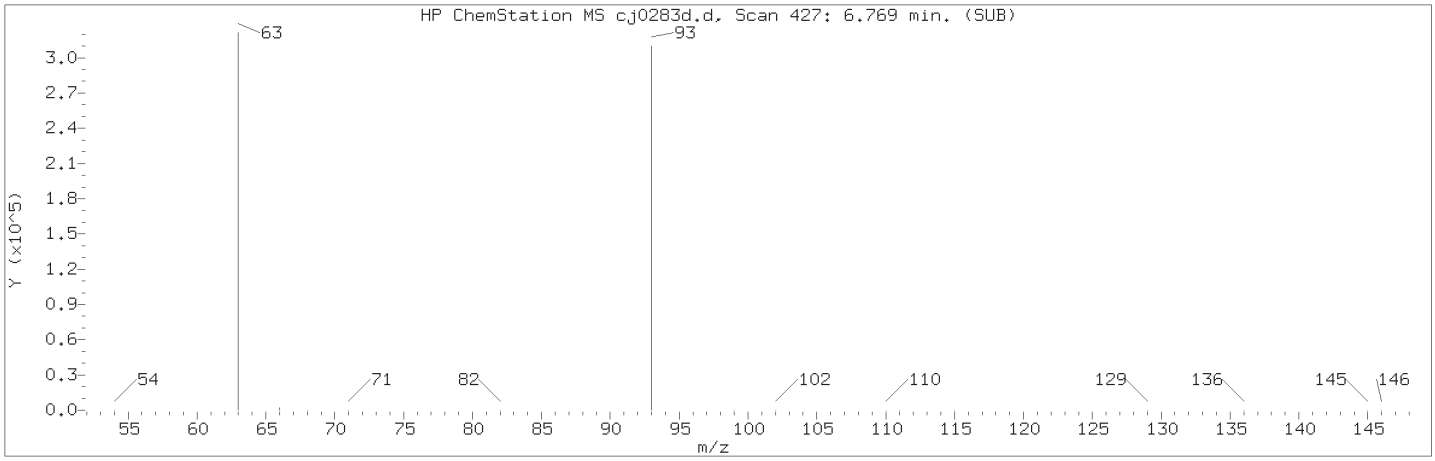
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD005 Lab Sample ID: SIM2598

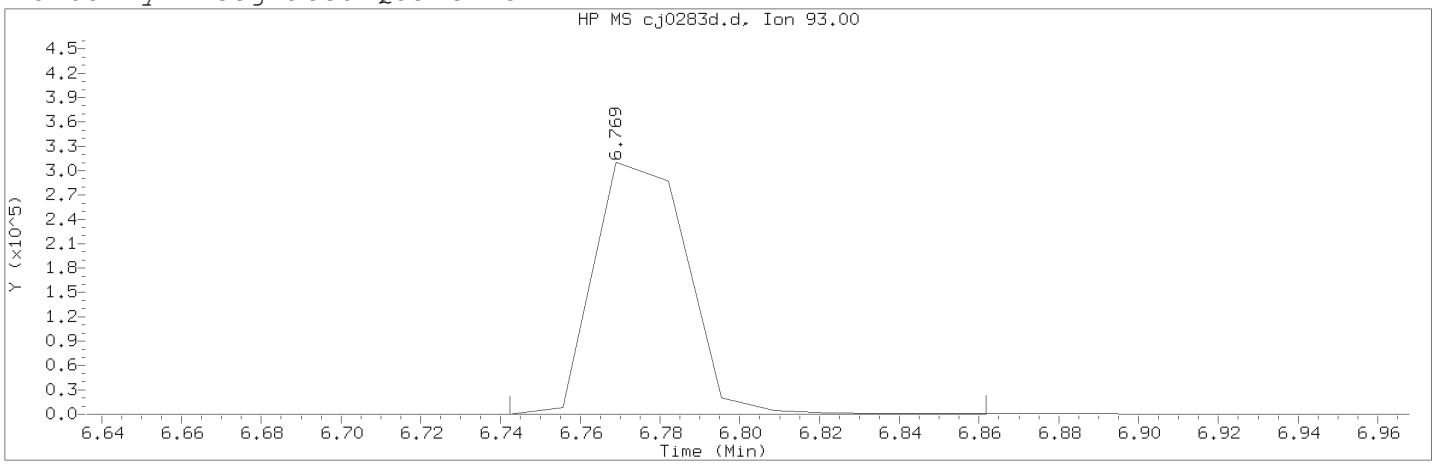
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.461	276	1042961	5.109
54) Dibenz(a,h)anthracene	(6)	20.468	278	903259	5.107
55) Benzo(g,h,i)perylene	(6)	21.104	276	974556	5.095

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0283d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 00:35 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD005 Lab Sample ID: SIM2598

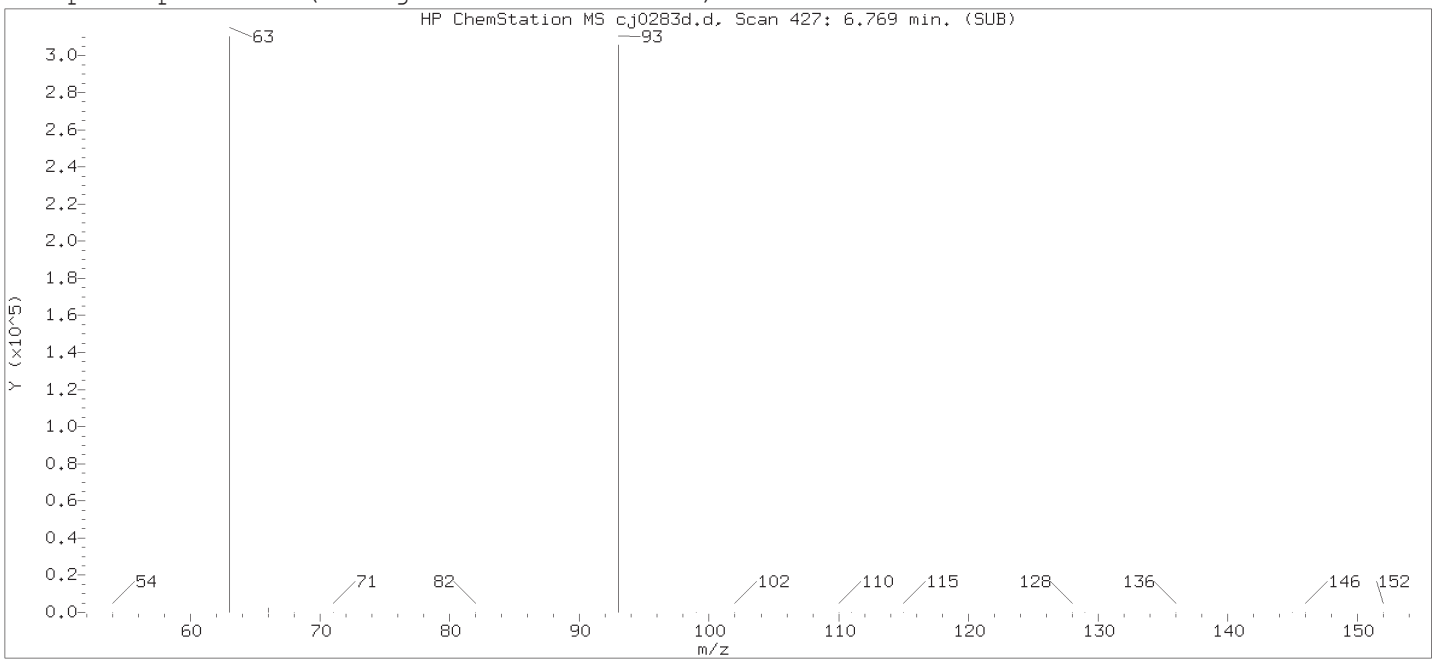
Compound Number : 5
Compound Name : bis(2-Chloroethyl)ether
Scan Number : 427
Retention Time (minutes) : 6.769
Quant Ion : 93.00
Area (flag) : 503818M
On-Column Amount (ng/ul) : 5.1979
Integration start scan : 424 Integration stop scan: 433
Y at integration start : 112 Y at integration end: 112

Reason for manual integration: improper integration

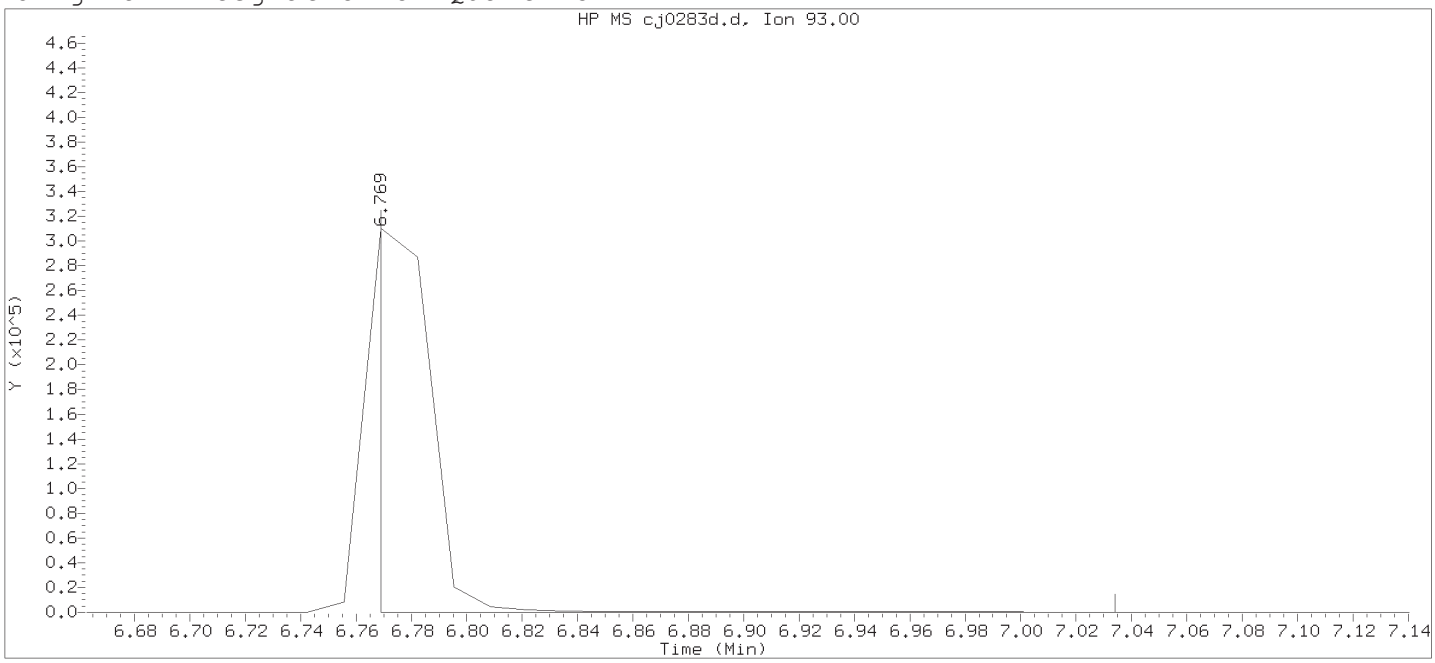
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0283d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 00:35 Analyst ID: apb10206

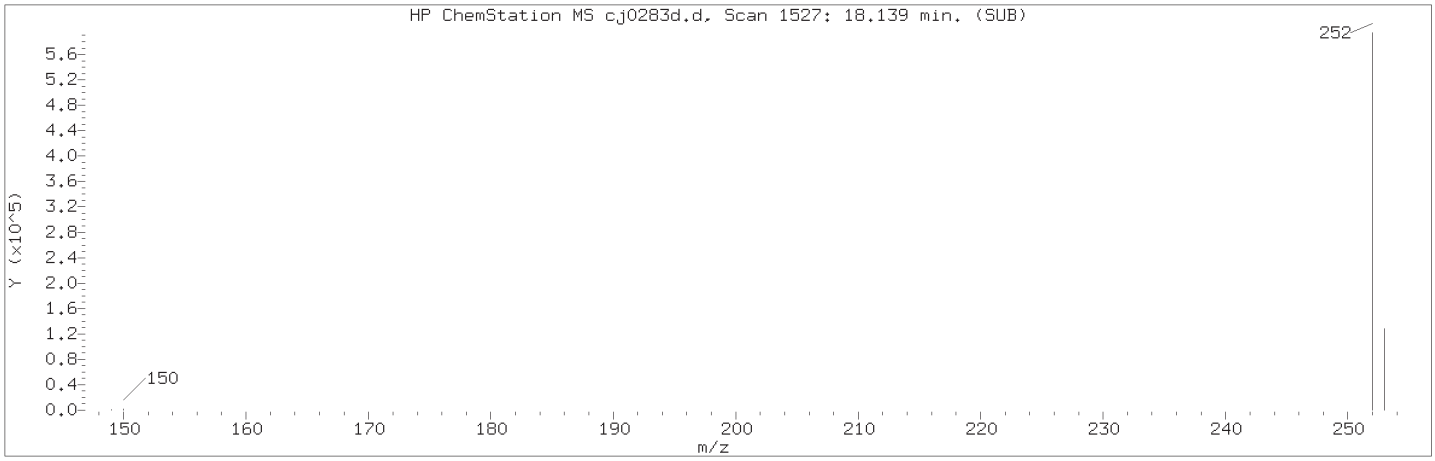
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:05
Date, time and analyst ID of latest file update: 07-Oct-2018 21:05 apb10206

Sample Name: SSTD005 Lab Sample ID: SIM2598

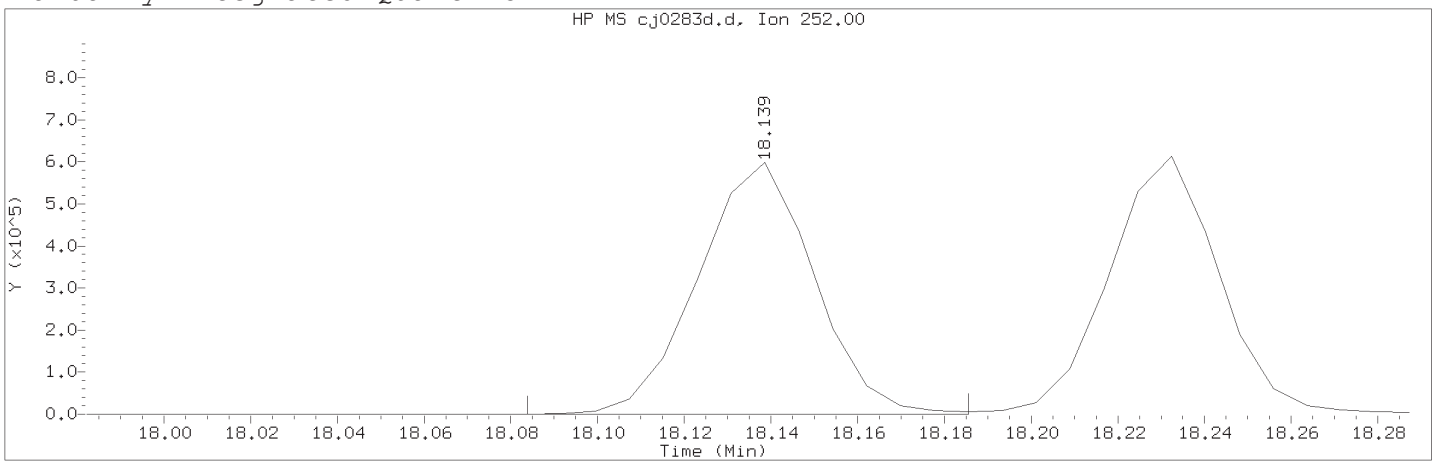
Compound Number	:	5
Compound Name	:	bis(2-Chloroethyl)ether
Scan Number	:	427
Retention Time (minutes)	:	6.769
Quant Ion	:	93.00
Area	:	374654
On-column Amount (ng/ul)	:	1.3127
Integration start scan	:	426
Integration stop scan	:	446
Y at integration start	:	122
Y at integration end	:	236

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0283d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 00:35 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD005 Lab Sample ID: SIM2598

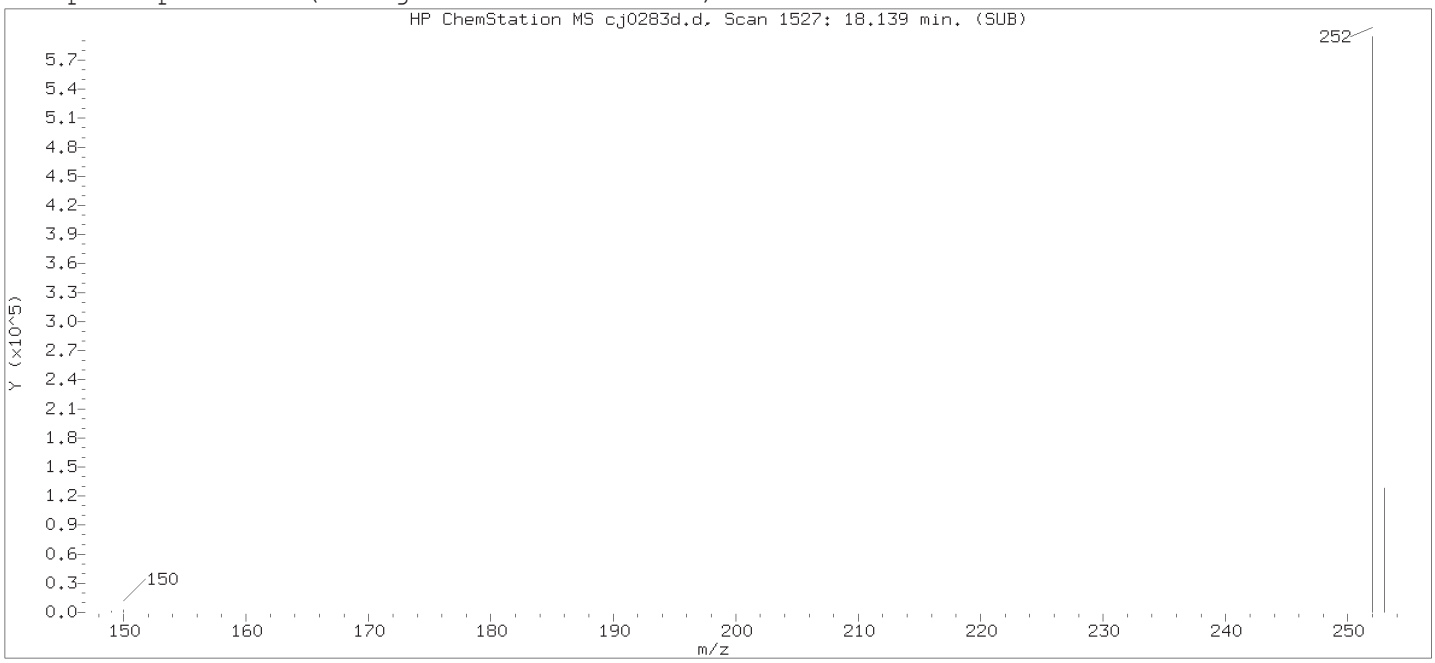
Compound Number : 48
Compound Name : Benzo(e)pyrene
Scan Number : 1527
Retention Time (minutes) : 18.139
Quant Ion : 252.00
Area (flag) : 1104607M
On-Column Amount (ng/ul) : 4.9859
Integration start scan : 1519 Integration stop scan: 1532
Y at integration start : 687 Y at integration end: 687

Reason for manual integration: improper integration

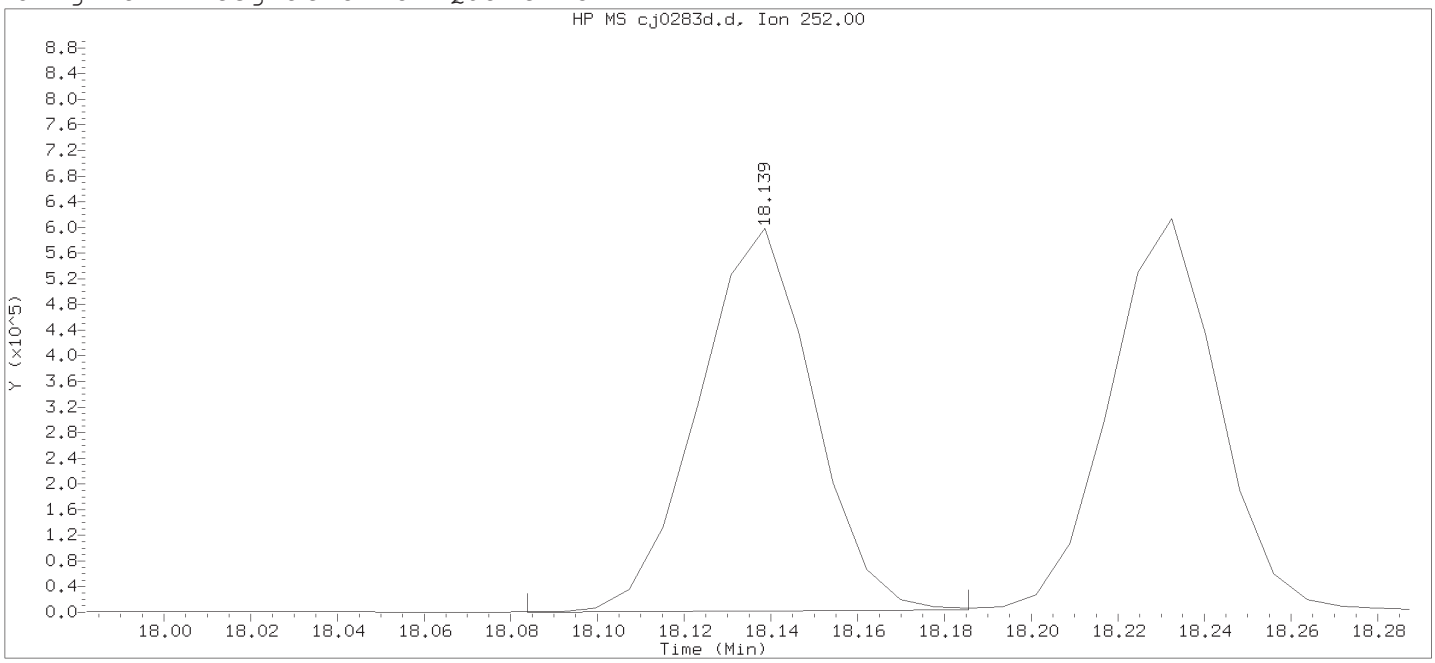
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



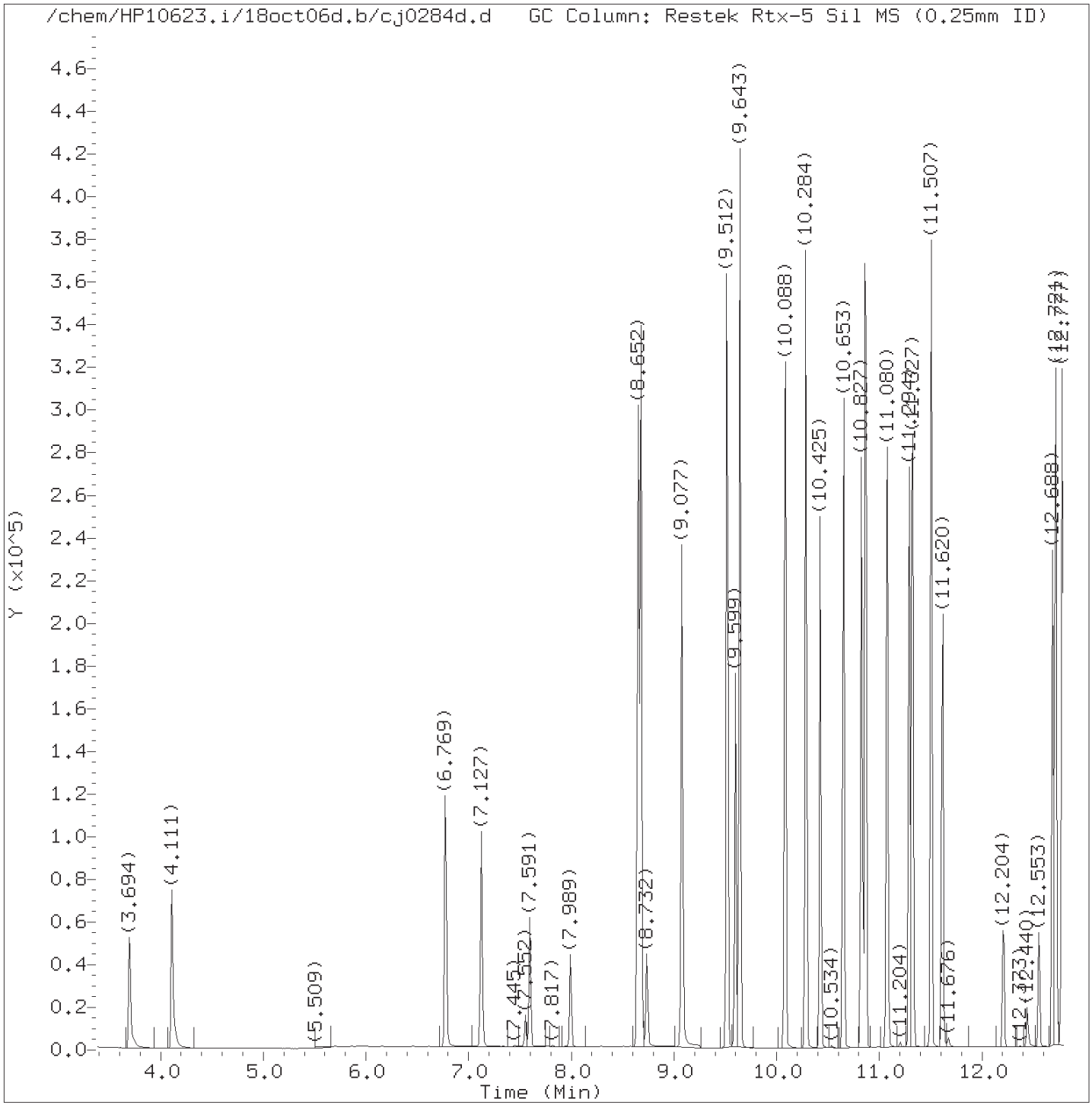
Data File: /chem/HP10623.i/18oct06d.b/cj0283d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 00:35 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:05
Date, time and analyst ID of latest file update: 07-Oct-2018 21:05 apb10206

Sample Name: SSTD005 Lab Sample ID: SIM2598

Compound Number	: 48		
Compound Name	: Benzo(e)pyrene		
Scan Number	: 1527		
Retention Time (minutes)	: 18.139		
Quant Ion	: 252.00		
Area	: 1095511		
On-column Amount (ng/ul)	: 2.8650		
Integration start scan	: 1519	Integration stop scan:	1532
Y at integration start	: 440	Y at integration end:	3508

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:26.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

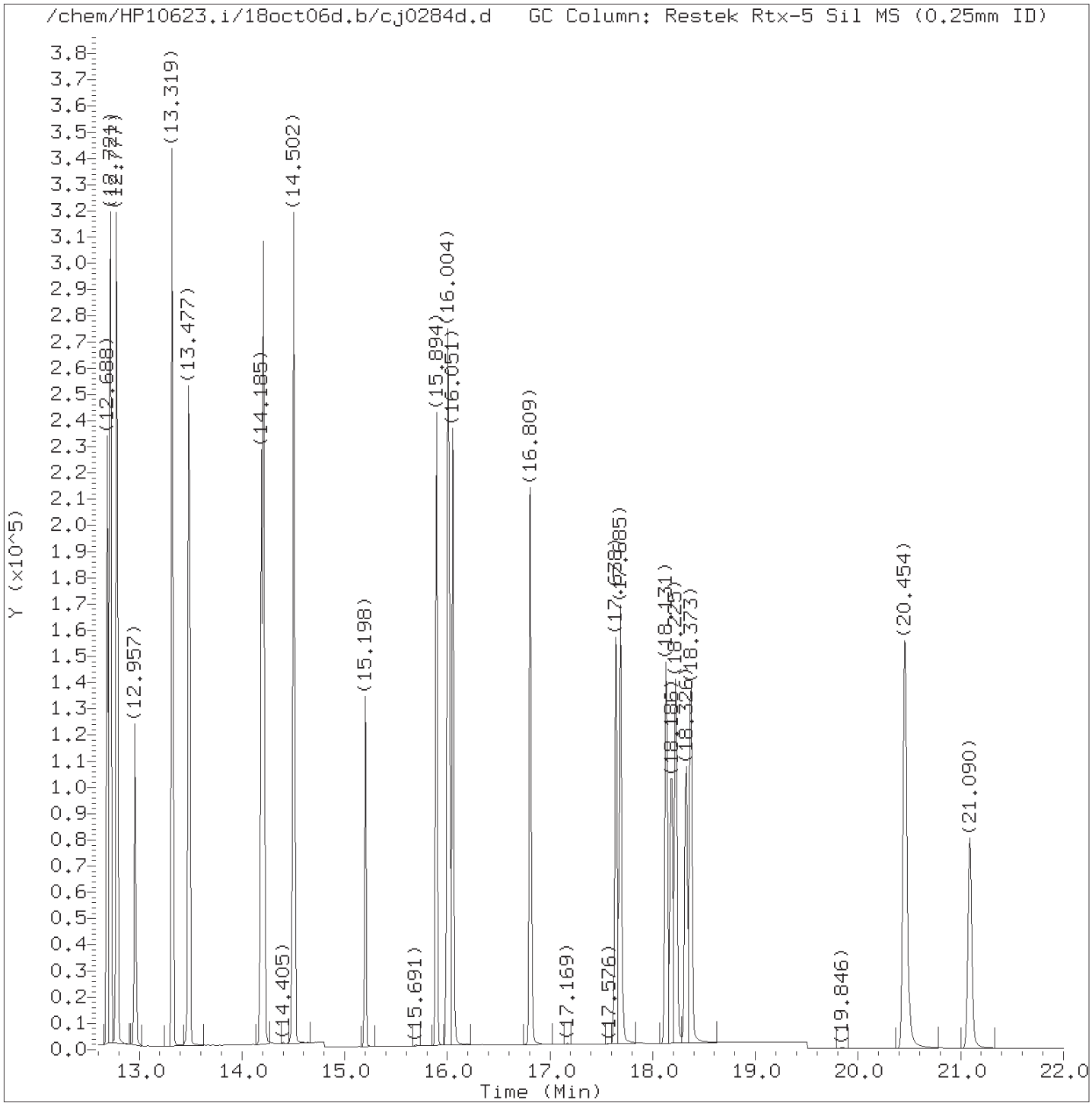
Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0284d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:07 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD001 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0284d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:07 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD001 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0284d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:07 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD001 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.701	88	45502	0.991
2) N-Nitrosodimethylamine	(1)	4.111	74	59367	0.962
5) bis(2-Chloroethyl)ether	(1)	6.769	93	94349	0.990
6)*1,4-Dichlorobenzene-d4	(1)	7.127	152	70798	1.000
10)*Naphthalene-d8	(2)	8.652	136	288589	1.000
11) Naphthalene	(2)	8.679	128	313192	1.008
12) Quinoline	(2)	9.077	129	185770	0.993
13) 2-Methylnaphthalene	(2)	9.512	142	197592	0.997
14)$1-Methylnaphthalene-d10	(2)	9.599	152	151540	1.015
15) 1-Methylnaphthalene	(2)	9.643	142	197753	1.001
18) Dimethylphthalate	(3)	10.425	163	194020	0.973
19) Acenaphthylene	(3)	10.653	152	274368	0.964
20)*Acenaphthene-d10	(3)	10.827	164	132299	1.000
21) Acenaphthene	(3)	10.870	154	183364	0.994
22) Dibenzofuran	(3)	11.080	168	252652	1.002
23) Diethylphthalate	(3)	11.294	149	189429	0.959
26) Fluorene	(3)	11.507	166	200628	0.995
28) NDPA as diphenylamine	(4)	11.620	169	126976	1.069
27) N-Nitrosodiphenylamine	(4)	11.620	169	126976	1.069
29) Hexachlorobenzene	(4)	12.215	284	43948	0.996
31)*Phenanthrene-d10	(4)	12.688	188	244232	1.000
32) Phenanthrene	(4)	12.721	178	299747	1.001
33) Anthracene	(4)	12.777	178	293854	0.978
35) Di-n-butylphthalate	(4)	13.319	149	308532	0.929
36)$Fluoranthene-d10	(4)	14.185	212	234864	1.004
37) Fluoranthene	(4)	14.209	202	302136	1.002
39) Pyrene	(5)	14.502	202	312011	0.990
40) Butylbenzylphthalate	(5)	15.198	149	129422	0.897
41) bis(2-Ethylhexyl)phthalate	(5)	15.894	149	174273	0.884
42) Benzo(a)anthracene	(5)	16.004	228	253431	0.985
43)*Chrysene-d12	(5)	16.020	240	186483	1.000
44) Chrysene	(5)	16.051	228	261829	1.006
45) Di-n-octylphthalate	(6)	16.809	149	279705	0.895
46) Benzo(b)fluoranthene	(6)	17.638	252	210830	1.002
47) Benzo(k)fluoranthene	(6)	17.685	252	237263	1.070
48) Benzo(e)pyrene	(6)	18.131	252	208049	1.021
49)$Benzo(a)pyrene-d12	(6)	18.186	264	150499	1.017
50) Benzo(a)pyrene	(6)	18.225	252	201235	1.032
51)*Perylene-d12	(6)	18.326	264	151438	1.000
52) Perylene	(6)	18.373	252	202825	1.019

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

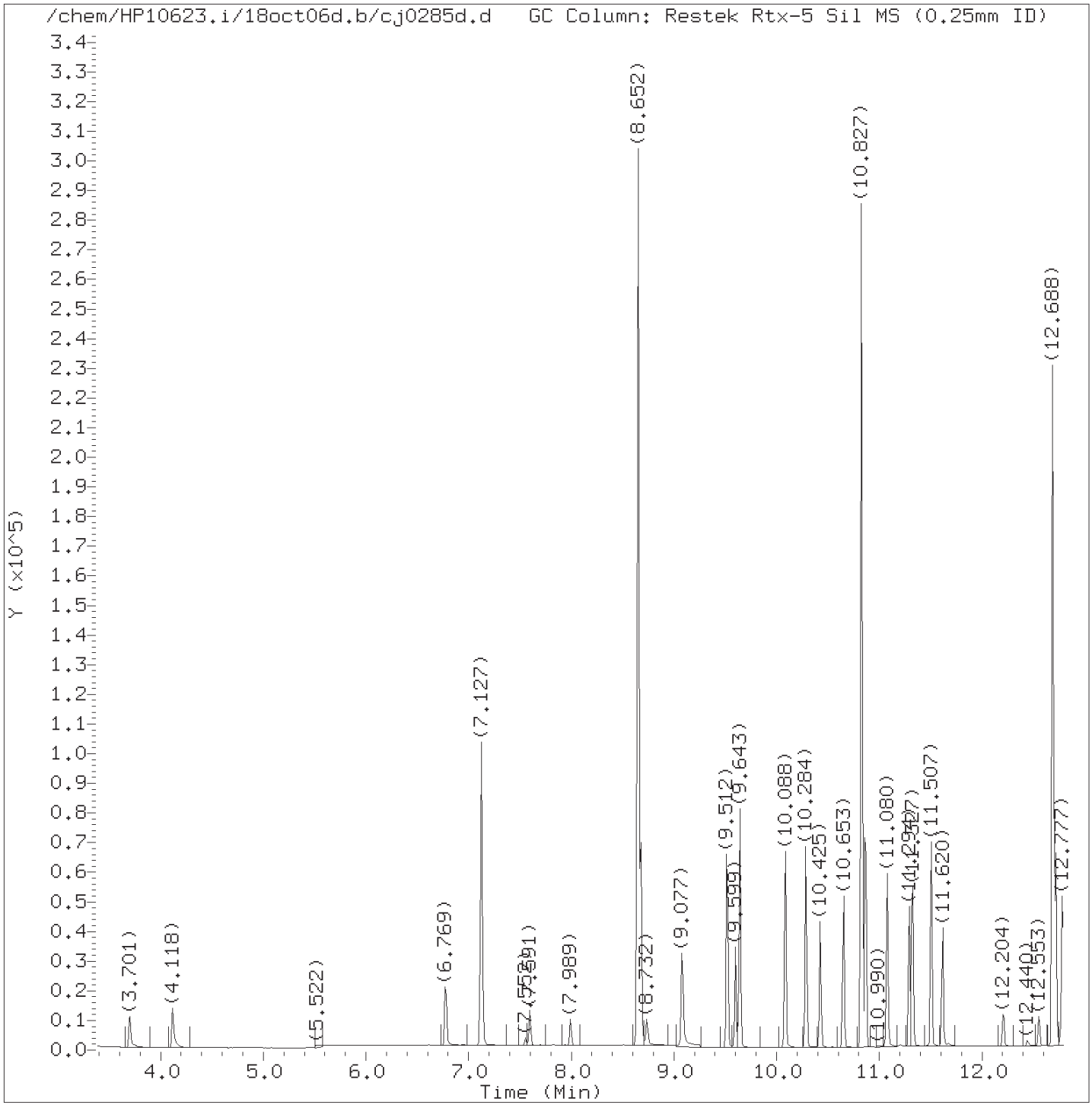
Data File: /chem/HP10623.i/18oct06d.b/cj0284d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:07 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD001 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.454	276	183301	0.987
54) Dibenz(a,h)anthracene	(6)	20.461	278	158769	0.987
55) Benzo(g,h,i)perylene	(6)	21.090	276	161252	0.941

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

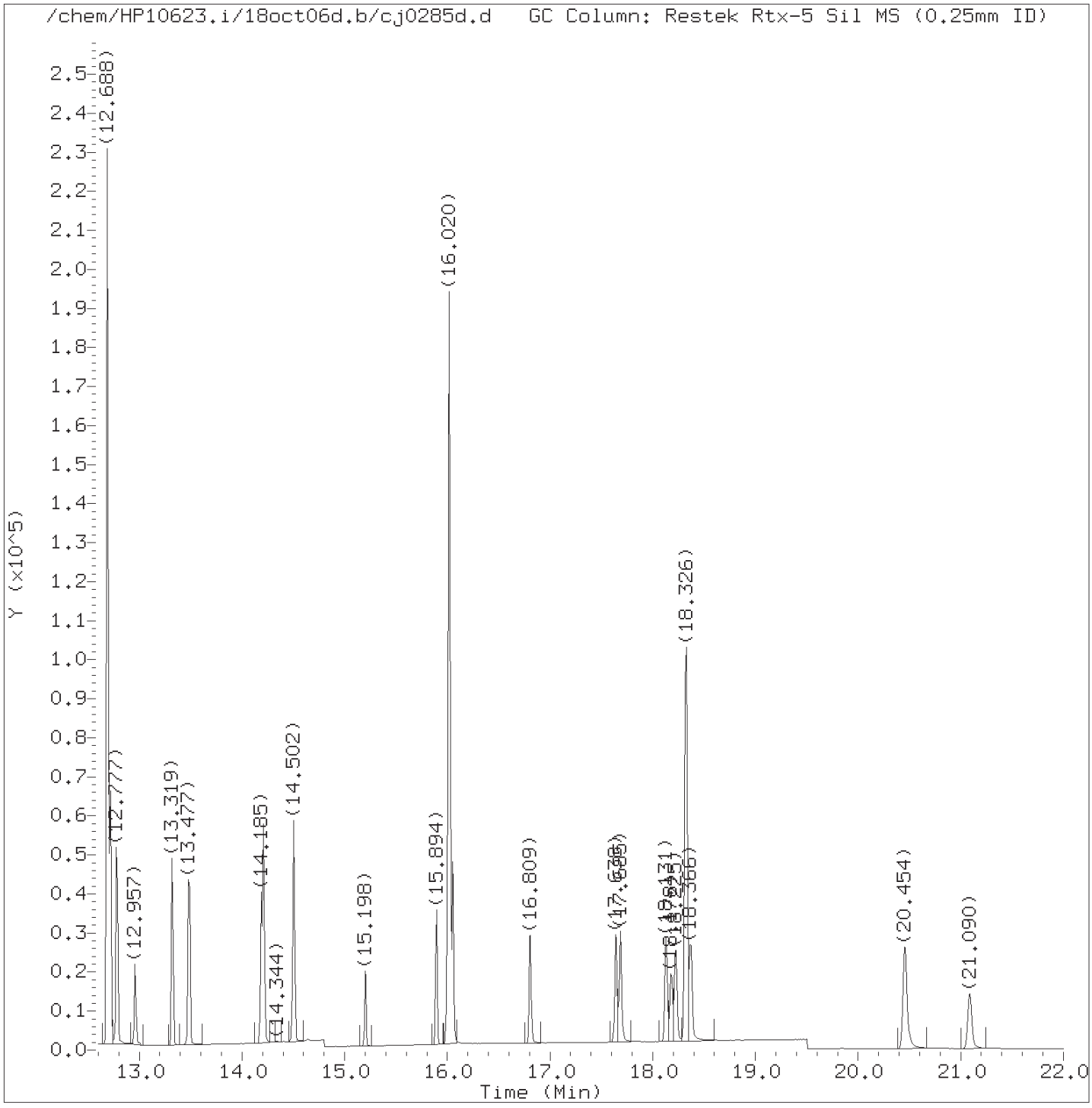
Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0285d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:39 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:14 apb10206

Sample Name: SSTD0.20 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0285d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:39 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:14 apb10206

Sample Name: SSTD0.20 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0285d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:39 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:14 apb10206

Sample Name: SSTD0.20 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.701	88	9291	0.202
2) N-Nitrosodimethylamine	(1)	4.118	74	11286	0.190
5) bis(2-Chloroethyl)ether	(1)	6.782	93	18037	0.194
6)*1,4-Dichlorobenzene-d4	(1)	7.127	152	71447	1.000
10)*Naphthalene-d8	(2)	8.652	136	291607	1.000
11) Naphthalene	(2)	8.679	128	62182	0.201
12) Quinoline	(2)	9.077	129	34008	0.190
13) 2-Methylnaphthalene	(2)	9.512	142	37023	0.192
14)$1-Methylnaphthalene-d10	(2)	9.599	152	29171	0.198
15) 1-Methylnaphthalene	(2)	9.643	142	37997	0.196
18) Dimethylphthalate	(3)	10.425	163	35340	0.186
19) Acenaphthylene	(3)	10.653	152	47624	0.179
20)*Acenaphthene-d10	(3)	10.827	164	134148	1.000
21) Acenaphthene	(3)	10.870	154	35716	0.196
22) Dibenzofuran	(3)	11.080	168	48411M	0.195
23) Diethylphthalate	(3)	11.294	149	33225	0.179
26) Fluorene	(3)	11.507	166	37346	0.192
28) NDPA as diphenylamine	(4)	11.620	169	23569	0.202
27) N-Nitrosodiphenylamine	(4)	11.620	169	23569	0.202
29) Hexachlorobenzene	(4)	12.215	284	8604	0.197
31)*Phenanthrene-d10	(4)	12.688	188	247979	1.000
32) Phenanthrene	(4)	12.721	178	58447	0.198
33) Anthracene	(4)	12.777	178	52872	0.186
35) Di-n-butylphthalate	(4)	13.319	149	47293	0.149
36)$Fluoranthene-d10	(4)	14.185	212	42399	0.188
37) Fluoranthene	(4)	14.209	202	56135	0.193
39) Pyrene	(5)	14.502	202	57040	0.192
40) Butylbenzylphthalate	(5)	15.198	149	19724	0.147
41) bis(2-Ethylhexyl)phthalate	(5)	15.894	149	25348M	0.140
42) Benzo(a)anthracene	(5)	16.004	228	45387	0.190
43)*Chrysene-d12	(5)	16.020	240	184440	1.000
44) Chrysene	(5)	16.051	228	50023	0.204
45) Di-n-octylphthalate	(6)	16.809	149	38136	0.136
46) Benzo(b)fluoranthene	(6)	17.638	252	37440	0.198
47) Benzo(k)fluoranthene	(6)	17.685	252	42303	0.209
48) Benzo(e)pyrene	(6)	18.131	252	38774M	0.200
49)$Benzo(a)pyrene-d12	(6)	18.178	264	25536	0.189
50) Benzo(a)pyrene	(6)	18.225	252	35108	0.204
51)*Perylene-d12	(6)	18.326	264	147266	1.000
52) Perylene	(6)	18.373	252	38313M	0.204

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0285d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:39 Analyst ID: apb10206

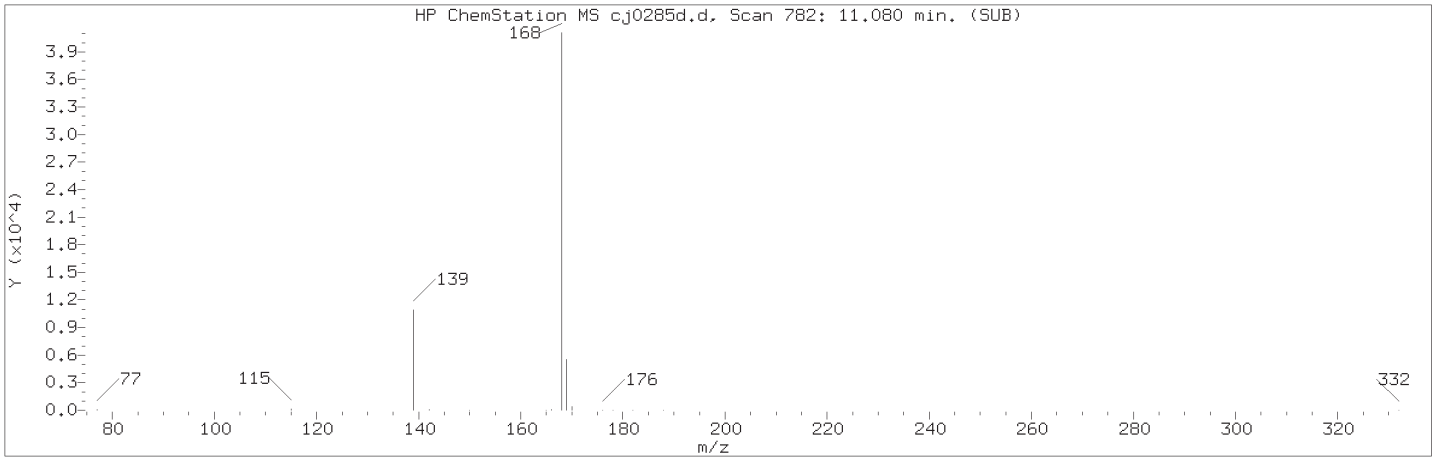
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:14 apb10206

Sample Name: SSTD0.20 Lab Sample ID: SIM2598

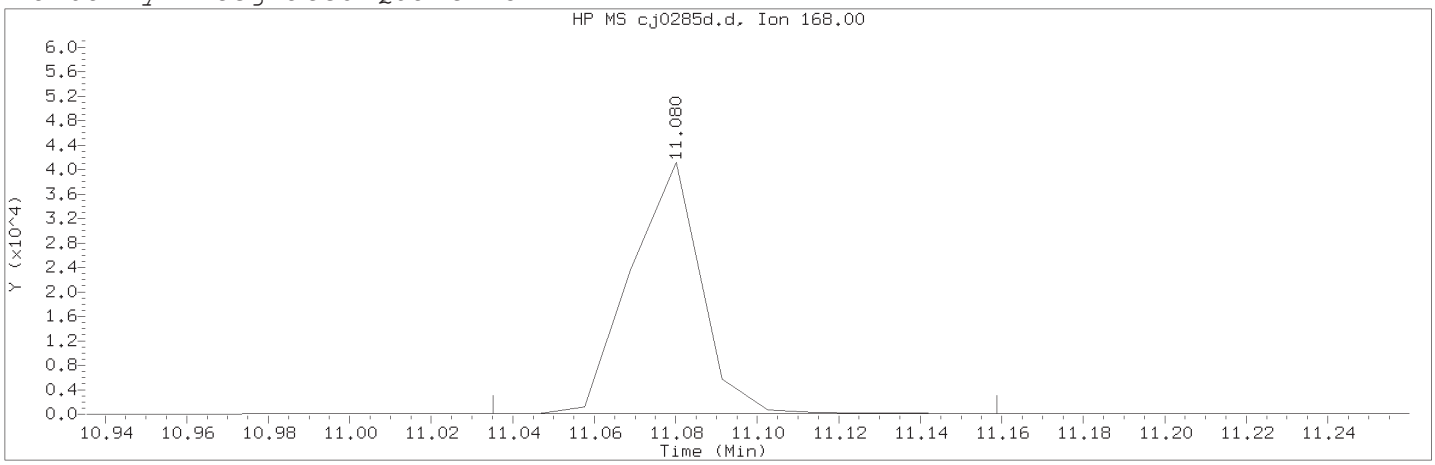
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.454	276	32609	0.199
54) Dibenz(a,h)anthracene	(6)	20.468	278	28185	0.199
55) Benzo(g,h,i)perylene	(6)	21.090	276	31473	0.197

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0285d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:39 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:14 apb10206

Sample Name: SSTD0.20 Lab Sample ID: SIM2598

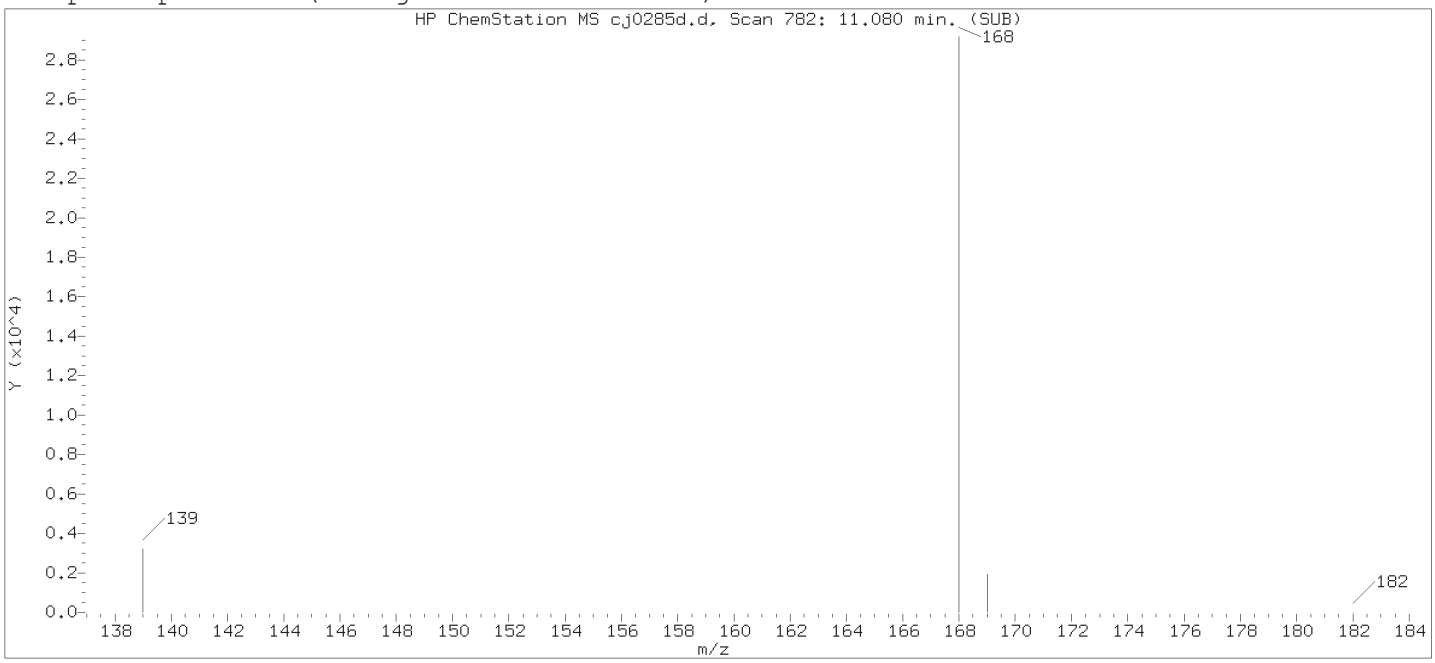
Compound Number : 22
Compound Name : Dibenzofuran
Scan Number : 782
Retention Time (minutes) : 11.080
Quant Ion : 168.00
Area (flag) : 48411M
On-Column Amount (ng/ul) : 0.1951
Integration start scan : 777 Integration stop scan: 788
Y at integration start : 50 Y at integration end: 50

Reason for manual integration: improper integration

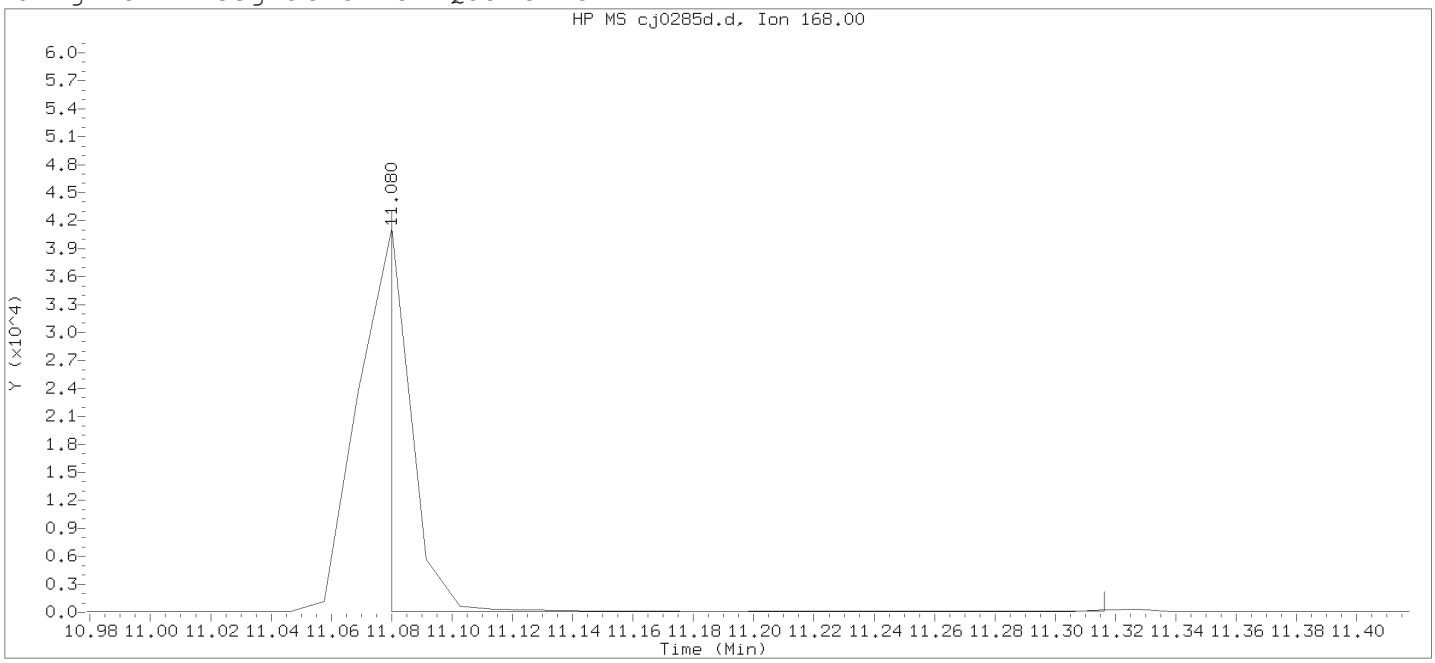
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0285d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:39 Analyst ID: apb10206

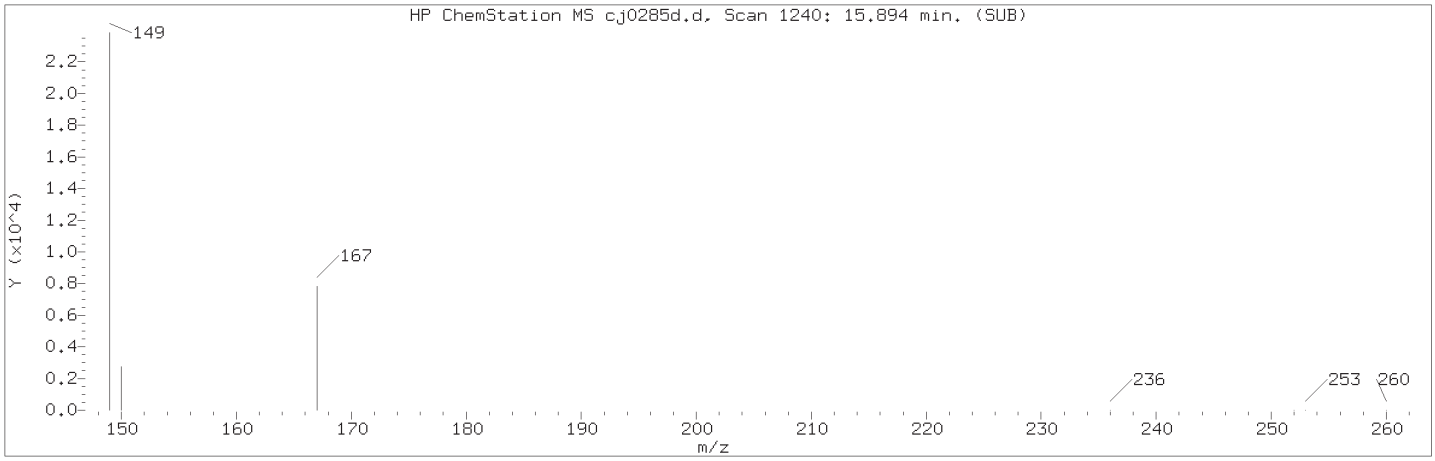
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:06
Date, time and analyst ID of latest file update: 07-Oct-2018 21:06 apb10206

Sample Name: SSTD0.20 Lab Sample ID: SIM2598

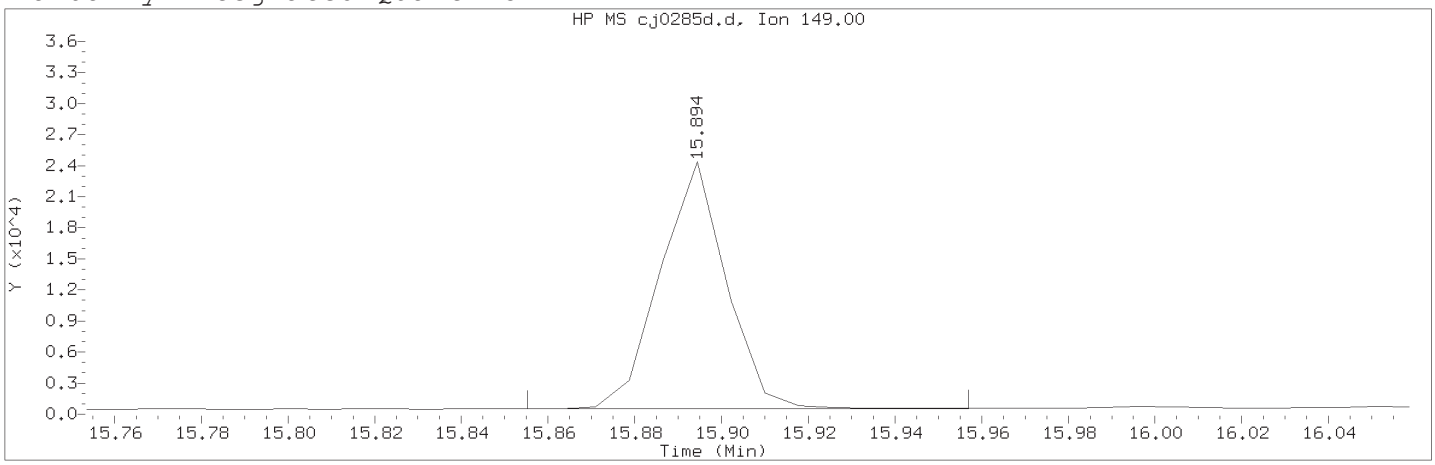
Compound Number	: 22		
Compound Name	: Dibenzofuran		
Scan Number	: 782		
Retention Time (minutes)	: 11.080		
Quant Ion	: 168.00		
Area	: 18291		
On-column Amount (ng/ul)	: 0.0272		
Integration start scan	: 781	Integration stop scan:	802
Y at integration start	: 51	Y at integration end:	108

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0285d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:39 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:14 apb10206

Sample Name: SSTD0.20 Lab Sample ID: SIM2598

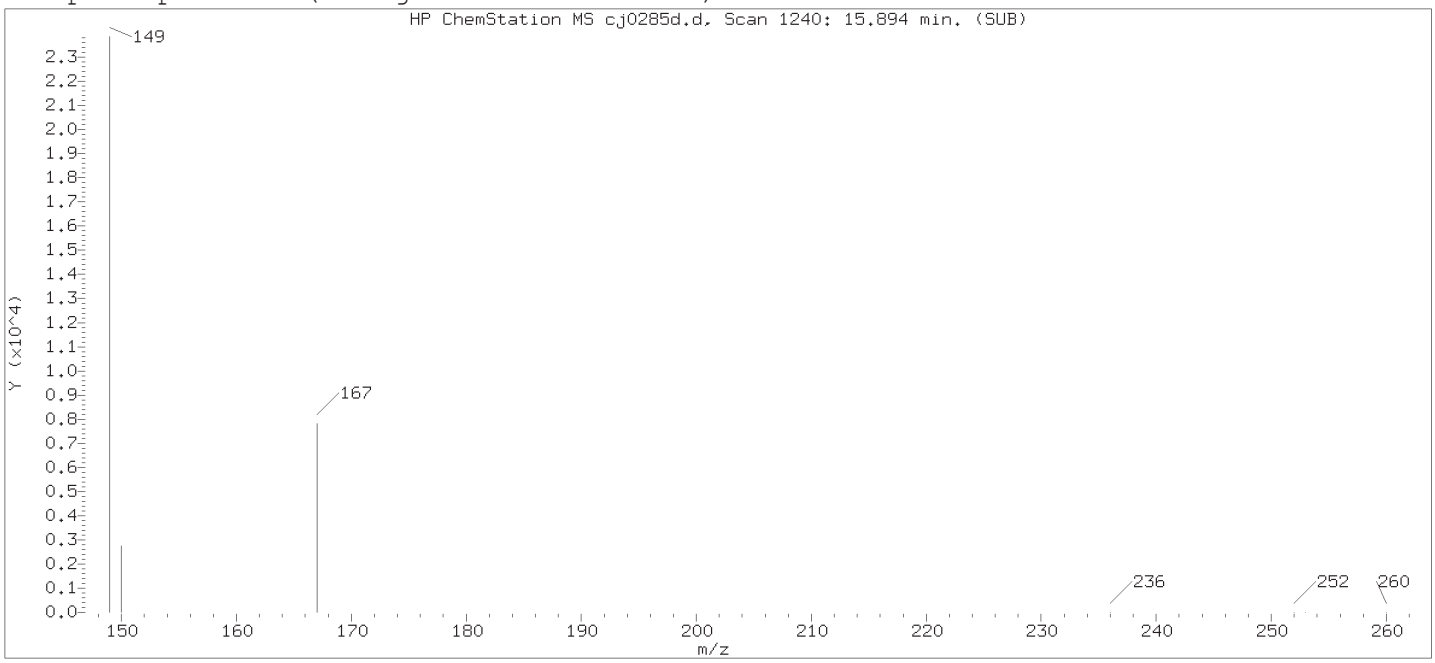
Compound Number : 41
Compound Name : bis(2-Ethylhexyl)phthalate
Scan Number : 1240
Retention Time (minutes) : 15.894
Quant Ion : 149.00
Area (flag) : 25348M
On-Column Amount (ng/ul) : 0.1398
Integration start scan : 1234 Integration stop scan: 1247
Y at integration start : 497 Y at integration end: 497

Reason for manual integration: improper integration

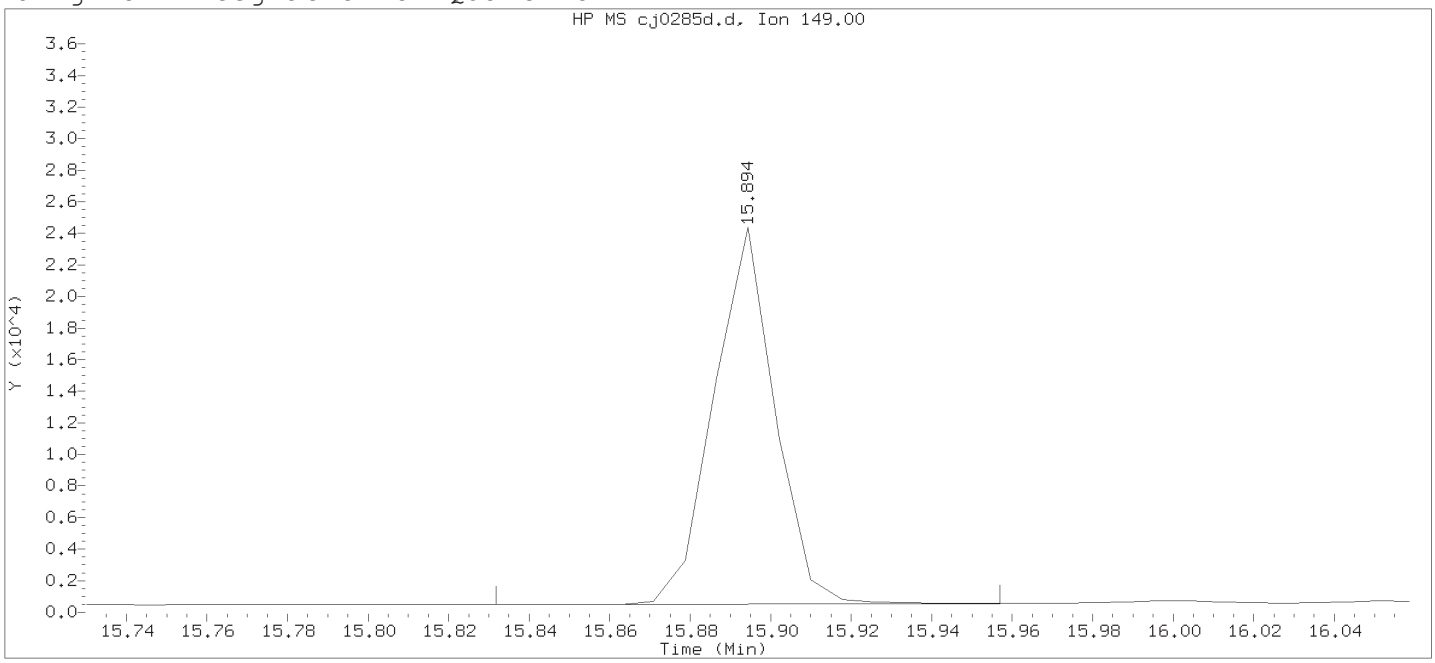
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0285d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:39 Analyst ID: apb10206

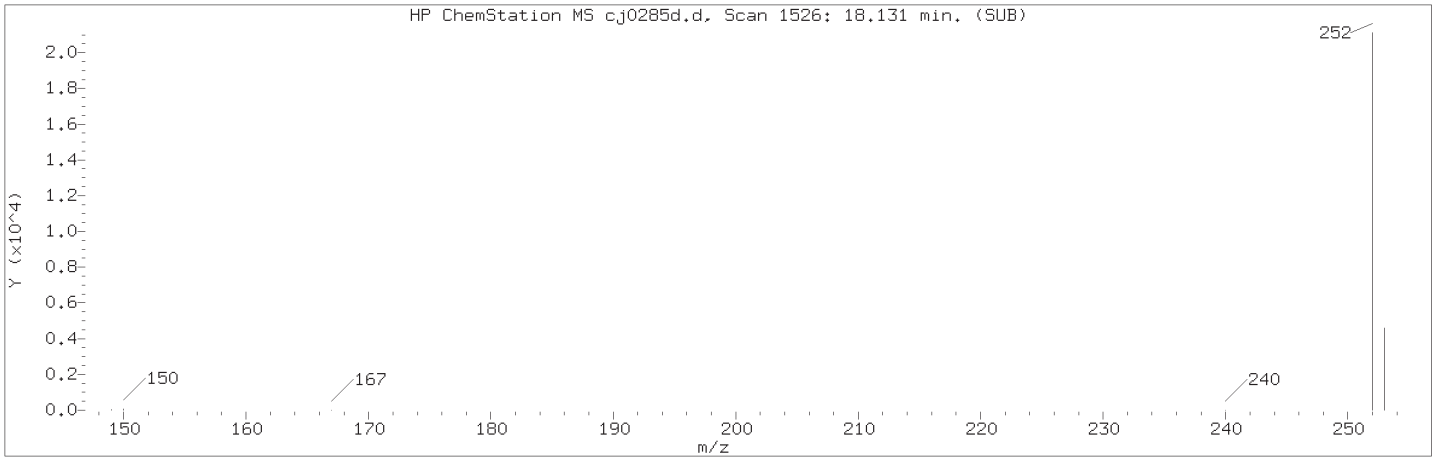
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:06
Date, time and analyst ID of latest file update: 07-Oct-2018 21:06 apb10206

Sample Name: SSTD0.20 Lab Sample ID: SIM2598

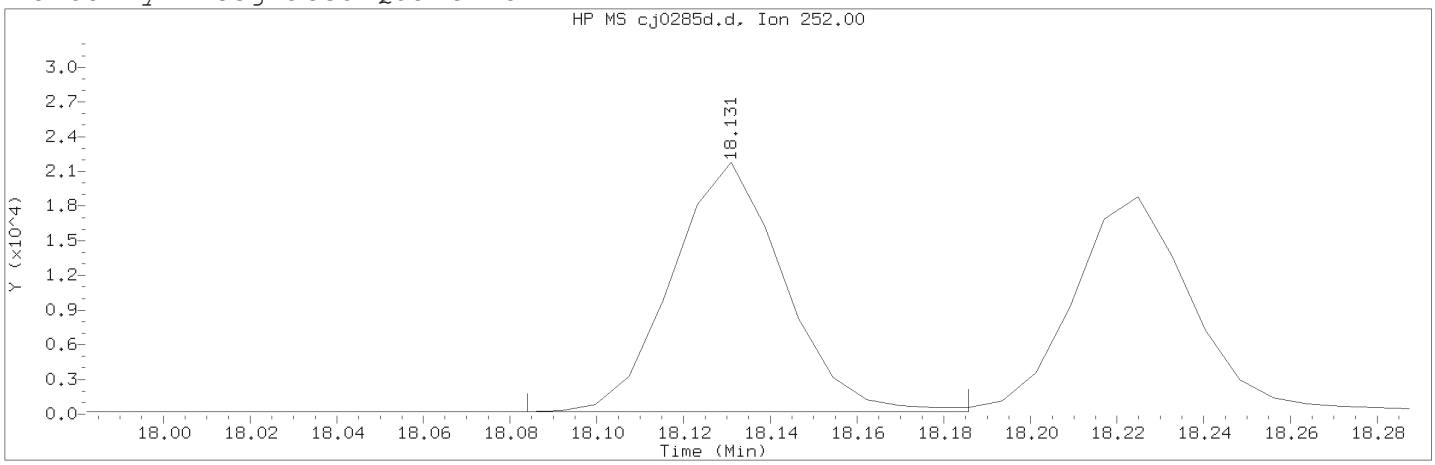
Compound Number	: 41		
Compound Name	: bis(2-Ethylhexyl)phthalate		
Scan Number	: 1240		
Retention Time (minutes)	: 15.894		
Quant Ion	: 149.00		
Area	: 25298		
On-column Amount (ng/ul)	: 0.0411		
Integration start scan	: 1231	Integration stop scan:	1247
Y at integration start	: 486	Y at integration end:	520

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:26.
Target 3.5 esignature used in this report

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0285d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:39 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:14 apb10206

Sample Name: SSTD0.20 Lab Sample ID: SIM2598

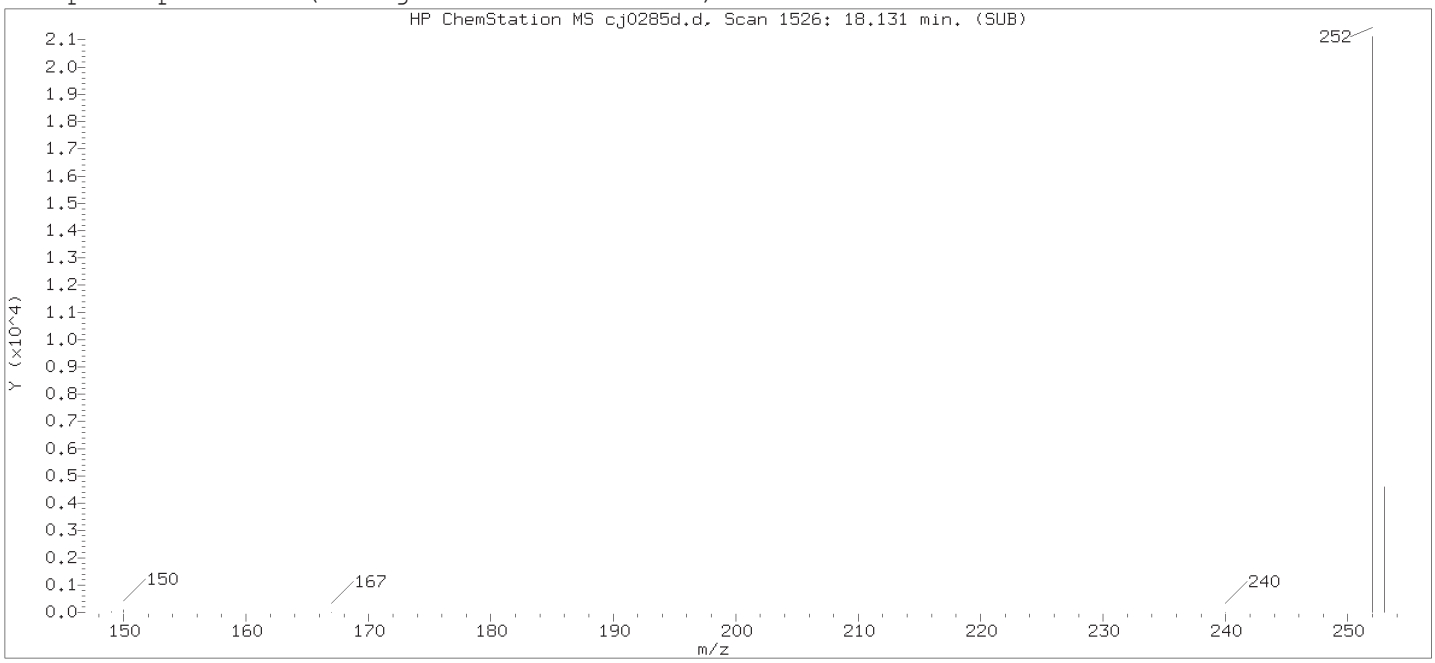
Compound Number : 48
Compound Name : Benzo(e)pyrene
Scan Number : 1526
Retention Time (minutes) : 18.131
Quant Ion : 252.00
Area (flag) : 38774M
On-Column Amount (ng/ul) : 0.2004
Integration start scan : 1519 Integration stop scan: 1532
Y at integration start : 189 Y at integration end: 189

Reason for manual integration: improper integration

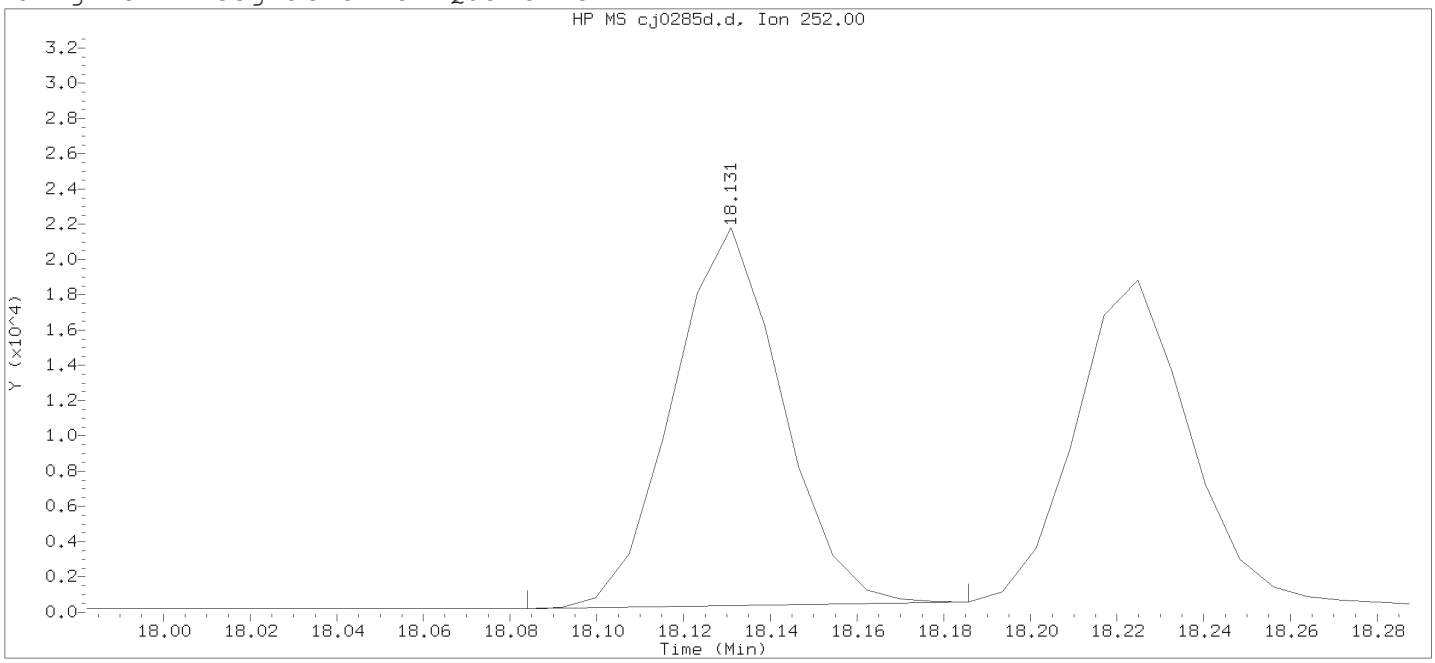
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0285d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:39 Analyst ID: apb10206

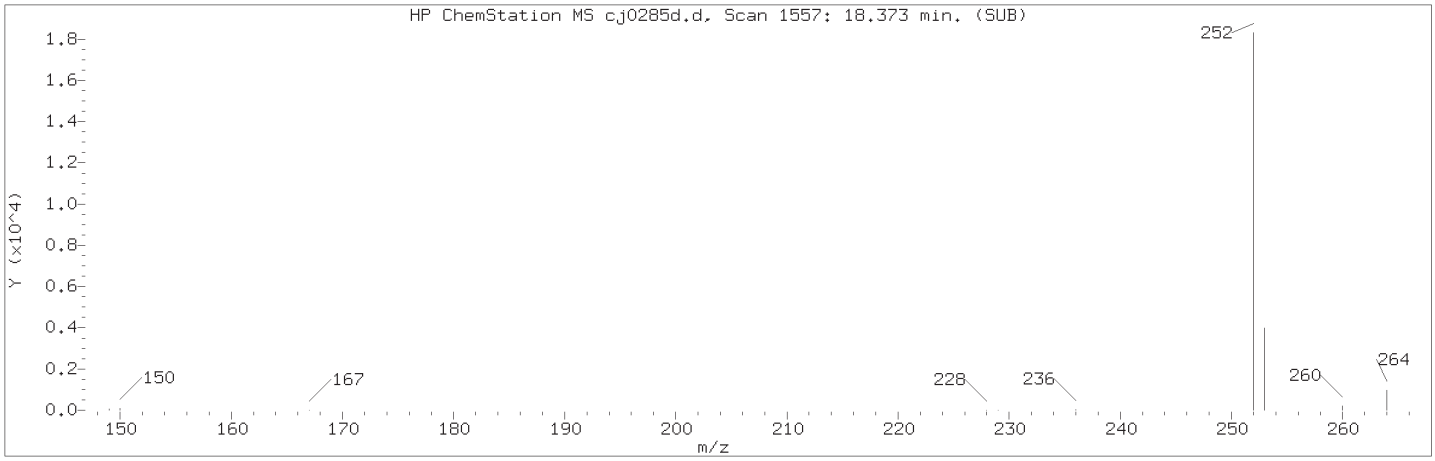
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:06
Date, time and analyst ID of latest file update: 07-Oct-2018 21:06 apb10206

Sample Name: SSTD0.20 Lab Sample ID: SIM2598

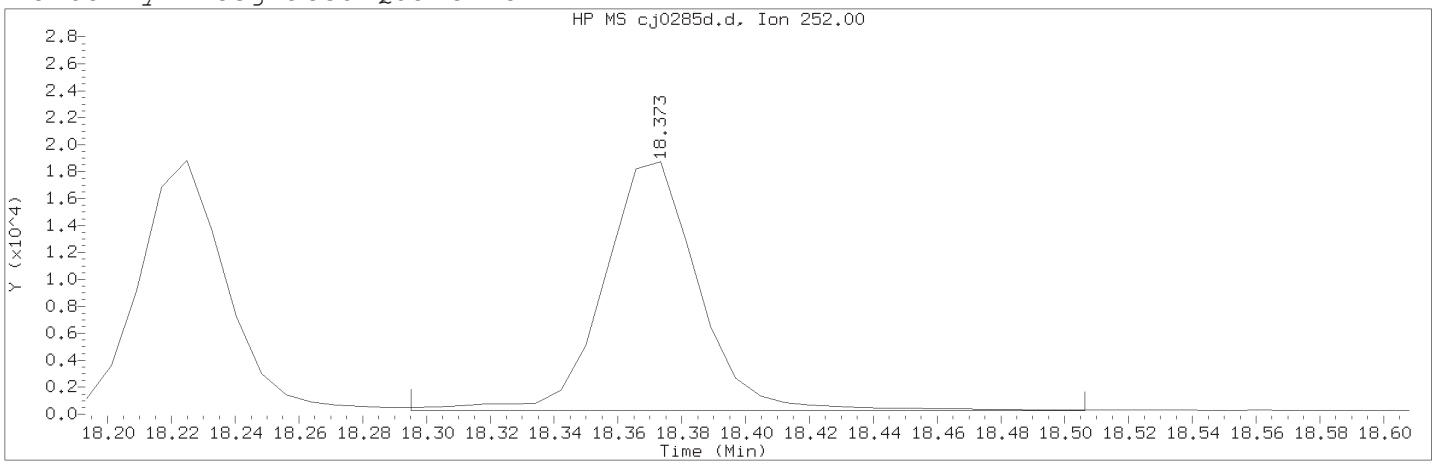
Compound Number	: 48		
Compound Name	: Benzo(e)pyrene		
Scan Number	: 1526		
Retention Time (minutes)	: 18.131		
Quant Ion	: 252.00		
Area	: 37422		
On-column Amount (ng/ul)	: 0.0789		
Integration start scan	: 1519	Integration stop scan:	1532
Y at integration start	: 208	Y at integration end:	581

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:26.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0285d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:39 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:14 apb10206

Sample Name: SSTD0.20 Lab Sample ID: SIM2598

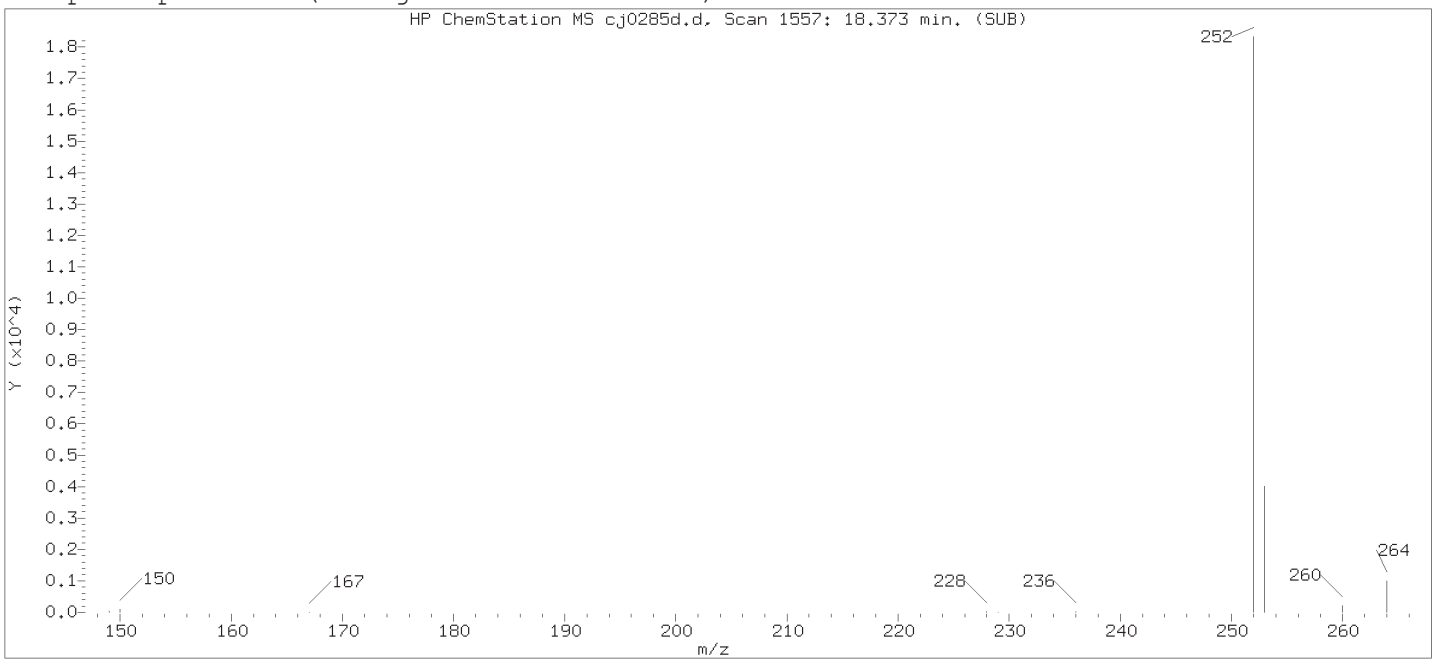
Compound Number	: 52		
Compound Name	: Perylene		
Scan Number	: 1557		
Retention Time (minutes)	: 18.373		
Quant Ion	: 252.00		
Area (flag)	: 38313M		
On-Column Amount (ng/ul)	: 0.2044		
Integration start scan	: 1546	Integration stop scan:	1573
Y at integration start	: 258	Y at integration end:	258

Reason for manual integration: improper integration

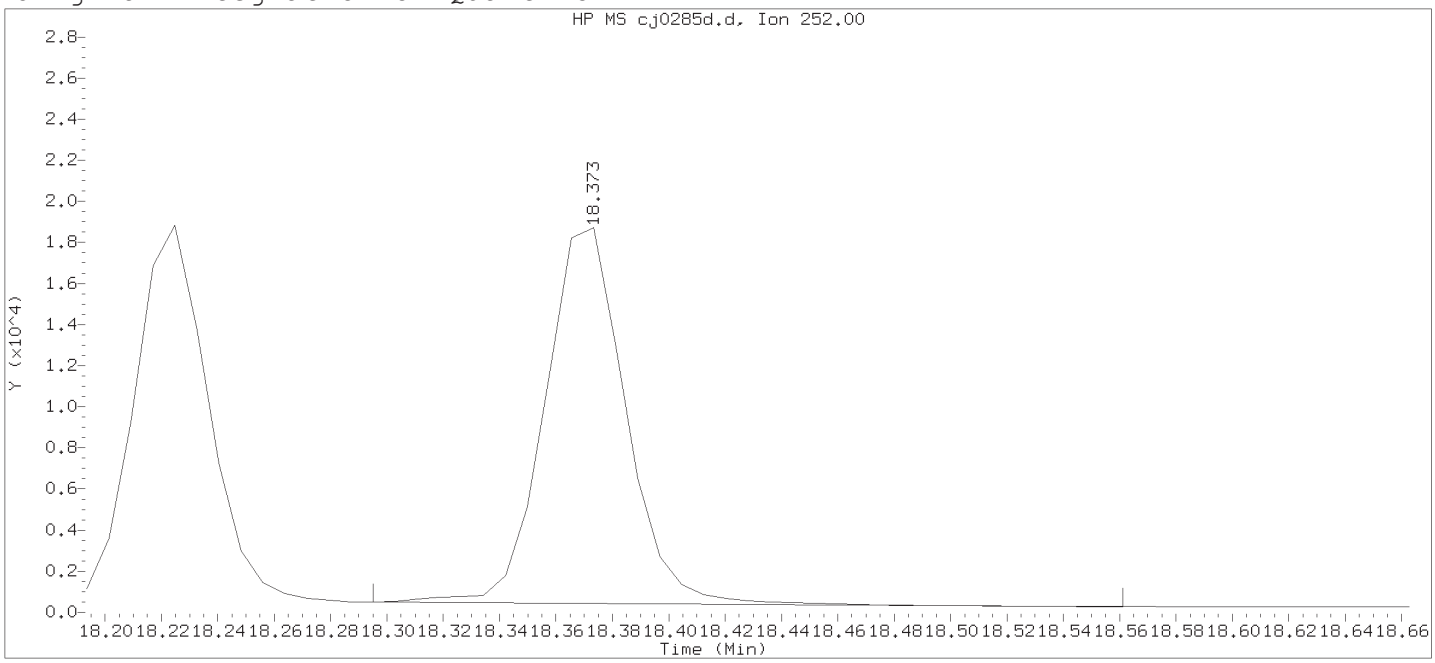
Analyst responsible for change: Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



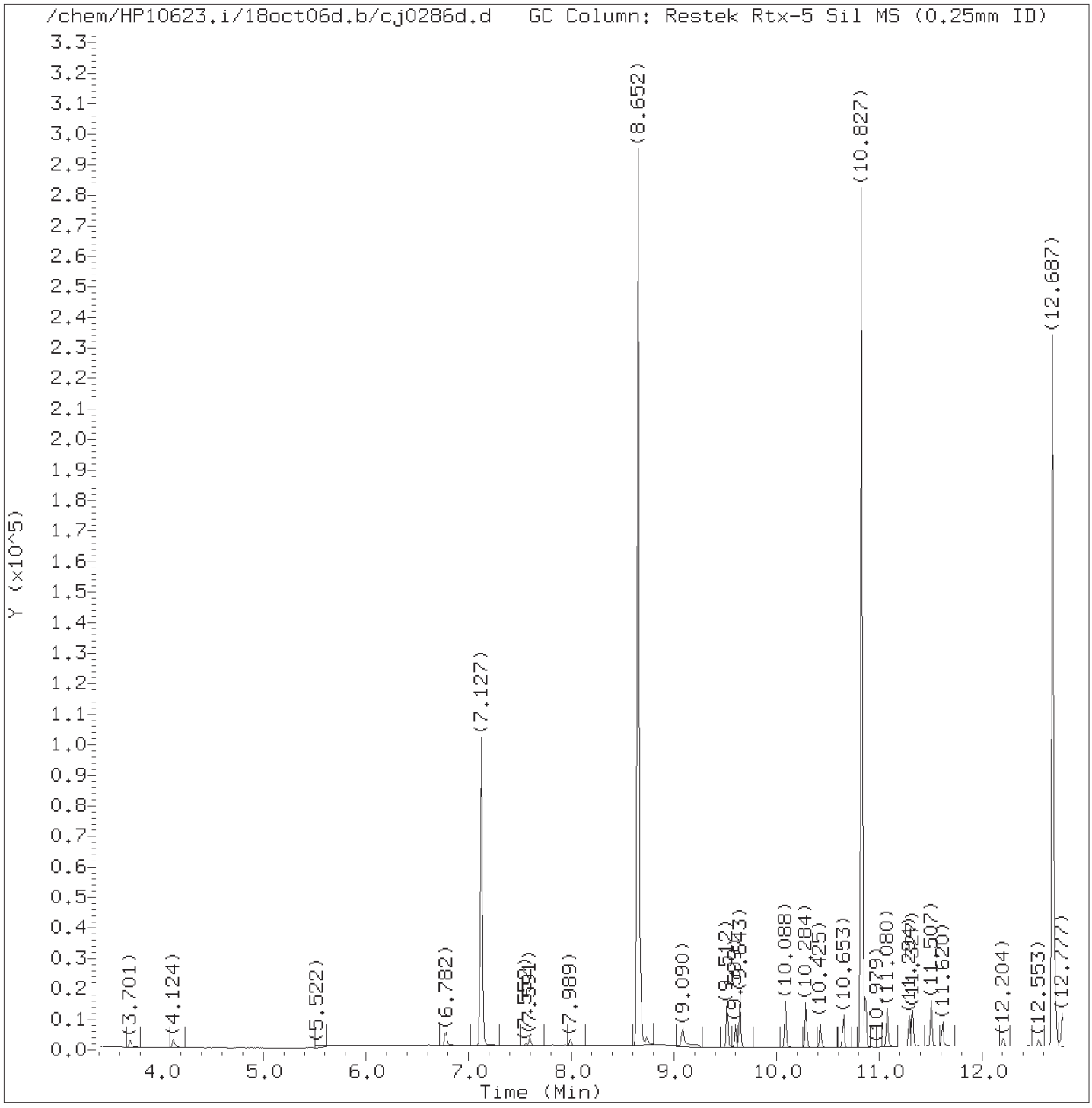
Data File: /chem/HP10623.i/18oct06d.b/cj0285d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 01:39 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:06
Date, time and analyst ID of latest file update: 07-Oct-2018 21:06 apb10206

Sample Name: SSTD0.20 Lab Sample ID: SIM2598

Compound Number	: 52		
Compound Name	: Perylene		
Scan Number	: 1557		
Retention Time (minutes)	: 18.373		
Quant Ion	: 252.00		
Area	: 36501		
On-column Amount (ng/ul)	: 0.0776		
Integration start scan	: 1546	Integration stop scan:	1580
Y at integration start	: 490	Y at integration end:	261

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:26.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

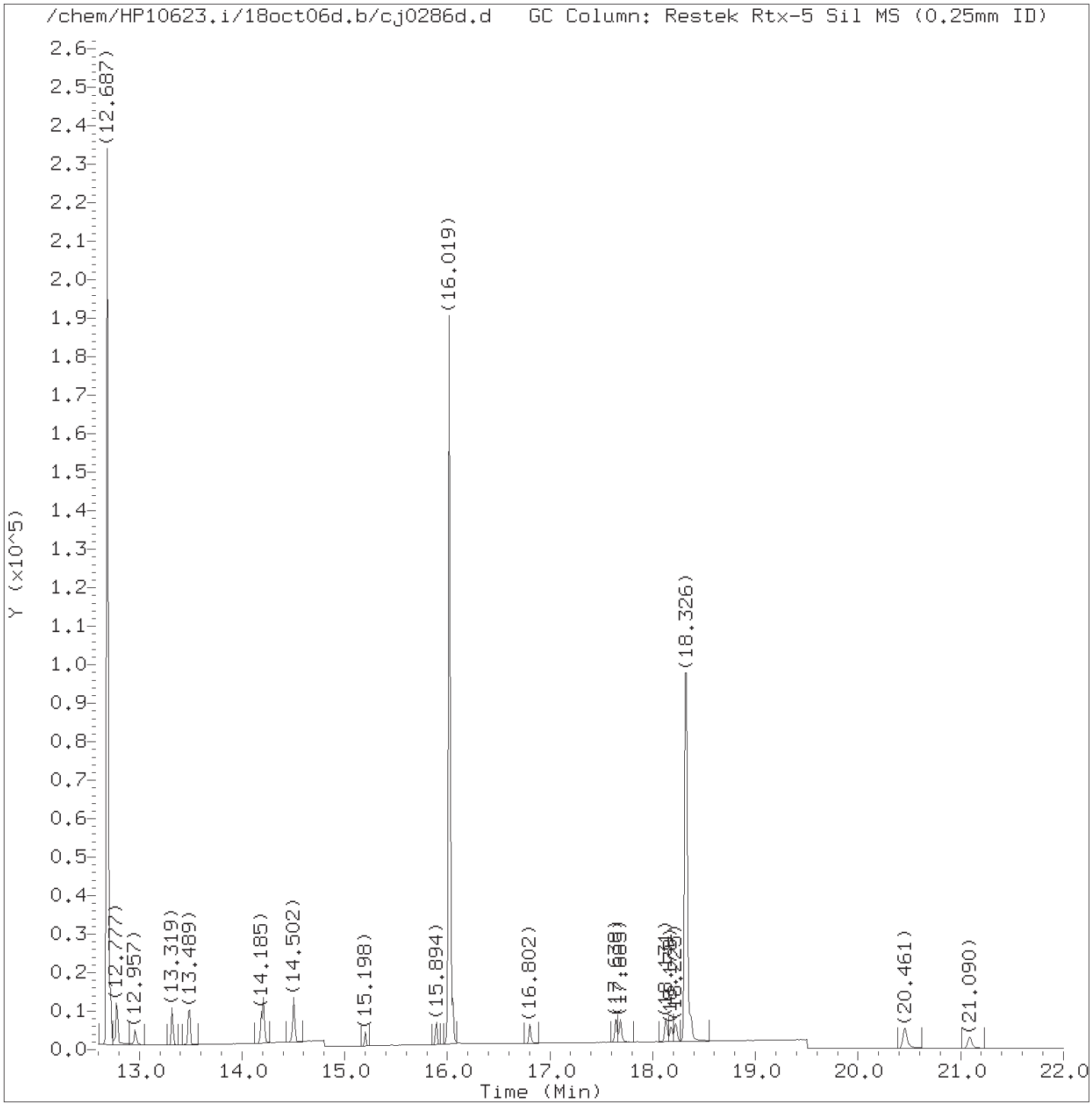
Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.701	88	2202	0.048
2) N-Nitrosodimethylamine	(1)	4.124	74	2539	0.042
5) bis(2-Chloroethyl)ether	(1)	6.782	93	4194	0.045
6)*1,4-Dichlorobenzene-d4	(1)	7.127	152	72122	1.000
10)*Naphthalene-d8	(2)	8.652	136	288195	1.000
11) Naphthalene	(2)	8.679	128	14369	0.047
12) Quinoline	(2)	9.090	129	7385M	0.042
13) 2-Methylnaphthalene	(2)	9.512	142	8495M	0.045
14)$1-Methylnaphthalene-d10	(2)	9.599	152	6654	0.046
15) 1-Methylnaphthalene	(2)	9.643	142	8778	0.046
18) Dimethylphthalate	(3)	10.425	163	7631	0.041
19) Acenaphthylene	(3)	10.653	152	10197	0.039
20)*Acenaphthene-d10	(3)	10.827	164	133032	1.000
21) Acenaphthene	(3)	10.870	154	8283M	0.046
22) Dibenzofuran	(3)	11.080	168	11114M	0.045
23) Diethylphthalate	(3)	11.294	149	7238	0.039
26) Fluorene	(3)	11.507	166	8192	0.042
28) NDPA as diphenylamine	(4)	11.620	169	5049	0.043
27) N-Nitrosodiphenylamine	(4)	11.620	169	5049	0.043
29) Hexachlorobenzene	(4)	12.215	284	1981	0.046
31)*Phenanthrene-d10	(4)	12.687	188	246827	1.000
32) Phenanthrene	(4)	12.721	178	13295	0.045
33) Anthracene	(4)	12.777	178	11092	0.039
35) Di-n-butylphthalate	(4)	13.319	149	9113	0.029
36)$Fluoranthene-d10	(4)	14.185	212	9334	0.042
37) Fluoranthene	(4)	14.209	202	11923	0.041
39) Pyrene	(5)	14.502	202	12298	0.042
40) Butylbenzylphthalate	(5)	15.198	149	3568	0.027
41) bis(2-Ethylhexyl)phthalate	(5)	15.894	149	4619	0.026
42) Benzo(a)anthracene	(5)	16.004	228	10048	0.042
43)*Chrysene-d12	(5)	16.019	240	181988	1.000
44) Chrysene	(5)	16.051	228	11404	0.046
45) Di-n-octylphthalate	(6)	16.802	149	6482	0.023
46) Benzo(b)fluoranthene	(6)	17.638	252	8158	0.042
47) Benzo(k)fluoranthene	(6)	17.685	252	9199	0.044
48) Benzo(e)pyrene	(6)	18.131	252	8611M	0.045
49)$Benzo(a)pyrene-d12	(6)	18.178	264	5361	0.040
50) Benzo(a)pyrene	(6)	18.225	252	7261	0.041
51)*Perylene-d12	(6)	18.326	264	145437	1.000
52) Perylene	(6)	18.373	252	7844M	0.042

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

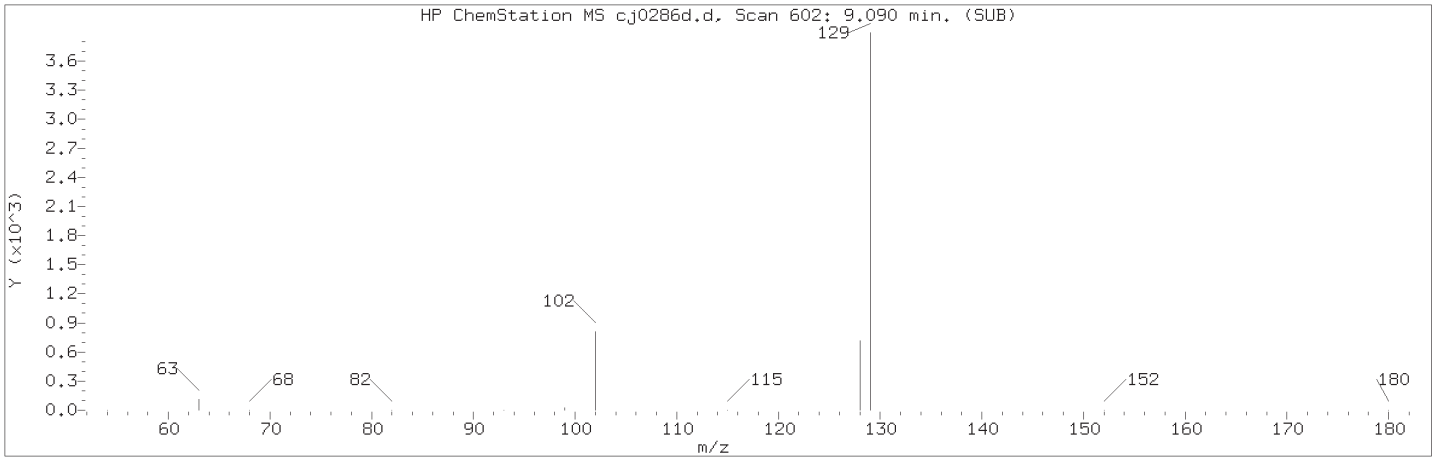
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

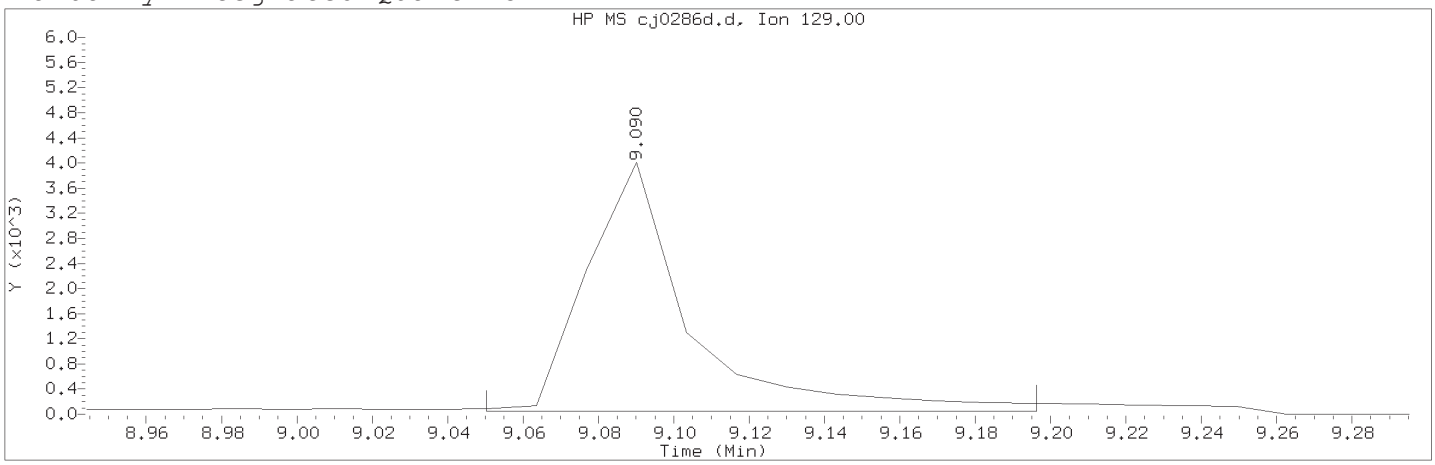
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.454	276	6900	0.041
54) Dibenz(a,h)anthracene	(6)	20.461	278	5934	0.041
55) Benzo(g,h,i)perylene	(6)	21.090	276	6556	0.042

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

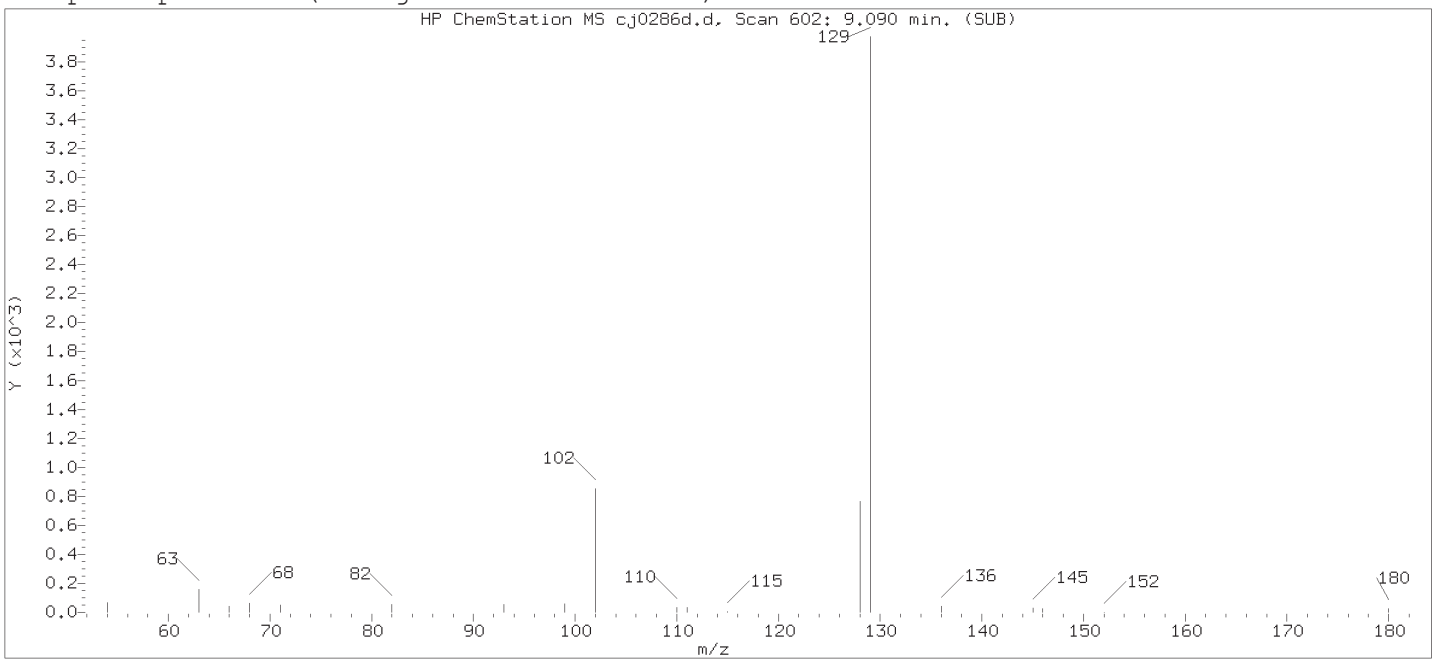
Compound Number	: 12		
Compound Name	: Quinoline		
Scan Number	: 602		
Retention Time (minutes)	: 9.090		
Quant Ion	: 129.00		
Area (flag)	: 7385M		
On-Column Amount (ng/ul)	: 0.0417		
Integration start scan	: 598	Integration stop scan:	609
Y at integration start	: 45	Y at integration end:	45

Reason for manual integration: improper integration

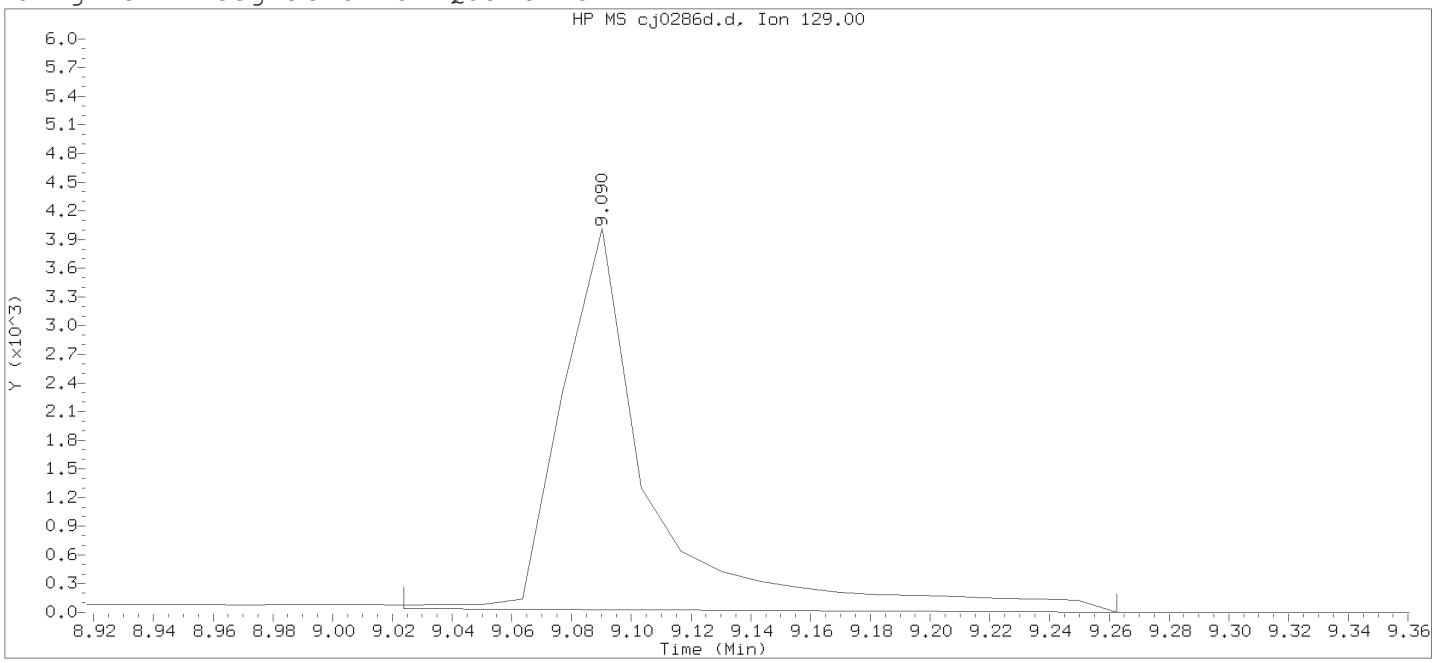
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

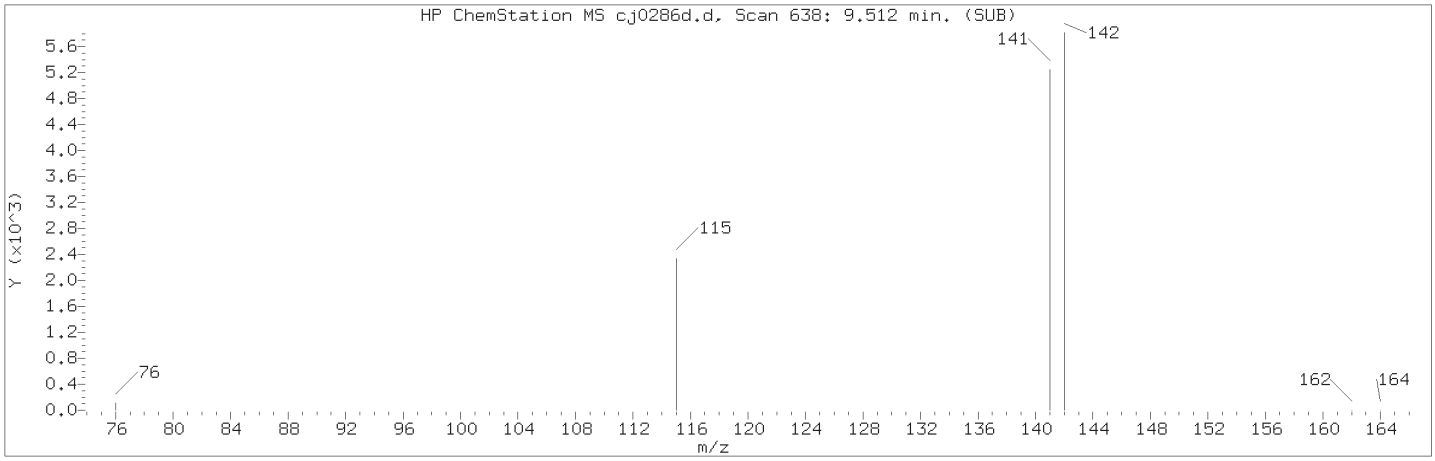
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:06
Date, time and analyst ID of latest file update: 07-Oct-2018 21:06 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

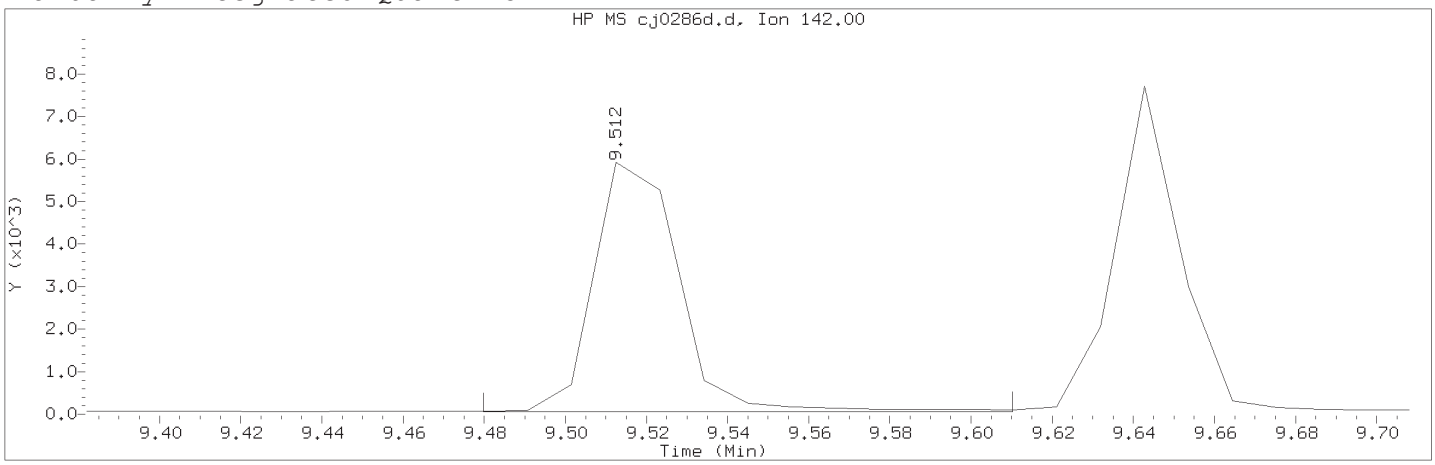
Compound Number	: 12		
Compound Name	: Quinoline		
Scan Number	: 602		
Retention Time (minutes)	: 9.090		
Quant Ion	: 129.00		
Area	: 8040		
On-column Amount (ng/ul)	: 0.0134		
Integration start scan	: 596	Integration stop scan:	614
Y at integration start	: 39	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

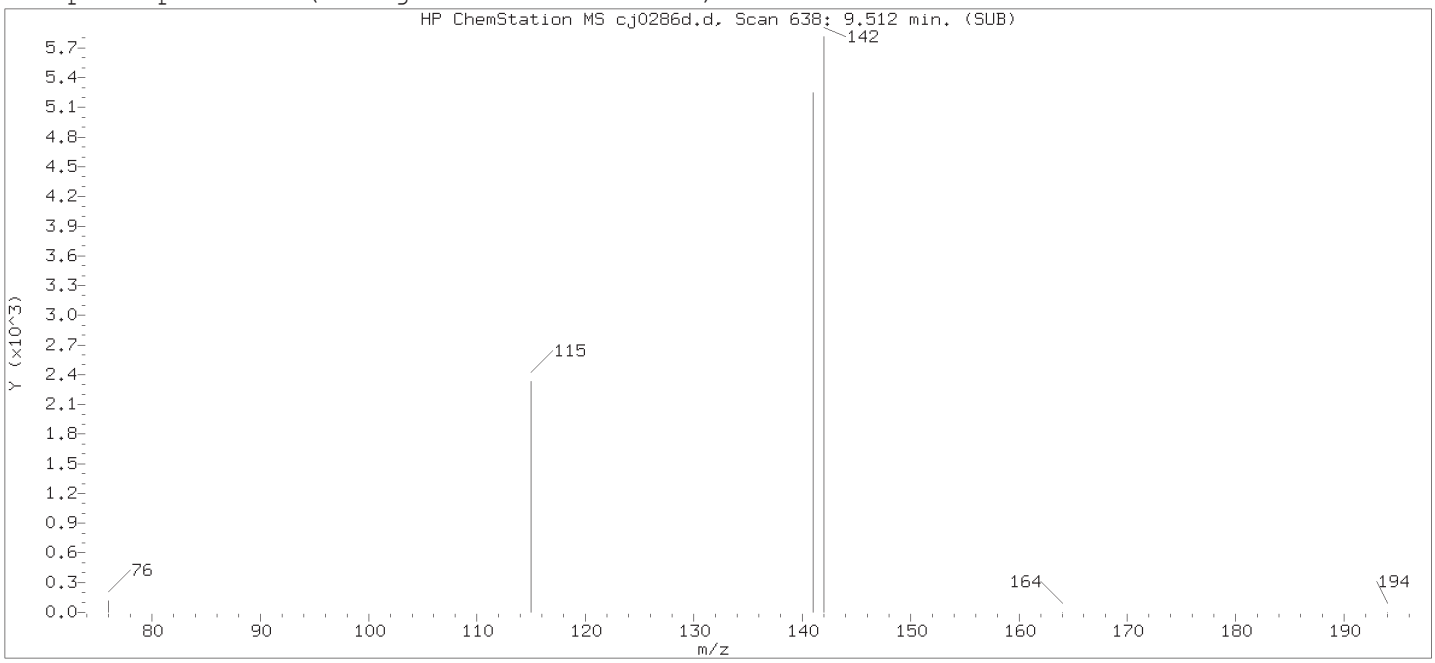
Compound Number : 13
Compound Name : 2-Methylnaphthalene
Scan Number : 638
Retention Time (minutes) : 9.512
Quant Ion : 142.00
Area (flag) : 8495M
On-Column Amount (ng/ul) : 0.0445
Integration start scan : 634 Integration stop scan: 646
Y at integration start : 63 Y at integration end: 63

Reason for manual integration: improper integration

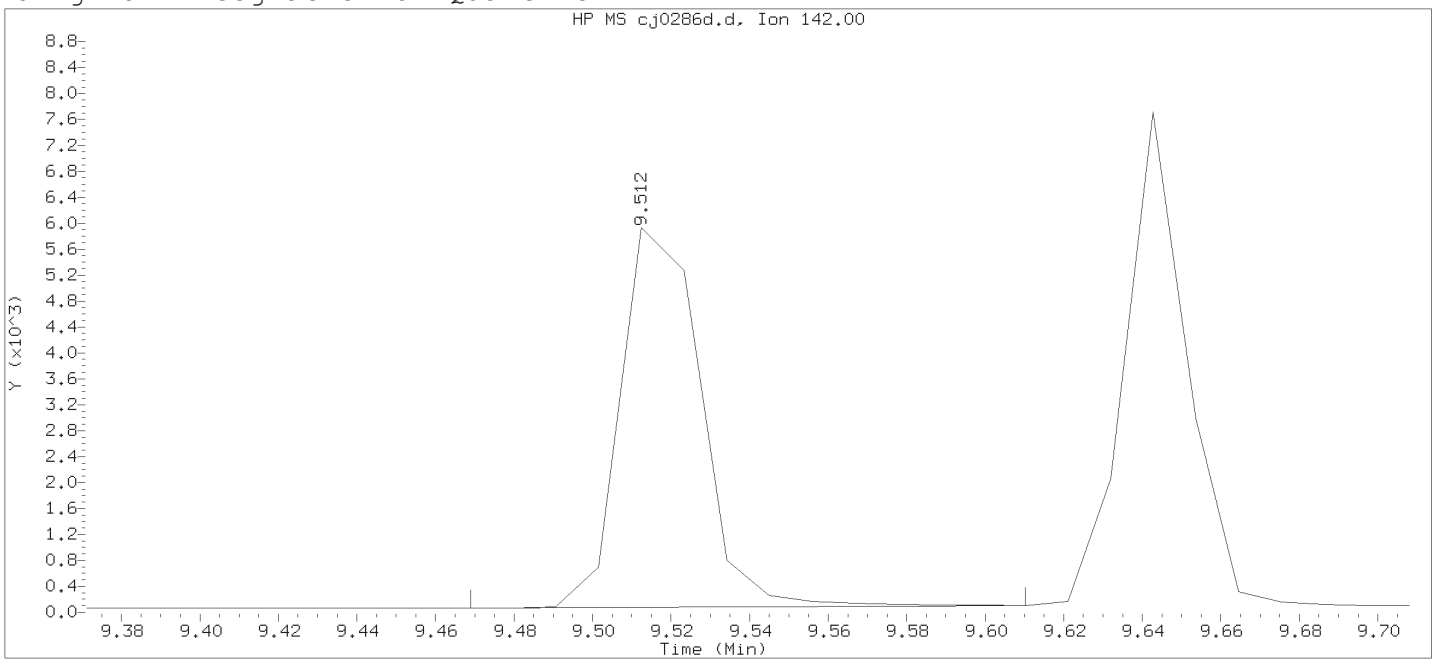
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

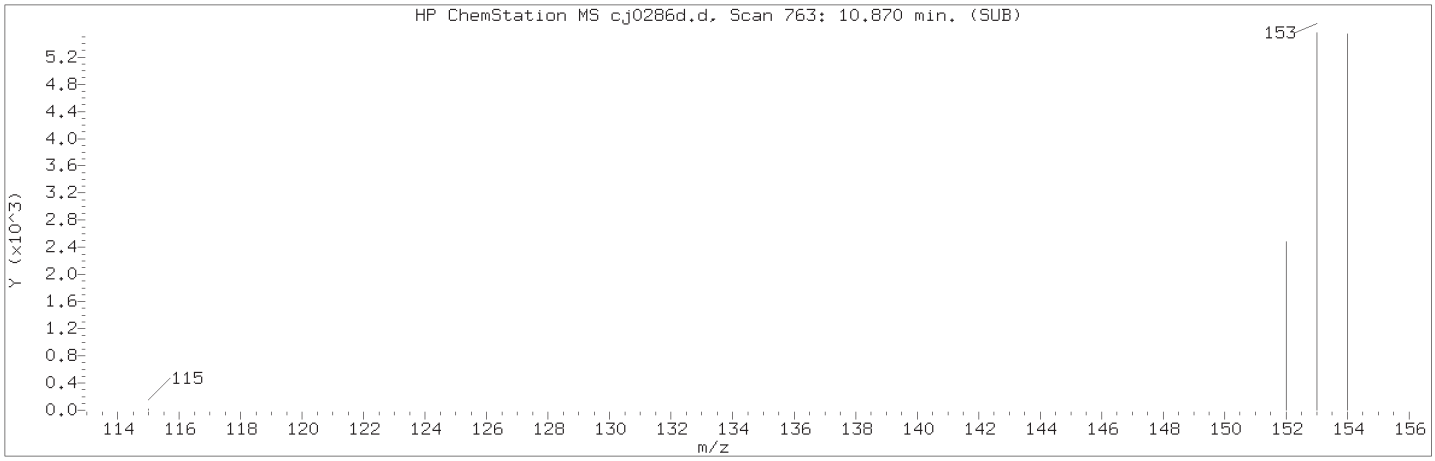
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:06
Date, time and analyst ID of latest file update: 07-Oct-2018 21:06 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

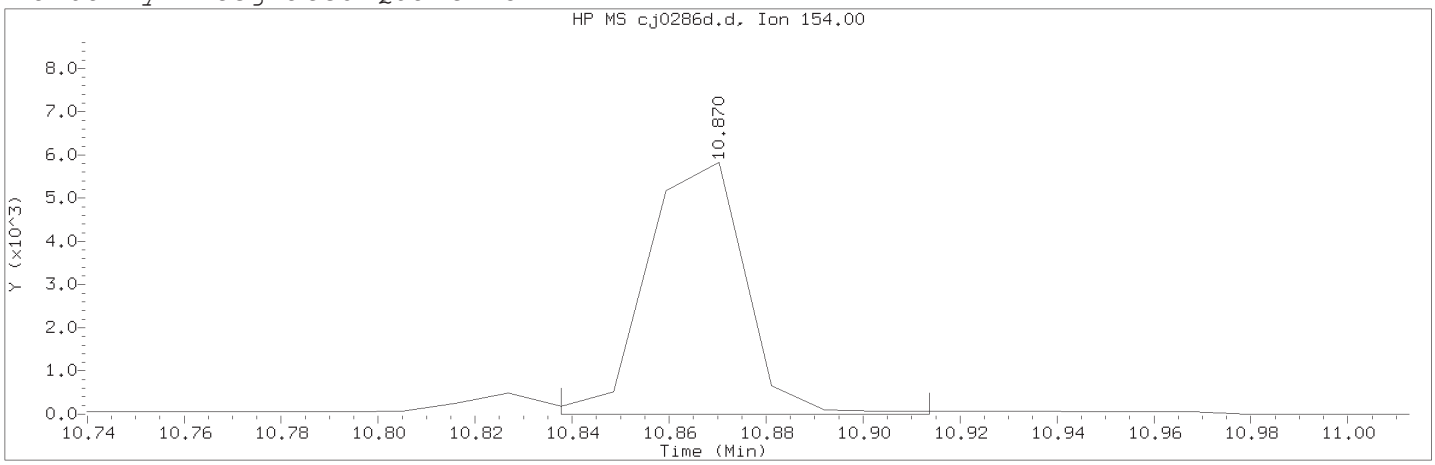
Compound Number	: 13		
Compound Name	: 2-Methylnaphthalene		
Scan Number	: 638		
Retention Time (minutes)	: 9.512		
Quant Ion	: 142.00		
Area	: 8327		
On-column Amount (ng/ul)	: 0.0170		
Integration start scan	: 633	Integration stop scan:	646
Y at integration start	: 62	Y at integration end:	101

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:26.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

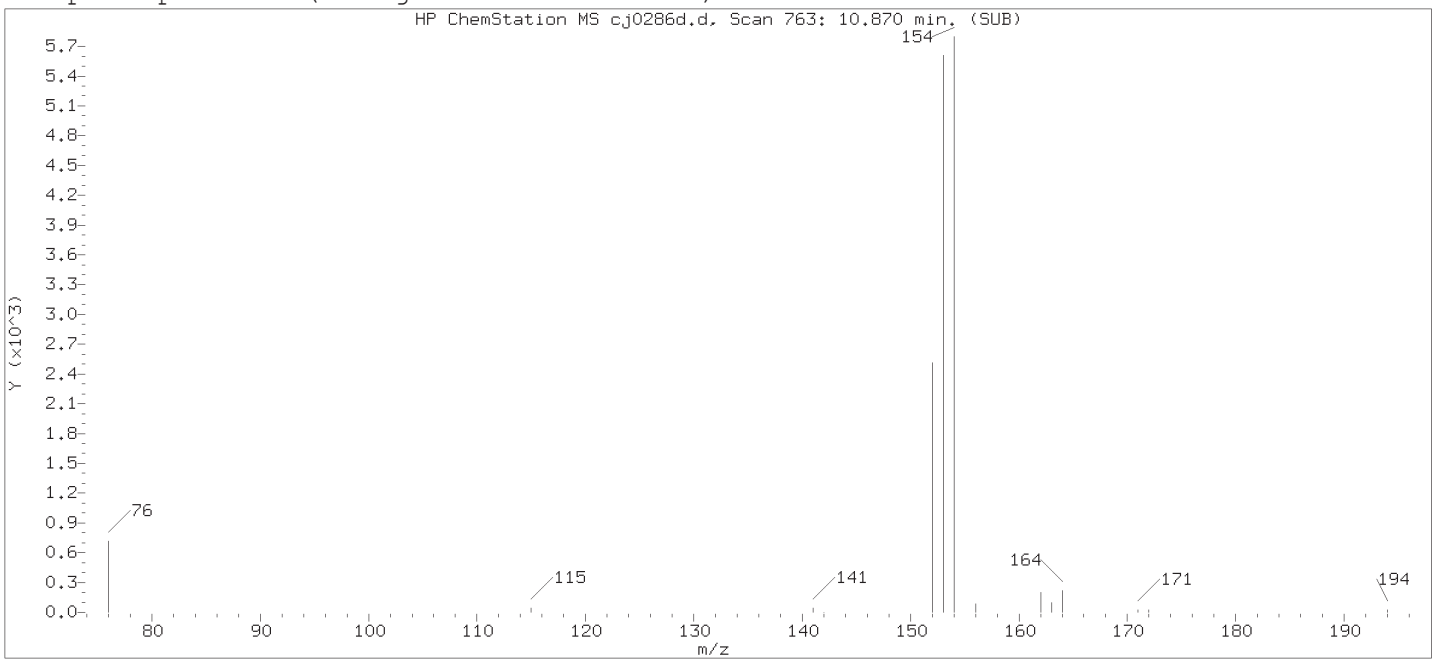
Compound Number : 21
Compound Name : Acenaphthene
Scan Number : 763
Retention Time (minutes) : 10.870
Quant Ion : 154.00
Area (flag) : 8283M
On-Column Amount (ng/ul) : 0.0458
Integration start scan : 759 Integration stop scan: 766
Y at integration start : -1 Y at integration end: -1

Reason for manual integration: improper integration

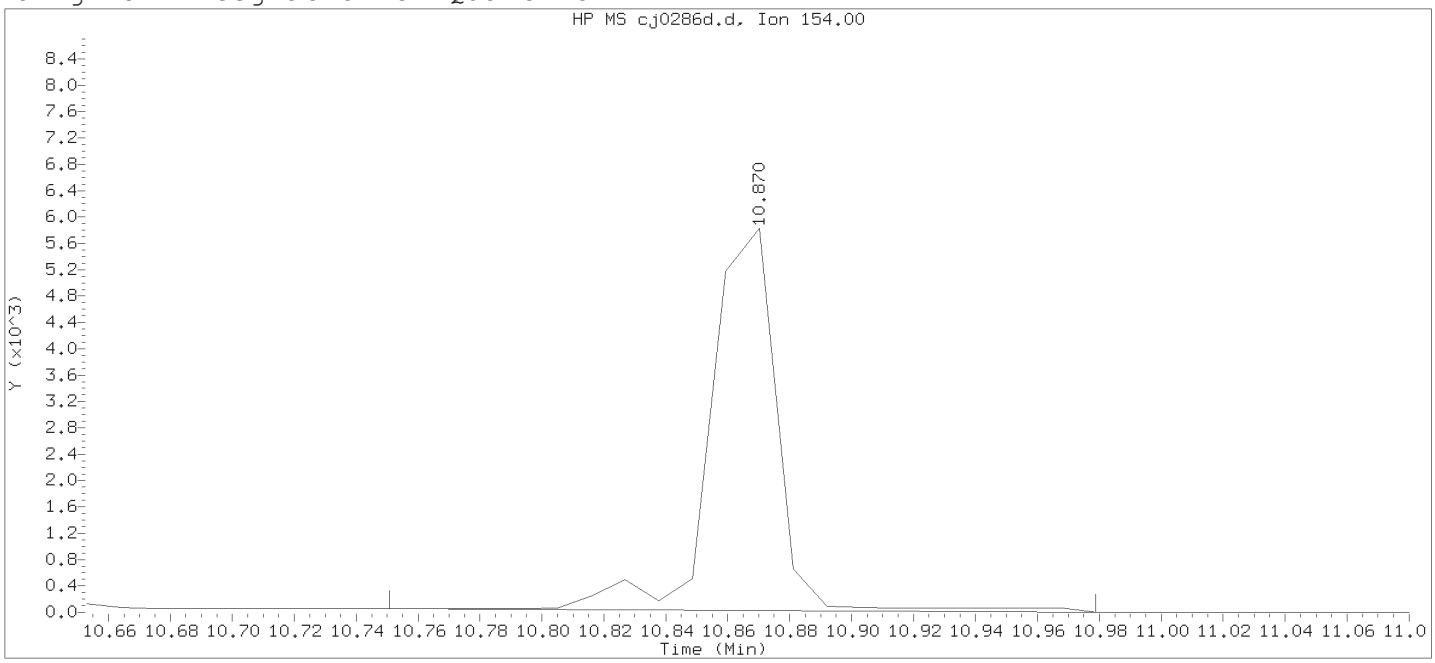
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

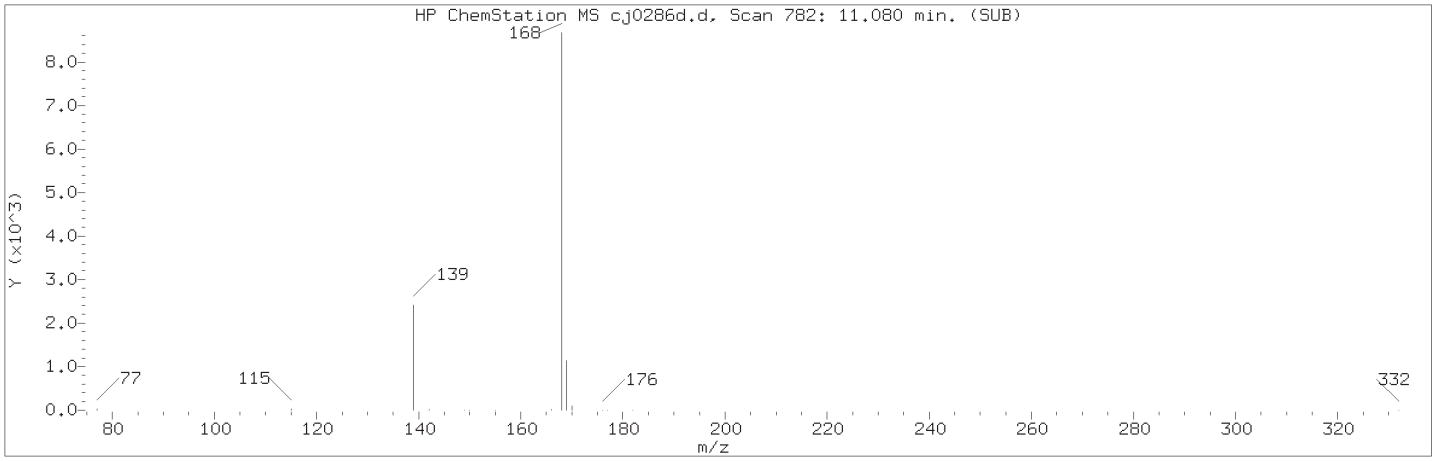
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:06
Date, time and analyst ID of latest file update: 07-Oct-2018 21:06 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

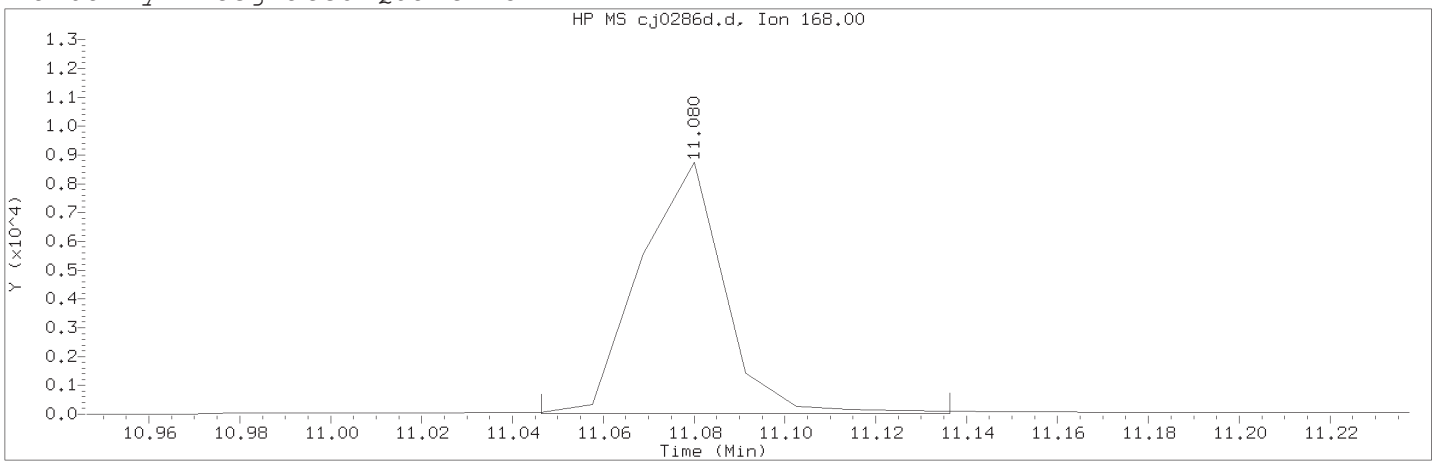
Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 763		
Retention Time (minutes)	: 10.870		
Quant Ion	: 154.00		
Area	: 8807		
On-column Amount (ng/ul)	: 0.0192		
Integration start scan	: 751	Integration stop scan:	772
Y at integration start	: 54	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:26.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

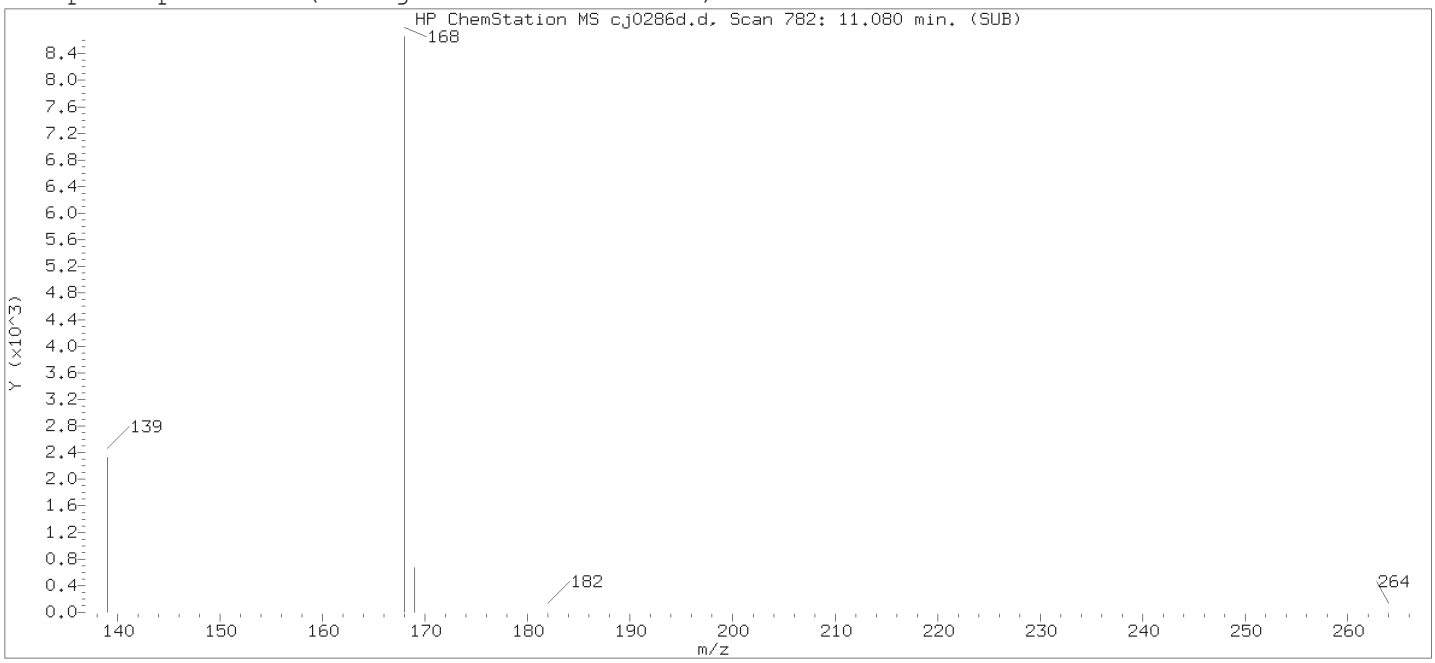
Compound Number : 22
Compound Name : Dibenzofuran
Scan Number : 782
Retention Time (minutes) : 11.080
Quant Ion : 168.00
Area (flag) : 11114M
On-Column Amount (ng/ul) : 0.0452
Integration start scan : 778 Integration stop scan: 786
Y at integration start : 17 Y at integration end: 17

Reason for manual integration: improper integration

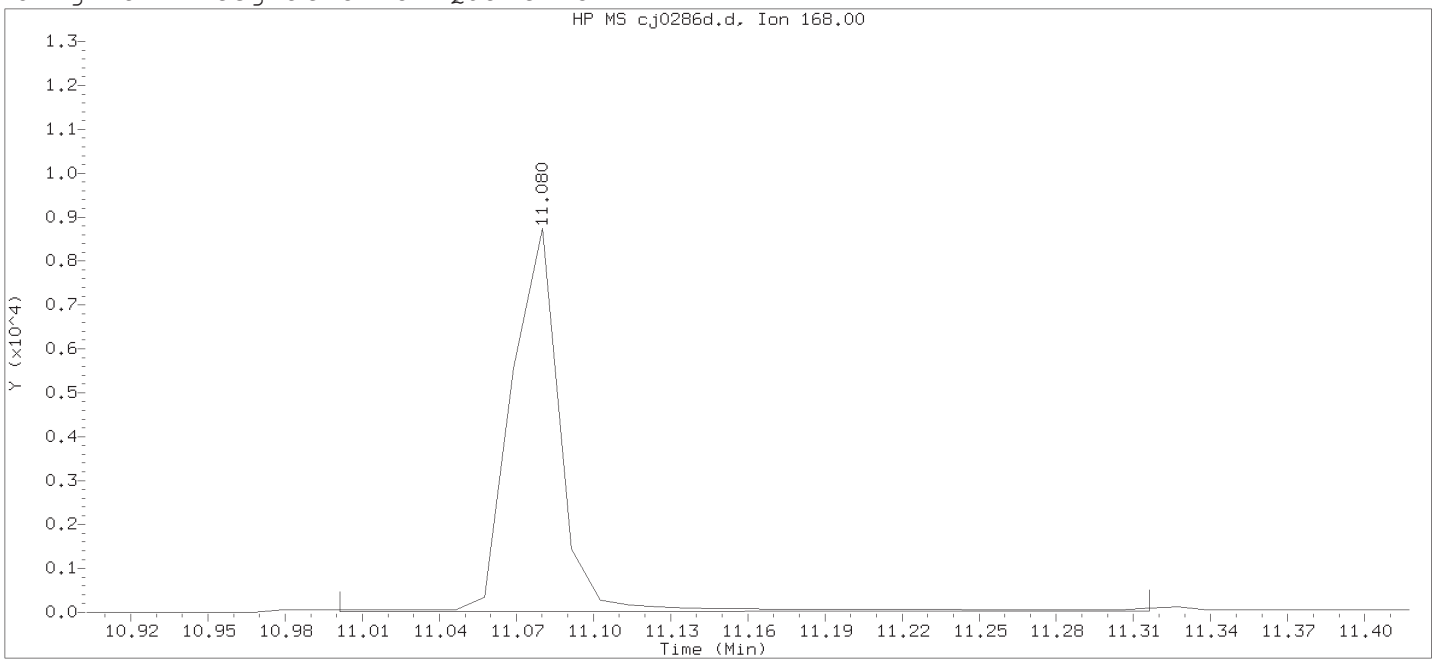
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

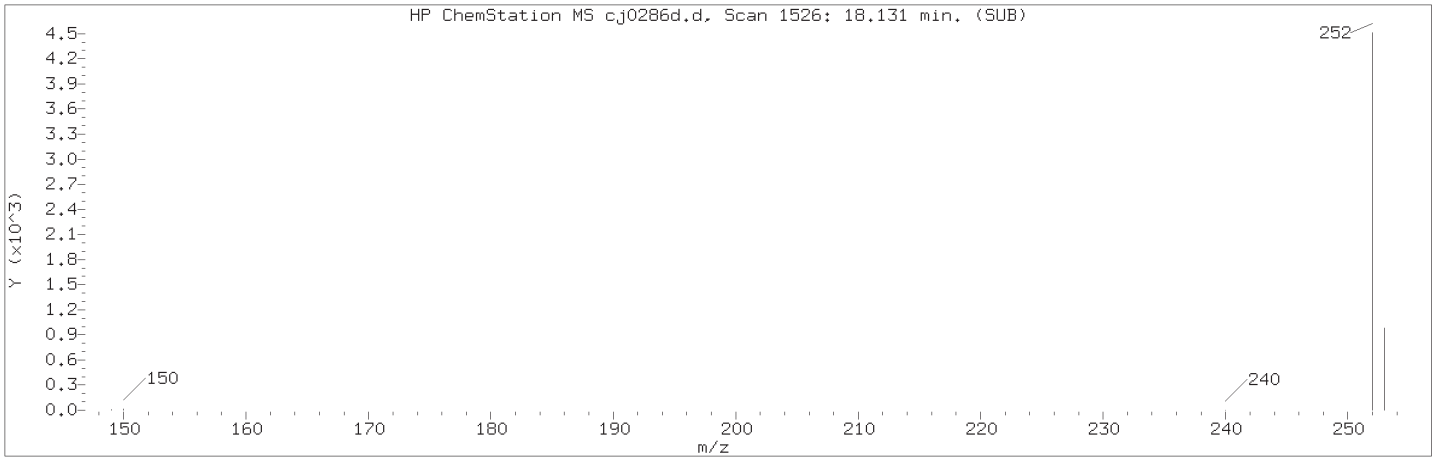
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:06
Date, time and analyst ID of latest file update: 07-Oct-2018 21:06 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

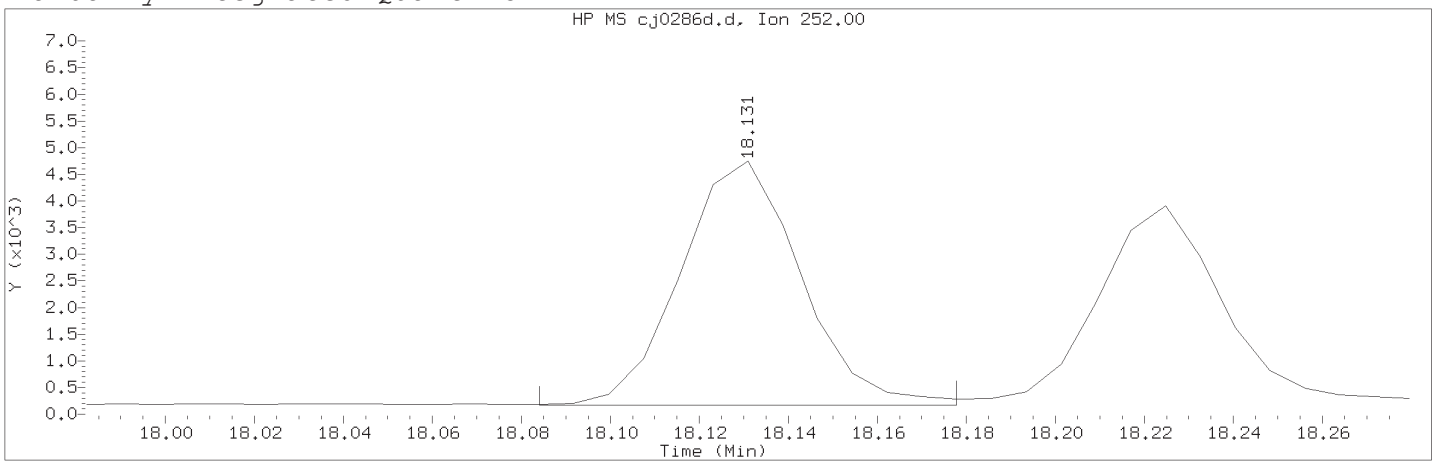
Compound Number	: 22		
Compound Name	: Dibenzofuran		
Scan Number	: 782		
Retention Time (minutes)	: 11.080		
Quant Ion	: 168.00		
Area	: 11615		
On-column Amount (ng/ul)	: 0.0174		
Integration start scan	: 774	Integration stop scan:	802
Y at integration start	: 9	Y at integration end:	34

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:26.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

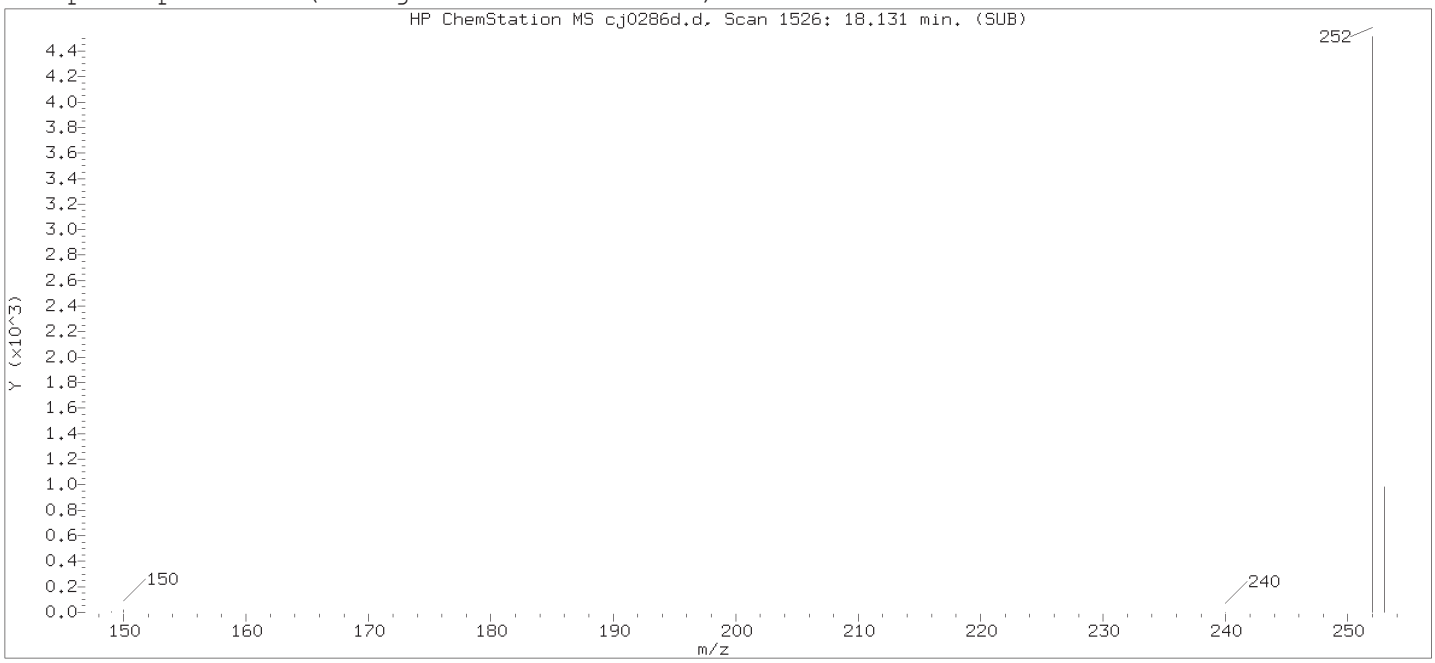
Compound Number	: 48		
Compound Name	: Benzo(e)pyrene		
Scan Number	: 1526		
Retention Time (minutes)	: 18.131		
Quant Ion	: 252.00		
Area (flag)	: 8611M		
On-Column Amount (ng/ul)	: 0.0451		
Integration start scan	: 1519	Integration stop scan:	1531
Y at integration start	: 167	Y at integration end:	167

Reason for manual integration: improper integration

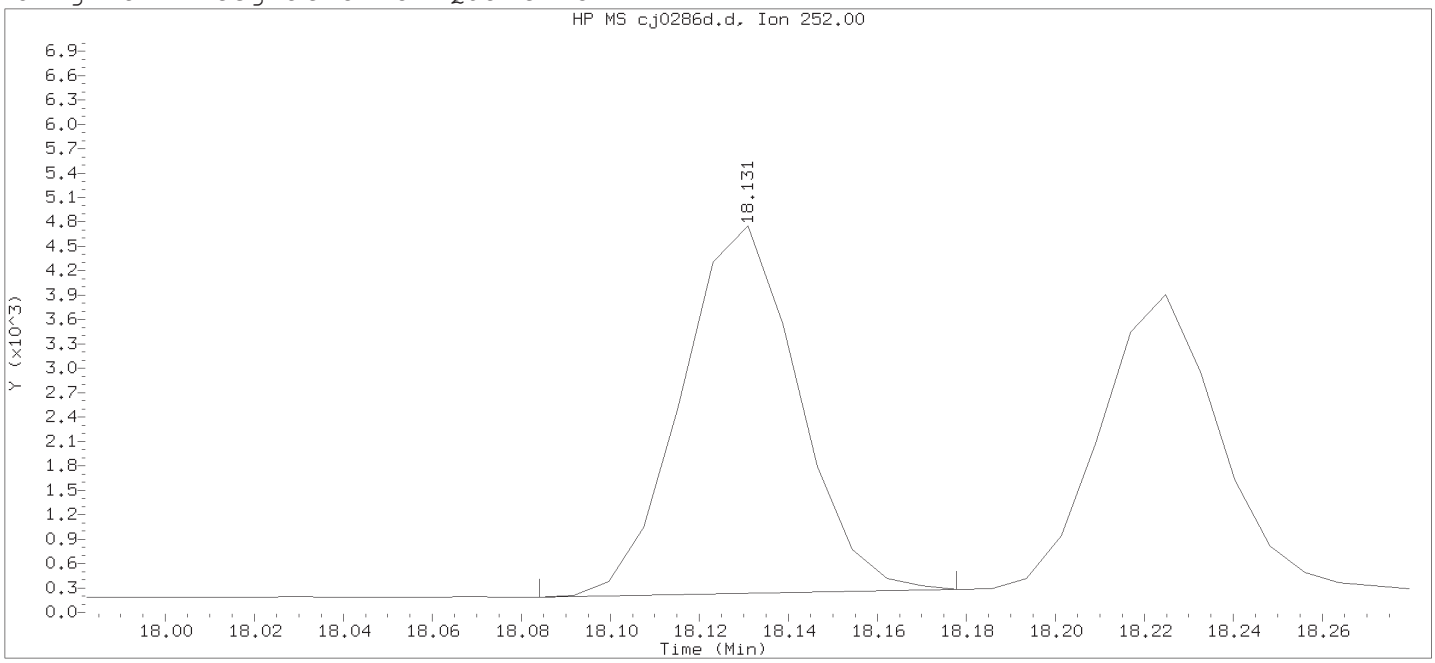
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

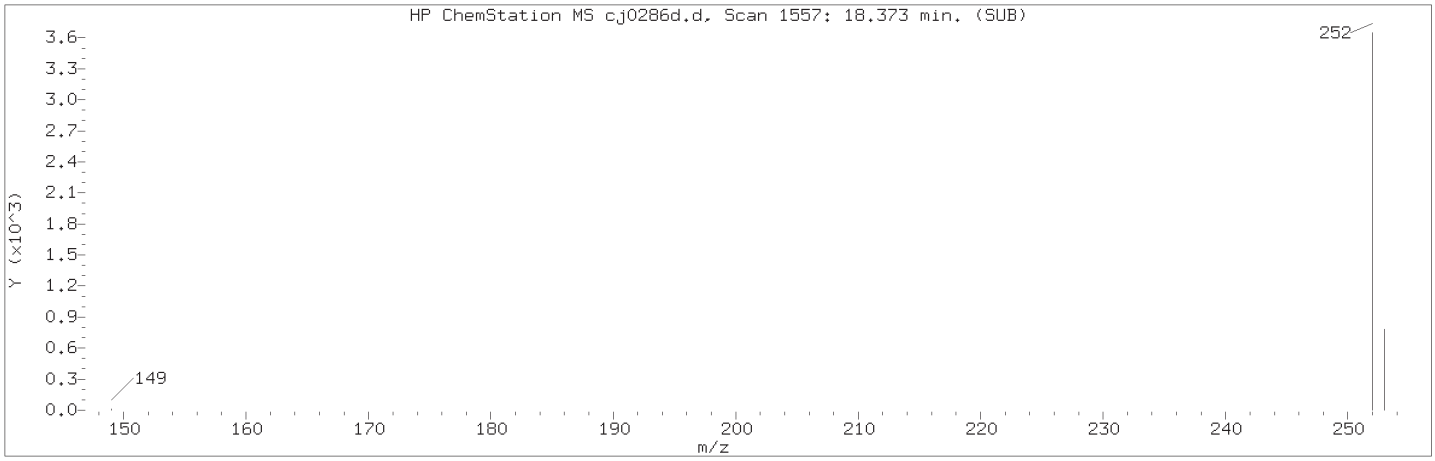
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:06
Date, time and analyst ID of latest file update: 07-Oct-2018 21:06 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

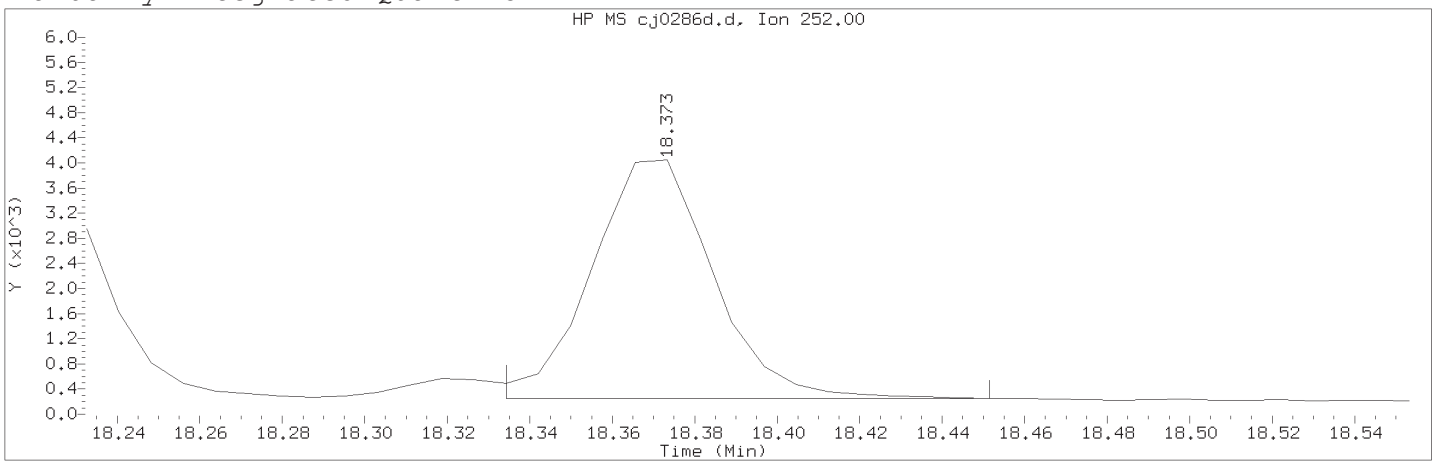
Compound Number	: 48		
Compound Name	: Benzo(e)pyrene		
Scan Number	: 1526		
Retention Time (minutes)	: 18.131		
Quant Ion	: 252.00		
Area	: 8217		
On-column Amount (ng/ul)	: 0.0176		
Integration start scan	: 1519	Integration stop scan:	1531
Y at integration start	: 183	Y at integration end:	280

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:26.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

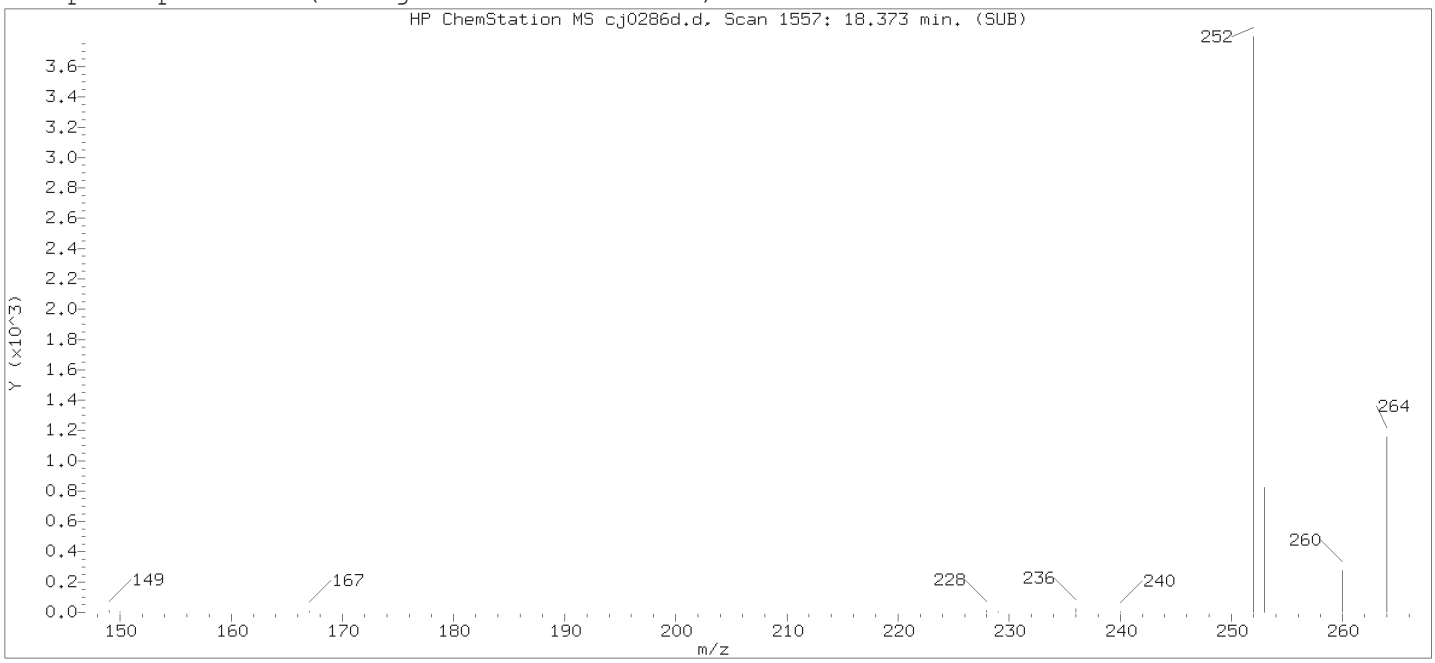
Compound Number : 52
Compound Name : Perylene
Scan Number : 1557
Retention Time (minutes) : 18.373
Quant Ion : 252.00
Area (flag) : 7844M
On-Column Amount (ng/ul) : 0.0424
Integration start scan : 1551 Integration stop scan: 1566
Y at integration start : 247 Y at integration end: 247

Reason for manual integration: improper integration

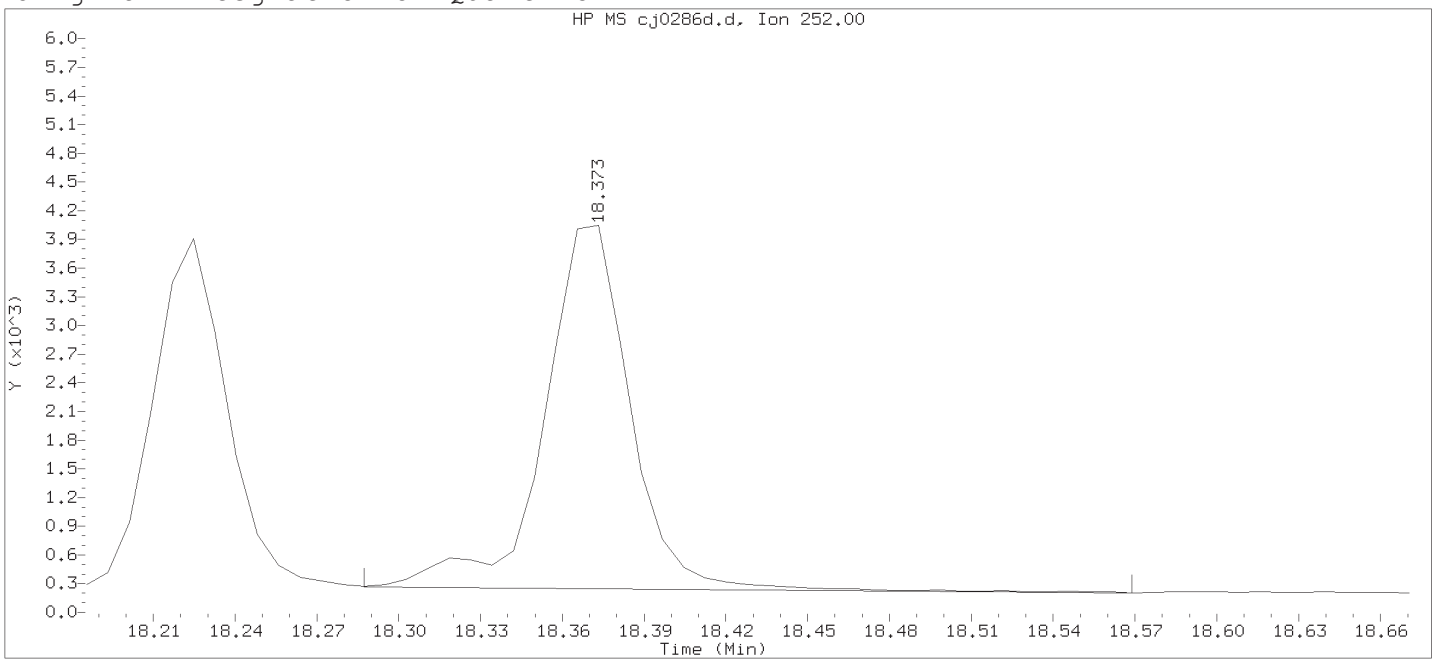
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



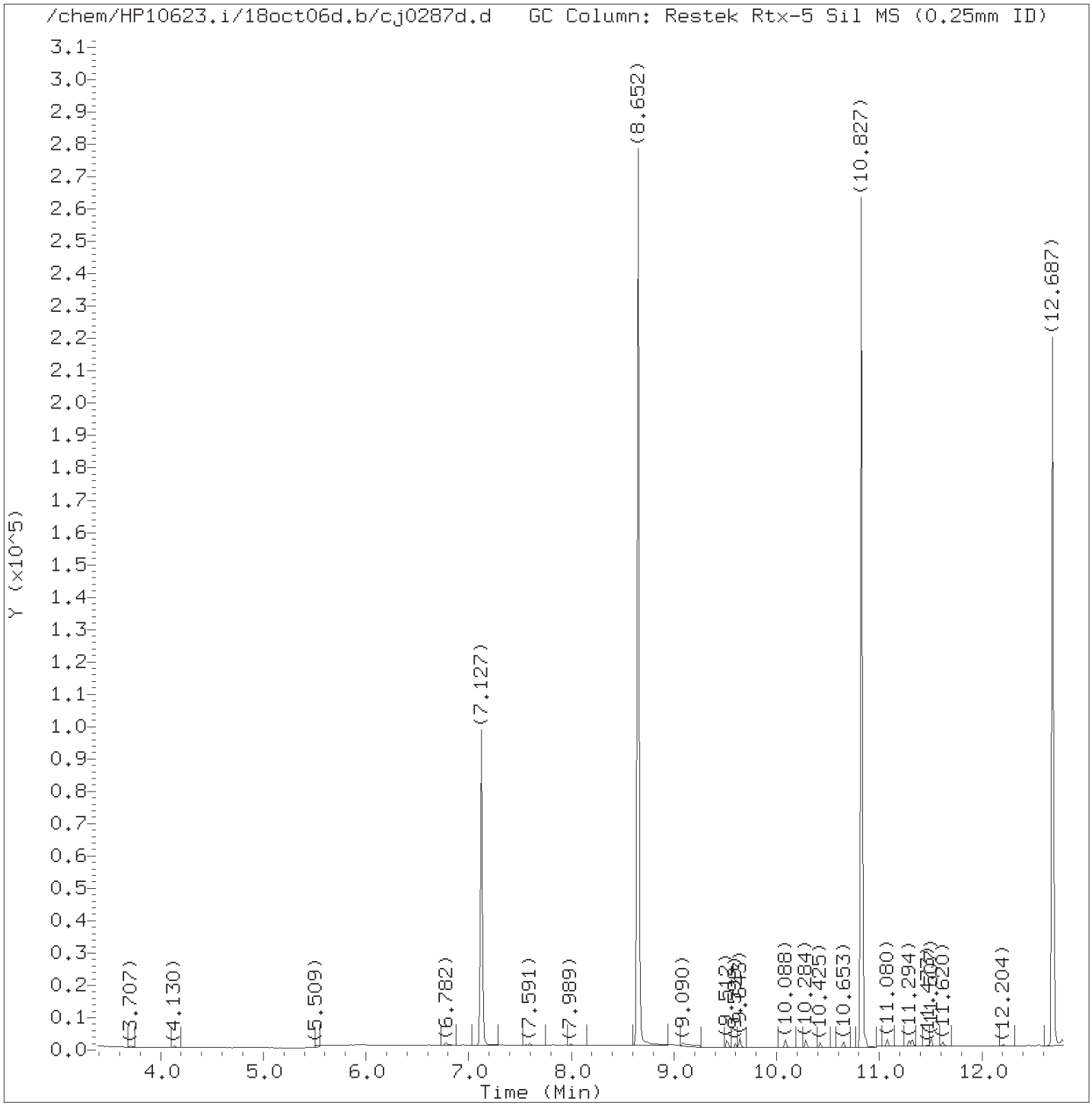
Data File: /chem/HP10623.i/18oct06d.b/cj0286d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:10 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:06
Date, time and analyst ID of latest file update: 07-Oct-2018 21:06 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM2598

Compound Number	: 52		
Compound Name	: Perylene		
Scan Number	: 1557		
Retention Time (minutes)	: 18.373		
Quant Ion	: 252.00		
Area	: 8387		
On-column Amount (ng/ul)	: 0.0180		
Integration start scan	: 1545	Integration stop scan:	1581
Y at integration start	: 265	Y at integration end:	202

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:26.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

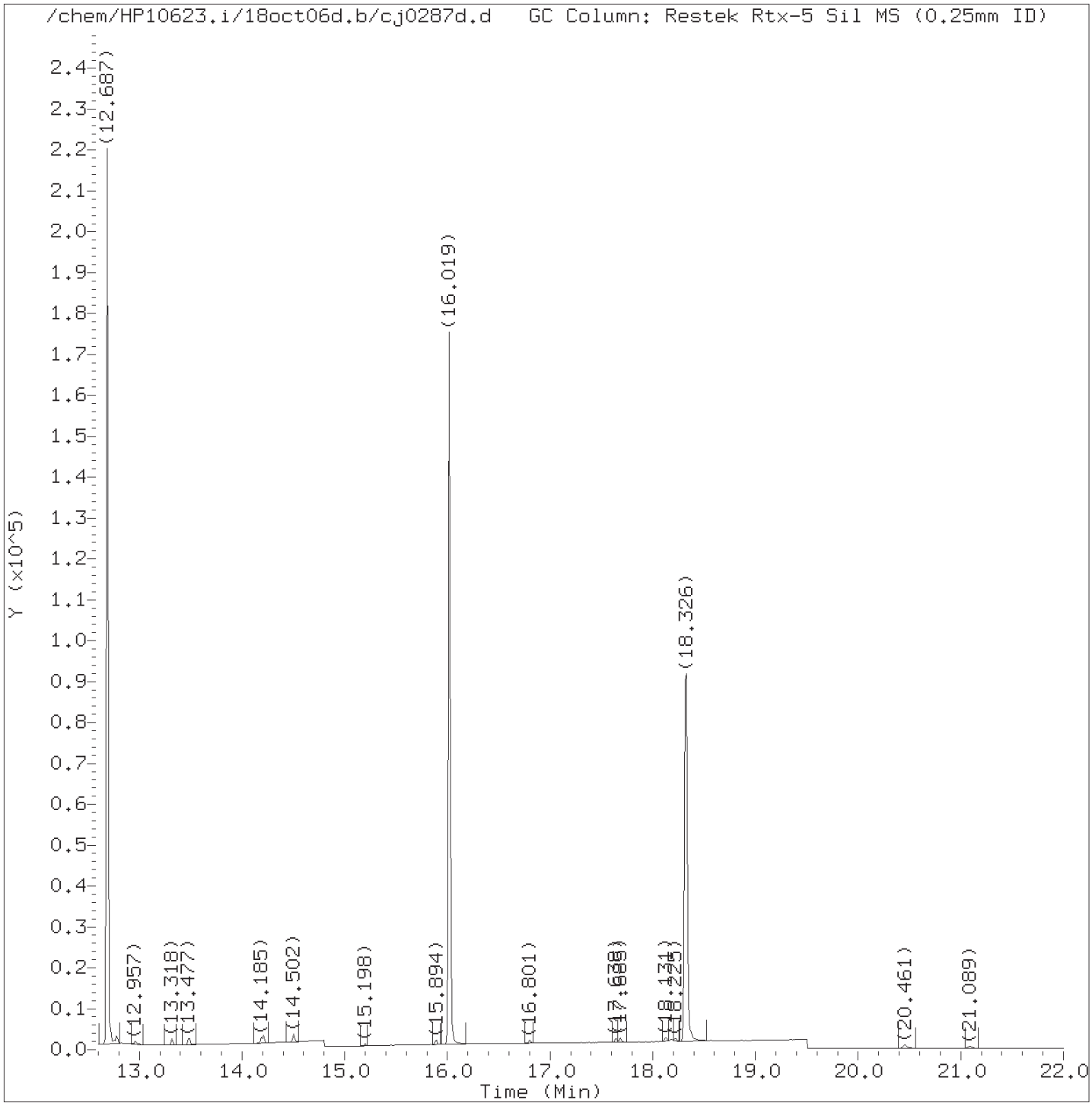
Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0287d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:42 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.01 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0287d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:42 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.01 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0287d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:42 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.01 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.707	88	482	0.011
2) N-Nitrosodimethylamine	(1)	4.137	74	438	0.008
5) bis(2-Chloroethyl)ether	(1)	6.782	93	777	0.009
6)*1,4-Dichlorobenzene-d4	(1)	7.127	152	68868	1.000
10)*Naphthalene-d8	(2)	8.652	136	277886	1.000
11) Naphthalene	(2)	8.679	128	2613	0.009
12) Quinoline	(2)	9.090	129	1886	0.011
13) 2-Methylnaphthalene	(2)	9.512	142	1411	0.008
14)$1-Methylnaphthalene-d10	(2)	9.599	152	1191	0.008
15) 1-Methylnaphthalene	(2)	9.643	142	1511	0.008
18) Dimethylphthalate	(3)	10.425	163	1229	0.007
19) Acenaphthylene	(3)	10.653	152	1747	0.007
20)*Acenaphthene-d10	(3)	10.827	164	124779	1.000
21) Acenaphthene	(3)	10.827	154	2091	0.012
22) Dibenzofuran	(3)	11.080	168	2606	0.011
23) Diethylphthalate	(3)	11.294	149	1405	0.008
26) Fluorene	(3)	11.507	166	1451	0.008
27) N-Nitrosodiphenylamine	(4)	11.620	169	865	0.008
28) NDPA as diphenylamine	(4)	11.620	169	865	0.008
29) Hexachlorobenzene	(4)	12.215	284	339	0.008
31)*Phenanthrene-d10	(4)	12.687	188	231062	1.000
32) Phenanthrene	(4)	12.721	178	2327	0.008
33) Anthracene	(4)	12.777	178	1805	0.007
35) Di-n-butylphthalate	(4)	13.318	149	1476	0.005
36)$Fluoranthene-d10	(4)	14.185	212	1504	0.007
37) Fluoranthene	(4)	14.209	202	1890	0.007
39) Pyrene	(5)	14.502	202	1945	0.007
40) Butylbenzylphthalate	(5)	15.198	149	597	0.005
41) bis(2-Ethylhexyl)phthalate	(5)	15.894	149	959	0.006
42) Benzo(a)anthracene	(5)	16.004	228	2069	0.009
43)*Chrysene-d12	(5)	16.019	240	169404	1.000
44) Chrysene	(5)	16.051	228	1864	0.008
45) Di-n-octylphthalate	(6)	16.801	149	1067	0.004
46) Benzo(b)fluoranthene	(6)	17.638	252	1385M	0.008
47) Benzo(k)fluoranthene	(6)	17.685	252	1462	0.008
48) Benzo(e)pyrene	(6)	18.131	252	1370	0.008
49)$Benzo(a)pyrene-d12	(6)	18.178	264	820	0.007
50) Benzo(a)pyrene	(6)	18.225	252	1146	0.007
52) Perylene	(6)	18.319	252	1802	0.010
51)*Perylene-d12	(6)	18.326	264	135541	1.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0287d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:42 Analyst ID: apb10206

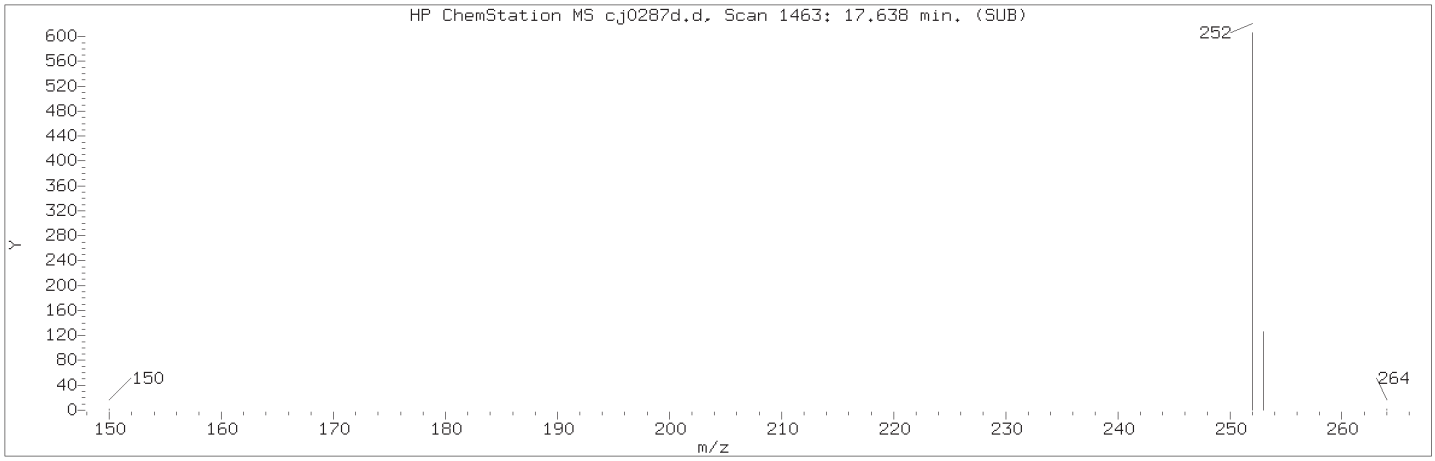
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.01 Lab Sample ID: SIM2598

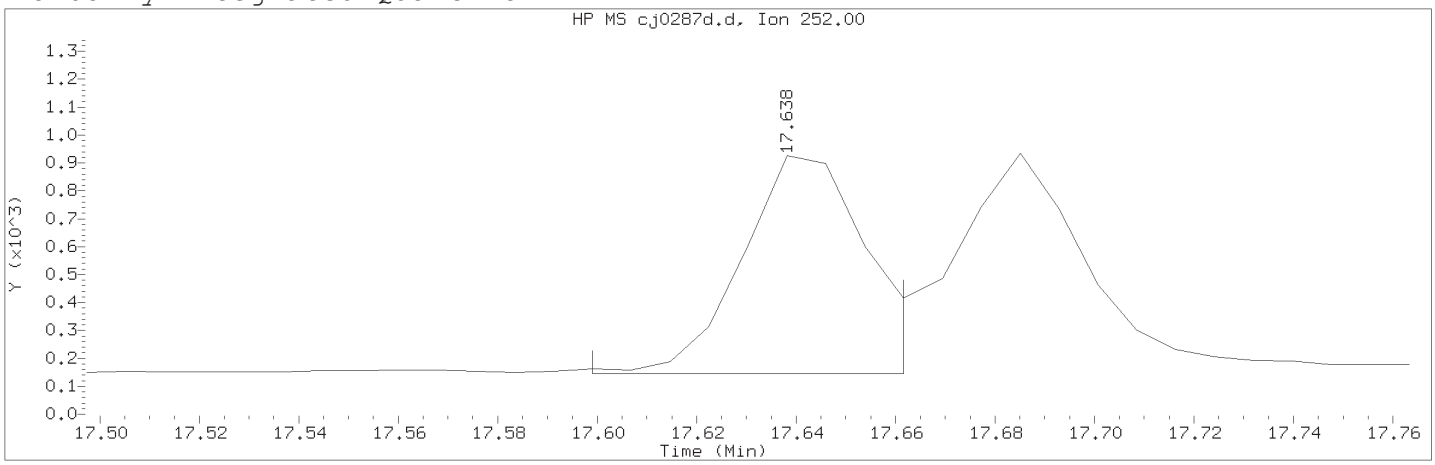
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.454	276	1102	0.007
54) Dibenz(a,h)anthracene	(6)	20.461	278	963	0.007
55) Benzo(g,h,i)perylene	(6)	21.089	276	1052	0.007

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0287d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:42 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:12
Date, time and analyst ID of latest file update: 07-Oct-2018 21:12 apb10206

Sample Name: SSTD0.01 Lab Sample ID: SIM2598

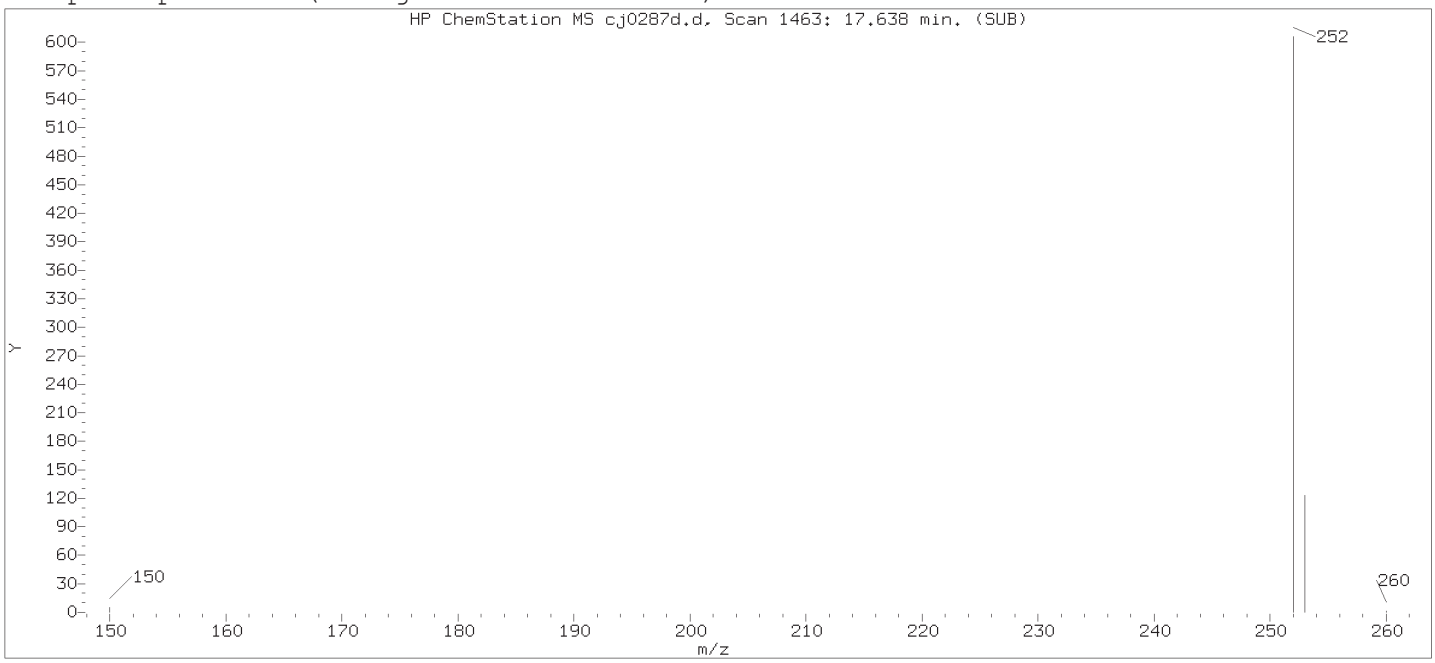
Compound Number	: 46		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1463		
Retention Time (minutes)	: 17.638		
Quant Ion	: 252.00		
Area (flag)	: 1385M		
On-Column Amount (ng/ul)	: 0.0080		
Integration start scan	: 1457	Integration stop scan:	1465
Y at integration start	: 146	Y at integration end:	146

Reason for manual integration: improper integration

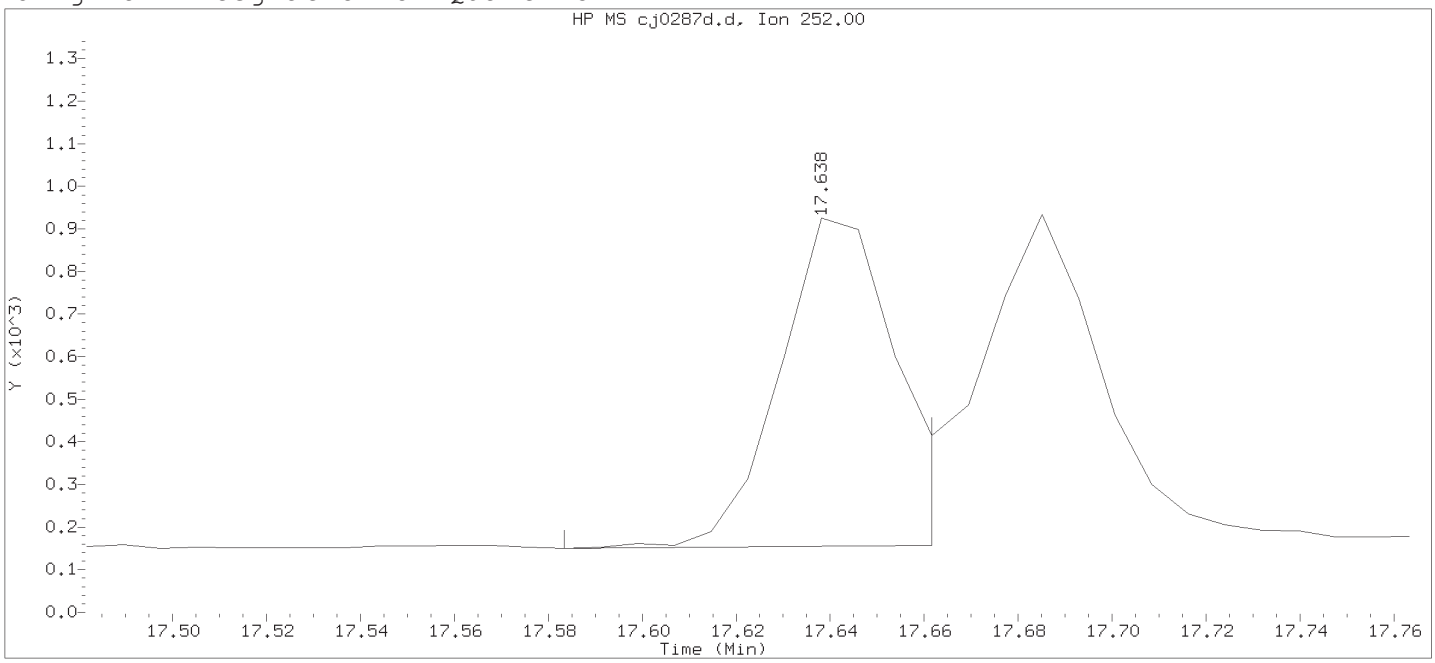
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 21:26.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



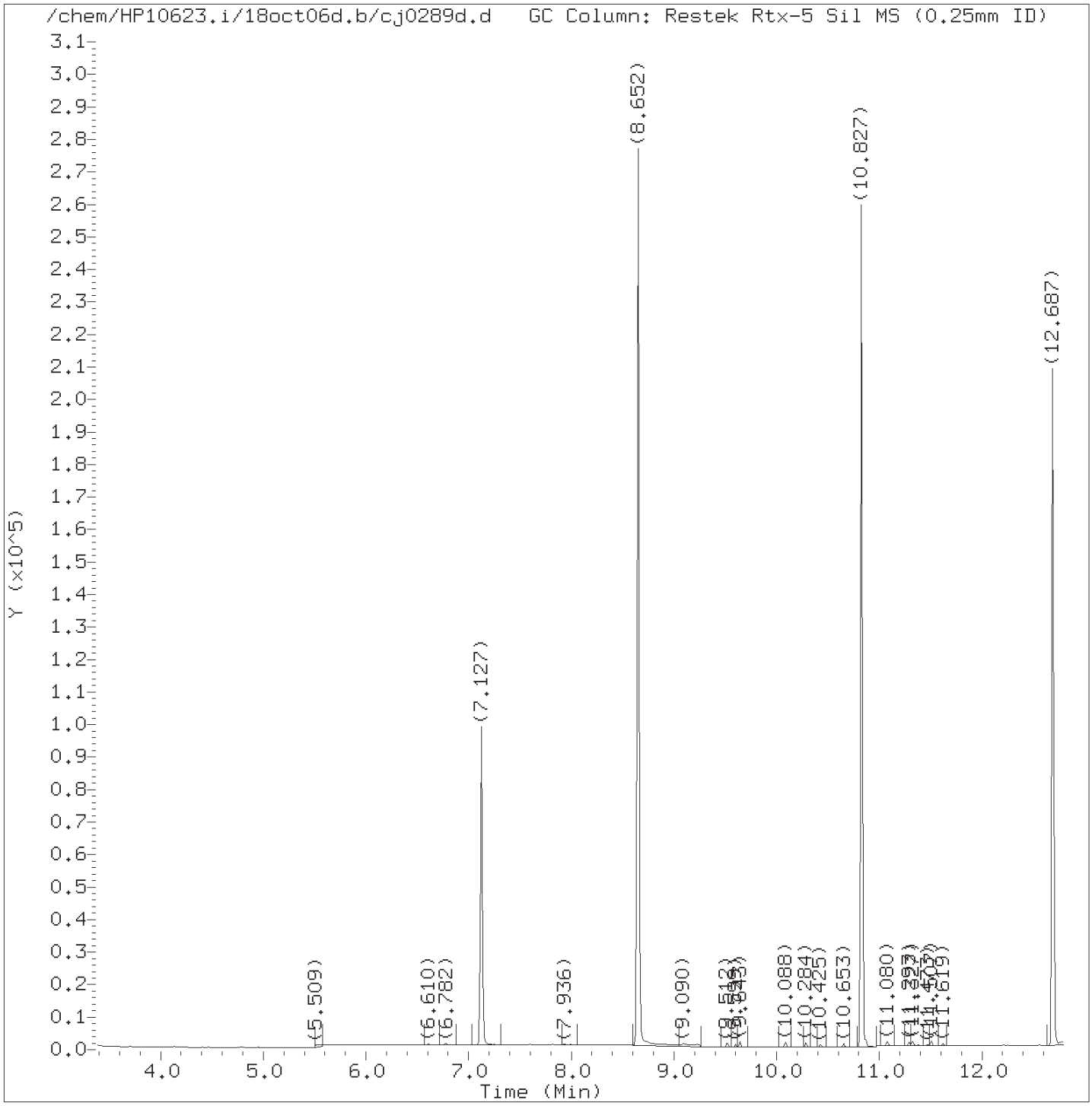
Data File: /chem/HP10623.i/18oct06d.b/cj0287d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 02:42 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 21:06
Date, time and analyst ID of latest file update: 07-Oct-2018 21:06 apb10206

Sample Name: SSTD0.01 Lab Sample ID: SIM2598

Compound Number	: 46		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1463		
Retention Time (minutes)	: 17.638		
Quant Ion	: 252.00		
Area	: 1291		
On-column Amount (ng/ul)	: 0.0032		
Integration start scan	: 1455	Integration stop scan:	1465
Y at integration start	: 150	Y at integration end:	157

Digitally signed by Anthony P. Bauer on 10/07/2018 at 21:26.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

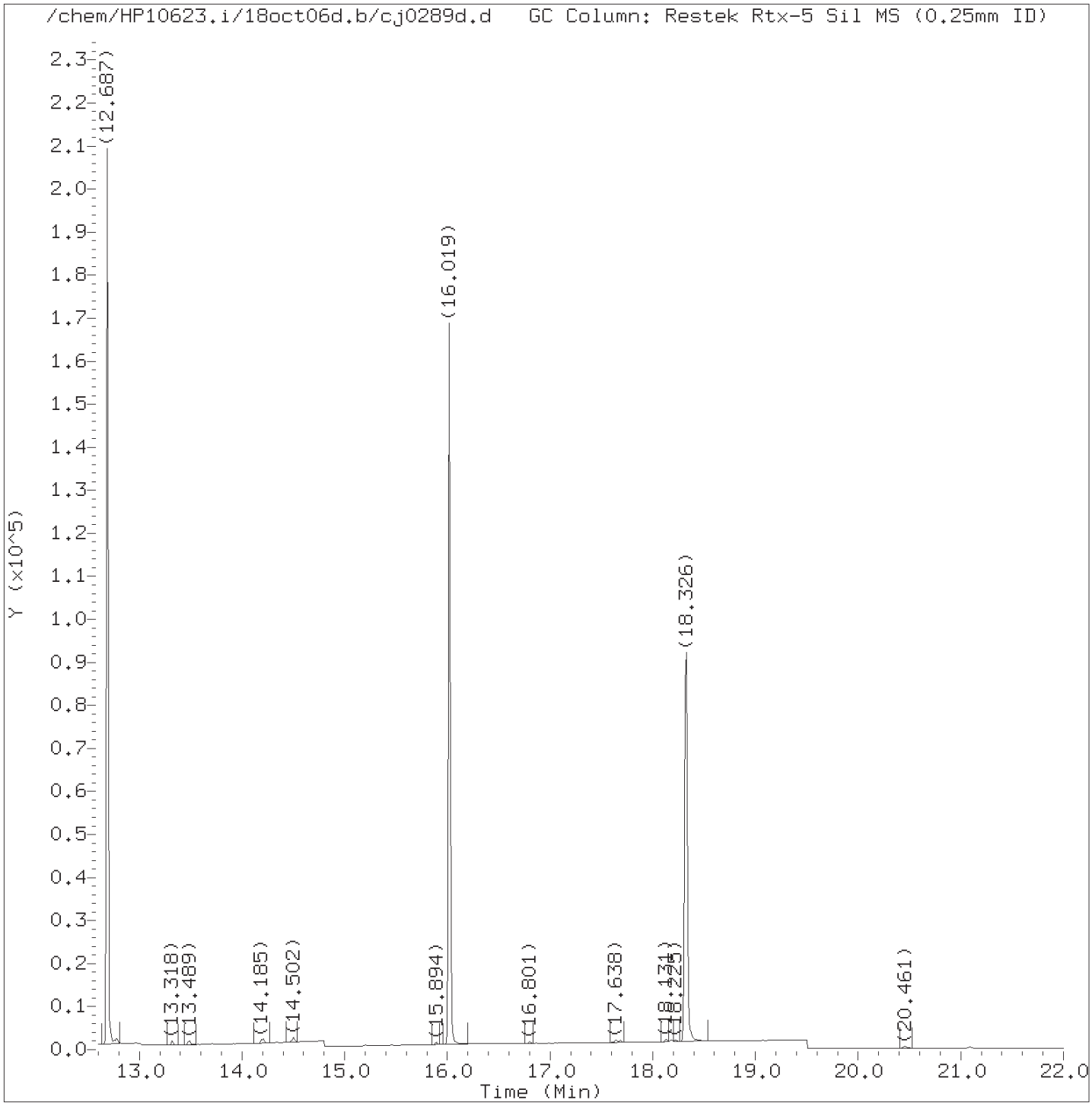
Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.701	88	203M	0.005
2) N-Nitrosodimethylamine	(1)	4.130	74	227	0.004
5) bis(2-Chloroethyl)ether	(1)	6.782	93	414	0.005
6)*1,4-Dichlorobenzene-d4	(1)	7.127	152	68441	1.000
10)*Naphthalene-d8	(2)	8.652	136	273056	1.000
11) Naphthalene	(2)	8.679	128	1562	0.005
12) Quinoline	(2)	9.090	129	678M	0.004
13) 2-Methylnaphthalene	(2)	9.523	142	840	0.005
14)$1-Methylnaphthalene-d10	(2)	9.599	152	769	0.006
15) 1-Methylnaphthalene	(2)	9.643	142	888	0.005
18) Dimethylphthalate	(3)	10.425	163	704	0.004
19) Acenaphthylene	(3)	10.653	152	972	0.004
20)*Acenaphthene-d10	(3)	10.827	164	122372	1.000
21) Acenaphthene	(3)	10.870	154	833M	0.005
22) Dibenzofuran	(3)	11.080	168	1139M	0.005
23) Diethylphthalate	(3)	11.293	149	822M	0.005
26) Fluorene	(3)	11.507	166	807M	0.005
28) NDPA as diphenylamine	(4)	11.619	169	478	0.004
27) N-Nitrosodiphenylamine	(4)	11.619	169	478	0.004
29) Hexachlorobenzene	(4)	12.215	284	210M	0.005
31)*Phenanthrene-d10	(4)	12.687	188	226910	1.000
32) Phenanthrene	(4)	12.721	178	1415	0.005
33) Anthracene	(4)	12.777	178	1062M	0.004
35) Di-n-butylphthalate	(4)	13.318	149	913M	0.003
36)$Fluoranthene-d10	(4)	14.185	212	1148	0.006
37) Fluoranthene	(4)	14.209	202	1149	0.004
39) Pyrene	(5)	14.502	202	1257	0.005
40) Butylbenzylphthalate	(5)	15.198	149	353M	0.003
41) bis(2-Ethylhexyl)phthalate	(5)	15.894	149	446M	0.126
42) Benzo(a)anthracene	(5)	16.004	228	1387	0.006
43)*Chrysene-d12	(5)	16.019	240	165422	1.000
44) Chrysene	(5)	16.051	228	1133	0.005
45) Di-n-octylphthalate	(6)	16.801	149	577M	0.002
46) Benzo(b)fluoranthene	(6)	17.638	252	781	0.005
47) Benzo(k)fluoranthene	(6)	17.685	252	920	0.005
48) Benzo(e)pyrene	(6)	18.131	252	890M	0.005
49)$Benzo(a)pyrene-d12	(6)	18.178	264	631	0.005
50) Benzo(a)pyrene	(6)	18.225	252	642	0.004
51)*Perylene-d12	(6)	18.326	264	132274	1.000
52) Perylene	(6)	18.365	252	824M	0.005

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

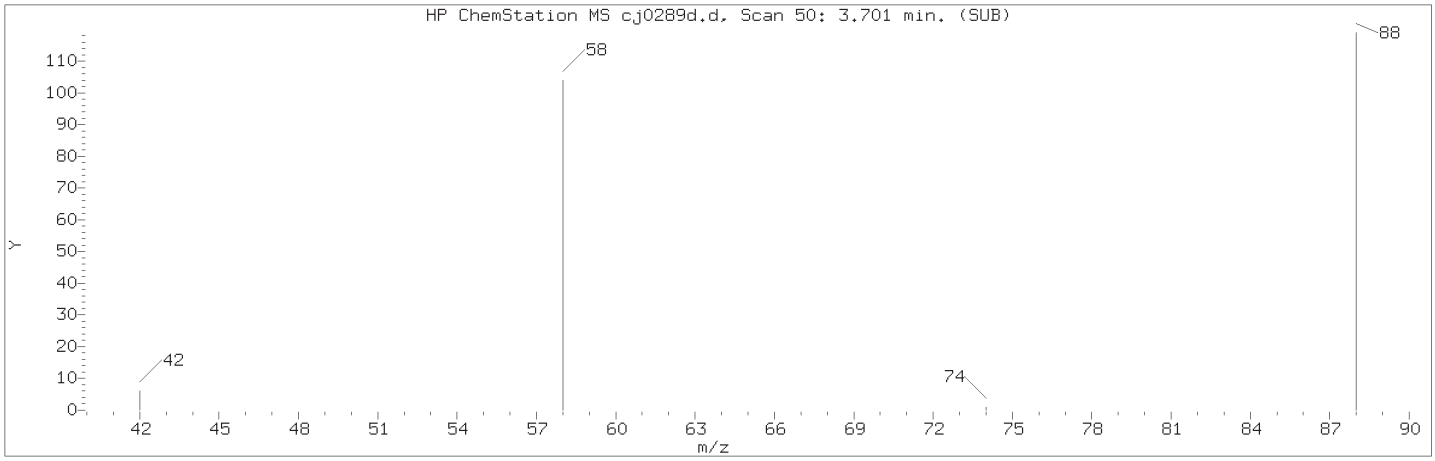
Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

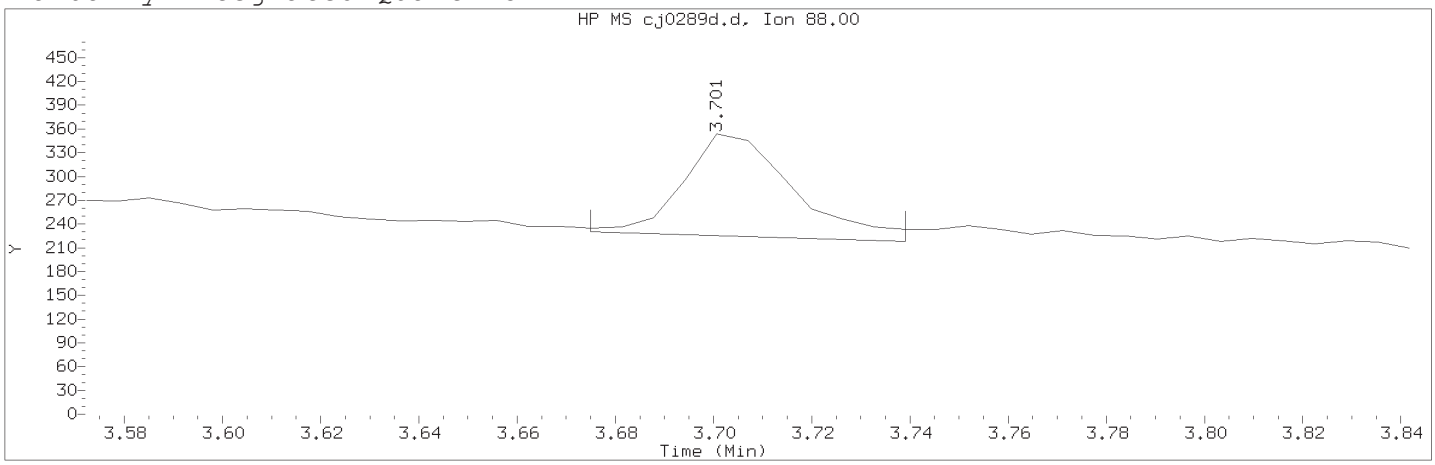
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.454	276	645	0.004
54) Dibenz(a,h)anthracene	(6)	20.461	278	551	0.004
55) Benzo(g,h,i)perylene	(6)	21.089	276	672	0.005

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

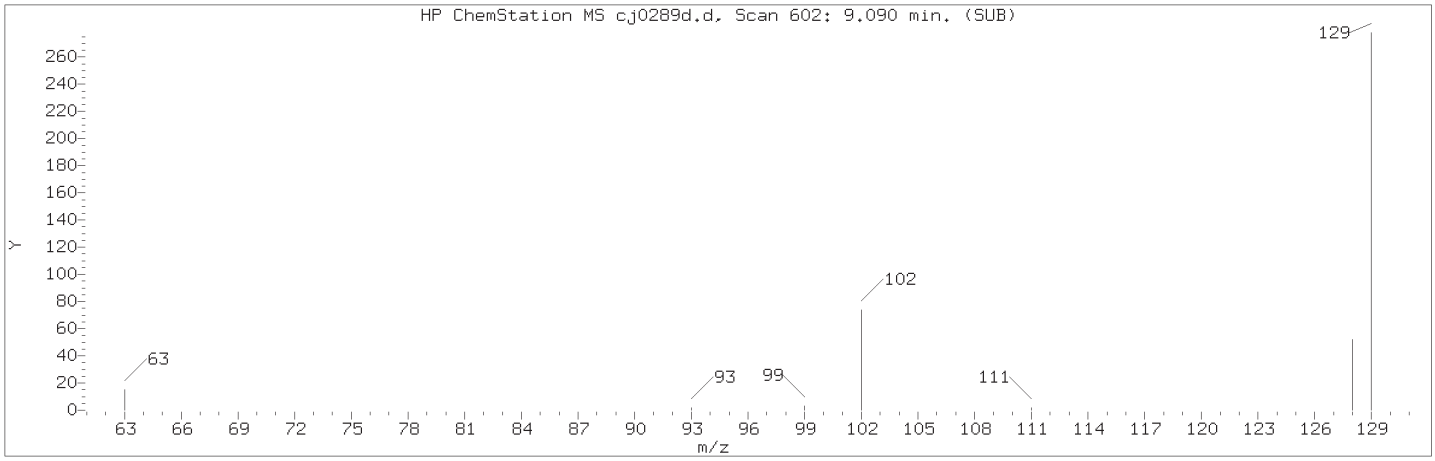
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 50		
Retention Time (minutes)	: 3.701		
Quant Ion	: 88.00		
Area (flag)	: 203M		
On-Column Amount (ng/ul)	: 0.0046		
Integration start scan	: 45	Integration stop scan:	55
Y at integration start	: 230	Y at integration end:	218

Reason for manual integration: improper integration

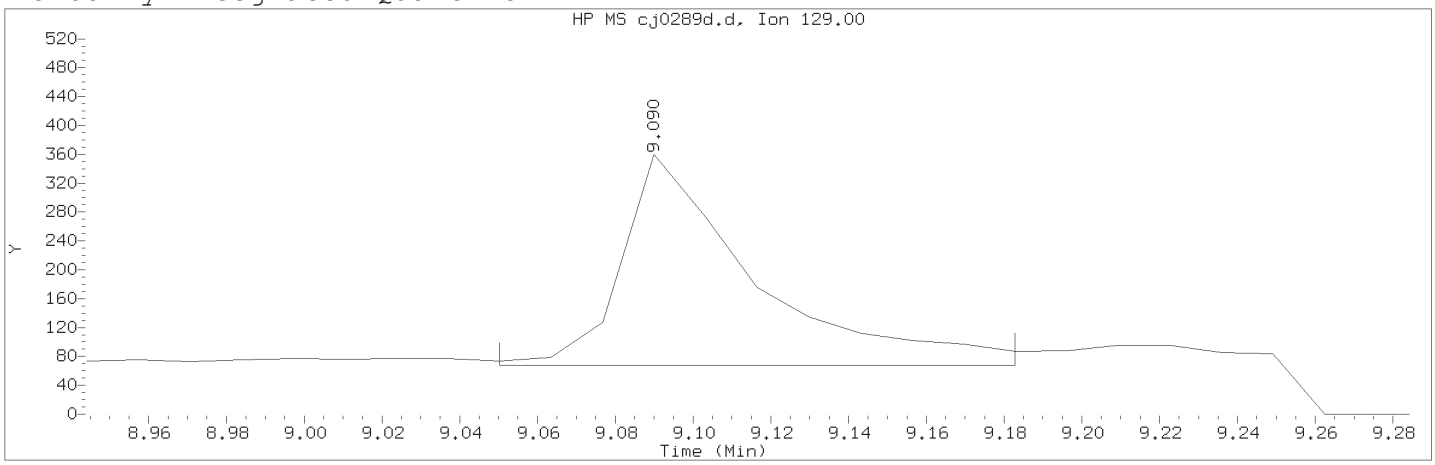
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

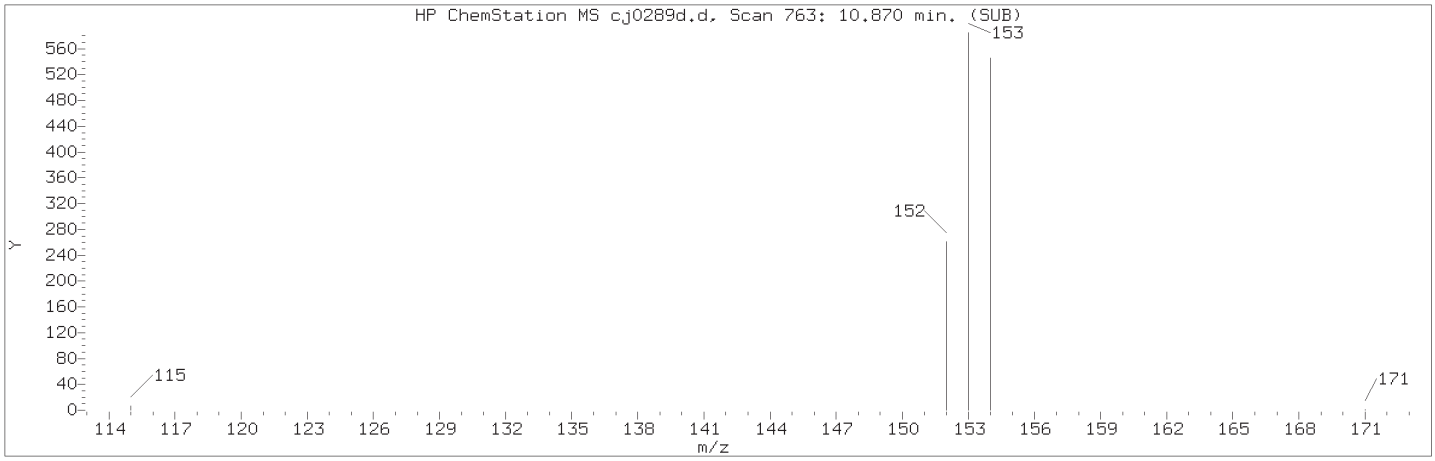
Compound Number	: 12		
Compound Name	: Quinoline		
Scan Number	: 602		
Retention Time (minutes)	: 9.090		
Quant Ion	: 129.00		
Area (flag)	: 678M		
On-Column Amount (ng/ul)	: 0.0040		
Integration start scan	: 598	Integration stop scan:	608
Y at integration start	: 68	Y at integration end:	68

Reason for manual integration: improper integration

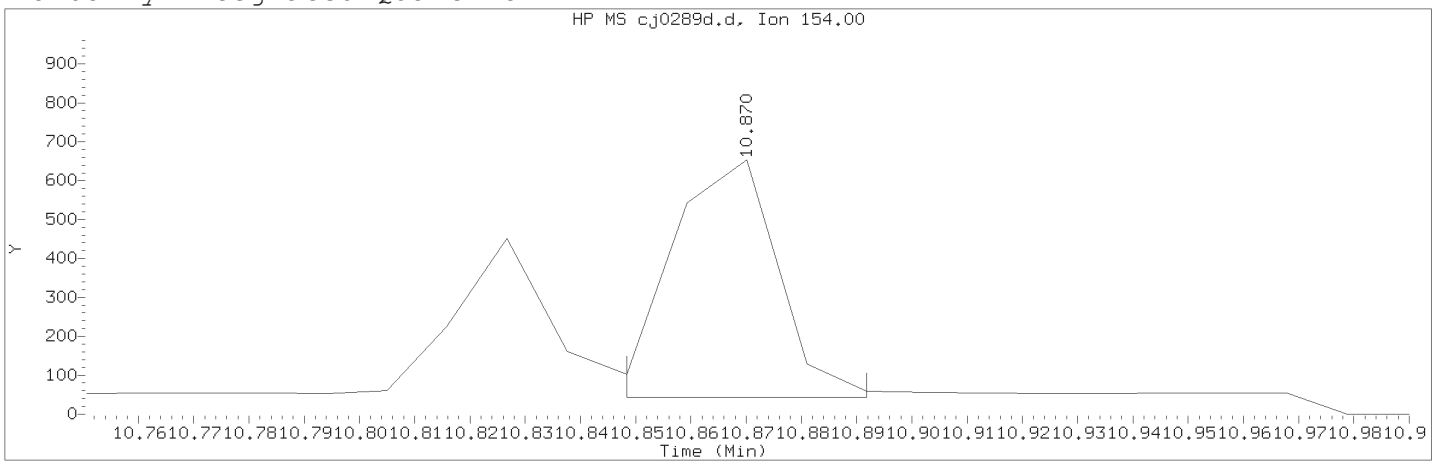
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

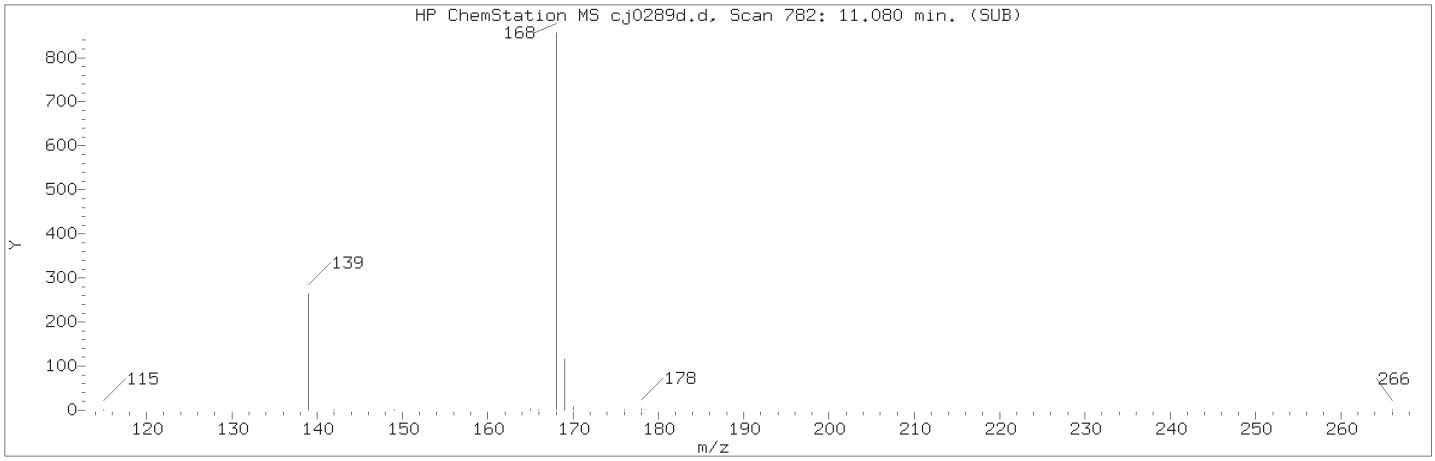
Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 763		
Retention Time (minutes)	: 10.870		
Quant Ion	: 154.00		
Area (flag)	: 833M		
On-Column Amount (ng/ul)	: 0.0050		
Integration start scan	: 760	Integration stop scan:	764
Y at integration start	: 44	Y at integration end:	44

Reason for manual integration: improper integration

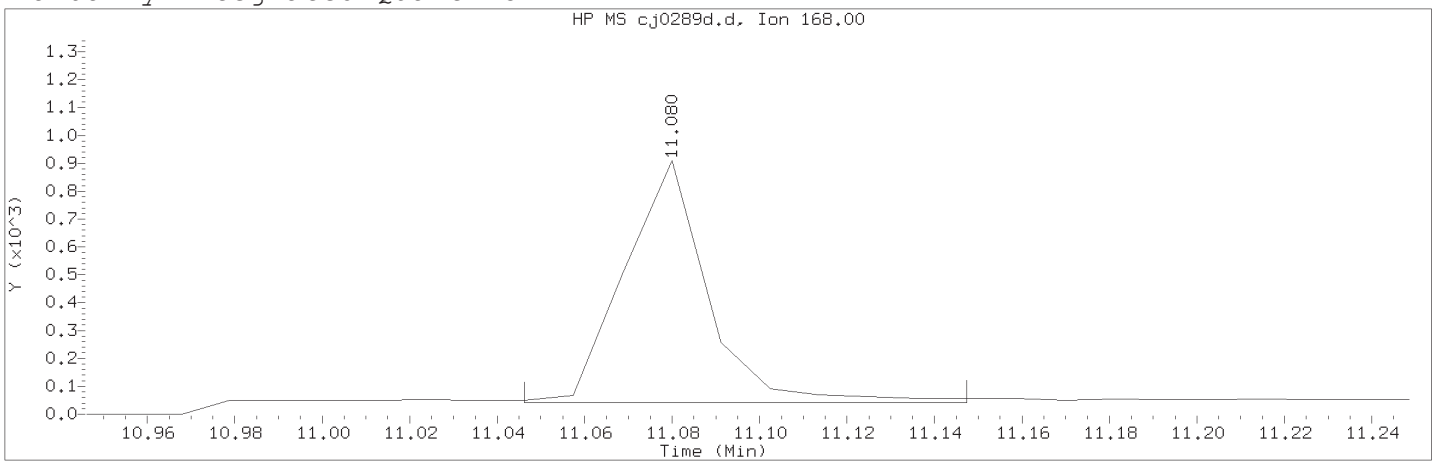
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

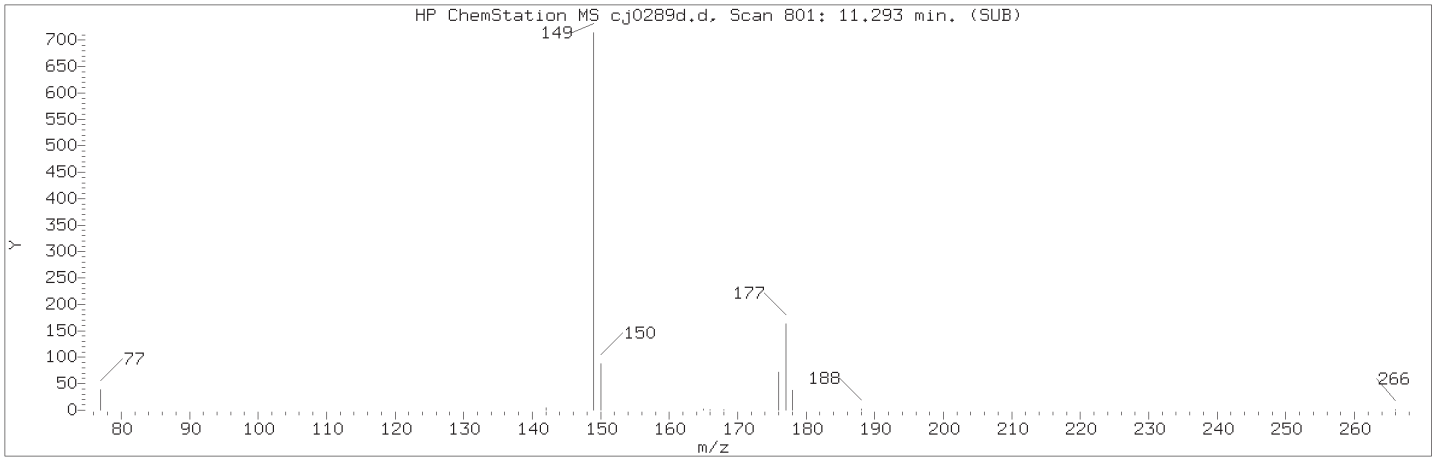
Compound Number	: 22		
Compound Name	: Dibenzofuran		
Scan Number	: 782		
Retention Time (minutes)	: 11.080		
Quant Ion	: 168.00		
Area (flag)	: 1139M		
On-Column Amount (ng/ul)	: 0.0050		
Integration start scan	: 778	Integration stop scan:	787
Y at integration start	: 42	Y at integration end:	42

Reason for manual integration: improper integration

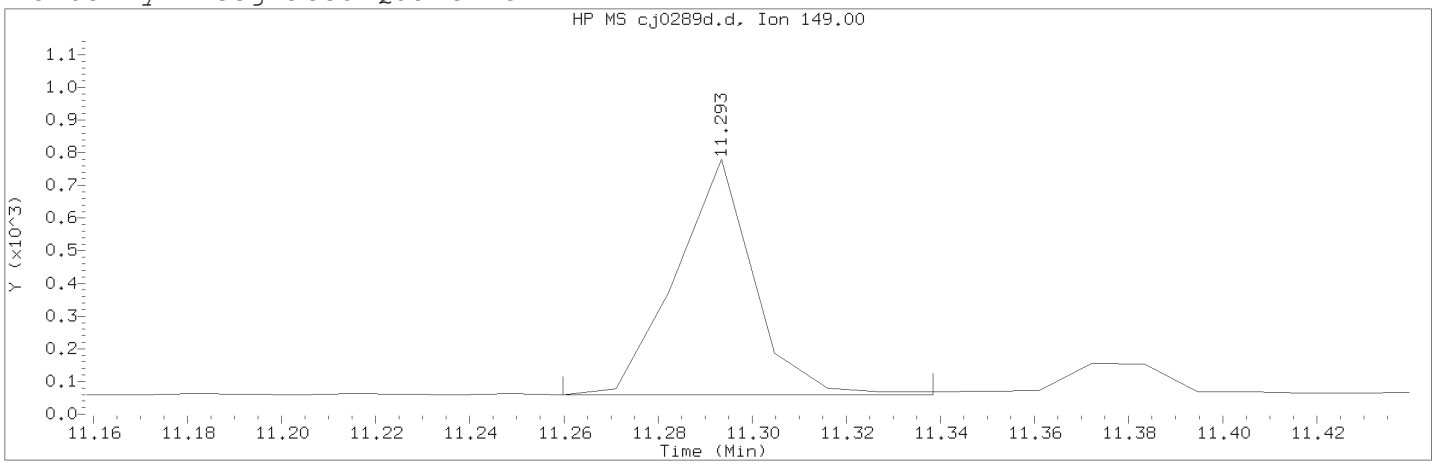
Analyst responsible for change: Digitally signed by Anthony P. Bauer on 10/07/2018 at 23:03. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

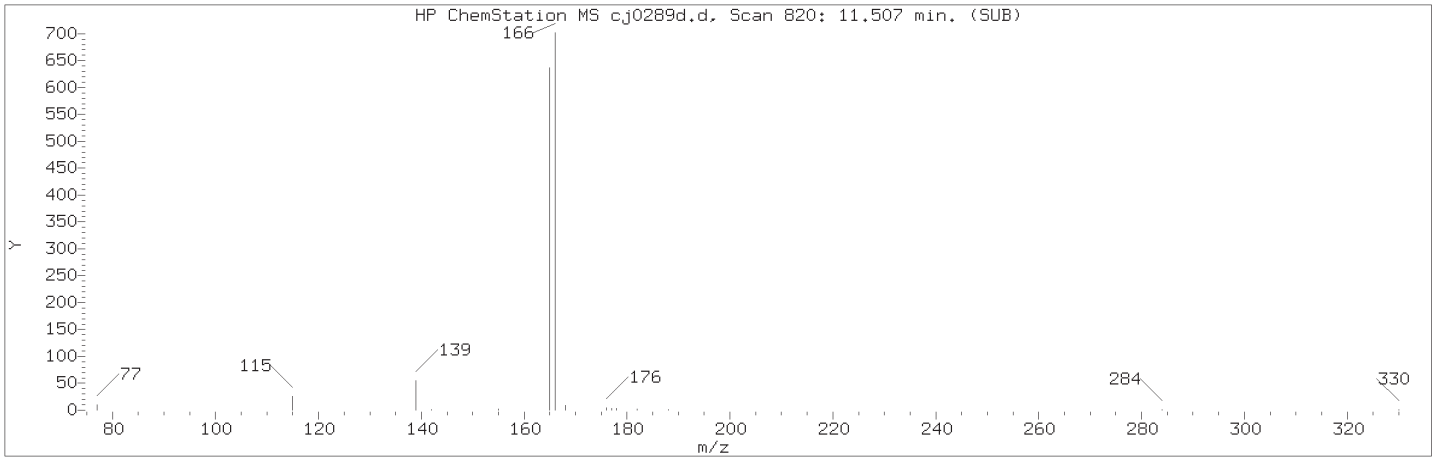
Compound Number	: 23		
Compound Name	: Diethylphthalate		
Scan Number	: 801		
Retention Time (minutes)	: 11.293		
Quant Ion	: 149.00		
Area (flag)	: 822M		
On-Column Amount (ng/ul)	: 0.0049		
Integration start scan	: 797	Integration stop scan:	804
Y at integration start	: 59	Y at integration end:	59

Reason for manual integration: improper integration

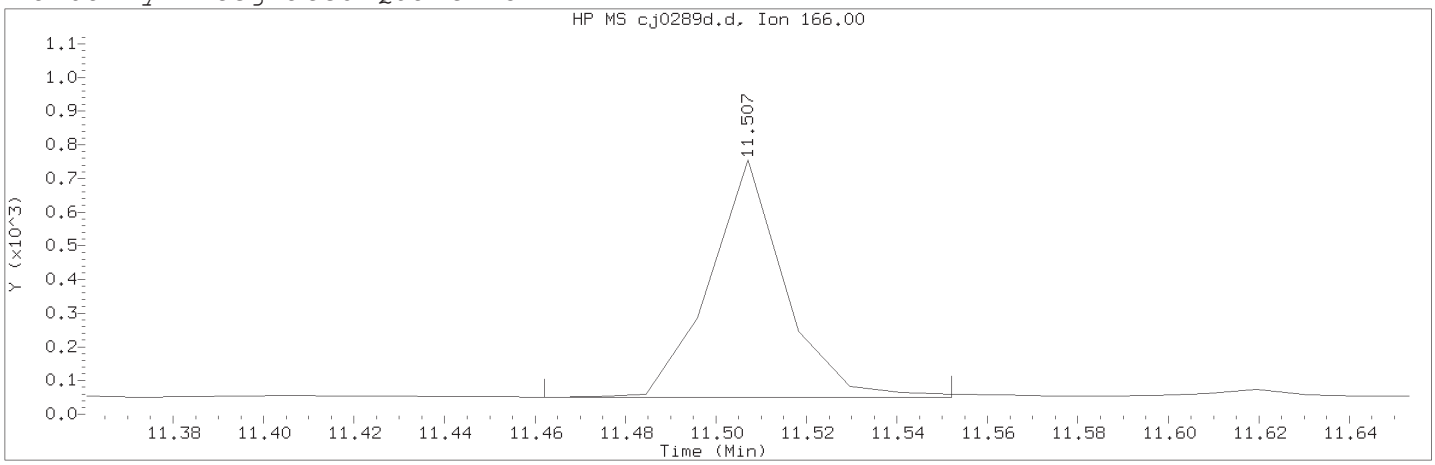
Analyst responsible for change: Digitally signed by Anthony P. Bauer on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

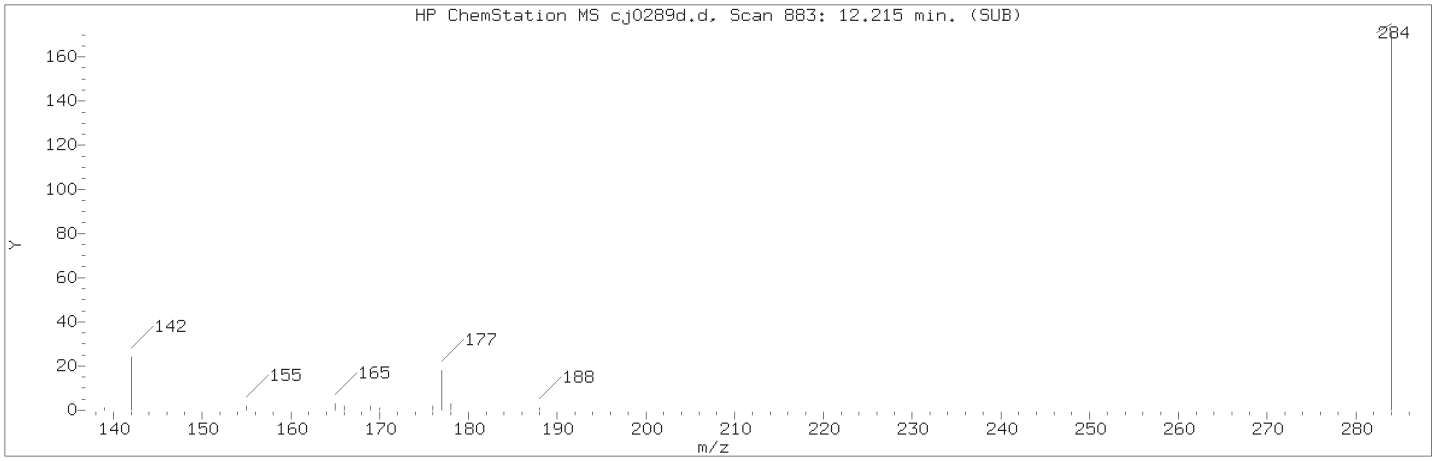
Compound Number	: 26		
Compound Name	: Fluorene		
Scan Number	: 820		
Retention Time (minutes)	: 11.507		
Quant Ion	: 166.00		
Area (flag)	: 807M		
On-Column Amount (ng/ul)	: 0.0045		
Integration start scan	: 815	Integration stop scan:	823
Y at integration start	: 51	Y at integration end:	51

Reason for manual integration: improper integration

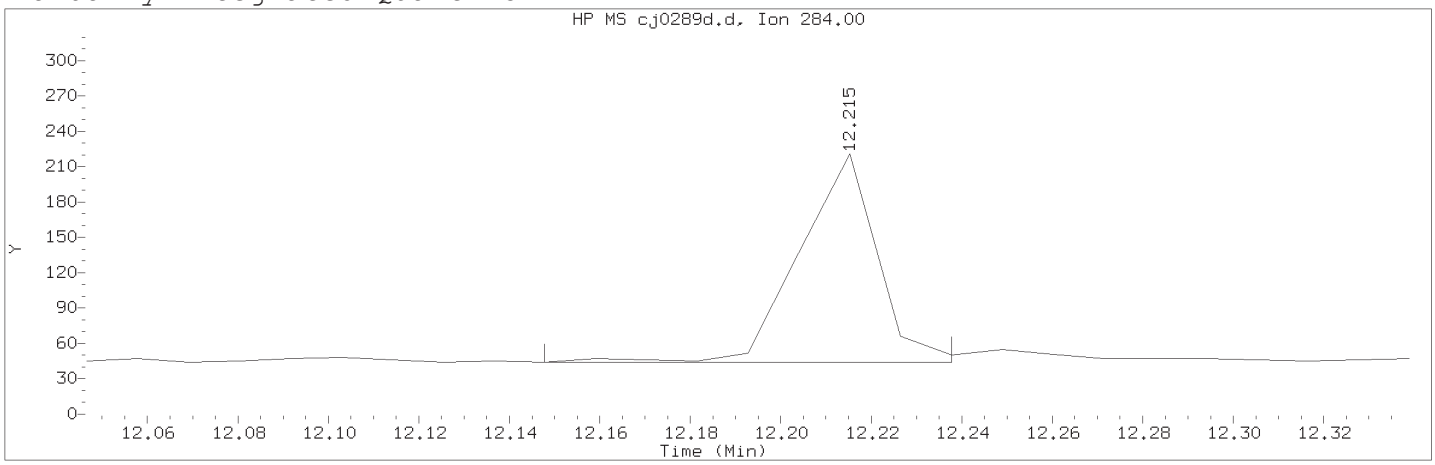
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

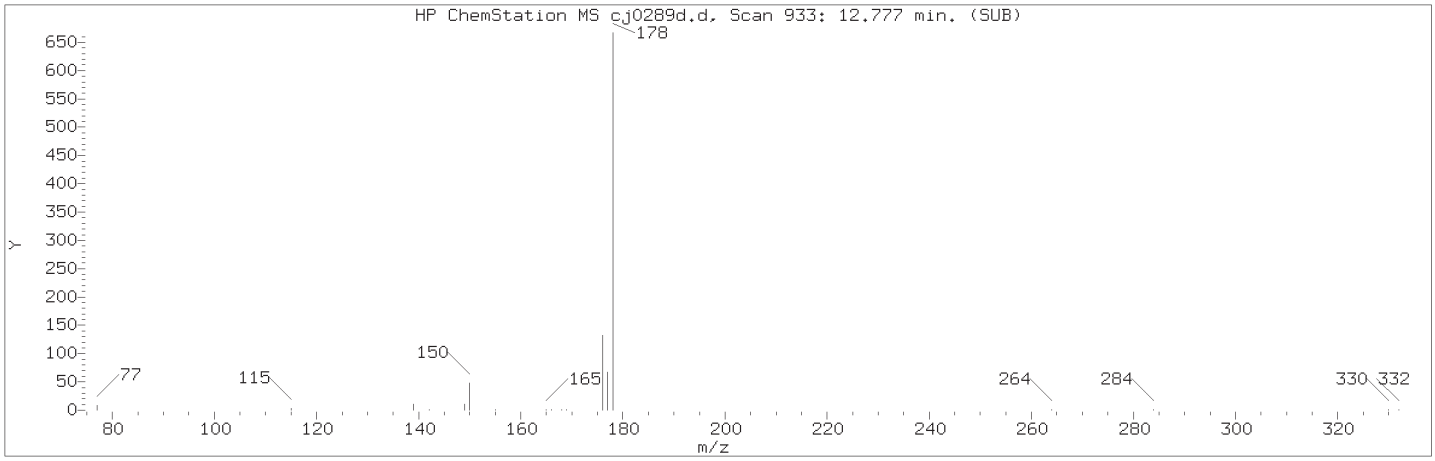
Compound Number : 29
Compound Name : Hexachlorobenzene
Scan Number : 883
Retention Time (minutes) : 12.215
Quant Ion : 284.00
Area (flag) : 210M
On-Column Amount (ng/ul) : 0.0053
Integration start scan : 876 Integration stop scan: 884
Y at integration start : 44 Y at integration end: 44

Reason for manual integration: improper integration

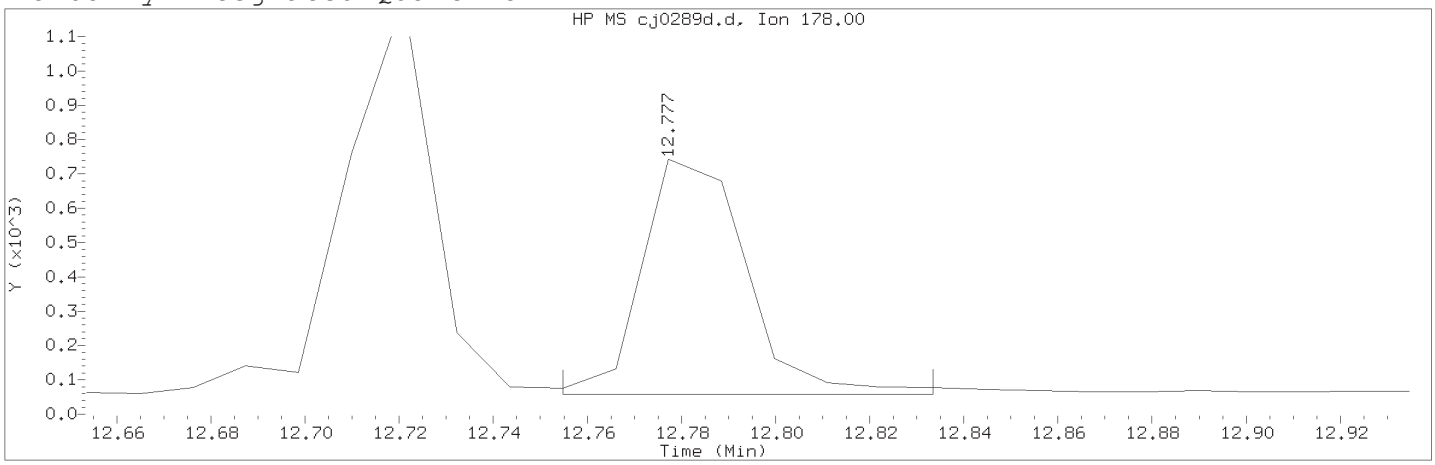
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

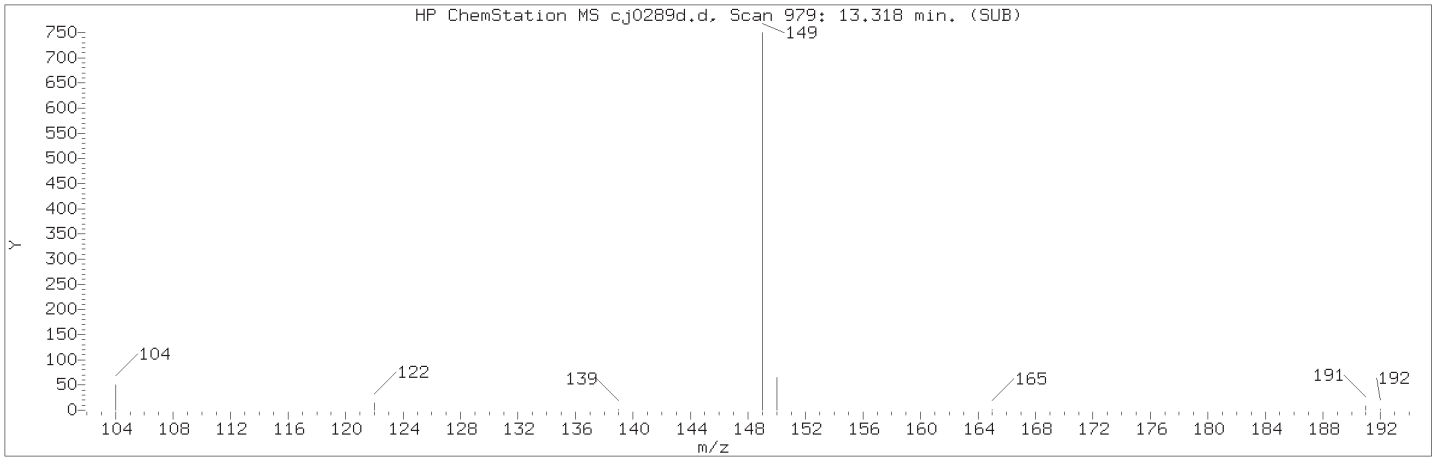
Compound Number	: 33		
Compound Name	: Anthracene		
Scan Number	: 933		
Retention Time (minutes)	: 12.777		
Quant Ion	: 178.00		
Area (flag)	: 1062M		
On-Column Amount (ng/ul)	: 0.0041		
Integration start scan	: 930	Integration stop scan:	937
Y at integration start	: 58	Y at integration end:	58

Reason for manual integration: improper integration

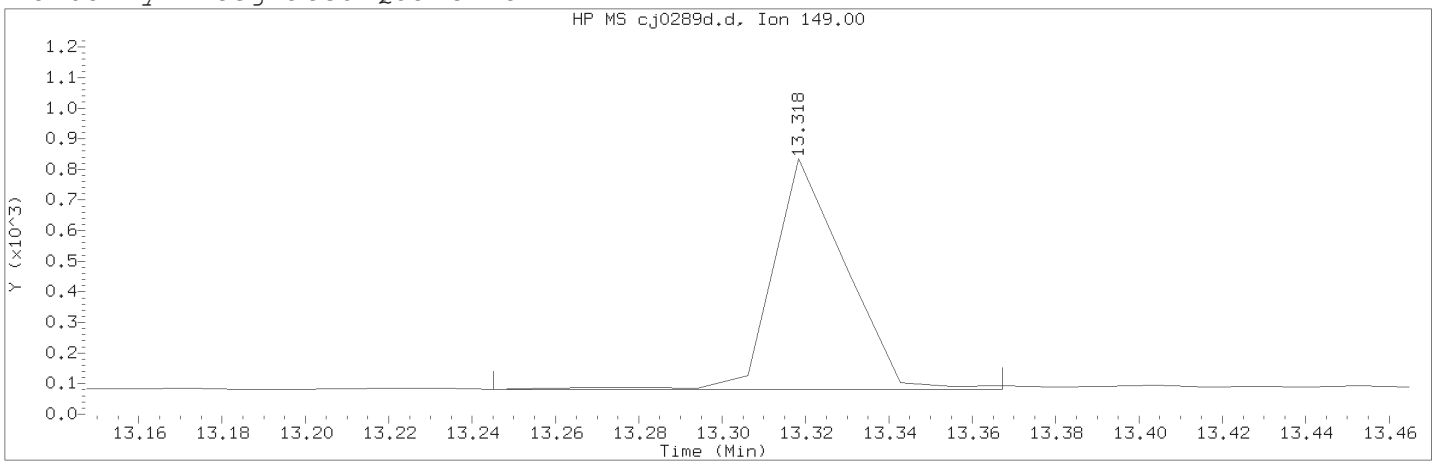
Analyst responsible for change: Digitally signed by Anthony P. Bauer on 10/07/2018 at 23:03. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

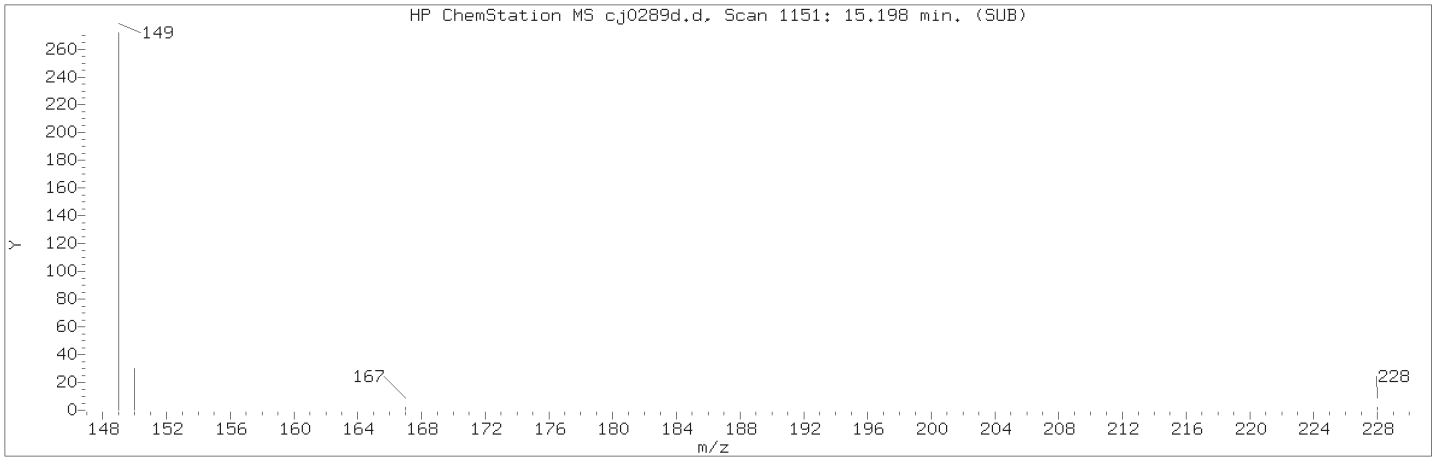
Compound Number	: 35		
Compound Name	: Di-n-butylphthalate		
Scan Number	: 979		
Retention Time (minutes)	: 13.318		
Quant Ion	: 149.00		
Area (flag)	: 913M		
On-Column Amount (ng/ul)	: 0.0031		
Integration start scan	: 972	Integration stop scan:	982
Y at integration start	: 80	Y at integration end:	80

Reason for manual integration: improper integration

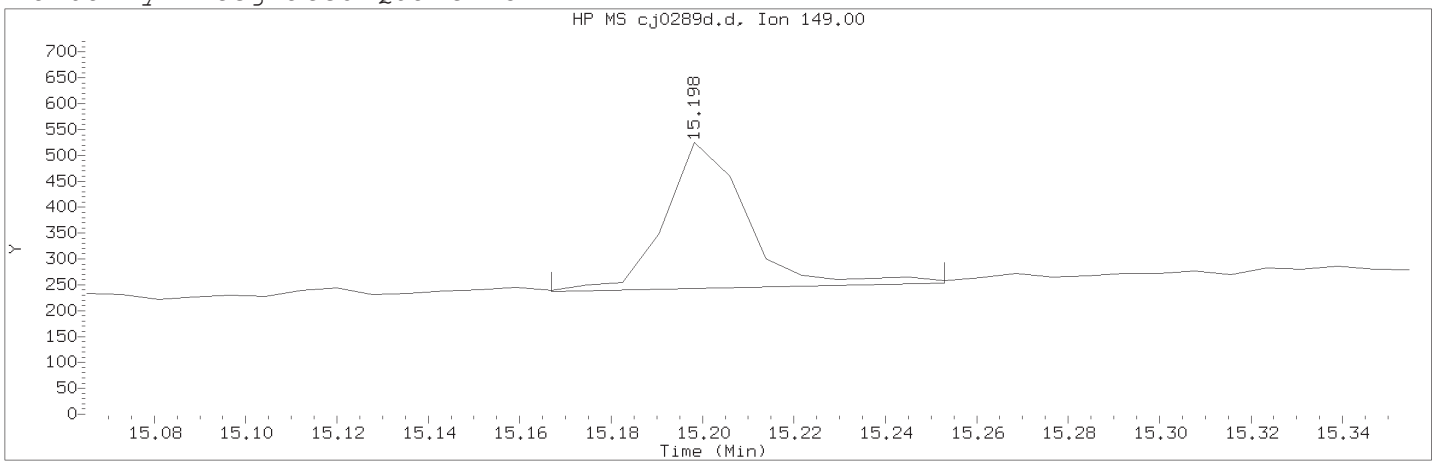
Analyst responsible for change: Digitally signed by Anthony P. Bauer on 10/07/2018 at 23:03. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

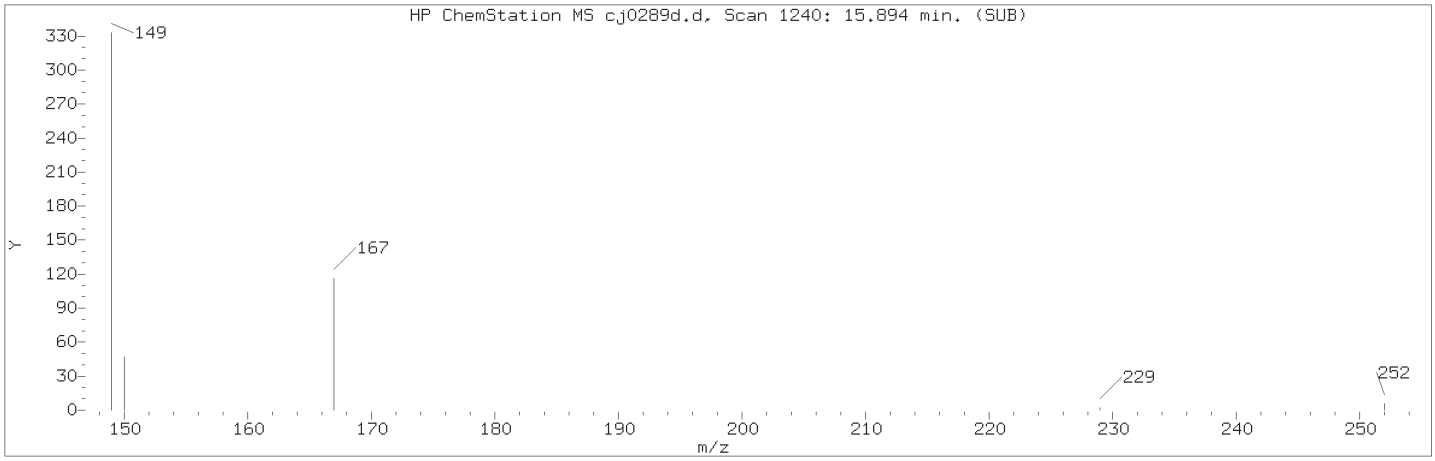
Compound Number : 40
Compound Name : Butylbenzylphthalate
Scan Number : 1151
Retention Time (minutes) : 15.198
Quant Ion : 149.00
Area (flag) : 353M
On-Column Amount (ng/ul) : 0.0029
Integration start scan : 1146 Integration stop scan: 1157
Y at integration start : 237 Y at integration end: 253

Reason for manual integration: improper integration

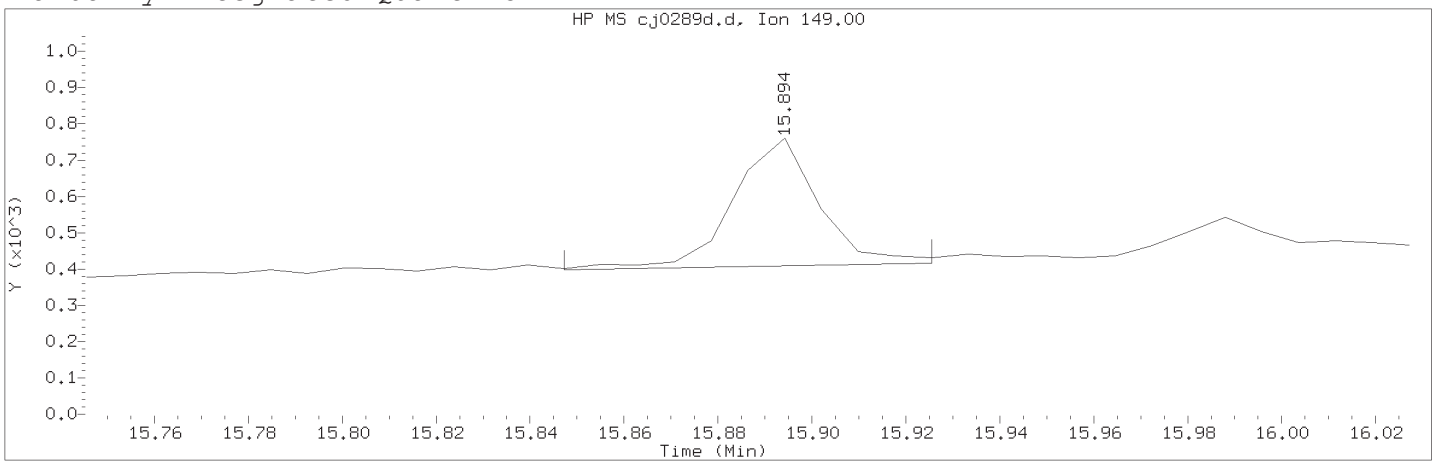
Analyst responsible for change: Digitally signed by Anthony P. Bauer on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

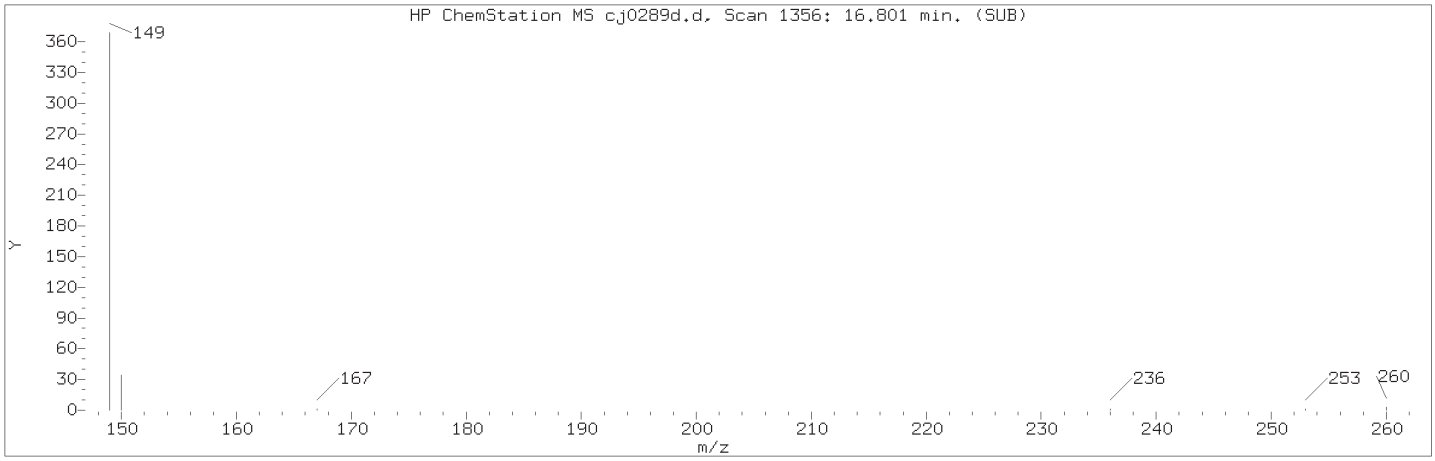
Compound Number	: 41		
Compound Name	: bis(2-Ethylhexyl)phthalate		
Scan Number	: 1240		
Retention Time (minutes)	: 15.894		
Quant Ion	: 149.00		
Area (flag)	: 446M		
On-Column Amount (ng/ul)	: 0.1257		
Integration start scan	: 1233	Integration stop scan:	1243
Y at integration start	: 398	Y at integration end:	417

Reason for manual integration: improper integration

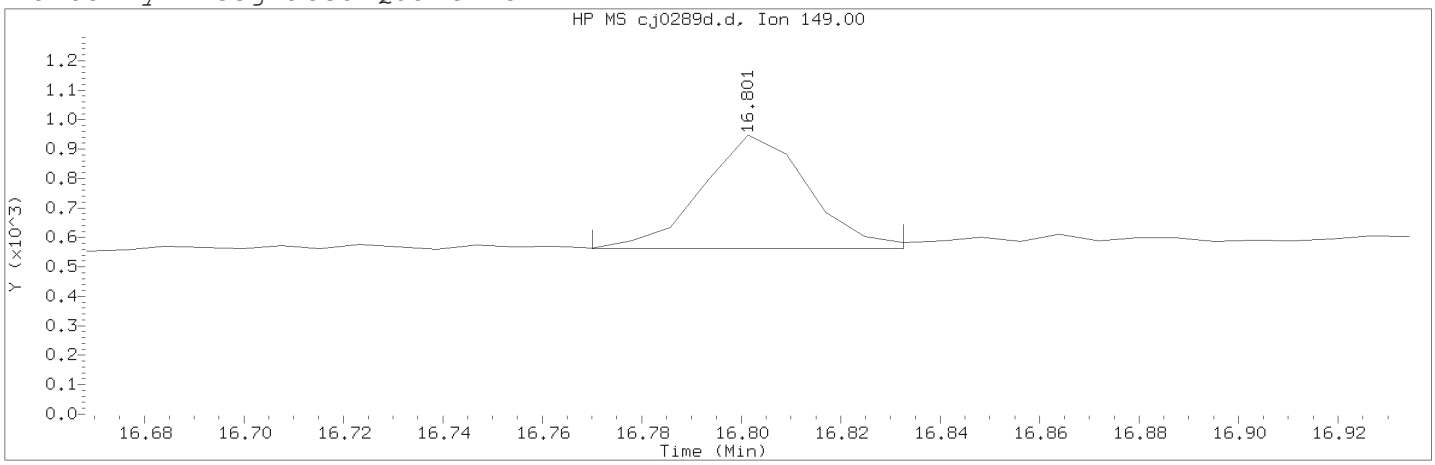
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

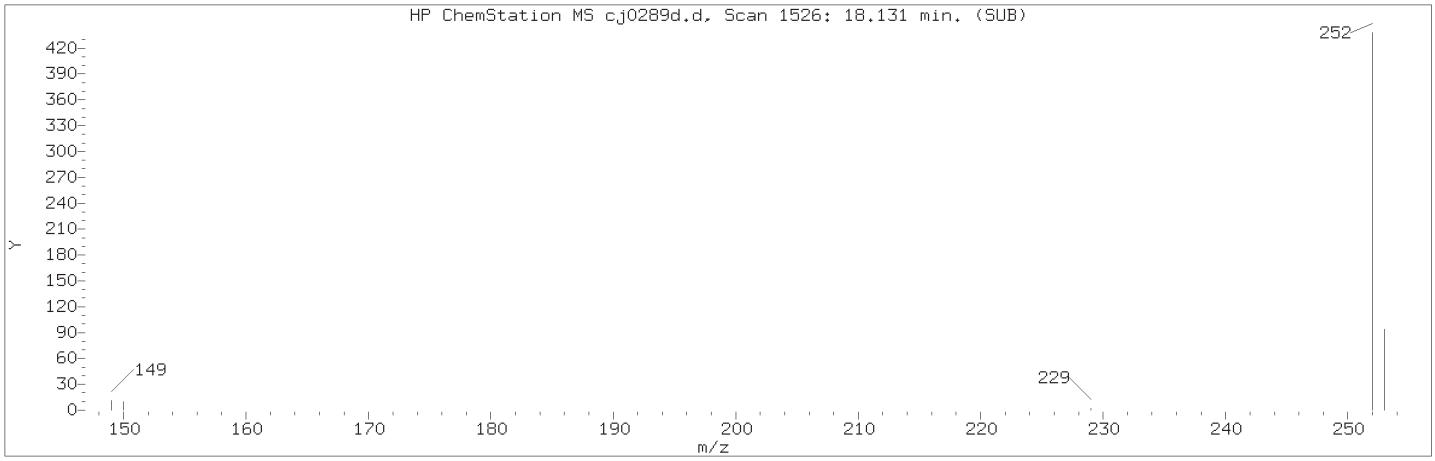
Compound Number : 45
Compound Name : Di-n-octylphthalate
Scan Number : 1356
Retention Time (minutes) : 16.801
Quant Ion : 149.00
Area (flag) : 577M
On-Column Amount (ng/ul) : 0.0023
Integration start scan : 1351 Integration stop scan: 1359
Y at integration start : 561 Y at integration end: 561

Reason for manual integration: improper integration

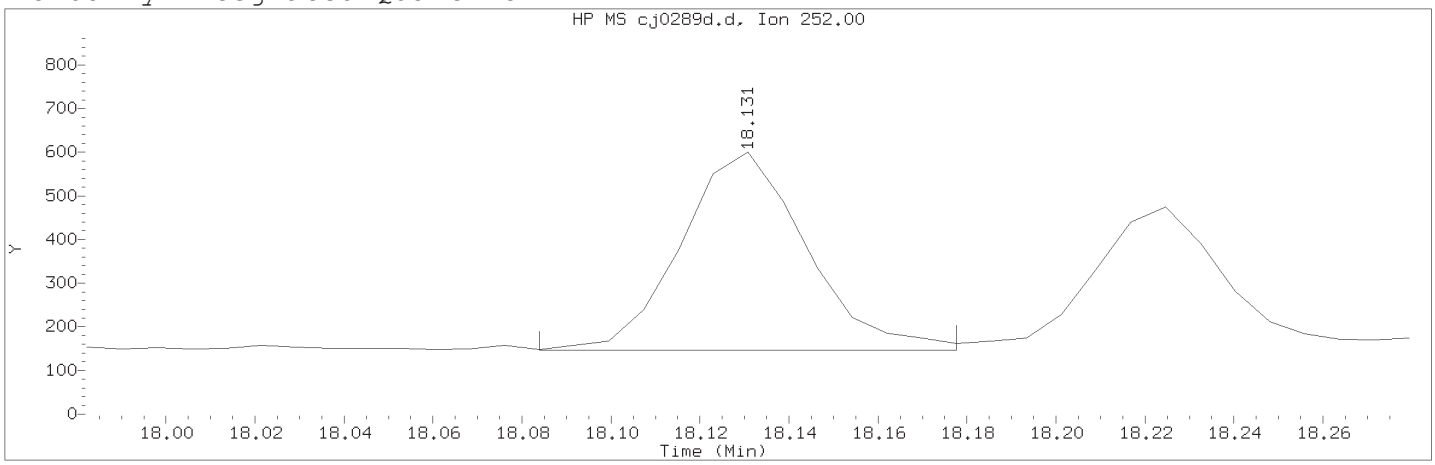
Analyst responsible for change: Digitally signed by Anthony P. Bauer on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD0.005 Lab Sample ID: SIM2598

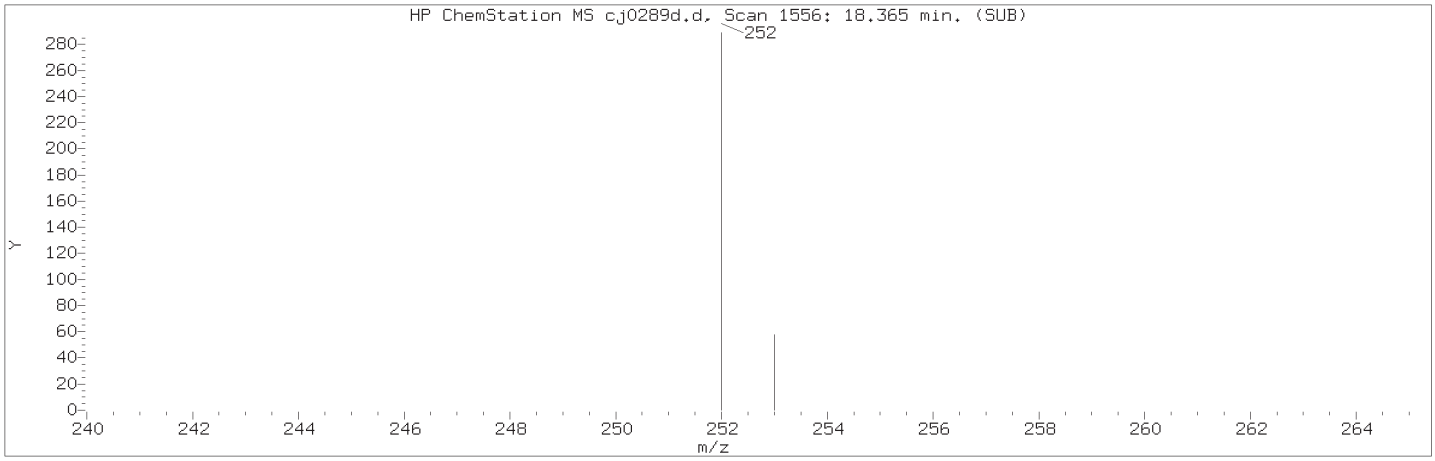
Compound Number : 48
Compound Name : Benzo(e)pyrene
Scan Number : 1526
Retention Time (minutes) : 18.131
Quant Ion : 252.00
Area (flag) : 890M
On-Column Amount (ng/ul) : 0.0051
Integration start scan : 1519 Integration stop scan: 1531
Y at integration start : 147 Y at integration end: 147

Reason for manual integration: improper integration

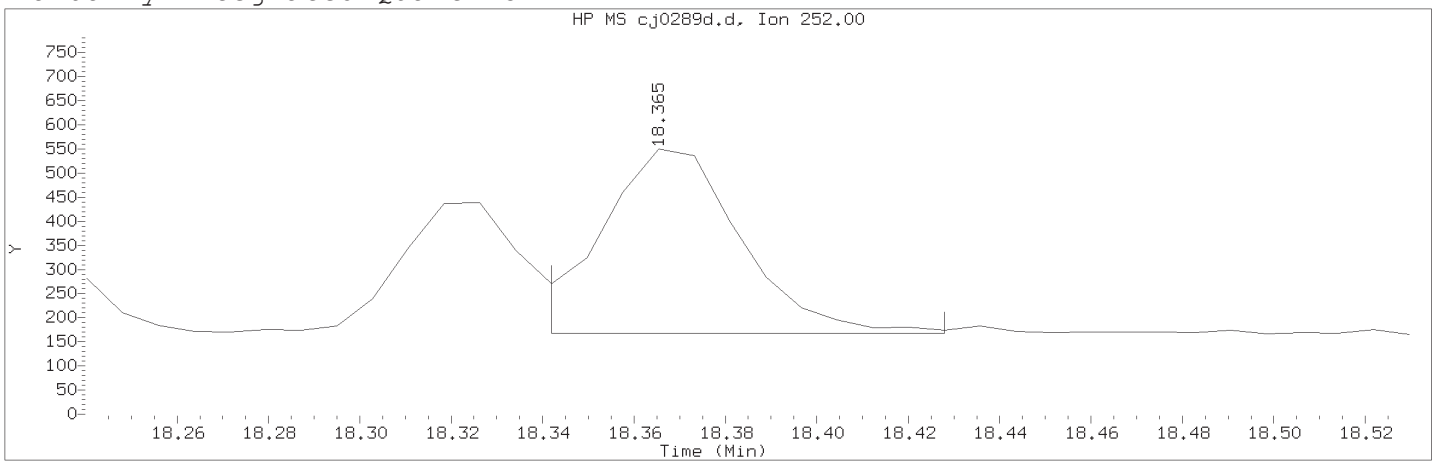
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0289d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 03:45 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

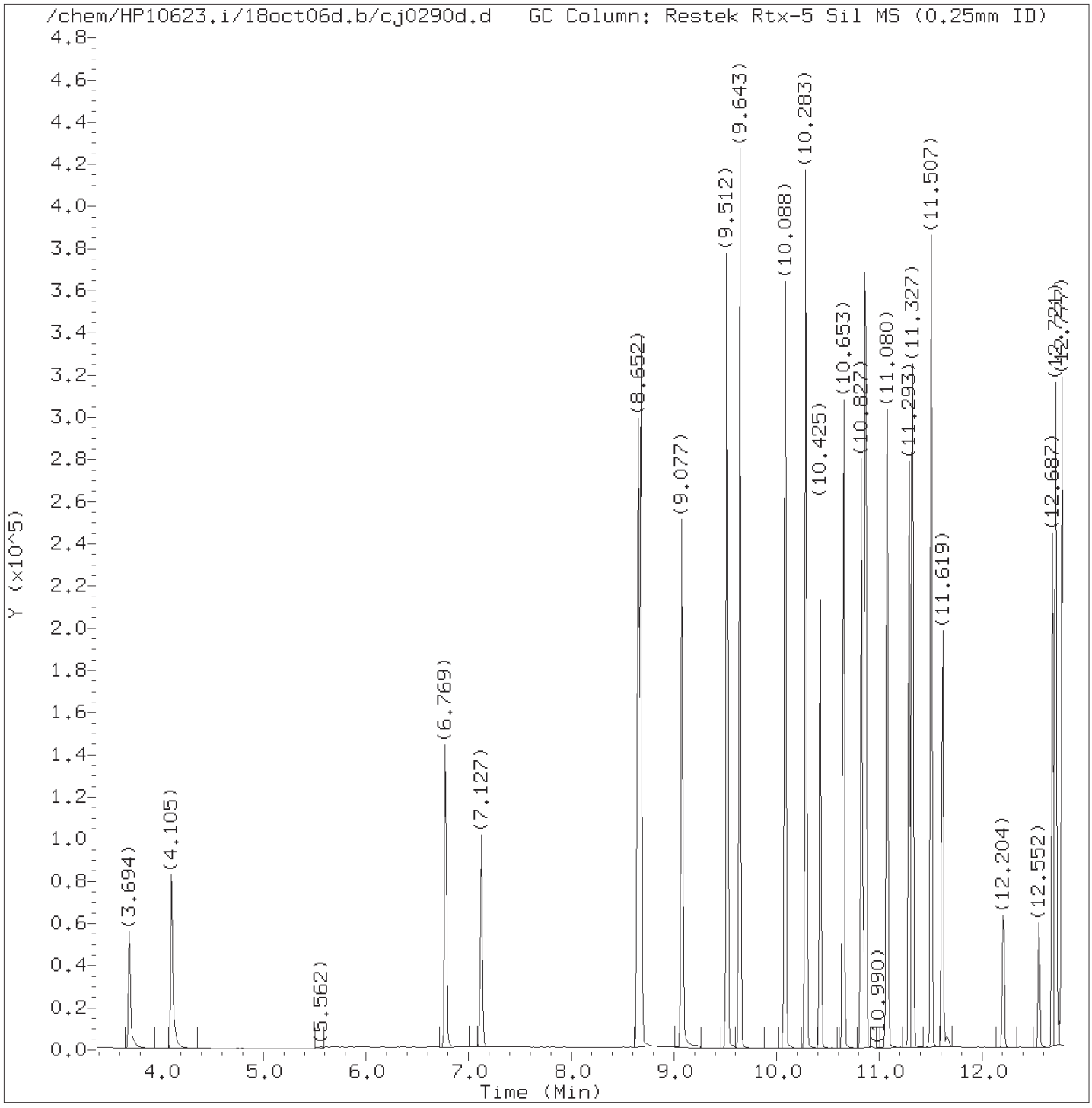
Sample Name: SSTD0.005 Lab Sample ID: SIM2598

Compound Number	: 52		
Compound Name	: Perylene		
Scan Number	: 1556		
Retention Time (minutes)	: 18.365		
Quant Ion	: 252.00		
Area (flag)	: 824M		
On-Column Amount (ng/ul)	: 0.0049		
Integration start scan	: 1552	Integration stop scan:	1563
Y at integration start	: 168	Y at integration end:	168

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

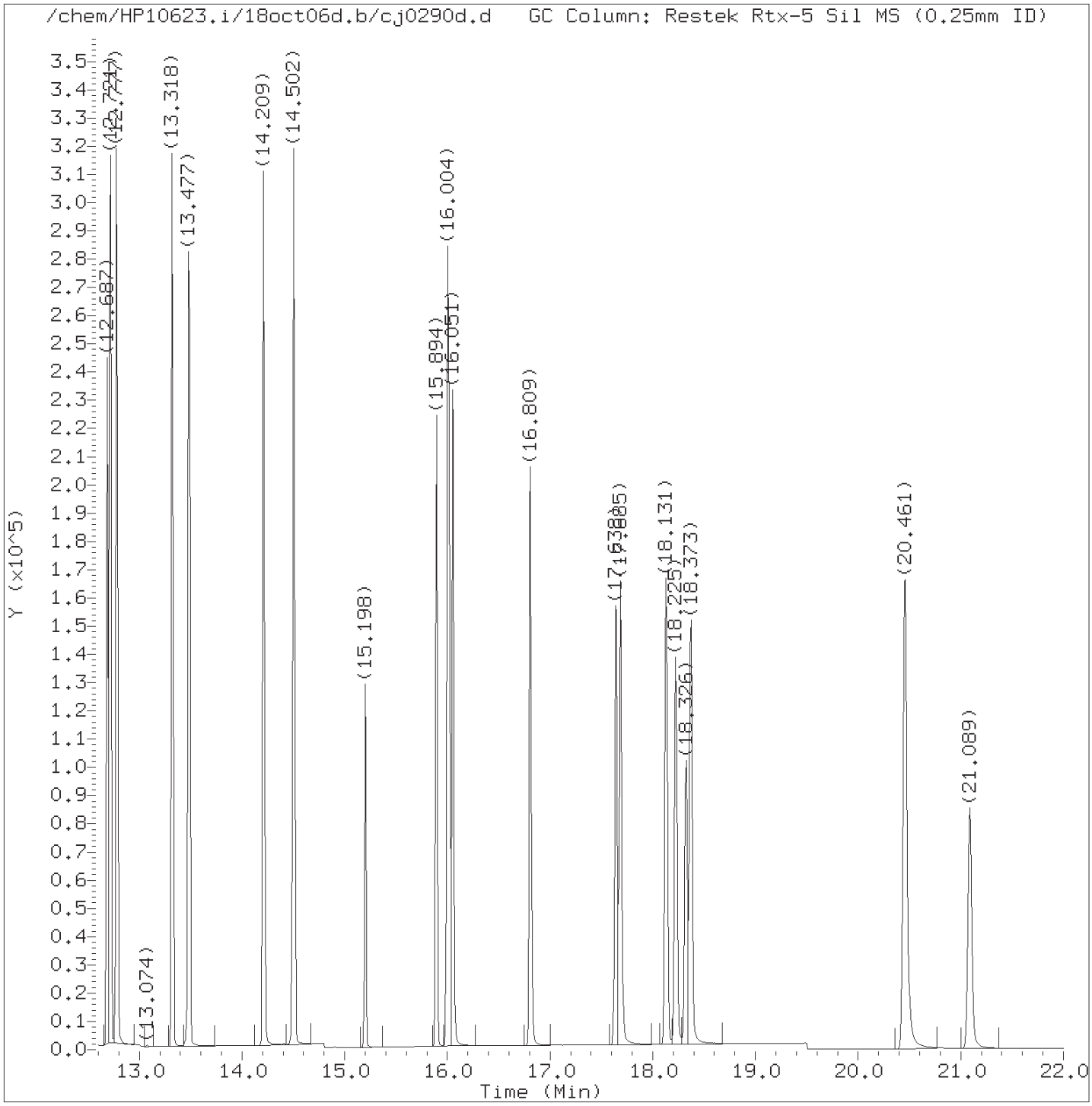
Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0290d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 04:16 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: icvall1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD001 Lab Sample ID: SICV1908

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0290d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 04:16 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: icvall1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD001 Lab Sample ID: SICV1908

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18oct06d.b/cj0290d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 04:16 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: icvall1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD001 Lab Sample ID: SICV1908

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.694	88	47418	1.023
2) N-Nitrosodimethylamine	(1)	4.111	74	64900	1.084
5) bis(2-Chloroethyl)ether	(1)	6.769	93	115694M	1.232
6)*1,4-Dichlorobenzene-d4	(1)	7.127	152	72140	1.000
10)*Naphthalene-d8	(2)	8.652	136	292464	1.000
11) Naphthalene	(2)	8.679	128	318651	1.026
12) Quinoline	(2)	9.077	129	195904	1.090
13) 2-Methylnaphthalene	(2)	9.512	142	206707	1.068
15) 1-Methylnaphthalene	(2)	9.643	142	197491	1.013
18) Dimethylphthalate	(3)	10.425	163	204754	1.093
19) Acenaphthylene	(3)	10.653	152	282805	1.077
20)*Acenaphthene-d10	(3)	10.827	164	132248	1.000
21) Acenaphthene	(3)	10.870	154	182180	1.014
22) Dibenzofuran	(3)	11.080	168	267169	1.092
23) Diethylphthalate	(3)	11.293	149	197646	1.081
26) Fluorene	(3)	11.507	166	211062	1.098
27) N-Nitrosodiphenylamine	(4)	11.619	169	117967	1.001
28) NDPA as diphenylamine	(4)	11.619	169	117967	1.001
29) Hexachlorobenzene	(4)	12.215	284	50451	1.146
31)*Phenanthrene-d10	(4)	12.687	188	249995	1.000
32) Phenanthrene	(4)	12.721	178	304503	1.021
33) Anthracene	(4)	12.777	178	295369	1.030
35) Di-n-butylphthalate	(4)	13.318	149	302035	0.945
37) Fluoranthene	(4)	14.209	202	305368	1.042
39) Pyrene	(5)	14.502	202	315711	1.022
40) Butylbenzylphthalate	(5)	15.198	149	121788	0.874
41) bis(2-Ethylhexyl)phthalate	(5)	15.894	149	163058	0.841
42) Benzo(a)anthracene	(5)	16.004	228	263021	1.058
43)*Chrysene-d12	(5)	16.019	240	191865	1.000
44) Chrysene	(5)	16.051	228	260762	1.024
45) Di-n-octylphthalate	(6)	16.809	149	263363	0.938
46) Benzo(b)fluoranthene	(6)	17.638	252	211462	1.122
47) Benzo(k)fluoranthene	(6)	17.685	252	242326	1.197
48) Benzo(e)pyrene	(6)	18.131	252	236610	1.225
50) Benzo(a)pyrene	(6)	18.225	252	200087	1.164
51)*Perylene-d12	(6)	18.326	264	147055	1.000
52) Perylene	(6)	18.373	252	224520	1.200
53) Indeno(1,2,3-cd)pyrene	(6)	20.454	276	199583	1.170
54) Dibenz(a,h)anthracene	(6)	20.461	278	160373	1.134
55) Benzo(g,h,i)perylene	(6)	21.089	276	177182	1.113

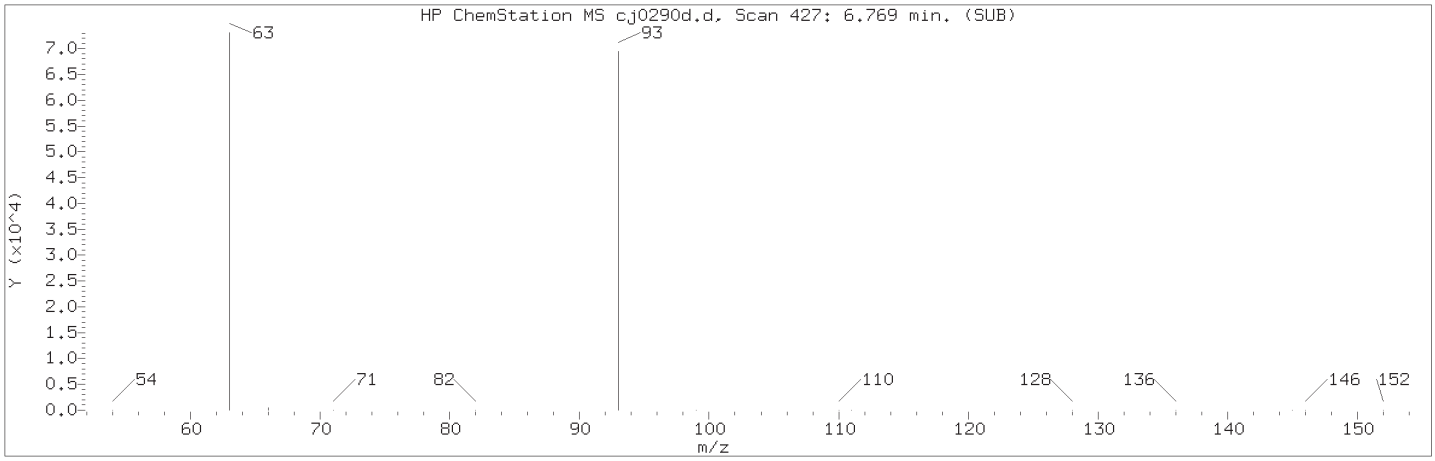
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

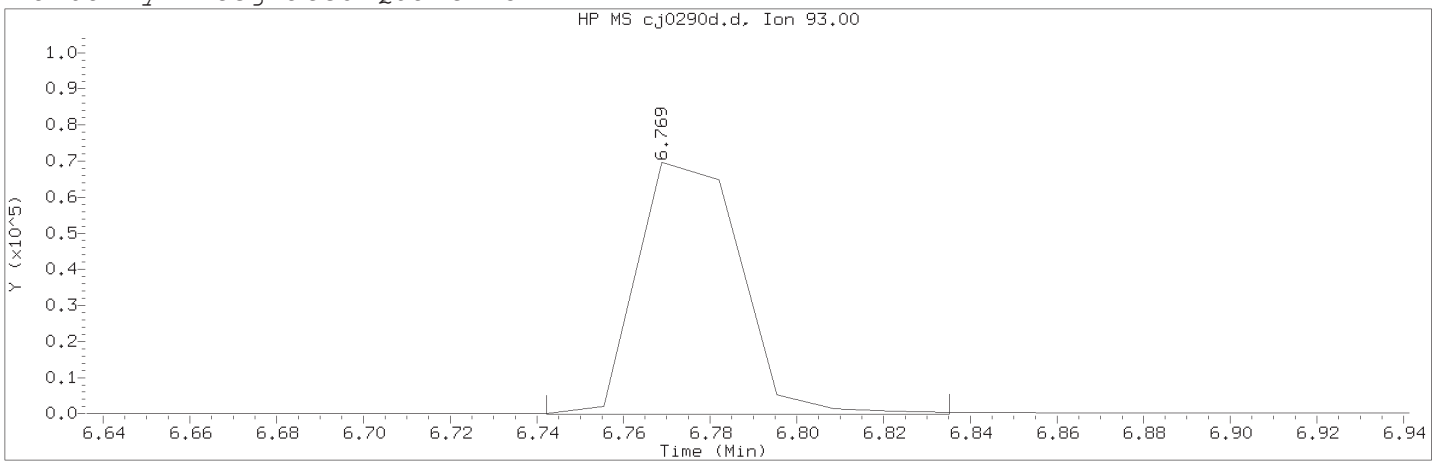
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0290d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 04:16 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: icvall1
Calibration date and time: 07-OCT-2018 23:02
Date, time and analyst ID of latest file update: 07-Oct-2018 23:03 apb10206

Sample Name: SSTD001 Lab Sample ID: SICV1908

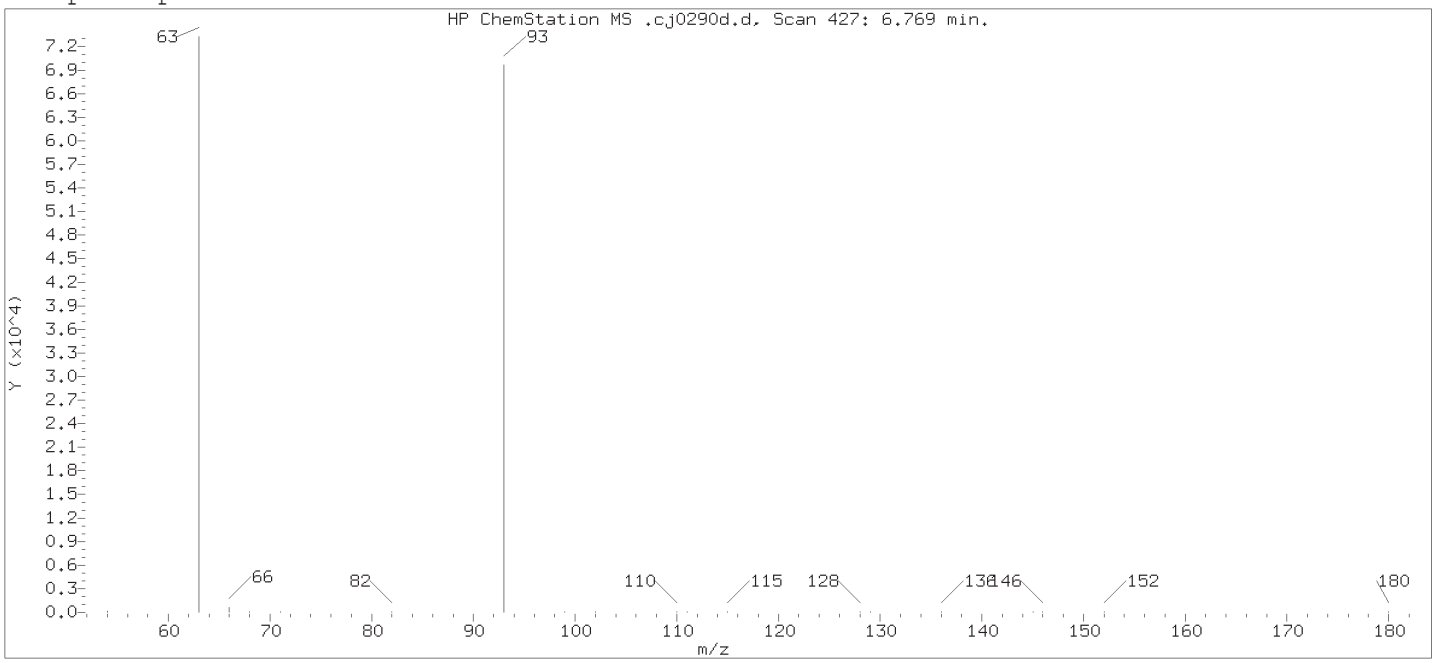
Compound Number	: 5		
Compound Name	: bis(2-Chloroethyl)ether		
Scan Number	: 427		
Retention Time (minutes)	: 6.769		
Quant Ion	: 93.00		
Area (flag)	: 115694M		
On-Column Amount (ng/ul)	: 1.2320		
Integration start scan	: 424	Integration stop scan:	431
Y at integration start	: -112	Y at integration end:	-112

Reason for manual integration: missed peak

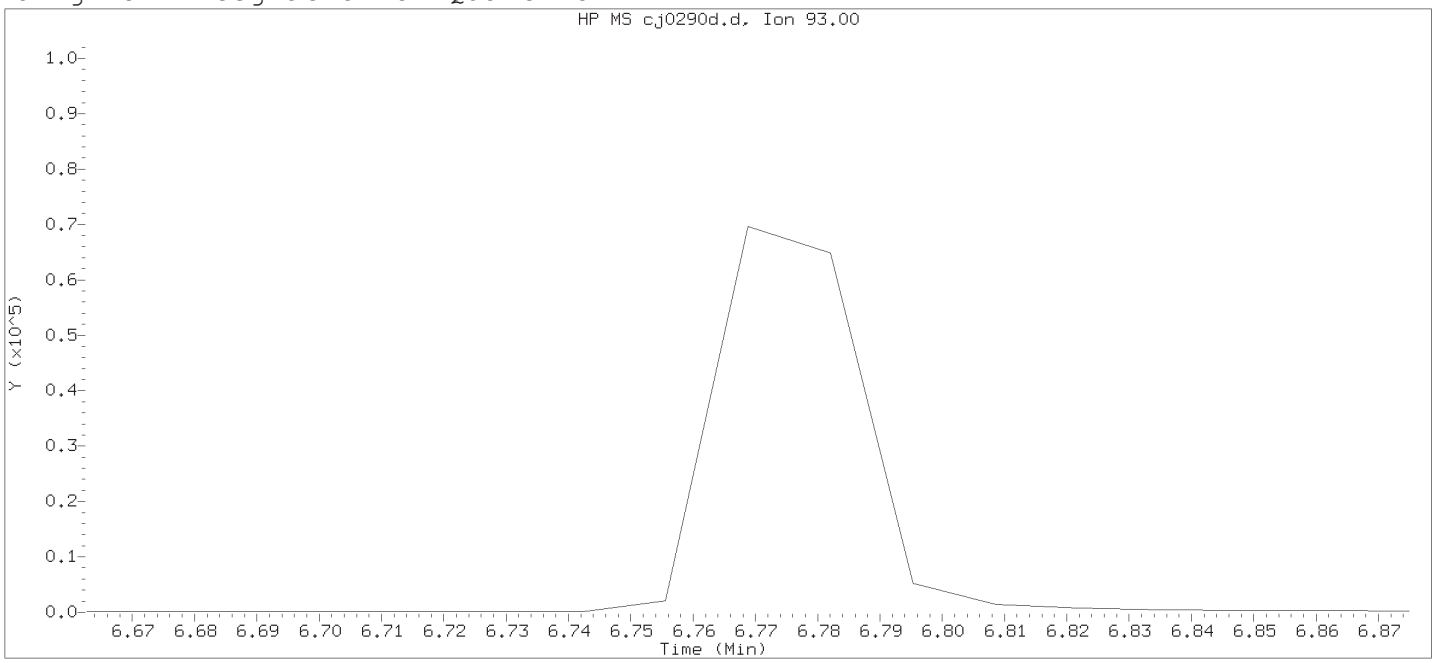
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/07/2018 at 23:03.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 10/09/2018 at 12:23.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18oct06d.b/cj0290d.d Instrument ID: HP10623.i
Injection date and time: 07-OCT-2018 04:16 Analyst ID: apb10206

Method used: /chem/HP10623.i/18oct06d.b/sim8270d.m Sublist used: icvall1
Calibration date and time: 07-OCT-2018 22:55
Date, time and analyst ID of latest file update: 07-Oct-2018 22:56 apb10206

Sample Name: SSTD001 Lab Sample ID: SICV1908

Compound Number : 5
Compound Name : bis(2-Chloroethyl)ether
Expected RT (minutes) : 6.769
Quant Ion : 93.00

Digitally signed by Anthony P. Bauer on 10/07/2018 at 23:03.
Target 3.5 esignature used [illegible]

Data File: /chem/HP10623.i/18nov16.b/ck0700.d

Date : 16-NOV-2018 05:01

Client ID: DFTPP

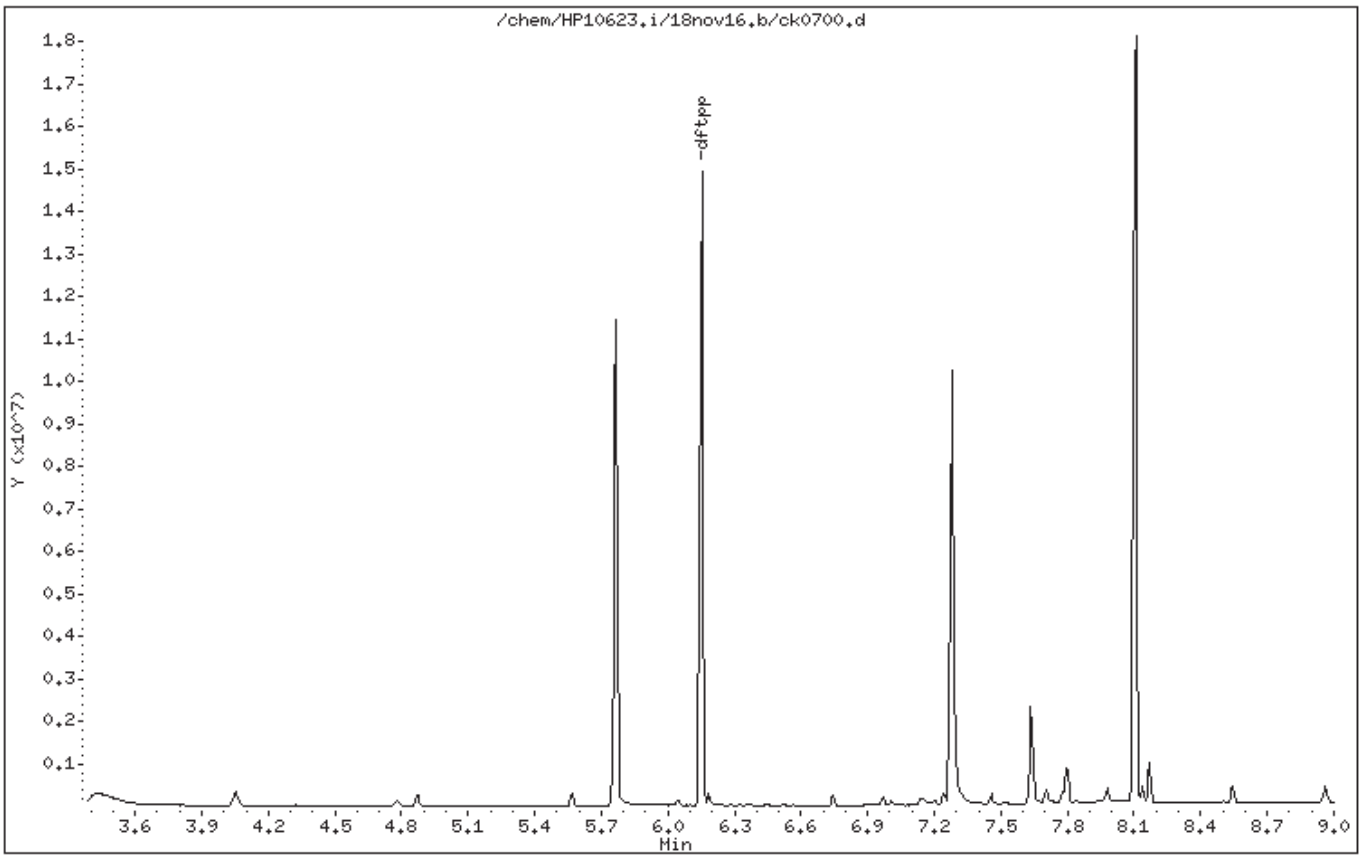
Instrument: HP10623.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Joseph M. Gambler on 11/16/2018 at 06:31.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP10623.i/18nov16.b/ck0700.d

Date : 16-NOV-2018 05:01

Client ID: DFTPP

Instrument: HP10623.i

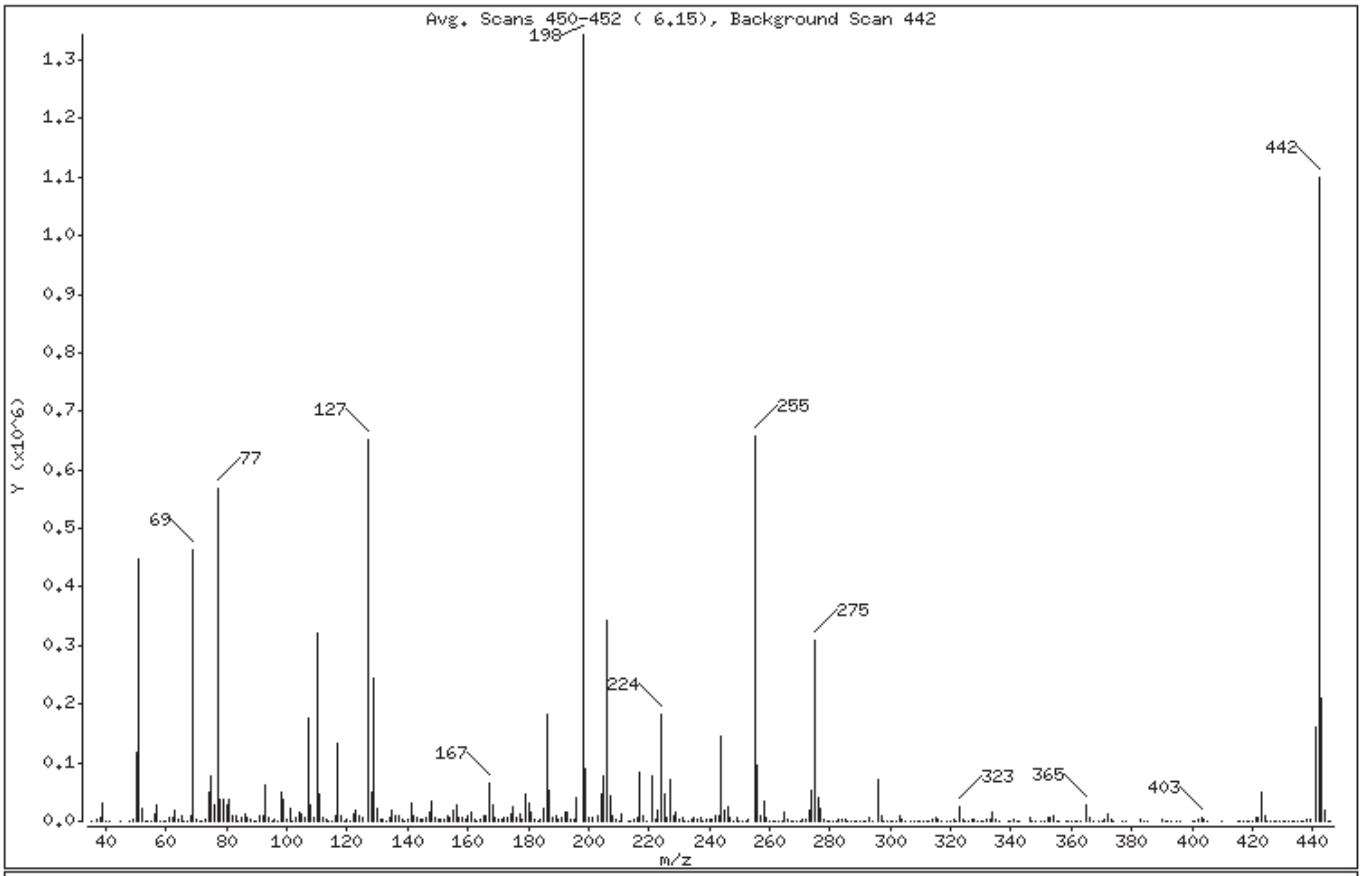
Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	33.40
68	Less than 2.00% of mass 69	0.65 (1.87)
69	Mass 69 relative abundance	34.56
70	Less than 2.00% of mass 69	0.18 (0.51)
127	10.00 - 80.00% of mass 198	48.39
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.71
275	10.00 - 60.00% of mass 198	22.96
365	Greater than 1.00% of mass 198	2.12
441	0.01 - 24.00% of mass 442	11.93 (14.58)
442	50.00 - 99.99% of mass 198	81.82
443	15.00 - 24.00% of mass 442	15.64 (19.11)

Digitally signed by Joseph M. Gambler on 11/16/2018 at 06:31.
Target 3.5 esignature user ID: jmg00346

Date : 16-NOV-2018 05:01

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

Data File: ck0700.d
Spectrum: Avg. Scans 450-452 (6.15), Background Scan 442
Location of Maximum: 198.00
Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	84	134.00	6720	230.00	2073	326.00	523
37.00	1776	135.00	20040	231.00	6568	327.00	4344
38.00	5433	136.00	7797	232.00	1227	328.00	2350
39.00	31496	137.00	9861	233.00	1452	329.00	394
40.00	1414	138.00	2123	234.00	4283	330.00	142
41.00	166	139.00	1258	235.00	5089	331.00	202
45.00	594	140.00	3071	236.00	3484	332.00	1635
48.00	143	141.00	30280	237.00	5457	333.00	2292
49.00	2698	142.00	10352	238.00	828	334.00	15164
50.00	118768	143.00	6353	239.00	2646	335.00	4122
51.00	448832	144.00	1847	240.00	2191	336.00	480
52.00	22840	145.00	1826	241.00	4072	339.00	379
53.00	680	146.00	5608	242.00	9025	340.00	349
54.00	64	147.00	16004	243.00	10090	341.00	2895
55.00	1467	148.00	34960	244.00	144512	342.00	809
56.00	12484	149.00	6886	245.00	19280	343.00	67
57.00	28912	150.00	2143	246.00	24216	346.00	5224
58.00	1201	151.00	4341	247.00	4691	347.00	974
59.00	407	152.00	1795	248.00	1342	348.00	64
60.00	273	153.00	9792	249.00	4913	350.00	180
61.00	5317	154.00	7650	250.00	1014	351.00	387
62.00	6521	155.00	17840	251.00	1213	352.00	6983
63.00	18264	156.00	26640	252.00	1458	353.00	5087
64.00	2655	157.00	5484	253.00	3283	354.00	7771
65.00	9333	158.00	5602	255.00	656832	355.00	1492
66.00	426	159.00	4371	256.00	96216	356.00	155
67.00	398	160.00	9135	257.00	7772	358.00	74
68.00	8695	161.00	14081	258.00	34504	359.00	515
69.00	464384	162.00	3967	259.00	5589	360.00	123
70.00	2356	163.00	1166	260.00	1018	361.00	138
71.00	196	164.00	1898	261.00	1223	362.00	71
72.00	394	165.00	10748	262.00	235	363.00	187
73.00	3539	166.00	9501	263.00	358	365.00	28432
74.00	49688	167.00	63960	264.00	1010	366.00	4714
75.00	77856	168.00	28560	265.00	14018	367.00	355

Digitally signed by Joseph M. Gambler on 11/16/2018 at 06:31.
Target 3.5 esignature user ID: jmg00346

Date : 16-NOV-2018 05:01

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

Data File: ck0700.d
Spectrum: Avg. Scans 450-452 (6.15), Background Scan 442
Location of Maximum: 198.00
Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	28056	169.00	4932	266.00	2086	369.00	73
77.00	568704	170.00	2128	267.00	279	370.00	697
78.00	38376	171.00	2658	268.00	128	371.00	2070
79.00	35776	172.00	5359	269.00	227	372.00	12388
80.00	27040	173.00	6937	270.00	853	373.00	2877
81.00	38568	174.00	13011	271.00	1613	374.00	393
82.00	9215	175.00	25144	272.00	2076	377.00	326
83.00	9004	176.00	7475	273.00	19376	378.00	66
84.00	811	177.00	11561	274.00	53848	383.00	3044
85.00	7086	178.00	3566	275.00	308480	384.00	891
86.00	10871	179.00	46064	276.00	41656	385.00	275
87.00	5047	180.00	31064	277.00	22512	390.00	1808
88.00	2024	181.00	15292	278.00	3954	391.00	1168
89.00	948	182.00	2483	279.00	853	392.00	796
90.00	235	183.00	1270	280.00	131	393.00	82
91.00	8299	184.00	3768	281.00	161	395.00	57
92.00	9751	185.00	22608	282.00	660	396.00	55
93.00	60864	186.00	183744	283.00	2637	400.00	53
94.00	4644	187.00	51864	284.00	1829	401.00	785
95.00	889	188.00	4973	285.00	4015	402.00	4332
96.00	2666	189.00	10550	286.00	711	403.00	6402
97.00	340	190.00	2047	287.00	134	404.00	2441
98.00	47888	191.00	5055	288.00	281	405.00	318
99.00	37408	192.00	14233	289.00	868	410.00	339
100.00	3422	193.00	15953	290.00	985	415.00	263
101.00	21464	194.00	3384	291.00	593	416.00	86
102.00	1360	195.00	2500	292.00	1201	417.00	58
103.00	7340	196.00	41344	293.00	5056	418.00	58
104.00	14065	198.00	1343488	294.00	1305	419.00	135
105.00	12767	199.00	90176	296.00	70600	420.00	69
106.00	4709	200.00	6519	297.00	9373	421.00	6034
107.00	176704	201.00	6462	298.00	674	422.00	5963
108.00	27616	203.00	8510	299.00	181	423.00	50328
109.00	5715	204.00	45656	300.00	61	424.00	10060
110.00	322496	205.00	78648	301.00	947	425.00	987

Digitally signed by Joseph M. Gambler on 11/16/2018 at 06:31.
Target 3.5 esignature user ID: jmg00346

Date : 16-NOV-2018 05:01

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

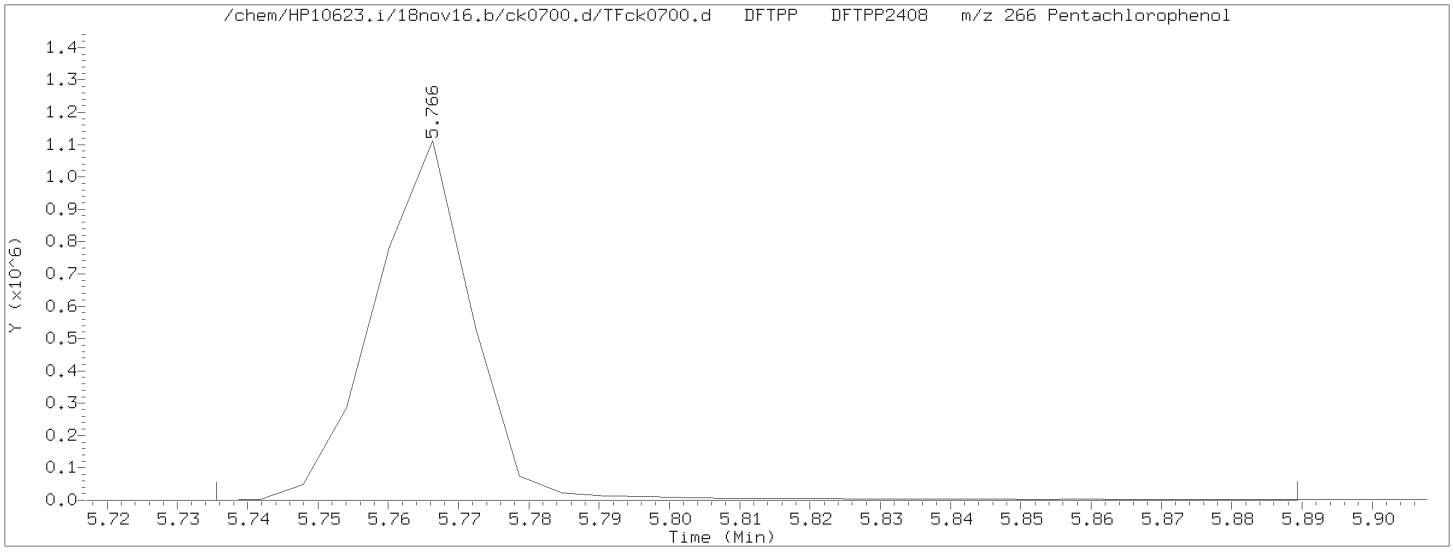
Data File: ck0700.d
Spectrum: Avg. Scans 450-452 (6.15), Background Scan 442
Location of Maximum: 198.00
Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	47776	206.00	341440	302.00	1406	426.00	88
112.00	5981	207.00	44448	303.00	9021	427.00	240
113.00	1771	208.00	10438	304.00	2548	428.00	152
114.00	495	209.00	3419	305.00	333	429.00	407
115.00	486	210.00	923	307.00	72	430.00	377
116.00	10175	211.00	12199	308.00	953	431.00	453
117.00	133824	213.00	927	309.00	628	432.00	339
118.00	10144	214.00	445	310.00	1049	433.00	719
119.00	923	215.00	3396	311.00	357	434.00	1052
120.00	2298	216.00	6989	312.00	259	435.00	697
121.00	700	217.00	82144	313.00	804	436.00	1412
122.00	11664	218.00	10715	314.00	3536	437.00	1209
123.00	17408	219.00	1079	315.00	7549	438.00	1693
124.00	7984	221.00	78672	316.00	4468	439.00	1571
125.00	7335	222.00	2425	317.00	758	441.00	160256
127.00	650176	223.00	19264	319.00	151	442.00	1099264
128.00	48440	224.00	181760	320.00	415	443.00	210112
129.00	243904	225.00	45616	321.00	2460	444.00	18264
130.00	20120	226.00	5063	322.00	1477	445.00	1130
131.00	3831	227.00	70304	323.00	25304	446.00	62
132.00	1891	228.00	9500	324.00	4330		
133.00	715	229.00	15304	325.00	478		

Digitally signed by Joseph M. Gambler on 11/16/2018 at 06:31.
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

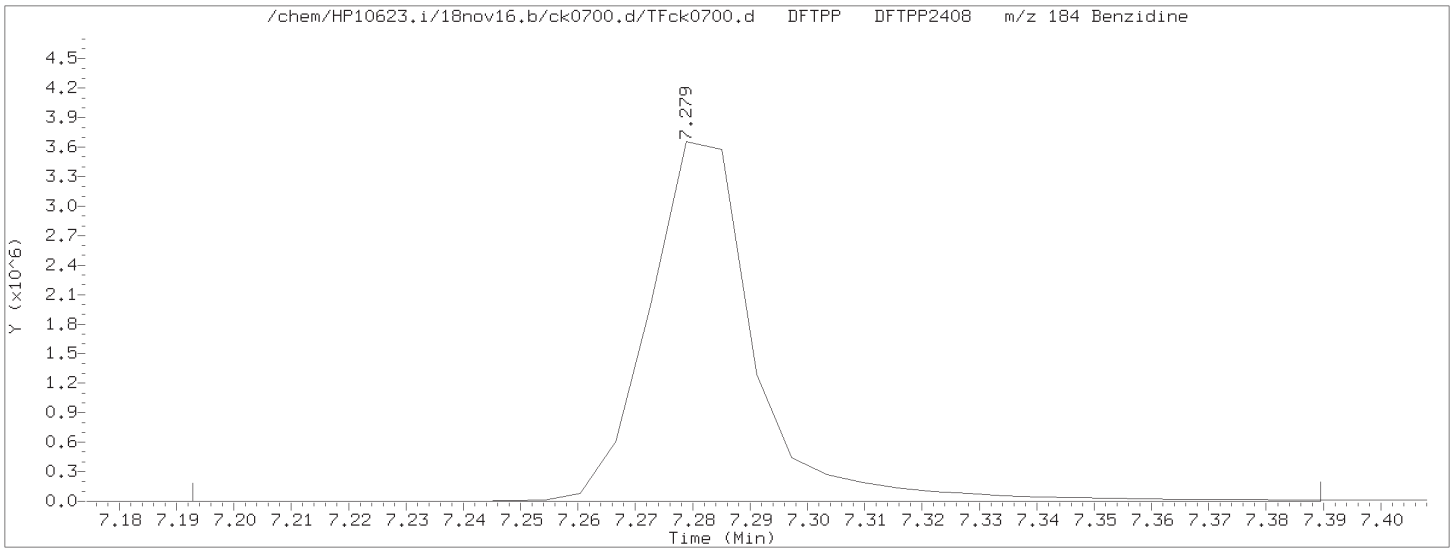
Instrument ID: HP10623.i Injection Date: 16-NOV-2018 05:01 Operator: jmg00346



Pentachlorophenol EICP peak height = 1112576 EICP peak height at 10% = 111258 Pentachlorophenol EICP area = 1082233

Pentachlorophenol EICP peak apex (min.) = 5.766
RT at 10% of front half of EICP (min.) = 5.750 'Front' peak width (min.) = 0.0168000000
RT at 10% of back half of EICP (min.) = 5.778 'Tailing' peak width (min.) = 0.0117833333

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0117833333}{0.0168000000} = 0.701$



Benzidine EICP peak height = 3657312 EICP peak height at 10% = 365731 Benzidine EICP area = 4676439

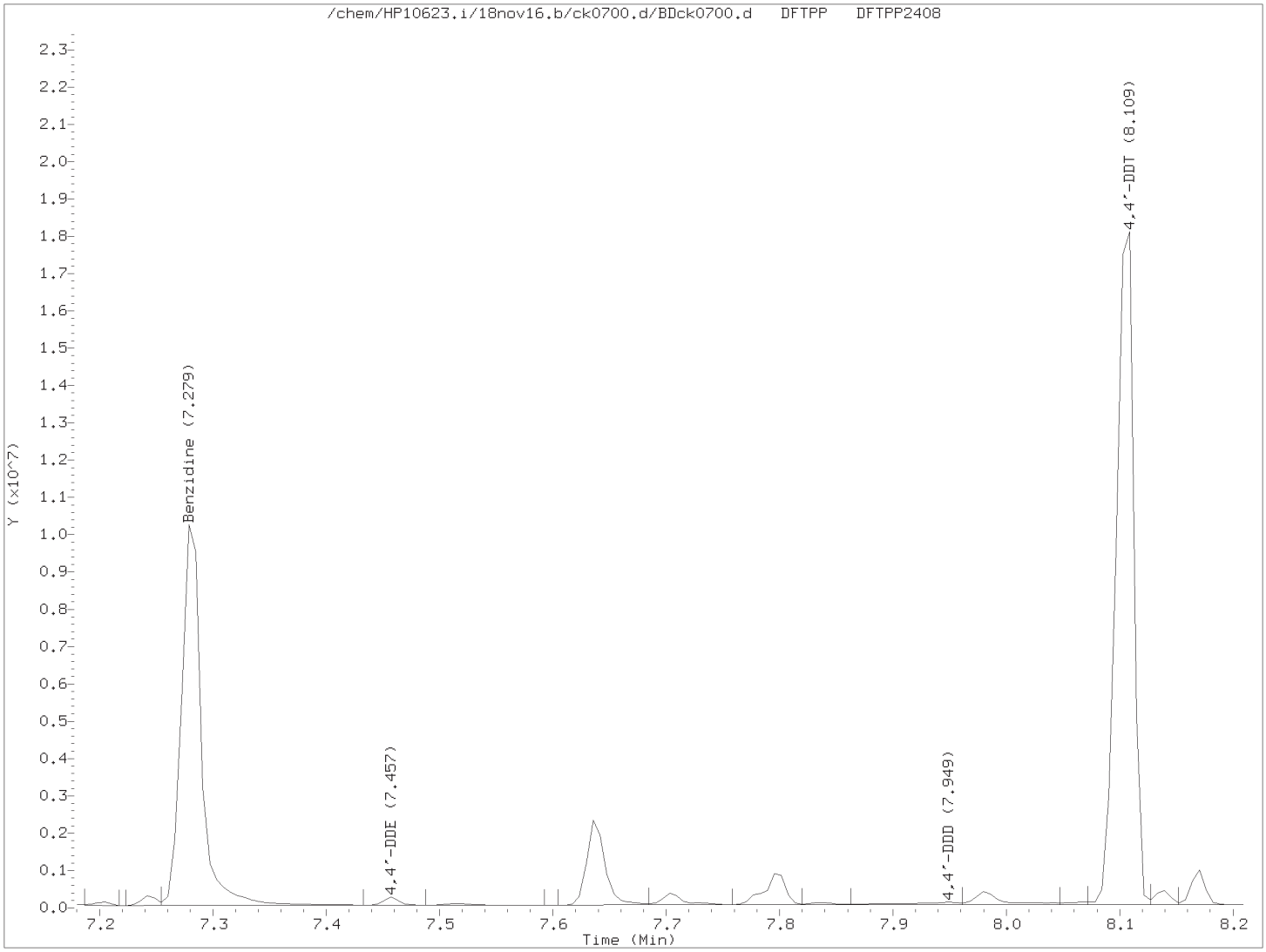
Benzidine EICP peak apex (min.) = 7.279
RT at 10% of front half of EICP (min.) = 7.264 'Front' peak width (min.) = 0.0150666667
RT at 10% of back half of EICP (min.) = 7.300 'Tailing' peak width (min.) = 0.0209500000

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0209500000}{0.0150666667} = 1.390$

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20. PARALLAX ID: cam01237

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP10623.i Injection Date: 16-NOV-2018 05:01 Operator: jmg00346

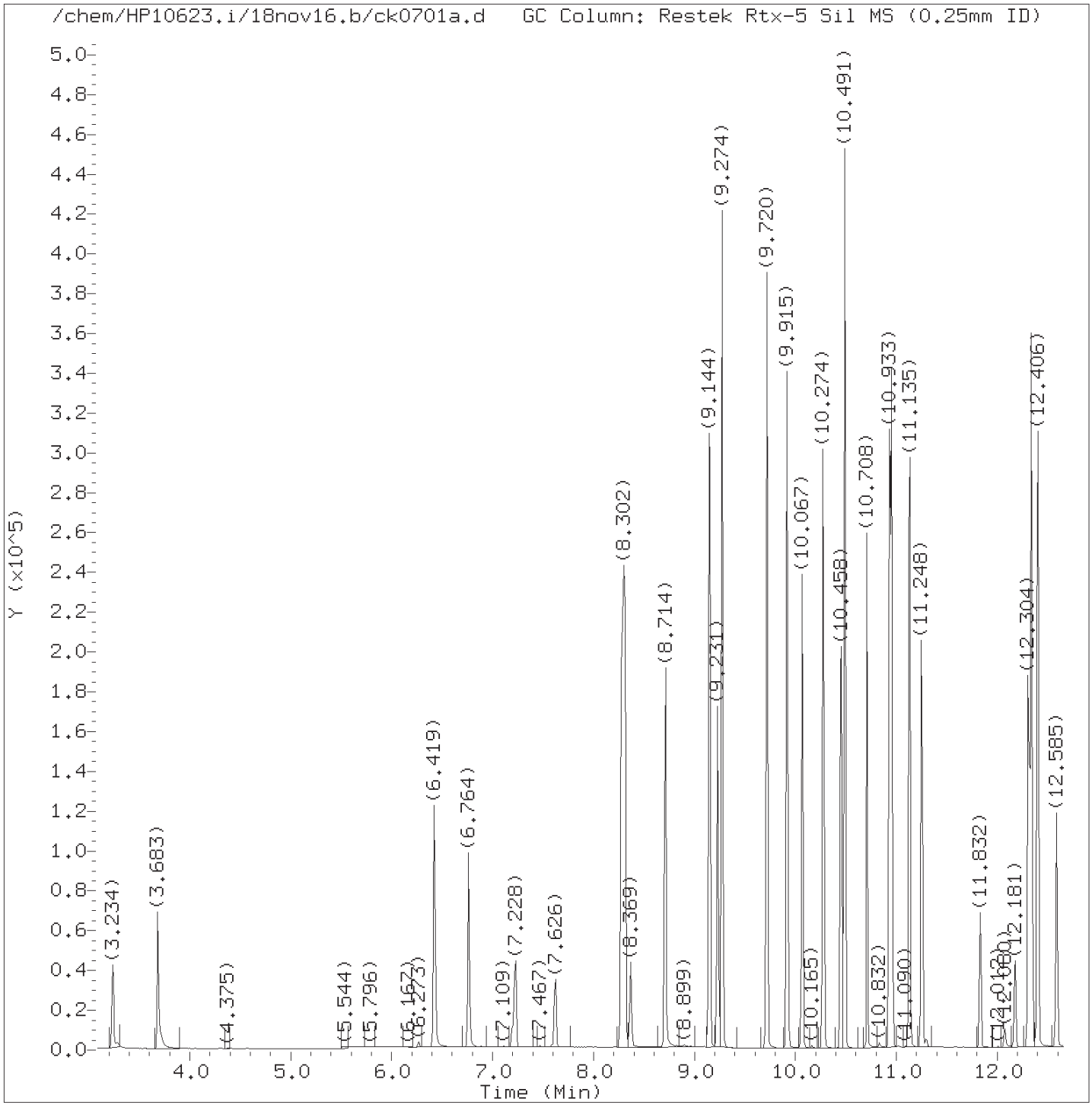


$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{204617 + 204672}{204617 + 204672 + 19809835} \times 100 = 2.0$$

printed on 11/16/2018 at 05:16

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

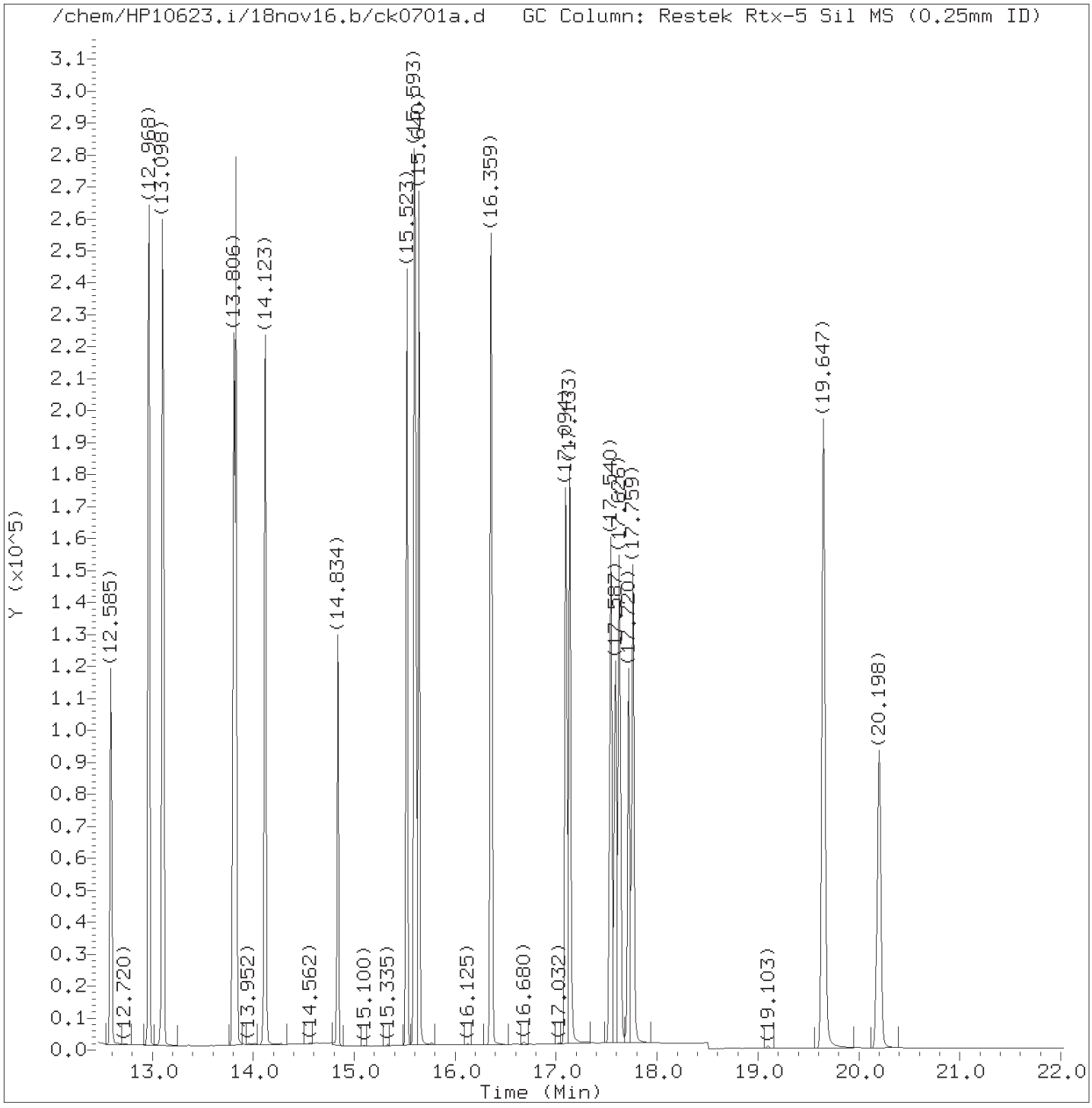
Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0701a.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 05:58 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: all1
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 06:29 jmg00346

Sample Name: SSTD001 Lab Sample ID: SIM2598

Digitally signed by Joseph M. Gambler
on 11/16/2018 at 06:31.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0701a.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 05:58 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: all1
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 06:29 jmg00346

Sample Name: SSTD001 Lab Sample ID: SIM2598

Digitally signed by Joseph M. Gambler
on 11/16/2018 at 06:31.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0701a.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 05:58 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: all1
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 06:29 jmg00346

Sample Name: SSTD001 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.234	88	36423MA	0.827
2) N-Nitrosodimethylamine	(1)	3.683	74	52972	0.931
5) bis(2-Chloroethyl)ether	(1)	6.419	93	86842	0.973
6)*1,4-Dichlorobenzene-d4	(1)	6.764	152	68540	1.000
10)*Naphthalene-d8	(2)	8.289	136	263636	1.000
11) Naphthalene	(2)	8.316	128	295438	1.055
12) Quinoline	(2)	8.714	129	175316	1.082
13) 2-Methylnaphthalene	(2)	9.155	142	208814	1.196
14)$1-Methylnaphthalene-d10	(2)	9.231	152	150442	1.129
15) 1-Methylnaphthalene	(2)	9.274	142	200281	1.140
18) Dimethylphthalate	(3)	10.067	163	188531	1.100
19) Acenaphthylene	(3)	10.274	152	262067	1.090
20)*Acenaphthene-d10	(3)	10.458	164	121087	1.000
21) Acenaphthene	(3)	10.491	154	169544	1.030
22) Dibenzofuran	(3)	10.708	168	136838	0.611
23) Diethylphthalate	(3)	10.933	149	196044	1.171
26) Fluorene	(3)	11.135	166	192891	1.096
28) NDPA as diphenylamine	(4)	11.248	169	122753	1.138
27) N-Nitrosodiphenylamine	(4)	11.248	169	122753	1.138
29) Hexachlorobenzene	(4)	11.832	284	45020	1.117
31)*Phenanthrene-d10	(4)	12.304	188	228805	1.000
32) Phenanthrene	(4)	12.338	178	281287	1.030
33) Anthracene	(4)	12.406	178	284040	1.082
35) Di-n-butylphthalate	(4)	12.968	149	312845	1.070
36)$Fluoranthene-d10	(4)	13.806	212	220454	1.062
37) Fluoranthene	(4)	13.830	202	279123	1.041
39) Pyrene	(5)	14.123	202	287516	1.019
40) Butylbenzylphthalate	(5)	14.834	149	157361	1.236
41) bis(2-Ethylhexyl)phthalate	(5)	15.523	149	183479	1.007
42) Benzo(a)anthracene	(5)	15.593	228	244941	1.078
43)*Chrysene-d12	(5)	15.609	240	175341	1.000
44) Chrysene	(5)	15.640	228	248215	1.066
45) Di-n-octylphthalate	(6)	16.359	149	301867	1.031
46) Benzo(b)fluoranthene	(6)	17.094	252	223926	1.139
47) Benzo(k)fluoranthene	(6)	17.133	252	226905	1.075
48) Benzo(e)pyrene	(6)	17.540	252	214569	1.065
49)$Benzo(a)pyrene-d12	(6)	17.587	264	156026	1.107
50) Benzo(a)pyrene	(6)	17.626	252	203573	1.135
51)*Perylene-d12	(6)	17.720	264	153412	1.000
52) Perylene	(6)	17.759	252	203145	1.040

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/16/2018 at 06:31.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0701a.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 05:58 Analyst ID: jmg00346

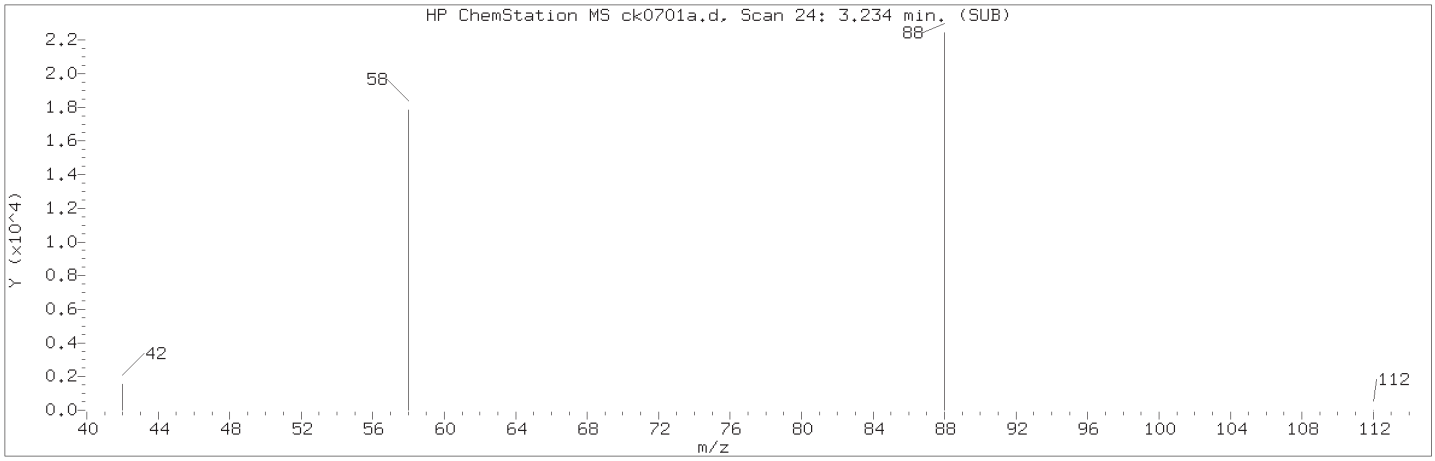
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: all1
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 06:29 jmg00346

Sample Name: SSTD001 Lab Sample ID: SIM2598

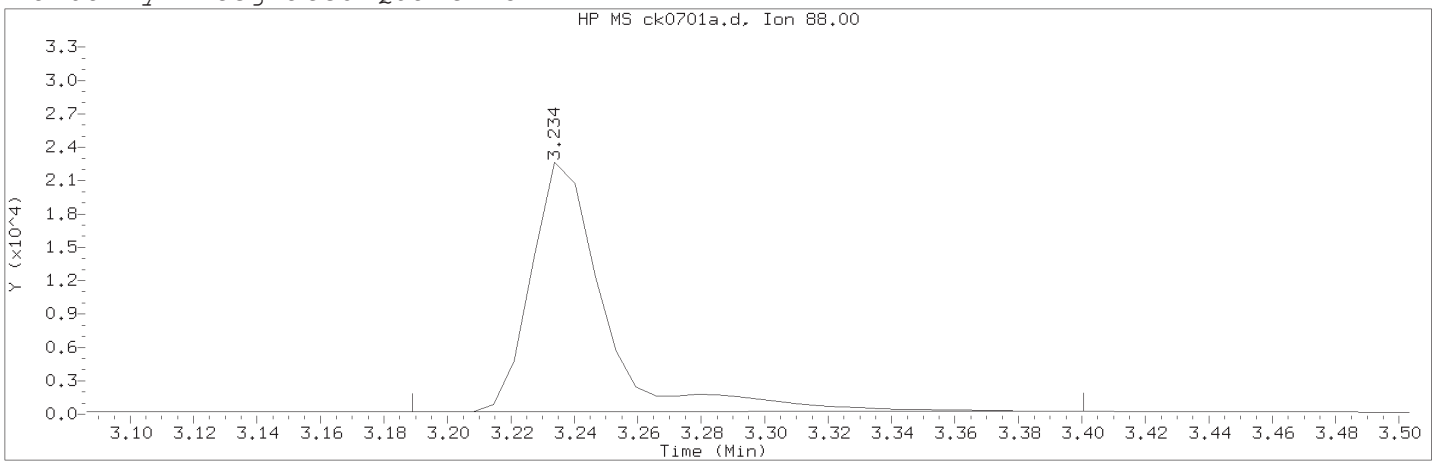
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	19.647	276	193811	1.089
54) Dibenz(a,h)anthracene	(6)	19.654	278	169330	1.148
55) Benzo(g,h,i)perylene	(6)	20.198	276	178428	1.074

Digitally signed by Joseph M. Gambler
on 11/16/2018 at 06:31.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0701a.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 05:58 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: all1
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 06:29 jmg00346

Sample Name: SSTD001 Lab Sample ID: SIM2598

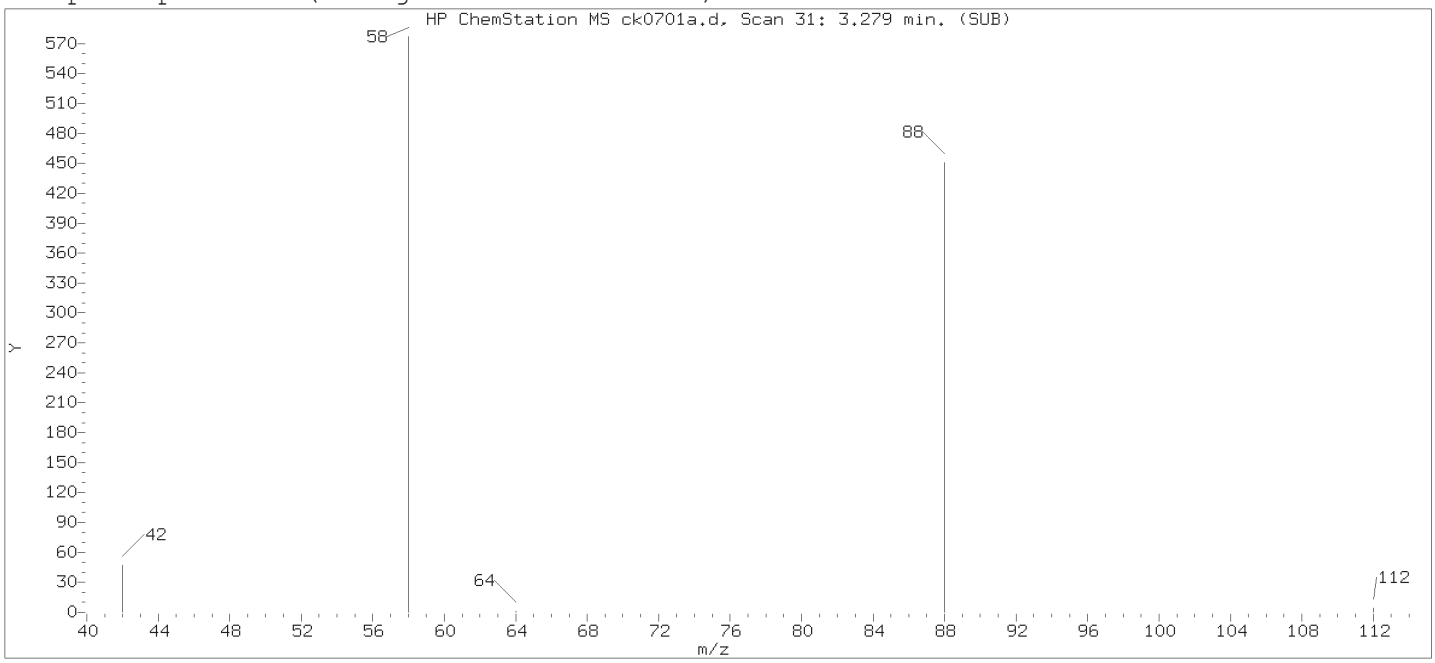
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 24
Retention Time (minutes) : 3.234
Quant Ion : 88.00
Area (flag) : 36423MA
On-Column Amount (ng/ul) : 0.8268
Integration start scan : 16 Integration stop scan: 49
Y at integration start : 199 Y at integration end: 247

Reason for manual integration: improper integration

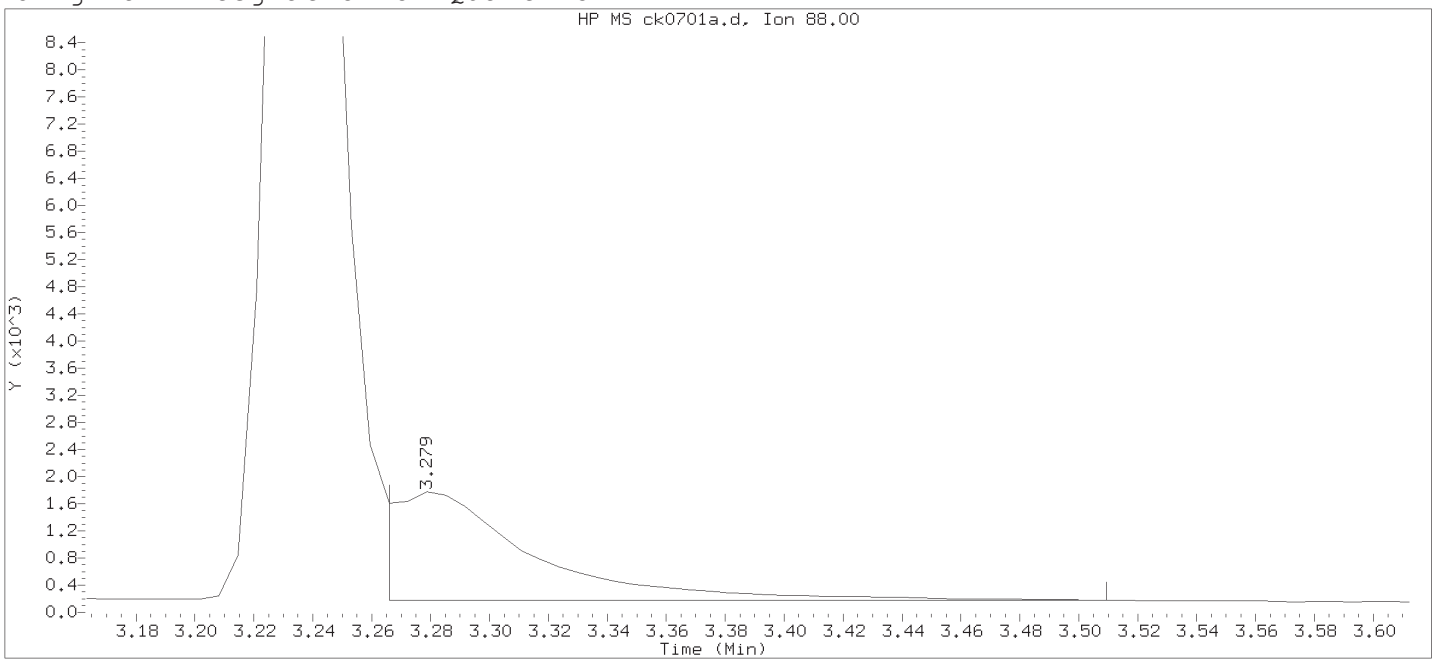
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/16/2018 at 06:31.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0701a.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 05:58 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: all1
Calibration date and time: 16-NOV-2018 06:25
Date, time and analyst ID of latest file update: 16-Nov-2018 06:25 Automation

Sample Name: SSTD001 Lab Sample ID: SIM2598

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 31		
Retention Time (minutes)	: 3.279		
Quant Ion	: 88.00		
Area	: 5173		
On-column Amount (ng/ul)	: 0.1174		
Integration start scan	: 28	Integration stop scan:	66
Y at integration start	: 177	Y at integration end:	177

Digitally signed by Joseph M. Gambler on 11/16/2018 at 06:31.
Target 3.5 esignature used 11/16/2018 06:25

Data File: /chem/HP10976.i/18sep04a.b/ii0100f.d

Date : 04-SEP-2018 19:19

Client ID: DFTPP050

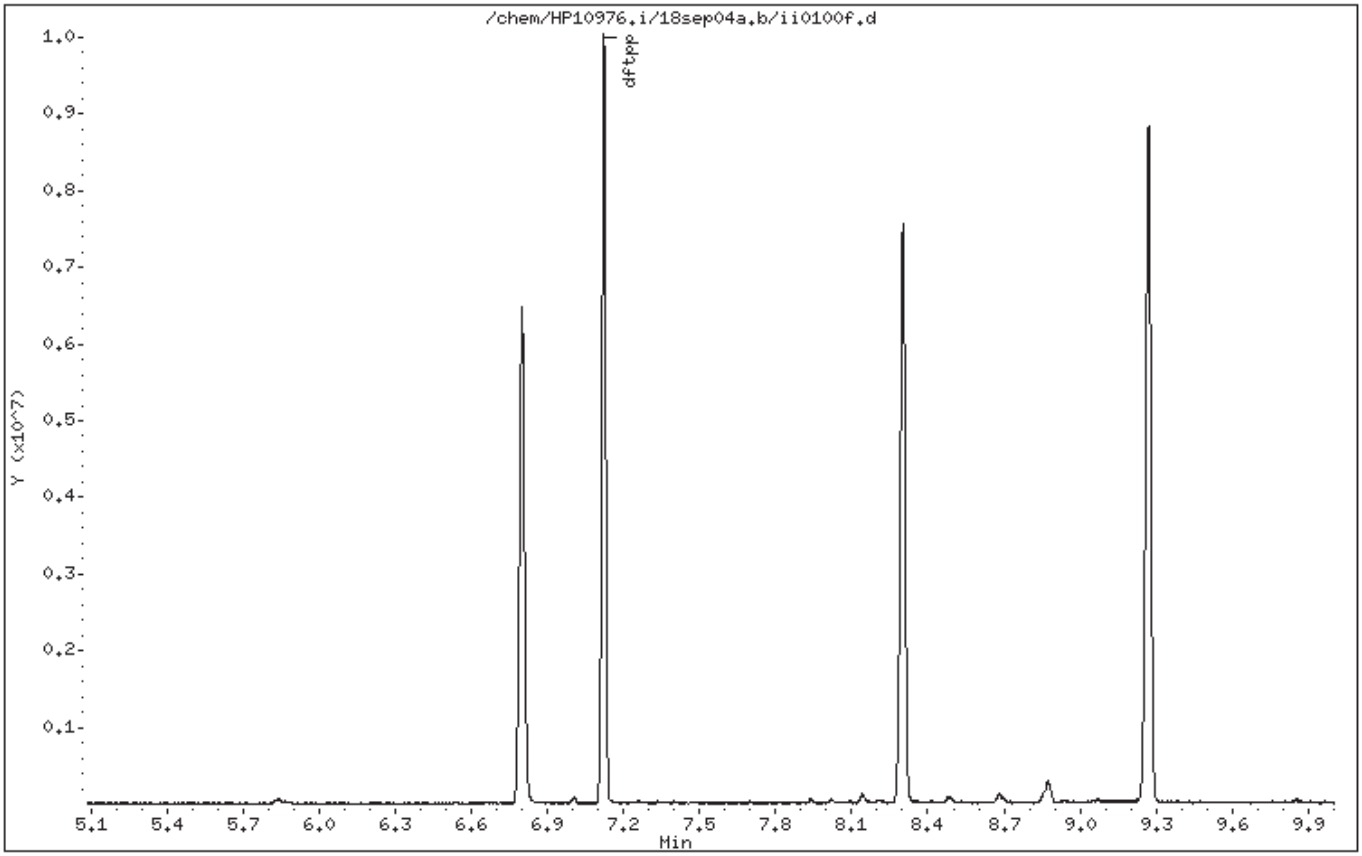
Instrument: HP10976.i

Sample Info: DFTPP050;DFTPP1598;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Data File: /chem/HP10976.i/18sep04a.b/ii0100f.d

Date : 04-SEP-2018 19:19

Client ID: DFTPP050

Instrument: HP10976.i

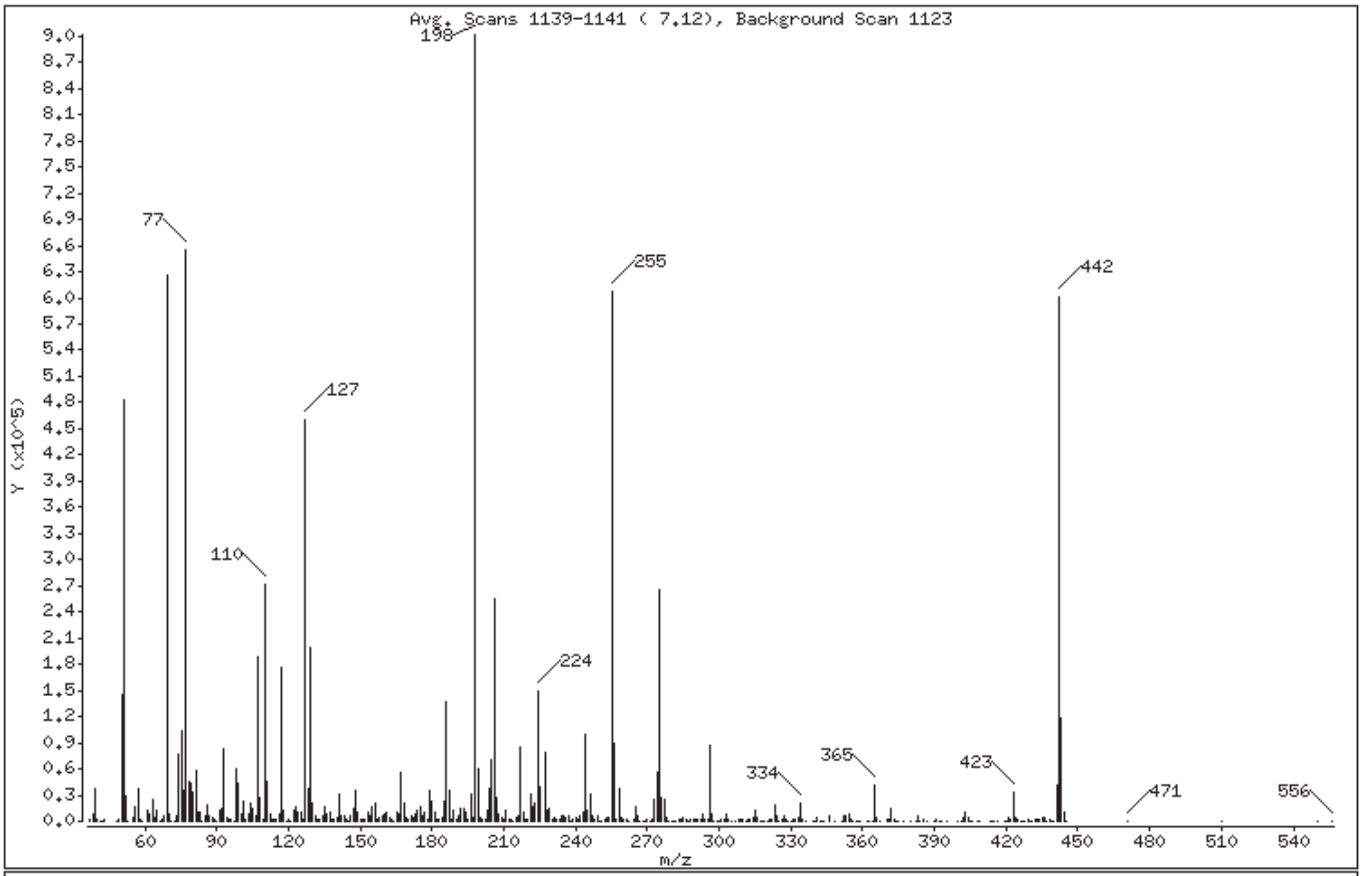
Sample Info: DFTPP050;DFTPP1598;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	53.63
68	Less than 2.00% of mass 69	0.66 (0.95)
69	Mass 69 relative abundance	69.47
70	Less than 2.00% of mass 69	0.99 (1.43)
127	10.00 - 80.00% of mass 198	51.07
197	Less than 2.00% of mass 198	0.57
199	5.00 - 9.00% of mass 198	6.74
275	10.00 - 60.00% of mass 198	29.37
365	Greater than 1.00% of mass 198	4.58
441	0.01 - 24.00% of mass 442	4.71 (7.06)
442	50.00 - 99.99% of mass 198	66.70
443	15.00 - 24.00% of mass 442	13.04 (19.55)

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Date : 04-SEP-2018 19:19

Client ID: DFTPP050 Instrument: HP10976.i

Sample Info: DFTPP050;DFTPP1598;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

Data File: ii0100f.d
Spectrum: Avg. Scans 1139-1141 (7.12), Background Scan 1123
Location of Maximum: 198.00
Number of points: 376

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	3030	138.00	1964	234.00	6519	331.00	1112
38.00	8522	139.00	1284	235.00	6462	332.00	2160
39.00	36888	140.00	3378	236.00	4500	333.00	4976
40.00	1602	141.00	30336	237.00	6799	334.00	21440
41.00	779	142.00	5828	238.00	908	335.00	2970
42.00	88	143.00	5706	239.00	2066	336.00	645
43.00	1376	144.00	2763	240.00	4211	339.00	959
48.00	223	145.00	924	241.00	2649	340.00	317
49.00	2511	146.00	7197	242.00	7182	341.00	3891
50.00	145792	147.00	14815	243.00	9585	342.00	589
51.00	483584	148.00	35344	244.00	98664	343.00	490
52.00	29136	149.00	9330	245.00	13263	344.00	417
53.00	852	150.00	1200	246.00	31000	346.00	6726
55.00	3326	151.00	2977	247.00	5486	348.00	227
56.00	16920	152.00	1338	248.00	1679	351.00	1009
57.00	36880	153.00	10119	249.00	6279	352.00	7118
58.00	2328	154.00	6886	250.00	884	353.00	5954
59.00	303	155.00	16496	251.00	289	354.00	7638
61.00	11854	156.00	21088	252.00	1638	355.00	2006
62.00	8396	157.00	2986	253.00	4849	356.00	523
63.00	24648	158.00	4645	254.00	3230	357.00	57
64.00	3246	159.00	5537	255.00	607488	358.00	240
65.00	11786	160.00	9202	256.00	88384	359.00	75
66.00	256	161.00	9681	257.00	1369	362.00	304
67.00	1528	162.00	3882	258.00	38104	363.00	155
68.00	5933	163.00	3086	259.00	4915	364.00	267
69.00	626368	164.00	544	260.00	1698	365.00	41304
70.00	8937	165.00	11267	261.00	1192	366.00	4376
71.00	173	166.00	8487	262.00	521	367.00	123
72.00	138	167.00	55440	264.00	1180	370.00	1304
73.00	5916	168.00	20640	265.00	17560	371.00	1848
74.00	75744	169.00	5046	266.00	6050	372.00	13525
75.00	104488	170.00	1800	267.00	51	373.00	2708
76.00	36024	171.00	5644	268.00	609	374.00	228
77.00	655296	172.00	4457	269.00	738	375.00	257

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Date : 04-SEP-2018 19:19

Client ID: DFTPP050 Instrument: HP10976.i

Sample Info: DFTPP050;DFTPP1598;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

Data File: ii0100f.d
Spectrum: Avg. Scans 1139-1141 (7.12), Background Scan 1123
Location of Maximum: 198.00
Number of points: 376

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	44840	173.00	7593	270.00	1409	377.00	950
79.00	43184	174.00	12241	271.00	317	380.00	66
80.00	32608	175.00	16400	272.00	2894	382.00	781
81.00	57616	176.00	7069	273.00	25136	383.00	5500
82.00	9663	177.00	11031	274.00	56192	384.00	625
83.00	10621	178.00	2798	275.00	264832	385.00	1778
84.00	825	179.00	35784	276.00	27280	387.00	281
85.00	6203	180.00	22696	277.00	24680	390.00	844
86.00	18232	181.00	11162	278.00	3858	391.00	1122
87.00	6611	182.00	2666	279.00	976	392.00	861
88.00	3977	183.00	1883	280.00	269	393.00	830
89.00	1438	184.00	3694	281.00	148	395.00	95
90.00	398	185.00	23392	282.00	275	400.00	243
91.00	12516	186.00	136640	283.00	1899	401.00	825
92.00	13649	187.00	35520	284.00	1941	402.00	3865
93.00	83000	188.00	3068	285.00	4075	403.00	9629
94.00	4935	189.00	11766	286.00	2272	404.00	4619
95.00	1200	190.00	1975	287.00	278	405.00	669
96.00	1775	191.00	6629	288.00	1628	406.00	608
97.00	436	192.00	14788	289.00	1291	408.00	90
98.00	59320	193.00	14957	290.00	1672	409.00	439
99.00	43928	194.00	9774	291.00	1170	413.00	533
100.00	7435	195.00	1934	292.00	2403	414.00	1034
101.00	22104	196.00	30760	293.00	8427	415.00	610
102.00	1551	197.00	5095	294.00	1241	416.00	437
103.00	9084	198.00	901632	295.00	1844	419.00	380
104.00	20288	199.00	60752	296.00	86736	420.00	895
105.00	14691	200.00	3558	297.00	8106	421.00	5119
106.00	6501	201.00	3022	298.00	380	422.00	2721
107.00	189248	202.00	3032	299.00	566	423.00	33536
108.00	27000	203.00	12842	300.00	152	424.00	3717
109.00	2263	204.00	38000	301.00	1390	425.00	1495
110.00	271296	205.00	70944	302.00	1443	426.00	994
111.00	45080	206.00	254464	303.00	9266	427.00	608
112.00	9118	207.00	26312	304.00	2206	428.00	826

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Date : 04-SEP-2018 19:19

Client ID: DFTPP050 Instrument: HP10976.i

Sample Info: DFTPP050;DFTPP1598;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

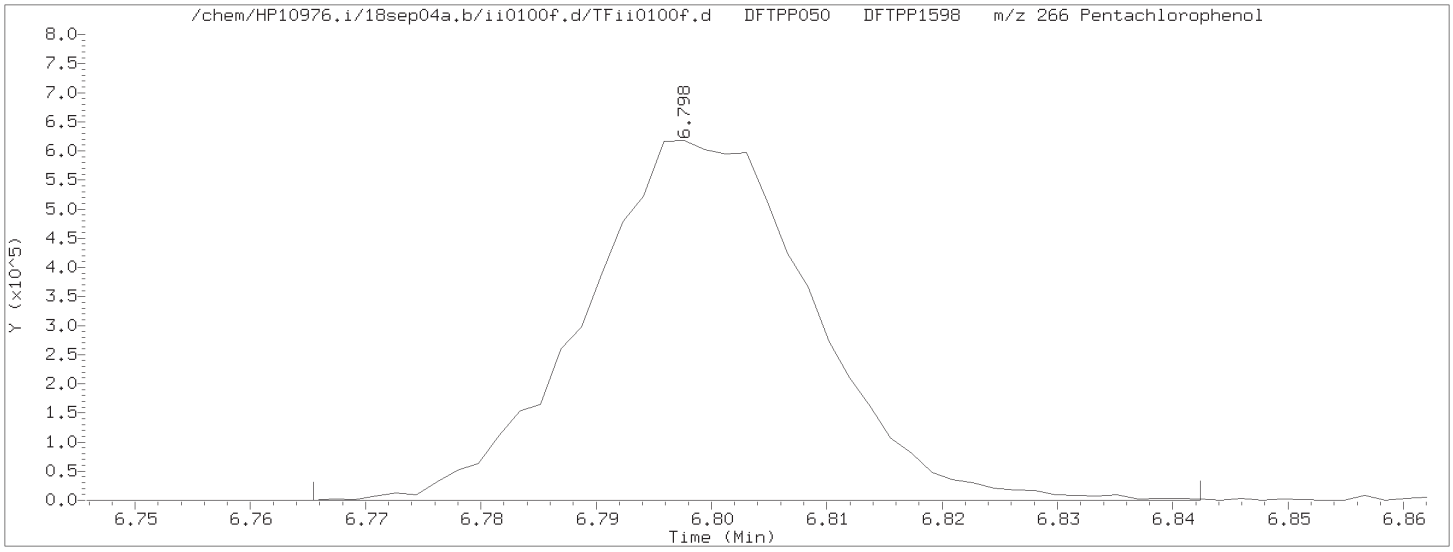
Data File: ii0100f.d
Spectrum: Avg. Scans 1139-1141 (7.12), Background Scan 1123
Location of Maximum: 198.00
Number of points: 376

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	2002	208.00	8932	305.00	398	429.00	1116
114.00	1281	209.00	3514	307.00	289	430.00	917
115.00	1188	210.00	2665	308.00	2522	431.00	340
116.00	7340	211.00	11507	309.00	1077	432.00	2301
117.00	177024	212.00	2576	310.00	1615	433.00	2552
118.00	11555	213.00	2326	311.00	674	434.00	2847
119.00	972	214.00	704	312.00	2038	435.00	4714
120.00	2267	215.00	3463	313.00	1770	436.00	3774
121.00	753	216.00	7135	314.00	4129	437.00	876
122.00	13251	217.00	85096	315.00	13140	438.00	1685
123.00	15856	218.00	9698	316.00	3476	439.00	947
124.00	10115	219.00	1464	317.00	830	440.00	421
125.00	9343	220.00	1499	318.00	531	441.00	42448
126.00	1134	221.00	31784	319.00	269	442.00	601408
127.00	460480	222.00	17128	320.00	890	443.00	117600
128.00	37912	223.00	20776	321.00	2697	444.00	10723
129.00	198848	224.00	149376	322.00	1567	445.00	81
130.00	19936	225.00	39256	323.00	18752	471.00	170
131.00	5919	227.00	79080	324.00	7143	510.00	81
132.00	1936	228.00	11648	325.00	214	550.00	100
133.00	1136	229.00	15197	326.00	1193	556.00	210
134.00	5541	230.00	2091	327.00	6771		
135.00	16166	231.00	3992	328.00	2714		
136.00	8171	232.00	2371	329.00	766		
137.00	11172	233.00	1867	330.00	243		

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Assessment of GC Column Performance and Injection Port Inertness for

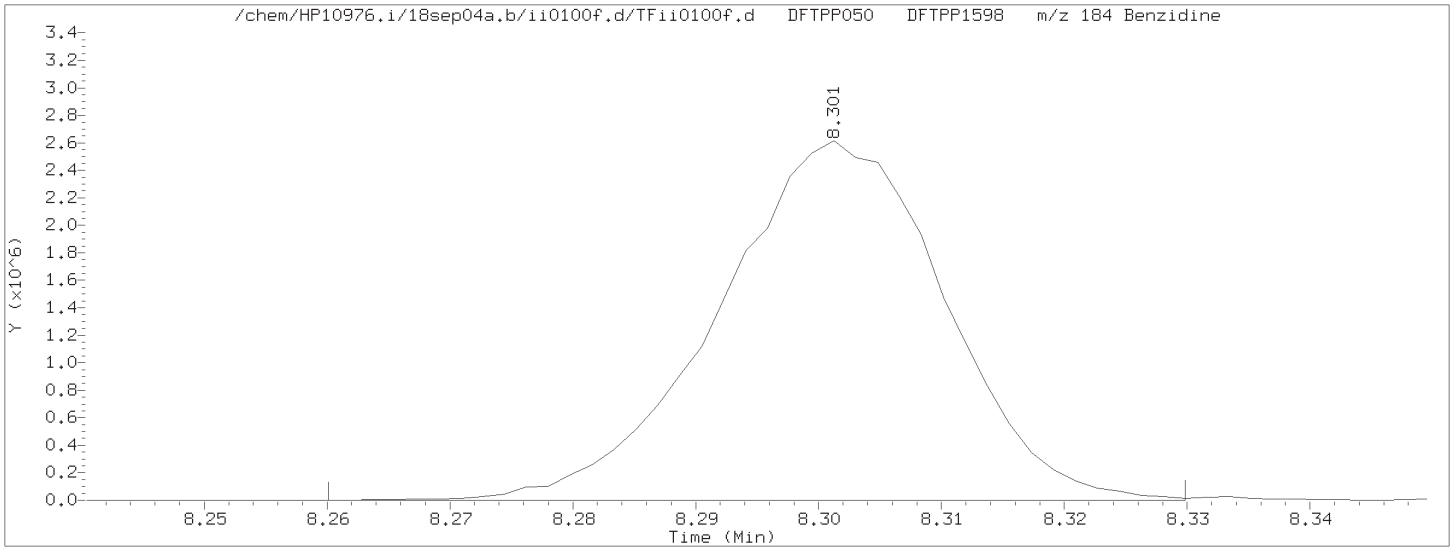
Instrument ID: HP10976.i Injection Date: 04-SEP-2018 19:19 Operator: apb10206



Pentachlorophenol EICP peak height = 617846 EICP peak height at 10% = 61785 Pentachlorophenol EICP area = 851276

Pentachlorophenol EICP peak apex (min.) = 6.798
RT at 10% of front half of EICP (min.) = 6.780 'Front' peak width (min.) = 0.0179333333
RT at 10% of back half of EICP (min.) = 6.818 'Tailing' peak width (min.) = 0.0206166667

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0206166667}{0.0179333333} = 1.150$



Benzidine EICP peak height = 2616832 EICP peak height at 10% = 261683 Benzidine EICP area = 3340050

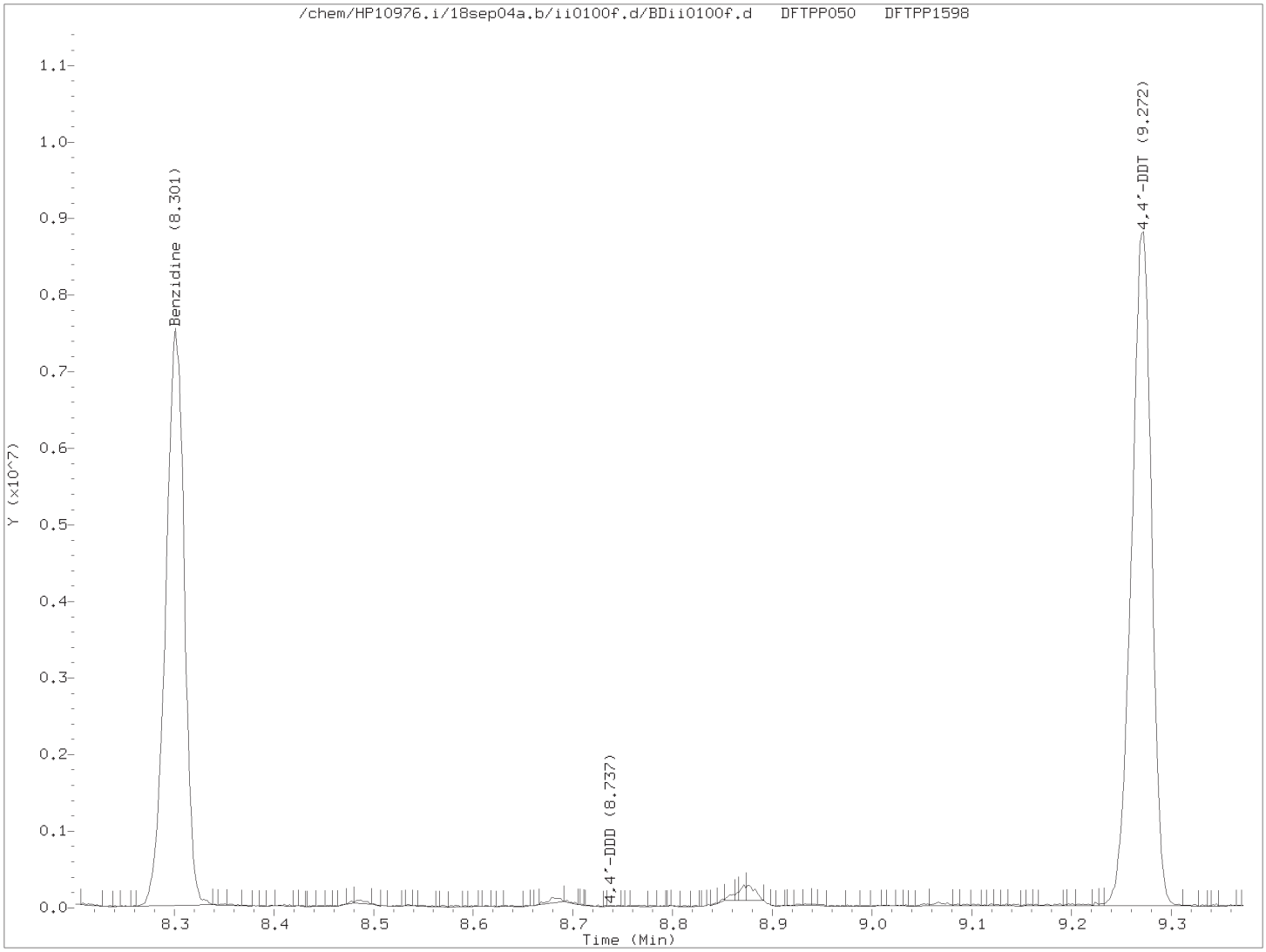
Benzidine EICP peak apex (min.) = 8.301
RT at 10% of front half of EICP (min.) = 8.282 'Front' peak width (min.) = 0.0195000000
RT at 10% of back half of EICP (min.) = 8.318 'Tailing' peak width (min.) = 0.0172166667

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0172166667}{0.0195000000} = 0.883$

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

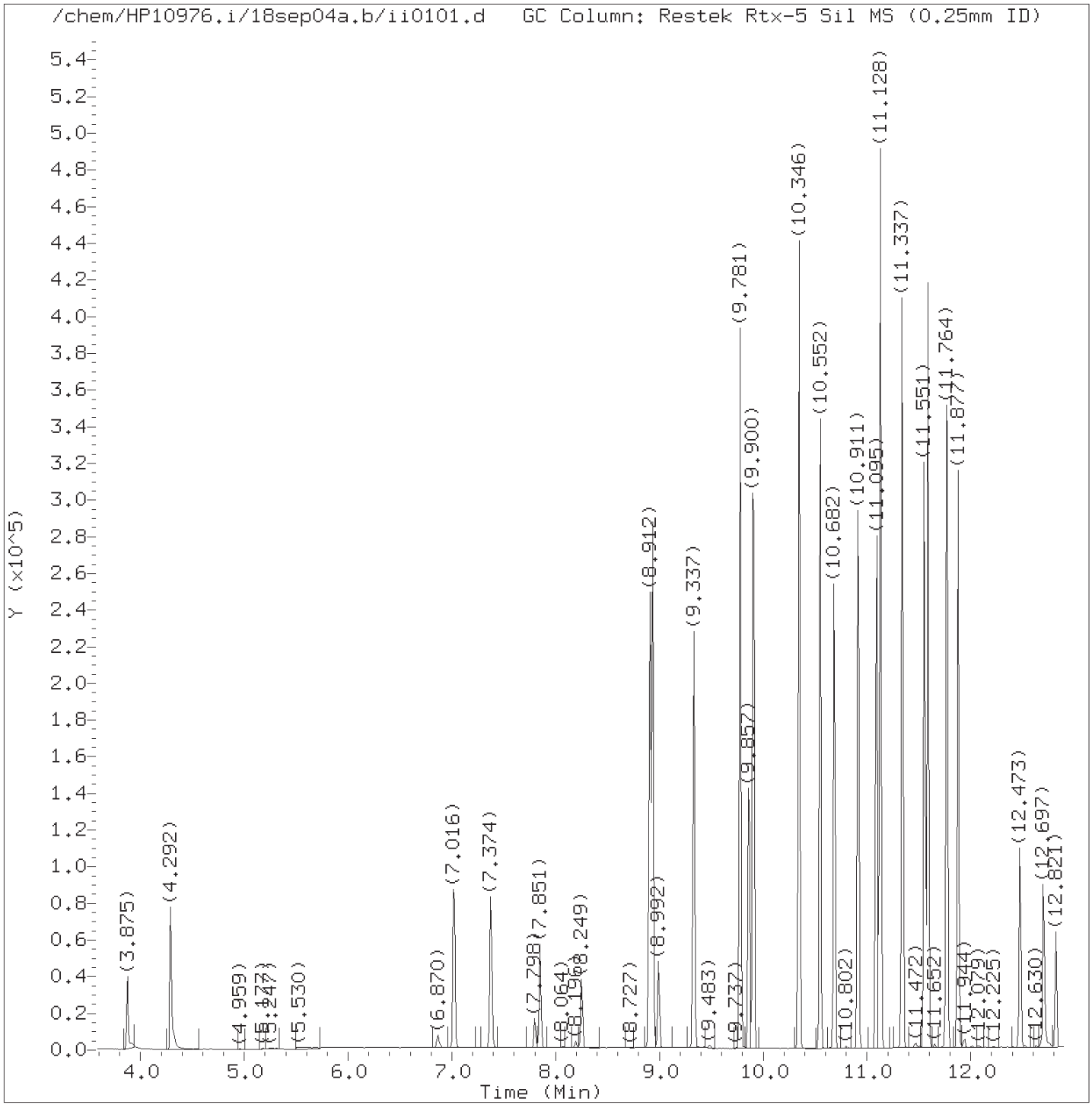
Instrument ID: HP10976.i Injection Date: 04-SEP-2018 19:19 Operator: apb10206



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{0 + 5723}{0 + 5723 + 12398171} \times 100 = 0.0$$

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

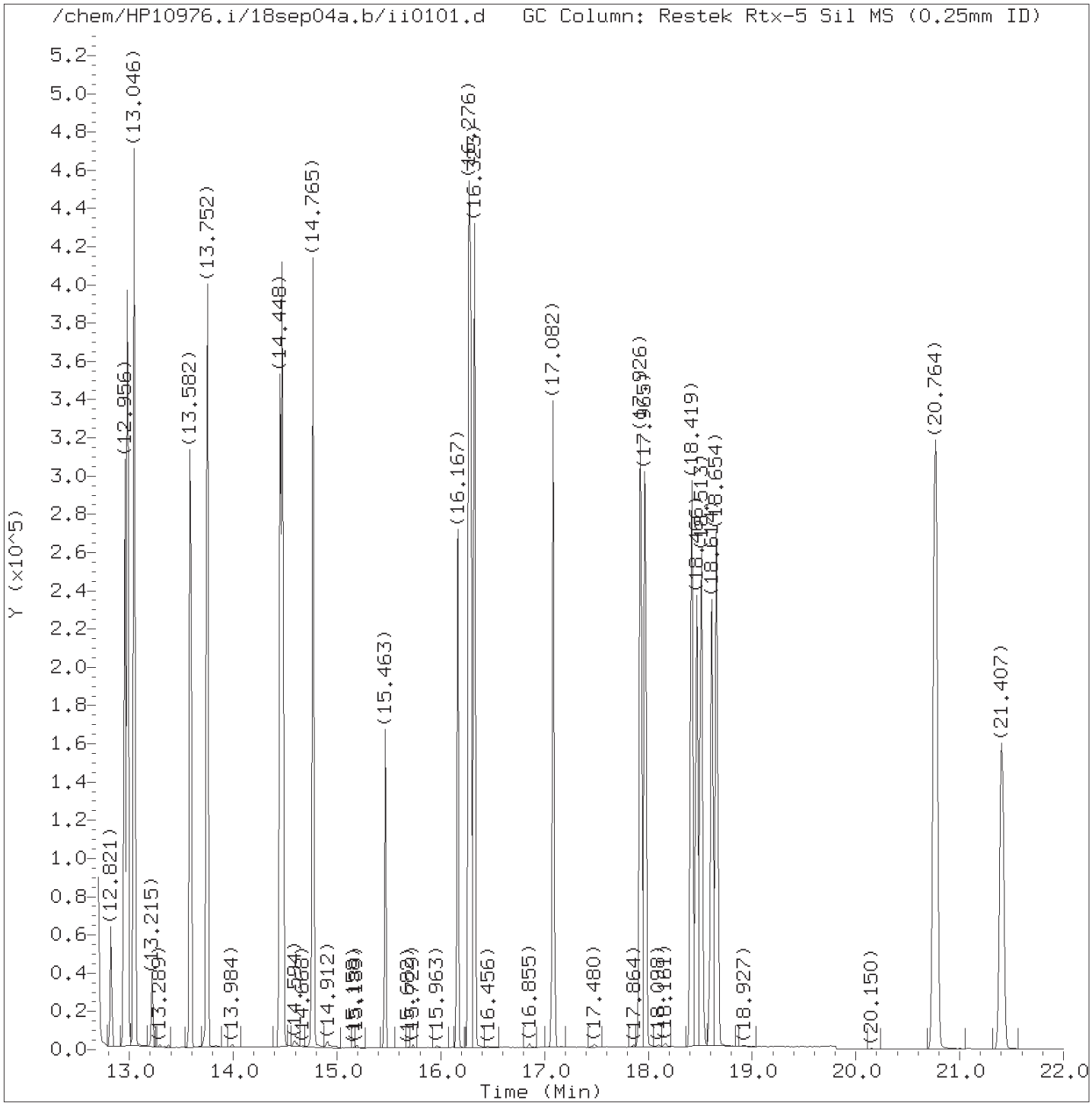
Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0101.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 19:41 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD001 Lab Sample ID: SIM1288

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0101.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 19:41 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD001 Lab Sample ID: SIM1288

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0101.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 19:41 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD001 Lab Sample ID: SIM1288

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.875	88	38748M	1.000
2) N-Nitrosodimethylamine	(1)	4.292	74	59842	1.000
5) bis(2-Chloroethyl)ether	(1)	7.029	93	81454	1.000
6)*1,4-Dichlorobenzene-d4	(1)	7.387	152	62135	1.000
10)*Naphthalene-d8	(2)	8.912	136	234679	1.000
11) Naphthalene	(2)	8.939	128	248039	1.000
12) Quinoline	(2)	9.337	129	156667	1.000
13) 2-Methylnaphthalene	(2)	9.781	142	181099	1.000
14)$1-Methylnaphthalene-d10	(2)	9.857	152	147620	1.000
15) 1-Methylnaphthalene	(2)	9.911	142	175423	1.000
18) Dimethylphthalate	(3)	10.682	163	217279	1.000
19) Acenaphthylene	(3)	10.911	152	282181	1.000
20)*Acenaphthene-d10	(3)	11.095	164	144286	1.000
21) Acenaphthene	(3)	11.128	154	184275	1.000
22) Dibenzofuran	(3)	11.337	168	288387	1.000
23) Diethylphthalate	(3)	11.551	149	215754	1.000
26) Fluorene	(3)	11.776	166	232172	1.000
28) NDPA as diphenylamine	(4)	11.877	169	151673	1.000
27) N-Nitrosodiphenylamine	(4)	11.877	169	151673	1.000
29) Hexachlorobenzene	(4)	12.473	284	97087	1.000
31)*Phenanthrene-d10	(4)	12.956	188	331893	1.000
32) Phenanthrene	(4)	12.978	178	361428	1.000
33) Anthracene	(4)	13.046	178	371409	1.000
35) Di-n-butylphthalate	(4)	13.582	149	356687	1.000
36)$Fluoranthene-d10	(4)	14.448	212	418761	1.000
37) Fluoranthene	(4)	14.472	202	459245	1.000
39) Pyrene	(5)	14.765	202	467872	1.000
40) Butylbenzylphthalate	(5)	15.463	149	153840	1.000
41) bis(2-Ethylhexyl)phthalate	(5)	16.159	149	231831	1.000
42) Benzo(a)anthracene	(5)	16.268	228	429192	1.000
43)*Chrysene-d12	(5)	16.292	240	331592	1.000
44) Chrysene	(5)	16.323	228	414543	1.000
45) Di-n-octylphthalate	(6)	17.082	149	388731	1.000
46) Benzo(b)fluoranthene	(6)	17.926	252	428975	1.000
47) Benzo(k)fluoranthene	(6)	17.965	252	389755	1.000
48) Benzo(e)pyrene	(6)	18.419	252	415958	1.000
49)$Benzo(a)pyrene-d12	(6)	18.466	264	329224	1.000
50) Benzo(a)pyrene	(6)	18.513	252	366720	1.000
51)*Perylene-d12	(6)	18.614	264	333223	1.000
52) Perylene	(6)	18.654	252	403061	1.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0101.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 19:41 Analyst ID: apb10206

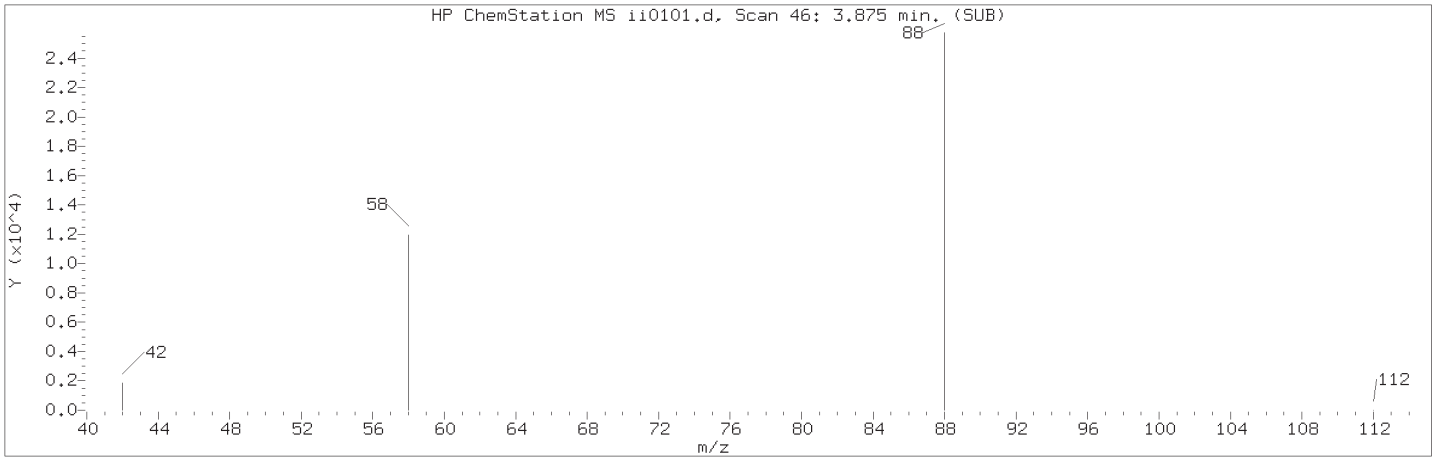
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD001 Lab Sample ID: SIM1288

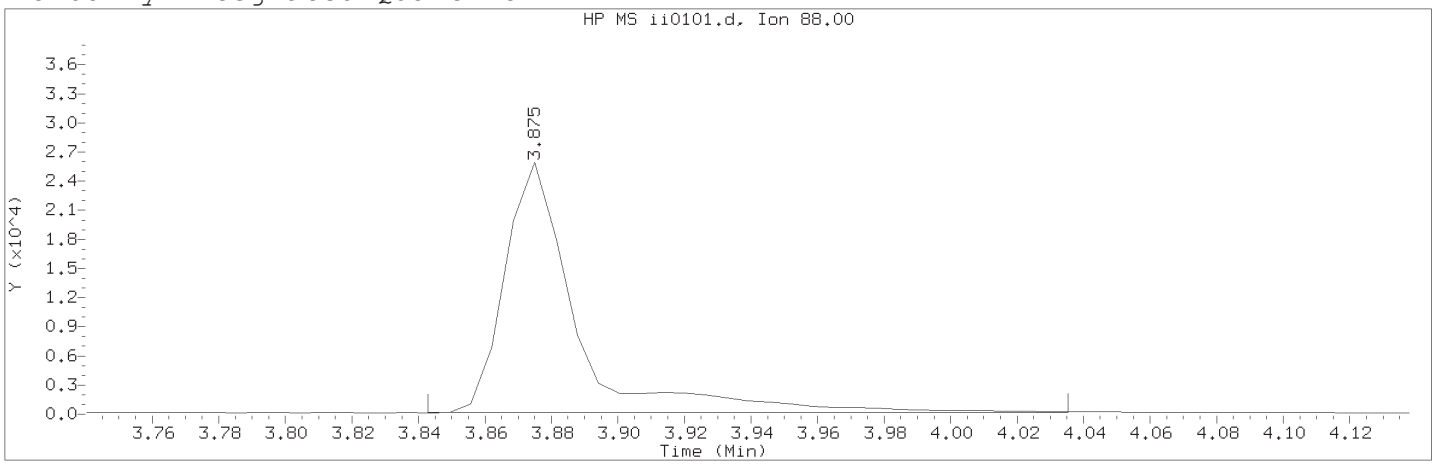
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.757	276	431266	1.000
54) Dibenz(a,h)anthracene	(6)	20.772	278	350989	1.000
55) Benzo(g,h,i)perylene	(6)	21.407	276	378567	1.000

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0101.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 19:41 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD001 Lab Sample ID: SIM1288

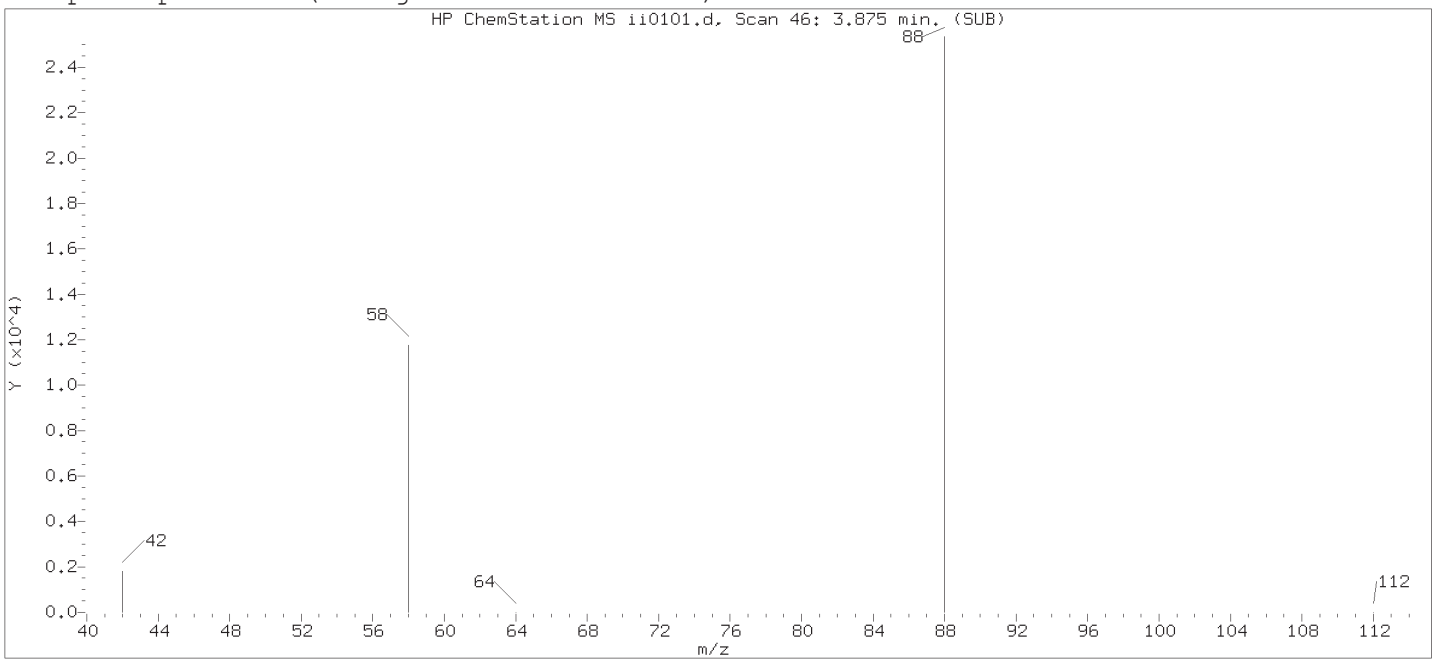
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 46		
Retention Time (minutes)	: 3.875		
Quant Ion	: 88.00		
Area (flag)	: 38748M		
On-Column Amount (ng/ul)	: 1.0000		
Integration start scan	: 40	Integration stop scan:	70
Y at integration start	: 158	Y at integration end:	158

Reason for manual integration: improper integration

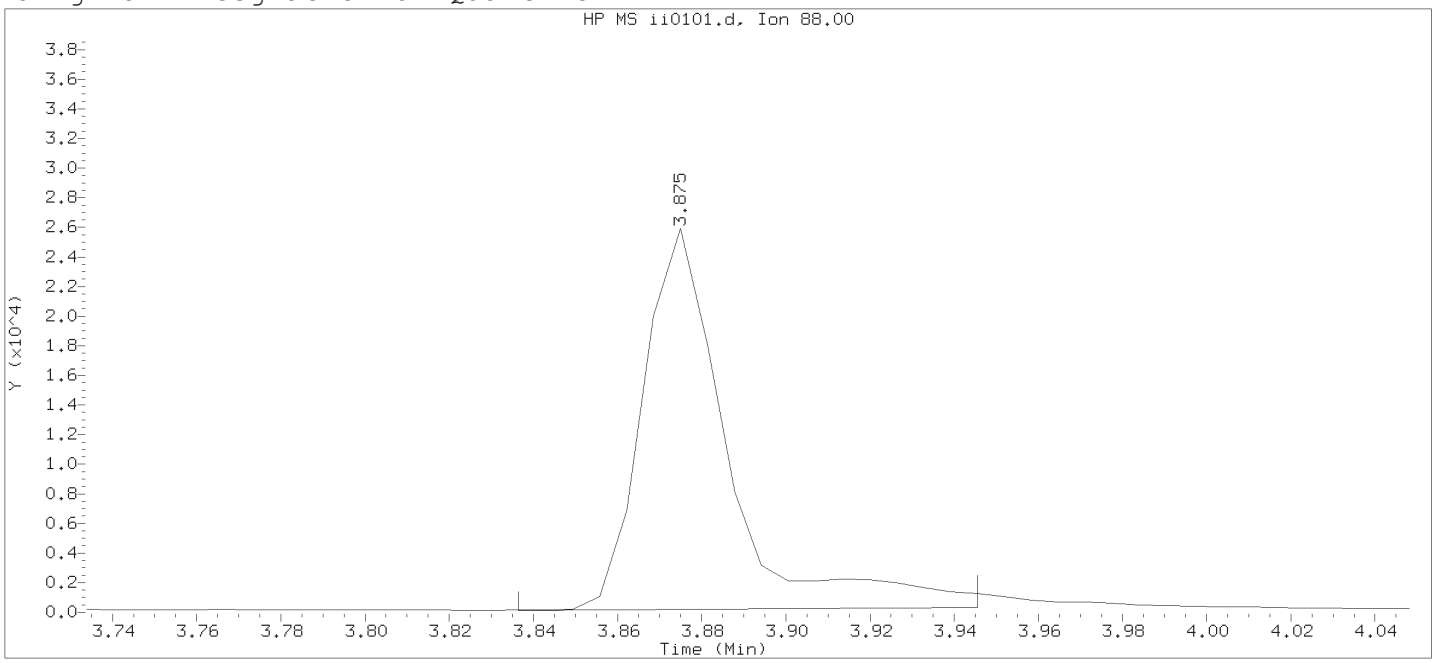
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



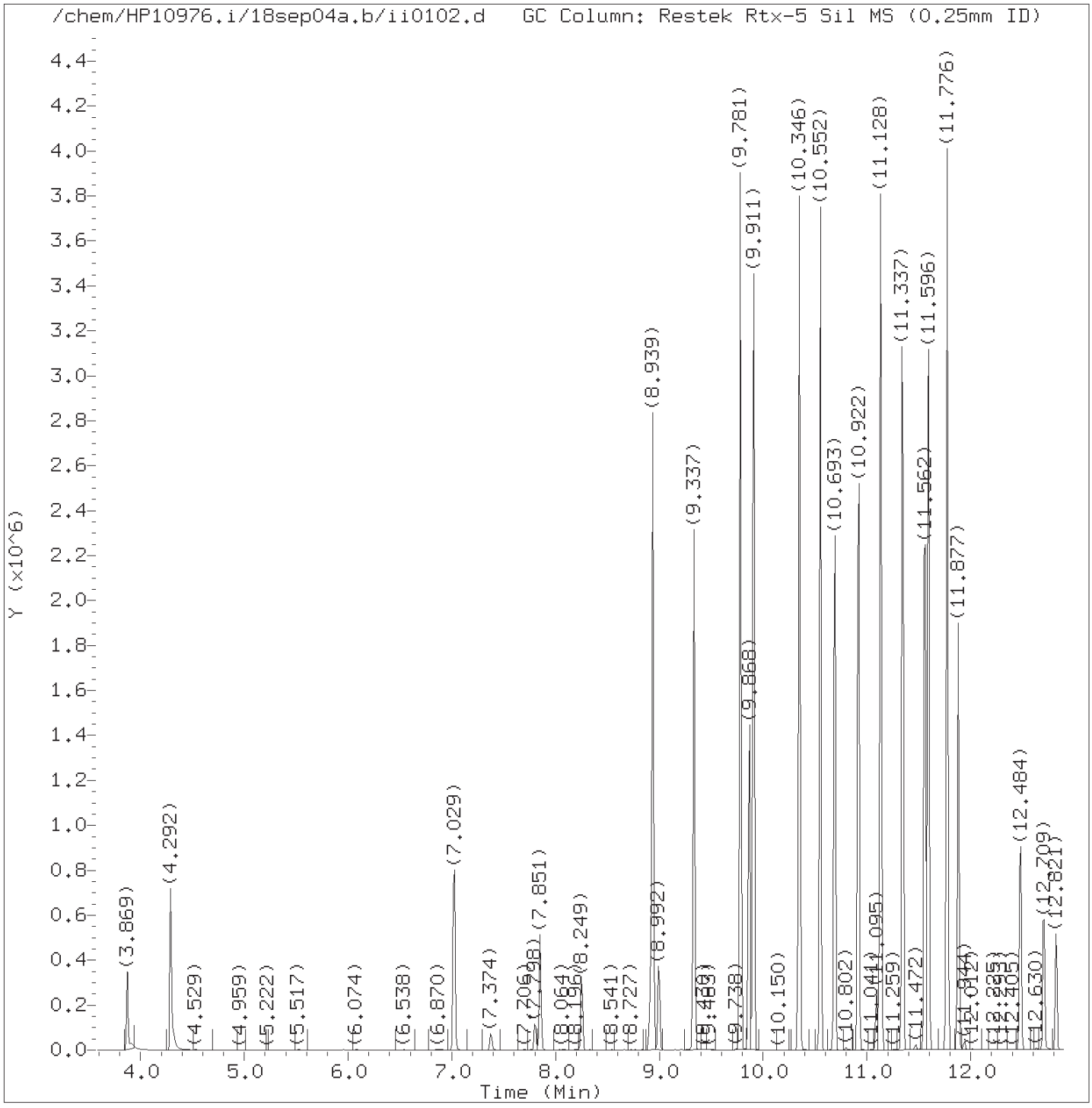
Data File: /chem/HP10976.i/18sep04a.b/ii0101.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 19:41 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 20:07
Date, time and analyst ID of latest file update: 04-Sep-2018 20:07 Automation

Sample Name: SSTD001 Lab Sample ID: SIM1288

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 46		
Retention Time (minutes)	: 3.875		
Quant Ion	: 88.00		
Area	: 36156		
On-column Amount (ng/ul)	: 0.7526		
Integration start scan	: 39	Integration stop scan:	56
Y at integration start	: 138	Y at integration end:	343

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

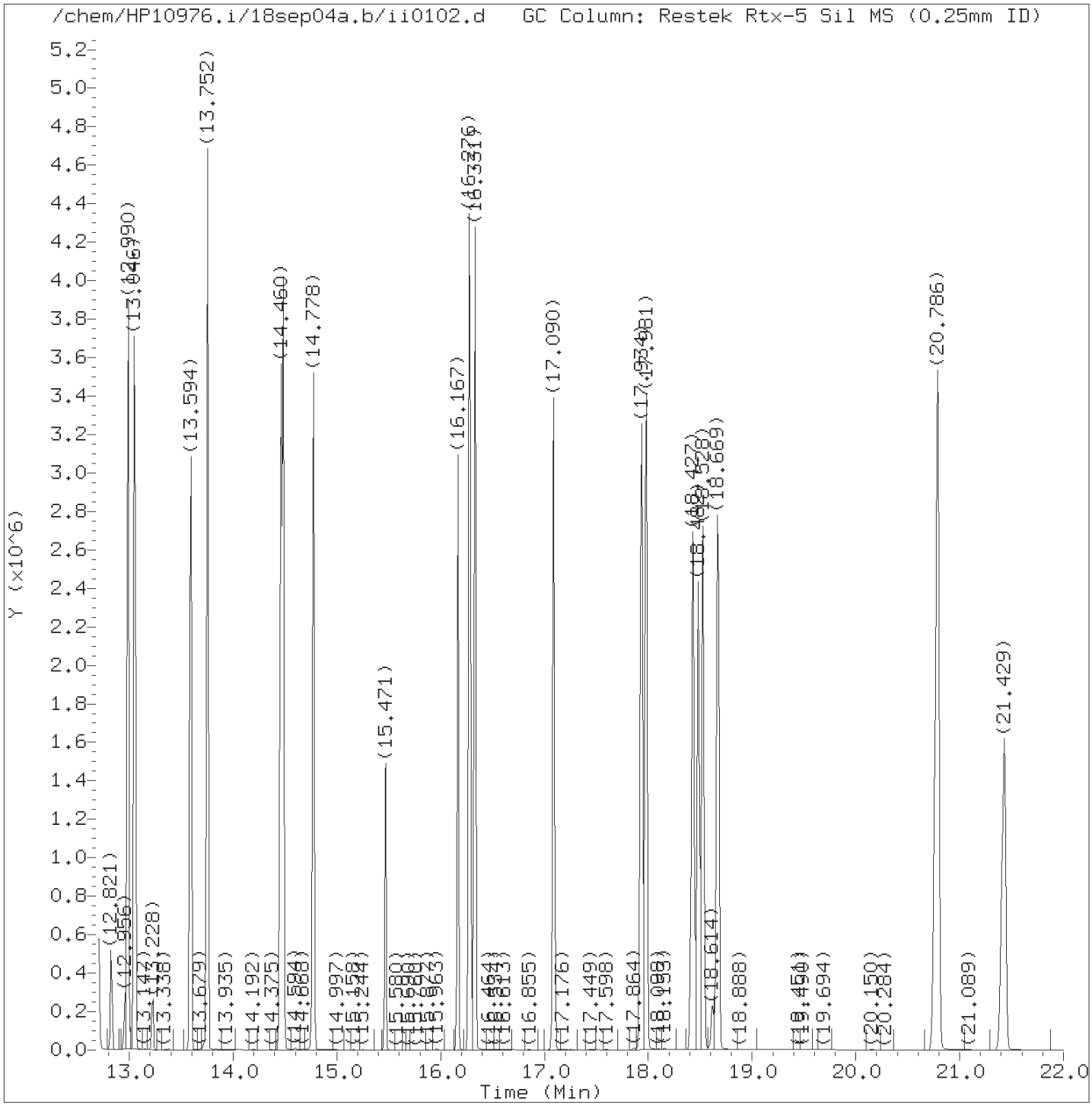
Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0102.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 20:12 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD010 Lab Sample ID: SIM1288

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0102.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 20:12 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD010 Lab Sample ID: SIM1288

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0102.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 20:12 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD010 Lab Sample ID: SIM1288

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.875	88	362064M	10.073
2) N-Nitrosodimethylamine	(1)	4.292	74	550798	9.998
5) bis(2-Chloroethyl)ether	(1)	7.029	93	738820	9.925
6)*1,4-Dichlorobenzene-d4	(1)	7.387	152	57215	1.000
10)*Naphthalene-d8	(2)	8.913	136	223185	1.000
11) Naphthalene	(2)	8.939	128	2314578	9.905
12) Quinoline	(2)	9.337	129	1448949	9.861
13) 2-Methylnaphthalene	(2)	9.781	142	1677762	9.869
14)$1-Methylnaphthalene-d10	(2)	9.868	152	1367985	9.870
15) 1-Methylnaphthalene	(2)	9.911	142	1628242	9.878
18) Dimethylphthalate	(3)	10.693	163	2043848	10.093
19) Acenaphthylene	(3)	10.922	152	2654640	10.093
20)*Acenaphthene-d10	(3)	11.095	164	133230	1.000
21) Acenaphthene	(3)	11.128	154	1694824	9.980
22) Dibenzofuran	(3)	11.337	168	2655704	9.986
23) Diethylphthalate	(3)	11.551	149	1952402	9.899
26) Fluorene	(3)	11.776	166	2135737	9.981
28) NDPA as diphenylamine	(4)	11.877	169	1033904	8.388
27) N-Nitrosodiphenylamine	(4)	11.877	169	1033904	8.388
29) Hexachlorobenzene	(4)	12.484	284	892326	9.869
31)*Phenanthrene-d10	(4)	12.956	188	313169	1.000
32) Phenanthrene	(4)	12.990	178	3442231	10.046
33) Anthracene	(4)	13.046	178	3485468	9.973
35) Di-n-butylphthalate	(4)	13.594	149	3386440	10.031
36)$Fluoranthene-d10	(4)	14.460	212	4074100	10.153
37) Fluoranthene	(4)	14.485	202	4483902	10.171
39) Pyrene	(5)	14.778	202	4500970	9.686
40) Butylbenzylphthalate	(5)	15.471	149	1511732	9.793
41) bis(2-Ethylhexyl)phthalate	(5)	16.167	149	2296697	9.833
42) Benzo(a)anthracene	(5)	16.276	228	4301275	9.891
43)*Chrysene-d12	(5)	16.292	240	339647	1.000
44) Chrysene	(5)	16.331	228	4176207	9.917
45) Di-n-octylphthalate	(6)	17.090	149	3940222	9.871
46) Benzo(b)fluoranthene	(6)	17.934	252	4359472	9.884
47) Benzo(k)fluoranthene	(6)	17.981	252	4187959	10.162
48) Benzo(e)pyrene	(6)	18.427	252	4224379	9.880
49)$Benzo(a)pyrene-d12	(6)	18.482	264	3441305	10.025
50) Benzo(a)pyrene	(6)	18.528	252	3787666	9.965
51)*Perylene-d12	(6)	18.614	264	346603	1.000
52) Perylene	(6)	18.669	252	4075200	9.858

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0102.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 20:12 Analyst ID: apb10206

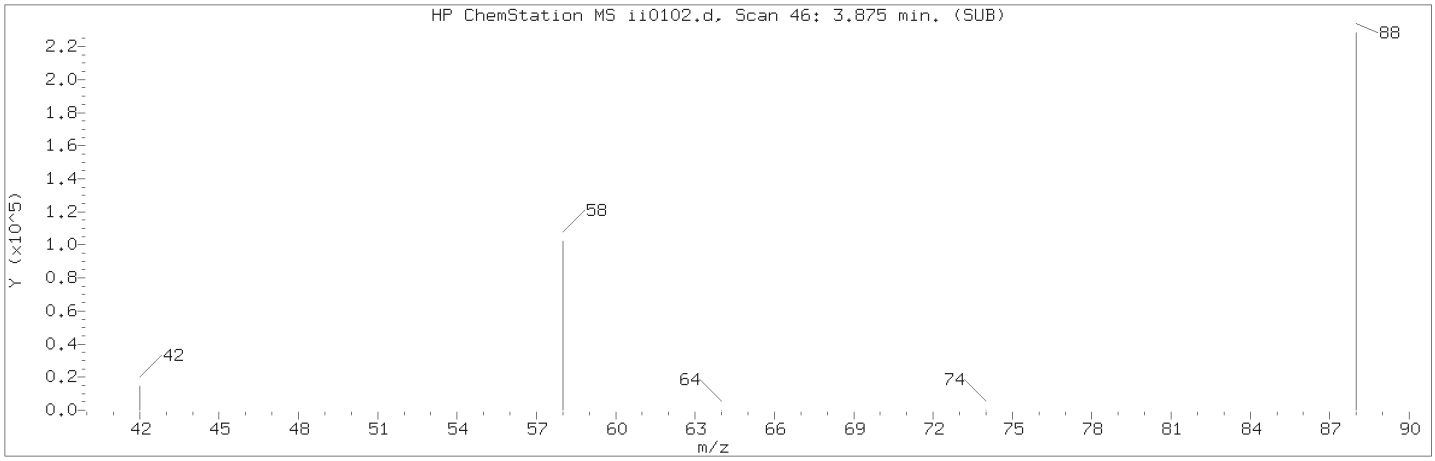
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD010 Lab Sample ID: SIM1288

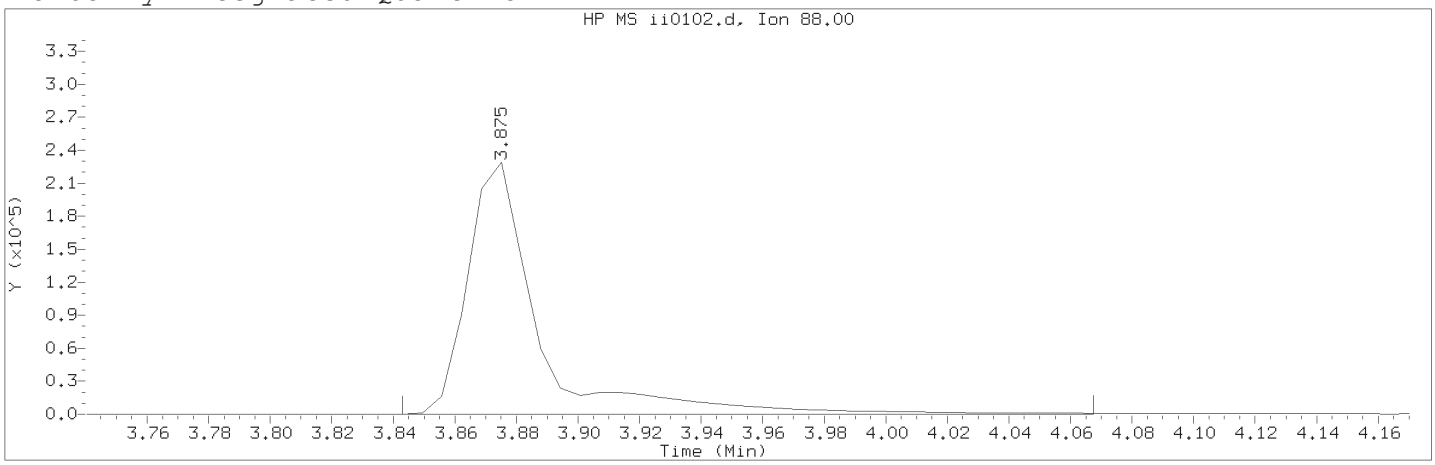
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.786	276	4527401	10.046
54) Dibenz(a,h)anthracene	(6)	20.793	278	3687824	10.050
55) Benzo(g,h,i)perylene	(6)	21.429	276	3854992	9.894

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0102.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 20:12 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD010 Lab Sample ID: SIM1288

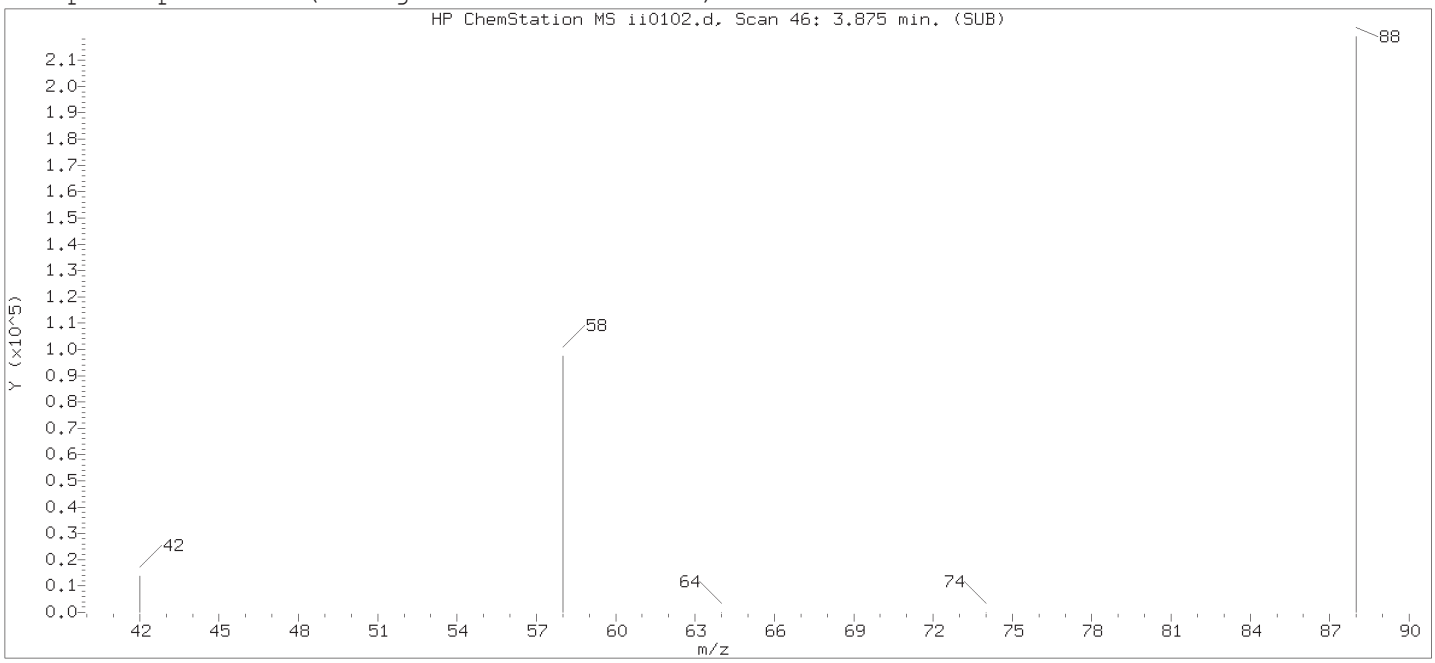
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 46		
Retention Time (minutes)	: 3.875		
Quant Ion	: 88.00		
Area (flag)	: 362064M		
On-Column Amount (ng/ul)	: 10.0732		
Integration start scan	: 40	Integration stop scan:	75
Y at integration start	: 134	Y at integration end:	134

Reason for manual integration: improper integration

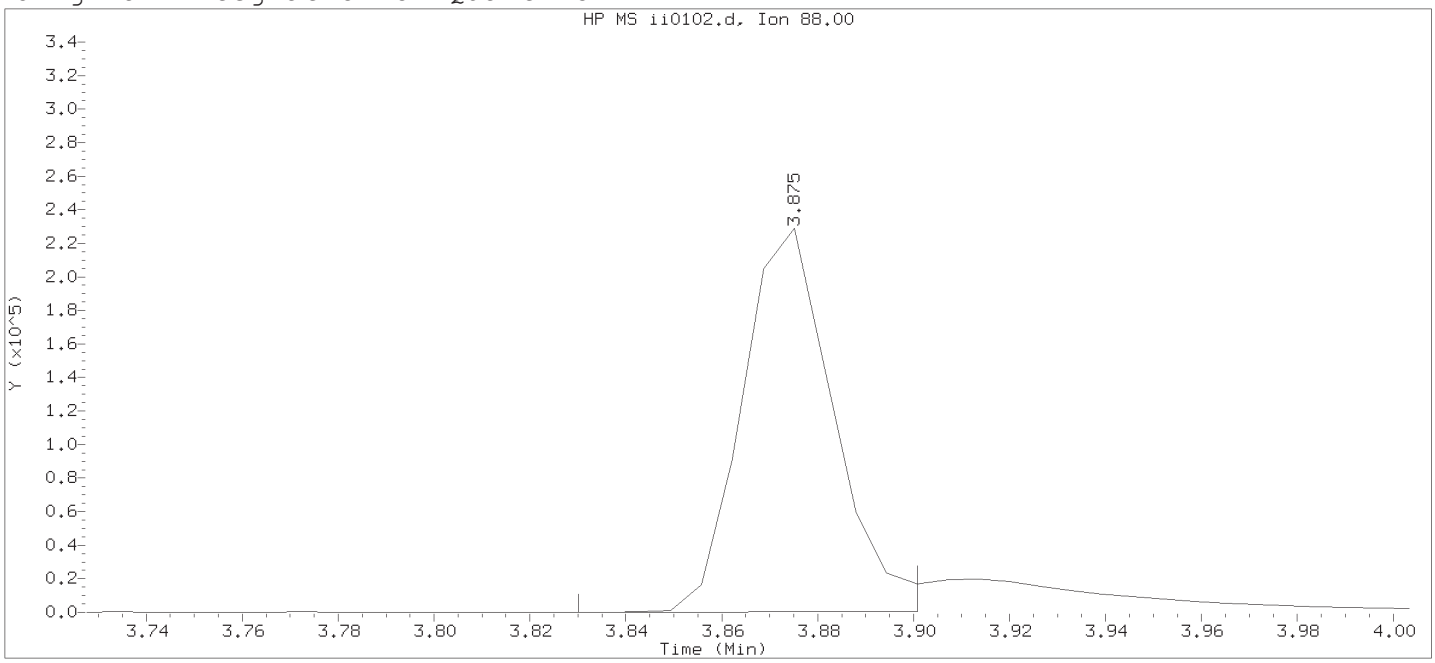
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



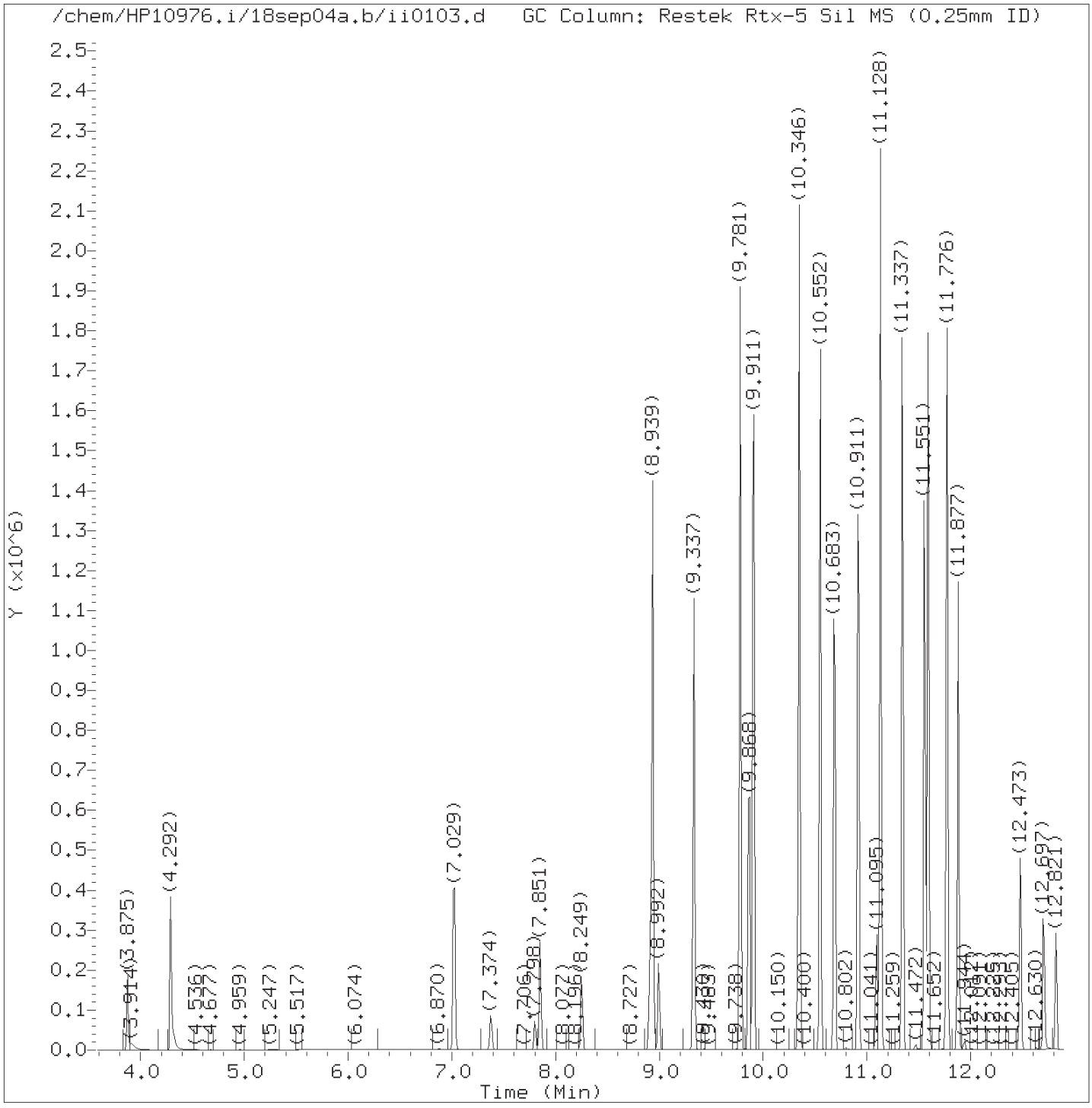
Data File: /chem/HP10976.i/18sep04a.b/ii0102.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 20:12 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 20:38
Date, time and analyst ID of latest file update: 04-Sep-2018 20:38 Automation

Sample Name: SSTD010 Lab Sample ID: SIM1288

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 46		
Retention Time (minutes)	: 3.875		
Quant Ion	: 88.00		
Area	: 299008		
On-column Amount (ng/ul)	: 7.1517		
Integration start scan	: 38	Integration stop scan:	49
Y at integration start	: 142	Y at integration end:	191

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

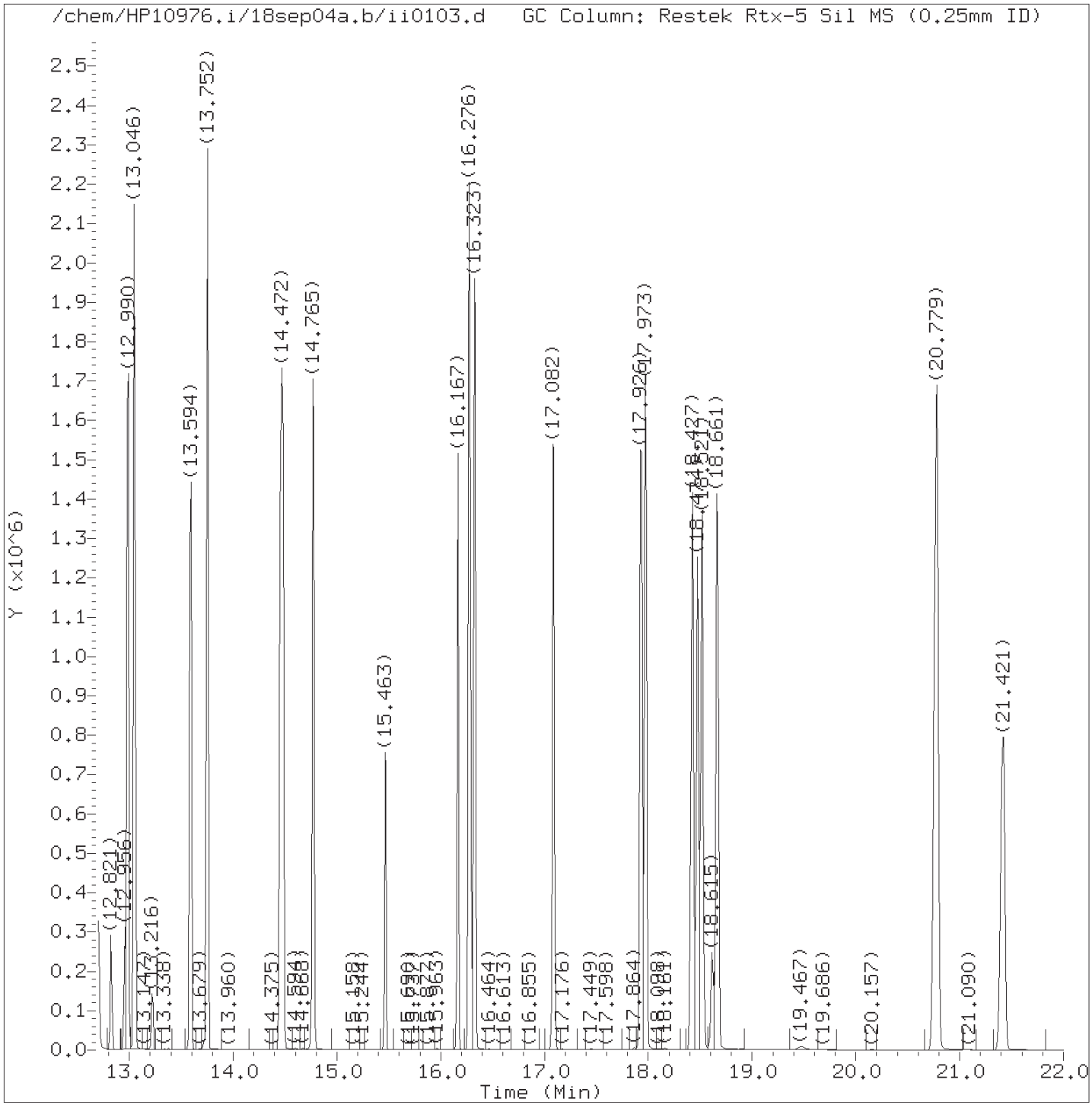
Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0103.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 20:43 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD005 Lab Sample ID: SIM1288

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0103.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 20:43 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD005 Lab Sample ID: SIM1288

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0103.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 20:43 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD005 Lab Sample ID: SIM1288

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.875	88	188863M	4.740
2) N-Nitrosodimethylamine	(1)	4.292	74	291792	4.766
5) bis(2-Chloroethyl)ether	(1)	7.029	93	396349	4.783
6)*1,4-Dichlorobenzene-d4	(1)	7.387	152	65069	1.000
10)*Naphthalene-d8	(2)	8.913	136	241875	1.000
11) Naphthalene	(2)	8.939	128	1202702	4.830
12) Quinoline	(2)	9.337	129	741148	4.764
13) 2-Methylnaphthalene	(2)	9.781	142	870578	4.813
14)$1-Methylnaphthalene-d10	(2)	9.868	152	710388	4.816
15) 1-Methylnaphthalene	(2)	9.911	142	859964	4.875
18) Dimethylphthalate	(3)	10.683	163	1049303	4.832
19) Acenaphthylene	(3)	10.911	152	1377563	4.867
20)*Acenaphthene-d10	(3)	11.095	164	145290	1.000
21) Acenaphthene	(3)	11.128	154	878620	4.827
22) Dibenzofuran	(3)	11.337	168	1372984	4.820
23) Diethylphthalate	(3)	11.551	149	1021533	4.830
26) Fluorene	(3)	11.776	166	1114832	4.849
28) NDPA as diphenylamine	(4)	11.877	169	597826	4.672
27) N-Nitrosodiphenylamine	(4)	11.877	169	597826	4.672
29) Hexachlorobenzene	(4)	12.484	284	464327	4.857
31)*Phenanthrene-d10	(4)	12.956	188	335792	1.000
32) Phenanthrene	(4)	12.990	178	1745445	4.831
33) Anthracene	(4)	13.046	178	1784307	4.838
35) Di-n-butylphthalate	(4)	13.594	149	1722035	4.835
36)$Fluoranthene-d10	(4)	14.460	212	2086320	4.898
37) Fluoranthene	(4)	14.485	202	2240634	4.824
39) Pyrene	(5)	14.778	202	2315913	4.868
40) Butylbenzylphthalate	(5)	15.463	149	762204	4.837
41) bis(2-Ethylhexyl)phthalate	(5)	16.167	149	1136922	4.791
42) Benzo(a)anthracene	(5)	16.276	228	2176476	4.882
43)*Chrysene-d12	(5)	16.292	240	352329	1.000
44) Chrysene	(5)	16.323	228	2088206	4.851
45) Di-n-octylphthalate	(6)	17.082	149	1943153	4.823
46) Benzo(b)fluoranthene	(6)	17.926	252	2101485	4.753
47) Benzo(k)fluoranthene	(6)	17.973	252	2138375	5.034
48) Benzo(e)pyrene	(6)	18.427	252	2117576	4.879
49)$Benzo(a)pyrene-d12	(6)	18.474	264	1718267	4.914
50) Benzo(a)pyrene	(6)	18.521	252	1899854	4.910
51)*Perylene-d12	(6)	18.615	264	356058	1.000
52) Perylene	(6)	18.661	252	2053968	4.890

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0103.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 20:43 Analyst ID: apb10206

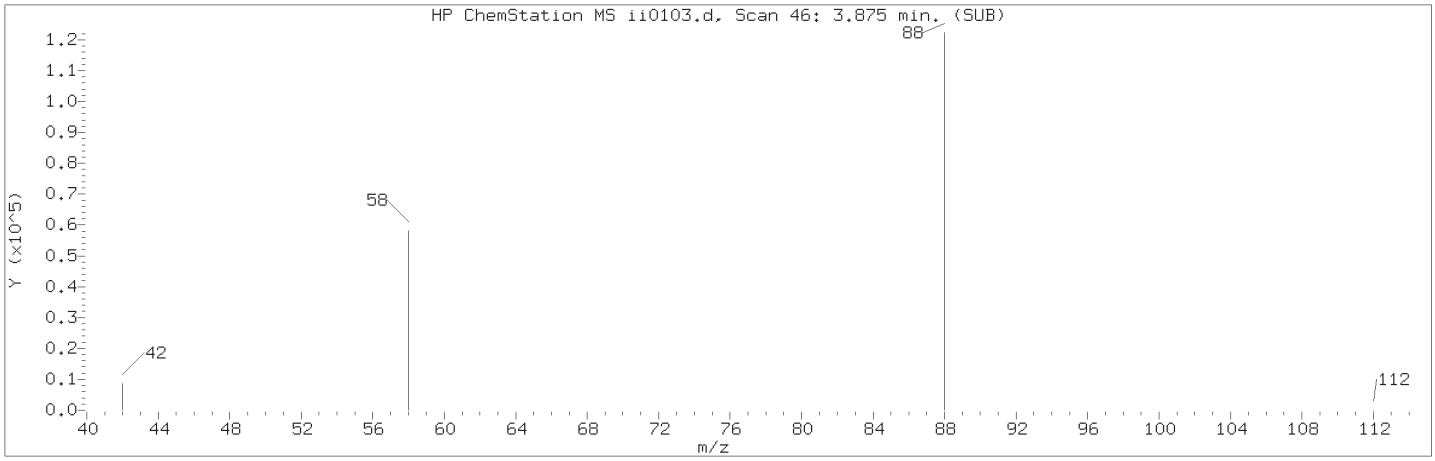
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD005 Lab Sample ID: SIM1288

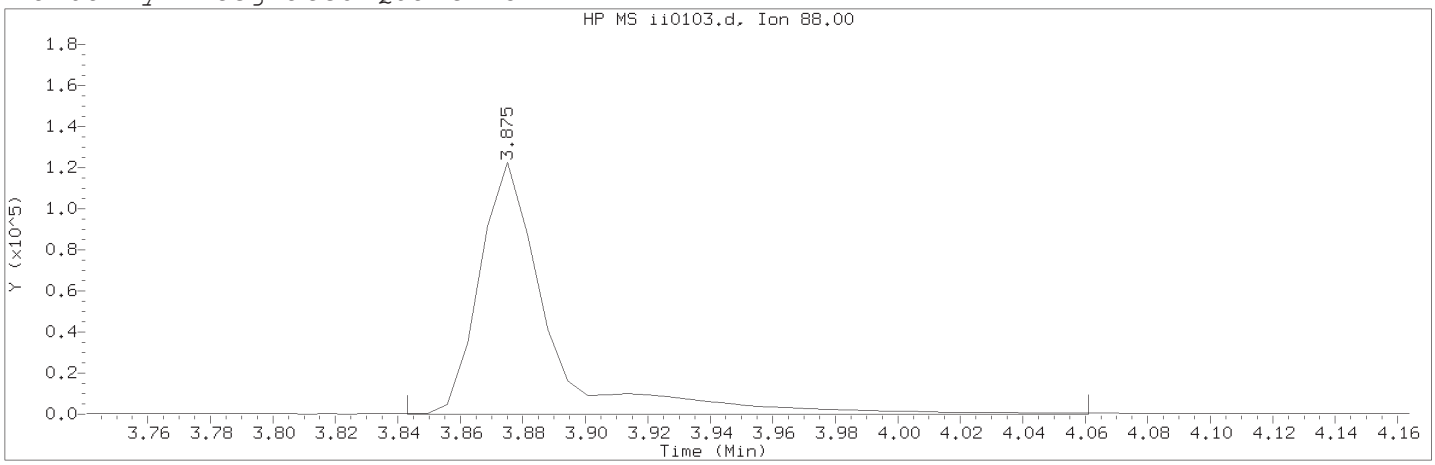
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.772	276	2245455	4.899
54) Dibenz(a,h)anthracene	(6)	20.779	278	1821440	4.887
55) Benzo(g,h,i)perylene	(6)	21.421	276	1938195	4.894

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0103.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 20:43 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD005 Lab Sample ID: SIM1288

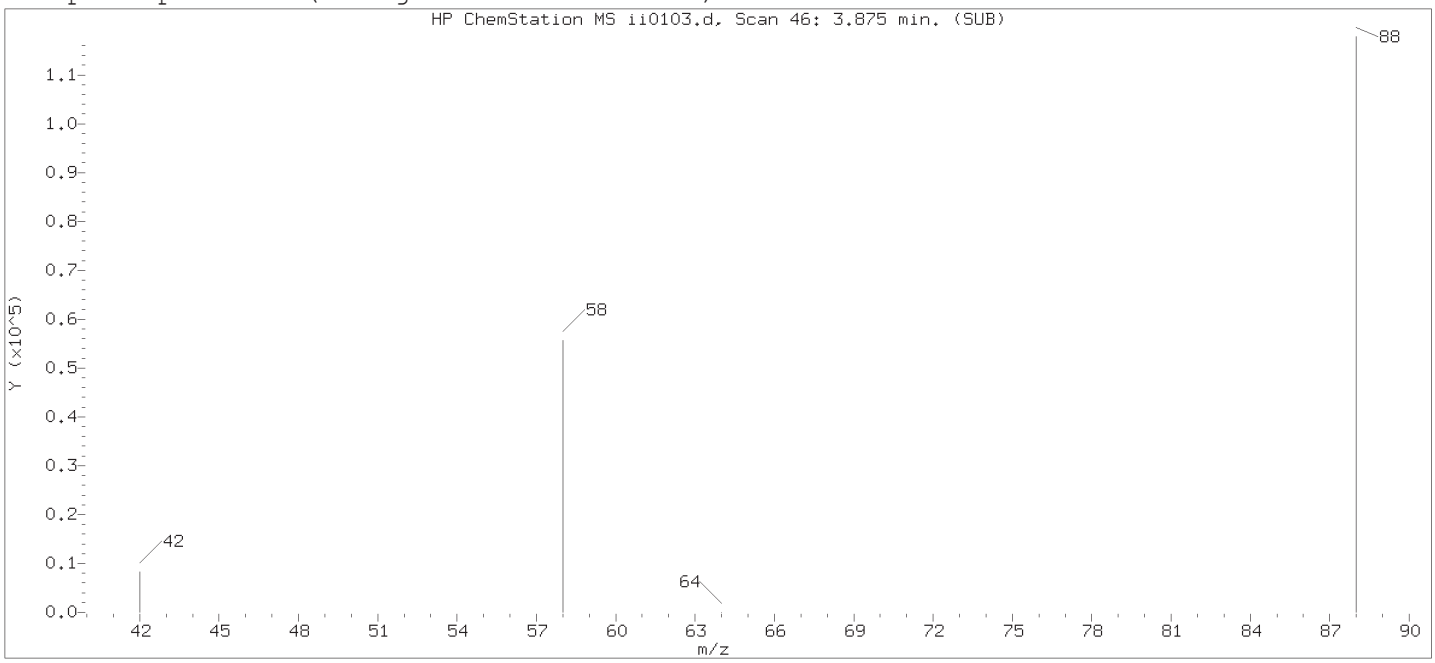
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 46		
Retention Time (minutes)	: 3.875		
Quant Ion	: 88.00		
Area (flag)	: 188863M		
On-Column Amount (ng/ul)	: 4.7403		
Integration start scan	: 40	Integration stop scan:	74
Y at integration start	: 102	Y at integration end:	102

Reason for manual integration: improper integration

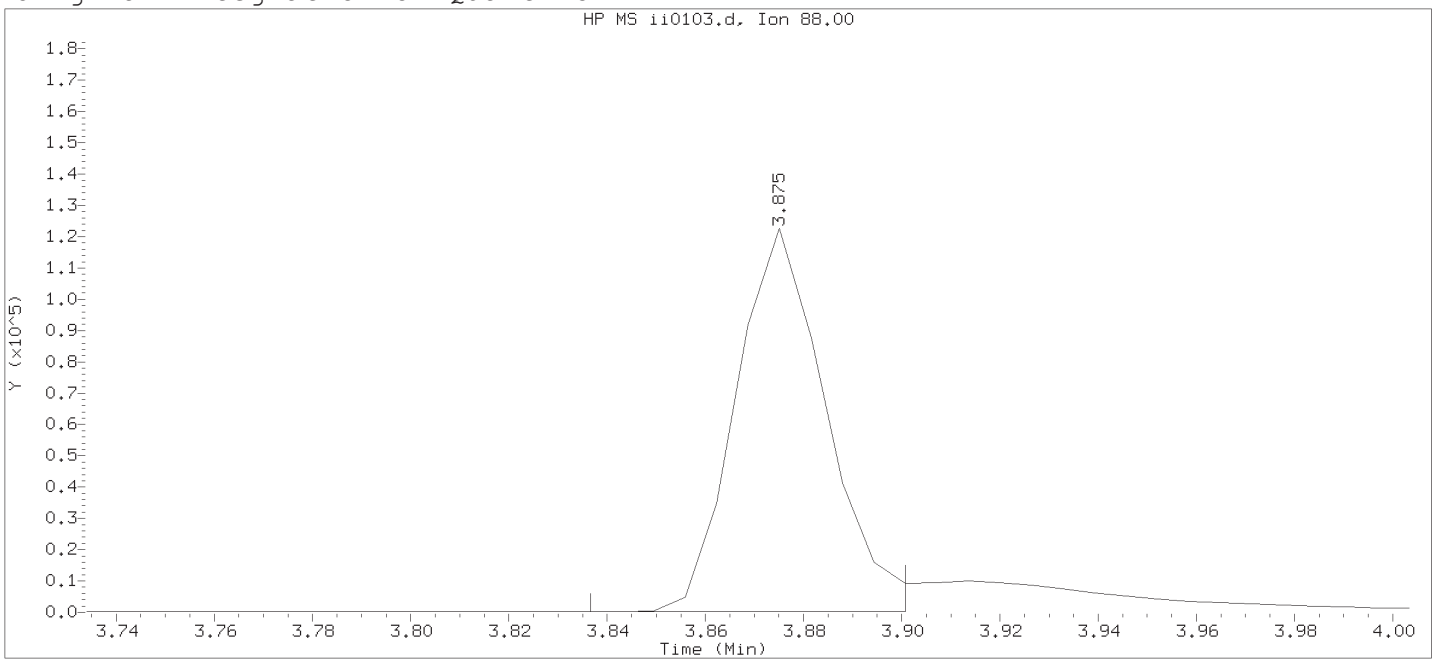
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



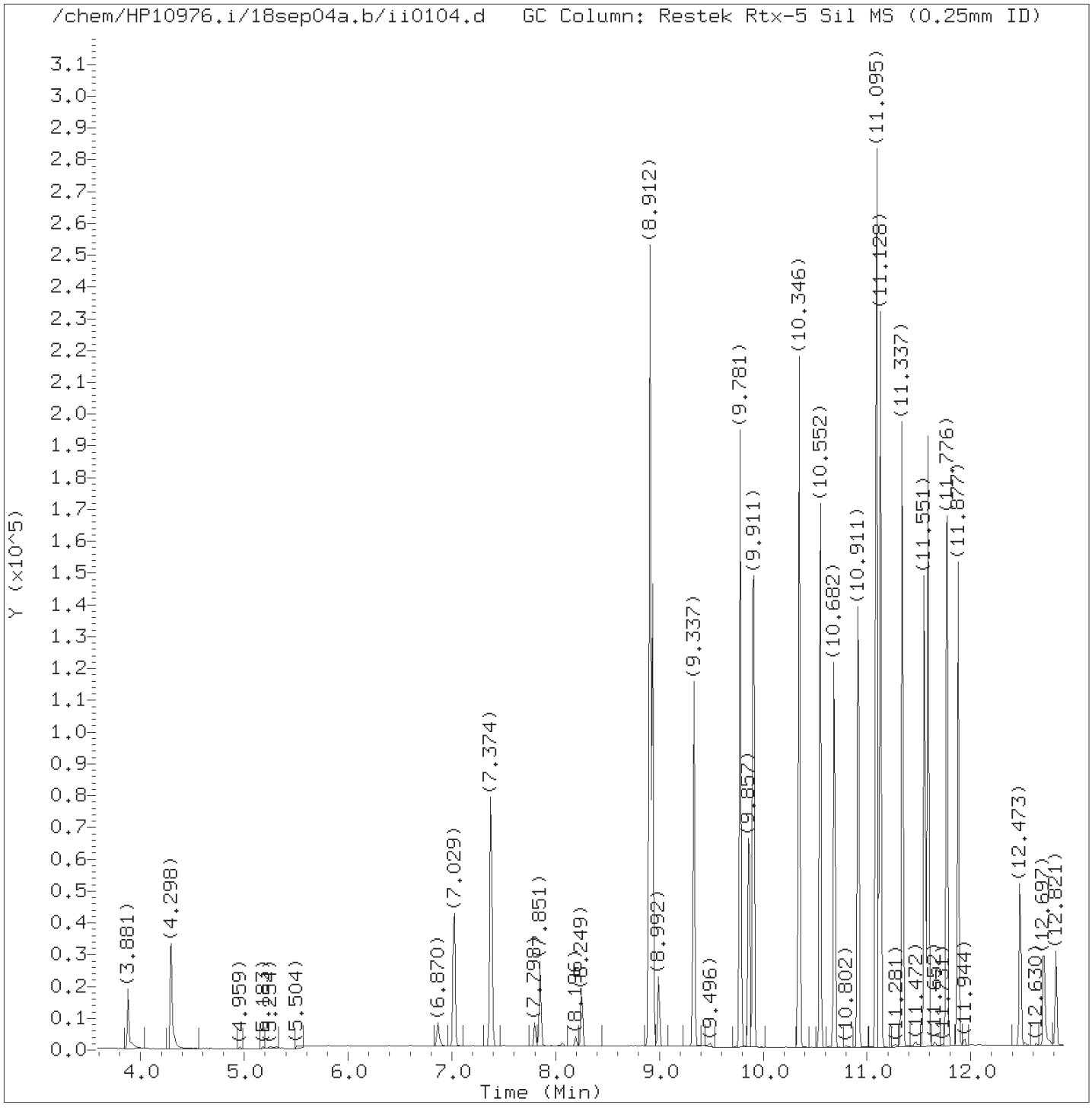
Data File: /chem/HP10976.i/18sep04a.b/ii0103.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 20:43 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 21:09
Date, time and analyst ID of latest file update: 04-Sep-2018 21:09 Automation

Sample Name: SSTD005 Lab Sample ID: SIM1288

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 46		
Retention Time (minutes)	: 3.875		
Quant Ion	: 88.00		
Area	: 154938		
On-column Amount (ng/ul)	: 3.4927		
Integration start scan	: 39	Integration stop scan:	49
Y at integration start	: 147	Y at integration end:	190

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

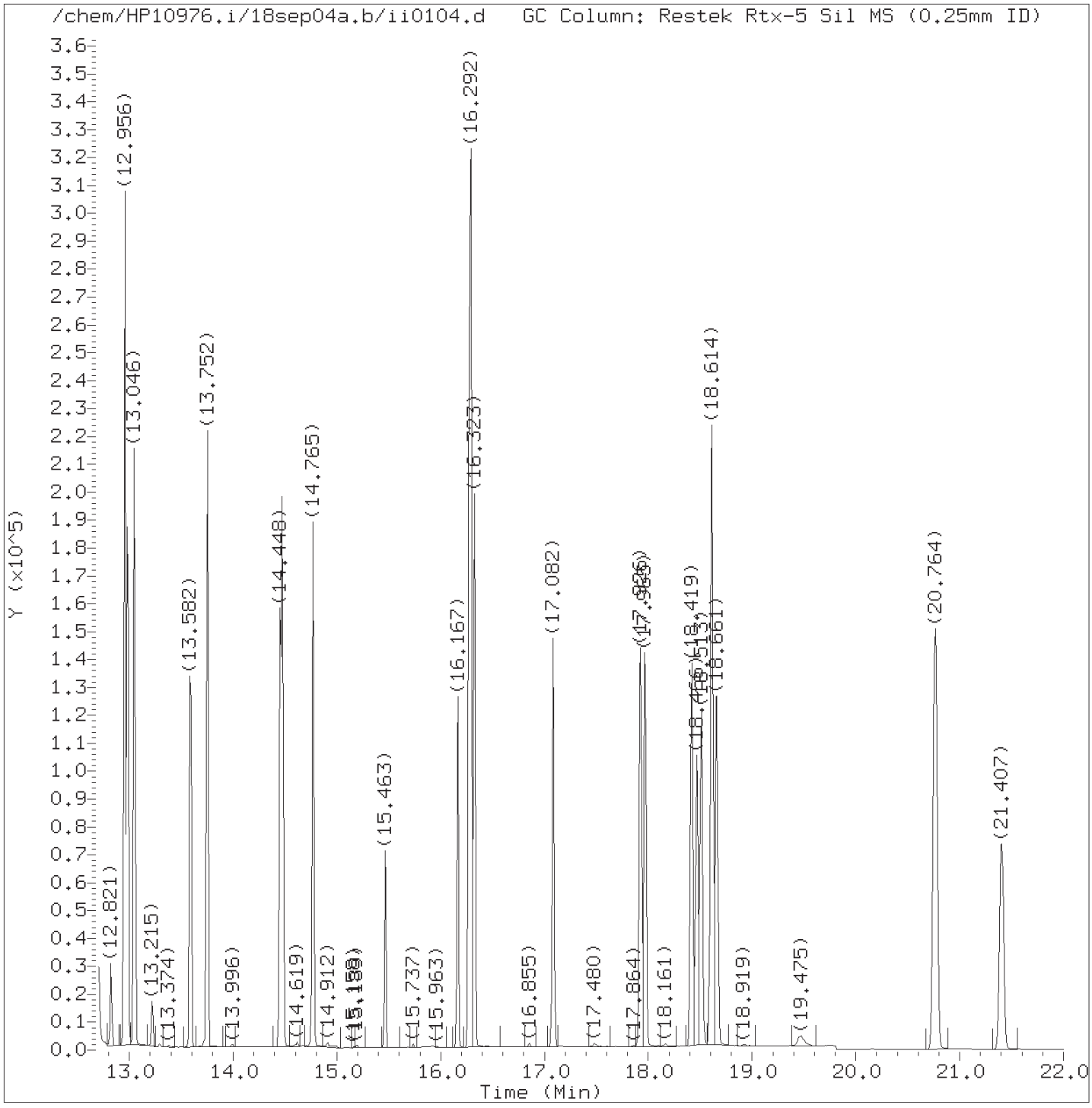
Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0104.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 21:14 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.5 Lab Sample ID: SIM1288

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0104.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 21:14 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.5 Lab Sample ID: SIM1288

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0104.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 21:14 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.5 Lab Sample ID: SIM1288

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.881	88	18790M	0.499
2) N-Nitrosodimethylamine	(1)	4.298	74	28065	0.488
5) bis(2-Chloroethyl)ether	(1)	7.029	93	39012	0.498
6)*1,4-Dichlorobenzene-d4	(1)	7.387	152	61558	1.000
10)*Naphthalene-d8	(2)	8.912	136	232516	1.000
11) Naphthalene	(2)	8.939	128	122459	0.509
12) Quinoline	(2)	9.337	129	75798	0.505
13) 2-Methylnaphthalene	(2)	9.781	142	87298	0.502
14)$1-Methylnaphthalene-d10	(2)	9.857	152	70554	0.498
15) 1-Methylnaphthalene	(2)	9.911	142	85884	0.505
18) Dimethylphthalate	(3)	10.682	163	104049	0.495
19) Acenaphthylene	(3)	10.911	152	136828	0.498
20)*Acenaphthene-d10	(3)	11.095	164	141121	1.000
21) Acenaphthene	(3)	11.128	154	91212	0.512
22) Dibenzofuran	(3)	11.337	168	139935	0.504
23) Diethylphthalate	(3)	11.551	149	104433	0.506
26) Fluorene	(3)	11.776	166	110744	0.497
28) NDPA as diphenylamine	(4)	11.877	169	74341	0.578
27) N-Nitrosodiphenylamine	(4)	11.877	169	74341	0.578
29) Hexachlorobenzene	(4)	12.484	284	47785	0.518
31)*Phenanthrene-d10	(4)	12.956	188	320188	1.000
32) Phenanthrene	(4)	12.978	178	174996	0.506
33) Anthracene	(4)	13.046	178	174040	0.496
35) Di-n-butylphthalate	(4)	13.582	149	164021	0.487
36)$Fluoranthene-d10	(4)	14.448	212	201179	0.497
37) Fluoranthene	(4)	14.472	202	217615	0.493
39) Pyrene	(5)	14.765	202	220894	0.521
40) Butylbenzylphthalate	(5)	15.463	149	68368	0.496
41) bis(2-Ethylhexyl)phthalate	(5)	16.167	149	103164	0.496
42) Benzo(a)anthracene	(5)	16.268	228	198055	0.504
43)*Chrysene-d12	(5)	16.292	240	309373	1.000
44) Chrysene	(5)	16.323	228	194063	0.510
45) Di-n-octylphthalate	(6)	17.082	149	170312	0.487
46) Benzo(b)fluoranthene	(6)	17.926	252	198483	0.509
47) Benzo(k)fluoranthene	(6)	17.965	252	182440	0.492
48) Benzo(e)pyrene	(6)	18.419	252	194214	0.508
49)$Benzo(a)pyrene-d12	(6)	18.466	264	150286	0.493
50) Benzo(a)pyrene	(6)	18.513	252	169215	0.499
51)*Perylene-d12	(6)	18.614	264	312109	1.000
52) Perylene	(6)	18.661	252	188059	0.508

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0104.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 21:14 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

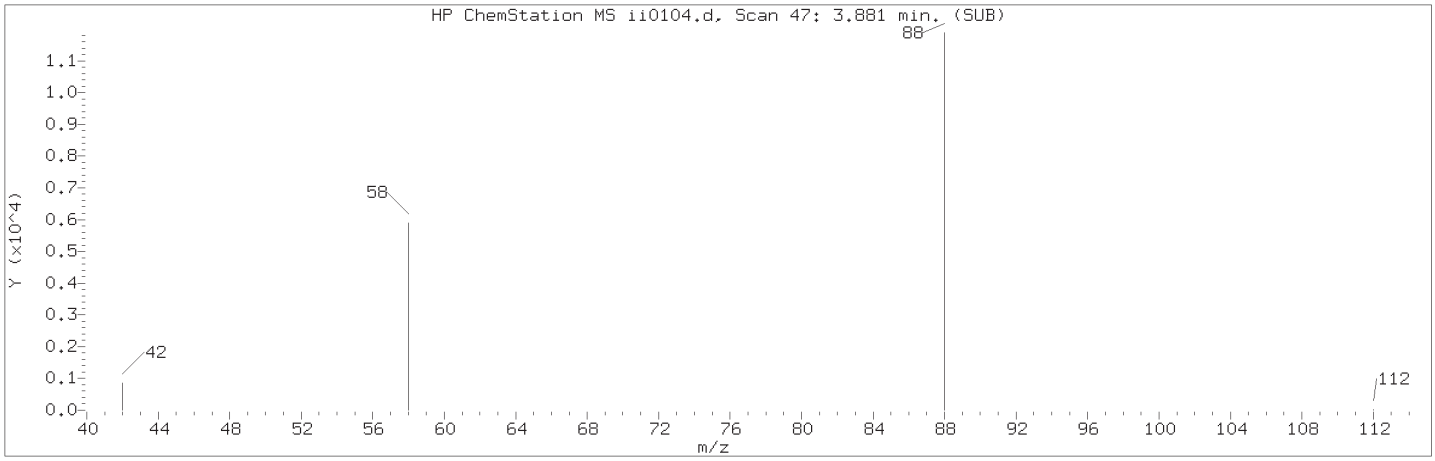
Sample Name: SSTD0.5 Lab Sample ID: SIM1288

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.757	276	199821	0.498
54) Dibenz(a,h)anthracene	(6)	20.772	278	162824	0.499
55) Benzo(g,h,i)perylene	(6)	21.407	276	175272M	0.504

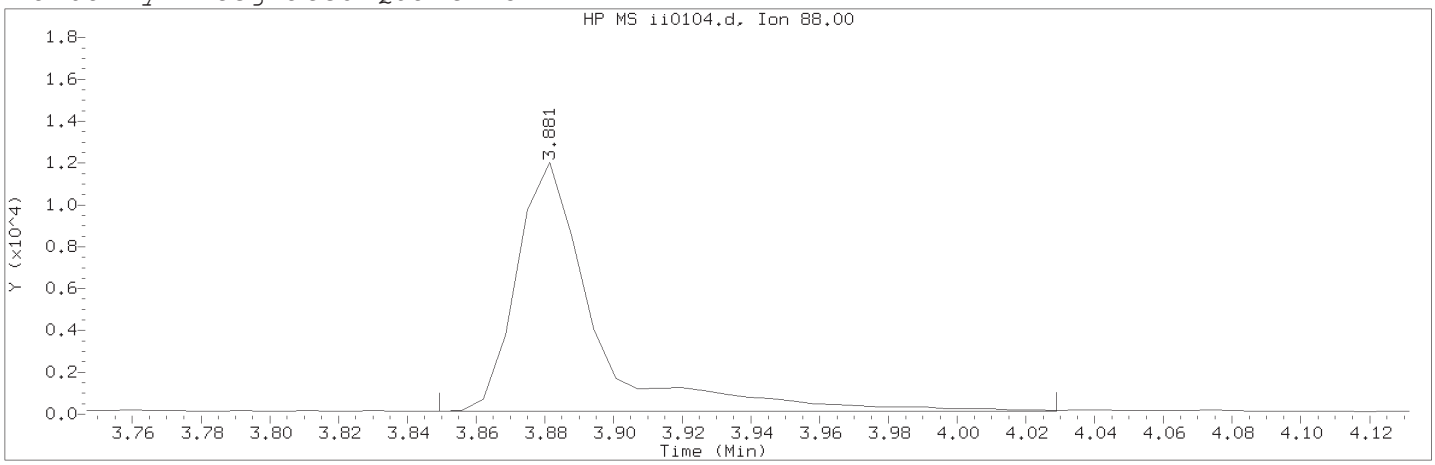
M = Compound was manually integrated.

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0104.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 21:14 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.5 Lab Sample ID: SIM1288

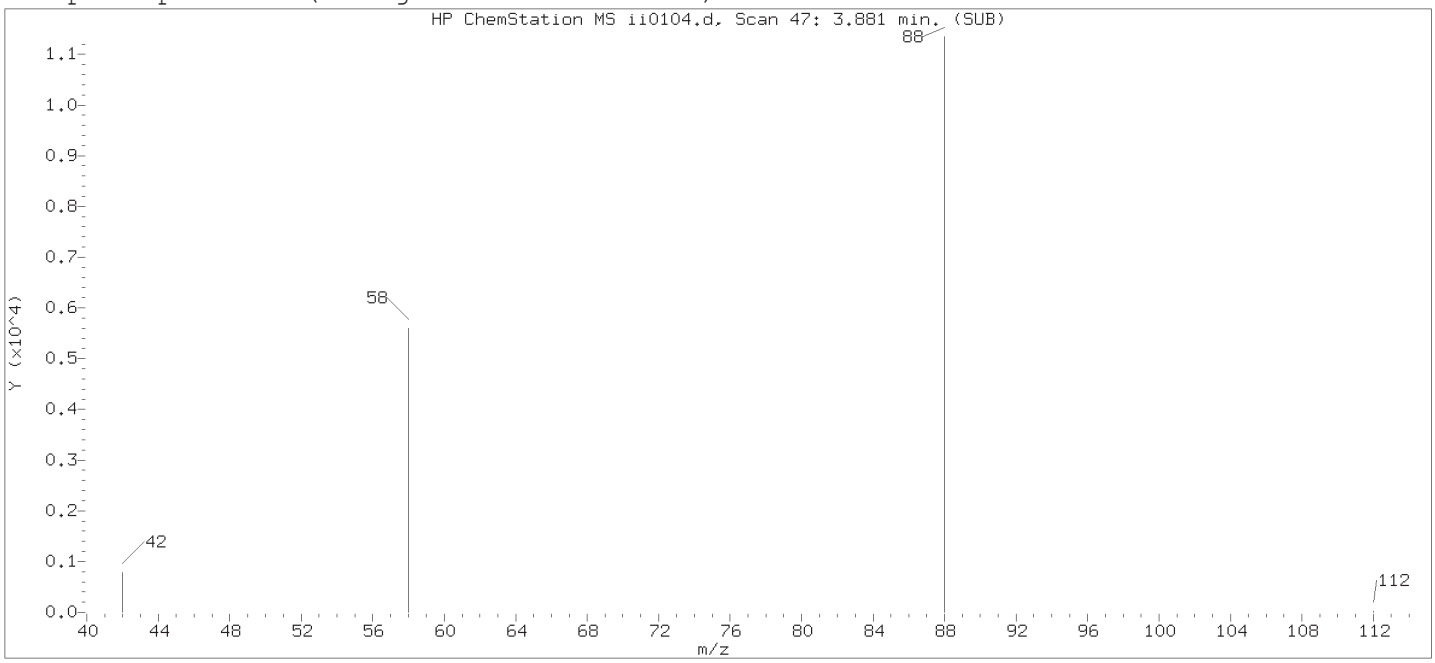
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 47		
Retention Time (minutes)	: 3.881		
Quant Ion	: 88.00		
Area (flag)	: 18790M		
On-Column Amount (ng/ul)	: 0.4989		
Integration start scan	: 41	Integration stop scan:	69
Y at integration start	: 135	Y at integration end:	135

Reason for manual integration: improper integration

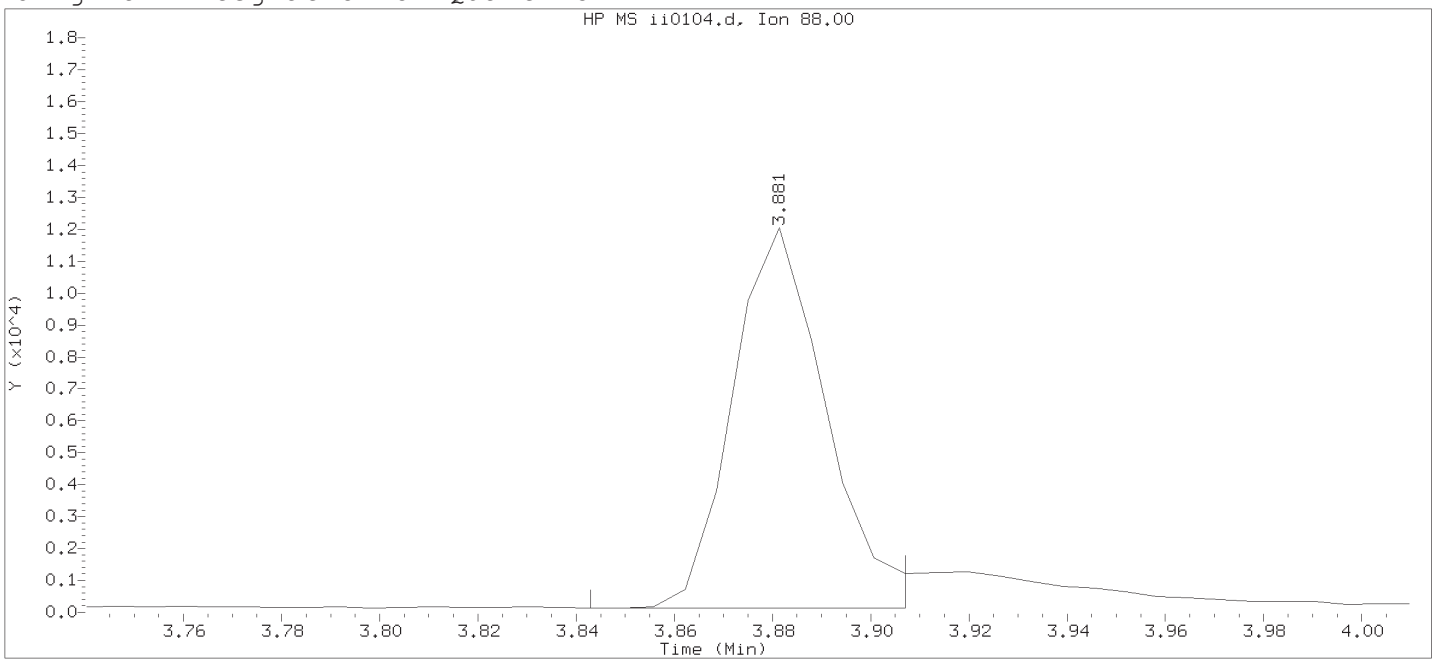
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0104.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 21:14 Analyst ID: apb10206

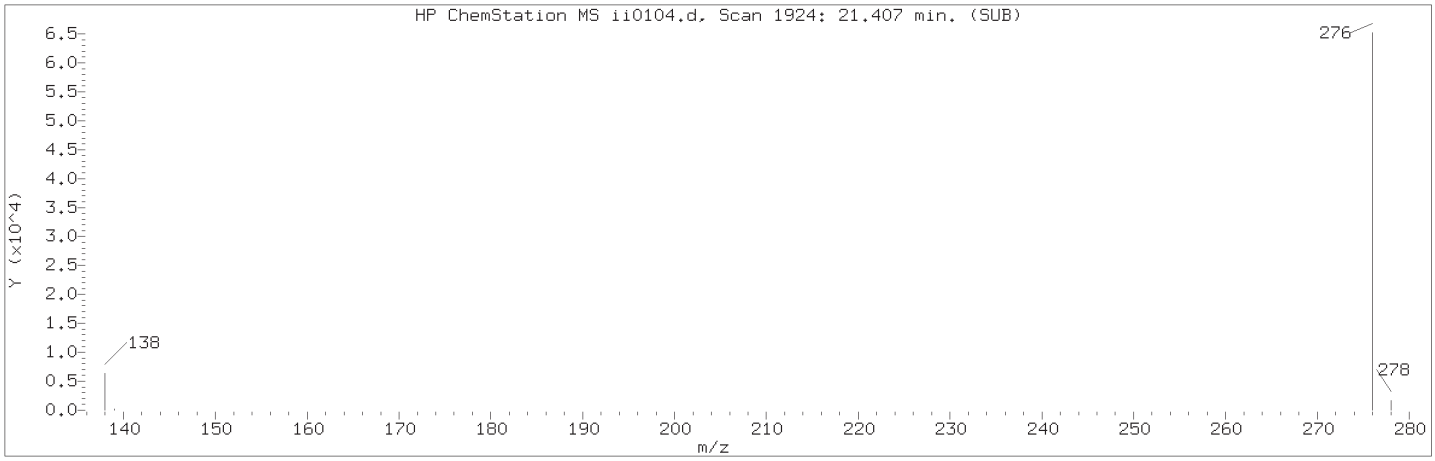
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 21:40
Date, time and analyst ID of latest file update: 04-Sep-2018 21:40 Automation

Sample Name: SSTD0.5 Lab Sample ID: SIM1288

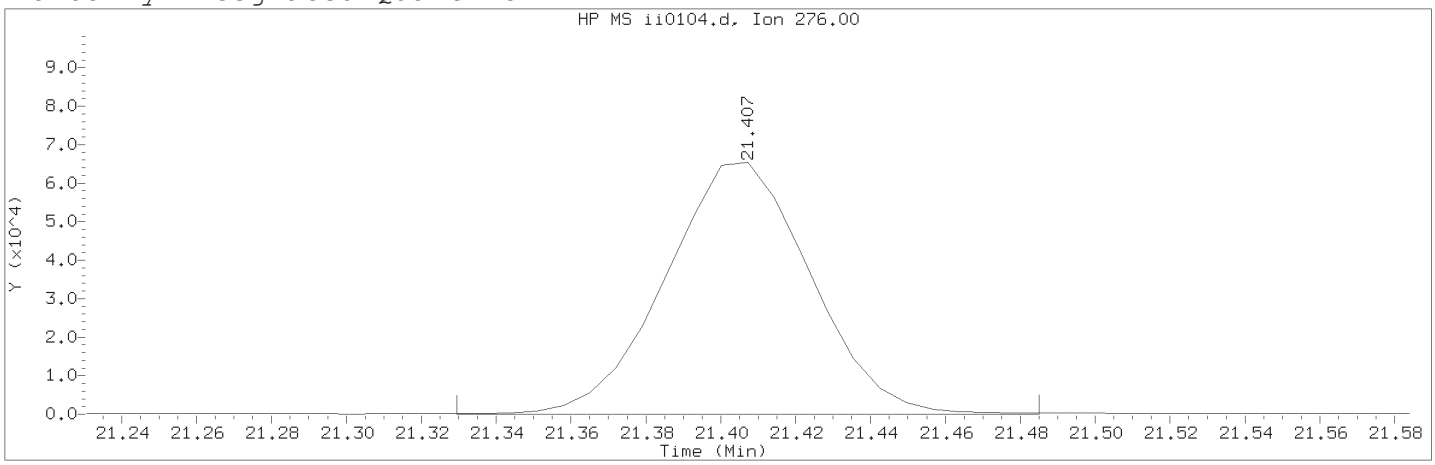
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 47		
Retention Time (minutes)	: 3.881		
Quant Ion	: 88.00		
Area	: 15504		
On-column Amount (ng/ul)	: 0.3974		
Integration start scan	: 40	Integration stop scan:	50
Y at integration start	: 136	Y at integration end:	136

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0104.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 21:14 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.5 Lab Sample ID: SIM1288

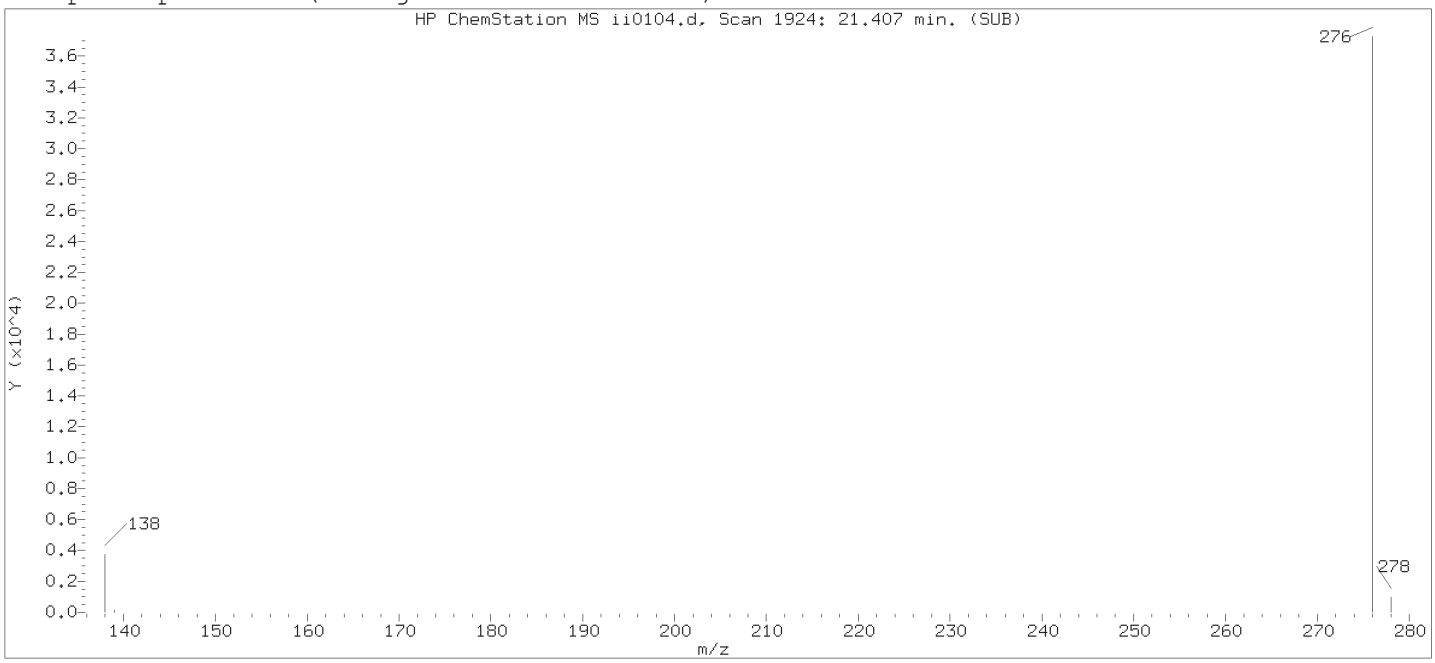
Compound Number : 55
Compound Name : Benzo(g,h,i)perylene
Scan Number : 1924
Retention Time (minutes) : 21.407
Quant Ion : 276.00
Area (flag) : 175272M
On-Column Amount (ng/ul) : 0.5036
Integration start scan : 1912 Integration stop scan: 1934
Y at integration start : 71 Y at integration end: 71

Reason for manual integration: improper integration

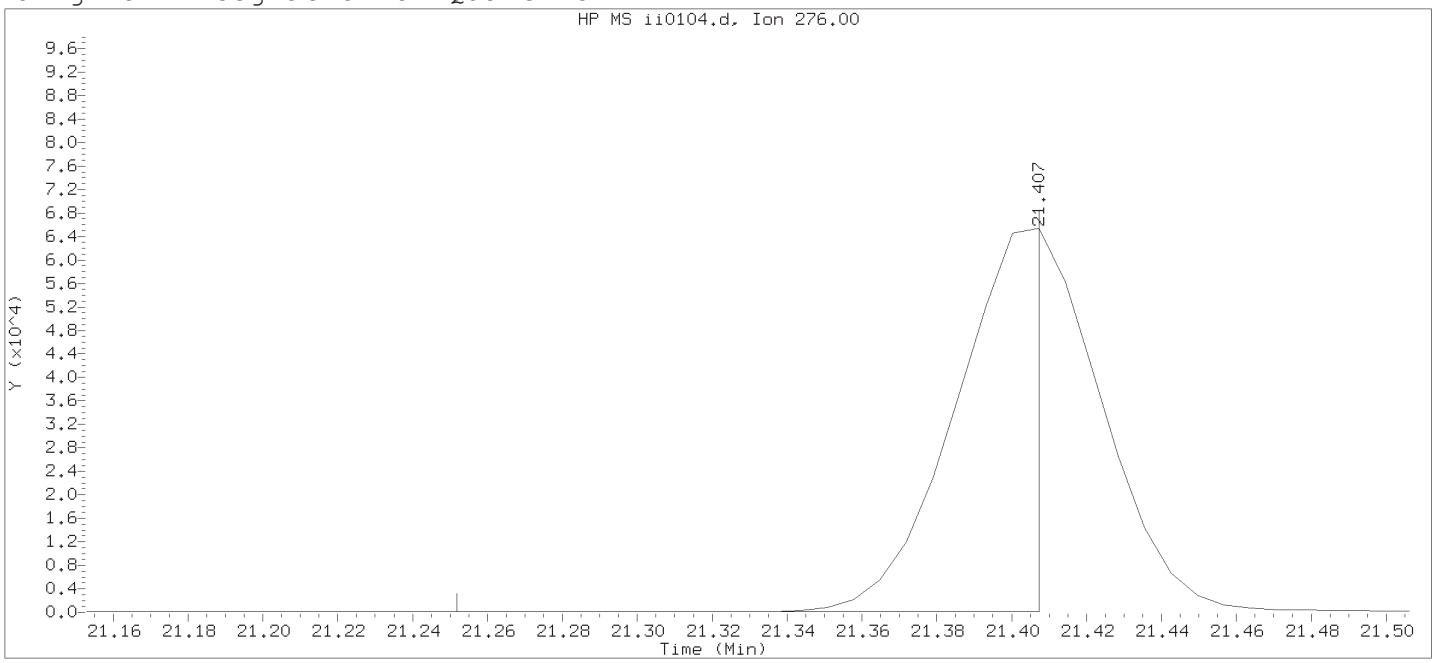
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



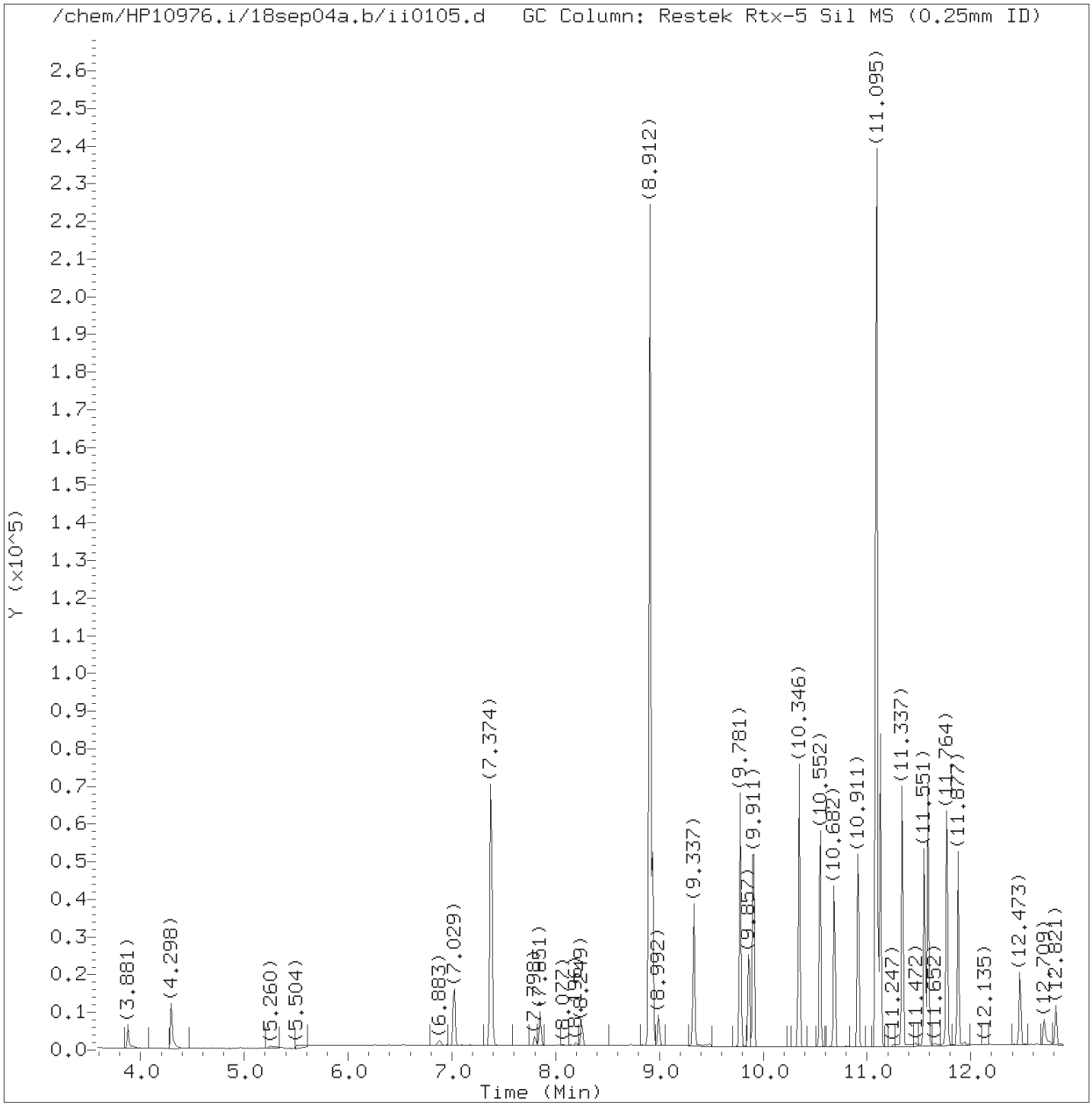
Data File: /chem/HP10976.i/18sep04a.b/ii0104.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 21:14 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 21:40
Date, time and analyst ID of latest file update: 04-Sep-2018 21:40 Automation

Sample Name: SSTD0.5 Lab Sample ID: SIM1288

Compound Number	: 55		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 1924		
Retention Time (minutes)	: 21.407		
Quant Ion	: 276.00		
Area	: 97424		
On-column Amount (ng/ul)	: 0.2804		
Integration start scan	: 1901	Integration stop scan:	1923
Y at integration start	: 78	Y at integration end:	78

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

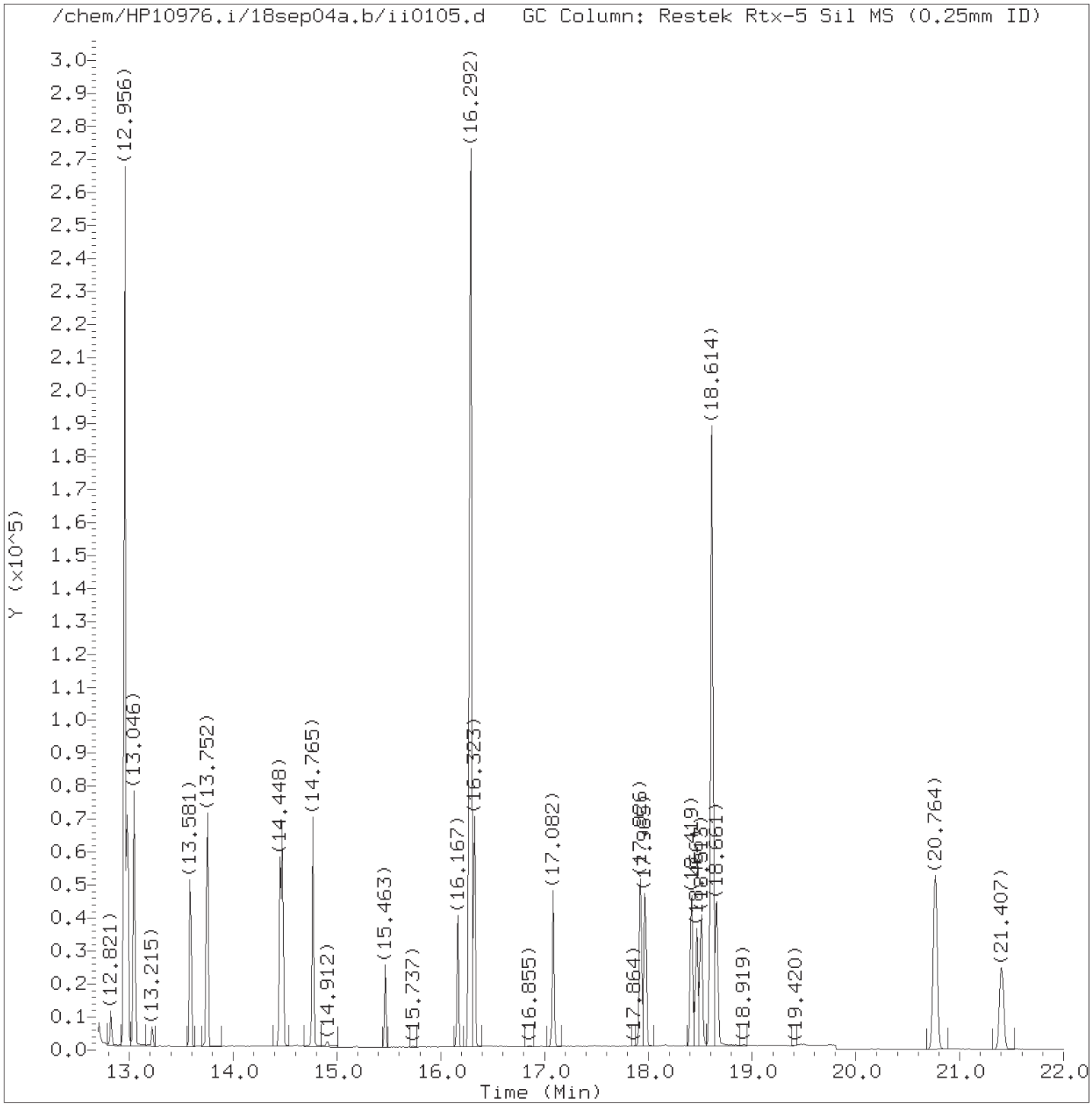
Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0105.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.2 Lab Sample ID: SIM1288

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0105.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.2 Lab Sample ID: SIM1288

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0105.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.2 Lab Sample ID: SIM1288

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.881	88	6632M	0.194
2) N-Nitrosodimethylamine	(1)	4.298	74	9922	0.191
5) bis(2-Chloroethyl)ether	(1)	7.029	93	13856	0.195
6)*1,4-Dichlorobenzene-d4	(1)	7.387	152	56238	1.000
10)*Naphthalene-d8	(2)	8.912	136	211328	1.000
11) Naphthalene	(2)	8.939	128	43050	0.197
12) Quinoline	(2)	9.337	129	26293	0.194
13) 2-Methylnaphthalene	(2)	9.781	142	31020	0.197
14)$1-Methylnaphthalene-d10	(2)	9.857	152	25343	0.198
15) 1-Methylnaphthalene	(2)	9.911	142	30262	0.197
18) Dimethylphthalate	(3)	10.682	163	37048	0.196
19) Acenaphthylene	(3)	10.911	152	47671	0.193
20)*Acenaphthene-d10	(3)	11.095	164	127752	1.000
21) Acenaphthene	(3)	11.128	154	32210	0.200
22) Dibenzofuran	(3)	11.337	168	49687	0.198
23) Diethylphthalate	(3)	11.551	149	35721	0.193
26) Fluorene	(3)	11.764	166	38900	0.194
28) NDPA as diphenylamine	(4)	11.877	169	25708	0.217
27) N-Nitrosodiphenylamine	(4)	11.877	169	25708	0.217
29) Hexachlorobenzene	(4)	12.473	284	17234	0.206
31)*Phenanthrene-d10	(4)	12.956	188	289036	1.000
32) Phenanthrene	(4)	12.978	178	62304	0.200
33) Anthracene	(4)	13.046	178	61318	0.195
35) Di-n-butylphthalate	(4)	13.581	149	55637	0.186
36)$Fluoranthene-d10	(4)	14.448	212	69088	0.191
37) Fluoranthene	(4)	14.472	202	74920	0.190
39) Pyrene	(5)	14.765	202	76340	0.202
40) Butylbenzylphthalate	(5)	15.463	149	22294	0.185
41) bis(2-Ethylhexyl)phthalate	(5)	16.167	149	33198	0.183
42) Benzo(a)anthracene	(5)	16.268	228	68642	0.197
43)*Chrysene-d12	(5)	16.292	240	276026	1.000
44) Chrysene	(5)	16.323	228	67560	0.199
45) Di-n-octylphthalate	(6)	17.082	149	54510	0.180
46) Benzo(b)fluoranthene	(6)	17.926	252	68663	0.199
47) Benzo(k)fluoranthene	(6)	17.965	252	62051	0.191
48) Benzo(e)pyrene	(6)	18.419	252	66028	0.196
49)$Benzo(a)pyrene-d12	(6)	18.466	264	50857	0.190
50) Benzo(a)pyrene	(6)	18.513	252	57202	0.192
51)*Perylene-d12	(6)	18.614	264	276848	1.000
52) Perylene	(6)	18.661	252	65239	0.199

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0105.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 21:45 Analyst ID: apb10206

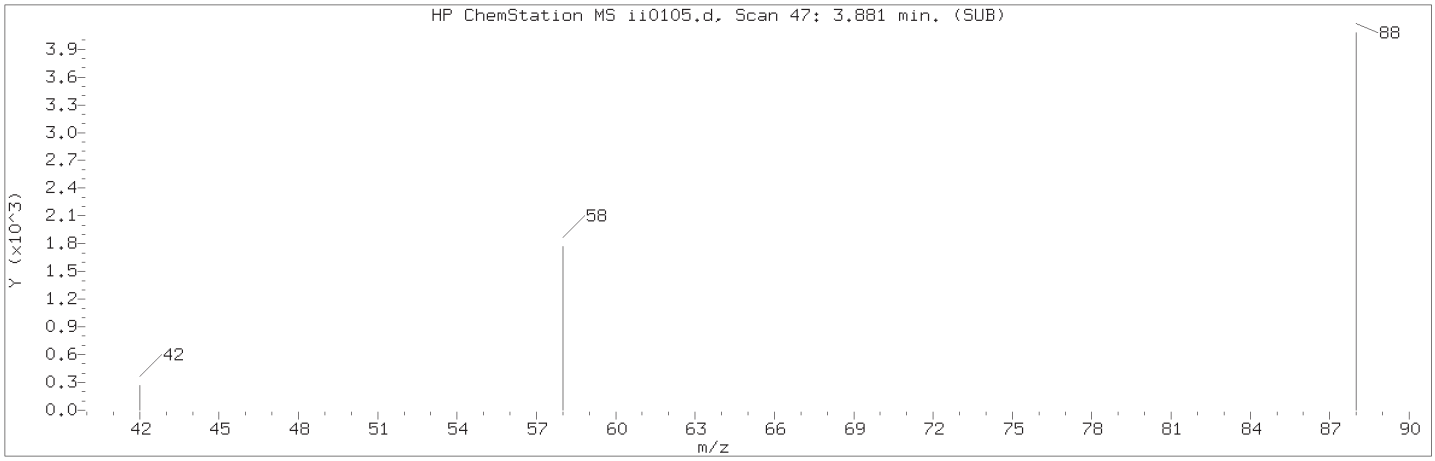
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.2 Lab Sample ID: SIM1288

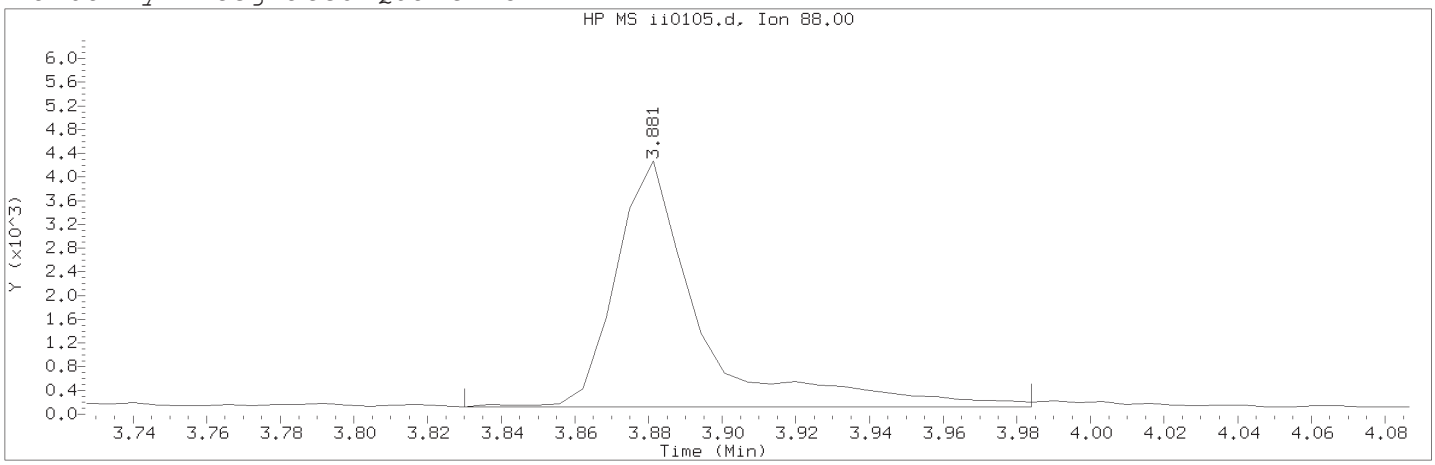
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.757	276	68478	0.194
54) Dibenz(a,h)anthracene	(6)	20.771	278	56350	0.196
55) Benzo(g,h,i)perylene	(6)	21.407	276	60147	0.196

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0105.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.2 Lab Sample ID: SIM1288

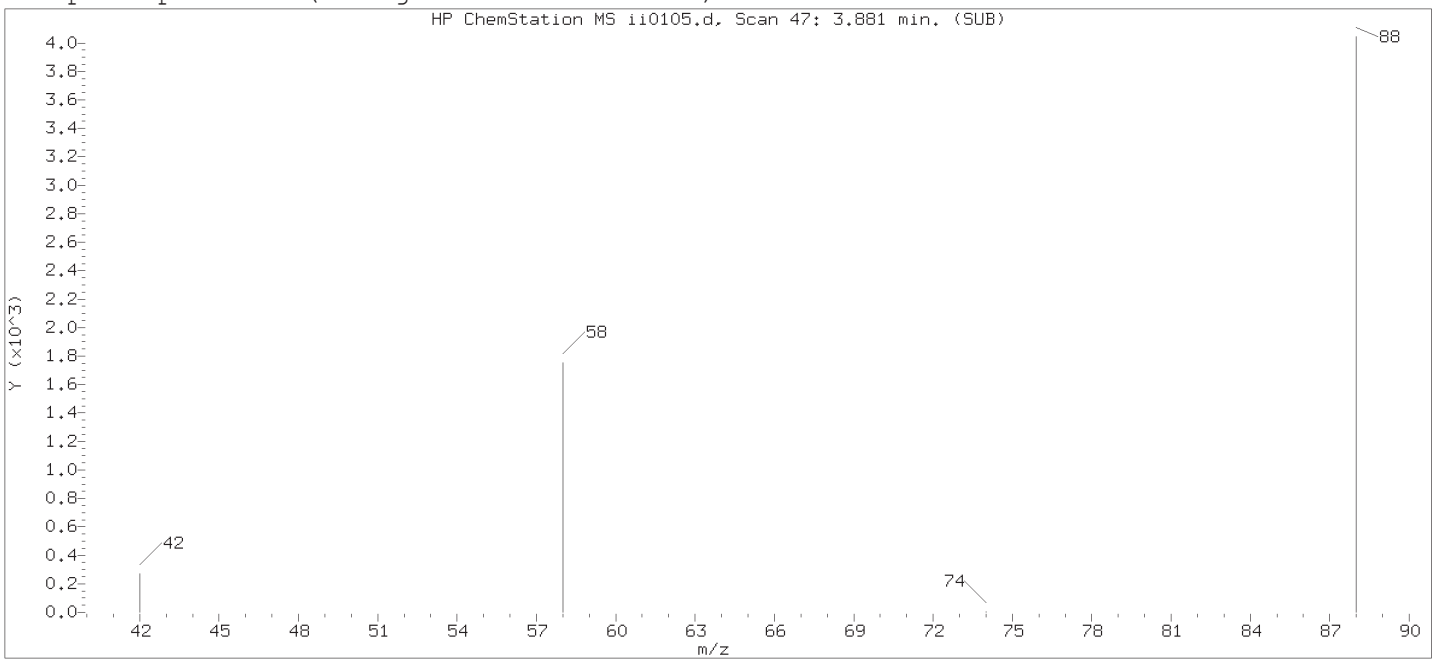
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 47		
Retention Time (minutes)	: 3.881		
Quant Ion	: 88.00		
Area (flag)	: 6632M		
On-Column Amount (ng/ul)	: 0.1941		
Integration start scan	: 38	Integration stop scan:	62
Y at integration start	: 119	Y at integration end:	119

Reason for manual integration: improper integration

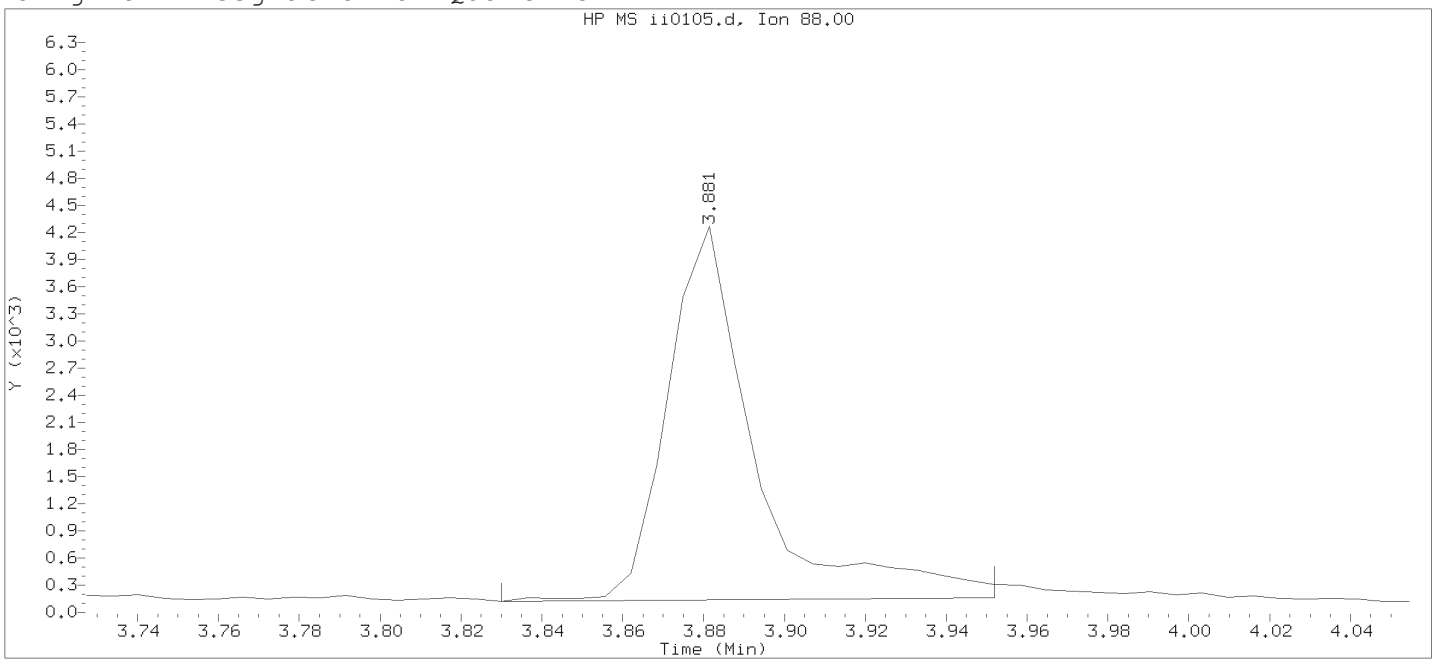
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



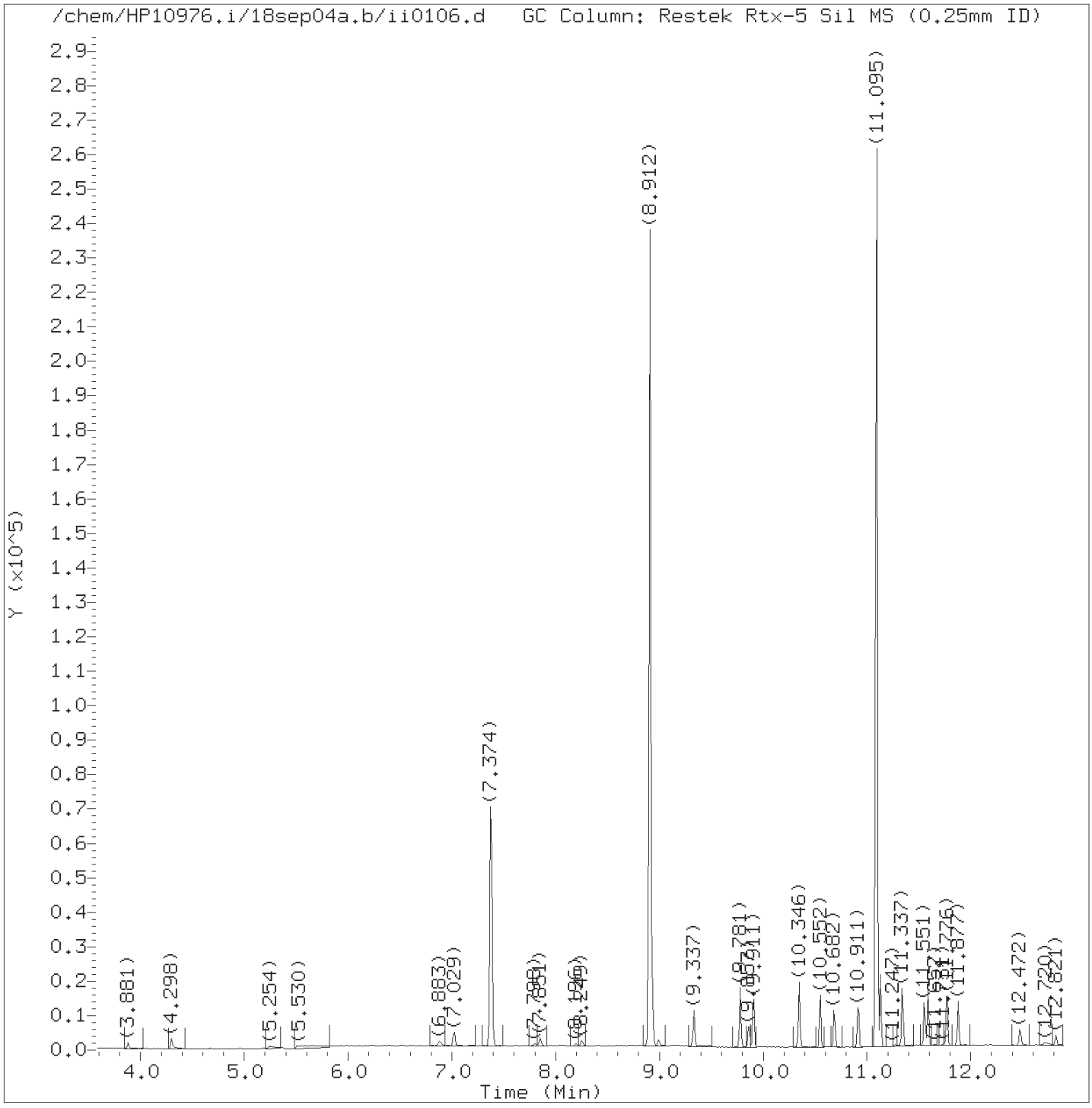
Data File: /chem/HP10976.i/18sep04a.b/ii0105.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 22:11
Date, time and analyst ID of latest file update: 04-Sep-2018 22:11 Automation

Sample Name: SSTD0.2 Lab Sample ID: SIM1288

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 47		
Retention Time (minutes)	: 3.881		
Quant Ion	: 88.00		
Area	: 6192		
On-column Amount (ng/ul)	: 0.1841		
Integration start scan	: 38	Integration stop scan:	57
Y at integration start	: 122	Y at integration end:	162

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

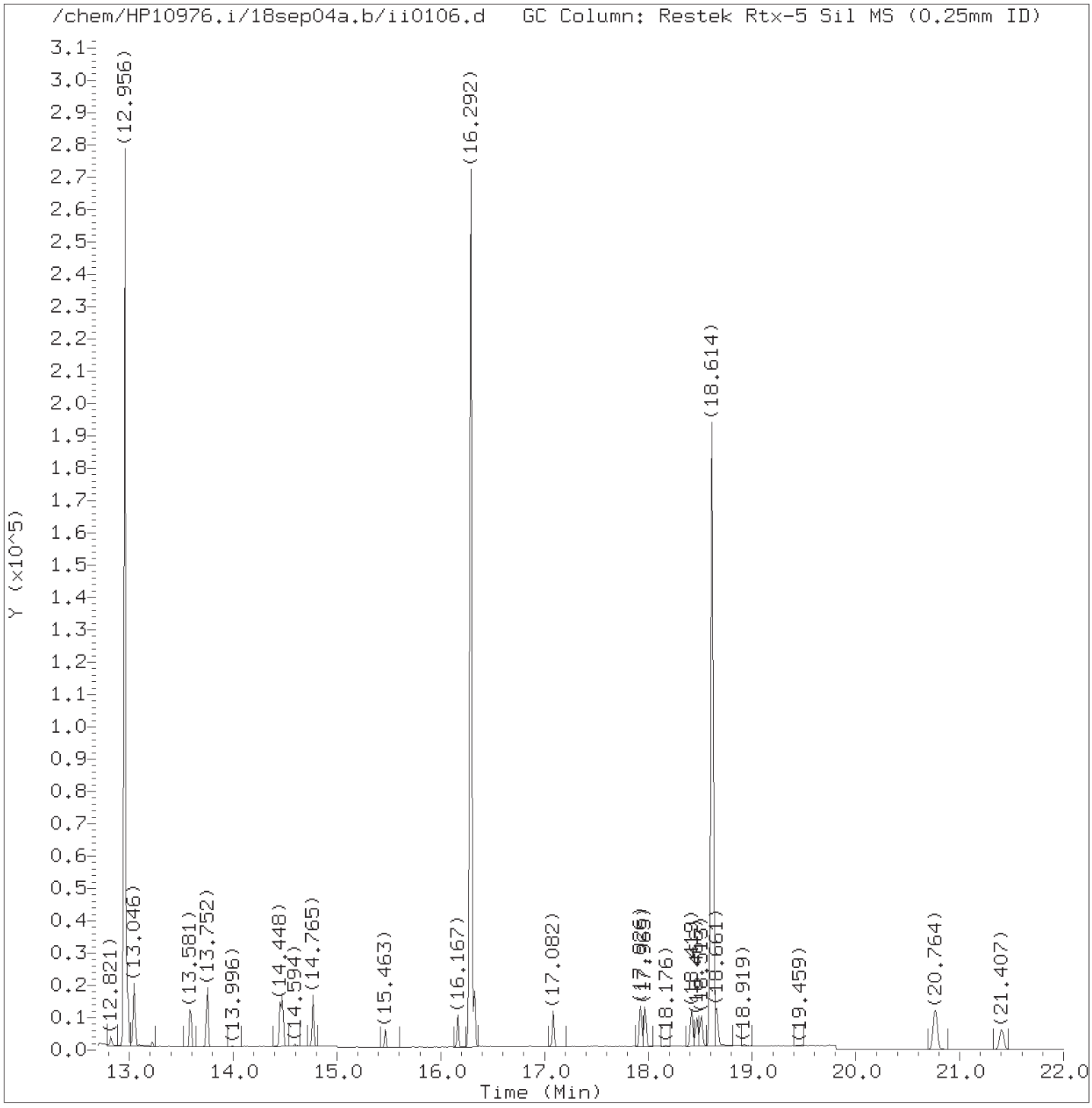
Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0106.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:16 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM1288

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0106.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:16 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM1288

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0106.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:16 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM1288

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.881	88	1582	0.046
2) N-Nitrosodimethylamine	(1)	4.298	74	2463	0.047
5) bis(2-Chloroethyl)ether	(1)	7.029	93	3452	0.048
6)*1,4-Dichlorobenzene-d4	(1)	7.387	152	57036	1.000
10)*Naphthalene-d8	(2)	8.912	136	215309	1.000
11) Naphthalene	(2)	8.939	128	10961	0.049
12) Quinoline	(2)	9.337	129	6642	0.048
13) 2-Methylnaphthalene	(2)	9.781	142	7735	0.048
14)$1-Methylnaphthalene-d10	(2)	9.868	152	6705	0.051
15) 1-Methylnaphthalene	(2)	9.911	142	7752	0.050
18) Dimethylphthalate	(3)	10.682	163	9414	0.049
19) Acenaphthylene	(3)	10.911	152	12023	0.048
20)*Acenaphthene-d10	(3)	11.095	164	130523	1.000
21) Acenaphthene	(3)	11.128	154	8121M	0.049
22) Dibenzofuran	(3)	11.337	168	12335M	0.048
23) Diethylphthalate	(3)	11.551	149	9076M	0.048
26) Fluorene	(3)	11.776	166	9535	0.047
28) NDPA as diphenylamine	(4)	11.877	169	6556	0.054
27) N-Nitrosodiphenylamine	(4)	11.877	169	6556	0.054
29) Hexachlorobenzene	(4)	12.484	284	4502	0.052
31)*Phenanthrene-d10	(4)	12.956	188	293041	1.000
32) Phenanthrene	(4)	12.978	178	15878	0.050
33) Anthracene	(4)	13.046	178	15375	0.048
35) Di-n-butylphthalate	(4)	13.581	149	13780	0.045
36)$Fluoranthene-d10	(4)	14.448	212	17324	0.048
37) Fluoranthene	(4)	14.472	202	18541	0.047
39) Pyrene	(5)	14.765	202	19768	0.052
40) Butylbenzylphthalate	(5)	15.463	149	5625	0.047
41) bis(2-Ethylhexyl)phthalate	(5)	16.167	149	8273M	0.046
42) Benzo(a)anthracene	(5)	16.268	228	17291	0.050
43)*Chrysene-d12	(5)	16.292	240	273917	1.000
44) Chrysene	(5)	16.323	228	17103	0.051
45) Di-n-octylphthalate	(6)	17.082	149	13171	0.044
46) Benzo(b)fluoranthene	(6)	17.926	252	16528	0.049
47) Benzo(k)fluoranthene	(6)	17.965	252	15463	0.049
48) Benzo(e)pyrene	(6)	18.419	252	16404M	0.050
49)$Benzo(a)pyrene-d12	(6)	18.466	264	12249	0.047
50) Benzo(a)pyrene	(6)	18.513	252	13878	0.048
51)*Perylene-d12	(6)	18.614	264	270990	1.000
52) Perylene	(6)	18.661	252	16314	0.051

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0106.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:16 Analyst ID: apb10206

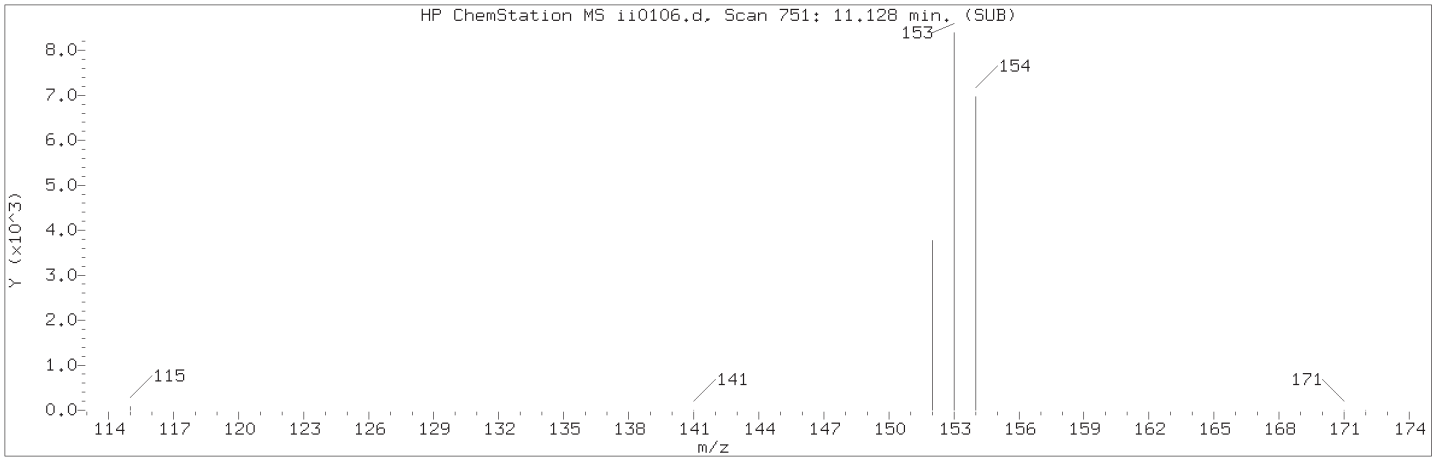
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM1288

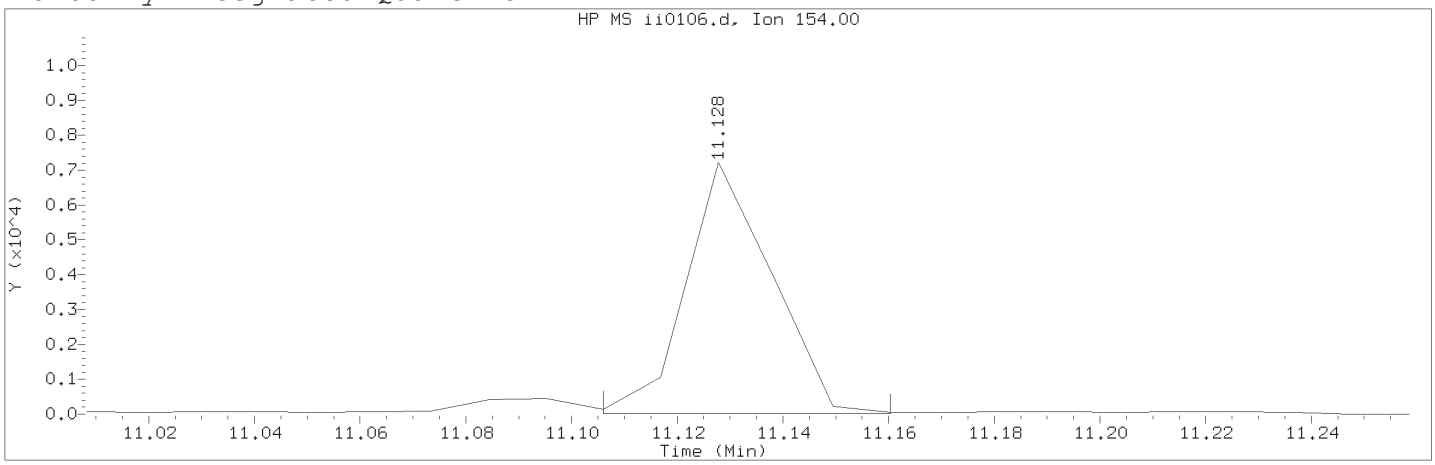
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.757	276	16622	0.048
54) Dibenz(a,h)anthracene	(6)	20.771	278	13574	0.048
55) Benzo(g,h,i)perylene	(6)	21.407	276	14697	0.049

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0106.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:16 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM1288

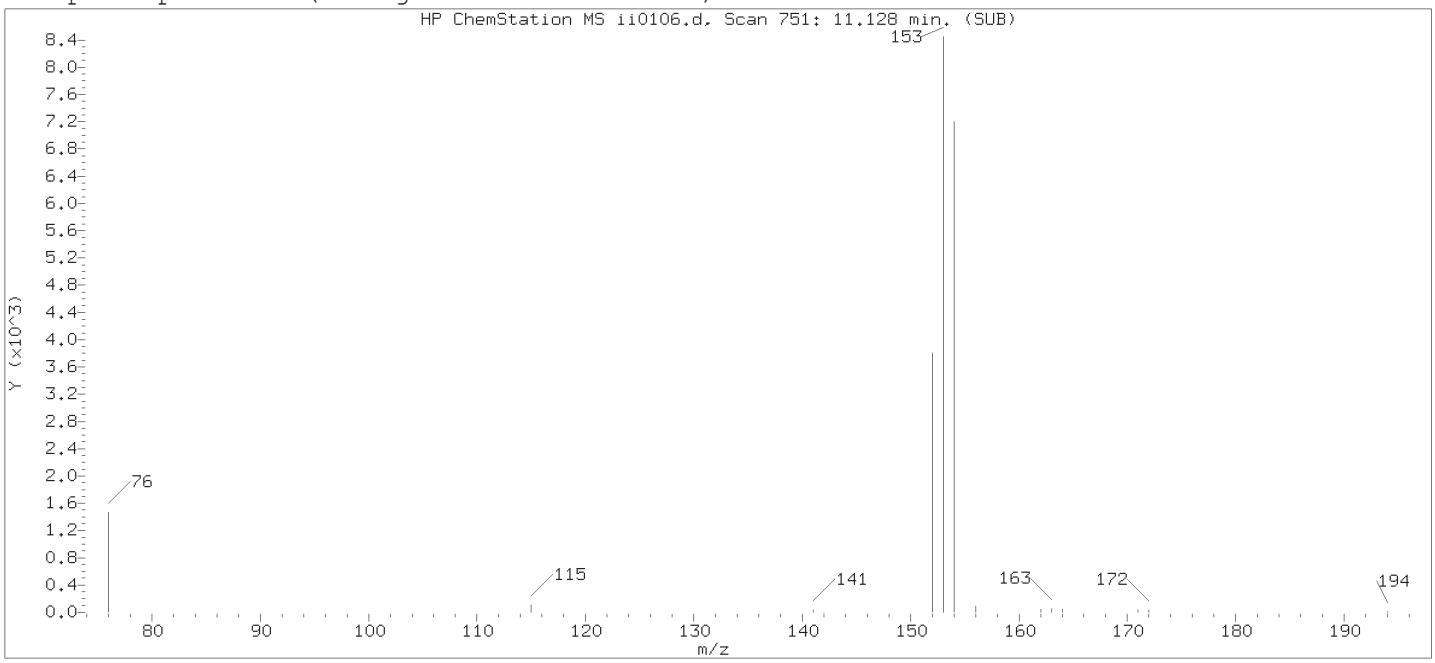
Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 751		
Retention Time (minutes)	: 11.128		
Quant Ion	: 154.00		
Area (flag)	: 8121M		
On-Column Amount (ng/ul)	: 0.0494		
Integration start scan	: 748	Integration stop scan:	753
Y at integration start	: 24	Y at integration end:	24

Reason for manual integration: improper integration

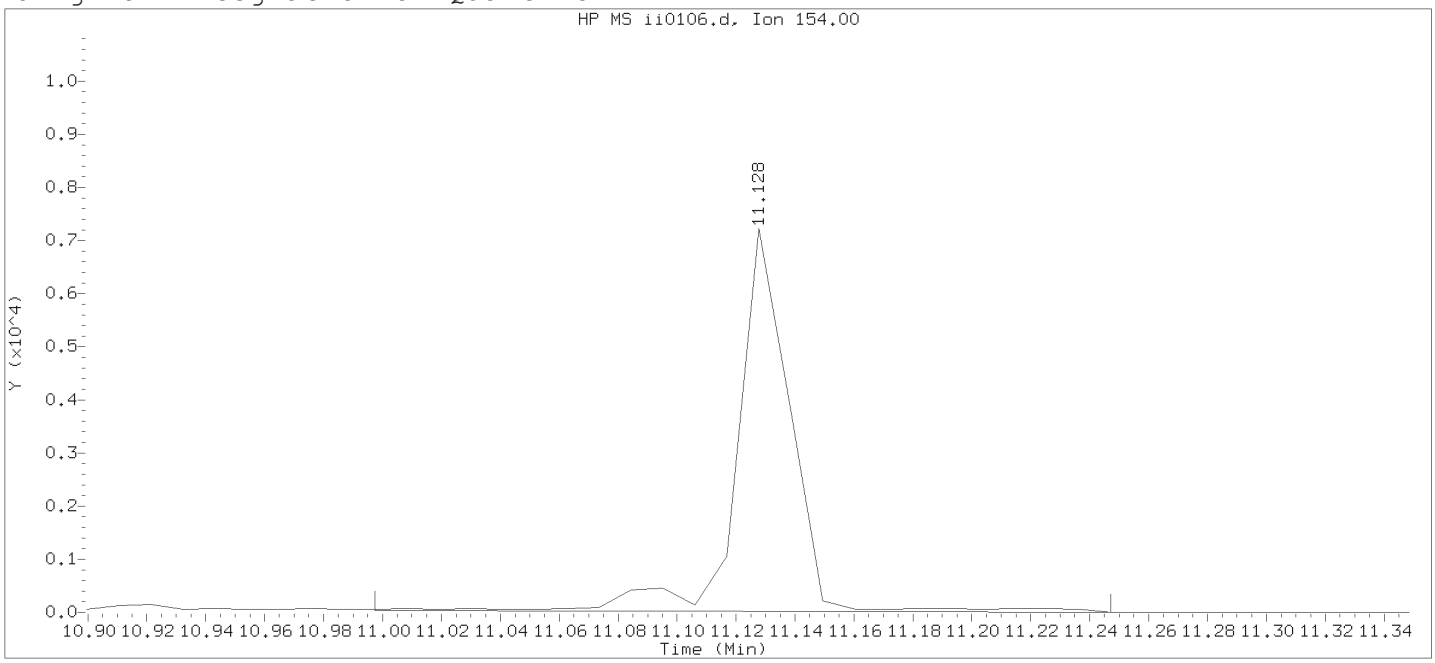
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0106.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:16 Analyst ID: apb10206

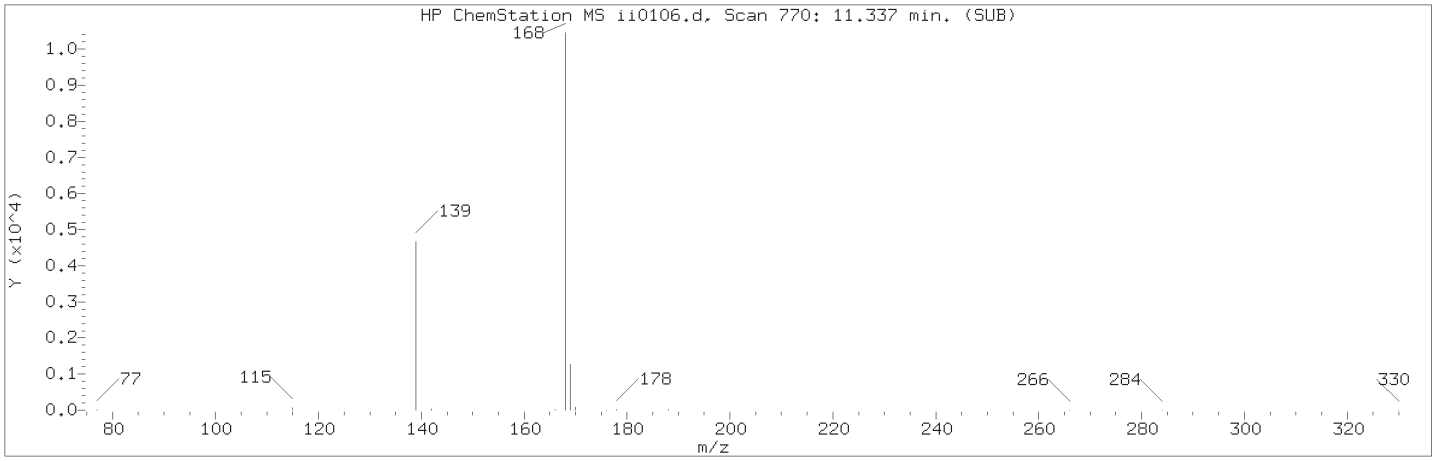
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 22:42
Date, time and analyst ID of latest file update: 04-Sep-2018 22:42 Automation

Sample Name: SSTD0.05 Lab Sample ID: SIM1288

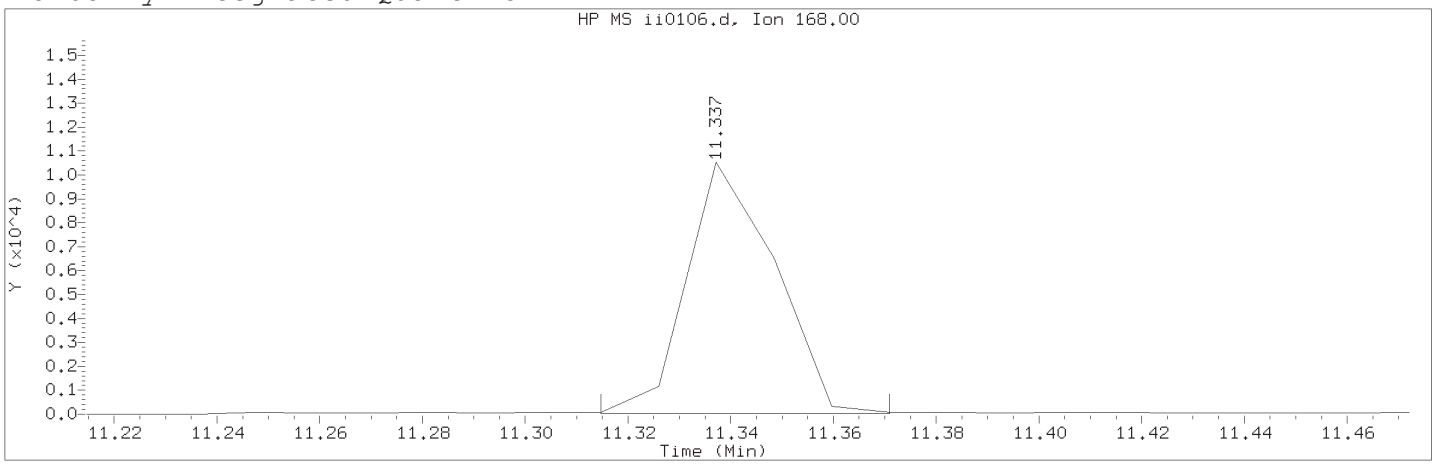
Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 751		
Retention Time (minutes)	: 11.128		
Quant Ion	: 154.00		
Area	: 9121		
On-column Amount (ng/ul)	: 0.0548		
Integration start scan	: 738	Integration stop scan:	761
Y at integration start	: 36	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0106.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:16 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM1288

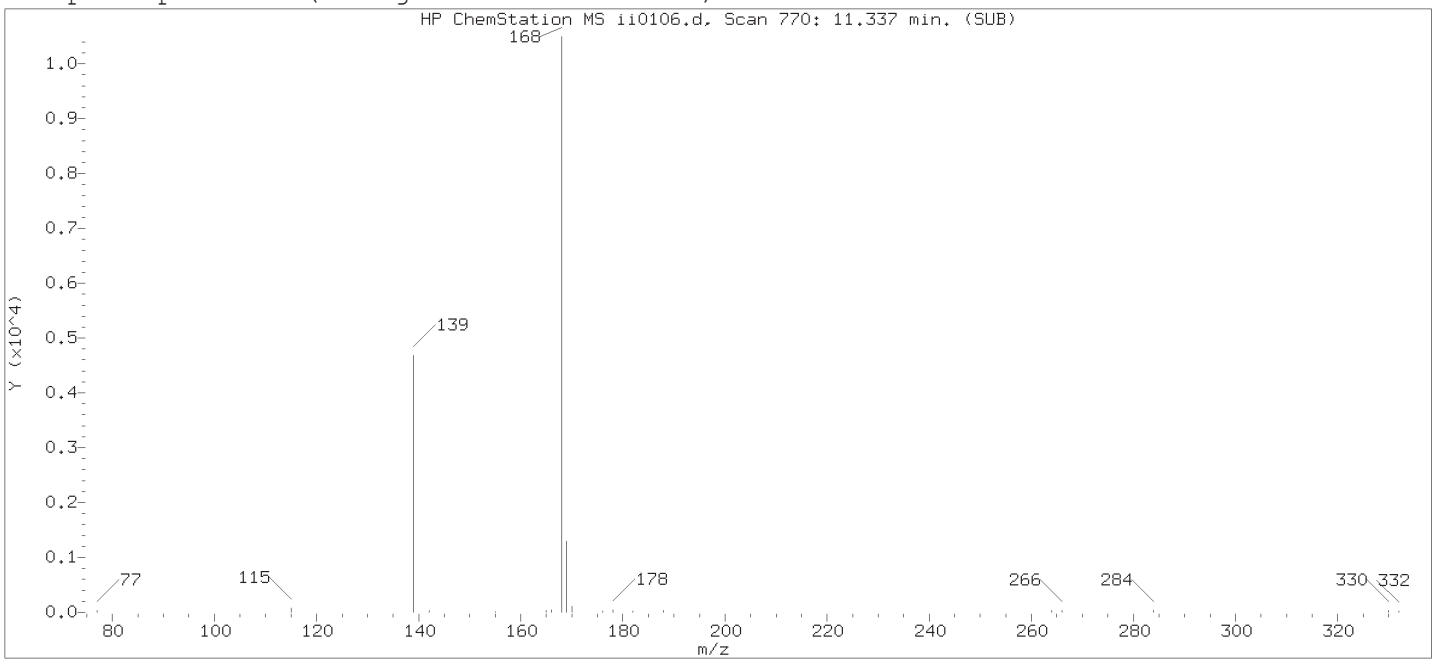
Compound Number	: 22		
Compound Name	: Dibenzofuran		
Scan Number	: 770		
Retention Time (minutes)	: 11.337		
Quant Ion	: 168.00		
Area (flag)	: 12335M		
On-Column Amount (ng/ul)	: 0.0485		
Integration start scan	: 767	Integration stop scan:	772
Y at integration start	: 30	Y at integration end:	30

Reason for manual integration: improper integration

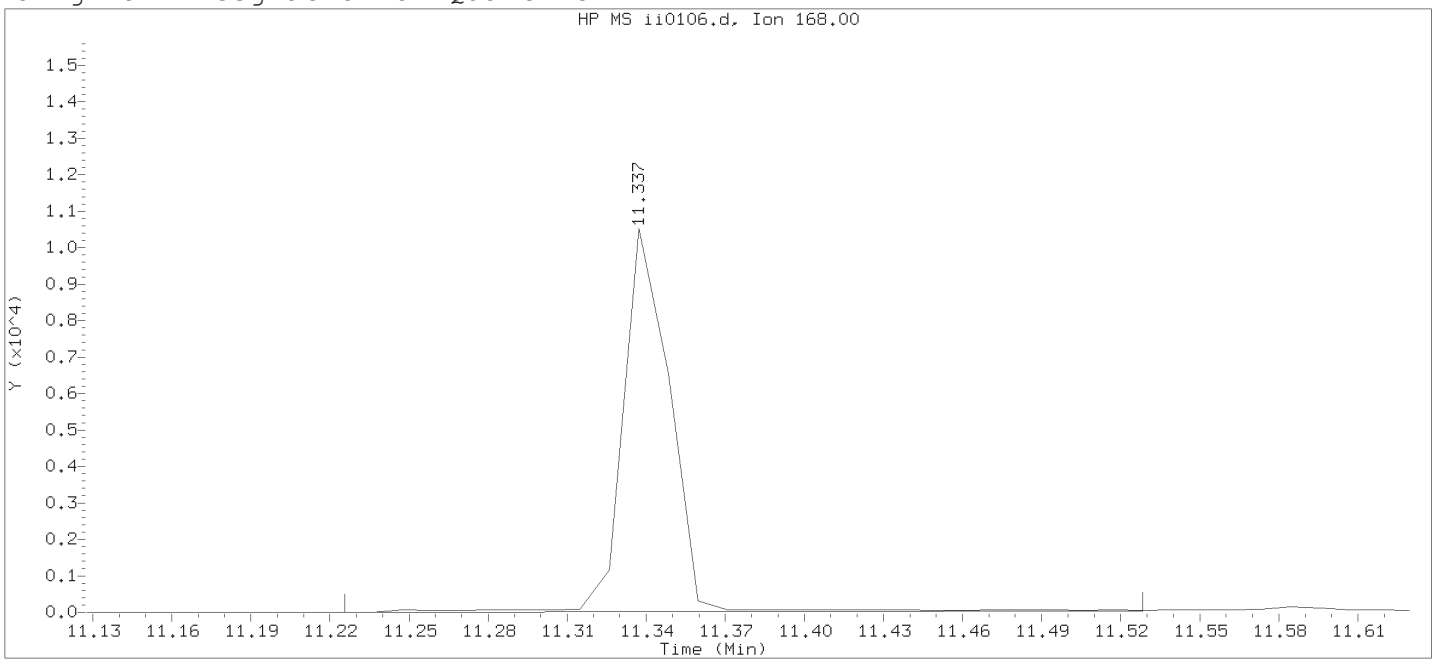
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0106.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:16 Analyst ID: apb10206

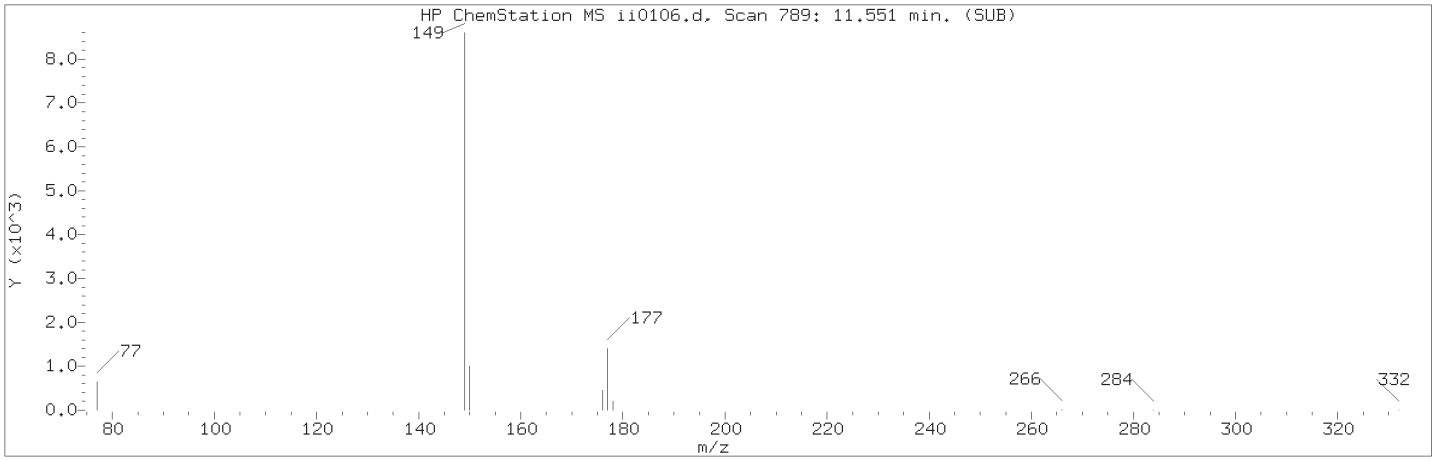
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 22:42
Date, time and analyst ID of latest file update: 04-Sep-2018 22:42 Automation

Sample Name: SSTD0.05 Lab Sample ID: SIM1288

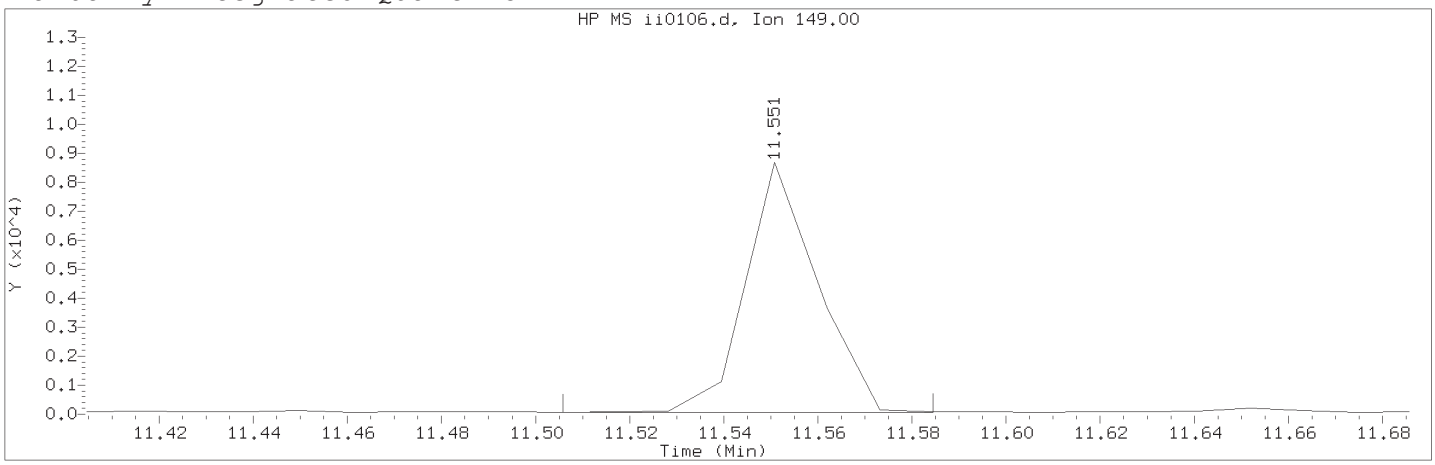
Compound Number	: 22		
Compound Name	: Dibenzofuran		
Scan Number	: 770		
Retention Time (minutes)	: 11.337		
Quant Ion	: 168.00		
Area	: 13018		
On-column Amount (ng/ul)	: 0.0502		
Integration start scan	: 759	Integration stop scan:	786
Y at integration start	: 0	Y at integration end:	26

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0106.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:16 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM1288

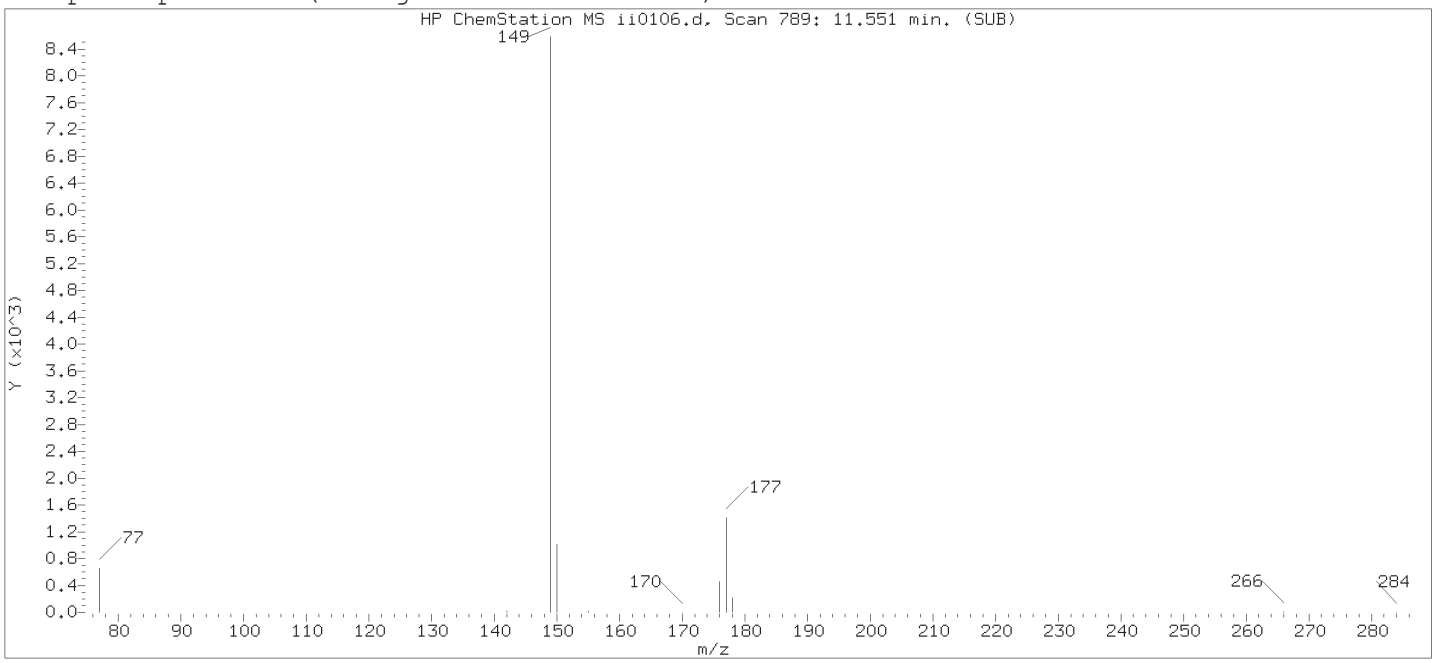
Compound Number	: 23		
Compound Name	: Diethylphthalate		
Scan Number	: 789		
Retention Time (minutes)	: 11.551		
Quant Ion	: 149.00		
Area (flag)	: 9076M		
On-Column Amount (ng/ul)	: 0.0483		
Integration start scan	: 784	Integration stop scan:	791
Y at integration start	: 59	Y at integration end:	59

Reason for manual integration: improper integration

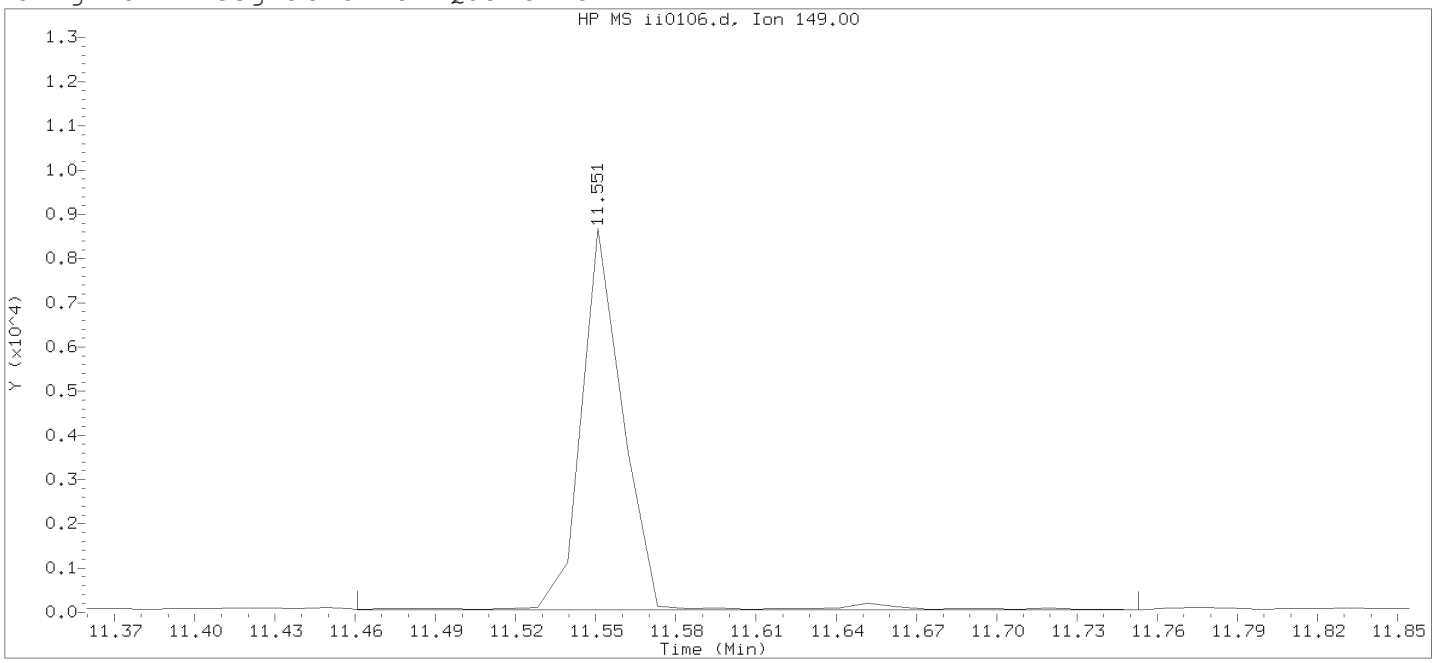
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0106.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:16 Analyst ID: apb10206

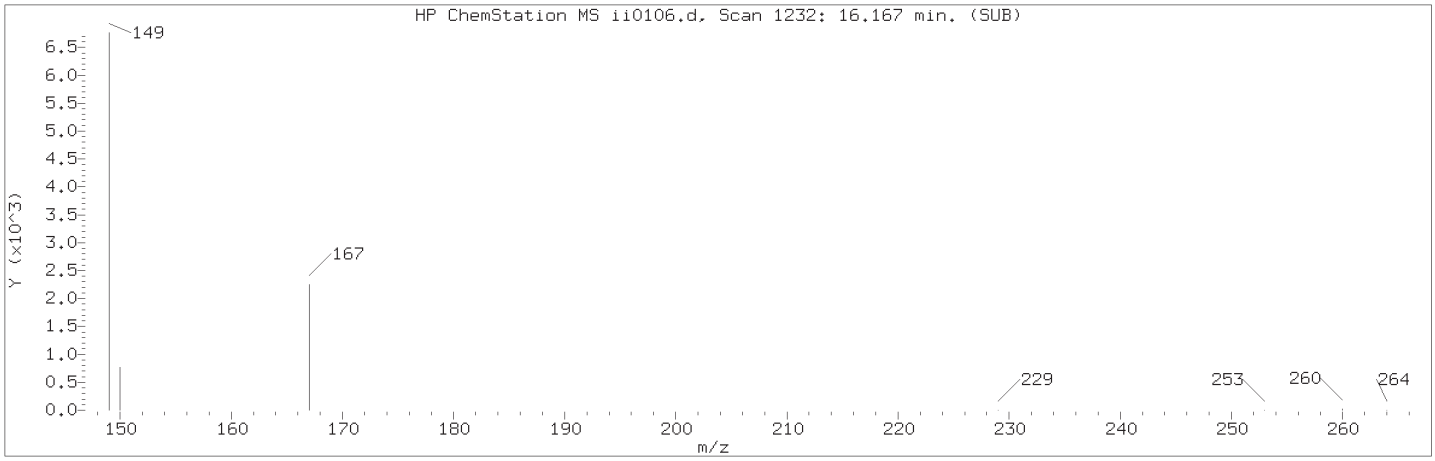
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 22:42
Date, time and analyst ID of latest file update: 04-Sep-2018 22:42 Automation

Sample Name: SSTD0.05 Lab Sample ID: SIM1288

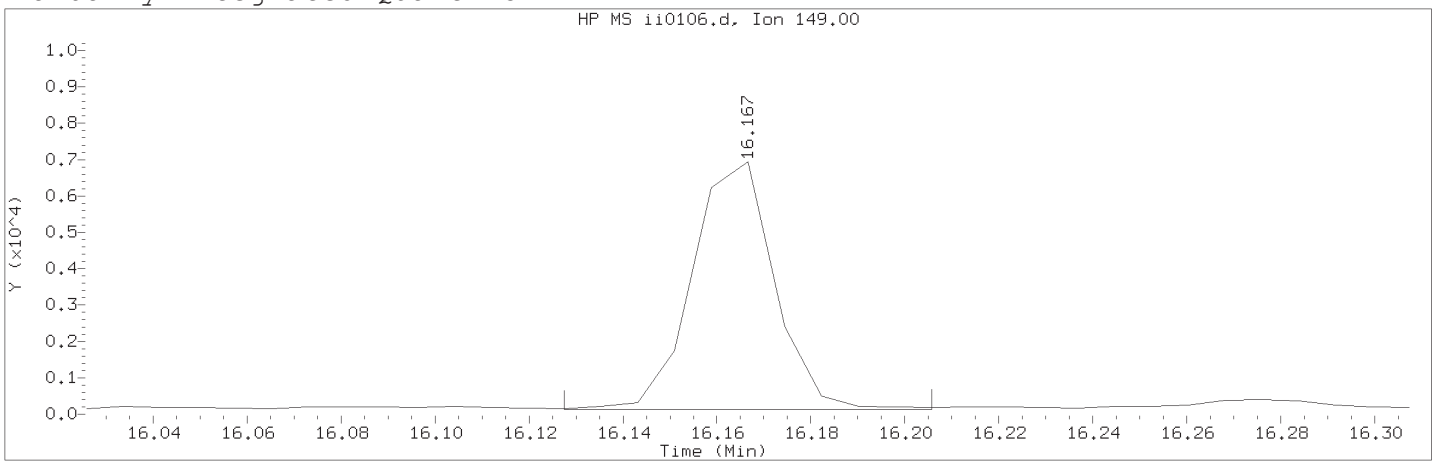
Compound Number	: 23		
Compound Name	: Diethylphthalate		
Scan Number	: 789		
Retention Time (minutes)	: 11.551		
Quant Ion	: 149.00		
Area	: 9428		
On-column Amount (ng/ul)	: 0.0505		
Integration start scan	: 780	Integration stop scan:	806
Y at integration start	: 60	Y at integration end:	60

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0106.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:16 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM1288

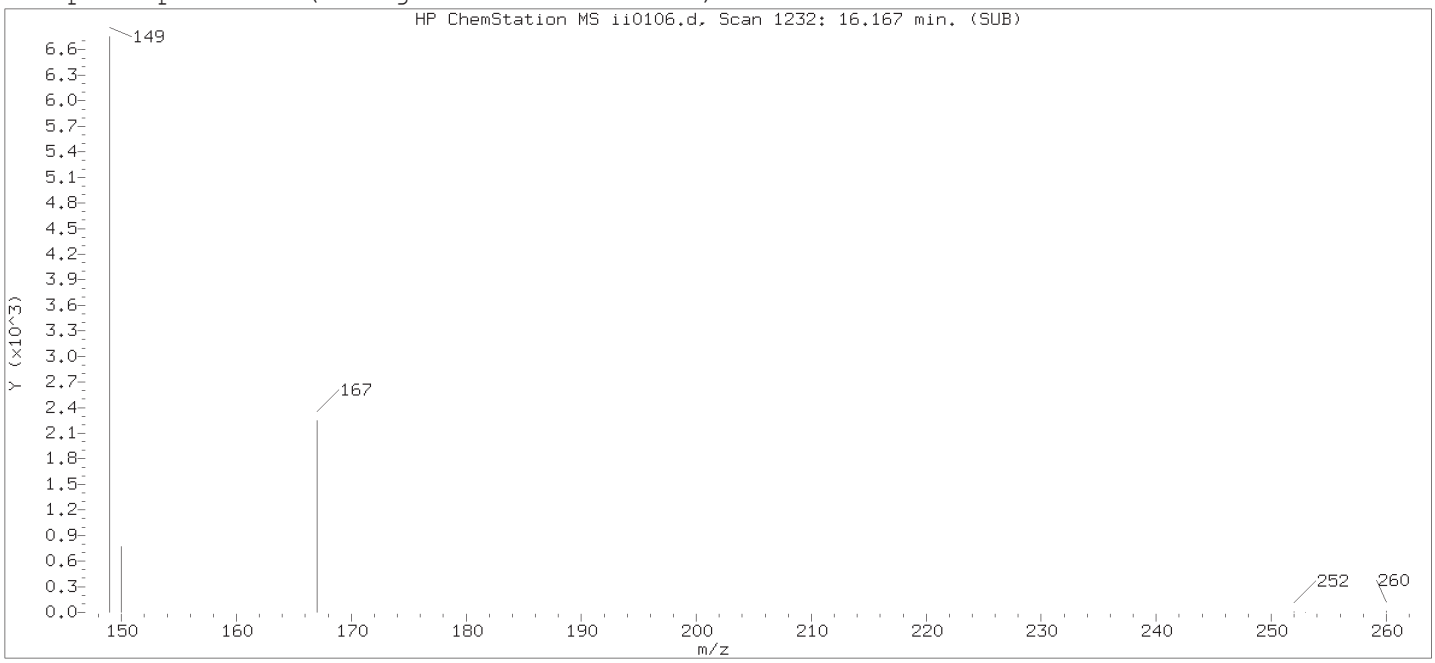
Compound Number : 41
Compound Name : bis(2-Ethylhexyl)phthalate
Scan Number : 1232
Retention Time (minutes) : 16.167
Quant Ion : 149.00
Area (flag) : 8273M
On-Column Amount (ng/ul) : 0.0459
Integration start scan : 1226 Integration stop scan: 1236
Y at integration start : 135 Y at integration end: 135

Reason for manual integration: improper integration

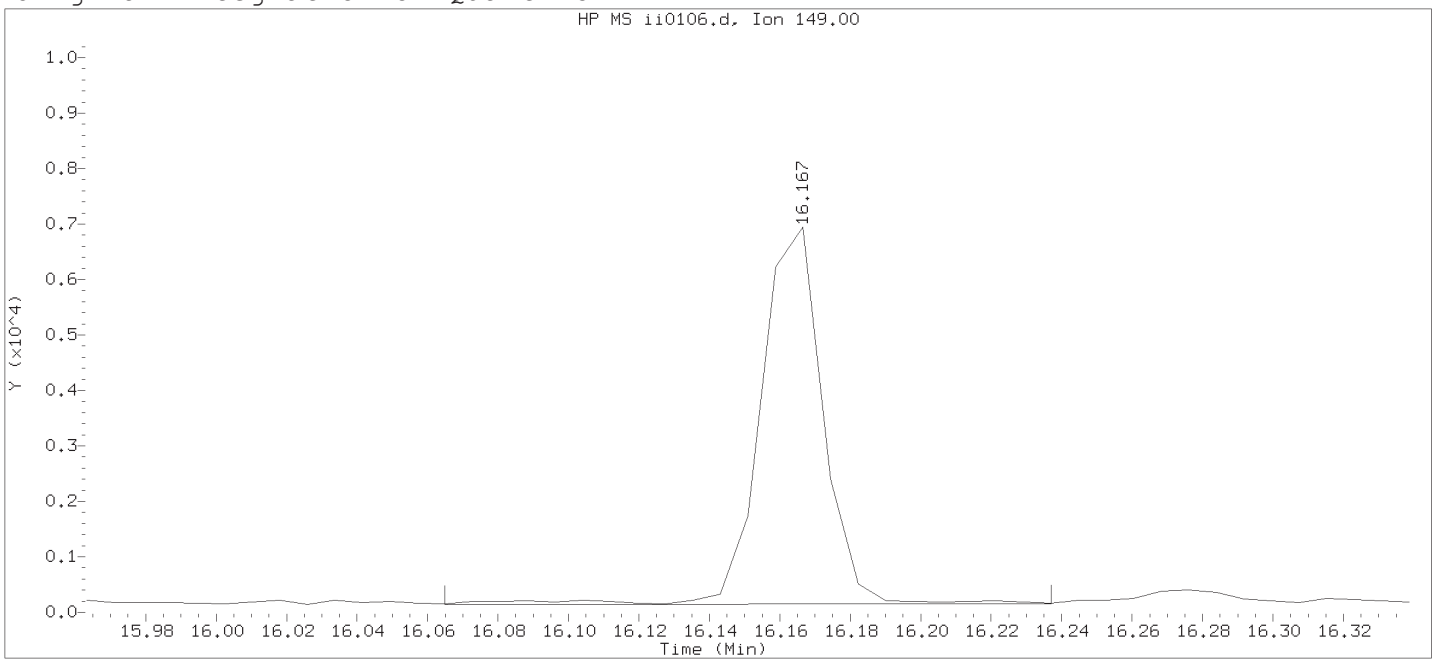
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0106.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:16 Analyst ID: apb10206

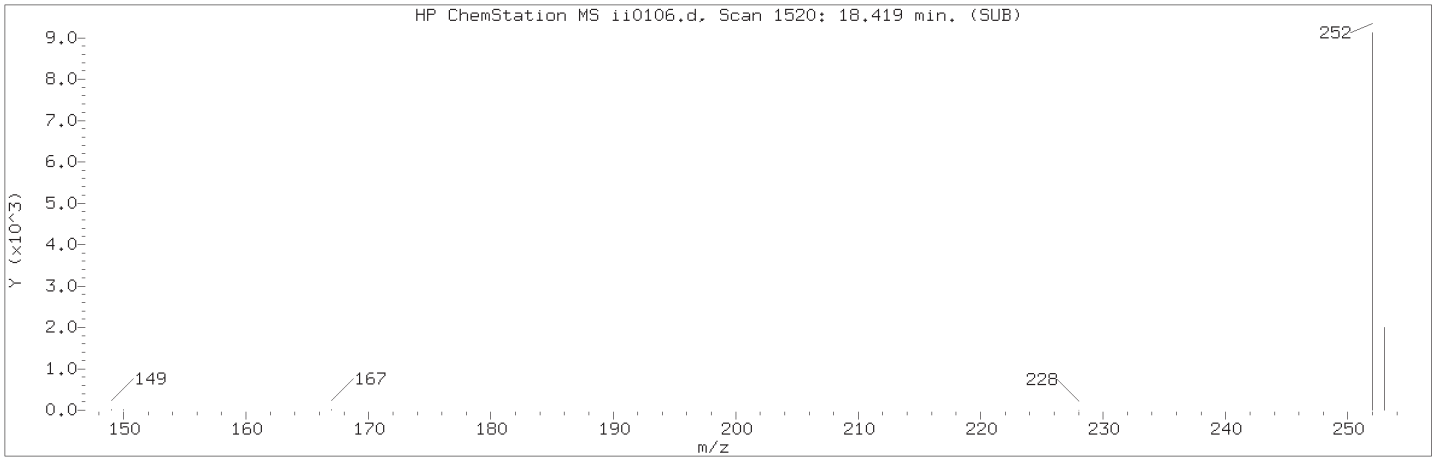
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 22:42
Date, time and analyst ID of latest file update: 04-Sep-2018 22:42 Automation

Sample Name: SSTD0.05 Lab Sample ID: SIM1288

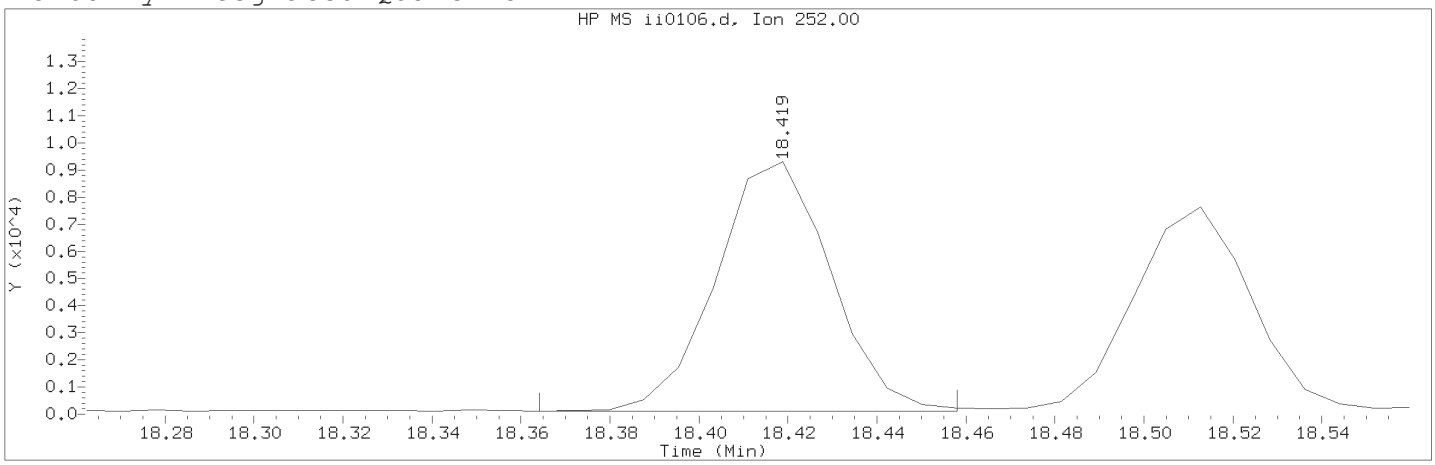
Compound Number	: 41		
Compound Name	: bis(2-Ethylhexyl)phthalate		
Scan Number	: 1232		
Retention Time (minutes)	: 16.167		
Quant Ion	: 149.00		
Area	: 8424		
On-column Amount (ng/ul)	: 0.0468		
Integration start scan	: 1218	Integration stop scan:	1240
Y at integration start	: 145	Y at integration end:	152

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0106.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:16 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.05 Lab Sample ID: SIM1288

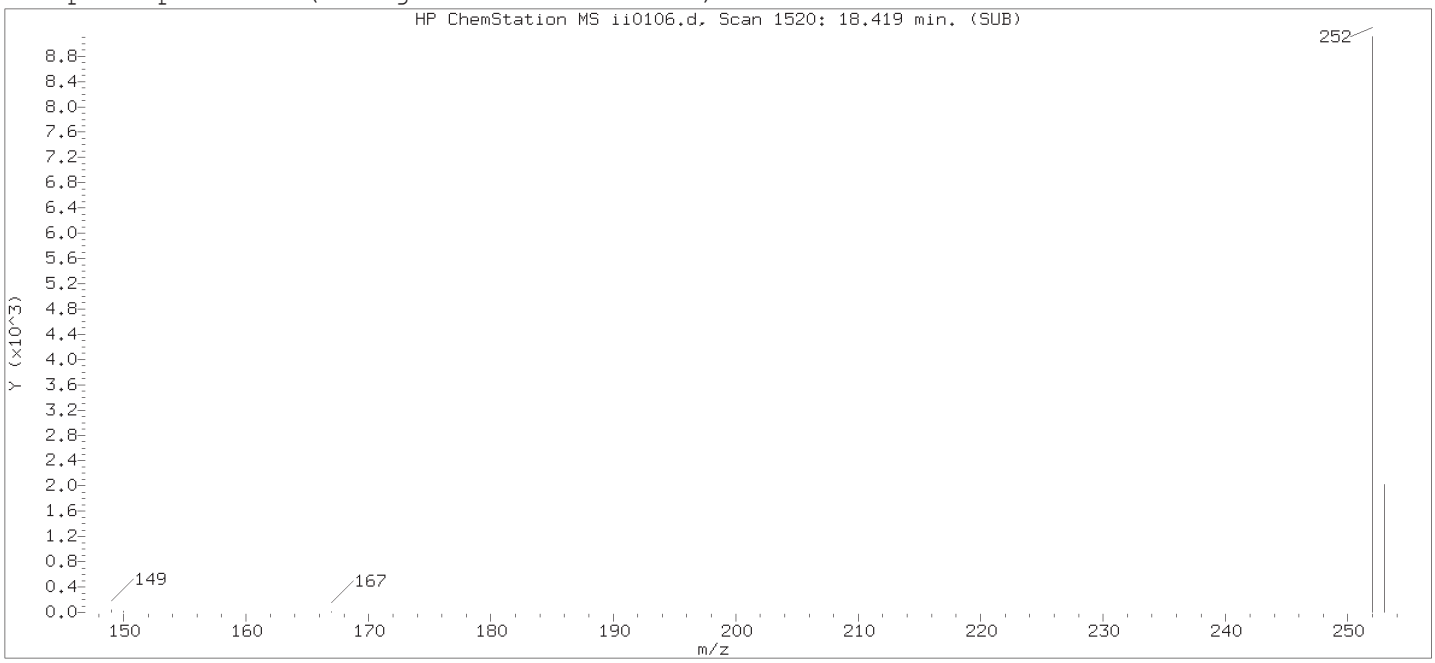
Compound Number	: 48		
Compound Name	: Benzo(e)pyrene		
Scan Number	: 1520		
Retention Time (minutes)	: 18.419		
Quant Ion	: 252.00		
Area (flag)	: 16404M		
On-Column Amount (ng/ul)	: 0.0497		
Integration start scan	: 1512	Integration stop scan:	1524
Y at integration start	: 117	Y at integration end:	117

Reason for manual integration: improper integration

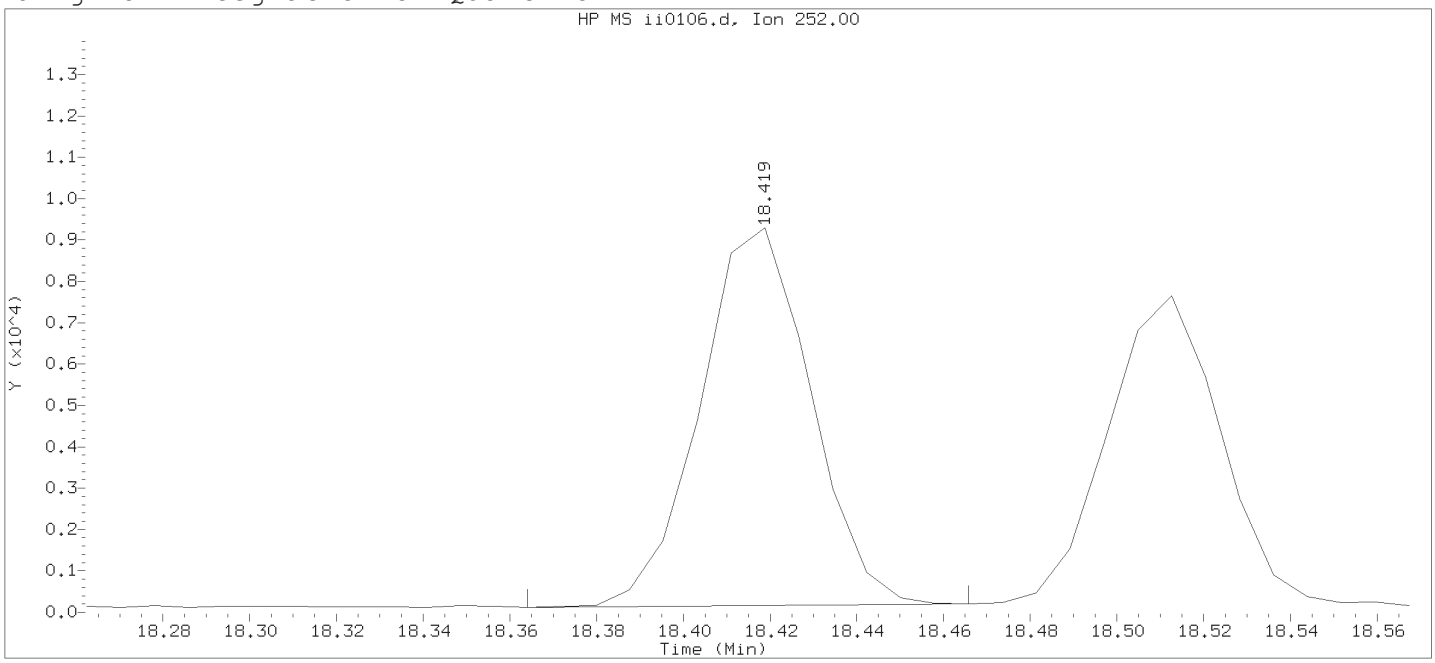
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



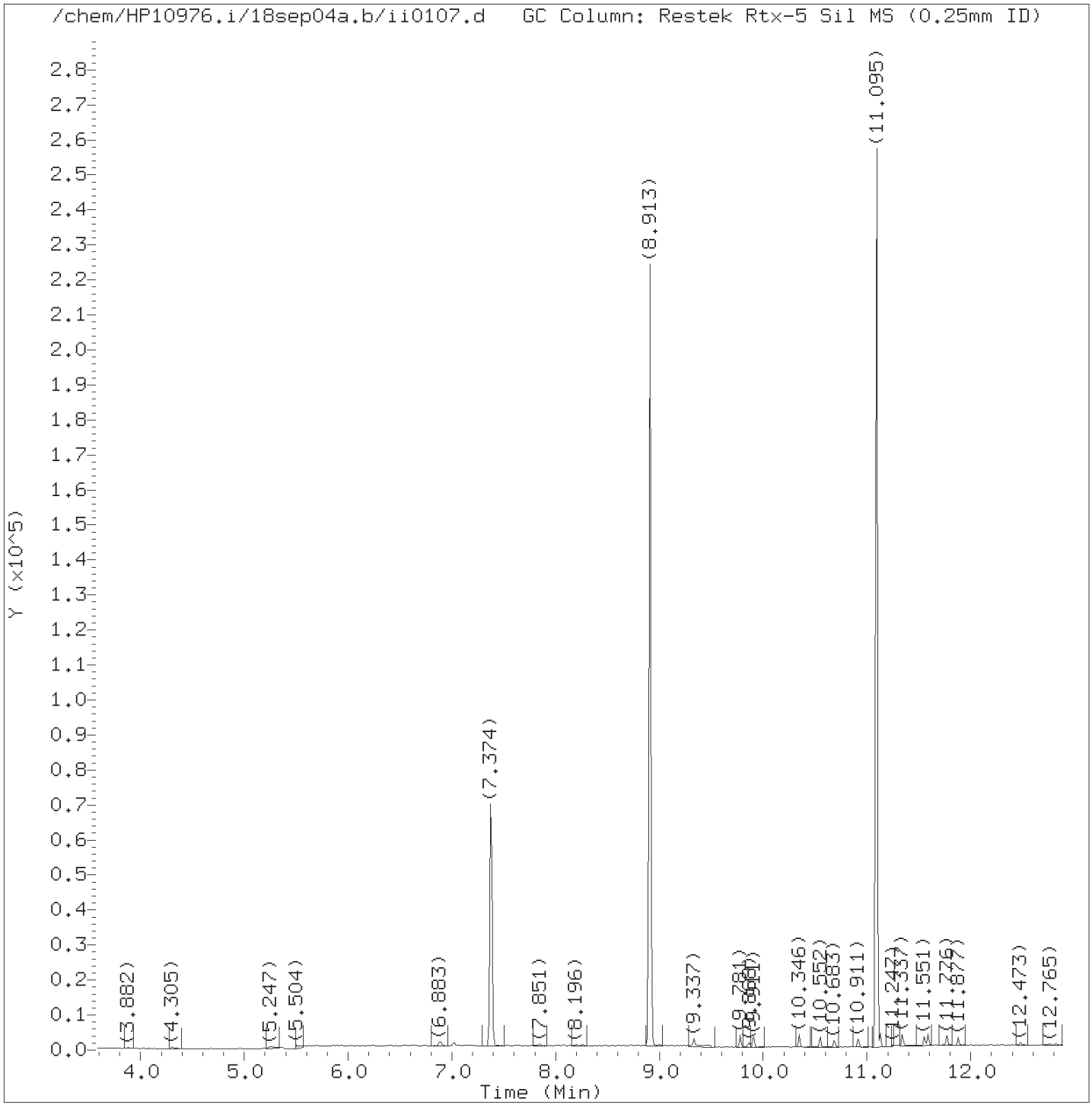
Data File: /chem/HP10976.i/18sep04a.b/ii0106.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:16 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 22:42
Date, time and analyst ID of latest file update: 04-Sep-2018 22:42 Automation

Sample Name: SSTD0.05 Lab Sample ID: SIM1288

Compound Number	: 48		
Compound Name	: Benzo(e)pyrene		
Scan Number	: 1520		
Retention Time (minutes)	: 18.419		
Quant Ion	: 252.00		
Area	: 16187		
On-column Amount (ng/ul)	: 0.0487		
Integration start scan	: 1512	Integration stop scan:	1525
Y at integration start	: 112	Y at integration end:	200

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

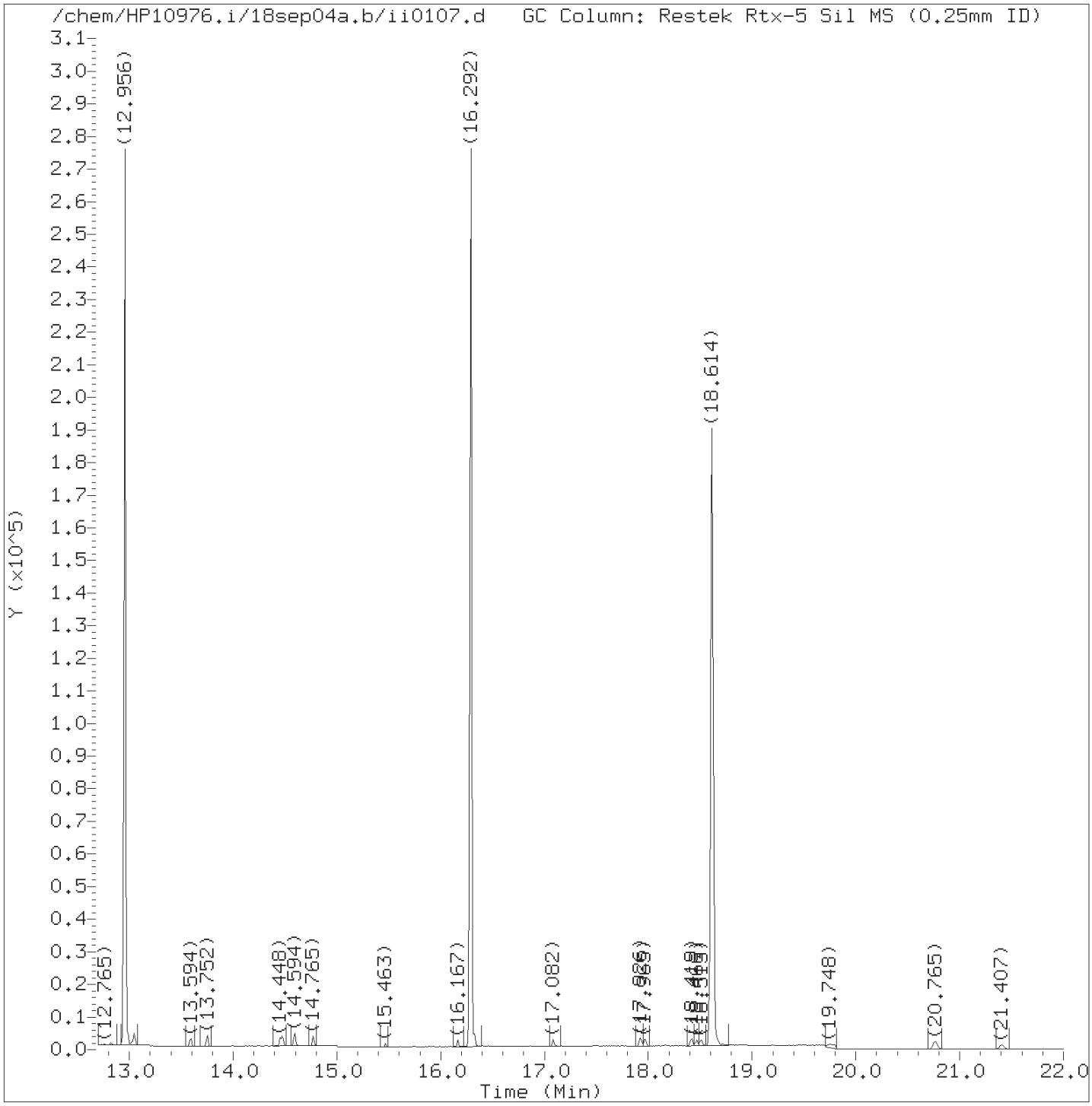
Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0107.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:47 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.01 Lab Sample ID: SIM1288

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0107.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:47 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.01 Lab Sample ID: SIM1288

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0107.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:47 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.01 Lab Sample ID: SIM1288

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.882	88	338	0.010
2) N-Nitrosodimethylamine	(1)	4.305	74	642	0.013
5) bis(2-Chloroethyl)ether	(1)	7.029	93	755	0.011
6)*1,4-Dichlorobenzene-d4	(1)	7.387	152	55324	1.000
10)*Naphthalene-d8	(2)	8.913	136	207127	1.000
11) Naphthalene	(2)	8.939	128	2163	0.010
12) Quinoline	(2)	9.337	129	1409	0.011
13) 2-Methylnaphthalene	(2)	9.781	142	1521	0.010
14)$1-Methylnaphthalene-d10	(2)	9.868	152	1286	0.010
15) 1-Methylnaphthalene	(2)	9.911	142	1538	0.010
18) Dimethylphthalate	(3)	10.683	163	1848	0.010
19) Acenaphthylene	(3)	10.911	152	2284	0.009
20)*Acenaphthene-d10	(3)	11.095	164	126750	1.000
21) Acenaphthene	(3)	11.128	154	2440	0.015
22) Dibenzofuran	(3)	11.337	168	3040	0.012
23) Diethylphthalate	(3)	11.551	149	1868	0.010
26) Fluorene	(3)	11.776	166	1796	0.009
28) NDPA as diphenylamine	(4)	11.877	169	1343	0.011
27) N-Nitrosodiphenylamine	(4)	11.877	169	1343	0.011
29) Hexachlorobenzene	(4)	12.484	284	937	0.011
31)*Phenanthrene-d10	(4)	12.956	188	285967	1.000
32) Phenanthrene	(4)	12.978	178	3397	0.011
33) Anthracene	(4)	13.046	178	2856	0.009
35) Di-n-butylphthalate	(4)	13.594	149	2910	0.010
36)$Fluoranthene-d10	(4)	14.448	212	3313	0.009
37) Fluoranthene	(4)	14.472	202	3568	0.009
39) Pyrene	(5)	14.765	202	4032	0.011
40) Butylbenzylphthalate	(5)	15.463	149	1117	0.010
41) bis(2-Ethylhexyl)phthalate	(5)	16.167	149	1662	0.009
42) Benzo(a)anthracene	(5)	16.276	228	3799	0.011
43)*Chrysene-d12	(5)	16.292	240	266943	1.000
44) Chrysene	(5)	16.323	228	3231	0.010
45) Di-n-octylphthalate	(6)	17.082	149	2660	0.009
46) Benzo(b)fluoranthene	(6)	17.926	252	3293	0.010
47) Benzo(k)fluoranthene	(6)	17.965	252	3036M	0.010
48) Benzo(e)pyrene	(6)	18.419	252	3109	0.010
49)$Benzo(a)pyrene-d12	(6)	18.466	264	2348	0.009
50) Benzo(a)pyrene	(6)	18.513	252	2793M	0.010
51)*Perylene-d12	(6)	18.614	264	263732	1.000
52) Perylene	(6)	18.661	252	3185	0.010

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0107.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:47 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

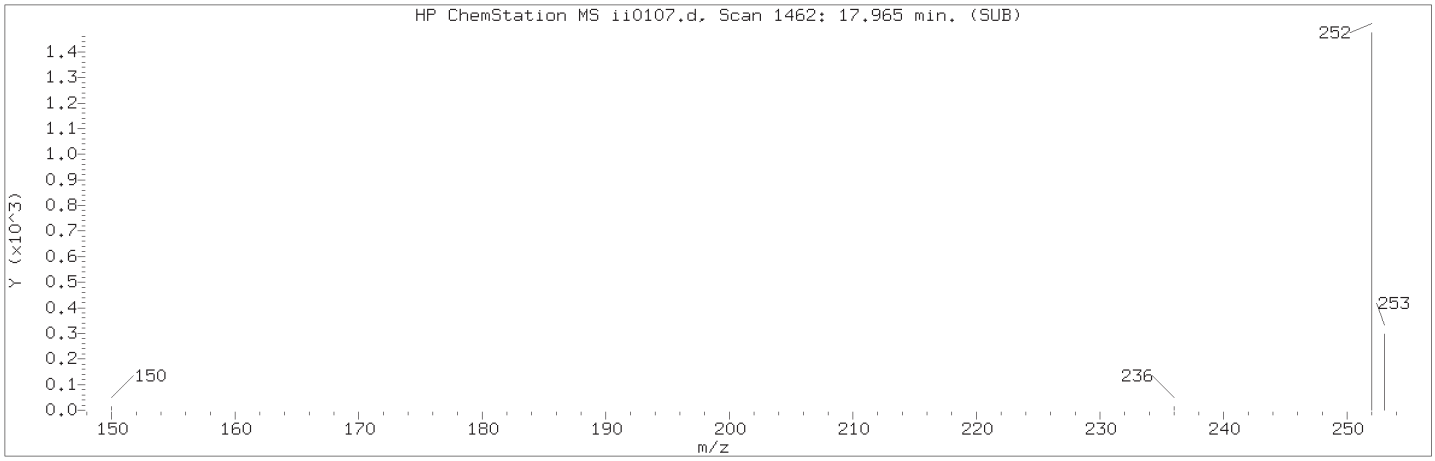
Sample Name: SSTD0.01 Lab Sample ID: SIM1288

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.758	276	3147M	0.009
54) Dibenz(a,h)anthracene	(6)	20.765	278	2587	0.010
55) Benzo(g,h,i)perylene	(6)	21.407	276	2873	0.010

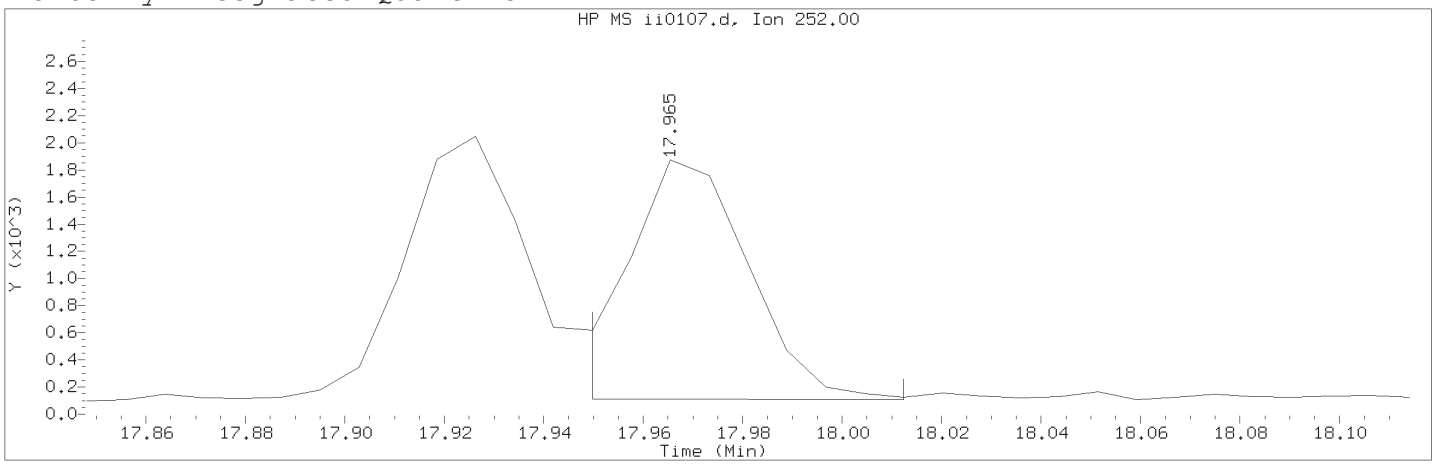
M = Compound was manually integrated.

Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0107.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:47 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.01 Lab Sample ID: SIM1288

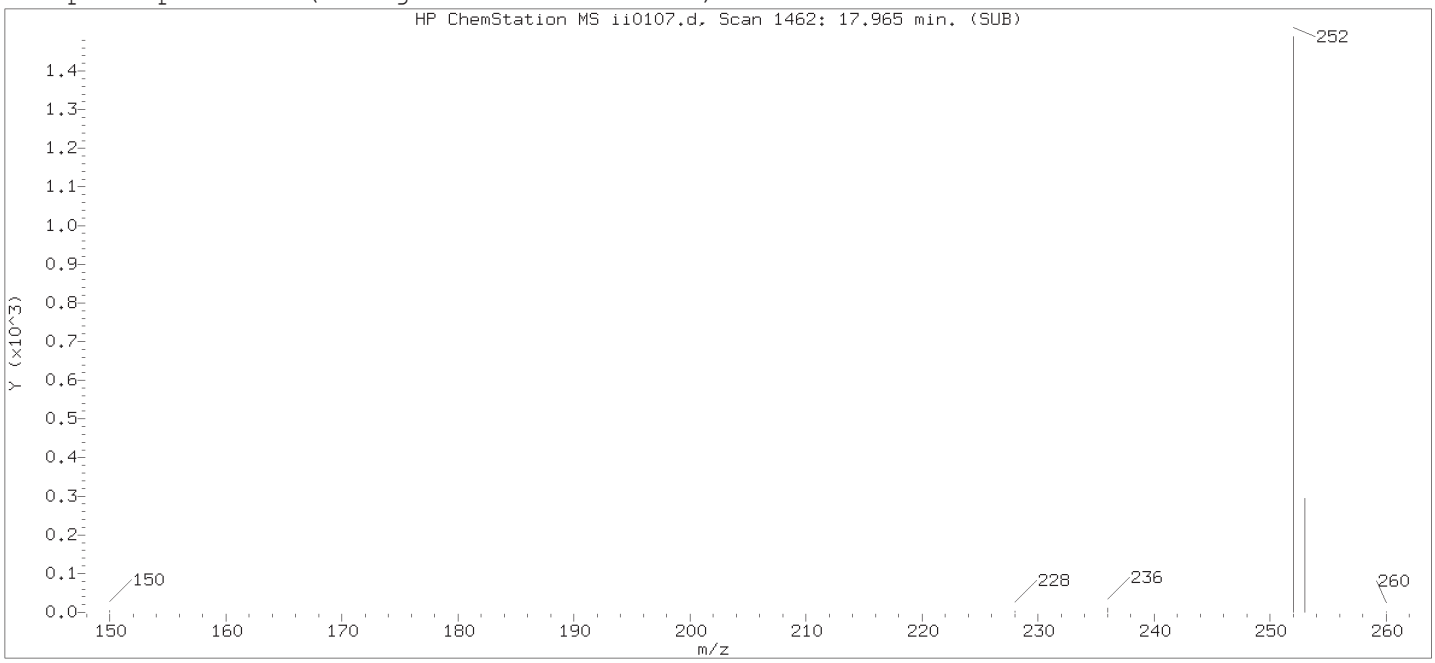
Compound Number	: 47		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1462		
Retention Time (minutes)	: 17.965		
Quant Ion	: 252.00		
Area (flag)	: 3036M		
On-Column Amount (ng/ul)	: 0.0099		
Integration start scan	: 1459	Integration stop scan:	1467
Y at integration start	: 111	Y at integration end:	109

Reason for manual integration: improper integration

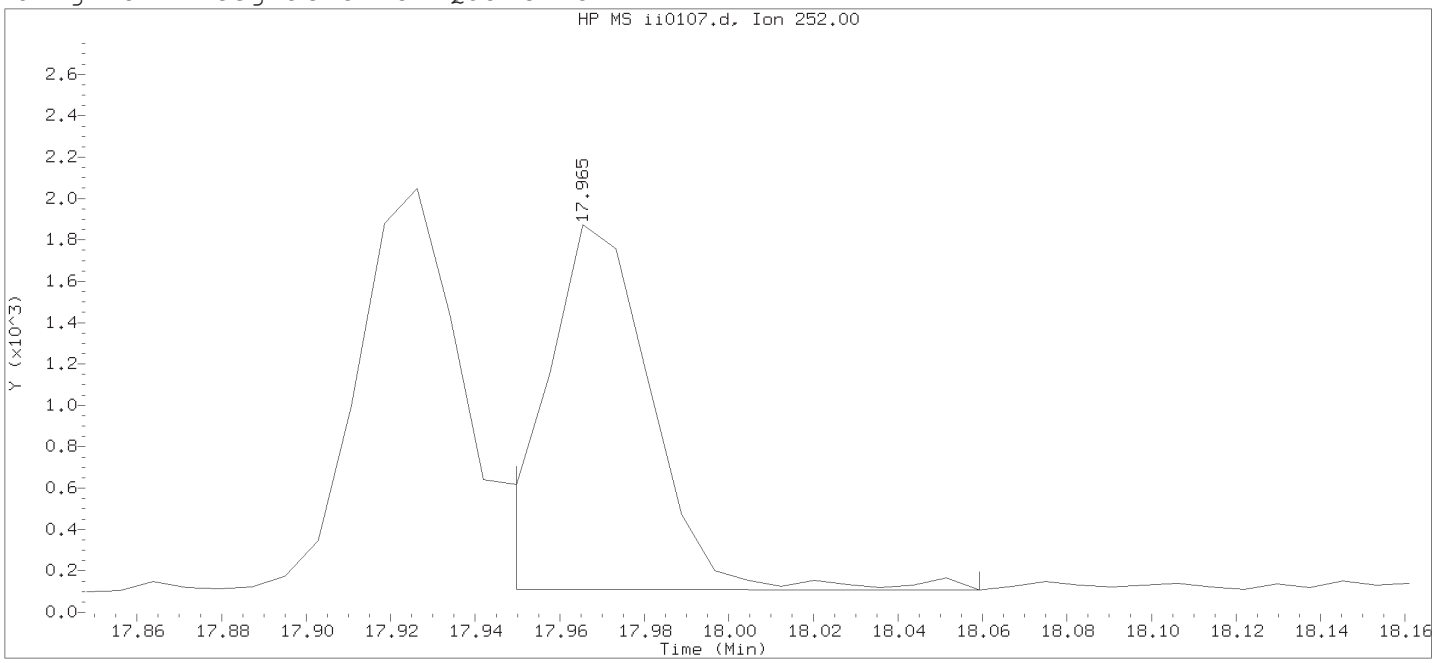
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0107.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:47 Analyst ID: apb10206

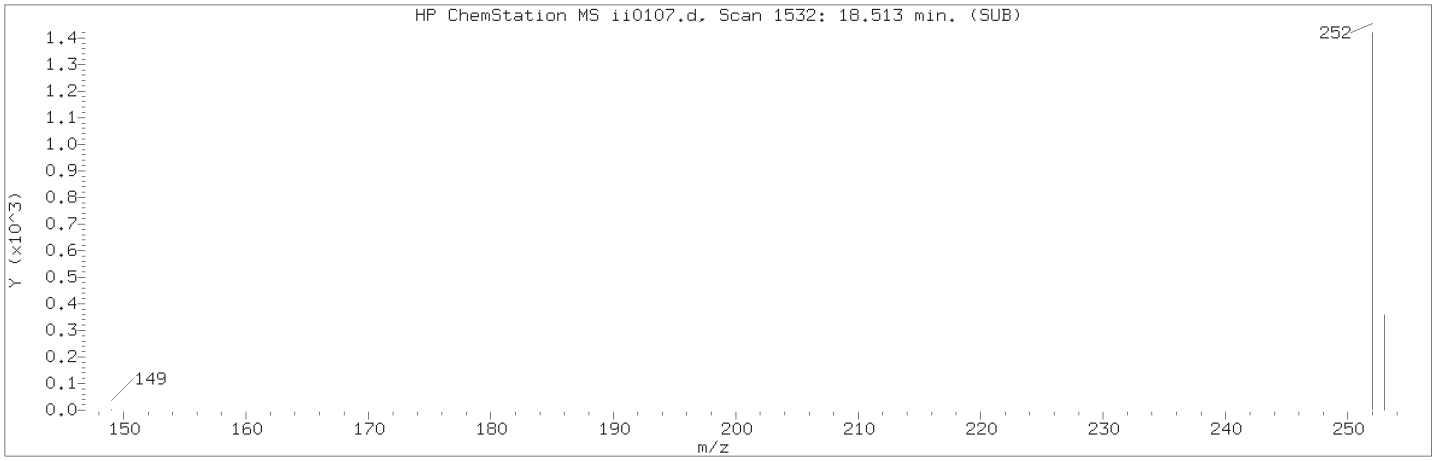
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:13
Date, time and analyst ID of latest file update: 04-Sep-2018 23:13 Automation

Sample Name: SSTD0.01 Lab Sample ID: SIM1288

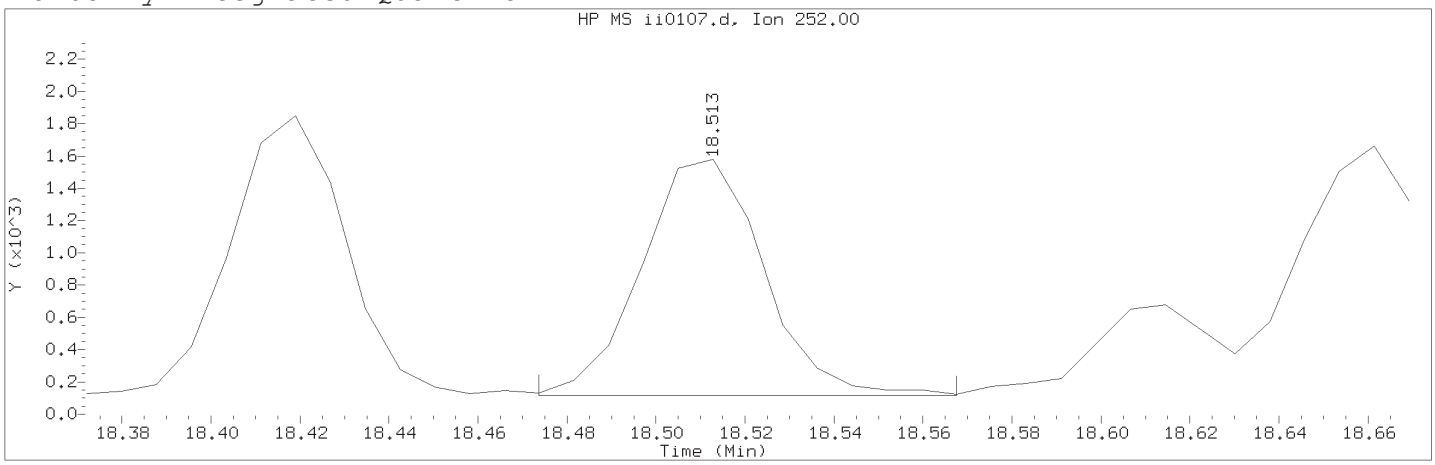
Compound Number	: 47		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1462		
Retention Time (minutes)	: 17.965		
Quant Ion	: 252.00		
Area	: 2995		
On-column Amount (ng/ul)	: 0.0094		
Integration start scan	: 1459	Integration stop scan:	1473
Y at integration start	: 111	Y at integration end:	107

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0107.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:47 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.01 Lab Sample ID: SIM1288

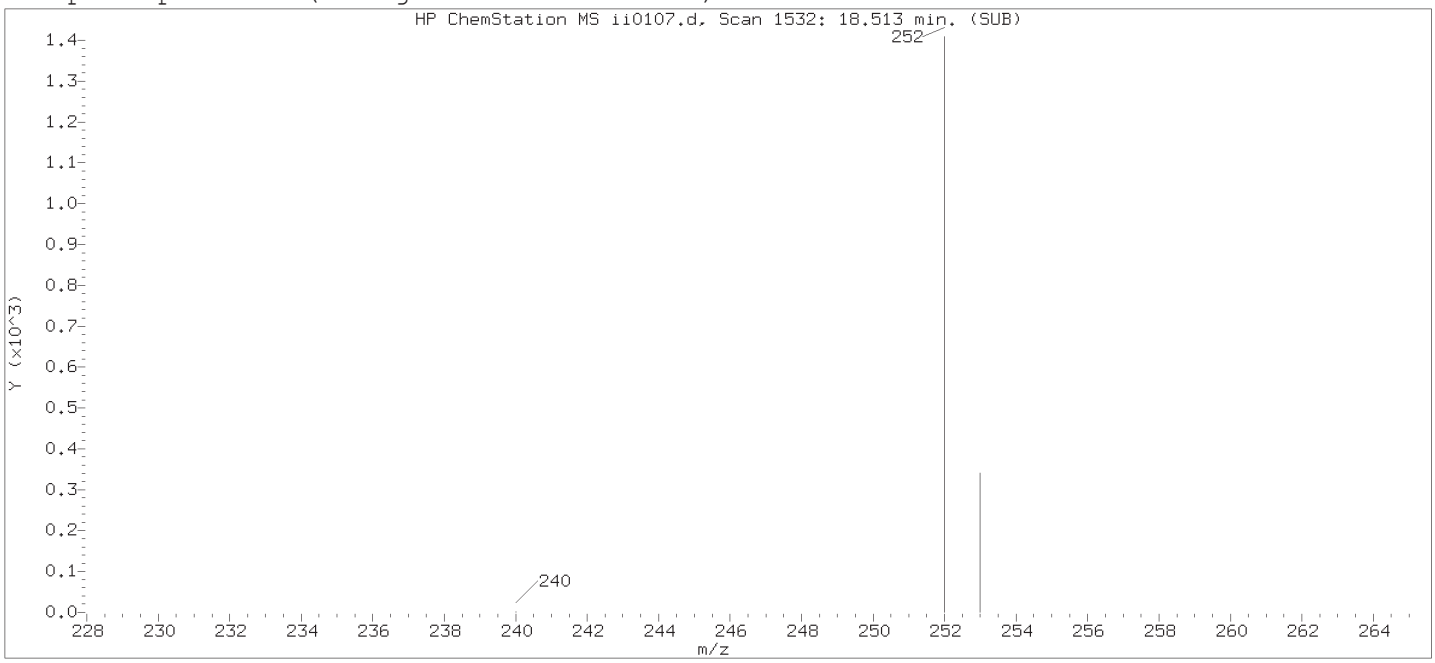
Compound Number	: 50		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1532		
Retention Time (minutes)	: 18.513		
Quant Ion	: 252.00		
Area (flag)	: 2793M		
On-Column Amount (ng/ul)	: 0.0099		
Integration start scan	: 1526	Integration stop scan:	1538
Y at integration start	: 116	Y at integration end:	116

Reason for manual integration: improper integration

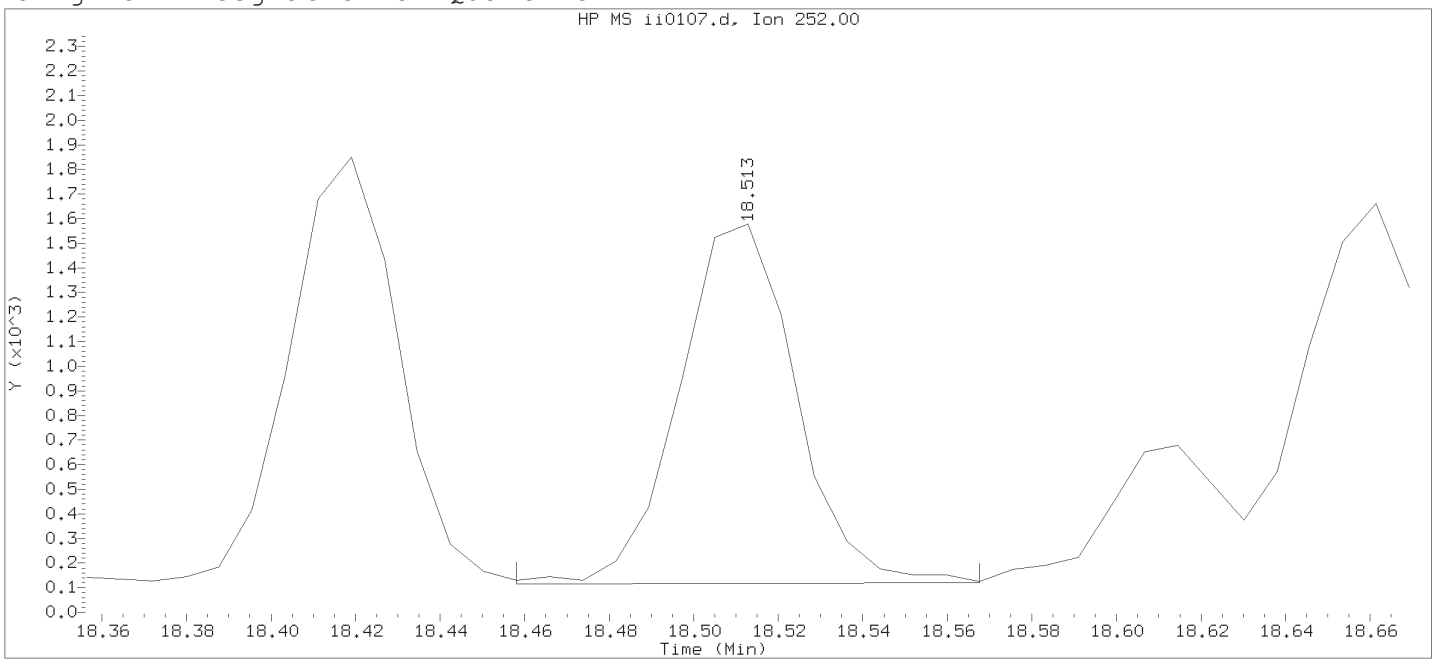
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0107.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:47 Analyst ID: apb10206

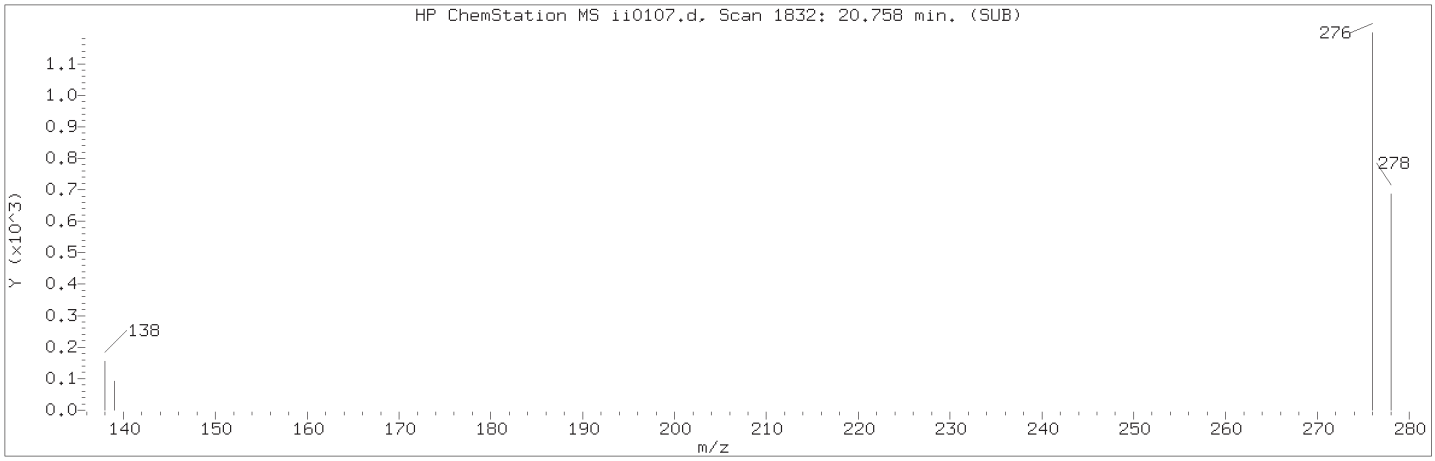
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:13
Date, time and analyst ID of latest file update: 04-Sep-2018 23:13 Automation

Sample Name: SSTD0.01 Lab Sample ID: SIM1288

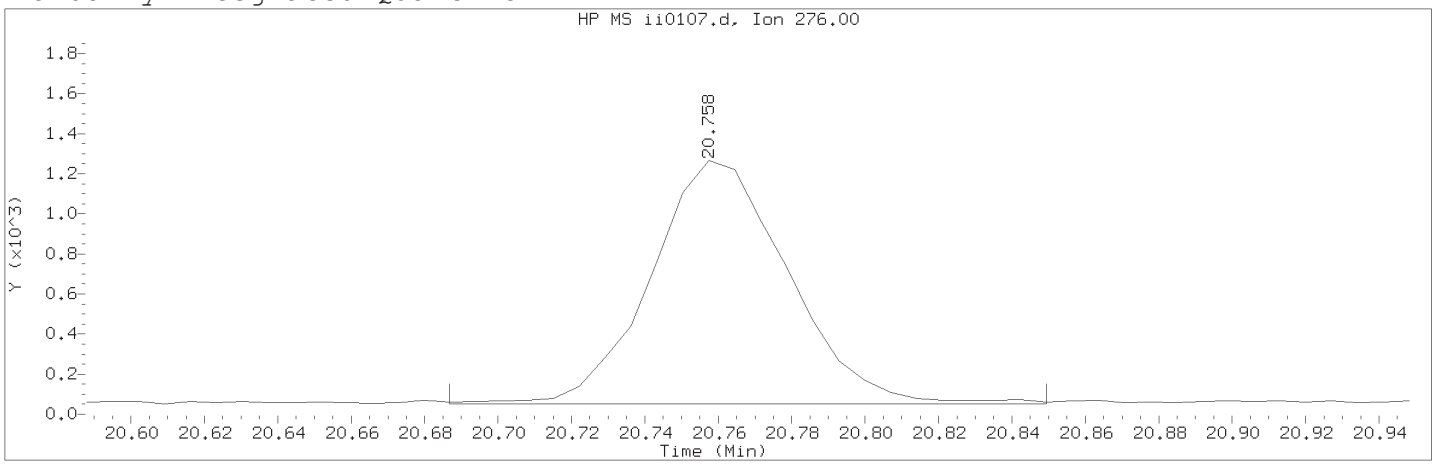
Compound Number	: 50		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1532		
Retention Time (minutes)	: 18.513		
Quant Ion	: 252.00		
Area	: 2804		
On-column Amount (ng/ul)	: 0.0098		
Integration start scan	: 1524	Integration stop scan:	1538
Y at integration start	: 114	Y at integration end:	119

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0107.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:47 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:56
Date, time and analyst ID of latest file update: 04-Sep-2018 23:56 apb10206

Sample Name: SSTD0.01 Lab Sample ID: SIM1288

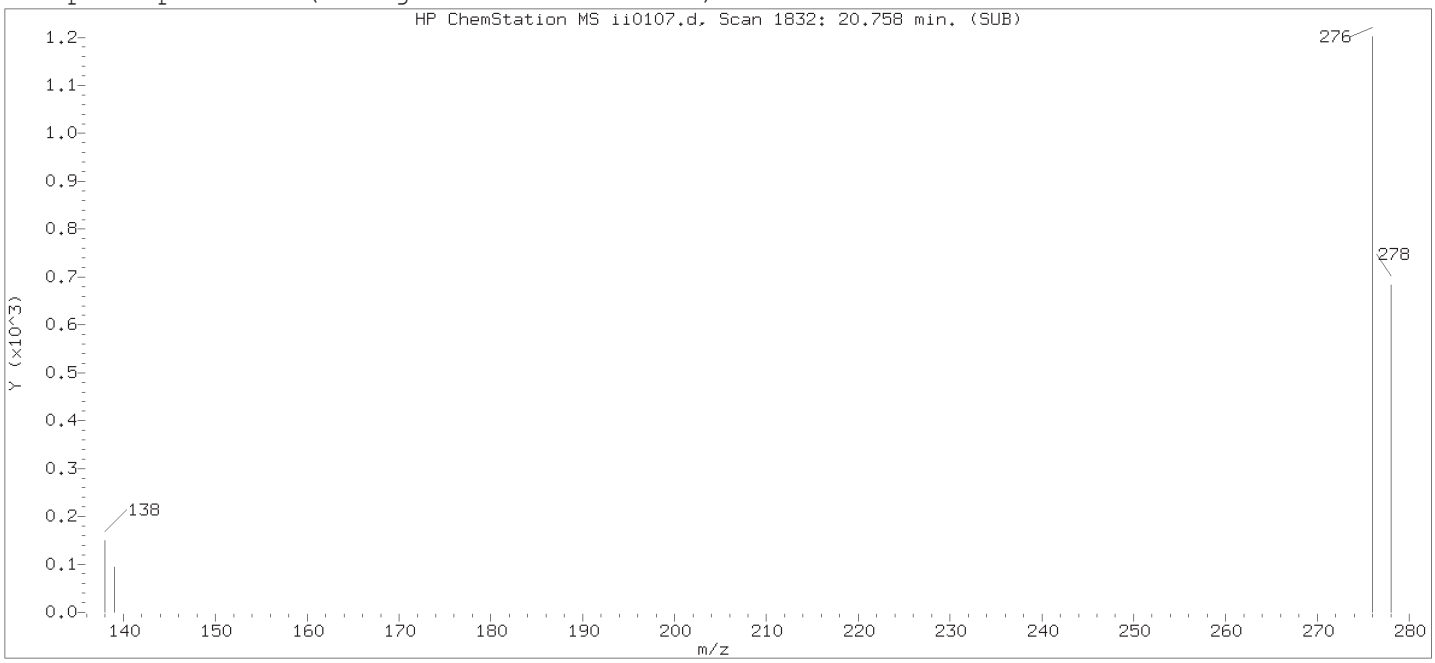
Compound Number	: 53		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 1832		
Retention Time (minutes)	: 20.758		
Quant Ion	: 276.00		
Area (flag)	: 3147M		
On-Column Amount (ng/ul)	: 0.0095		
Integration start scan	: 1821	Integration stop scan:	1844
Y at integration start	: 52	Y at integration end:	52

Reason for manual integration: improper integration

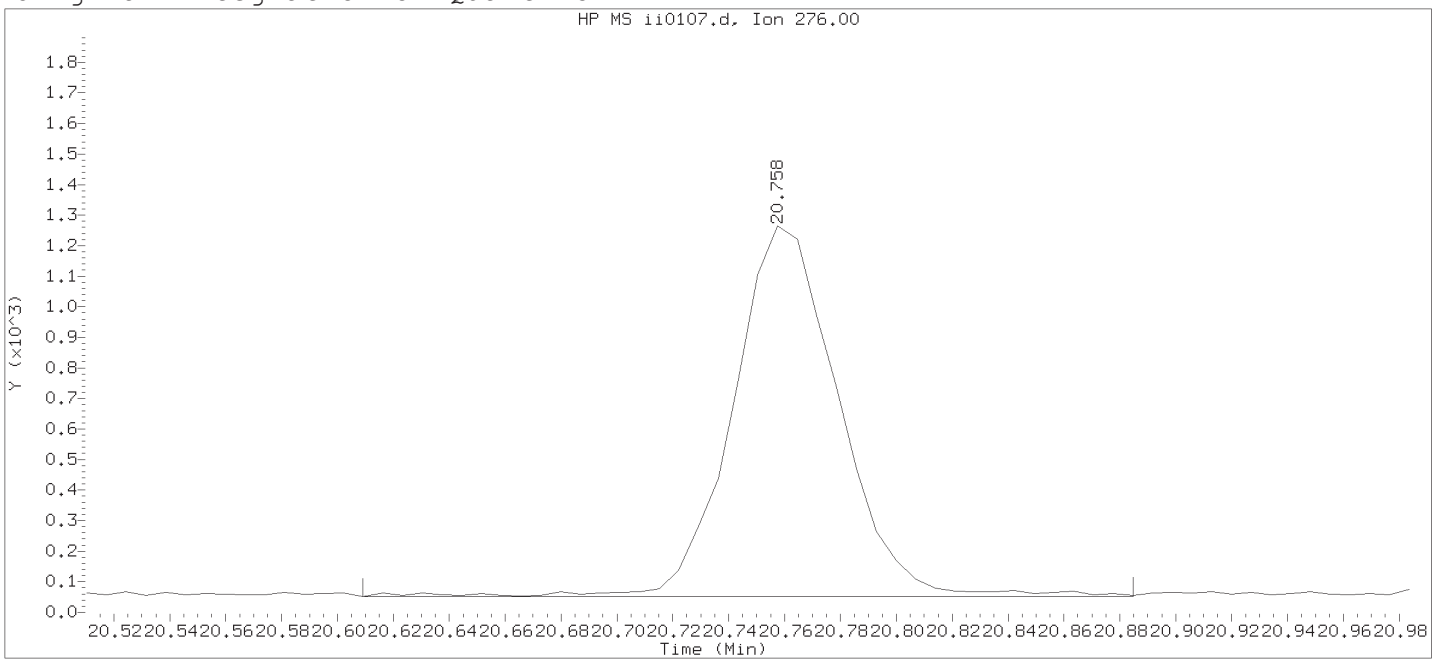
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 09/05/2018 at 00:06.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



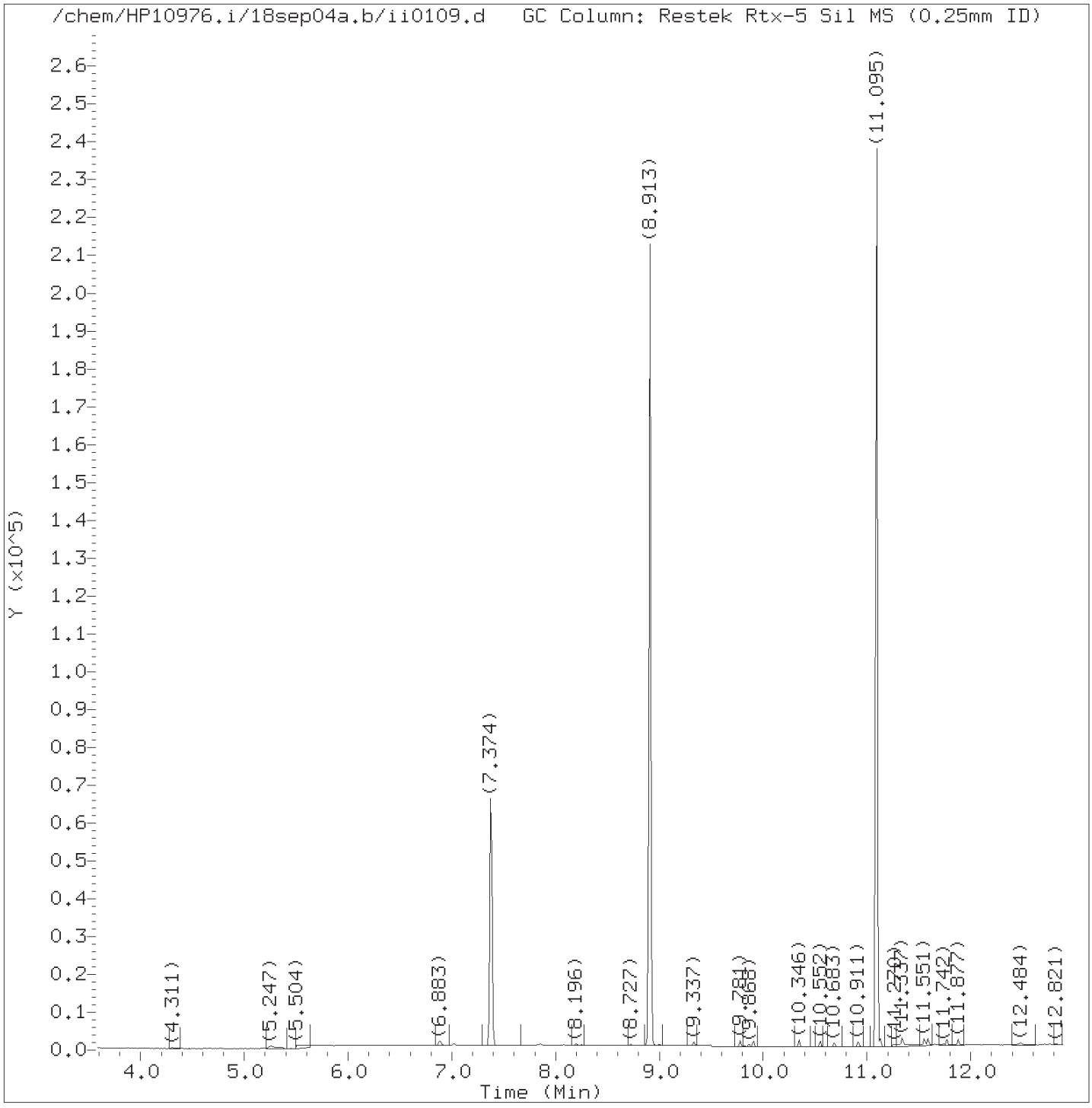
Data File: /chem/HP10976.i/18sep04a.b/ii0107.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 22:47 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:13
Date, time and analyst ID of latest file update: 04-Sep-2018 23:13 Automation

Sample Name: SSTD0.01 Lab Sample ID: SIM1288

Compound Number	: 53		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 1832		
Retention Time (minutes)	: 20.758		
Quant Ion	: 276.00		
Area	: 3197		
On-column Amount (ng/ul)	: 0.0094		
Integration start scan	: 1810	Integration stop scan:	1849
Y at integration start	: 52	Y at integration end:	52

Digitally signed by Anthony P. Bauer on 09/05/2018 at 00:06.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

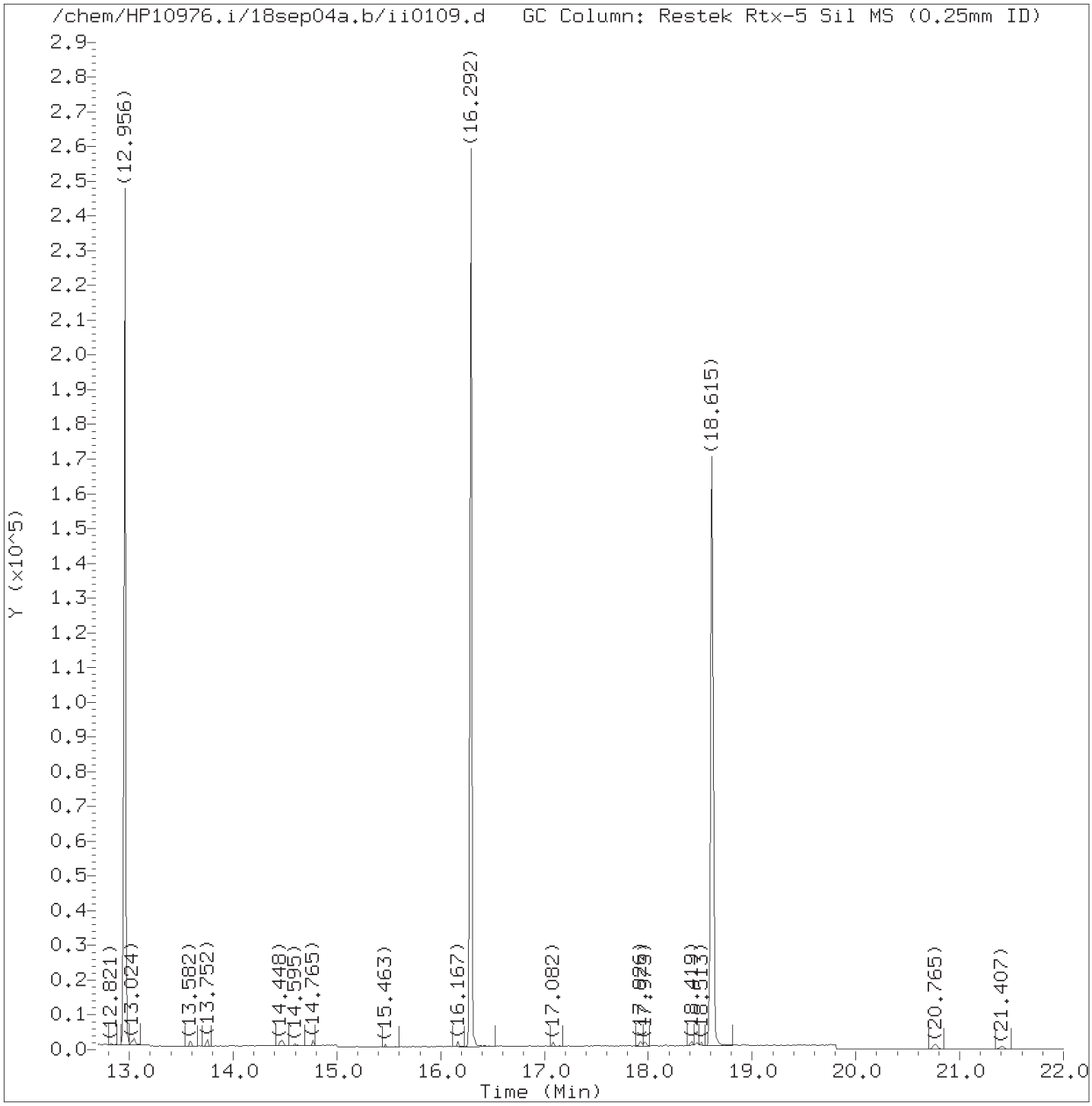
Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.882	88	199	0.006
2) N-Nitrosodimethylamine	(1)	4.311	74	326M	0.007
5) bis(2-Chloroethyl)ether	(1)	7.029	93	515M	0.008
6)*1,4-Dichlorobenzene-d4	(1)	7.387	152	53019	1.000
10)*Naphthalene-d8	(2)	8.913	136	196735	1.000
11) Naphthalene	(2)	8.939	128	1219	0.006
12) Quinoline	(2)	9.337	129	683	0.005
13) 2-Methylnaphthalene	(2)	9.781	142	875	0.006
14)$1-Methylnaphthalene-d10	(2)	9.868	152	631M	0.005
15) 1-Methylnaphthalene	(2)	9.911	142	791	0.006
18) Dimethylphthalate	(3)	10.683	163	1016	0.006
19) Acenaphthylene	(3)	10.911	152	1262	0.006
20)*Acenaphthene-d10	(3)	11.095	164	116138	1.000
21) Acenaphthene	(3)	11.128	154	849M	0.006
22) Dibenzofuran	(3)	11.337	168	1352M	0.006
23) Diethylphthalate	(3)	11.551	149	1152M	0.007
26) Fluorene	(3)	11.776	166	1013	0.006
28) NDPA as diphenylamine	(4)	11.877	169	749M	0.007
27) N-Nitrosodiphenylamine	(4)	11.877	169	739M	0.007
29) Hexachlorobenzene	(4)	12.473	284	465M	0.006
31)*Phenanthrene-d10	(4)	12.956	188	262605	1.000
32) Phenanthrene	(4)	12.979	178	1941M	0.007
33) Anthracene	(4)	13.046	178	1646M	0.006
35) Di-n-butylphthalate	(4)	13.582	149	1569M	0.006
36)$Fluoranthene-d10	(4)	14.448	212	1770M	0.005
37) Fluoranthene	(4)	14.473	202	1917	0.005
39) Pyrene	(5)	14.765	202	1922	0.006
40) Butylbenzylphthalate	(5)	15.463	149	714	0.007
41) bis(2-Ethylhexyl)phthalate	(5)	16.167	149	1195M	0.007
42) Benzo(a)anthracene	(5)	16.276	228	2460	0.008
43)*Chrysene-d12	(5)	16.292	240	247109	1.000
44) Chrysene	(5)	16.323	228	1726	0.006
45) Di-n-octylphthalate	(6)	17.082	149	1316	0.005
46) Benzo(b)fluoranthene	(6)	17.926	252	1840	0.006
47) Benzo(k)fluoranthene	(6)	17.973	252	1722	0.006
48) Benzo(e)pyrene	(6)	18.419	252	1756	0.006
49)$Benzo(a)pyrene-d12	(6)	18.466	264	1294	0.006
50) Benzo(a)pyrene	(6)	18.513	252	1481	0.006
51)*Perylene-d12	(6)	18.615	264	242241	1.000
52) Perylene	(6)	18.661	252	1649M	0.006

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

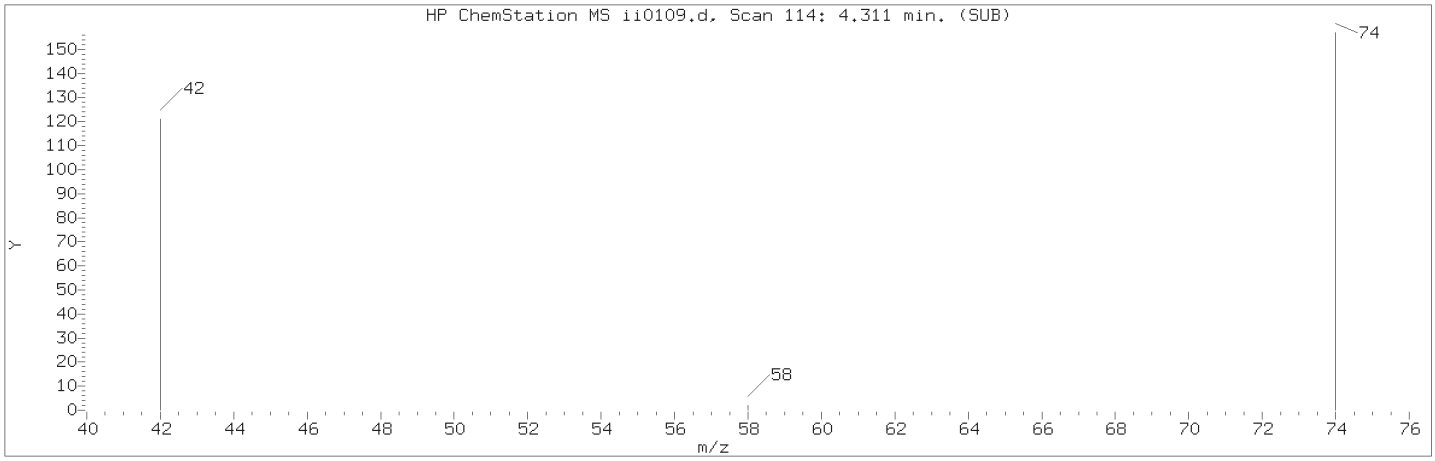
Sample Name: SSTD0.005 Lab Sample ID: SIM1288

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	20.765	276	1737M	0.006
54) Dibenz(a,h)anthracene	(6)	20.772	278	1471	0.006
55) Benzo(g,h,i)perylene	(6)	21.407	276	1619	0.006

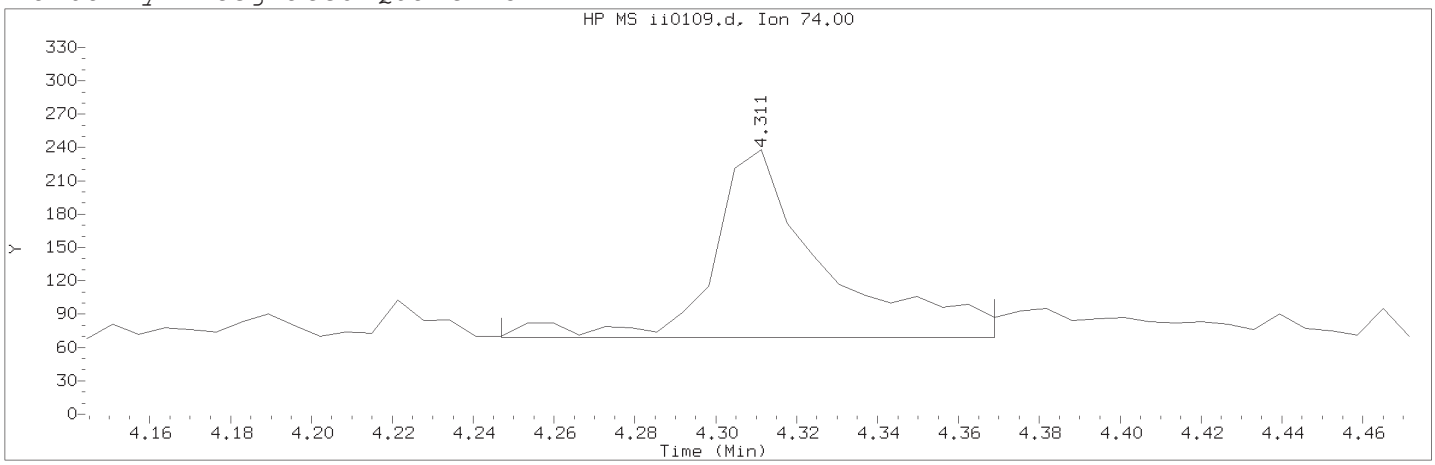
M = Compound was manually integrated.

Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

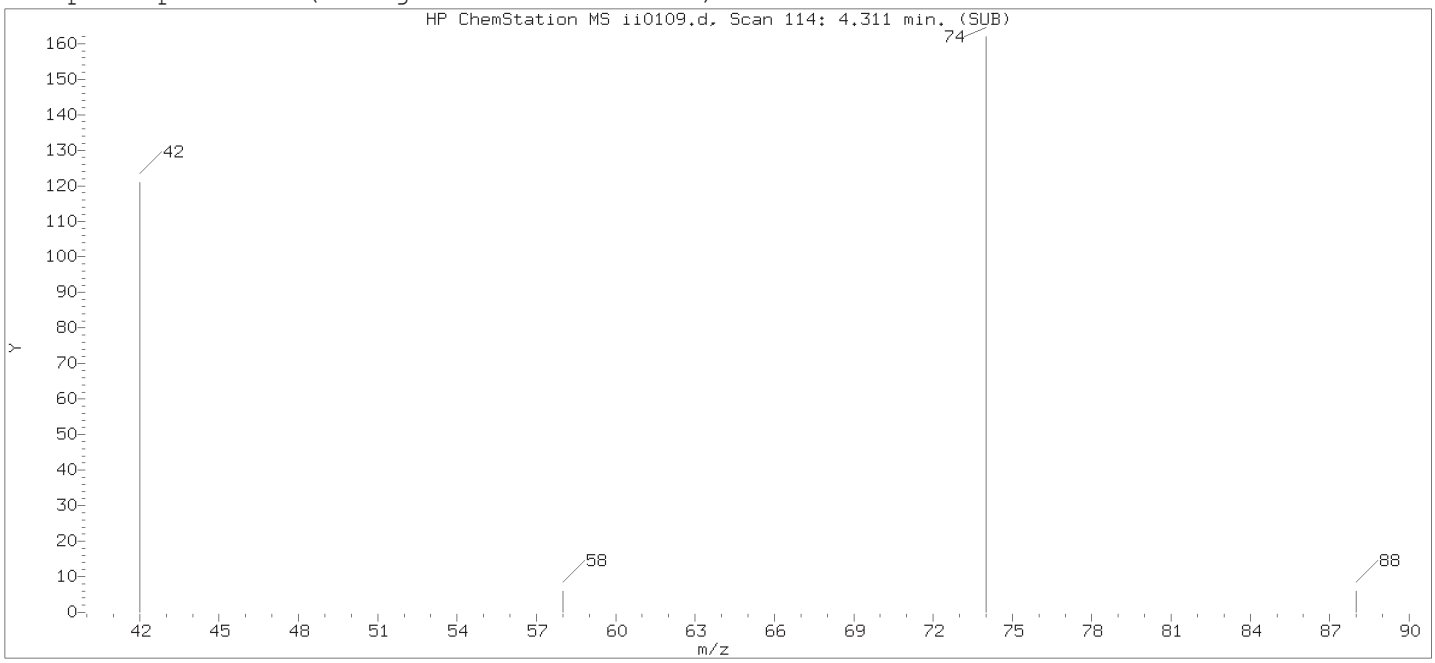
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 114		
Retention Time (minutes)	: 4.311		
Quant Ion	: 74.00		
Area (flag)	: 326M		
On-Column Amount (ng/ul)	: 0.0067		
Integration start scan	: 103	Integration stop scan:	122
Y at integration start	: 69	Y at integration end:	69

Reason for manual integration: improper integration

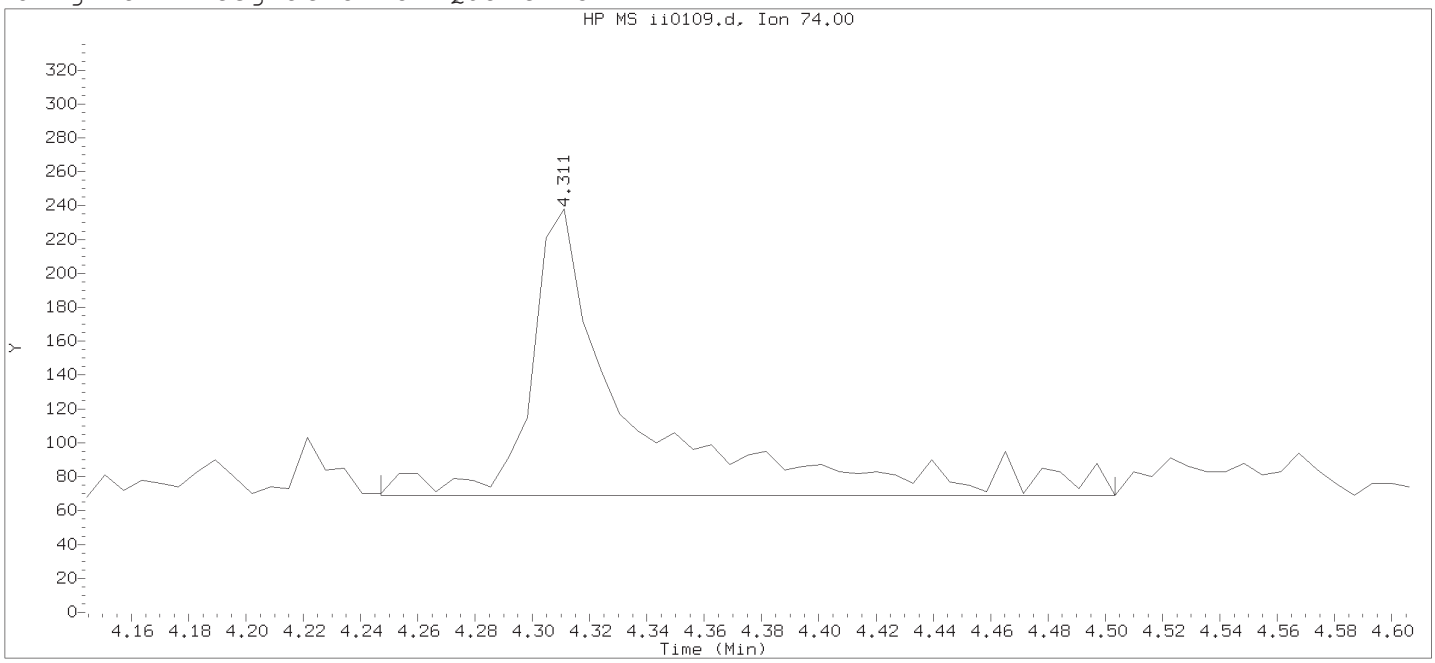
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

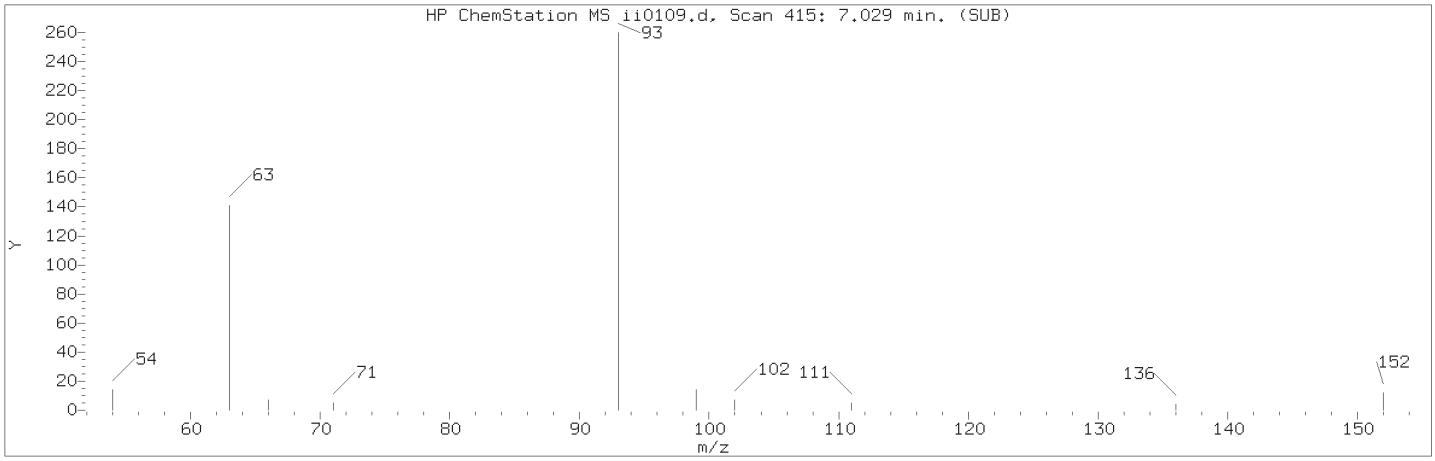
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

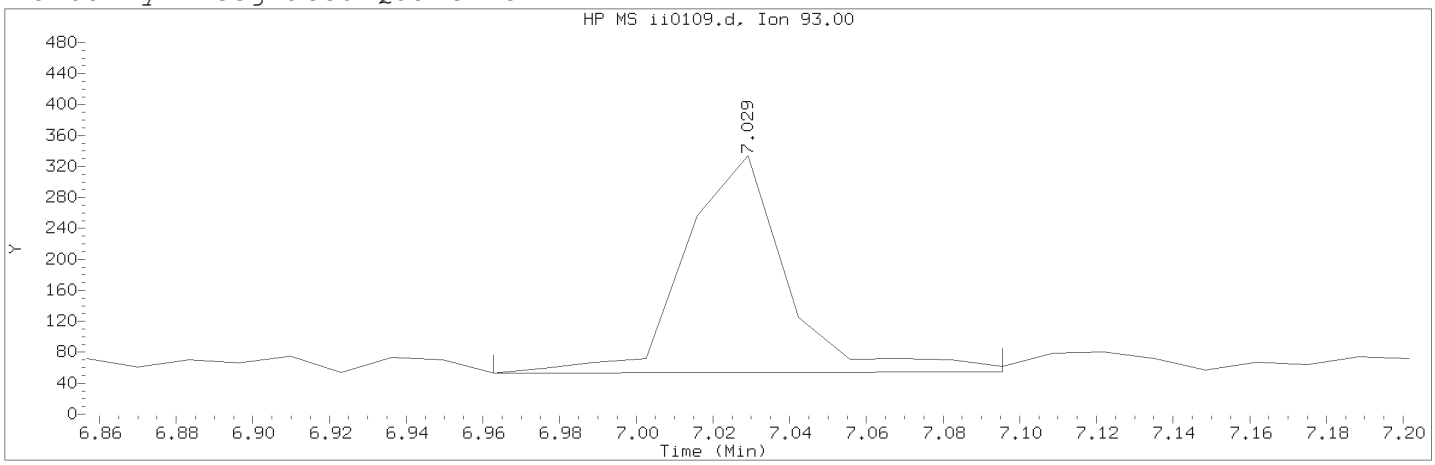
Compound Number : 2
Compound Name : N-Nitrosodimethylamine
Scan Number : 114
Retention Time (minutes) : 4.311
Quant Ion : 74.00
Area : 433
On-column Amount (ng/ul) : 0.0089
Integration start scan : 103 Integration stop scan: 143
Y at integration start : 69 Y at integration end: 69

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg0404

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

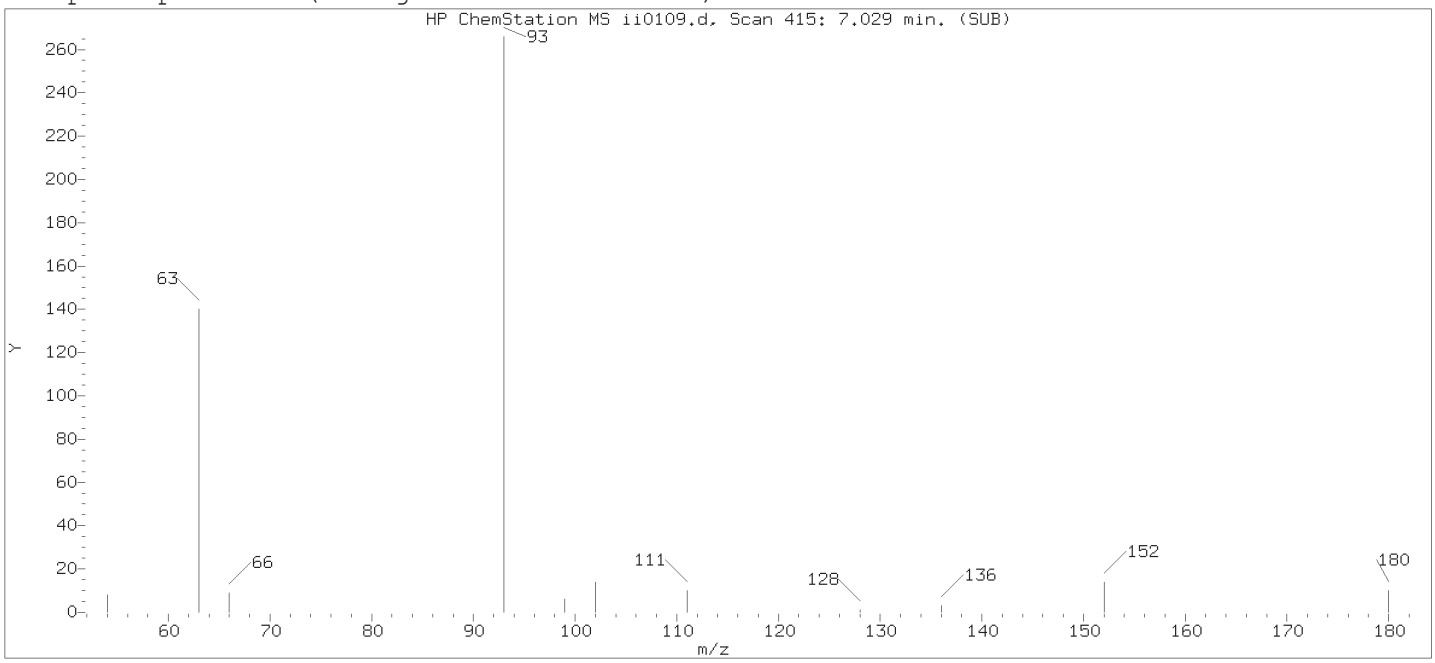
Compound Number : 5
Compound Name : bis(2-Chloroethyl)ether
Scan Number : 415
Retention Time (minutes) : 7.029
Quant Ion : 93.00
Area (flag) : 515M
On-Column Amount (ng/ul) : 0.0077
Integration start scan : 409 Integration stop scan: 419
Y at integration start : 53 Y at integration end: 55

Reason for manual integration: improper integration

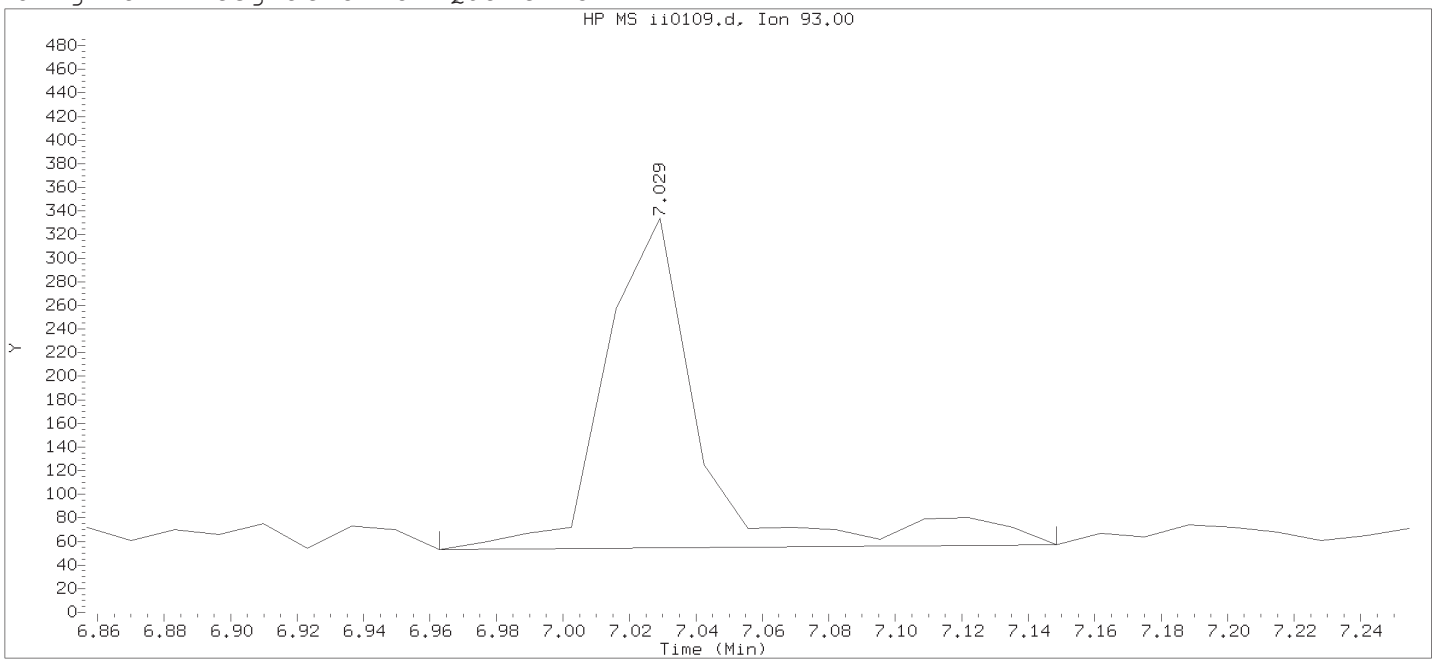
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

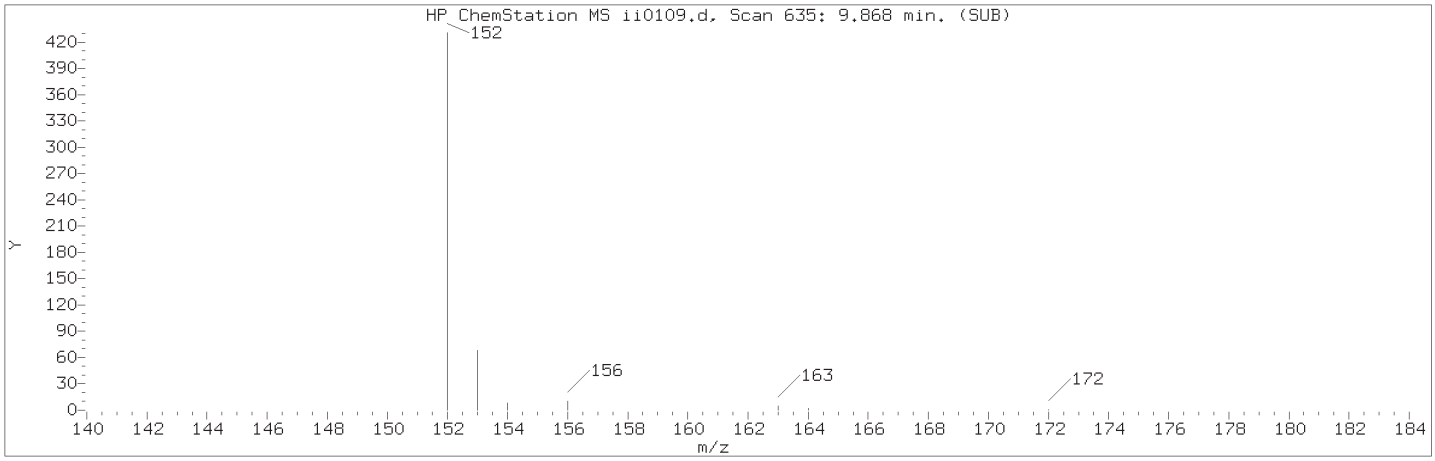
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

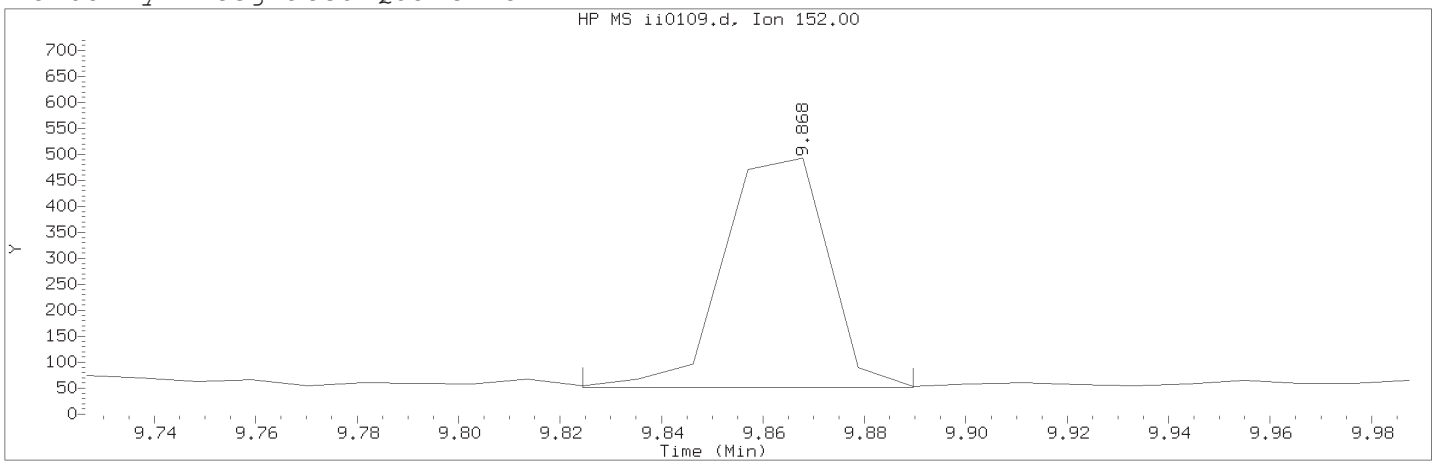
Compound Number	: 5		
Compound Name	: bis(2-Chloroethyl)ether		
Scan Number	: 415		
Retention Time (minutes)	: 7.029		
Quant Ion	: 93.00		
Area	: 561		
On-column Amount (ng/ul)	: 0.0084		
Integration start scan	: 409	Integration stop scan:	423
Y at integration start	: 53	Y at integration end:	57

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature used: D10 Page 2406

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

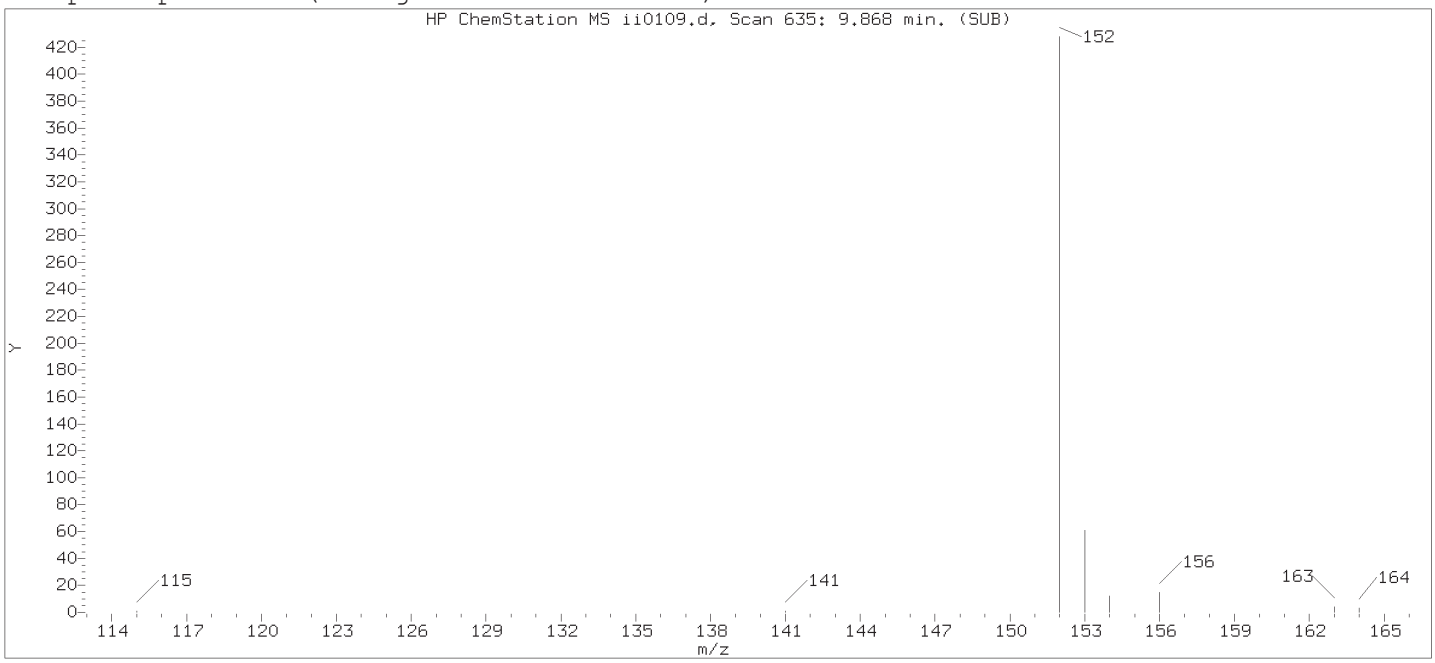
Compound Number	: 14		
Compound Name	: 1-Methylnaphthalene-d10		
Scan Number	: 635		
Retention Time (minutes)	: 9.868		
Quant Ion	: 152.00		
Area (flag)	: 631M		
On-Column Amount (ng/ul)	: 0.0053		
Integration start scan	: 630	Integration stop scan:	636
Y at integration start	: 51	Y at integration end:	51

Reason for manual integration: improper integration

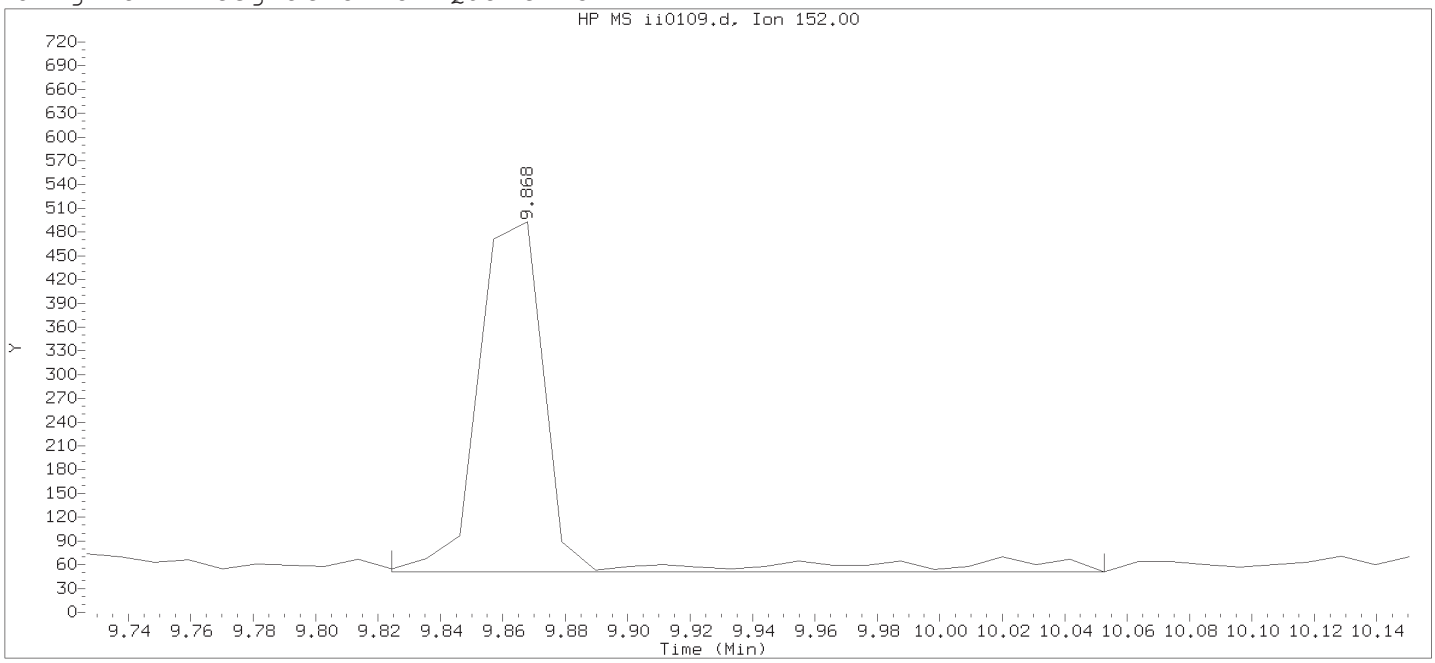
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

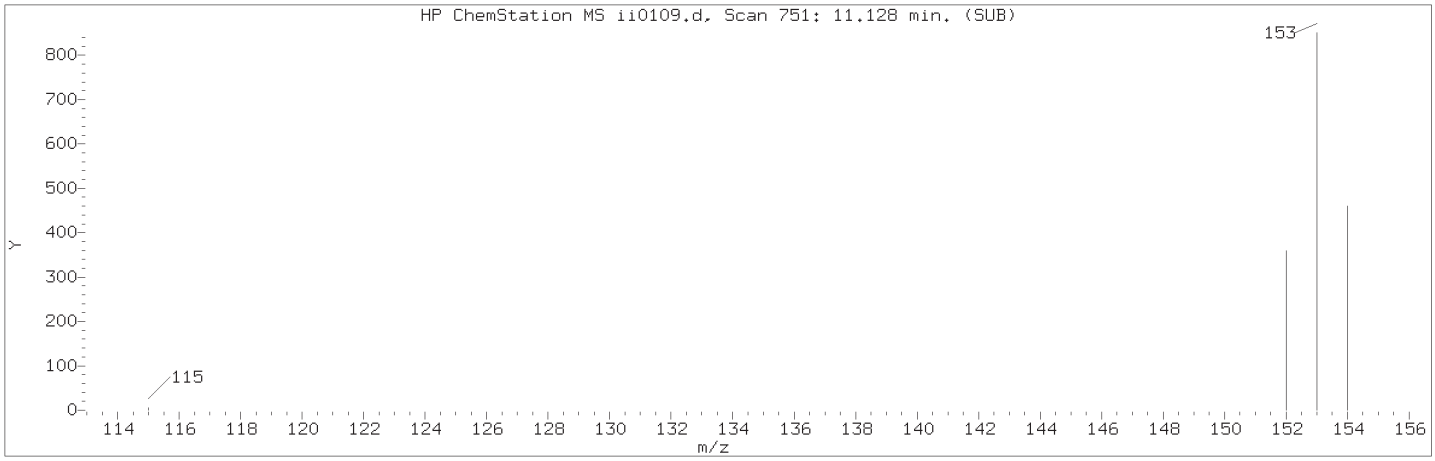
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

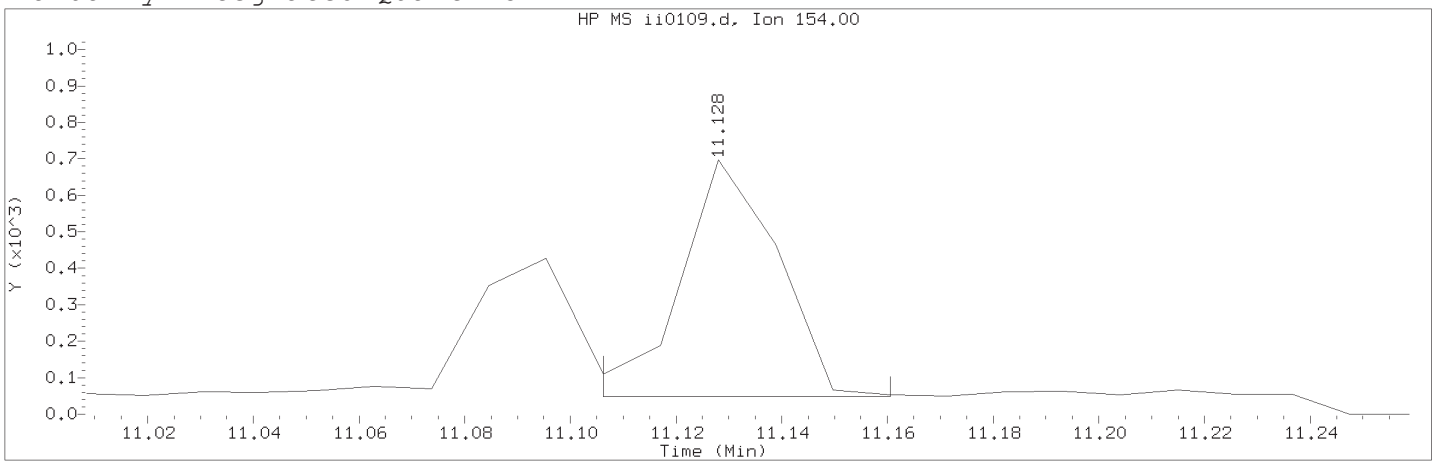
Compound Number	: 14		
Compound Name	: 1-Methylnaphthalene-d10		
Scan Number	: 635		
Retention Time (minutes)	: 9.868		
Quant Ion	: 152.00		
Area	: 715		
On-column Amount (ng/ul)	: 0.0060		
Integration start scan	: 630	Integration stop scan:	651
Y at integration start	: 51	Y at integration end:	51

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature used: D10 Page 2408

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

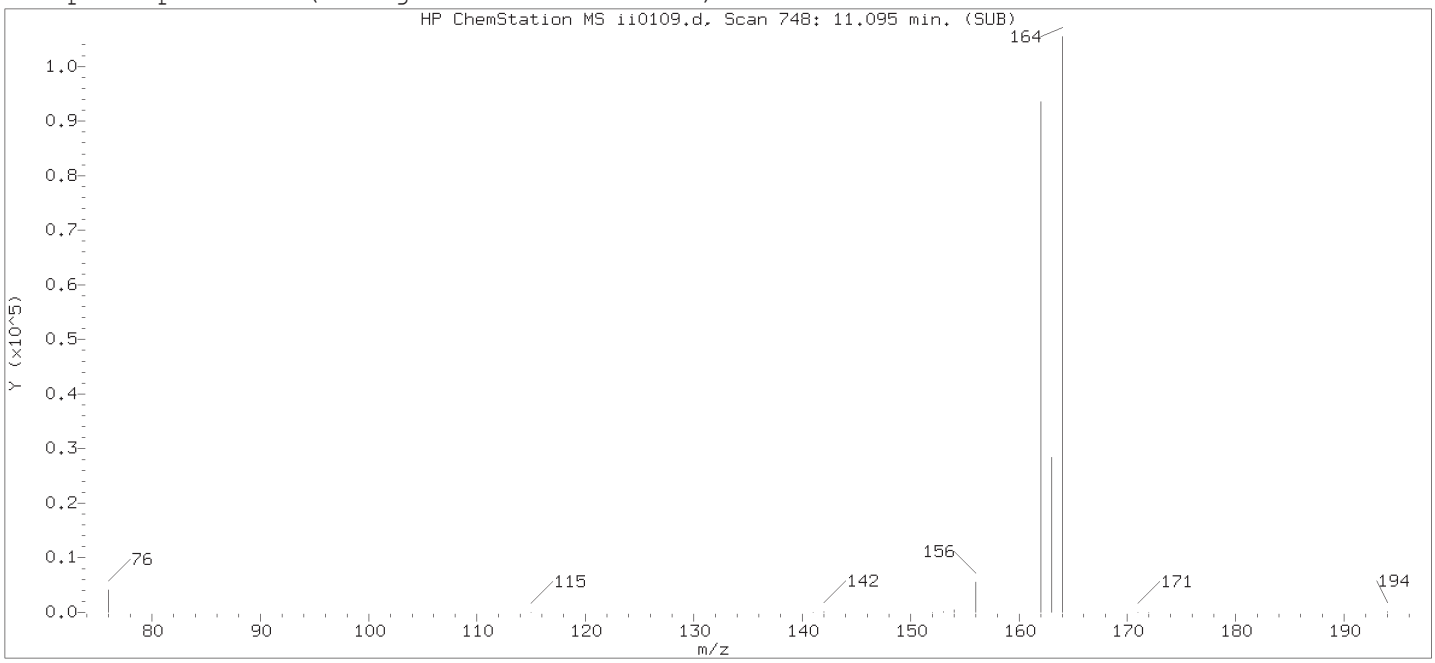
Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 751		
Retention Time (minutes)	: 11.128		
Quant Ion	: 154.00		
Area (flag)	: 849M		
On-Column Amount (ng/ul)	: 0.0058		
Integration start scan	: 748	Integration stop scan:	753
Y at integration start	: 48	Y at integration end:	48

Reason for manual integration: improper integration

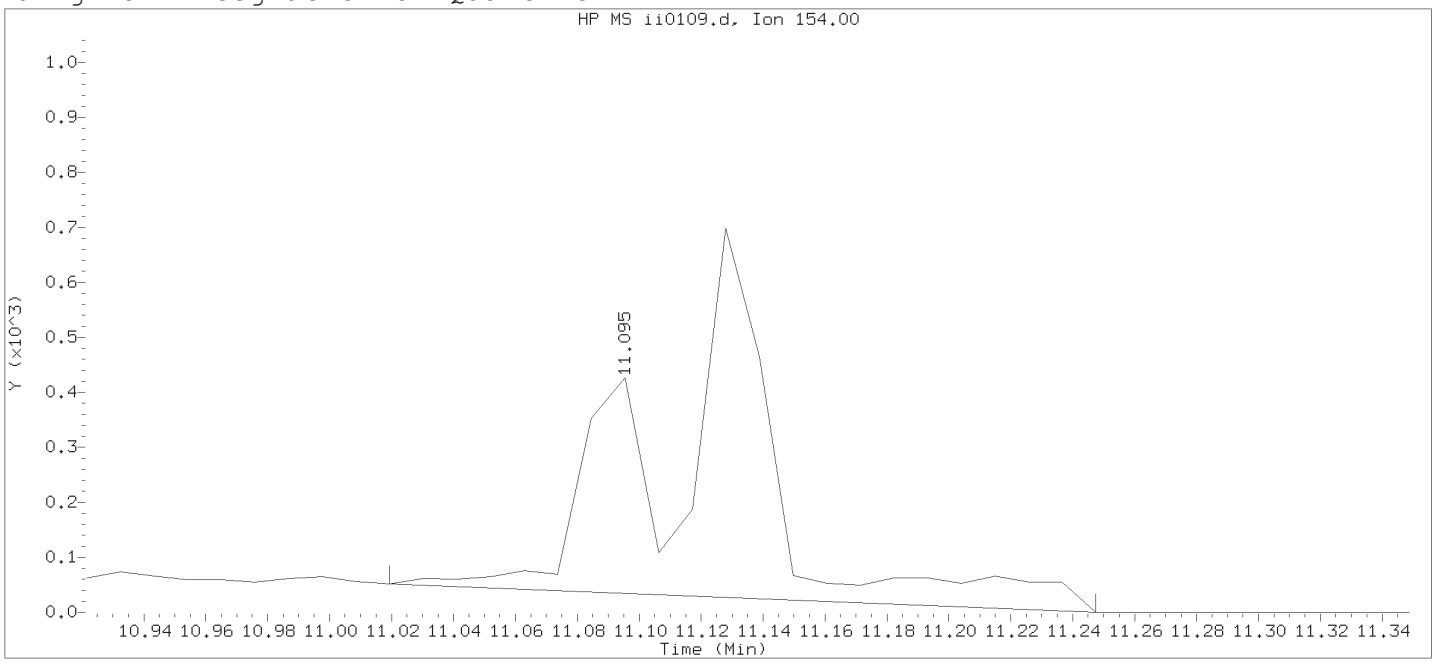
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

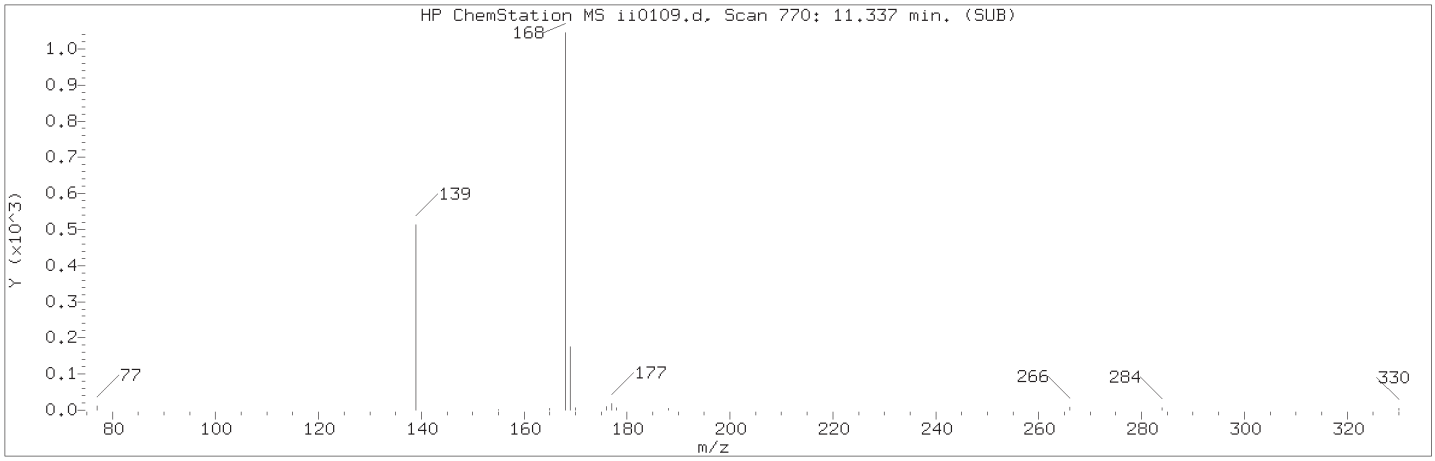
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

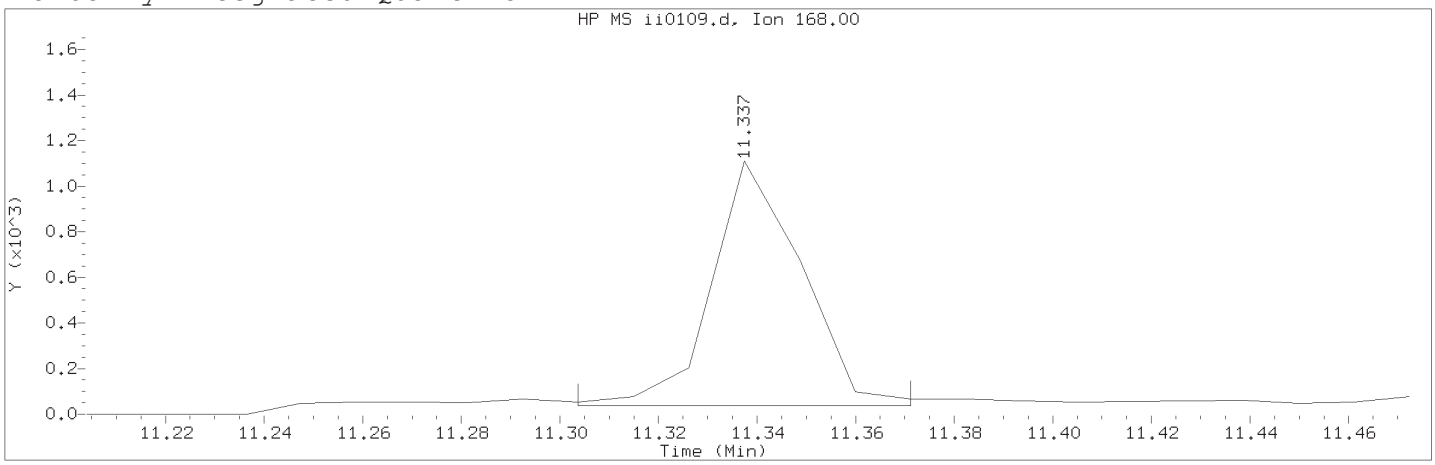
Compound Number : 21
Compound Name : Acenaphthene
Scan Number : 748
Retention Time (minutes) : 11.095
Quant Ion : 154.00
Area : 1692
On-column Amount (ng/ul) : 0.0116
Integration start scan : 740 Integration stop scan: 761
Y at integration start : 52 Y at integration end: 0

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg0416

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

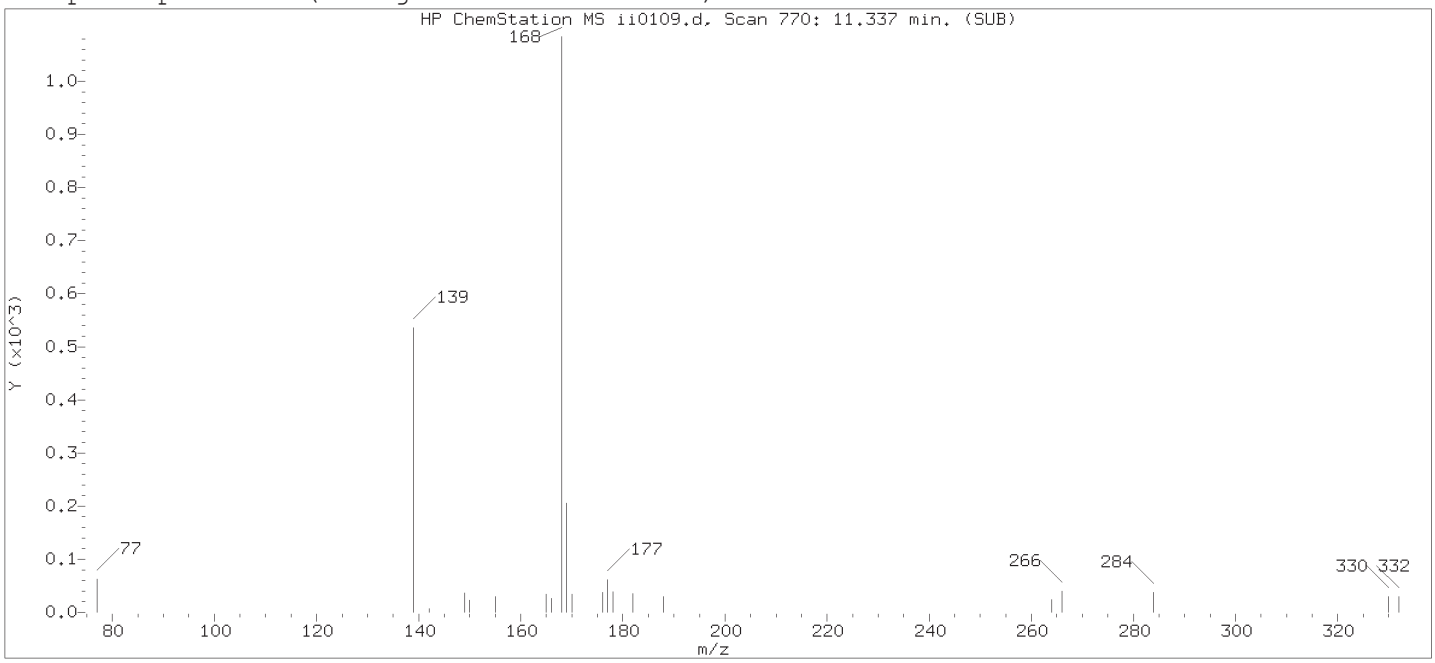
Compound Number : 22
Compound Name : Dibenzofuran
Scan Number : 770
Retention Time (minutes) : 11.337
Quant Ion : 168.00
Area (flag) : 1352M
On-Column Amount (ng/ul) : 0.0060
Integration start scan : 766 Integration stop scan: 772
Y at integration start : 37 Y at integration end: 37

Reason for manual integration: improper integration

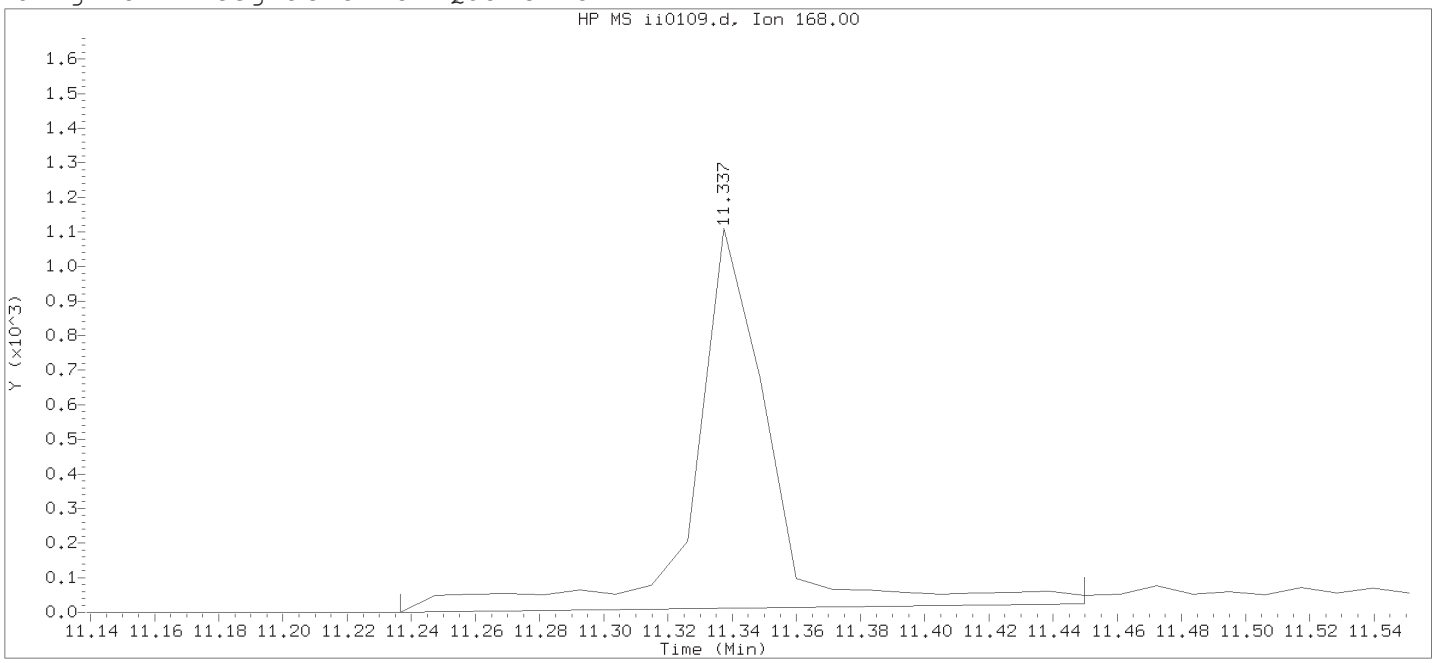
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

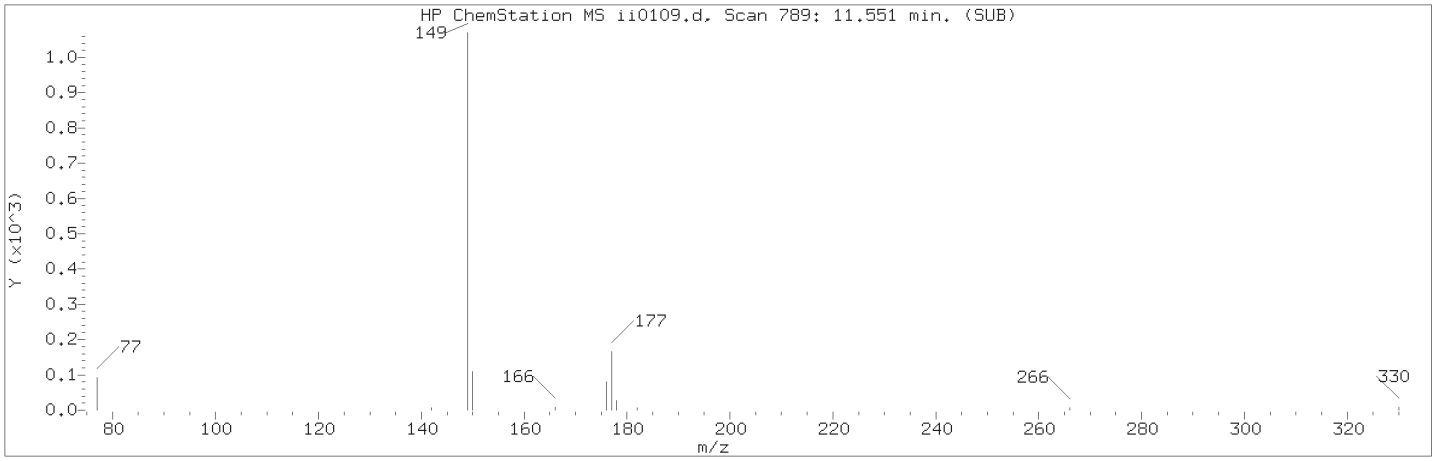
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

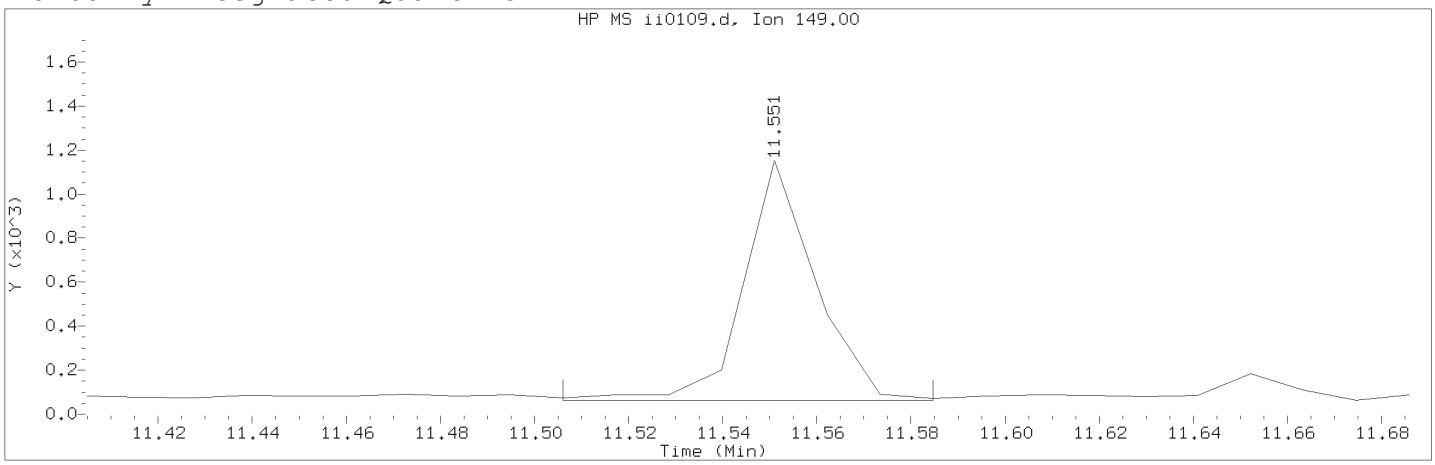
Compound Number	:	22
Compound Name	:	Dibenzofuran
Scan Number	:	770
Retention Time (minutes)	:	11.337
Quant Ion	:	168.00
Area	:	1803
On-column Amount (ng/ul)	:	0.0080
Integration start scan	:	760 Integration stop scan: 779
Y at integration start	:	0 Y at integration end: 24

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg0442

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

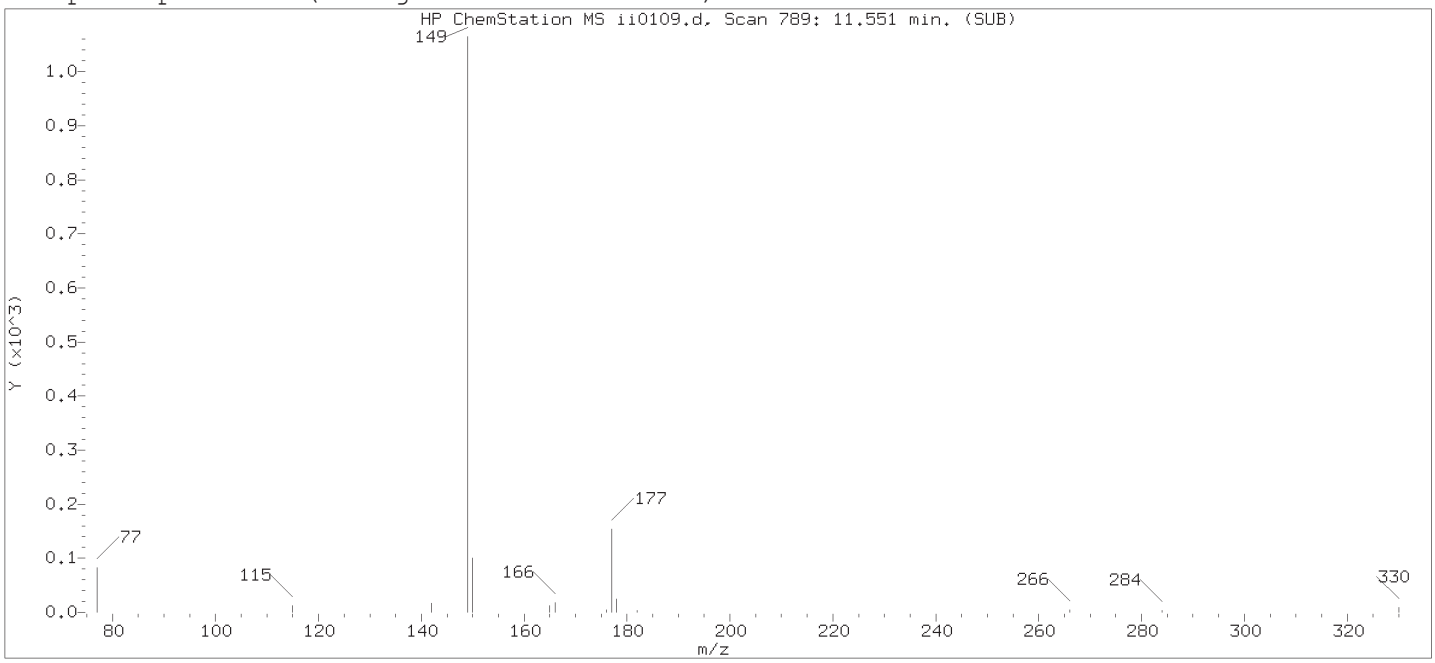
Compound Number	: 23		
Compound Name	: Diethylphthalate		
Scan Number	: 789		
Retention Time (minutes)	: 11.551		
Quant Ion	: 149.00		
Area (flag)	: 1152M		
On-Column Amount (ng/ul)	: 0.0069		
Integration start scan	: 784	Integration stop scan:	791
Y at integration start	: 63	Y at integration end:	63

Reason for manual integration: improper integration

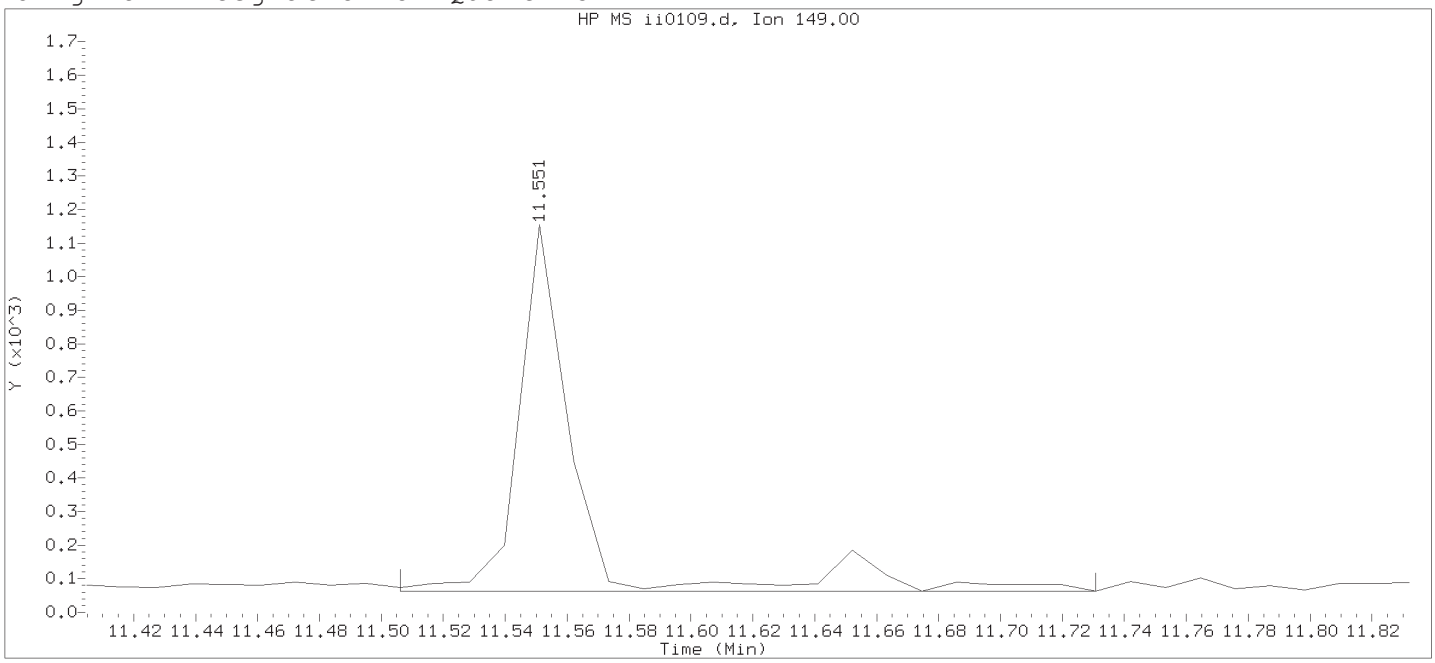
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

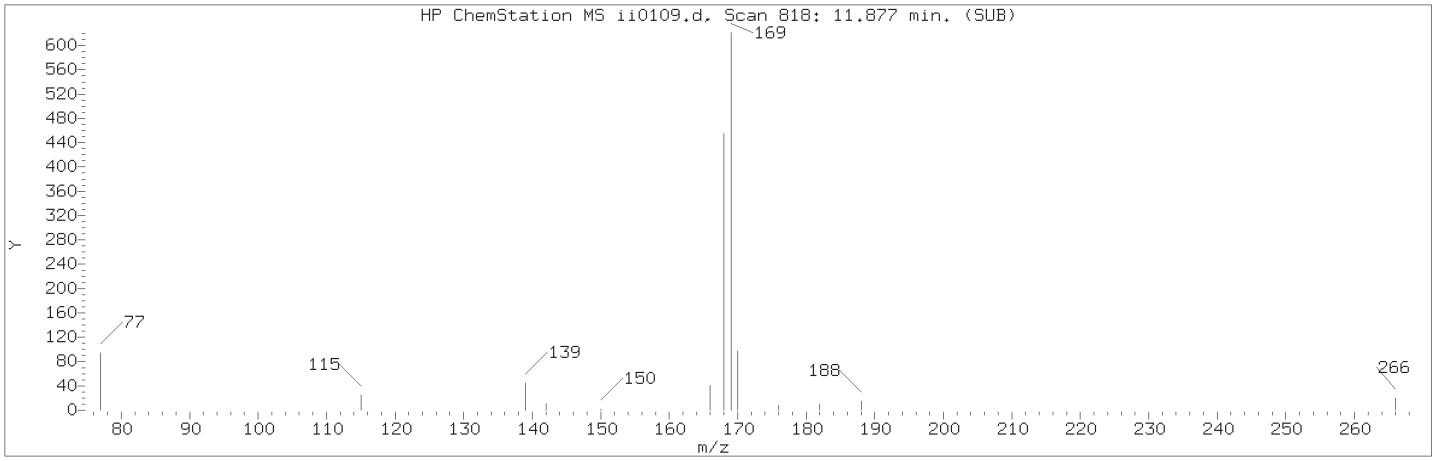
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

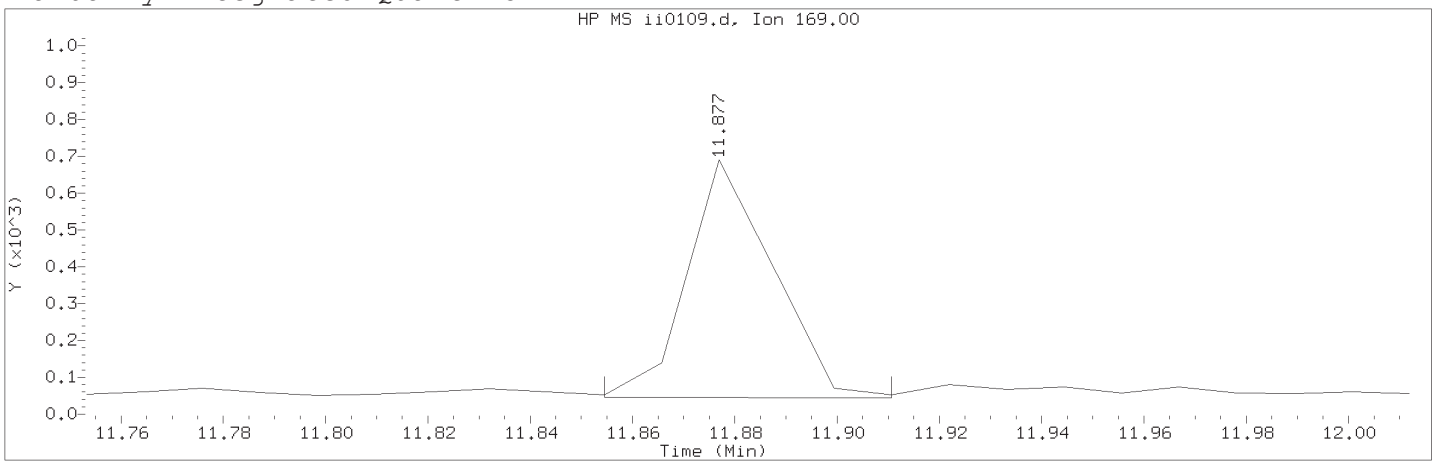
Compound Number	: 23		
Compound Name	: Diethylphthalate		
Scan Number	: 789		
Retention Time (minutes)	: 11.551		
Quant Ion	: 149.00		
Area	: 1390		
On-column Amount (ng/ul)	: 0.0083		
Integration start scan	: 784	Integration stop scan:	804
Y at integration start	: 63	Y at integration end:	63

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg0414

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

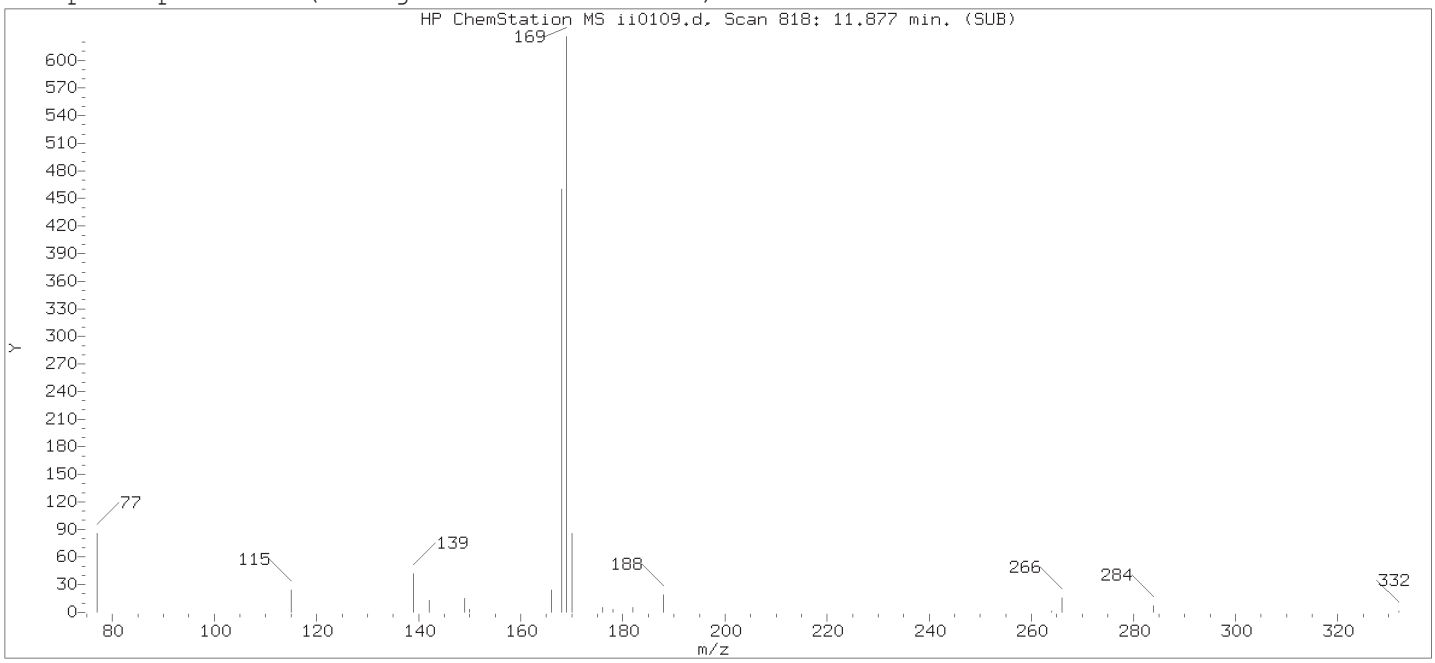
Compound Number : 28
Compound Name : NDPA as diphenylamine
Scan Number : 818
Retention Time (minutes) : 11.877
Quant Ion : 169.00
Area (flag) : 749M
On-Column Amount (ng/ul) : 0.0069
Integration start scan : 815 Integration stop scan: 820
Y at integration start : 46 Y at integration end: 45

Reason for manual integration: improper integration

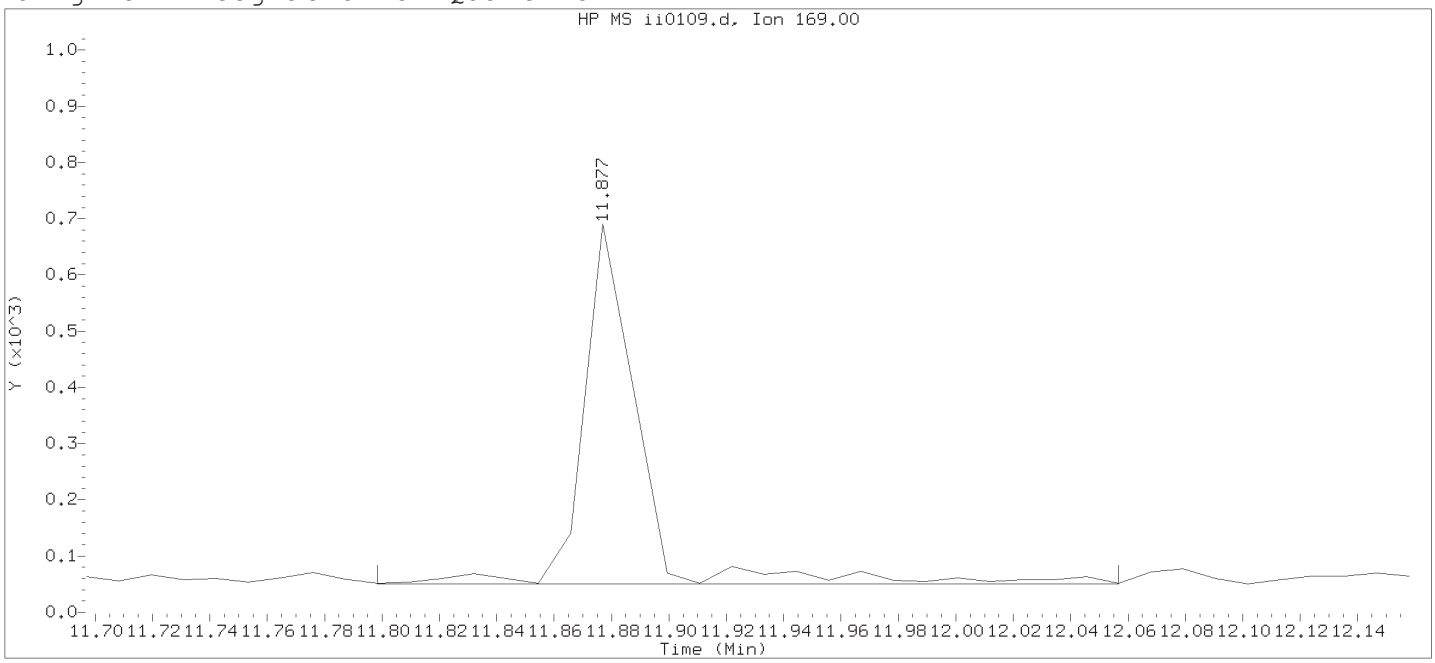
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

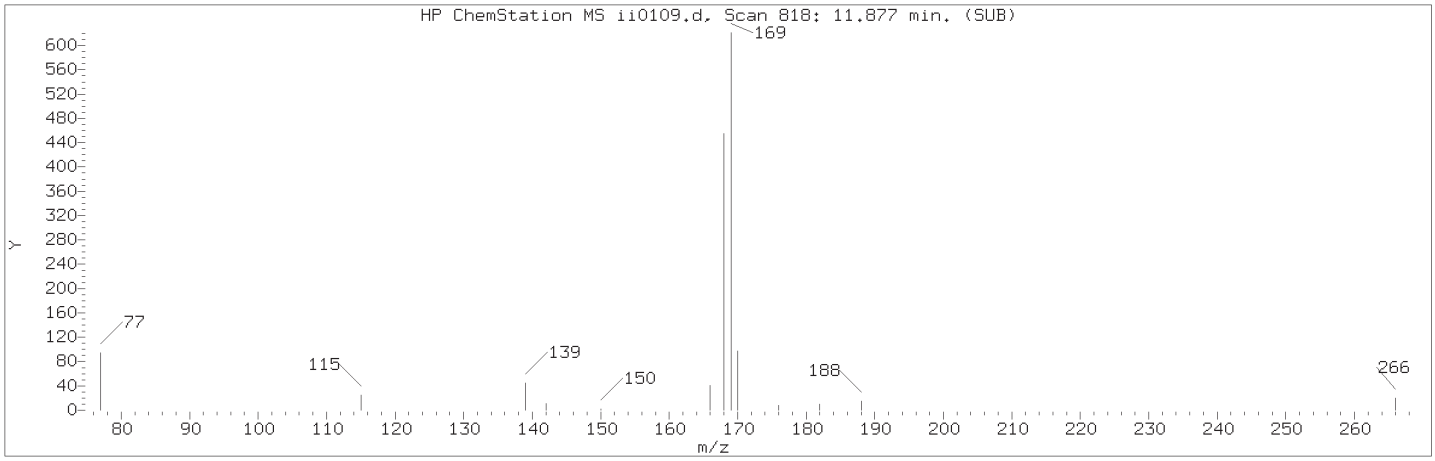
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

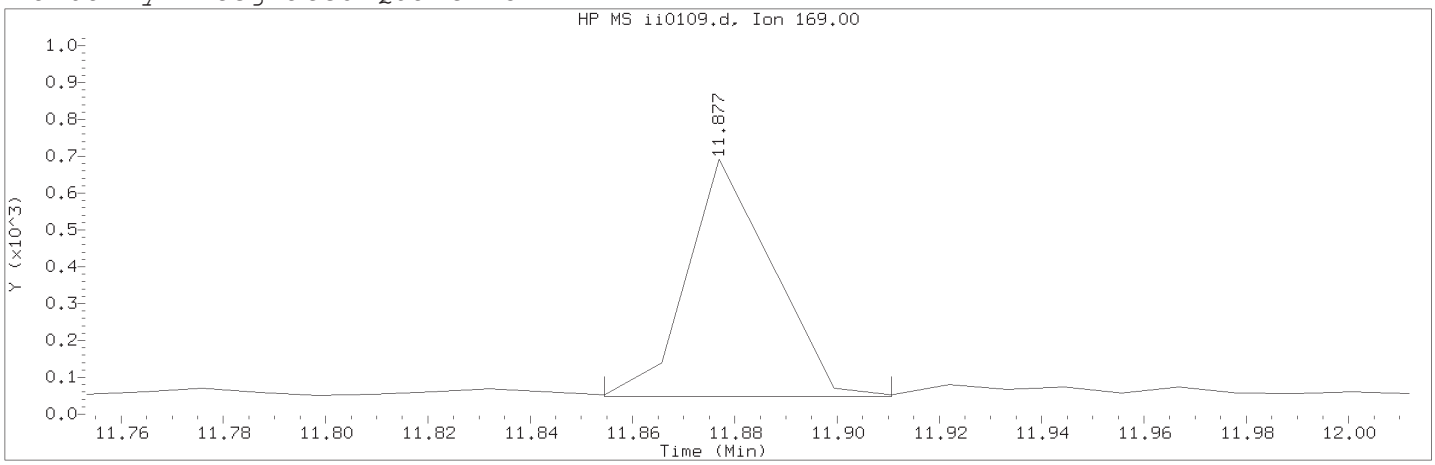
Compound Number	:	28
Compound Name	:	NDPA as diphenylamine
Scan Number	:	818
Retention Time (minutes)	:	11.877
Quant Ion	:	169.00
Area	:	869
On-column Amount (ng/ul)	:	0.0079
Integration start scan	:	810 Integration stop scan: 833
Y at integration start	:	50 Y at integration end: 50

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature used: D10 Page 2416

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

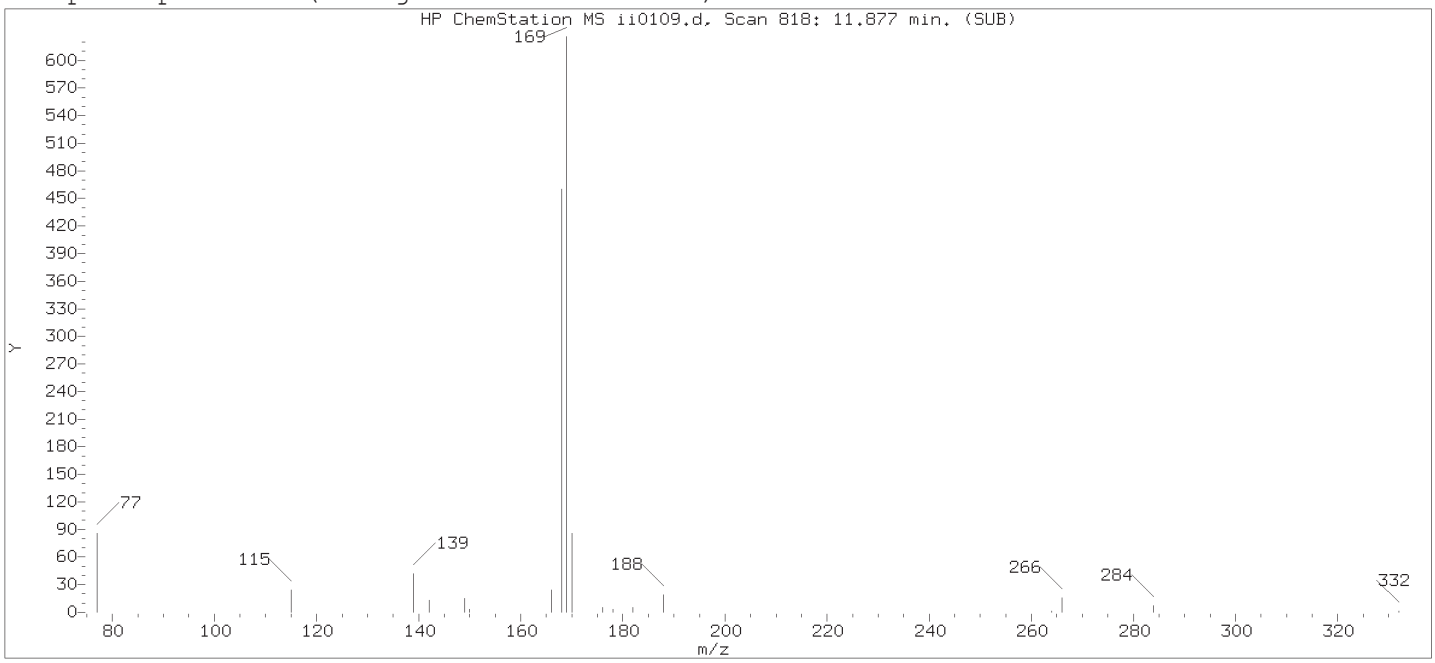
Compound Number	: 27		
Compound Name	: N-Nitrosodiphenylamine		
Scan Number	: 818		
Retention Time (minutes)	: 11.877		
Quant Ion	: 169.00		
Area (flag)	: 739M		
On-Column Amount (ng/ul)	: 0.0068		
Integration start scan	: 815	Integration stop scan:	820
Y at integration start	: 48	Y at integration end:	48

Reason for manual integration: improper integration

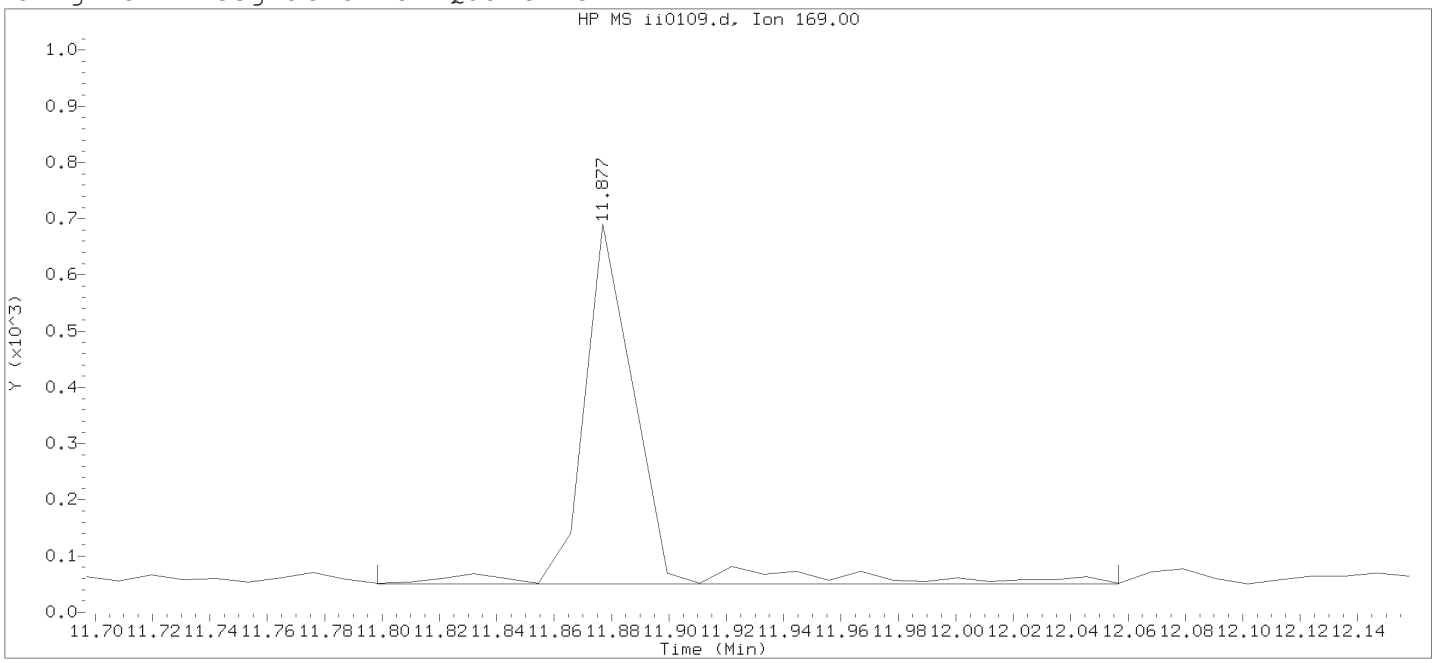
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

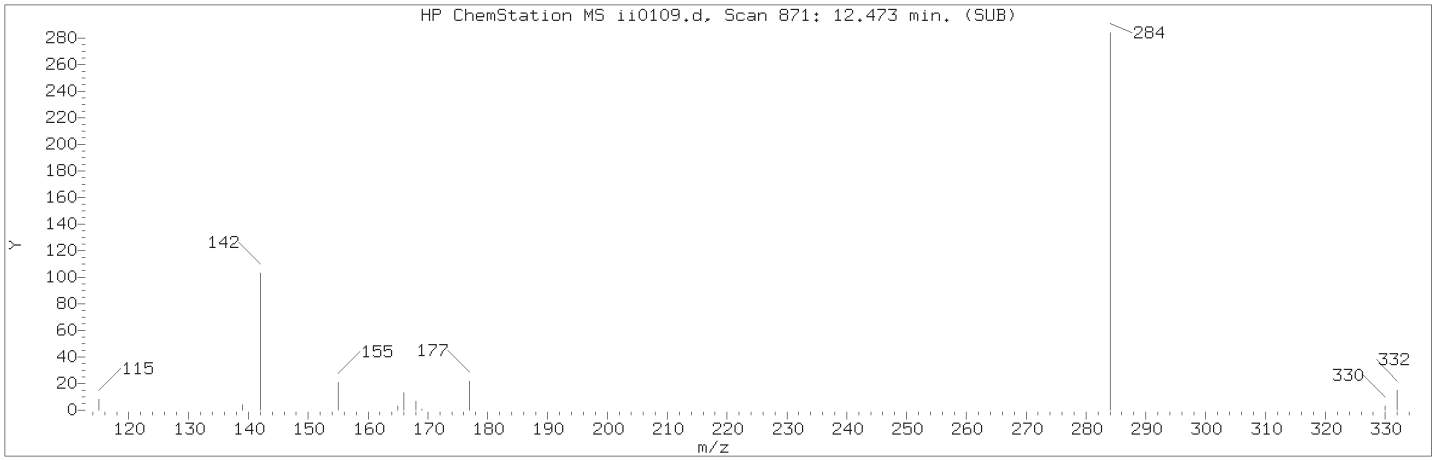
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

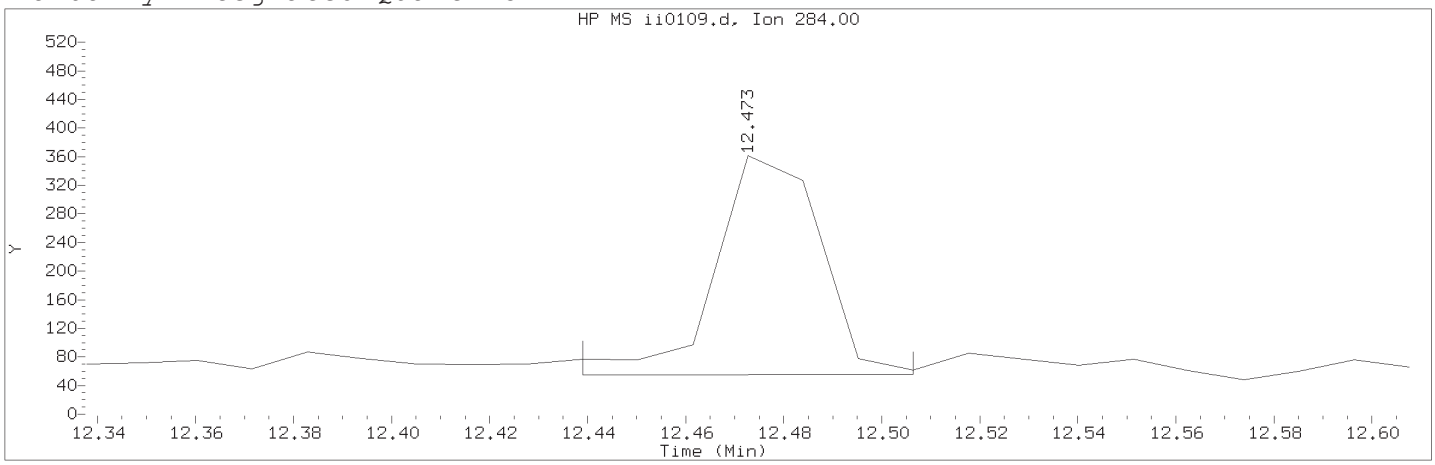
Compound Number	:	27
Compound Name	:	N-Nitrosodiphenylamine
Scan Number	:	818
Retention Time (minutes)	:	11.877
Quant Ion	:	169.00
Area	:	869
On-column Amount (ng/ul)	:	0.0079
Integration start scan	:	810 Integration stop scan: 833
Y at integration start	:	50 Y at integration end: 50

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg0418

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

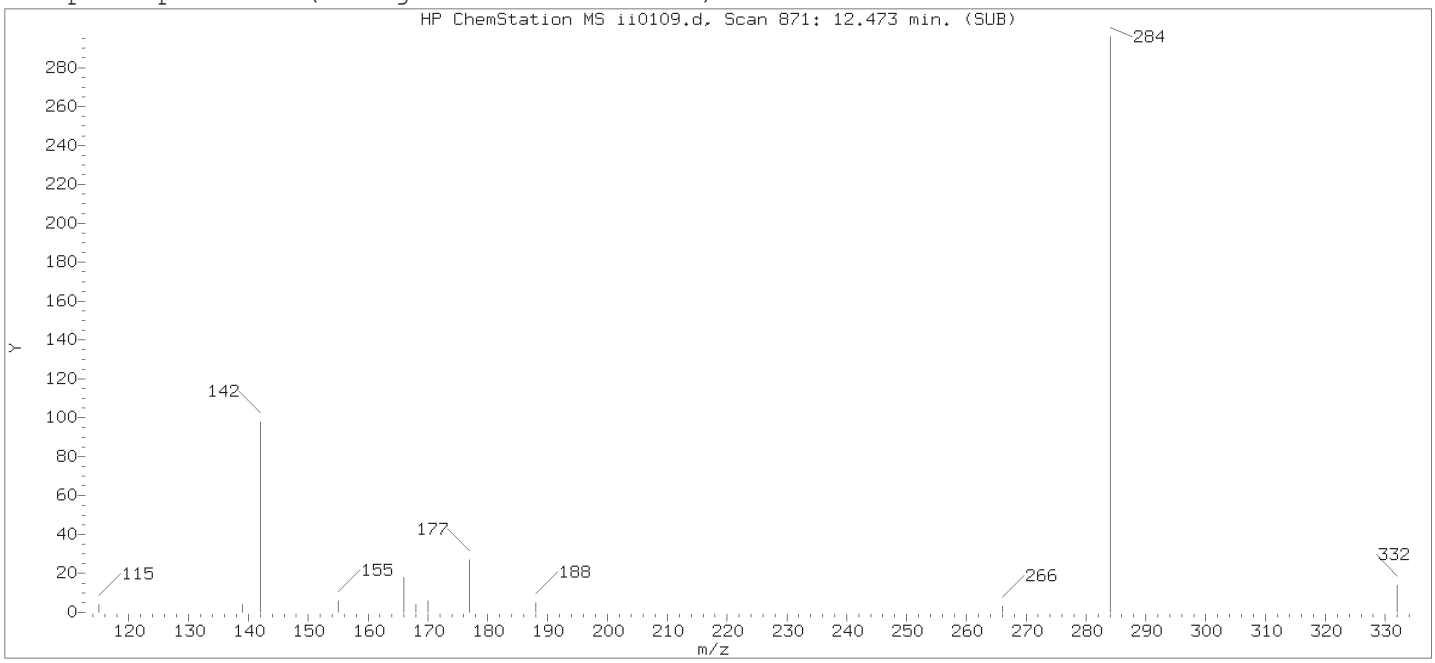
Compound Number	: 29		
Compound Name	: Hexachlorobenzene		
Scan Number	: 871		
Retention Time (minutes)	: 12.473		
Quant Ion	: 284.00		
Area (flag)	: 465M		
On-Column Amount (ng/ul)	: 0.0060		
Integration start scan	: 867	Integration stop scan:	873
Y at integration start	: 55	Y at integration end:	56

Reason for manual integration: improper integration

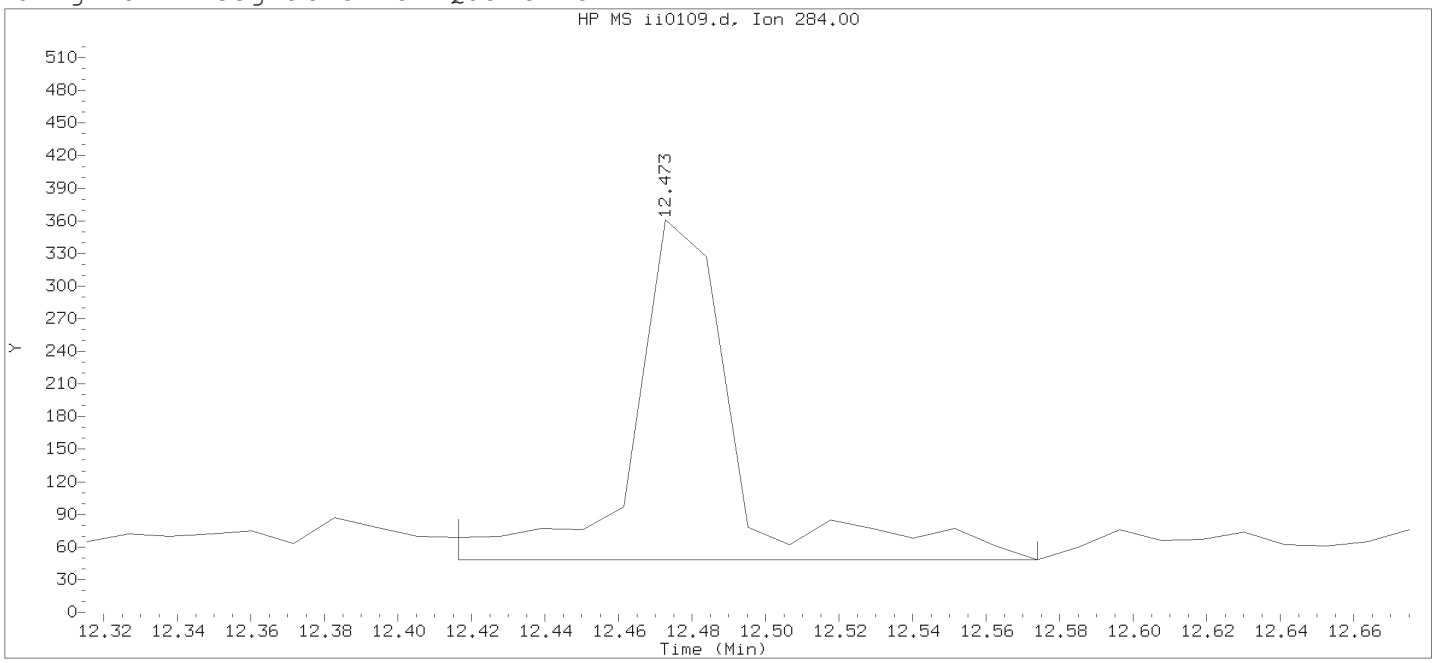
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

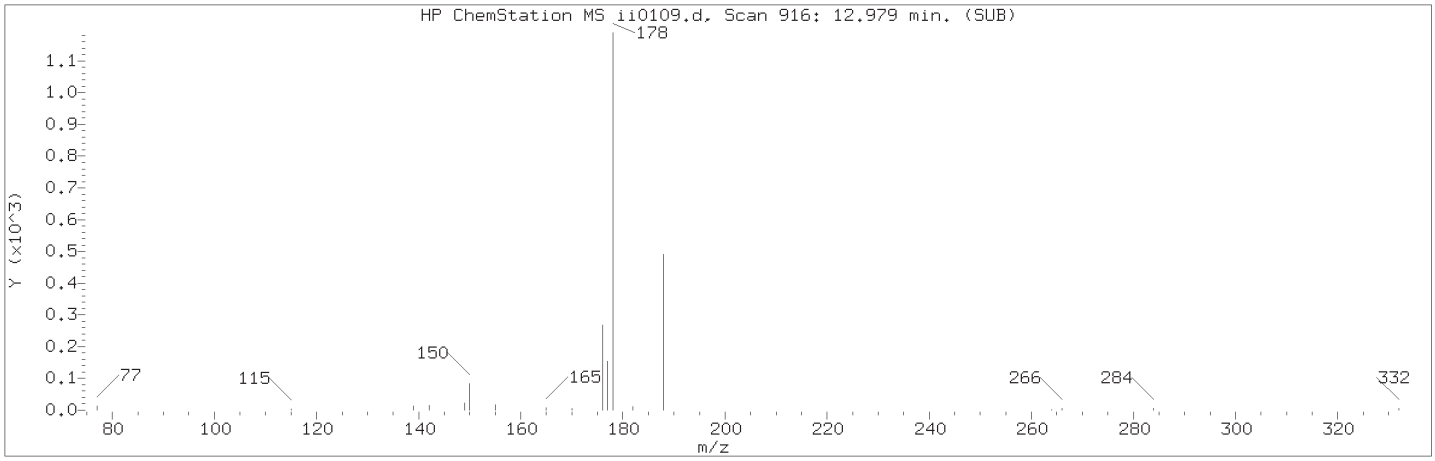
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

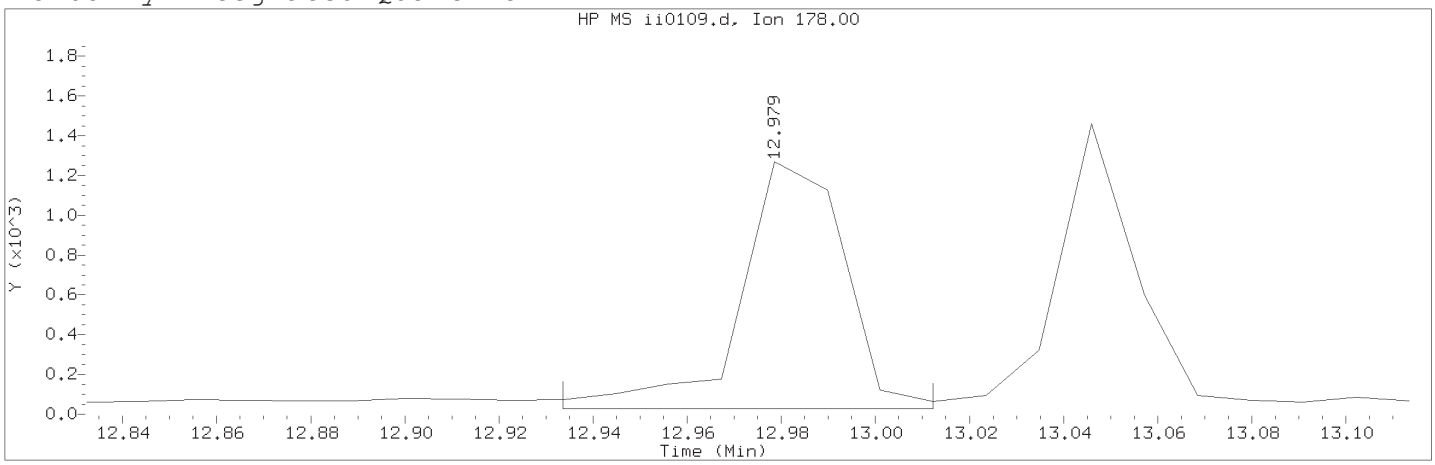
Compound Number	:	29
Compound Name	:	Hexachlorobenzene
Scan Number	:	871
Retention Time (minutes)	:	12.473
Quant Ion	:	284.00
Area	:	608
On-column Amount (ng/ul)	:	0.0079
Integration start scan	:	865 Integration stop scan: 879
Y at integration start	:	48 Y at integration end: 48

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg0426

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

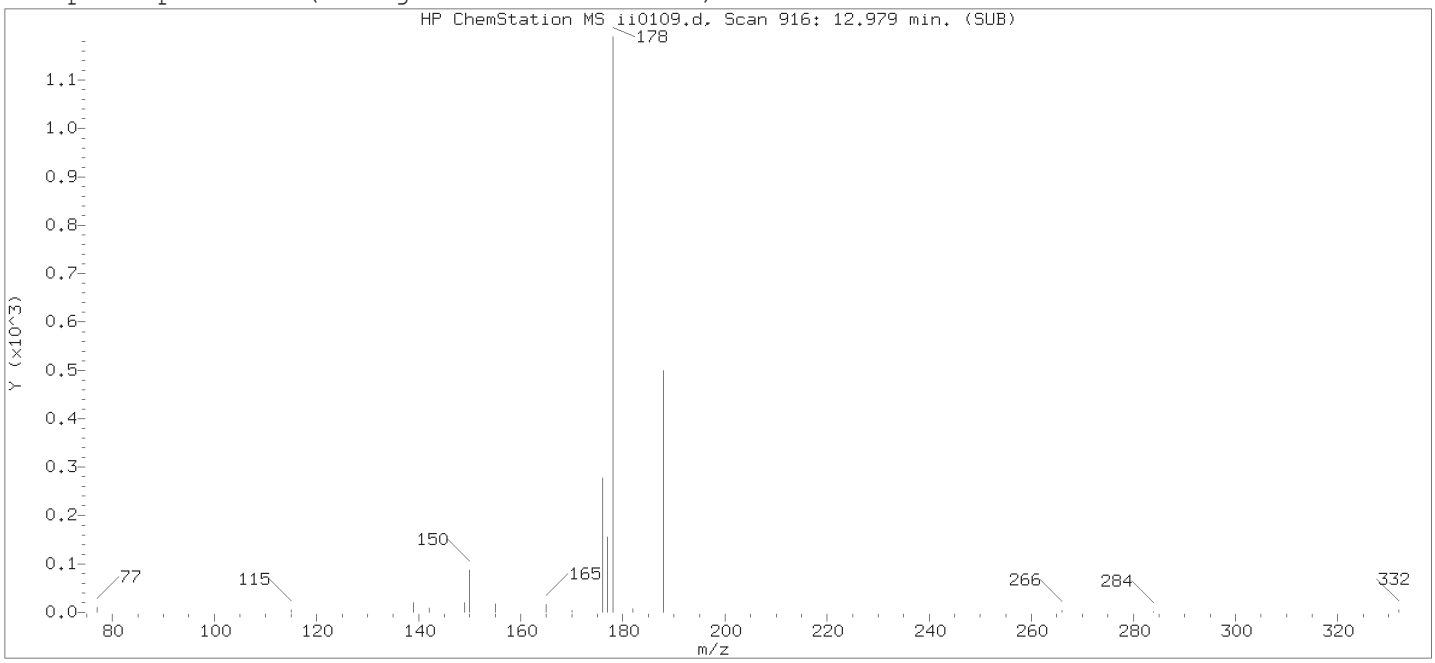
Compound Number	: 32		
Compound Name	: Phenanthrene		
Scan Number	: 916		
Retention Time (minutes)	: 12.979		
Quant Ion	: 178.00		
Area (flag)	: 1941M		
On-Column Amount (ng/ul)	: 0.0068		
Integration start scan	: 911	Integration stop scan:	918
Y at integration start	: 27	Y at integration end:	27

Reason for manual integration: improper integration

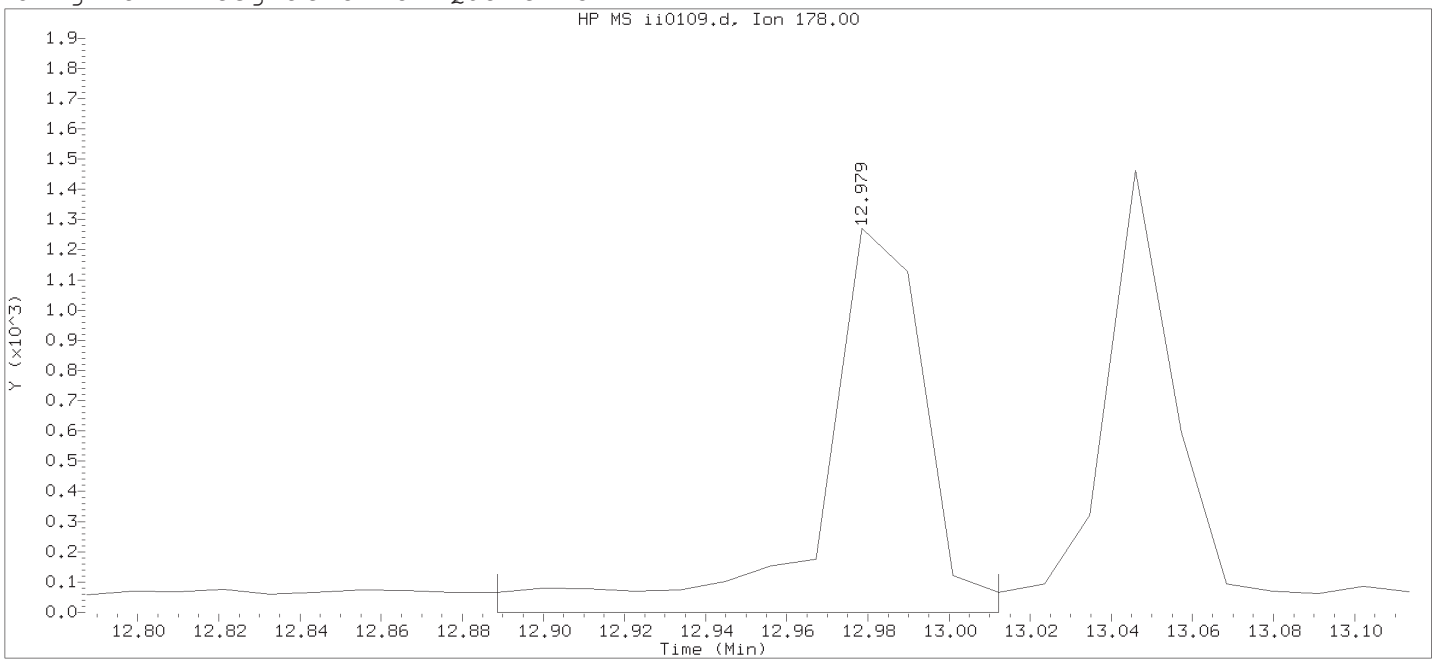
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

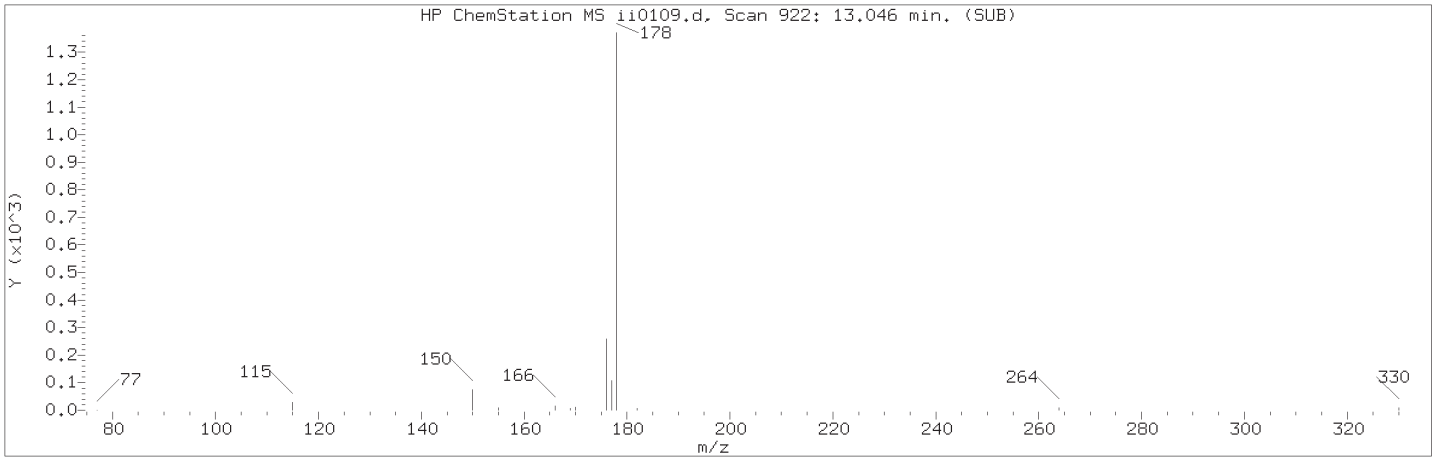
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

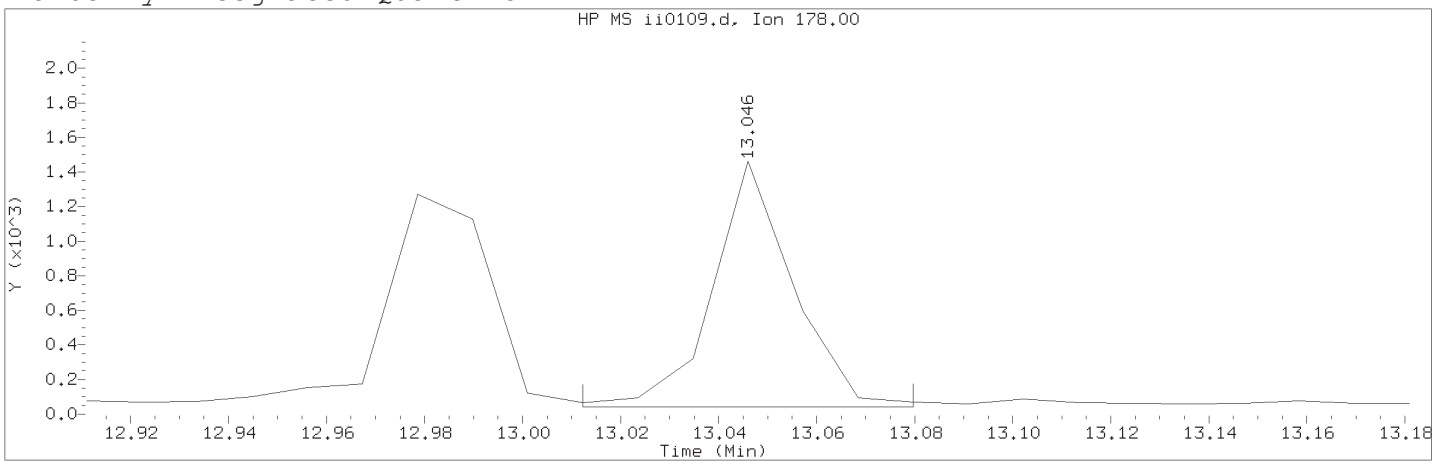
Compound Number	:	32
Compound Name	:	Phenanthrene
Scan Number	:	916
Retention Time (minutes)	:	12.979
Quant Ion	:	178.00
Area	:	2244
On-column Amount (ng/ul)	:	0.0079
Integration start scan	:	907 Integration stop scan: 918
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

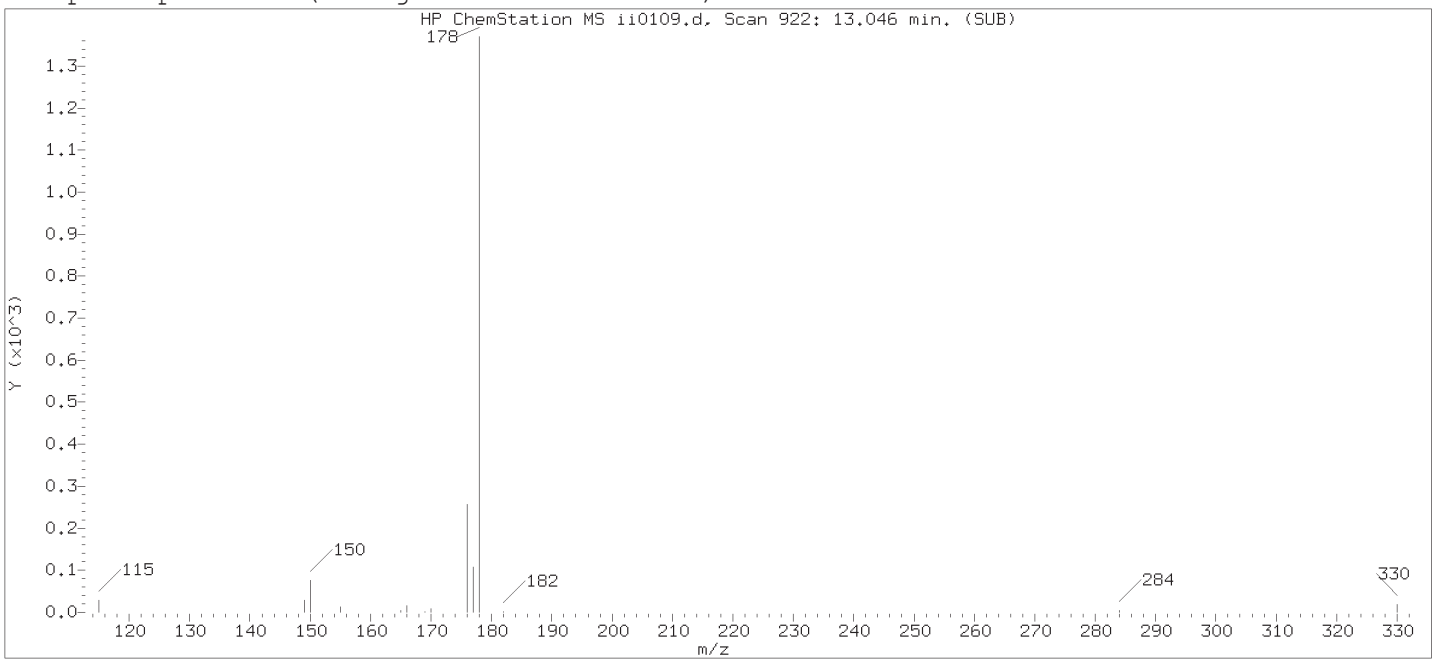
Compound Number	: 33		
Compound Name	: Anthracene		
Scan Number	: 922		
Retention Time (minutes)	: 13.046		
Quant Ion	: 178.00		
Area (flag)	: 1646M		
On-Column Amount (ng/ul)	: 0.0058		
Integration start scan	: 918	Integration stop scan:	924
Y at integration start	: 42	Y at integration end:	42

Reason for manual integration: improper integration

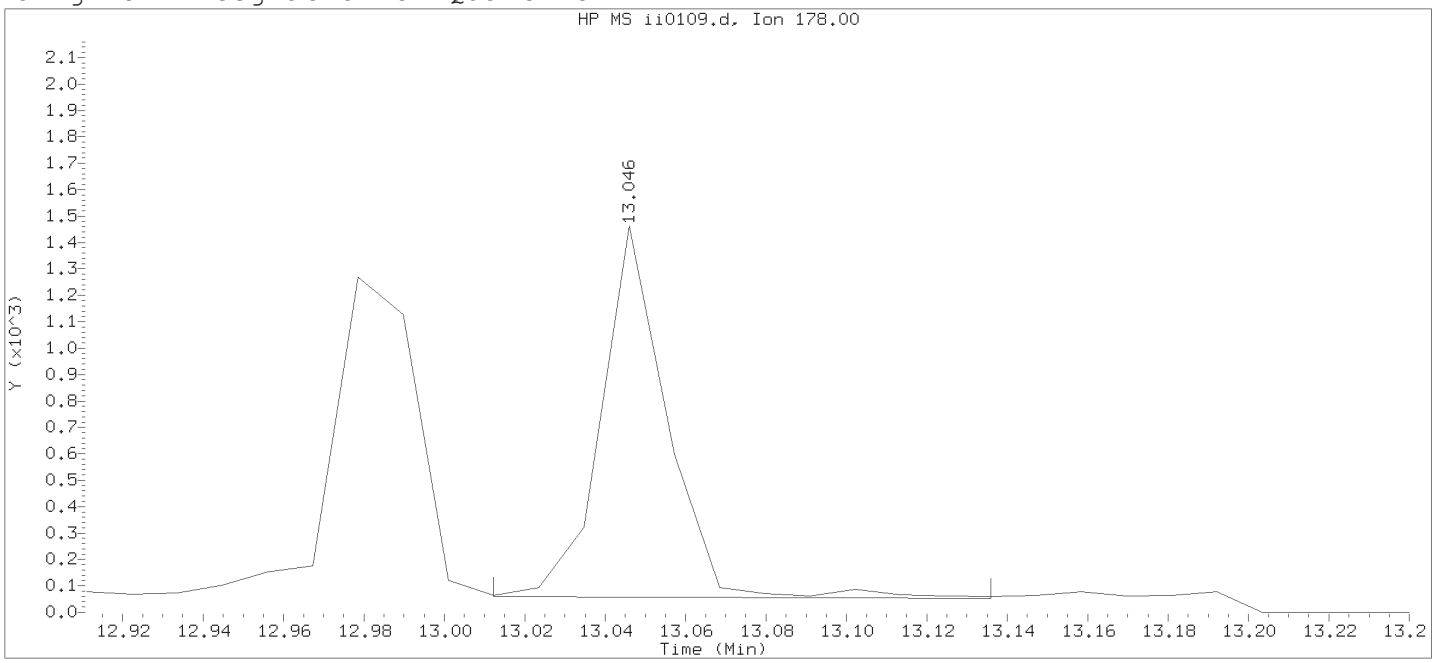
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

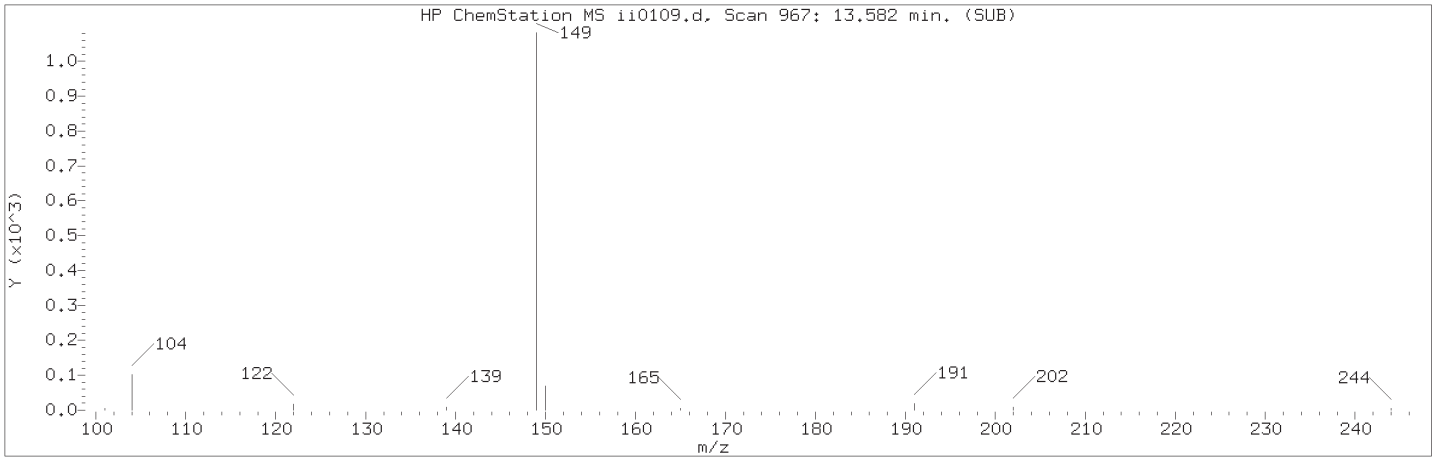
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

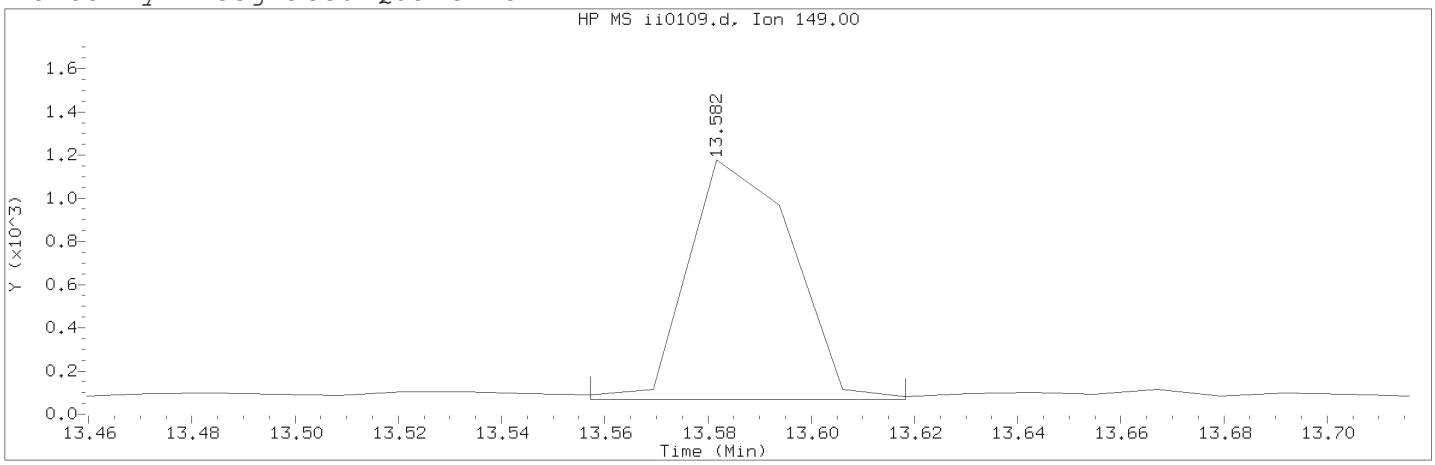
Compound Number	:	33
Compound Name	:	Anthracene
Scan Number	:	922
Retention Time (minutes)	:	13.046
Quant Ion	:	178.00
Area	:	1615
On-column Amount (ng/ul)	:	0.0057
Integration start scan	:	918 Integration stop scan: 929
Y at integration start	:	59 Y at integration end: 53

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg0424

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

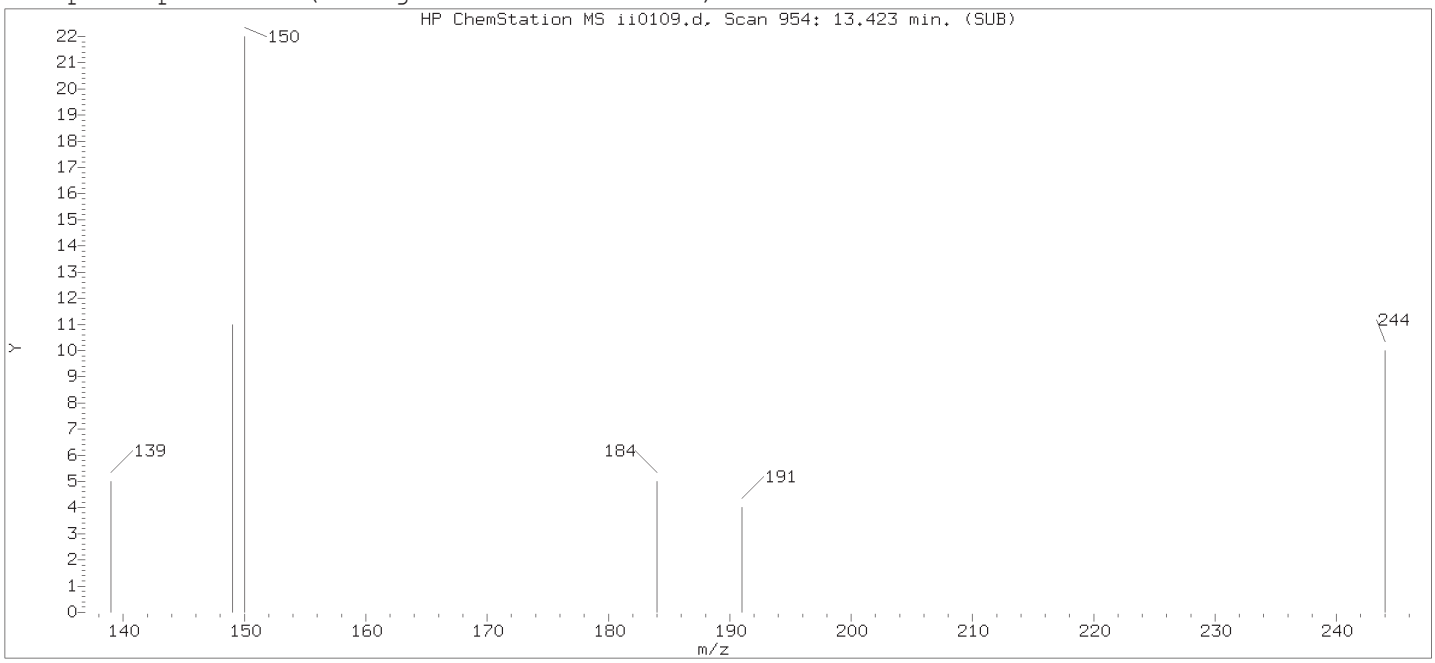
Compound Number	: 35		
Compound Name	: Di-n-butylphthalate		
Scan Number	: 967		
Retention Time (minutes)	: 13.582		
Quant Ion	: 149.00		
Area (flag)	: 1569M		
On-Column Amount (ng/ul)	: 0.0058		
Integration start scan	: 964	Integration stop scan:	969
Y at integration start	: 67	Y at integration end:	67

Reason for manual integration: improper integration

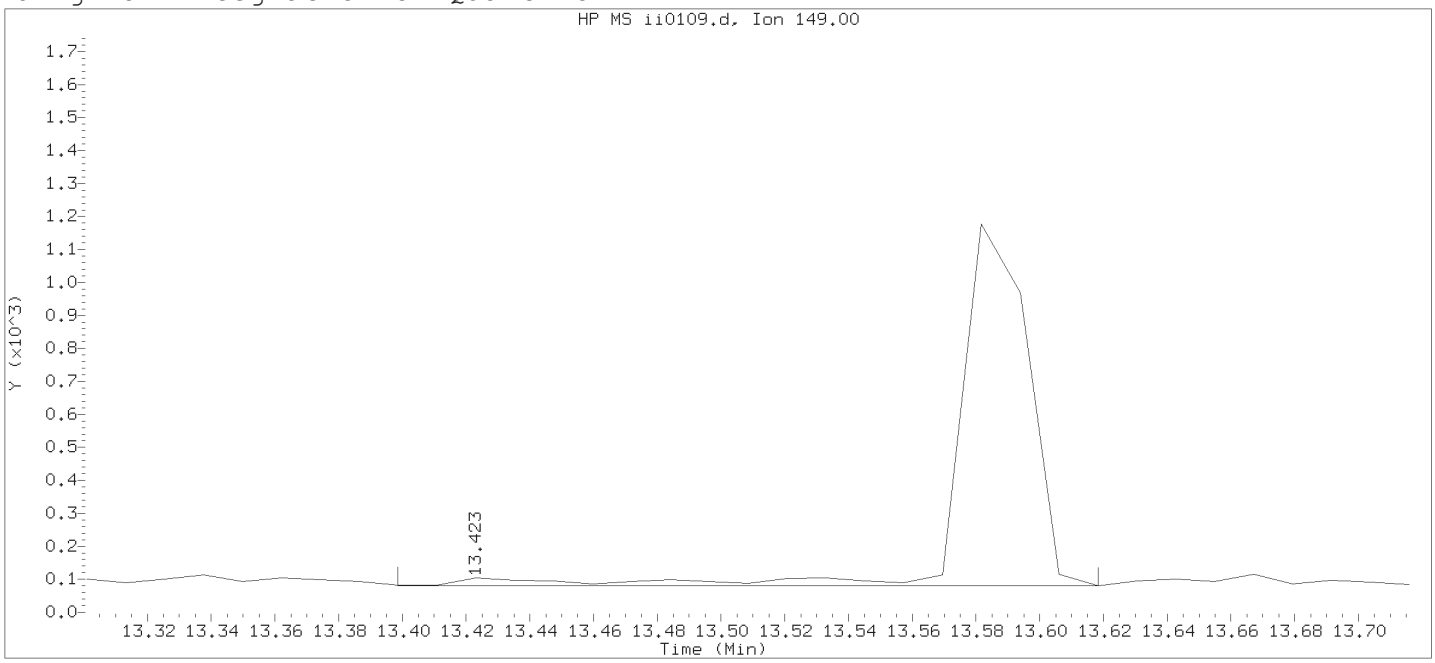
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

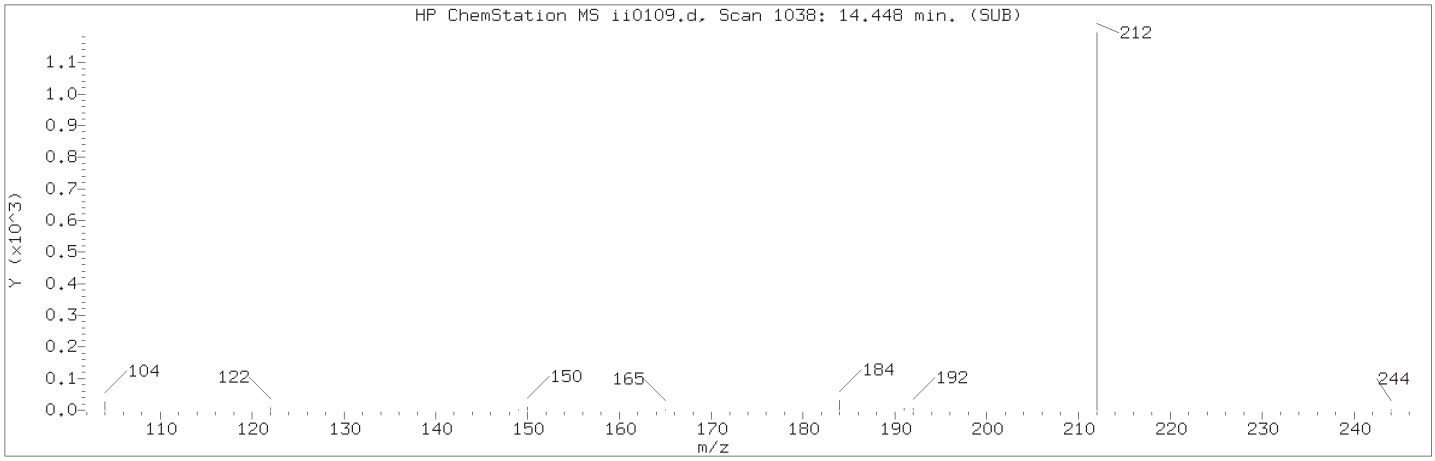
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

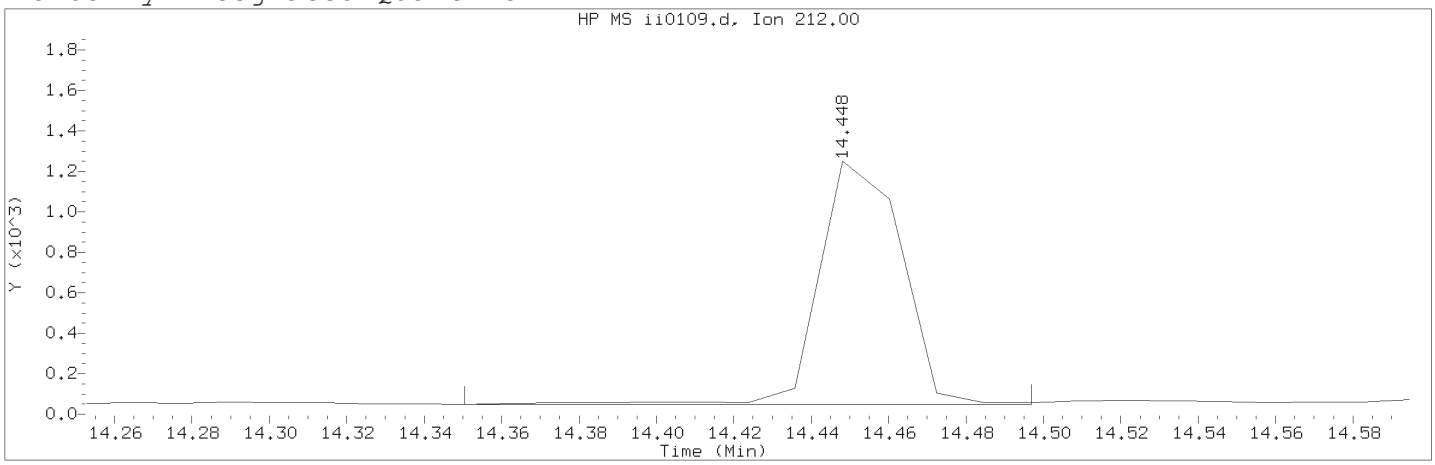
Compound Number	: 35		
Compound Name	: Di-n-butylphthalate		
Scan Number	: 954		
Retention Time (minutes)	: 13.423		
Quant Ion	: 149.00		
Area	: 1643		
On-column Amount (ng/ul)	: 0.0061		
Integration start scan	: 951	Integration stop scan:	969
Y at integration start	: 80	Y at integration end:	80

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature used: D10 Page 2426

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

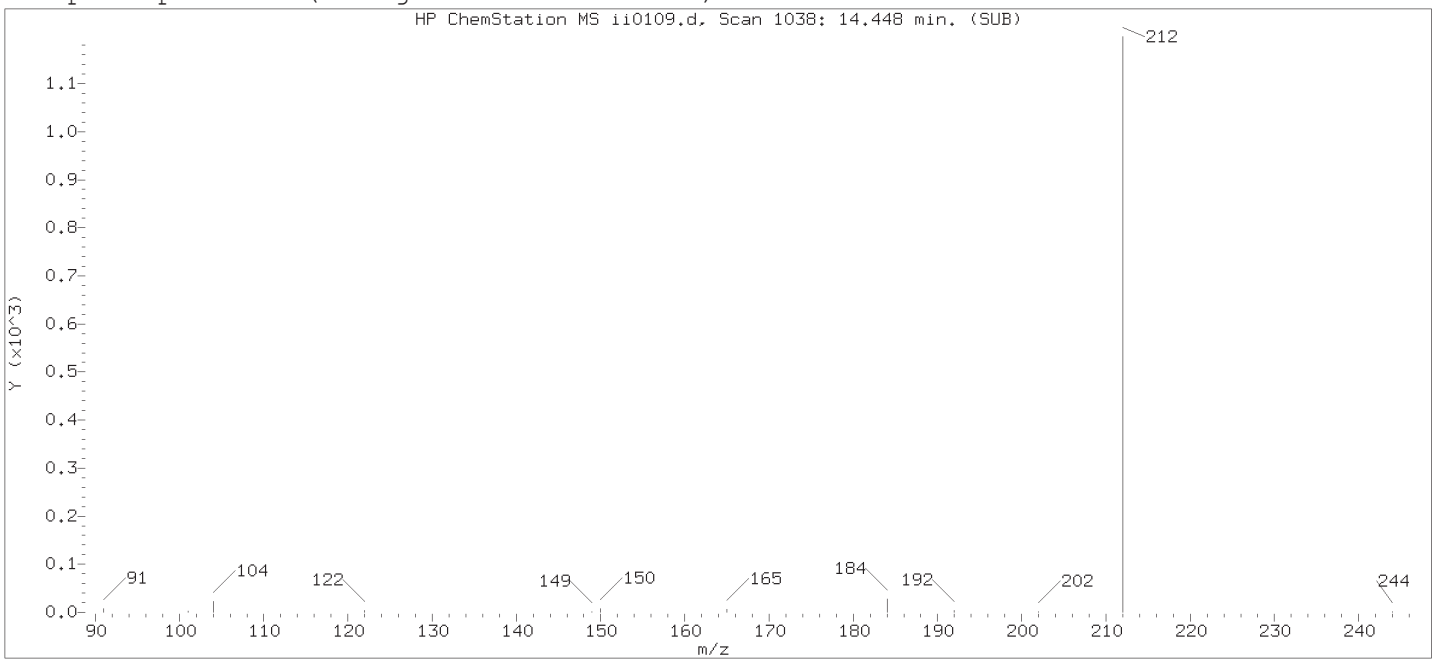
Compound Number : 36
Compound Name : Fluoranthene-d10
Scan Number : 1038
Retention Time (minutes) : 14.448
Quant Ion : 212.00
Area (flag) : 1770M
On-Column Amount (ng/ul) : 0.0054
Integration start scan : 1029 Integration stop scan: 1041
Y at integration start : 49 Y at integration end: 49

Reason for manual integration: improper integration

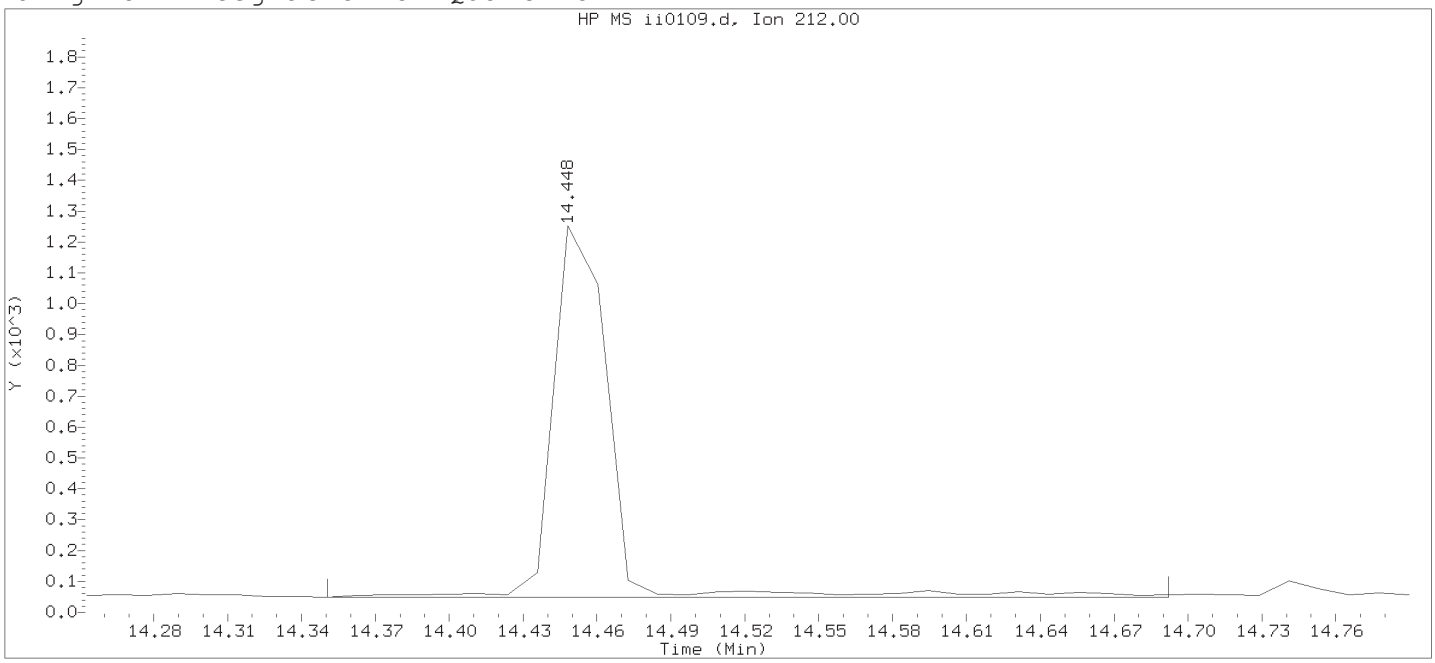
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

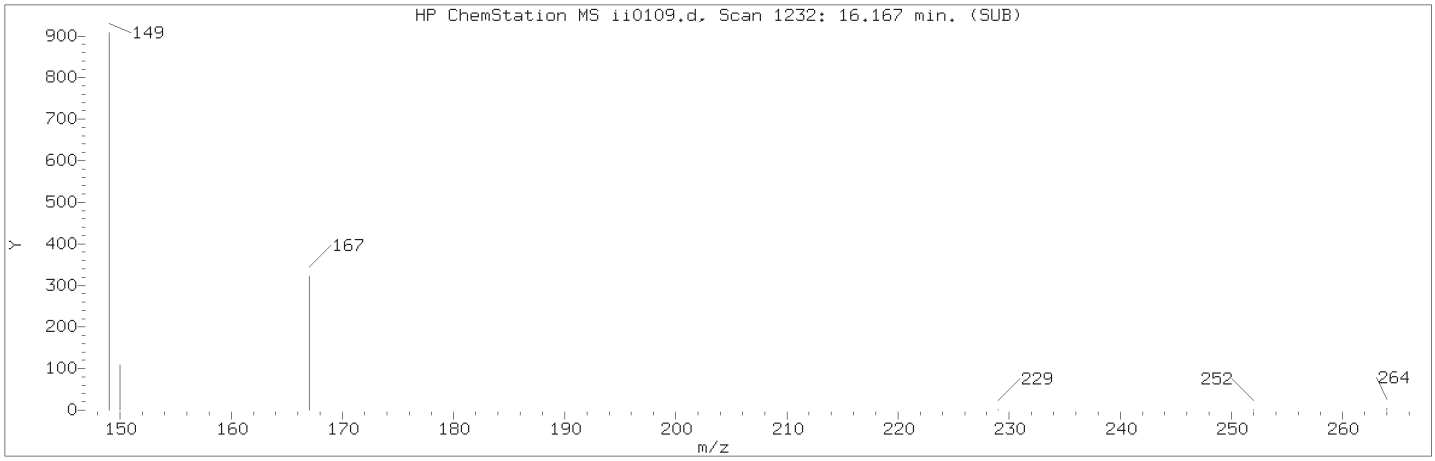
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

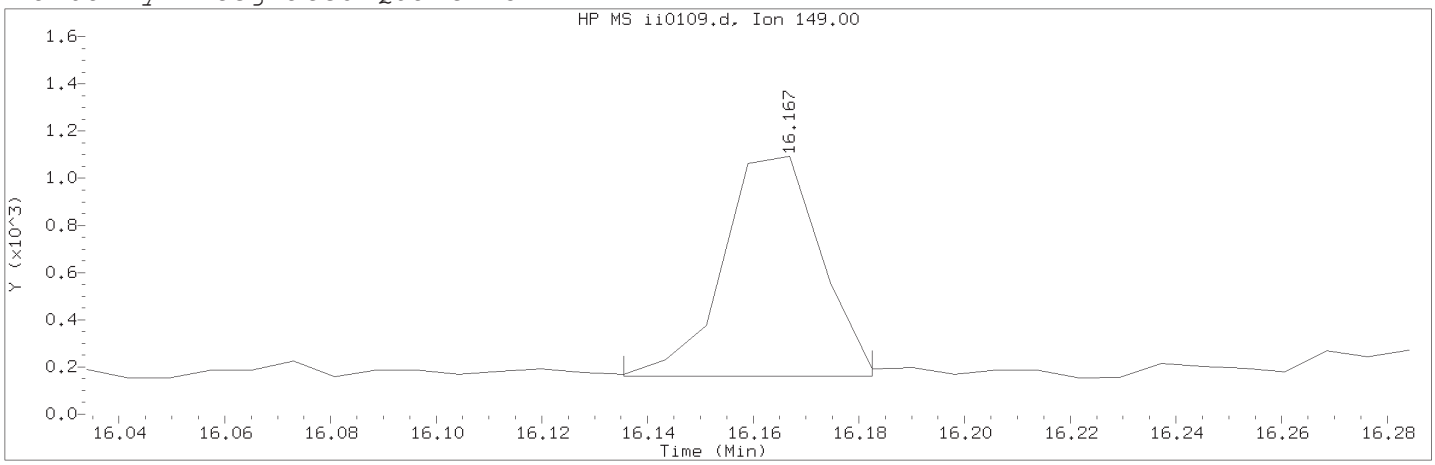
Compound Number : 36
Compound Name : Fluoranthene-d10
Scan Number : 1038
Retention Time (minutes) : 14.448
Quant Ion : 212.00
Area : 1916
On-column Amount (ng/ul) : 0.0059
Integration start scan : 1029 Integration stop scan: 1057
Y at integration start : 49 Y at integration end: 49

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg0426

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

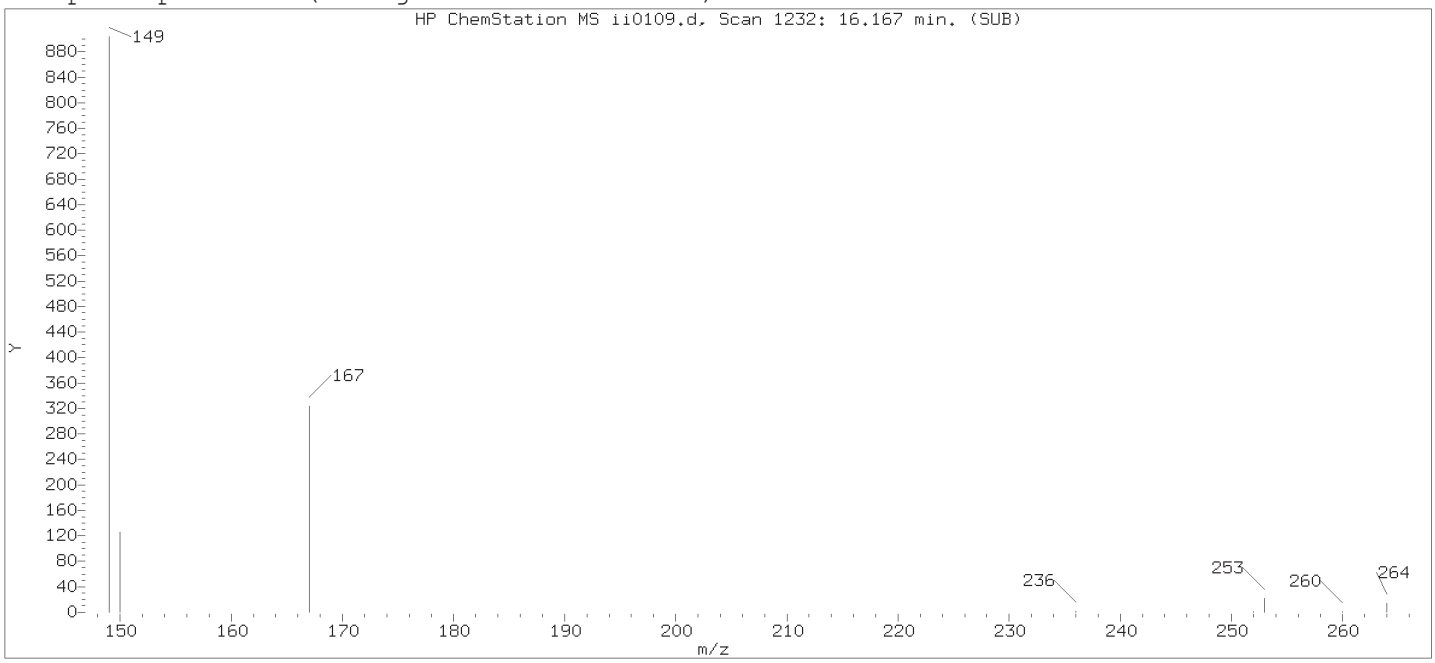
Compound Number : 41
Compound Name : bis(2-Ethylhexyl)phthalate
Scan Number : 1232
Retention Time (minutes) : 16.167
Quant Ion : 149.00
Area (flag) : 1195M
On-Column Amount (ng/ul) : 0.0074
Integration start scan : 1227 Integration stop scan: 1233
Y at integration start : 162 Y at integration end: 162

Reason for manual integration: improper integration

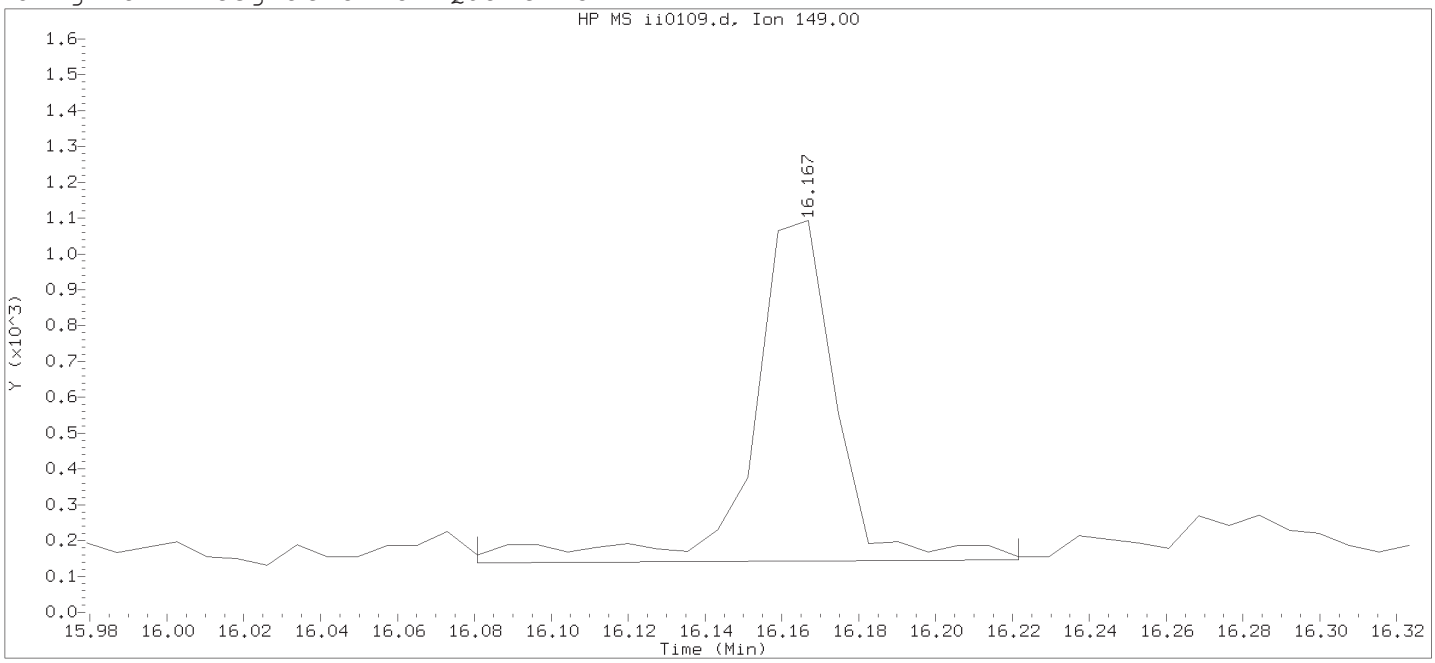
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

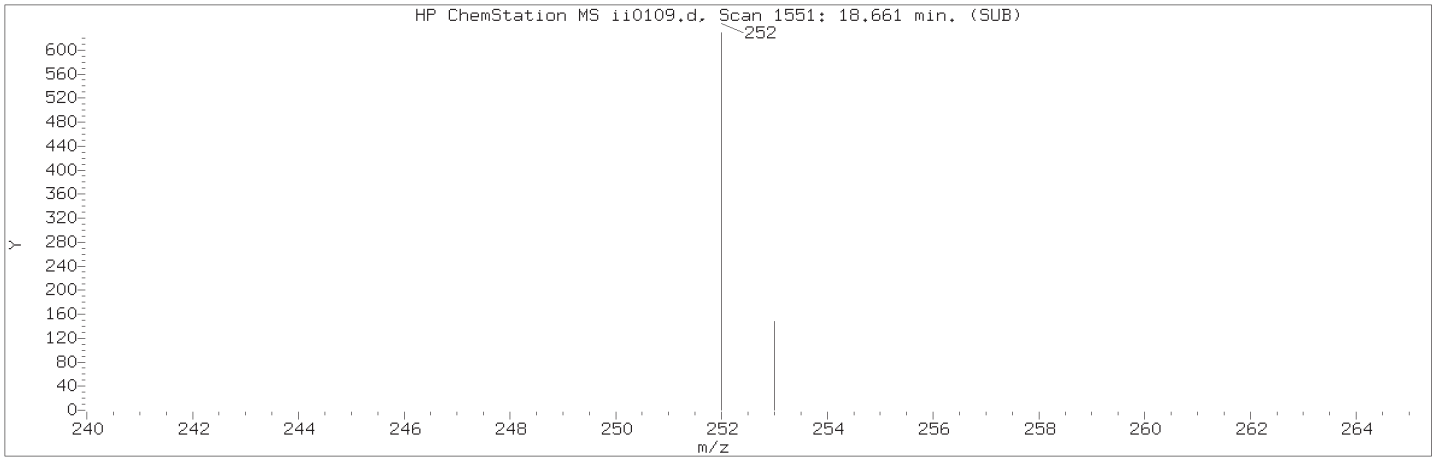
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

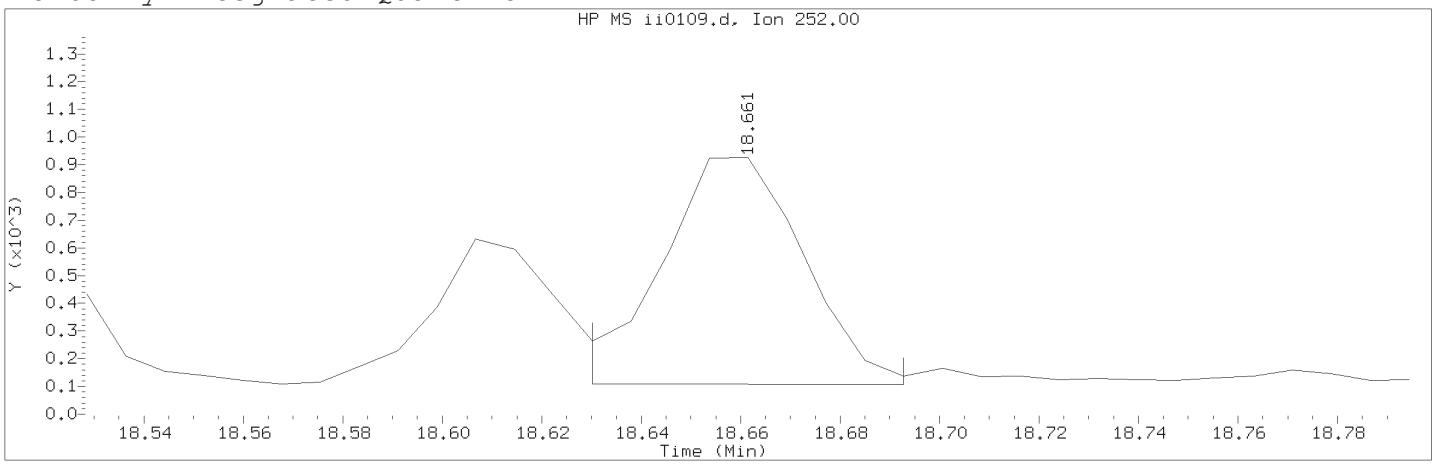
Compound Number	: 41	
Compound Name	: bis(2-Ethylhexyl)phthalate	
Scan Number	: 1232	
Retention Time (minutes)	: 16.167	
Quant Ion	: 149.00	
Area	: 1456	
On-column Amount (ng/ul)	: 0.0090	
Integration start scan	: 1220	Integration stop scan: 1238
Y at integration start	: 138	Y at integration end: 147

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature used: D10 Page 2430

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

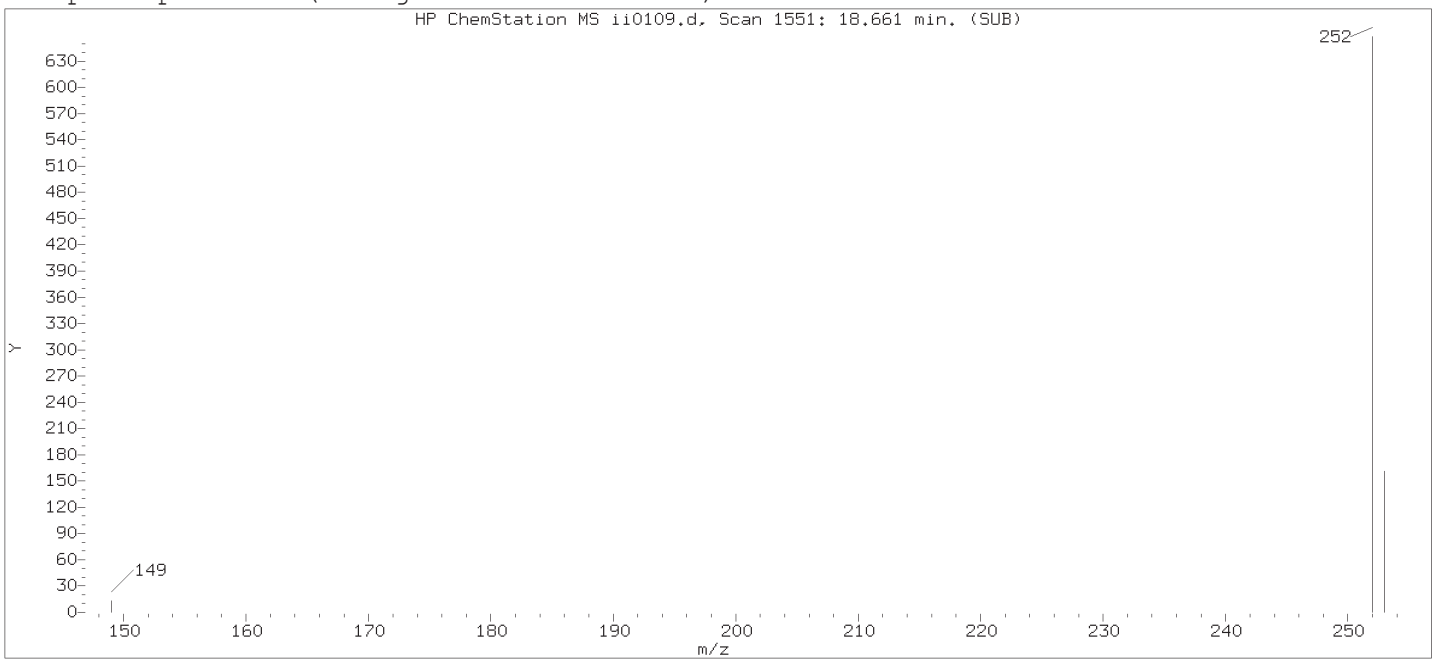
Compound Number	: 52		
Compound Name	: Perylene		
Scan Number	: 1551		
Retention Time (minutes)	: 18.661		
Quant Ion	: 252.00		
Area (flag)	: 1649M		
On-Column Amount (ng/ul)	: 0.0057		
Integration start scan	: 1546	Integration stop scan:	1554
Y at integration start	: 108	Y at integration end:	107

Reason for manual integration: improper integration

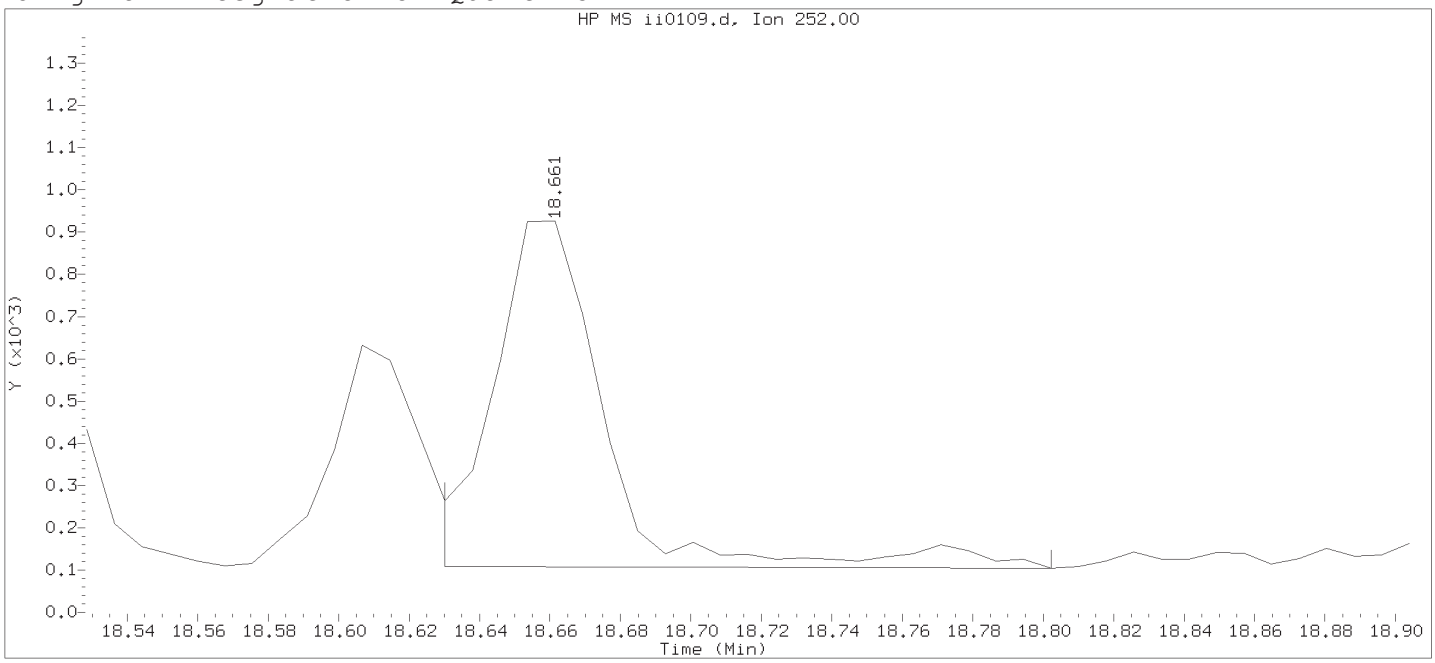
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

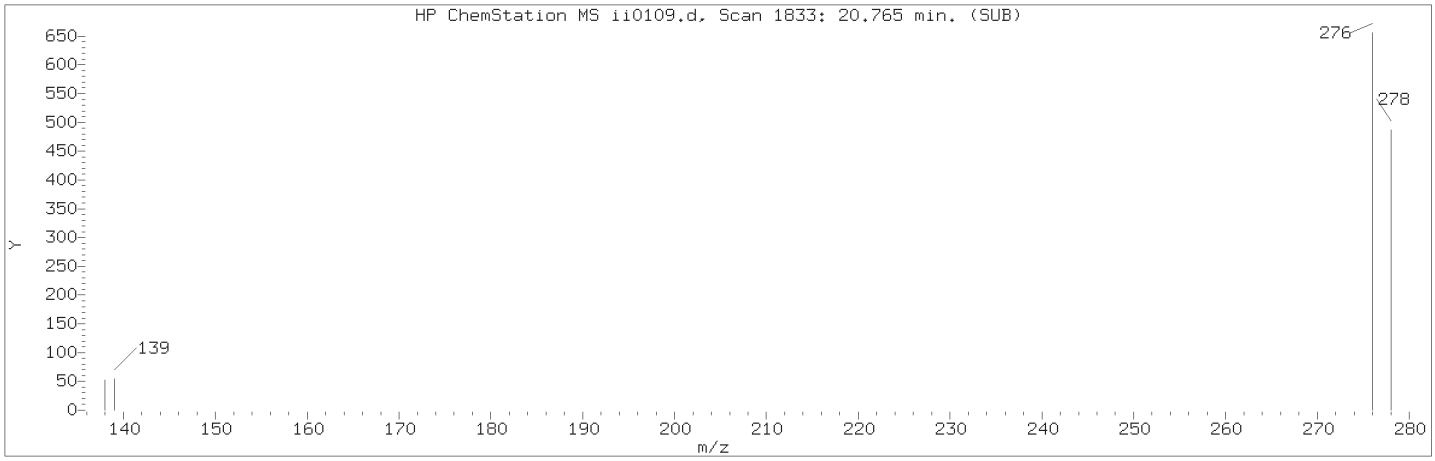
Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

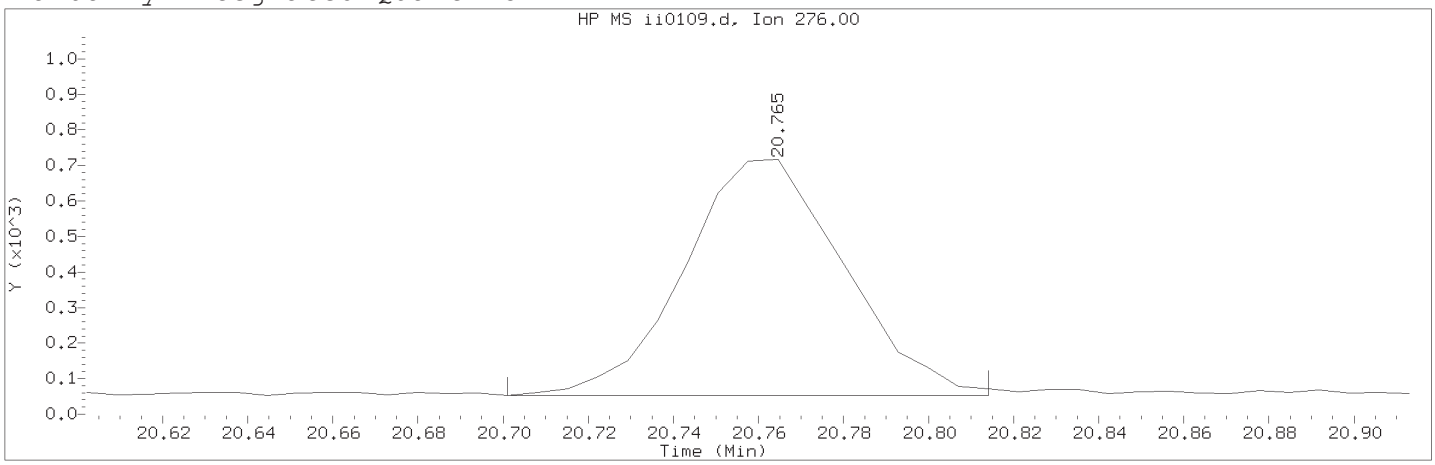
Compound Number	:	52
Compound Name	:	Perylene
Scan Number	:	1551
Retention Time (minutes)	:	18.661
Quant Ion	:	252.00
Area	:	1796
On-column Amount (ng/ul)	:	0.0062
Integration start scan	:	1546 Integration stop scan: 1568
Y at integration start	:	108 Y at integration end: 104

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg0432

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:25 jmg00346

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

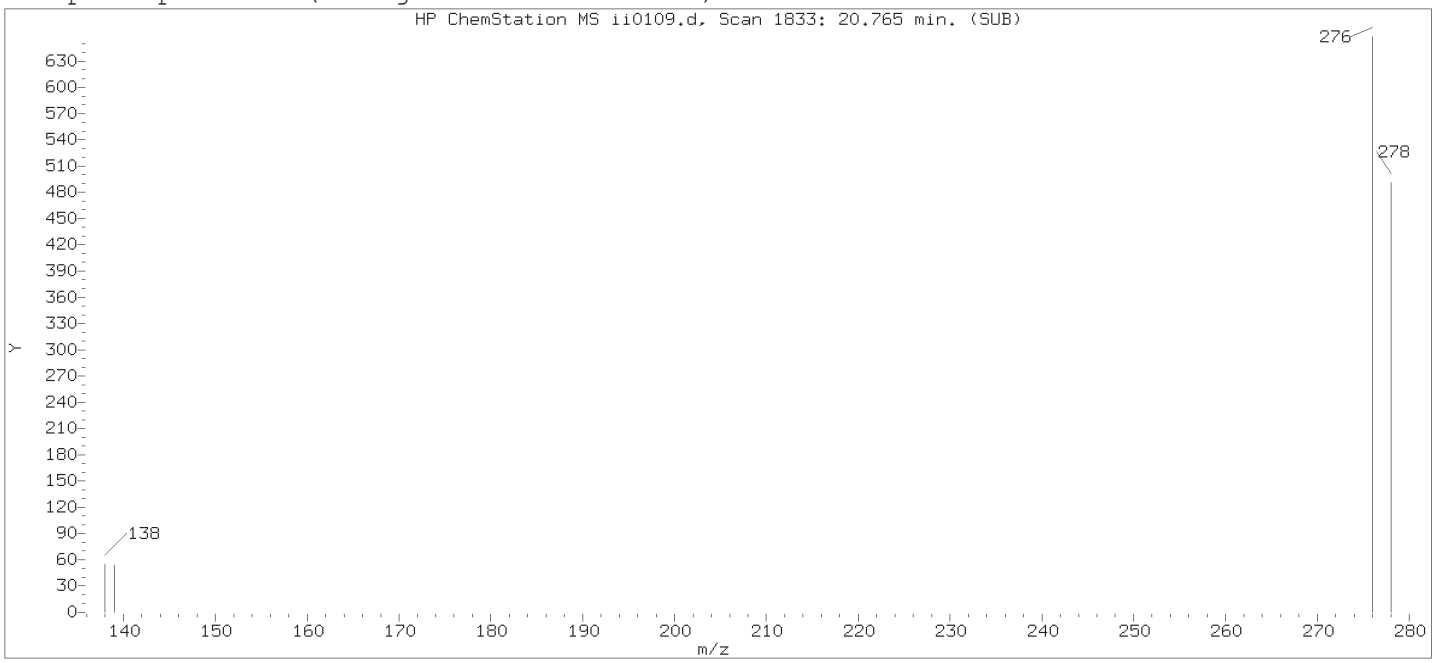
Compound Number	: 53		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 1833		
Retention Time (minutes)	: 20.765		
Quant Ion	: 276.00		
Area (flag)	: 1737M		
On-Column Amount (ng/ul)	: 0.0057		
Integration start scan	: 1823	Integration stop scan:	1839
Y at integration start	: 52	Y at integration end:	52

Reason for manual integration: improper integration

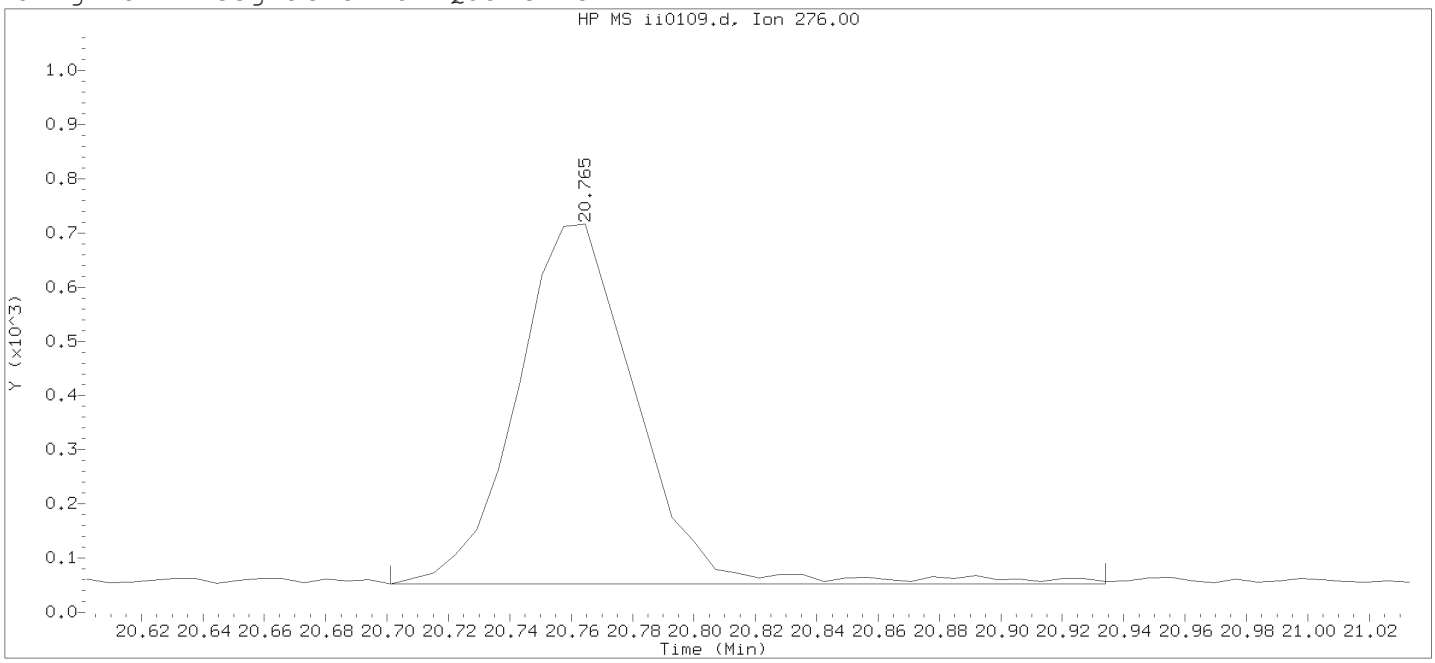
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 09/06/2018 at 07:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



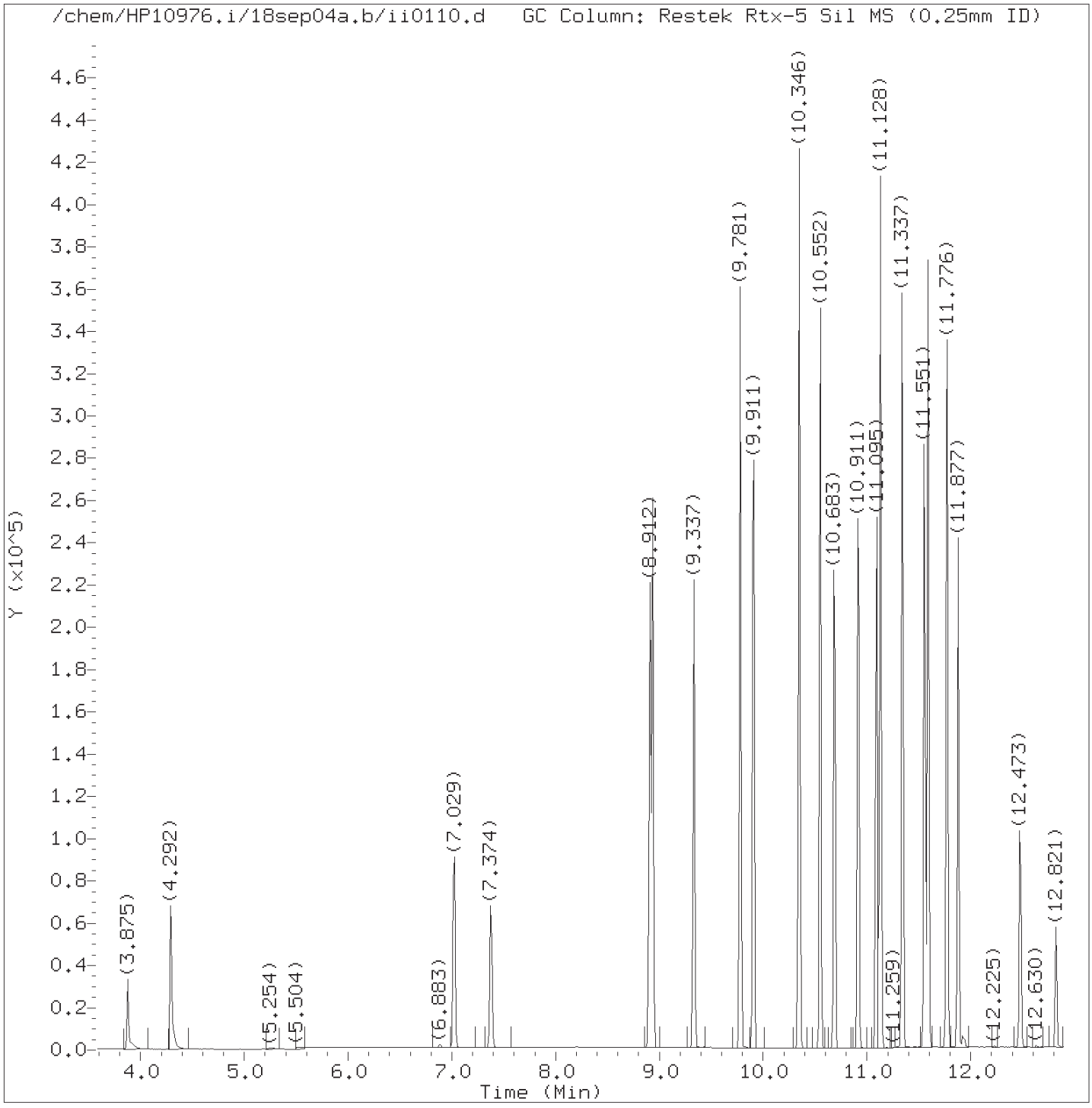
Data File: /chem/HP10976.i/18sep04a.b/ii0109.d Instrument ID: HP10976.i
Injection date and time: 04-SEP-2018 23:49 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 00:15 Automation

Sample Name: SSTD0.005 Lab Sample ID: SIM1288

Compound Number : 53
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 1833
Retention Time (minutes) : 20.765
Quant Ion : 276.00
Area : 1810
On-column Amount (ng/ul) : 0.0059
Integration start scan : 1823 Integration stop scan: 1856
Y at integration start : 52 Y at integration end: 52

Digitally signed by Joseph M. Gambler on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg0434



Total Ion Chromatogram (TIC)

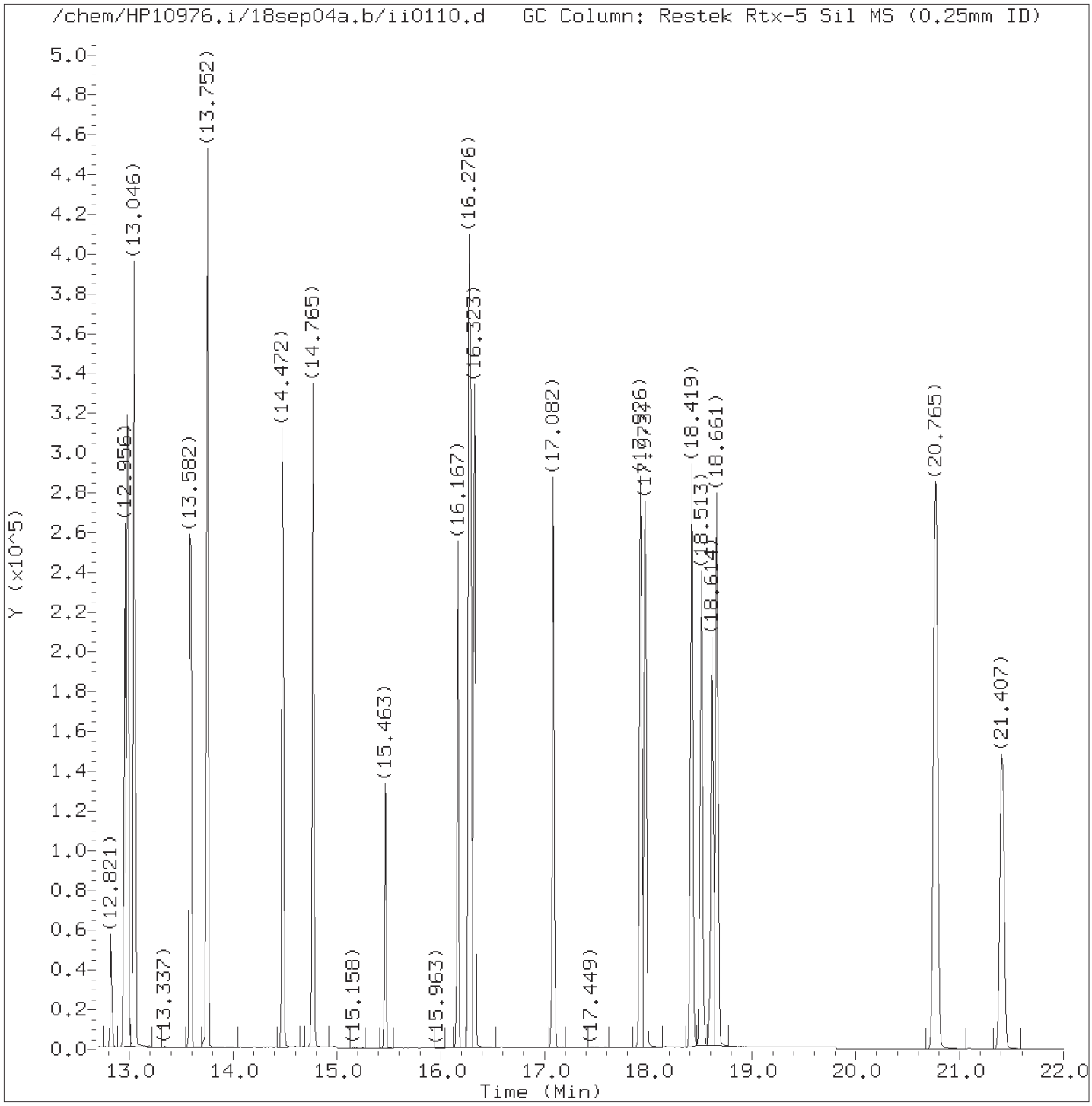
Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0110.d Instrument ID: HP10976.i
Injection date and time: 05-SEP-2018 00:19 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:28 jmg00346

Sample Name: SSTD001 Lab Sample ID: SICV1908

Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0110.d Instrument ID: HP10976.i
Injection date and time: 05-SEP-2018 00:19 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:28 jmg00346

Sample Name: SSTD001 Lab Sample ID: SICV1908

Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18sep04a.b/ii0110.d Instrument ID: HP10976.i
Injection date and time: 05-SEP-2018 00:19 Analyst ID: apb10206

Method used: /chem/HP10976.i/18sep04a.b/sim8270d.m Sublist used: all1
Calibration date and time: 04-SEP-2018 23:57
Date, time and analyst ID of latest file update: 05-Sep-2018 03:28 jmg00346

Sample Name: SSTD001 Lab Sample ID: SICV1908

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.875	88	34271	1.073
2) N-Nitrosodimethylamine	(1)	4.292	74	53859	1.105
5) bis(2-Chloroethyl)ether	(1)	7.029	93	82892	1.238
6)*1,4-Dichlorobenzene-d4	(1)	7.387	152	53345	1.000
10)*Naphthalene-d8	(2)	8.912	136	202211	1.000
11) Naphthalene	(2)	8.939	128	218267	1.048
12) Quinoline	(2)	9.337	129	143297	1.113
13) 2-Methylnaphthalene	(2)	9.781	142	161061	1.075
15) 1-Methylnaphthalene	(2)	9.911	142	152527	1.037
18) Dimethylphthalate	(3)	10.683	163	213133	1.157
19) Acenaphthylene	(3)	10.911	152	257537	1.076
20)*Acenaphthene-d10	(3)	11.095	164	124922	1.000
21) Acenaphthene	(3)	11.128	154	161228	1.025
22) Dibenzofuran	(3)	11.337	168	263206	1.080
23) Diethylphthalate	(3)	11.551	149	204025	1.135
26) Fluorene	(3)	11.776	166	210744	1.088
28) NDPA as diphenylamine	(4)	11.877	169	120583	1.027
27) N-Nitrosodiphenylamine	(4)	11.877	169	120583	1.027
29) Hexachlorobenzene	(4)	12.484	284	98579	1.193
31)*Phenanthrene-d10	(4)	12.956	188	281922	1.000
32) Phenanthrene	(4)	12.990	178	319382	1.049
33) Anthracene	(4)	13.046	178	323696	1.061
35) Di-n-butylphthalate	(4)	13.594	149	324426	1.113
37) Fluoranthene	(4)	14.472	202	396995	1.047
39) Pyrene	(5)	14.765	202	406254	1.040
40) Butylbenzylphthalate	(5)	15.463	149	132819	1.075
41) bis(2-Ethylhexyl)phthalate	(5)	16.167	149	196816	1.060
42) Benzo(a)anthracene	(5)	16.276	228	377008	1.038
43)*Chrysene-d12	(5)	16.292	240	282330	1.000
44) Chrysene	(5)	16.323	228	347595	1.002
45) Di-n-octylphthalate	(6)	17.082	149	336052	1.069
46) Benzo(b)fluoranthene	(6)	17.926	252	370830	1.037
47) Benzo(k)fluoranthene	(6)	17.973	252	358541	1.070
48) Benzo(e)pyrene	(6)	18.419	252	402759	1.151
50) Benzo(a)pyrene	(6)	18.513	252	332151	1.084
51)*Perylene-d12	(6)	18.614	264	287393	1.000
52) Perylene	(6)	18.661	252	392101	1.149
53) Indeno(1,2,3-cd)pyrene	(6)	20.765	276	394573	1.092
54) Dibenz(a,h)anthracene	(6)	20.772	278	312958	1.061
55) Benzo(g,h,i)perylene	(6)	21.407	276	358963	1.130

* = Compound is an internal standard.

Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: jmg00346

* = Compound is an internal standard.

Digitally signed by Joseph M. Gambler
on 09/05/2018 at 03:58.
Target 3.5 esignature user ID: img00346

Data File: /chem/HP10976.i/18nov07.b/ik0300.d

Date : 07-NOV-2018 17:14

Client ID: DFTPP

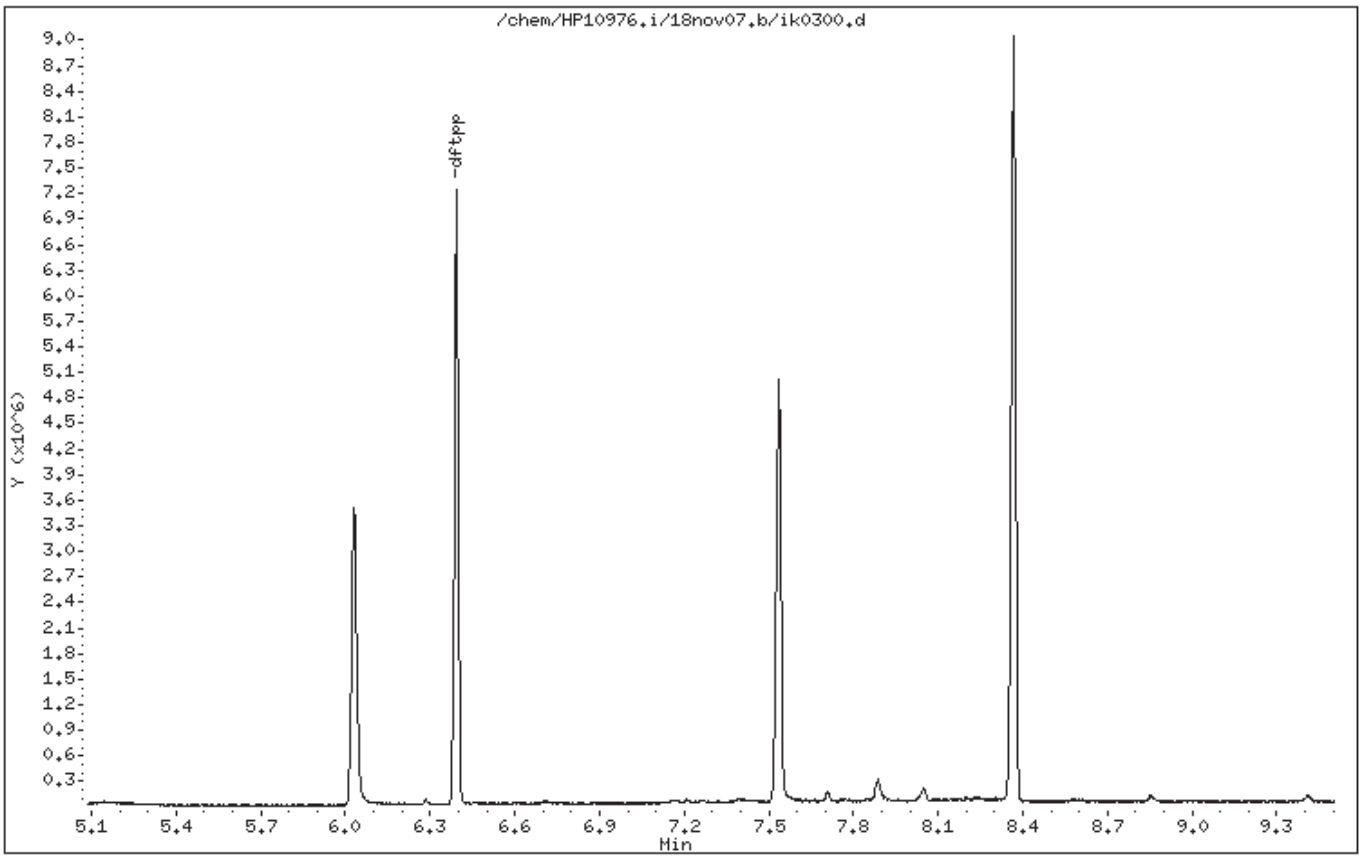
Instrument: HP10976.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Anthony P. Bauer on 11/07/2018 at 18:15.
Target 3.5 esignature user ID: apb10206

Data File: /chem/HP10976.i/18nov07.b/ik0300.d

Date : 07-NOV-2018 17:14

Client ID: DFTPP

Instrument: HP10976.i

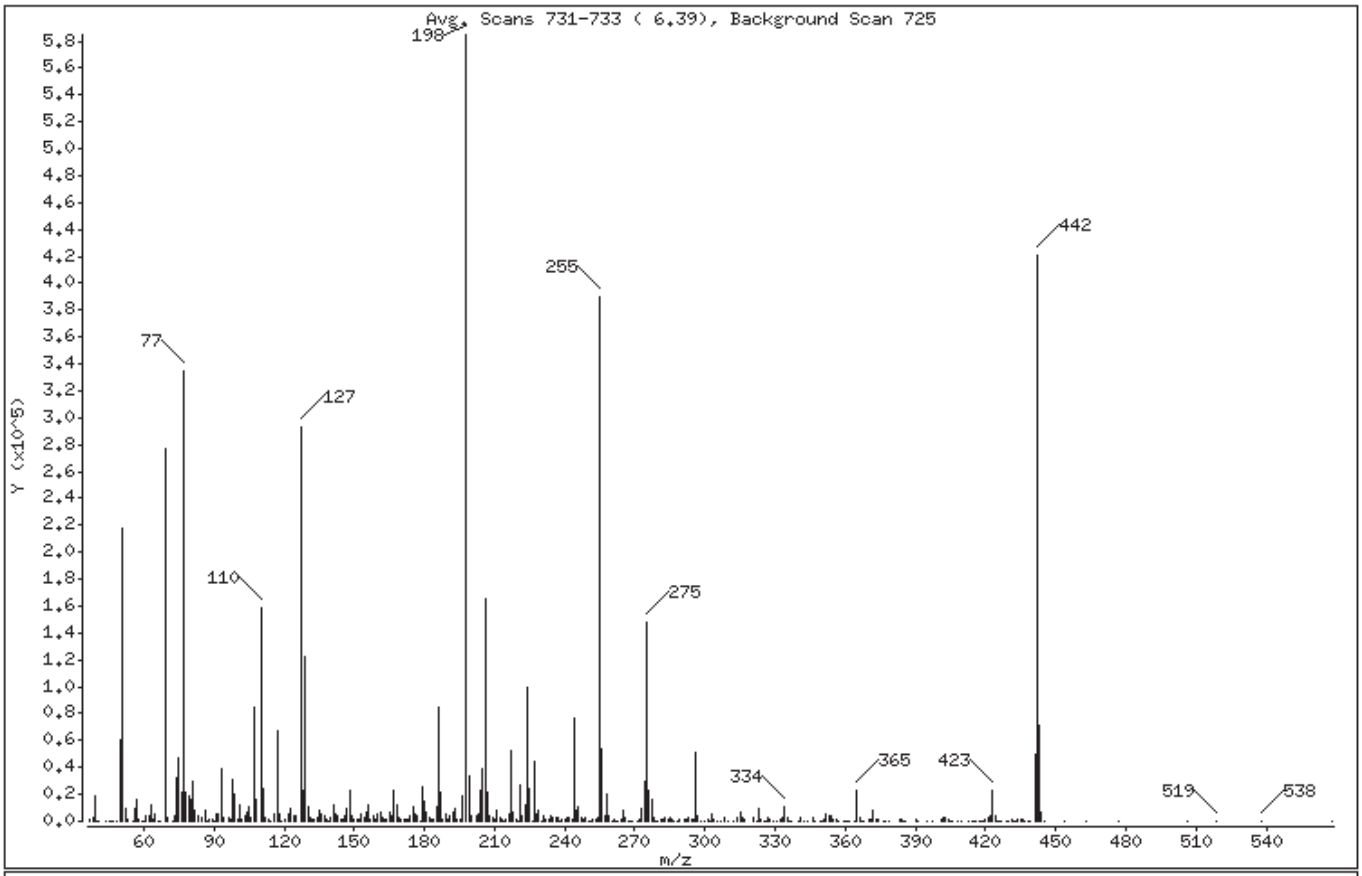
Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	37.31
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	47.41
70	Less than 2.00% of mass 69	0.35 (0.74)
127	10.00 - 80.00% of mass 198	50.12
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	5.73
275	10.00 - 60.00% of mass 198	25.36
365	Greater than 1.00% of mass 198	3.90
441	0.01 - 24.00% of mass 442	8.58 (11.91)
442	50.00 - 99.99% of mass 198	72.03
443	15.00 - 24.00% of mass 442	12.29 (17.07)

Digitally signed by Anthony P. Bauer on 11/07/2018 at 18:15.
Target 3.5 esignature user ID: apb10206

Date : 07-NOV-2018 17:14

Client ID: DFTPP Instrument: HP10976.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

Data File: ik0300.d
Spectrum: Avg. Scans 731-733 (6.39), Background Scan 725
Location of Maximum: 198.00
Number of points: 362

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	997	140.00	2709	233.00	692	335.00	2675
38.00	3102	141.00	11965	234.00	4420	336.00	563
39.00	18968	142.00	5289	235.00	2768	337.00	74
40.00	615	143.00	4357	236.00	2206	340.00	83
41.00	248	144.00	765	237.00	2200	341.00	2893
44.00	115	145.00	988	238.00	437	342.00	581
45.00	68	146.00	3974	239.00	1209	344.00	208
46.00	129	147.00	9414	240.00	1386	346.00	2155
47.00	227	148.00	22336	241.00	2744	347.00	267
48.00	127	149.00	4512	242.00	3211	349.00	365
50.00	60400	150.00	1848	243.00	1839	350.00	65
51.00	218176	151.00	1930	244.00	77216	351.00	902
52.00	9132	152.00	1350	245.00	8273	352.00	5211
53.00	751	153.00	5334	246.00	11092	353.00	3388
55.00	91	154.00	2514	247.00	2941	354.00	3373
56.00	9227	155.00	7220	248.00	1633	355.00	1240
57.00	15635	156.00	11569	249.00	2451	356.00	1053
58.00	1476	157.00	2008	250.00	258	357.00	283
59.00	312	158.00	3851	251.00	459	359.00	258
60.00	365	159.00	1688	252.00	1150	360.00	550
61.00	3784	160.00	4977	253.00	996	361.00	104
62.00	4009	161.00	6451	254.00	2299	362.00	329
63.00	11491	162.00	2380	255.00	390400	364.00	176
64.00	712	163.00	1142	256.00	53152	365.00	22824
65.00	5979	164.00	1035	257.00	3600	366.00	2407
66.00	34	165.00	7367	258.00	20312	367.00	616
67.00	538	166.00	4100	259.00	3948	368.00	395
69.00	277248	167.00	22368	260.00	519	370.00	942
70.00	2040	168.00	11967	261.00	1115	371.00	718
72.00	423	169.00	2964	262.00	83	372.00	7690
73.00	4161	170.00	1188	263.00	175	373.00	1046
74.00	32624	171.00	1708	264.00	1381	374.00	729
75.00	47616	172.00	1184	265.00	8501	376.00	150
76.00	21928	173.00	1148	266.00	2048	377.00	91
77.00	334144	174.00	4029	267.00	459	379.00	115

Digitally signed by Anthony P. Bauer on 11/07/2018 at 18:15.
Target 3.5 esignature user ID: apb10206

Date : 07-NOV-2018 17:14

Client ID: DFTPP Instrument: HP10976.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

Data File: ik0300.d
Spectrum: Avg. Scans 731-733 (6.39), Background Scan 725
Location of Maximum: 198.00
Number of points: 362

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	21584	175.00	10330	268.00	496	383.00	1244
79.00	18672	176.00	5486	269.00	180	384.00	873
80.00	15688	177.00	4536	271.00	570	385.00	54
81.00	29320	178.00	536	272.00	827	386.00	106
82.00	7619	179.00	25632	273.00	8962	390.00	1268
83.00	3862	180.00	14385	274.00	29296	391.00	537
85.00	2991	181.00	7369	275.00	148288	395.00	155
86.00	7992	182.00	2293	276.00	22632	397.00	268
87.00	346	183.00	1654	277.00	16608	401.00	1124
88.00	936	184.00	1820	278.00	2750	402.00	3307
89.00	687	185.00	11185	279.00	614	403.00	2973
90.00	242	186.00	84176	280.00	358	404.00	1558
91.00	5687	187.00	21688	281.00	1024	405.00	115
92.00	5117	188.00	2013	282.00	765	406.00	101
93.00	39624	189.00	5099	283.00	2103	408.00	69
94.00	2077	190.00	1674	284.00	961	410.00	161
96.00	2729	191.00	3579	285.00	2474	413.00	149
97.00	1316	192.00	6088	286.00	986	414.00	75
98.00	30784	193.00	9187	287.00	103	415.00	164
99.00	19544	194.00	1434	288.00	377	416.00	558
100.00	1789	195.00	1963	289.00	1257	417.00	593
101.00	12508	196.00	19464	291.00	694	418.00	325
102.00	917	198.00	584832	292.00	1088	419.00	419
103.00	3404	199.00	33520	293.00	2083	420.00	725
104.00	6414	200.00	4181	294.00	1793	421.00	3140
105.00	10127	202.00	4209	295.00	710	422.00	3744
106.00	2153	203.00	4894	296.00	51024	423.00	22792
107.00	84272	204.00	22800	297.00	4562	424.00	4450
108.00	16219	205.00	39416	298.00	627	425.00	477
110.00	159296	206.00	165696	300.00	97	426.00	77
111.00	24664	207.00	21304	301.00	1013	427.00	482
112.00	2523	208.00	4441	302.00	598	429.00	366
113.00	1427	209.00	2357	303.00	5313	430.00	326
114.00	485	210.00	1644	304.00	1386	431.00	1470
116.00	6028	211.00	7822	305.00	185	432.00	592

Digitally signed by Anthony P. Bauer on 11/07/2018 at 18:15.
Target 3.5 esignature user ID: apb10206

Date : 07-NOV-2018 17:14

Client ID: DFTPP Instrument: HP10976.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

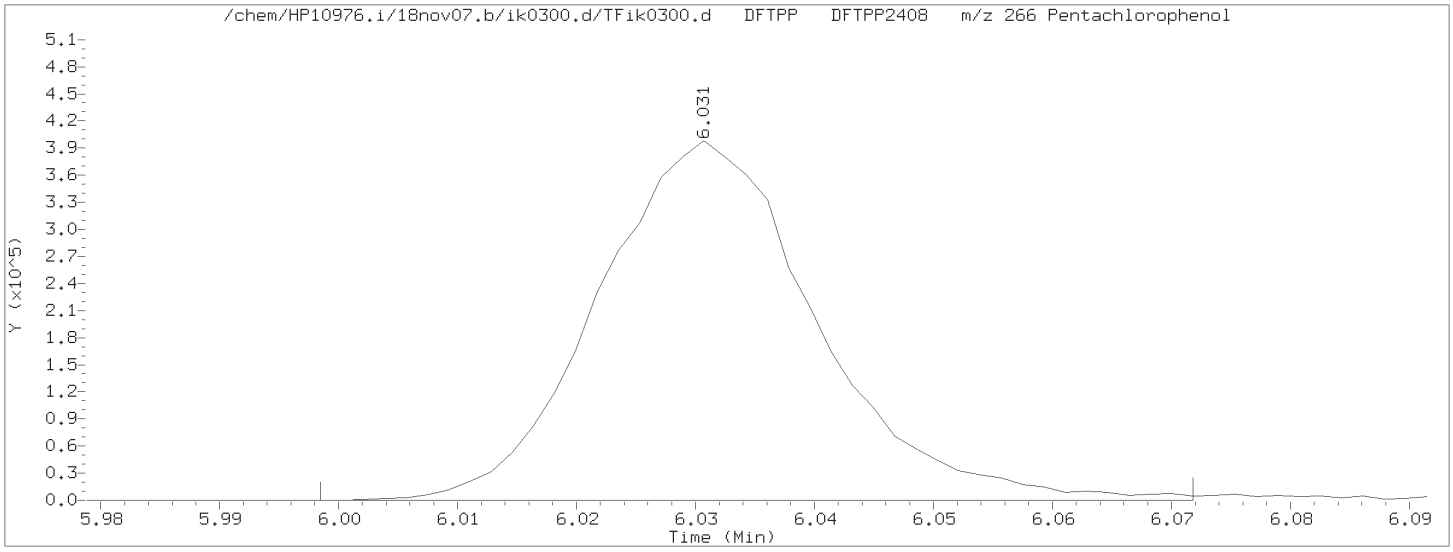
Data File: ik0300.d
Spectrum: Avg. Scans 731-733 (6.39), Background Scan 725
Location of Maximum: 198.00
Number of points: 362

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	67424	212.00	3193	307.00	326	433.00	418
118.00	5025	213.00	851	308.00	2104	434.00	1009
119.00	598	214.00	190	310.00	336	435.00	1454
120.00	1016	215.00	1642	312.00	179	436.00	1005
122.00	5931	216.00	5424	314.00	3133	437.00	343
123.00	9170	217.00	51944	315.00	6378	438.00	522
124.00	4407	218.00	6985	316.00	2984	439.00	88
125.00	3805	219.00	686	317.00	812	441.00	50184
127.00	293056	220.00	321	321.00	2701	442.00	421248
128.00	22736	221.00	27368	322.00	191	443.00	71888
129.00	122992	222.00	4170	323.00	9075	444.00	7318
130.00	10699	223.00	11726	324.00	943	445.00	78
131.00	2610	224.00	99888	325.00	585	454.00	94
132.00	884	225.00	24408	326.00	150	463.00	80
133.00	1358	226.00	511	327.00	2655	477.00	86
134.00	2756	227.00	44872	328.00	1905	506.00	116
135.00	8628	228.00	6027	329.00	346	519.00	129
136.00	4890	229.00	8208	331.00	270	538.00	66
137.00	4046	230.00	399	332.00	1608	568.00	63
138.00	957	231.00	4286	333.00	2114		
139.00	582	232.00	736	334.00	10181		

Digitally signed by Anthony P. Bauer on 11/07/2018 at 18:15.
Target 3.5 esignature user ID: apb10206

Assessment of GC Column Performance and Injection Port Inertness for

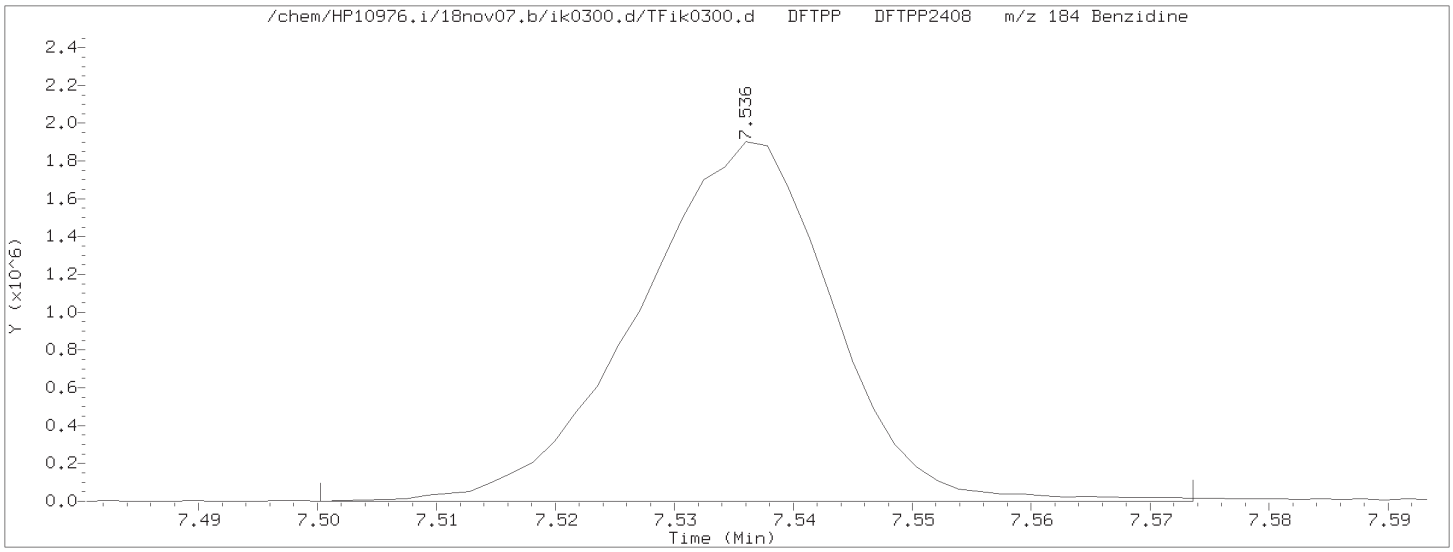
Instrument ID: HP10976.i Injection Date: 07-NOV-2018 17:14 Operator: apb10206



Pentachlorophenol EICP peak height = 398336 EICP peak height at 10% = 39834 Pentachlorophenol EICP area = 506974

Pentachlorophenol EICP peak apex (min.) = 6.031
RT at 10% of front half of EICP (min.) = 6.014 'Front' peak width (min.) = 0.0170000000
RT at 10% of back half of EICP (min.) = 6.051 'Tailing' peak width (min.) = 0.0199666667

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0199666667}{0.0170000000} = 1.175$



Benzidine EICP peak height = 1903104 EICP peak height at 10% = 190310 Benzidine EICP area = 2161003

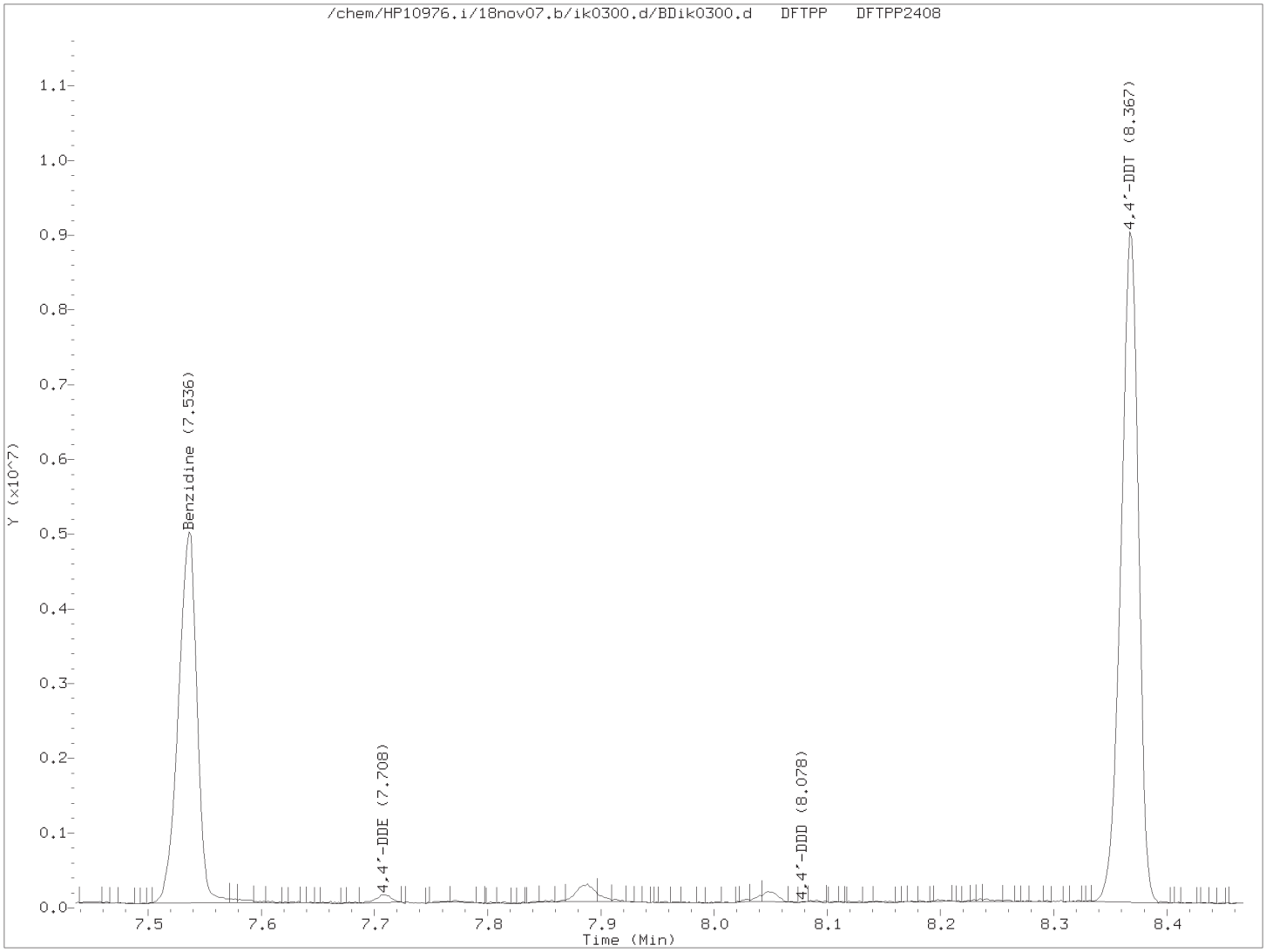
Benzidine EICP peak apex (min.) = 7.536
RT at 10% of front half of EICP (min.) = 7.518 'Front' peak width (min.) = 0.0181500000
RT at 10% of back half of EICP (min.) = 7.550 'Tailing' peak width (min.) = 0.0140500000

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0140500000}{0.0181500000} = 0.774$

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 13:58. PARALLAX ID: ild00415

Assessment of GC Column Performance and Injection Port Inertness for

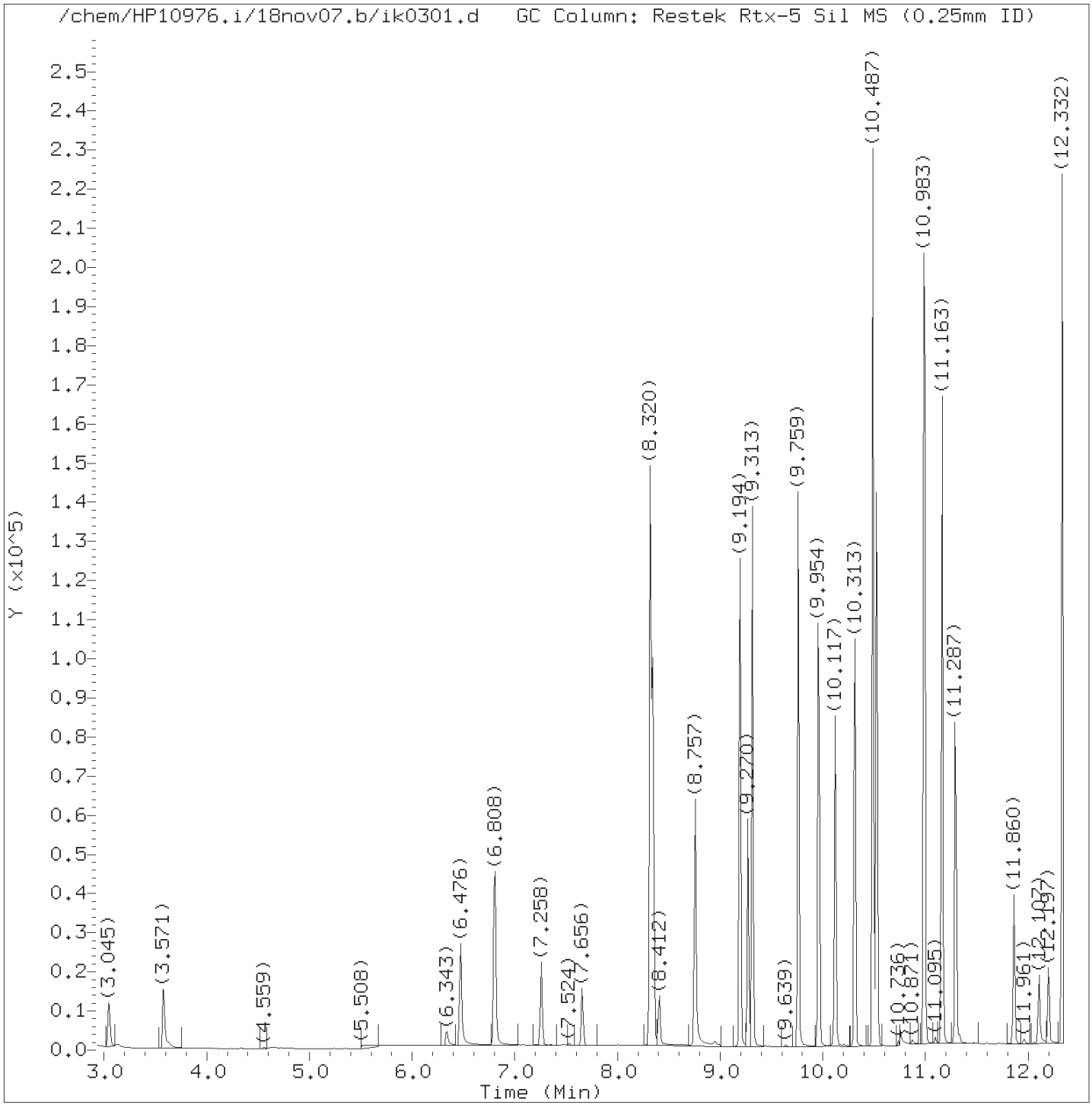
Instrument ID: HP10976.i Injection Date: 07-NOV-2018 17:14 Operator: apb10206



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{98238 + 2520}{98238 + 2520 + 9664895} \times 100 = 1.0$$

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 13:58. PARALLAX ID: ild00415



Total Ion Chromatogram (TIC)

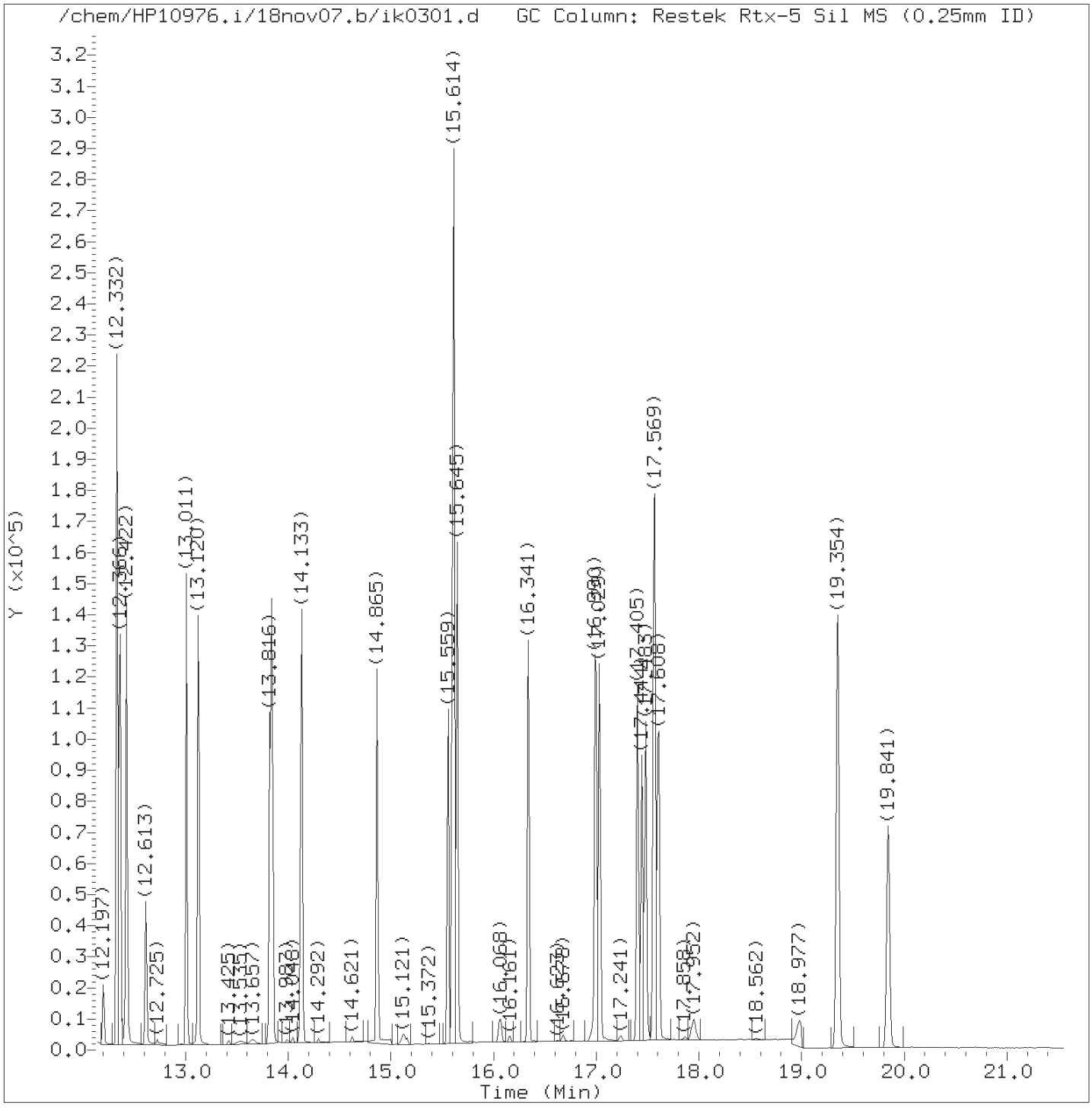
Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0301.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 17:32 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov06.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-NOV-2018 18:02
Date, time and analyst ID of latest file update: 07-Nov-2018 18:02 apb10206

Sample Name: SSTD0.50 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 11/07/2018 at 18:15.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0301.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 17:32 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov06.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-NOV-2018 18:02
Date, time and analyst ID of latest file update: 07-Nov-2018 18:02 apb10206

Sample Name: SSTD0.50 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 11/07/2018 at 18:15.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0301.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 17:32 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov06.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-NOV-2018 18:02
Date, time and analyst ID of latest file update: 07-Nov-2018 18:02 apb10206

Sample Name: SSTD0.50 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.045	88	11342M	0.432
2) N-Nitrosodimethylamine	(1)	3.578	74	18154	0.453
5) bis(2-Chloroethyl)ether	(1)	6.476	93	25495	0.463
6)*1,4-Dichlorobenzene-d4	(1)	6.808	152	43881	1.000
10)*Naphthalene-d8	(2)	8.320	136	160275	1.000
11) Naphthalene	(2)	8.346	128	86995	0.527
12) Quinoline	(2)	8.757	129	53905	0.528
13) 2-Methylnaphthalene	(2)	9.194	142	62062	0.522
14)$1-Methylnaphthalene-d10	(2)	9.270	152	47378	0.485
15) 1-Methylnaphthalene	(2)	9.313	142	62071	0.533
18) Dimethylphthalate	(3)	10.117	163	77779	0.521
19) Acenaphthylene	(3)	10.313	152	96528	0.498
20)*Acenaphthene-d10	(3)	10.487	164	101156	1.000
21) Acenaphthene	(3)	10.519	154	63866	0.501
22) Dibenzofuran	(3)	10.758	168	4742	0.024
23) Diethylphthalate	(3)	10.983	149	77541	0.533
26) Fluorene	(3)	11.163	166	78979	0.504
28) NDPA as diphenylamine	(4)	11.287	169	51181	0.552
27) N-Nitrosodiphenylamine	(4)	11.287	169	51181	0.552
29) Hexachlorobenzene	(4)	11.860	284	33393	0.512
31)*Phenanthrene-d10	(4)	12.332	188	222571	1.000
32) Phenanthrene	(4)	12.366	178	124077	0.516
33) Anthracene	(4)	12.422	178	124829	0.518
35) Di-n-butylphthalate	(4)	13.011	149	131878	0.573
36)$Fluoranthene-d10	(4)	13.816	212	135964	0.493
37) Fluoranthene	(4)	13.840	202	154893	0.517
39) Pyrene	(5)	14.133	202	158623	0.500
40) Butylbenzylphthalate	(5)	14.865	149	51296	0.511
41) bis(2-Ethylhexyl)phthalate	(5)	15.559	149	85805	0.569
42) Benzo(a)anthracene	(5)	15.598	228	145457	0.493
43)*Chrysene-d12	(5)	15.614	240	229303	1.000
44) Chrysene	(5)	15.645	228	147125	0.522
45) Di-n-octylphthalate	(6)	16.341	149	140488	0.557
46) Benzo(b)fluoranthene	(6)	16.990	252	146232	0.510
47) Benzo(k)fluoranthene	(6)	17.029	252	140083	0.521
48) Benzo(e)pyrene	(6)	17.405	252	139596	0.497
49)$Benzo(a)pyrene-d12	(6)	17.444	264	110292	0.501
50) Benzo(a)pyrene	(6)	17.483	252	126319	0.514
51)*Perylene-d12	(6)	17.569	264	230626	1.000
52) Perylene	(6)	17.608	252	135099	0.493

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/07/2018 at 18:15.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0301.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 17:32 Analyst ID: apb10206

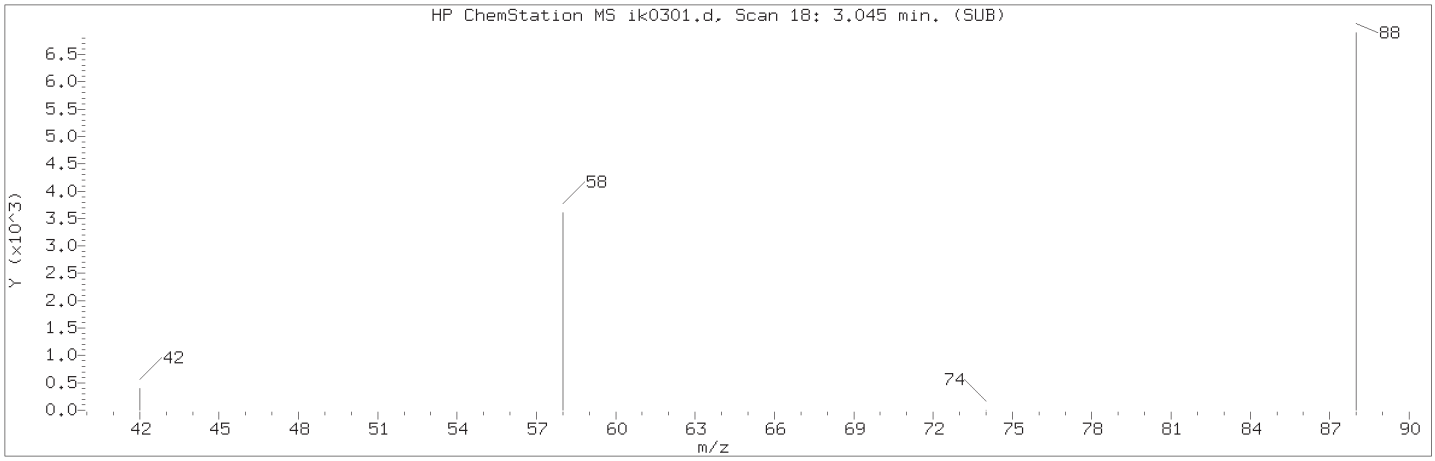
Method used: /chem/HP10976.i/18nov06.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-NOV-2018 18:02
Date, time and analyst ID of latest file update: 07-Nov-2018 18:02 apb10206

Sample Name: SSTD0.50 Lab Sample ID: SIM2598

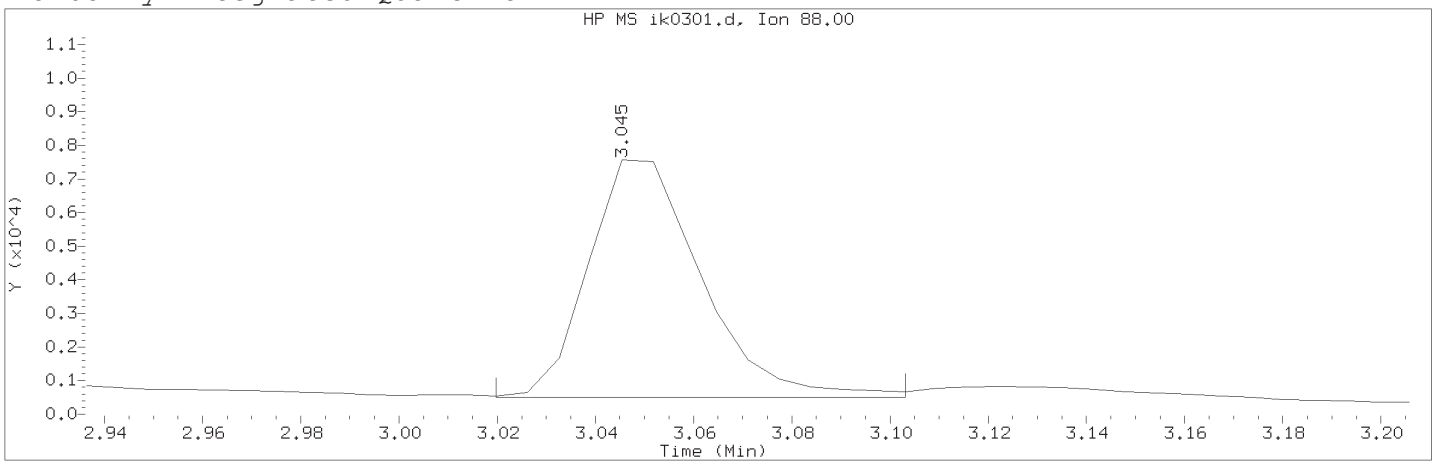
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	19.347	276	143959	0.497
54) Dibenz(a,h)anthracene	(6)	19.354	278	122159	0.516
55) Benzo(g,h,i)perylene	(6)	19.841	276	139563	0.548

Digitally signed by Anthony P. Bauer
on 11/07/2018 at 18:15.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0301.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 17:32 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov06.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-NOV-2018 18:02
Date, time and analyst ID of latest file update: 07-Nov-2018 18:02 apb10206

Sample Name: SSTD0.50 Lab Sample ID: SIM2598

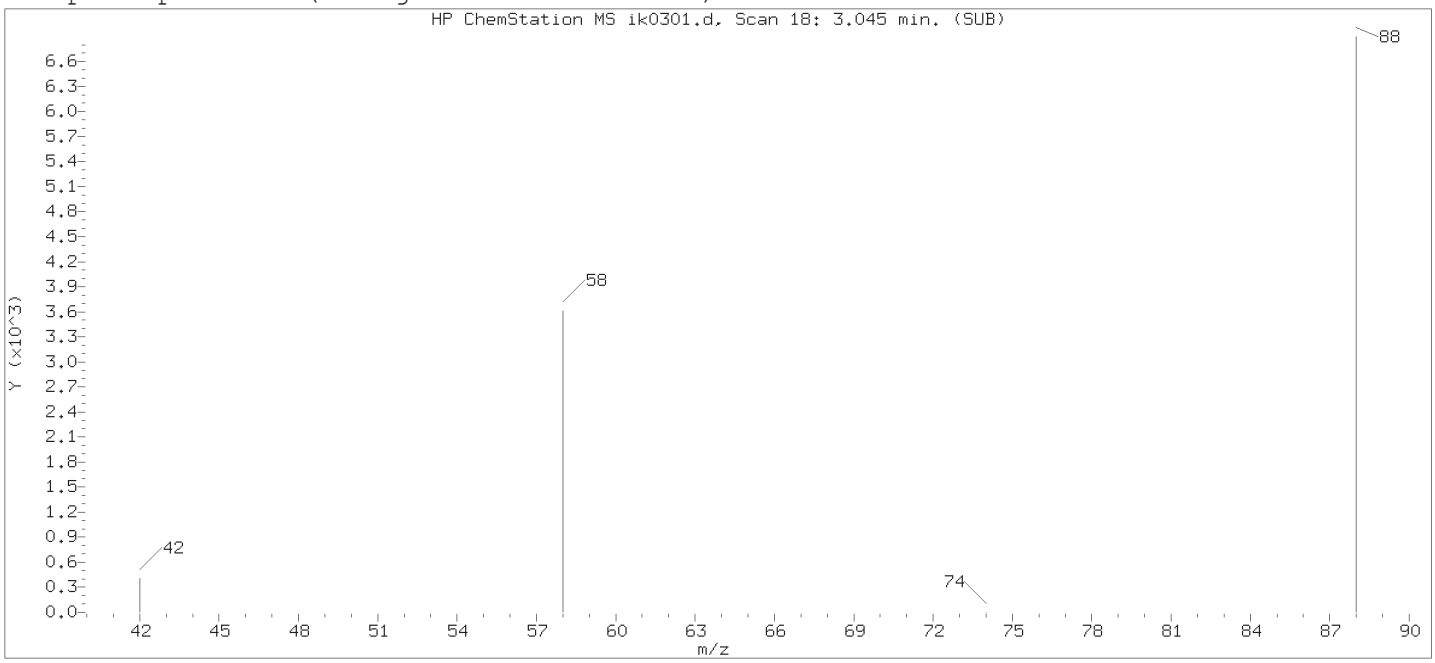
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 18		
Retention Time (minutes)	: 3.045		
Quant Ion	: 88.00		
Area (flag)	: 11342M		
On-Column Amount (ng/ul)	: 0.4318		
Integration start scan	: 13	Integration stop scan:	26
Y at integration start	: 501	Y at integration end:	501

Reason for manual integration: improper integration

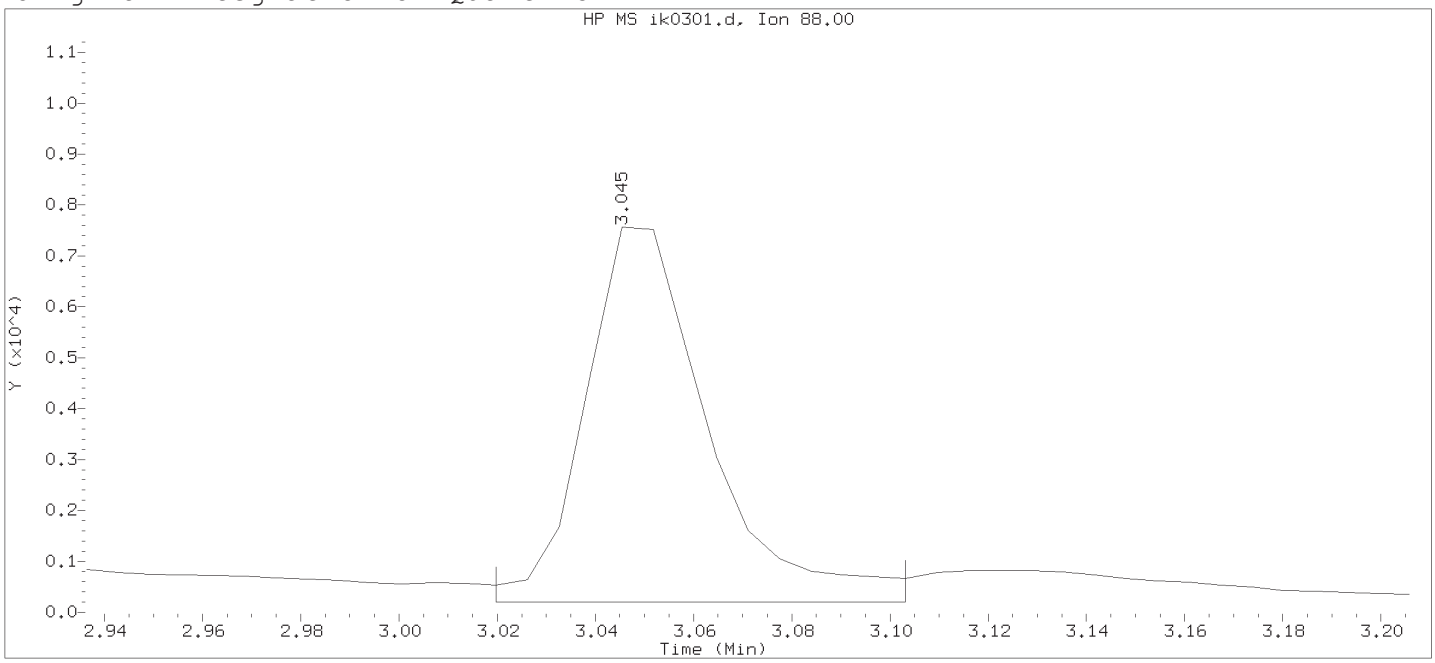
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/07/2018 at 18:15.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 13:58.
PARALLAX ID: ild00415

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



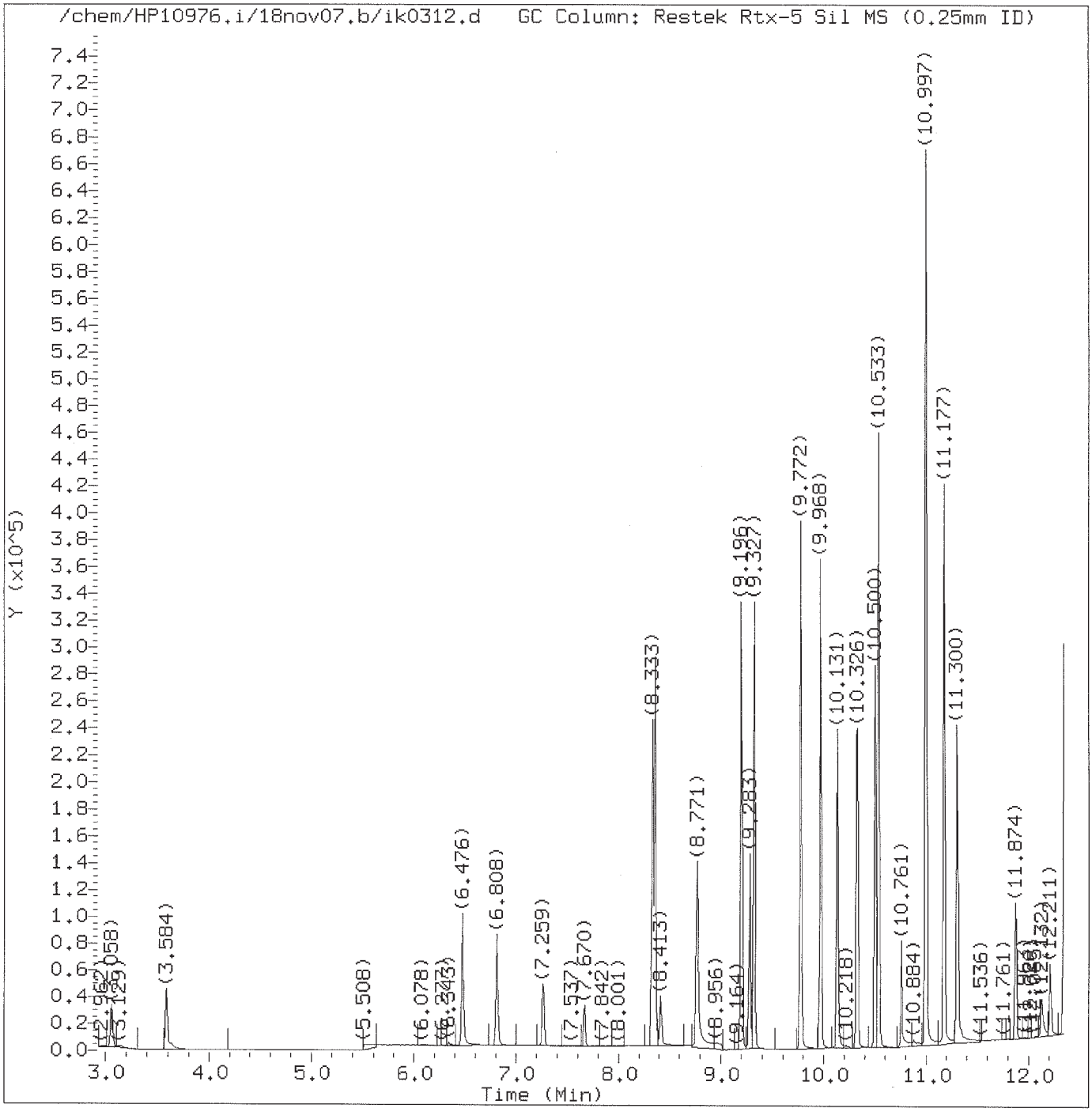
Data File: /chem/HP10976.i/18nov07.b/ik0301.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 17:32 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov06.b/sim8270d.m Sublist used: all1
Calibration date and time: 07-NOV-2018 17:58
Date, time and analyst ID of latest file update: 07-Nov-2018 17:58 Automation

Sample Name: SSTD0.50 Lab Sample ID: SIM2598

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 18		
Retention Time (minutes)	: 3.045		
Quant Ion	: 88.00		
Area	: 12820		
On-column Amount (ng/ul)	: 0.4880		
Integration start scan	: 13	Integration stop scan:	26
Y at integration start	: 198	Y at integration end:	198

Digitally signed by Anthony P. Bauer on 11/07/2018 at 18:15.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0312.d
Injection date and time: 08-NOV-2018 00:13

Instrument ID: HP10976.i
Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m
Calibration date and time: 07-NOV-2018 18:18

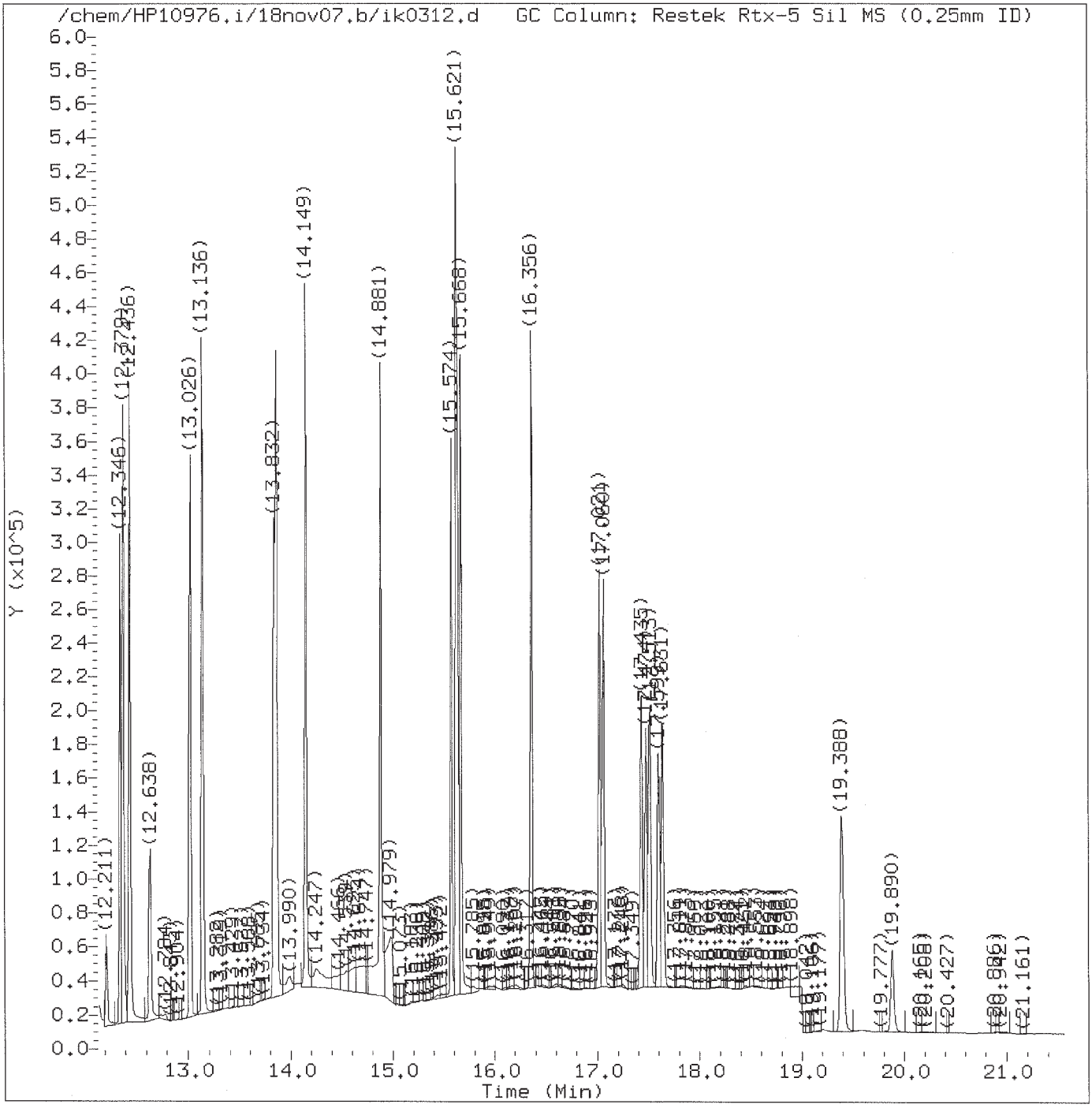
Sublist used: 25804

Date, time and analyst ID of latest file update: 08-Nov-2018 07:42 jmg00346

Sample Name: SECC1

Lab Sample ID: SIM2598

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0312.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 00:13 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:42 jmg00346

Sample Name: SECC1 Lab Sample ID: SIM2598

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0312.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 00:13 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:42 jmg00346

Sample Name: SECC1 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.058	88	32991	0.923
6)*1,4-Dichlorobenzene-d4	(1)	6.808	152	59732	1.000
10)*Naphthalene-d8	(2)	8.333	136	221294	1.000
11) Naphthalene	(2)	8.360	128	243249	1.067
14)$1-Methylnaphthalene-d10	(2)	9.283	152	130503	0.967
19) Acenaphthylene	(3)	10.326	152	272158	1.032
20)*Acenaphthene-d10	(3)	10.500	164	137669	1.000
21) Acenaphthene	(3)	10.533	154	174821	1.008
26) Fluorene	(3)	11.177	166	216237	1.013
31)*Phenanthrene-d10	(4)	12.346	188	301953	1.000
32) Phenanthrene	(4)	12.379	178	334141	1.024
33) Anthracene	(4)	12.436	178	357894	1.095
35) Di-n-butylphthalate	(4)	13.026	149	366412	1.174
36)$Fluoranthene-d10	(4)	13.832	212	380751	1.017
37) Fluoranthene	(4)	13.856	202	427155	1.052
39) Pyrene	(5)	14.149	202	453235	1.038
41) bis(2-Ethylhexyl)phthalate	(5)	15.574	149	249525	1.202
42) Benzo(a)anthracene	(5)	15.621	228	405706	1.000
43)*Chrysene-d12	(5)	15.637	240	315477	1.000
44) Chrysene	(5)	15.668	228	407587	1.051
46) Benzo(b)fluoranthene	(6)	17.021	252	266374	1.158
47) Benzo(k)fluoranthene	(6)	17.060	252	298332	1.383
49)$Benzo(a)pyrene-d12	(6)	17.474	264	192256	1.088
50) Benzo(a)pyrene	(6)	17.513	252	219666	1.114
51)*Perylene-d12	(6)	17.599	264	184982	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.388	276	134851	0.580
54) Dibenz(a,h)anthracene	(6)	19.396	278	126050	0.664
55) Benzo(g,h,i)perylene	(6)	19.890	276	98387	0.481

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:47.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP10976.i/18nov08.b/ik0350.d

Date : 08-NOV-2018 06:43

Client ID: DFTPP

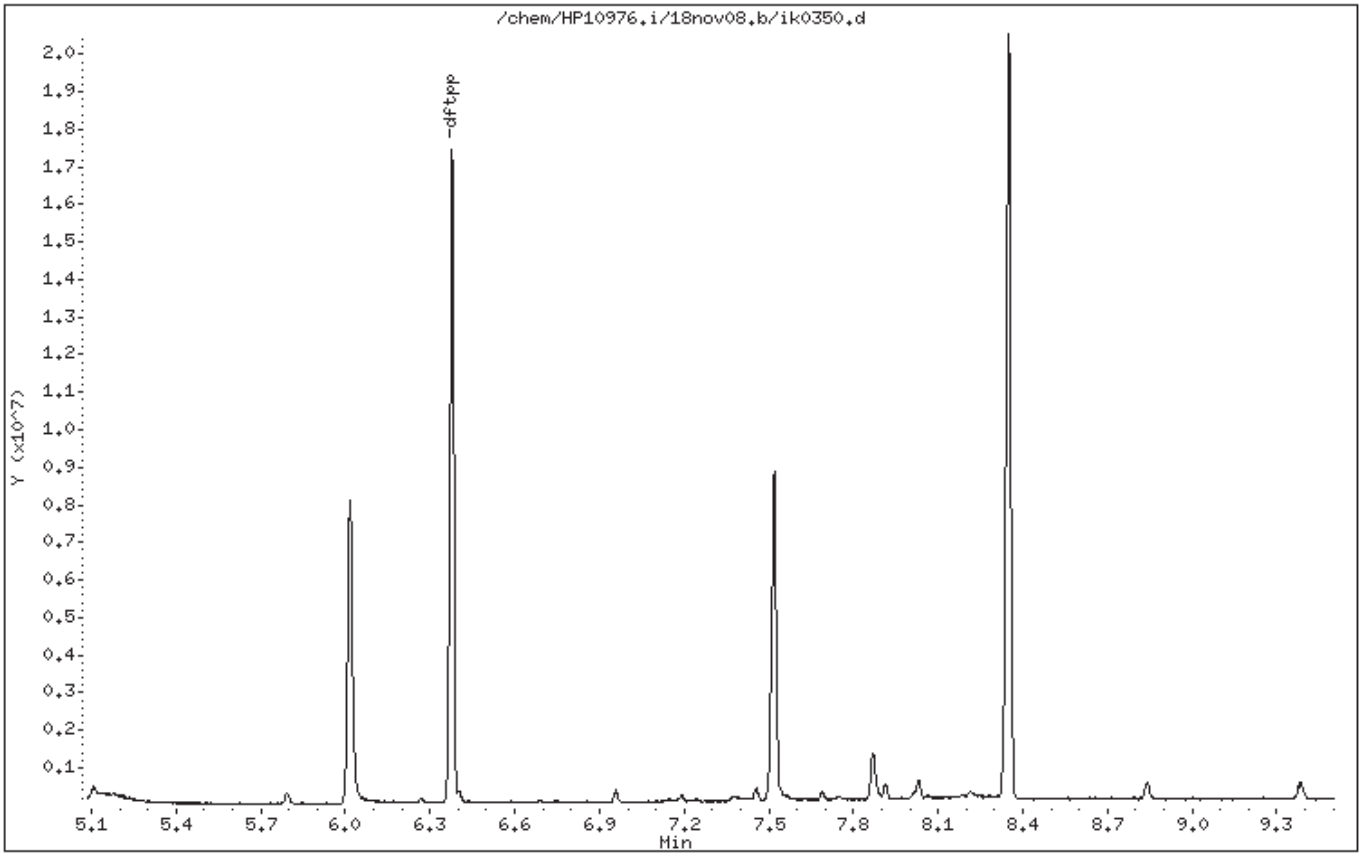
Instrument: HP10976.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Joseph M. Gambler on 11/08/2018 at 08:10.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP10976.i/18nov08.b/ik0350.d

Date : 08-NOV-2018 06:43

Client ID: DFTPP

Instrument: HP10976.i

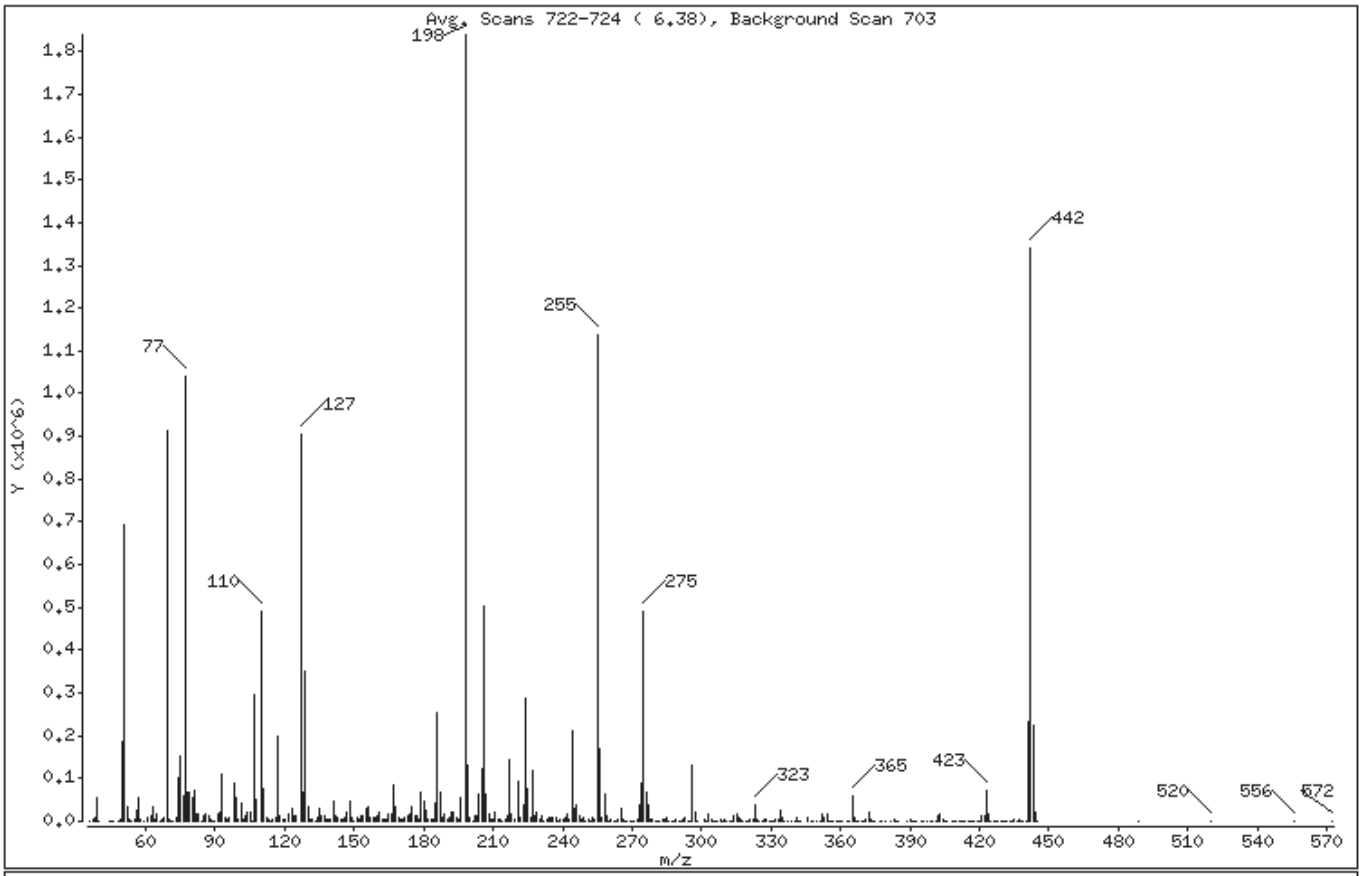
Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	37.78
68	Less than 2.00% of mass 69	0.40 (0.81)
69	Mass 69 relative abundance	49.76
70	Less than 2.00% of mass 69	0.24 (0.47)
127	10.00 - 80.00% of mass 198	49.11
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.04
275	10.00 - 60.00% of mass 198	26.60
365	Greater than 1.00% of mass 198	3.26
441	0.01 - 24.00% of mass 442	12.65 (17.38)
442	50.00 - 99.99% of mass 198	72.81
443	15.00 - 24.00% of mass 442	12.28 (16.87)

Digitally signed by Joseph M. Gambler on 11/08/2018 at 08:10.
Target 3.5 esignature user ID: jmg00346

Date : 08-NOV-2018 06:43

Client ID: DFTPP Instrument: HP10976.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

Data File: ik0350.d
Spectrum: Avg. Scans 722-724 (6.38), Background Scan 703
Location of Maximum: 198.00
Number of points: 387

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	256	142.00	13533	241.00	6664	341.00	7258
37.00	3205	143.00	7988	242.00	18528	342.00	1864
38.00	9249	144.00	3400	243.00	6112	343.00	574
39.00	56544	145.00	3297	244.00	213376	346.00	8798
40.00	1988	146.00	6909	245.00	27864	347.00	1689
44.00	264	147.00	23064	246.00	37624	348.00	507
45.00	927	148.00	47384	247.00	11689	350.00	814
46.00	52	149.00	7255	248.00	3476	351.00	640
48.00	123	150.00	1631	249.00	7579	352.00	15215
49.00	5150	151.00	6525	250.00	1386	353.00	8854
50.00	183936	152.00	2164	251.00	3297	354.00	15458
51.00	694848	153.00	14120	252.00	2017	355.00	1583
52.00	32192	154.00	12127	253.00	8438	356.00	680
53.00	2391	155.00	27776	254.00	3570	357.00	98
54.00	216	156.00	35136	255.00	1138176	358.00	941
55.00	3342	157.00	6530	256.00	170112	359.00	218
56.00	25032	158.00	7962	257.00	9741	360.00	1213
57.00	54272	159.00	6706	258.00	61824	361.00	183
58.00	2327	160.00	13141	259.00	10705	363.00	1212
59.00	1281	161.00	22792	260.00	925	364.00	428
61.00	9965	162.00	4784	261.00	2797	365.00	59936
62.00	11634	163.00	2138	262.00	309	366.00	7201
63.00	35192	164.00	3410	263.00	1832	367.00	628
64.00	5550	165.00	18720	264.00	2357	368.00	203
65.00	16044	166.00	15354	265.00	28504	369.00	173
66.00	1145	167.00	84424	266.00	3076	370.00	1696
67.00	2527	168.00	33632	267.00	541	371.00	4011
68.00	7384	169.00	8293	268.00	413	372.00	20568
69.00	915136	170.00	3058	269.00	1233	373.00	4414
70.00	4331	171.00	4228	270.00	1413	374.00	179
71.00	1288	172.00	6687	271.00	2097	375.00	186
72.00	894	173.00	12400	272.00	5793	377.00	898
73.00	7885	174.00	17512	273.00	37448	378.00	177
74.00	100776	175.00	35288	274.00	87296	379.00	392
75.00	151552	176.00	12051	275.00	489152	382.00	575

Digitally signed by Joseph M. Gambler on 11/08/2018 at 08:10.
Target 3.5 esignature user ID: jmg00346

Date : 08-NOV-2018 06:43

Client ID: DFTPP Instrument: HP10976.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

Data File: ik0350.d
Spectrum: Avg. Scans 722-724 (6.38), Background Scan 703
Location of Maximum: 198.00
Number of points: 387

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	57640	177.00	13639	276.00	65688	383.00	5700
77.00	1038016	178.00	5807	277.00	37304	384.00	1030
78.00	68152	179.00	66320	278.00	5941	385.00	842
79.00	67800	180.00	46448	279.00	3112	389.00	236
80.00	56168	181.00	25048	280.00	640	390.00	4229
81.00	72832	182.00	3432	281.00	799	391.00	900
82.00	16576	183.00	3011	282.00	897	392.00	1565
83.00	18296	184.00	3363	283.00	4283	393.00	575
84.00	882	185.00	41080	284.00	3625	395.00	788
85.00	14474	186.00	251776	285.00	8417	396.00	245
86.00	16872	187.00	69040	286.00	1856	397.00	198
87.00	10799	188.00	8154	287.00	283	399.00	86
88.00	3100	189.00	15117	288.00	951	400.00	253
89.00	1618	190.00	3402	289.00	2777	401.00	1462
90.00	368	191.00	7226	290.00	1448	402.00	11075
91.00	16189	192.00	23024	291.00	1124	403.00	15315
92.00	20064	193.00	22552	292.00	2604	404.00	4410
93.00	109072	194.00	7252	293.00	8255	405.00	679
94.00	9852	195.00	3156	294.00	1758	406.00	111
95.00	4029	196.00	52856	295.00	1182	408.00	301
96.00	6901	198.00	1839104	296.00	129360	409.00	657
98.00	89744	199.00	129448	297.00	20352	410.00	577
99.00	53984	200.00	10561	298.00	562	411.00	1277
100.00	5749	201.00	1356	301.00	2945	412.00	192
101.00	44112	202.00	12342	302.00	1308	413.00	600
102.00	3387	203.00	13529	303.00	16249	414.00	294
103.00	12980	204.00	64840	304.00	4779	415.00	854
104.00	23080	205.00	121640	305.00	762	416.00	671
105.00	20208	206.00	503424	306.00	81	417.00	143
106.00	789	207.00	61624	307.00	420	418.00	502
107.00	296512	208.00	16792	308.00	2328	419.00	306
108.00	49224	209.00	4563	309.00	1812	420.00	663
110.00	490368	210.00	5994	310.00	2144	421.00	13149
111.00	76792	211.00	19088	311.00	374	422.00	11272
112.00	8898	212.00	2214	312.00	77	423.00	70736

Digitally signed by Joseph M. Gambler on 11/08/2018 at 08:10.
Target 3.5 esignature user ID: jmg00346

Date : 08-NOV-2018 06:43

Client ID: DFTPP Instrument: HP10976.i

Sample Info: DFTPP;DFTPP2408;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

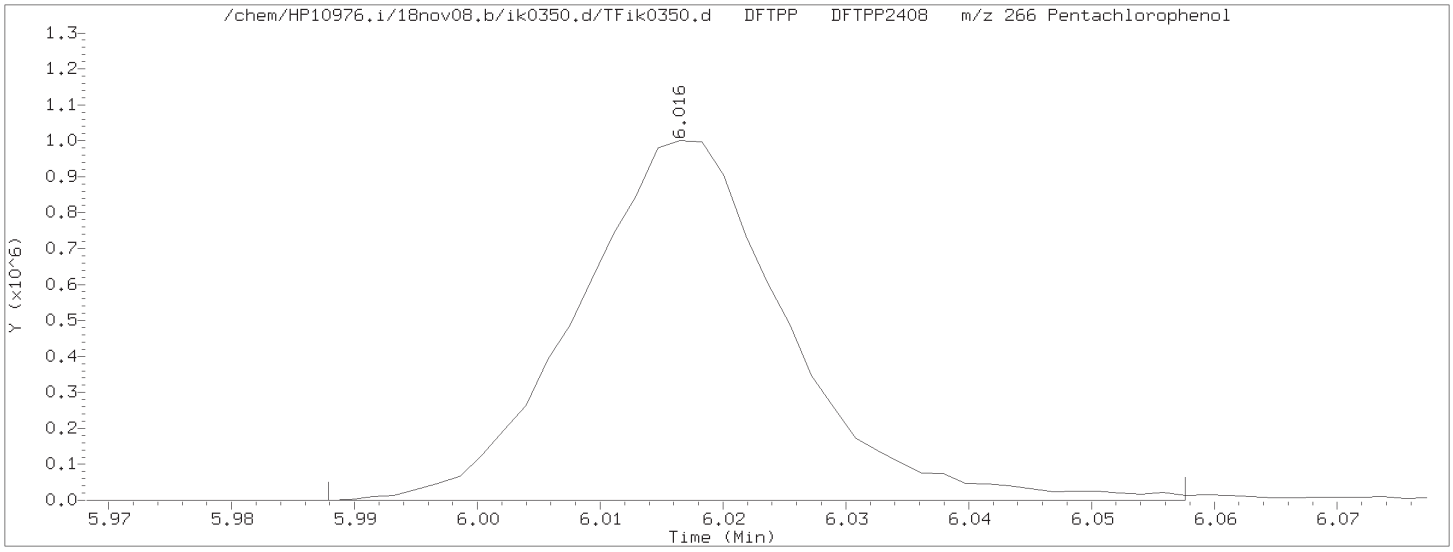
Data File: ik0350.d
Spectrum: Avg. Scans 722-724 (6.38), Background Scan 703
Location of Maximum: 198.00
Number of points: 387

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	3692	213.00	2171	313.00	1824	424.00	18032
114.00	1817	214.00	953	314.00	10779	425.00	2060
115.00	2313	215.00	4259	315.00	15155	426.00	702
116.00	10392	216.00	12189	316.00	6631	427.00	1048
117.00	199168	217.00	145856	317.00	2580	428.00	1171
118.00	13304	218.00	17128	318.00	166	429.00	1916
119.00	2276	219.00	2995	319.00	61	430.00	1280
120.00	3968	221.00	93800	320.00	622	431.00	342
122.00	17240	222.00	9963	321.00	4022	432.00	1299
123.00	31488	223.00	38184	322.00	3558	433.00	1625
124.00	13153	224.00	286272	323.00	39976	434.00	1923
125.00	11083	225.00	76088	324.00	5950	435.00	2519
127.00	903104	226.00	8715	325.00	1366	436.00	1260
128.00	67680	227.00	118328	326.00	1379	437.00	2550
129.00	351424	228.00	14393	327.00	5742	438.00	326
130.00	33216	229.00	22776	328.00	3327	439.00	394
131.00	5395	230.00	2566	329.00	1566	440.00	1197
132.00	2733	231.00	11763	330.00	247	441.00	232704
133.00	1132	232.00	324	331.00	504	442.00	1338880
134.00	8818	233.00	3259	332.00	3713	443.00	225856
135.00	30864	234.00	7989	333.00	5974	444.00	22320
136.00	11209	235.00	8393	334.00	23560	445.00	2027
137.00	12501	236.00	7800	335.00	6735	489.00	263
138.00	5770	237.00	8869	336.00	885	520.00	300
139.00	2274	238.00	849	337.00	865	556.00	60
140.00	4240	239.00	6124	339.00	1581	572.00	53
141.00	45816	240.00	5949	340.00	730		

Digitally signed by Joseph M. Gambler on 11/08/2018 at 08:10.
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

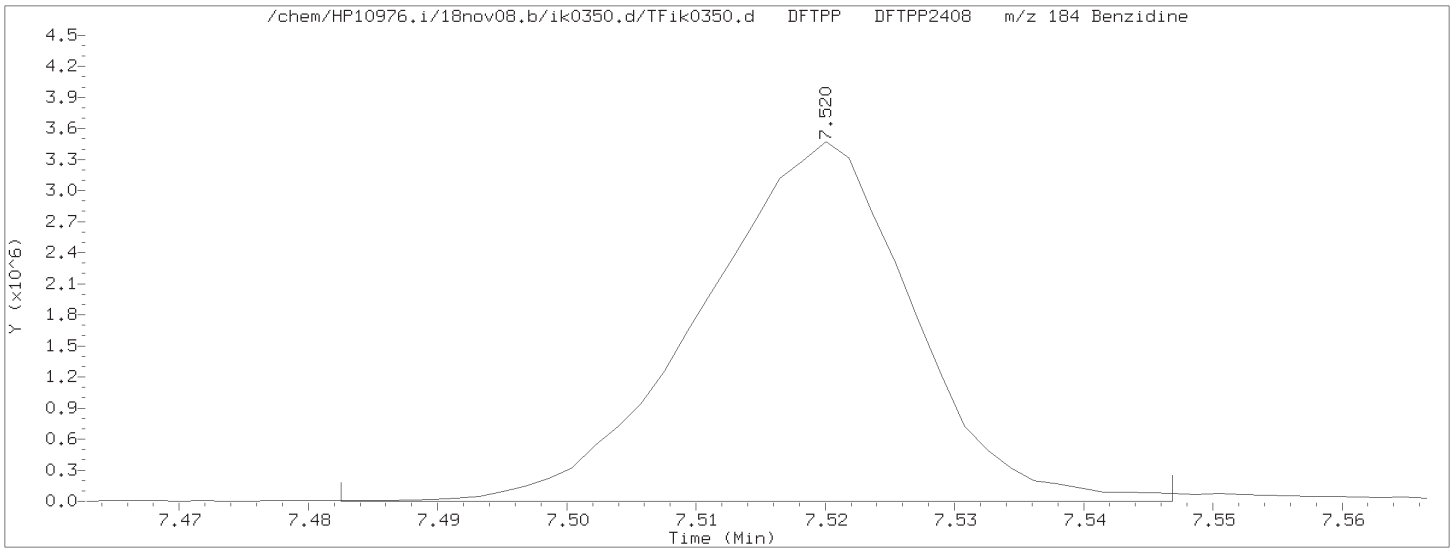
Instrument ID: HP10976.i Injection Date: 08-NOV-2018 06:43 Operator: jmg00346



Pentachlorophenol EICP peak height = 1000701 EICP peak height at 10% = 100070 Pentachlorophenol EICP area = 1182553

Pentachlorophenol EICP peak apex (min.) = 6.016
RT at 10% of front half of EICP (min.) = 6.000 'Front' peak width (min.) = 0.0167000000
RT at 10% of back half of EICP (min.) = 6.034 'Tailing' peak width (min.) = 0.0178666667

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0178666667}{0.0167000000} = 1.070$



Benzidine EICP peak height = 3473790 EICP peak height at 10% = 347379 Benzidine EICP area = 3928425

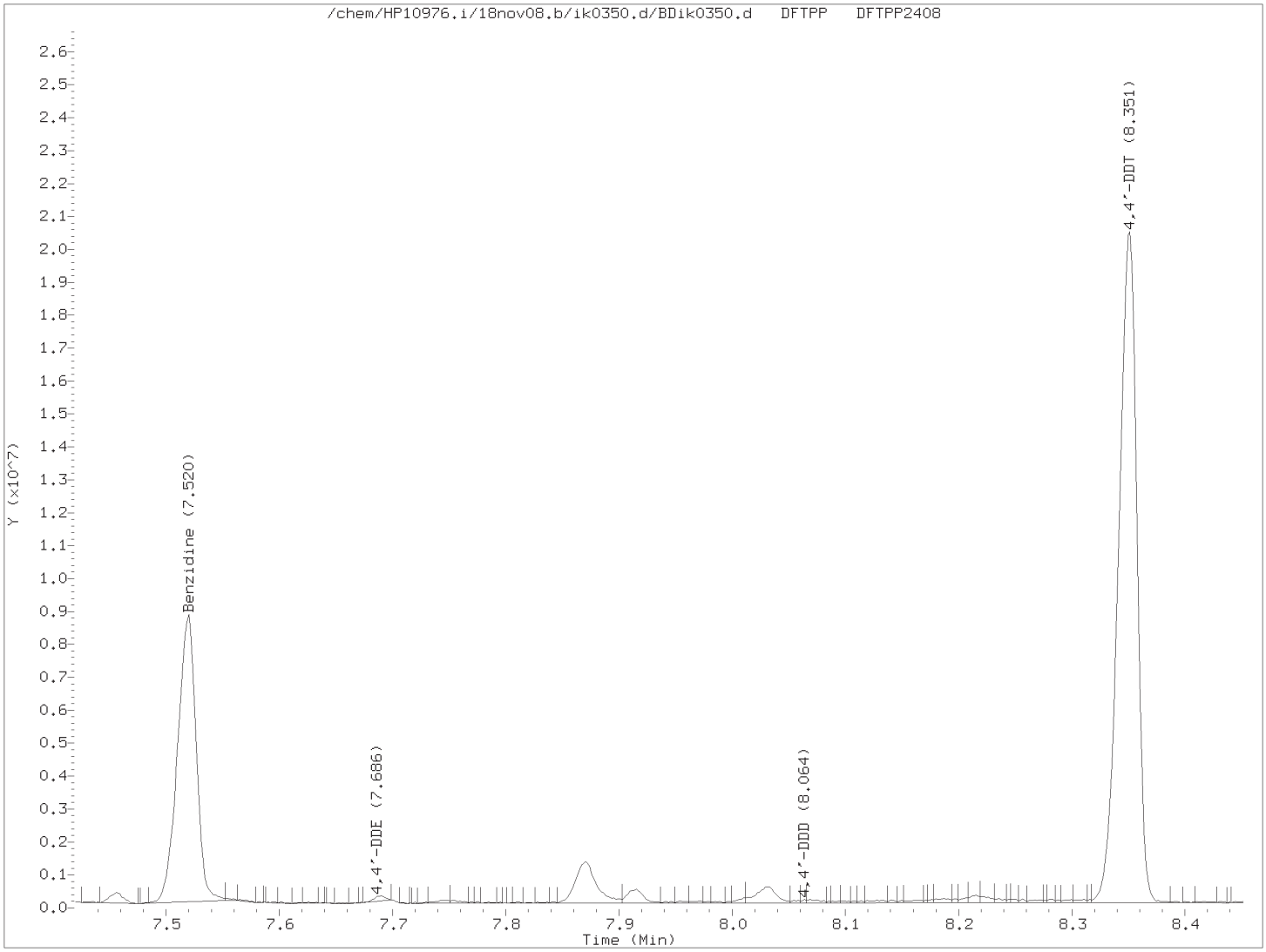
Benzidine EICP peak apex (min.) = 7.520
RT at 10% of front half of EICP (min.) = 7.501 'Front' peak width (min.) = 0.0190666667
RT at 10% of back half of EICP (min.) = 7.534 'Tailing' peak width (min.) = 0.0135333333

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0135333333}{0.0190666667} = 0.710$

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:50. PARALLAX ID: hb01996

Assessment of GC Column Performance and Injection Port Inertness for

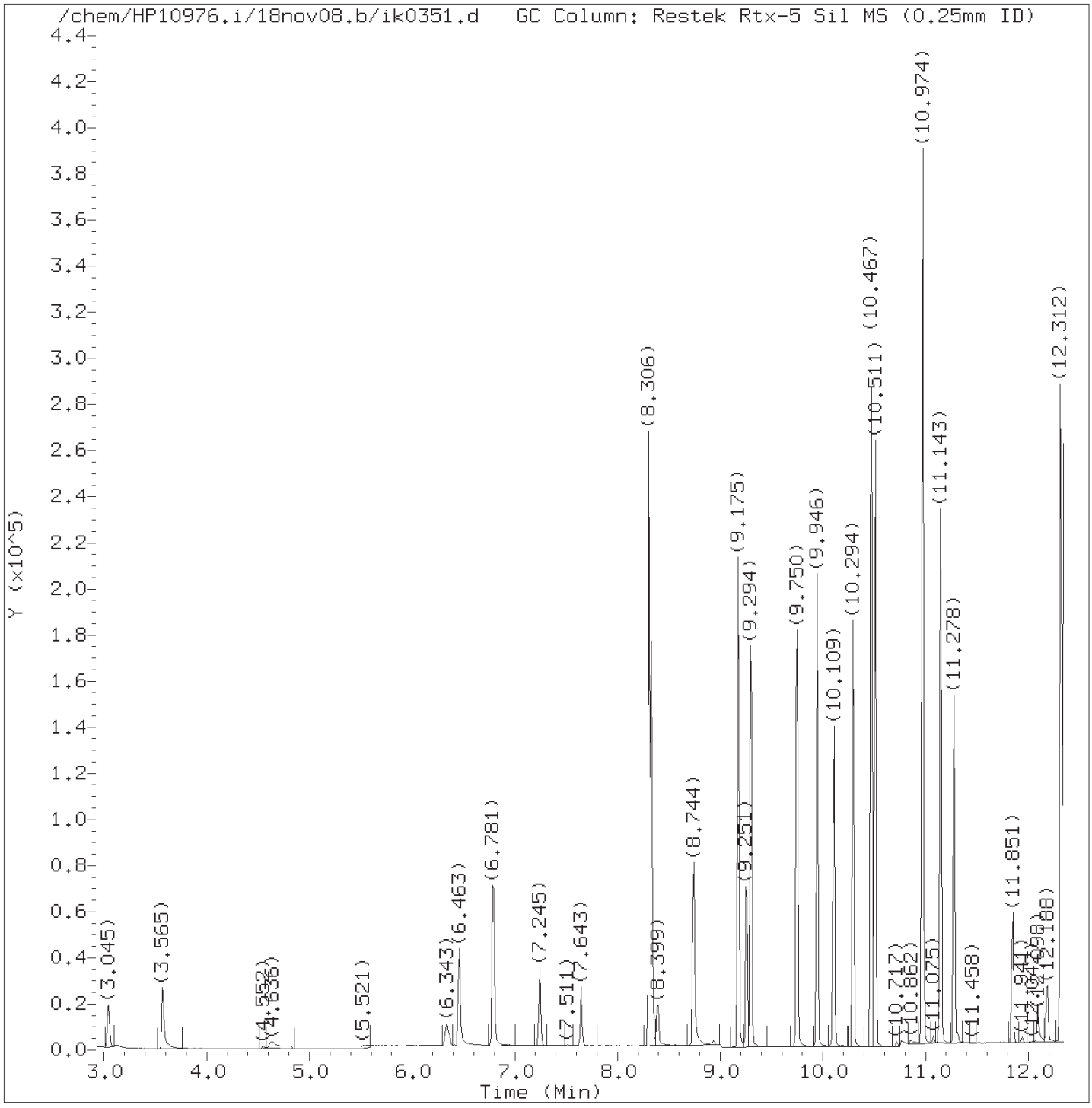
Instrument ID: HP10976.i Injection Date: 08-NOV-2018 06:43 Operator: jmg00346



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{107932 + 24298}{107932 + 24298 + 22960369} \times 100 = 0.6$$

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:50. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

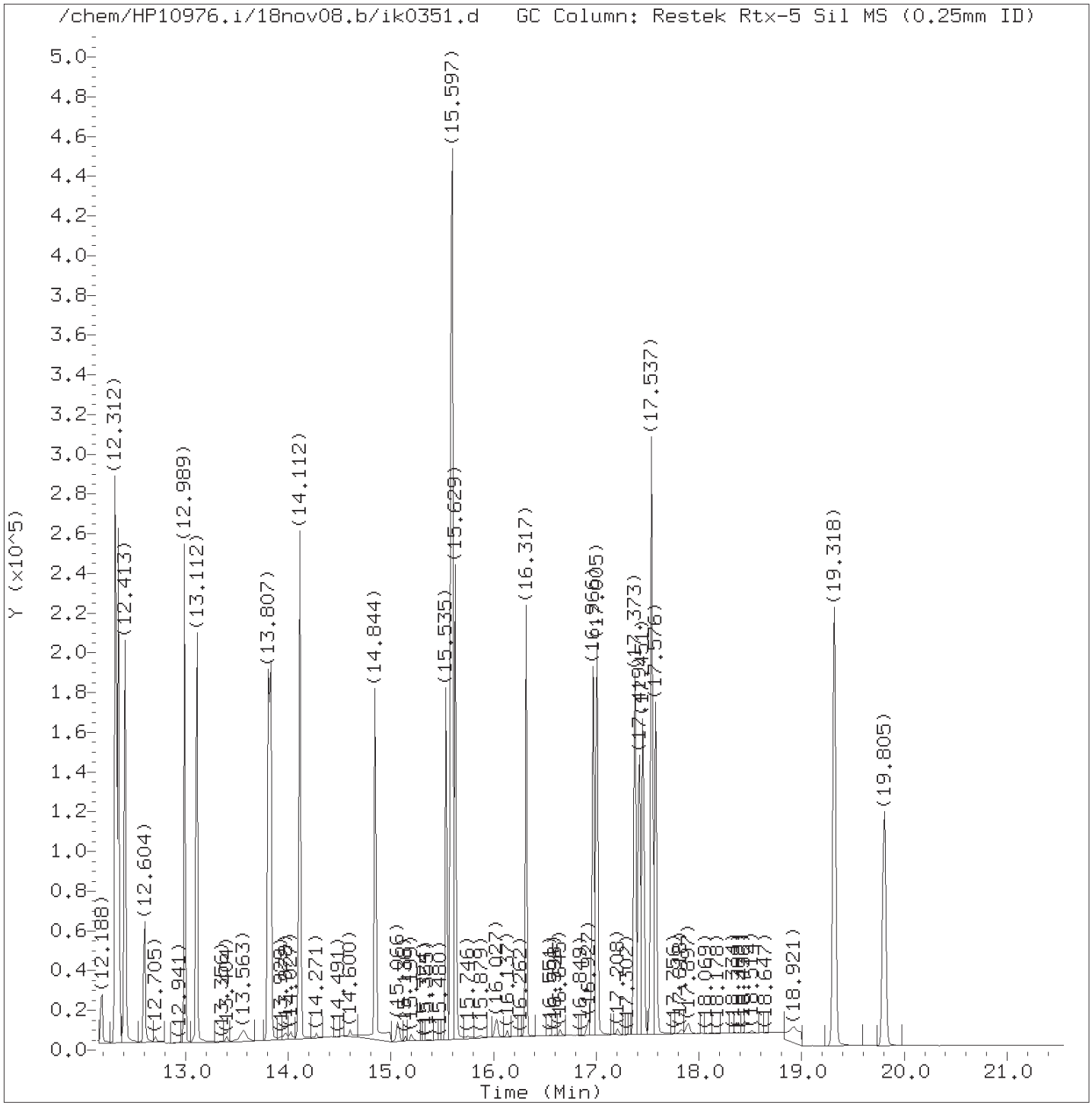
Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0351.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 07:03 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: all1
Calibration date and time: 08-NOV-2018 08:10
Date, time and analyst ID of latest file update: 08-Nov-2018 08:10 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: SIM2598

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 08:10.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0351.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 07:03 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: all1
Calibration date and time: 08-NOV-2018 08:10
Date, time and analyst ID of latest file update: 08-Nov-2018 08:10 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: SIM2598

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 08:10.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0351.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 07:03 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: all1
Calibration date and time: 08-NOV-2018 08:10
Date, time and analyst ID of latest file update: 08-Nov-2018 08:10 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.045	88	20412	0.483
2) N-Nitrosodimethylamine	(1)	3.571	74	29857	0.463
5) bis(2-Chloroethyl)ether	(1)	6.463	93	42132	0.476
6)*1,4-Dichlorobenzene-d4	(1)	6.794	152	70563	1.000
10)*Naphthalene-d8	(2)	8.306	136	261021	1.000
11) Naphthalene	(2)	8.333	128	143410	0.534
12) Quinoline	(2)	8.744	129	84058	0.506
13) 2-Methylnaphthalene	(2)	9.175	142	100715	0.521
14)$1-Methylnaphthalene-d10	(2)	9.251	152	76271	0.479
15) 1-Methylnaphthalene	(2)	9.294	142	100627	0.530
18) Dimethylphthalate	(3)	10.109	163	125758	0.533
19) Acenaphthylene	(3)	10.294	152	155648	0.508
20)*Acenaphthene-d10	(3)	10.467	164	160070	1.000
21) Acenaphthene	(3)	10.511	154	102778M	0.510
22) Dibenzofuran	(3)	10.761	168	4302	0.014
23) Diethylphthalate	(3)	10.963	149	133616	0.580
26) Fluorene	(3)	11.143	166	125071	0.504
28) NDPA as diphenylamine	(4)	11.278	169	81174	0.557
27) N-Nitrosodiphenylamine	(4)	11.278	169	81174	0.557
29) Hexachlorobenzene	(4)	11.851	284	52341	0.511
31)*Phenanthrene-d10	(4)	12.312	188	349633	1.000
32) Phenanthrene	(4)	12.346	178	194127	0.514
33) Anthracene	(4)	12.413	178	197562	0.522
35) Di-n-butylphthalate	(4)	12.989	149	206080	0.570
36)$Fluoranthene-d10	(4)	13.807	212	213487	0.492
37) Fluoranthene	(4)	13.832	202	243423	0.518
39) Pyrene	(5)	14.112	202	254781	0.506
40) Butylbenzylphthalate	(5)	14.844	149	81820	0.514
41) bis(2-Ethylhexyl)phthalate	(5)	15.535	149	134517	0.562
42) Benzo(a)anthracene	(5)	15.582	228	230397	0.493
43)*Chrysene-d12	(5)	15.597	240	363603	1.000
44) Chrysene	(5)	15.629	228	230687	0.516
45) Di-n-octylphthalate	(6)	16.317	149	222097	0.559
46) Benzo(b)fluoranthene	(6)	16.966	252	229341	0.508
47) Benzo(k)fluoranthene	(6)	17.005	252	216480	0.511
48) Benzo(e)pyrene	(6)	17.373	252	220184	0.498
49)$Benzo(a)pyrene-d12	(6)	17.419	264	174828	0.504
50) Benzo(a)pyrene	(6)	17.451	252	203574	0.526
51)*Perylene-d12	(6)	17.537	264	363146	1.000
52) Perylene	(6)	17.576	252	215251	0.499

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 08:10.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0351.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 07:03 Analyst ID: jmg00346

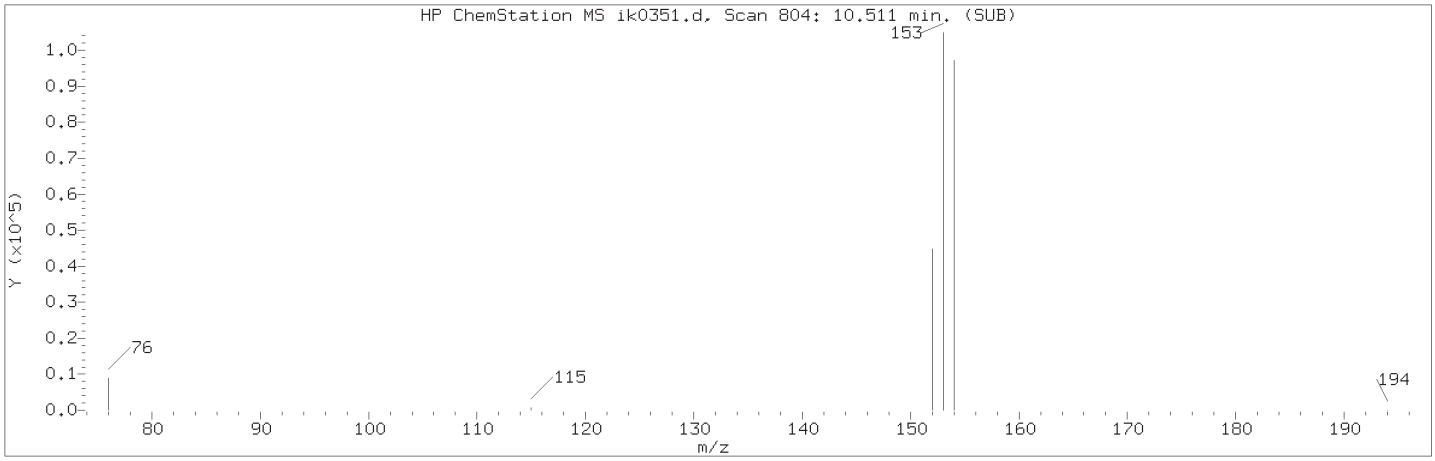
Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: all1
Calibration date and time: 08-NOV-2018 08:10
Date, time and analyst ID of latest file update: 08-Nov-2018 08:10 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: SIM2598

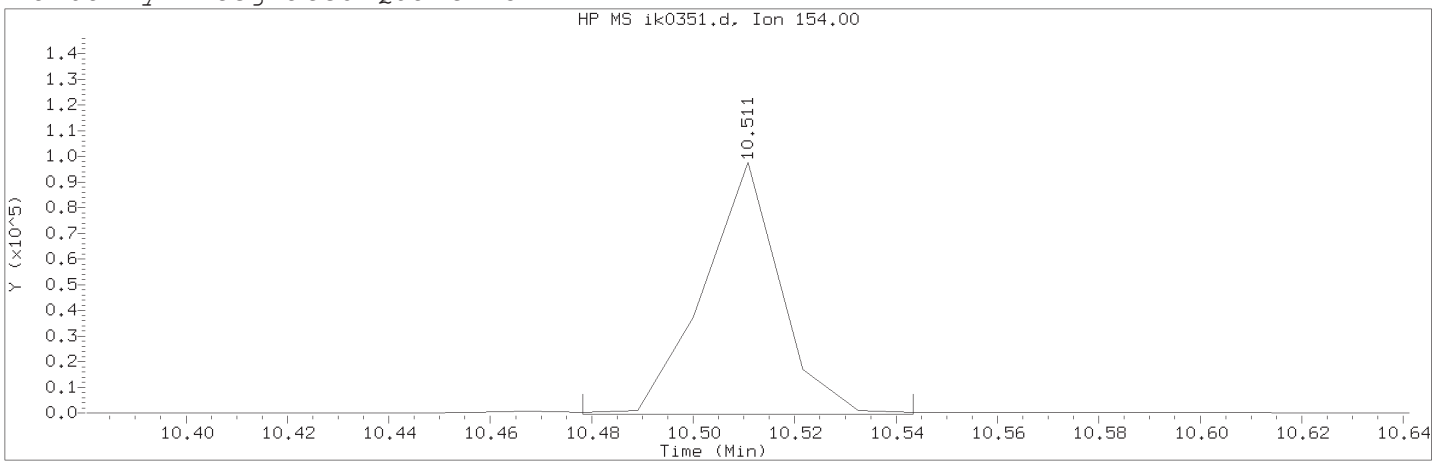
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) Indeno(1,2,3-cd)pyrene	(6)	19.311	276	232026	0.508
54) Dibenz(a,h)anthracene	(6)	19.318	278	195999	0.526
55) Benzo(g,h,i)perylene	(6)	19.805	276	223236	0.556

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 08:10.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov08.b/ik0351.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 07:03 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: all1
Calibration date and time: 08-NOV-2018 08:10
Date, time and analyst ID of latest file update: 08-Nov-2018 08:10 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: SIM2598

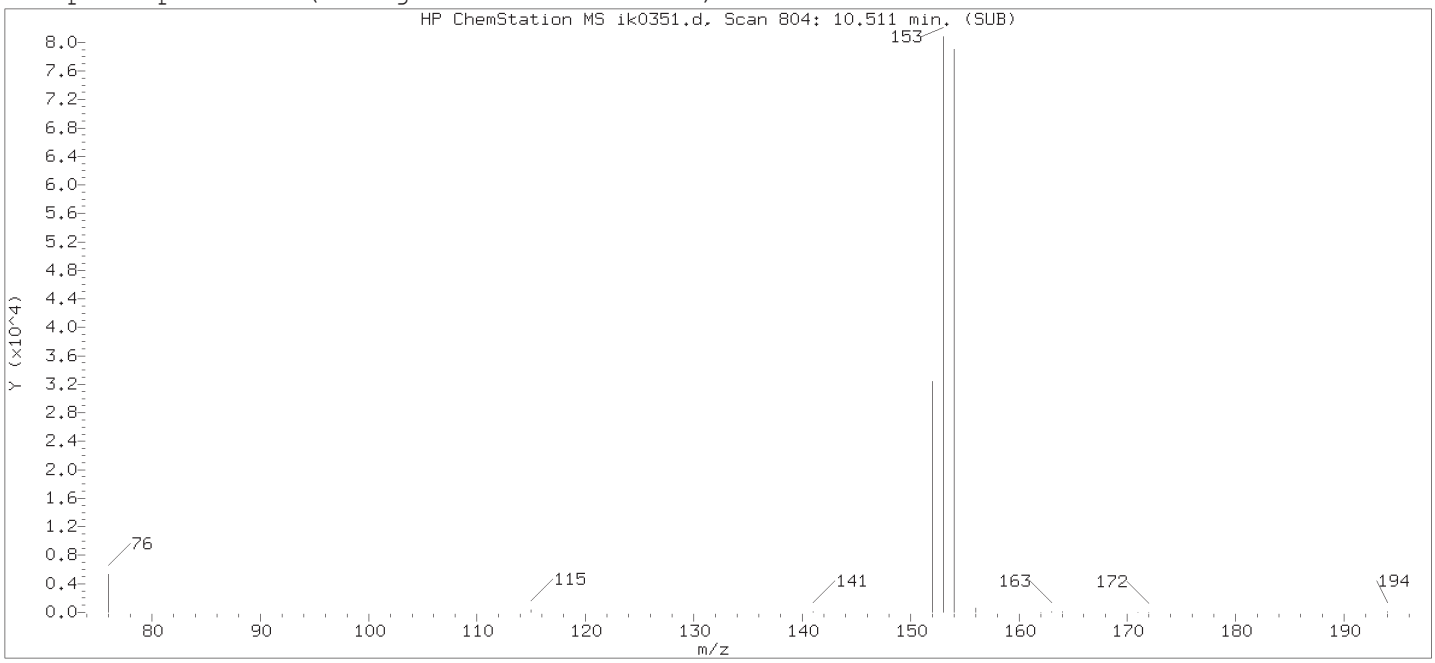
Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 804		
Retention Time (minutes)	: 10.511		
Quant Ion	: 154.00		
Area (flag)	: 102778M		
On-Column Amount (ng/ul)	: 0.5098		
Integration start scan	: 800	Integration stop scan:	806
Y at integration start	: -448	Y at integration end:	-448

Reason for manual integration: improper integration

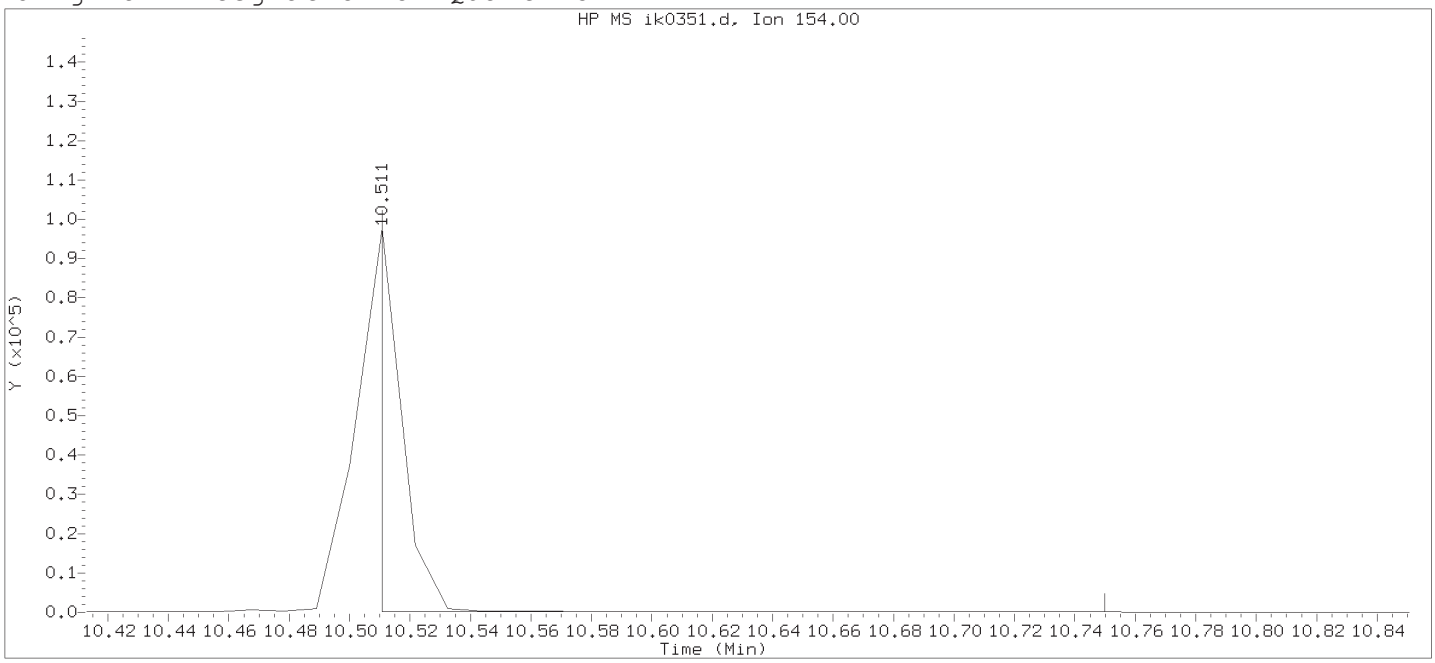
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 08:10.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:50.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



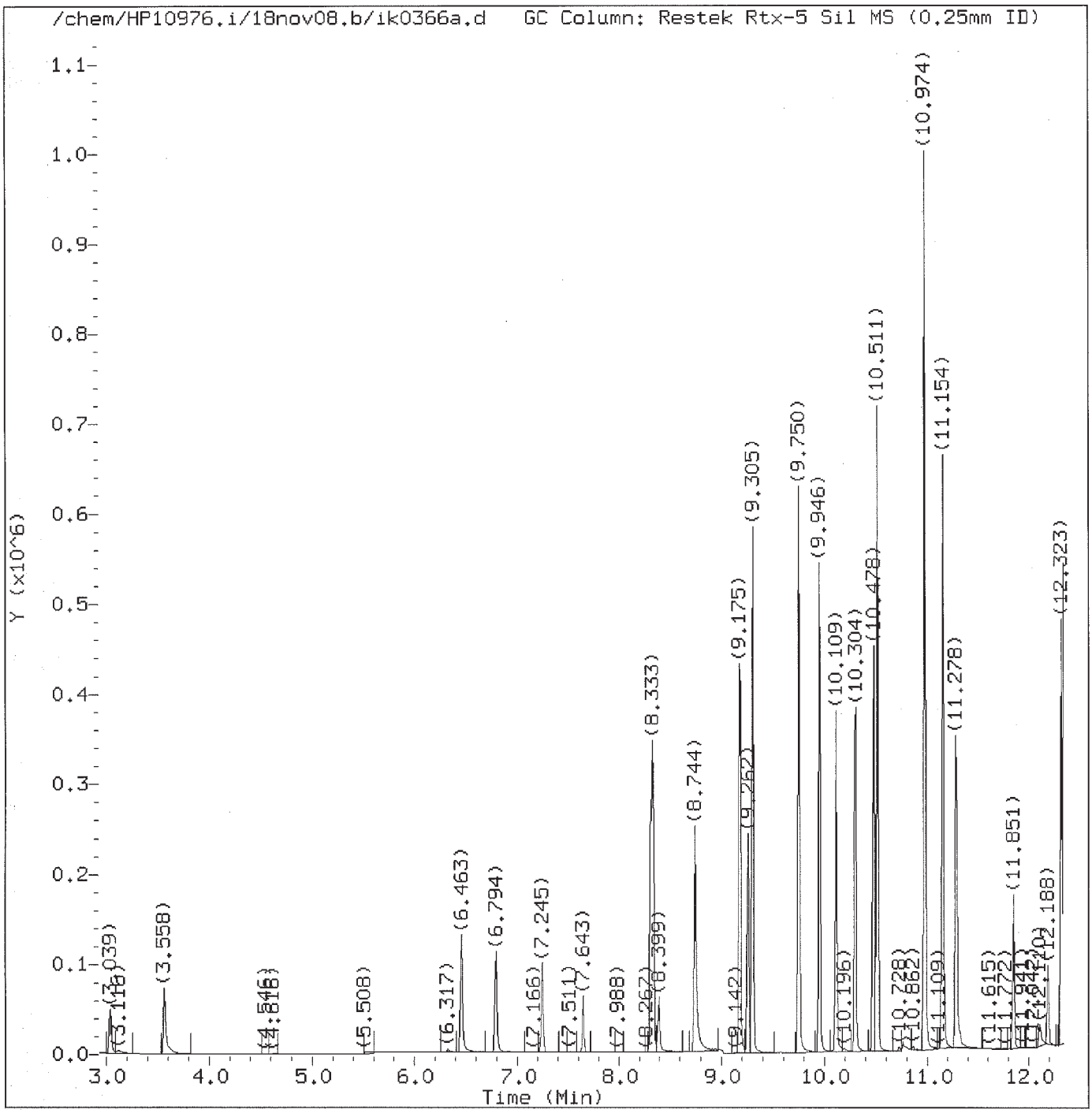
Data File: /chem/HP10976.i/18nov08.b/ik0351.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 07:03 Analyst ID: jmg00346

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: all1
Calibration date and time: 08-NOV-2018 07:29
Date, time and analyst ID of latest file update: 08-Nov-2018 07:29 Automation

Sample Name: SSTD0.50 Lab Sample ID: SIM2598

Compound Number	: 21		
Compound Name	: Acenaphthene		
Scan Number	: 804		
Retention Time (minutes)	: 10.511		
Quant Ion	: 154.00		
Area	: 44016		
On-column Amount (ng/ul)	: 0.2183		
Integration start scan	: 803	Integration stop scan:	825
Y at integration start	: 87	Y at integration end:	107

Digitally signed by Joseph M. Gambler on 11/08/2018 at 08:10.
Target 3.5 esignature used 11/08/2018.



Total Ion Chromatogram (TIC)

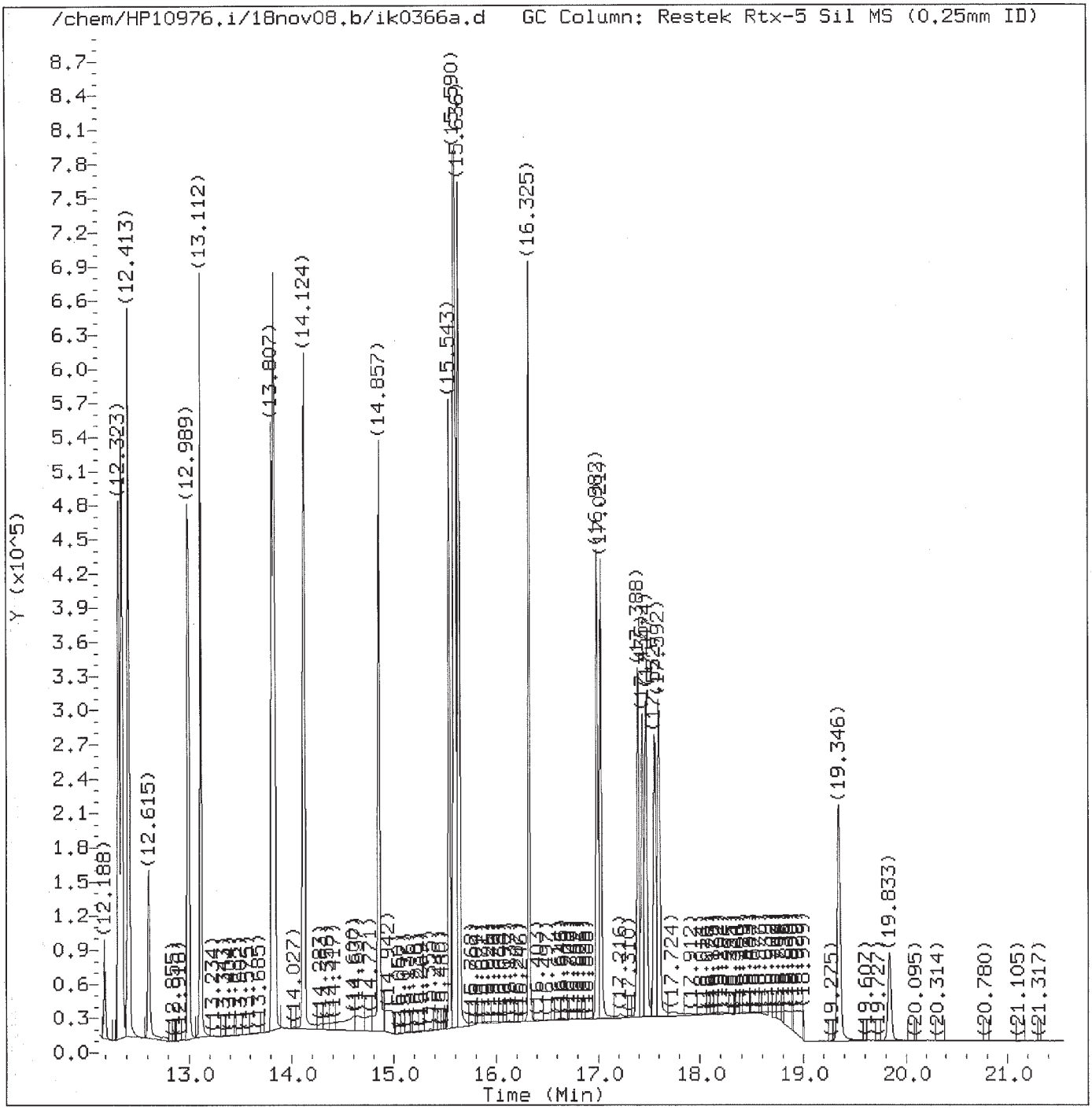
Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0366a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:32 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 18:08 apb10206

Sample Name: SECC1 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:08.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0366a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:32 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 18:08 apb10206

Sample Name: SECC1 Lab Sample ID: SIM2598

Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov08.b/ik0366a.d Instrument ID: HP10976.i
Injection date and time: 08-NOV-2018 17:32 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov08.b/sim8270d.m Sublist used: 25804
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 08-Nov-2018 18:08 apb10206

Sample Name: SECC1 Lab Sample ID: SIM2598

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.039	88	53196	0.916
6)*1,4-Dichlorobenzene-d4	(1)	6.794	152	96987	1.000
10)*Naphthalene-d8	(2)	8.320	136	341532	1.000
11) Naphthalene	(2)	8.333	128	374339	1.064
14)$1-Methylnaphthalene-d10	(2)	9.262	152	207030	0.994
19) Acenaphthylene	(3)	10.304	152	427151	1.031
20)*Acenaphthene-d10	(3)	10.478	164	216290	1.000
21) Acenaphthene	(3)	10.511	154	279504	1.026
26) Fluorene	(3)	11.154	166	345227	1.030
31)*Phenanthrene-d10	(4)	12.323	188	492570	1.000
32) Phenanthrene	(4)	12.357	178	535391	1.006
33) Anthracene	(4)	12.413	178	568496	1.067
35) Di-n-butylphthalate	(4)	12.989	149	587179	1.153
36)$Fluoranthene-d10	(4)	13.807	212	631328	1.034
37) Fluoranthene	(4)	13.832	202	691997	1.044
39) Pyrene	(5)	14.124	202	725301	1.014
41) bis(2-Ethylhexyl)phthalate	(5)	15.543	149	391091	1.151
42) Benzo(a)anthracene	(5)	15.590	228	653856	0.984
43)*Chrysene-d12	(5)	15.605	240	516639	1.000
44) Chrysene	(5)	15.636	228	678728	1.069
46) Benzo(b)fluoranthene	(6)	16.982	252	493647	1.266
47) Benzo(k)fluoranthene	(6)	17.021	252	466728	1.277
49)$Benzo(a)pyrene-d12	(6)	17.435	264	326893	1.091
50) Benzo(a)pyrene	(6)	17.474	252	375709	1.124
51)*Perylene-d12	(6)	17.552	264	313542	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.339	276	219455	0.557
54) Dibenz(a,h)anthracene	(6)	19.346	278	207596	0.645
55) Benzo(g,h,i)perylene	(6)	19.833	276	158140	0.456

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/08/2018 at 18:08.
Target 3.5 esignature user ID: apb10206

Raw QC Data

Semivolatiles by GC/MS-SIM

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10976.i/18nov07.b/ik0302.d Injection date and time: **07-NOV-2018 18:15**
Data file Sample Info. Line: SBLKLH302;SBLKLH302;2;3;BLANK;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 08-Nov-2018 07:10 jmg00346

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 07-NOV-2018 18:18
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov07.b/ik0301.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.808	(0.000)	500	152	38204	(-13)	1.00	
10) Naphthalene-d8	8.320	(0.000)	614	136	140365	(-12)	1.00	
20) Acenaphthene-d10	10.489	(-0.002)	802	164	85870	(-15)	1.00	
31) Phenanthrene-d10	12.334	(-0.002)	967	188	190240	(-15)	1.00	
43) Chrysene-d12	15.621	(-0.007)	1268	240	189233	(-17)	1.00	
51) Perylene-d12	17.568	(0.001)	1517	264	179720	(-22)	1.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
14) 1-Methylnaphthalene-d10	(2)	9.272	(0.000)	152	75115	0.878	88%
36) Fluoranthene-d10	(4)	13.819	(0.000)	212	207910	0.881	88%
49) Benzo(a)pyrene-d12	(6)	17.451	(0.000)	264	143997	0.839	84%

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)				Not Detected					0.02
11) Naphthalene	(2)	8.346	(-0.000)	128	135776	0.939	31.31			0.04
19) Acenaphthylene	(3)				Not Detected					0.01
21) Acenaphthene	(3)	10.522	(0.000)	154	5590M	0.052	1.72			0.02
26) Fluorene	(3)	11.165	(0.000)	166	7781	0.058	1.95			0.02
32) Phenanthrene	(4)	12.357	(0.000)	178	15782	0.077	2.56			0.02
33) Anthracene	(4)	12.424	(0.000)	178	4519M	0.022	0.73			0.02
35) Di-n-butylphthalate	(4)				Not Detected					0.2
37) Fluoranthene	(4)				Not Detected					0.02
39) Pyrene	(5)				Not Detected					0.02
41) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.3
42) Benzo(a)anthracene	(5)				Not Detected					0.02
44) Chrysene	(5)				Not Detected					0.01
46) Benzo(b)fluoranthene	(6)				Not Detected					0.02
47) Benzo(k)fluoranthene	(6)				Not Detected					0.02
50) Benzo(a)pyrene	(6)				Not Detected					0.02
53) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.02
54) Dibenz(a,h)anthracene	(6)				Not Detected					0.02
55) Benzo(g,h,i)perylene	(6)				Not Detected					0.02

M = Compound was manually integrated.

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:29. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP10976.i/18nov07.b/ik0302.d Injection date and time: **07-NOV-2018 18:15**
Data file Sample Info. Line: SBLKLH302;SBLKLH302;2;3;BLANK;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 08-Nov-2018 07:10 jmg00346

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 07-NOV-2018 18:18
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov07.b/ik0301.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

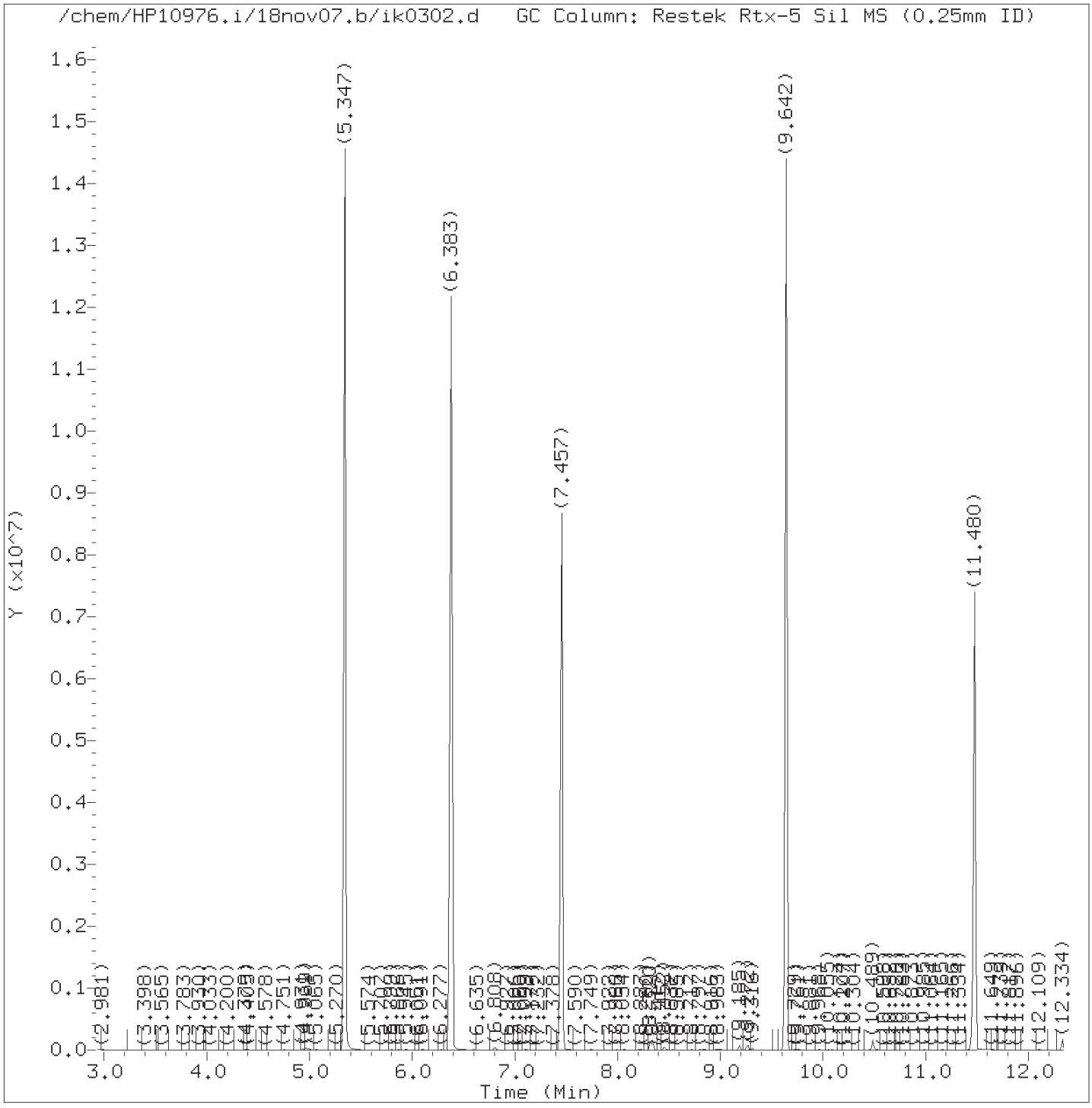
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:29. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:49. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

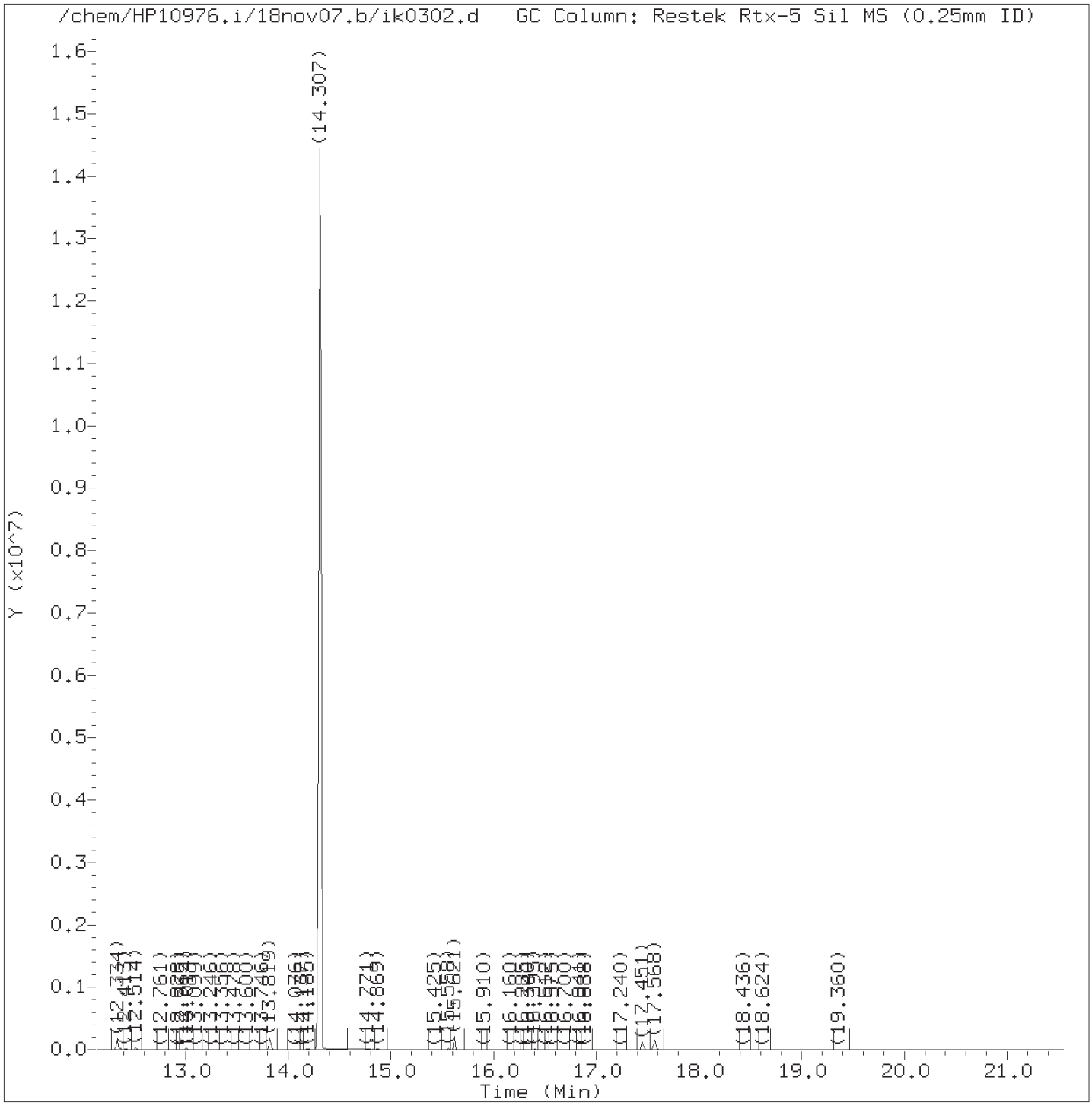
Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0302.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 18:15 Analyst ID: 18302SLH

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:10 jmg00346

Sample Name: SBLKLH302 Lab Sample ID: SBLKLH302

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0302.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 18:15 Analyst ID: 18302SLH

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:10 jmg00346

Sample Name: SBLKLH302 Lab Sample ID: SBLKLH302

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0302.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 18:15 Analyst ID: 18302SLH

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:10 jmg00346

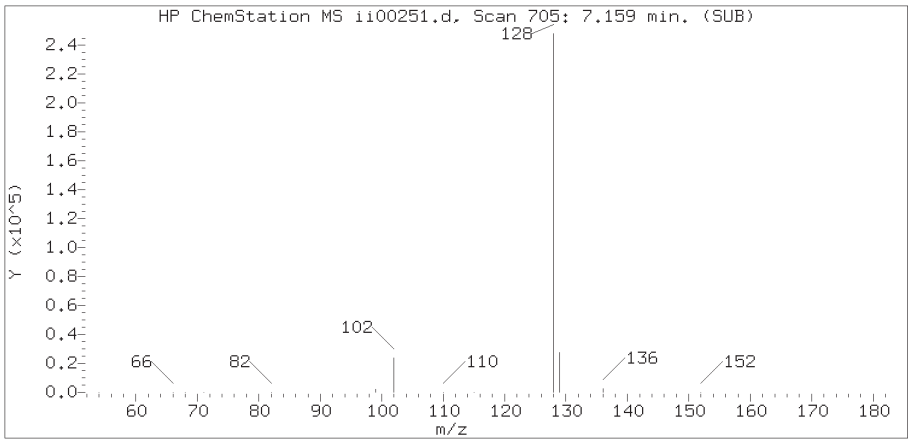
Sample Name: SBLKLH302 Lab Sample ID: SBLKLH302

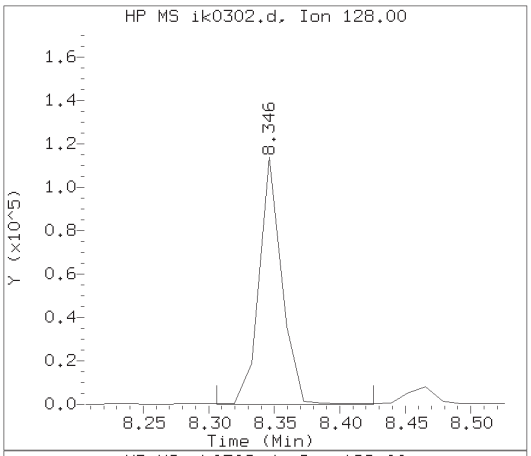
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
6)*1,4-Dichlorobenzene-d4	(1)	6.808	152	38204	1.000
10)*Naphthalene-d8	(2)	8.320	136	140365	1.000
11) Naphthalene	(2)	8.346	128	135776	0.939
14)$1-Methylnaphthalene-d10	(2)	9.272	152	75115	0.878
20)*Acenaphthene-d10	(3)	10.489	164	85870	1.000
21) Acenaphthene	(3)	10.522	154	5590M	0.052
26) Fluorene	(3)	11.165	166	7781	0.058
31)*Phenanthrene-d10	(4)	12.334	188	190240	1.000
32) Phenanthrene	(4)	12.357	178	15782	0.077
33) Anthracene	(4)	12.424	178	4519M	0.022
36)$Fluoranthene-d10	(4)	13.819	212	207910	0.881
43)*Chrysene-d12	(5)	15.621	240	189233	1.000
49)$Benzo(a)pyrene-d12	(6)	17.451	264	143997	0.839
51)*Perylene-d12	(6)	17.568	264	179720	1.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

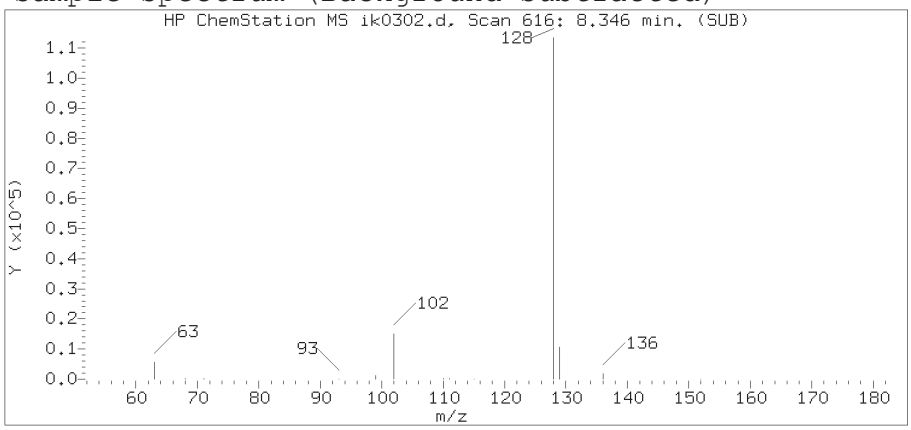
Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346

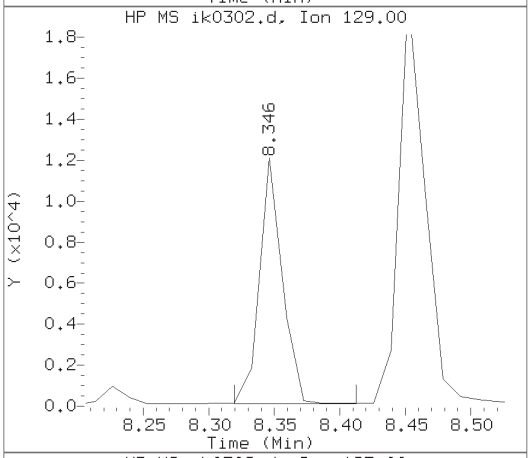
Reference Standard Spectrum for Naphthalene



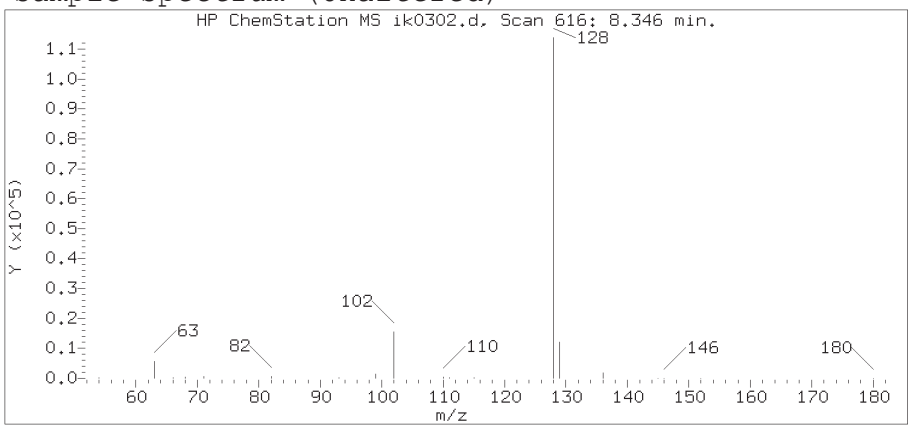


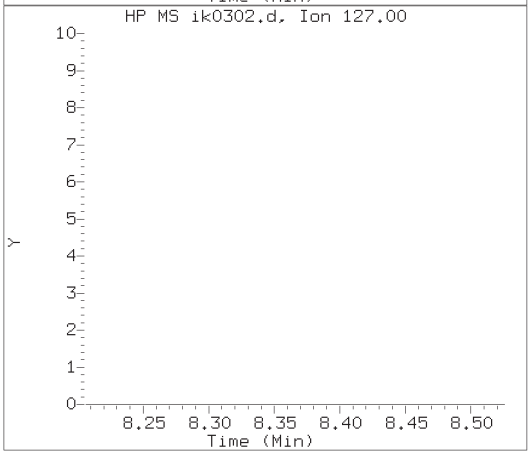
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0302.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 18:15 Analyst ID: 18302SLH

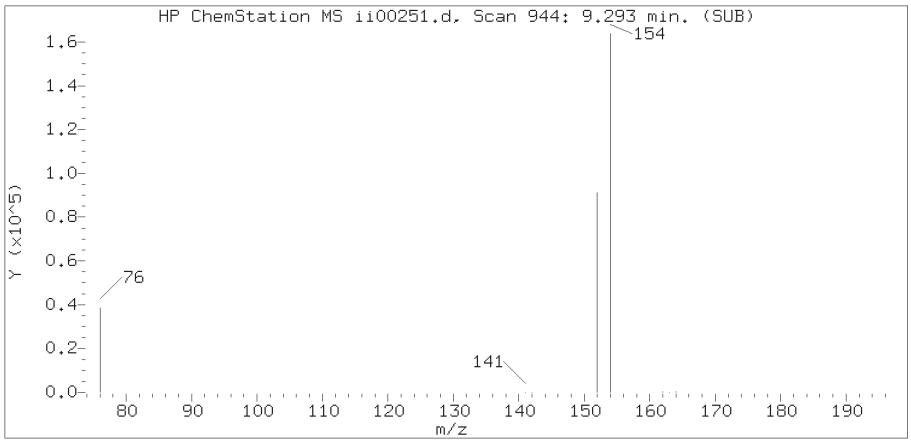
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:10 jmg00346

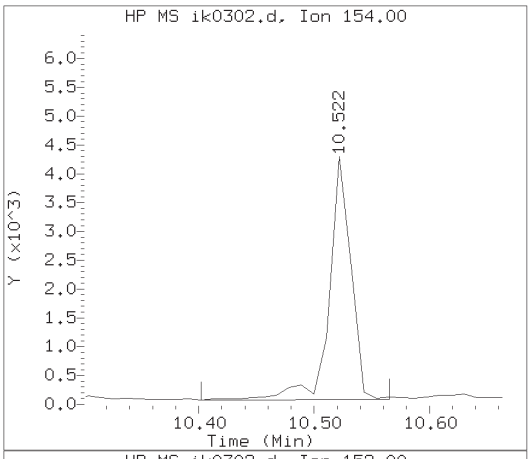
Sample Name: SBLKLH302 Lab Sample ID: SBLKLH302

Compound Number	: 11
Compound Name	: Naphthalene
Scan Number	: 616
Retention Time (minutes)	: 8.346
Relative Retention Time	:-0.00000
Quant Ion	: 128.00
Area (flag)	: 135776
On-column Amount (ng/ul)	: 0.9394

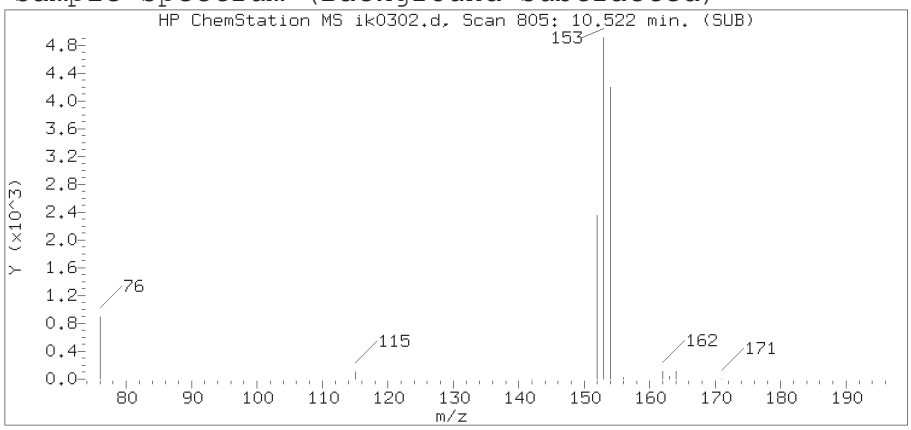
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346

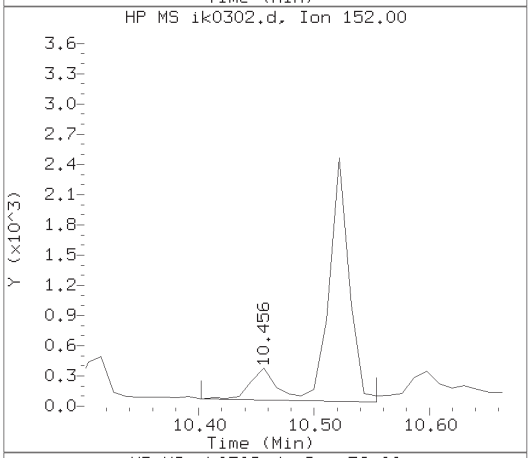
Reference Standard Spectrum for Acenaphthene



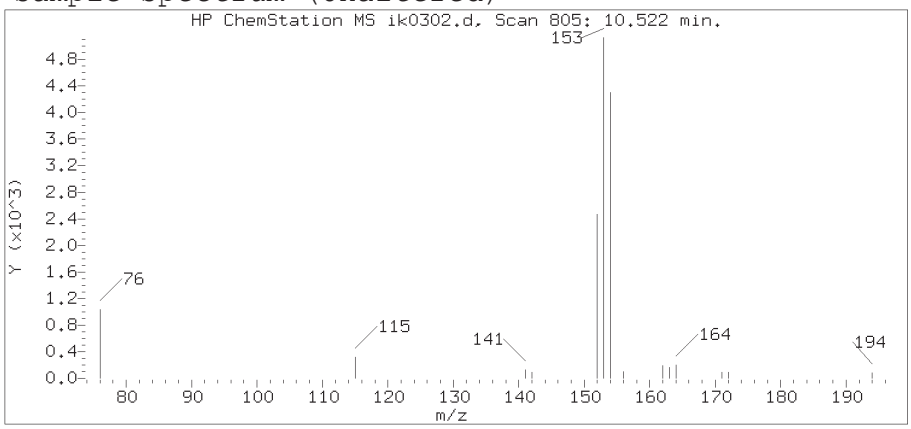


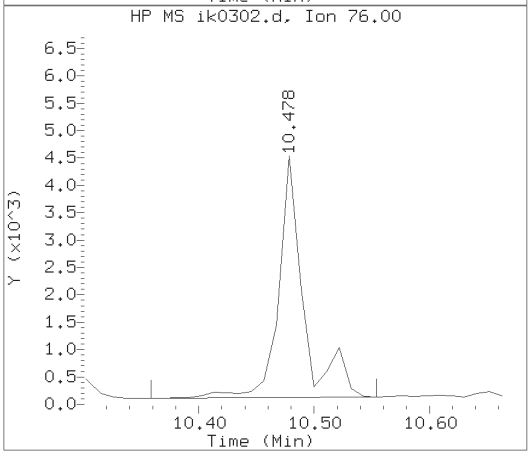
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0302.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 18:15 Analyst ID: 18302SLH

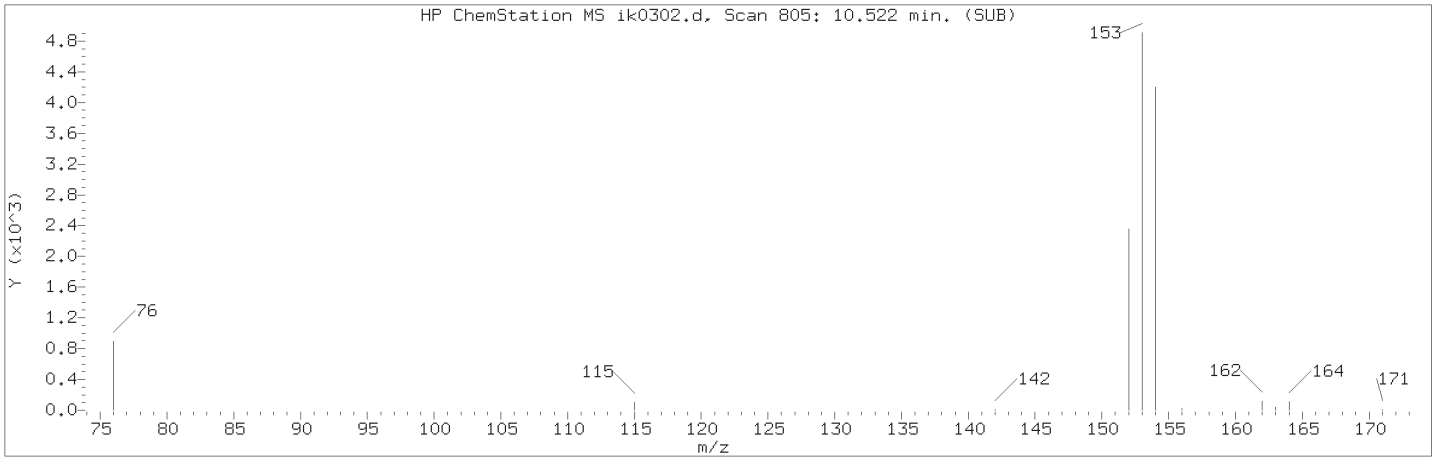
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:10 jmg00346

Sample Name: SBLKLH302 Lab Sample ID: SBLKLH302

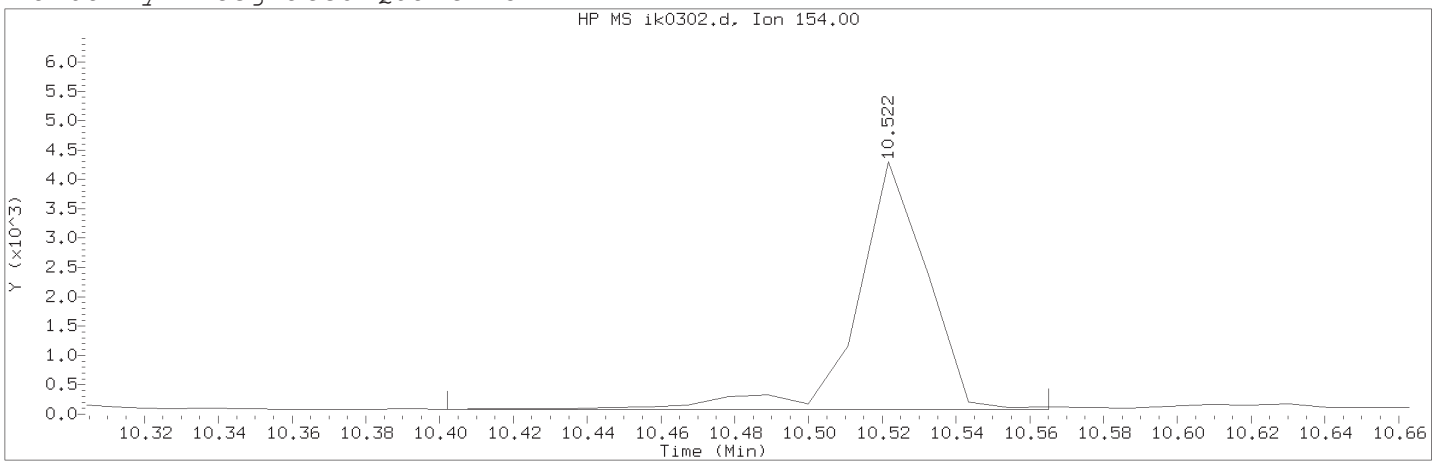
Compound Number	: 21
Compound Name	: Acenaphthene
Scan Number	: 805
Retention Time (minutes)	: 10.522
Relative Retention Time	: 0.00000
Quant Ion	: 154.00
Area (flag)	: 5590M
On-column Amount (ng/ul)	: 0.0517

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0302.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 18:15 Analyst ID: 18302SLH

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:10 jmg00346

Sample Name: SBLKLH302 Lab Sample ID: SBLKLH302

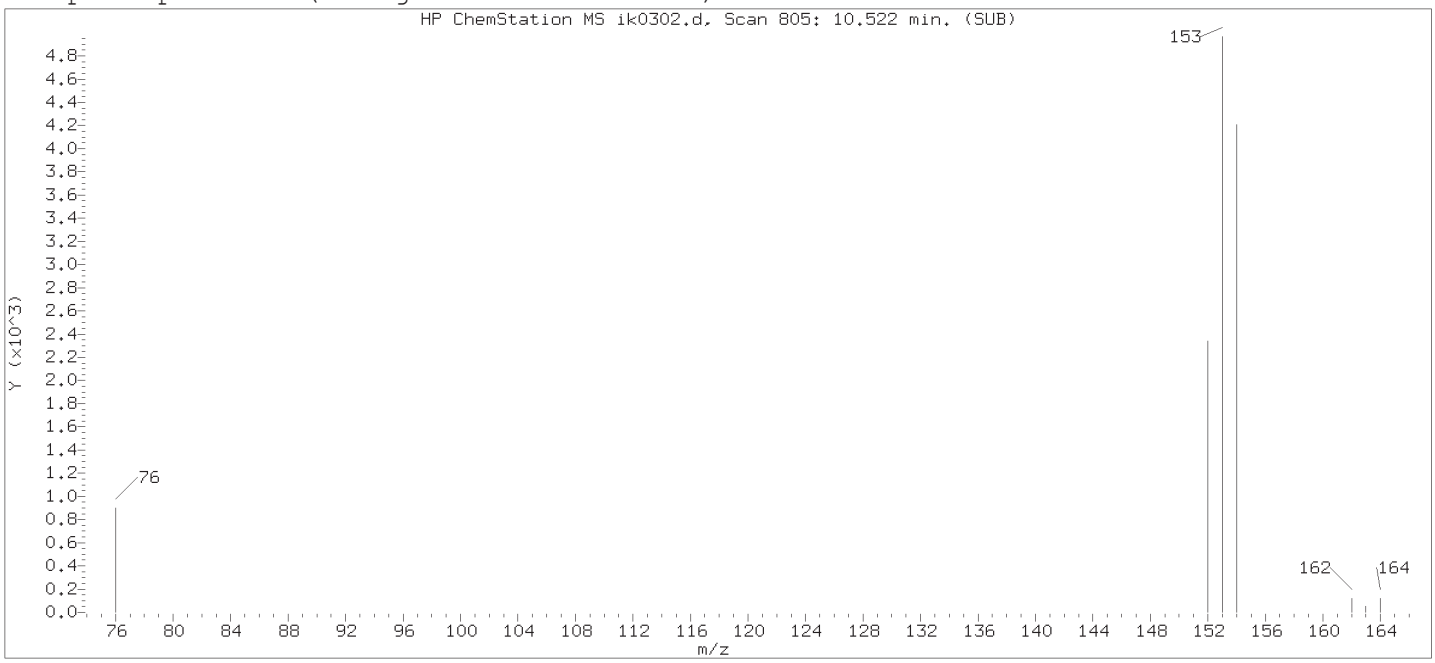
Compound Number : 21
Compound Name : Acenaphthene
Scan Number : 805
Retention Time (minutes) : 10.522
Quant Ion : 154.00
Area (flag) : 5590M
On-column Amount (ng/ul) : 0.0517
Integration start scan : 793 Integration stop scan: 808
Y at integration start : 78 Y at integration end: 80

Reason for manual integration: improper integration

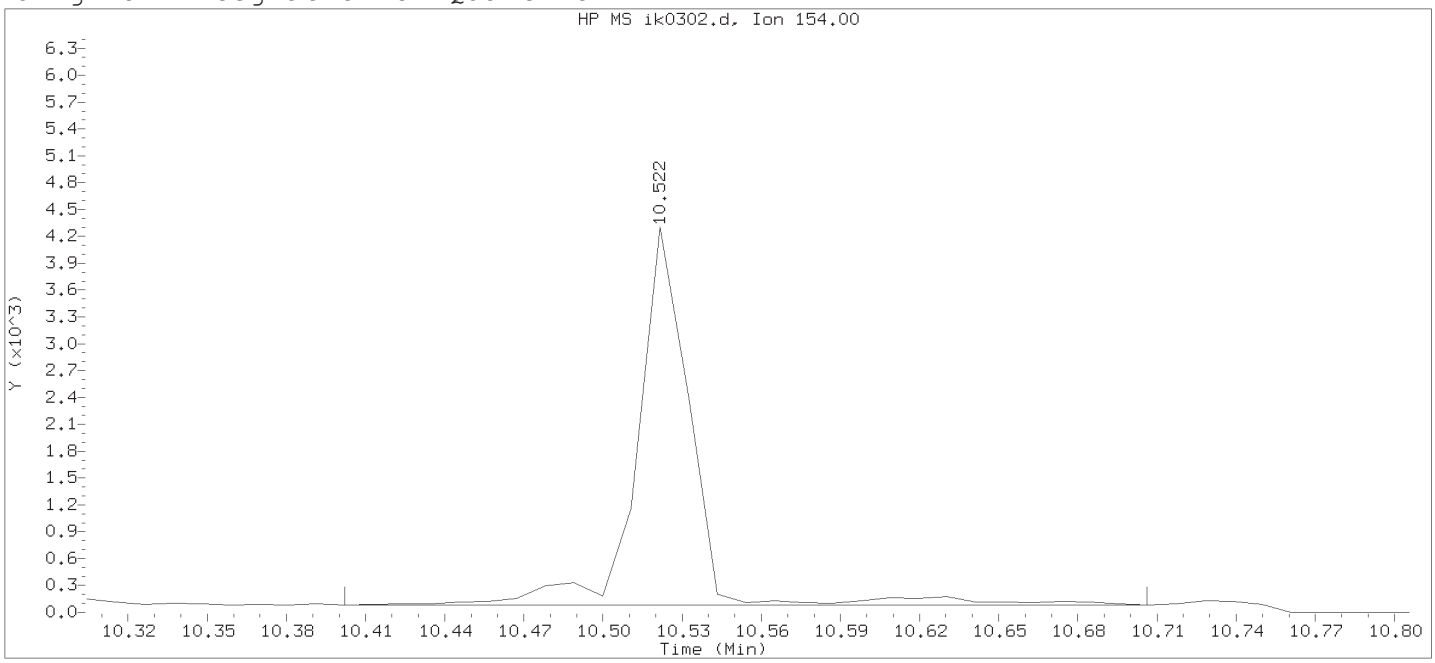
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:49.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0302.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 18:15 Analyst ID: 18302SLH

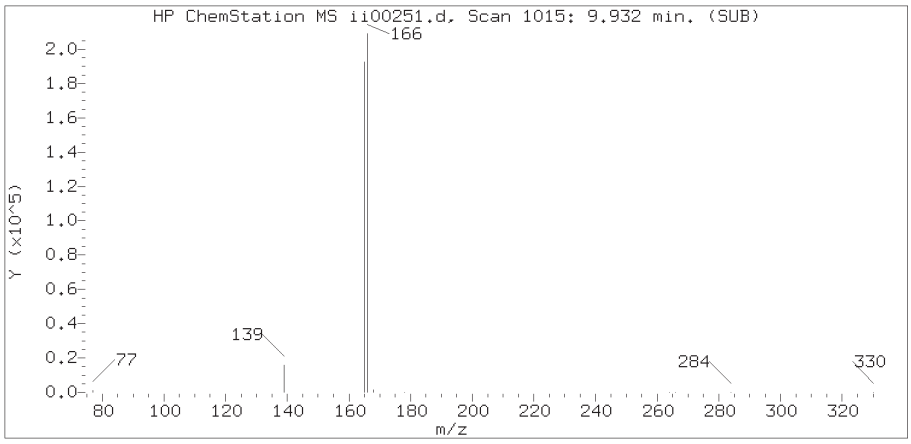
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:09 jmg00346

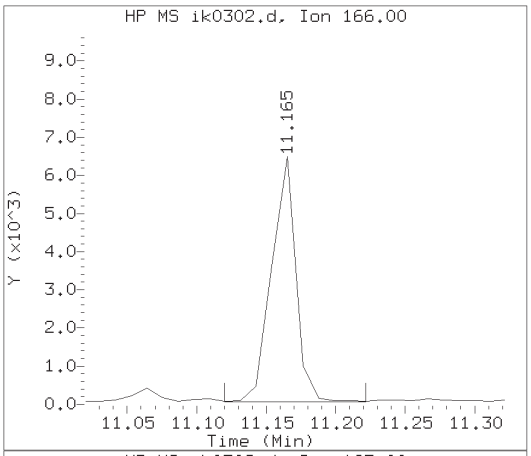
Sample Name: SBLKLH302 Lab Sample ID: SBLKLH302

Compound Number	:	21
Compound Name	:	Acenaphthene
Scan Number	:	805
Retention Time (minutes)	:	10.522
Quant Ion	:	154.00
Area	:	5928
On-column Amount (ng/ul)	:	0.0548
Integration start scan	:	793 Integration stop scan: 821
Y at integration start	:	78 Y at integration end: 83

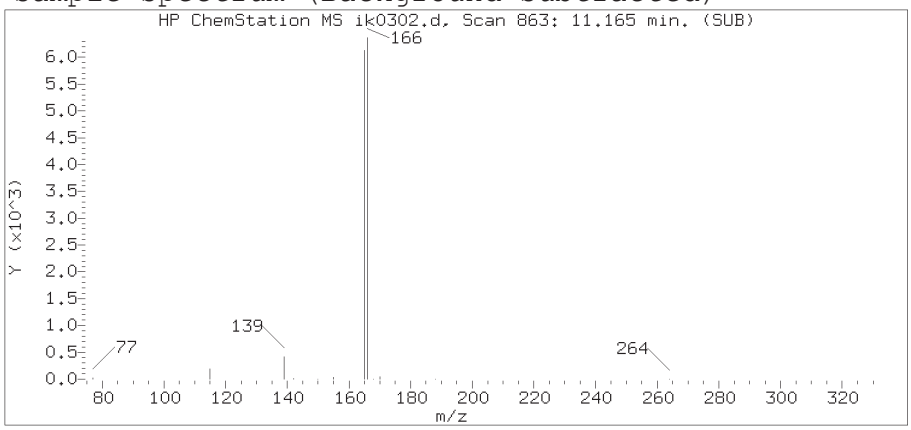
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346

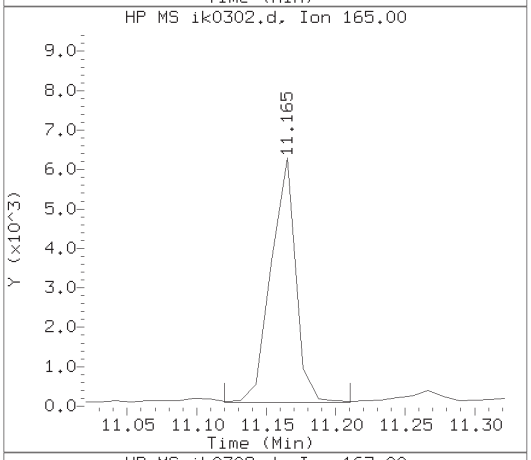
Reference Standard Spectrum for Fluorene



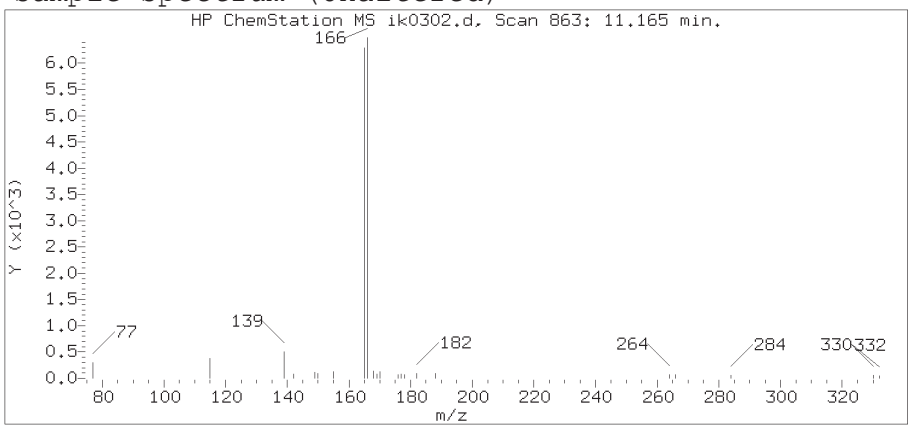


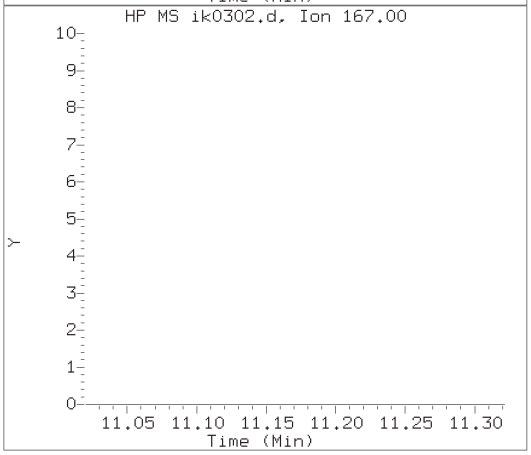
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0302.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 18:15 Analyst ID: 18302SLH

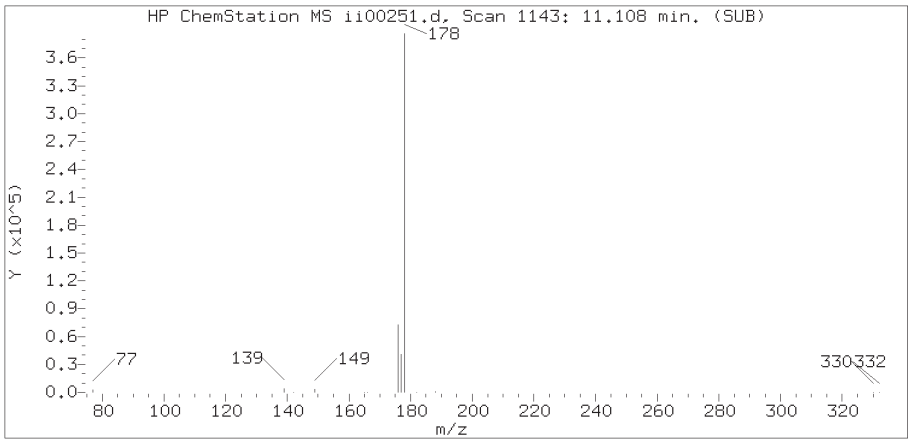
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:10 jmg00346

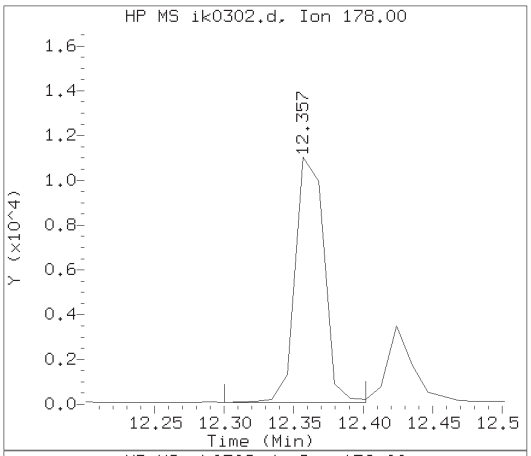
Sample Name: SBLKLH302 Lab Sample ID: SBLKLH302

Compound Number	: 26
Compound Name	: Fluorene
Scan Number	: 863
Retention Time (minutes)	: 11.165
Relative Retention Time	: 0.00001
Quant Ion	: 166.00
Area (flag)	: 7781
On-column Amount (ng/ul)	: 0.0585

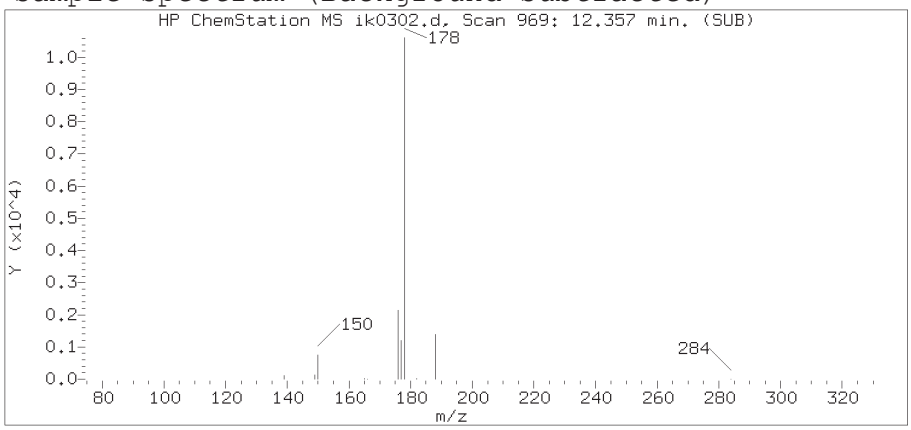
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346

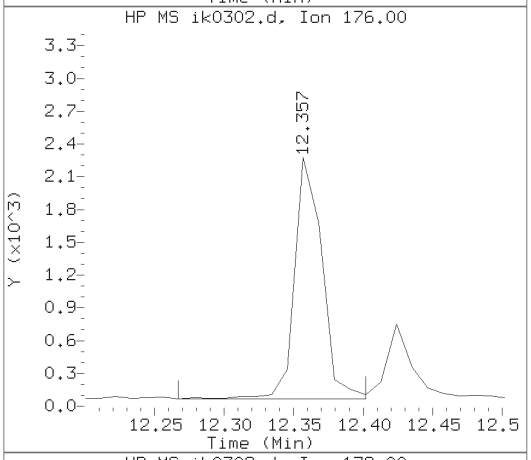
Reference Standard Spectrum for Phenanthrene



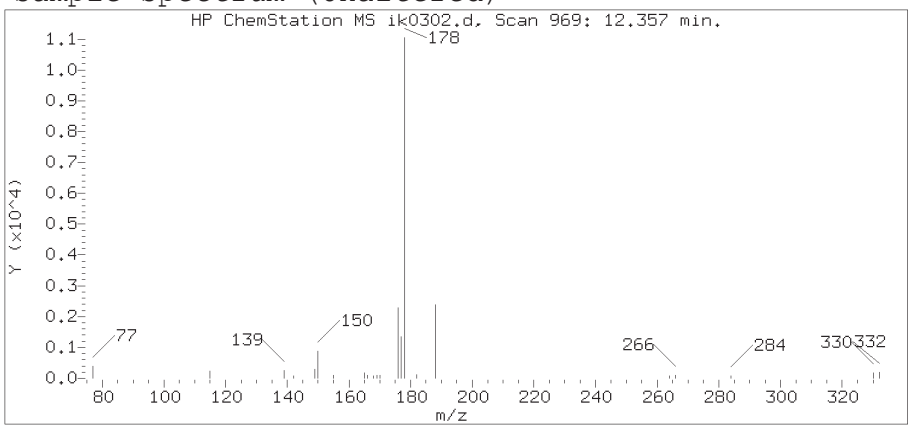


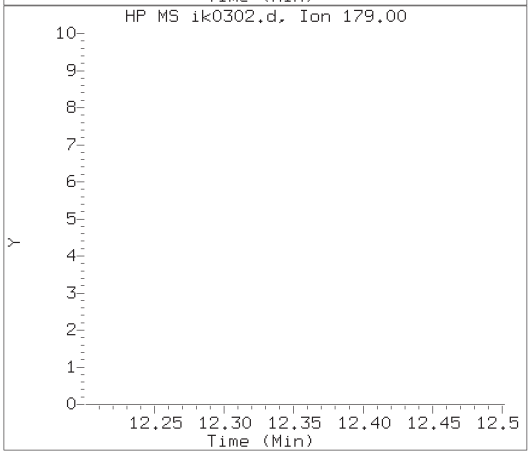
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0302.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 18:15 Analyst ID: 18302SLH

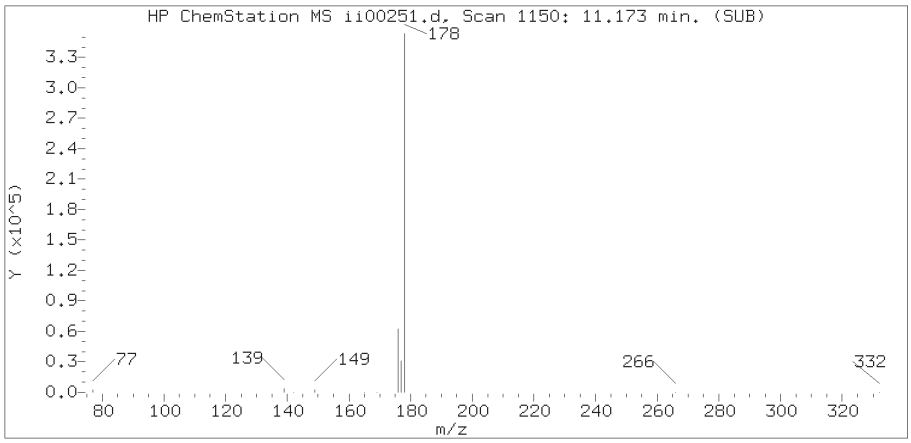
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:10 jmg00346

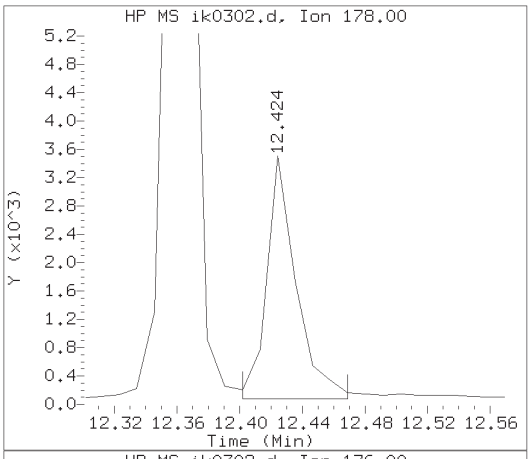
Sample Name: SBLKLH302 Lab Sample ID: SBLKLH302

Compound Number	: 32
Compound Name	: Phenanthrene
Scan Number	: 969
Retention Time (minutes)	: 12.357
Relative Retention Time	: 0.00091
Quant Ion	: 178.00
Area (flag)	: 15782
On-column Amount (ng/ul)	: 0.0768

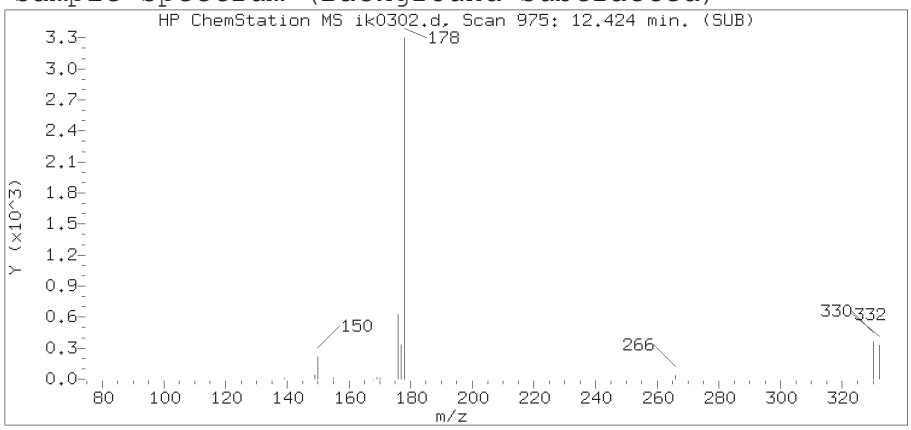
Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346

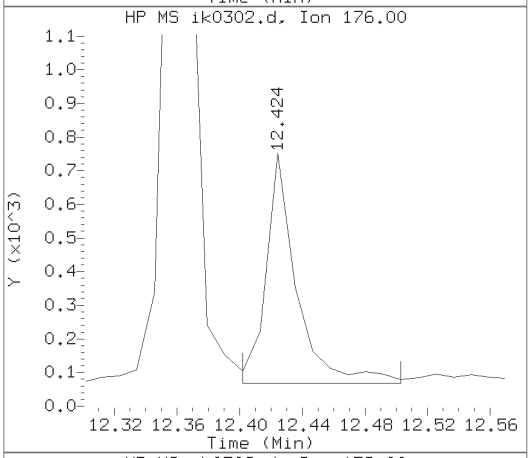
Reference Standard Spectrum for Anthracene



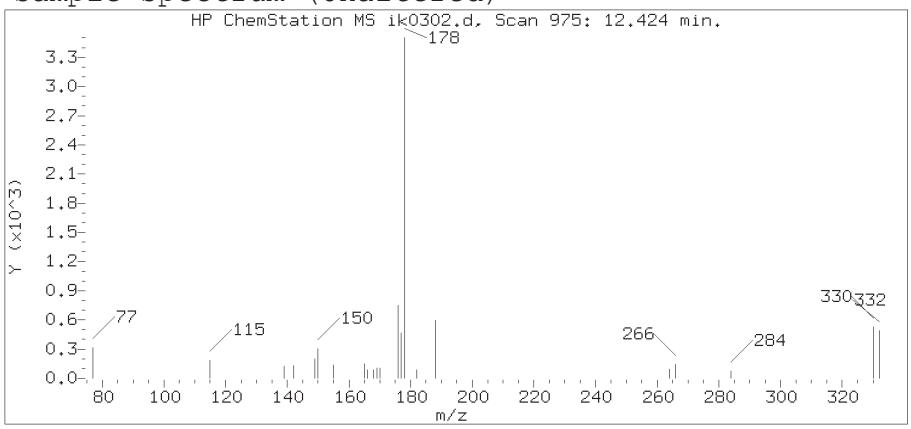


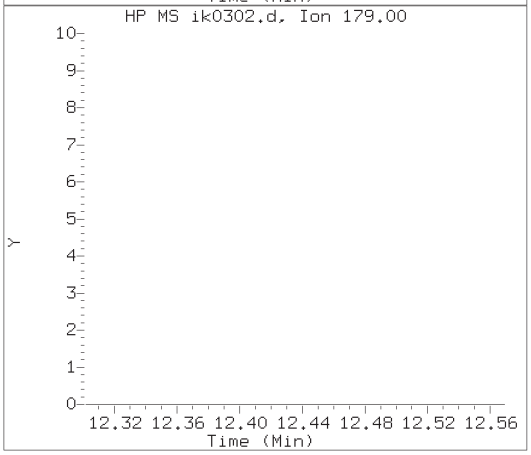
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10976.i/18nov07.b/ik0302.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 18:15 Analyst ID: 18302SLH

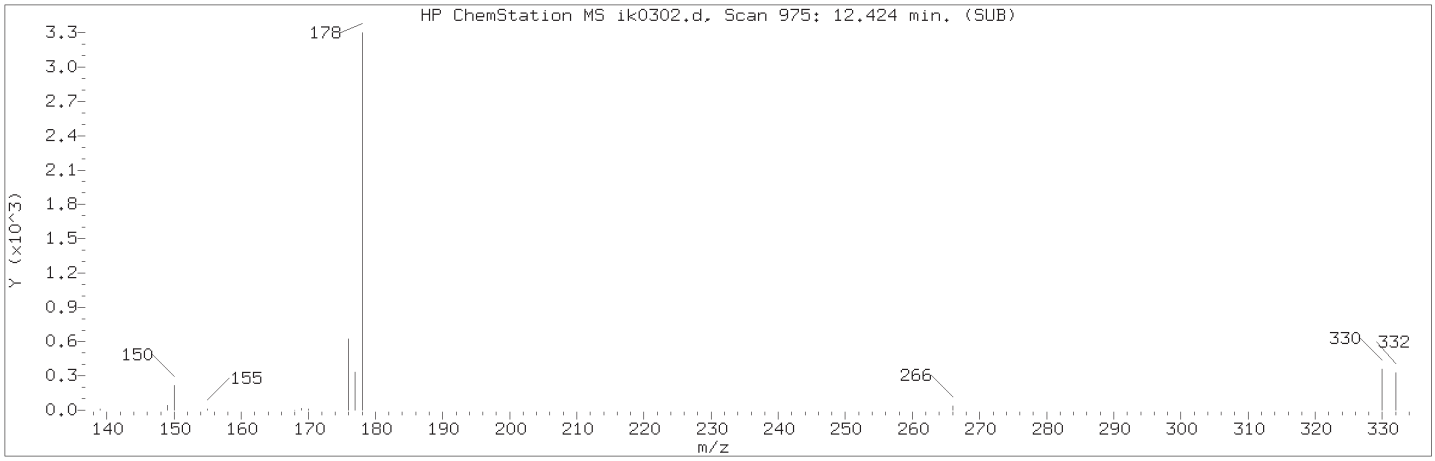
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:10 jmg00346

Sample Name: SBLKLH302 Lab Sample ID: SBLKLH302

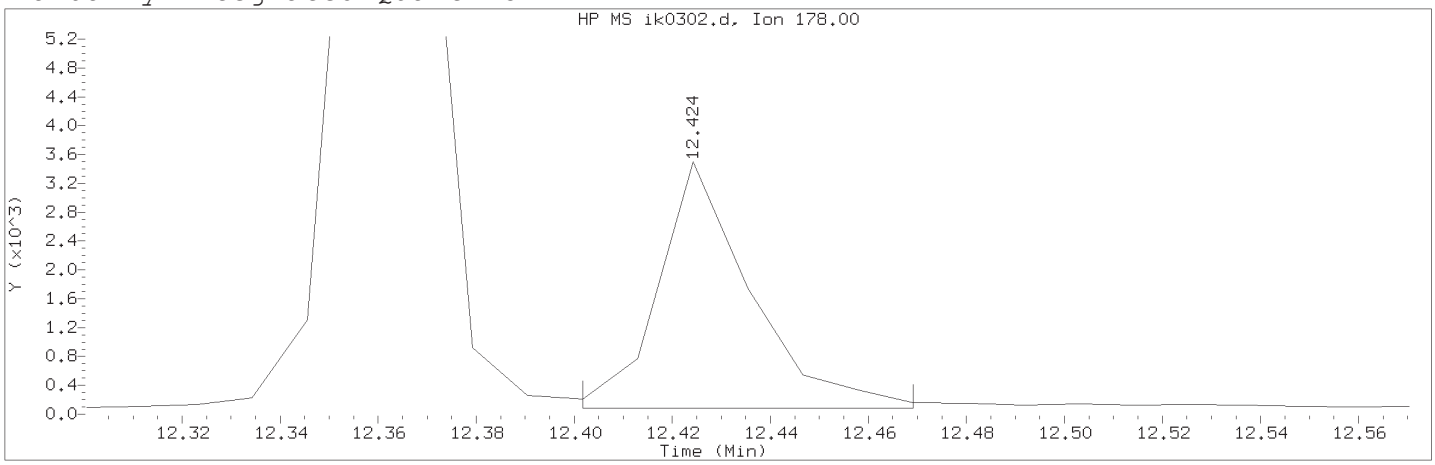
Compound Number	: 33
Compound Name	: Anthracene
Scan Number	: 975
Retention Time (minutes)	: 12.424
Relative Retention Time	: 0.00000
Quant Ion	: 178.00
Area (flag)	: 4519M
On-column Amount (ng/ul)	: 0.0220

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0302.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 18:15 Analyst ID: 18302SLH

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:10 jmg00346

Sample Name: SBLKLH302 Lab Sample ID: SBLKLH302

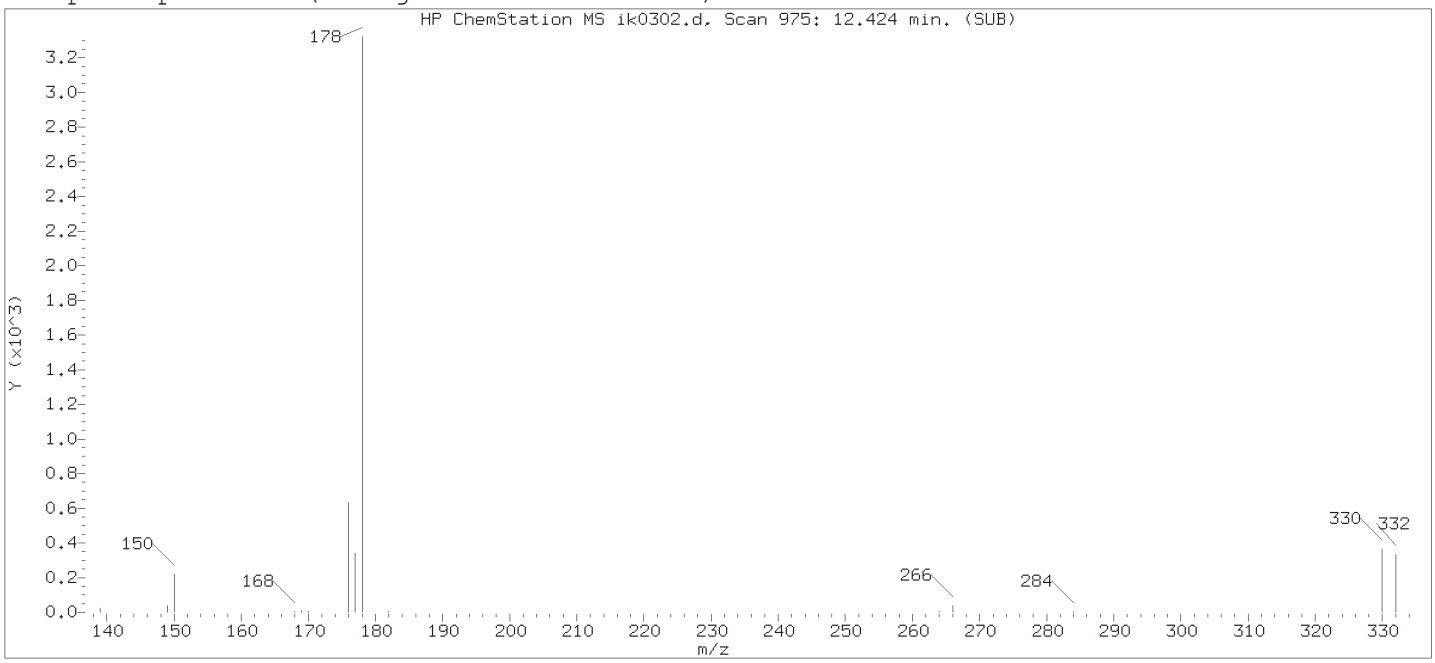
Compound Number : 33
Compound Name : Anthracene
Scan Number : 975
Retention Time (minutes) : 12.424
Quant Ion : 178.00
Area (flag) : 4519M
On-column Amount (ng/ul) : 0.0220
Integration start scan : 972 Integration stop scan: 978
Y at integration start : 80 Y at integration end: 80

Reason for manual integration: improper integration

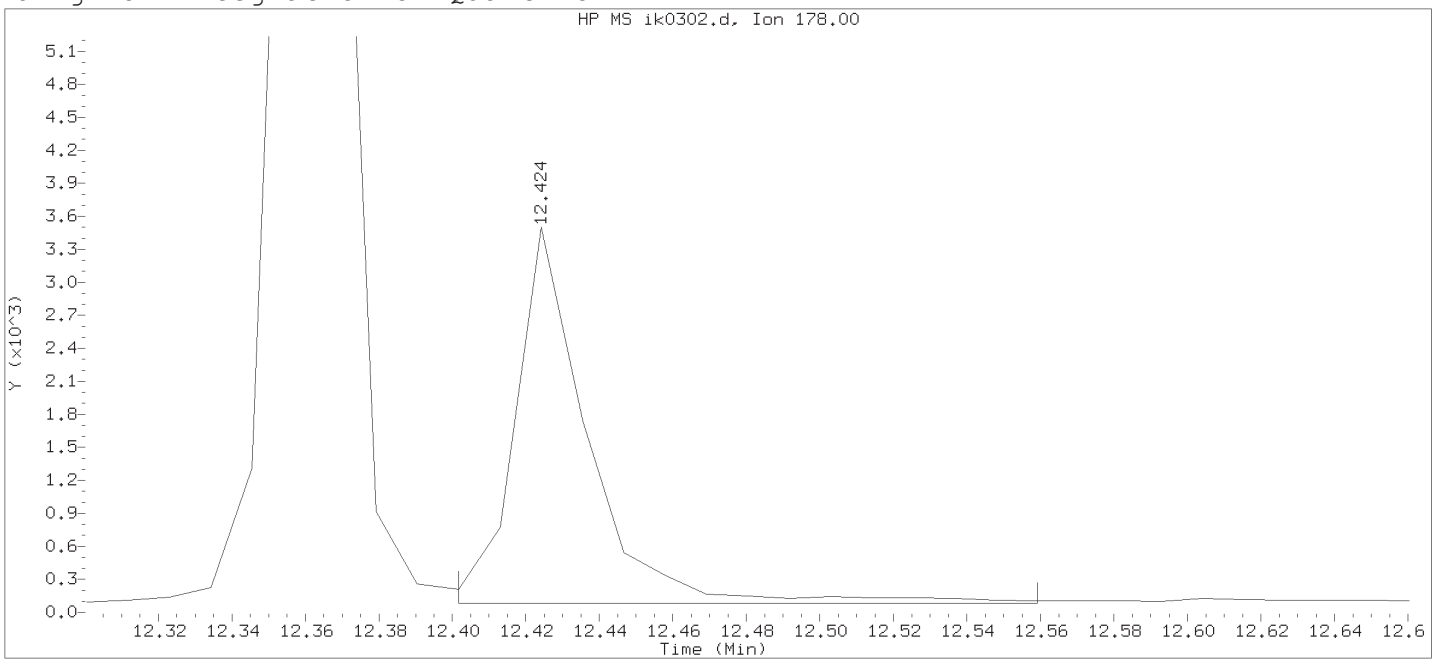
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:49.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0302.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 18:15 Analyst ID: 18302SLH

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:09 jmg00346

Sample Name: SBLKLH302 Lab Sample ID: SBLKLH302

Compound Number : 33
Compound Name : Anthracene
Scan Number : 975
Retention Time (minutes) : 12.424
Quant Ion : 178.00
Area : 4718
On-column Amount (ng/ul) : 0.0229
Integration start scan : 972 Integration stop scan: 986
Y at integration start : 80 Y at integration end: 80

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

SBLKLC317

Data file: /chem/HP10623.i/18nov16.b/ck0702.d Injection date and time: **16-NOV-2018 07:21**
Data file Sample Info. Line: SBLKLC317;SBLKLC317;2;3;BLANK;;DOD26; Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:16 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.764	(0.000)	473	152	62792	(-8)	1.00	
10) Naphthalene-d8	8.276	(0.013)	587	136	252987	(-4)	1.00	
20) Acenaphthene-d10	10.448	(0.011)	773	164	117061	(-3)	1.00	
31) Phenanthrene-d10	12.305	(0.000)	939	188	223243	(-2)	1.00	
43) Chrysene-d12	15.609	(0.000)	1251	240	169975	(-3)	1.00	
51) Perylene-d12	17.720	(0.000)	1521	264	141767	(-8)	1.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
14) 1-Methylnaphthalene-d10	(2)	9.231	(-0.002)	152	137145	1.073	107%
36) Fluoranthene-d10	(4)	13.806	(0.000)	212	217463	1.074	107%
49) Benzo(a)pyrene-d12	(6)	17.587	(0.000)	264	124896	0.959	96%

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)				Not Detected					0.02
11) Naphthalene	(2)				Not Detected					0.04
19) Acenaphthylene	(3)	10.274	(-0.001)	152	2332M	0.010	0.33			0.01
21) Acenaphthene	(3)				Not Detected					0.02
26) Fluorene	(3)				Not Detected					0.02
32) Phenanthrene	(4)				Not Detected					0.02
33) Anthracene	(4)				Not Detected					0.02
35) Di-n-butylphthalate	(4)				Not Detected					0.2
37) Fluoranthene	(4)				Not Detected					0.02
39) Pyrene	(5)				Not Detected					0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.523	(0.000)	149	86708	0.554	18.48			0.3
42) Benzo(a)anthracene	(5)				Not Detected					0.02
44) Chrysene	(5)				Not Detected					0.01
46) Benzo(b)fluoranthene	(6)				Not Detected					0.02
47) Benzo(k)fluoranthene	(6)				Not Detected					0.02
50) Benzo(a)pyrene	(6)				Not Detected					0.02
53) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.02
54) Dibenz(a,h)anthracene	(6)				Not Detected					0.02
55) Benzo(g,h,i)perylene	(6)				Not Detected					0.02

M = Compound was manually integrated.

Digitally signed by William H Saadeh on 11/16/2018 at 12:33. Target 3.5 esignature user ID: whs02991

Data file: /chem/HP10623.i/18nov16.b/ck0702.d Injection date and time: **16-NOV-2018 07:21**
Data file Sample Info. Line: SBLKLC317;SBLKLC317;2;3;BLANK;;DOD26; Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:16 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

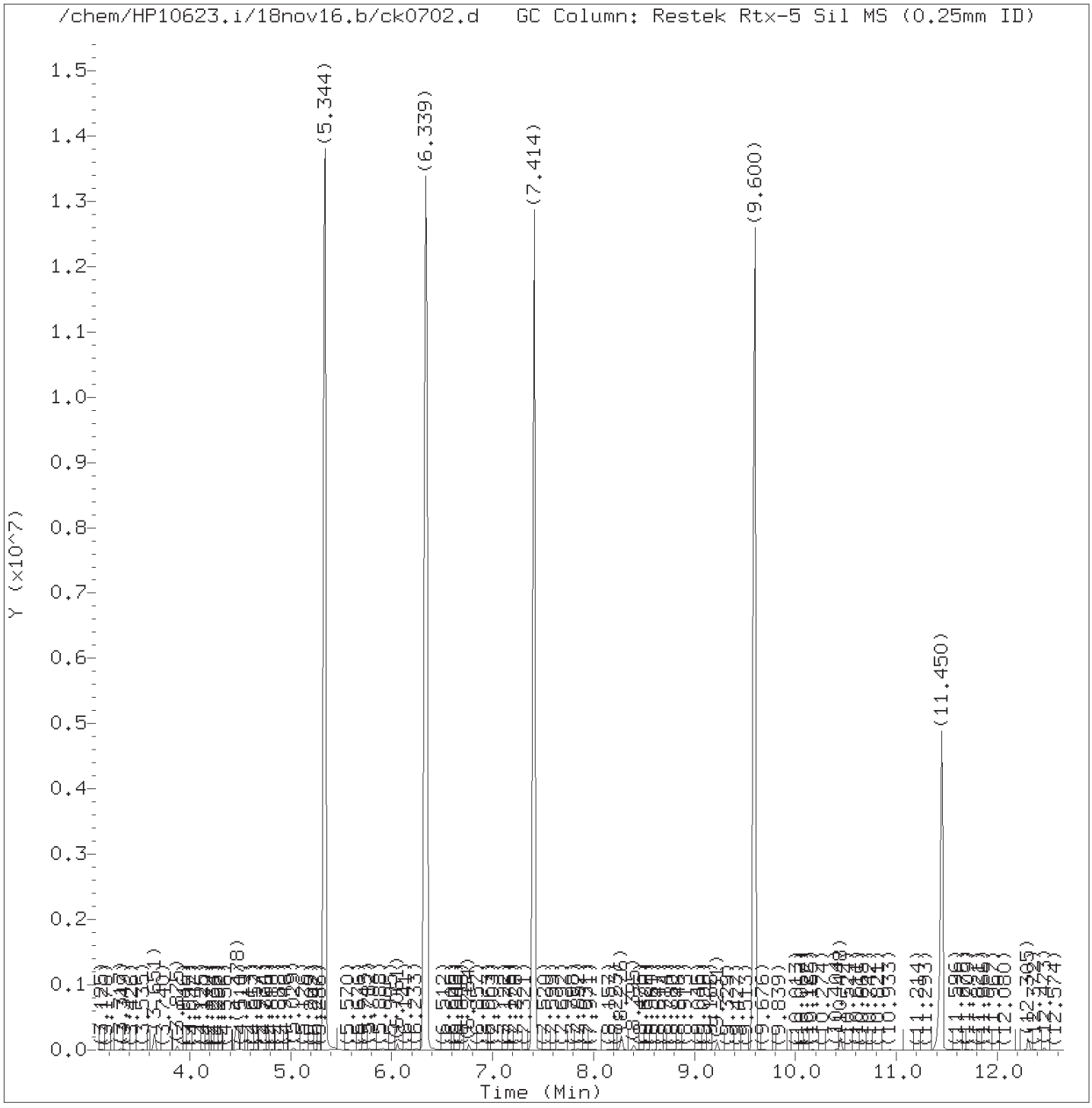
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by William H Saadeh on 11/16/2018 at 12:33. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

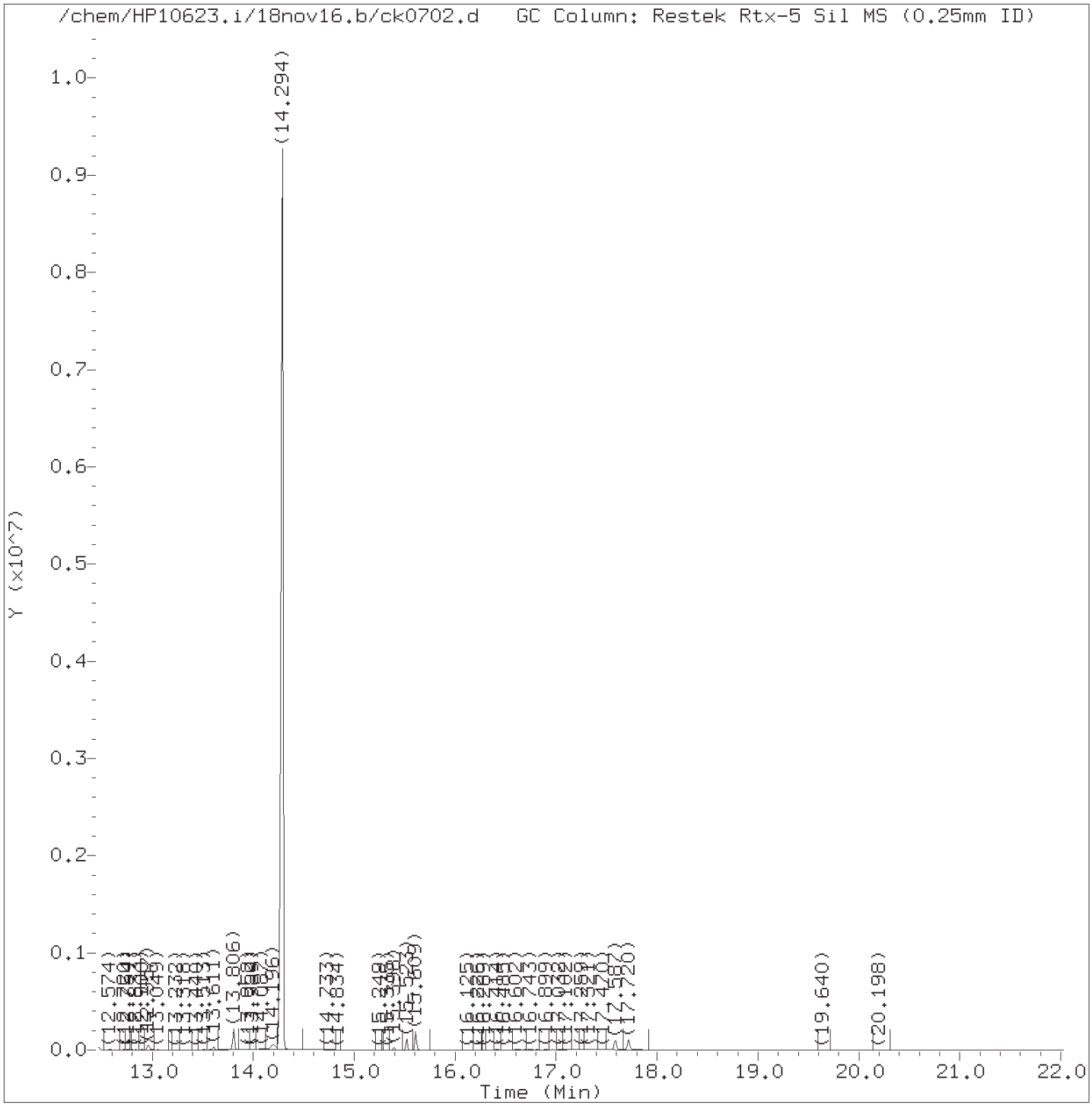
Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0702.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 07:21 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:16 whs02991

Sample Name: SBLKLC317 Lab Sample ID: SBLKLC317

Digitally signed by William H Saadeh
on 11/16/2018 at 12:33.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0702.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 07:21 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:16 whs02991

Sample Name: SBLKLC317 Lab Sample ID: SBLKLC317

Digitally signed by William H Saadeh
on 11/16/2018 at 12:33.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0702.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 07:21 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:16 whs02991

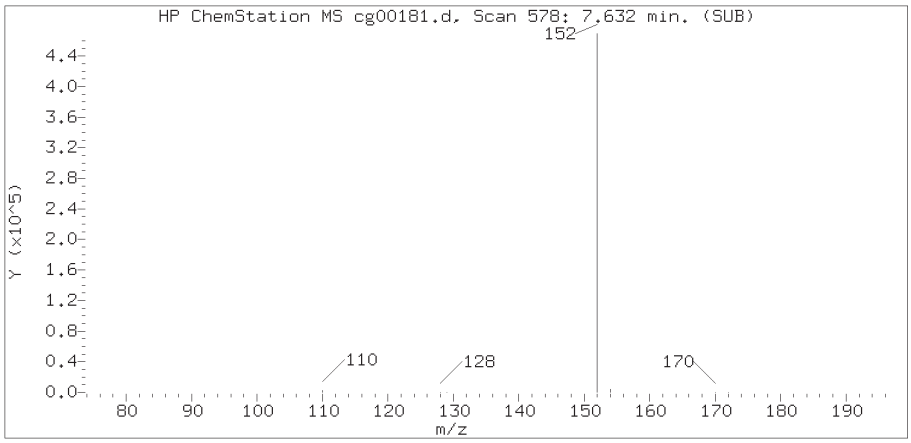
Sample Name: SBLKLC317 Lab Sample ID: SBLKLC317

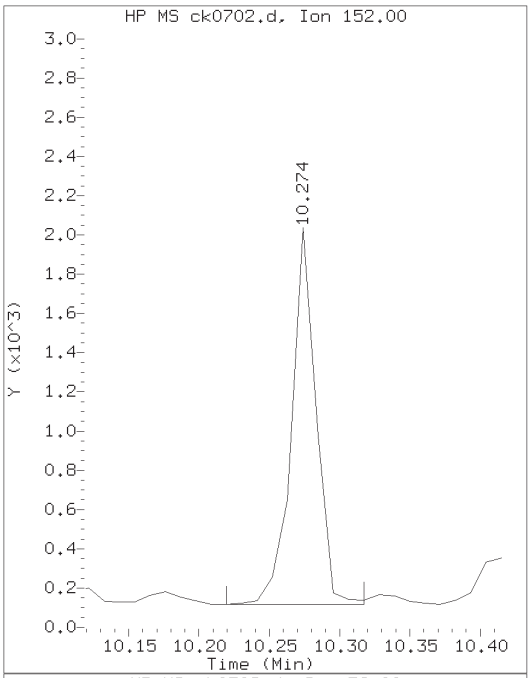
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
6)*1,4-Dichlorobenzene-d4	(1)	6.764	152	62792	1.000
10)*Naphthalene-d8	(2)	8.276	136	252987	1.000
14)$1-Methylnaphthalene-d10	(2)	9.231	152	137145	1.073
19) Acenaphthylene	(3)	10.274	152	2332M	0.010
20)*Acenaphthene-d10	(3)	10.448	164	117061	1.000
31)*Phenanthrene-d10	(4)	12.305	188	223243	1.000
36)$Fluoranthene-d10	(4)	13.806	212	217463	1.074
41) bis(2-Ethylhexyl)phthalate	(5)	15.523	149	86708	0.554
43)*Chrysene-d12	(5)	15.609	240	169975	1.000
49)$Benzo(a)pyrene-d12	(6)	17.587	264	124896	0.959
51)*Perylene-d12	(6)	17.720	264	141767	1.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

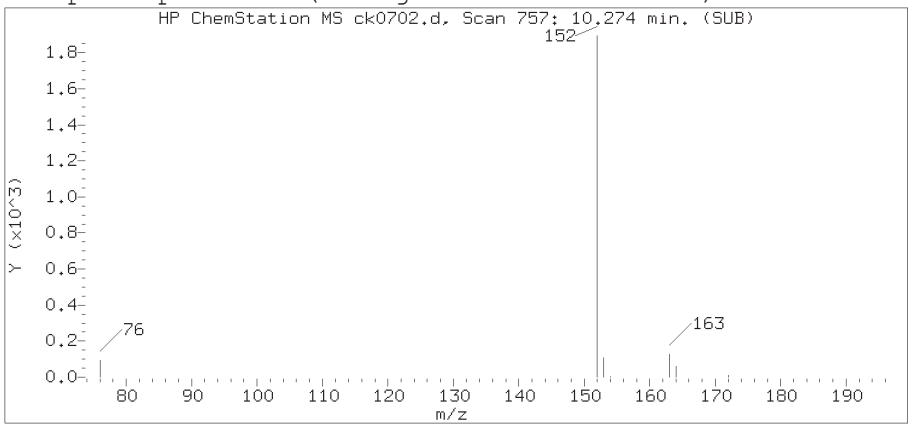
Digitally signed by William H Saadeh
on 11/16/2018 at 12:33.
Target 3.5 esignature user ID: whs02991

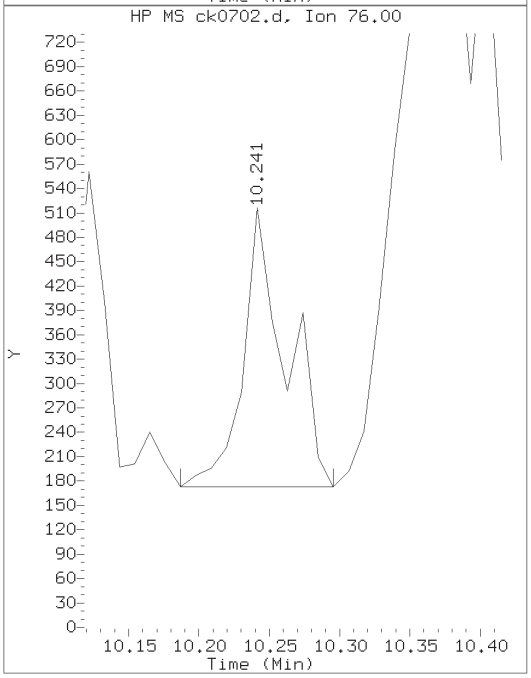
Reference Standard Spectrum for Acenaphthylene



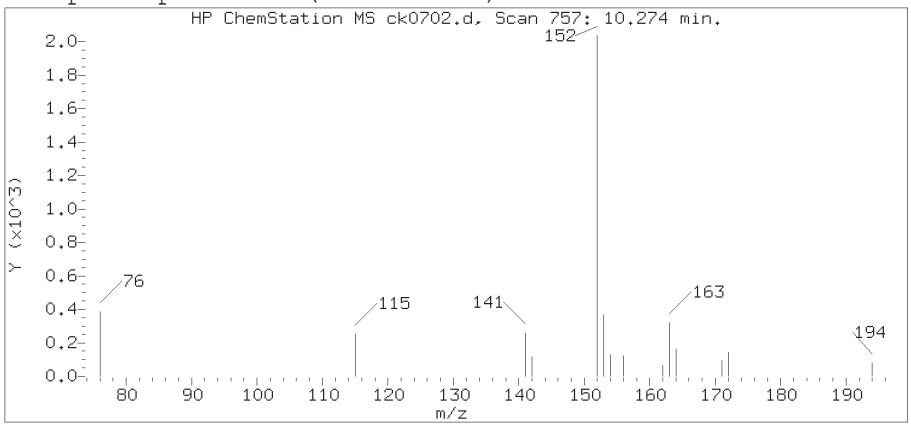


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10623.i/18nov16.b/ck0702.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 07:21 Analyst ID: jmg00346

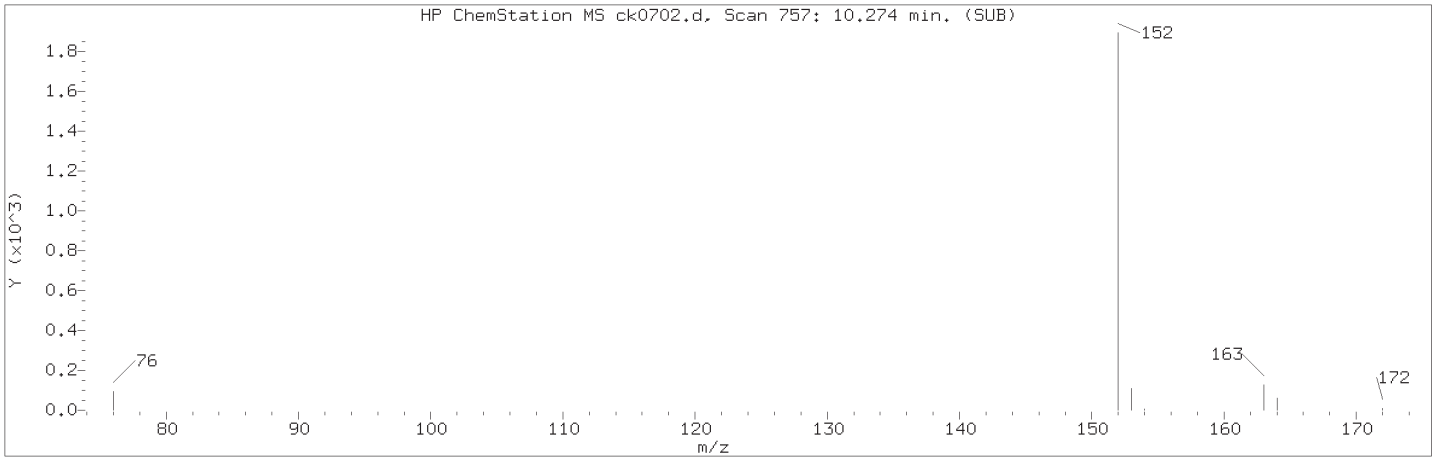
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:16 whs02991

Sample Name: SBLKLC317 Lab Sample ID: SBLKLC317

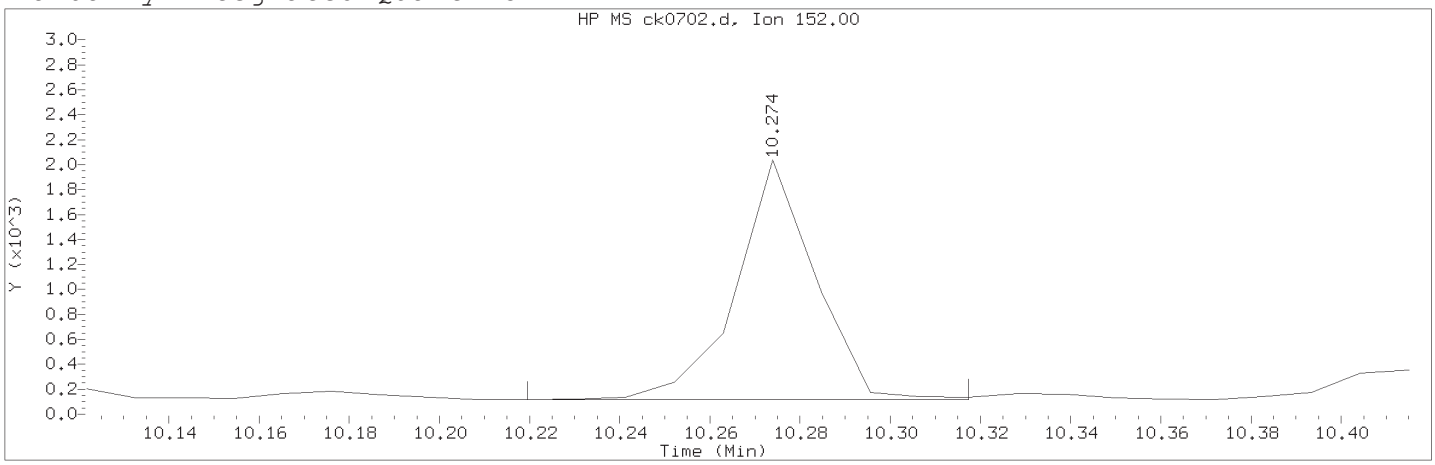
Compound Number	: 19
Compound Name	: Acenaphthylene
Scan Number	: 757
Retention Time (minutes)	: 10.274
Relative Retention Time	:-0.00102
Quant Ion	: 152.00
Area (flag)	: 2332M
On-column Amount (ng/ul)	: 0.0100

Digitally signed by William H Saadeh on 11/16/2018 at 12:33.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0702.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 07:21 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:16 whs02991

Sample Name: SBLKLC317 Lab Sample ID: SBLKLC317

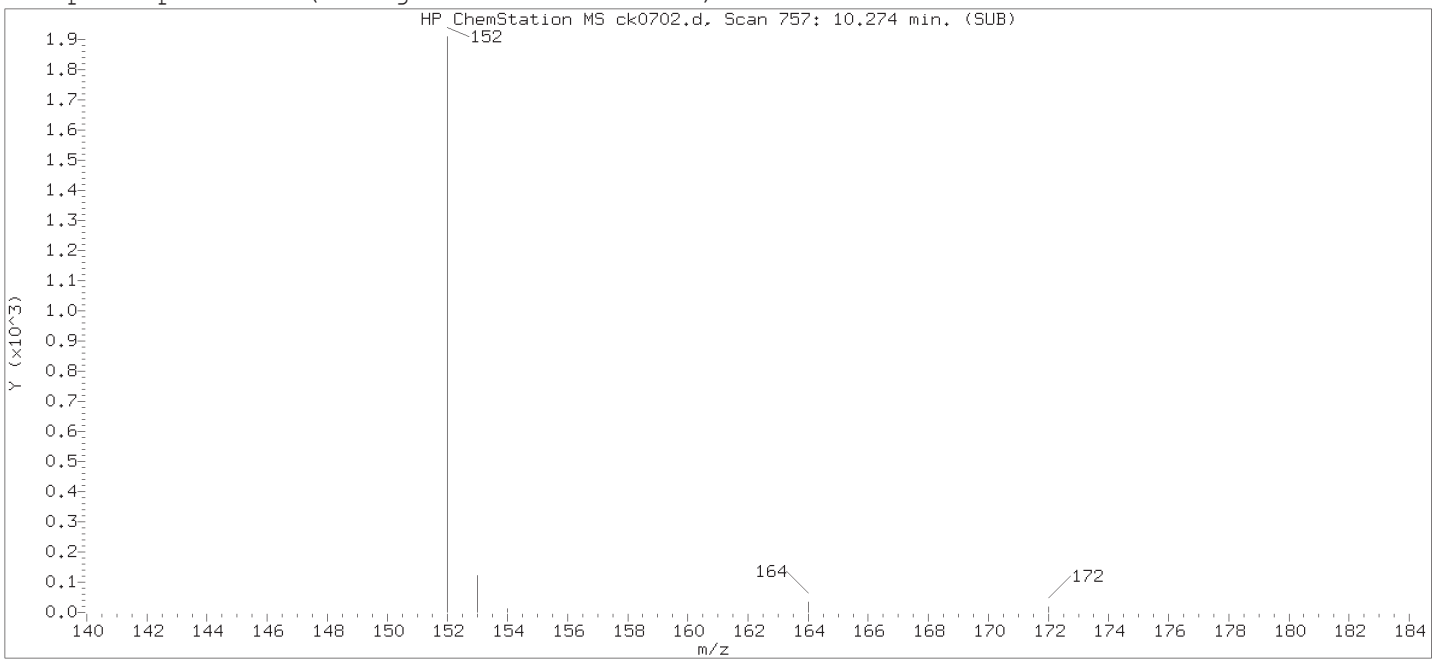
Compound Number	: 19		
Compound Name	: Acenaphthylene		
Scan Number	: 757		
Retention Time (minutes)	: 10.274		
Quant Ion	: 152.00		
Area (flag)	: 2332M		
On-column Amount (ng/ul)	: 0.0100		
Integration start scan	: 751	Integration stop scan:	760
Y at integration start	: 117	Y at integration end:	117

Reason for manual integration: improper integration

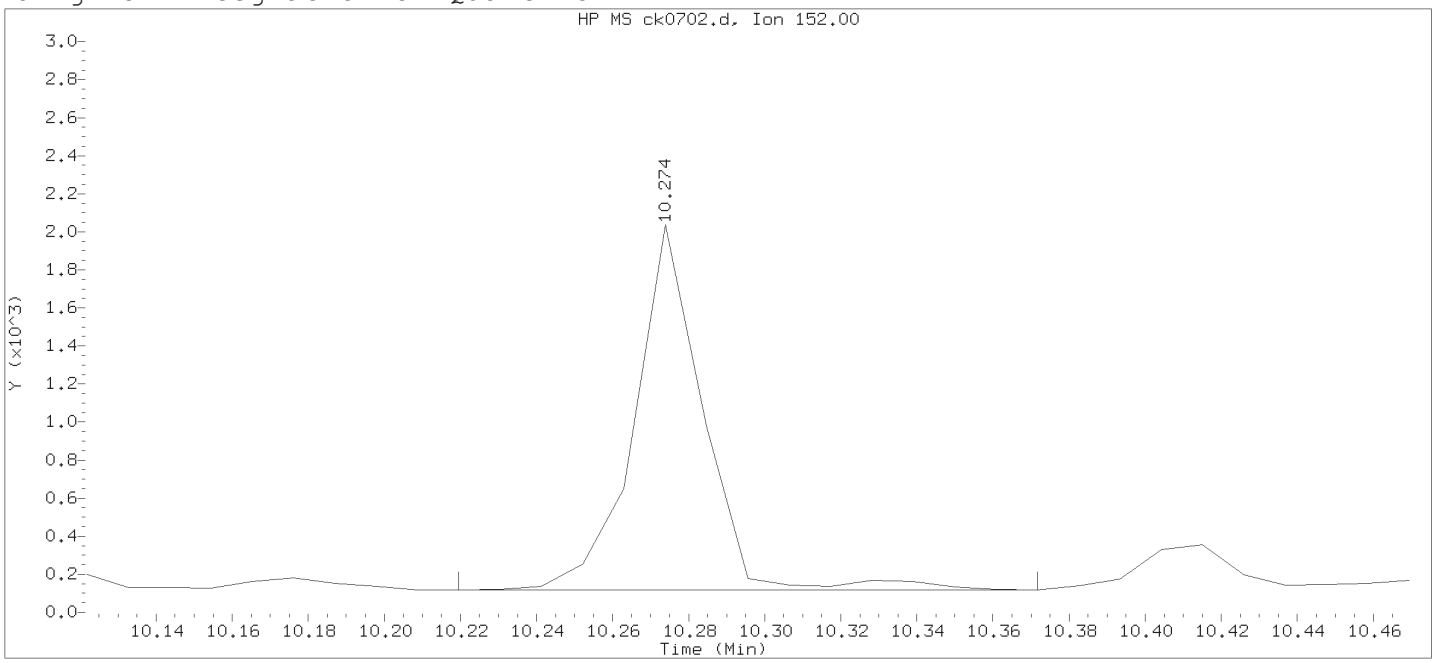
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:33.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0702.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 07:21 Analyst ID: jmg00346

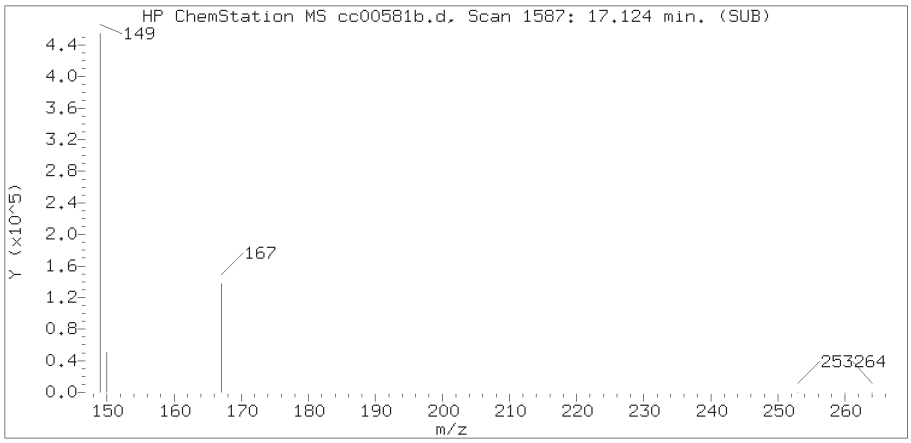
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 07:48 Automation

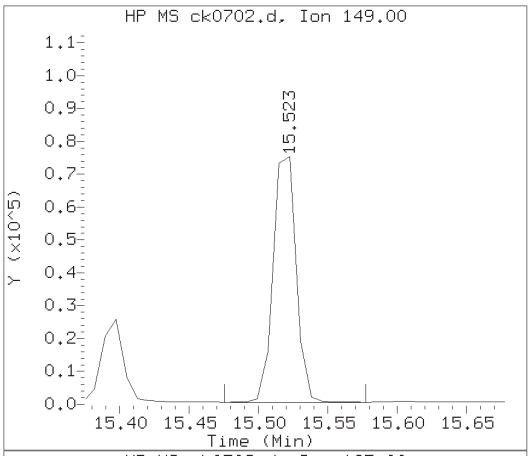
Sample Name: SBLKLC317 Lab Sample ID: SBLKLC317

Compound Number	: 19		
Compound Name	: Acenaphthylene		
Scan Number	: 757		
Retention Time (minutes)	: 10.274		
Quant Ion	: 152.00		
Area	: 2407		
On-column Amount (ng/ul)	: 0.0104		
Integration start scan	: 751	Integration stop scan:	765
Y at integration start	: 117	Y at integration end:	117

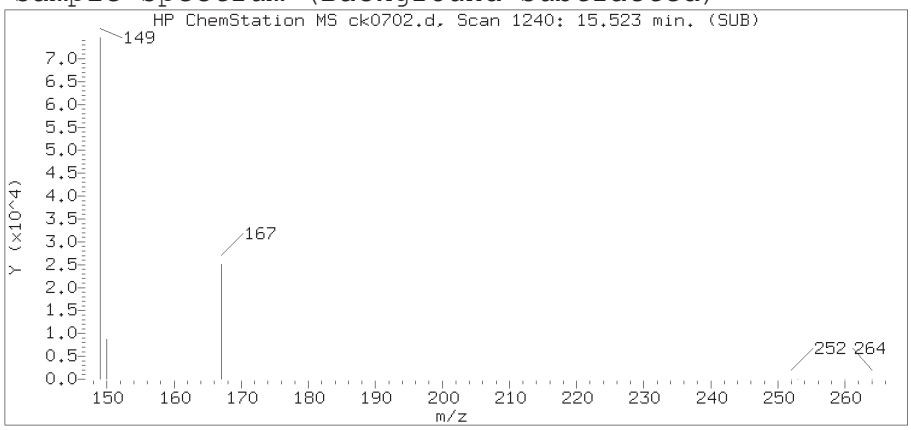
Digitally signed by William H Saadeh on 11/16/2018 at 12:33.
Target 3.5 esignature user ID: 10

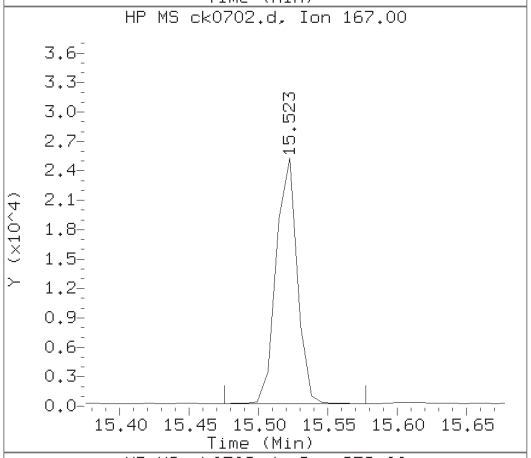
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



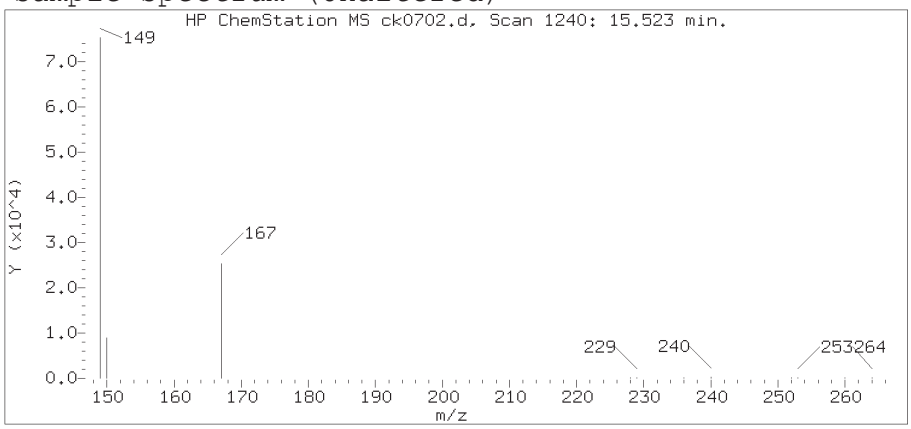


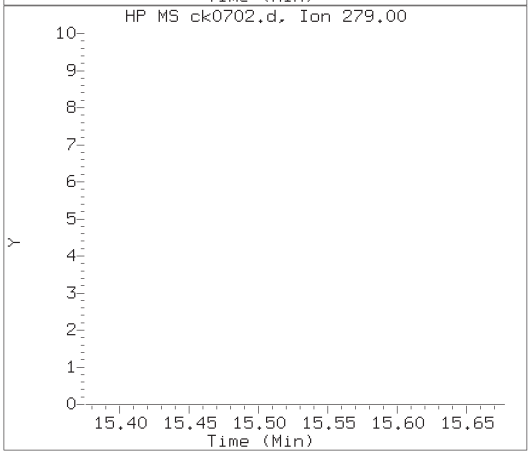
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/18nov16.b/ck0702.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 07:21 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:16 whs02991

Sample Name: SBLKLC317 Lab Sample ID: SBLKLC317

Compound Number	: 41
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1240
Retention Time (minutes)	: 15.523
Relative Retention Time	: 0.00000
Quant Ion	: 149.00
Area (flag)	: 86708
On-column Amount (ng/ul)	: 0.5543

Digitally signed by William H Saadeh on 11/16/2018 at 12:33.
Target 3.5 esignature user ID: whs02991

T1003MS

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

9867763

Data file: /chem/HP10976.i/18nov07.b/ik0306.d
Data file Sample Info. Line: T1003MS;9867763;2;3;MS;;DOD26;
Date, time and analyst ID of latest file update: 12-Nov-2018 02:32 apb10206

Injection date and time: **07-NOV-2018 21:15**
Instrument ID: **HP10976.i** Batch: **18302SLH**

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 07-NOV-2018 18:18
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov07.b/ik0301.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1
Final Extract Volume (Vt): 500 ul
GpcCleanup (No = 0, Yes = 1): 1
Volume Injected (Vi): 1 ul
Unit Correction Factor (Uf): 1
Sample Weight (Ws): 30.1 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.808	(0.000)	500	152	44472	(1)	1.00	
10) Naphthalene-d8	8.333	(-0.013)	615	136	163084	(2)	1.00	
20) Acenaphthene-d10	10.489	(-0.002)	802	164	110201	(9)	1.00	
31) Phenanthrene-d10	12.346	(-0.014)	968	188	246471	(11)	1.00	
43) Chrysene-d12	15.636	(-0.022)	1270	240	244755	(7)	1.00	
51) Perylene-d12	17.607	(-0.038)	1522	264	119337	(-48)	1.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.272	(0.001)	152	79201	0.796	80%		61 - 111
36) Fluoranthene-d10	(4)	13.831	(0.000)	212	223198	0.730	73%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.490	(0.000)	264	69655	0.611	61%		54 - 122

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.161	(-0.016)	88	22393M	0.841	27.95			0.02
11) Naphthalene	(2)	8.359	(0.000)	128	1187417	7.071	234.90	31.312	B	0.04
19) Acenaphthylene	(3)	10.315	(-0.000)	152	181033	0.858	28.50			0.01
21) Acenaphthene	(3)	10.532	(-0.001)	154	136143	0.981	32.59	1.723	B	0.02
26) Fluorene	(3)	11.165	(0.000)	166	181458	1.062	35.29	1.949	B	0.02
32) Phenanthrene	(4)	12.368	(0.000)	178	1248104	4.687	155.72	2.56	B	0.02
33) Anthracene	(4)	12.435	(0.000)	178	341822	1.282	42.58	0.732	B	0.02
35) Di-n-butylphthalate	(4)	13.038	(-0.001)	149	14834052	58.221	1934.27		E	0.2
37) Fluoranthene	(4)	13.856	(-0.000)	202	2642493	7.970	264.80			0.02
39) Pyrene	(5)	14.149	(0.000)	202	2606711	7.694	255.63			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.582	(-0.000)	149	1673408	10.394	345.31		E	0.3
42) Benzo(a)anthracene	(5)	15.621	(-0.000)	228	1431031	4.545	150.99			0.02
44) Chrysene	(5)	15.668	(0.000)	228	1779699	5.917	196.57			0.01
46) Benzo(b)fluoranthene	(6)	17.036	(-0.000)	252	1707539M	11.505	382.22		E	0.02
47) Benzo(k)fluoranthene	(6)	17.068	(-0.000)	252	765687M	5.503	182.83			0.02
50) Benzo(a)pyrene	(6)	17.529	(-0.000)	252	630387	4.956	164.65			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.410	(-0.001)	276	349149	2.328	77.33			0.02
54) Dibenz(a,h)anthracene	(6)	19.410	(-0.000)	278	146544	1.196	39.75			0.02
55) Benzo(g,h,i)perylene	(6)	19.911	(-0.001)	276	285797	2.167	71.99			0.02

M = Compound was manually integrated. B = Compound detected in referenced method blank. E = Compound concentration above calibration range.

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33. Target 3.5 esignature user ID: apb10206

Data file: /chem/HP10976.i/18nov07.b/ik0306.d Injection date and time: **07-NOV-2018 21:15**
Data file Sample Info. Line: T1003MS;9867763;2;3;MS;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 12-Nov-2018 02:32 apb10206

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 07-NOV-2018 18:18
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov07.b/ik0301.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

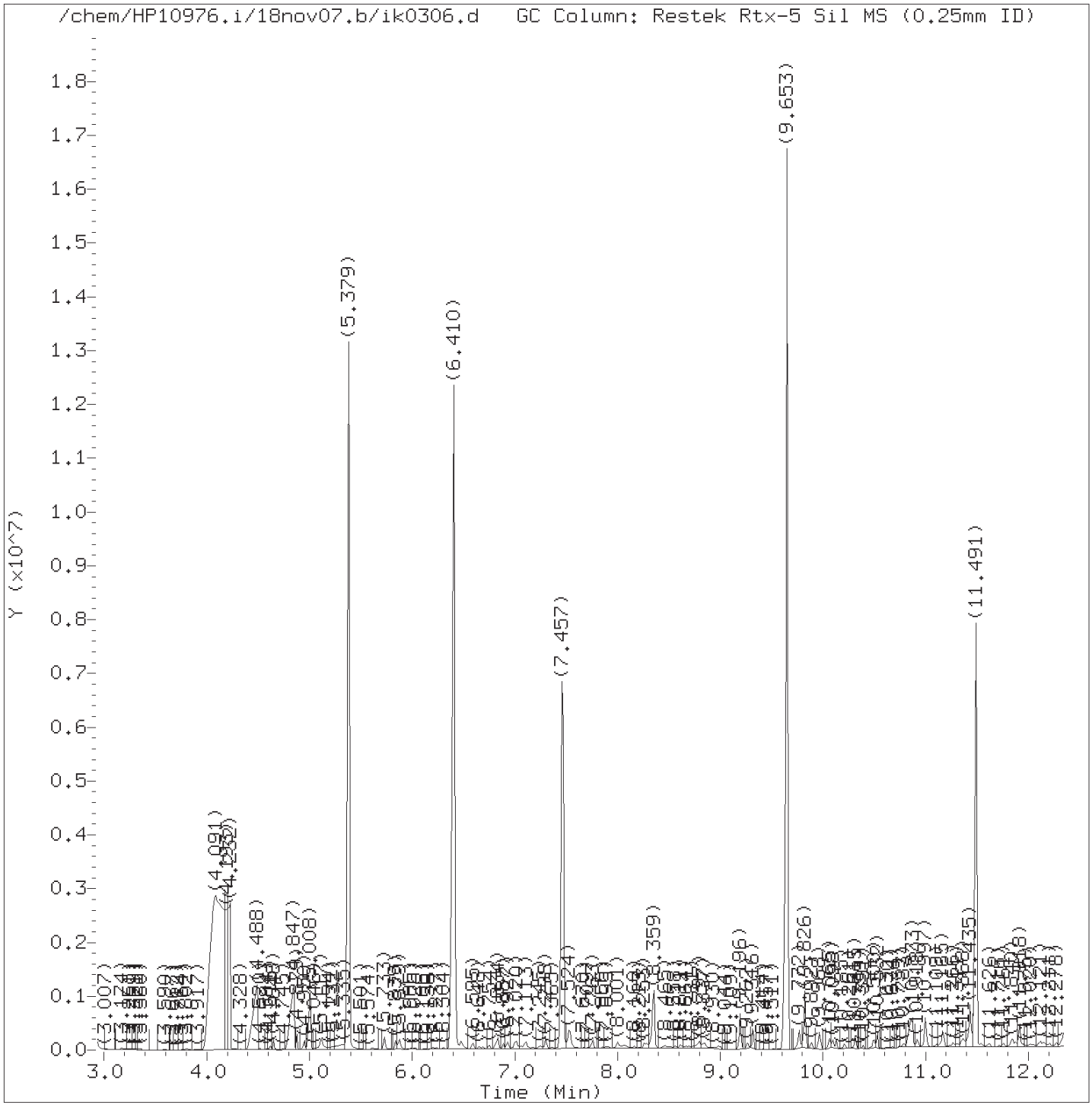
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.1 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

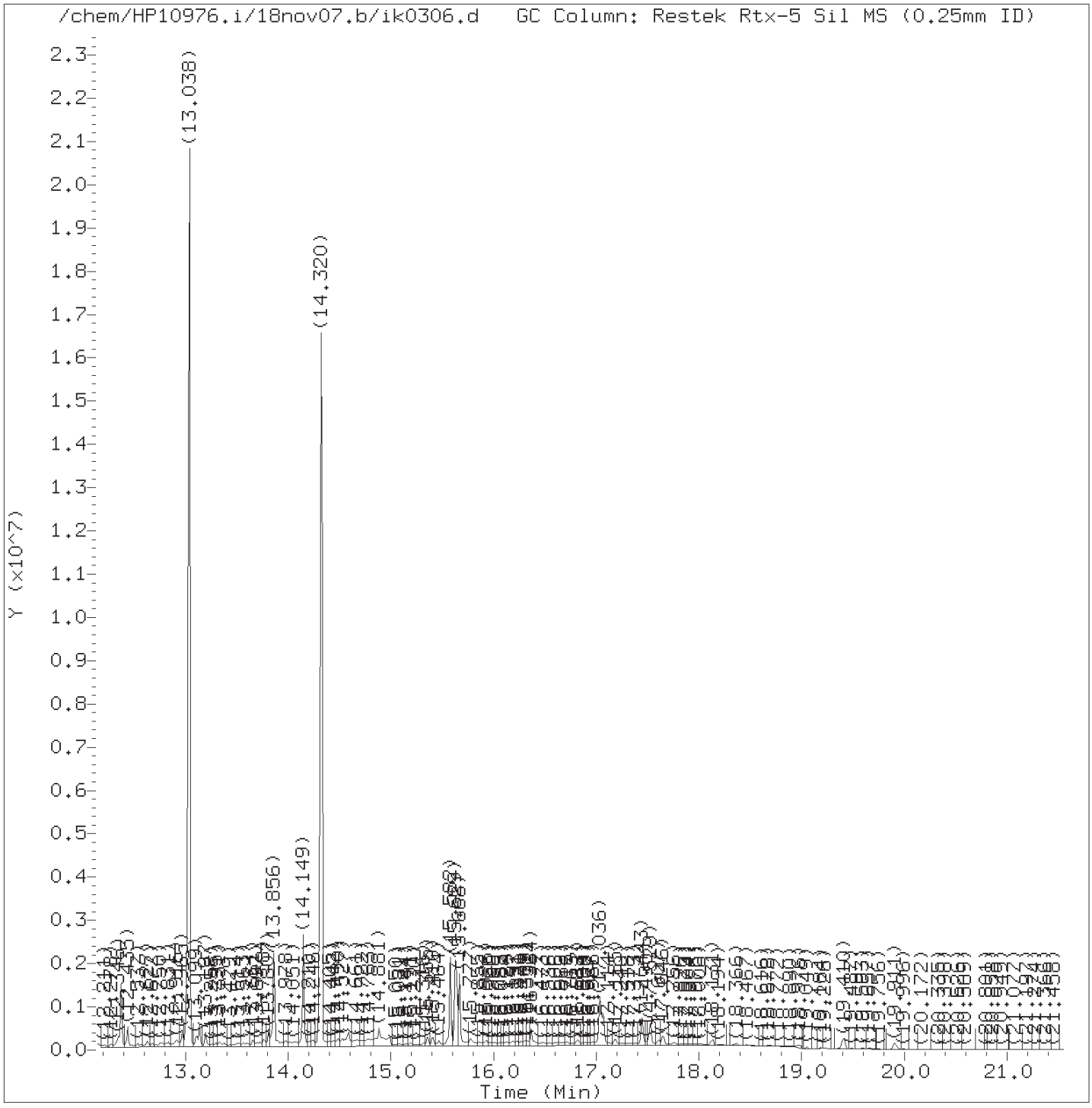
Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0306.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 12-Nov-2018 02:32 apb10206

Sample Name: T1003MS Lab Sample ID: 9867763

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0306.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 12-Nov-2018 02:32 apb10206

Sample Name: T1003MS Lab Sample ID: 9867763

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0306.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 12-Nov-2018 02:32 apb10206

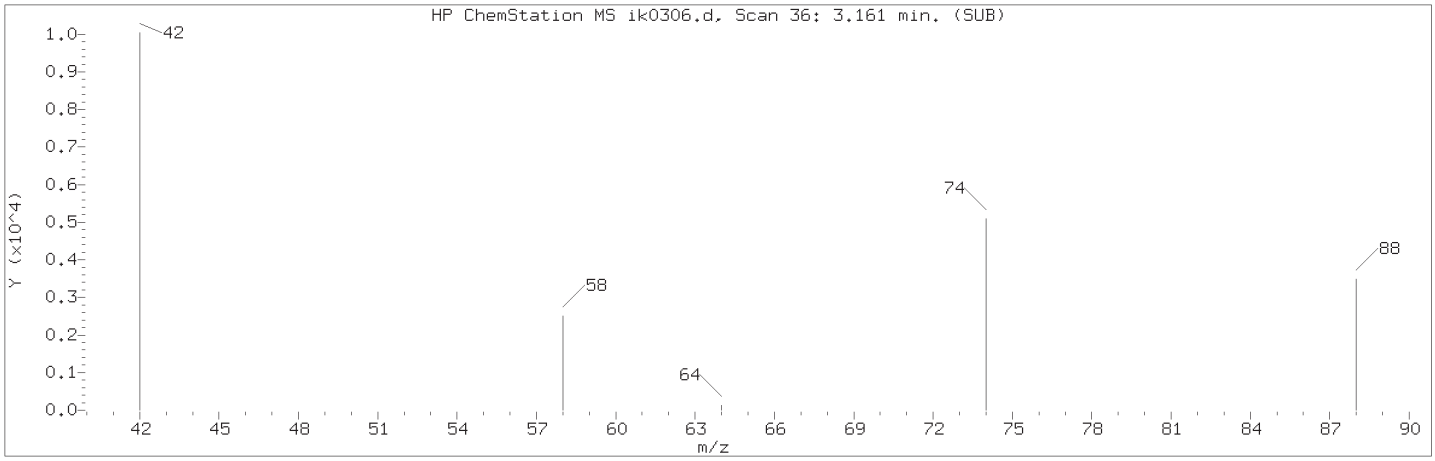
Sample Name: T1003MS Lab Sample ID: 9867763

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.161	88	22393M	0.841
6)*1,4-Dichlorobenzene-d4	(1)	6.808	152	44472	1.000
10)*Naphthalene-d8	(2)	8.333	136	163084	1.000
11) Naphthalene	(2)	8.359	128	1187417	7.071
14)$1-Methylnaphthalene-d10	(2)	9.272	152	79201	0.796
19) Acenaphthylene	(3)	10.315	152	181033	0.858
20)*Acenaphthene-d10	(3)	10.489	164	110201	1.000
21) Acenaphthene	(3)	10.532	154	136143	0.981
26) Fluorene	(3)	11.165	166	181458	1.062
31)*Phenanthrene-d10	(4)	12.346	188	246471	1.000
32) Phenanthrene	(4)	12.368	178	1248104	4.687
33) Anthracene	(4)	12.435	178	341822	1.282
35) Di-n-butylphthalate	(4)	13.038	149	14834052	58.221
36)$Fluoranthene-d10	(4)	13.831	212	223198	0.730
37) Fluoranthene	(4)	13.856	202	2642493	7.970
39) Pyrene	(5)	14.149	202	2606711	7.694
41) bis(2-Ethylhexyl)phthalate	(5)	15.582	149	1673408	10.394
42) Benzo(a)anthracene	(5)	15.621	228	1431031	4.545
43)*Chrysene-d12	(5)	15.636	240	244755	1.000
44) Chrysene	(5)	15.668	228	1779699	5.917
46) Benzo(b)fluoranthene	(6)	17.036	252	1707539M	11.505
47) Benzo(k)fluoranthene	(6)	17.068	252	765687M	5.503
49)$Benzo(a)pyrene-d12	(6)	17.490	264	69655	0.611
50) Benzo(a)pyrene	(6)	17.529	252	630387	4.956
51)*Perylene-d12	(6)	17.607	264	119337	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.410	276	349149	2.328
54) Dibenz(a,h)anthracene	(6)	19.410	278	146544	1.196
55) Benzo(g,h,i)perylene	(6)	19.911	276	285797	2.167

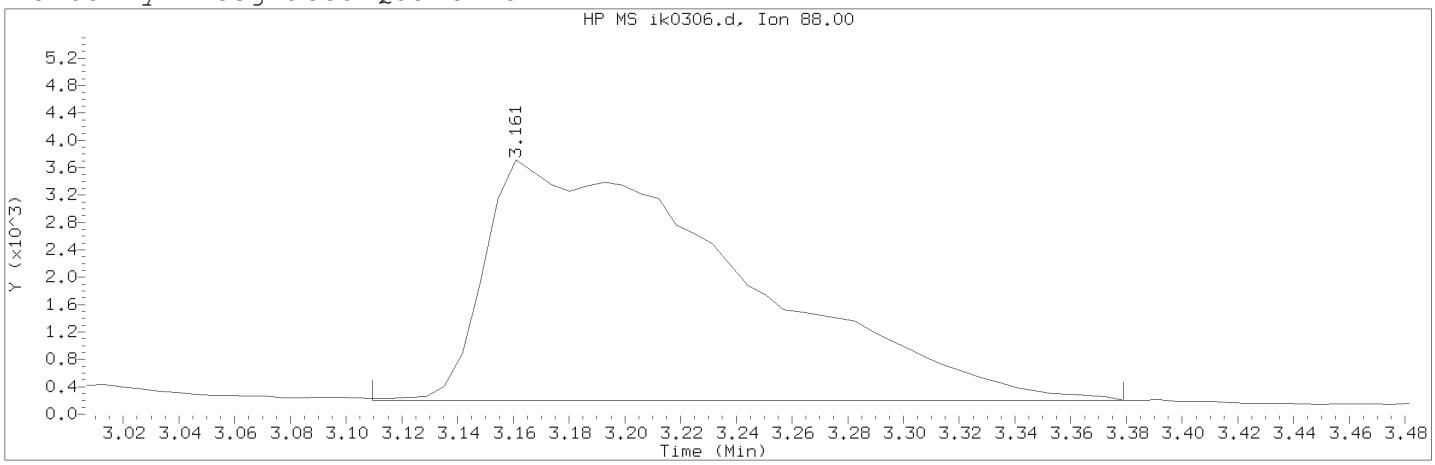
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0306.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 12-Nov-2018 02:32 apb10206

Sample Name: T1003MS Lab Sample ID: 9867763

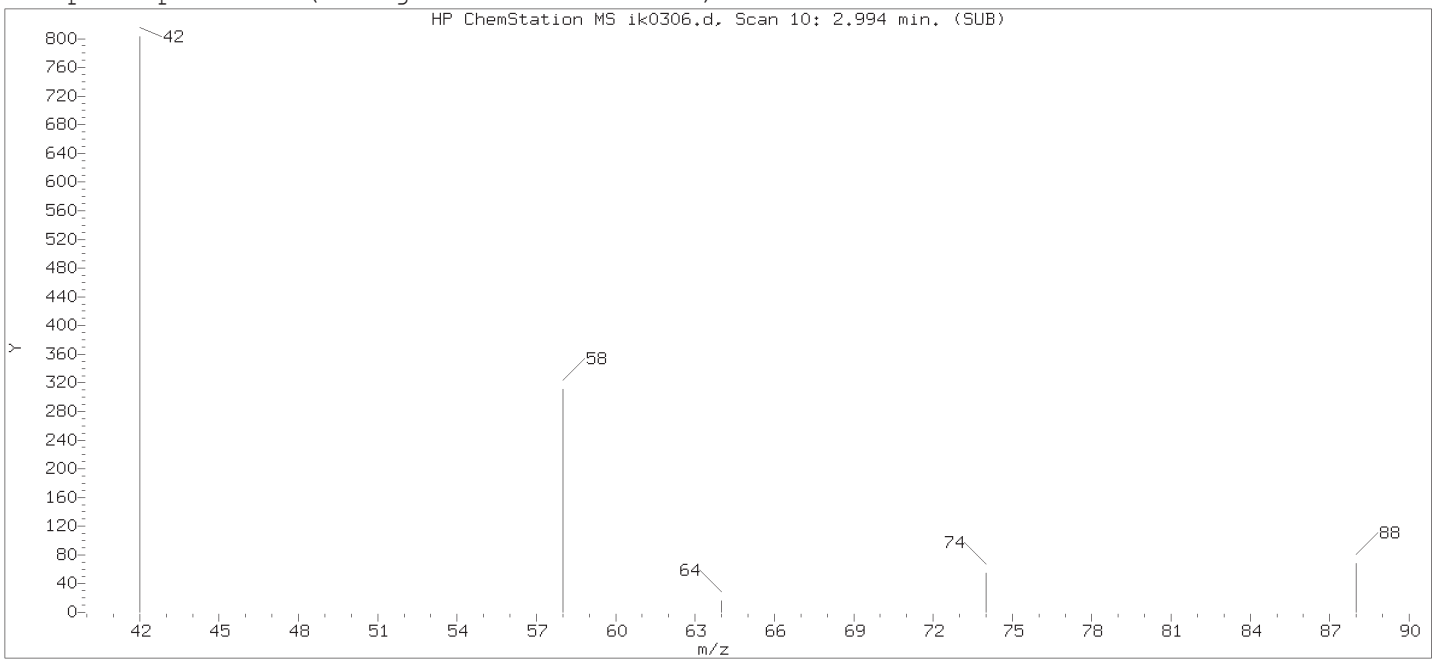
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 36		
Retention Time (minutes)	: 3.161		
Quant Ion	: 88.00		
Area (flag)	: 22393M		
On-Column Amount (ng/ul)	: 0.8412		
Integration start scan	: 27	Integration stop scan:	69
Y at integration start	: 203	Y at integration end:	203

Reason for manual integration: improper integration

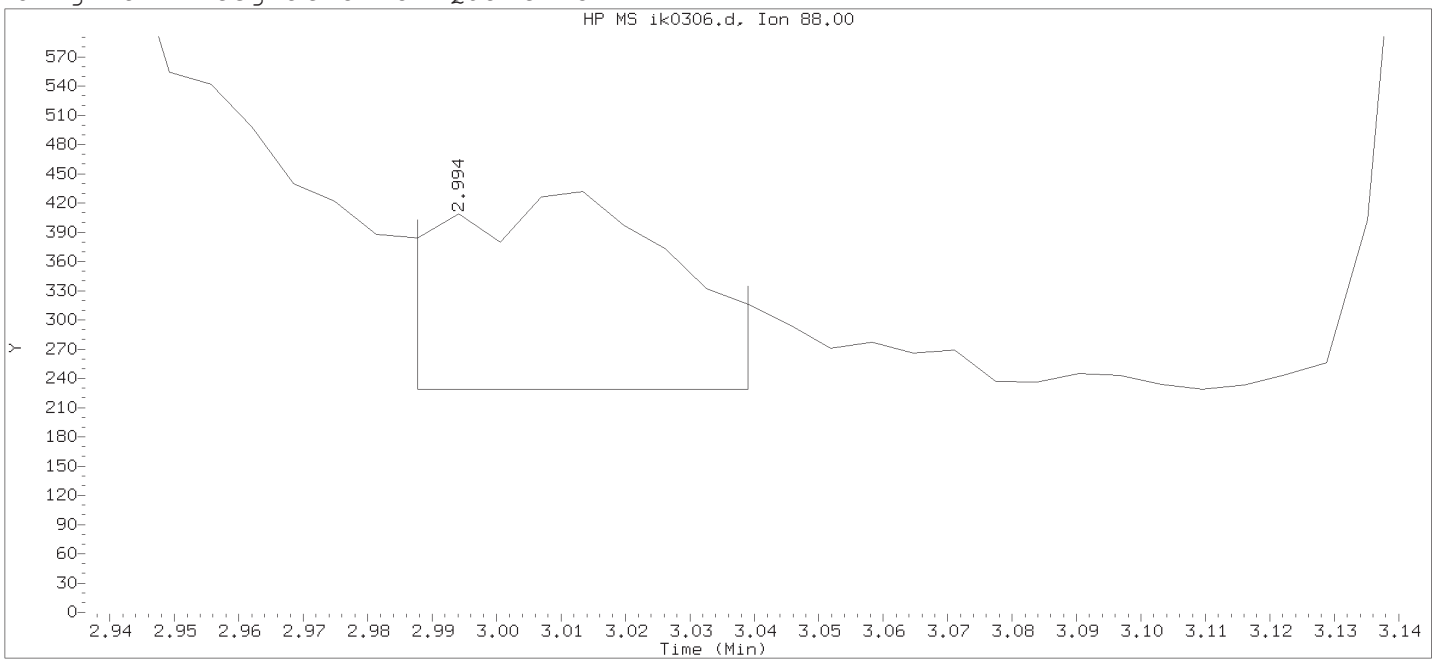
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0306.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:15 Analyst ID: apb10206

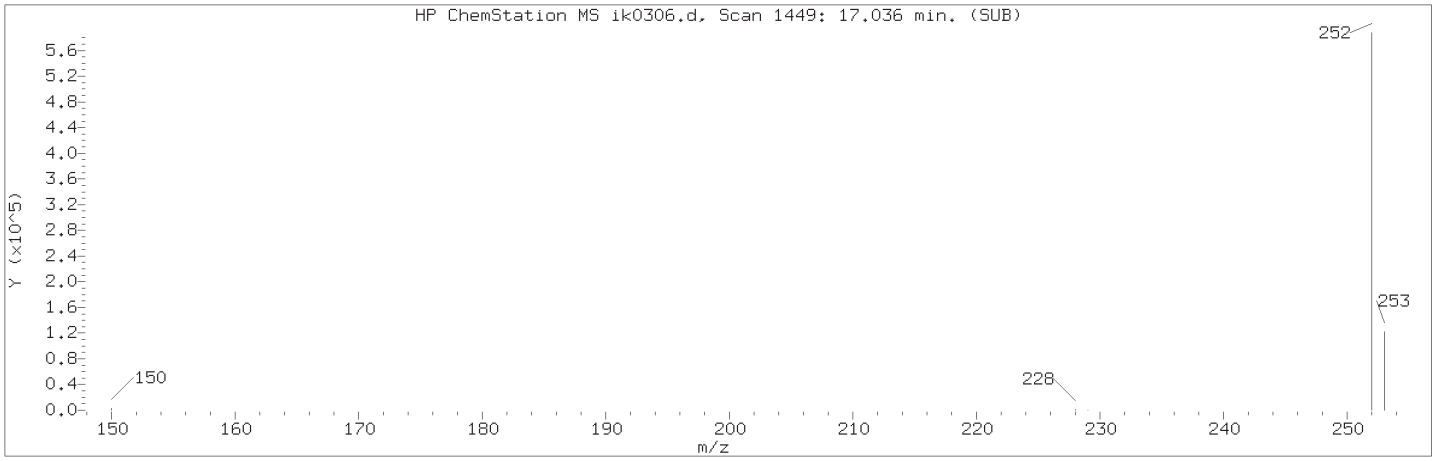
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1003MS Lab Sample ID: 9867763

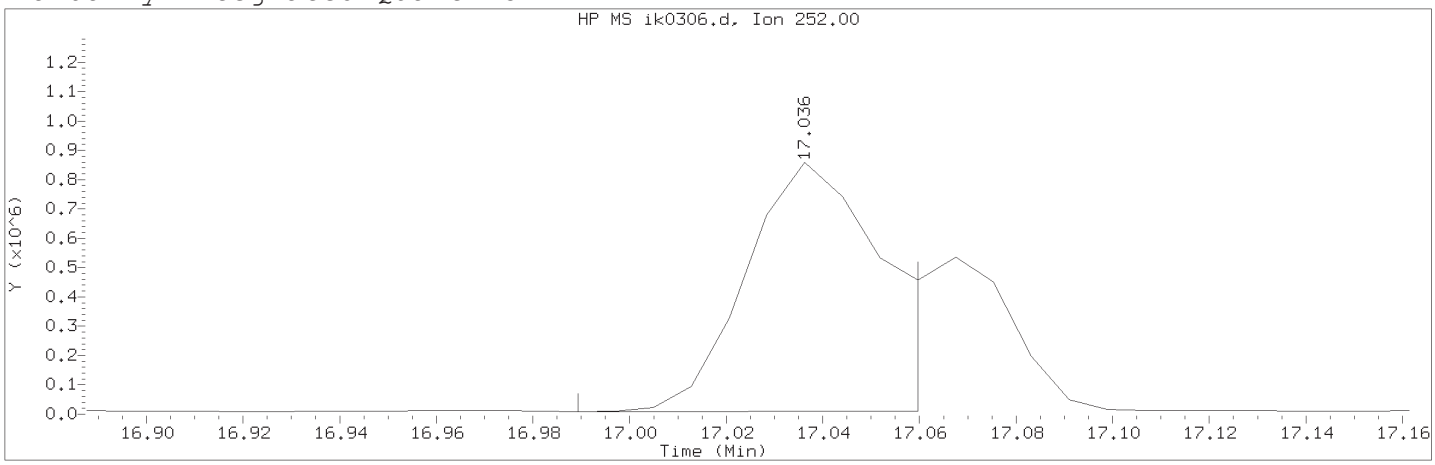
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 10		
Retention Time (minutes)	: 2.994		
Quant Ion	: 88.00		
Area	: 487		
On-column Amount (ng/ul)	: 0.0183		
Integration start scan	: 8	Integration stop scan:	16
Y at integration start	: 229	Y at integration end:	229

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0306.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 12-Nov-2018 02:32 apb10206

Sample Name: T1003MS Lab Sample ID: 9867763

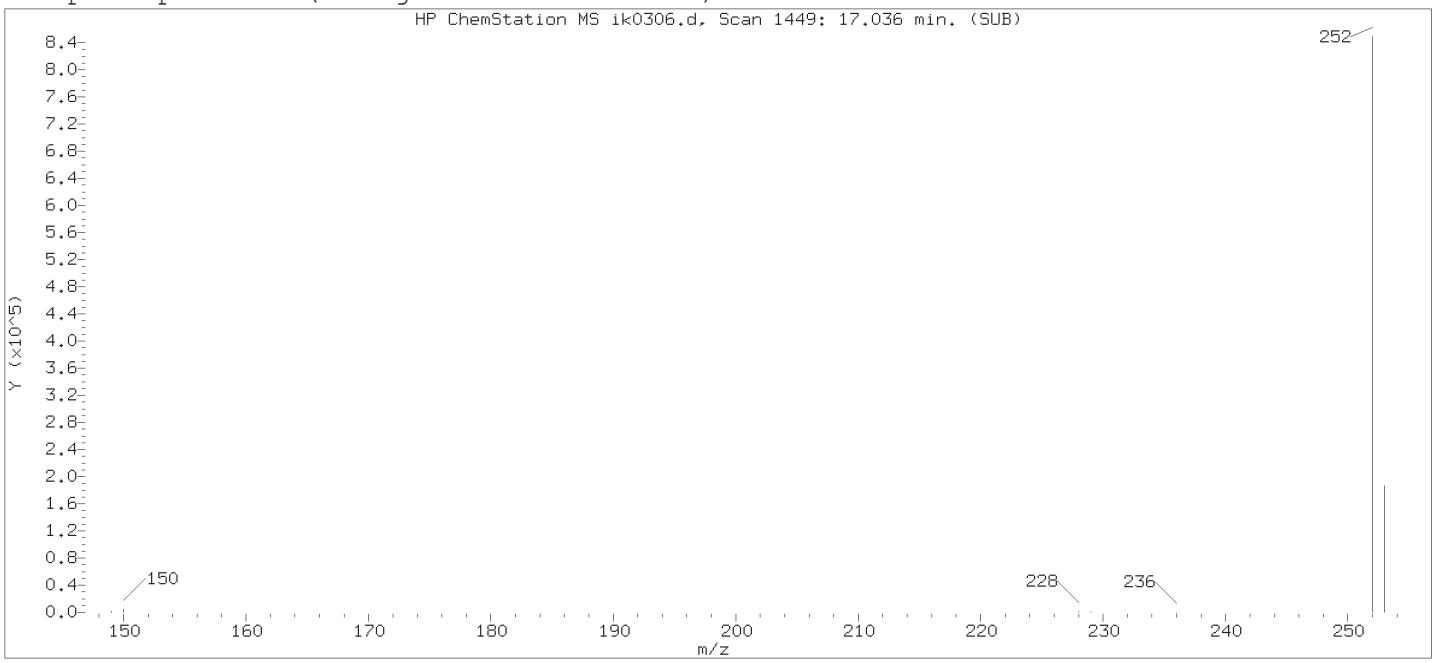
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1449
Retention Time (minutes) : 17.036
Quant Ion : 252.00
Area (flag) : 1707539M
On-Column Amount (ng/ul) : 11.5048
Integration start scan : 1442 Integration stop scan: 1451
Y at integration start : 8839 Y at integration end: 10374

Reason for manual integration: improper integration

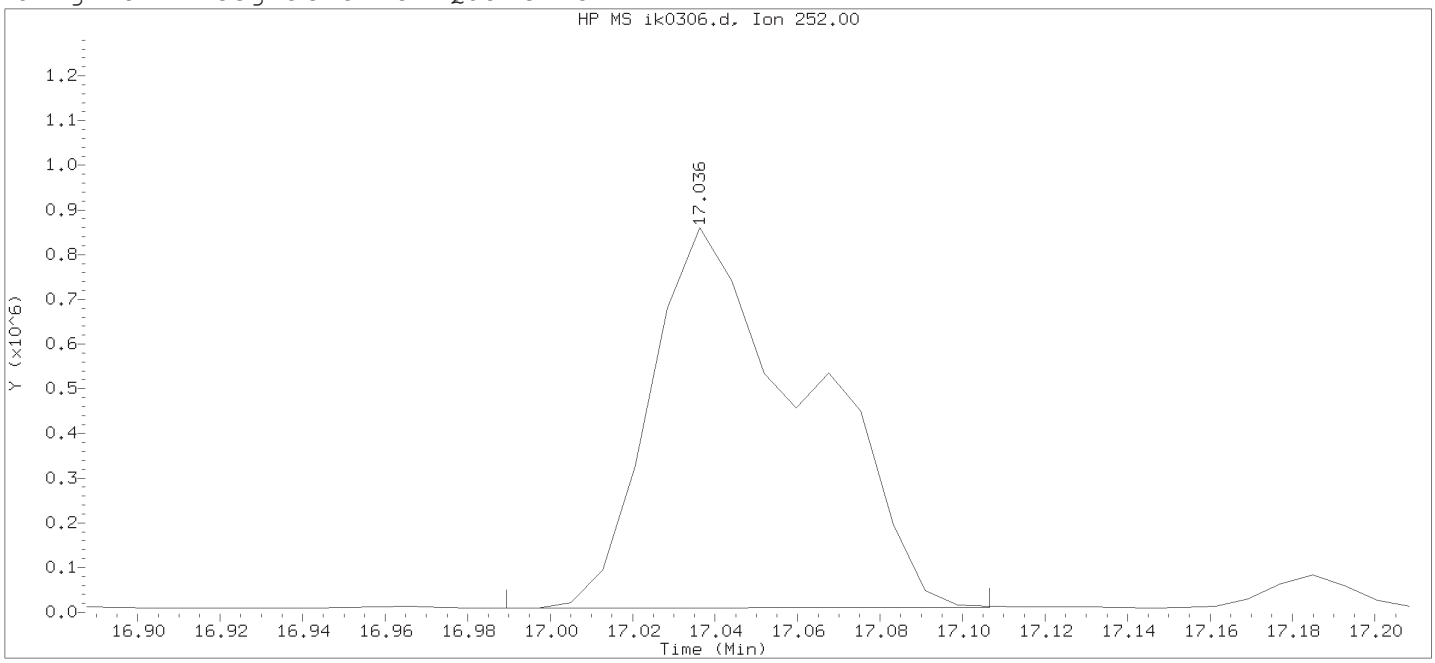
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0306.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:15 Analyst ID: apb10206

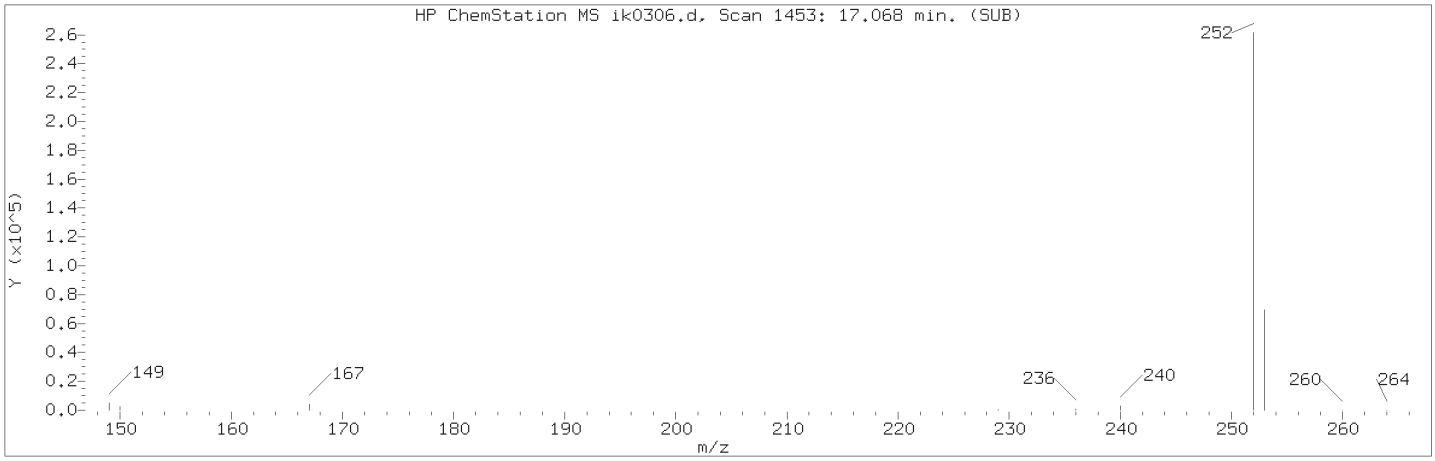
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1003MS Lab Sample ID: 9867763

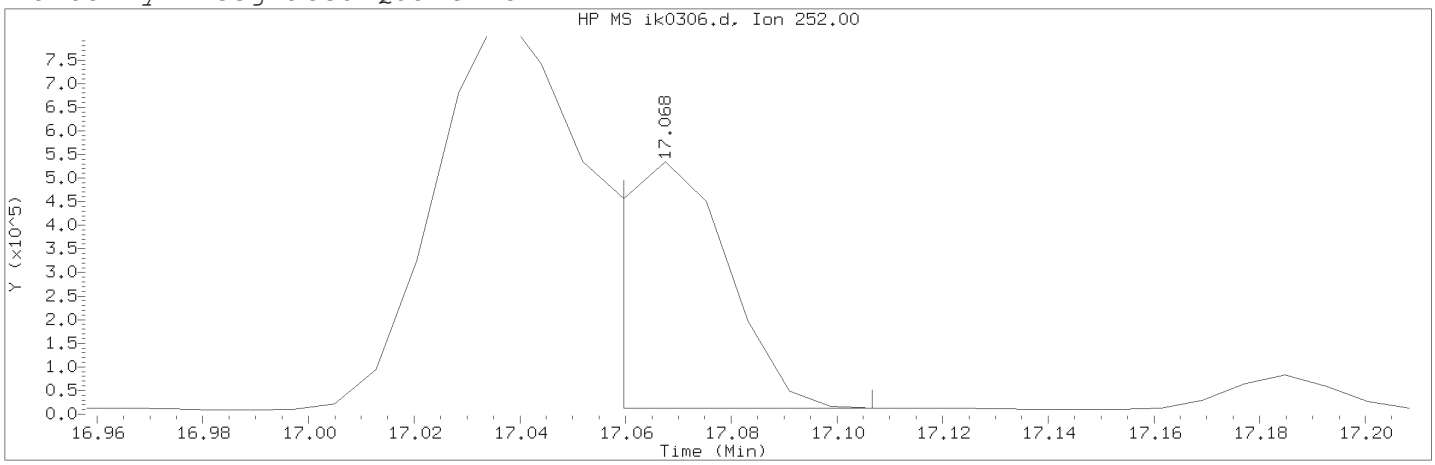
Compound Number	: 46		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1449		
Retention Time (minutes)	: 17.036		
Quant Ion	: 252.00		
Area	: 2268028		
On-column Amount (ng/ul)	: 15.2810		
Integration start scan	: 1442	Integration stop scan:	1457
Y at integration start	: 8839	Y at integration end:	11399

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0306.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 12-Nov-2018 02:32 apb10206

Sample Name: T1003MS Lab Sample ID: 9867763

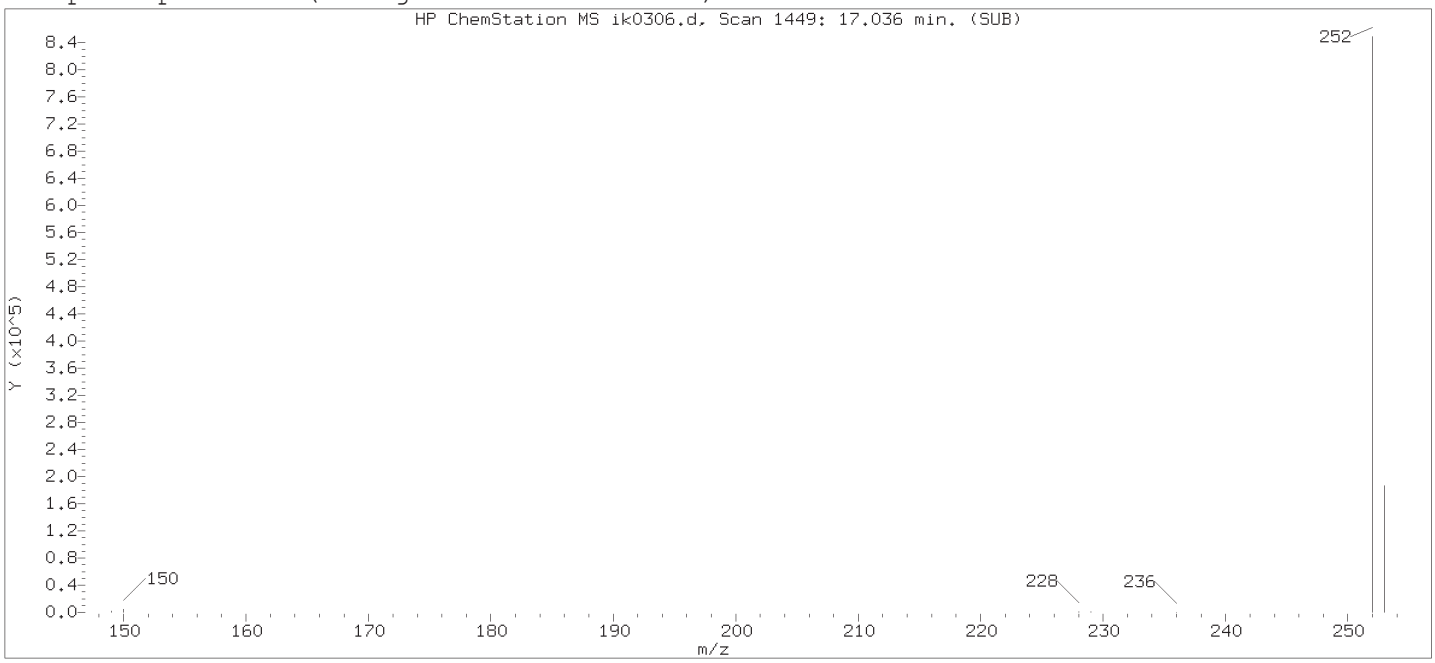
Compound Number : 47
Compound Name : Benzo(k)fluoranthene
Scan Number : 1453
Retention Time (minutes) : 17.068
Quant Ion : 252.00
Area (flag) : 765687M
On-Column Amount (ng/ul) : 5.5033
Integration start scan : 1451 Integration stop scan: 1457
Y at integration start : 12317 Y at integration end: 12317

Reason for manual integration: improper integration

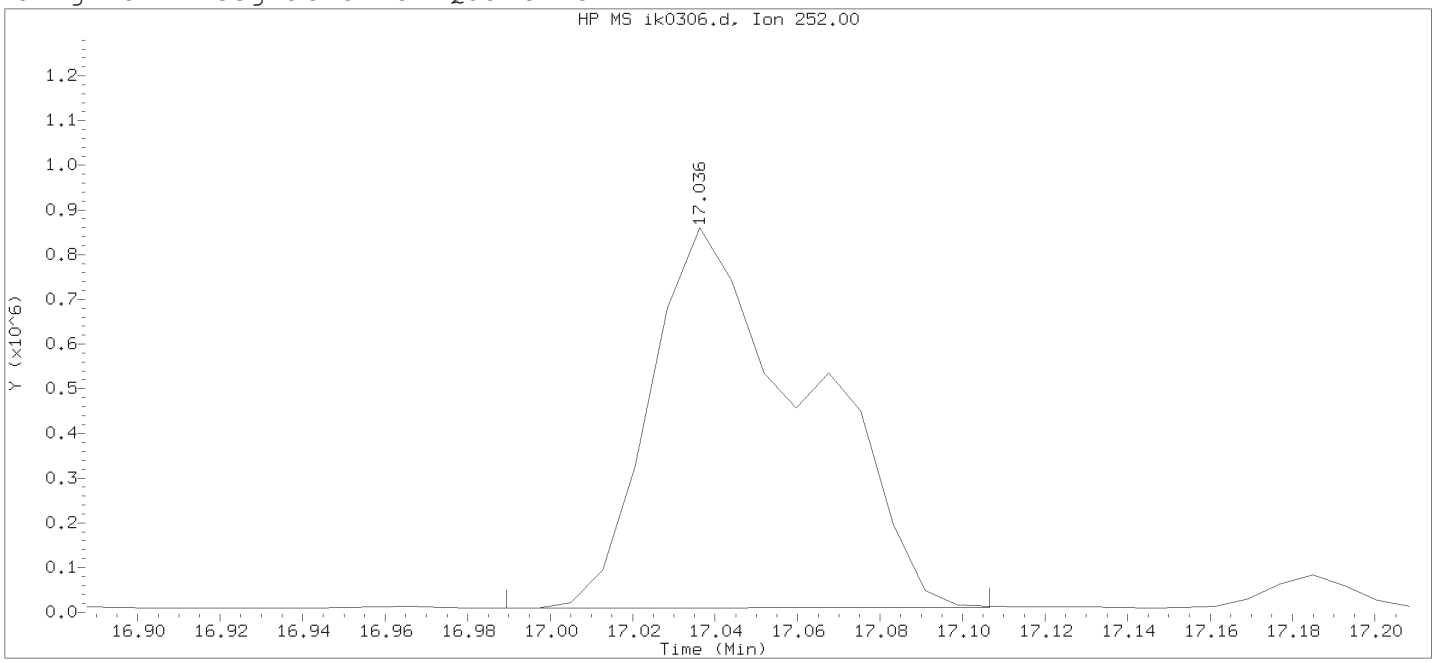
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 11/12/2018 at 02:33.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Holly B. Ziegler on 11/12/2018 at 08:09.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0306.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:15 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1003MS Lab Sample ID: 9867763

Compound Number	: 47		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1449		
Retention Time (minutes)	: 17.036		
Quant Ion	: 252.00		
Area	: 2268025		
On-column Amount (ng/ul)	: 16.3010		
Integration start scan	: 1442	Integration stop scan:	1457
Y at integration start	: 8839	Y at integration end:	11400

Digitally signed by Anthony P. Bauer on 11/12/2018 at 02:33.
Target 3.5 esignature used [illegible]

T1003MSD

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

9867764

Data file: /chem/HP10976.i/18nov07.b/ik0307.d
Data file Sample Info. Line: T1003MSD;9867764;2;3;MSD;;DOD26;
Date, time and analyst ID of latest file update: 08-Nov-2018 07:17 jmg00346

Injection date and time: **07-NOV-2018 21:45**
Instrument ID: **HP10976.i** Batch: **18302SLH**

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 07-NOV-2018 18:18
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov07.b/ik0301.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1
Final Extract Volume (Vt): 500 ul
GpcCleanup (No = 0, Yes = 1): 1
Volume Injected (Vi): 1 ul
Unit Correction Factor (Uf): 1
Sample Weight (Ws): 30.3 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.821 (-0.013)	501	152	41300 (-6)	1.00	
10) Naphthalene-d8	8.333 (-0.013)	615	136	177848 (11)	1.00	
20) Acenaphthene-d10	10.500 (-0.013)	803	164	113809 (13)	1.00	
31) Phenanthrene-d10	12.301 (0.031)	964	188	221093 (-1)	1.00	
43) Chrysene-d12	15.644 (-0.030)	1271	240	224327 (-2)	1.00	
51) Perylene-d12	17.615 (-0.046)	1523	264	111608 (-52)	1.00	*

*** = Internal Standard area outside QC limits**

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.283 (0.000)	152	78832	0.727	73%		61 - 111
36) Fluoranthene-d10	(4)	13.844 (-0.005)	212	224641	0.819	82%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.498 (0.000)	264	58880	0.552	55%		54 - 122

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.244 (-0.028)	88	28769M	1.164	38.40			0.02
11) Naphthalene	(2)	8.359 (0.000)	128	2058083	11.238	370.88	31.312	B E	0.04
19) Acenaphthylene	(3)	10.326 (-0.000)	152	181127	0.831	27.42			0.01
21) Acenaphthene	(3)	10.532 (0.000)	154	163815M	1.143	37.72	1.723	B	0.02
26) Fluorene	(3)	11.176 (0.000)	166	212154	1.203	39.69	1.949	B	0.02
32) Phenanthrene	(4)	12.379 (-0.003)	178	2594831A	10.863	358.52	2.56	B E	0.02
33) Anthracene	(4)	12.435 (-0.003)	178	530196A	2.216	73.15	0.732	B	0.02
35) Di-n-butylphthalate	(4)	13.050 (-0.005)	149	17743214A	77.633	2562.15		E	0.2
37) Fluoranthene	(4)	13.868 (-0.005)	202	4438544A	14.925	492.56		E	0.02
39) Pyrene	(5)	14.149 (0.000)	202	3787375	12.197	402.55		E	0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.582 (0.000)	149	1150694	7.798	257.36			0.3
42) Benzo(a)anthracene	(5)	15.629 (-0.000)	228	1817653	6.298	207.86			0.02
44) Chrysene	(5)	15.676 (0.000)	228	2553978	9.264	305.75			0.01
46) Benzo(b)fluoranthene	(6)	17.044 (-0.000)	252	2265095M	16.318	538.56		E	0.02
47) Benzo(k)fluoranthene	(6)	17.075 (-0.000)	252	990252M	7.610	251.16			0.02
50) Benzo(a)pyrene	(6)	17.537 (-0.000)	252	759733	6.386	210.77			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.417 (-0.001)	276	425628	3.034	100.13			0.02
54) Dibenz(a,h)anthracene	(6)	19.424 (-0.001)	278	159130	1.389	45.85			0.02
55) Benzo(g,h,i)perylene	(6)	19.918 (-0.001)	276	329834	2.674	88.25			0.02

M = Compound was manually integrated. E = Compound concentration above calibration range. B = Compound detected in referenced method blank.
A = User selected an alternate peak.

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP10976.i/18nov07.b/ik0307.d Injection date and time: **07-NOV-2018 21:45**
Data file Sample Info. Line: T1003MSD;9867764;2;3;MSD;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 08-Nov-2018 07:17 jmg00346

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 07-NOV-2018 18:18
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov07.b/ik0301.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

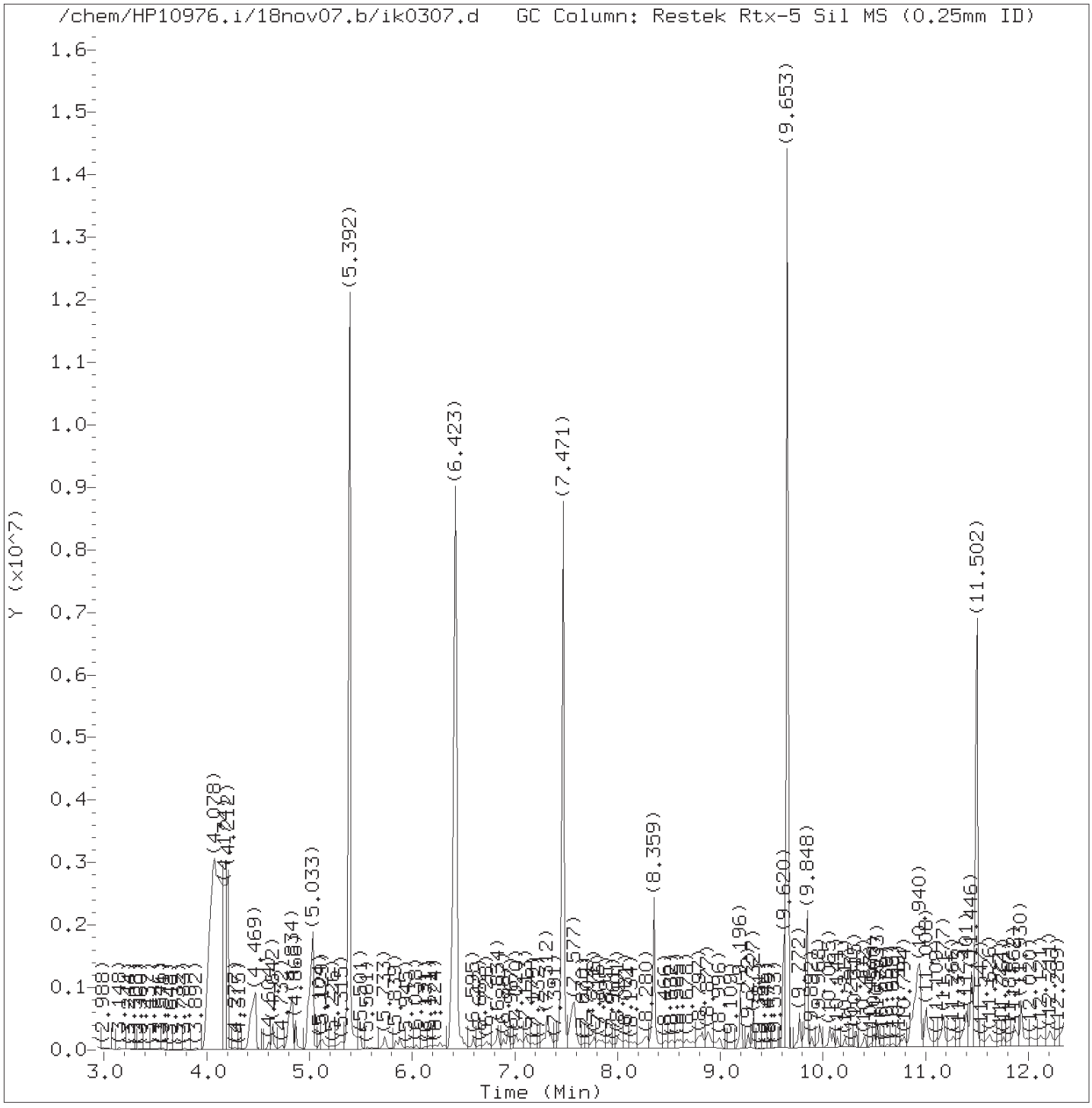
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.3 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:50. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

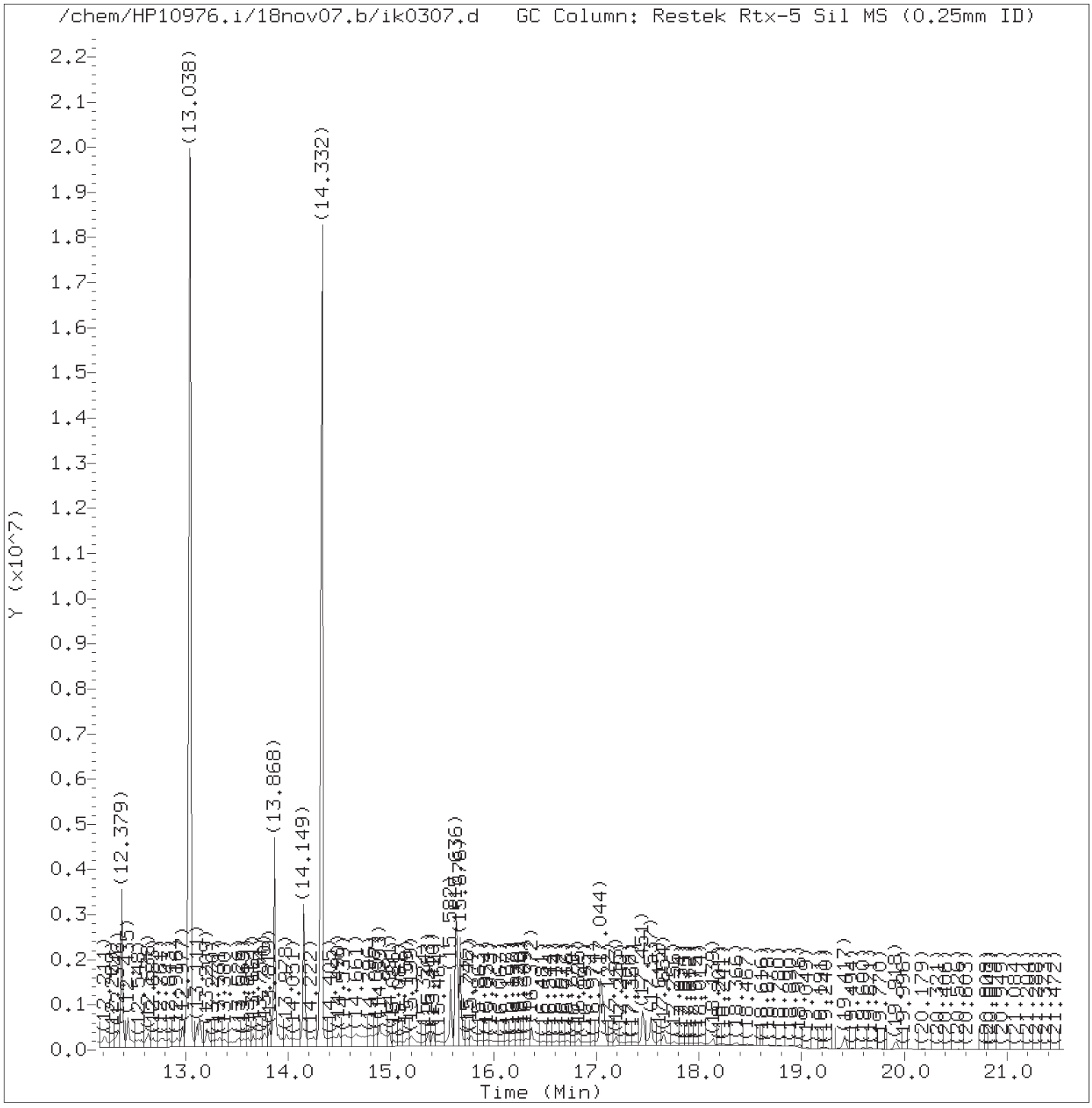
Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:17 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:17 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:17 jmg00346

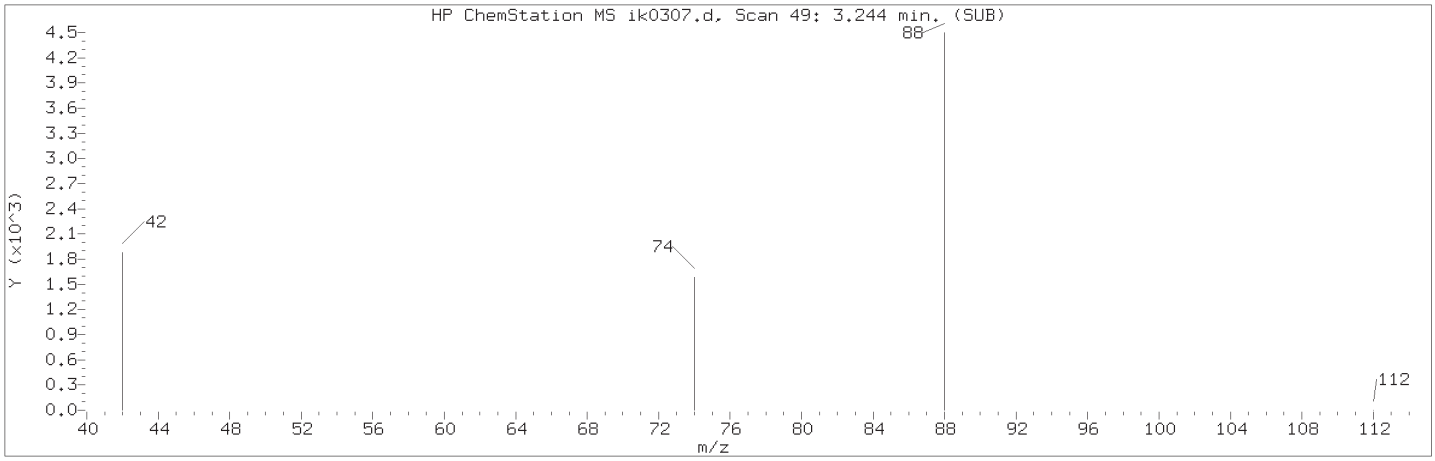
Sample Name: T1003MSD Lab Sample ID: 9867764

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.244	88	28769M	1.164
6)*1,4-Dichlorobenzene-d4	(1)	6.821	152	41300	1.000
10)*Naphthalene-d8	(2)	8.333	136	177848	1.000
11) Naphthalene	(2)	8.359	128	2058083	11.238
14)$1-Methylnaphthalene-d10	(2)	9.283	152	78832	0.727
19) Acenaphthylene	(3)	10.326	152	181127	0.831
20)*Acenaphthene-d10	(3)	10.500	164	113809	1.000
21) Acenaphthene	(3)	10.533	154	163815M	1.143
26) Fluorene	(3)	11.177	166	212154	1.203
31)*Phenanthrene-d10	(4)	12.301	188	221093	1.000
32) Phenanthrene	(4)	12.379	178	2594831A	10.863
33) Anthracene	(4)	12.435	178	530196A	2.216
35) Di-n-butylphthalate	(4)	13.050	149	17743214A	77.633
36)$Fluoranthene-d10	(4)	13.844	212	224641	0.819
37) Fluoranthene	(4)	13.868	202	4438544A	14.925
39) Pyrene	(5)	14.149	202	3787375	12.197
41) bis(2-Ethylhexyl)phthalate	(5)	15.582	149	1150694	7.798
42) Benzo(a)anthracene	(5)	15.629	228	1817653	6.298
43)*Chrysene-d12	(5)	15.644	240	224327	1.000
44) Chrysene	(5)	15.676	228	2553978	9.264
46) Benzo(b)fluoranthene	(6)	17.044	252	2265095M	16.318
47) Benzo(k)fluoranthene	(6)	17.075	252	990252M	7.610
49)$Benzo(a)pyrene-d12	(6)	17.498	264	58880	0.552
50) Benzo(a)pyrene	(6)	17.537	252	759733	6.386
51)*Perylene-d12	(6)	17.615	264	111608	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.417	276	425628	3.034
54) Dibenz(a,h)anthracene	(6)	19.424	278	159130	1.389
55) Benzo(g,h,i)perylene	(6)	19.918	276	329834	2.674

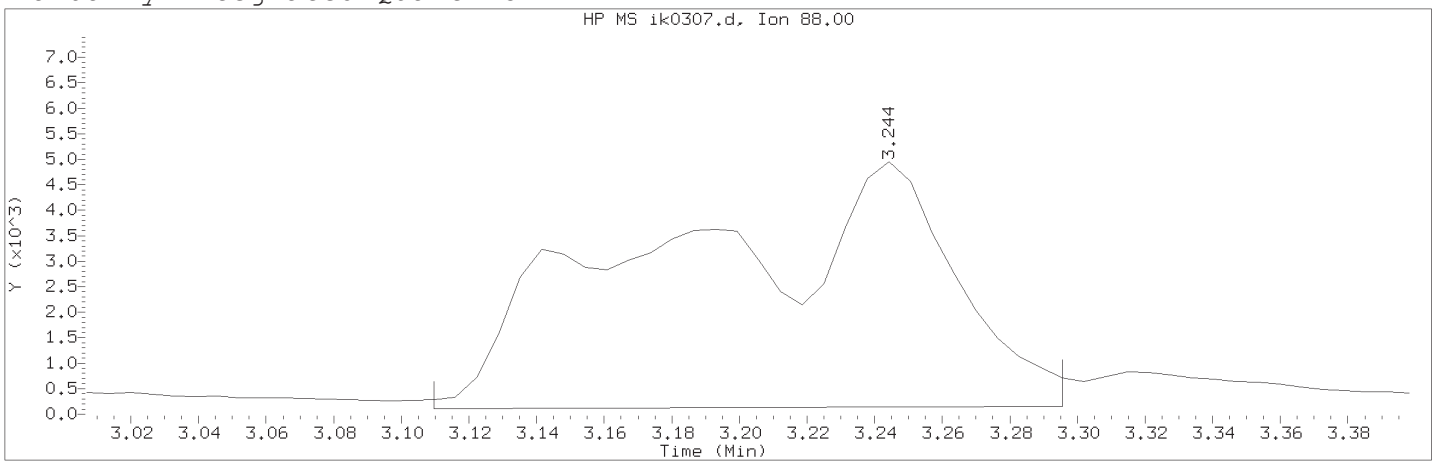
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:17 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

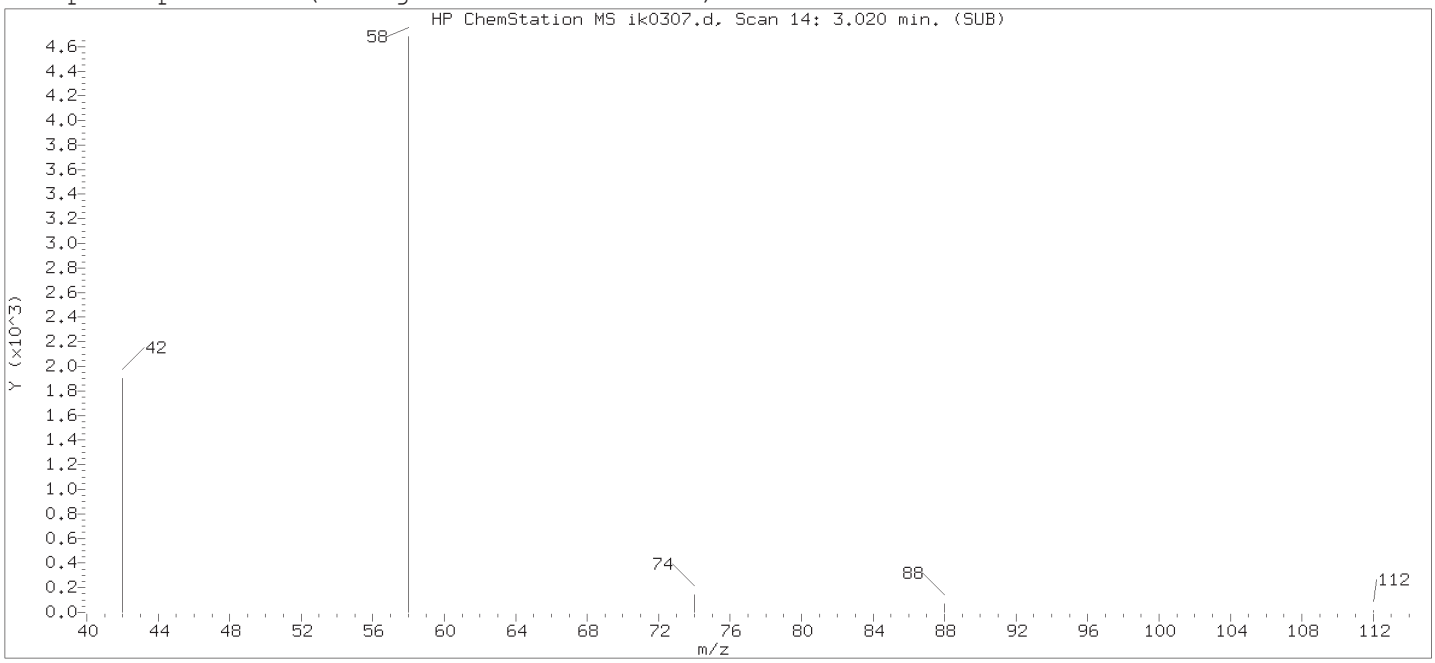
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 49		
Retention Time (minutes)	: 3.244		
Quant Ion	: 88.00		
Area (flag)	: 28769M		
On-Column Amount (ng/ul)	: 1.1636		
Integration start scan	: 27	Integration stop scan:	56
Y at integration start	: 110	Y at integration end:	149

Reason for manual integration: improper integration

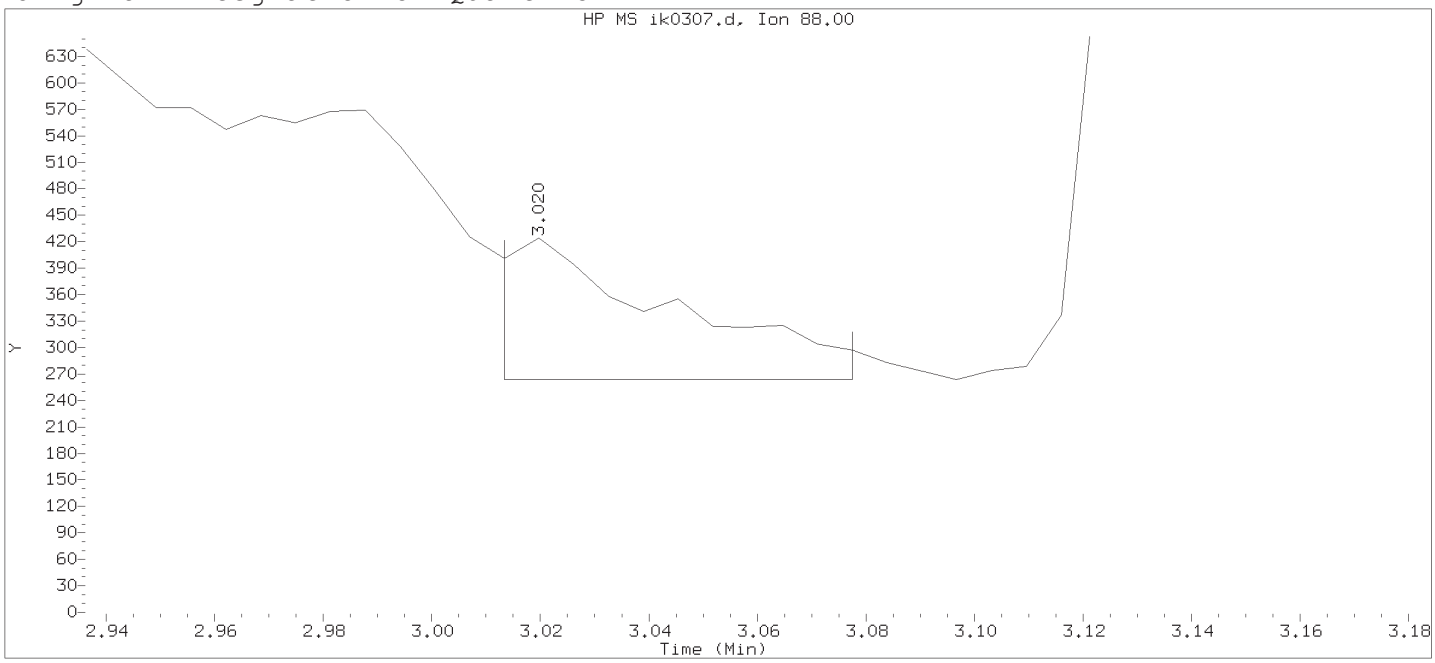
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:50.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

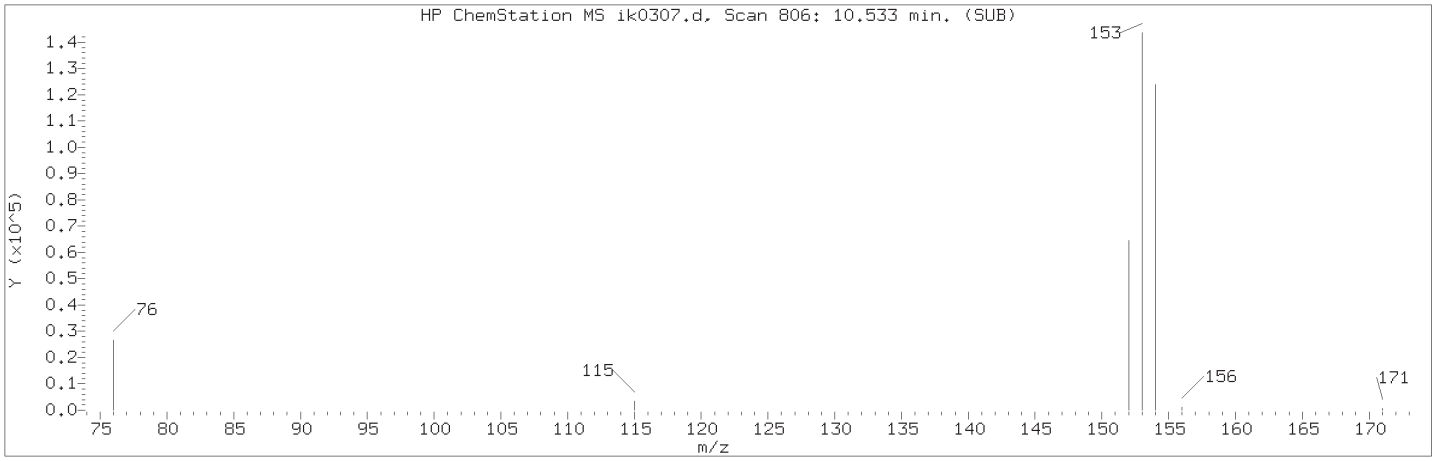
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

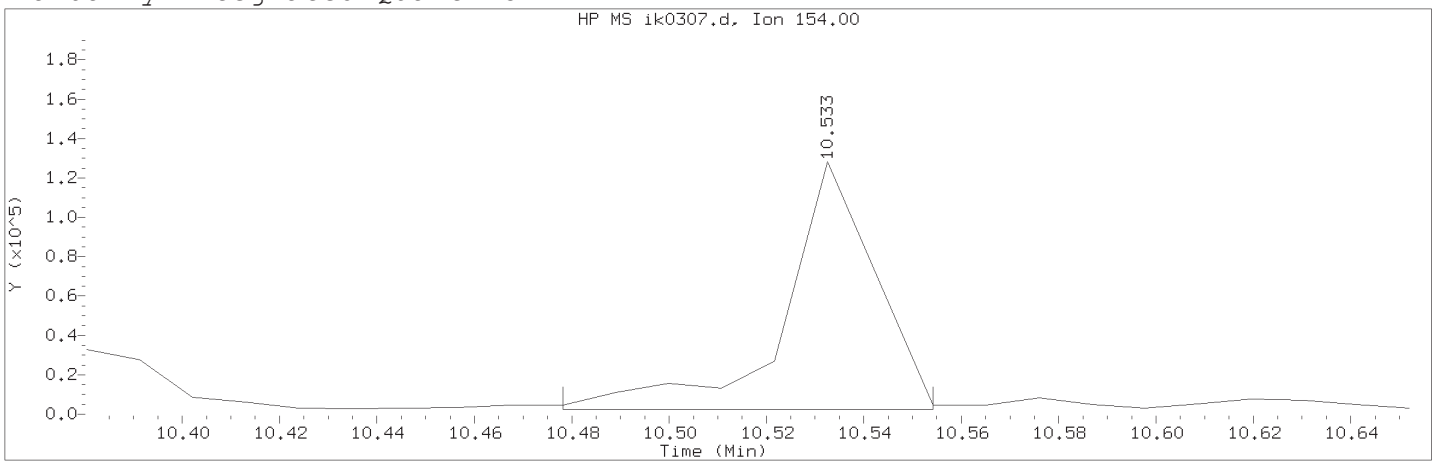
Compound Number	:	1
Compound Name	:	1,4-Dioxane
Scan Number	:	14
Retention Time (minutes)	:	3.020
Quant Ion	:	88.00
Area	:	329
On-column Amount (ng/ul)	:	0.0133
Integration start scan	:	12
Integration stop scan	:	22
Y at integration start	:	264
Y at integration end	:	264

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:17 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

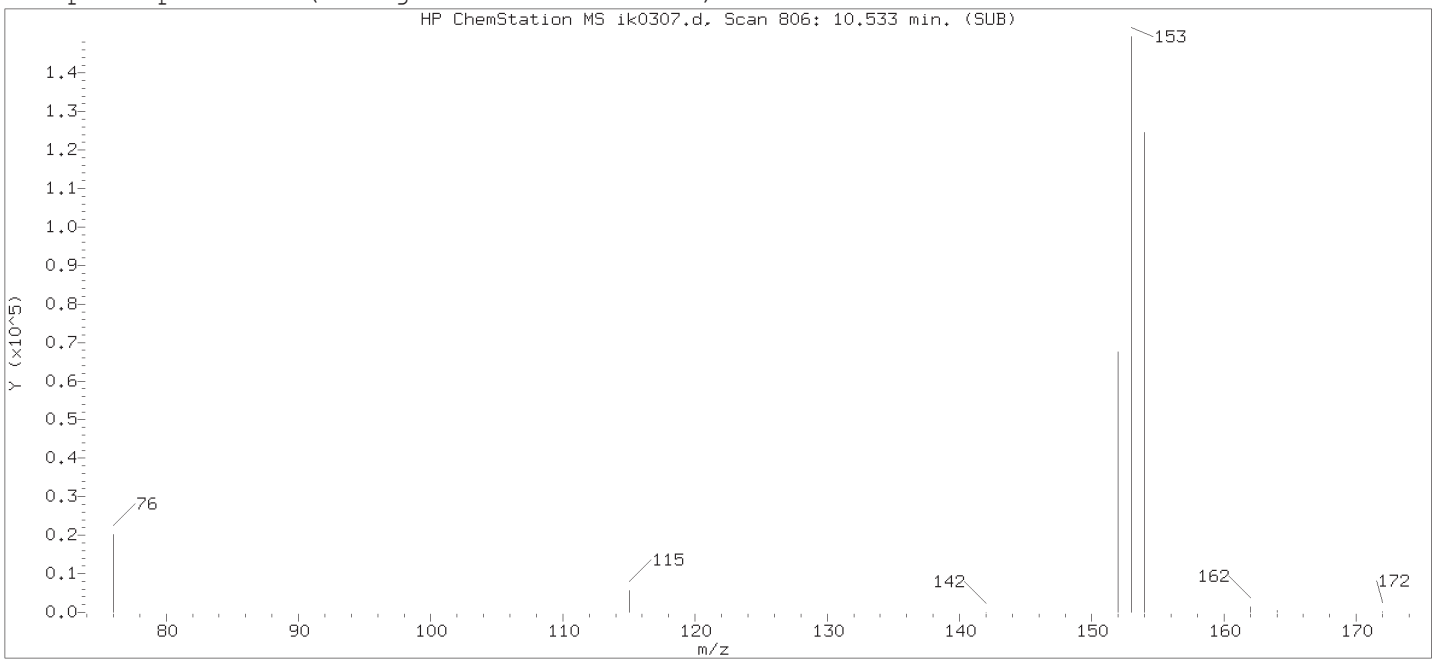
Compound Number : 21
Compound Name : Acenaphthene
Scan Number : 806
Retention Time (minutes) : 10.533
Quant Ion : 154.00
Area (flag) : 163815M
On-Column Amount (ng/ul) : 1.1429
Integration start scan : 800 Integration stop scan: 807
Y at integration start : 2458 Y at integration end: 2458

Reason for manual integration: improper integration

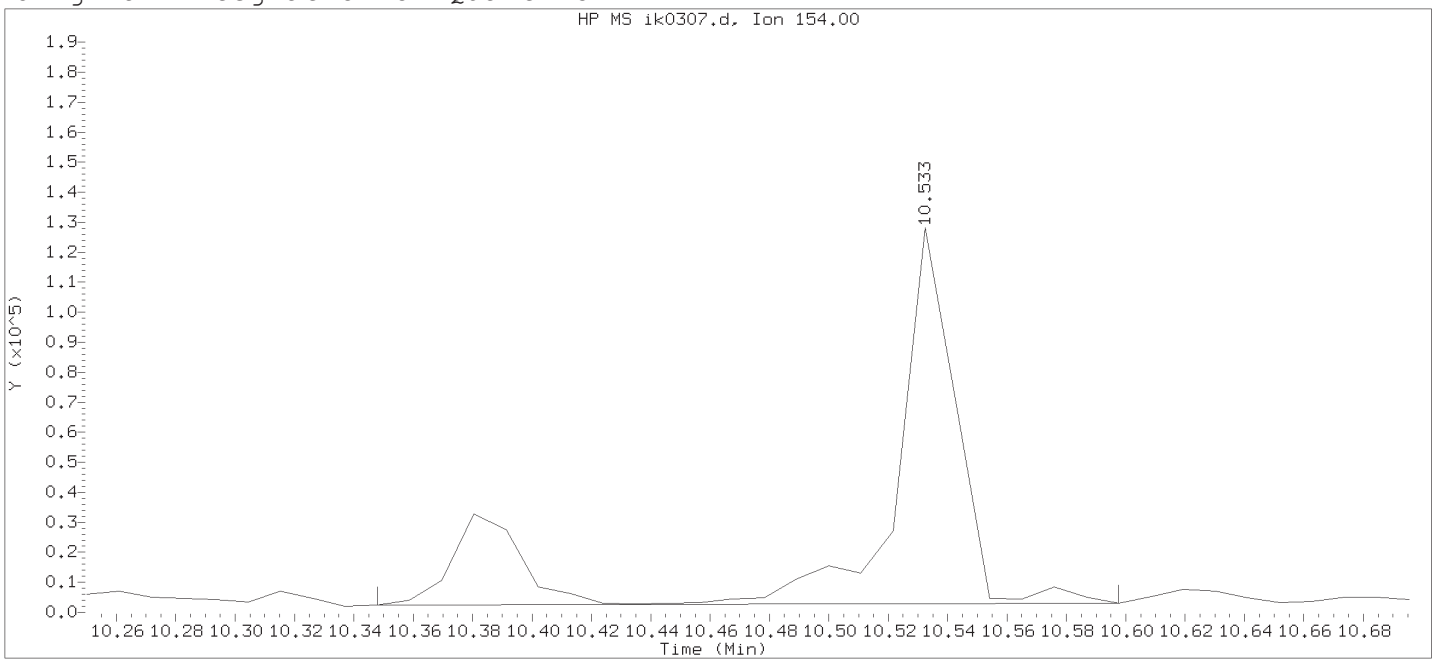
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:50.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

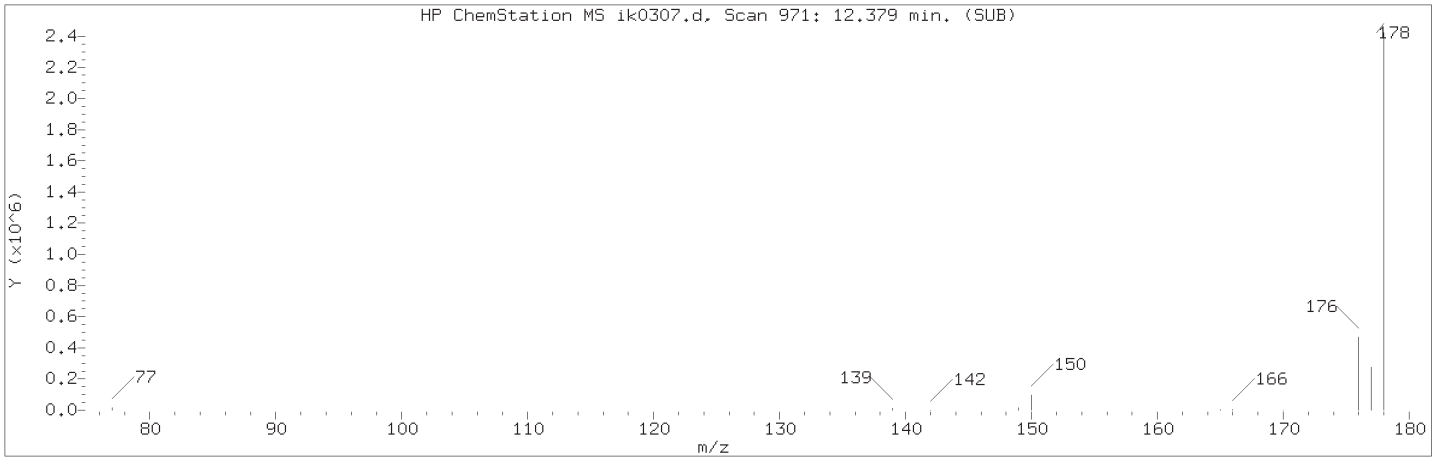
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

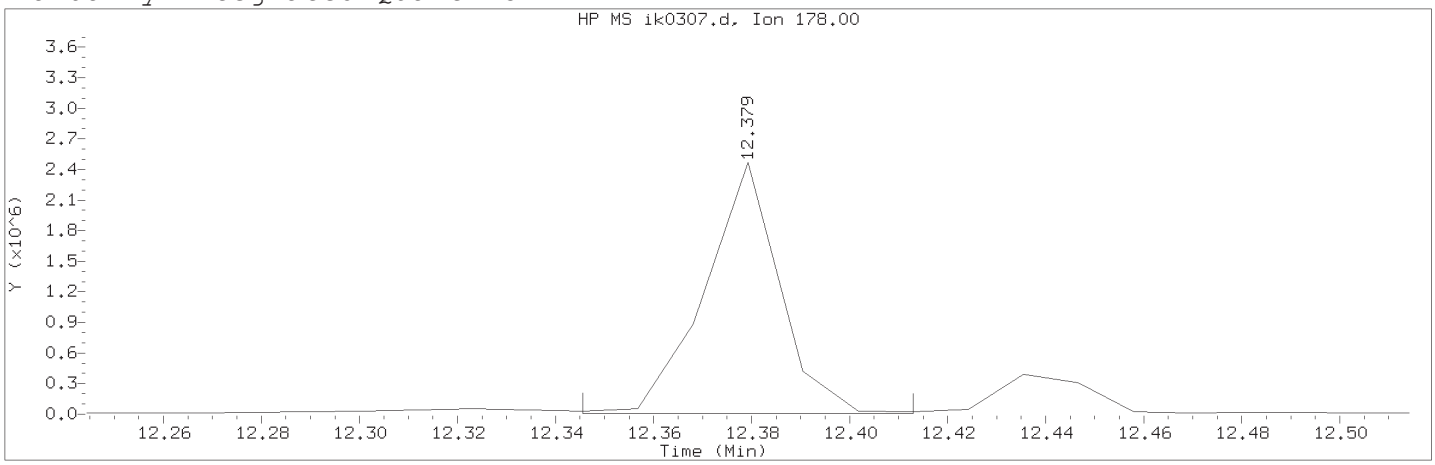
Compound Number	:	21
Compound Name	:	Acenaphthene
Scan Number	:	806
Retention Time (minutes)	:	10.533
Quant Ion	:	154.00
Area	:	218804
On-column Amount (ng/ul)	:	1.5266
Integration start scan	:	788 Integration stop scan: 811
Y at integration start	:	2362 Y at integration end: 3096

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:17 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

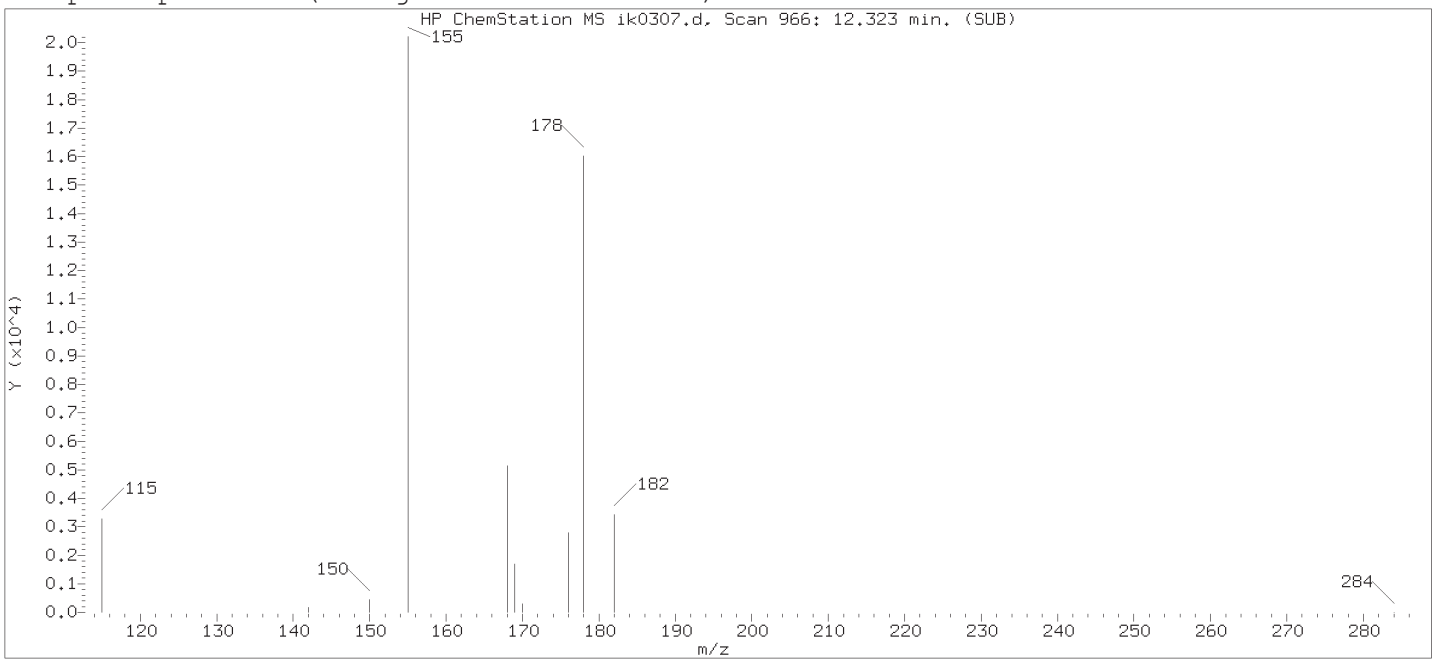
Compound Number : 32
Compound Name : Phenanthrene
Scan Number : 971
Retention Time (minutes) : 12.379
Quant Ion : 178.00
Area (flag) : 2594831A
On-Column Amount (ng/ul) : 10.8632
Integration start scan : 967 Integration stop scan: 973
Y at integration start : 6450 Y at integration end: 6450

Reason for manual integration: improper integration

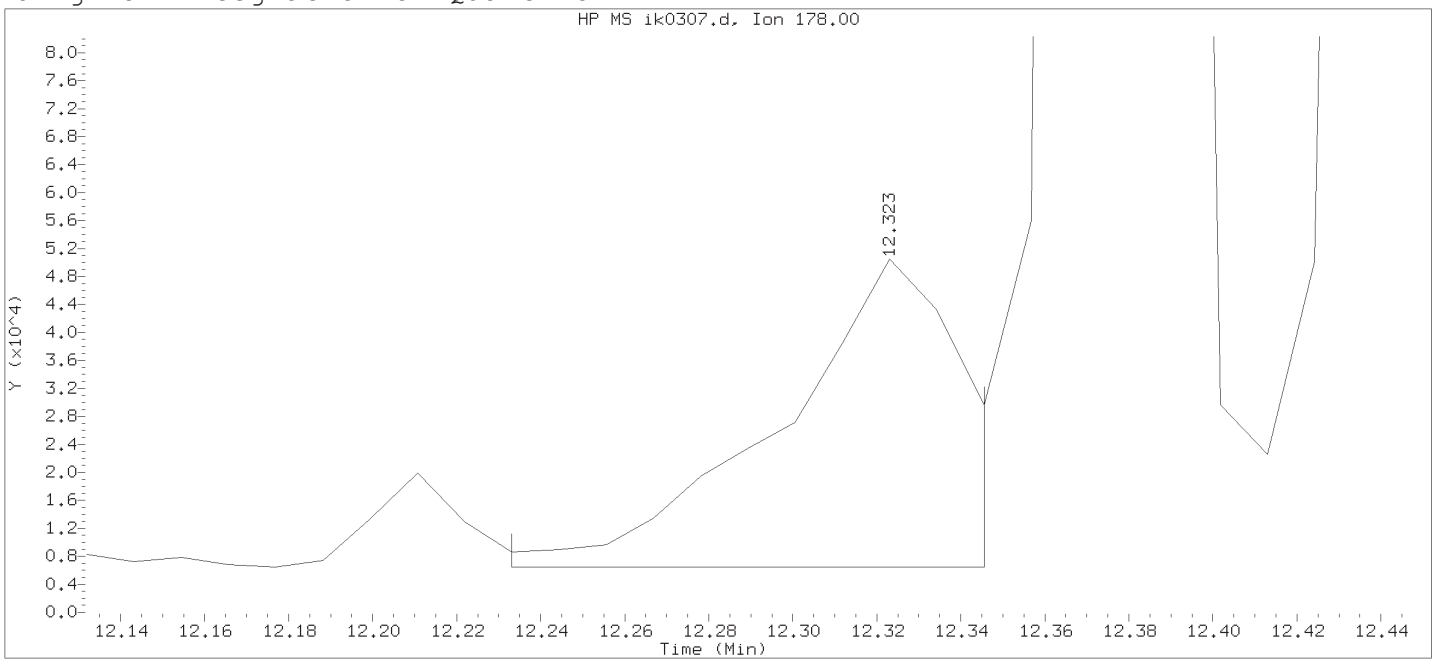
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:50.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

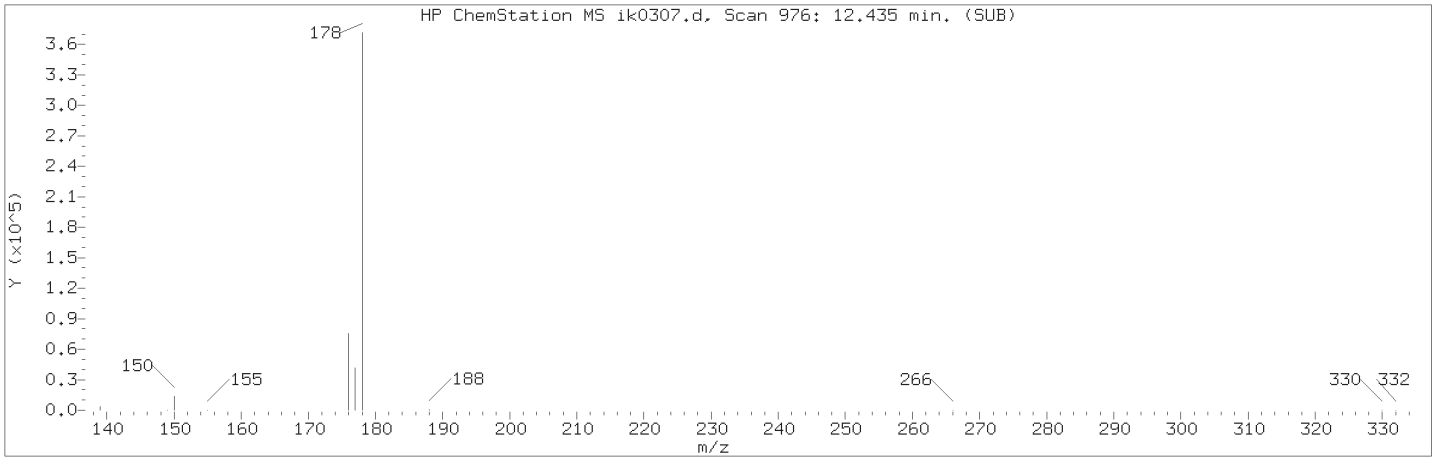
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

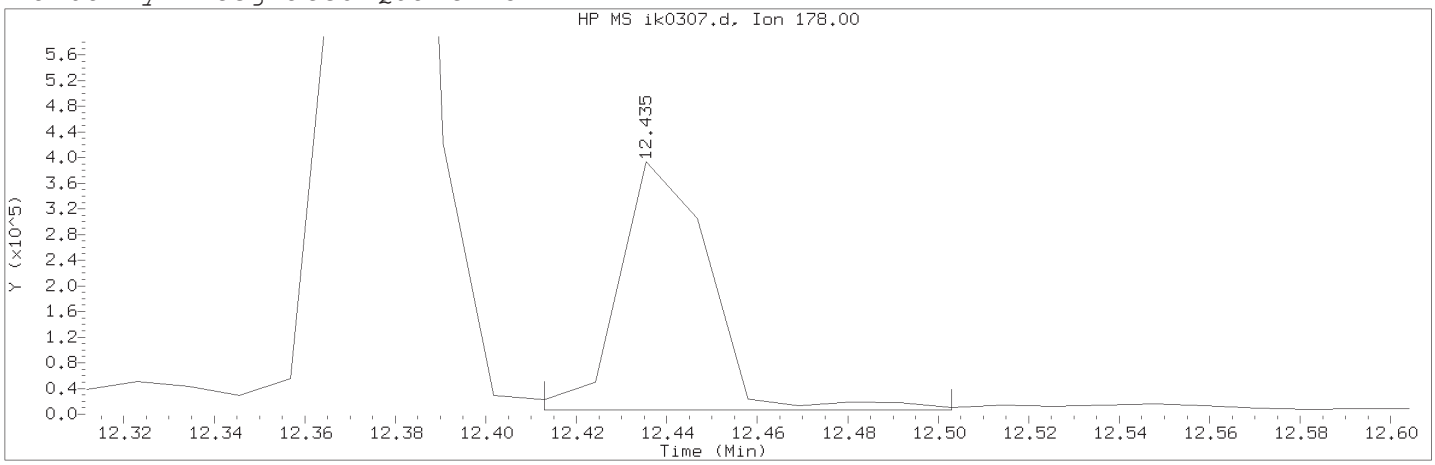
Compound Number	:	32
Compound Name	:	Phenanthrene
Scan Number	:	966
Retention Time (minutes)	:	12.323
Quant Ion	:	178.00
Area	:	127521
On-column Amount (ng/ul)	:	0.5339
Integration start scan	:	957 Integration stop scan: 967
Y at integration start	:	6450 Y at integration end: 6450

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:17 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

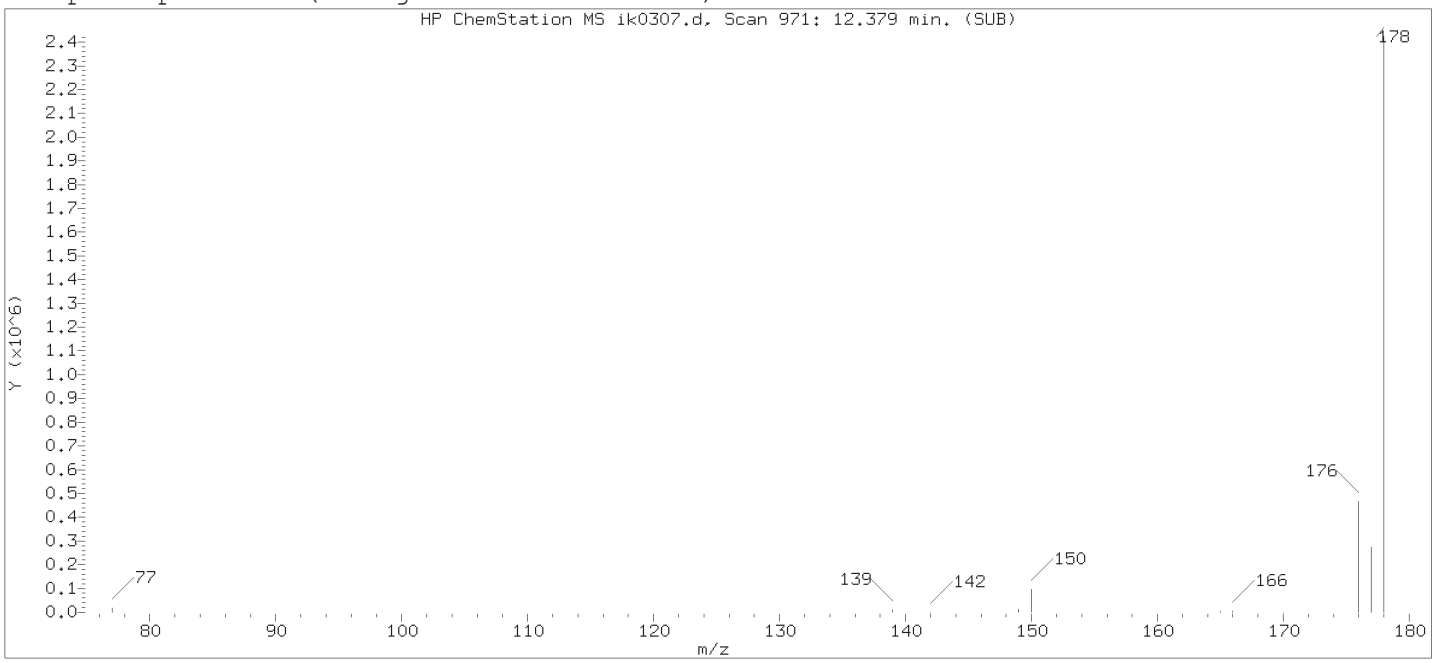
Compound Number : 33
Compound Name : Anthracene
Scan Number : 976
Retention Time (minutes) : 12.435
Quant Ion : 178.00
Area (flag) : 530196A
On-Column Amount (ng/ul) : 2.2163
Integration start scan : 973 Integration stop scan: 981
Y at integration start : 6450 Y at integration end: 6450

Reason for manual integration: improper integration

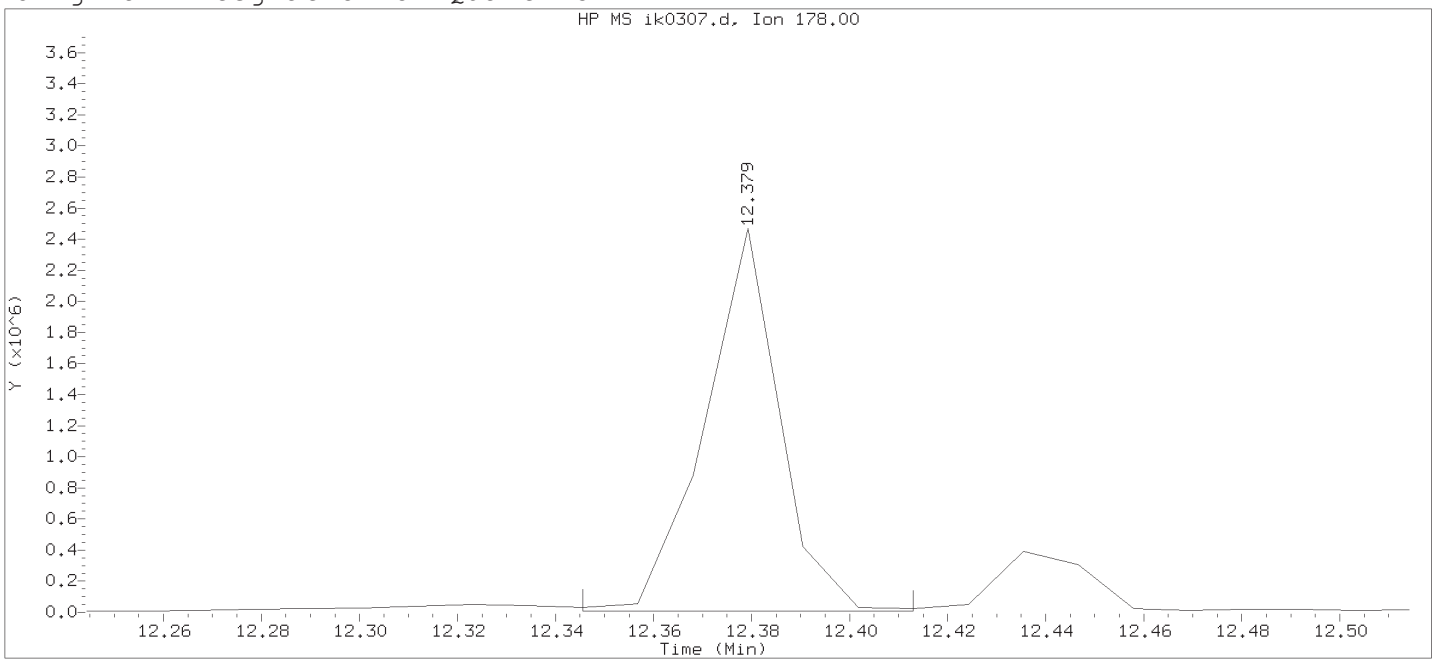
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:50.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

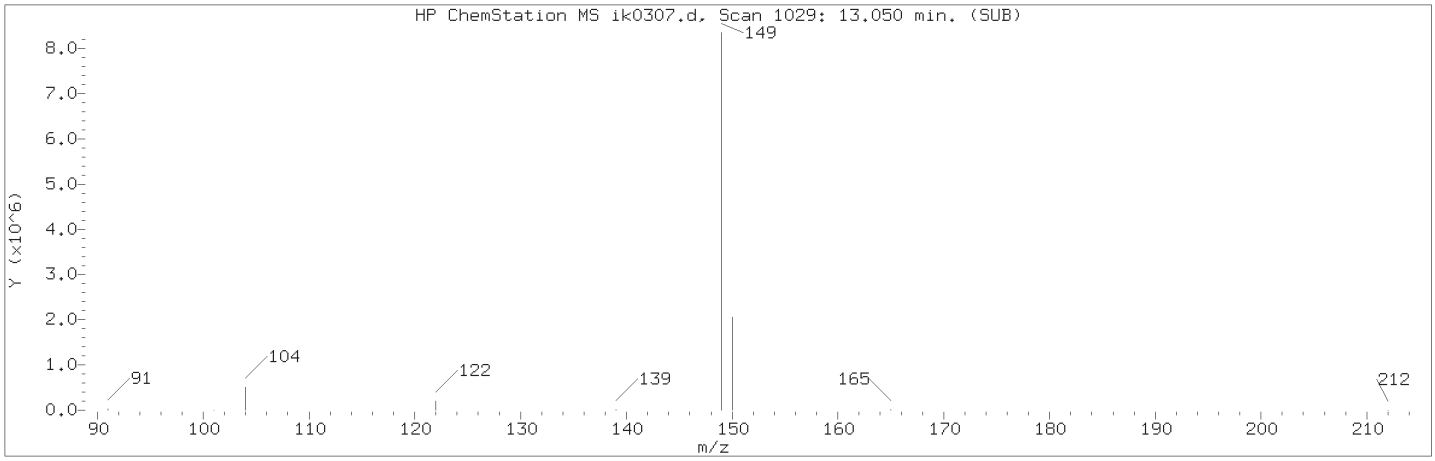
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

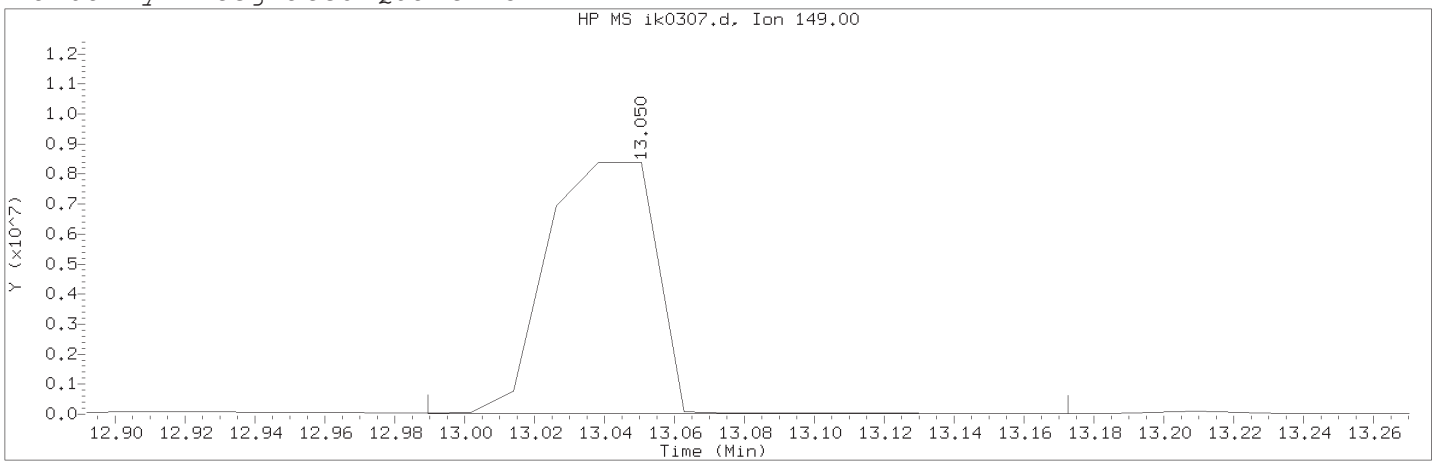
Compound Number : 33
Compound Name : Anthracene
Scan Number : 971
Retention Time (minutes) : 12.379
Quant Ion : 178.00
Area : 2594744
On-column Amount (ng/ul) : 10.8466
Integration start scan : 967 Integration stop scan: 973
Y at integration start : 6450 Y at integration end: 6450

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:17 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

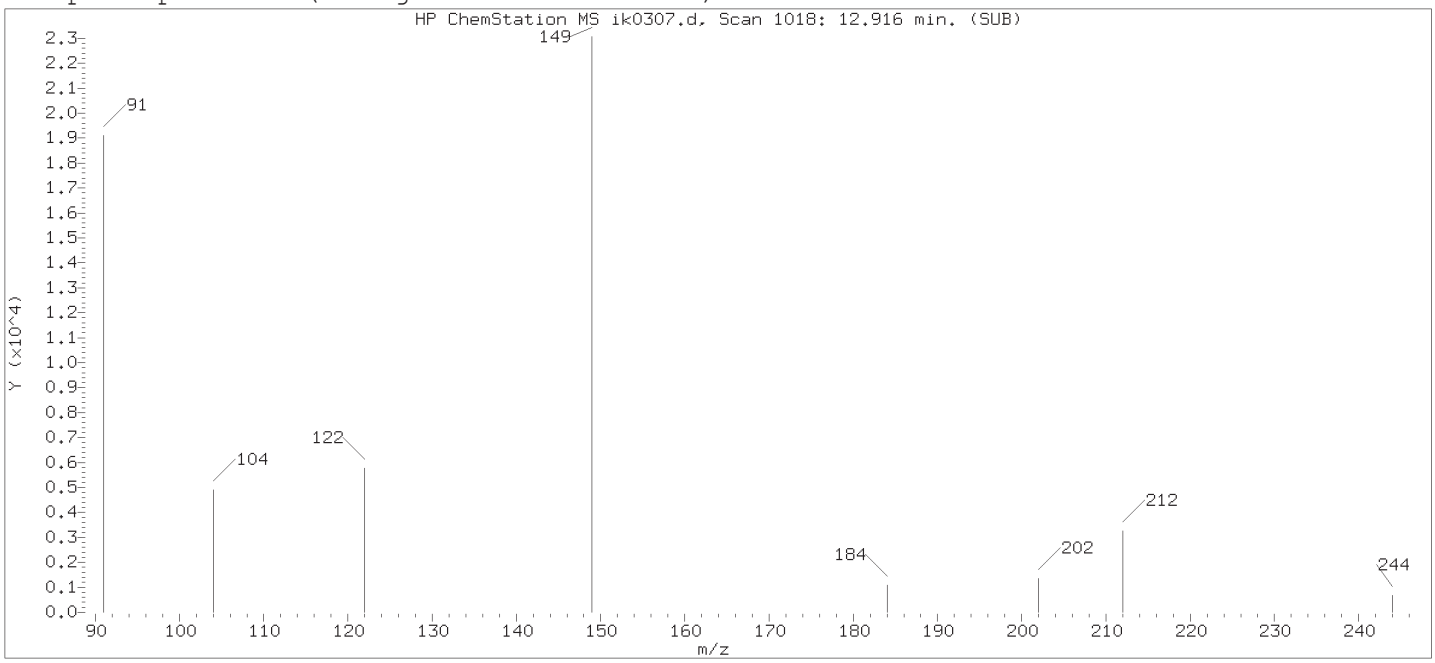
Compound Number : 35
Compound Name : Di-n-butylphthalate
Scan Number : 1029
Retention Time (minutes) : 13.050
Quant Ion : 149.00
Area (flag) : 17743214A
On-Column Amount (ng/ul) : 77.6330
Integration start scan : 1023 Integration stop scan: 1038
Y at integration start : 21872 Y at integration end: 21872

Reason for manual integration: improper integration

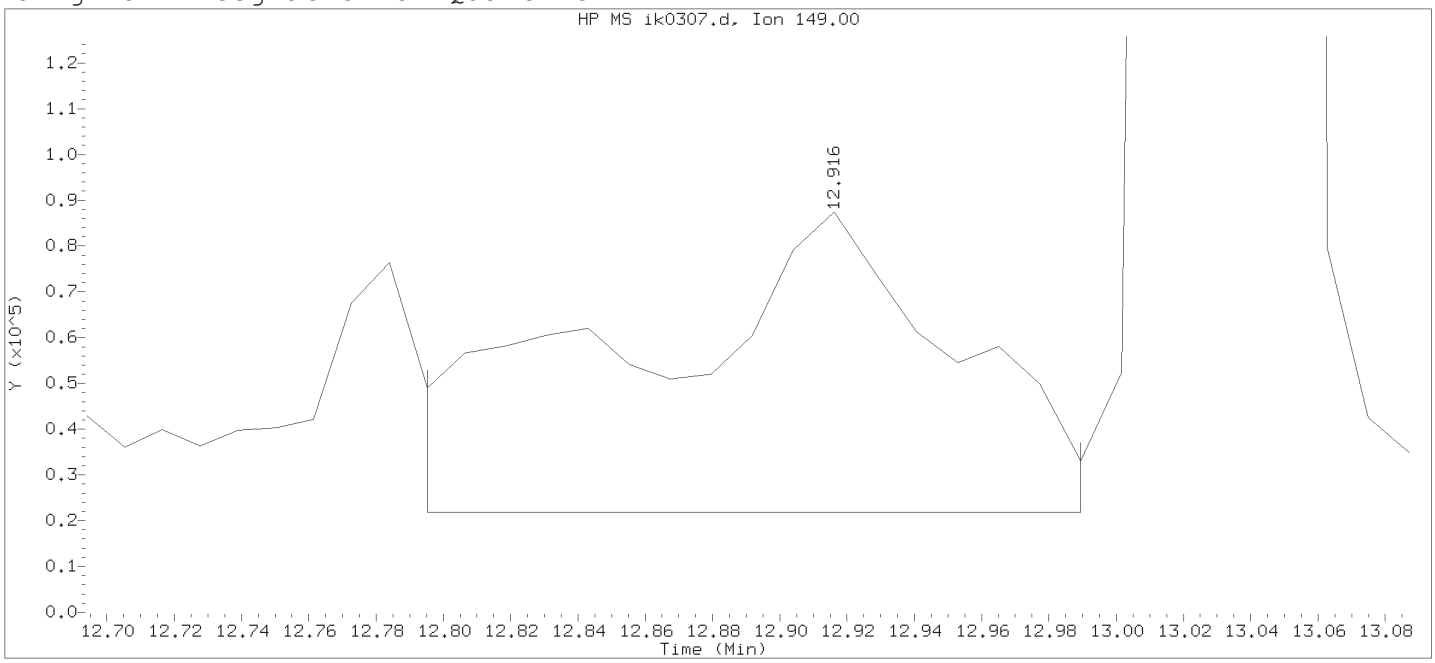
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:50.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

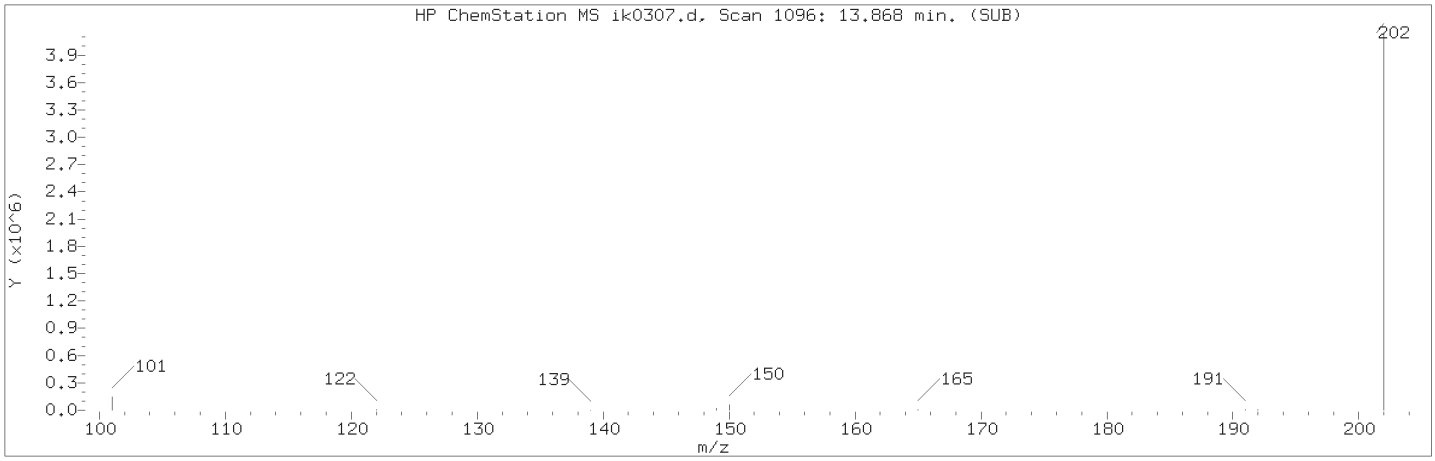
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

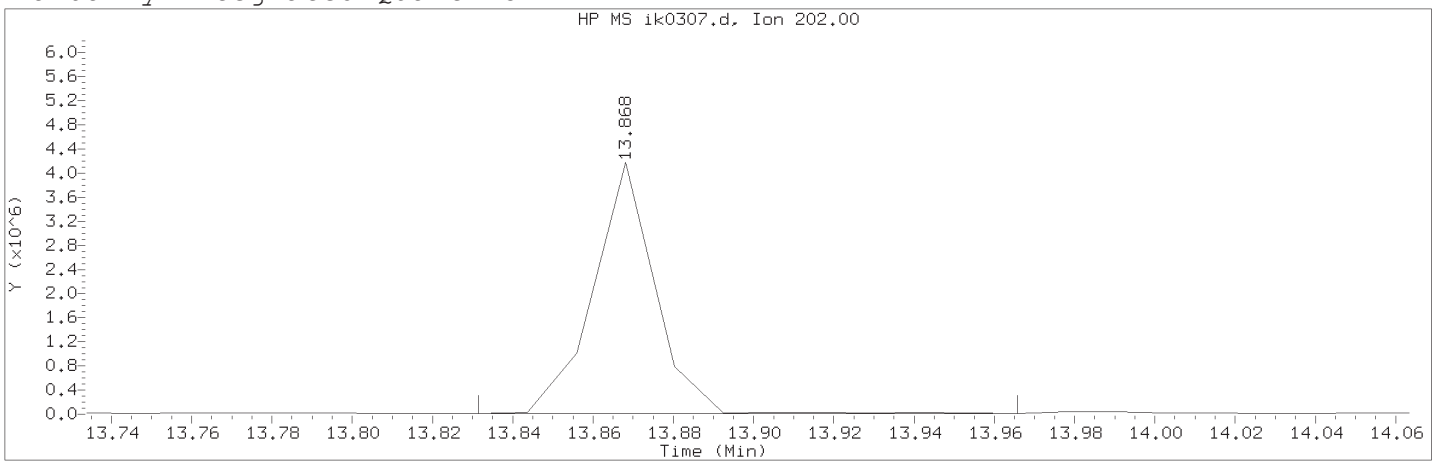
Compound Number : 35
Compound Name : Di-n-butylphthalate
Scan Number : 1018
Retention Time (minutes) : 12.916
Quant Ion : 149.00
Area : 440928
On-column Amount (ng/ul) : 1.9292
Integration start scan : 1007 Integration stop scan: 1023
Y at integration start : 21872 Y at integration end: 21872

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:17 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

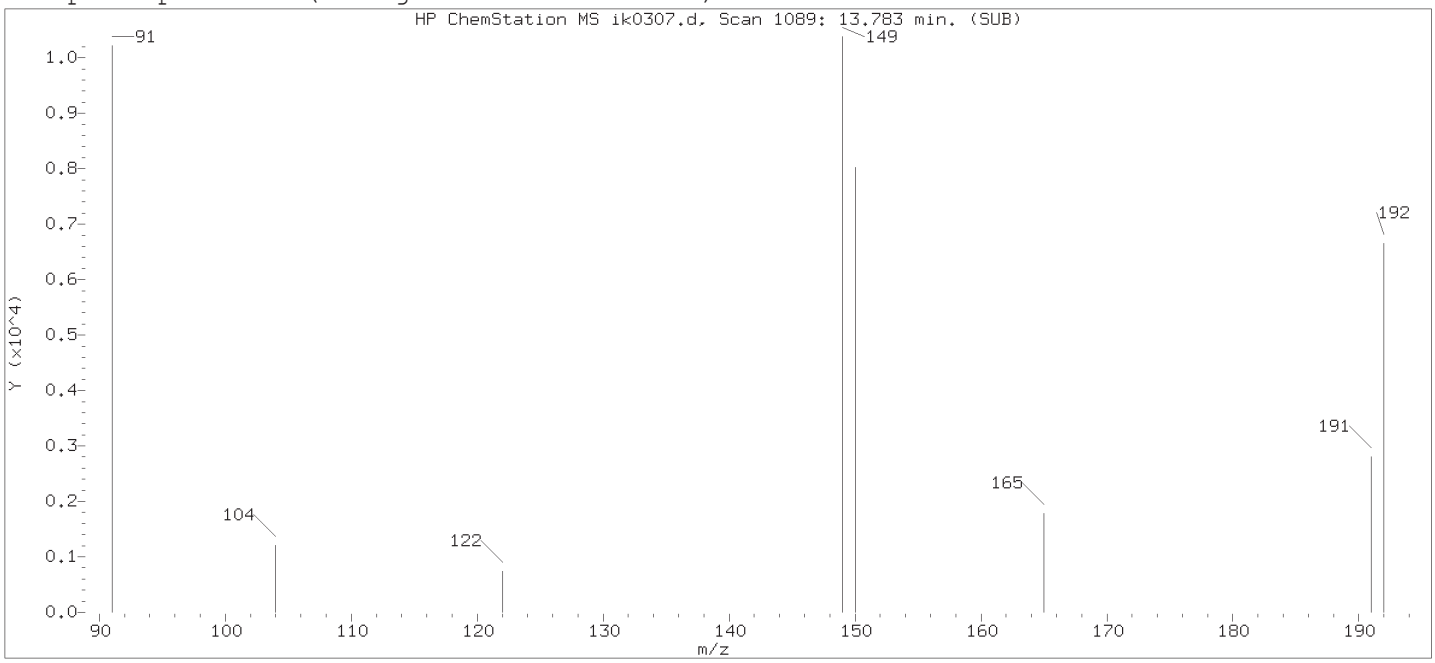
Compound Number	: 37		
Compound Name	: Fluoranthene		
Scan Number	: 1096		
Retention Time (minutes)	: 13.868		
Quant Ion	: 202.00		
Area (flag)	: 4438544A		
On-Column Amount (ng/ul)	: 14.9245		
Integration start scan	: 1092	Integration stop scan:	1103
Y at integration start	: 9125	Y at integration end:	10432

Reason for manual integration: improper integration

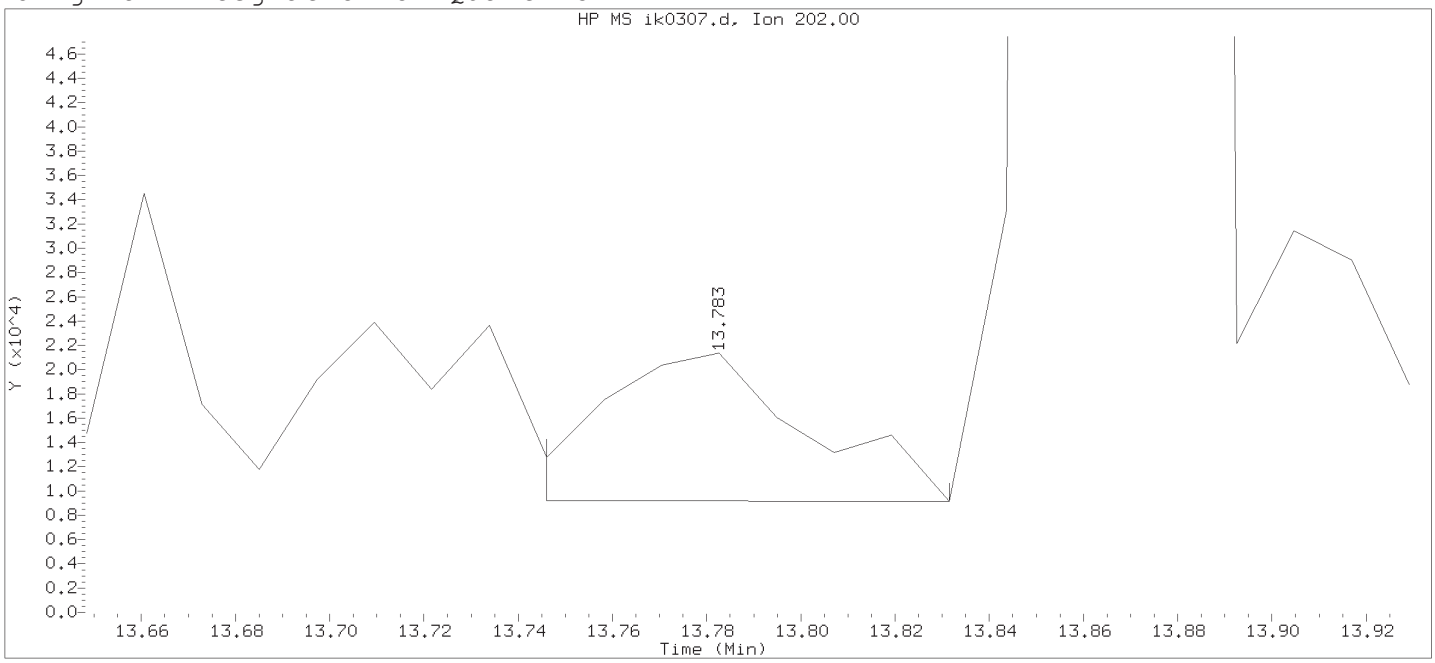
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:50.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

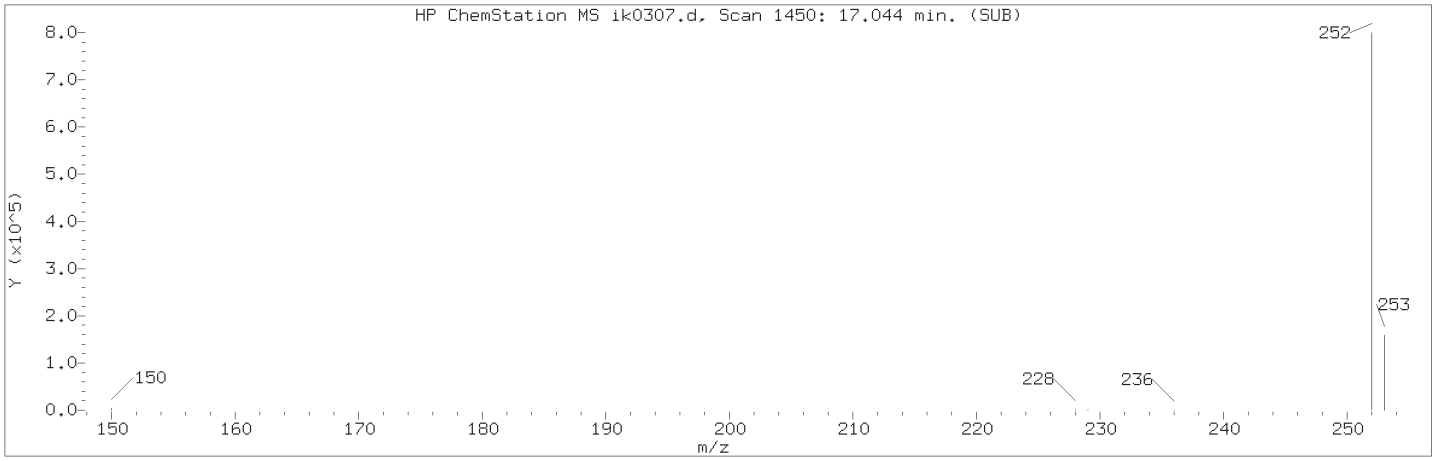
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

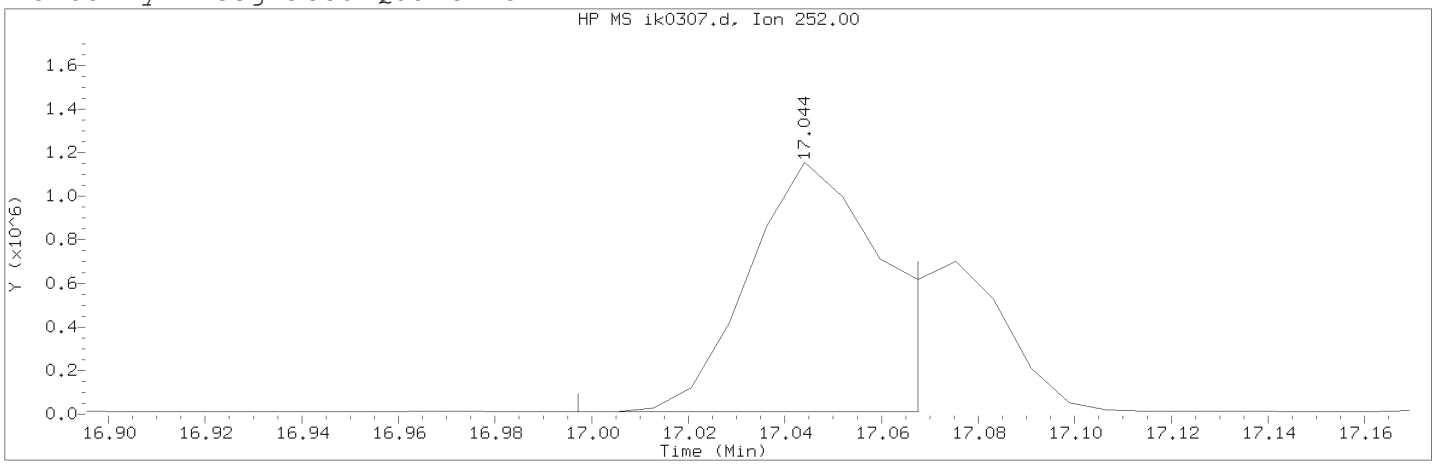
Compound Number	:	37
Compound Name	:	Fluoranthene
Scan Number	:	1089
Retention Time (minutes)	:	13.783
Quant Ion	:	202.00
Area	:	36514
On-column Amount (ng/ul)	:	0.1228
Integration start scan	:	1085 Integration stop scan: 1092
Y at integration start	:	9198 Y at integration end: 9125

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:17 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

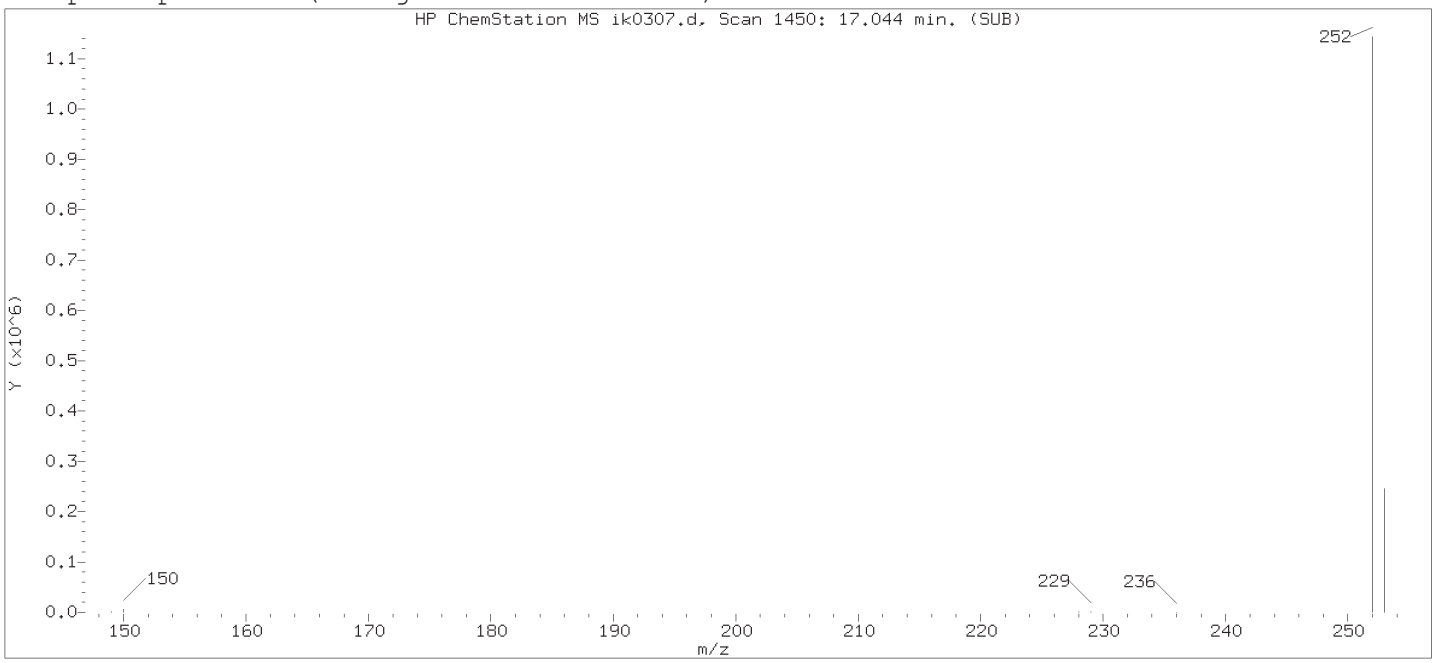
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1450
Retention Time (minutes) : 17.044
Quant Ion : 252.00
Area (flag) : 2265095M
On-Column Amount (ng/ul) : 16.3182
Integration start scan : 1443 Integration stop scan: 1452
Y at integration start : 9949 Y at integration end: 11832

Reason for manual integration: improper integration

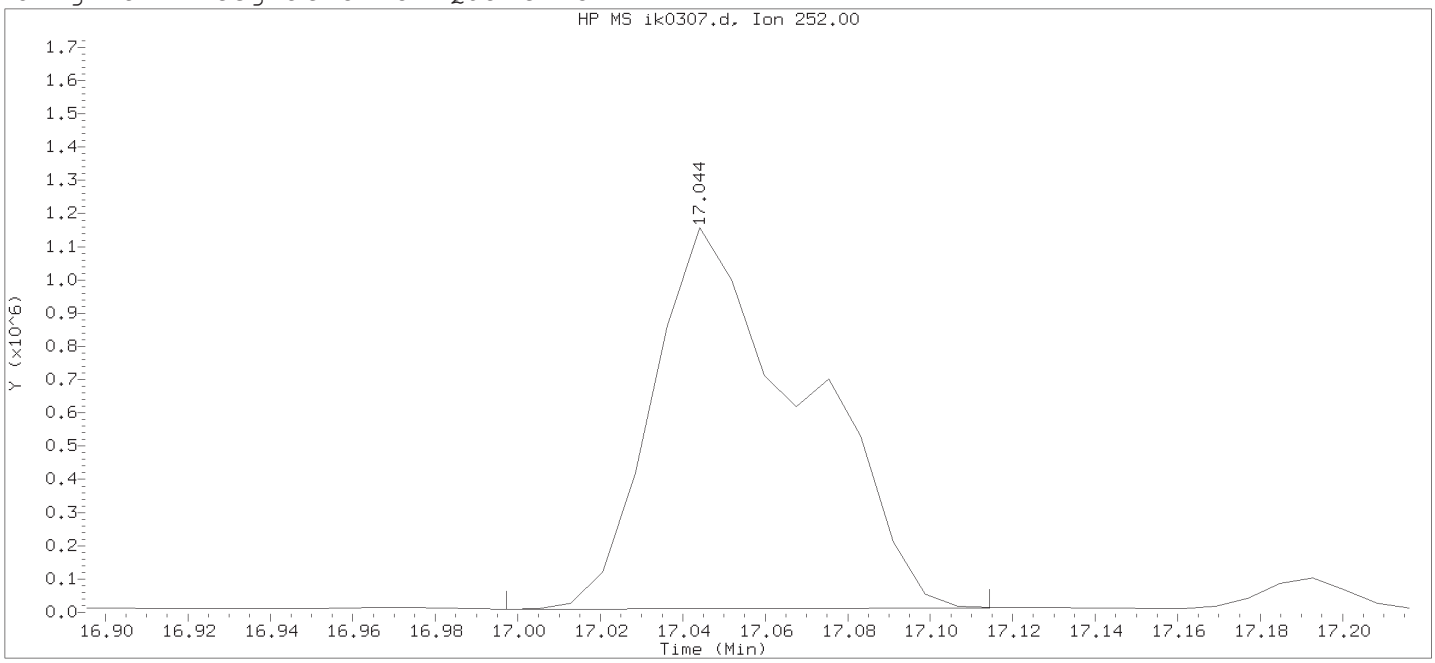
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:50.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

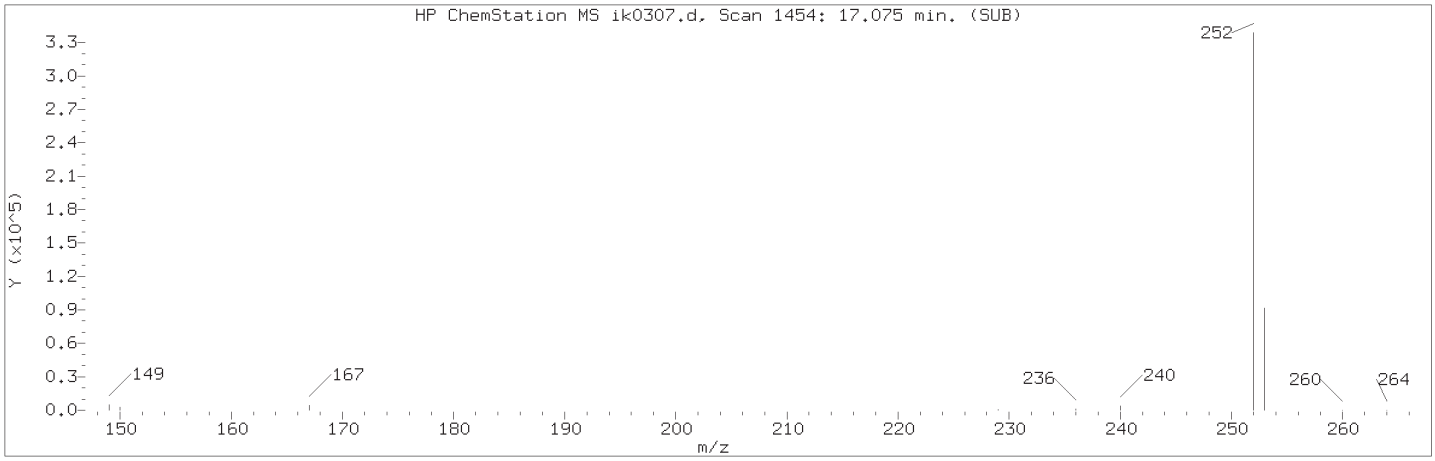
Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

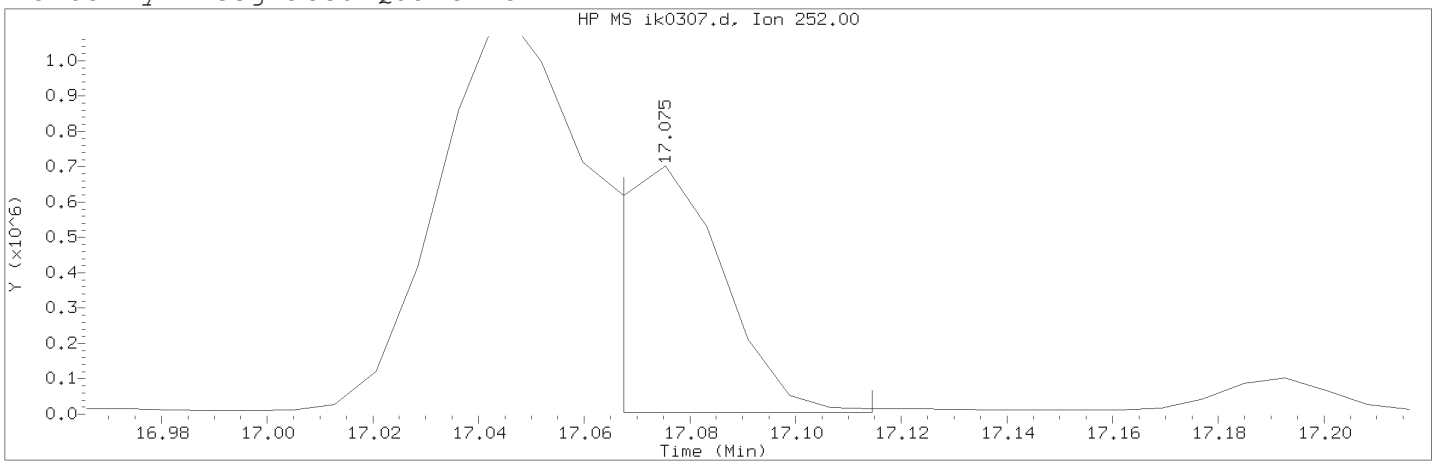
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1450
Retention Time (minutes) : 17.044
Quant Ion : 252.00
Area : 2947788
On-column Amount (ng/ul) : 21.2365
Integration start scan : 1443 Integration stop scan: 1458
Y at integration start : 9949 Y at integration end: 13088

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:17 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

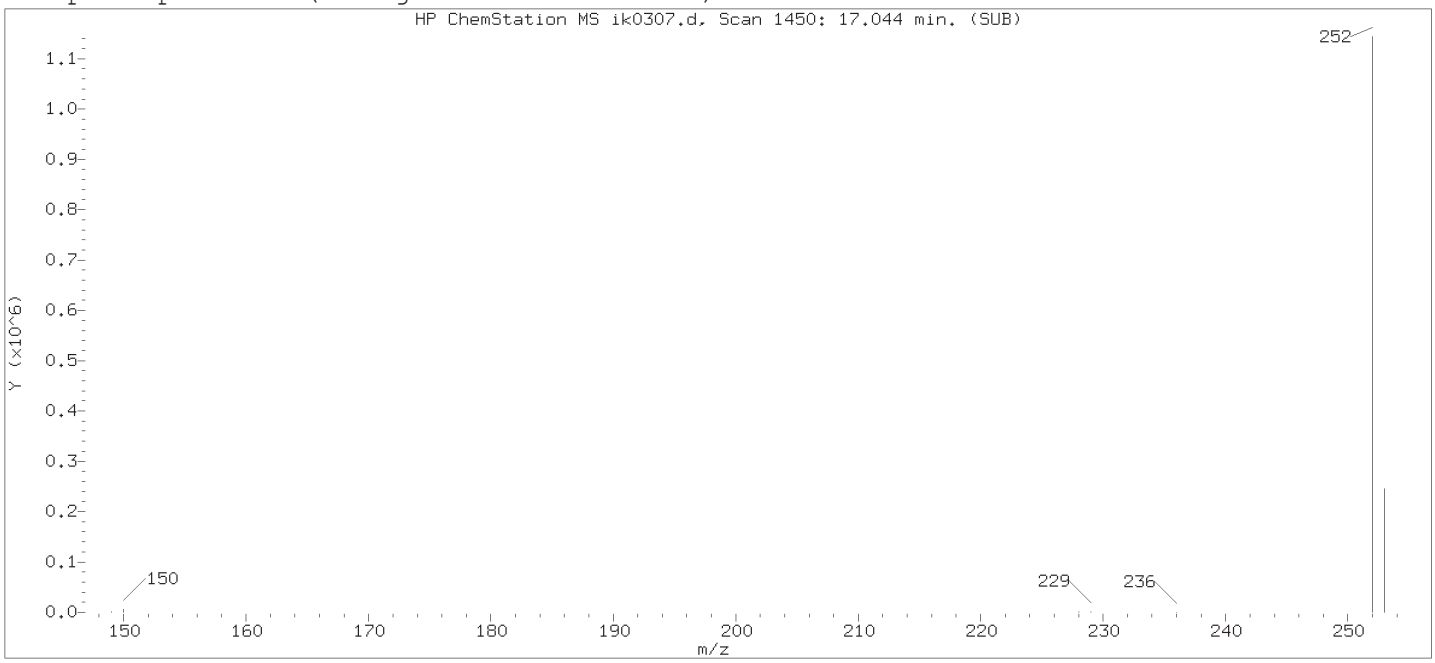
Compound Number : 47
Compound Name : Benzo(k)fluoranthene
Scan Number : 1454
Retention Time (minutes) : 17.075
Quant Ion : 252.00
Area (flag) : 990252M
On-Column Amount (ng/ul) : 7.6102
Integration start scan : 1452 Integration stop scan: 1458
Y at integration start : 5605 Y at integration end: 5605

Reason for manual integration: improper integration

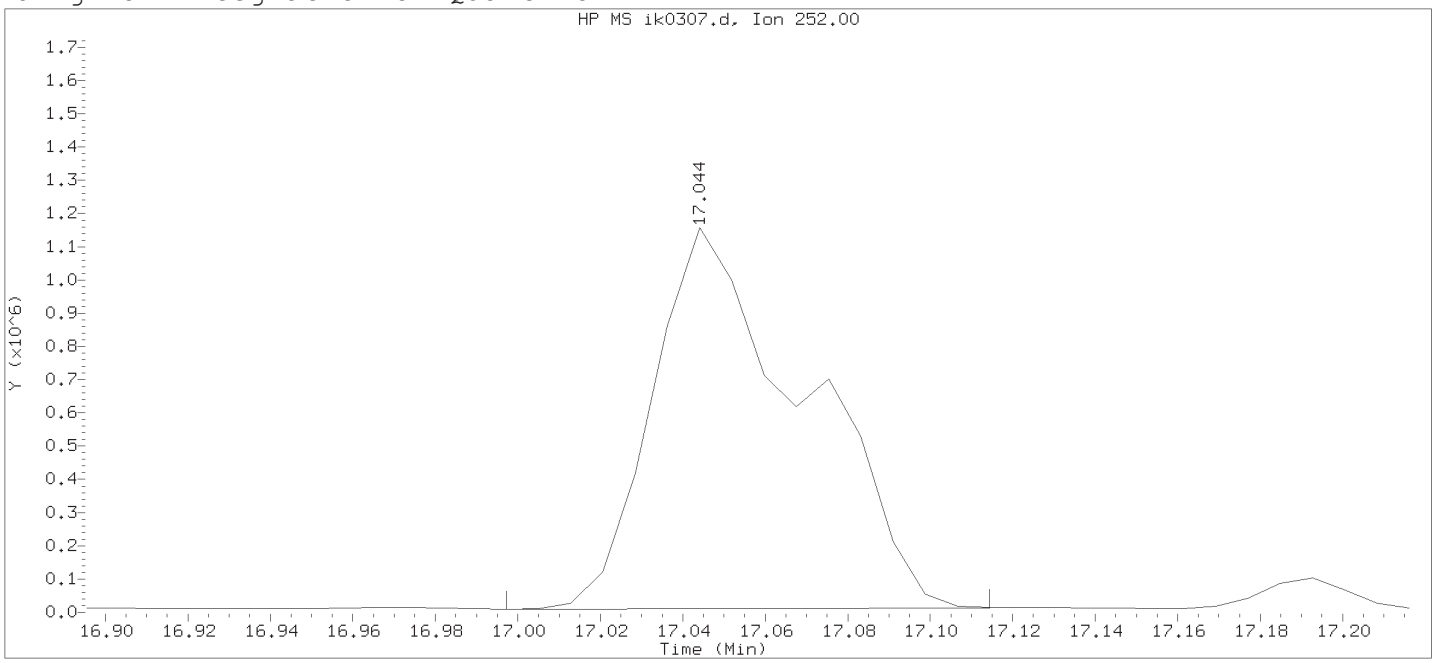
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:30.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:50.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10976.i/18nov07.b/ik0307.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 21:45 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: T1003MSD Lab Sample ID: 9867764

Compound Number	: 47	
Compound Name	: Benzo(k)fluoranthene	
Scan Number	: 1450	
Retention Time (minutes)	: 17.044	
Quant Ion	: 252.00	
Area	: 2947788	
On-column Amount (ng/ul)	: 22.6539	
Integration start scan	: 1443	Integration stop scan: 1458
Y at integration start	: 9949	Y at integration end: 13088

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:30.
Target 3.5 esignature used 11/08/2018

Data file: /chem/HP10623.i/18nov16.b/ck0709.d Injection date and time: **16-NOV-2018 10:57**
Data file Sample Info. Line: T1003REMS;9867763RE;2;3;MS;;DOD26;T2 Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:29 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 20.2 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.777(-0.013)	474	152	49732 (-27)	1.00	
10) Naphthalene-d8	8.289(0.000)	588	136	212998 (-19)	1.00	
20) Acenaphthene-d10	10.469(-0.011)	775	164	98796 (-18)	1.00	
31) Phenanthrene-d10	12.327(-0.023)	941	188	180628 (-21)	1.00	
43) Chrysene-d12	15.648(-0.039)	1256	240	136001 (-22)	1.00	
51) Perylene-d12	17.798(-0.078)	1531	264	86875A (-43)	1.00	

A = User selected an alternate peak

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.242(-0.001)	152	92620	0.861	86%		61 - 111
36) Fluoranthene-d10	(4)	13.830(0.000)	212	149574	0.913	91%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.665(0.000)	264	55159A	0.691	69%		54 - 122

A = User selected an alternate peak.

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.336(-0.014)	88	21662A	0.678	33.55			0.02
11) Naphthalene	(2)	8.316(-0.000)	128	978288	4.326	214.14			0.04
19) Acenaphthylene	(3)	10.285(-0.000)	152	227893	1.162	57.52	0.335	B	0.01
21) Acenaphthene	(3)	10.502(0.000)	154	135865	1.012	50.10			0.02
26) Fluorene	(3)	11.147(0.000)	166	163125	1.136	56.25			0.02
32) Phenanthrene	(4)	12.349(0.000)	178	1224954	5.684	281.37			0.02
33) Anthracene	(4)	12.417(0.000)	178	483118	2.331	115.40			0.02
35) Di-n-butylphthalate	(4)	13.013(-0.001)	149	23649600	102.443	5071.46		E	0.2
37) Fluoranthene	(4)	13.855(0.000)	202	2023684	9.556	473.07			0.02
39) Pyrene	(5)	14.148(0.000)	202	1849062	8.447	418.19			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.546(0.000)	149	1274307	8.037	397.88	18.477	B	0.3
42) Benzo(a)anthracene	(5)	15.624(0.000)	228	909016	5.157	255.31			0.02
44) Chrysene	(5)	15.679(0.000)	228	1092978	6.052	299.62			0.01
46) Benzo(b)fluoranthene	(6)	17.165(0.000)	252	1106766MA	9.940	492.08			0.02
47) Benzo(k)fluoranthene	(6)	17.196(0.000)	252	551458MA	4.612	228.32			0.02
50) Benzo(a)pyrene	(6)	17.704(-0.000)	252	534394A	5.261	260.43			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.760(-0.001)	276	262576A	2.606	129.00			0.02
54) Dibenz(a,h)anthracene	(6)	19.760(-0.001)	278	109222A	1.307	64.73			0.02
55) Benzo(g,h,i)perylene	(6)	20.332(-0.002)	276	207298MA	2.204	109.12			0.02

A = User selected an alternate peak. B = Compound detected in referenced method blank. E = Compound concentration above calibration range.
M = Compound was manually integrated.

Digitally signed by William H Saadeh on 11/16/2018 at 12:35. Target 3.5 esignature user ID: whs02991

Data file: /chem/HP10623.i/18nov16.b/ck0709.d Injection date and time: **16-NOV-2018 10:57**
Data file Sample Info. Line: T1003REMS;9867763RE;2;3;MS;;DOD26;T2 Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:29 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

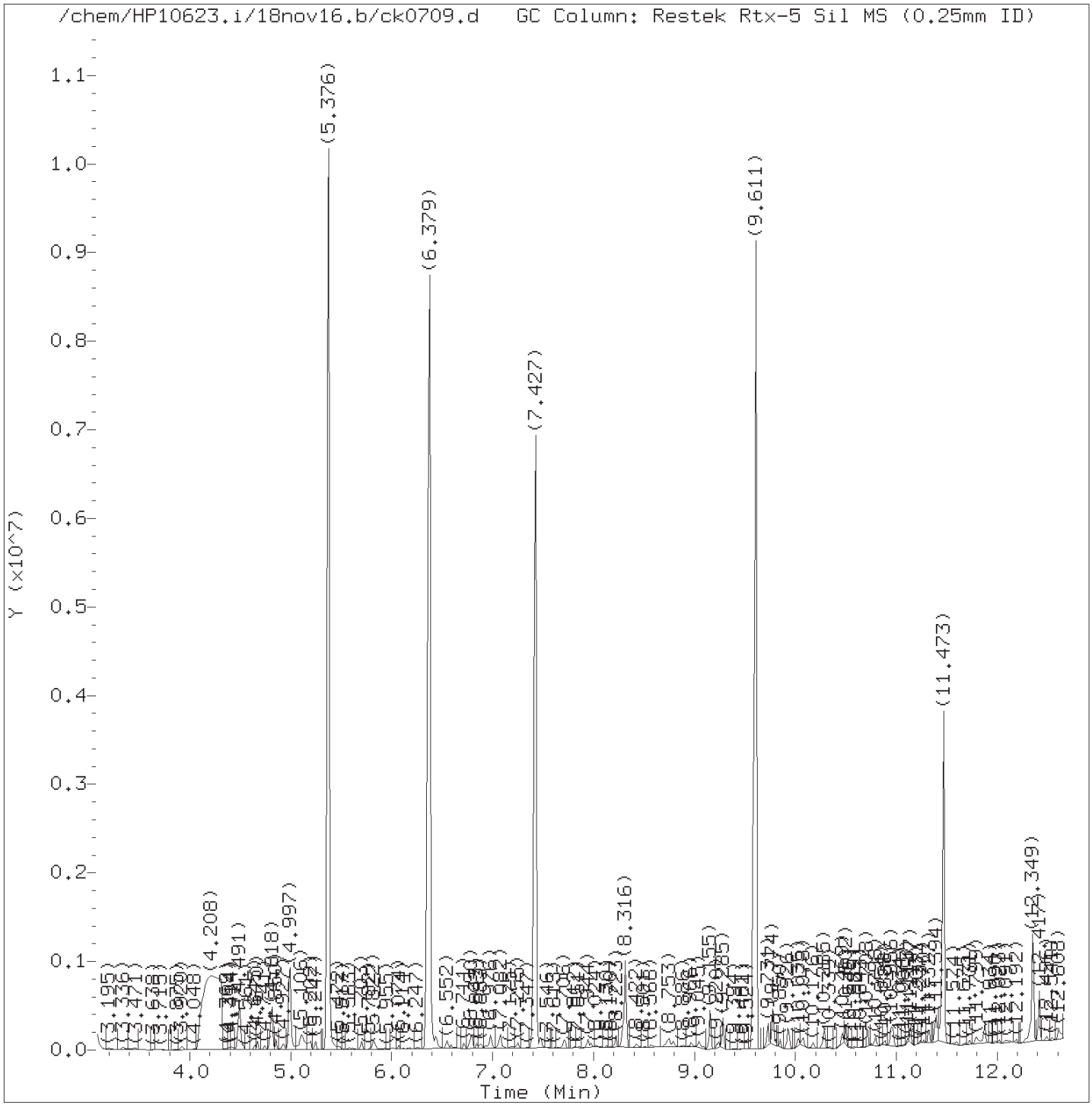
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 20.2 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by William H Saadeh on 11/16/2018 at 12:35. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

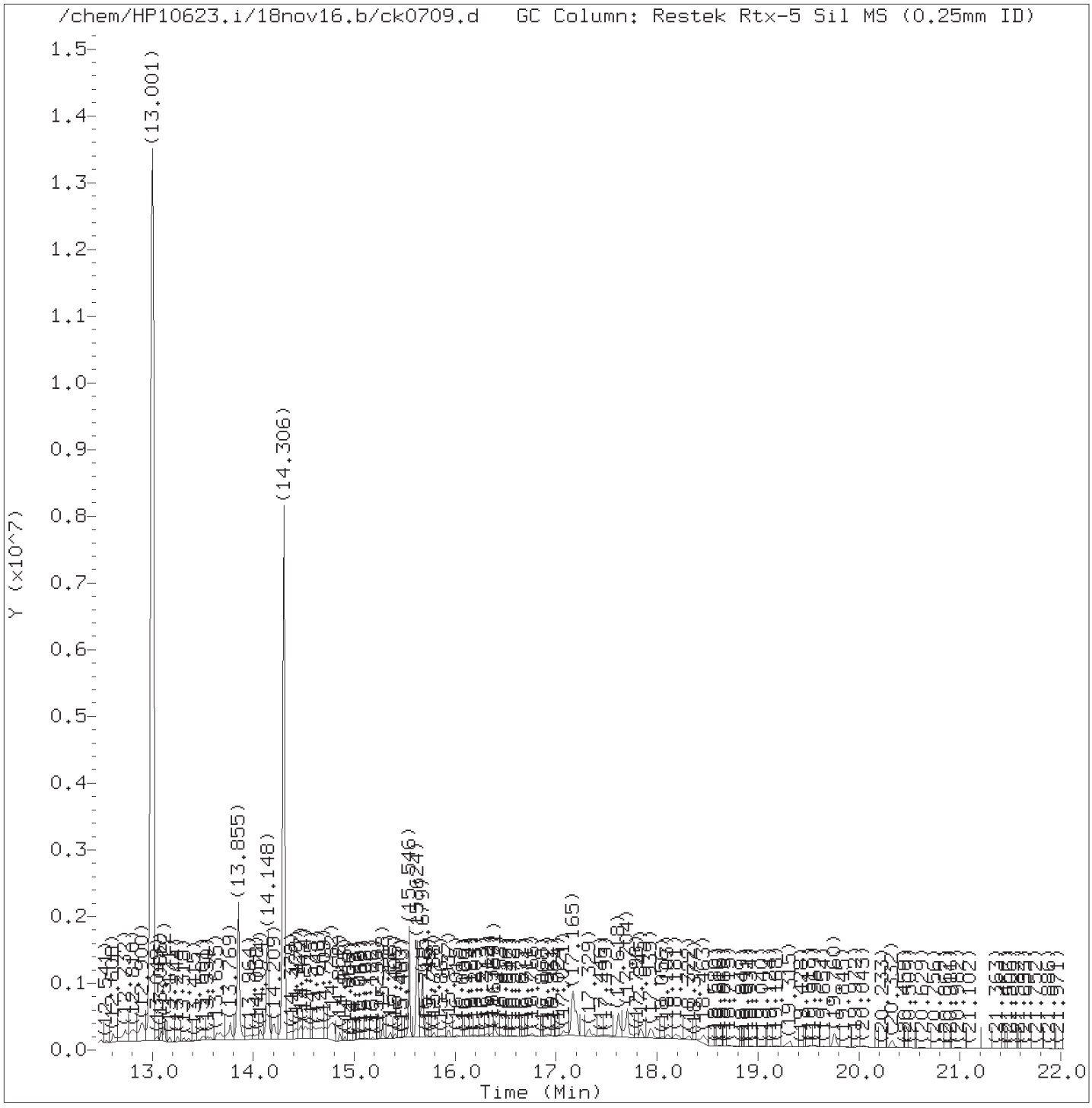
Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:29 whs02991

Sample Name: T1003REMS Lab Sample ID: 9867763RE

Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:29 whs02991

Sample Name: T1003REMS Lab Sample ID: 9867763RE

Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:29 whs02991

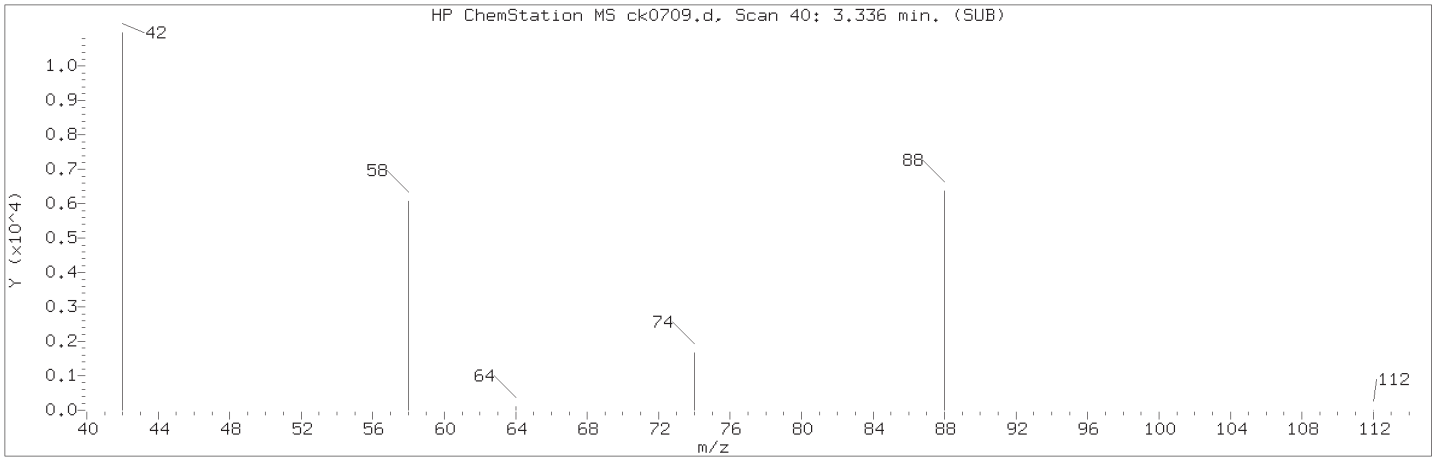
Sample Name: T1003REMS Lab Sample ID: 9867763RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.336	88	21662A	0.678
6)*1,4-Dichlorobenzene-d4	(1)	6.777	152	49732	1.000
10)*Naphthalene-d8	(2)	8.289	136	212998	1.000
11) Naphthalene	(2)	8.316	128	978288	4.326
14)$1-Methylnaphthalene-d10	(2)	9.242	152	92620	0.861
19) Acenaphthylene	(3)	10.285	152	227893	1.162
20)*Acenaphthene-d10	(3)	10.469	164	98796	1.000
21) Acenaphthene	(3)	10.502	154	135865	1.012
26) Fluorene	(3)	11.147	166	163125	1.136
31)*Phenanthrene-d10	(4)	12.327	188	180628	1.000
32) Phenanthrene	(4)	12.349	178	1224954	5.684
33) Anthracene	(4)	12.417	178	483118	2.331
35) Di-n-butylphthalate	(4)	13.013	149	23649600	102.443
36)$Fluoranthene-d10	(4)	13.830	212	149574	0.913
37) Fluoranthene	(4)	13.855	202	2023684	9.556
39) Pyrene	(5)	14.148	202	1849062	8.447
41) bis(2-Ethylhexyl)phthalate	(5)	15.546	149	1274307	8.037
42) Benzo(a)anthracene	(5)	15.624	228	909016	5.157
43)*Chrysene-d12	(5)	15.648	240	136001	1.000
44) Chrysene	(5)	15.679	228	1092978	6.052
46) Benzo(b)fluoranthene	(6)	17.165	252	1106766MA	9.940
47) Benzo(k)fluoranthene	(6)	17.196	252	551458MA	4.612
49)$Benzo(a)pyrene-d12	(6)	17.665	264	55159A	0.691
50) Benzo(a)pyrene	(6)	17.704	252	534394A	5.261
51)*Perylene-d12	(6)	17.798	264	86875A	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.760	276	262576A	2.606
54) Dibenz(a,h)anthracene	(6)	19.760	278	109222A	1.307
55) Benzo(g,h,i)perylene	(6)	20.332	276	207298MA	2.204

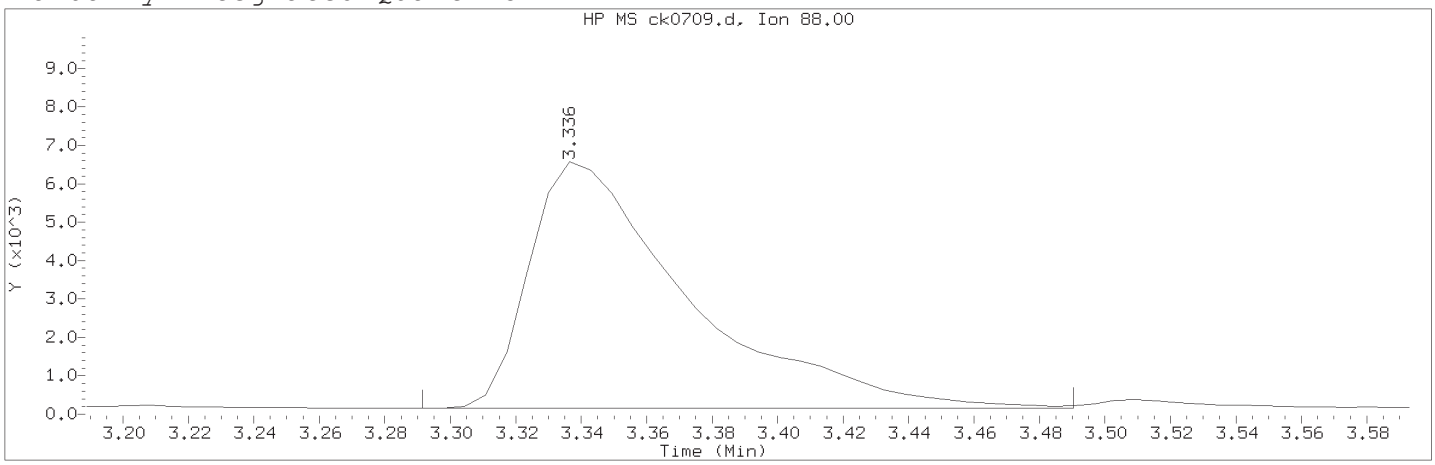
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:29 whs02991

Sample Name: T1003REMS Lab Sample ID: 9867763RE

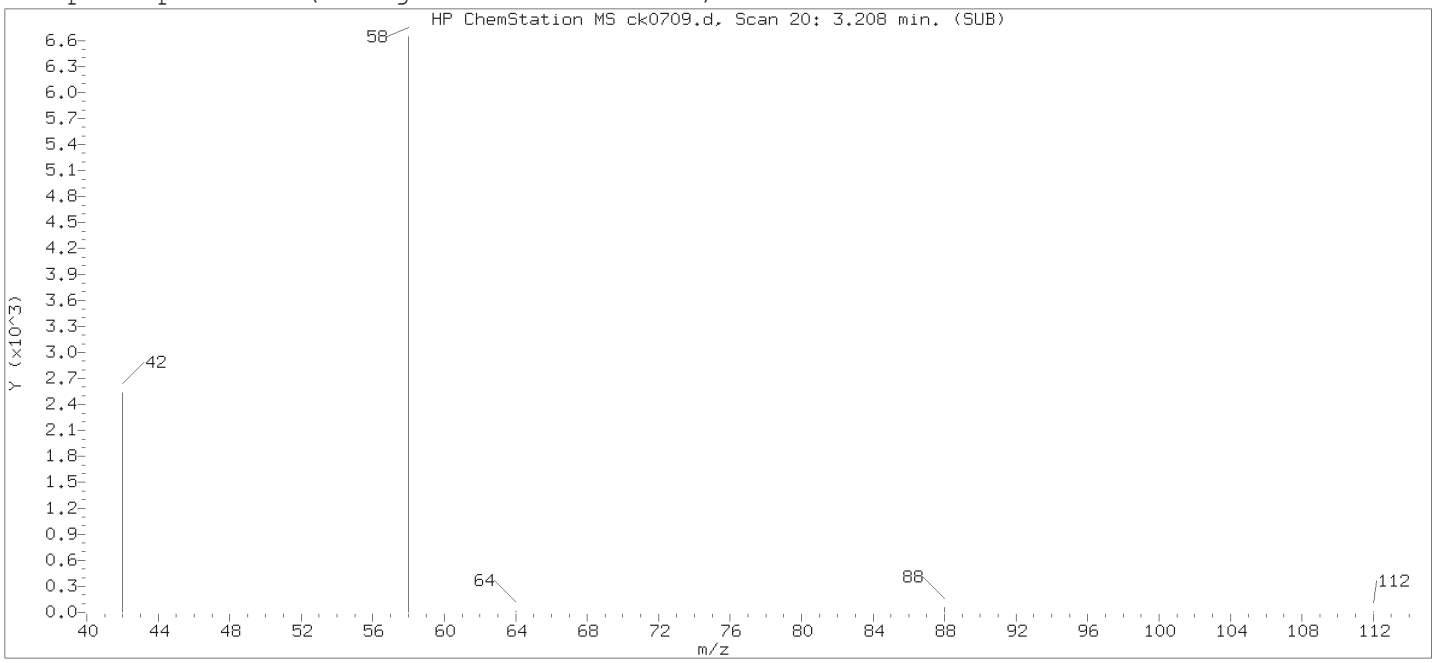
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 40
Retention Time (minutes) : 3.336
Quant Ion : 88.00
Area (flag) : 21662A
On-Column Amount (ng/ul) : 0.6777
Integration start scan : 32 Integration stop scan: 63
Y at integration start : 151 Y at integration end: 151

Reason for manual integration: improper integration

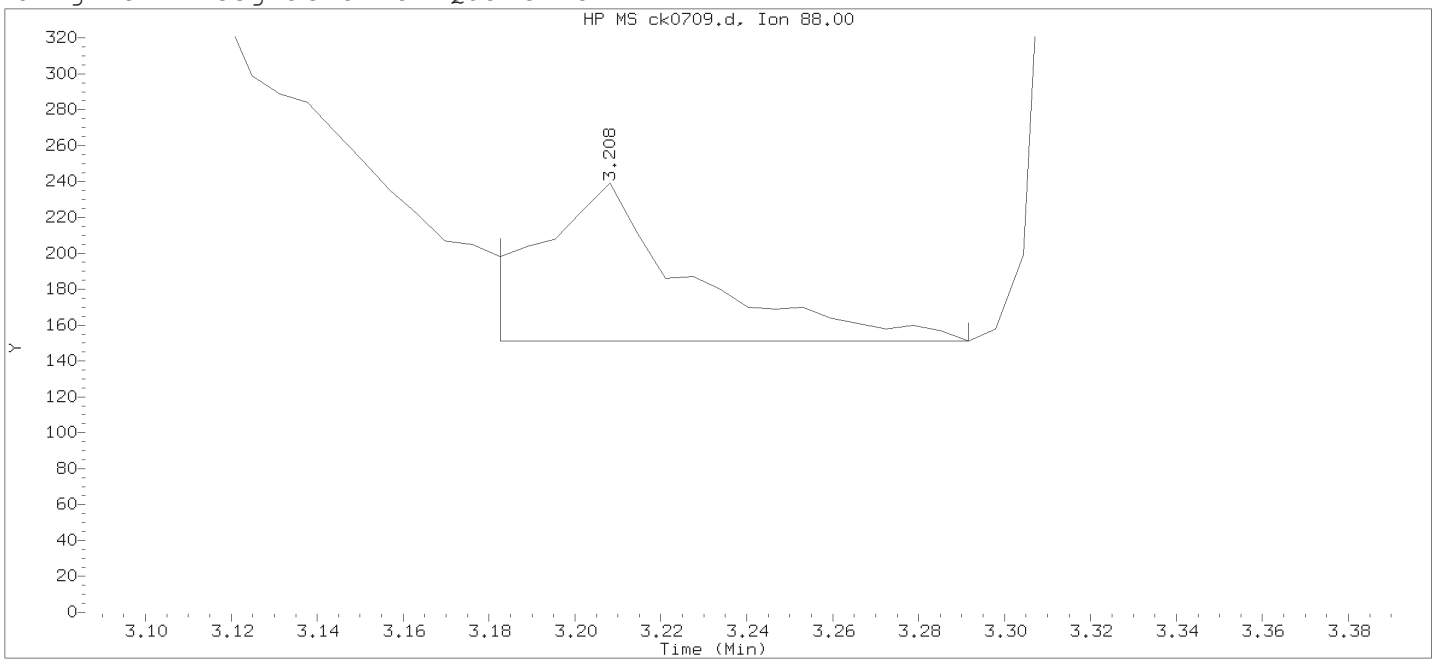
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

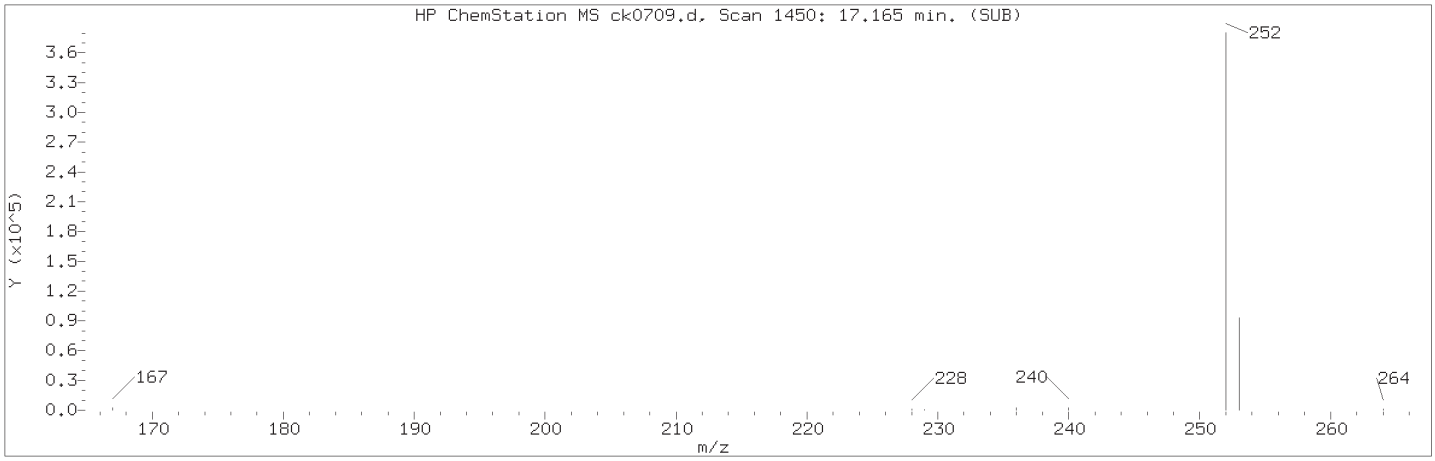
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 11:24 Automation

Sample Name: T1003REMS Lab Sample ID: 9867763RE

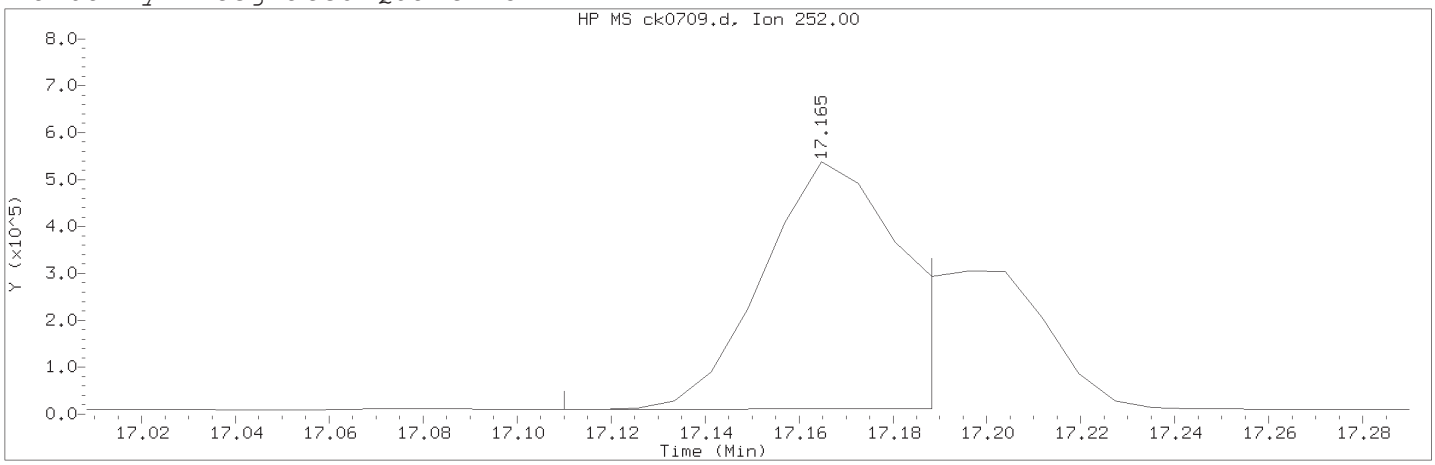
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 20
Retention Time (minutes) : 3.208
Quant Ion : 88.00
Area : 213
On-column Amount (ng/ul) : 0.0067
Integration start scan : 15 Integration stop scan: 32
Y at integration start : 151 Y at integration end: 151

Digitally signed by William H Saadeh on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:29 whs02991

Sample Name: T1003REMS Lab Sample ID: 9867763RE

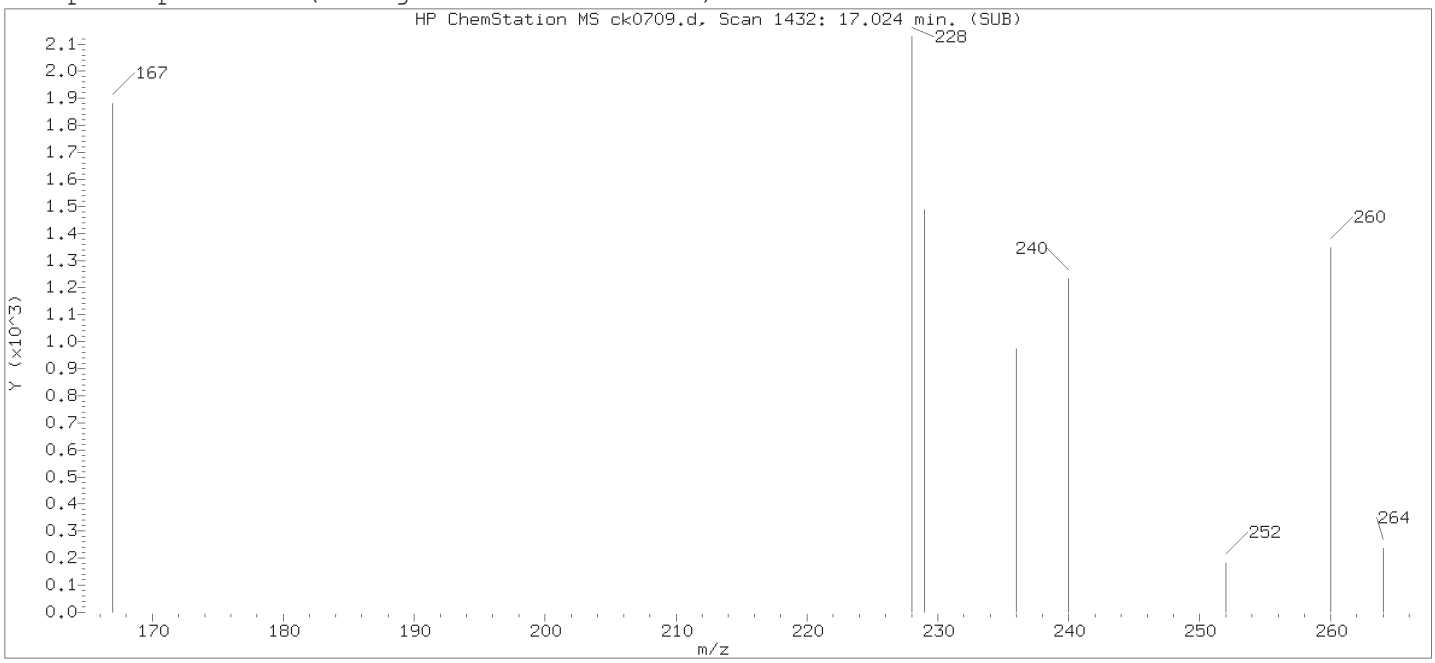
Compound Number : 46
Compound Name : Benzo(b)fluoranthene
Scan Number : 1450
Retention Time (minutes) : 17.165
Quant Ion : 252.00
Area (flag) : 1106766MA
On-Column Amount (ng/ul) : 9.9400
Integration start scan : 1442 Integration stop scan: 1452
Y at integration start : 9785 Y at integration end: 11348

Reason for manual integration: improper integration

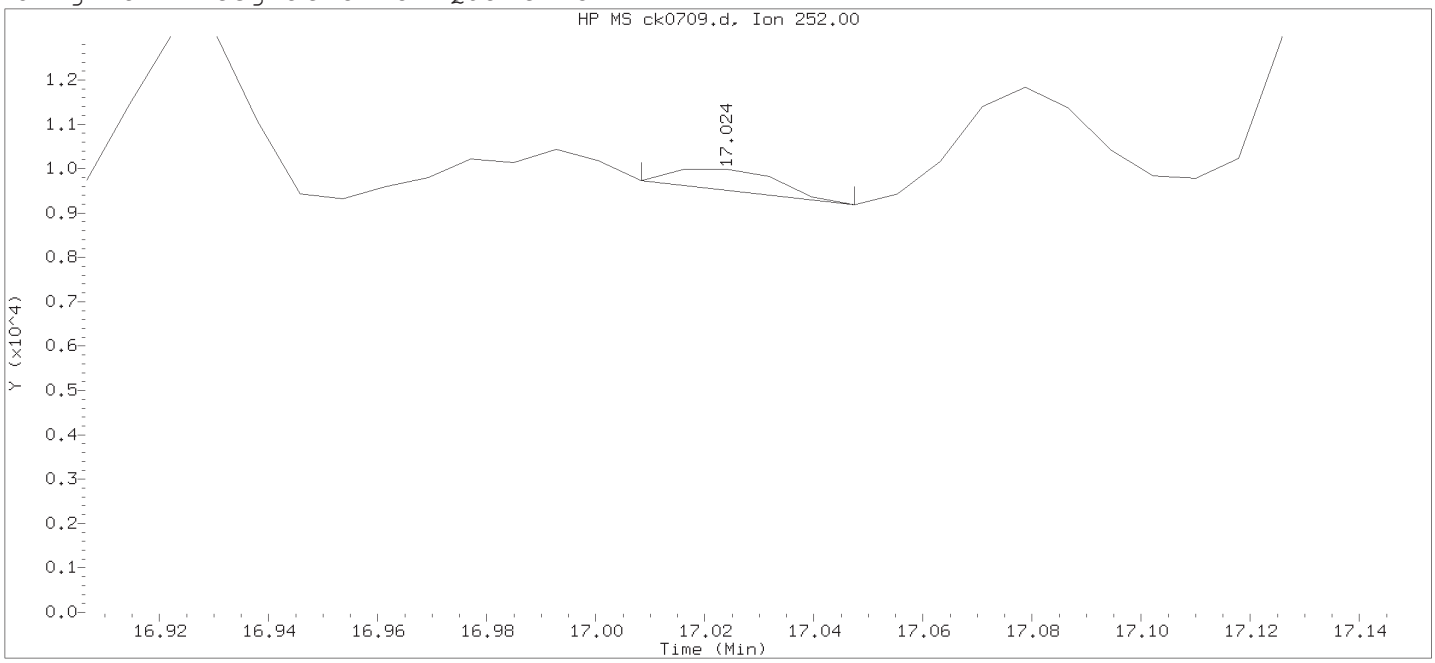
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

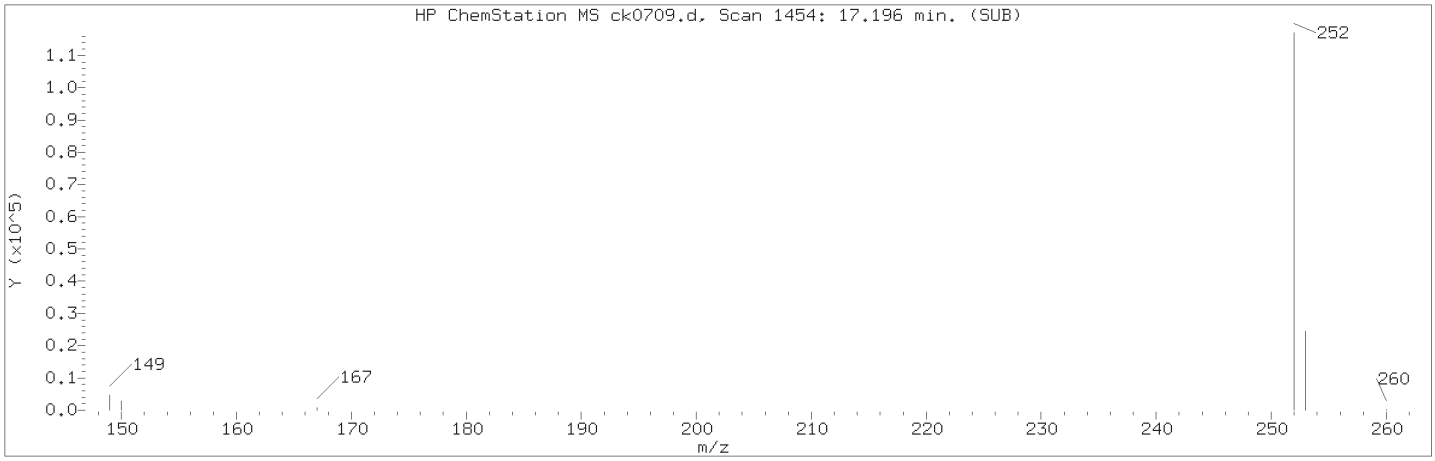
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 11:24 Automation

Sample Name: T1003REMS Lab Sample ID: 9867763RE

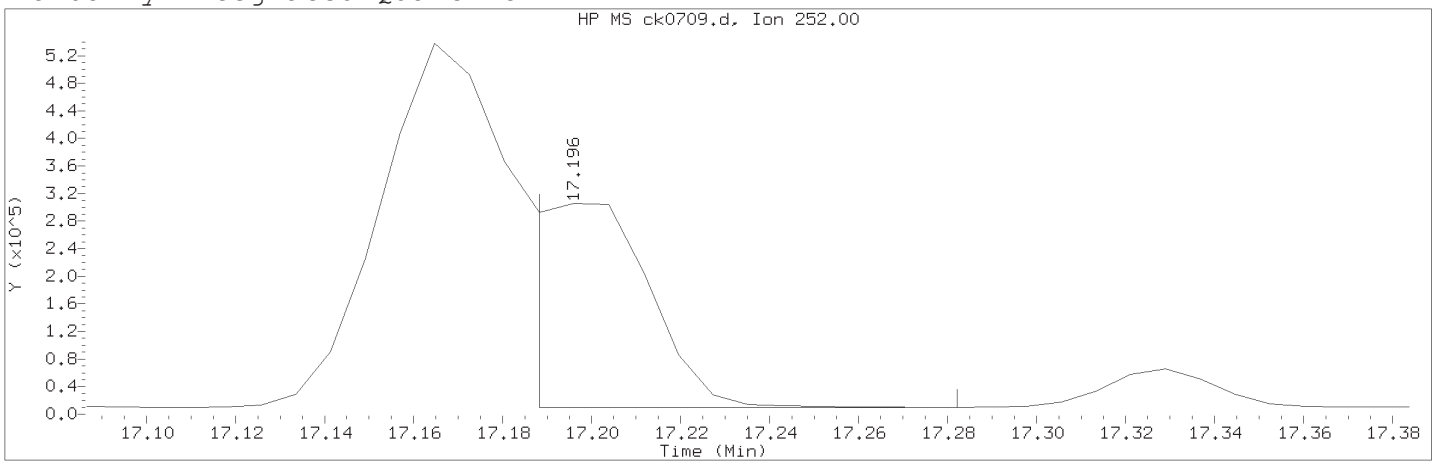
Compound Number	:	46
Compound Name	:	Benzo(b)fluoranthene
Scan Number	:	1432
Retention Time (minutes)	:	17.024
Quant Ion	:	252.00
Area	:	618
On-column Amount (ng/ul)	:	0.0088
Integration start scan	:	1429 Integration stop scan: 1434
Y at integration start	:	9735 Y at integration end: 9185

Digitally signed by William H Saadeh on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:29 whs02991

Sample Name: T1003REMS Lab Sample ID: 9867763RE

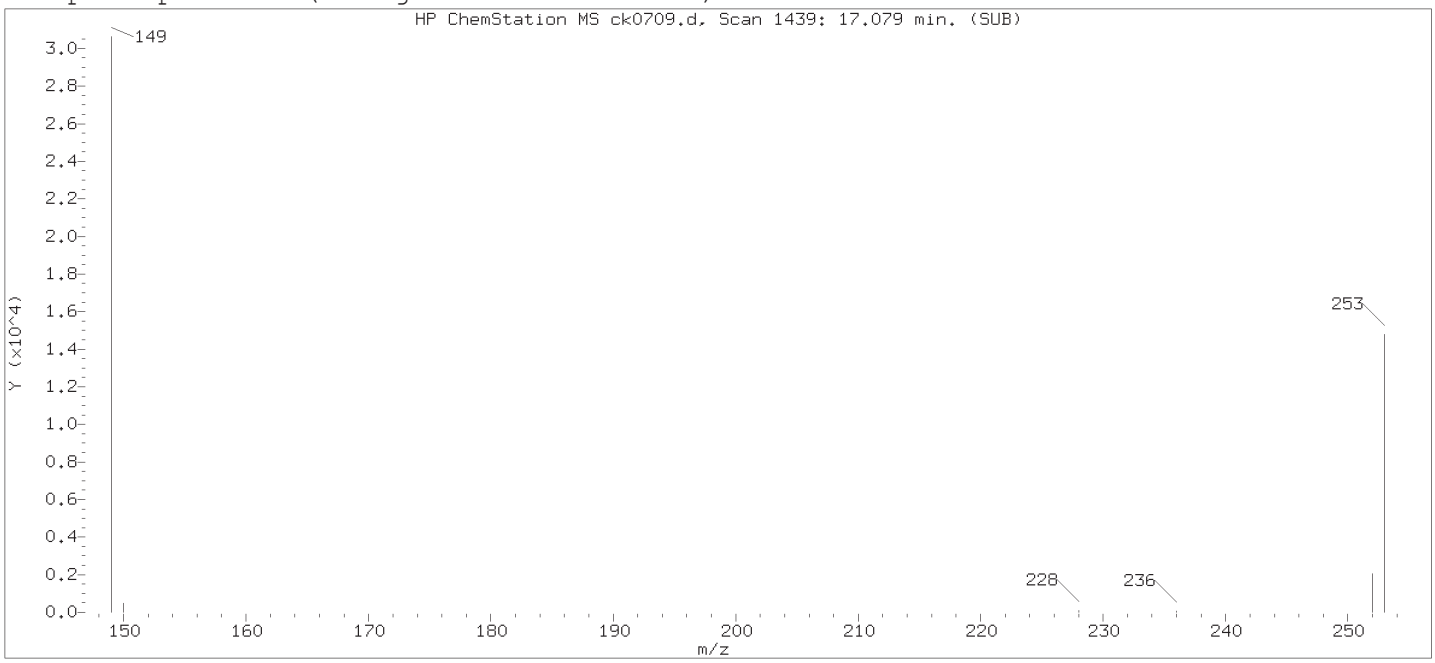
Compound Number : 47
Compound Name : Benzo(k)fluoranthene
Scan Number : 1454
Retention Time (minutes) : 17.196
Quant Ion : 252.00
Area (flag) : 551458MA
On-Column Amount (ng/ul) : 4.6120
Integration start scan : 1452 Integration stop scan: 1464
Y at integration start : 9816 Y at integration end: 9536

Reason for manual integration: improper integration

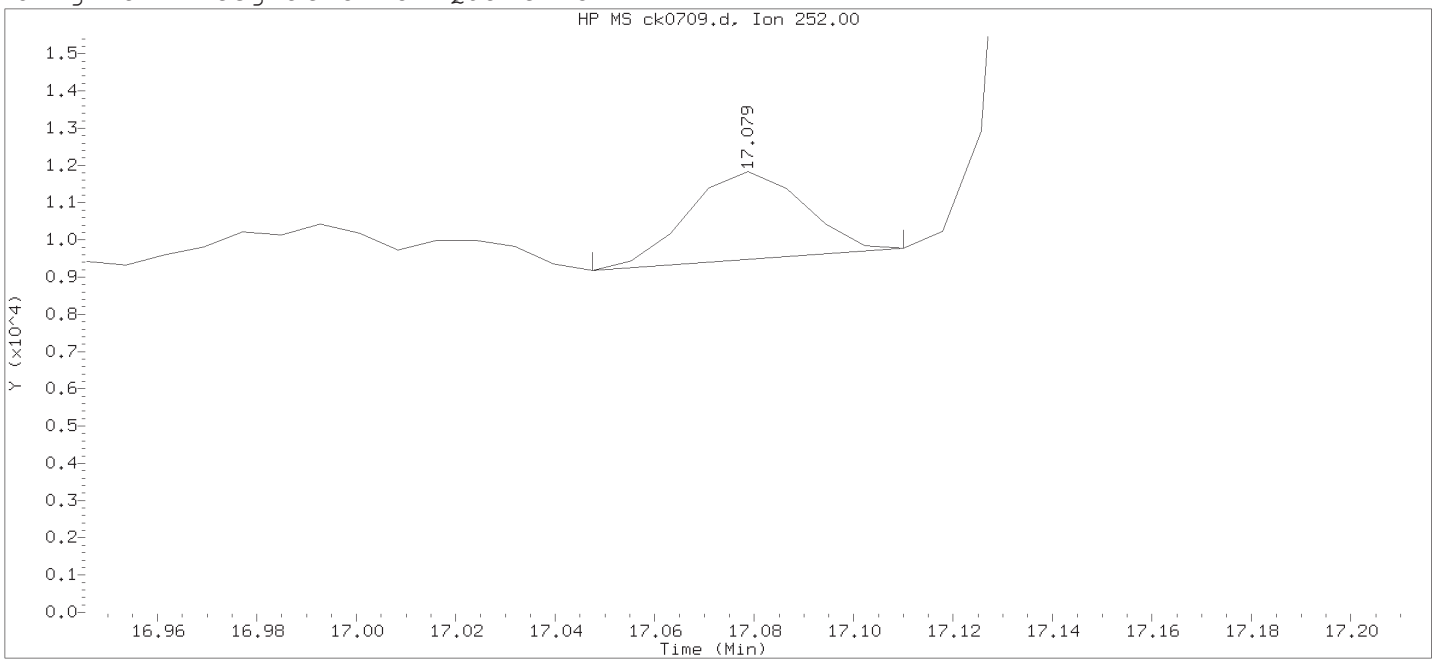
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

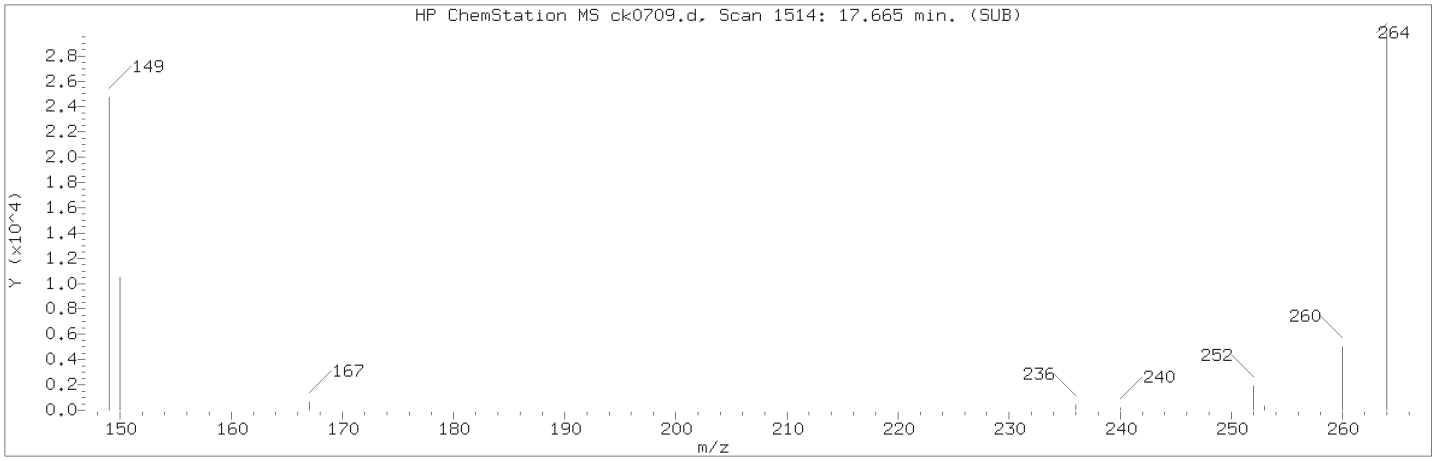
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 11:24 Automation

Sample Name: T1003REMS Lab Sample ID: 9867763RE

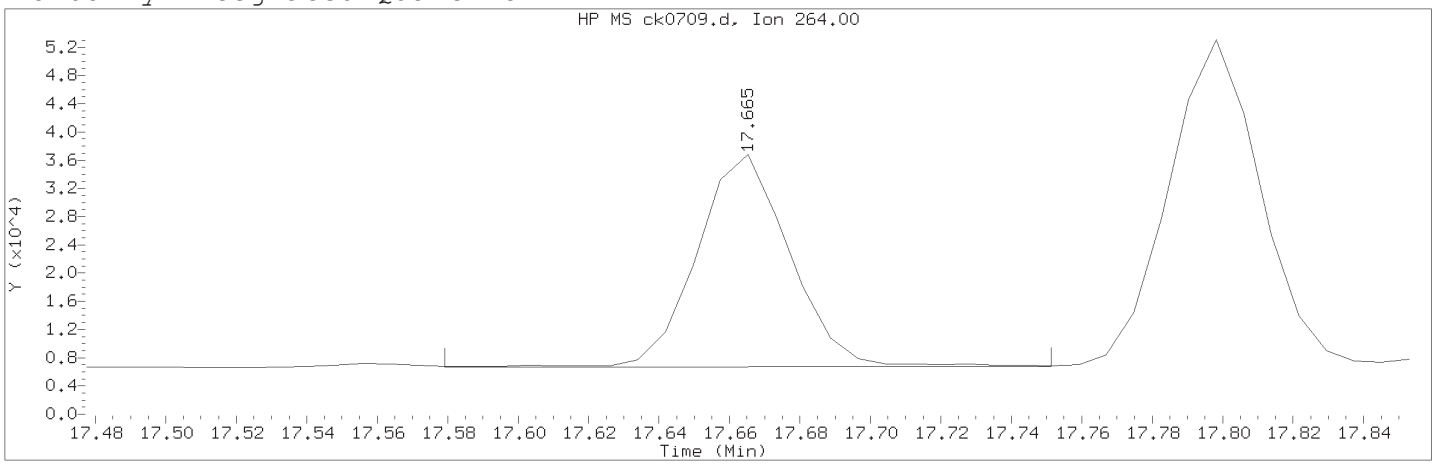
Compound Number	:	47
Compound Name	:	Benzo(k)fluoranthene
Scan Number	:	1439
Retention Time (minutes)	:	17.079
Quant Ion	:	252.00
Area	:	3792
On-column Amount (ng/ul)	:	0.0500
Integration start scan	:	1434 Integration stop scan: 1442
Y at integration start	:	9185 Y at integration end: 9785

Digitally signed by William H Saadeh on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:29 whs02991

Sample Name: T1003REMS Lab Sample ID: 9867763RE

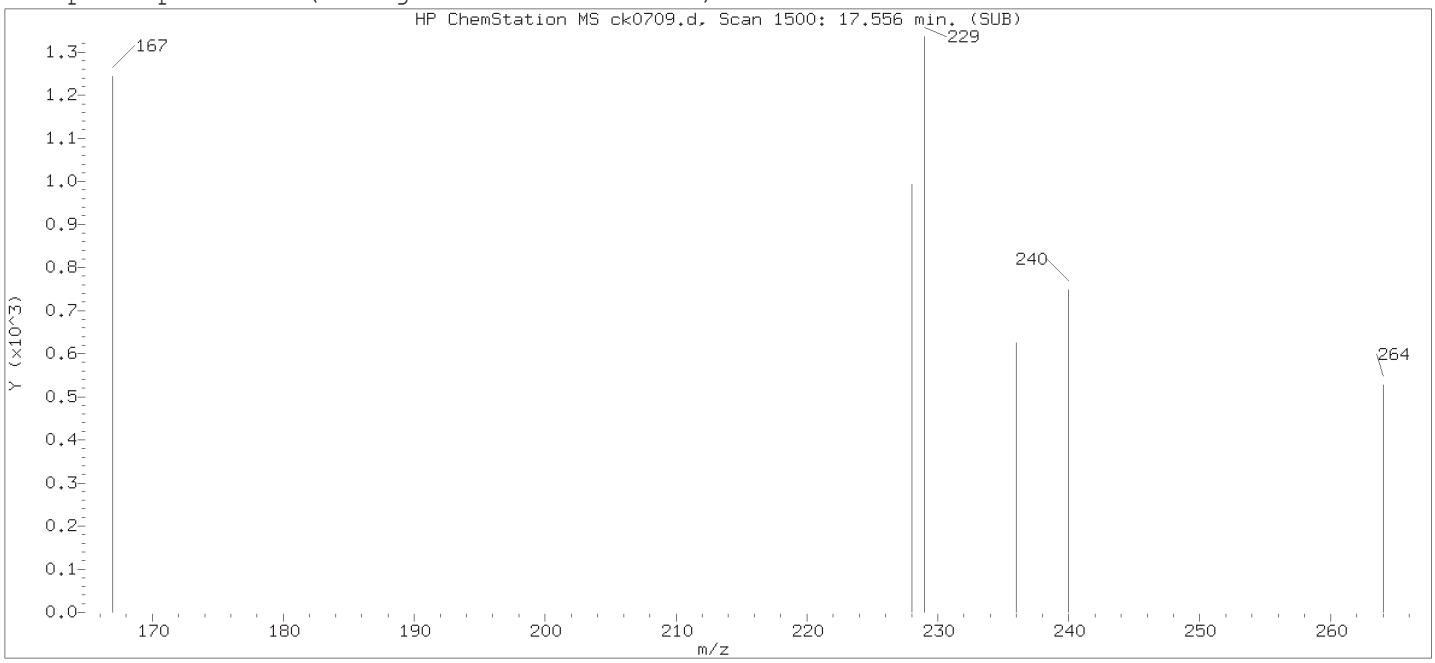
Compound Number	: 49		
Compound Name	: Benzo(a)pyrene-d12		
Scan Number	: 1514		
Retention Time (minutes)	: 17.665		
Quant Ion	: 264.00		
Area (flag)	: 55159A		
On-Column Amount (ng/ul)	: 0.6909		
Integration start scan	: 1502	Integration stop scan:	1524
Y at integration start	: 6707	Y at integration end:	6732

Reason for manual integration: improper integration

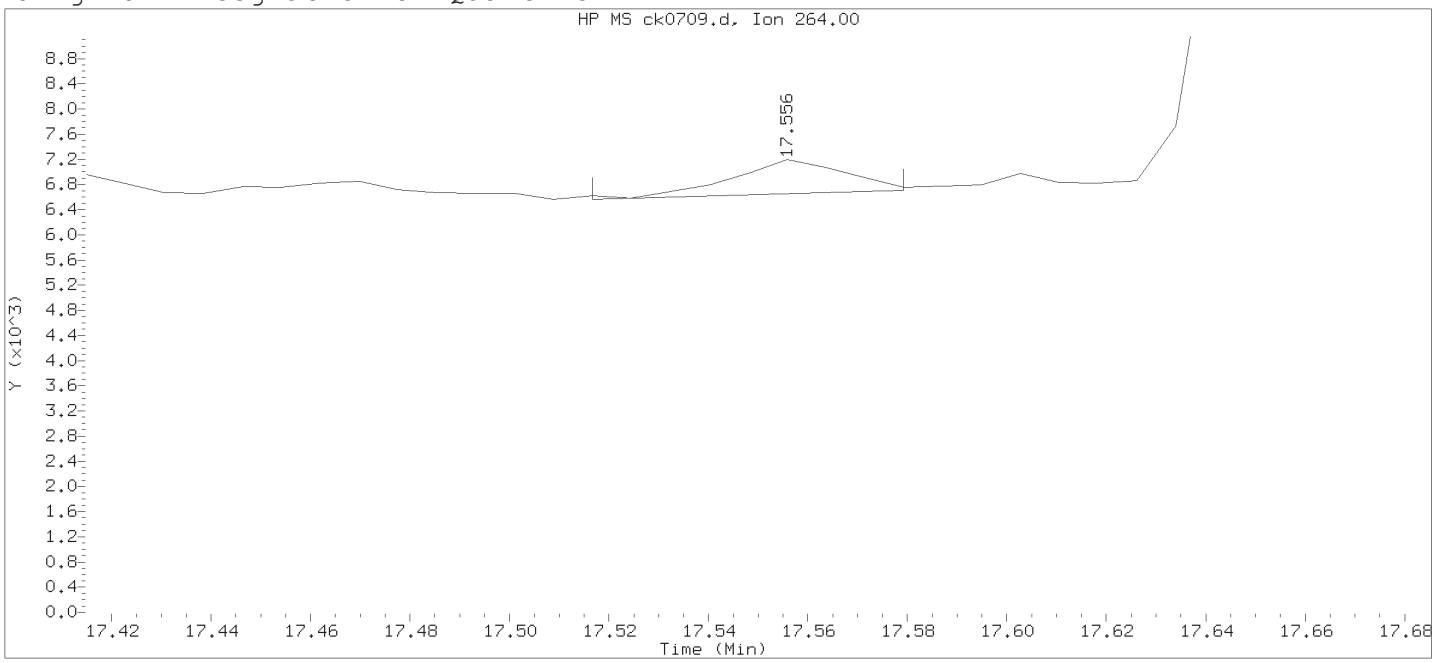
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

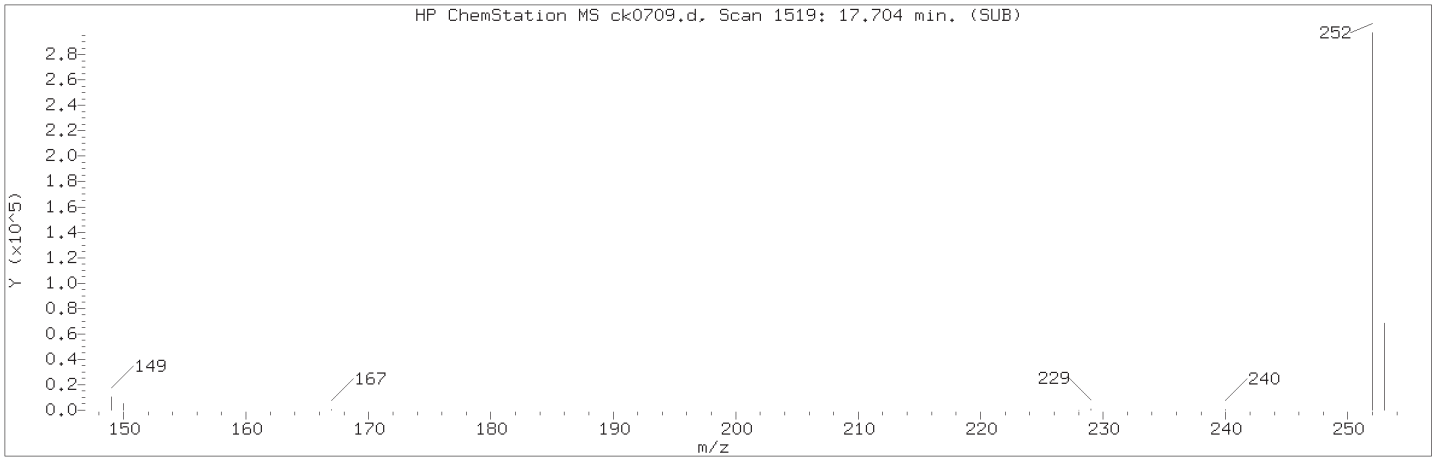
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 11:24 Automation

Sample Name: T1003REMS Lab Sample ID: 9867763RE

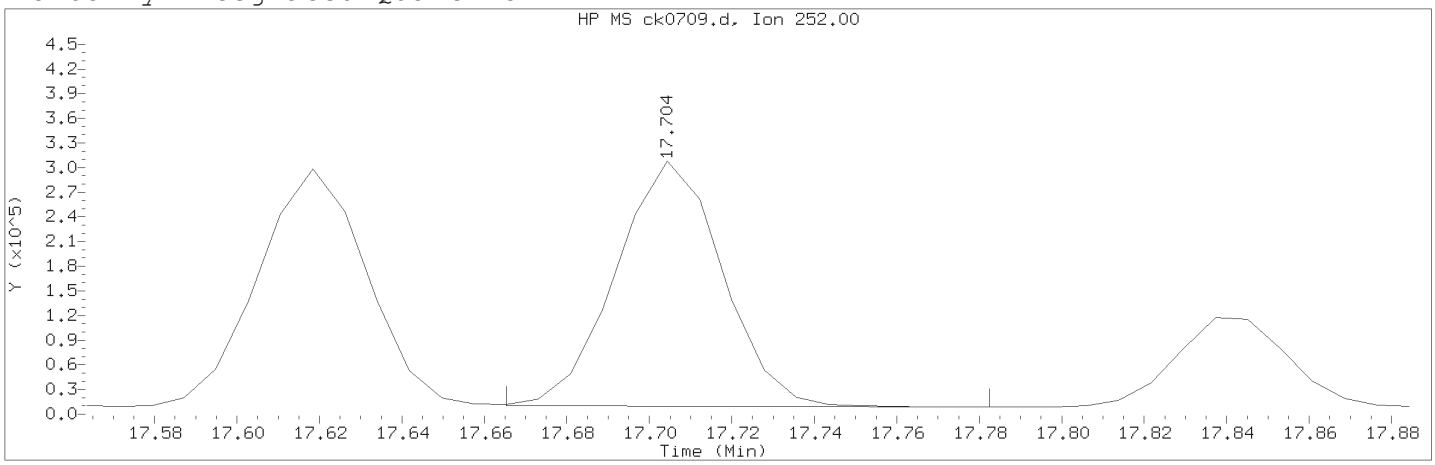
Compound Number	:	49
Compound Name	:	Benzo(a)pyrene-d12
Scan Number	:	1500
Retention Time (minutes)	:	17.556
Quant Ion	:	264.00
Area	:	854
On-column Amount (ng/ul)	:	0.0169
Integration start scan	:	1494 Integration stop scan: 1502
Y at integration start	:	6561 Y at integration end: 6707

Digitally signed by William H Saadeh on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs0539

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:29 whs02991

Sample Name: T1003REMS Lab Sample ID: 9867763RE

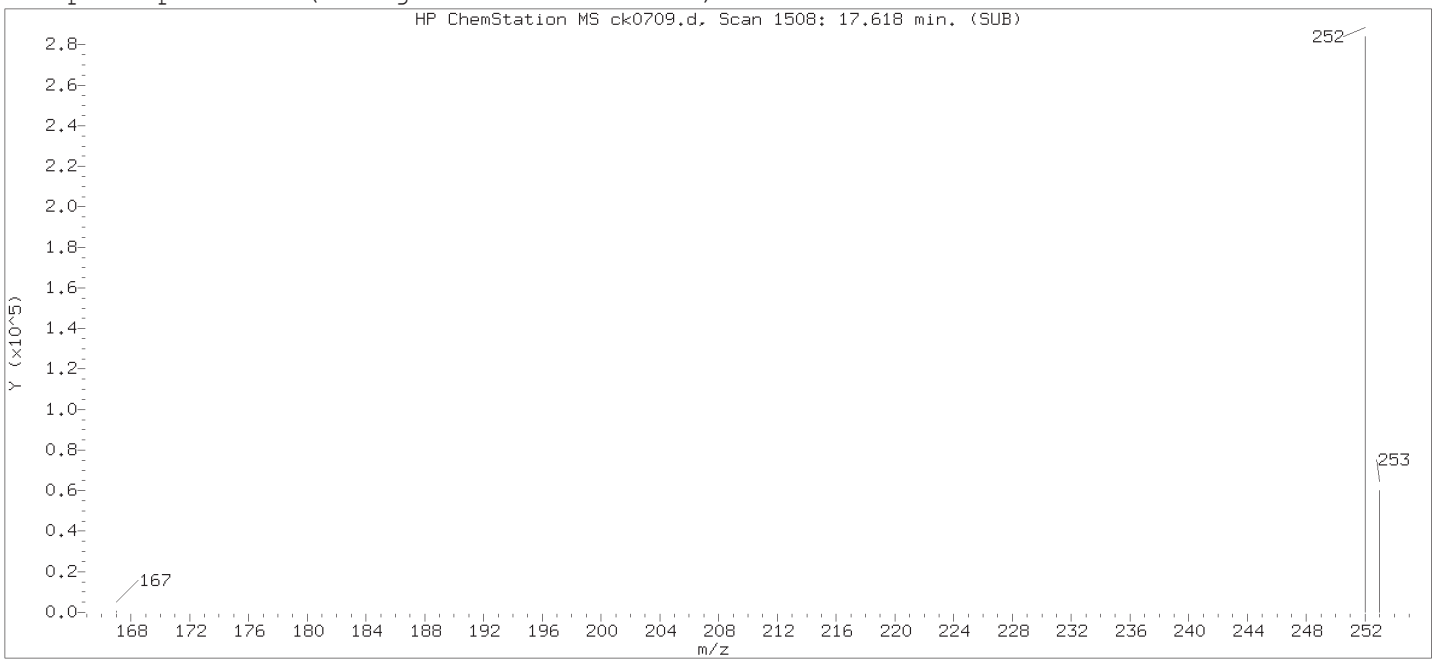
Compound Number : 50
Compound Name : Benzo(a)pyrene
Scan Number : 1519
Retention Time (minutes) : 17.704
Quant Ion : 252.00
Area (flag) : 534394A
On-Column Amount (ng/ul) : 5.2606
Integration start scan : 1513 Integration stop scan: 1528
Y at integration start : 10274 Y at integration end: 8520

Reason for manual integration: improper integration

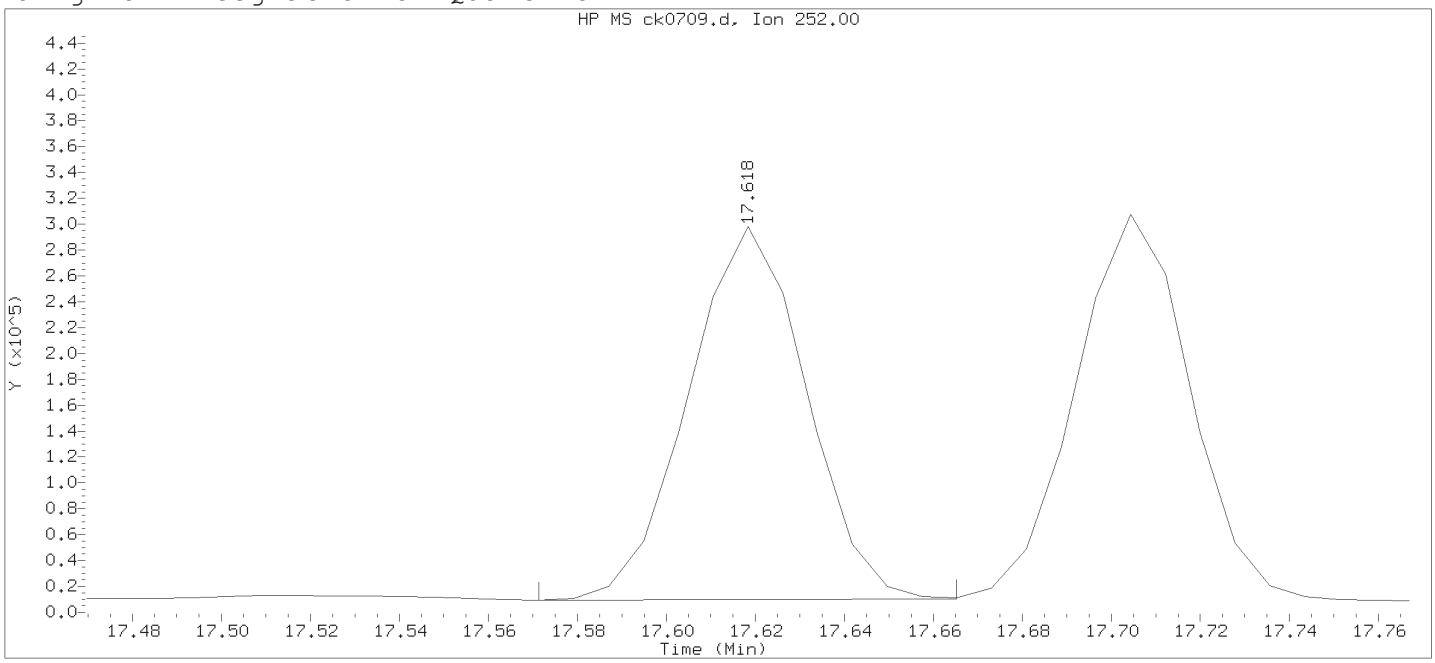
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

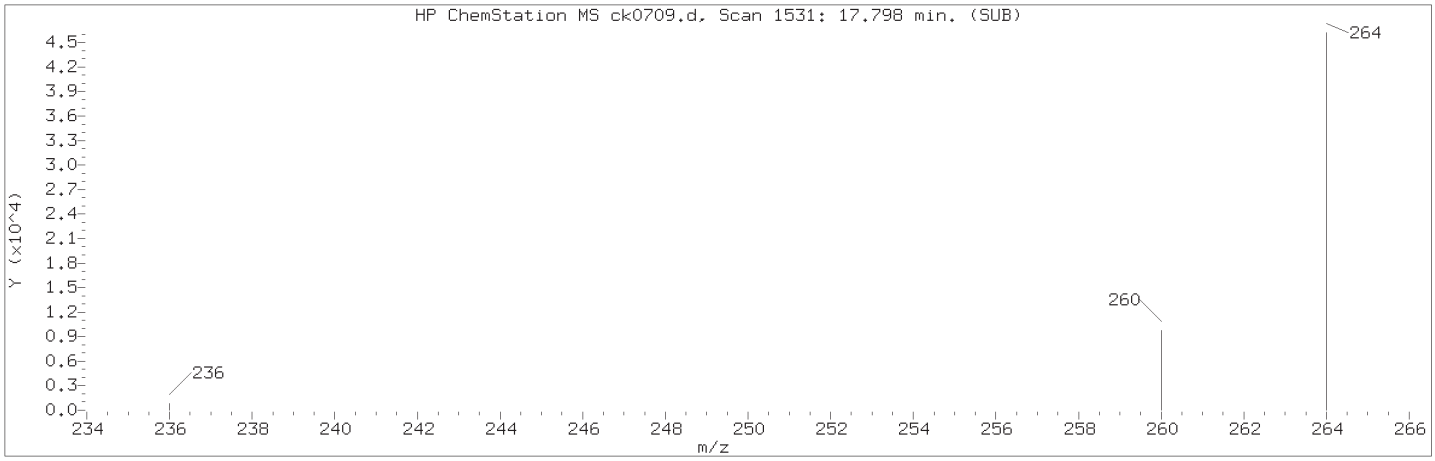
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 11:24 Automation

Sample Name: T1003REMS Lab Sample ID: 9867763RE

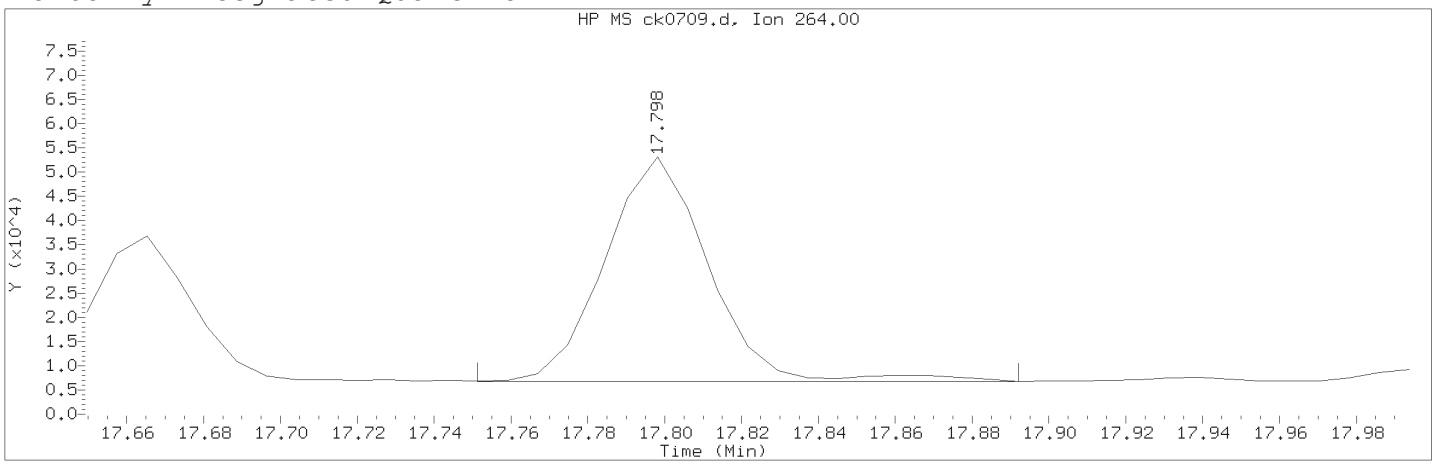
Compound Number	: 50		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1508		
Retention Time (minutes)	: 17.618		
Quant Ion	: 252.00		
Area	: 528626		
On-column Amount (ng/ul)	: 8.2073		
Integration start scan	: 1501	Integration stop scan:	1513
Y at integration start	: 9431	Y at integration end:	10274

Digitally signed by William H Saadeh on 11/16/2018 at 12:35.
Target 3.5 esignature used: D10 Page 2541

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:29 whs02991

Sample Name: T1003REMS Lab Sample ID: 9867763RE

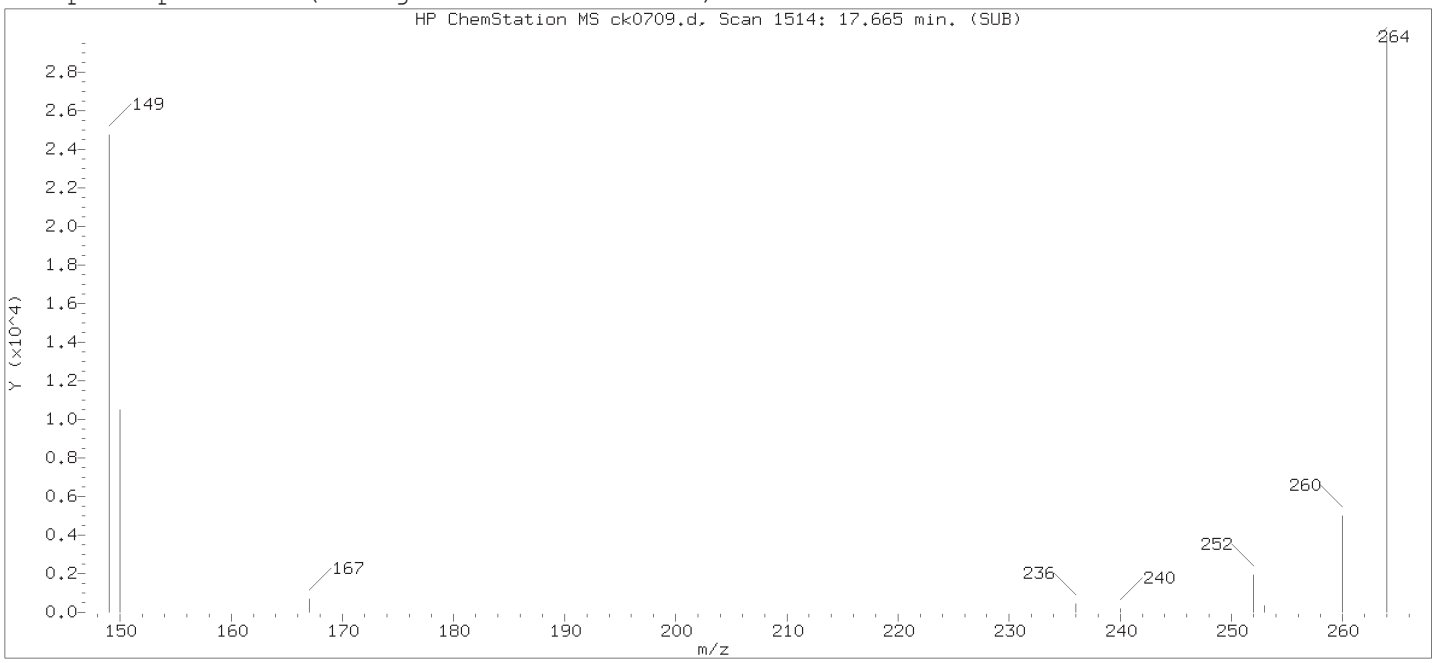
Compound Number : 51
Compound Name : Perylene-d12
Scan Number : 1531
Retention Time (minutes) : 17.798
Quant Ion : 264.00
Area (flag) : 86875A
On-Column Amount (ng/ul) : 1.0000
Integration start scan : 1524 Integration stop scan: 1542
Y at integration start : 6744 Y at integration end: 6747

Reason for manual integration: improper integration

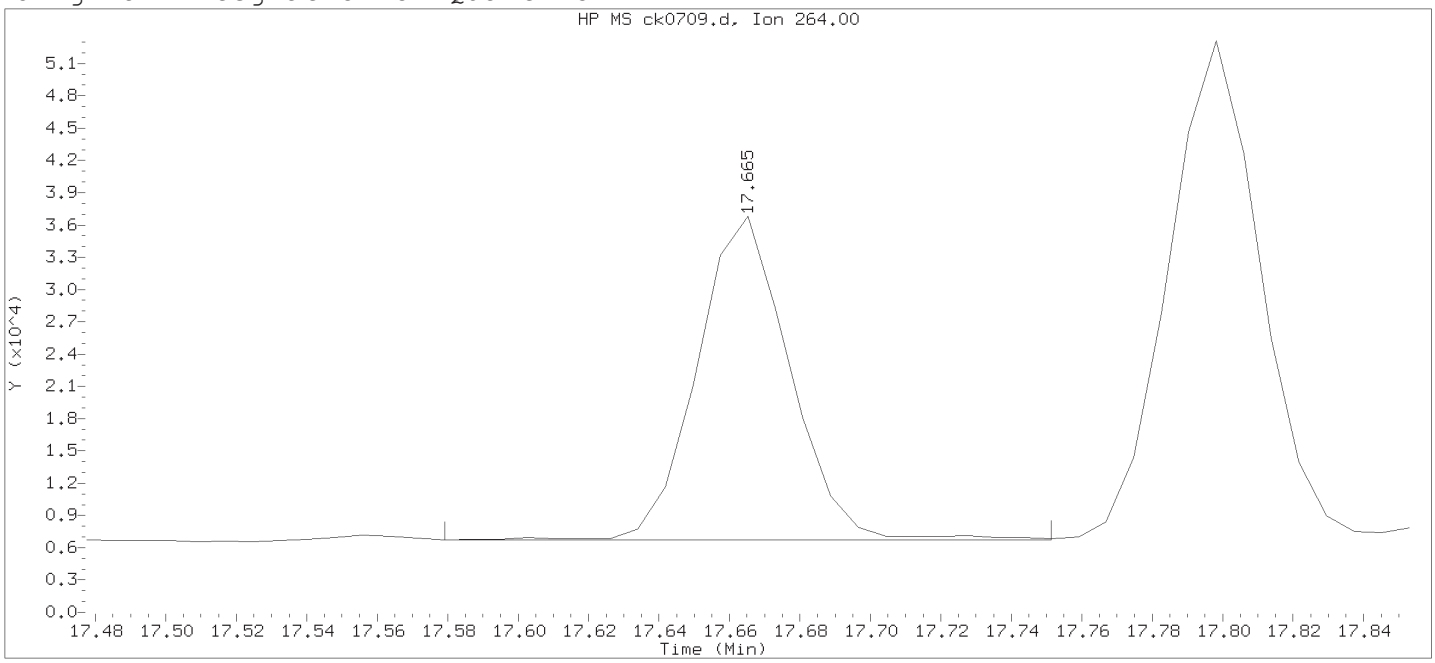
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

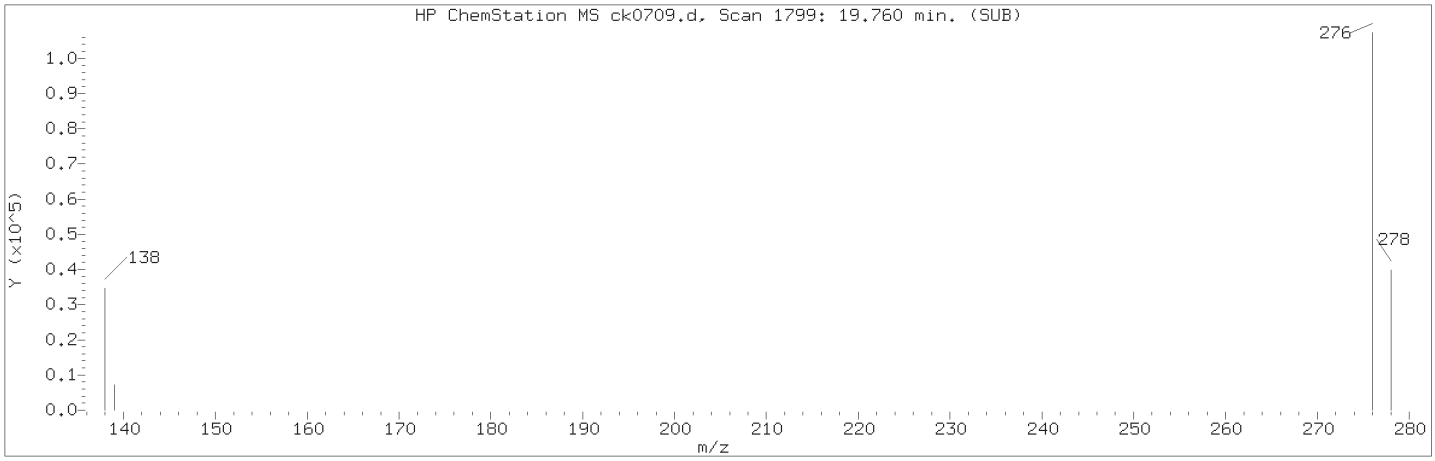
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 11:24 Automation

Sample Name: T1003REMS Lab Sample ID: 9867763RE

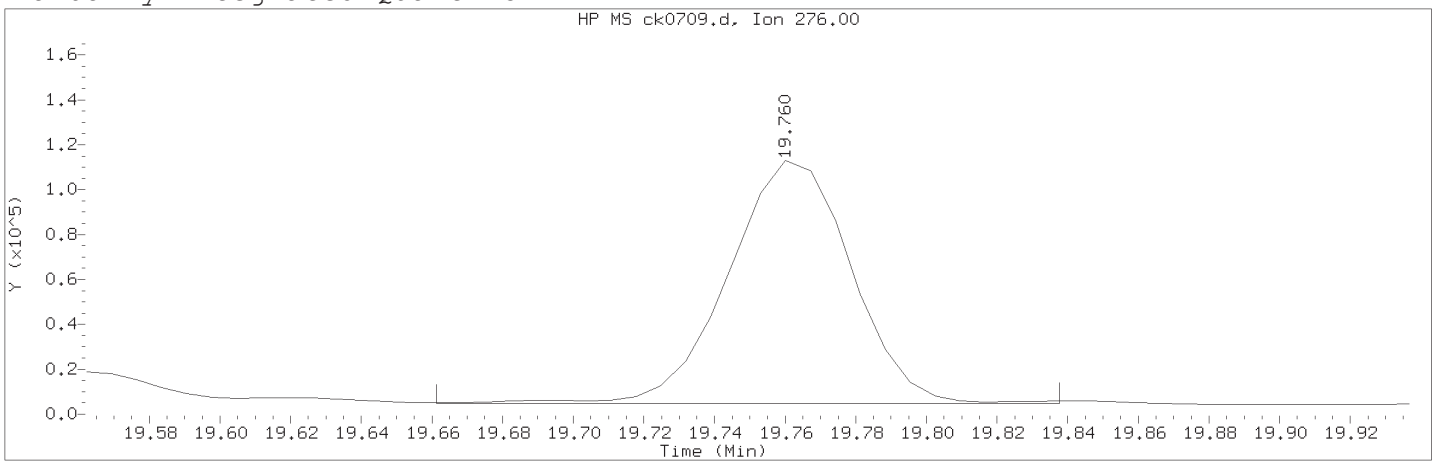
Compound Number	:	51
Compound Name	:	Perylene-d12
Scan Number	:	1514
Retention Time (minutes)	:	17.665
Quant Ion	:	264.00
Area	:	55083
On-column Amount (ng/ul)	:	1.0000
Integration start scan	:	1502 Integration stop scan: 1524
Y at integration start	:	6710 Y at integration end: 6744

Digitally signed by William H Saadeh on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs0543

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:29 whs02991

Sample Name: T1003REMS Lab Sample ID: 9867763RE

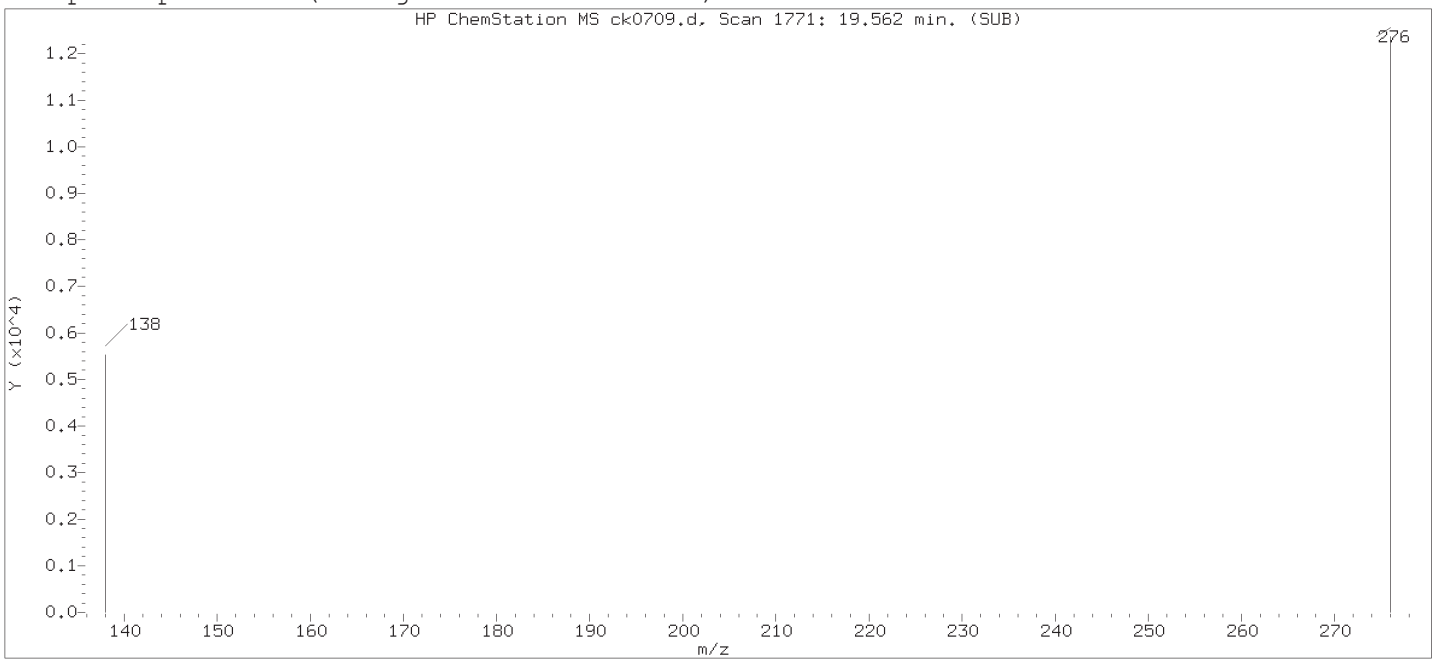
Compound Number : 53
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 1799
Retention Time (minutes) : 19.760
Quant Ion : 276.00
Area (flag) : 262576A
On-Column Amount (ng/ul) : 2.6058
Integration start scan : 1784 Integration stop scan: 1809
Y at integration start : 4715 Y at integration end: 4715

Reason for manual integration: improper integration

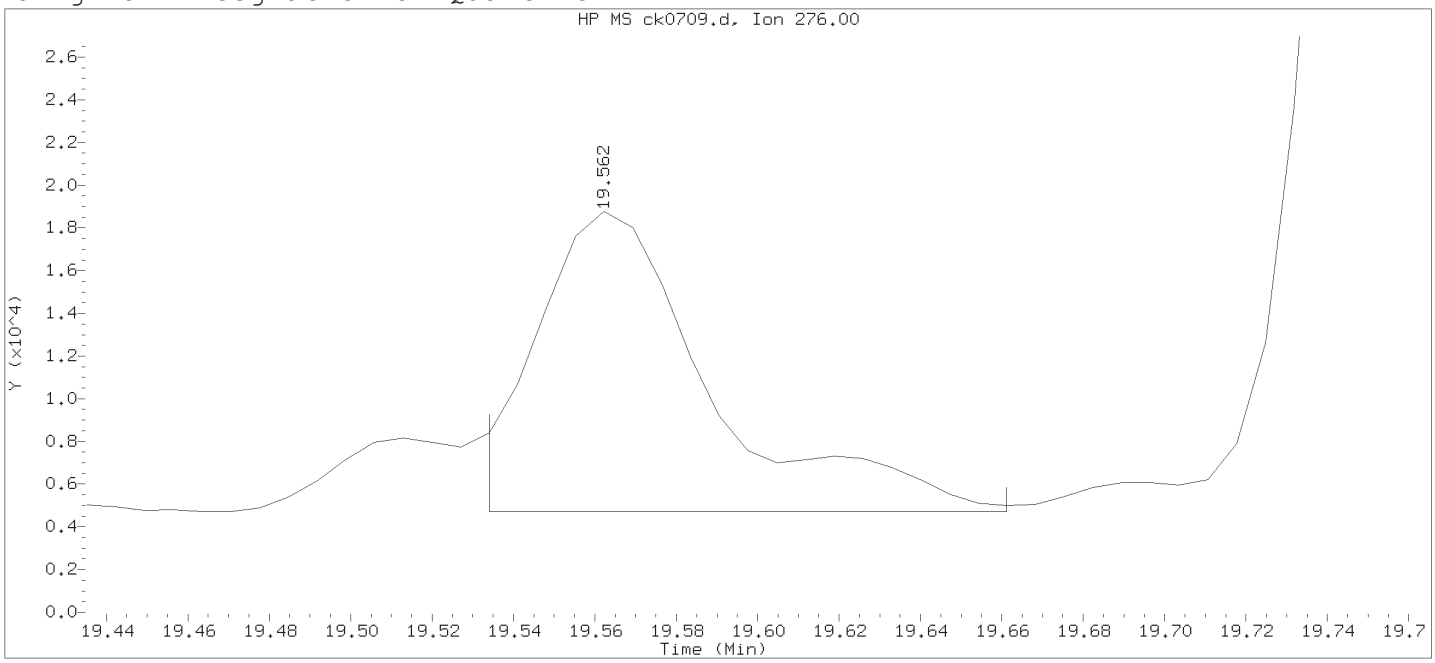
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

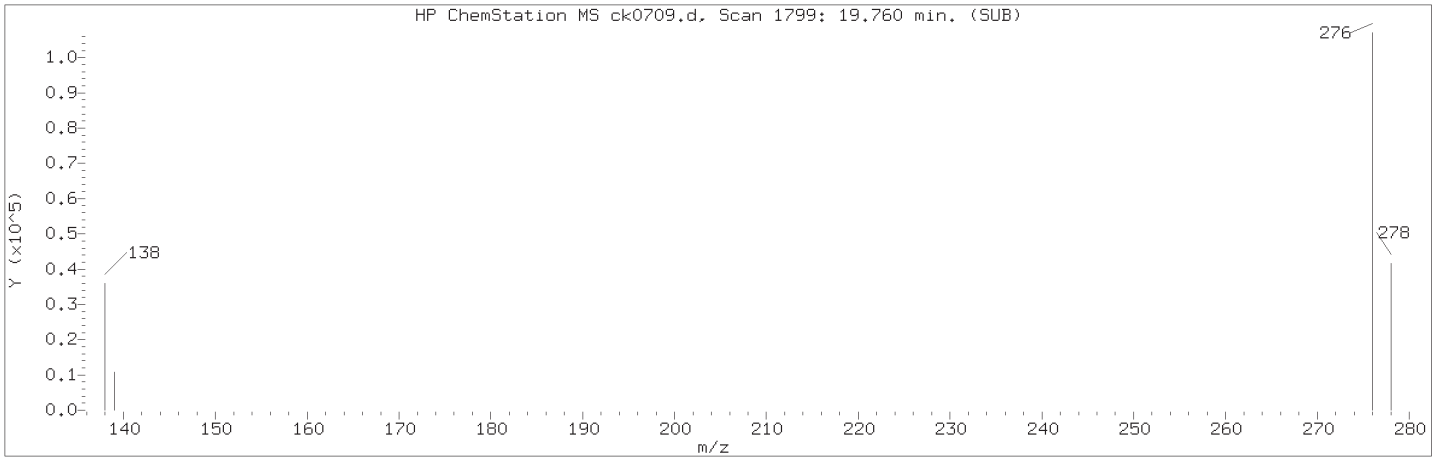
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 11:24 Automation

Sample Name: T1003REMS Lab Sample ID: 9867763RE

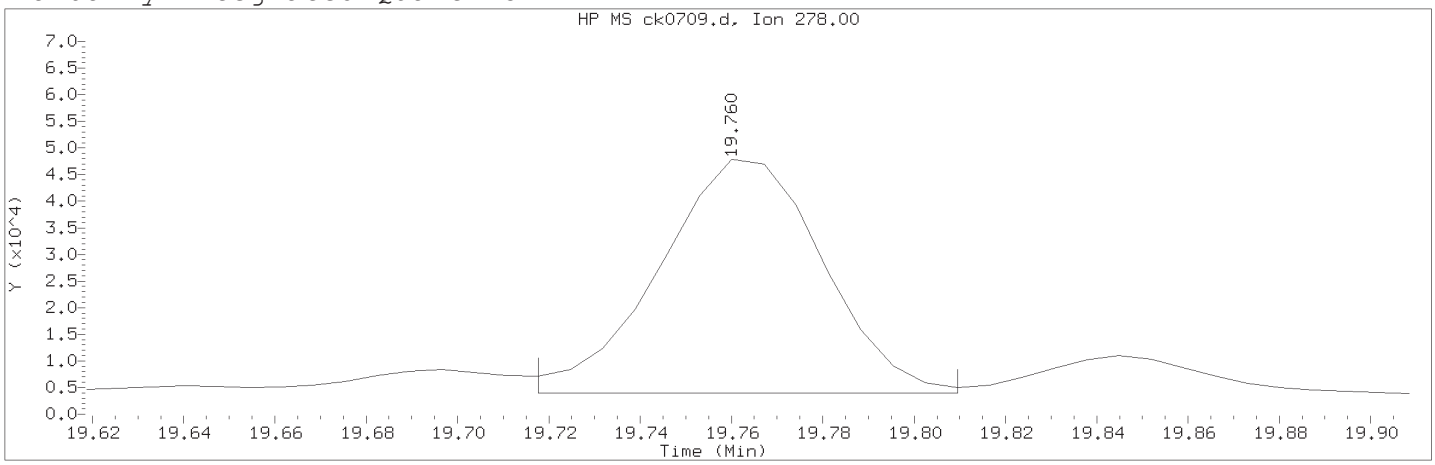
Compound Number	:	53
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	1771
Retention Time (minutes)	:	19.562
Quant Ion	:	276.00
Area	:	41361
On-column Amount (ng/ul)	:	0.6474
Integration start scan	:	1766 Integration stop scan: 1784
Y at integration start	:	4715 Y at integration end: 4715

Digitally signed by William H Saadeh on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs0545

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:29 whs02991

Sample Name: T1003REMS Lab Sample ID: 9867763RE

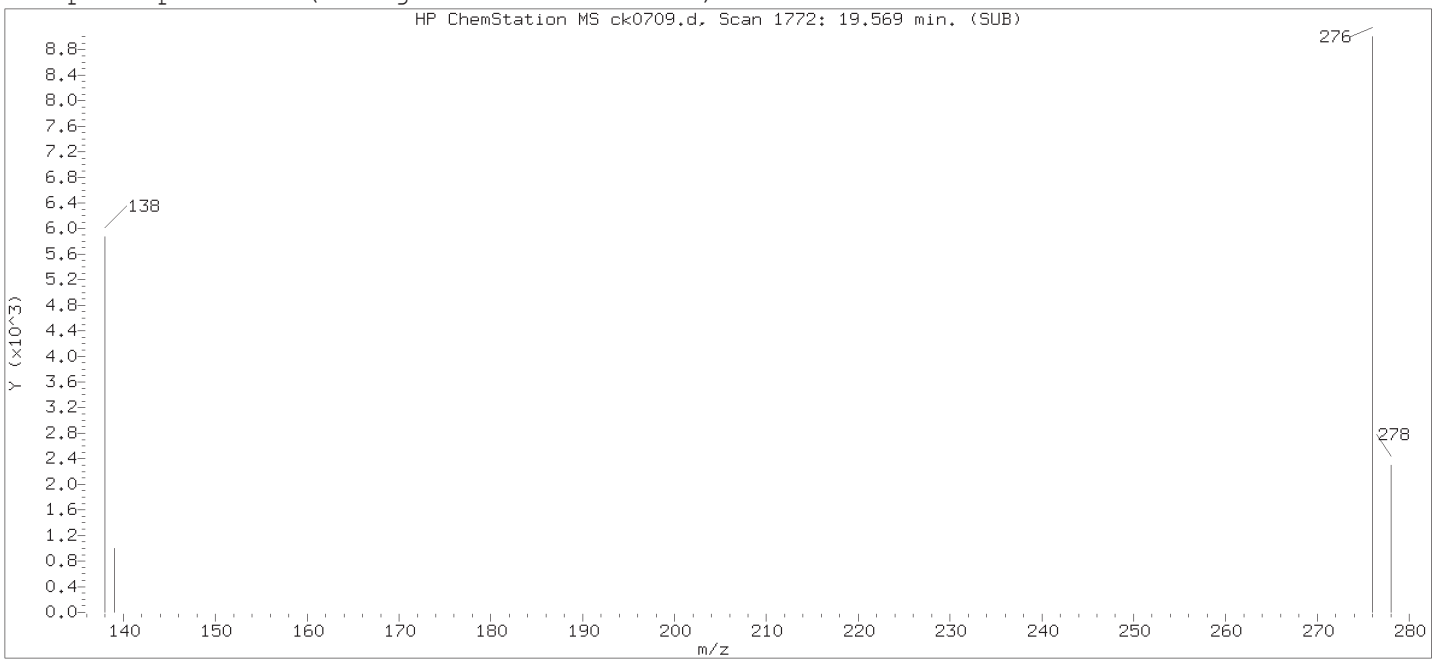
Compound Number	: 54		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 1799		
Retention Time (minutes)	: 19.760		
Quant Ion	: 278.00		
Area (flag)	: 109222A		
On-Column Amount (ng/ul)	: 1.3075		
Integration start scan	: 1792	Integration stop scan:	1805
Y at integration start	: 3946	Y at integration end:	3946

Reason for manual integration: improper integration

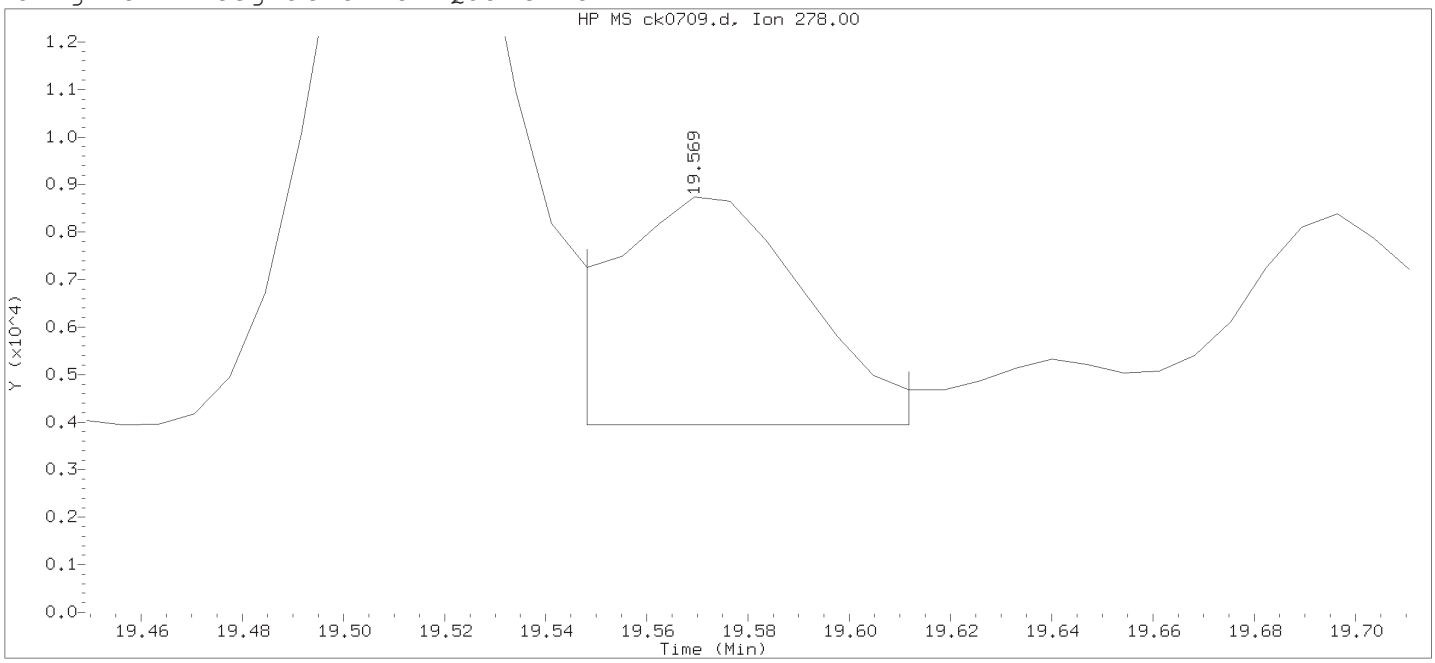
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

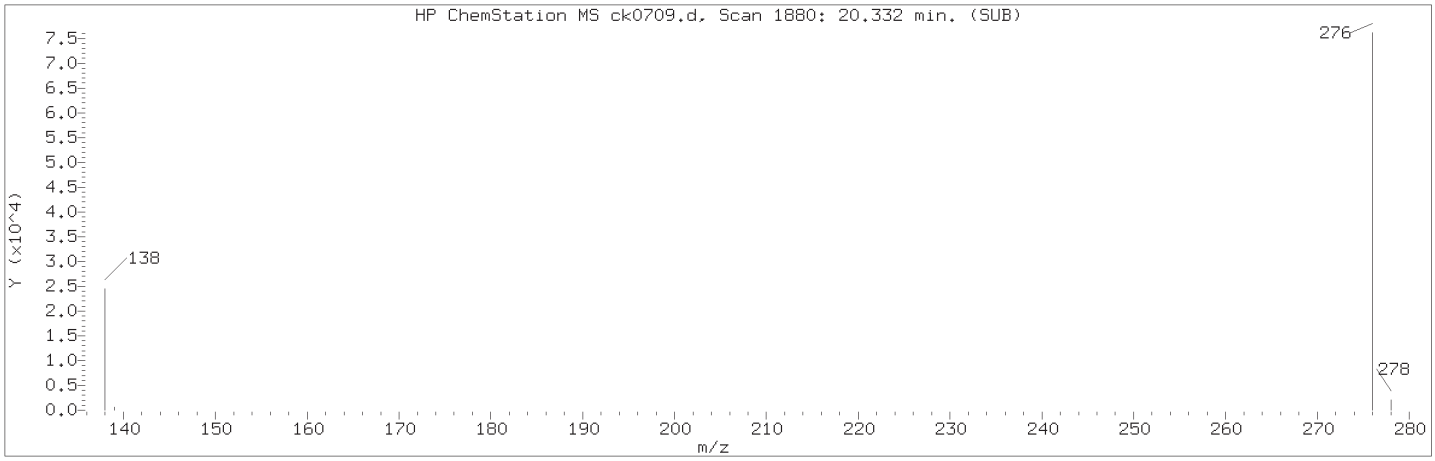
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 11:24 Automation

Sample Name: T1003REMS Lab Sample ID: 9867763RE

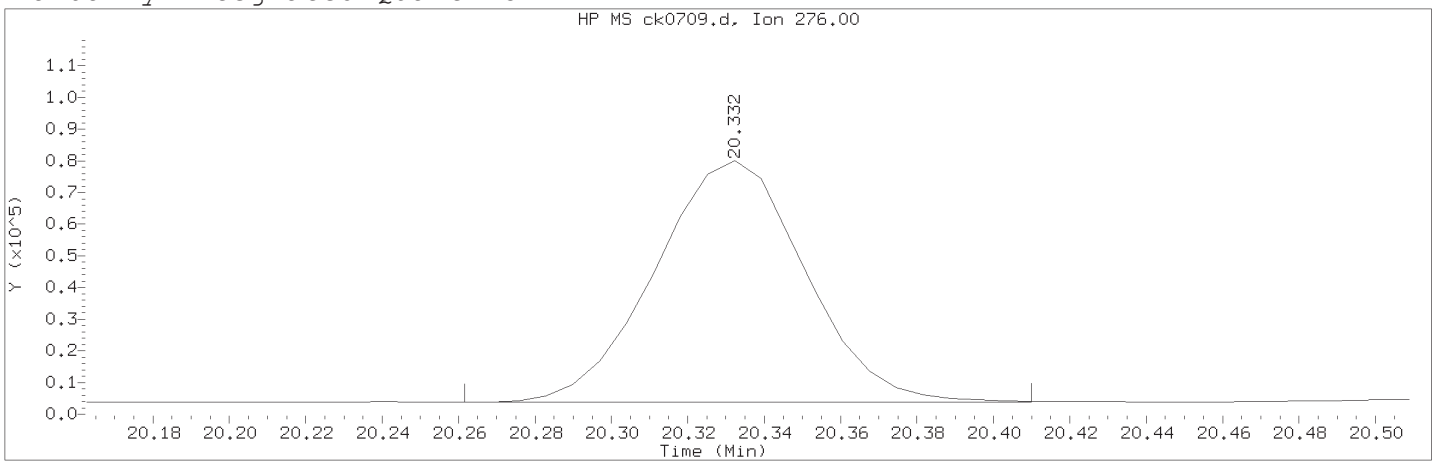
Compound Number	:	54
Compound Name	:	Dibenz(a,h)anthracene
Scan Number	:	1772
Retention Time (minutes)	:	19.569
Quant Ion	:	278.00
Area	:	12257
On-column Amount (ng/ul)	:	0.2314
Integration start scan	:	1768 Integration stop scan: 1777
Y at integration start	:	3946 Y at integration end: 3946

Digitally signed by William H Saadeh on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs0547

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:29 whs02991

Sample Name: T1003REMS Lab Sample ID: 9867763RE

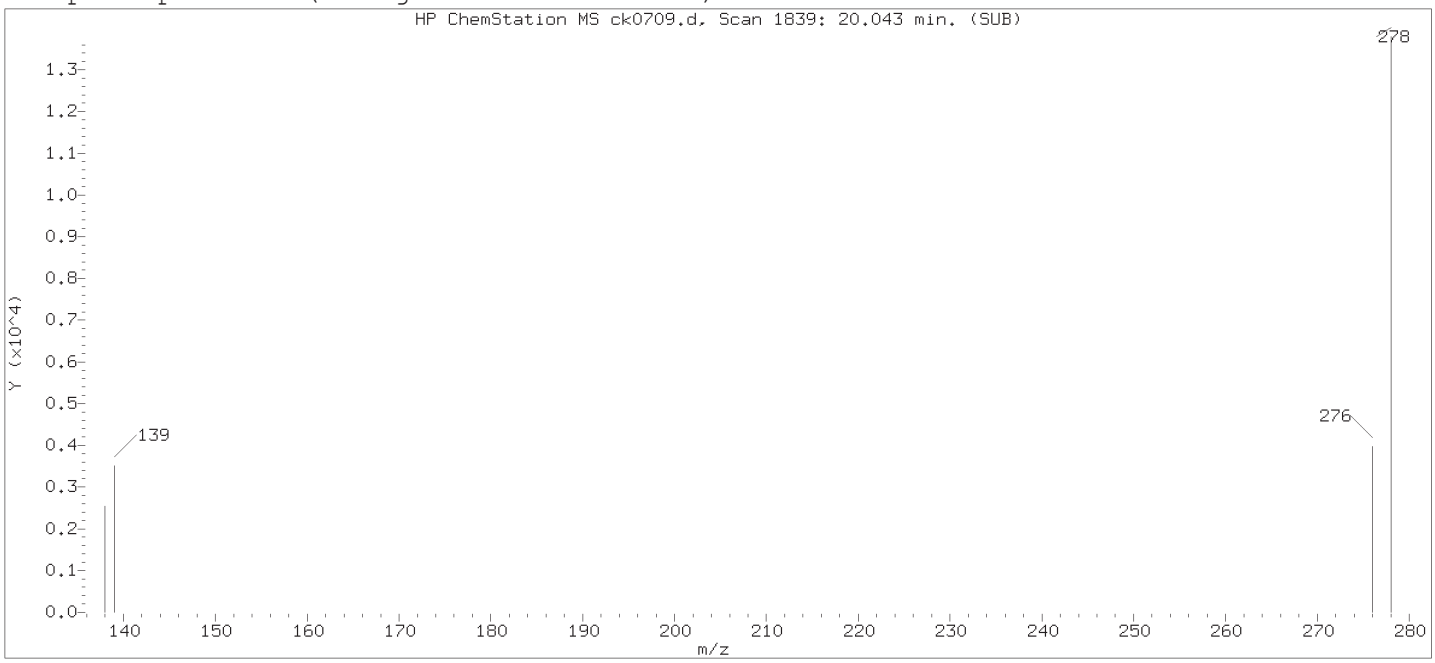
Compound Number : 55
Compound Name : Benzo(g,h,i)perylene
Scan Number : 1880
Retention Time (minutes) : 20.332
Quant Ion : 276.00
Area (flag) : 207298MA
On-Column Amount (ng/ul) : 2.2043
Integration start scan : 1869 Integration stop scan: 1890
Y at integration start : 3782 Y at integration end: 3863

Reason for manual integration: improper integration

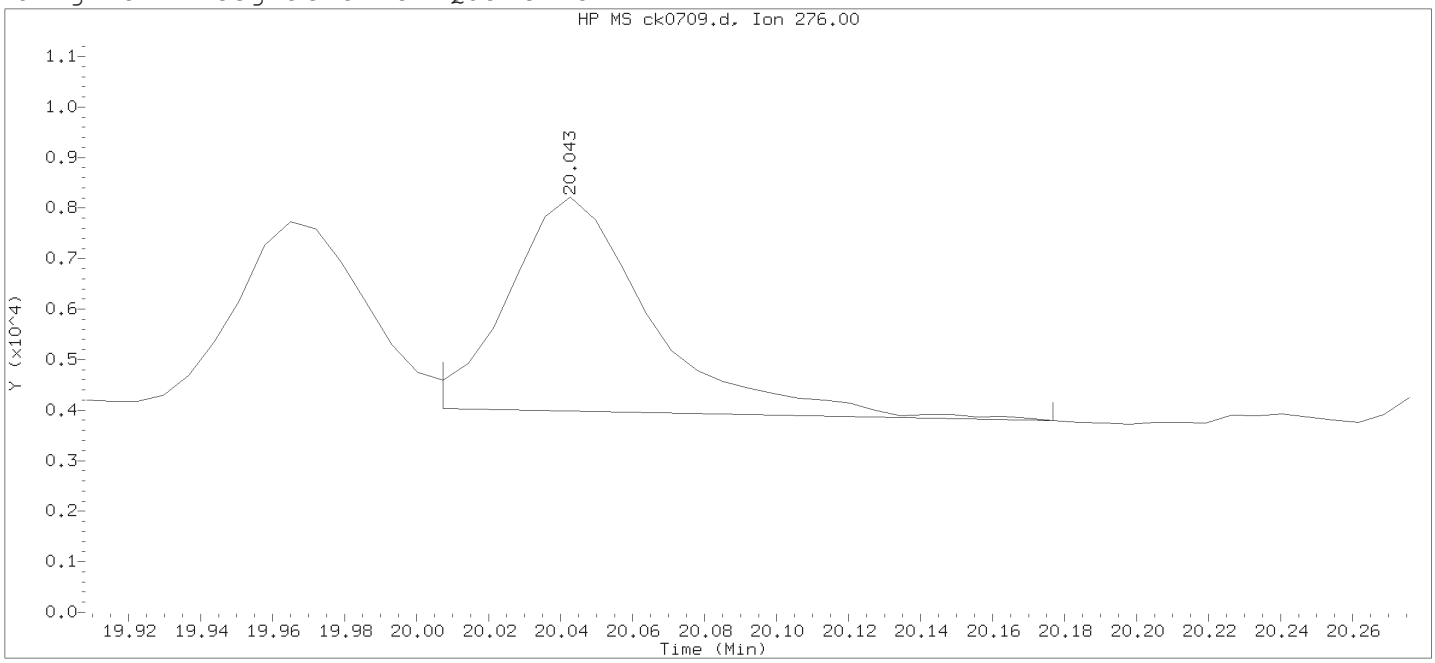
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0709.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 10:57 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 11:24 Automation

Sample Name: T1003REMS Lab Sample ID: 9867763RE

Compound Number	:	55
Compound Name	:	Benzo(g,h,i)perylene
Scan Number	:	1839
Retention Time (minutes)	:	20.043
Quant Ion	:	276.00
Area	:	11610
On-column Amount (ng/ul)	:	0.1947
Integration start scan	:	1833 Integration stop scan: 1857
Y at integration start	:	4028 Y at integration end: 3798

Digitally signed by William H Saadeh on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs0549

Data file: /chem/HP10623.i/18nov16.b/ck0710.d Injection date and time: **16-NOV-2018 11:28**
Data file Sample Info. Line: T1003REMSD;9867764RE;2;3;MSD;;DOD26;T2 Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:30 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 20.2 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.777 (-0.013)	474	152	48416 (-29)	1.00	
10) Naphthalene-d8	8.289 (0.000)	588	136	214869 (-18)	1.00	
20) Acenaphthene-d10	10.469 (-0.011)	775	164	100655 (-17)	1.00	
31) Phenanthrene-d10	12.271 (0.034)	936	188	181723 (-21)	1.00	
43) Chrysene-d12	15.640 (-0.031)	1255	240	123180 (-30)	1.00	
51) Perylene-d12	17.783 (-0.063)	1529	264	85710 (-44)	1.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
14) 1-Methylnaphthalene-d10	(2)	9.242 (-0.001)	152	99890	0.920	92%		61 - 111
36) Fluoranthene-d10	(4)	13.745 (0.002)	212	136152	0.826	83%		54 - 122
49) Benzo(a)pyrene-d12	(6)	17.650 (0.000)	264	54859	0.696	70%		54 - 122

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.349 (-0.016)	88	26808	0.862	42.65			0.02
11) Naphthalene	(2)	8.316 (-0.000)	128	1363546	5.977	295.87			0.04
19) Acenaphthylene	(3)	10.285 (-0.000)	152	213201	1.067	52.82	0.335	B	0.01
21) Acenaphthene	(3)	10.502 (0.000)	154	146644	1.072	53.08			0.02
26) Fluorene	(3)	11.147 (0.000)	166	135269	0.925	45.78			0.02
32) Phenanthrene	(4)	12.361 (-0.004)	178	1214404A	5.601	277.26			0.02
33) Anthracene	(4)	12.417 (-0.003)	178	391279A	1.877	92.90			0.02
35) Di-n-butylphthalate	(4)	12.990 (-0.004)	149	8724284A	37.563	1859.58		E	0.2
37) Fluoranthene	(4)	13.855 (-0.005)	202	1866074A	8.759	433.59			0.02
39) Pyrene	(5)	14.148 (0.000)	202	1748781	8.821	436.67			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.546 (0.000)	149	761149	5.342	264.47	18.477	B	0.3
42) Benzo(a)anthracene	(5)	15.624 (-0.000)	228	873337	5.471	270.82			0.02
44) Chrysene	(5)	15.679 (-0.000)	228	1020551	6.240	308.89			0.01
46) Benzo(b)fluoranthene	(6)	17.157 (-0.000)	252	1010125	9.195	455.21			0.02
47) Benzo(k)fluoranthene	(6)	17.196 (-0.000)	252	468103	3.968	196.44			0.02
50) Benzo(a)pyrene	(6)	17.697 (-0.000)	252	528713	5.275	261.16			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.746 (-0.001)	276	276037	2.777	137.46			0.02
54) Dibenz(a,h)anthracene	(6)	19.753 (-0.001)	278	113819	1.381	68.37			0.02
55) Benzo(g,h,i)perylene	(6)	20.318 (-0.002)	276	219825	2.369	117.29			0.02

B = Compound detected in referenced method blank. A = User selected an alternate peak. E = Compound concentration above calibration range.

Digitally signed by William H Saadeh on 11/16/2018 at 12:35. Target 3.5 esignature user ID: whs02991

Data file: /chem/HP10623.i/18nov16.b/ck0710.d Injection date and time: **16-NOV-2018 11:28**
Data file Sample Info. Line: T1003REMSD;9867764RE;2;3;MSD;;DOD26;T2 Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:30 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

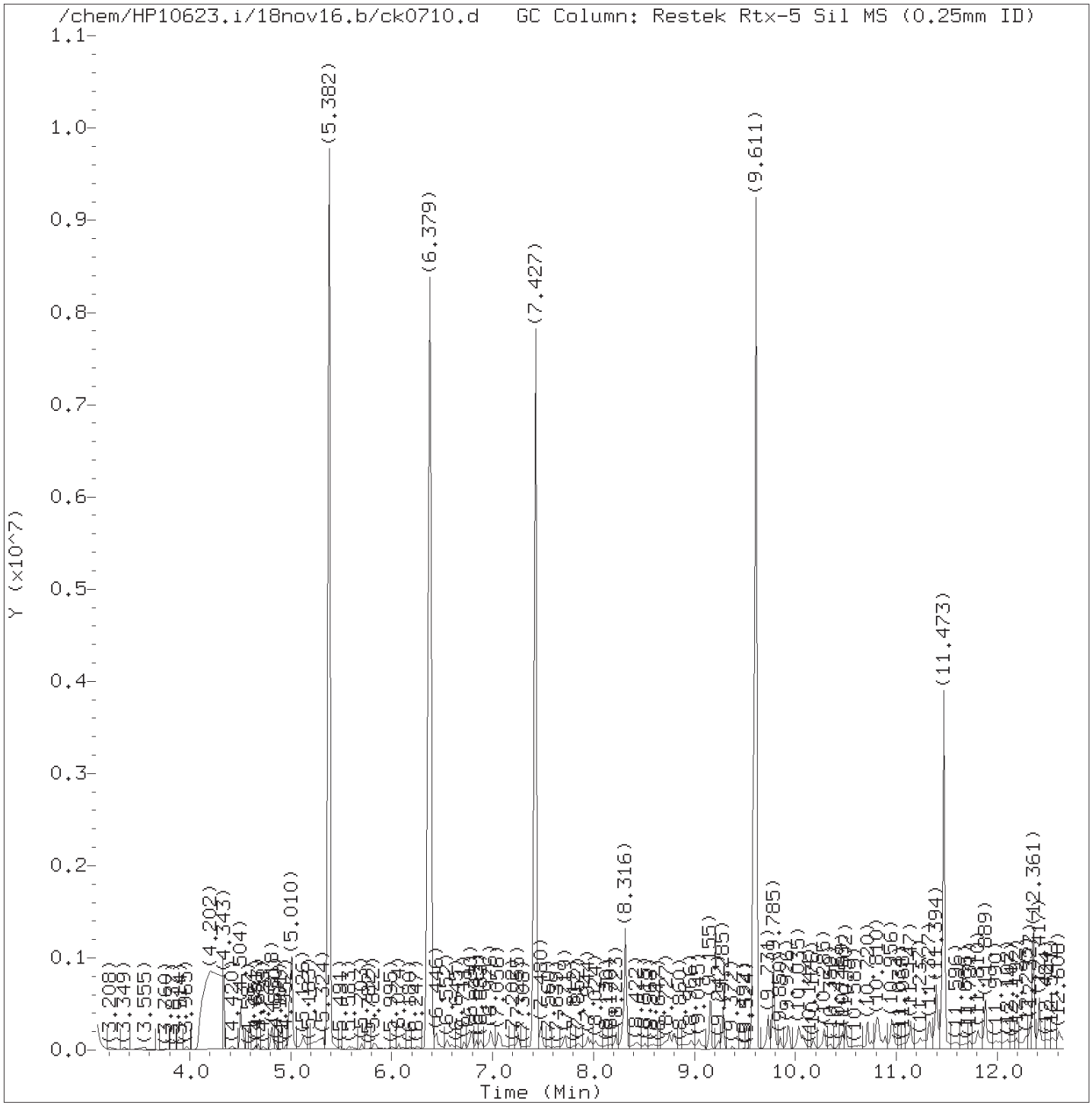
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 20.2 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by William H Saadeh on 11/16/2018 at 12:35. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

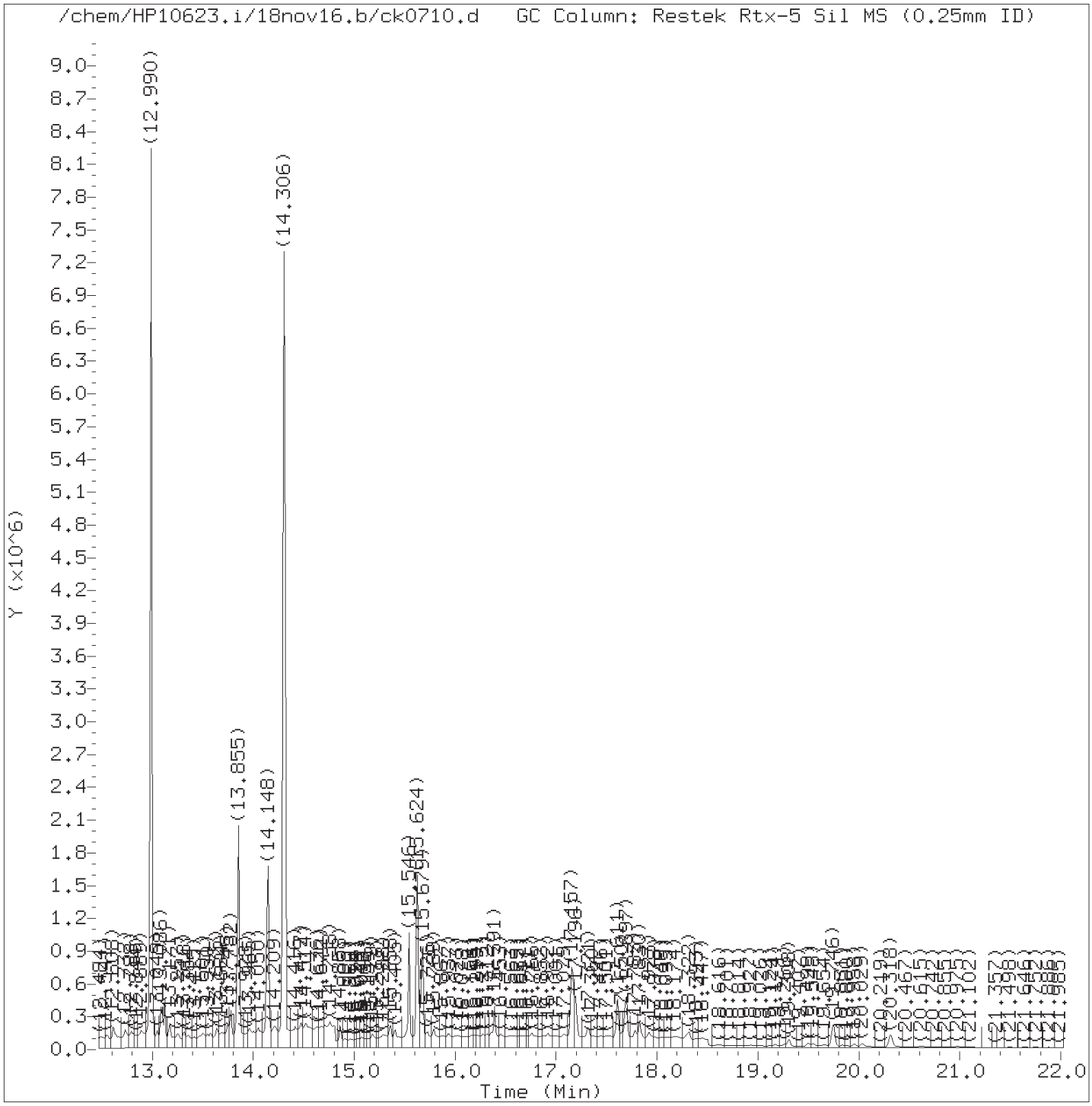
Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0710.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 11:28 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:30 whs02991

Sample Name: T1003REMSD Lab Sample ID: 9867764RE

Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0710.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 11:28 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:30 whs02991

Sample Name: T1003REMSD Lab Sample ID: 9867764RE

Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0710.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 11:28 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:30 whs02991

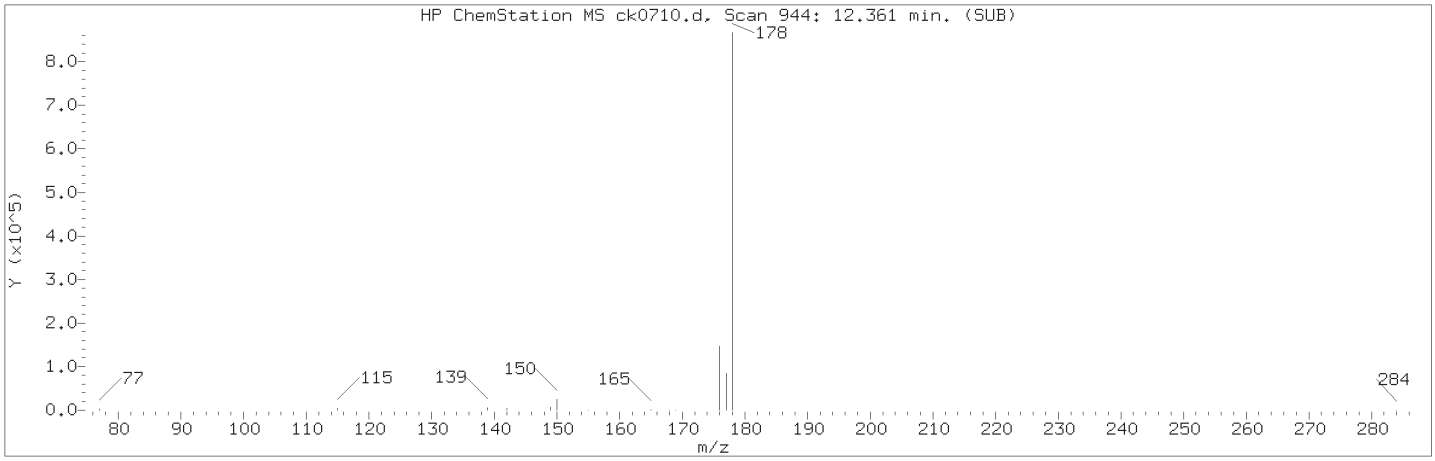
Sample Name: T1003REMSD Lab Sample ID: 9867764RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.349	88	26808	0.862
6)*1,4-Dichlorobenzene-d4	(1)	6.777	152	48416	1.000
10)*Naphthalene-d8	(2)	8.289	136	214869	1.000
11) Naphthalene	(2)	8.316	128	1363546	5.977
14)$1-Methylnaphthalene-d10	(2)	9.242	152	99890	0.920
19) Acenaphthylene	(3)	10.285	152	213201	1.067
20)*Acenaphthene-d10	(3)	10.469	164	100655	1.000
21) Acenaphthene	(3)	10.502	154	146644	1.072
26) Fluorene	(3)	11.147	166	135269	0.925
31)*Phenanthrene-d10	(4)	12.271	188	181723	1.000
32) Phenanthrene	(4)	12.361	178	1214404A	5.601
33) Anthracene	(4)	12.417	178	391279A	1.877
35) Di-n-butylphthalate	(4)	12.990	149	8724284A	37.563
36)$Fluoranthene-d10	(4)	13.745	212	136152	0.826
37) Fluoranthene	(4)	13.855	202	1866074A	8.759
39) Pyrene	(5)	14.148	202	1748781	8.821
41) bis(2-Ethylhexyl)phthalate	(5)	15.546	149	761149	5.342
42) Benzo(a)anthracene	(5)	15.624	228	873337	5.471
43)*Chrysene-d12	(5)	15.640	240	123180	1.000
44) Chrysene	(5)	15.679	228	1020551	6.240
46) Benzo(b)fluoranthene	(6)	17.157	252	1010125	9.195
47) Benzo(k)fluoranthene	(6)	17.196	252	468103	3.968
49)$Benzo(a)pyrene-d12	(6)	17.650	264	54859	0.696
50) Benzo(a)pyrene	(6)	17.697	252	528713	5.275
51)*Perylene-d12	(6)	17.783	264	85710	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.746	276	276037	2.777
54) Dibenz(a,h)anthracene	(6)	19.753	278	113819	1.381
55) Benzo(g,h,i)perylene	(6)	20.318	276	219825	2.369

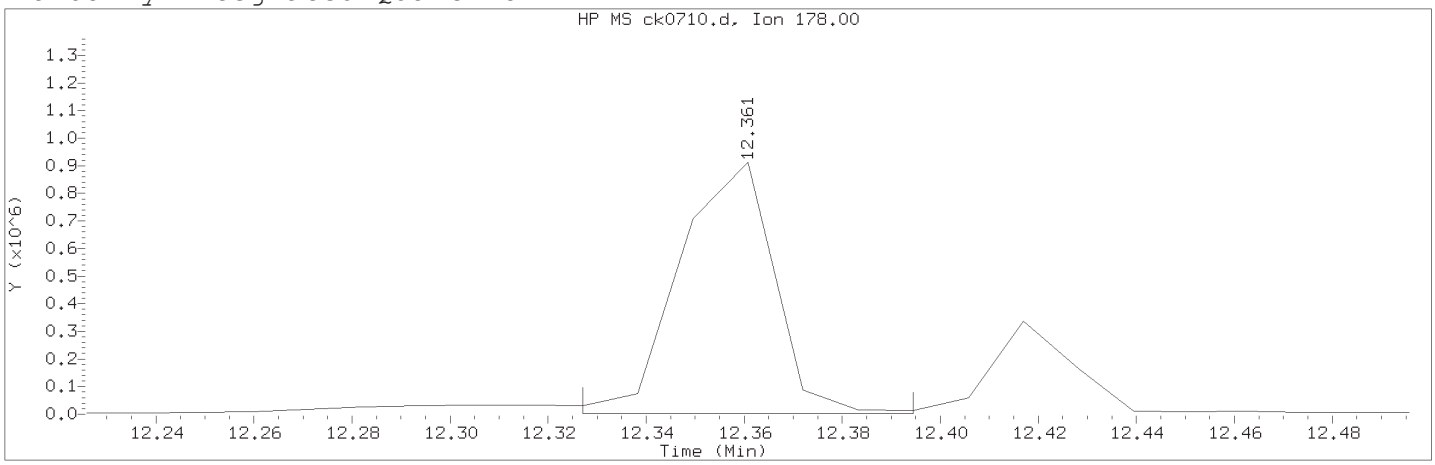
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0710.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 11:28 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:30 whs02991

Sample Name: T1003REMSD Lab Sample ID: 9867764RE

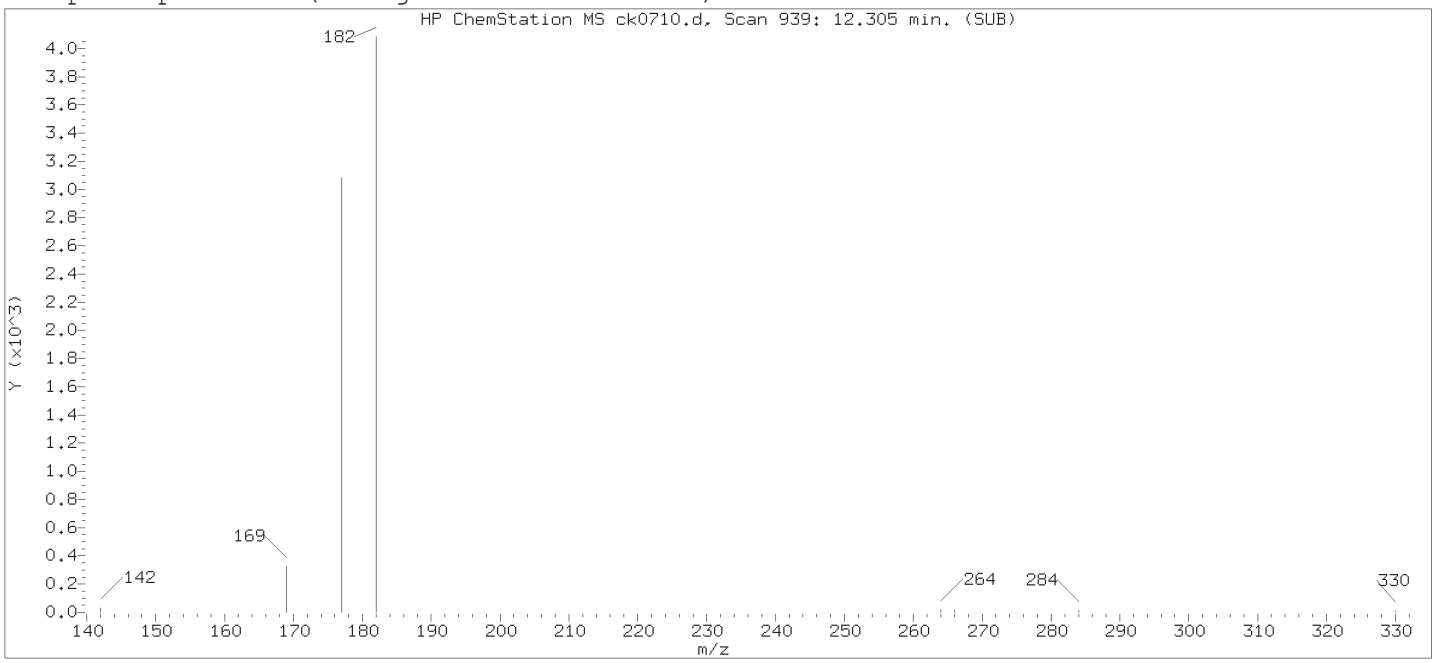
Compound Number : 32
Compound Name : Phenanthrene
Scan Number : 944
Retention Time (minutes) : 12.361
Quant Ion : 178.00
Area (flag) : 1214404A
On-Column Amount (ng/ul) : 5.6007
Integration start scan : 940 Integration stop scan: 946
Y at integration start : 2858 Y at integration end: 2858

Reason for manual integration: improper integration

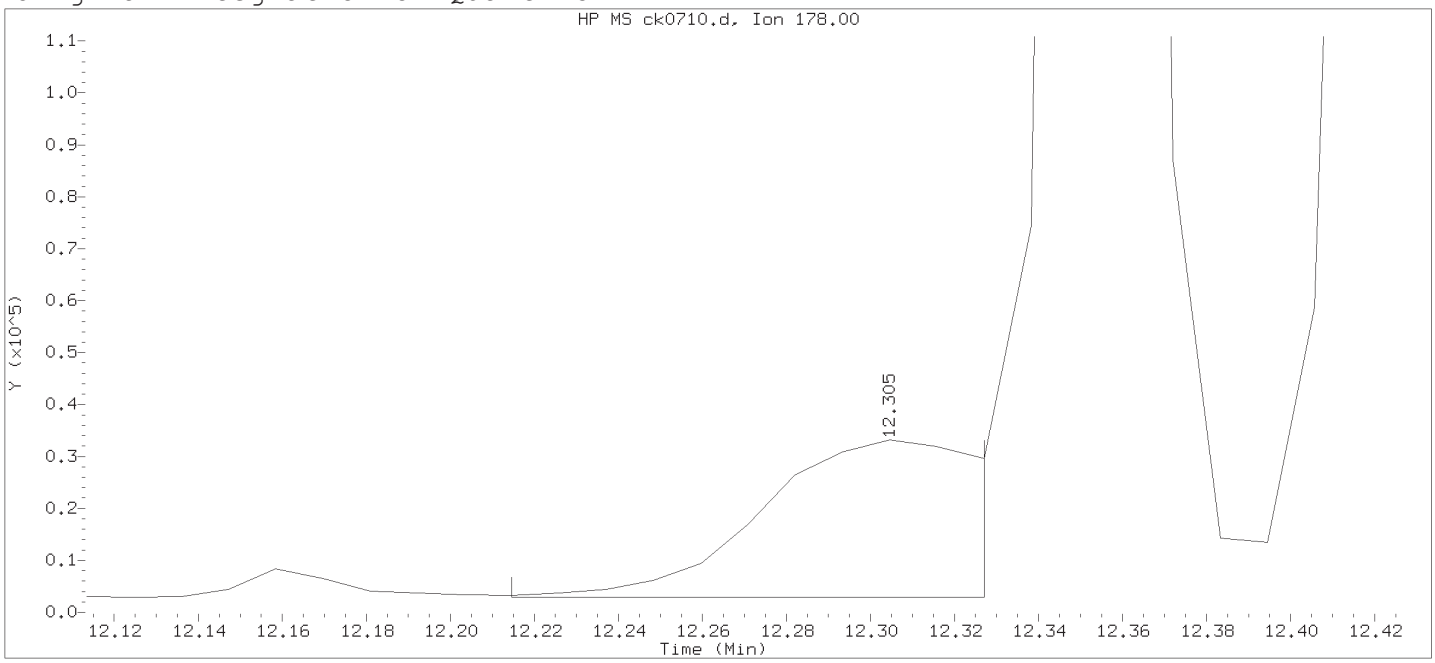
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0710.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 11:28 Analyst ID: jmg00346

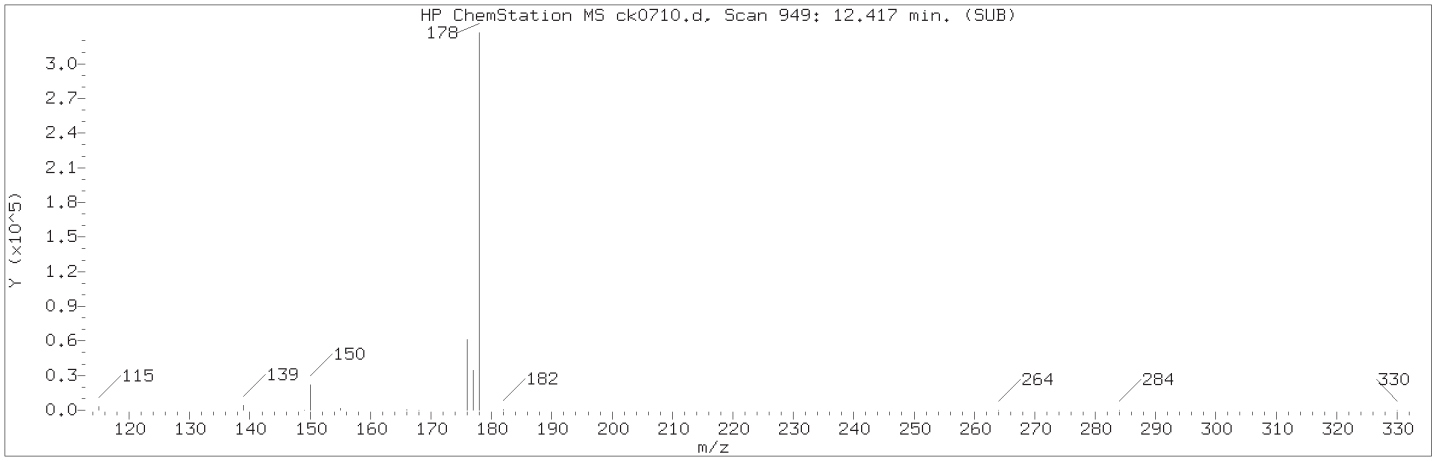
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 11:55 Automation

Sample Name: T1003REMSD Lab Sample ID: 9867764RE

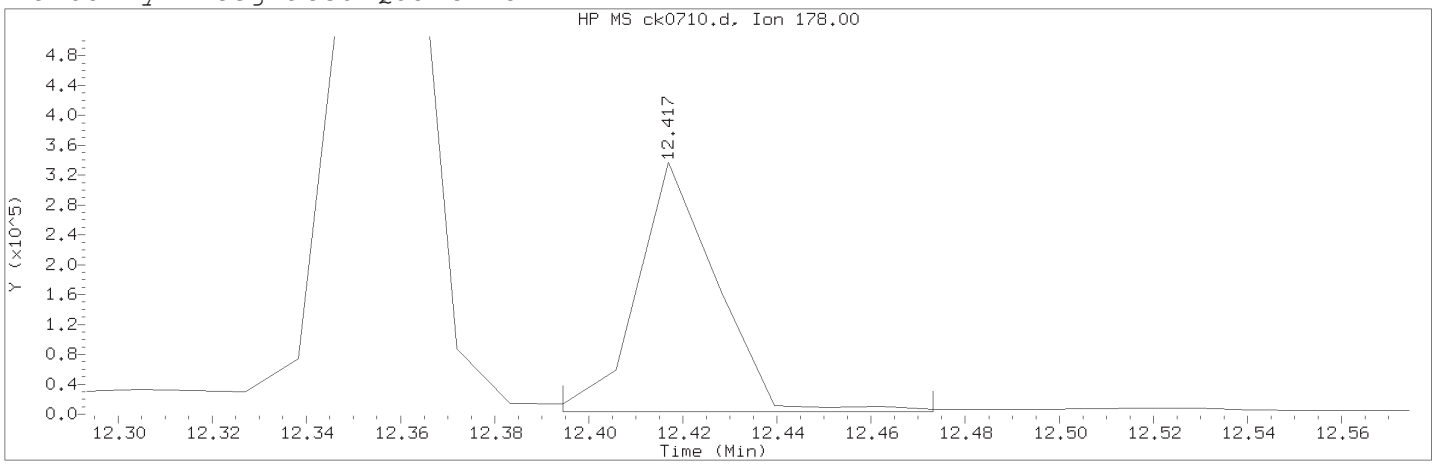
Compound Number	:	32
Compound Name	:	Phenanthrene
Scan Number	:	939
Retention Time (minutes)	:	12.305
Quant Ion	:	178.00
Area	:	101752
On-column Amount (ng/ul)	:	0.4693
Integration start scan	:	930 Integration stop scan: 940
Y at integration start	:	2858 Y at integration end: 2858

Digitally signed by William H Saadeh on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0710.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 11:28 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:30 whs02991

Sample Name: T1003REMSD Lab Sample ID: 9867764RE

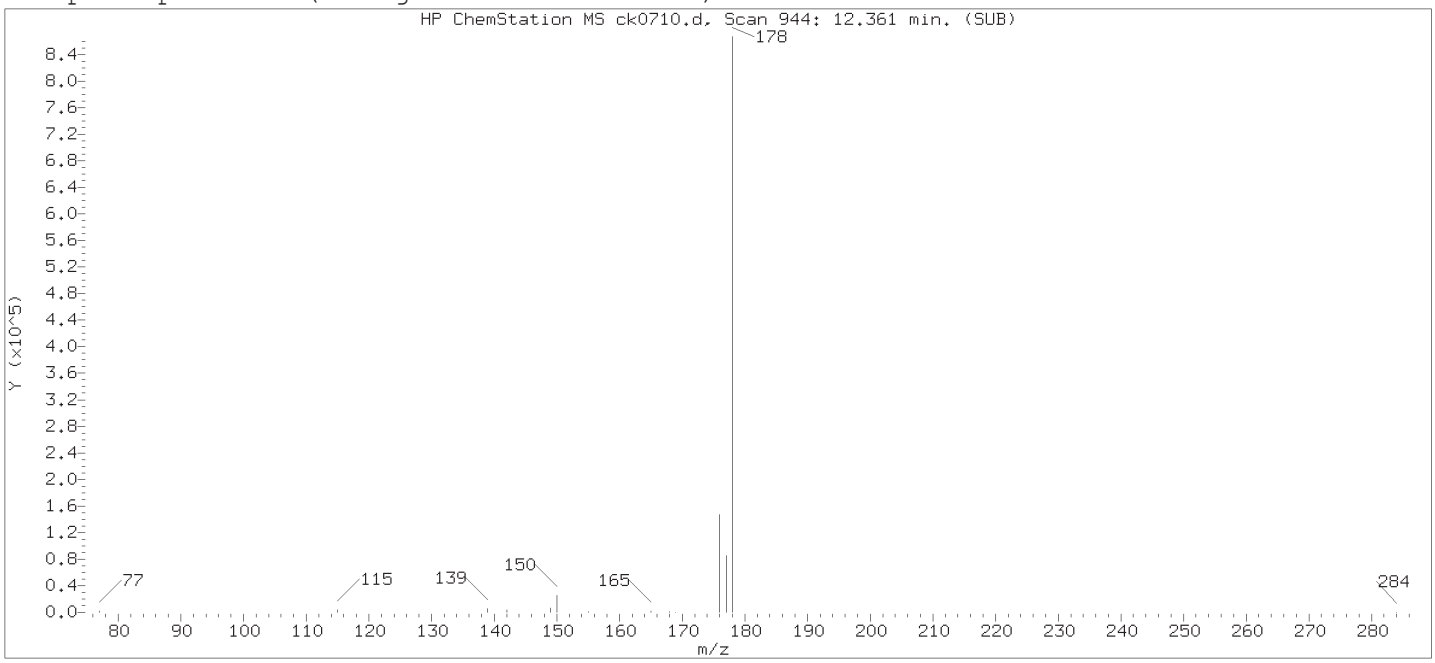
Compound Number	: 33		
Compound Name	: Anthracene		
Scan Number	: 949		
Retention Time (minutes)	: 12.417		
Quant Ion	: 178.00		
Area (flag)	: 391279A		
On-Column Amount (ng/ul)	: 1.8766		
Integration start scan	: 946	Integration stop scan:	953
Y at integration start	: 2858	Y at integration end:	2858

Reason for manual integration: improper integration

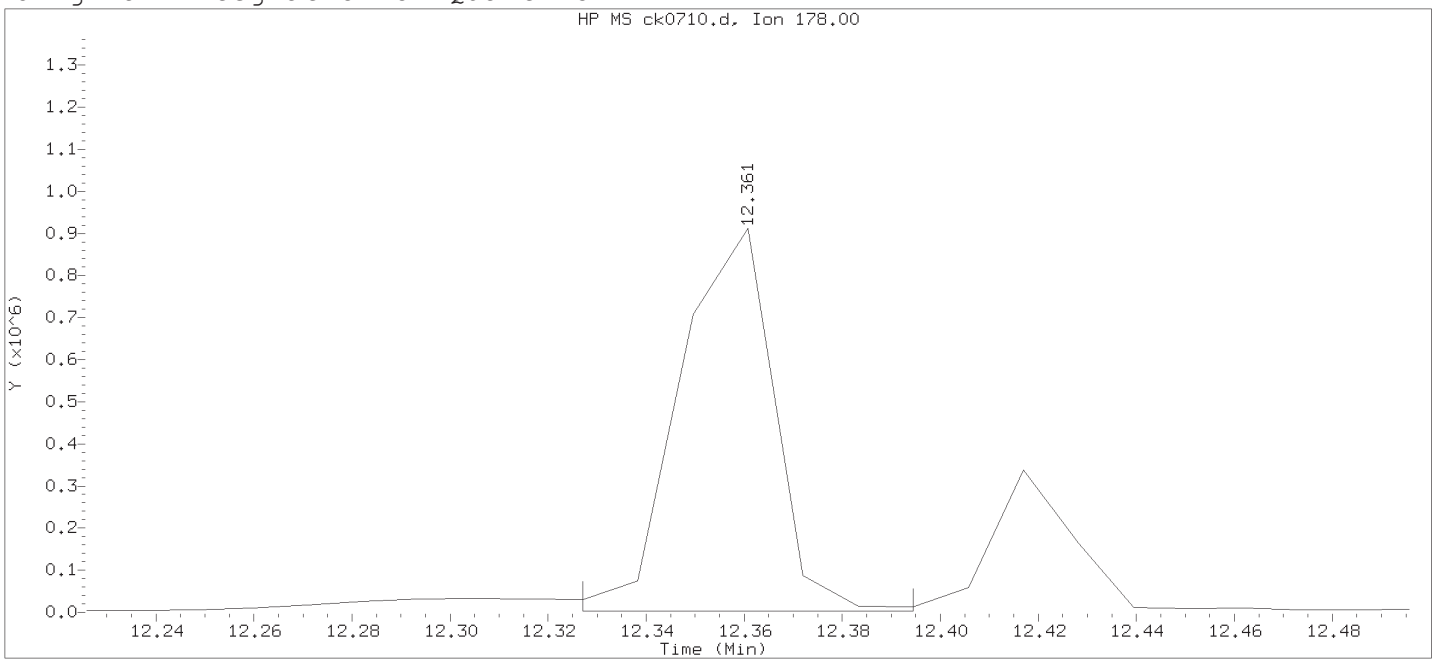
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0710.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 11:28 Analyst ID: jmg00346

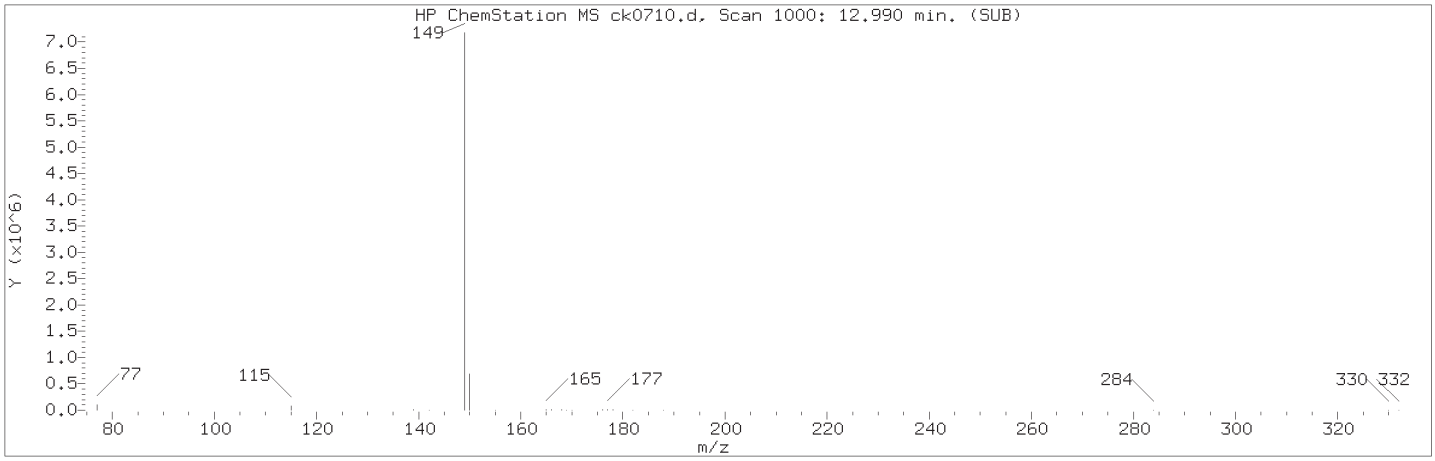
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 11:55 Automation

Sample Name: T1003REMSD Lab Sample ID: 9867764RE

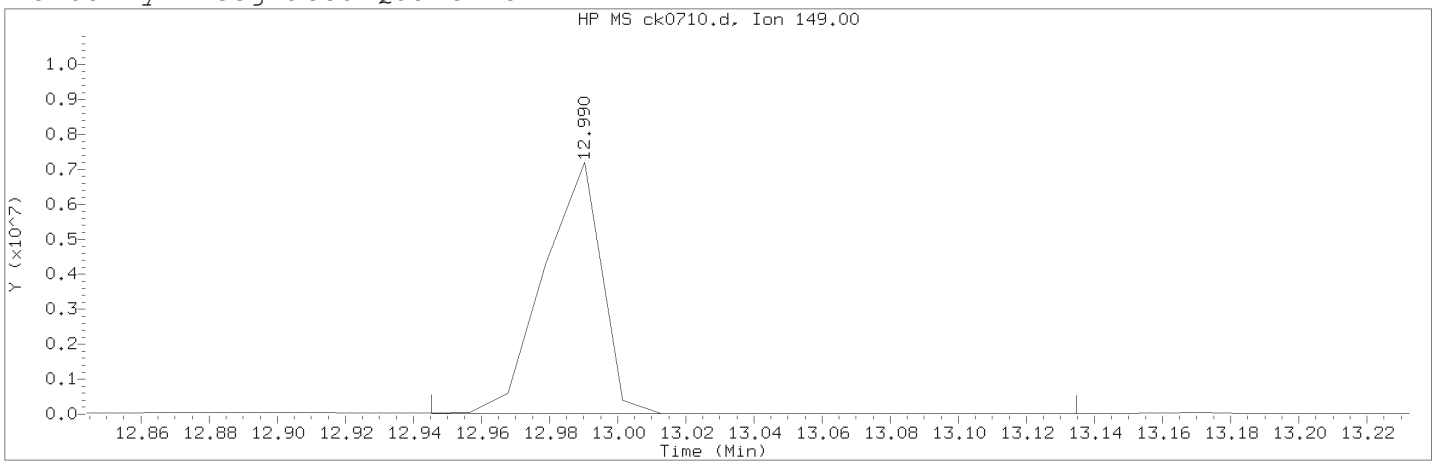
Compound Number	: 33		
Compound Name	: Anthracene		
Scan Number	: 944		
Retention Time (minutes)	: 12.361		
Quant Ion	: 178.00		
Area	: 1214364		
On-column Amount (ng/ul)	: 5.8241		
Integration start scan	: 940	Integration stop scan:	946
Y at integration start	: 2858	Y at integration end:	2858

Digitally signed by William H Saadeh on 11/16/2018 at 12:35.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0710.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 11:28 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:30 whs02991

Sample Name: T1003REMSD Lab Sample ID: 9867764RE

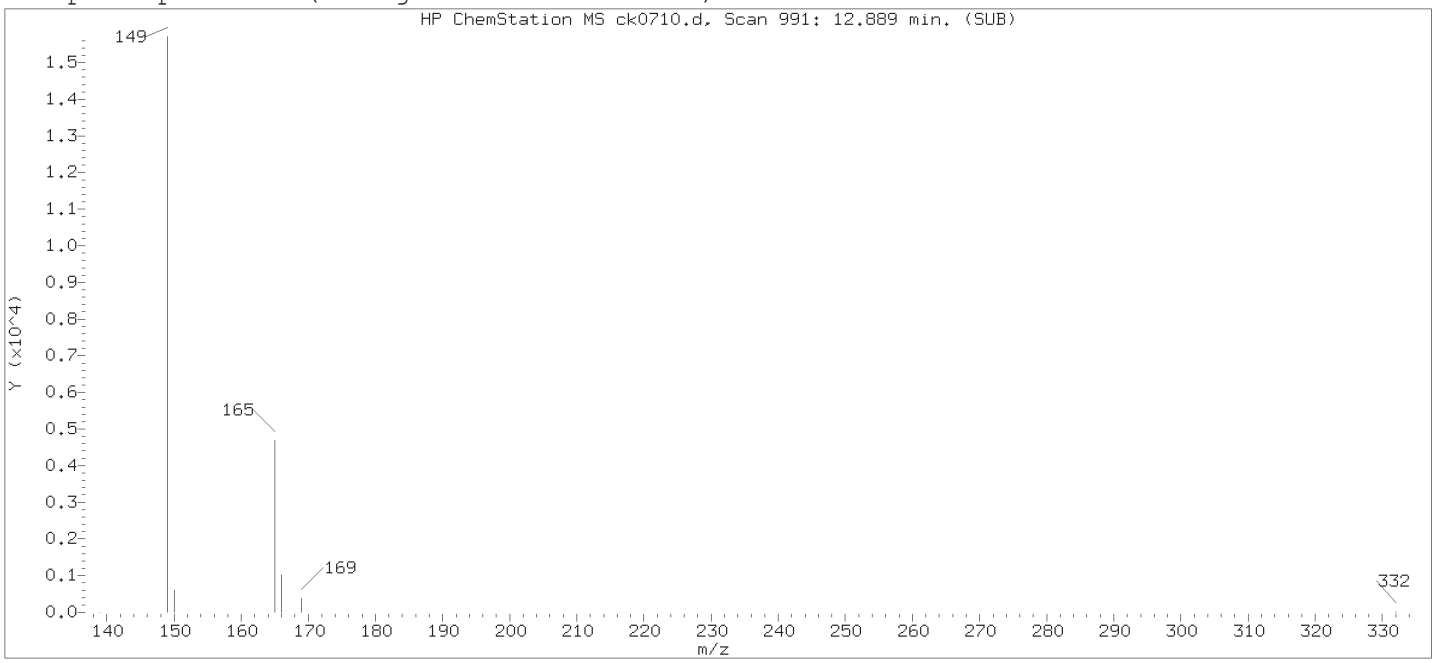
Compound Number : 35
Compound Name : Di-n-butylphthalate
Scan Number : 1000
Retention Time (minutes) : 12.990
Quant Ion : 149.00
Area (flag) : 8724284A
On-Column Amount (ng/ul) : 37.5635
Integration start scan : 995 Integration stop scan: 1011
Y at integration start : 11671 Y at integration end: 11671

Reason for manual integration: improper integration

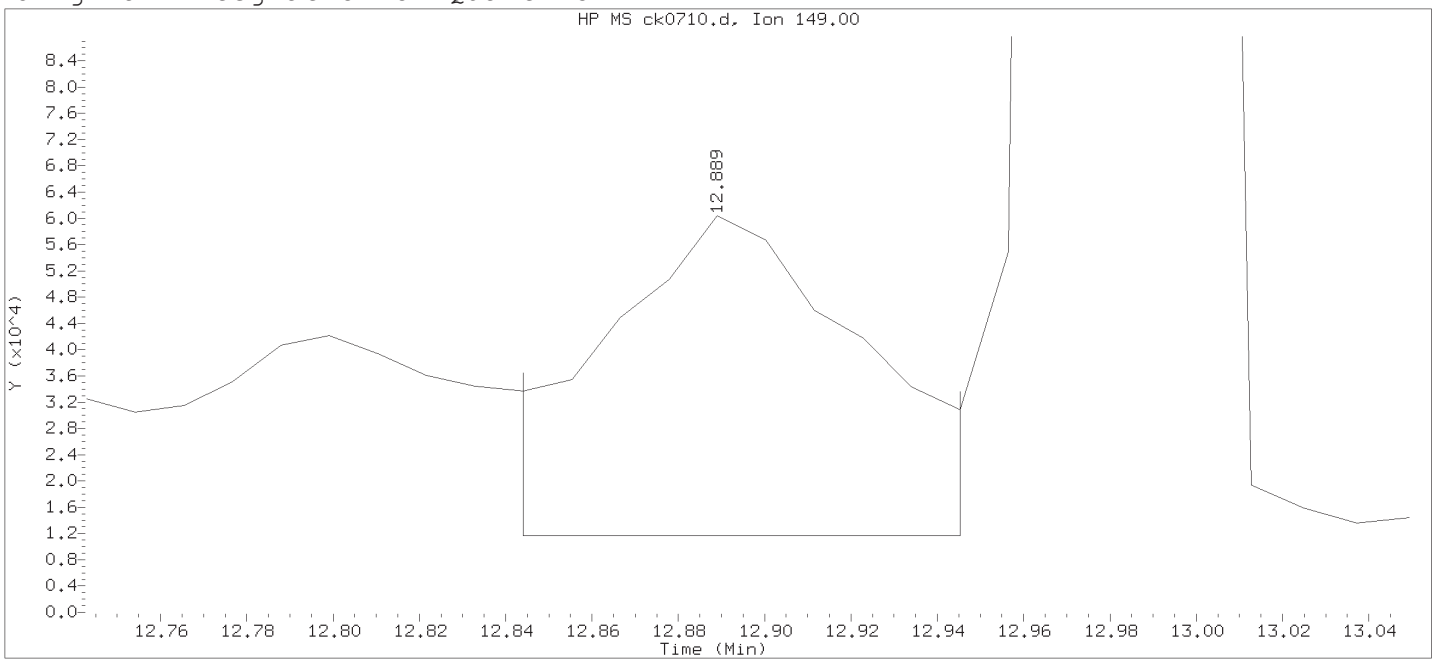
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0710.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 11:28 Analyst ID: jmg00346

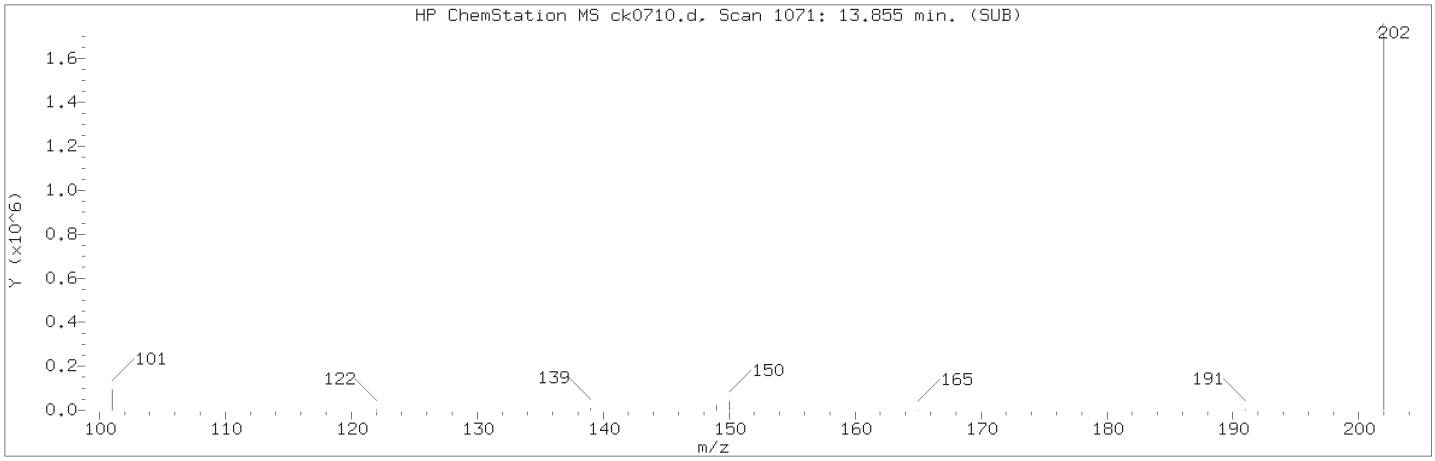
Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 11:55 Automation

Sample Name: T1003REMSD Lab Sample ID: 9867764RE

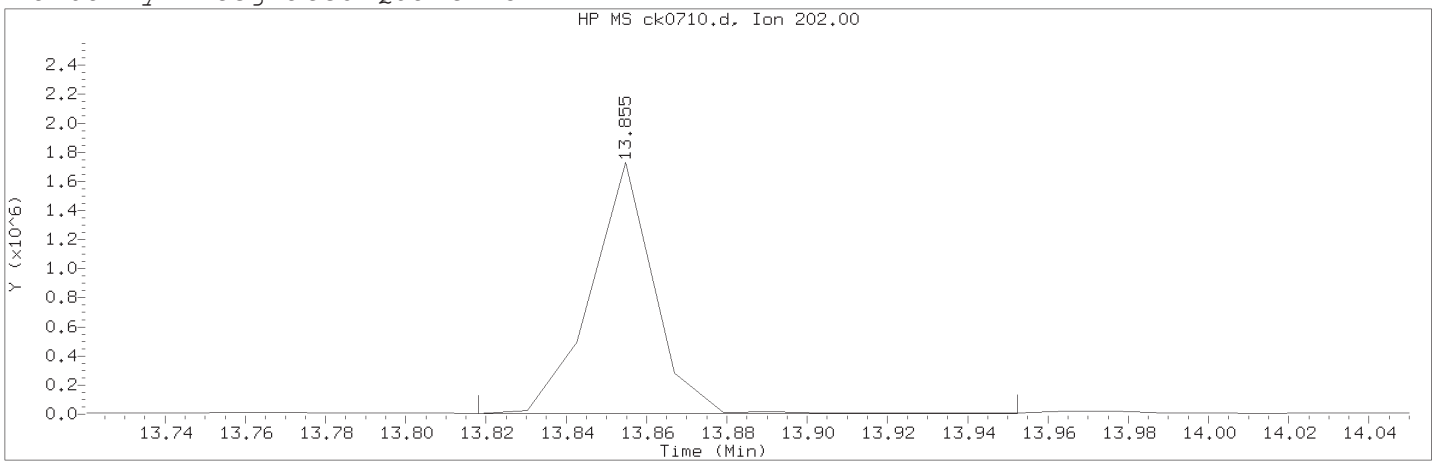
Compound Number	:	35
Compound Name	:	Di-n-butylphthalate
Scan Number	:	991
Retention Time (minutes)	:	12.889
Quant Ion	:	149.00
Area	:	206223
On-column Amount (ng/ul)	:	0.8879
Integration start scan	:	986 Integration stop scan: 995
Y at integration start	:	11671 Y at integration end: 11671

Digitally signed by William H Saadeh on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0710.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 11:28 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:30 whs02991

Sample Name: T1003REMSD Lab Sample ID: 9867764RE

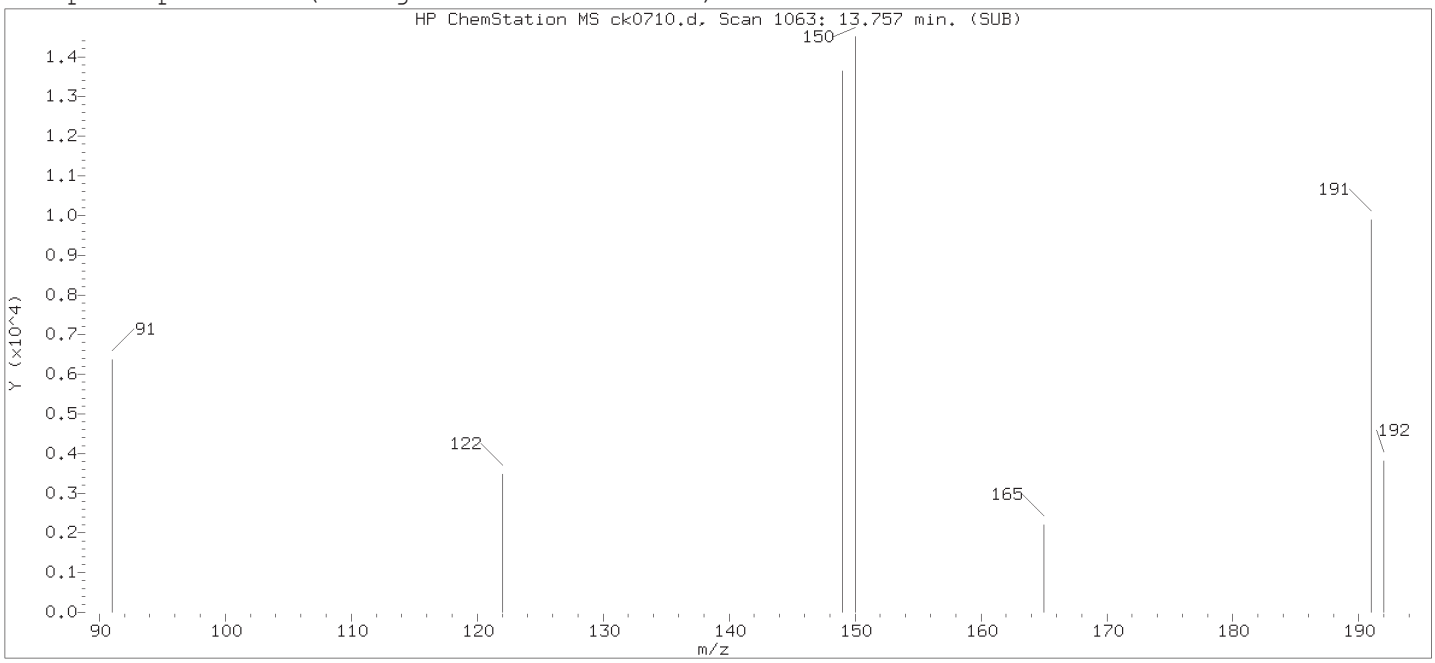
Compound Number : 37
Compound Name : Fluoranthene
Scan Number : 1071
Retention Time (minutes) : 13.855
Quant Ion : 202.00
Area (flag) : 1866074A
On-Column Amount (ng/ul) : 8.7586
Integration start scan : 1067 Integration stop scan: 1078
Y at integration start : 4557 Y at integration end: 4965

Reason for manual integration: improper integration

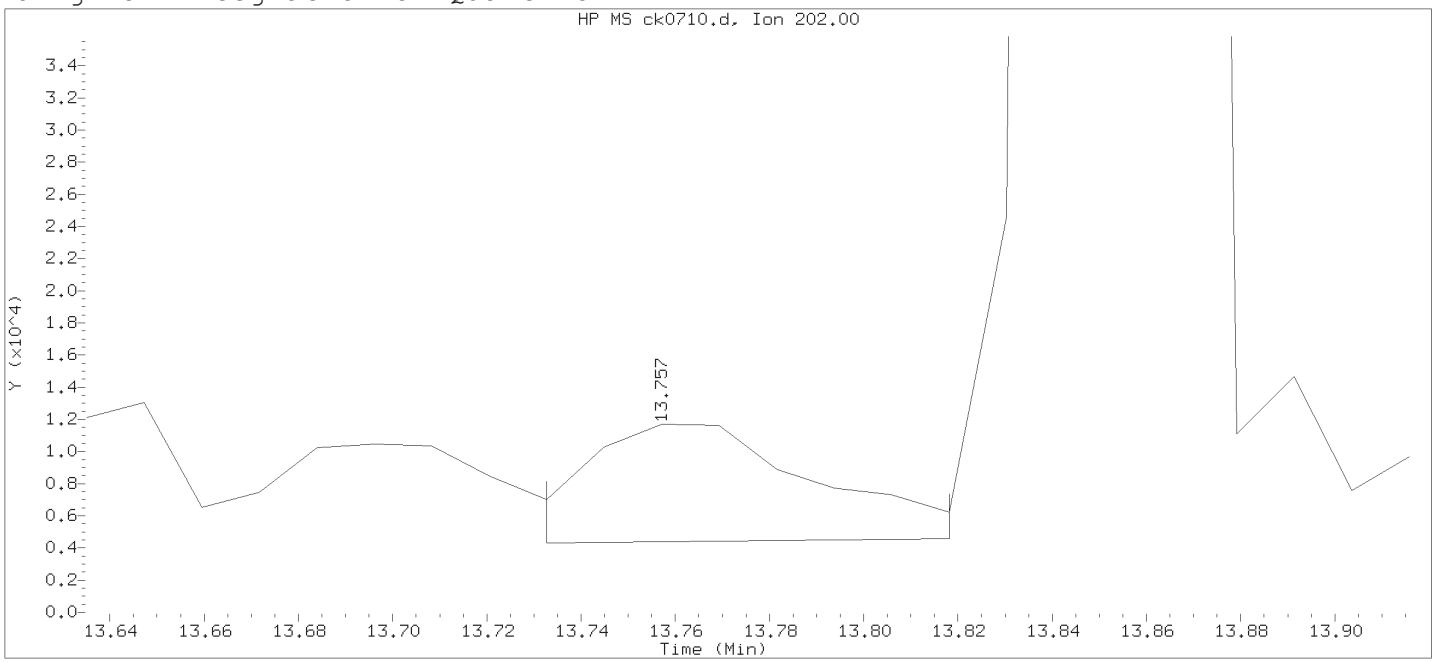
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:24.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0710.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 11:28 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 11:55 Automation

Sample Name: T1003REMSD Lab Sample ID: 9867764RE

Compound Number	:	37
Compound Name	:	Fluoranthene
Scan Number	:	1063
Retention Time (minutes)	:	13.757
Quant Ion	:	202.00
Area	:	24172
On-column Amount (ng/ul)	:	0.1135
Integration start scan	:	1060 Integration stop scan: 1067
Y at integration start	:	4327 Y at integration end: 4557

Digitally signed by William H Saadeh on 11/16/2018 at 12:35.
Target 3.5 esignature user ID: [illegible]

Data file: /chem/HP10976.i/18nov07.b/ik0303.d Injection date and time: **07-NOV-2018 19:46**
Data file Sample Info. Line: 302LHLCS;302LHLCS;2;3;LCS;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 07-NOV-2018 18:18
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov07.b/ik0301.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.808	(0.000)	500	152	41340	(-6)	1.00	
10) Naphthalene-d8	8.320	(0.000)	614	136	148938	(-7)	1.00	
20) Acenaphthene-d10	10.489	(-0.003)	802	164	90471	(-11)	1.00	
31) Phenanthrene-d10	12.334	(-0.003)	967	188	197716	(-11)	1.00	
43) Chrysene-d12	15.621	(-0.007)	1268	240	201020	(-12)	1.00	
51) Perylene-d12	17.576	(-0.007)	1518	264	190917	(-17)	1.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
14) 1-Methylnaphthalene-d10	(2)	9.273	(0.000)	152	77123	0.849	85%
36) Fluoranthene-d10	(4)	13.819	(0.000)	212	210249	0.858	86%
49) Benzo(a)pyrene-d12	(6)	17.451	(0.000)	264	149685	0.821	82%

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.187	(-0.020)	88	16960	0.685	22.84			0.02
11) Naphthalene	(2)	8.346	(-0.000)	128	168823	1.101	36.69	31.312	B	0.04
19) Acenaphthylene	(3)	10.315	(-0.000)	152	144050	0.831	27.71			0.01
21) Acenaphthene	(3)	10.522	(0.000)	154	116843	1.025	34.18	1.723	B	0.02
26) Fluorene	(3)	11.165	(0.000)	166	127239	0.907	30.25	1.949	B	0.02
32) Phenanthrene	(4)	12.368	(0.000)	178	199760	0.935	31.17	2.56	B	0.02
33) Anthracene	(4)	12.424	(0.000)	178	197196	0.922	30.73	0.732	B	0.02
35) Di-n-butylphthalate	(4)	13.014	(-0.000)	149	227326	1.112	37.07			0.2
37) Fluoranthene	(4)	13.844	(-0.000)	202	248043	0.933	31.09			0.02
39) Pyrene	(5)	14.137	(0.000)	202	250953	0.902	30.06			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.558	(0.000)	149	155542	1.176	39.21			0.3
42) Benzo(a)anthracene	(5)	15.605	(-0.000)	228	233615	0.903	30.11			0.02
44) Chrysene	(5)	15.652	(0.000)	228	233335	0.945	31.48			0.01
46) Benzo(b)fluoranthene	(6)	16.997	(-0.000)	252	241642	1.018	33.92			0.02
47) Benzo(k)fluoranthene	(6)	17.036	(-0.000)	252	217821	0.979	32.62			0.02
50) Benzo(a)pyrene	(6)	17.490	(-0.000)	252	199345	0.980	32.65			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.353	(0.000)	276	229923	0.958	31.94			0.02
54) Dibenz(a,h)anthracene	(6)	19.367	(-0.000)	278	188284	0.961	32.03			0.02
55) Benzo(g,h,i)perylene	(6)	19.848	(0.000)	276	205301	0.973	32.43			0.02

B = Compound detected in referenced method blank.

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:29. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP10976.i/18nov07.b/ik0303.d Injection date and time: **07-NOV-2018 19:46**
Data file Sample Info. Line: 302LHLCS;302LHLCS;2;3;LCS;;DOD26; Instrument ID: **HP10976.i** Batch: **18302SLH**
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Blank Data file reference: **/chem/HP10976.i/18nov07.b/ik0302.d**

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 07-NOV-2018 18:18
Mid Level Daily Calibration Standard Reference: **/chem/HP10976.i/18nov07.b/ik0301.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

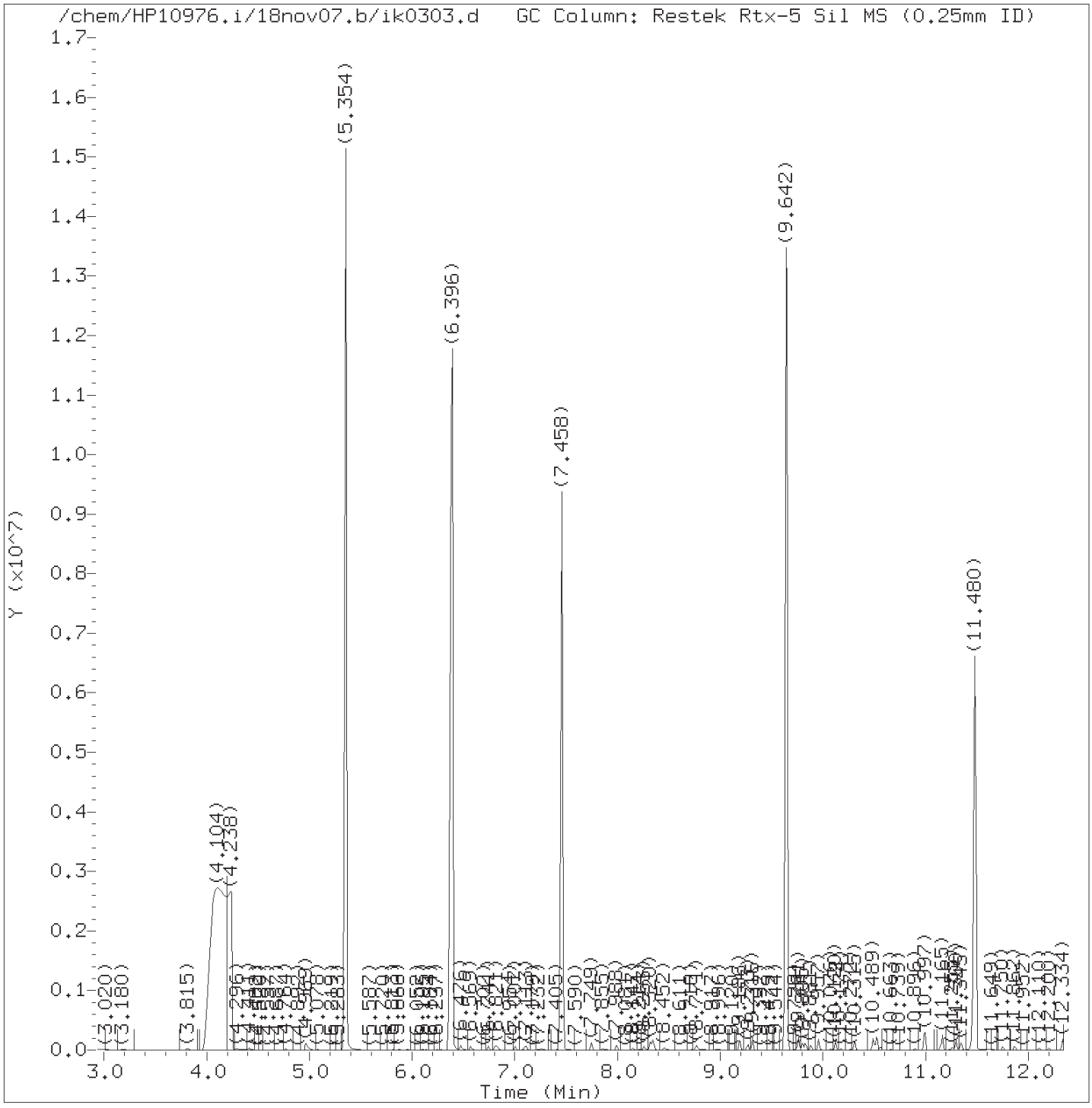
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by Joseph M. Gambler on 11/08/2018 at 07:29. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Holly B. Ziegler on 11/09/2018 at 15:50. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

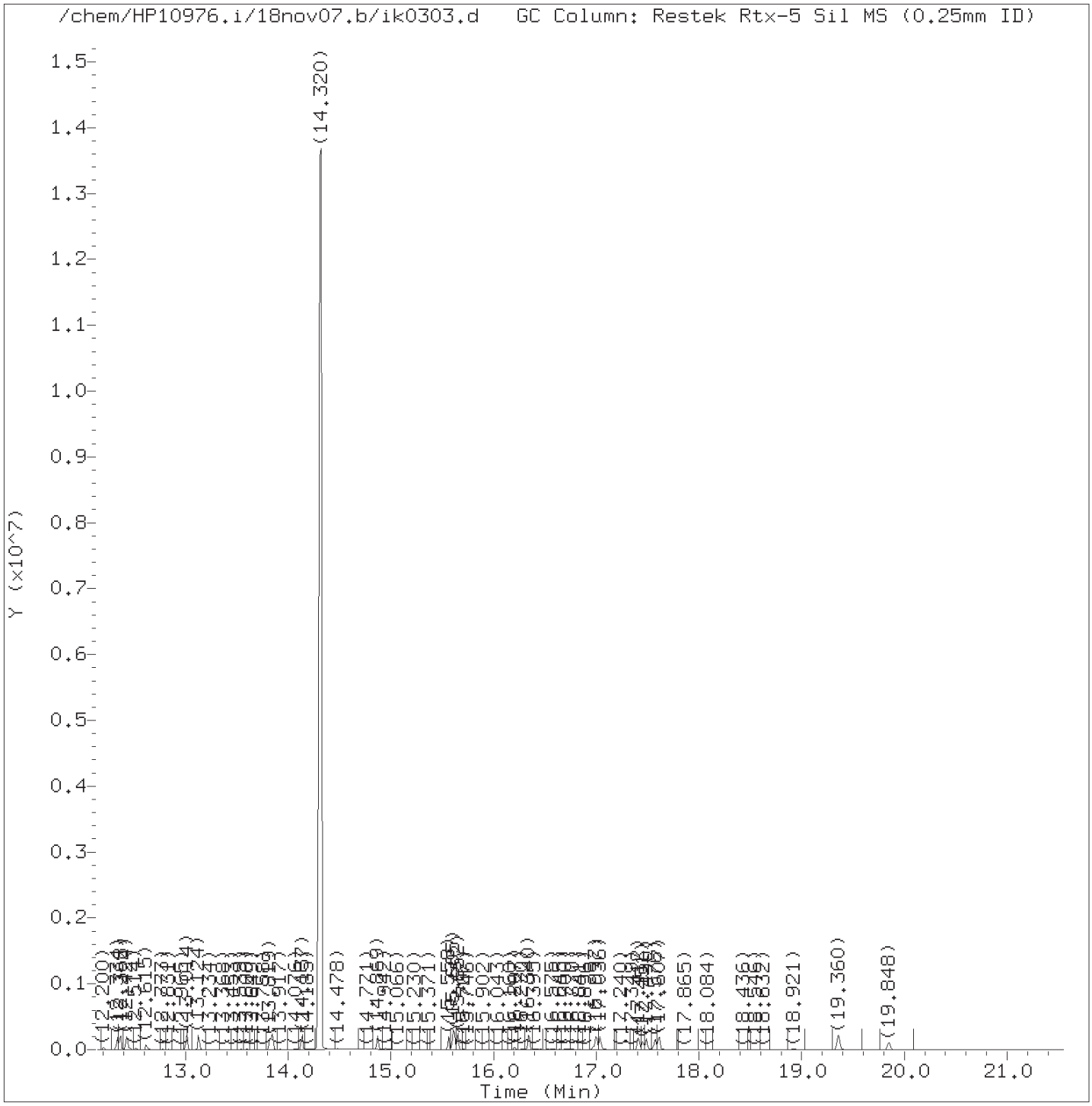
Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0303.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 19:46 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: 302LHLCS Lab Sample ID: 302LHLCS

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0303.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 19:46 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: 302LHLCS Lab Sample ID: 302LHLCS

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/18nov07.b/ik0303.d Instrument ID: HP10976.i
Injection date and time: 07-NOV-2018 19:46 Analyst ID: apb10206

Method used: /chem/HP10976.i/18nov07.b/sim8270d.m Sublist used: 25804
Calibration date and time: 07-NOV-2018 18:18
Date, time and analyst ID of latest file update: 08-Nov-2018 07:11 jmg00346

Sample Name: 302LHLCS Lab Sample ID: 302LHLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.187	88	16960	0.685
6)*1,4-Dichlorobenzene-d4	(1)	6.808	152	41340	1.000
10)*Naphthalene-d8	(2)	8.320	136	148938	1.000
11) Naphthalene	(2)	8.346	128	168823	1.101
14)$1-Methylnaphthalene-d10	(2)	9.273	152	77123	0.849
19) Acenaphthylene	(3)	10.315	152	144050	0.831
20)*Acenaphthene-d10	(3)	10.489	164	90471	1.000
21) Acenaphthene	(3)	10.522	154	116843	1.025
26) Fluorene	(3)	11.165	166	127239	0.907
31)*Phenanthrene-d10	(4)	12.334	188	197716	1.000
32) Phenanthrene	(4)	12.368	178	199760	0.935
33) Anthracene	(4)	12.424	178	197196	0.922
35) Di-n-butylphthalate	(4)	13.014	149	227326	1.112
36)$Fluoranthene-d10	(4)	13.819	212	210249	0.858
37) Fluoranthene	(4)	13.844	202	248043	0.933
39) Pyrene	(5)	14.137	202	250953	0.902
41) bis(2-Ethylhexyl)phthalate	(5)	15.558	149	155542	1.176
42) Benzo(a)anthracene	(5)	15.605	228	233615	0.903
43)*Chrysene-d12	(5)	15.621	240	201020	1.000
44) Chrysene	(5)	15.652	228	233335	0.945
46) Benzo(b)fluoranthene	(6)	16.997	252	241642	1.018
47) Benzo(k)fluoranthene	(6)	17.036	252	217821	0.979
49)$Benzo(a)pyrene-d12	(6)	17.451	264	149685	0.821
50) Benzo(a)pyrene	(6)	17.490	252	199345	0.980
51)*Perylene-d12	(6)	17.576	264	190917	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.353	276	229923	0.958
54) Dibenz(a,h)anthracene	(6)	19.367	278	188284	0.961
55) Benzo(g,h,i)perylene	(6)	19.848	276	205301	0.973

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 07:29.
Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/18nov16.b/ck0703.d Injection date and time: **16-NOV-2018 07:51**
Data file Sample Info. Line: 317LCLCS;317LCLCS;2;3;LCS;;DOD26; Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:59 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
6) 1,4-Dichlorobenzene-d4	6.764	(0.000)	473	152	62085	(-9)	1.00	
10) Naphthalene-d8	8.276	(0.013)	587	136	254083	(-4)	1.00	
20) Acenaphthene-d10	10.448	(0.011)	773	164	115753	(-4)	1.00	
31) Phenanthrene-d10	12.305	(0.000)	939	188	211999	(-7)	1.00	
43) Chrysene-d12	15.609	(0.000)	1251	240	155001	(-12)	1.00	
51) Perylene-d12	17.720	(0.000)	1521	264	143114	(-7)	1.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
14) 1-Methylnaphthalene-d10	(2)	9.231	(-0.002)	152	120754	0.941	94%
36) Fluoranthene-d10	(4)	13.806	(0.000)	212	172264	0.896	90%
49) Benzo(a)pyrene-d12	(6)	17.587	(0.000)	264	107966	0.821	82%

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	3.349	(-0.017)	88	26790A	0.671	22.38			0.02
11) Naphthalene	(2)	8.302	(-0.000)	128	231896	0.860	28.65			0.04
19) Acenaphthylene	(3)	10.274	(-0.001)	152	195489	0.851	28.36	0.335	B	0.01
21) Acenaphthene	(3)	10.491	(-0.001)	154	141620	0.900	30.01			0.02
26) Fluorene	(3)	11.124	(-0.000)	166	148383	0.882	29.40			0.02
32) Phenanthrene	(4)	12.338	(0.000)	178	218819	0.865	28.84			0.02
33) Anthracene	(4)	12.406	(0.000)	178	214928	0.884	29.45			0.02
35) Di-n-butylphthalate	(4)	12.889	(0.006)	149	321815	1.188	39.59			0.2
37) Fluoranthene	(4)	13.830	(0.000)	202	214137	0.862	28.72			0.02
39) Pyrene	(5)	14.111	(0.000)	202	219033	0.878	29.27			0.02
41) bis(2-Ethylhexyl)phthalate	(5)	15.515	(0.000)	149	217879	1.311	43.69	18.477	B	0.3
42) Benzo(a)anthracene	(5)	15.593	(-0.000)	228	185747	0.925	30.82			0.02
44) Chrysene	(5)	15.640	(0.000)	228	179813	0.874	29.12			0.01
46) Benzo(b)fluoranthene	(6)	17.094	(-0.000)	252	167953	0.916	30.52			0.02
47) Benzo(k)fluoranthene	(6)	17.134	(-0.000)	252	182094	0.924	30.82			0.02
50) Benzo(a)pyrene	(6)	17.626	(0.000)	252	158301	0.946	31.53			0.02
53) Indeno(1,2,3-cd)pyrene	(6)	19.640	(0.000)	276	161900	0.975	32.51			0.02
54) Dibenz(a,h)anthracene	(6)	19.647	(0.000)	278	136667	0.993	33.10			0.02
55) Benzo(g,h,i)perylene	(6)	20.198	(0.000)	276	137691	0.889	29.63			0.02

A = User selected an alternate peak. B = Compound detected in referenced method blank.

Digitally signed by William H Saadeh on 11/16/2018 at 12:59. Target 3.5 esignature user ID: whs02991

Data file: /chem/HP10623.i/18nov16.b/ck0703.d Injection date and time: **16-NOV-2018 07:51**
Data file Sample Info. Line: 317LCLCS;317LCLCS;2;3;LCS;;DOD26; Instrument ID: **HP10623.i** Batch: **18317SLC**
Date, time and analyst ID of latest file update: 16-Nov-2018 12:59 whs02991

Blank Data file reference: **/chem/HP10623.i/18nov16.b/ck0702.d**

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: **25804**
Calibration date and time (Last Method Edit): 16-NOV-2018 10:03
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/18nov16.b/ck0701a.d**

Matrix: SOIL Level: Low GPC clean-up: Yes On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/(Vi * Ws)

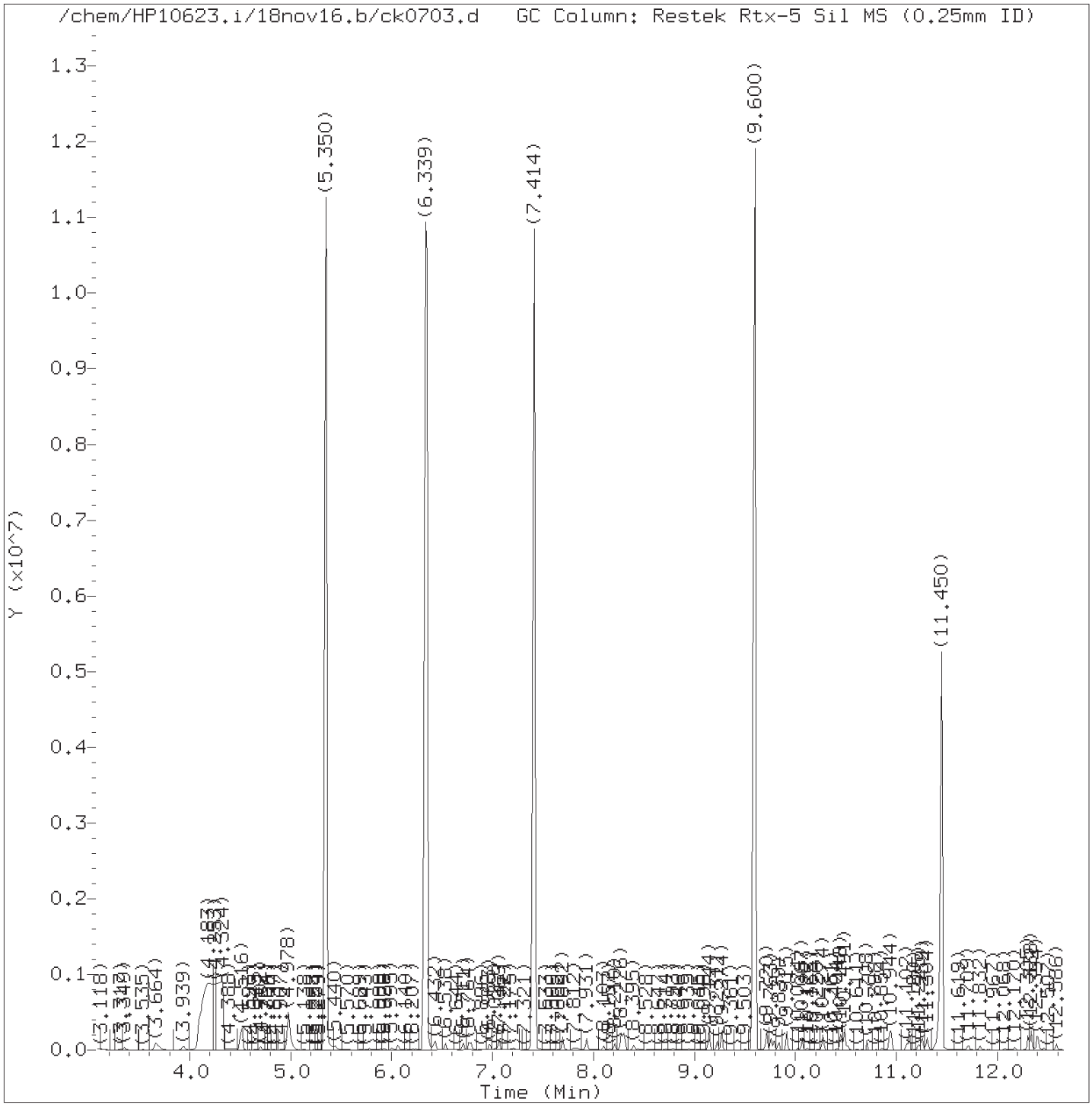
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 1 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 500 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 19

Digitally signed by William H Saadeh on 11/16/2018 at 12:59. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

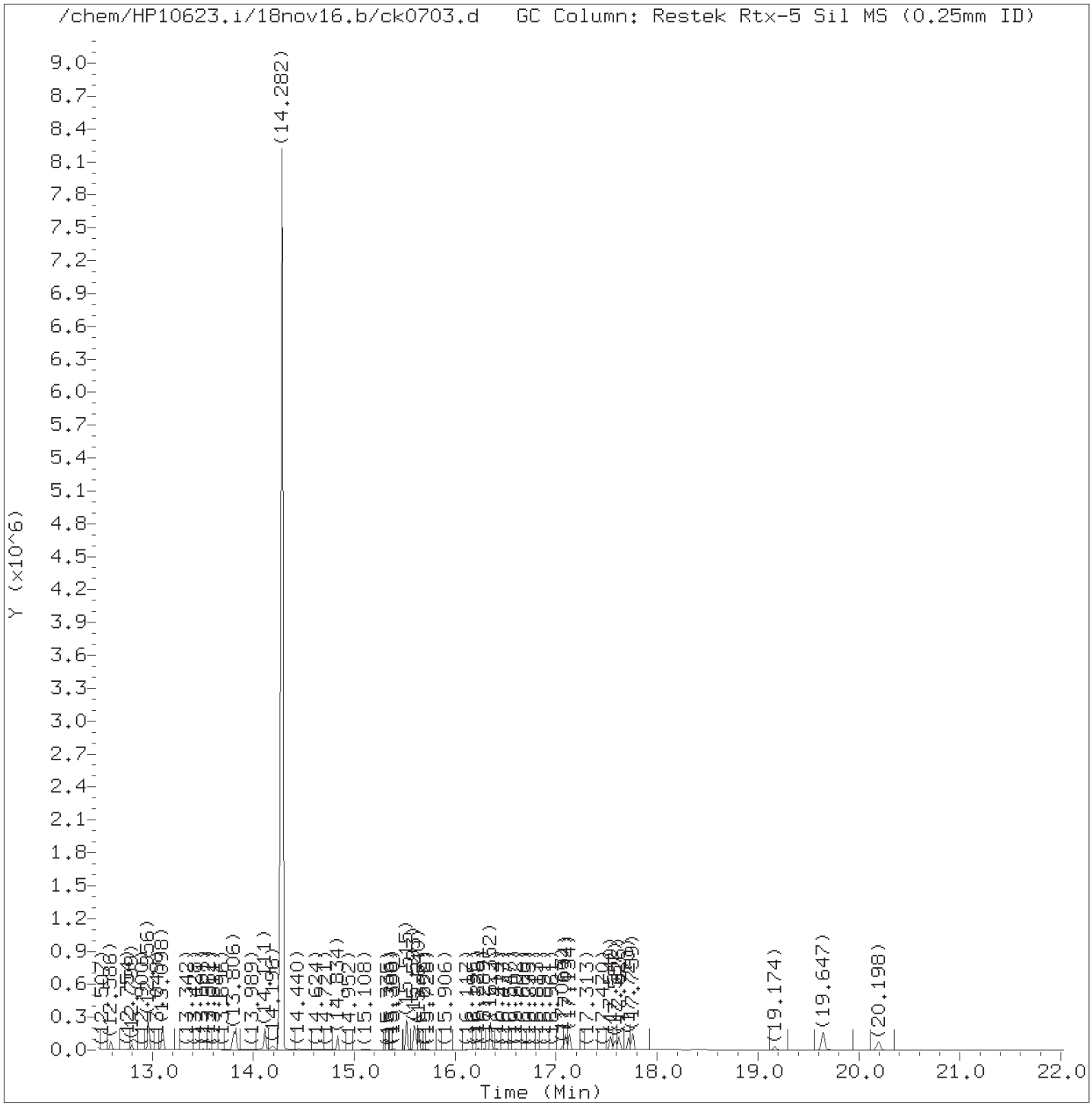
Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0703.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 07:51 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:59 whs02991

Sample Name: 317LCLCS Lab Sample ID: 317LCLCS

Digitally signed by William H Saadeh
on 11/16/2018 at 12:59.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0703.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 07:51 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:59 whs02991

Sample Name: 317LCLCS Lab Sample ID: 317LCLCS

Digitally signed by William H Saadeh
on 11/16/2018 at 12:59.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/18nov16.b/ck0703.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 07:51 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:59 whs02991

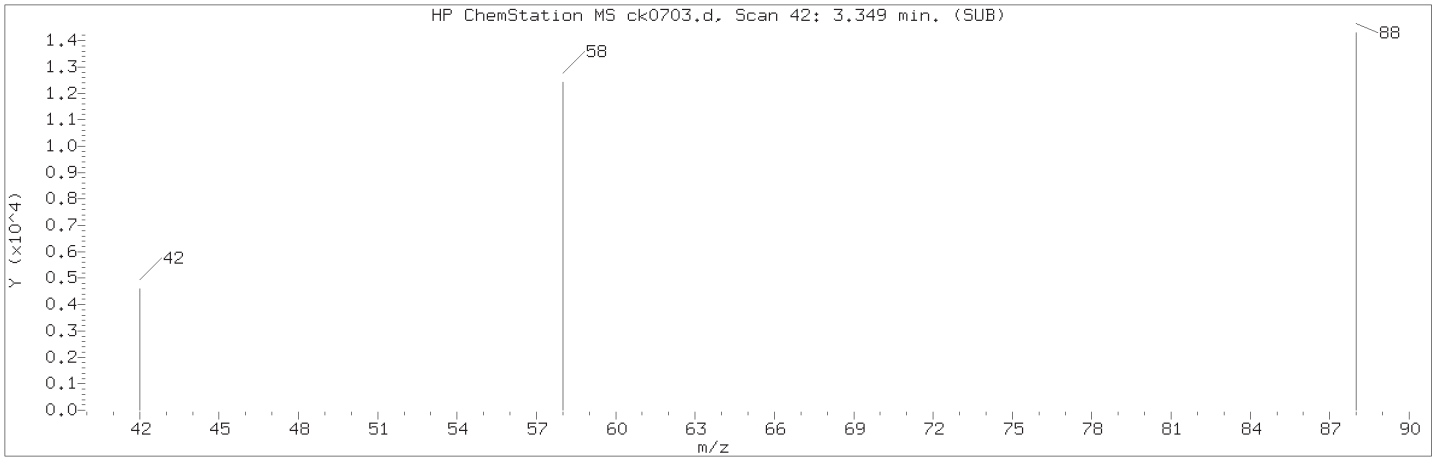
Sample Name: 317LCLCS Lab Sample ID: 317LCLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	3.349	88	26790A	0.671
6)*1,4-Dichlorobenzene-d4	(1)	6.764	152	62085	1.000
10)*Naphthalene-d8	(2)	8.276	136	254083	1.000
11) Naphthalene	(2)	8.302	128	231896	0.860
14)$1-Methylnaphthalene-d10	(2)	9.231	152	120754	0.941
19) Acenaphthylene	(3)	10.274	152	195489	0.851
20)*Acenaphthene-d10	(3)	10.448	164	115753	1.000
21) Acenaphthene	(3)	10.491	154	141620	0.900
26) Fluorene	(3)	11.124	166	148383	0.882
31)*Phenanthrene-d10	(4)	12.305	188	211999	1.000
32) Phenanthrene	(4)	12.338	178	218819	0.865
33) Anthracene	(4)	12.406	178	214928	0.884
35) Di-n-butylphthalate	(4)	12.889	149	321815	1.188
36)$Fluoranthene-d10	(4)	13.806	212	172264	0.896
37) Fluoranthene	(4)	13.830	202	214137	0.862
39) Pyrene	(5)	14.111	202	219033	0.878
41) bis(2-Ethylhexyl)phthalate	(5)	15.515	149	217879	1.311
42) Benzo(a)anthracene	(5)	15.593	228	185747	0.925
43)*Chrysene-d12	(5)	15.609	240	155001	1.000
44) Chrysene	(5)	15.640	228	179813	0.874
46) Benzo(b)fluoranthene	(6)	17.094	252	167953	0.916
47) Benzo(k)fluoranthene	(6)	17.134	252	182094	0.924
49)$Benzo(a)pyrene-d12	(6)	17.587	264	107966	0.821
50) Benzo(a)pyrene	(6)	17.626	252	158301	0.946
51)*Perylene-d12	(6)	17.720	264	143114	1.000
53) Indeno(1,2,3-cd)pyrene	(6)	19.640	276	161900	0.975
54) Dibenz(a,h)anthracene	(6)	19.647	278	136667	0.993
55) Benzo(g,h,i)perylene	(6)	20.198	276	137691	0.889

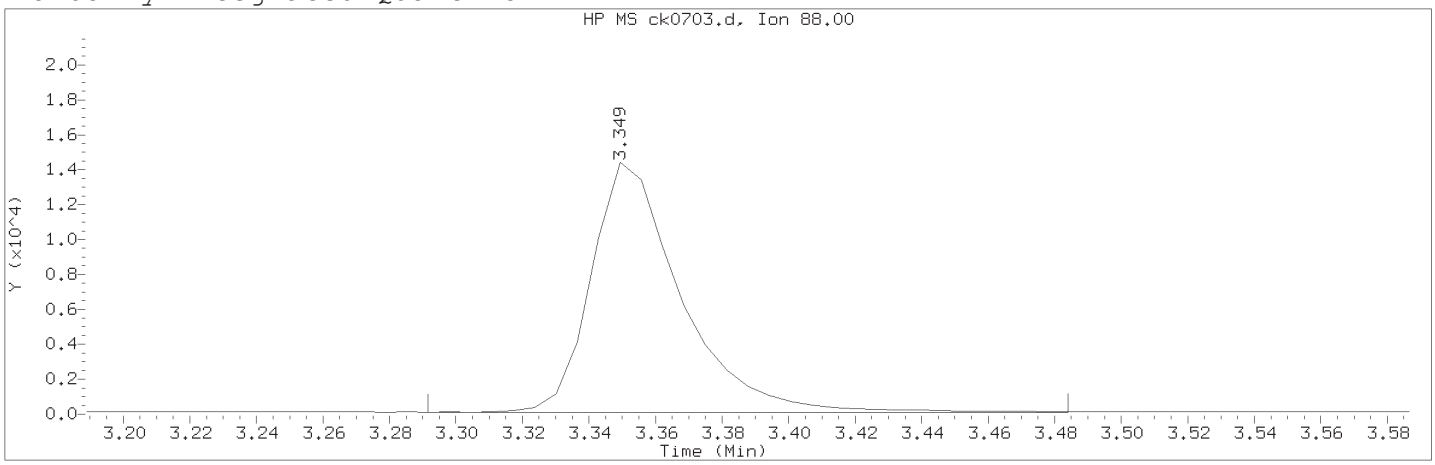
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 11/16/2018 at 12:59.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0703.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 07:51 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 10:03
Date, time and analyst ID of latest file update: 16-Nov-2018 12:59 whs02991

Sample Name: 317LCLCS Lab Sample ID: 317LCLCS

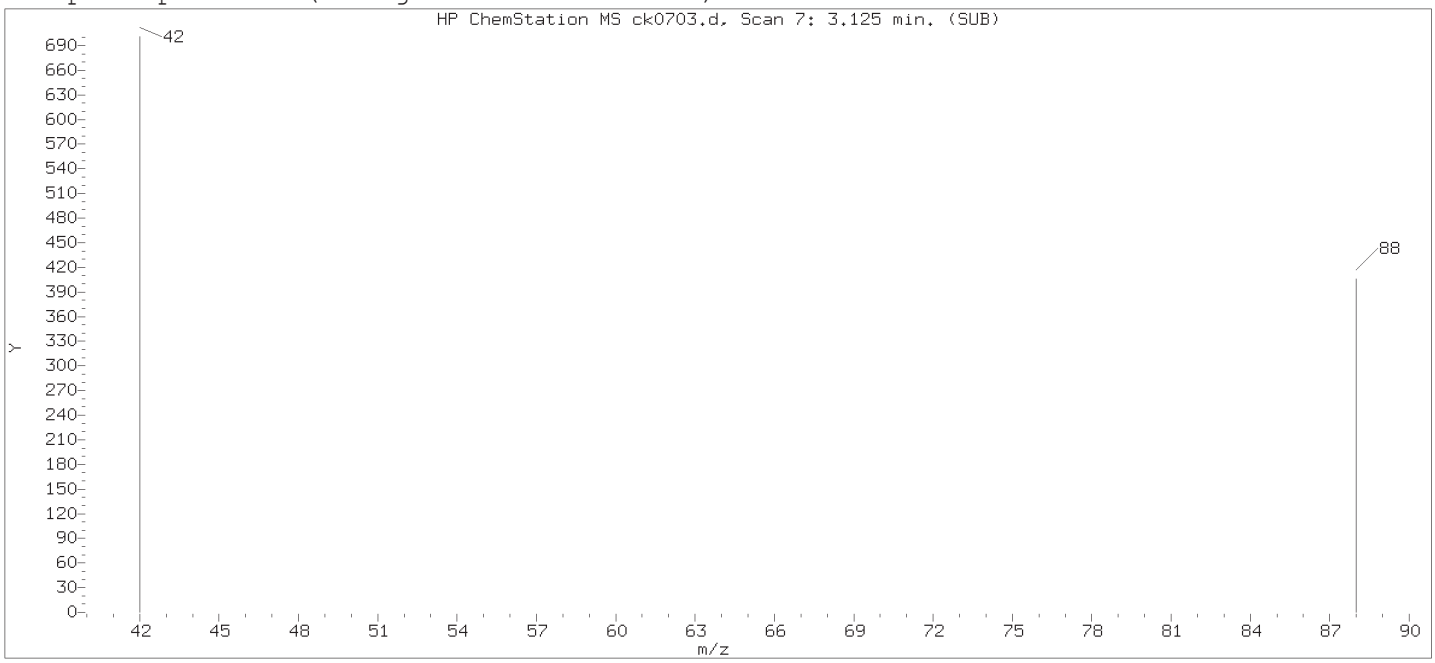
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 42		
Retention Time (minutes)	: 3.349		
Quant Ion	: 88.00		
Area (flag)	: 26790A		
On-Column Amount (ng/ul)	: 0.6714		
Integration start scan	: 32	Integration stop scan:	62
Y at integration start	: 117	Y at integration end:	117

Reason for manual integration: improper integration

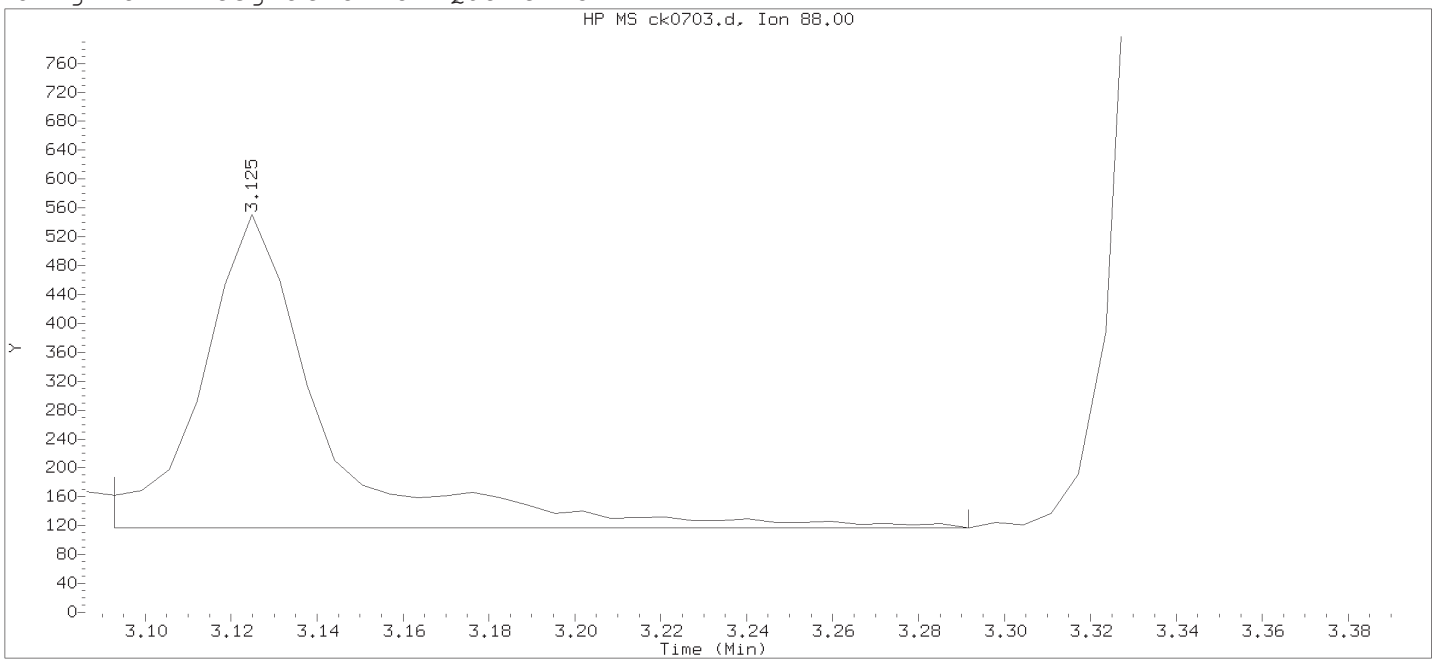
Analyst responsible for change: Digitally signed by William H Saadeh
on 11/16/2018 at 12:59.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 11/16/2018 at 14:20.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/18nov16.b/ck0703.d Instrument ID: HP10623.i
Injection date and time: 16-NOV-2018 07:51 Analyst ID: jmg00346

Method used: /chem/HP10623.i/18nov16.b/sim8270d.m Sublist used: 25804
Calibration date and time: 16-NOV-2018 06:29
Date, time and analyst ID of latest file update: 16-Nov-2018 08:19 Automation

Sample Name: 317LCLCS Lab Sample ID: 317LCLCS

Compound Number	:	1
Compound Name	:	1,4-Dioxane
Scan Number	:	7
Retention Time (minutes)	:	3.125
Quant Ion	:	88.00
Area	:	849
On-column Amount (ng/ul)	:	0.0213
Integration start scan	:	1
Integration stop scan	:	32
Y at integration start	:	117
Y at integration end	:	117

Digitally signed by William H Saadeh on 11/16/2018 at 12:59.
Target 3.5 esignature user ID: [illegible]

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS-SIM

Organic Extraction Batchlog Assigned to: 12366 Joshua Ruth Reviewed by: 10106 11-07-18 Start Date: 10/30/18 Start time: 7:00

18302SLH026

Tech 1: JSR 12366 Tech 2: N/A

Dept: 26 Prep Analysis: 10811 BNA Soil Microwave SIM SIM SVOAs 8270D (microwave)

QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
(5) 9867763MS	T1003	~~30.32~~ 30.1	SS1829826C	1.0	MS1830226B	1.0	10	Z	Z	~~301A~~	brown soil
(5) 9867764MSD	T1003	~~30.34~~ 30.3	SS1829826C	↓	MS1830226B	1.0	10	Z	Z	~~301A~~	↓
BLANKA ☆	SBLKLH302	30.0	SS1829826C	↓	—	—	10	Z	Z	Z	Reagent
LCSA	302LHLCS	30.0	SS1829826C	↓	MS1830226B	1.0	10	Z	Z	Z	↓

(5) Used parent jar BC 036A JSR 12366 10/30/18 N/A

☆Split w/ 18302SLH026

Solvent Used	Lot No.
1:1 Methylene Chloride/Acetone	178S102918A
Methylene Chloride	187356
Sodium Sulfate	18299A
Syringe Filter	16837043

Spike Solutions: Witness: N/A
MS1830226B SIM LCS SPIKE
SS1829826C BNA SURROGATE STANDARD

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1 9867761 ☆	T1002	30.16	SS1829826C	1.0	10	Z	Z	301A	Soil;Sandy;Brown	12969	25804	11/05/2018	N
2 9867762BKG ☆	T1003	30.43	SS1829826C	↓	10	Z	Z	301A	Soil;Sandy;Brown	12969	25804	11/05/2018	N
3 9867766 ☆	T1004	30.16	SS1829826C	↓	10	Z	Z	301A	Soil;Sandy;Rocks;Brown	12969	25804	11/05/2018	N
4 9867767 ☆	T1005	30.39	SS1829826C	↓	10	Z	Z	301A	Soil;Wet;Brown	12969	25804	11/05/2018	N
5 9872064 ☆	12T06	30.23	SS1829826C	↓	10	Z	Z	301A	Organic Matter;Soil;Rocks;Black	12969	25804	11/07/2018	N
6 9872065 ☆	12T07	30.15	SS1829826C	↓	10	Z	Z	301A	Soil;Brown	12969	25804	11/07/2018	N

TID10 Page 2576 of 6051

N/A

Bench#	/	Bench#	/	Bench#	/	17424
Rack ID:		/	Work Station	Hood 900	Micro Temp 100?	✓
Internal Standard	SISTD 3028		Balance #	17609		

R-VAP ID	/ C	R-VAP ID	/ C	R-VAP ID	/ C
S-bath ID 5	98 C	S-bath ID	/ C	N-Evap	/ C

M-vap / C

18302SLH026

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Prep-Process Worksheet

GPC
Prep: 10811 BNA Soil Microwave SIM
Batch: 18302SLH026

Verified: 10206 ACB 11-07-18
Start Date: 11-1-18
Start Time: 18:00
Tech 1: [illegible] 572
Tech 2:

Sample #	Vol. (mL) on	Final Conc Volume (ml)	Column ID	D.F. Aliq	D.F. F.V.	Comments
9867763MS	5	0.5	1			3 [illegible] 572 11-1-18
9867764MSD	5	0.5	1			3 [illegible] 572 11-1-18

	Sample #	Vol. (mL) on	Final Conc Volume (ml)	Column ID		D.F. Aliq	D.F. F.V.	Comments	Analyses
1	9867761 S	5	0.5	1	2				12969
2	9867762 S			1	2				12969
3	9867766 S			1	2				12969
4	9867767 S			1	2				12969
5	9872064 S			1	2				12969
6	9872065 S			1	2				12969

Blank
LS

NA [illegible] 572 11-1-18

Additional Comment: _____

DF = Dilution Factor FV = Final Volume

Solvent Used	Lot No.	Solvent Used	Lot No.
		MeCl2	187356
		MeCl2	186618

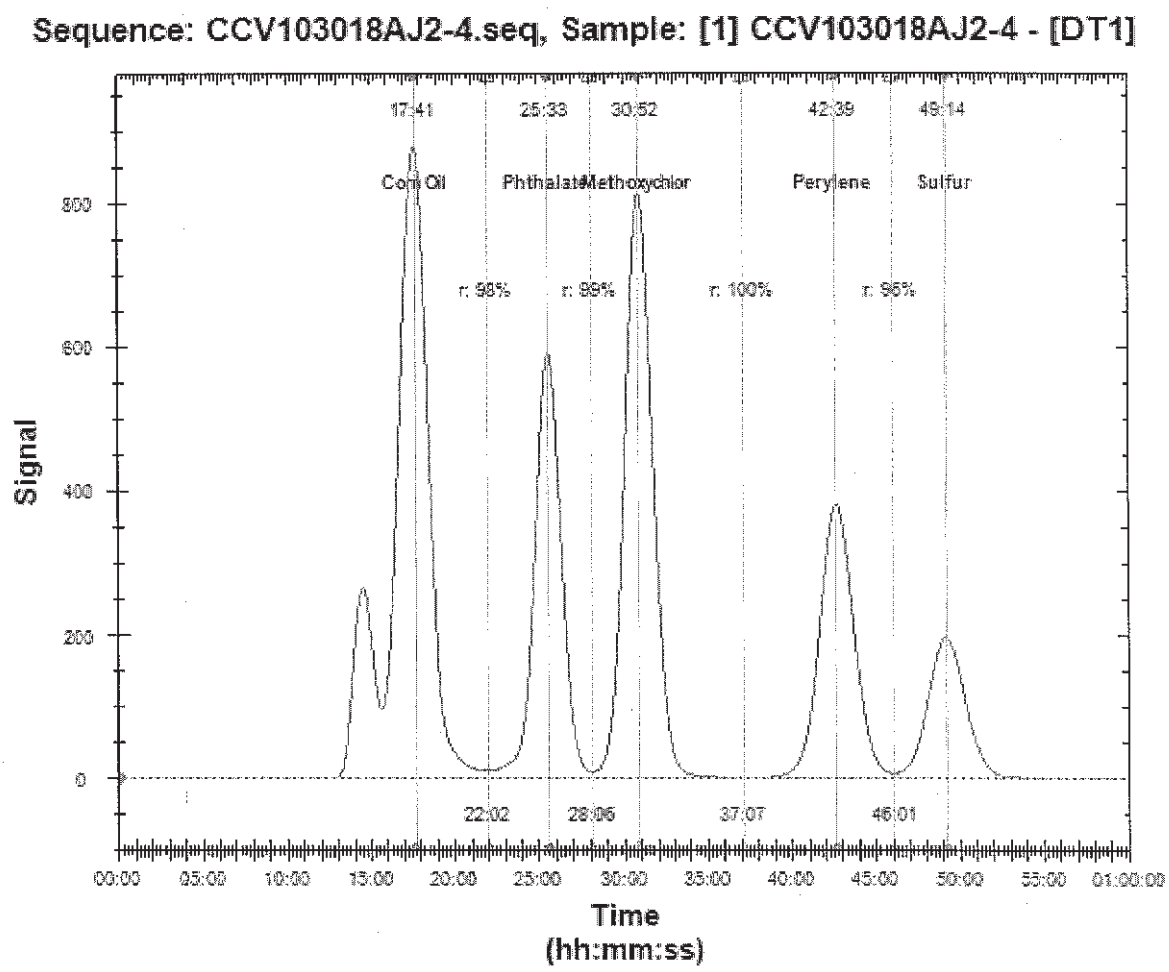
S-Evap/~~bath~~	C	S-Evap/bath	85°C	N-~~Evap~~	C

#16982

Instrument #: J2-4
Column ID #1: 112
Column ID #2:

The documented temperatures are NIST corrected.

CALIBRATION REPORT



TEMPLATE NAME : CO100

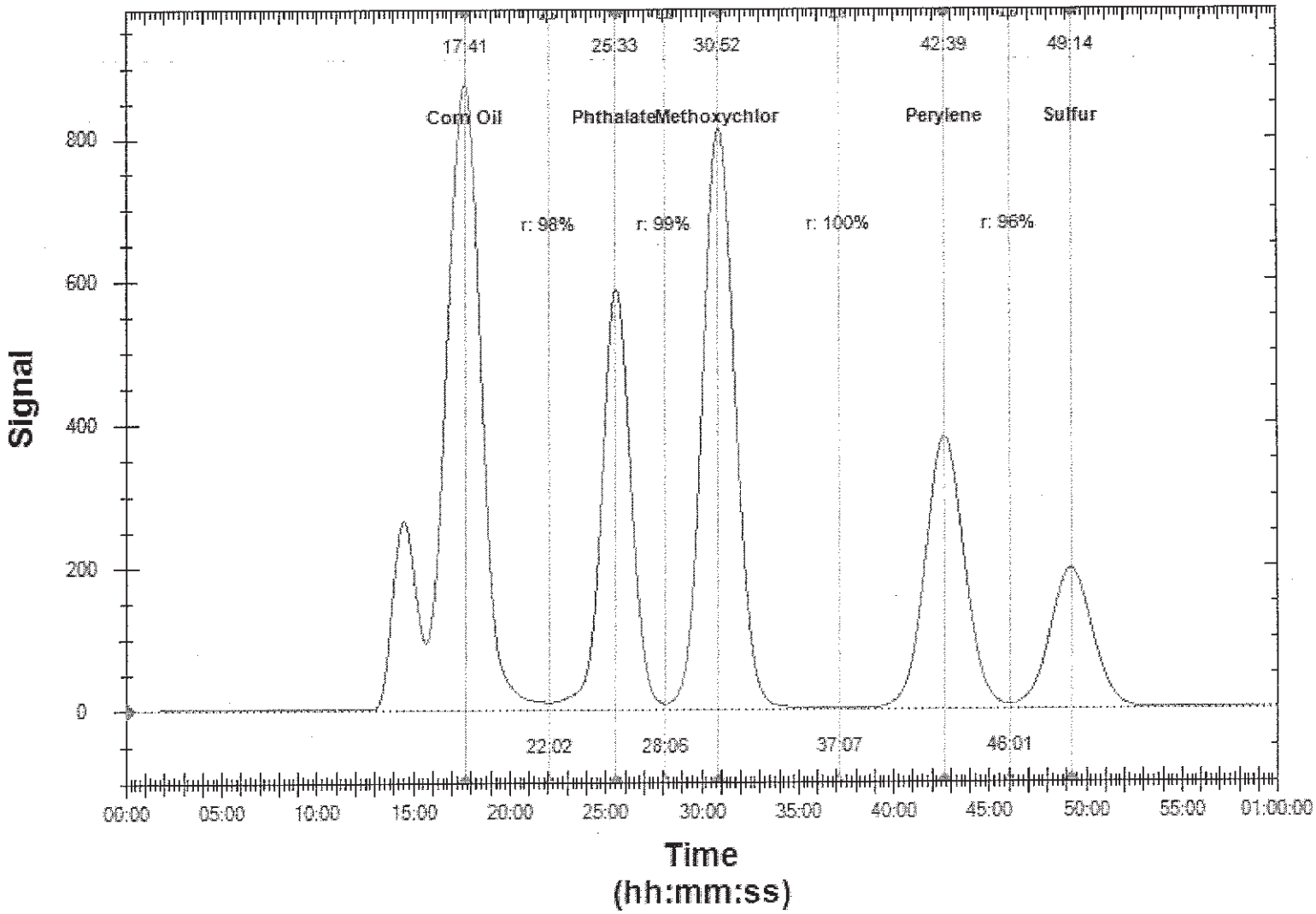
PEAK	SAMPLE	RET. TIME	SIGNAL
1	Corn Oil	17:41	879
2	Phthalate	25:33	592
3	Methoxychlor	30:52	815
4	Perylene	42:39	382
5	Sulfur	49:14	197

VALLEY	PEAKS	RES.	LIMIT	P/F
1	Corn Oil/Phthalate	98	0	P
2	Phthalate/Methoxychlor	99	0	P
3	Methoxychlor/Perylene	100	0	P
4	Perylene/Sulfur	96	0	P

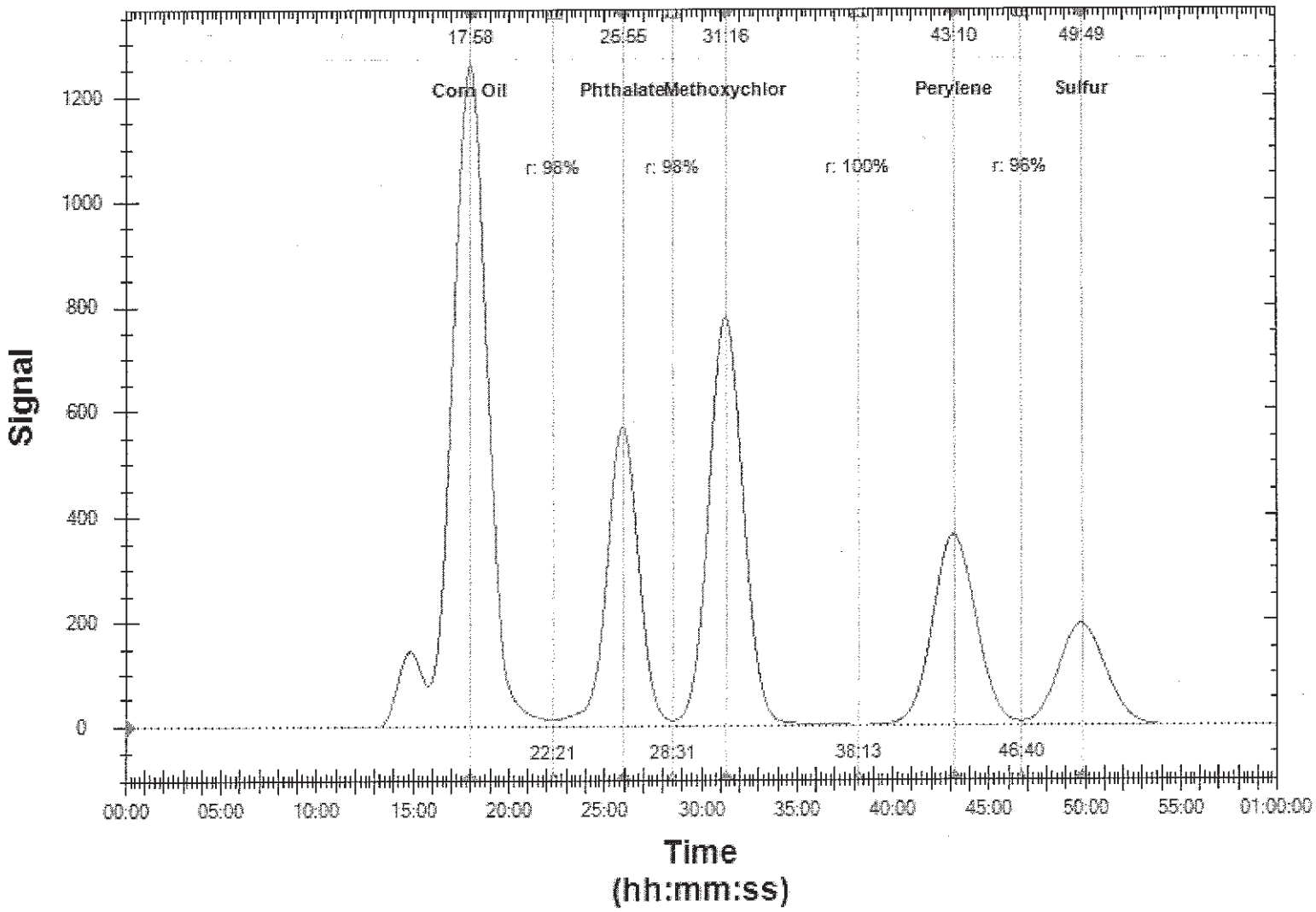
PREPARED BY: System 12/6/2018 1:33:56 PM

SAMPLE	: 1 - 1
TYPE	:
ID	: CCV103018AJ2-4
BATCH	:
START TIME	: 10/30/2018 4:45:56 PM
END TIME	: 10/30/2018 5:50:01 PM
METHOD	: Calibration.gmf
REVISION	: 3
VOLUME (uL)	: 5000
STATUS	: PROCESSED

Sequence: CCV103018AJ2-4.seq, Sample: [1] CCV103018AJ2-4 - [DT1]



Sequence: CCV101518AJ2-4.seq, Sample: [1] CCV101518AJ2-4 - [DT1]



COLUMN : Inline
SEQUENCE: CCV103018AJ2-4.SEQ, SAMPLE: [1] CCV103018AJ2-4 - [DT1]
PREPARED BY: System 12/6/2018 3:28:04 PM

METHOD : Calibration.gmf
TEMPLATE NAME : CO100

PEAK	SAMPLE	RET. TIME	SIGNAL
1	Corn Oil	17:41	879
2	Phthalate	25:33	592
3	Methoxychlor	30:52	815
4	Perylene	42:39	382
5	Sulfur	49:14	197

COLUMN : Inline
SEQUENCE: CCV101518AJ2-4.SEQ, SAMPLE: [1] CCV101518AJ2-4 - [DT1]
METHOD : Calibration.gmf
TEMPLATE NAME : CO100

PEAK	SAMPLE	RET. TIME	SIGNAL
1	Corn Oil	17:58	1263
2	Phthalate	25:55	572
3	Methoxychlor	31:16	779
4	Perylene	43:10	364
5	Sulfur	49:49	193

RESULTS

RESOLUTION RESULTS FOR SEQUENCE: CCV103018AJ2-4.SEQ, SAMPLE: [1] CCV103018AJ2-4 - [DT1]

VALLEY	PEAKS	RES.	LIMIT	P/F
1	Corn Oil/Phthalate	98	0	P
2	Phthalate/Methoxychlor	99	0	P
3	Methoxychlor/Perylene	100	0	P
4	Perylene/Sulfur	96	0	P

RESOLUTION RESULTS FOR SEQUENCE: CCV101518AJ2-4.SEQ, SAMPLE: [1] CCV101518AJ2-4 - [DT1]

VALLEY	PEAKS	RES.	LIMIT	P/F

PREPARED BY: System 12/6/2018 3:28:04 PM

TID10 Page 2582 of 6051

1	Corn Oil/Phthalate	98	0	P
2	Phthalate/Methoxychlor	98	0	P
3	Methoxychlor/Perylene	100	0	P
4	Perylene/Sulfur	96	0	P

RETENTION TIME COMPARISON

COMPOUND	RT DRIFT	RT DRIFT +/-	P/F
Corn Oil	2%	85%	P
Phthalate	1%	85%	P
Methoxychlor	1%	85%	P
Perylene	1%	85%	P
Sulfur	1%	85%	P

OVERALL RESULT: PASS

PREPARED BY: System 12/6/2018 3:28:04 PM

SEQUENCE REPORT V.2

SEQUENCE NAME : 103118AJ2-4.seq

PROCESSED BY : System

MAT NAME : ELLE.m3k

SAMPLE	STATUS	TYPE	METHOD	REV.	VOLUME (uL)	TYPE	ID
1	PROCESSED	GPC	SEMI.gmf	112	5000		BLANKA
2	PROCESSED	GPC	SEMI.gmf	112	5000		LCSA
3	PROCESSED	GPC	SEMI.gmf	112	5000		9863854 MS
4	PROCESSED	GPC	SEMI.gmf	112	5000		9863855 MSD
5	PROCESSED	GPC	SEMI.gmf	112	5000		LCSA
6	PROCESSED	GPC	SEMI.gmf	112	5000		LCSAP1
7	PROCESSED	GPC	SEMI.gmf	112	5000		LCSDAP1
8	PROCESSED	GPC	SEMI.gmf	112	5000		9863854 MS
9	PROCESSED	GPC	SEMI.gmf	112	5000		9863855 MSD
10	PROCESSED	GPC	SEMI.gmf	112	5000		9863851
11	PROCESSED	GPC	SEMI.gmf	112	5000		9863852
12	PROCESSED	GPC	SEMI.gmf	112	5000		9863853 BKG
13	PROCESSED	GPC	SEMI.gmf	112	5000		9863857
14	PROCESSED	GPC	SEMI.gmf	112	5000		9863858
15	PROCESSED	GPC	SEMI.gmf	112	5000		9866461
16	PROCESSED	GPC	SEMI.gmf	112	5000		9866462
17	PROCESSED	GPC	SEMI.gmf	112	5000		9866463
18	PROCESSED	GPC	SEMI.gmf	112	5000		9866464
19	PROCESSED	GPC	SEMI.gmf	112	5000		9866465
20	PROCESSED	GPC	SEMI.gmf	112	5000		9866466
21	PROCESSED	GPC	SEMI.gmf	112	5000		9866467
22	PROCESSED	GPC	SEMI.gmf	112	5000		9870251
23	PROCESSED	GPC	SEMI.gmf	112	5000		9870252
24	PROCESSED	GPC	SEMI.gmf	112	5000		9870253
25	PROCESSED	GPC	SEMI.gmf	112	5000		9870254
26	PROCESSED	GPC	SEMI.gmf	112	5000		9872060
27	PROCESSED	GPC	SEMI.gmf	112	5000		9872061
28	PROCESSED	GPC	SEMI.gmf	112	5000		9872062
29	PROCESSED	GPC	SEMI.gmf	112	5000		9872063
30	PROCESSED	GPC	SEMI.gmf	112	5000		SYSTEM BLANK
31	PROCESSED	GPC	SEMI.gmf	112	5000		SYSTEM BLANK
32	PROCESSED	GPC	SEMI.gmf	112	5000		BLANKA
33	PROCESSED	GPC	SEMI.gmf	112	5000		LCSA
34	PROCESSED	GPC	SEMI.gmf	112	5000		9867763 MS
35	PROCESSED	GPC	SEMI.gmf	112	5000		9867764 MSD
36	PROCESSED	GPC	SEMI.gmf	112	5000		LCSA
37	PROCESSED	GPC	SEMI.gmf	112	5000		LCSAP1
38	PROCESSED	GPC	SEMI.gmf	112	5000		LCSDAP1
39	PROCESSED	GPC	SEMI.gmf	112	5000		9867763 MS
40	PROCESSED	GPC	SEMI.gmf	112	5000		9867764 MSD
41	PROCESSED	GPC	SEMI.gmf	112	5000		9867761
42	PROCESSED	GPC	SEMI.gmf	112	5000		9867762 BKG
43	PROCESSED	GPC	SEMI.gmf	112	5000		9867766
44	PROCESSED	GPC	SEMI.gmf	112	5000		9867767

45	PROCESSED	GPC	SEMI.gmf	112	5000	9872064
46	PROCESSED	GPC	SEMI.gmf	112	5000	9872065
47	PROCESSED	GPC	SEMI.gmf	112	5000	SYSTEM BLANK
48	PROCESSED	GPC	SEMI.gmf	112	5000	SYSTEM BLANK

START TIME : 10/31/2018 2:07:10 PM
END TIME : 11/2/2018 9:29:06 PM

Organic Extraction Batchlog Assigned to: 504 Sally Appleyard Reviewed by: JMG/546 11-16-18 Start Date: 11/13/18 Start time: 191,25

18317SLC026

Tech 1: SLA-504 Tech 2:

Dept: 26	Prep Analysis: 10811 BNA Soil Microwave SIM										SIM SVOAs 8270D (microwave)
QC	Sample Code	Amt G	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
9867763MS	T1003	20.2	SS1829826C	1.0	MS1831326A	1.0	10	Z	Z	36A	Moist STONE
9867764MSD	T1003	20.2	SS1829826C	1.0	MS1831326A	1.0	10	Z	Z	36A	Moist STONE
BLANKA *	SBLKLC317	30.0	SS1829826C	1.0	—	—	10	Z	Z	—	N/A 504
LCSA	317LCLCS	30.0	SS1829826C	1.0	MS1831326A	1.0	10	Z	Z	—	N/A 504

Solvent Used	Lot No.
1:1 Methylene Chloride/Acetone	2447011318B
Methylene Chloride	187001
Sodium Sulfate	18316A
—	—

Spike Solutions: Witness: —

MS1831326A SIM LCS SPIKE

SS1829826C BNA SURROGATE STANDARD

*split w/18317SLB026

	Sample #	Sample Code	Amt G	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1	9867761 R	T1002	30.3	SS1829826C	1.0	10	Z	Z	36A	Gritty, STONE D-1	12969	25804	11/05/2018	N
2	9867762BKG R	T1003	20.0	SS1829826C	1.0	10	Z	Z	36A	Moist, STONE D-1	12969	25804	11/05/2018	N
3	9867766 R	T1004	30.2	SS1829826C	1.0	10	Z	Z	36A	Moist, STONE D-1	12969	25804	11/05/2018	N
4	9867767 R	T1005	30.0	SS1829826C	1.0	10	Z	Z	36A	Clumpy D-1	12969	25804	11/05/2018	N
5	9872065 R	12T07	30.0	SS1829826C	1.0	10	Z	Z	36A	CLAY D-1	12969	25804	11/07/2018	N

SLA 11/13/18 N/A

Bench#	~~Bench#~~	Bench#
Rack ID:	—	Work Station: Micro
Internal Standard:	SST03028	Balance #: 25196

Micro Temp 100? ✓

R-VAP ID	— C	R-VAP ID	— C	R-VAP ID	— C		
S-bath ID	597 C	S-bath ID	— C	N-Evap	— C	M-vap	— C

18317SLC026

DF = Dilution Factor FV = Final Volume

SA/504 11/13/18

Documented temps are NIST corrected.

Prep-Process Worksheet

GPC
Prep: 10811 BNA Soil Microwave SIM
Batch: 18317SLC026

Verified: _____ 13766 11/20/18
Start Date: 11-14-18
Start Time: 12:47
Tech 1: MW 572
Tech 2: CG12385

Sample #	Vol. (mL) on	Final Conc Volume (ml)	Column ID	D.F. Aliq	D.F. F.V.	Comments
9867763MS	5	0.5	1			
9867764MSD	5	0.5	1			

	Sample #	Vol. (mL) on	Final Conc Volume (ml)	Column ID		D.F. Aliq	D.F. F.V.	Comments	Analyses
1	9867761 S	5	0.5	1	2				12969
2	9867762 S		0.5		2				12969
3	9867766 S		0.5		2				12969
4	9867767 S		0.5		2				12969
5	9872065 S		0.5		2				12969
	Blank	5		1					
	LCS	5		1					

NA MW 572 11-14-18

Additional Comment: NA

DF = Dilution Factor FV = Final Volume

Solvent Used	Lot No.	Solvent Used	Lot No.
		MeCl2	187001

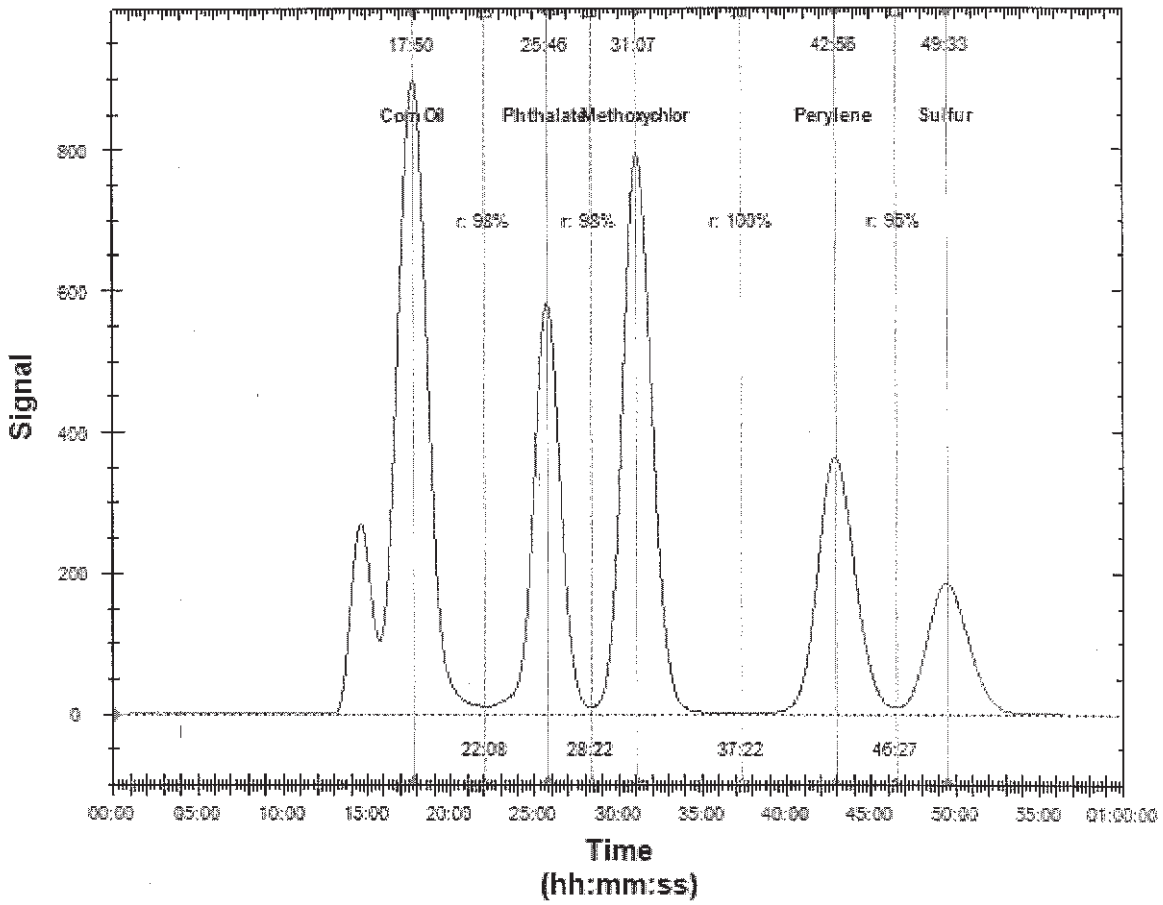
S-Evap/bath 90 °C S-Evap/bath C N-Evap C

Instrument #: GC-4
Column ID #1: 112
Column ID #2: NA

The documented temperatures are NIST corrected.

CALIBRATION REPORT

Sequence: CCV111318AJ2-4.seq, Sample: [1] CCV111318AJ2-4 - [DT1]



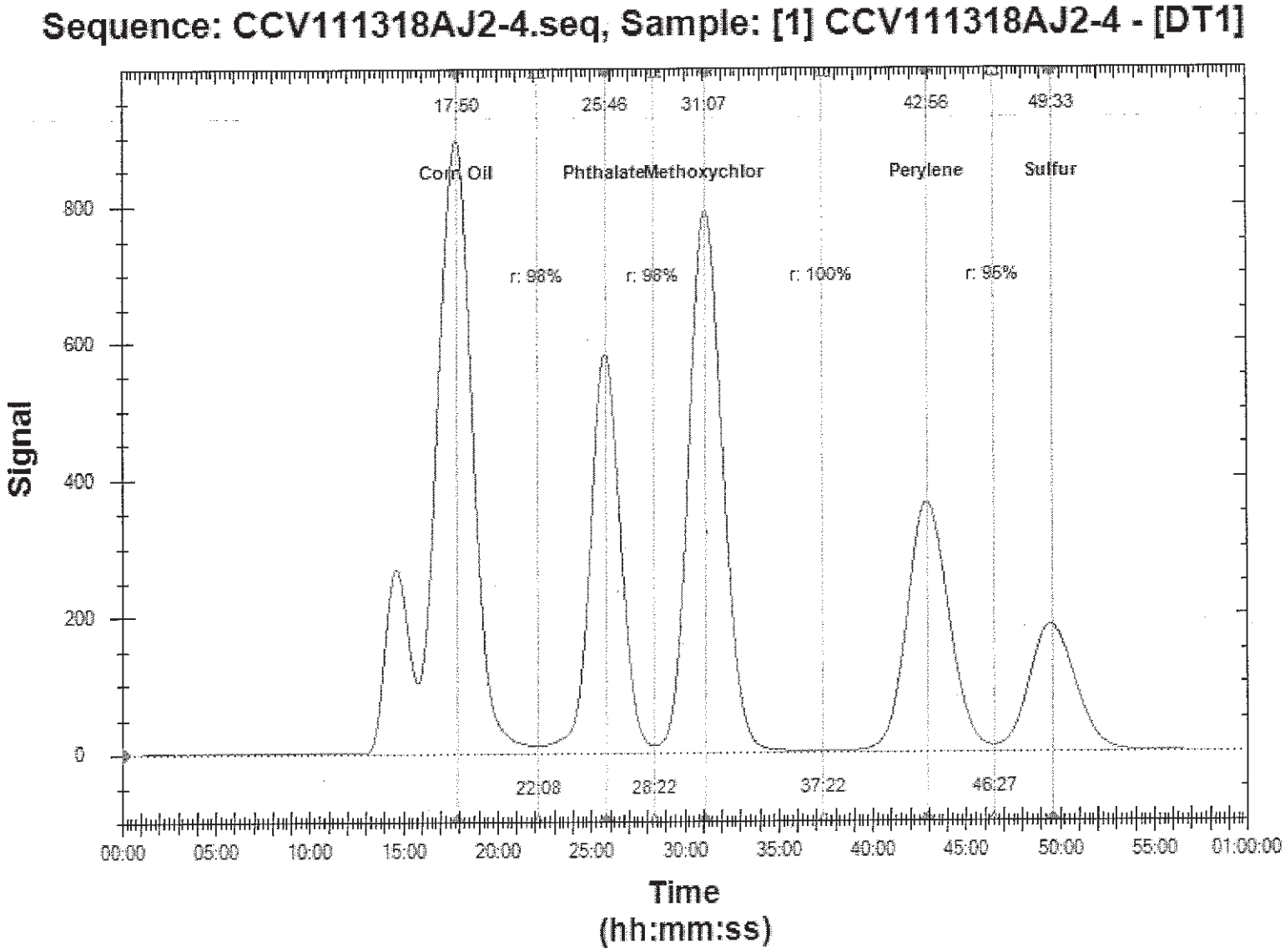
TEMPLATE NAME : CO100

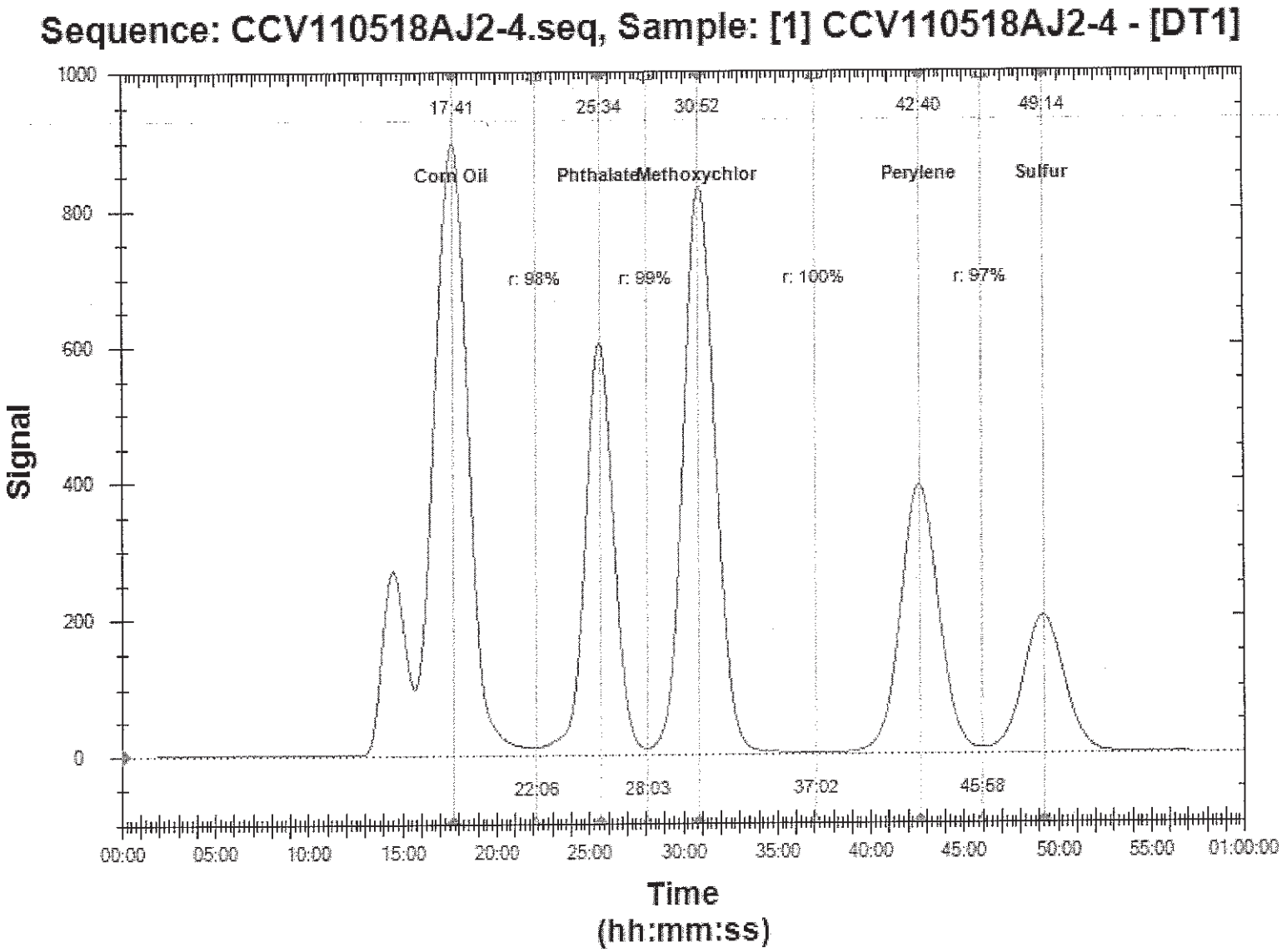
PEAK	SAMPLE	RET. TIME	SIGNAL
1	Corn Oil	17:50	898
2	Phthalate	25:46	584
3	Methoxychlor	31:07	795
4	Perylene	42:56	365
5	Sulfur	49:33	186

VALLEY	PEAKS	RES.	LIMIT	P/F
1	Corn Oil/Phthalate	98	0	P
2	Phthalate/Methoxychlor	98	0	P
3	Methoxychlor/Perylene	100	0	P
4	Perylene/Sulfur	95	0	P

PREPARED BY: System 12/6/2018 1:41:22 PM

SAMPLE	: 1 - 1
TYPE	:
ID	: CCV111318AJ2-4
BATCH	:
START TIME	: 11/13/2018 1:44:52 PM
END TIME	: 11/13/2018 2:48:55 PM
METHOD	: Calibration.gmf
REVISION	: 3
VOLUME (uL)	: 5000
STATUS	: PROCESSED


Sequence: CCV111318AJ2-4.seq, Sample: [1] CCV111318AJ2-4 - [DT1]
17:50
25:46
31:07
42:56
49:33
Corn Oil
PhthalateMethoxychlor
Perylene
Sulfur
r: 98%
r: 98%
r: 100%
r: 95%
800
600
400
200
0
Signal
22:08
28:22
37:22
46:27
00:00
05:00
10:00
15:00
20:00
25:00
30:00
35:00
40:00
45:00
50:00
55:00
01:00:00
Time
(hh:mm:ss)



COLUMN : Inline
SEQUENCE: CCV111318AJ2-4.SEQ, SAMPLE: [1] CCV111318AJ2-4 - [DT1]
PREPARED BY: System 12/6/2018 3:30:29 PM

METHOD : Calibration.gmf
TEMPLATE NAME : CO100

PEAK	SAMPLE	RET. TIME	SIGNAL
1	Corn Oil	17:50	898
2	Phthalate	25:46	584
3	Methoxychlor	31:07	795
4	Perylene	42:56	365
5	Sulfur	49:33	186

COLUMN : Inline
SEQUENCE: CCV110518AJ2-4.SEQ, SAMPLE: [1] CCV110518AJ2-4 - [DT1]
METHOD : Calibration.gmf
TEMPLATE NAME : CO100

PEAK	SAMPLE	RET. TIME	SIGNAL
1	Corn Oil	17:41	899
2	Phthalate	25:34	608
3	Methoxychlor	30:52	836
4	Perylene	42:40	393
5	Sulfur	49:14	203

RESULTS

RESOLUTION RESULTS FOR SEQUENCE: CCV111318AJ2-4.SEQ, SAMPLE: [1] CCV111318AJ2-4 - [DT1]

VALLEY	PEAKS	RES.	LIMIT	P/F
1	Corn Oil/Phthalate	98	0	P
2	Phthalate/Methoxychlor	98	0	P
3	Methoxychlor/Perylene	100	0	P
4	Perylene/Sulfur	95	0	P

RESOLUTION RESULTS FOR SEQUENCE: CCV110518AJ2-4.SEQ, SAMPLE: [1] CCV110518AJ2-4 - [DT1]

VALLEY	PEAKS	RES.	LIMIT	P/F

PREPARED BY: System 12/6/2018 3:30:29 PM

TID10 Page 2592 of 6051

1	Corn Oil/Phthalate	98	0	P
2	Phthalate/Methoxychlor	99	0	P
3	Methoxychlor/Perylene	100	0	P
4	Perylene/Sulfur	97	0	P

RETENTION TIME COMPARISON

COMPOUND	RT DRIFT	RT DRIFT +/-	P/F
Corn Oil	1%	85%	P
Phthalate	1%	85%	P
Methoxychlor	1%	85%	P
Perylene	1%	85%	P
Sulfur	1%	85%	P

OVERALL RESULT: PASS

SEQUENCE REPORT V.2

SEQUENCE NAME : 111418AJ2-4.seq

PROCESSED BY : System

MAT NAME : ELLE.m3k

SAMPLE	STATUS	TYPE	METHOD	REV.	VOLUME (uL)	TYPE	ID
1	PROCESSED	GPC	SEMI.gmf	114	5000		BLANKA
2	PROCESSED	GPC	SEMI.gmf	114	5000		LCSA
3	PROCESSED	GPC	SEMI.gmf	114	5000		LCSA
4	PROCESSED	GPC	SEMI.gmf	114	5000		LCSDA
5	PROCESSED	GPC	SEMI.gmf	114	5000		LCSAP1
6	PROCESSED	GPC	SEMI.gmf	114	5000		LCSDAP1
7	PROCESSED	GPC	SEMI.gmf	114	5000		9867763 MS
8	PROCESSED	GPC	SEMI.gmf	114	5000		9867764 MSD
9	PROCESSED	GPC	SEMI.gmf	114	5000		9867761
10	PROCESSED	GPC	SEMI.gmf	114	5000		9867762
11	PROCESSED	GPC	SEMI.gmf	114	5000		9867766
12	PROCESSED	GPC	SEMI.gmf	114	5000		9867767
13	PROCESSED	GPC	SEMI.gmf	114	5000		9872065
14	PROCESSED	GPC	SEMI.gmf	114	5000		SYSTEM BLANK
15	PROCESSED	GPC	SEMI.gmf	114	5000		SYSTEM BLANK

START TIME : 11/14/2018 12:46:47 PM
END TIME : 11/15/2018 6:06:41 AM

Herbicides Data

Case Narrative/Conformance Summary

Herbicides

eurofins | Lancaster Laboratories Environmental

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID10

Pesticide Residue Analysis

Fraction: Herbicides

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9867761	OU2-1-SS004		X	5	
9867762	OU2-1-SS006		X	5	Unspiked
9867763	OU2-1-SS006 MS		X	5	Matrix Spike
9867764	OU2-1-SS006 MSD		X	5	Matrix Spike Duplicate
9867766	OU2-1-SS002		X	5	
9867767	OU2-1-SS008		X	10	

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

(Sample number(s): 9867761-9867764, 9867766-9867767: Analysis: 10401)
For dual column analyses in which the calibration (initial and/or continuing) response is outside the acceptance criteria on one column and within criteria on the second column affected analytes are reported from the compliant column. The sample raw data identifies the column used to report each analyte.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

Batch#: 183030010A (Sample number(s): 9867761-9867764, 9867766-9867767, UNSPK: 9867762)
The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: Dinoseb

eurofins | Lancaster Laboratories Environmental

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID10

Pesticide Residue Analysis

Fraction: Herbicides

(Sample number(s): 9867761-9867764, 9867766-9867767: Analysis: 10401)
The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.

MS/MSD

Batch#: 183030010A (Sample number(s): 9867761-9867764, 9867766-9867767, UNSPK: 9867762)
The recovery(ies) for the following analyte(s) in the MS and MSD were below the acceptance window: Dalapon, Dicamba, Dinoseb, MCPA, MCPP (Mecoprop)

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Batch#: 183030010A (Sample number(s): 9867761-9867764, 9867766-9867767, UNSPK: 9867762)
The recovery(ies) for the following surrogate(s) exceeded the acceptance window: 2,4-DCAA-D1 (9867767), 2,4-DCAA-D2 (9867767)

SAMPLE ANALYSIS:

(Sample number(s): 9867766-9867767: Analysis: 10401)
Due to the nature of the sample extract matrix, a dilution was used for the analysis. The reporting limits were raised accordingly.

No other problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Herbicides

eurofins | Lancaster Laboratories Environmental

Quality Control Reference List
Pesticide Residue Analysis

CLIENT: Tidewater, Inc.
SDG: TID10

Fraction: Herbicides

Analysis	Batch Number	Sample Number	Analysis Date
Herbicide soils 8151A Master	183030010A	PBLK10303	11/01/2018 19:09
		LCS10303	11/01/2018 19:42
		9867761	11/02/2018 09:30
		9867762 UNSPK	11/01/2018 21:22
		9867763 MS	11/01/2018 23:01
		9867764 MSD	11/02/2018 01:47
		9867766	11/02/2018 10:37
		9867767	11/02/2018 11:10

Quality Control Summary
Method Blank
Pesticide Residue Analysis
SDG: TID10
Matrix: SOLID

Fraction: Herbicides

183030010A / PBLK10303 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Dalapon	11/01/18	N.D.	ug/kg	44	88	90
Dicamba	11/01/18	N.D.	ug/kg	4.0	8.0	12
MCPP (Mecoprop)	11/01/18	N.D.	ug/kg	3800	7600	7700
MCPA	11/01/18	N.D.	ug/kg	760	1500	2500
2,4-DP (Dichloroprop)	11/01/18	N.D.	ug/kg	9.0	18	20
2,4-D	11/01/18	N.D.	ug/kg	12	24	36
2,4,5-TP	11/01/18	N.D.	ug/kg	0.75	1.5	1.7
Dinoseb	11/01/18	N.D.	ug/kg	9.0	18	24
2,4,5-T	11/01/18	N.D.	ug/kg	0.82	1.6	1.7
2,4-DB	11/01/18	N.D.	ug/kg	9.8	20	21

Quality Control Summary
Surrogates
Pesticide Residue Analysis
SDG: TID10
Matrix: SOLID

Fraction: Herbicides

183030010A	2,4-DCAA-D1		2,4-DCAA-D2	
	Spike Added	66.66666 ug/kg	Spike Added	66.66666 ug/kg
Sample	% Recovery	Limits	% Recovery	Limits
PBLK10303	89	27 - 122	84	27 - 122
LCS10303	95	27 - 122	97	27 - 122
9867761	110	27 - 122	108	27 - 122
9867762 UNSPK	101	27 - 122	119	27 - 122
9867763 MS	101	27 - 122	116	27 - 122
9867764 MSD	104	27 - 122	118	27 - 122
9867766	99	27 - 122	104	27 - 122
9867767	152 *	27 - 122	128 *	27 - 122

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Pesticide Residue Analysis

Fraction: Herbicides

UNSPK: 9867762 MS: 9867763 MSD: 9867764 **Analyte**	Batch: **183030010A** (Sample number(s): 9867761-9867764, 9867766-9867767)								
	Spike Added ug/kg MS/MSD	**Unspiked Conc ug/kg**	**MS Conc ug/kg**	**MSD Conc ug/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dalapon	205.91 / 207.2	N.D.	N.D.	N.D.	0 *	0 *	15-115	0	30
Dicamba	8.23 / 8.28	N.D.	N.D.	N.D.	0 *	0 *	38-132	0	30
MCPP (Mecoprop)	8245.31 / 8297.18	N.D.	N.D.	N.D.	0 *	0 *	35-143	0	30
MCPA	8259.3 / 8311.26	N.D.	N.D.	N.D.	0 *	0 *	28-135	0	30
2,4-DP (Dichloroprop)	82.35 / 82.86	N.D.	99.33	100.41	121	121	28-155	1	30
2,4-D	82.26 / 82.78	N.D.	91.14 J	95.62 J	111	116	28-144	5	30
2,4,5-TP	8.23 / 8.28	N.D.	8.83	8.81	107	106	43-129	0	30
2,4,5-T	8.23 / 8.28	N.D.	9.72	10.03	118	121	31-138	3	30
Dinoseb	41.21 / 41.47	N.D.	N.D.	N.D.	0 *	0 *	10-115	0	30
2,4-DB	82.68 / 83.2	N.D.	94.88 J	93.95 J	115	113	34-142	1	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: TID10
Matrix: SOLID

Pesticide Residue Analysis
Fraction: Herbicides

LCS: LCS10303	Batch: **183030010A** (Sample number(s): 9867761-9867764, 9867766-9867767)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dalapon	208.58	171.65	NA	82	NA	15-115	NA	NA
Dicamba	8.33	7.85 J	NA	94	NA	38-132	NA	NA
MCPP (Mecoprop)	8352.5	10262.49	NA	123	NA	35-143	NA	NA
MCPA	8366.67	8855.01	NA	106	NA	28-135	NA	NA
2,4-DP (Dichloroprop)	83.42	85.36	NA	102	NA	28-155	NA	NA
2,4-D	83.33	85.1	NA	102	NA	28-144	NA	NA
2,4,5-TP	8.33	9.21	NA	111	NA	43-129	NA	NA
2,4,5-T	8.33	8.94	NA	107	NA	31-138	NA	NA
Dinoseb	41.75	N.D	NA	0 *	NA	10-115	NA	NA
2,4-DB	83.75	85.95	NA	103	NA	34-142	NA	NA

Fraction: Herbicides

10401: Herbicide soils 8151A Master Analyte Name	Default DL	Default LOD	Default LOQ	Units
Dalapon	44	88	90	ug/kg
Dicamba	4	8	12	ug/kg
MCPP (Mecoprop)	3800	7600	7,700	ug/kg
MCPA	760	1520	2,500	ug/kg
2,4-DP (Dichloroprop)	9	18	20	ug/kg
2,4-D	12	24	36	ug/kg
2,4,5-TP	.75	1.5	1.7	ug/kg
2,4,5-T	.82	1.64	1.7	ug/kg
Dinoseb	9	18	24	ug/kg
2,4-DB	9.8	20	21	ug/kg

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850A Calibration File: 15HERB1830401

GC Column (1) : ZB XLB ID: 0.32 (mm)

ICAL Date(s) Analyzed: 10/31/2018 10/31/2018

COMPOUND	RT OF STANDARDS						MIDPOINT RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6		FROM	TO
Dalapon	3.72	3.73	3.73	3.72	3.73	3.73	3.73	3.70	3.76
2,4-DCAA	11.96	11.95	11.94	11.94	11.93	11.93	11.94	11.91	11.97
Dicamba	12.09	12.08	12.07	12.06	12.05	12.05	12.07	12.04	12.10
Mcpp	12.49	12.48	12.48	12.48	12.48	12.49	12.48	12.45	12.51
Mcpa	12.87	12.87	12.86	12.86	12.87	12.88	12.86	12.83	12.89
2,4-DP	13.46	13.46	13.46	13.45	13.45	13.44	13.46	13.43	13.49
2,4-D	13.90	13.90	13.90	13.90	13.89	13.89	13.90	13.87	13.93
PCP	15.10	15.10	15.09	15.09	15.09	15.08	15.09	15.06	15.12
2,4,5-TP	15.39	15.39	15.39	15.38	15.38	15.38	15.39	15.36	15.42
2,4,5-T	15.91	15.91	15.91	15.91	15.90	15.90	15.91	15.88	15.94
2,4-DB	16.74	16.74	16.74	16.74	16.74	16.73	16.74	16.71	16.77
Dinoseb	16.93	16.93	16.93	16.93	16.92	16.92	16.93	16.90	16.96
Picloram	17.89	17.89	17.89	17.89	17.89	17.88	17.89	17.86	17.92
Hexachlorophene	26.14	26.14	26.13	26.13	26.13	26.13	26.13	26.10	26.16

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850A Calibration File: 15HERB1830401

GC Column (1) : ZB XLB ID: 0.32 (mm)

ICAL Date(s) Analyzed: 10/31/2018 10/31/2018

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
Dalapon	7.74E-04	7.50E-04	7.45E-04	7.24E-04	7.40E-04	7.54E-04	7.48E-04	2	
2,4-DCAA	1.55E-03	1.42E-03	1.35E-03	1.25E-03	1.24E-03	1.28E-03	1.35E-03	9	
Dicamba	5.62E-03	5.70E-03	5.48E-03	5.33E-03	5.24E-03	5.09E-03	5.41E-03	4	
Mcpp	1.30E-05	1.10E-05	9.00E-06	7.00E-06	5.00E-06		9.00E-06	35	Linear
Mcpa	1.70E-05	1.40E-05	1.00E-05	8.00E-06	7.00E-06		1.12E-05	38	Linear
2,4-DP	1.25E-03	1.24E-03	1.12E-03	1.02E-03	9.28E-04		1.11E-03	13	
2,4-D	1.39E-03	1.42E-03	1.35E-03	1.27E-03	1.27E-03	1.28E-03	1.33E-03	5	
PCP	1.57E-02	1.66E-02	1.75E-02	1.69E-02	1.72E-02	1.68E-02	1.68E-02	4	
2,4,5-TP	6.20E-03	6.30E-03	6.43E-03	6.11E-03	6.58E-03	6.55E-03	6.36E-03	3	
2,4,5-T	5.19E-03	5.47E-03	5.52E-03	5.51E-03	5.91E-03	6.08E-03	5.61E-03	6	
2,4-DB	7.64E-04	7.84E-04	7.94E-04	7.43E-04	7.71E-04	8.17E-04	7.79E-04	3	
Dinoseb	3.09E-03	3.06E-03	3.05E-03	2.84E-03	2.84E-03	2.65E-03	2.92E-03	6	
Picloram	4.35E-03	4.64E-03	4.98E-03	4.85E-03	5.10E-03	5.30E-03	4.87E-03	7	
Hexachlorophene	4.92E-03	5.25E-03	5.51E-03	5.27E-03	5.31E-03	5.58E-03	5.30E-03	4	

RL
13378
11/1/18

File Name: V:\CP15\15HERB1830401.CAL
Version: 30

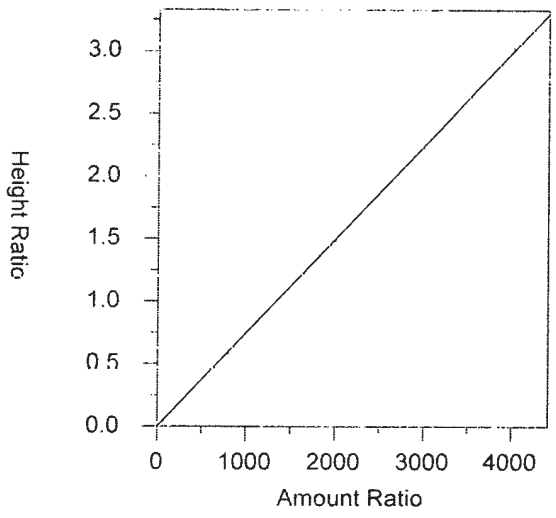
Creator:
Description:
Reason for change:

Internal standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 0
Amount units: PPB
No default component

Method of calculating data point averages: Current update equal to cal data
No calibration update report

All levels are normal data points.

1 Dalapon



Expected retention time: 3.725 minutes
Search window: 0.03 minutes
Internal standard component: 8 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

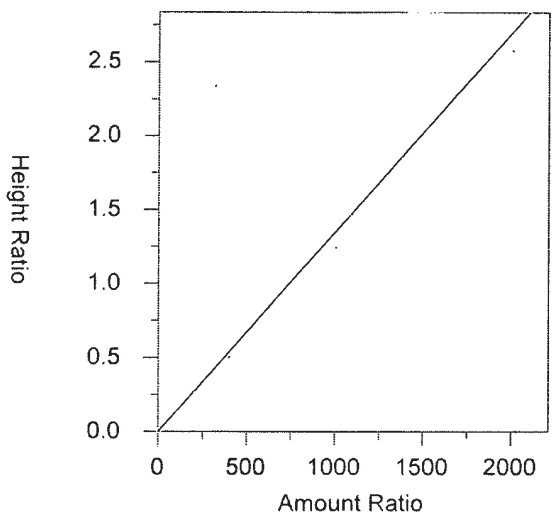
Single peak quantification by height

Y = 0.0007477441 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9997898
Average error: 1.576%
Average CF: 0.0007477441
RSD: 2.226%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	100	858224	8582.24	3.468	100	0.07736794	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\
2	201	1662882	8273.045	0.357	201	0.1508334	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\
3	401	3394969	8466.257	-0.421	401	0.2985827	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\
4	802	6375297	7949.248	-3.236	802	0.5802846	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\
5	2005	1.621528E+07	8087.421	-1.072	2005	1.48316	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\
6	4010	3.123782E+07	7789.98	0.903	4010	3.025537	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\

2 DCAA



Expected retention time: 11.943 minutes
Search window: 0.03 minutes
Internal standard component: 8 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

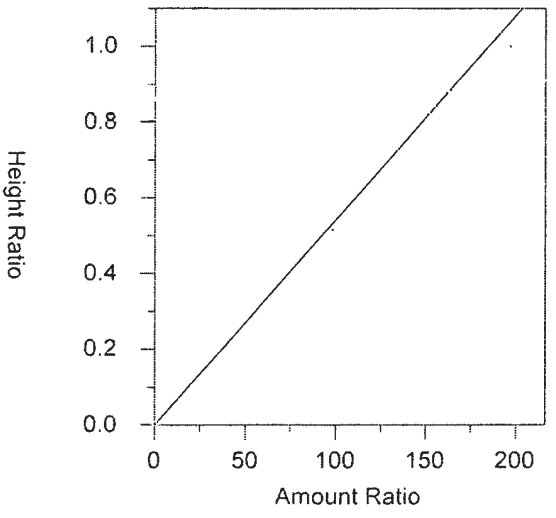
Single peak quantification by height

Y = 0.001346959 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9933155
Average error: 6.738%
Average CF: 0.001346959
RSD: 8.865%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	50	859147.9	17182.96	15.002	50	0.07745123	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	101	1575704	15601.03	5.059	101	0.1429258	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	201	3083047	15338.54	0.152	201	0.2711496	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	402	5525293	13744.51	-7.121	402	0.5029166	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	1005	1.357703E+07	13509.48	-8.262	1005	1.241847	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	2010	2.660314E+07	13235.39	-4.829	2010	2.576645	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

3 DICAMBA



Expected retention time: 12.07 minutes
Search window: 0.03 minutes
Internal standard component: 8 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

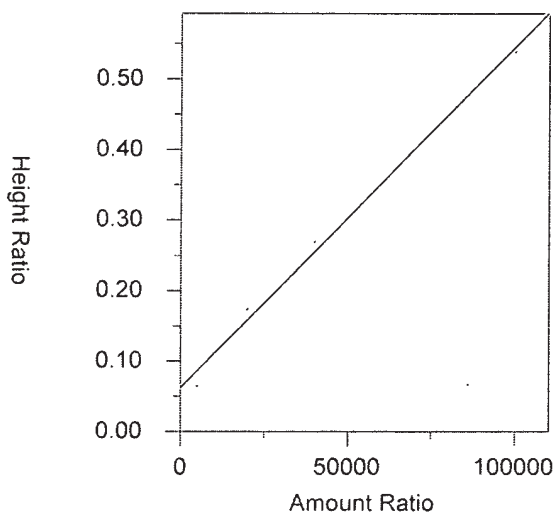
Single peak quantification by height

Y = 0.005410979 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9939634
Average error: 3.509%
Average CF: 0.005410979
RSD: 4.308%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	4.9	305319.3	62310.06	3.811	4.9	0.0275242	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	9.8	616290.5	62886.79	5.419	9.8	0.05590124	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	19.7	1227761	62322.89	1.298	19.7	0.1079798	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	39.3	2301711	58567.71	-1.480	39.3	0.2095036	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	98.3	5635526	57329.87	-3.090	98.3	0.5154635	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	196.6	1.032907E+07	52538.5	-5.958	196.6	1.000421	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

4 MCPP



Expected retention time:	12.479 minutes
Search window:	0.03 minutes
Internal standard component:	8 (DBOFB)
No retention time reference component	
No response proxy component	
Group number:	0
High alarm limit:	0
Low alarm limit:	0
Component constant:	0

Single peak quantification by height

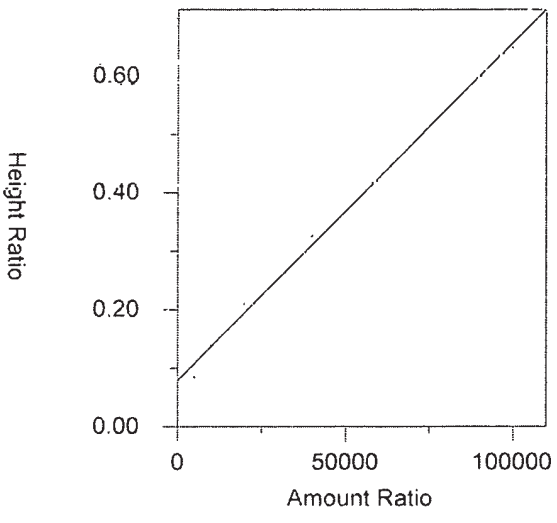
Y = 4.835912E-06 X + 0.06207189

Linear fit with equal weighting

Coefficient of determination:	0.9935448
Average error:	8.322%
Average CF:	8.964442E-06
RSD:	34.516%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	5004	717370.8	143.3595	-25.038	5004	0.06467018	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-2·
2	10008	1227418	122.6437	0.783	10008	0.1113342	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-2·
3	20016	1973646	98.60342	9.260	20016	0.1735794	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-2·
4	40032	2954836	73.81185	5.198	40032	0.2689515	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-2·
5	100080	5890508	58.85799	-1.330	100080	0.5387859	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-2·
6	(200160)	(9569284)	--	--	200160	9569284	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-2·

5 MCPA



Expected retention time:	12.863 minutes
Search window:	0.03 minutes
Internal standard component:	8 (DBOFB)
No retention time reference component	
No response proxy component	
Group number:	0
High alarm limit:	0
Low alarm limit:	0
Component constant:	0

Single peak quantification by height

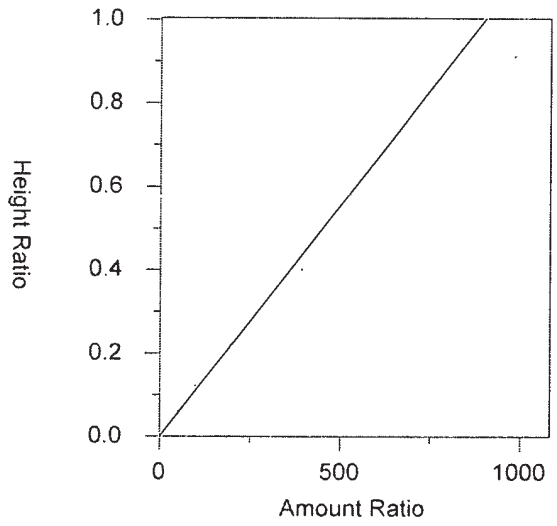
Y = 5.798257E-06 X + 0.07889777

Linear fit with equal weighting

Coefficient of determination:	0.9947603
Average error:	7.346%
Average CF:	1.118598E-05
RSD:	37.811%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	4990	935168.3	187.4085	-21.818	4990	0.08430438	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DI
2	9979	1530045	153.3265	1.481	9979	0.1387842	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DI
3	19958	2373250	118.9122	7.247	19958	0.208724	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DI
4	39916	3578818	89.65873	4.964	39916	0.3257469	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DI
5	99790	7100900	71.15843	-1.218	99790	0.6494965	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DI
6	(199580)	(1.183941E+07)	--	--	199580	1.183941E+07	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DI

6 2,4-DP



Expected retention time: 13.455 minutes
Search window: 0.03 minutes
Internal standard component: 8 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

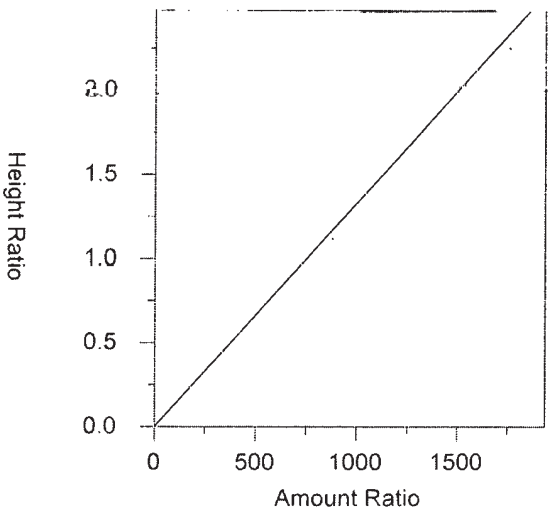
Single peak quantification by height

Y = 0.001111501 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9279918
Average error: 9.789%
Average CF: 0.001111501
RSD: 12.501%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	49.2	682185.7	13865.56	12.457	49.2	0.06149828	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DI
2	98.3	1343982	13672.25	11.575	98.3	0.1219072	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DI
3	196.6	2495584	12693.71	0.440	196.6	0.2194831	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DI
4	393.2	4418721	11237.85	-7.973	393.2	0.4021955	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DI
5	983	9974529	10147.03	-16.499	983	0.9123381	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DI
6	(1966)	(1.686066E+07)	--	--	1966	1.686066E+07	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DI

7 2,4-D



Expected retention time: 13.898 minutes
Search window: 0.03 minutes
Internal standard component: 8 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

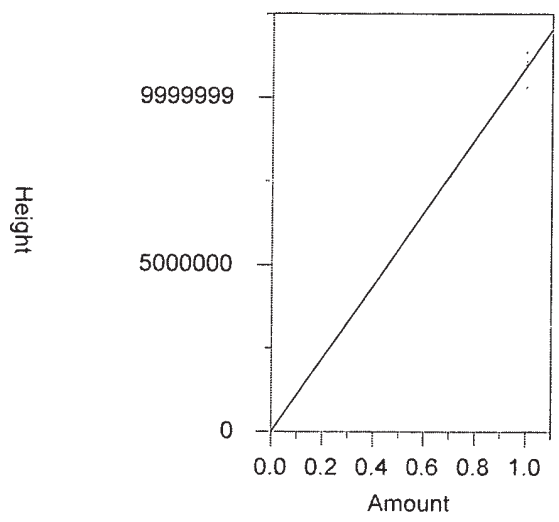
Single peak quantification by height

Y = 0.001328755 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9969206
Average error: 4.296%
Average CF: 0.001328755
RSD: 5.035%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	44	678951.3	15430.71	4.689	44	0.06120671	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	88	1377651	15655.13	6.868	88	0.1249612	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	176	2694477	15309.53	1.332	176	0.2369754	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	352	4894198	13903.97	-4.757	352	0.4454738	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	880	1.223129E+07	13899.19	-4.323	880	1.118757	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	1760	2.322572E+07	13196.43	-3.809	1760	2.249525	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

8 DBOFB ** Internal standard component **



Expected retention time: 14.235 minutes
Search window: 0.03 minutes
No internal standard component
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

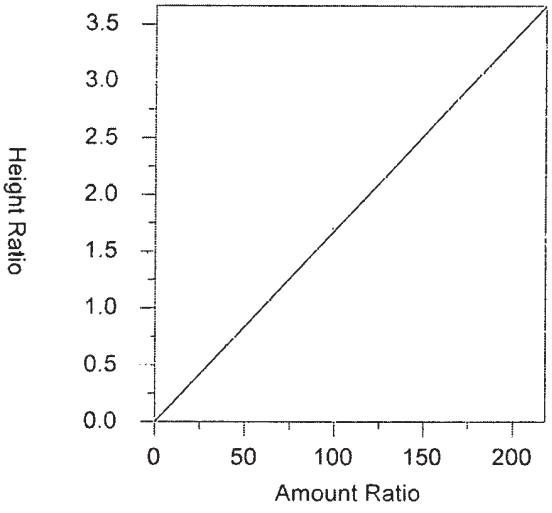
Single peak quantification by height

Y = 1.09553E+07 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0
Average error: 1.987%
Average CF: 1.09553E+07
RSD: 3.149%

Level	Amount	Response	Cal Factor	Error, %	Source
1	1	1.109276E+07	1.109276E+07	1.255	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304
2	1	1.102463E+07	1.102463E+07	0.633	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304
3	1	1.137028E+07	1.137028E+07	3.788	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304
4	1	1.09865E+07	1.09865E+07	0.285	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304
5	1	1.093293E+07	1.093293E+07	-0.204	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304
6	1	1.032472E+07	1.032472E+07	-5.756	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304

9 PCP



Expected retention time: 15.094 minutes
Search window: 0.03 minutes
Internal standard component: 8 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

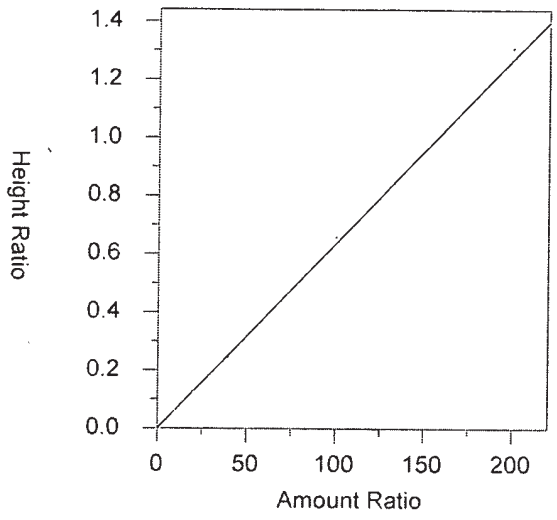
Single peak quantification by height

Y = 0.01680253 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9997659
Average error: 2.525%
Average CF: 0.01680253
RSD: 3.651%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	5	873142.1	174628.4	-6.308	5	0.07871279	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	9.9	1810691	182898.1	-1.265	9.9	0.1642405	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	19.8	3946770	199331.8	4.335	19.8	0.3471128	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	39.6	7370801	186131.3	0.829	39.6	0.6708962	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	99.1	1.864217E+07	188114.7	2.403	99.1	1.705139	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	198.2	3.438624E+07	173492.6	0.006	198.2	3.330477	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

10 2,4,5-TP



Expected retention time: 15.386 minutes
Search window: 0.03 minutes
Internal standard component: 8 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

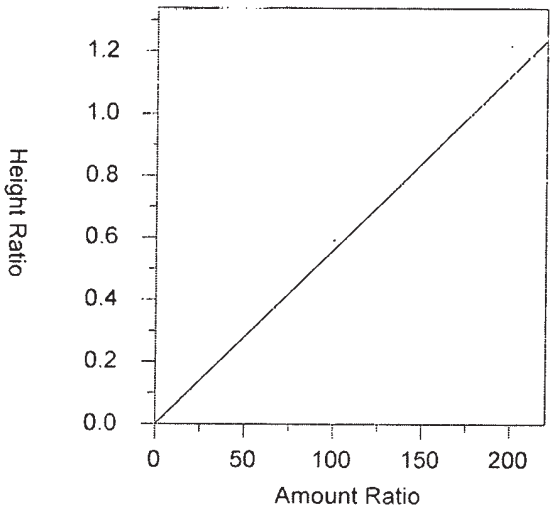
Single peak quantification by height

Y = 0.006360548 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9984261
Average error: 2.472%
Average CF: 0.006360548
RSD: 2.976%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	5	343771.6	68754.32	-2.554	5	0.03099063	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEF
2	10	694634.1	69463.41	-0.940	10	0.06300747	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEF
3	20	1461688	73084.4	1.055	20	0.1285534	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEF
4	40	2685560	67139	-3.923	40	0.2444418	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEF
5	100	7194175	71941.75	3.455	100	0.6580281	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEF
6	200	1.351592E+07	67579.6	2.907	200	1.309083	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEF

11 2,4,5-T



Expected retention time: 15.91 minutes
Search window: 0.03 minutes
Internal standard component: 8 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

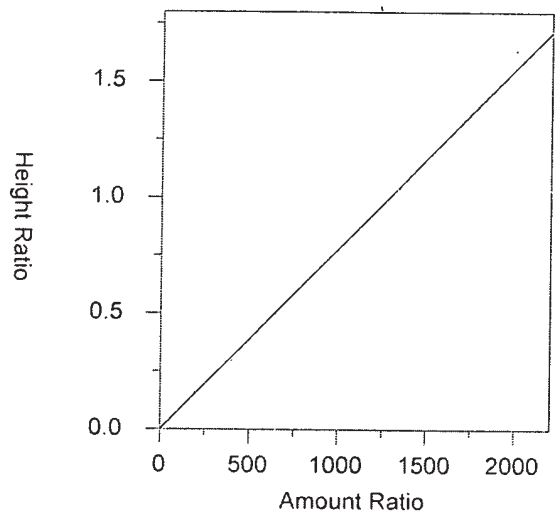
Single peak quantification by height

Y = 0.0056143 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9909356
Average error: 4.557%
Average CF: 0.0056143
RSD: 5.786%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	5	288078.3	57615.66	-7.486	5	0.02596994	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEF
2	10	602756.8	60275.68	-2.617	10	0.05467365	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEF
3	20	1254887	62744.35	-1.710	20	0.1103655	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEF
4	40	2421446	60536.15	-1.857	40	0.2204019	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEF
5	100.1	6470386	64639.22	5.309	100.1	0.5918254	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEF
6	200.2	1.257523E+07	62813.34	8.362	200.2	1.217973	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEF

12 2,4-DB



Expected retention time: 16.742 minutes
Search window: 0.03 minutes
Internal standard component: 8 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

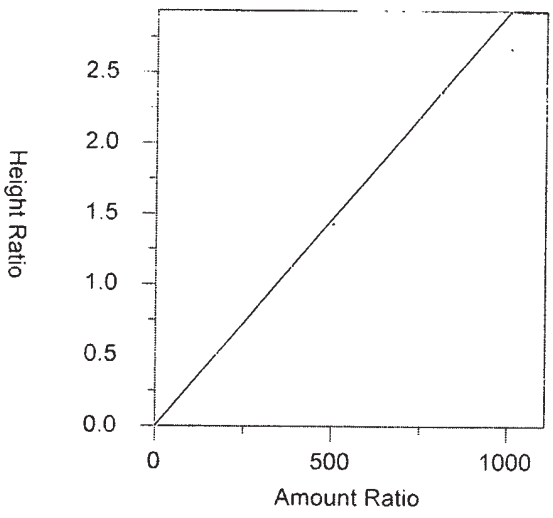
Single peak quantification by height

Y = 0.0007789058 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9968689
Average error: 2.500%
Average CF: 0.0007789058
RSD: 3.274%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	50.1	424860.3	8480.246	-1.851	50.1	0.03830069	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	100.1	865643.3	8647.785	0.706	100.1	0.07851904	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	200.2	1807705	9029.496	1.955	200.2	0.1589851	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	400.4	3268072	8162.018	-4.621	400.4	0.2974625	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	1001	8436519	8428.091	-1.029	1001	0.7716613	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	2002	1.687937E+07	8431.254	4.840	2002	1.63485	Manual

13 DINOSEB



Expected retention time: 16.931 minutes
Search window: 0.03 minutes
Internal standard component: 8 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

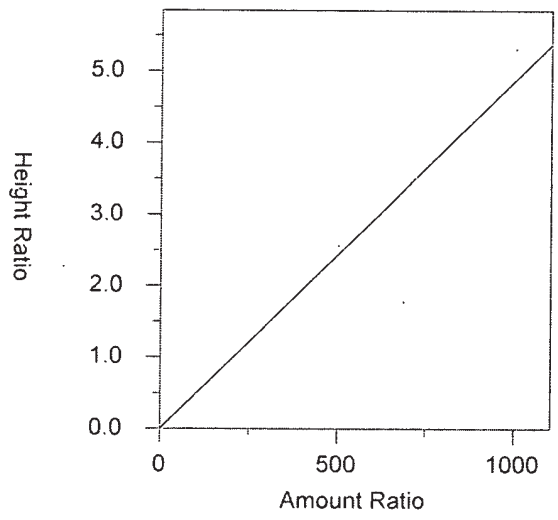
Single peak quantification by height

Y = 0.002921449 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9853474
Average error: 4.915%
Average CF: 0.002921449
RSD: 5.881%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	25.2	863126.1	34251.04	5.690	25.2	0.07780986	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	50.4	1699388	33718.02	4.689	50.4	0.1541447	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	100.7	3491085	34668.18	4.367	100.7	0.307036	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	201.4	6284589	31204.51	-2.779	201.4	0.5720283	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	503.5	1.563065E+07	31043.99	-2.805	503.5	1.429685	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	1007	2.759162E+07	27399.82	-9.161	1007	2.672384	Manual

14 Picloram



Expected retention time:	17.889 minutes
Search window:	0.03 minutes
Internal standard component:	8 (DBOFB)
No retention time reference component	
No response proxy component	
Group number:	0
High alarm limit:	0
Low alarm limit:	0
Component constant:	0

Single peak quantification by height

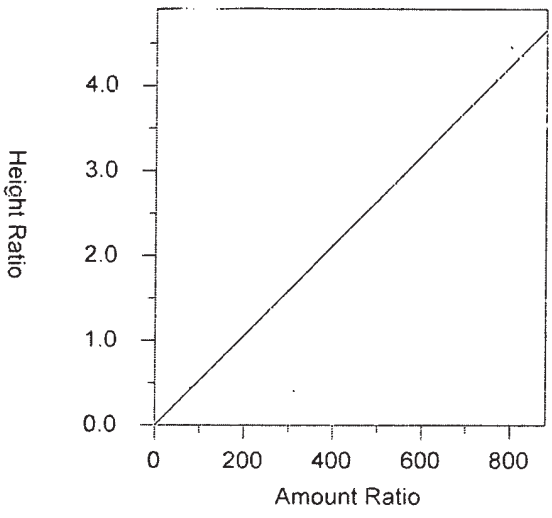
Y = 0.004867646 X + 0

Average CF fit with equal weighting, forced to origin

Coefficient of determination:	0.9902943
Average error:	5.279%
Average CF:	0.004867646
RSD:	6.957%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	25.1	1210413	48223.63	-10.690	25.1	0.1091174	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	50.2	2566900	51133.46	-4.716	50.2	0.2328332	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	100.4	5681229	56585.95	2.239	100.4	0.499656	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	200.7	1.068681E+07	53247.68	-0.431	200.7	0.972722	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	501.8	2.799226E+07	55783.7	4.822	501.8	2.560362	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	1003.5	5.485869E+07	54667.35	8.775	1003.5	5.313334	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

15 Hexachlorophene



Expected retention time:	26.133 minutes
Search window:	0.03 minutes
Internal standard component:	8 (DBOFB)
No retention time reference component	
No response proxy component	
Group number:	0
High alarm limit:	0
Low alarm limit:	0
Component constant:	0

Single peak quantification by height

Y = 0.005304662 X + 0

Average CF fit with equal weighting, forced to origin

Coefficient of determination:	0.996512
Average error:	3.042%
Average CF:	0.005304662
RSD:	4.397%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	20	1091063	54553.15	-7.291	20	0.09835812	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	40	2313000	57825	-1.123	40	0.209803	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	80	5007937	62599.21	3.786	80	0.440441	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	160	9258325	57864.53	-0.712	160	0.8427001	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	400	2.322244E+07	58056.1	0.105	400	2.124082	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	800	4.610935E+07	57636.69	5.236	800	4.465918	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850B Calibration File: 15HERB1830401B

GC Column (2) : ZB 35 ID: 0.32 (mm)

ICAL Date(s) Analyzed: 10/31/2018 10/31/2018

COMPOUND	RT OF STANDARDS						MIDPOINT RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6		FROM	TO
Dalapon	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.83	3.89
2,4-DCAA	12.53	12.52	12.52	12.51	12.50	12.50	12.52	12.49	12.55
Dicamba	12.89	12.88	12.88	12.87	12.87	12.87	12.88	12.85	12.91
Mcpp	12.94	12.94	12.93	12.93	12.93	12.95	12.93	12.90	12.96
Mcpa	13.46	13.46	13.46	13.46	13.46	13.48	13.46	13.43	13.49
2,4-DP	13.99	13.99	13.99	13.98	13.98	13.97	13.99	13.96	14.02
2,4-D	14.61	14.61	14.61	14.61	14.61	14.60	14.61	14.58	14.64
PCP	15.31	15.31	15.31	15.30	15.30	15.29	15.31	15.28	15.34
2,4,5-TP	15.80	15.80	15.80	15.80	15.80	15.80	15.80	15.77	15.83
2,4,5-T	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.47	16.53
Dinoseb	16.94	16.94	16.94	16.94	16.93	16.93	16.94	16.91	16.97
2,4-DB	17.21	17.21	17.21	17.21	17.20	17.20	17.21	17.18	17.24
Picloram	19.51	19.51	19.51	19.51	19.50	19.50	19.51	19.48	19.54
Hexachlorophene	26.56	26.56	26.55	26.56	26.55	26.55	26.55	26.52	26.58

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850B Calibration File: 15HERB1830401B

GC Column (2) : ZB 35 ID: 0.32 (mm)

ICAL Date(s) Analyzed: 10/31/2018 10/31/2018

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
Dalapon	1.13E-03	1.10E-03	1.05E-03	1.00E-03	1.03E-03	9.58E-04	1.05E-03	6
2,4-DCAA	1.53E-03	1.46E-03	1.34E-03	1.29E-03	1.34E-03	1.30E-03	1.38E-03	7
Dicamba	5.99E-03	5.96E-03	5.75E-03	5.70E-03	5.62E-03	5.33E-03	5.73E-03	4
Mcpp	6.00E-06	6.00E-06	6.00E-06	5.00E-06	6.00E-06	5.00E-06	5.67E-06	6
Mcpa	9.00E-06	9.00E-06	8.00E-06	7.00E-06	7.00E-06	7.00E-06	7.83E-06	14
2,4-DP	1.45E-03	1.34E-03	1.25E-03	1.11E-03	1.08E-03	9.99E-04	1.20E-03	14
2,4-D	1.45E-03	1.44E-03	1.38E-03	1.31E-03	1.37E-03	1.33E-03	1.38E-03	4
PCP	1.71E-02	1.83E-02	1.80E-02	1.75E-02	1.79E-02	1.72E-02	1.77E-02	3
2,4,5-TP	6.58E-03	6.71E-03	6.47E-03	6.40E-03	6.68E-03	6.28E-03	6.52E-03	3
2,4,5-T	5.63E-03	5.85E-03	5.75E-03	5.64E-03	5.89E-03	5.78E-03	5.76E-03	2
Dinoseb	3.16E-03	3.14E-03	3.07E-03	2.85E-03	2.88E-03	2.68E-03	2.96E-03	6
2,4-DB	8.44E-04	8.42E-04	8.12E-04	7.72E-04	8.20E-04	8.10E-04	8.17E-04	3
Picloram	4.73E-03	5.09E-03	5.25E-03	5.14E-03	5.48E-03	5.54E-03	5.20E-03	6
Hexachlorophene	5.26E-03	5.24E-03	5.46E-03	5.44E-03	5.41E-03	5.55E-03	5.39E-03	2

File Name: V:\CP15\15HERB1830401B.CAL
Version: 35

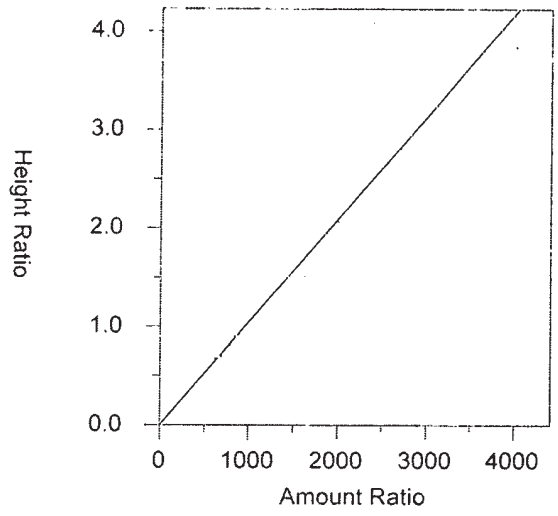
Creator:
Description:
Reason for change:

Internal standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 0
Amount units: PPB
No default component

Method of calculating data point averages: Current update equal to cal data
No calibration update report

All levels are normal data points.

1 Dalapon



Expected retention time: 3.855 minutes
Search window: 0.03 minutes
Internal standard component: 6 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

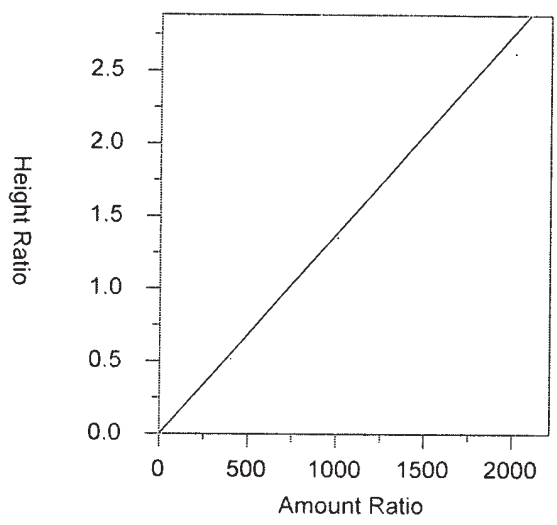
Single peak quantification by height

$Y = 0.001045819 X + 0$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9881734
Average error: 4.685%
Average CF: 0.001045819
RSD: 6.028%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	100	1231728	12317.28	7.923	100	0.1128679	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24'
2	201	2383770	11859.55	5.412	201	0.2215859	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24'
3	401	4787344	11938.51	0.719	401	0.4223905	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24'
4	802	8878889	11070.93	-4.060	802	0.8046976	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24'
5	2005	2.213928E+07	11042.04	-1.631	2005	2.062678	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24'
6	4010	4.138906E+07	10321.46	-8.364	4010	3.84297	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24'

2 DCAA



Expected retention time: 12.516 minutes
Search window: 0.03 minutes
Internal standard component: 6 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

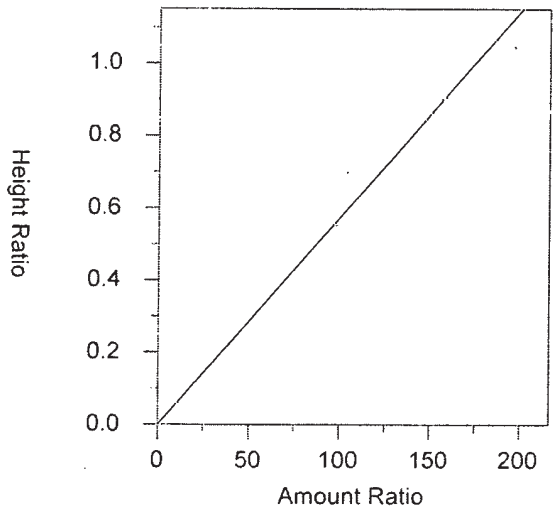
Single peak quantification by height

Y = 0.001377822 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9950715
Average error: 5.543%
Average CF: 0.001377822
RSD: 6.798%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	50	832311	16646.22	10.708	50	0.07626778	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	101	1585699	15699.99	5.921	101	0.1474003	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	201	3060839	15228.05	-2.485	201	0.2700598	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	402	5720252	14229.48	-6.401	402	0.518429	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	1005	1.450293E+07	14430.78	-2.419	1005	1.351213	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	2010	2.823902E+07	14049.26	-5.324	2010	2.62199	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

3 DICAMBA



Expected retention time: 12.878 minutes
Search window: 0.03 minutes
Internal standard component: 6 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

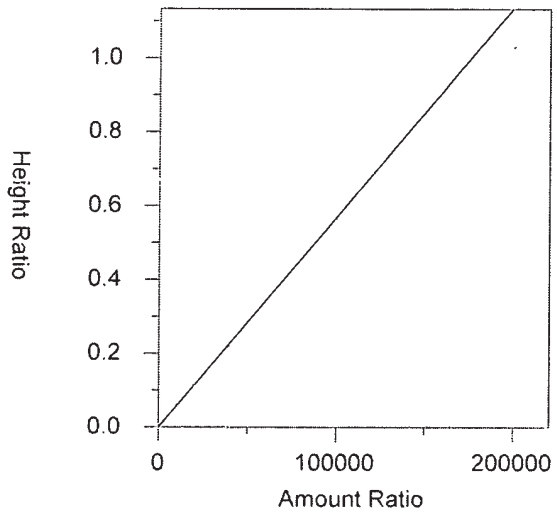
Single peak quantification by height

Y = 0.005724836 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9920483
Average error: 3.044%
Average CF: 0.005724836
RSD: 4.234%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	4.9	320092.3	65324.96	4.561	4.9	0.02933126	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	9.8	628317.6	64114.04	4.104	9.8	0.05840594	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	19.7	1284205	65188.07	0.467	19.7	0.1133062	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	39.3	2472484	62913.08	-0.402	39.3	0.2240823	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	98.3	5933390	60360.02	-1.768	98.3	0.5528036	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	196.6	1.127766E+07	57363.48	-6.963	196.6	1.04713	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

4 MCPP



Expected retention time:	12.932 minutes
Search window:	0.03 minutes
Internal standard component:	6 (DBOFB)
No retention time reference component	
No response proxy component	
Group number:	0
High alarm limit:	0
Low alarm limit:	0
Component constant:	0

Single peak quantification by height

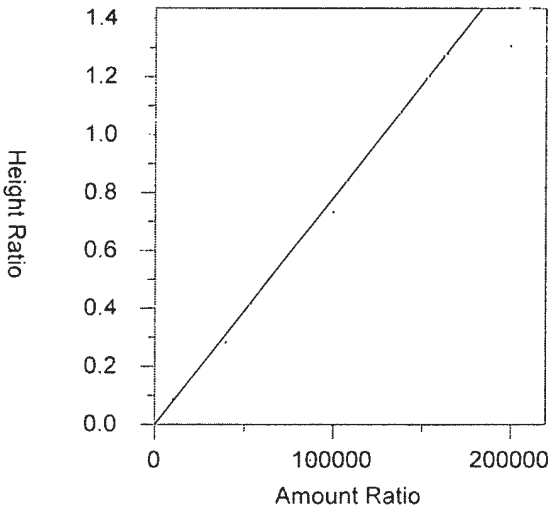
Y = 5.691065E-06 X + 0

Average CF fit with equal weighting, forced to origin

Coefficient of determination:	0.9843849
Average error:	4.643%
Average CF:	5.691065E-06
RSD:	6.298%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	5004	333254.5	66.59762	7.231	5004	0.03053736	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	10008	652304.4	65.17829	6.460	10008	0.06063565	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	20016	1294153	64.65592	0.238	20016	0.114184	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	40032	2426446	60.61266	-3.474	40032	0.2199099	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	100080	6058388	60.53545	-0.898	100080	0.5644494	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	200160	1.109583E+07	55.4348	-9.558	200160	1.030247	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

5 MCPA



Expected retention time:	13.459 minutes
Search window:	0.03 minutes
Internal standard component:	6 (DBOFB)
No retention time reference component	
No response proxy component	
Group number:	0
High alarm limit:	0
Low alarm limit:	0
Component constant:	0

Single peak quantification by height

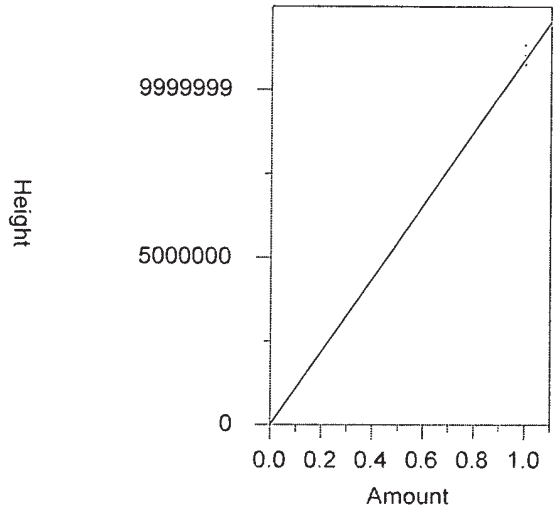
Y = 7.82698E-06 X + 0

Average CF fit with equal weighting, forced to origin

Coefficient of determination:	0.9437551
Average error:	10.952%
Average CF:	7.82698E-06
RSD:	13.880%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	4990	512483.5	102.7021	20.238	4990	0.04696078	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEP1
2	9979	946254.9	94.82462	12.617	9979	0.08796013	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEP1
3	19958	1753191	87.84402	-0.977	19958	0.1546852	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEP1
4	39916	3123468	78.25103	-9.391	39916	0.2830813	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEP1
5	99790	7870239	78.86801	-6.120	99790	0.7332564	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEP1
6	199580	1.40704E+07	70.50005	-16.367	199580	1.306435	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEP1

6 DBOFB ** Internal standard component **



Expected retention time: 13.715 minutes
Search window: 0.03 minutes
No internal standard component
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

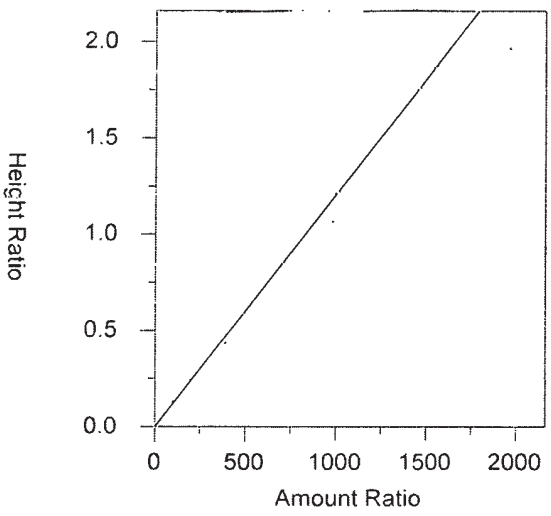
Single peak quantification by height

Y = 1.092365E+07 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0
Average error: 1.588%
Average CF: 1.092365E+07
RSD: 2.119%

Level	Amount	Response	Cal Factor	Error, %	Source
1	1	1.091301E+07	1.091301E+07	-0.097	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304
2	1	1.075777E+07	1.075777E+07	-1.518	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304
3	1	1.133393E+07	1.133393E+07	3.756	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304
4	1	1.103382E+07	1.103382E+07	1.009	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304
5	1	1.073327E+07	1.073327E+07	-1.743	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304
6	1	1.077007E+07	1.077007E+07	-1.406	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304

7 2,4-DP



Expected retention time: 13.985 minutes
Search window: 0.03 minutes
Internal standard component: 6 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

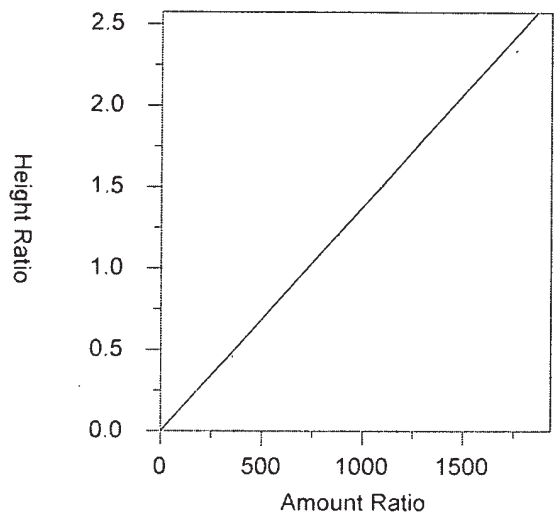
Single peak quantification by height

Y = 0.001204806 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.933893
Average error: 11.671%
Average CF: 0.001204806
RSD: 14.159%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	49.2	777028.1	15793.25	20.119	49.2	0.071202	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	98.3	1420029	14445.87	11.456	98.3	0.1320003	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	196.6	2776951	14124.88	3.440	196.6	0.2450122	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	393.2	4812606	12239.59	-7.929	393.2	0.4361686	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	983	1.14386E+07	11636.42	-10.015	983	1.065714	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	1966	2.115571E+07	10760.79	-17.071	1966	1.964306	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

8 2,4-D



Expected retention time: 14.609 minutes
Search window: 0.03 minutes
Internal standard component: 6 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

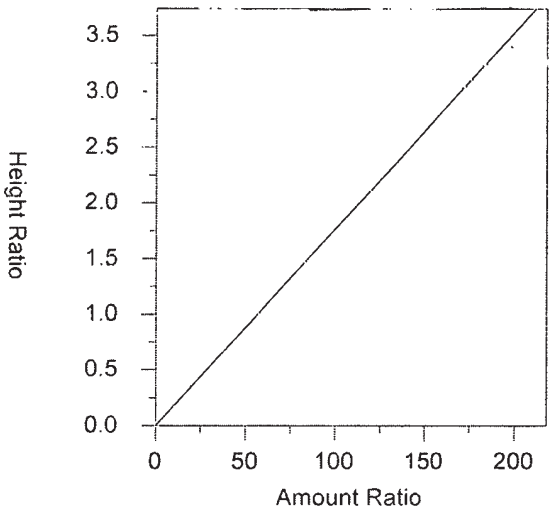
Single peak quantification by height

Y = 0.001380125 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9977708
Average error: 3.190%
Average CF: 0.001380125
RSD: 4.109%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	44	695226.4	15800.6	4.908	44	0.0637062	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	88	1366650	15530.11	4.601	88	0.1270384	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	176	2754721	15651.82	0.061	176	0.2430508	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	352	5093714	14470.78	-4.973	352	0.4616456	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	880	1.291685E+07	14678.24	-0.911	880	1.20344	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	1760	2.519645E+07	14316.17	-3.686	1760	2.339488	Manual

9 PCP



Expected retention time: 15.306 minutes
Search window: 0.03 minutes
Internal standard component: 6 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

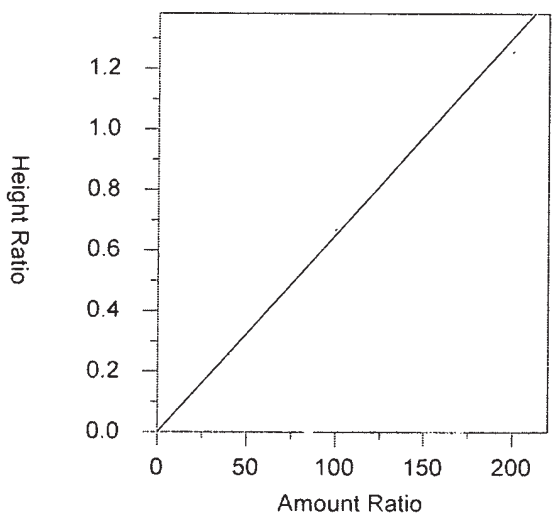
Single peak quantification by height

Y = 0.01766282 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9986944
Average error: 2.357%
Average CF: 0.01766282
RSD: 2.781%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	5	933507.4	186701.5	-3.140	5	0.08554078	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	9.9	1950152	196985.1	3.670	9.9	0.1812785	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	19.8	4042969	204190.4	1.999	19.8	0.3567138	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	39.6	7636133	192831.7	-1.055	39.6	0.6920661	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	99.1	1.905082E+07	192238.3	1.402	99.1	1.774932	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	198.2	3.66196E+07	184760.8	-2.875	198.2	3.400126	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

10 2,4,5-TP



Expected retention time: 15.8 minutes
Search window: 0.03 minutes
Internal standard component: 6 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

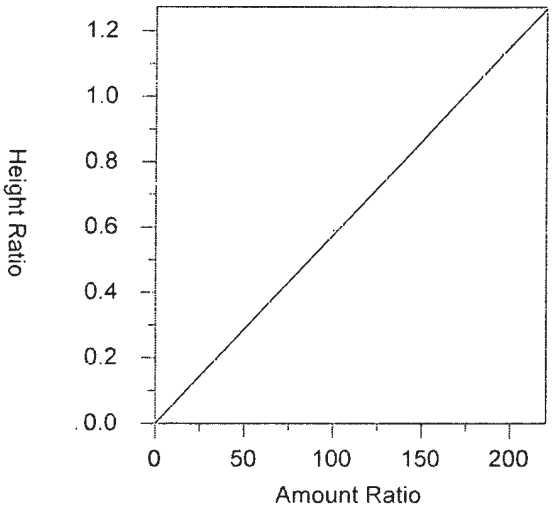
Single peak quantification by height

Y = 0.006518227 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9977756
Average error: 2.110%
Average CF: 0.006518227
RSD: 2.562%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	5	359201	71840.2	0.994	5	0.03291493	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	10	721492.6	72149.27	2.892	10	0.06706712	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	20	1465761	73288.05	-0.797	20	0.129325	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	40	2822618	70565.45	-1.885	40	0.2558151	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	100	7167274	71672.74	2.445	100	0.6677624	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	200	1.352809E+07	67640.45	-3.648	200	1.256082	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

11 2,4,5-T



Expected retention time: 16.503 minutes
Search window: 0.03 minutes
Internal standard component: 6 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

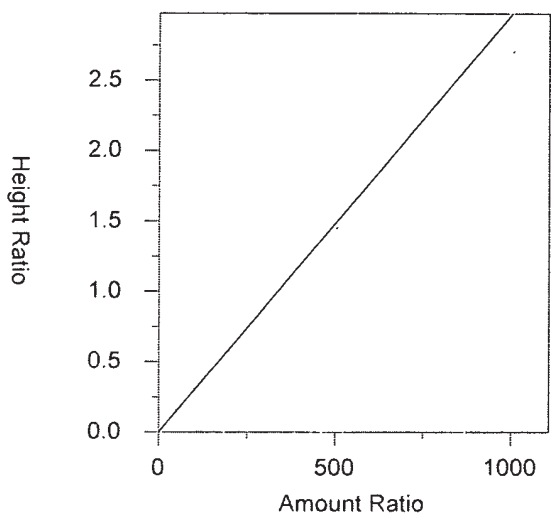
Single peak quantification by height

Y = 0.005758906 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9997687
Average error: 1.451%
Average CF: 0.005758906
RSD: 1.854%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	5	307396	61479.2	-2.176	5	0.02816785	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEP1
2	10	629615.4	62961.54	1.628	10	0.05852657	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEP1
3	20	1304147	65207.35	-0.098	20	0.1150657	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEP1
4	40	2488851	62221.27	-2.080	40	0.2255657	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEP1
5	100.1	6329542	63232.19	2.298	100.1	0.5897124	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEP1
6	200.2	1.24703E+07	62289.21	0.428	200.2	1.157866	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEP1

12 DINOSEB



Expected retention time: 16.936 minutes
Search window: 0.03 minutes
Internal standard component: 6 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

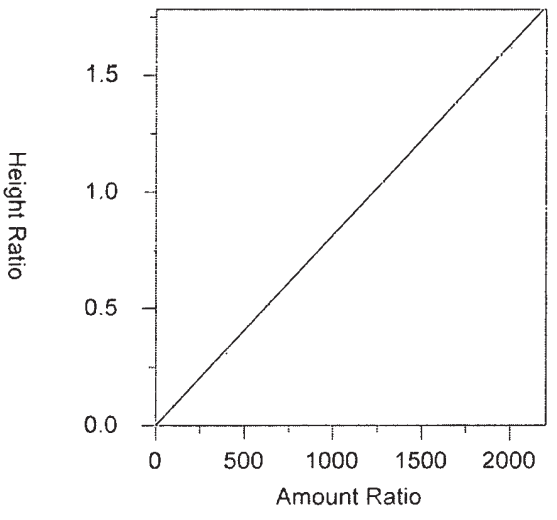
Single peak quantification by height

Y = 0.002964897 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9842514
Average error: 5.443%
Average CF: 0.002964897
RSD: 6.441%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	25.2	869271.2	34494.89	6.611	25.2	0.07965457	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	50.4	1704537	33820.18	6.034	50.4	0.1584471	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	100.7	3508585	34841.96	3.684	100.7	0.3095647	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	201.4	6324136	31400.88	-4.014	201.4	0.5731593	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	503.5	1.556533E+07	30914.26	-2.856	503.5	1.450195	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	1007	2.911423E+07	28911.85	-9.458	1007	2.703254	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

13 2,4-DB



Expected retention time: 17.209 minutes
Search window: 0.03 minutes
Internal standard component: 6 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

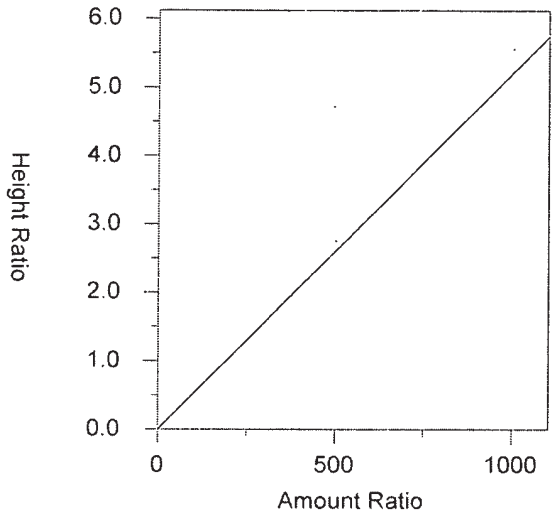
Single peak quantification by height

Y = 0.0008163974 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.99972
Average error: 2.297%
Average CF: 0.0008163974
RSD: 3.235%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	50.1	461590.6	9213.386	3.413	50.1	0.04229728	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	100.1	906211.7	9053.063	3.079	100.1	0.08423787	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	200.2	1841865	9200.125	-0.571	200.2	0.1625089	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	400.4	3409265	8514.648	-5.477	400.4	0.3089832	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	1001	8806290	8797.492	0.398	1001	0.8204666	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	2002	1.745469E+07	8718.626	-0.842	2002	1.620666	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

14 Picloram



Expected retention time: 19.507 minutes
Search window: 0.03 minutes
Internal standard component: 6 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

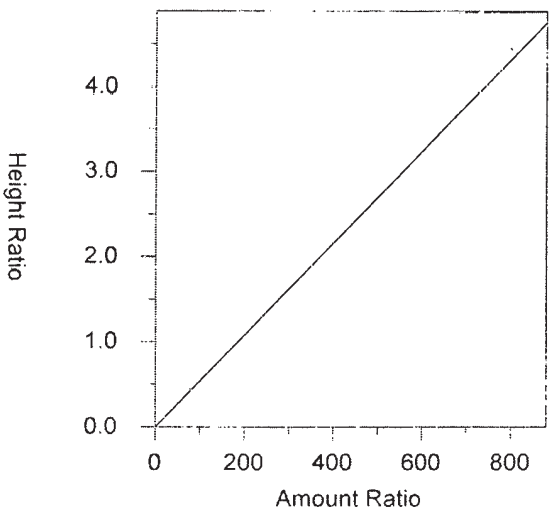
Single peak quantification by height

Y = 0.005204885 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9939634
Average error: 4.220%
Average CF: 0.005204885
RSD: 5.701%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	25.1	1294424	51570.68	-9.208	25.1	0.1186129	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	50.2	2748069	54742.41	-2.233	50.2	0.2554497	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	100.4	5972955	59491.58	0.847	100.4	0.5269977	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	200.7	1.138575E+07	56730.2	-1.218	200.7	1.031896	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	501.8	2.951671E+07	58821.66	5.292	501.8	2.75002	Manual
6	1003.5	5.992133E+07	59712.34	6.521	1003.5	5.56369	Manual

15 Hexachlorophene



Expected retention time: 26.553 minutes
Search window: 0.03 minutes
Internal standard component: 6 (DBOFB)
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by height

Y = 0.005393045 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.998834
Average error: 1.769%
Average CF: 0.005393045
RSD: 2.246%

Level	Amount	Response	Cal Factor	Error, %	Amount Ratio	Response Ratio	Source
1	20	1148370	57418.5	-2.440	20	0.1052294	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
2	40	2254160	56354	-2.867	40	0.2095378	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
3	80	4950506	61881.32	1.238	80	0.4367864	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
4	160	9599394	59996.21	0.824	160	0.8699973	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
5	400	2.321953E+07	58048.82	0.283	400	2.163323	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI
6	800	4.784262E+07	59803.27	2.961	800	4.442183	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEI

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850A

GC Column (1) : ZB XLB ID: .32 (mm)

Lab File ID: 15HERB18304001.013.RAW

Lab Standard ID: ICHBXAA

Calibration: 15HERB1830401

Date Analyzed: 10/31/18

Time Analyzed: 22:13

Initial Calibration: 15HERB1830401

Init. Calib Date(s): 10/31/18 10/31/18

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Dalapon	3.72	3.70	3.76	415.23	481.60	-14
2,4-DCAA	11.94	11.91	11.97	186.56	201.00	-7
Dicamba	12.07	12.04	12.10	20.27	18.94	7
Mcpp	12.48	12.45	12.51	21623.53	19186.00	13
Mcpa	12.86	12.83	12.89	21327.76	19084.00	12
2,4-DP	13.45	13.43	13.49	214.13	192.80	11
2,4-D	13.90	13.87	13.93	195.75	187.20	5
PCP	15.09	15.06	15.12	93.48	93.34	0
2,4,5-TP	15.39	15.36	15.42	20.49	18.64	10
2,4,5-T	15.91	15.88	15.94	19.97	18.62	7
2,4-DB	16.74	16.71	16.77	184.24	181.80	1
Dinoseb	16.93	16.90	16.96	84.30	93.34	-10
Picloram	17.89	17.86	17.92	198.75	183.20	8
Hexachlorophene	26.14	26.10	26.16	109.82	99.20	11

Compounds 14

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850B

GC Column (2) : ZB 35 ID: .32 (mm)

Lab File ID: 15HERB18304001B.013.RAW

Lab Standard ID: ICHBXAA

Calibration: 15HERB1830401B

Date Analyzed: 10/31/18

Time Analyzed: 22:13

Initial Calibration: 15HERB1830401B

Init. Calib Date(s): 10/31/18 10/31/18

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Dalapon	3.85	3.83	3.89	418.96	481.60	-13
2,4-DCAA	12.52	12.49	12.55	194.23	201.00	-3
Dicamba	12.88	12.85	12.91	20.43	18.94	8
Mcpp	12.93	12.90	12.96	19502.99	19186.00	2
Mcpa	13.46	13.43	13.49	18662.05	19084.00	-2
2,4-DP	13.99	13.96	14.02	204.79	192.80	6
2,4-D	14.61	14.58	14.64	190.48	187.20	2
PCP	15.31	15.28	15.34	87.44	93.34	-6
2,4,5-TP	15.80	15.77	15.83	20.15	18.64	8
2,4,5-T	16.50	16.47	16.53	19.94	18.62	7
Dinoseb	16.94	16.91	16.97	82.41	93.34	-12
2,4-DB	17.21	17.18	17.24	181.39	181.80	0
Picloram	19.51	19.48	19.54	190.70	183.20	4
Hexachlorophene	26.56	26.52	26.58	111.72	99.20	13

Compounds 14

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850A Date Analyzed: 11/01/18

GC Column (1) : ZB XLB ID: .32 (mm) Time Analyzed: 18:03

Lab File ID: 15HERB18304002.006.RAW Initial Calibration: 15HERB1830401

Lab Standard ID: HERB3UH Init. Calib Date(s): 10/31/18 10/31/18

Calibration: 15HERB1830401

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Dalapon	3.72	3.70	3.76	394.20	401.00	-2
2,4-DCAA	11.94	11.91	11.97	199.45	201.00	-1
Dicamba	12.07	12.04	12.10	20.22	19.66	3
Mcpp	12.48	12.45	12.51	22861.76	20016.00	14
Mcpa	12.86	12.83	12.89	21977.63	19958.00	10
2,4-DP	13.45	13.43	13.49	198.63	196.60	1
2,4-D	13.90	13.87	13.93	179.14	176.00	2
PCP	15.09	15.06	15.12	20.37	19.82	3
2,4,5-TP	15.38	15.36	15.42	20.19	20.00	1
2,4,5-T	15.91	15.88	15.94	19.51	20.02	-3
2,4-DB	16.74	16.71	16.77	198.51	200.20	-1
Dinoseb	16.93	16.90	16.96	102.72	100.70	2
Picloram	17.89	17.86	17.92	102.22	99.96	2
Hexachlorophene	26.13	26.10	26.16	81.12	80.00	1

Compounds 14

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850B Date Analyzed: 11/01/18

GC Column (2) : ZB 35 ID: .32 (mm) Time Analyzed: 18:03

Lab File ID: 15HERB18304002B.006.RAW Initial Calibration: 15HERB1830401B

Lab Standard ID: HERB3UH Init. Calib Date(s): 10/31/18 10/31/18

Calibration: 15HERB1830401B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Dalapon	3.85	3.83	3.89	403.12	401.00	1
2,4-DCAA	12.51	12.49	12.55	200.24	201.00	0
Dicamba	12.88	12.85	12.91	20.03	19.66	2
Mcpp	12.93	12.90	12.96	20397.04	20016.00	2
Mcpa	13.46	13.43	13.49	20252.76	19958.00	1
2,4-DP	13.98	13.96	14.02	200.78	196.60	2
2,4-D	14.61	14.58	14.64	176.59	176.00	0
PCP	15.30	15.28	15.34	20.59	19.82	4
2,4,5-TP	15.80	15.77	15.83	20.31	20.00	2
2,4,5-T	16.50	16.47	16.53	19.87	20.02	-1
Dinoseb	16.93	16.91	16.97	101.98	100.70	1
2,4-DB	17.21	17.18	17.24	197.56	200.20	-1
Picloram	19.50	19.48	19.54	102.23	99.96	2
Hexachlorophene	26.55	26.52	26.58	85.26	80.00	7

Compounds 14

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: HIBLKX1824B HIBLKRQ ID: RQ **Batchnumber: 1830499999**
Sample Amount: 1000 Total Volume: 10 ml Analyst: 13378 SDG: State:
Analyses: 10407

Analysis Report (A)

Injected on : Nov 01, 2018 18:36:36
Instrument : CP15--19850A
Result file : 15HERB18304002.007.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 67% (34-142) Conc.: 2.679998

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.70	3.76	5948	0.007610
DCAA	11.91	11.97	11.97	3773492	2.679998
MCPA	12.83	12.89	12.89	11916	-134.105600
2,4-DP	13.43	13.47	13.49	8068	0.006944
2,4-D	13.87	13.91	13.93	11183	0.008051
DBOFB	14.21	14.23	14.26	10453330	0.001000
PCP	15.06	15.10	15.12	6512	0.000371
2,4,5-T	15.88	15.92	15.94	10396	0.001771
2,4-DB	16.71	16.75	16.77	5880	0.007222
DINOSEB	16.90	16.94	16.96	17159	0.005619
Picloram	17.86	17.90	17.92	117249	0.023043
Hexachlorophene	26.10	26.14	26.16	111395	0.020089

Analysis Report (B)

Injected on : Nov 01, 2018 18:36:36
Instrument : CP15--19850B
Result file : 15HERB18304002B.007.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 62% (34-142) Conc.: 2.490873

Peak name	Min	R.T.	Max	Height	Amount
DCAA	12.49	12.53	12.55	3697180	2.490873
MCPA	13.43	13.46	13.49	1350	0.160055
DBOFB	13.69	13.72	13.75	10772730	0.001000
2,4-DP	13.96	13.99	14.01	9155	0.007053
2,4-D	14.58	14.62	14.64	11049	0.007431
PCP	15.28	15.31	15.34	8152	0.000428
2,4,5-TP	15.77	15.80	15.83	4811	0.000685
2,4,5-T	16.47	16.51	16.53	6503	0.001048
DINOSEB	16.91	16.94	16.97	15655	0.004901
2,4-DB	17.18	17.22	17.24	8622	0.009804
Picloram	19.48	19.51	19.54	145710	0.025987
Hexachlorophene	26.52	26.56	26.58	130851	0.022523

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Dalapon			<4	<1.8			
☐ DCAA	A	2.679998				7.32	
☑ DICAMBA			<0.3	<0.08			
☑ MCPP			<200	<50			
☑ MCPA			<200	<50			
☑ 2,4-DP	B	0.007053	<0.5	<0.16		1.57	
☑ 2,4-D	A	0.008051	<0.6	<0.25		8.01	
☐ DBOFB	A	0.001000				0.00	
☑ PCP	B	0.000428	<0.07	<0.027		14.44	
☑ 2,4,5-TP			<0.05	<0.01			
☑ 2,4,5-T	B	0.001048	<0.15	<0.065		51.30	**
☑ 2,4-DB	B	0.009804	<1.5	<0.63		30.32	
☑ DINOSEB	A	0.005619	<0.5	<0.18		13.64	
☑ Picloram	B	0.025987	<1	<0.36		12.01	
☑ Hexachlorophene	B	0.022523	<0.2	<0.18		11.42	

Units: ug/l

Reviewed by: [signature]
Date: 11/2/18

Verified by: Michele D. Hamilton
Michele D. Hamilton
Group Leader
Date: NOV 02 2018

%RPD = High - Low Amount divided by the Average times 100
** %Difference > 40, lower amount found reported
* Recovery outside QC Limits

Higher Amount Found unless RPD > 40

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850A Date Analyzed: 11/01/18

GC Column (1) : ZB XLB ID: .32 (mm) Time Analyzed: 23:34

Lab File ID: 15HERB18304002.016.RAW Initial Calibration: 15HERB1830401

Lab Standard ID: HERB3UI Init. Calib Date(s): 10/31/18 10/31/18

Calibration: 15HERB1830401

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Dalapon	3.72	3.70	3.76	405.06	401.00	1
2,4-DCAA	11.94	11.91	11.97	201.42	201.00	0
Dicamba	12.07	12.04	12.10	19.48	19.66	-1
Mcpp	12.48	12.45	12.51	22371.01	20016.00	12
Mcpa	12.86	12.83	12.89	21704.42	19958.00	9
2,4-DP	13.45	13.43	13.49	195.27	196.60	-1
2,4-D	13.90	13.87	13.93	178.88	176.00	2
PCP	15.09	15.06	15.12	19.80	19.82	0
2,4,5-TP	15.38	15.36	15.42	20.03	20.00	0
2,4,5-T	15.91	15.88	15.94	19.99	20.02	0
2,4-DB	16.74	16.71	16.77	199.51	200.20	0
Dinoseb	16.93	16.90	16.96	105.18	100.70	4
Picloram	17.89	17.86	17.92	101.28	99.96	1
Hexachlorophene	26.13	26.10	26.16	73.68	80.00	-8

Compounds 14

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850B Date Analyzed: 11/01/18

GC Column (2) : ZB 35 ID: .32 (mm) Time Analyzed: 23:34

Lab File ID: 15HERB18304002B.016.RAW Initial Calibration: 15HERB1830401B

Lab Standard ID: HERB3UI Init. Calib Date(s): 10/31/18 10/31/18

Calibration: 15HERB1830401B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Dalapon	3.85	3.83	3.89	404.06	401.00	1
2,4-DCAA	12.51	12.49	12.55	198.52	201.00	-1
Dicamba	12.88	12.85	12.91	19.69	19.66	0
Mcpp	12.93	12.90	12.96	20015.87	20016.00	0
Mcpa	13.46	13.43	13.49	19980.90	19958.00	0
2,4-DP	13.98	13.96	14.02	198.83	196.60	1
2,4-D	14.61	14.58	14.64	172.80	176.00	-2
PCP	15.30	15.28	15.34	20.05	19.82	1
2,4,5-TP	15.80	15.77	15.83	20.32	20.00	2
2,4,5-T	16.50	16.47	16.53	19.71	20.02	-2
Dinoseb	16.93	16.91	16.97	100.74	100.70	0
2,4-DB	17.21	17.18	17.24	203.42	200.20	2
Picloram	19.50	19.48	19.54	104.11	99.96	4
Hexachlorophene	26.55	26.52	26.58	72.78	80.00	-9

Compounds 14

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: HIBLKX1824B HIBLKRR ID: RR **Batchnumber: 1830499999**
Sample Amount: 1000 Total Volume: 10 ml Analyst: 13378 SDG: State:
Analyses: 10407

Analysis Report (A)

Injected on : Nov 02, 2018 00:07:51
Instrument : CP15--19850A
Result file : 15HERB18304002.017.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 67% (34-142) Conc.: 2.695587

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.75	3.76	3271	0.004125
DCAA	11.91	11.96	11.97	3850422	2.695587
MCPA	12.83	12.88	12.89	9560	-134.516900
2,4-DP	13.43	13.47	13.49	7512	0.006373
2,4-D	13.87	13.90	13.93	10457	0.007421
DBOFB	14.21	14.23	14.26	10604760	0.001000
PCP	15.06	15.10	15.12	6086	0.000342
2,4,5-TP	15.36	15.39	15.42	4197	0.000622
2,4,5-T	15.88	15.92	15.94	10632	0.001786
DINOSEB	16.90	16.94	16.96	16753	0.005407
Picloram	17.86	17.90	17.92	97389	0.018867
Hexachlorophene	26.10	26.13	26.16	84365	0.014997

Analysis Report (B)

Injected on : Nov 02, 2018 00:07:51
Instrument : CP15--19850B
Result file : 15HERB18304002B.017.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 64% (34-142) Conc.: 2.544475

Peak name	Min	R.T.	Max	Height	Amount
DCAA	12.49	12.53	12.55	3854088	2.544475
MCPA	13.43	13.46	13.49	1348	0.156607
DBOFB	13.69	13.71	13.75	10993350	0.001000
2,4-DP	13.96	13.97	14.01	129527	0.097794
2,4-D	14.58	14.61	14.64	7715	0.005085
PCP	15.28	15.31	15.34	6706	0.000345
2,4,5-TP	15.77	15.80	15.83	4617	0.000644
2,4,5-T	16.47	16.51	16.53	6543	0.001033
DINOSEB	16.91	16.94	16.97	14305	0.004389
2,4-DB	17.18	17.21	17.24	8944	0.009966
Picloram	19.48	19.51	19.54	118258	0.020668
Hexachlorophene	26.52	26.55	26.58	132055	0.022274

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Dalapon			<4	<1.8			
☐ DCAA	A	2.695587				5.77	
☑ DICAMBA			<0.3	<0.08			
☑ MCPP			<200	<50			
☑ MCPA			<200	<50			
☑ 2,4-DP	A	0.006373	<0.5	<0.16		175.53	**
☑ 2,4-D	A	0.007421	<0.6	<0.25		37.35	
☐ DBOFB	A	0.001000				0.00	
☑ PCP	B	0.000345	<0.07	<0.027		1.12	
☑ 2,4,5-TP	B	0.000644	<0.05	<0.01		3.50	
☑ 2,4,5-T	B	0.001033	<0.15	<0.065		53.37	**
☑ 2,4-DB			<1.5	<0.63			
☑ DINOSEB	A	0.005407	<0.5	<0.18		20.79	
☑ Picloram	B	0.020668	<1	<0.36		9.11	
☑ Hexachlorophene	B	0.022274	<0.2	<0.18		39.05	

Units: ug/l

Reviewed by: _____ Verified by: Michele D. Hamilton
Group Leader

Date: 11/2/18 Date: NOV 02 2018

%RPD = High - Low Amount divided by the Average times 100 Higher Amount Found unless RPD > 40
** %Difference > 40, lower amount found reported
* Recovery outside QC Limits

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850A Date Analyzed: 11/02/18

GC Column (1) : ZB XLB ID: .32 (mm) Time Analyzed: 5:39

Lab File ID: 15HERB18304002.027.RAW Initial Calibration: 15HERB1830401

Lab Standard ID: HERB3UJ Init. Calib Date(s): 10/31/18 10/31/18

Calibration: 15HERB1830401

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Dalapon	3.72	3.70	3.76	400.50	401.00	0
2,4-DCAA	11.94	11.91	11.97	198.60	201.00	-1
Dicamba	12.07	12.04	12.10	19.38	19.66	-1
Mcpp	12.48	12.45	12.51	21050.42	20016.00	5
Mcpa	12.86	12.83	12.89	20542.54	19958.00	3
2,4-DP	13.45	13.43	13.49	197.16	196.60	0
2,4-D	13.89	13.87	13.93	172.49	176.00	-2
PCP	15.09	15.06	15.12	19.94	19.82	1
2,4,5-TP	15.38	15.36	15.42	19.45	20.00	-3
2,4,5-T	15.91	15.88	15.94	19.34	20.02	-3
2,4-DB	16.74	16.71	16.77	195.87	200.20	-2
Dinoseb	16.93	16.90	16.96	107.05	100.70	6
Picloram	17.89	17.86	17.92	101.38	99.96	1
Hexachlorophene	26.13	26.10	26.16	75.99	80.00	-5

Compounds 14

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850B Date Analyzed: 11/02/18

GC Column (2) : ZB 35 ID: .32 (mm) Time Analyzed: 5:39

Lab File ID: 15HERB18304002B.027.RAW Initial Calibration: 15HERB1830401B

Lab Standard ID: HERB3UJ Init. Calib Date(s): 10/31/18 10/31/18

Calibration: 15HERB1830401B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Dalapon	3.85	3.83	3.89	404.76	401.00	1
2,4-DCAA	12.51	12.49	12.55	199.12	201.00	-1
Dicamba	12.87	12.85	12.91	19.96	19.66	2
Mcpp	12.93	12.90	12.96	19923.39	20016.00	0
Mcpa	13.45	13.43	13.49	19631.68	19958.00	-2
2,4-DP	13.98	13.96	14.02	202.43	196.60	3
2,4-D	14.61	14.58	14.64	173.02	176.00	-2
PCP	15.30	15.28	15.34	20.37	19.82	3
2,4,5-TP	15.80	15.77	15.83	20.43	20.00	2
2,4,5-T	16.50	16.47	16.53	20.00	20.02	0
Dinoseb	16.93	16.91	16.97	100.08	100.70	-1
2,4-DB	17.20	17.18	17.24	204.19	200.20	2
Picloram	19.50	19.48	19.54	102.32	99.96	2
Hexachlorophene	26.55	26.52	26.58	82.57	80.00	3

Compounds 14

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: HIBLKX1824B HIBLKRS ID: RS **Batchnumber: 1830499999**
Sample Amount: 1000 Total Volume: 10 ml Analyst: 13378 SDG: State:
Analyses: 10407

Analysis Report (A)

Injected on : Nov 02, 2018 06:12:10
Instrument : CP15--19850A
Result file : 15HERB18304002.028.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 68% (34-142) Conc.: 2.726566

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.70	3.76	4100	0.005004
DCAA	11.91	11.96	11.97	4024228	2.726566
MCPA	12.83	12.89	12.89	11377	-134.280900
2,4-DP	13.43	13.47	13.49	8167	0.006705
2,4-D	13.87	13.91	13.93	11897	0.008171
DBOFB	14.21	14.23	14.26	10957520	0.001000
PCP	15.06	15.09	15.12	6778	0.000368
2,4,5-TP	15.36	15.39	15.42	4951	0.000710
2,4,5-T	15.88	15.92	15.94	11942	0.001941
2,4-DB	16.71	16.75	16.77	7360	0.008623
DINOSEB	16.90	16.93	16.96	16583	0.005180
Picloram	17.86	17.89	17.92	105527	0.019785
Hexachlorophene	26.10	26.13	26.16	85847	0.014769

Analysis Report (B)

Injected on : Nov 02, 2018 06:12:10
Instrument : CP15--19850B
Result file : 15HERB18304002B.028.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 64% (34-142) Conc.: 2.552904

Peak name	Min	R.T.	Max	Height	Amount
DCAA	12.49	12.53	12.55	3951985	2.552904
MCPA	13.43	13.46	13.49	2344	0.266551
DBOFB	13.69	13.71	13.75	11235380	0.001000
2,4-DP	13.96	13.96	14.01	129734	0.095841
2,4-D	14.58	14.61	14.64	11387	0.007343
PCP	15.28	15.31	15.34	8092	0.000408
2,4,5-TP	15.77	15.80	15.83	4420	0.000604
2,4,5-T	16.47	16.50	16.53	7051	0.001090
DINOSEB	16.91	16.93	16.97	15883	0.004768
2,4-DB	17.18	17.21	17.24	9666	0.010538
Picloram	19.48	19.51	19.54	132998	0.022743
Hexachlorophene	26.52	26.55	26.58	110316	0.018206

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Dalapon			<4	<1.8			
☐ DCAA	A	2.726566				6.58	
☑ DICAMBA			<0.3	<0.08			
☑ MCPP			<200	<50			
☑ MCPA			<200	<50			
☑ 2,4-DP	A	0.006705	<0.5	<0.16		173.84	**
☑ 2,4-D	A	0.008171	<0.6	<0.25		10.67	
☐ DBOFB	A	0.001000				0.00	
☑ PCP	B	0.000408	<0.07	<0.027		10.21	
☑ 2,4,5-TP	A	0.000710	<0.05	<0.01		16.26	
☑ 2,4,5-T	B	0.001090	<0.15	<0.065		56.18	**
☑ 2,4-DB	B	0.010538	<1.5	<0.63		19.99	
☑ DINOSEB	A	0.005180	<0.5	<0.18		8.28	
☑ Picloram	B	0.022743	<1	<0.36		13.91	
☑ Hexachlorophene	B	0.018206	<0.2	<0.18		20.85	

Units: ug/l

Reviewed by: _____ Verified by: Michelle D. Hamilton
Michelle D. Hamilton
Group Leader
Date: 11/2 Date: NOV 02 2018

%RPD = High - Low Amount divided by the Average times 100 Higher Amount Found unless RPD > 40
** %Difference > 40, lower amount found reported
* Recovery outside QC Limits

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850A Date Analyzed: 11/02/18

GC Column (1) : ZB XLB ID: .32 (mm) Time Analyzed: 12:16

Lab File ID: 15HERB18304002.039.RAW Initial Calibration: 15HERB1830401

Lab Standard ID: HERB3UK Init. Calib Date(s): 10/31/18 10/31/18

Calibration: 15HERB1830401

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Dalapon	3.72	3.70	3.76	392.61	401.00	-2
2,4-DCAA	11.94	11.91	11.97	200.49	201.00	0
Dicamba	12.07	12.04	12.10	19.46	19.66	-1
Mcpp	12.48	12.45	12.51	21599.55	20016.00	8
Mcpa	12.86	12.83	12.89	20621.25	19958.00	3
2,4-DP	13.45	13.43	13.49	197.44	196.60	0
2,4-D	13.89	13.87	13.93	174.30	176.00	-1
PCP	15.09	15.06	15.12	19.64	19.82	-1
2,4,5-TP	15.38	15.36	15.42	19.71	20.00	-1
2,4,5-T	15.91	15.88	15.94	19.58	20.02	-2
2,4-DB	16.74	16.71	16.77	192.35	200.20	-4
Dinoseb	16.93	16.90	16.96	102.80	100.70	2
Picloram	17.88	17.86	17.92	99.44	99.96	-1
Hexachlorophene	26.13	26.10	26.16	70.02	80.00	-12

Compounds 14

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850B Date Analyzed: 11/02/18

GC Column (2) : ZB 35 ID: .32 (mm) Time Analyzed: 12:16

Lab File ID: 15HERB18304002B.039.RAW Initial Calibration: 15HERB1830401B

Lab Standard ID: HERB3UK Init. Calib Date(s): 10/31/18 10/31/18

Calibration: 15HERB1830401B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Dalapon	3.85	3.83	3.89	395.02	401.00	-1
2,4-DCAA	12.51	12.49	12.55	193.51	201.00	-4
Dicamba	12.87	12.85	12.91	19.45	19.66	-1
Mcpp	12.93	12.90	12.96	19290.67	20016.00	-4
Mcpa	13.45	13.43	13.49	19387.06	19958.00	-3
2,4-DP	13.98	13.96	14.02	191.76	196.60	-2
2,4-D	14.61	14.58	14.64	173.48	176.00	-1
PCP	15.30	15.28	15.34	19.36	19.82	-2
2,4,5-TP	15.80	15.77	15.83	19.33	20.00	-3
2,4,5-T	16.50	16.47	16.53	20.11	20.02	0
Dinoseb	16.93	16.91	16.97	102.87	100.70	2
2,4-DB	17.21	17.18	17.24	198.29	200.20	-1
Picloram	19.50	19.48	19.54	97.90	99.96	-2
Hexachlorophene	26.55	26.52	26.58	73.70	80.00	-8

Compounds 14

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: HIBLKX1824B HIBLKRT ID: RT **Batchnumber: 1830499999**
Sample Amount: 1000 Total Volume: 10 ml Analyst: 13378 SDG: State:
Analyses: 10407

Analysis Report (A)

Injected on : Nov 02, 2018 12:49:15
Instrument : CP15--19850A
Result file : 15HERB18304002.040.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 68% (34-142) Conc.: 2.724122

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.74	3.76	9106	0.011151
DCAA	11.91	11.96	11.97	4007105	2.724122
MCPA	12.83	12.89	12.89	10911	-134.348400
2,4-DP	13.43	13.47	13.49	10677	0.008796
2,4-D	13.87	13.90	13.93	9690	0.006678
DBOFB	14.21	14.23	14.26	10920680	0.001000
PCP	15.06	15.10	15.12	6389	0.000348
2,4,5-T	15.88	15.91	15.94	12439	0.002029
DINOSEB	16.90	16.93	16.96	15572	0.004881
Picloram	17.86	17.89	17.92	107087	0.020145
Hexachlorophene	26.10	26.12	26.16	81407	0.014053

Analysis Report (B)

Injected on : Nov 02, 2018 12:49:15
Instrument : CP15--19850B
Result file : 15HERB18304002B.040.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 62% (34-142) Conc.: 2.478664

Peak name	Min	R.T.	Max	Height	Amount
DCAA	12.49	12.53	12.55	3954655	2.478664
MCPA	13.43	13.46	13.49	2043	0.225425
DBOFB	13.69	13.71	13.75	11579710	0.001000
2,4-DP	13.96	13.98	14.01	89116	0.063876
2,4-D	14.58	14.62	14.64	9794	0.006128
PCP	15.28	15.30	15.34	6677	0.000326
2,4,5-TP	15.77	15.80	15.83	3955	0.000524
2,4,5-T	16.47	16.50	16.53	5444	0.000816
DINOSEB	16.91	16.93	16.97	13559	0.003949
2,4-DB	17.18	17.21	17.24	12026	0.012721
Picloram	19.48	19.50	19.54	131901	0.021885
Hexachlorophene	26.52	26.55	26.58	146584	0.023472

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Dalapon			<4	<1.8			
☐ DCAA	A	2.724122				9.44	
☑ DICAMBA			<0.3	<0.08			
☑ MCPP			<200	<50			
☑ MCPA			<200	<50			
☑ 2,4-DP	A	0.008796	<0.5	<0.16		151.59	**
☑ 2,4-D	A	0.006678	<0.6	<0.25		8.58	
☐ DBOFB	A	0.001000				0.00	
☑ PCP	A	0.000348	<0.07	<0.027		6.44	
☑ 2,4,5-TP			<0.05	<0.01			
☑ 2,4,5-T	B	0.000816	<0.15	<0.065		85.22	**
☑ 2,4-DB			<1.5	<0.63			
☑ DINOSEB	A	0.004881	<0.5	<0.18		21.10	
☑ Picloram	B	0.021885	<1	<0.36		8.28	
☑ Hexachlorophene	A	0.014053	<0.2	<0.18		50.20	**

Units: ug/l

Valerie L. Tomayko
Principal Specialist

Reviewed by: _____ Verified by: _____
Date: 11/7/18 Date: NOV 0 7 2018

%RPD = High - Low Amount divided by the Average times 100 Higher Amount Found unless RPD > 40
** %Difference > 40, lower amount found reported
* Recovery outside QC Limits

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 15HERB18304001
Instrument CP15--19850A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
13378	15HERB18304001.001	CONDITIONER		10/31/18 15:37	1830299999	1.00
13378	15HERB18304001.002	CONDITIONER		10/31/18 16:10	1830299999	1.00
13378	15HERB18304001.003	CONDITIONER		10/31/18 16:43	1830299999	1.00
13378	15HERB18304001.004	CONDITIONER		10/31/18 17:16	1830299999	1.00
13378	15HERB18304001.005	HIBLKX1824B	HIBLKAA	10/31/18 17:49	1830299999	10.00
13378	15HERB18304001.006	HERB11824E	HERB1AA	10/31/18 18:22	1830299999	1.00
13378	15HERB18304001.007	HERB21824E	HERB2AA	10/31/18 18:55	1830299999	1.00
13378	15HERB18304001.008	HERB31824F	HERB3AA	10/31/18 19:28	1830299999	1.00
13378	15HERB18304001.009	HERB41824E	HERB4AA	10/31/18 20:01	1830299999	1.00
13378	15HERB18304001.010	HERB51824E	HERB5AA	10/31/18 20:34	1830299999	1.00
13378	15HERB18304001.011	HERB61824E	HERB6AA	10/31/18 21:07	1830299999	1.00
13378	15HERB18304001.012	MDHEX1824E	MDHEXAA	10/31/18 21:40	1830299999	1.00
13378	15HERB18304001.013	ICHBX1824G	ICHBXAA	10/31/18 22:13	1830299999	1.00
13378	15HERB18304001.014	ICHBX1824H	ICHBXQV	10/31/18 22:46	1830299999	1.00
13378	15HERB18304001.015	ICHBX1824I	ICHBXQW	10/31/18 23:19	1830299999	1.00
13378	15HERB18304001.016	BLANKA 10/29/18 F	PBLK08302	10/31/18 23:52	183020008A	10.00
13378	15HERB18304001.017	LCSA 10/29/18 F	LCS08302	11/1/18 0:25	183020008A	10.00
13378	15HERB18304001.018	LCSDA 10/29/18 F	LCSD08302	11/1/18 0:59	183020008A	10.00
13378	15HERB18304001.019	9868184 F	RCL-1	11/1/18 1:32	183020008A	10.00
13378	15HERB18304001.020	9868185 F	RCL-4	11/1/18 2:05	183020008A	10.00
13378	15HERB18304001.021	9868186 F	RCL-7	11/1/18 2:38	183020008A	10.00
13378	15HERB18304001.022	9868187 F	RCLG4	11/1/18 3:11	183020008A	10.00
13378	15HERB18304001.023	9868189 F	RCLFB	11/1/18 3:44	183020008A	10.00
13378	15HERB18304001.024	9870991 F	02W02	11/1/18 4:17	183020008A	10.00
13378	15HERB18304001.025	HERB31824F	HERB3TW	11/1/18 4:50	1830299999	1.00
13378	15HERB18304001.026	HIBLKX1824B	PIBLKFL	11/1/18 5:23	1830299999	10.00
13378	15HERB18304001.027	BLANKA 10/29/18 F	PBLK09302	11/1/18 5:56	183020009A	10.00
13378	15HERB18304001.028	LCSA 10/29/18 F	LCS09302	11/1/18 6:29	183020009A	10.00
13378	15HERB18304001.029	9863853 F	GKP-4	11/1/18 7:02	183020009A	10.00
13378	15HERB18304001.030	9863854MS F	GKP-4	11/1/18 7:35	183020009A	10.00
13378	15HERB18304001.031	9863855MSD F	GKP-4	11/1/18 8:09	183020009A	10.00
13378	15HERB18304001.032	HERB31824F	HERB3TX	11/1/18 8:42	1830299999	1.00
13378	15HERB18304001.033	HIBLKX1824B	PIBLKFM	11/1/18 9:15	1830299999	10.00
13378	15HERB18304001.034	9863851 F	GKP-1	11/1/18 9:48	183020009A	10.00
13378	15HERB18304001.035	9863852 F	GKP-2	11/1/18 10:21	183020009A	10.00
13378	15HERB18304001.036	9863857 F	GKP-D	11/1/18 10:54	183020009A	10.00
13378	15HERB18304001.037	9863858 F	GKP-3	11/1/18 11:27	183020009A	10.00
13378	15HERB18304001.038	9866461 F	T0902	11/1/18 12:00	183020009A	10.00
13378	15HERB18304001.039	9866462 F	T0003	11/1/18 12:33	183020009A	10.00
13378	15HERB18304001.040	9870992 F	02W03	11/1/18 13:06	183020009A	10.00
13378	15HERB18304001.041	HERB31824F	HERB3TY	11/1/18 13:39	1830299999	1.00
13378	15HERB18304001.042	HIBLKX1824B	PIBLKFN	11/1/18 14:13	1830299999	10.00

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 15HERB18304002
Instrument CP15--19850A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
13378	15HERB18304002.001	CONDITIONER		11/1/18 15:18	1830499999	1.00
13378	15HERB18304002.002	CONDITIONER		11/1/18 15:51	1830499999	1.00
13378	15HERB18304002.003	CONDITIONER		11/1/18 16:24	1830499999	1.00
13378	15HERB18304002.004	CONDITIONER		11/1/18 16:57	1830499999	1.00
13378	15HERB18304002.005	CONDITIONER		11/1/18 17:30	1830499999	1.00
13378	15HERB18304002.006	HERB31824F	HERB3UH	11/1/18 18:03	1830499999	1.00
13378	15HERB18304002.007	HIBLKX1824B	HIBLKRQ	11/1/18 18:36	1830499999	10.00
13378	15HERB18304002.008	BLANKA 10/30/18 F	PBLK10303	11/1/18 19:09	183030010A	10.00
13378	15HERB18304002.009	LCSA 10/30/18 F	LCS10303	11/1/18 19:42	183030010A	10.00
13378	15HERB18304002.010	9867762 F	T1003	11/1/18 20:15	183030010A	10.00
13378	15HERB18304002.011	CONDITIONER		11/1/18 20:49	183030010A	10.00
13378	15HERB18304002.012	9867762 F DF5	T1003	11/1/18 21:22	183030010A	50.00
13378	15HERB18304002.013	9867763MS F	T1003	11/1/18 21:55	183030010A	10.00
13378	15HERB18304002.014	CONDITIONER		11/1/18 22:28	183030010A	10.00
13378	15HERB18304002.015	9867763MS F DF5	T1003	11/1/18 23:01	183030010A	50.00
13378	15HERB18304002.016	HERB31824F	HERB3UI	11/1/18 23:34	1830499999	1.00
13378	15HERB18304002.017	HIBLKX1824B	HIBLKRR	11/2/18 0:07	1830499999	10.00
13378	15HERB18304002.018	9867764MSD F	T1003	11/2/18 0:40	183030010A	10.00
13378	15HERB18304002.019	CONDITIONER		11/2/18 1:14	183030010A	10.00
13378	15HERB18304002.020	9867764MSD F DF5	T1003	11/2/18 1:47	183030010A	50.00
13378	15HERB18304002.021	9866463 F	T0904	11/2/18 2:20	183030010A	10.00
13378	15HERB18304002.022	9866463 F DF5	T0904	11/2/18 2:53	183030010A	50.00
13378	15HERB18304002.023	9866464 F	T0905	11/2/18 3:26	183030010A	10.00
13378	15HERB18304002.024	9866464 F DF5	T0905	11/2/18 3:59	183030010A	50.00
13378	15HERB18304002.025	9866465 F	T0906	11/2/18 4:32	183030010A	10.00
13378	15HERB18304002.026	9866465 F DF5	T0906	11/2/18 5:05	183030010A	50.00
13378	15HERB18304002.027	HERB31824F	HERB3UJ	11/2/18 5:39	1830499999	1.00
13378	15HERB18304002.028	HIBLKX1824B	HIBLKRS	11/2/18 6:12	1830499999	10.00
13378	15HERB18304002.029	9866466 F	T0907	11/2/18 6:45	183030010A	10.00
13378	15HERB18304002.030	9866466 F DF5	T0907	11/2/18 7:18	183030010A	50.00
13378	15HERB18304002.031	9866467 F	T0908	11/2/18 7:51	183030010A	10.00
13378	15HERB18304002.032	9866467 F DF5	T0908	11/2/18 8:24	183030010A	50.00
13378	15HERB18304002.033	9867761 F	T1002	11/2/18 8:57	183030010A	10.00
13378	15HERB18304002.034	9867761 F DF5	T1002	11/2/18 9:30	183030010A	50.00
13378	15HERB18304002.035	9867766 F	T1004	11/2/18 10:04	183030010A	10.00
13378	15HERB18304002.036	9867766 F DF5	T1004	11/2/18 10:37	183030010A	50.00
13378	15HERB18304002.037	9867767 F DF10	T1005	11/2/18 11:10	183030010A	100.00
13378	15HERB18304002.038	CONDITIONER		11/2/18 11:43	183030010A	100.00
13378	15HERB18304002.039	HERB31824F	HERB3UK	11/2/18 12:16	1830499999	1.00
13378	15HERB18304002.040	HIBLKX1824B	HIBLKRT	11/2/18 12:49	1830499999	10.00
13378	15HERB18304002.041	9869111 F	E7801	11/2/18 13:22	183030010A	10.00
13378	15HERB18304002.042	9869111 F DF5	E7801	11/2/18 13:55	183030010A	50.00
13378	15HERB18304002.043	9870251 F	T1102	11/2/18 14:28	183030010A	10.00
13378	15HERB18304002.044	9870251 F DF5	T1102	11/2/18 15:01	183030010A	50.00
13378	15HERB18304002.045	9870252 F	T1103	11/2/18 15:34	183030010A	10.00
13378	15HERB18304002.046	9870252 F DF5	T1103	11/2/18 16:07	183030010A	50.00
13378	15HERB18304002.047	9870253 F DF10	T1104	11/2/18 16:40	183030010A	100.00
13378	15HERB18304002.048	CONDITIONER		11/2/18 17:13	183030010A	100.00
13378	15HERB18304002.049	9870254 F	T1105	11/2/18 17:46	183030010A	10.00
13378	15HERB18304002.050	9870254 F DF5	T1105	11/2/18 18:19	183030010A	50.00
13378	15HERB18304002.051	HERB31824F	HERB3UL	11/2/18 18:53	1830499999	1.00
13378	15HERB18304002.052	HIBLKX1824B	HIBLKRU	11/2/18 19:26	1830499999	10.00
13378	15HERB18304002.053	9872060 F DF10	12T02	11/2/18 19:59	183030010A	100.00
13378	15HERB18304002.054	CONDITIONER		11/2/18 20:32	183030010A	100.00
13378	15HERB18304002.055	9872061 F	12T03	11/2/18 21:05	183030010A	10.00
13378	15HERB18304002.056	CONDITIONER		11/2/18 21:38	183030010A	10.00

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
13378	15HERB18304002.057	9872061 F DF5	12T03	11/2/18 22:11	183030010A	50.00
13378	15HERB18304002.058	9872062 F	12T04	11/2/18 22:44	183030010A	10.00
13378	15HERB18304002.059	CONDITIONER		11/2/18 23:17	183030010A	10.00
13378	15HERB18304002.060	9872062 F DF5	12T04	11/2/18 23:50	183030010A	50.00
13378	15HERB18304002.061	9866463	T0904	11/3/18 0:23	183030010A	10.00
13378	15HERB18304002.062	CONDITIONER		11/3/18 0:56	183030010A	10.00
13378	15HERB18304002.063	HERB31824F	HERB3UM	11/3/18 1:29	1830499999	1.00
13378	15HERB18304002.064	HIBLKX1824B	HIBLKRV	11/3/18 2:02	1830499999	10.00
13378	15HERB18304002.065	9872063 F DF5	12T05	11/3/18 2:35	183030010A	50.00
13378	15HERB18304002.066	9872064 F DF10	12T06	11/3/18 3:08	183030010A	100.00
13378	15HERB18304002.067	CONDITIONER		11/3/18 3:41	183030010A	100.00
13378	15HERB18304002.068	9872065 F DF10	12T07	11/3/18 4:14	183030010A	100.00
13378	15HERB18304002.069	CONDITIONER		11/3/18 4:47	183030010A	100.00
13378	15HERB18304002.070	HERB31824F	HERB3UN	11/3/18 5:20	1830499999	1.00
13378	15HERB18304002.071	HIBLKX1824B	HIBLKRW	11/3/18 5:53	1830499999	10.00

Sample Data

Herbicides

eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: 9867761 F DF5 T1002 Sample ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.18 g Total Volume: 50 ml Analyst: 120 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on Nov 02, 2018 09:30:58
Instrument 19850A
Result file 15HERB18304002.034.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 110% (27 - 122) Conc: 72.85364

Analysis Report (B)

Injected on Nov 02, 2018 09:30:58
Instrument 19850B
Result file 15HERB18304002B.034.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 108% (27 - 122) Conc: 71.27261

Single Component Data

Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.71	3.76	610961	124.1963
2,4-DCAA	11.91	11.95	11.97	645590	72.85364
Dicamba	12.04	12.05	12.10	116788	3.280742
MCPP (Mecoprop)	12.45	12.49	12.51	146903	0
2,4-DP (Dichloroprop)	13.43	13.45	13.49	58466	7.995389
2,4-D	13.87	13.92	13.93	72966	8.346854
Pentachlorophenol	15.06	15.09	15.12	401966	3.636333
2,4,5-TP	15.36	15.40	15.42	110594	2.642926
2,4,5-T	15.88	15.93	15.94	61650	1.6691
2,4-DB	16.71	16.75	16.77	550872	107.5013
Dinoseb	16.90	16.93	16.96	110715	5.760471

Compound	Min	RT	Max	Height	Amount
2,4-DCAA	12.49	12.52	12.55	687477	71.27261
MCPA	13.43	13.46	13.49	104523	1907.548
2,4-DP (Dichloroprop)	13.96	13.98	14.01	80249	9.51432
2,4-D	14.58	14.61	14.64	115153	11.9183
Pentachlorophenol	15.28	15.30	15.34	449888	3.638329
2,4,5-TP	15.77	15.82	15.83	27887	0.611116
Dinoseb	16.91	16.95	16.97	64835	3.123636
2,4-DB	17.18	17.23	17.24	126353	22.10767

Single Component Summary

	Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☑	Dalapon			<218.6879	<437.3758	<447.3161	D2		
☐	2,4-DCAA	A	72.85364	16.5755	33.1511	33.1511		2.19	
☑	2,4-DCAA-D1	A	72.85364	16.5755	33.1511	33.1511			
☑	2,4-DCAA-D2	B	71.27261	16.5755	33.1511	33.1511			
☑	Dicamba			<19.8807	<39.7614	<59.6421	D2		
☑	MCPP (Mecoprop)			<18886.6805	<37773.361	<38270.3789	D1		
☑	MCPA			<3777.3361	<7554.6722	<12425.4477	D1		
☑	2,4-DP (Dichloroprop)			<44.7316	<89.4632	<99.4036	D1		
☑	2,4-D			<59.6421	<119.2843	<178.9264	D1		
☐	Pentachlorophenol	B	3.638329	1.6402	3.2803	<8.4493	J	0.05	
☑	2,4,5-TP			<3.7276	<7.4553	<8.4493	D2		
☑	2,4,5-T			<4.0755	<8.1511	<8.4493	D2		
☑	2,4-DB			<48.7078	<99.4036	<104.3738	D2		
☑	Dinoseb			<44.7316	<89.4632	<119.2843	D2		
☐	Picloram			<99.4036	<198.8072	<203.7773			
☐	Hexachlorophene					<119.2843			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Michele D. Hamilton
Group Leader

NOV 02 2018

Reviewed and digitally signed by Richard A Shober on 11/2/2018 14:50:51

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: **9867761** F DF5 T1002 ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.18 g Total Volume: 50 ml Analyst: 13378 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on : Nov 02, 2018 09:30:58
Instrument : CP15--19850A
Result file : 15HERB18304002.034.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 110% (27-122) Conc.: 72.85364

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.71	3.76	610961	124.196300
DCAA	11.91	11.95	11.97	645590	72.853640
DICAMBA	12.04	12.05	12.10	116788	3.280742
MCPP	12.45	12.49	12.51	146903	-16647.650000
2,4-DP	13.43	13.45	13.49	58466	7.995389
2,4-D	13.87	13.92	13.93	72966	8.346854
DBOFB	14.21	14.23	14.26	10899390	0.033135
PCP	15.06	15.09	15.12	401966	3.636333
2,4,5-TP	15.36	15.40	15.42	110594	2.642926
2,4,5-T	15.88	15.93	15.94	61650	1.669100
2,4-DB	16.71	16.75	16.77	550872	107.501300
DINOSEB	16.90	16.93	16.96	110715	5.760471

Analysis Report (B)

Injected on : Nov 02, 2018 09:30:58
Instrument : CP15--19850B
Result file : 15HERB18304002B.034.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 108% (27-122) Conc.: 71.27261

Peak name	Min	R.T.	Max	Height	Amount
DCAA	12.49	12.52	12.55	687477	71.272610
MCPA	13.43	13.46	13.49	104523	1907.548000
DBOFB	13.69	13.70	13.75	11598270	0.033135
2,4-DP	13.96	13.98	14.01	80249	9.514320
2,4-D	14.58	14.61	14.64	115153	11.918300
PCP	15.28	15.30	15.34	449888	3.638329
2,4,5-TP	15.77	15.82	15.83	27887	0.611116
DINOSEB	16.91	16.95	16.97	64835	3.123636
2,4-DB	17.18	17.23	17.24	126353	22.107670

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Dalapon			<447.3161	<218.6879			
☐ DCAA	A	72.853640				2.19	
☑ DICAMBA			<59.6421	<19.8807			
☑ MCPP			38270.3789	18886.6805			
☑ MCPA			12425.4477	<3777.3361			
☑ 2,4-DP			<99.4036	<44.7316			
☑ 2,4-D			<178.9264	<59.6421			
☐ DBOFB	A	0.033135				0.00	
☐ PCP	B	3.638329	<8.4493	1.6402	J	0.05	
☑ 2,4,5-TP			<8.4493	<3.7276			
☑ 2,4,5-T			<8.4493	<4.0755			
☑ 2,4-DB			<104.3738	<48.7078			
☑ DINOSEB			<119.2843	<44.7316			
☐ Picloram			<203.7773	<99.4036			
☐ Hexachlorophene			<119.2843	<39.7614			

Units: ug/kg

Reviewed by: [signature]
Date: 11/2/18

Verified by: Michele D. Hamilton
Miche'le D. Hamilton
Group Leader
Date: NOV 02 2018

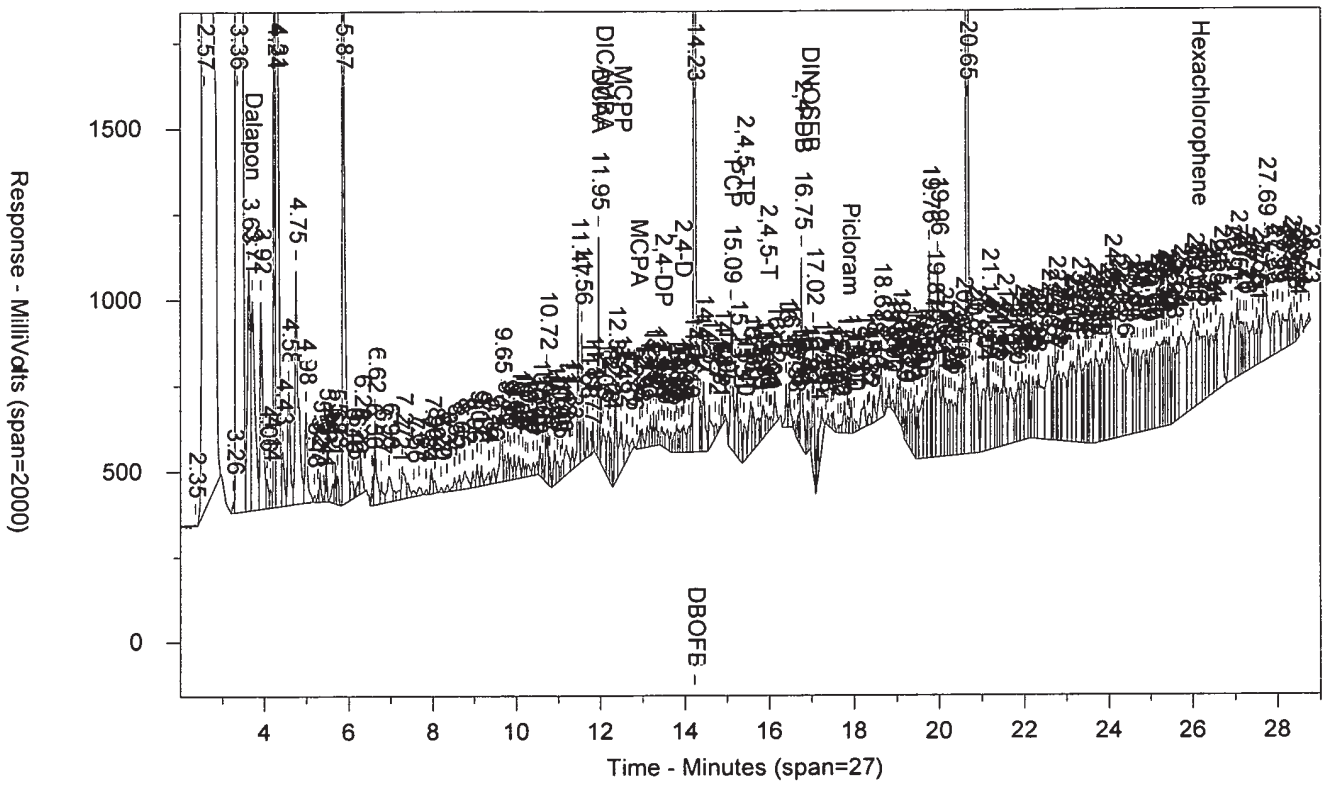
DILUTION FOR COLORED EXTRACT

%RPD = High - Low Amount divided by the Average times 100
** %Difference > 40, lower amount found reported
* Recovery outside QC Limits

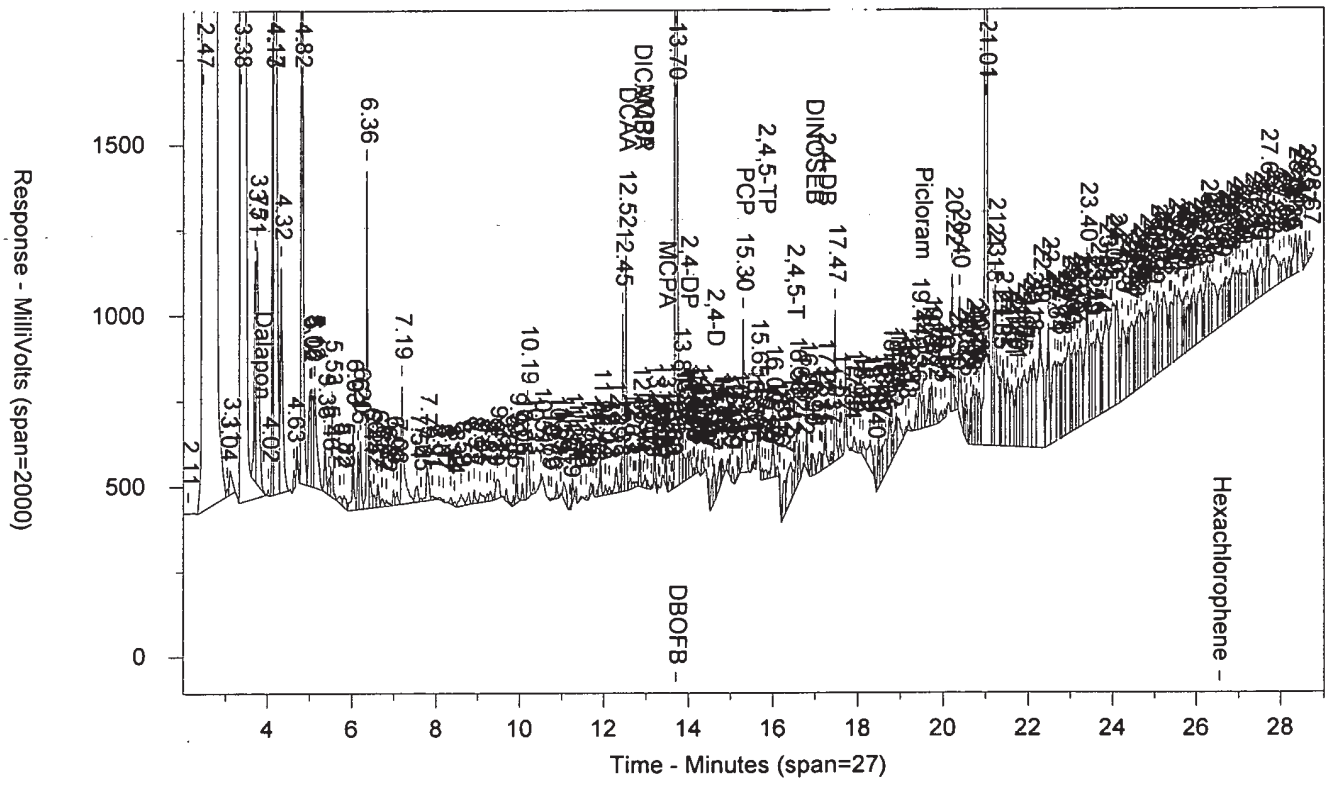
Higher Amount Found unless RPD > 40

9867761 F DF5 ACT1002 T 183030010A 10401 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.034.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.034.RAW



LANCASTER LABORATORIES

Sample Number: 9867761 F DF5 ACT1002 T 183030010A 10401 SW-846 8151A
Injected On: 11/2/2018 9:30:58 AM Sample Weight: 30.18
Instrument ID: CP15-19850 Dilution Factor: 50
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

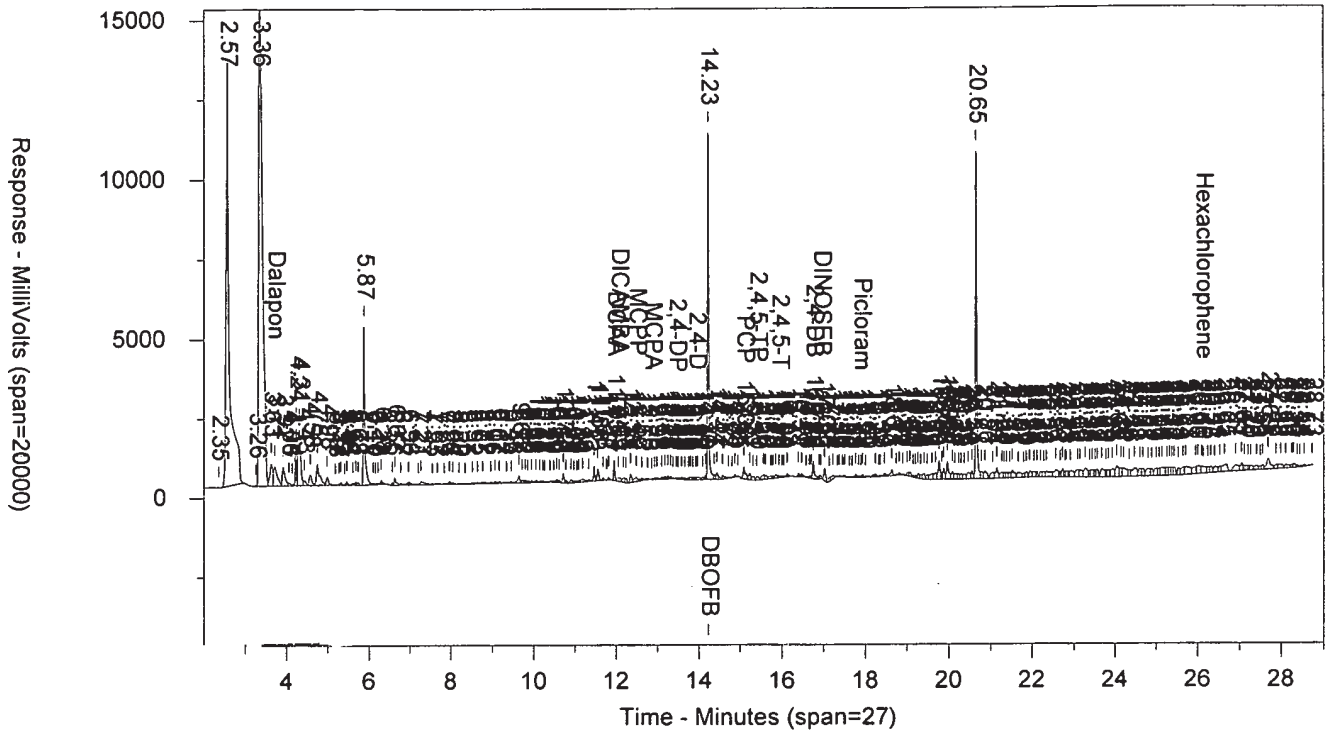
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.711	610961	124.196	Dalapon		0		Dalapon
11.955	645590	72.854	DCAA	12.523	687477	71.273	DCAA
12.055	116788	3.281	DICAMBA		0		DICAMBA
12.487	146903	-16647.65	MCPP		0		MCPP
13.449	58466	7.995	2,4-DP	13.984	80249	9.514	2,4-DP
	0		MCPA	13.464	104523	1907.548	MCPA
14.225	10899390	.033	DBOFB	13.704	11598270	.033	DBOFB
13.922	72966	8.347	2,4-D	14.607	115153	11.918	2,4-D
15.09	401966	3.636	PCP	15.3	449888	3.638	PCP
15.397	110594	2.643	2,4,5-TP	15.816	27887	.611	2,4,5-TP
15.932	61650	1.669	2,4,5-T		0		2,4,5-T
16.751	550872	107.501	2,4-DB	17.234	126353	22.108	2,4-DB
16.931	110715	5.76	DINOSEB	16.947	64835	3.124	DINOSEB

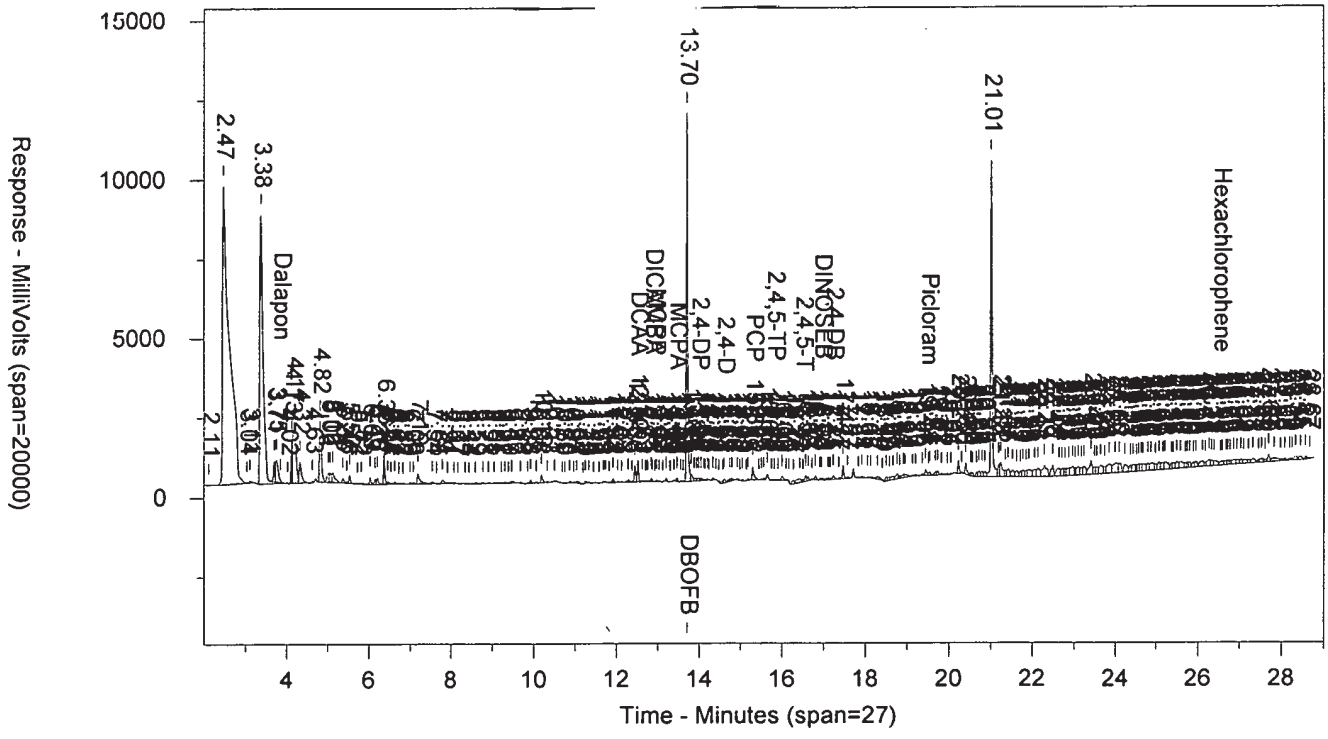
Files:
Area File: 15herb18304002.034.RAW
Area File: 15herb18304002B.034.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/2/2018 9:59:45 AM
File Reported On: 11/2/2018 at 1:26:30 PM

9867761 F DF5 ACT1002 T 183030010A 10401 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.034.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.034.RAW



eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: 9867762 F DF5 T1003 Sample ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.08 g Total Volume: 50 ml Analyst: 120 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on Nov 01, 2018 21:22:10
Instrument 19850A
Result file 15HERB18304002.012.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 101% (34 - 127) Conc: 66.96609

Analysis Report (B)

Injected on Nov 01, 2018 21:22:10
Instrument 19850B
Result file 15HERB18304002B.012.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 119% (34 - 127) Conc: 79.27177

Single Component Data

Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.71	3.76	548399	115.8115
2,4-DCAA	11.91	11.95	11.97	571217	66.96609
Dicamba	12.04	12.09	12.10	77222	2.253585
MCPP (Mecoprop)	12.45	12.48	12.51	142567	0
2,4-DP (Dichloroprop)	13.43	13.45	13.49	45030	6.397403
Pentachlorophenol	15.06	15.09	15.12	1467008	13.78688
2,4,5-TP	15.36	15.41	15.42	137058	3.402647
2,4,5-T	15.88	15.93	15.94	97472	2.741524
2,4-DB	16.71	16.75	16.77	1422211	288.3283
Dinoseb	16.90	16.93	16.96	163845	8.856133
Picloram	17.86	17.88	17.92	55474	1.799627
Hexachlorophene	26.10	26.11	26.16	248210	7.38874

Compound	Min	RT	Max	Height	Amount
2,4-DCAA	12.49	12.52	12.55	767914	79.27177
Dicamba	12.85	12.86	12.91	46924	1.165809
MCPA	13.43	13.46	13.49	190543	3462.571
2,4-DP (Dichloroprop)	13.96	13.97	14.01	104782	12.36993
2,4-D	14.58	14.61	14.64	161571	16.6512
Pentachlorophenol	15.28	15.30	15.34	1806073	14.54369
2,4,5-TP	15.77	15.81	15.83	49505	1.080229
2,4-DB	17.18	17.23	17.24	260927	45.45867
Hexachlorophene	26.52	26.55	26.58	162448	4.284298

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
Dalapon			<219.4149	<438.8298	<448.8032			
2,4-DCAA	B	79.27177	16.6307	33.2613	33.2613		16.83	
2,4-DCAA-D1	A	66.96609	16.6307	33.2613	33.2613			
2,4-DCAA-D2	B	79.27177	16.6307	33.2613	33.2613			
Dicamba			<19.9468	<39.8936	<59.8404			
MCPP (Mecoprop)			<18949.4675	<37898.9349	<38397.6051			
MCPA			<3789.8935	<7579.787	<12466.7549			
2,4-DP (Dichloroprop)			<44.8803	<89.7606	<99.734			
2,4-D			<59.8404	<119.6808	<179.5213			
Pentachlorophenol	B	14.54369	1.6456	3.2912	8.4774		5.34	
2,4,5-TP			<3.74	<7.4801	<8.4774			
2,4,5-T			<4.0891	<8.1782	<8.4774			
2,4-DB			<48.8697	<99.734	<104.7207			
Dinoseb			<44.8803	<89.7606	<119.6808			
Picloram			<99.734	<199.4681	<204.4548			
Hexachlorophene					<119.6808			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Michele D. Hamilton
Group Leader

NOV 02 2018

Reviewed and digitally signed by Richard A Shober on 11/2/2018 14:50:13

eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: 9867762 F DF5 T1003 Sample ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.08 g Total Volume: 50 ml Analyst: 120 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on Nov 01, 2018 21:22:10
Instrument 19850A
Result file 15HERB18304002.012.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 101% (27 - 122) Conc: 66.96609

Analysis Report (B)

Injected on Nov 01, 2018 21:22:10
Instrument 19850B
Result file 15HERB18304002B.012.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 119% (27 - 122) Conc: 79.27177

Single Component Data

Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.71	3.76	548399	115.8115
2,4-DCAA	11.91	11.95	11.97	571217	66.96609
Dicamba	12.04	12.09	12.10	77222	2.253585
MCPP (Mecoprop)	12.45	12.48	12.51	142567	0
2,4-DP (Dichloroprop)	13.43	13.45	13.49	45030	6.397403
Pentachlorophenol	15.06	15.09	15.12	1467008	13.78688
2,4,5-TP	15.36	15.41	15.42	137058	3.402647
2,4,5-T	15.88	15.93	15.94	97472	2.741524
2,4-DB	16.71	16.75	16.77	1422211	288.3283
Dinoseb	16.90	16.93	16.96	163845	8.856133
Picloram	17.86	17.88	17.92	55474	1.799627
Hexachlorophene	26.10	26.11	26.16	248210	7.38874

Compound	Min	RT	Max	Height	Amount
2,4-DCAA	12.49	12.52	12.55	767914	79.27177
Dicamba	12.85	12.86	12.91	46924	1.165809
MCPA	13.43	13.46	13.49	190543	3462.571
2,4-DP (Dichloroprop)	13.96	13.97	14.01	104782	12.36993
2,4-D	14.58	14.61	14.64	161571	16.6512
Pentachlorophenol	15.28	15.30	15.34	1806073	14.54369
2,4,5-TP	15.77	15.81	15.83	49505	1.080229
2,4-DB	17.18	17.23	17.24	260927	45.45867
Hexachlorophene	26.52	26.55	26.58	162448	4.284298

Single Component Summary

	Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☑	Dalapon			<219.4149	<438.8298	<448.8032	D2		
☐	2,4-DCAA	B	79.27177	16.6307	33.2613	33.2613		16.83	
☑	2,4-DCAA-D1	A	66.96609	16.6307	33.2613	33.2613			
☑	2,4-DCAA-D2	B	79.27177	16.6307	33.2613	33.2613			
☑	Dicamba			<19.9468	<39.8936	<59.8404	D2		
☑	MCPP (Mecoprop)			<18949.4675	<37898.9349	<38397.6051	D1		
☑	MCPA			<3789.8935	<7579.787	<12466.7549	D1		
☑	2,4-DP (Dichloroprop)			<44.8803	<89.7606	<99.734	D1		
☑	2,4-D			<59.8404	<119.6808	<179.5213	D1		
☐	Pentachlorophenol	B	14.54369	1.6456	3.2912	8.4774		5.34	
☑	2,4,5-TP			<3.74	<7.4801	<8.4774	D2		
☑	2,4,5-T			<4.0891	<8.1782	<8.4774	D2		
☑	2,4-DB			<48.8697	<99.734	<104.7207	D2		
☑	Dinoseb			<44.8803	<89.7606	<119.6808	D2		
☐	Picloram			<99.734	<199.4681	<204.4548			
☐	Hexachlorophene					<119.6808			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Michele D. Hamilton
Group Leader

NOV 02 2018

Reviewed and digitally signed by Richard A Shober on 11/2/2018 14:50:15

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: **9867762** F DF5 T1003 ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.08 g Total Volume: 50 ml Analyst: 13378 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on : Nov 01, 2018 21:22:10
Instrument : CP15--19850A
Result file : 15HERB18304002.012.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 101% (27-122) Conc.: 66.96609

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.71	3.76	548399	115.811500
DCAA	11.91	11.95	11.97	571217	66.966090
DICAMBA	12.04	12.09	12.10	77222	2.253585
MCPP	12.45	12.48	12.51	142567	-16680.490000
2,4-DP	13.43	13.45	13.49	45030	6.397403
DBOFB	14.21	14.22	14.26	10526500	0.033245
PCP	15.06	15.09	15.12	1467008	13.786880
2,4,5-TP	15.36	15.41	15.42	137058	3.402647
2,4,5-T	15.88	15.93	15.94	97472	2.741524
2,4-DB	16.71	16.75	16.77	1422211	288.328300
DINOSEB	16.90	16.93	16.96	163845	8.856133
Picloram	17.86	17.88	17.92	55474	1.799627
Hexachlorophene	26.10	26.11	26.16	248210	7.388740

Analysis Report (B)

Injected on : Nov 01, 2018 21:22:10
Instrument : CP15--19850B
Result file : 15HERB18304002B.012.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 119% (27-122) Conc.: 79.27177

Peak name	Min	R.T.	Max	Height	Amount
DCAA	12.49	12.52	12.55	767914	79.271770
DICAMBA	12.85	12.86	12.91	46924	1.165809
MCPA	13.43	13.46	13.49	190543	3462.571000
DBOFB	13.69	13.70	13.75	11686730	0.033245
2,4-DP	13.96	13.97	14.01	104782	12.369930
2,4-D	14.58	14.61	14.64	161571	16.651200
PCP	15.28	15.30	15.34	1806073	14.543690
2,4,5-TP	15.77	15.81	15.83	49505	1.080229
2,4-DB	17.18	17.23	17.24	260927	45.458670
Hexachlorophene	26.52	26.55	26.58	162448	4.284298

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Dalapon			<448.8032	<219.4149			
☐ DCAA	B	79.271770				16.83	
☑ DICAMBA			<59.8404	<19.9468			
☑ MCPP			38397.6051	18949.4675			
☑ MCPA			12466.7549	<3789.8935			
☑ 2,4-DP			<99.734	<44.8803			
☑ 2,4-D			<179.5213	<59.8404			
☐ DBOFB	A	0.033245				0.00	
☐ PCP	B	14.543690	8.4774	1.6456		5.34	
☑ 2,4,5-TP			<8.4774	<3.74			
☑ 2,4,5-T			<8.4774	<4.0891			
☑ 2,4-DB			<104.7207	<48.8697			
☑ DINOSEB			<119.6808	<44.8803			
☐ Picloram			<204.4548	<99.734			
☐ Hexachlorophene			<119.6808	<39.8936			

Units: ug/kg

Reviewed by: RMASK
Date: 11/2/18

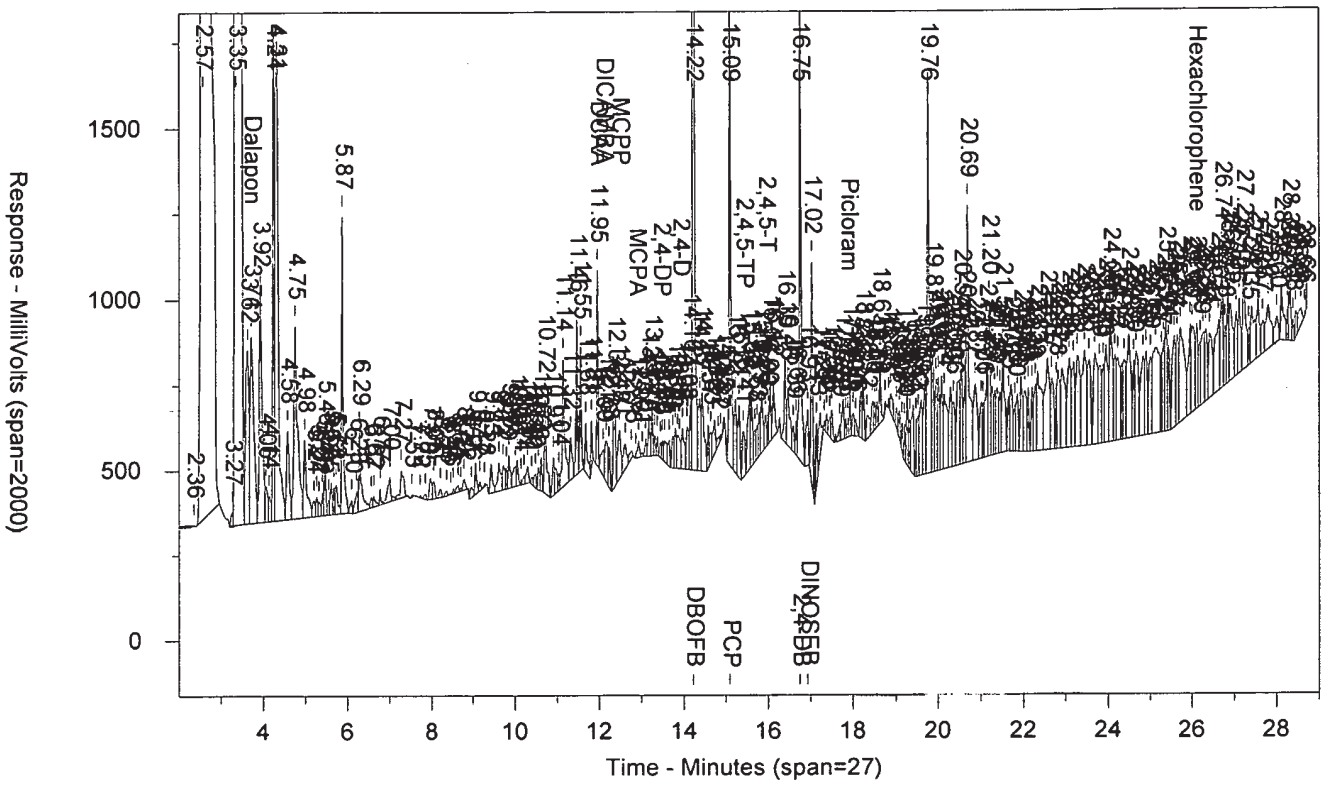
Verified by: Michele D. Hamilton
Michele D. Hamilton
Group Leader
Date: NOV 02 2018

DILUTION FOR COLORED EXTRACT

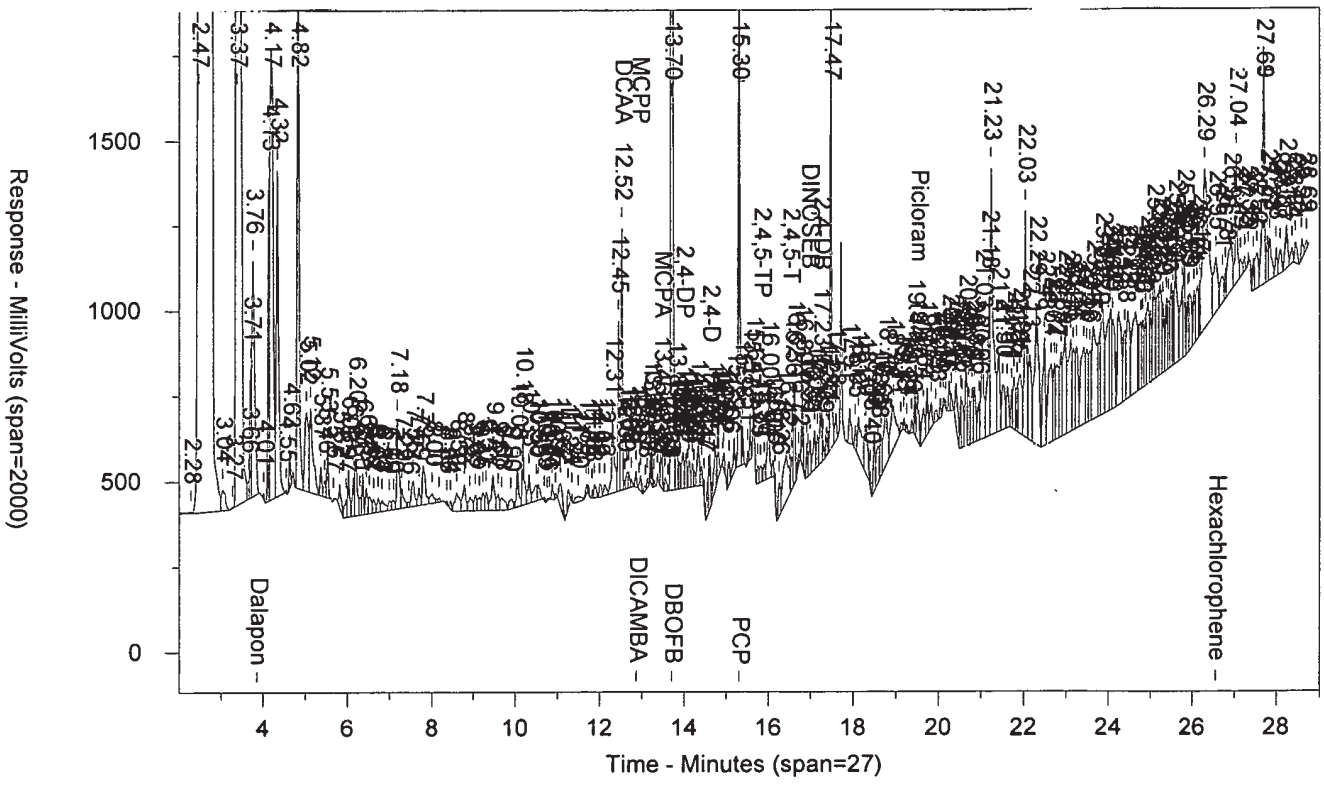
%RPD = High - Low Amount divided by the Average times 100 Higher Amount Found unless RPD > 40
** %Difference > 40, lower amount found reported
* Recovery outside QC Limits

9867762 F DF5 ACT1003 T 183030010A 10401 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.012.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.012.RAW



LANCASTER LABORATORIES

Sample Number: 9867762 F DF5 ACT1003 T 183030010A 10401 SW-846 8151A
Injected On: 11/1/2018 9:22:10 PM Sample Weight: 30.08
Instrument ID: CP15-19850 Dilution Factor: 50
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

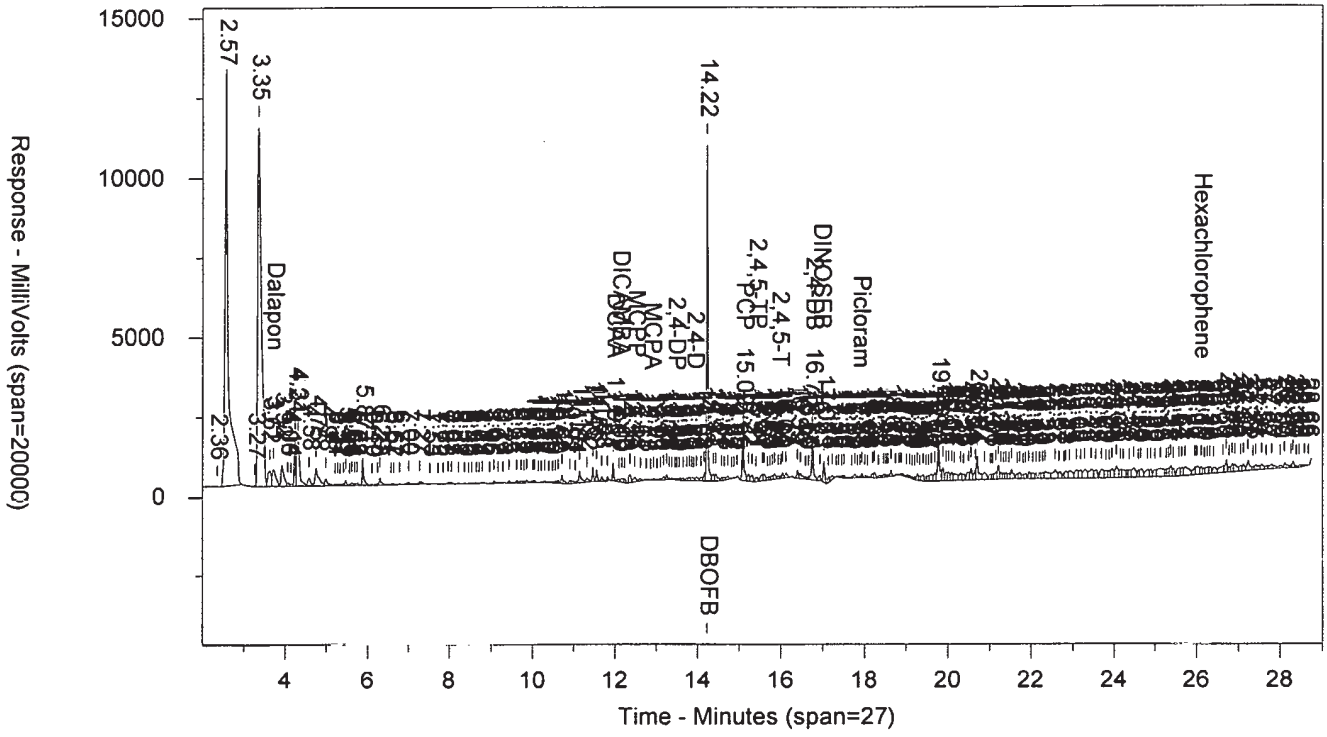
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.71	548399	115.812	Dalapon		0		Dalapon
11.954	571217	66.966	DCAA	12.523	767914	79.272	DCAA
12.092	77222	2.254	DICAMBA	12.864	46924	1.166	DICAMBA
12.478	142567	-16680.49	MCPP		0		MCPP
13.449	45030	6.397	2,4-DP	13.974	104782	12.37	2,4-DP
	0		MCPA	13.465	190543	3462.571	MCPA
14.225	10526500	.033	DBOFB	13.705	11686730	.033	DBOFB
	0		2,4-D	14.606	161571	16.651	2,4-D
15.09	1467008	13.787	PCP	15.302	1806073	14.544	PCP
15.406	137058	3.403	2,4,5-TP	15.815	49505	1.08	2,4,5-TP
15.934	97472	2.742	2,4,5-T		0		2,4,5-T
16.748	1422211	288.328	2,4-DB	17.232	260927	45.459	2,4-DB
16.926	163845	8.856	DINOSEB		0		DINOSEB
17.881	55474	1.8	Picloram		0		Picloram
26.107	248210	7.389	Hexachlorophene	26.552	162448	4.284	Hexachlorophe

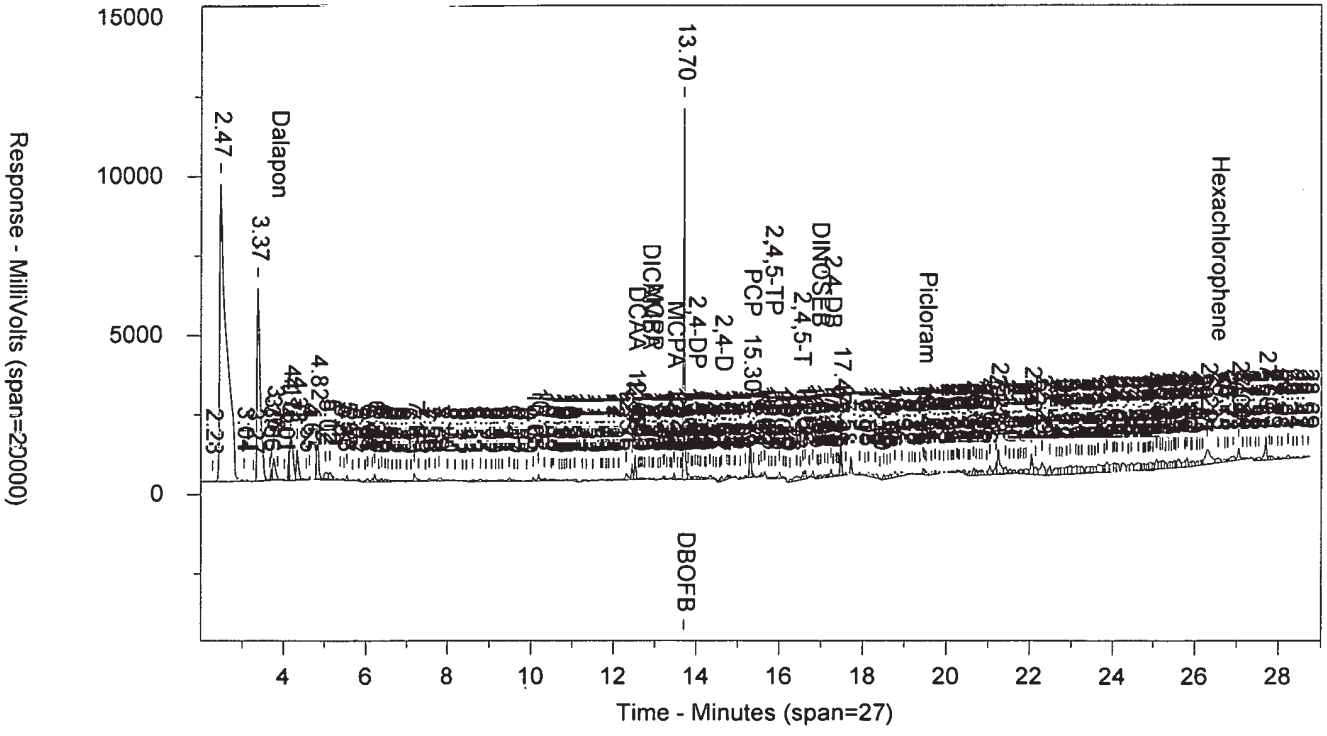
Files:
Area File: 15herb18304002.012.RAW
Area File: 15herb18304002B.012.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/1/2018 9:51:00 PM
File Reported On: 11/2/2018 at 1:18:49 PM

9867762 F DF5 ACT1003 T 183030010A 10401 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.012.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.012.RAW



eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: 9867766 F DF5 T1004 Sample ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.44 g Total Volume: 50 ml Analyst: 120 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on Nov 02, 2018 10:37:04
Instrument 19850A
Result file 15HERB18304002.036.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 99% (27 - 122) Conc: 65.30354

Analysis Report (B)

Injected on Nov 02, 2018 10:37:04
Instrument 19850B
Result file 15HERB18304002B.036.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 104% (27 - 122) Conc: 68.52969

Single Component Data

Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.71	3.76	462230	93.35708
2,4-DCAA	11.91	11.95	11.97	582436	65.30354
Dicamba	12.04	12.07	12.10	57713	1.61079
MCPP (Mecoprop)	12.45	12.48	12.51	104537	0
2,4-DP (Dichloroprop)	13.43	13.44	13.49	46749	6.351849
Pentachlorophenol	15.06	15.09	15.12	316897	2.848306
2,4,5-TP	15.36	15.40	15.42	93242	2.213908
2,4,5-T	15.88	15.93	15.94	69438	1.867872
2,4-DB	16.71	16.75	16.77	886960	171.9736
Dinoseb	16.90	16.93	16.96	141397	7.309431
Hexachlorophene	26.10	26.11	26.16	50806	1.446443

Compound	Min	RT	Max	Height	Amount
2,4-DCAA	12.49	12.52	12.55	656382	68.52969
Dicamba	12.85	12.85	12.91	51822	1.302157
MCPA	13.43	13.47	13.49	879587	16165.89
2,4-DP (Dichloroprop)	13.96	13.98	14.01	23456	2.800653
2,4-D	14.58	14.61	14.64	128815	13.42654
Pentachlorophenol	15.28	15.30	15.34	316490	2.577601
2,4,5-TP	15.77	15.82	15.83	27418	0.605099
2,4-DB	17.18	17.24	17.24	147866	26.05444

Single Component Summary

	Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☑	Dalapon			<216.82	<433.64	<443.4954	D2		
☐	2,4-DCAA	B	68.52969	16.434	32.8679	32.8679		4.82	
☑	2,4-DCAA-D1	A	65.30354	16.434	32.8679	32.8679			
☑	2,4-DCAA-D2	B	68.52969	16.434	32.8679	32.8679			
☑	Dicamba			<19.7109	<39.4218	<59.1327	D2		
☑	MCPP (Mecoprop)			<18725.3616	<37450.7233	<37943.4959	D1		
☑	MCPA			<3745.0723	<7490.1447	<12319.3169	D1		
☑	2,4-DP (Dichloroprop)			<44.3495	<88.6991	<98.5545	D2		
☑	2,4-D			<59.1327	<118.2654	<177.3982	D1		
☐	Pentachlorophenol	A	2.848306	1.6261	<3.2523	<8.3771	J	9.98	
☑	2,4,5-TP			<3.6958	<7.3916	<8.3771	D2		
☑	2,4,5-T			<4.0407	<8.0815	<8.3771	D2		
☑	2,4-DB			<48.2917	<98.5545	<103.4823	D2		
☑	Dinoseb			<44.3495	<88.6991	<118.2654	D2		
☐	Picloram			<98.5545	<197.1091	<202.0368			
☐	Hexachlorophene					<118.2654			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Michele D. Hamilton
Group Leader

NOV 02 2018

Reviewed and digitally signed by Richard A Shober on 11/2/2018 14:50:53

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: **9867766** F DF5 T1004 ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.44 g Total Volume: 50 ml Analyst: 13378 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on : Nov 02, 2018 10:37:04
Instrument : CP15--19850A
Result file : 15HERB18304002.036.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 99% (27-122) Conc.: 65.30354

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.71	3.76	462230	93.357080
DCAA	11.91	11.95	11.97	582436	65.303540
DICAMBA	12.04	12.07	12.10	57713	1.610790
MCPP	12.45	12.48	12.51	104537	-17818.830000
2,4-DP	13.43	13.44	13.49	46749	6.351849
DBOFB	14.21	14.22	14.26	10876340	0.032852
PCP	15.06	15.09	15.12	316897	2.848306
2,4,5-TP	15.36	15.40	15.42	93242	2.213908
2,4,5-T	15.88	15.93	15.94	69438	1.867872
2,4-DB	16.71	16.75	16.77	886960	171.973600
DINOSEB	16.90	16.93	16.96	141397	7.309431
Hexachlorophene	26.10	26.11	26.16	50806	1.446443

Analysis Report (B)

Injected on : Nov 02, 2018 10:37:04
Instrument : CP15--19850B
Result file : 15HERB18304002B.036.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 104% (27-122) Conc.: 68.52969

Peak name	Min	R.T.	Max	Height	Amount
DCAA	12.49	12.52	12.55	656382	68.529690
DICAMBA	12.85	12.85	12.91	51822	1.302157
MCPA	13.43	13.47	13.49	879587	16165.890000
DBOFB	13.69	13.71	13.75	11418530	0.032852
2,4-DP	13.96	13.98	14.01	23456	2.800653
2,4-D	14.58	14.61	14.64	128815	13.426540
PCP	15.28	15.30	15.34	316490	2.577601
2,4,5-TP	15.77	15.82	15.83	27418	0.605099
2,4-DB	17.18	17.24	17.24	147866	26.054440

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Dalapon			<443.4954	<216.82			
☐ DCAA	B	68.529690				4.82	
☑ DICAMBA			<59.1327	<19.7109			
☑ MCPP			37943.4959	18725.3616			
☑ MCPA			12319.3169	<3745.0723			
☑ 2,4-DP			<98.5545	<44.3495			
☑ 2,4-D			<177.3982	<59.1327			
☐ DBOFB	A	0.032852				0.00	
☐ PCP	A	2.848306	<8.3771	1.6261	J	9.98	
☑ 2,4,5-TP			<8.3771	<3.6958			
☑ 2,4,5-T			<8.3771	<4.0407			
☑ 2,4-DB			<103.4823	<48.2917			
☑ DINOSEB			<118.2654	<44.3495			
☐ Picloram			<202.0368	<98.5545			
☐ Hexachlorophene			<118.2654	<39.4218			

Units: ug/kg

Reviewed by: [signature]
Date: 11/2/

Verified by: [signature]
Date: Michele D. Hamilton
Group Leader
NOV 02 2018

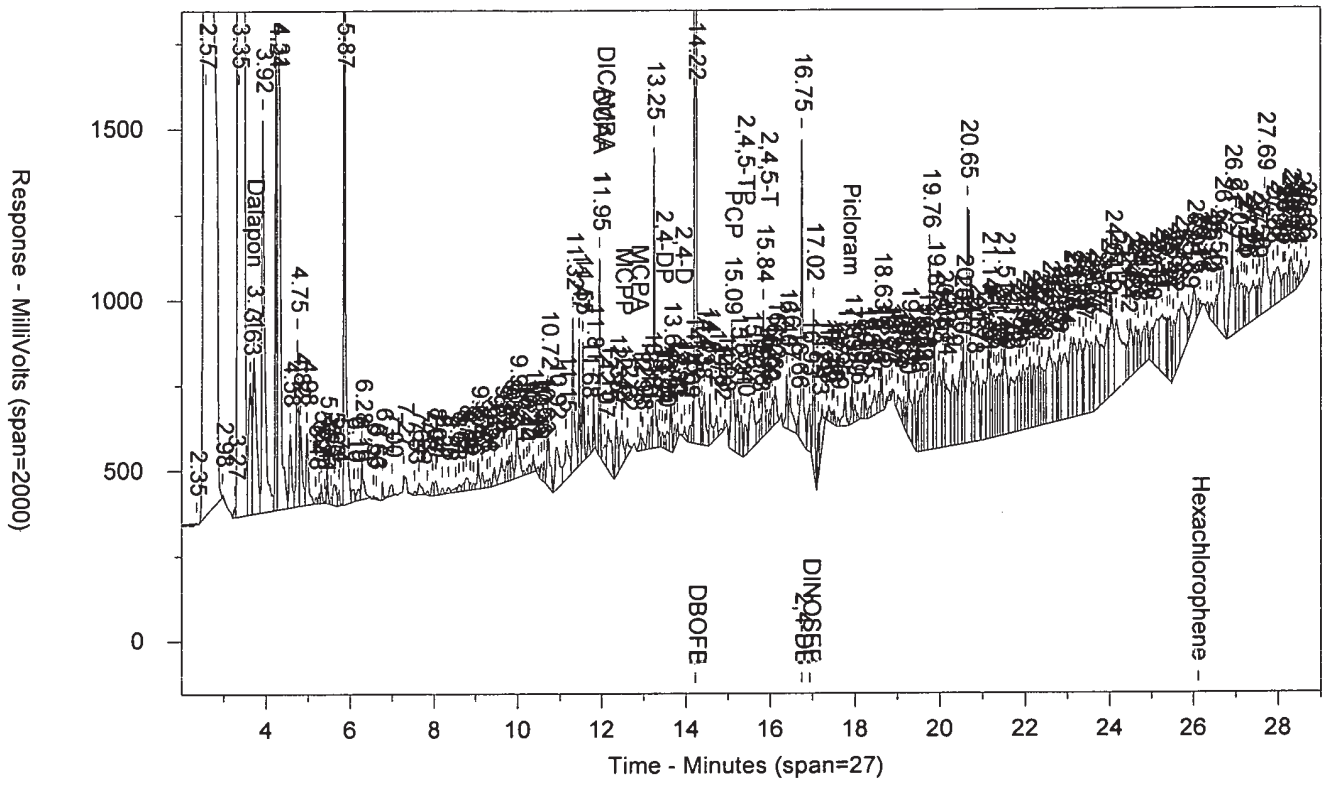
DILUTION FOR COLORED EXTRACT

%RPD = High - Low Amount divided by the Average times 100
** %Difference > 40, lower amount found reported
* Recovery outside QC Limits

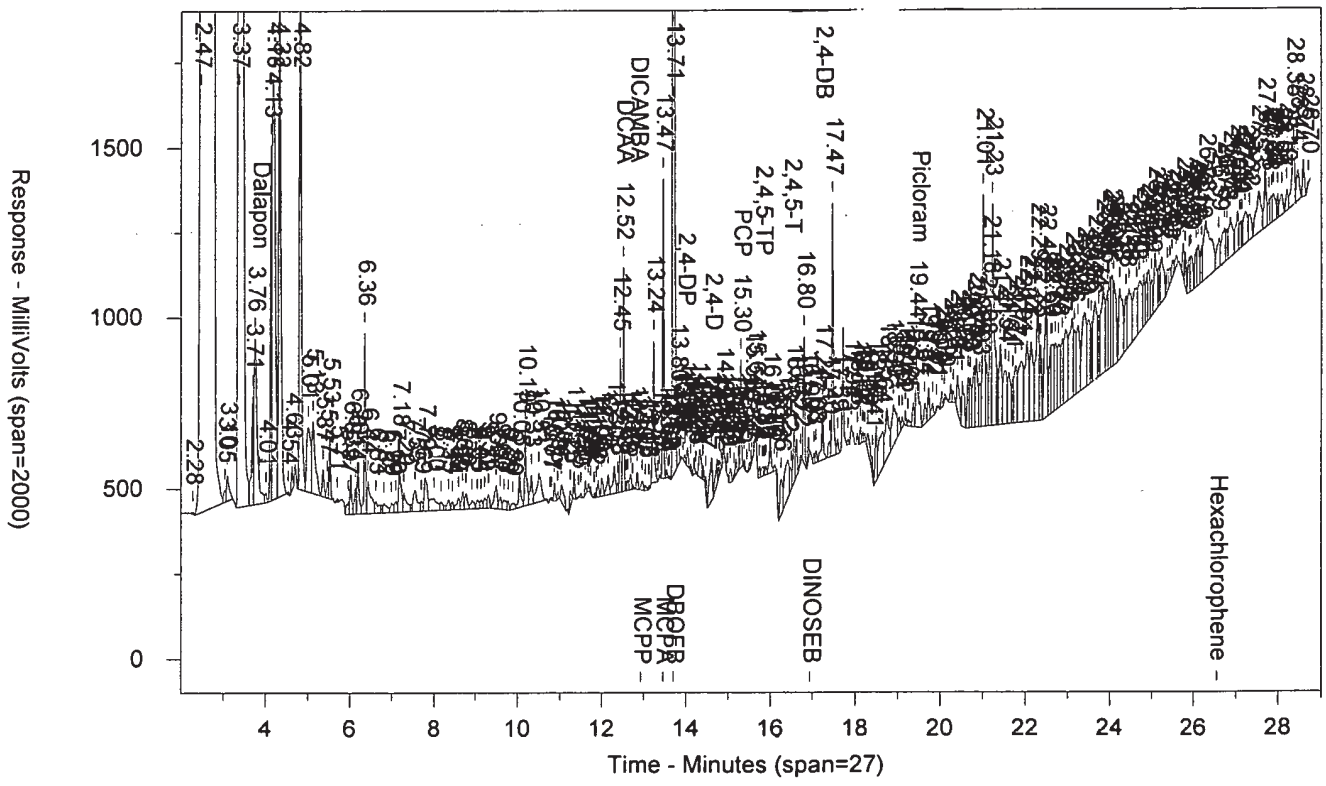
Higher Amount Found unless RPD > 40

9867766 F DF5 ACT1004 T 183030010A 10401 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.036.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.036.RAW



LANCASTER LABORATORIES

Sample Number: 9867766 F DF5 ACT1004 T 183030010A 10401 SW-846 8151A
Injected On: 11/2/2018 10:37:04 AM Sample Weight: 30.44
Instrument ID: CP15-19850 Dilution Factor: 50
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

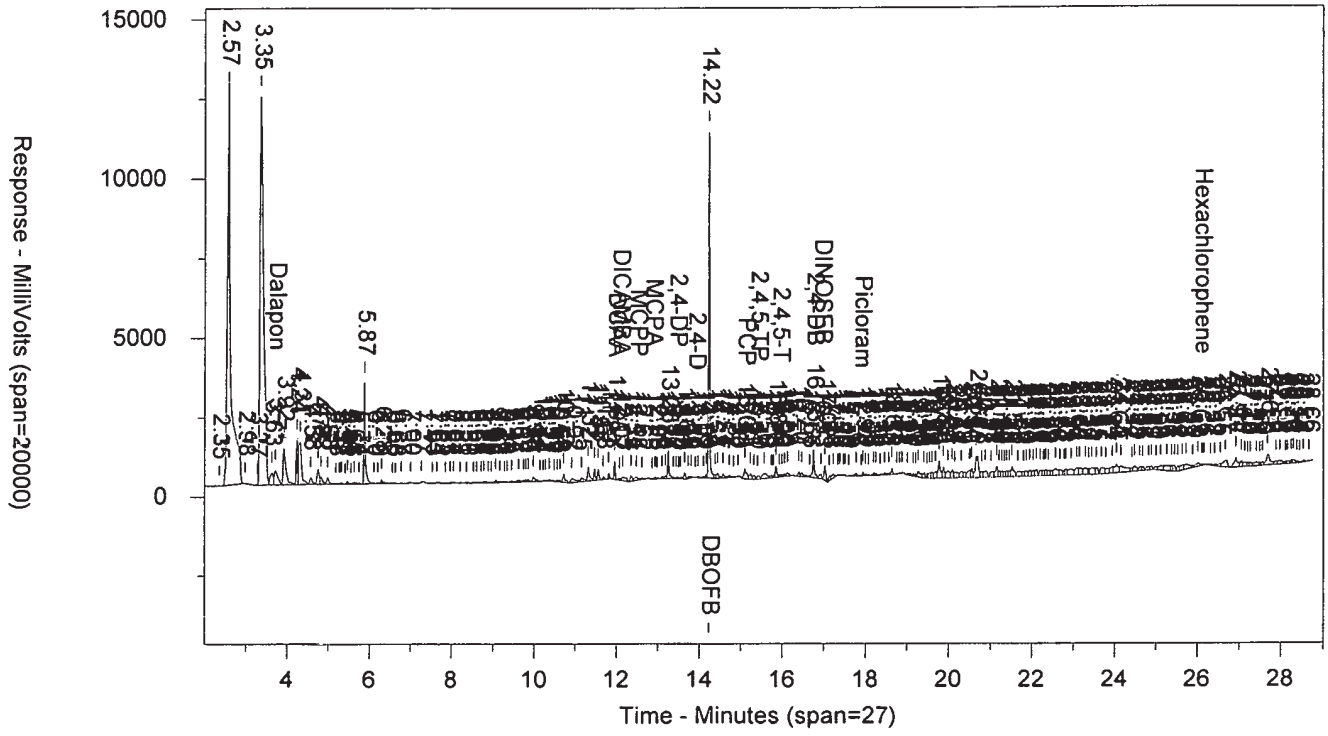
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.71	462230	93.357	Dalapon		0		Dalapon
11.953	582436	65.304	DCAA	12.523	656382	68.53	DCAA
12.069	57713	1.611	DICAMBA	12.848	51822	1.302	DICAMBA
12.482	104537	-17818.83	MCPP		0		MCPP
13.444	46749	6.352	2,4-DP	13.982	23456	2.801	2,4-DP
	0		MCPA	13.466	879587	16165.89	MCPA
14.225	10876340	.033	DBOFB	13.706	11418530	.033	DBOFB
	0		2,4-D	14.608	128815	13.427	2,4-D
15.09	316897	2.848	PCP	15.301	316490	2.578	PCP
15.397	93242	2.214	2,4,5-TP	15.823	27418	.605	2,4,5-TP
15.93	69438	1.868	2,4,5-T		0		2,4,5-T
16.748	886960	171.974	2,4-DB	17.235	147866	26.054	2,4-DB
16.928	141397	7.309	DINOSEB		0		DINOSEB
26.112	50806	1.446	Hexachlorophene		0		Hexachlorophe

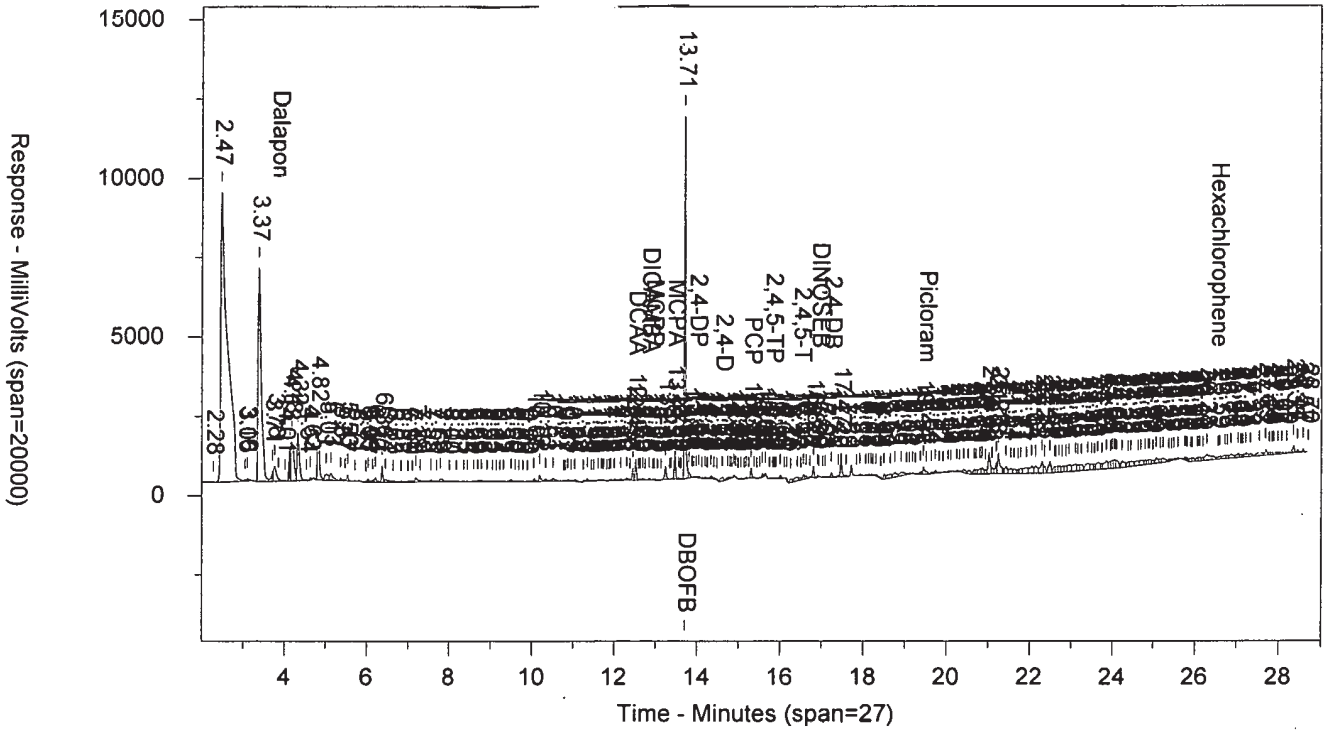
Files:
Area File: 15herb18304002.036.RAW
Area File: 15herb18304002B.036.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/2/2018 11:05:53 AM
File Reported On: 11/2/2018 at 1:27:09 PM

9867766 F DF5 ACT1004 T 183030010A 10401 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.036.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.036.RAW



eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: 9867767 F DF10 T1005 Sample ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.28 g Total Volume: 100 ml Analyst: 120 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on Nov 02, 2018 11:10:12
Instrument 19850A
Result file 15HERB18304002.037.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) * 152% (27 - 122) Conc: 100.5621

Analysis Report (B)

Injected on Nov 02, 2018 11:10:12
Instrument 19850B
Result file 15HERB18304002B.037.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) * 128% (27 - 122) Conc: 84.71327

Single Component Data

Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.71	3.76	334837	144.6571
2,4-DCAA	11.91	11.96	11.97	419305	100.5621
Dicamba	12.04	12.08	12.10	32145	1.919118
MCPP (Mecoprop)	12.45	12.45	12.51	155473	0
MCPA	12.83	12.87	12.89	21034	0
2,4-DP (Dichloroprop)	13.43	13.44	13.49	48533	14.10542
Pentachlorophenol	15.06	15.09	15.12	387439	7.448828
2,4,5-TP	15.36	15.40	15.42	175385	8.907516
2,4,5-T	15.88	15.92	15.94	67909	3.907444
2,4-DB	16.71	16.77	16.77	1463728	607.0639
Dinoseb	16.90	16.92	16.96	265261	29.33144
Picloram	17.86	17.92	17.92	123285	8.181839
Hexachlorophene	26.10	26.12	26.16	6127585	373.1562

Compound	Min	RT	Max	Height	Amount
2,4-DCAA	12.49	12.52	12.55	417432	84.71327
Dicamba	12.85	12.86	12.91	242895	11.86356
MCPA	13.43	13.46	13.49	315293	11263.63
2,4-DP (Dichloroprop)	13.96	13.97	14.01	93902	21.79307
Pentachlorophenol	15.28	15.30	15.34	360099	5.700597
2,4,5-TP	15.77	15.81	15.83	151362	6.493027
2,4-DB	17.18	17.23	17.24	189535	64.91517
Picloram	19.48	19.52	19.54	256817	13.79657
Hexachlorophene	26.52	26.55	26.58	7685320	398.462

Single Component Summary

	Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☑	Dalapon			<435.9313	<871.8626	<891.6777	D2		
☐	2,4-DCAA	A	100.5621	33.0416	66.0832	66.0832		17.11	
☑	2,4-DCAA-D1	A	100.5621	33.0416	66.0832	66.0832			
☑	2,4-DCAA-D2	B	84.71327	33.0416	66.0832	66.0832			
☑	Dicamba			<39.6301	<79.2602	<118.8904	D1		
☑	MCPP (Mecoprop)			<37648.6134	<75297.2267	<76287.9797	D1		
☑	MCPA			<7529.7227	<15059.4453	<24768.8246	D1		
☑	2,4-DP (Dichloroprop)			<89.1678	<178.3355	<198.1506	D1		
☑	2,4-D			<118.8904	<237.7807	<356.6711	D1		
☐	Pentachlorophenol	A	7.448828	3.2695	6.539	<16.8428	J	26.59	
☑	2,4,5-TP			<7.4306	<14.8613	<16.8428	D2		
☑	2,4,5-T			<8.1242	<16.2483	<16.8428	D2		
☑	2,4-DB			<97.0938	<198.1506	<208.0581	D2		
☑	Dinoseb			<89.1678	<178.3355	<237.7807	D2		
☐	Picloram			<198.1506	<396.3012	<406.2087			
☐	Hexachlorophene	B	398.462			237.7807		6.56	

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Michele D. Hamilton
Group Leader

NOV 02 2018

Reviewed and digitally signed by Richard A Shober on 11/2/2018 14:50:55

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: **9867767** F DF10 T1005 ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.28 g Total Volume: 100 ml Analyst: 13378 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on : Nov 02, 2018 11:10:12
Instrument : CP15--19850A
Result file : 15HERB18304002.037.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : *152% (27-122) Conc.: 100.5621

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.71	3.76	334837	144.657100
DCAA	11.91	11.96	11.97	419305	100.562100
DICAMBA	12.04	12.08	12.10	32145	1.919118
MCPP	12.45	12.45	12.51	155473	-32004.070000
MCPA	12.83	12.87	12.89	21034	-43765.880000
2,4-DP	13.43	13.44	13.49	48533	14.105420
DBOFB	14.21	14.22	14.26	10223160	0.033025
PCP	15.06	15.09	15.12	387439	7.448828
2,4,5-TP	15.36	15.40	15.42	175385	8.907516
2,4,5-T	15.88	15.92	15.94	67909	3.907444
2,4-DB	16.71	16.77	16.77	1463728	607.063900
DINOSEB	16.90	16.92	16.96	265261	29.331440
Picloram	17.86	17.92	17.92	123285	8.181839
Hexachlorophene	26.10	26.12	26.16	6127585	373.156200

Analysis Report (B)

Injected on : Nov 02, 2018 11:10:12
Instrument : CP15--19850B
Result file : 15HERB18304002B.037.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : *128% (27-122) Conc.: 84.71327

Peak name	Min	R.T.	Max	Height	Amount
DCAA	12.49	12.52	12.55	417432	84.713270
DICAMBA	12.85	12.86	12.91	242895	11.863560
MCPA	13.43	13.46	13.49	315293	11263.630000
DBOFB	13.69	13.70	13.75	11810960	0.033025
2,4-DP	13.96	13.97	14.01	93902	21.793070
PCP	15.28	15.30	15.34	360099	5.700597
2,4,5-TP	15.77	15.81	15.83	151362	6.493027
2,4-DB	17.18	17.23	17.24	189535	64.915170
Picloram	19.48	19.52	19.54	256817	13.796570
Hexachlorophene	26.52	26.55	26.58	7685320	398.462000

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Dalapon			<891.6777	<435.9313			
☐ DCAA	A	100.562100				17.11	
☑ DICAMBA			<118.8904	<39.6301			
☑ MCPP			76287.9797	37648.6134			
☑ MCPA			24768.8246	<7529.7227			
☑ 2,4-DP			<198.1506	<89.1678			
☑ 2,4-D			<356.6711	<118.8904			
☐ DBOFB	A	0.033025				0.00	
☐ PCP	A	7.448828	<16.8428	3.2695	J	26.59	
☑ 2,4,5-TP			<16.8428	<7.4306			
☑ 2,4,5-T			<16.8428	<8.1242			
☑ 2,4-DB			<208.0581	<97.0938			
☑ DINOSEB			<237.7807	<89.1678			
☐ Picloram			<406.2087	<198.1506			
☐ Hexachlorophene	B	398.462000	237.7807	79.2602		6.56	

Units: ug/kg

Reviewed by: RHA 84
Date: 11/2

Verified by: Michele D. Hamilton
Michele D. Hamilton
Group Leader
Date: NOV 02 2018

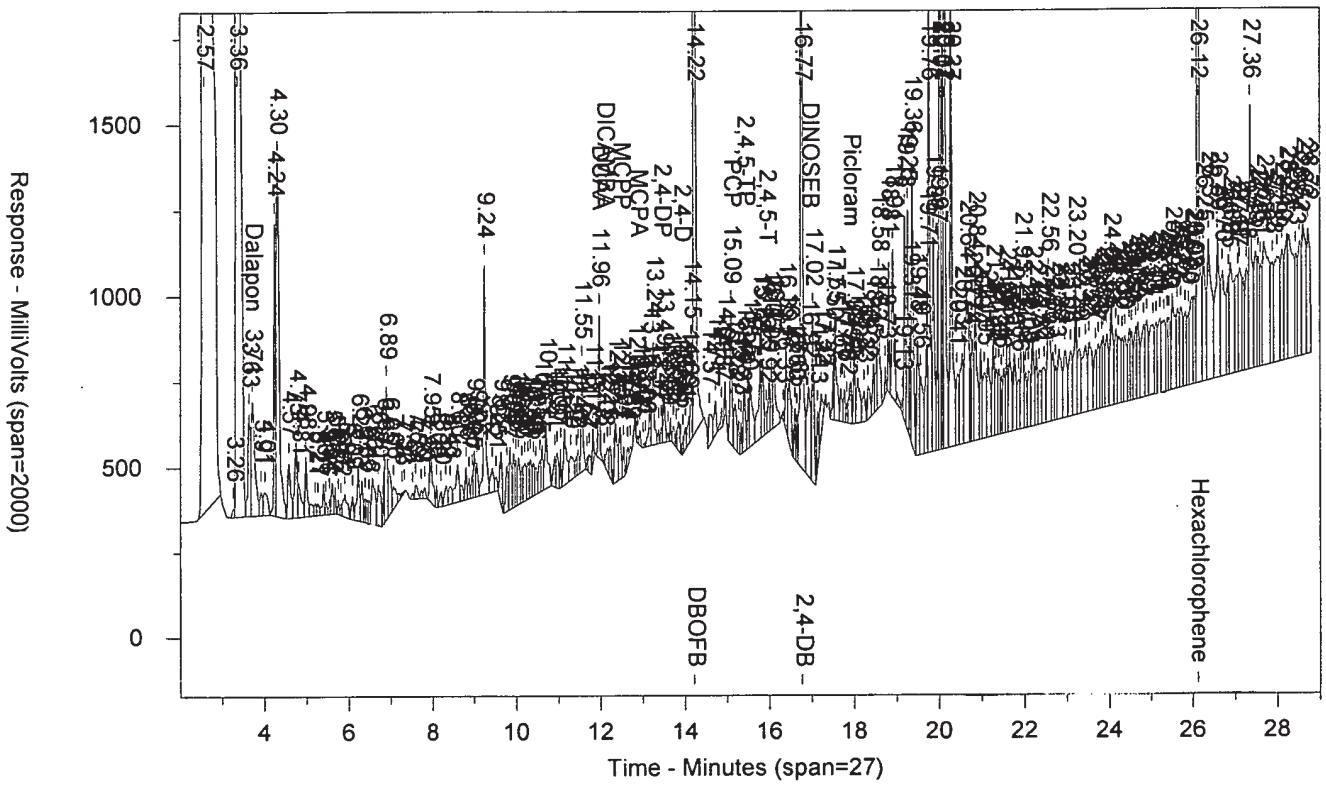
DILUTION FOR DARK EXTRACT

%RPD = High - Low Amount divided by the Average times 100
** %Difference > 40, lower amount found reported
* Recovery outside QC Limits

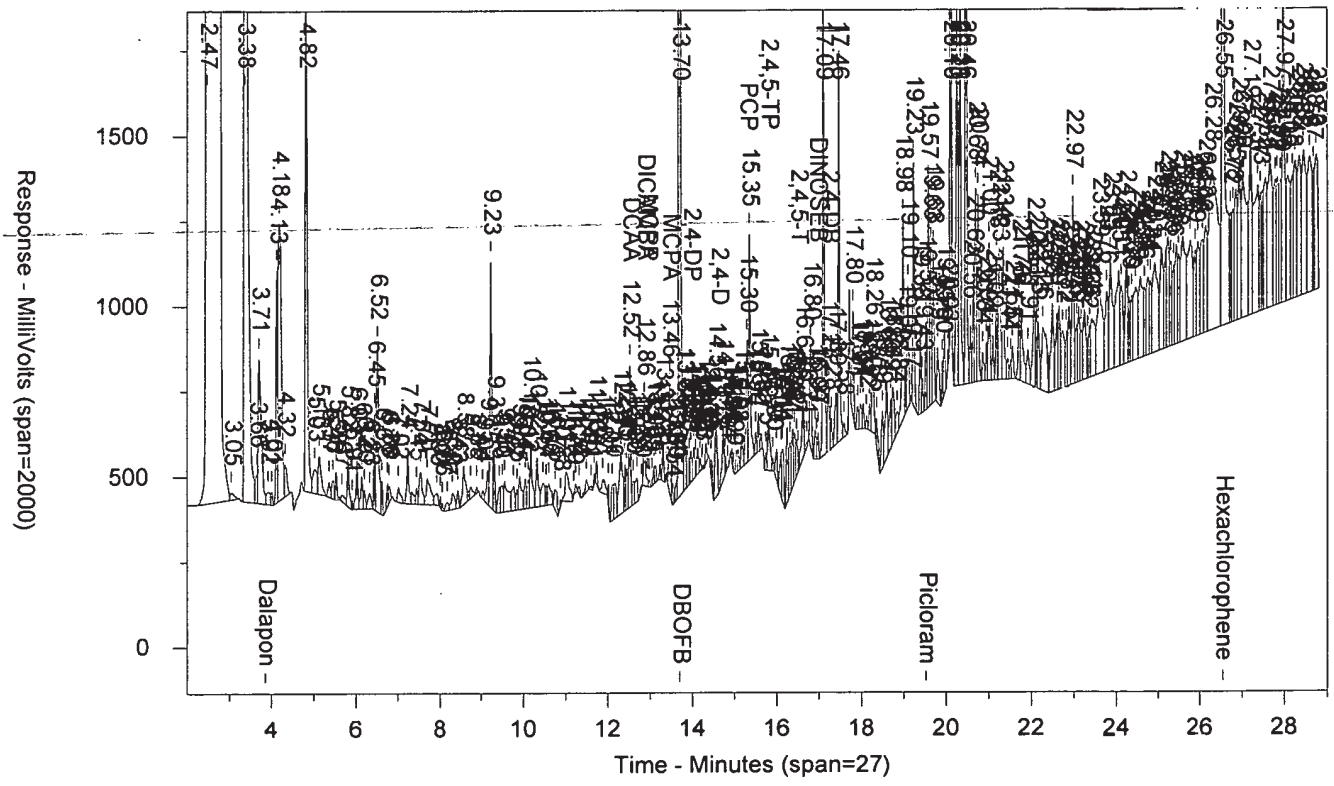
Higher Amount Found unless RPD > 40

9867767 F DF10 ACT1005 T 183030010A 10401 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.037.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.037.RAW



LANCASTER LABORATORIES

Sample Number: 9867767 F DF10 ACT1005 T 183030010A 10401 SW-846 8151A
Injected On: 11/2/2018 11:10:12 AM Sample Weight: 30.28
Instrument ID: CP15-19850 Dilution Factor: 100
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

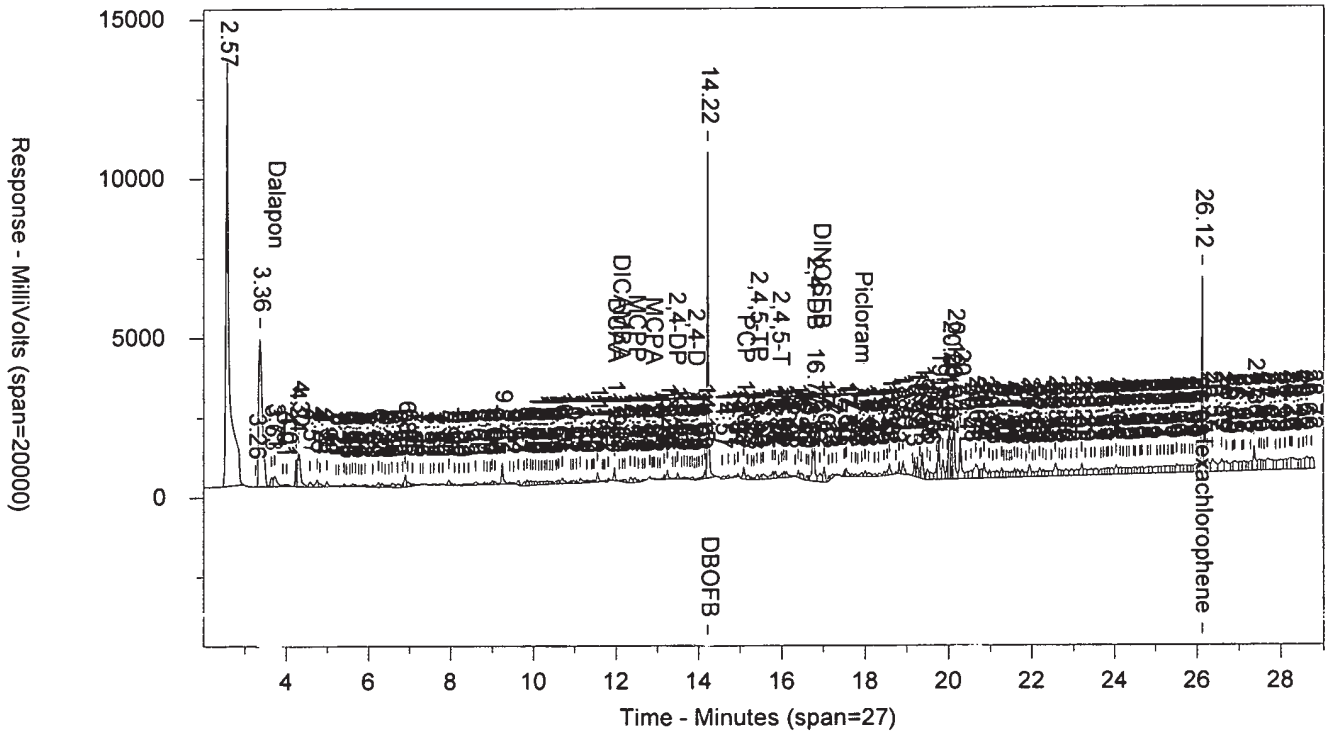
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.71	334837	144.657	Dalapon		0		Dalapon
11.96	419305	100.562	DCAA	12.52	417432	84.713	DCAA
12.083	32145	1.919	DICAMBA	12.863	242895	11.864	DICAMBA
12.453	155473	-32004.07	MCPP		0		MCPP
12.874	21034	-43765.88	MCPA	13.461	315293	11263.63	MCPA
13.437	48533	14.105	2,4-DP	13.967	93902	21.793	2,4-DP
14.217	10223160	.033	DBOFB	13.698	11810960	.033	DBOFB
15.086	387439	7.449	PCP	15.295	360099	5.701	PCP
15.405	175385	8.908	2,4,5-TP	15.805	151362	6.493	2,4,5-TP
15.923	67909	3.907	2,4,5-T		0		2,4,5-T
16.768	1463728	607.064	2,4-DB	17.228	189535	64.915	2,4-DB
16.917	265261	29.331	DINOSEB		0		DINOSEB
17.916	123285	8.182	Picloram	19.518	256817	13.797	Picloram
26.122	6127585	373.156	Hexachlorophene	26.545	7685320	398.462	Hexachlorophe

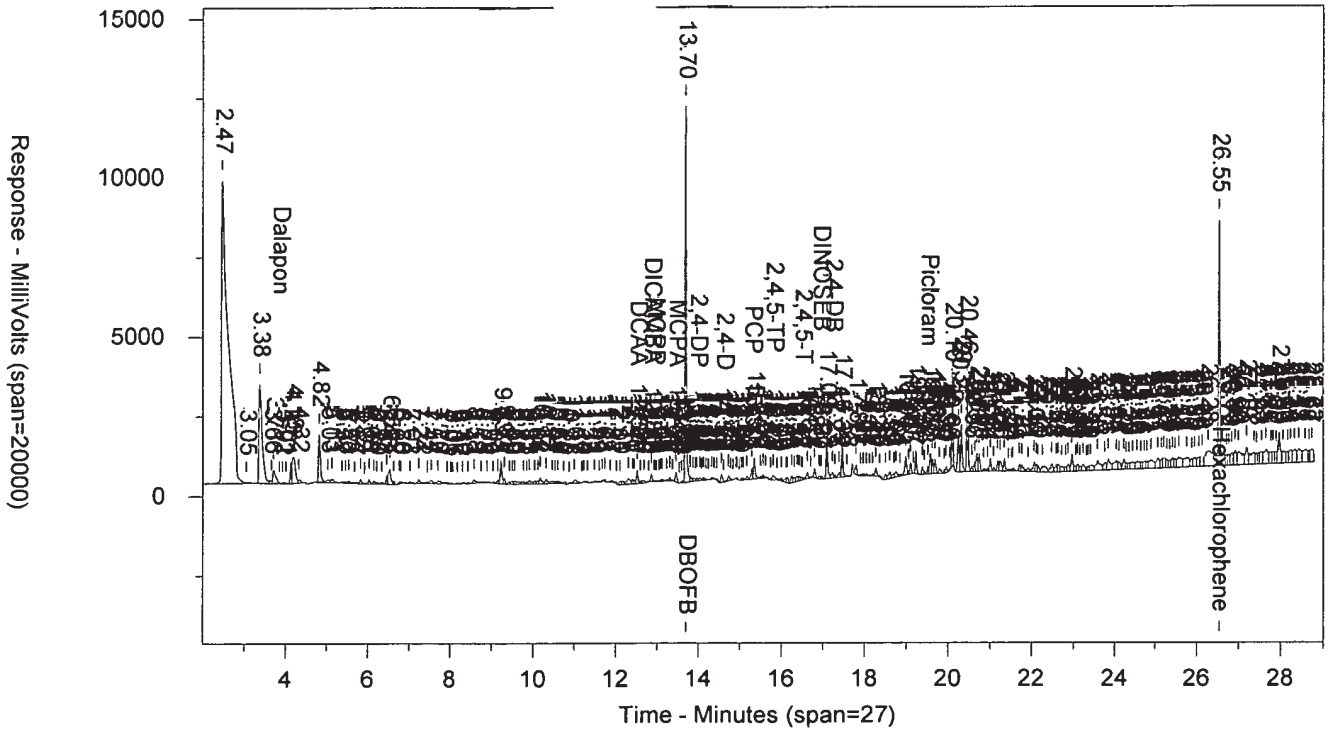
Files:
Area File: 15herb18304002.037.RAW
Area File: 15herb18304002B.037.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/2/2018 11:39:03 AM
File Reported On: 11/2/2018 at 1:27:34 PM

9867767 F DF10 ACT1005 T 183030010A 10401 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.037.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.037.RAW



Standards Data

Herbicides

Eurofins Lancaster Laboratories

CHROM PERFECT SEQUENCE FILE

Sequence File: \\Uslan-chromperfect\chromperfect-data\Dept-24\Active\CP15\15herb18304001.seq

Chromatography Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15

Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15

Number of Entries: 42

Samplename	VP	Code	ID	Method	Samp Amt	DF	Int Std	C	Batch Number	Analysis
1 CONDITIONER	1	MISC	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830299999	
2 CONDITIONER	2	MISC	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830299999	
3 CONDITIONER	3	MISC	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830299999	
4 CONDITIONER	4	MISC	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830299999	
5 HIBLKX1824B	5	ICAL	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830299999	10407
6 HERB11824E	6	ICAL	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	1	1830299999	10407
7 HERB21824E	7	ICAL	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	2	1830299999	10407
8 HERB31824F	8	ICAL	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	3	1830299999	10407
9 HERB41824E	9	ICAL	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	4	1830299999	10407
10 HERB51824E	10	ICAL	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	5	1830299999	10407
11 HERB61824E	11	ICAL	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	6	1830299999	10407
12 MDHEX1824E	12	ICAL	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830299999	10407
13 ICHBX1824G	13	CCAL	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830299999	10407
14 ICHBX1824H	14	CCAL	QV	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830299999	10407
15 ICHBX1824I	15	CCAL	QW	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830299999	10407
16 BLANKA 10/29/18 F	16	BLK	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	183020008A	10407
17 LCSA 10/29/18 F	17	LCS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	183020008A	10407
18 LCSDA 10/29/18 F	18	LCSD	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	183020008A	10407
19 9868184 F	19	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1040	10	1	0	183020008A	10407
20 9868185 F	20	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1062	10	1	0	183020008A	10407
21 9868186 F	21	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1045	10	1	0	183020008A	10407
22 9868187 F	22	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1055	10	1	0	183020008A	10407
23 9868189 F	23	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1060	10	1	0	183020008A	10407
24 9870991 F	24	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1029	10	1	0	183020008A	10407
25 HERB31824F	25	CCAL	TW	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830299999	10407
26 HIBLKX1824B	26	PIBLK	FL	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830299999	10407
27 BLANKA 10/29/18 F	27	BLK	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30	10	1	0	183020009A	10401
28 LCSA 10/29/18 F	28	LCS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30	10	1	0	183020009A	10401
29 9863853 F	29	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.39	10	1	0	183020009A	10401
30 9863854MS F	30	MS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.28	10	1	0	183020009A	10401
31 9863855MSD F	31	MSD	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.02	10	1	0	183020009A	10401
32 HERB31824F	32	CCAL	TX	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830299999	10407
33 HIBLKX1824B	33	PIBLK	FM	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830299999	10407
34 9863851 F	34	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30	10	1	0	183020009A	10401
35 9863852 F	35	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.03	10	1	0	183020009A	10401
36 9863857 F	36	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.29	10	1	0	183020009A	10401
37 9863858 F	37	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.27	10	1	0	183020009A	10401
38 9866461 F	38	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.06	10	1	0	183020009A	10401
39 9866462 F	39	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.18	10	1	0	183020009A	10401
40 9870992 F	40	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.41	10	1	0	183020009A	10401
41 HERB31824F	41	CCAL	TY	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830299999	10407
42 HIBLKX1824B	42	PIBLK	FN	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830299999	10407

MW 15249
11/2/18

Set-up by: _____ Date: 11/2/18

11/2/2018

Eurofins Lancaster Laboratories

CHROM PERFECT SEQUENCE FILE

Sequence File: \\Uslan-chromperfect\chromperfect-data\Dept-24\Active\CP15\15herb18304002.seq

Chromatography Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15

Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15

Number of Entries: 71

Samplename	VP	Code	ID	Method	Samp Amt	DF	Int Std	C	Batch Number	Analysis
1 CONDITIONER	1	MISC	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830499999	
2 CONDITIONER	2	MISC	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830499999	
3 CONDITIONER	3	MISC	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830499999	
4 CONDITIONER	4	MISC	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830499999	
5 CONDITIONER	5	MISC	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830499999	
6 HERB31824F	6	CCAL	UH	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830499999	10407
7 HIBLKX1824B	7	MISC	RQ	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830499999	10407
8 BLANKA 10/30/18 F	8	BLK	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30	10	1	0	183030010A	10401
9 LCSA 10/30/18 F	9	LCS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30	10	1	0	183030010A	10401
10 9867762 F	10	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.08	10	1	0	183030010A	10401
11 CONDITIONER	11	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.08	10	1	0	183030010A	10401
12 9867762 F DF5	12	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.08	50	1	0	183030010A	10401
13 9867763MS F	13	MS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.39	10	1	0	183030010A	10401
14 CONDITIONER	14	MS	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.39	10	1	0	183030010A	10401
15 9867763MS F DF5	15	MS	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.39	50	1	0	183030010A	10401
16 HERB31824F	16	CCAL	UI	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830499999	10407
17 HIBLKX1824B	17	MISC	RR	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830499999	10407
18 9867764MSD F	18	MSD	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.2	10	1	0	183030010A	10401
19 CONDITIONER	19	MSD	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.2	10	1	0	183030010A	10401
20 9867764MSD F DF5	20	MSD	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.2	50	1	0	183030010A	10401
21 9866463 F	21	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.28	10	1	0	183030010A	10401
22 9866463 F DF5	22	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.28	50	1	0	183030010A	10401
23 9866464 F	23	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.23	10	1	0	183030010A	10401
24 9866464 F DF5	24	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.23	50	1	0	183030010A	10401
25 9866465 F	25	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.3	10	1	0	183030010A	10401
26 9866465 F DF5	26	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.3	50	1	0	183030010A	10401
27 HERB31824F	27	CCAL	UJ	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830499999	10407
28 HIBLKX1824B	28	MISC	RS	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830499999	10407
29 9866466 F	29	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.02	10	1	0	183030010A	10401
30 9866466 F DF5	30	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.02	50	1	0	183030010A	10401
31 9866467 F	31	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.39	10	1	0	183030010A	10401
32 9866467 F DF5	32	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.39	50	1	0	183030010A	10401
33 9867761 F	33	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.18	10	1	0	183030010A	10401
34 9867761 F DF5	34	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.18	50	1	0	183030010A	10401
35 9867766 F	35	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.44	10	1	0	183030010A	10401
36 9867766 F DF5	36	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.44	50	1	0	183030010A	10401
37 9867767 F DF10	37	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.28	100	1	0	183030010A	10401
38 CONDITIONER	38	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.28	100	1	0	183030010A	10401
39 HERB31824F	39	CCAL	UK	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830499999	10407
40 HIBLKX1824B	40	MISC	RT	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830499999	10407
41 9869111 F	41	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.49	10	1	0	183030010A	10401
42 9869111 F DF5	42	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.49	50	1	0	183030010A	10401
43 9870251 F	43	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.19	10	1	0	183030010A	10401
44 9870251 F DF5	44	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.19	50	1	0	183030010A	10401
45 9870252 F	45	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.14	10	1	0	183030010A	10401
46 9870252 F DF5	46	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.14	50	1	0	183030010A	10401
47 9870253 F DF10	47	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.18	100	1	0	183030010A	10401
48 CONDITIONER	48	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.18	100	1	0	183030010A	10401
49 9870254 F	49	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.15	10	1	0	183030010A	10401
50 9870254 F DF5	50	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.15	50	1	0	183030010A	10401

Eurofins Lancaster Laboratories

CHROM PERFECT SEQUENCE FILE

Sequence File: \\Uslan-chromperfect\chromperfect-data\Dept-24\Active\CP15\15herb18304002.seq

Chromatography Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15

Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15

Number of Entries: 71

Samplename	VP	Code	ID	Method	Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 HERB31824F	51	CCAL	UL	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830499999	10407
52 HIBLKX1824B	52	MISC	RU	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830499999	10407
53 9872060 F DF10	53	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30	100	1	0	183030010A	10401
54 CONDITIONER	54	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30	100	1	0	183030010A	10401
55 9872061 F	55	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.02	10	1	0	183030010A	10401
56 CONDITIONER	56	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.02	10	1	0	183030010A	10401
57 9872061 F DF5	57	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.02	50	1	0	183030010A	10401
58 9872062 F	58	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.41	10	1	0	183030010A	10401
59 CONDITIONER	59	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.41	10	1	0	183030010A	10401
60 9872062 F DF5	60	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.41	50	1	0	183030010A	10401
61 9866463	61	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.28	10	1	0	183030010A	10401
62 CONDITIONER	62	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.28	10	1	0	183030010A	10401
63 HERB31824F	63	CCAL	UM	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830499999	10407
64 HIBLKX1824B	64	MISC	RV	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830499999	10407
65 9872063 F DF5	65	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.19	50	1	0	183030010A	10401
66 9872064 F DF10	66	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.22	100	1	0	183030010A	10401
67 CONDITIONER	67	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.22	100	1	0	183030010A	10401
68 9872065 F DF10	68	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.1	100	1	0	183030010A	10401
69 CONDITIONER	69	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.22	100	1	0	183030010A	10401
70 HERB31824F	70	CCAL	UN	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830499999	10407
71 HIBLKX1824B	71	MISC	RW	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830499999	10407

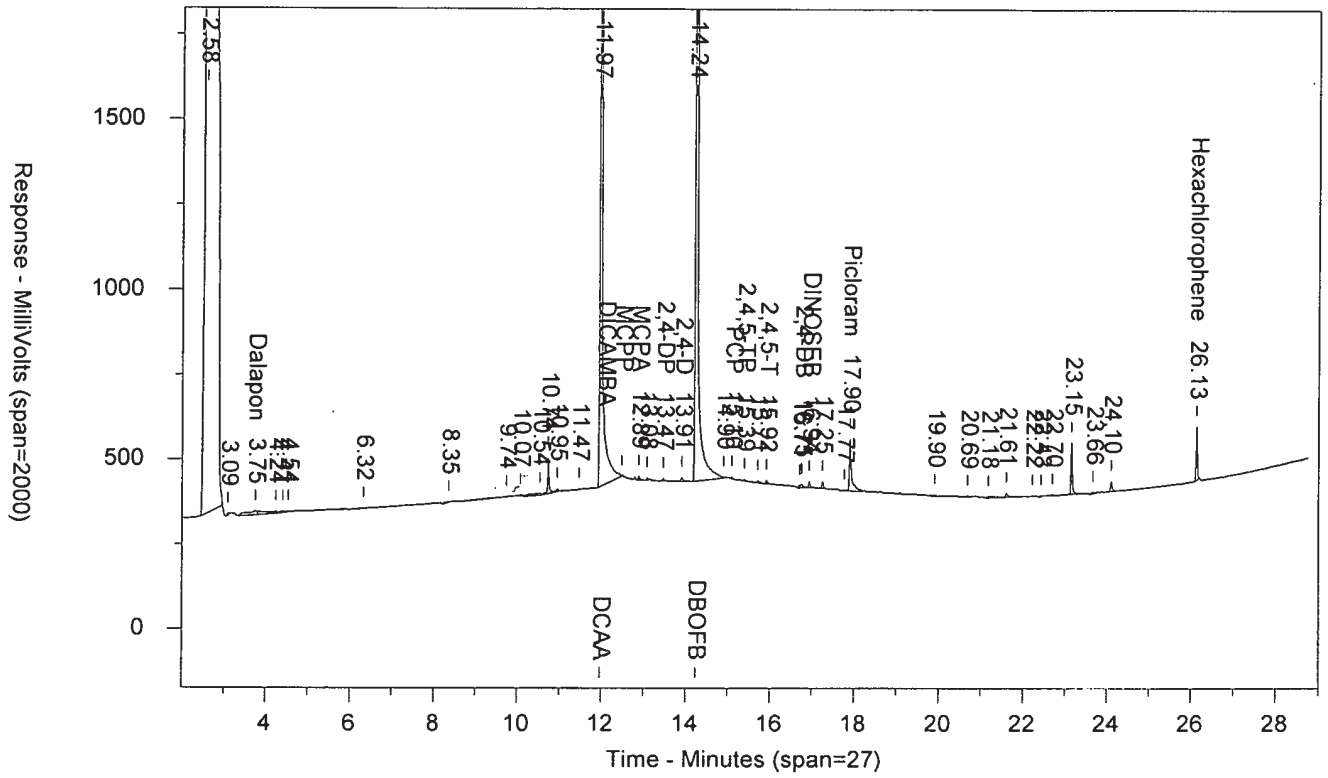
MW 15249

11/6/18

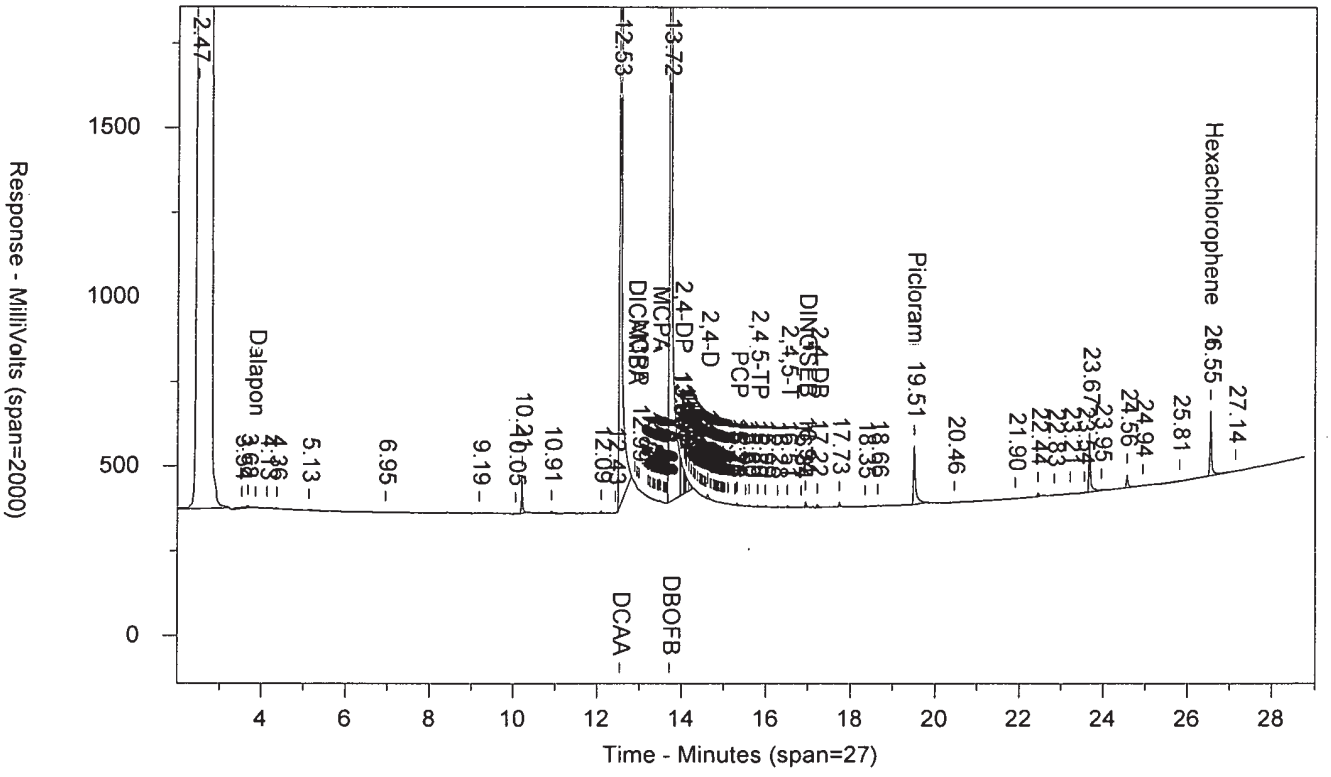
Set-up by: _____ Date: 11/2/18

HIBLKX1824B AAHIBLKAA ICAL 1830299999 10407 SW-846 8015A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.005.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.005.RAW



LANCASTER LABORATORIES

Sample Number: HIBLKX1824B AAHIBLKAA ICAL 1830299999 10407 SW-846 8015A
Injected On: 10/31/2018 5:49:08 PM Sample Weight: 1000
Instrument ID: CP15-19850 Dilution Factor: 10
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

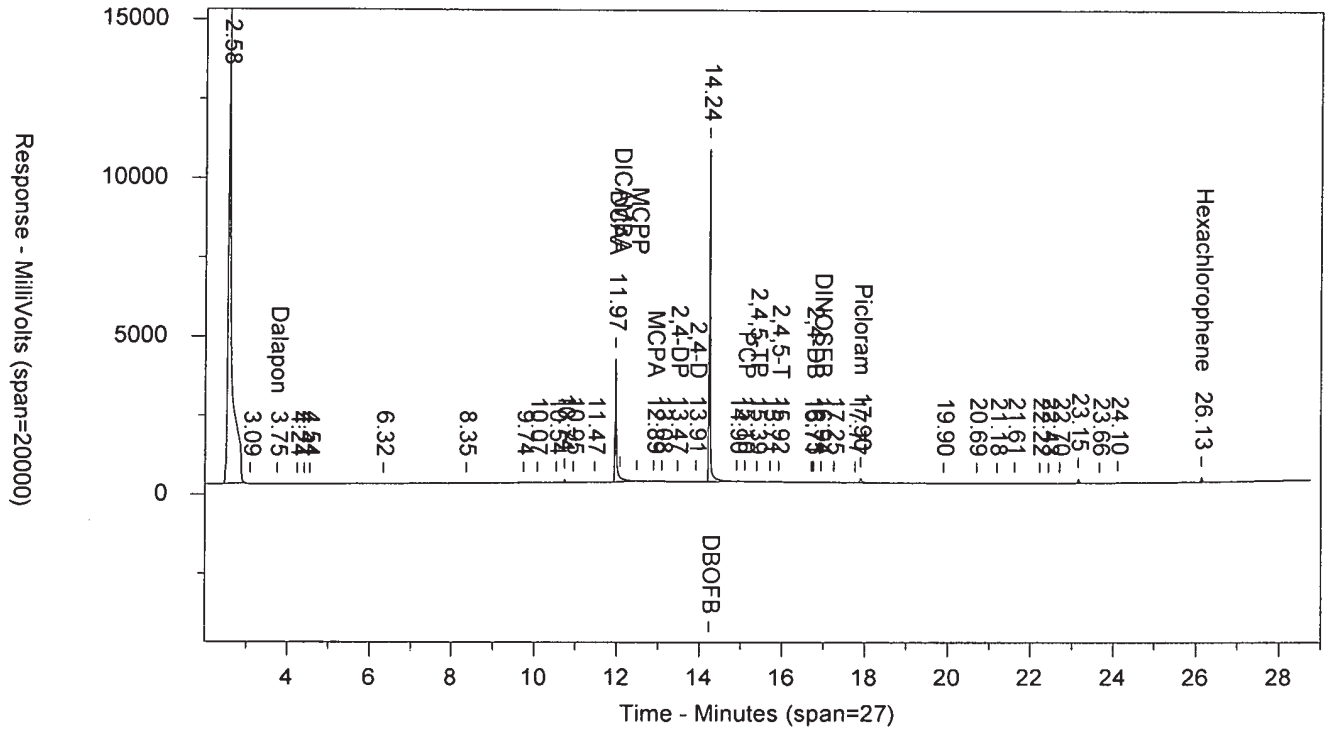
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.755	11581	.014	Dalapon		0		Dalapon
11.967	3921036	2.449	DCAA	12.534	3622133	2.326	DCAA
12.887	13381	1.111	MCPA	13.465	3261	.369	MCPA
13.47	8364	.007	2,4-DP	13.988	110770	.082	2,4-DP
14.236	10527320	.001	DBOFB	13.717	10561740	.001	DBOFB
13.912	12860	.008	2,4-D	14.617	13251	.008	2,4-D
15.097	6722		PCP	15.311	7542		PCP
15.391	5830	.001	2,4,5-TP	15.803	4935	.001	2,4,5-TP
15.917	11915	.002	2,4,5-T	16.511	6362	.001	2,4,5-T
16.752	10643	.011	2,4-DB	17.218	10684	.011	2,4-DB
16.936	19320	.006	DINOSEB	16.938	17975	.006	DINOSEB
17.9	152489	.024	Picloram	19.508	174574	.027	Picloram
26.134	158545	.026	Hexachlorophene	26.555	194068	.033	Hexachlorophen

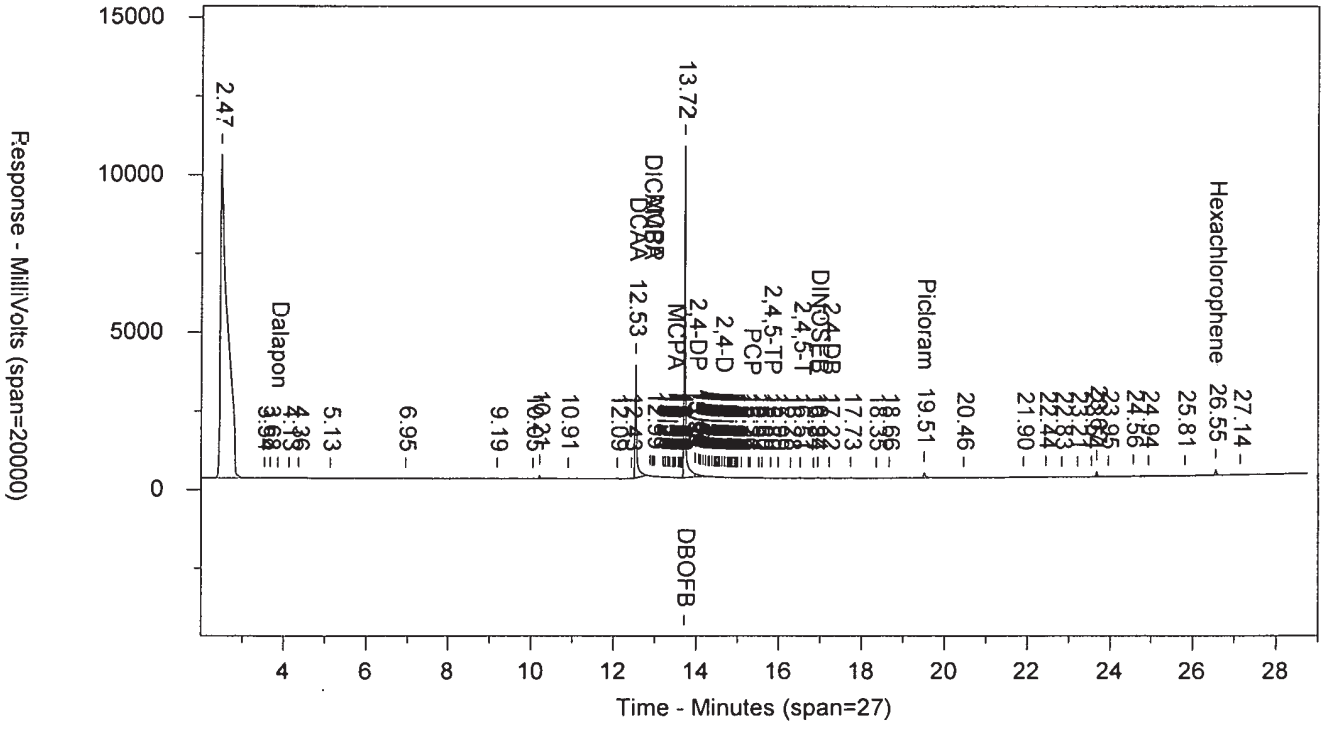
Files:
Area File: 15herb18304001.005.RAW
Area File: 15herb18304001B.005.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 10/31/2018 6:17:58 PM
File Reported On: 11/1/2018 at 9:25:08 AM

HIBLKX1824B AAHIBLKAA ICAL 1830299999 10407 SW-846 801

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.005.RAW

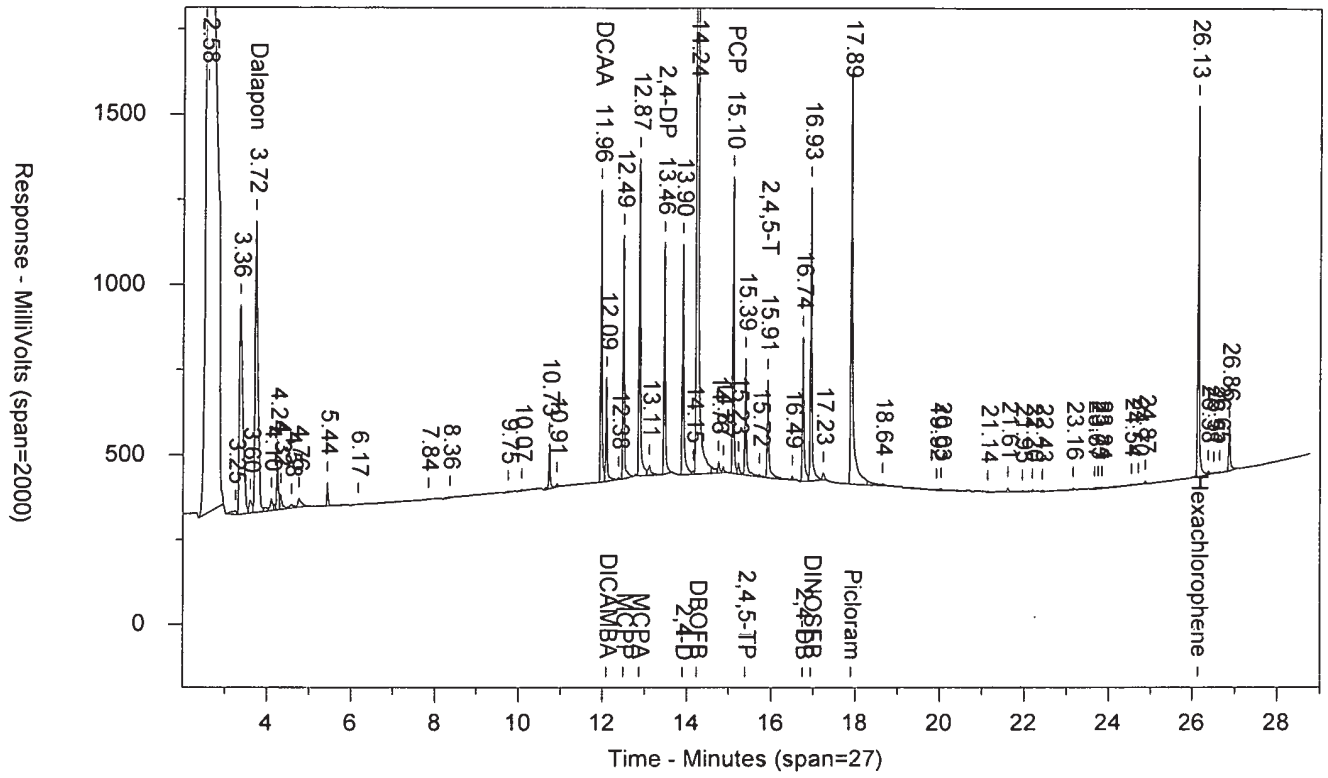


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.005.RAW

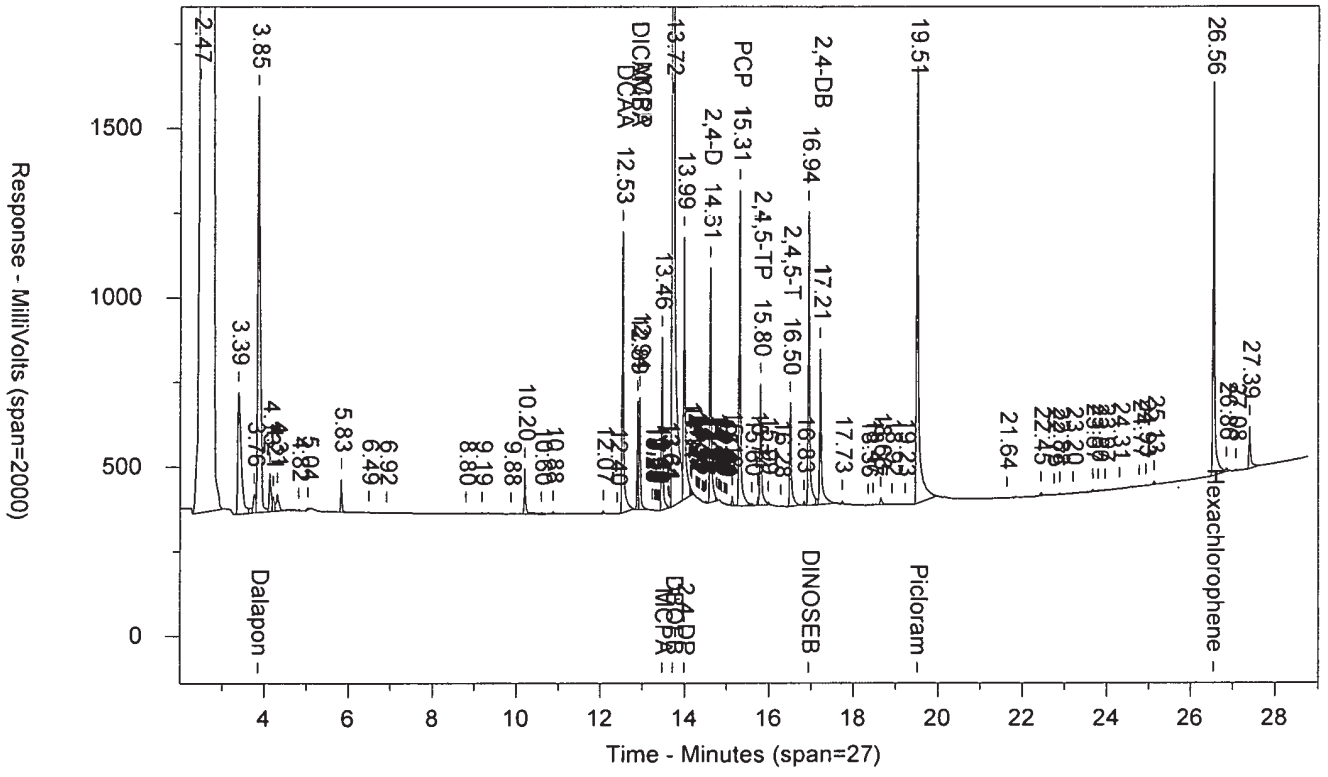


HERB11824E AAHERB1AA ICAL 1830299999 10407 SW-846 8015A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.006.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.006.RAW



LANCASTER LABORATORIES

Sample Number: HERB11824E AAHERB1AA ICAL 1830299999 10407 SW-846 8015A
Injected On: 10/31/2018 6:22:14 PM Sample Weight: 1
Instrument ID: CP15-19850 Dilution Factor: 1
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

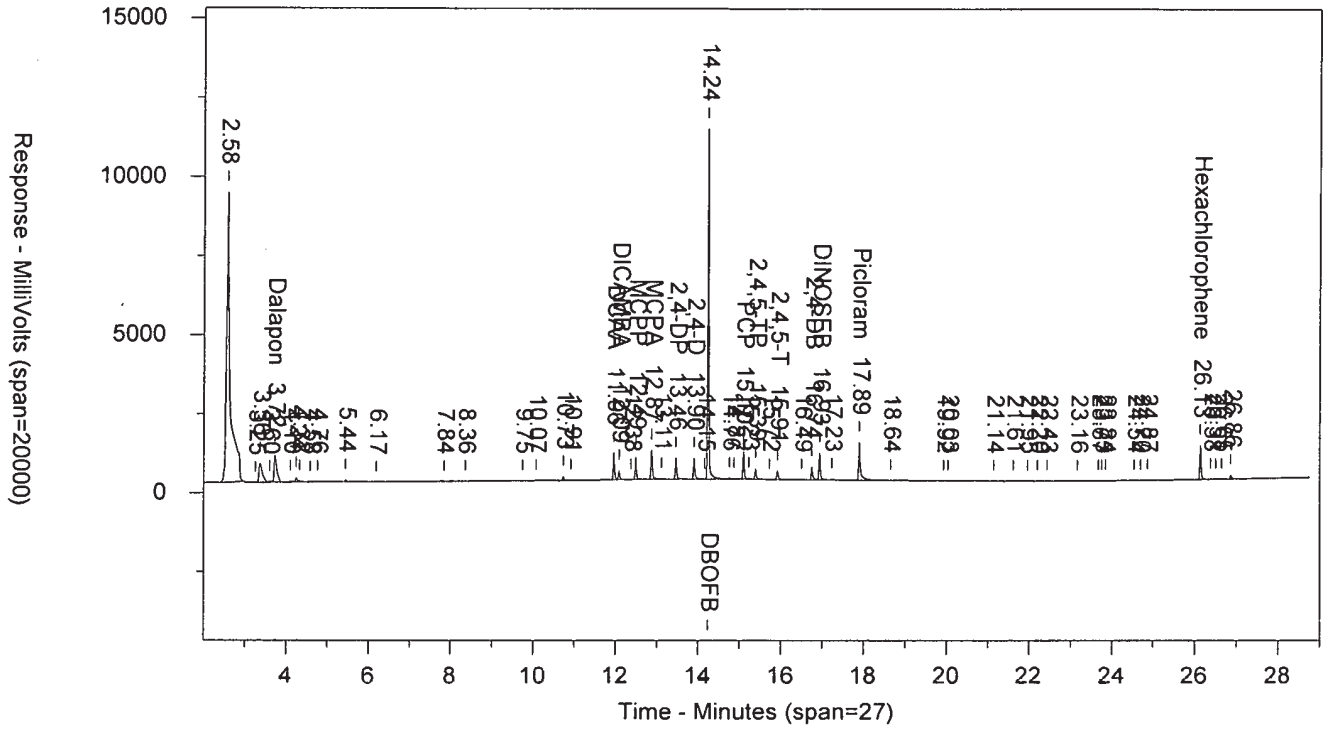
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.724	858224	97.18	Dalapon	3.855	1231728	102.024	Dalapon
11.959	859148	50.935	DCAA	12.529	832311	51.724	DCAA
12.086	305319	4.787	DICAMBA	12.889	320092	4.977	DICAMBA
12.489	717371	7031.88	MCPP	12.939	333255	5137.129	MCPP
12.869	935168	7370.042	MCPA	13.463	512484	5606.446	MCPA
13.461	682186	51.525	2,4-DP	13.989	777028	55.525	2,4-DP
14.235	11092760	1	DBOFB	13.716	10913010	1	DBOFB
13.901	678951	39.858	2,4-D	14.612	695226	41.444	2,4-D
15.097	873142	4.426	PCP	15.308	933507	4.622	PCP
15.387	343772	4.347	2,4,5-TP	15.8	359201	4.573	2,4,5-TP
15.912	288078	4.008	2,4,5-T	16.504	307396	4.333	2,4,5-T
16.744	424860	42.414	2,4-DB	17.212	461591	45.755	2,4-DB
16.934	863126	25.201	DINOSEB	16.939	869271	27.617	DINOSEB
17.894	1210413	18.349	Picloram	19.509	1294424	19.657	Picloram
26.135	1091063	17.06	Hexachlorophene	26.555	1148370	18.721	Hexachlorophen

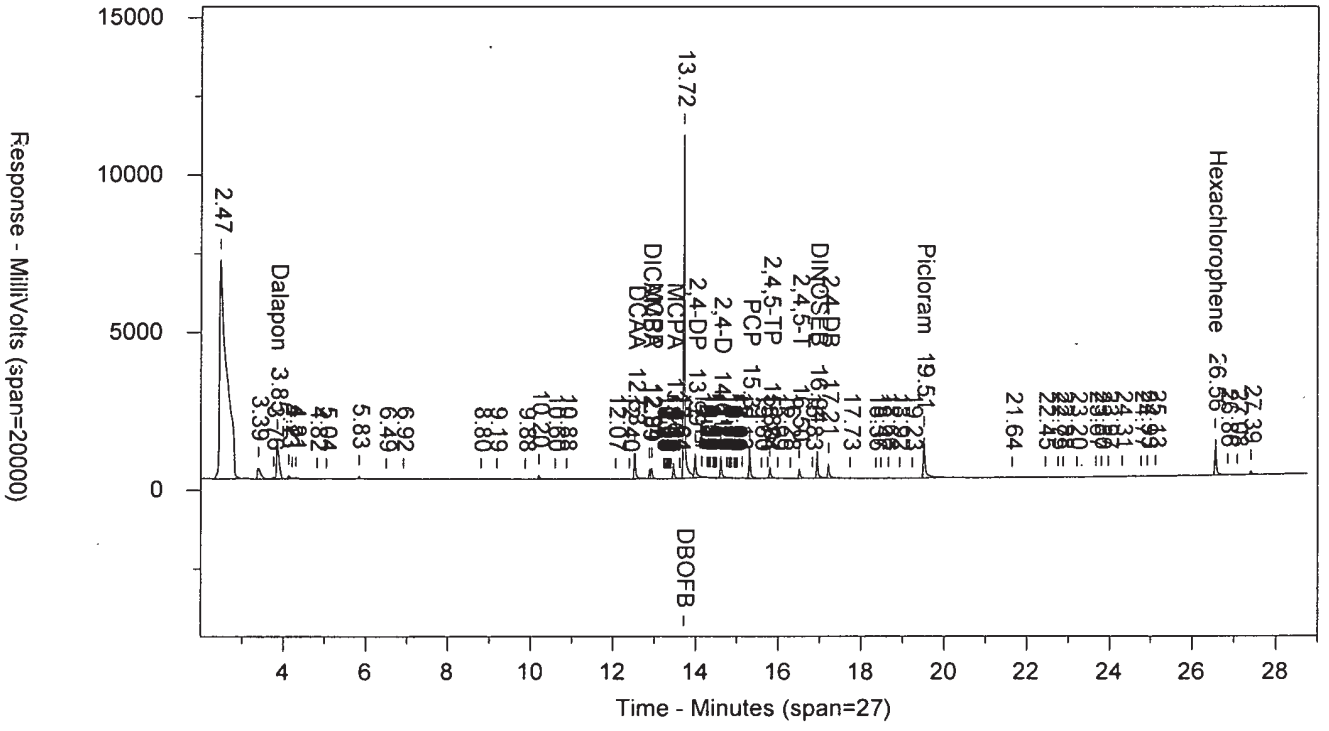
Files:
Area File: 15herb18304001.006.RAW
Area File: 15herb18304001B.006.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 10/31/2018 6:51:02 PM
File Reported On: 11/1/2018 at 9:25:15 AM

HERB11824E AAHERB1AA ICAL 1830299999 10407 SW-846 801

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.006.RAW

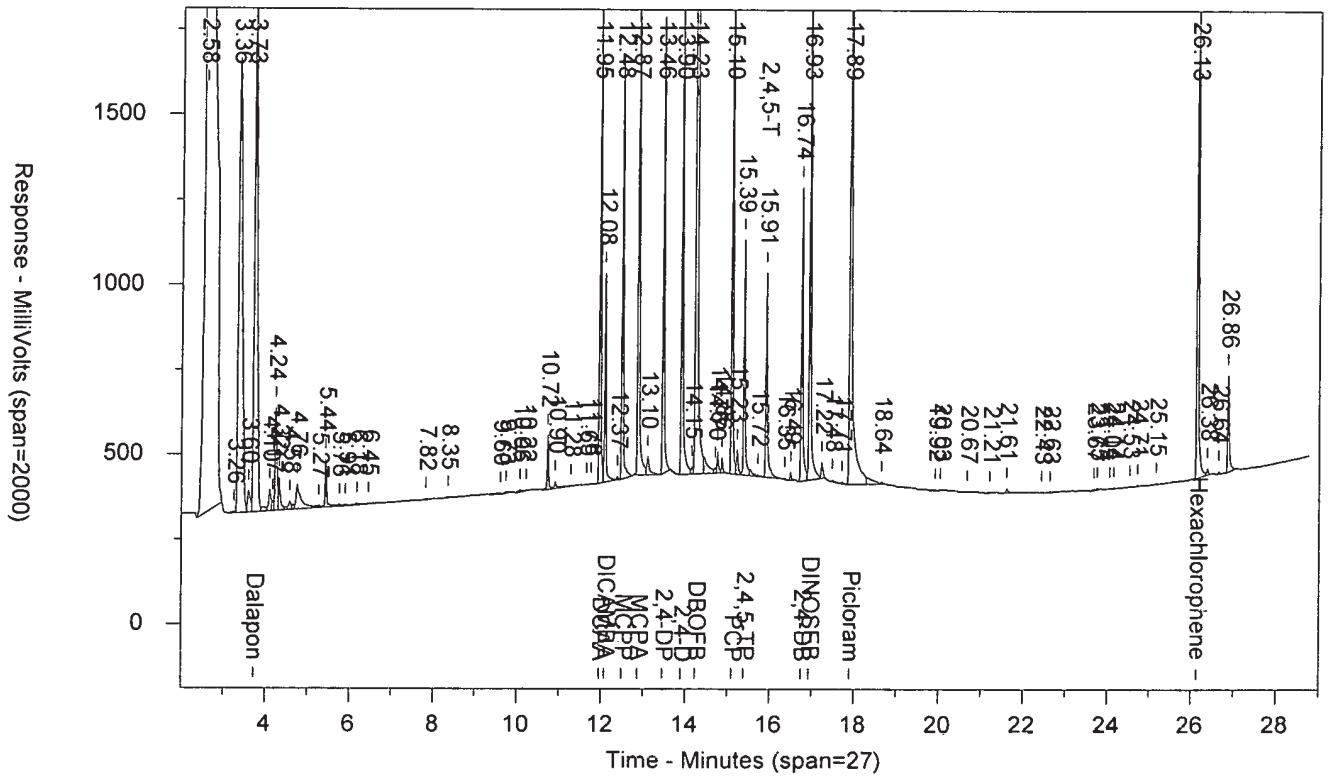


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.006.RAW

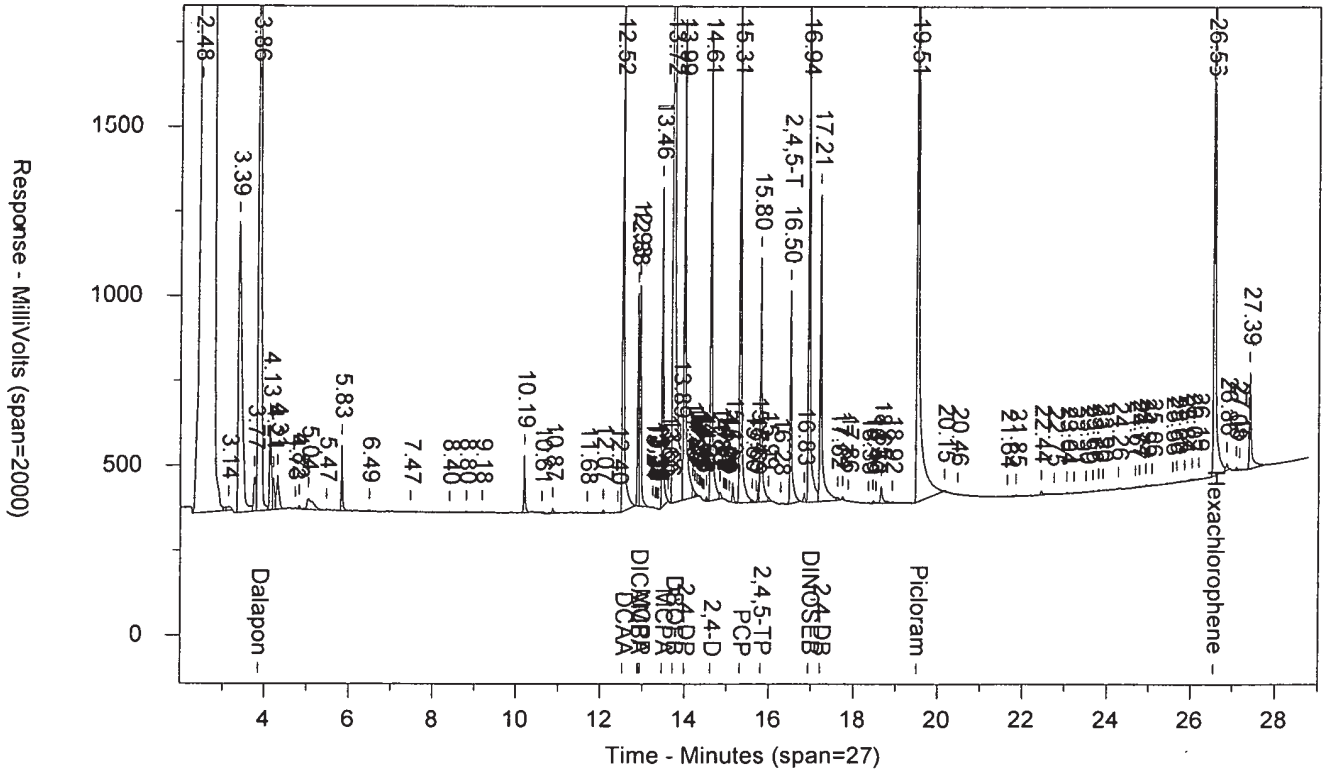


HERB21824E AAHERB2AA ICAL 1830299999 10407 SW-846 8015A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.007.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.007.RAW



LANCASTER LABORATORIES

Sample Number: HERB21824E AAHERB2AA ICAL 1830299999 10407 SW-846 8015A
Injected On: 10/31/2018 6:55:13 PM Sample Weight: 1
Instrument ID: CP15-19850 Dilution Factor: 1
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

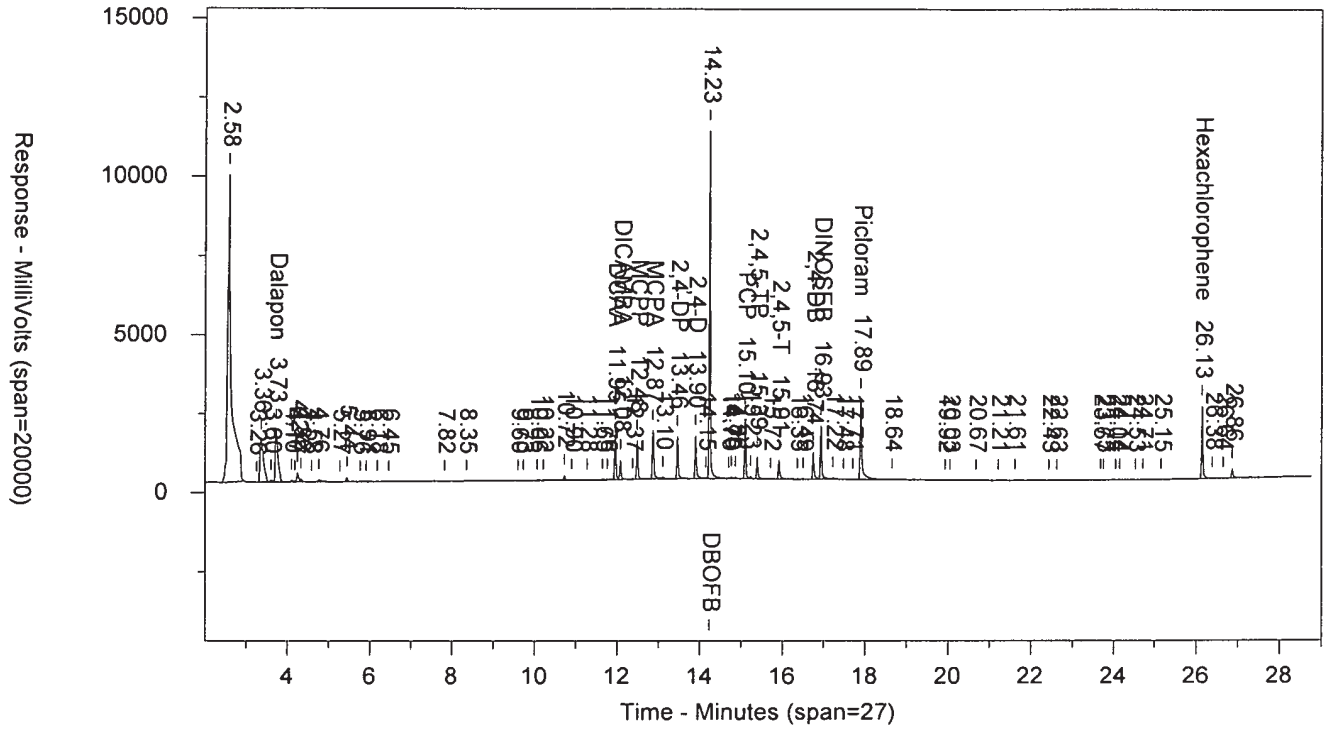
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.726	1662882	190.089	Dalapon	3.855	2383770	200.332	Dalapon
11.951	1575704	95.385	DCAA	12.522	1585699	100.285	DCAA
12.077	616291	9.777	DICAMBA	12.884	628318	9.868	DICAMBA
12.483	1227418	12419.01	MCPP	12.935	652304	10249.88	MCPP
12.865	1530045	12518.54	MCPA	13.46	946255	10607.04	MCPA
13.459	1343982	103.912	2,4-DP	13.988	1420029	103.46	2,4-DP
14.234	11024630	1	DBOFB	13.715	10757770	1	DBOFB
13.899	1377651	82.779	2,4-D	14.611	1366650	83.474	2,4-D
15.097	1810691	9.26	PCP	15.306	1950152	9.806	PCP
15.388	694634	8.902	2,4,5-TP	15.801	721493	9.384	2,4,5-TP
15.911	602757	8.55	2,4,5-T	16.503	629615	9.056	2,4,5-T
16.744	865643	88.261	2,4-DB	17.211	906212	91.255	2,4-DB
16.931	1699388	50.154	DINOSEB	16.937	1704537	54.011	DINOSEB
17.892	2566900	39.526	Picloram	19.507	2748069	42.6	Picloram
26.135	2313000	36.72	Hexachlorophene	26.555	2254160	37.344	Hexachloropher

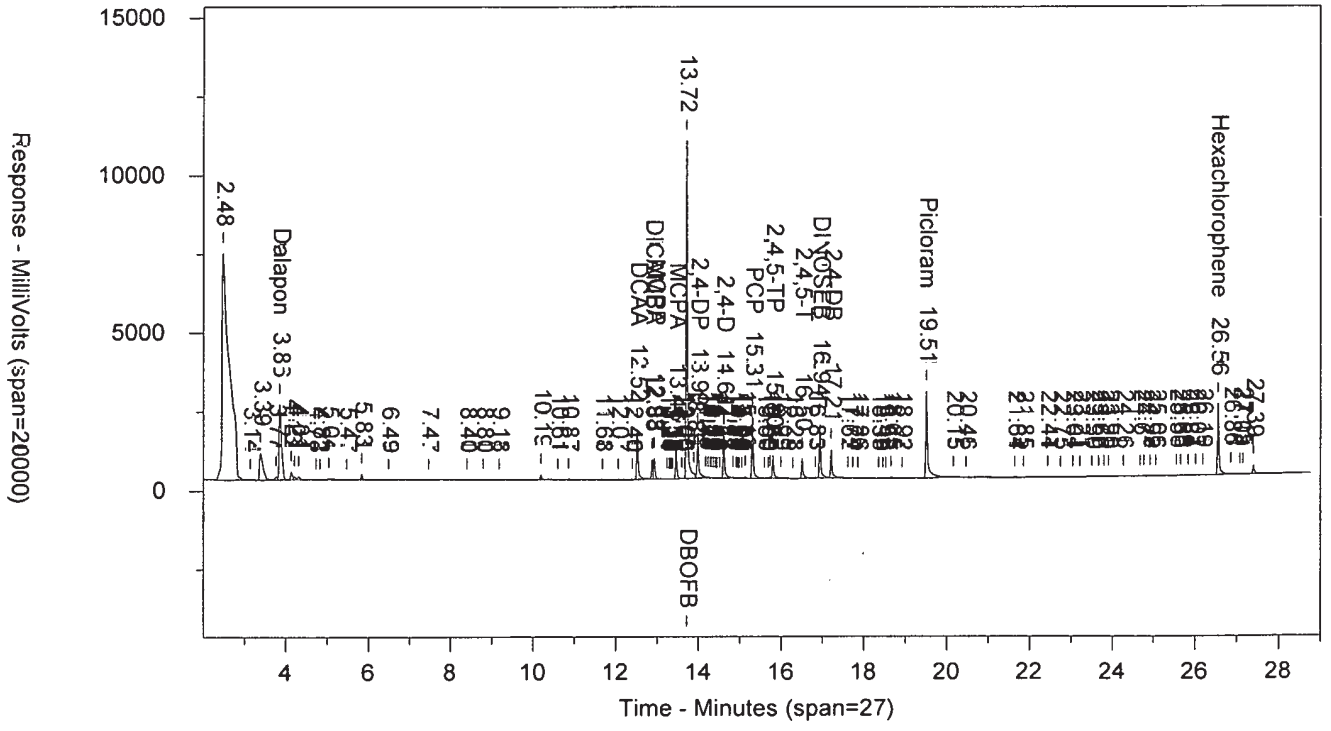
Files:
Area File: 15herb18304001.007.RAW
Area File: 15herb18304001B.007.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 10/31/2018 7:23:59 PM
File Reported On: 11/1/2018 at 9:25:21 AM

HERB21824E AAHERB2AA ICAL 1830299999 10407 SW-846 801

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.007.RAW

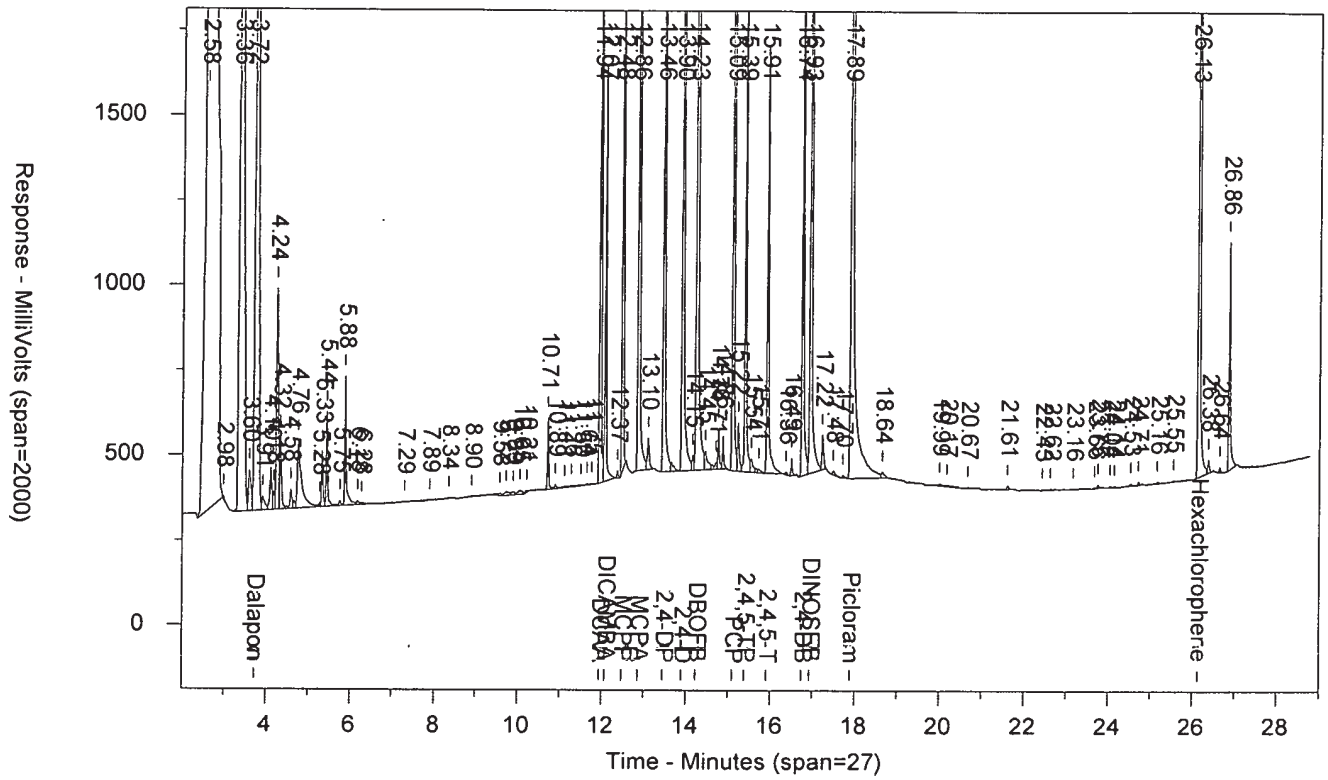


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.007.RAW

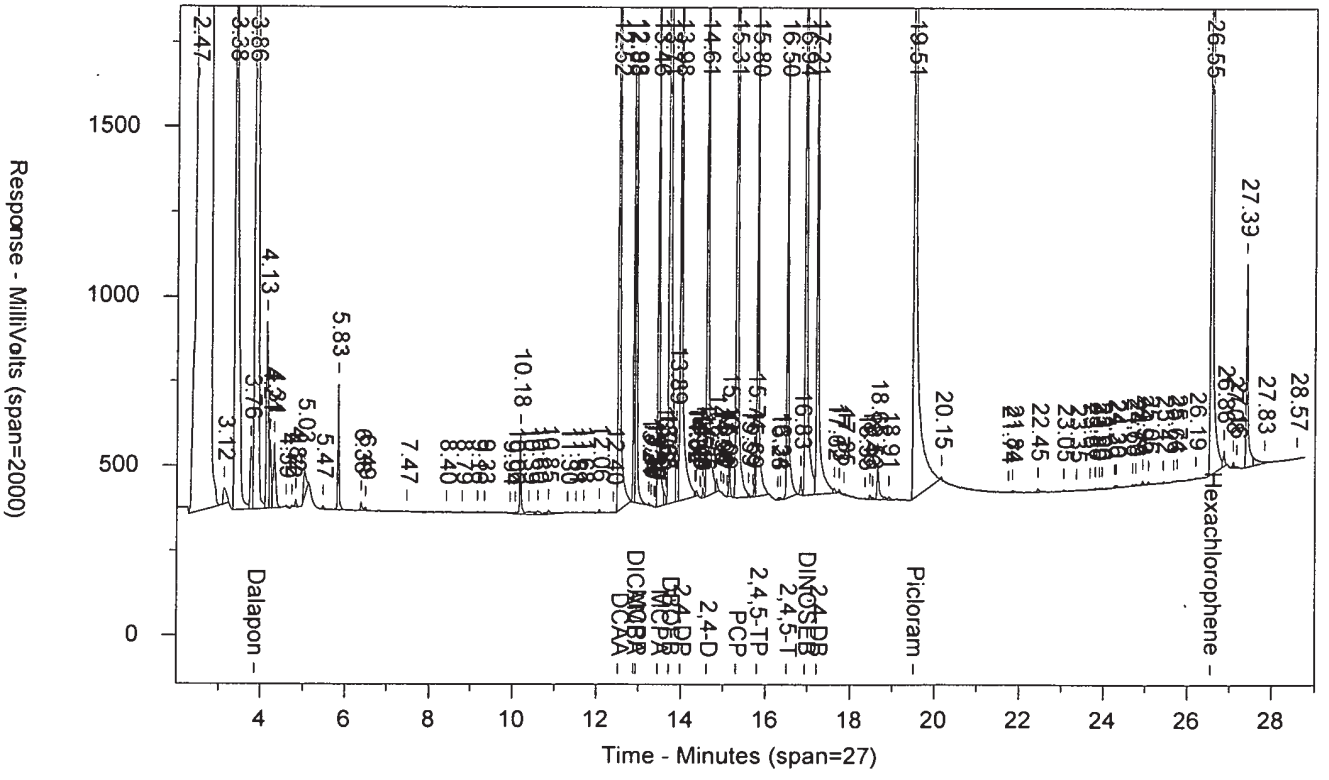


HERB31824F AAHERB3AA ICAL 1830299999 10407 SW-846 8015A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.008.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.008.RAW



LANCASTER LABORATORIES

Sample Number: HERB31824F AAHERB3AA ICAL 1830299999 10407 SW-846 8015A
Injected On: 10/31/2018 7:28:13 PM Sample Weight: 1
Instrument ID: CP15-19850 Dilution Factor: 1
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

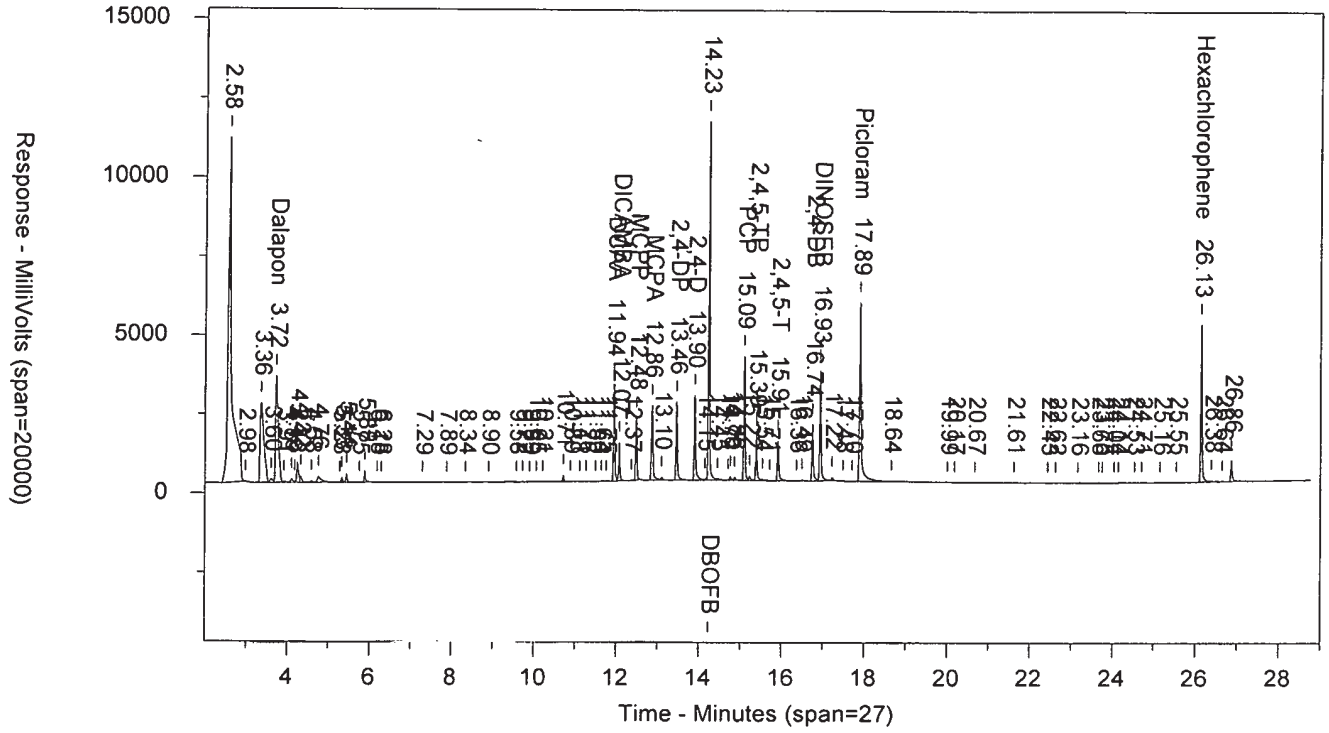
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.725	3394969	377.487	Dalapon	3.855	4787344	381.064	Dalapon
11.943	3083047	183.885	DCAA	12.516	3060839	183.609	DCAA
12.07	1227761	18.87	DICAMBA	12.878	1284205	19.049	DICAMBA
12.479	1973646	19723.64	MCPP	12.932	1294153	19296.11	MCPP
12.863	2373250	19076.33	MCPA	13.459	1753191	18699.51	MCPA
13.455	2495584	189.37	2,4-DP	13.985	2776951	191.685	2,4-DP
14.235	11370280	1	DBOFB	13.715	11333930	1	DBOFB
13.898	2694477	158.938	2,4-D	14.609	2754721	160.899	2,4-D
15.094	3946770	19.657	PCP	15.306	4042969	19.17	PCP
15.386	1461688	18.338	2,4,5-TP	15.8	1465761	18.145	2,4,5-TP
15.91	1254887	17.484	2,4,5-T	16.503	1304147	17.821	2,4,5-T
16.742	1807705	181.843	2,4-DB	17.209	1841865	177.732	2,4-DB
16.931	3491085	100.584	DINOSEB	16.936	3508585	104.421	DINOSEB
17.889	5681229	86.29	Picloram	19.507	5972955	88.349	Picloram
26.133	5007937	77.258	Hexachlorophene	26.553	4950506	77.745	Hexachlorophen

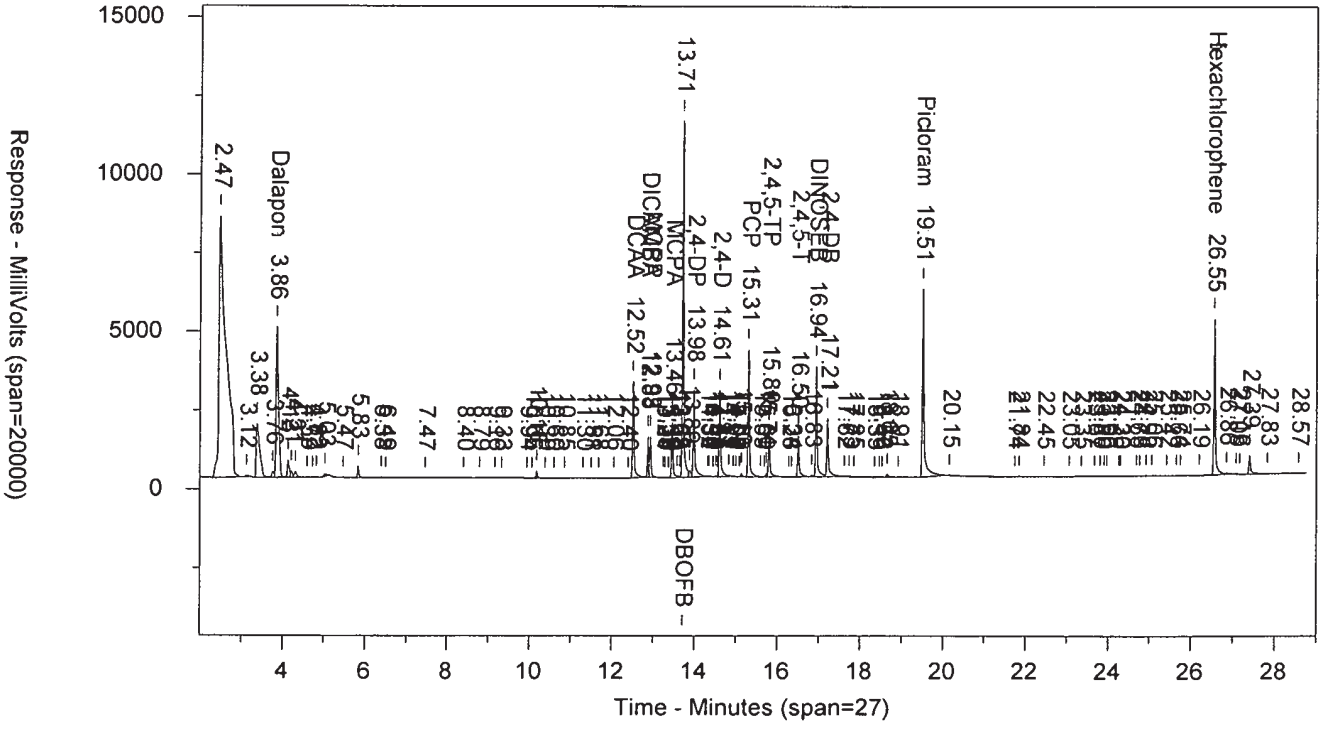
Files:
Area File: 15herb18304001.008.RAW
Area File: 15herb18304001B.008.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 10/31/2018 7:57:01 PM
File Reported On: 11/1/2018 at 9:25:27 AM

HERB31824F AAHERB3AA ICAL 1830299999 10407 SW-846 801

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.008.RAW

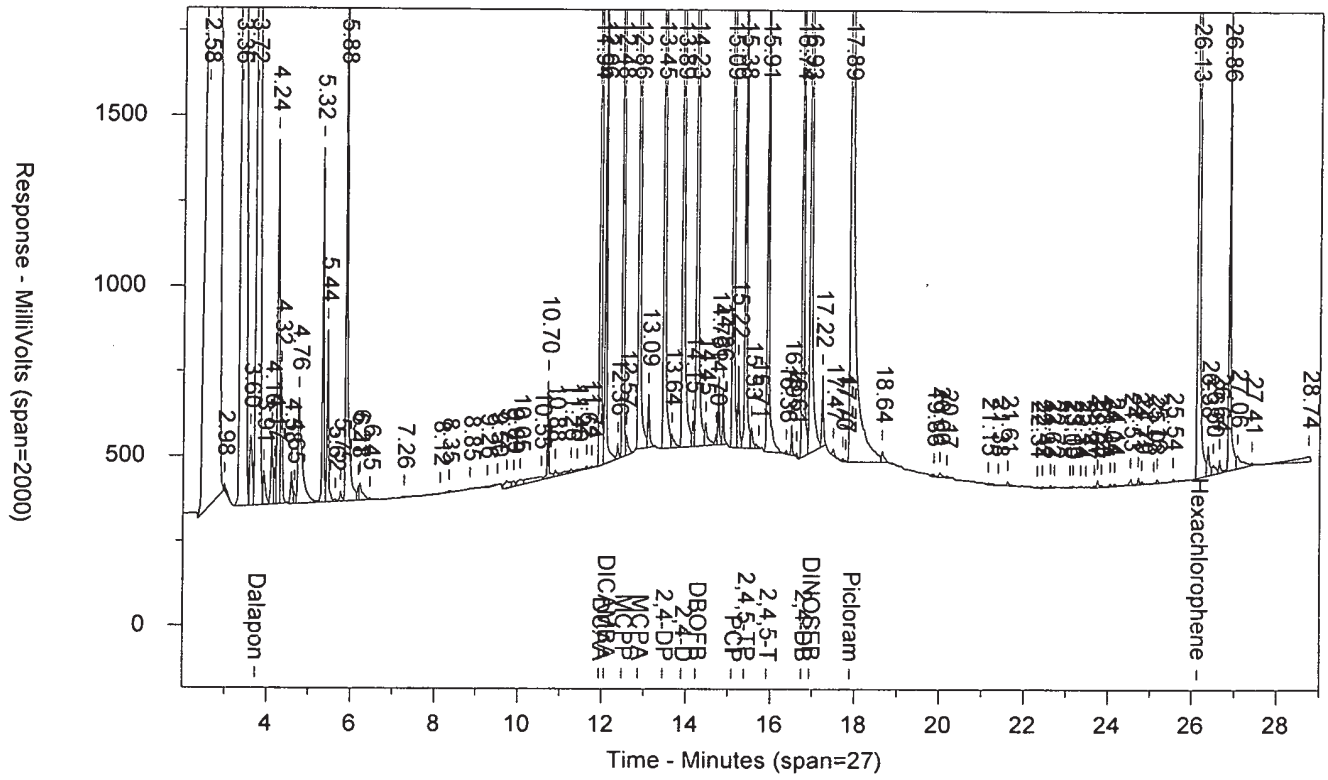


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.008.RAW

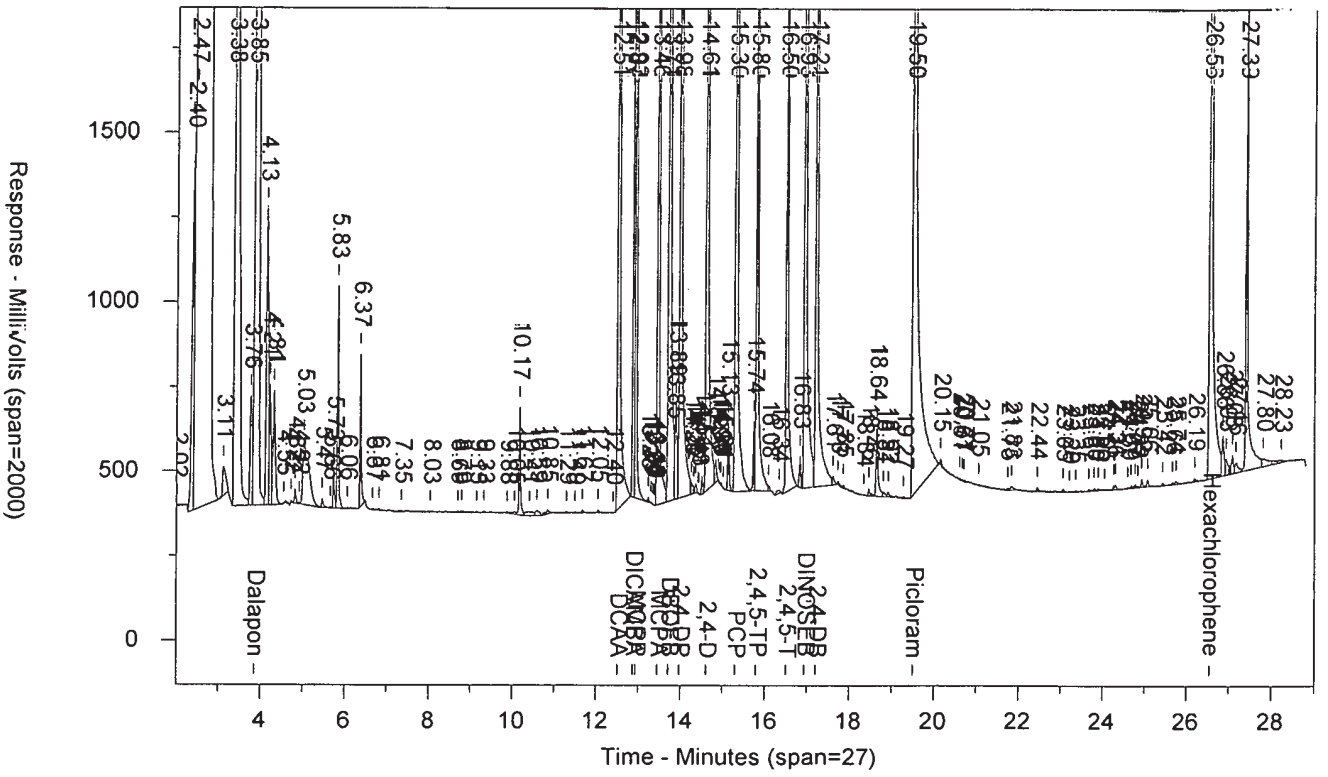


HERB41824E AAHERB4AA ICAL 1830299999 10407 SW-846 8015A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.009.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.009.RAW



LANCASTER LABORATORIES

Sample Number: HERB41824E AAHERB4AA ICAL 1830299999 10407 SW-846 8015A
Injected On: 10/31/2018 8:01:20 PM Sample Weight: 1
Instrument ID: CP15-19850 Dilution Factor: 1
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

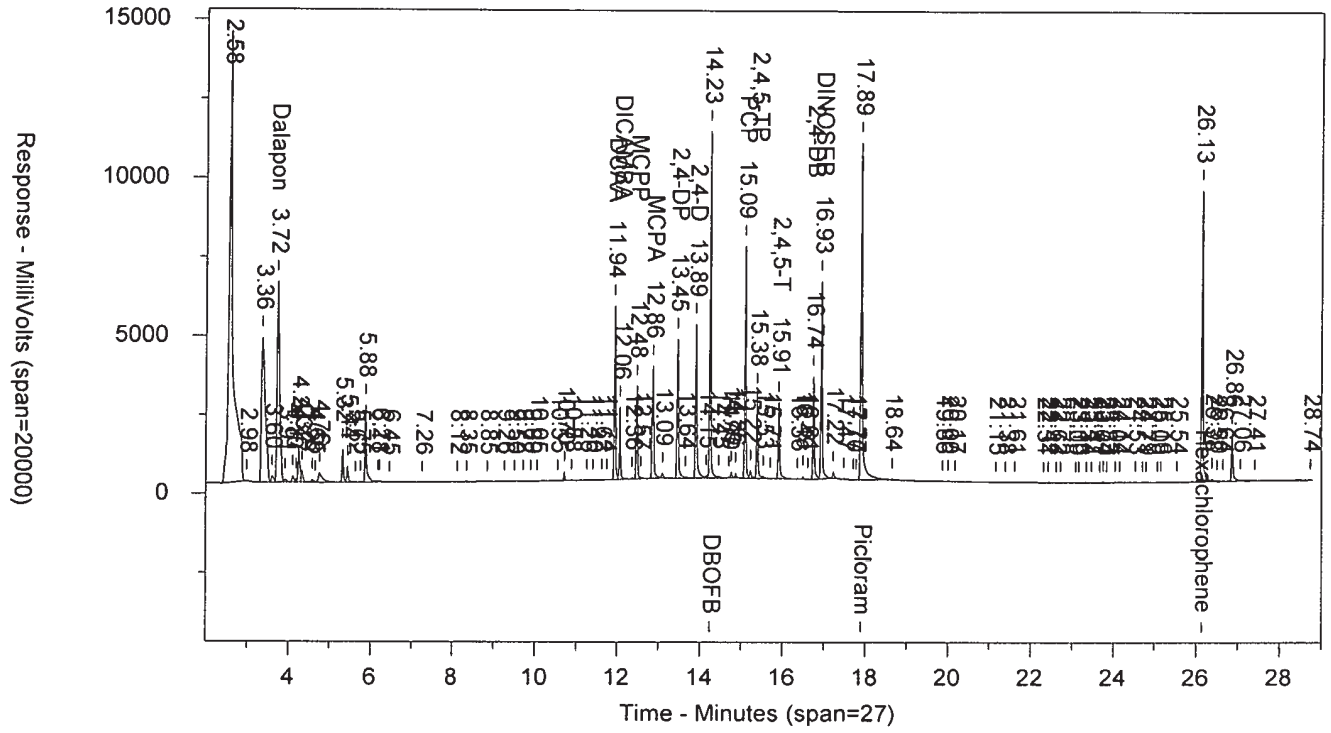
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.724	6375297	736.816	Dalapon	3.855	8878889	727.782	Dalapon
11.936	5525293	347.552	DCAA	12.51	5720252	354.284	DCAA
12.062	2301711	36.913	DICAMBA	12.873	2472484	37.404	DICAMBA
12.477	2954836	31186.8	MCPP	12.929	2426446	37139.09	MCPP
12.861	3578818	30329	MCPA	13.458	3123468	34326.52	MCPA
13.451	4418721	351.918	2,4-DP	13.983	4812606	340.739	2,4-DP
14.234	10986500	1	DBOFB	13.715	11033820	1	DBOFB
13.895	4894198	304.81	2,4-D	14.608	5093714	308.343	2,4-D
15.092	7370801	38.011	PCP	15.304	7636133	37.188	PCP
15.384	2685560	35.279	2,4,5-TP	15.799	2822618	36.323	2,4,5-TP
15.908	2421446	35.45	2,4,5-T	16.501	2488851	35.366	2,4,5-T
16.739	3268072	345.118	2,4-DB	17.208	3409265	342.171	2,4-DB
16.929	6284589	188.254	DINOSEB	16.935	6324136	190.684	DINOSEB
17.887	10686810	172.731	Picloram	19.505	11385750	175.491	Picloram
26.132	9258325	148.313	Hexachlorophene	26.556	9599394	154.091	Hexachloropher

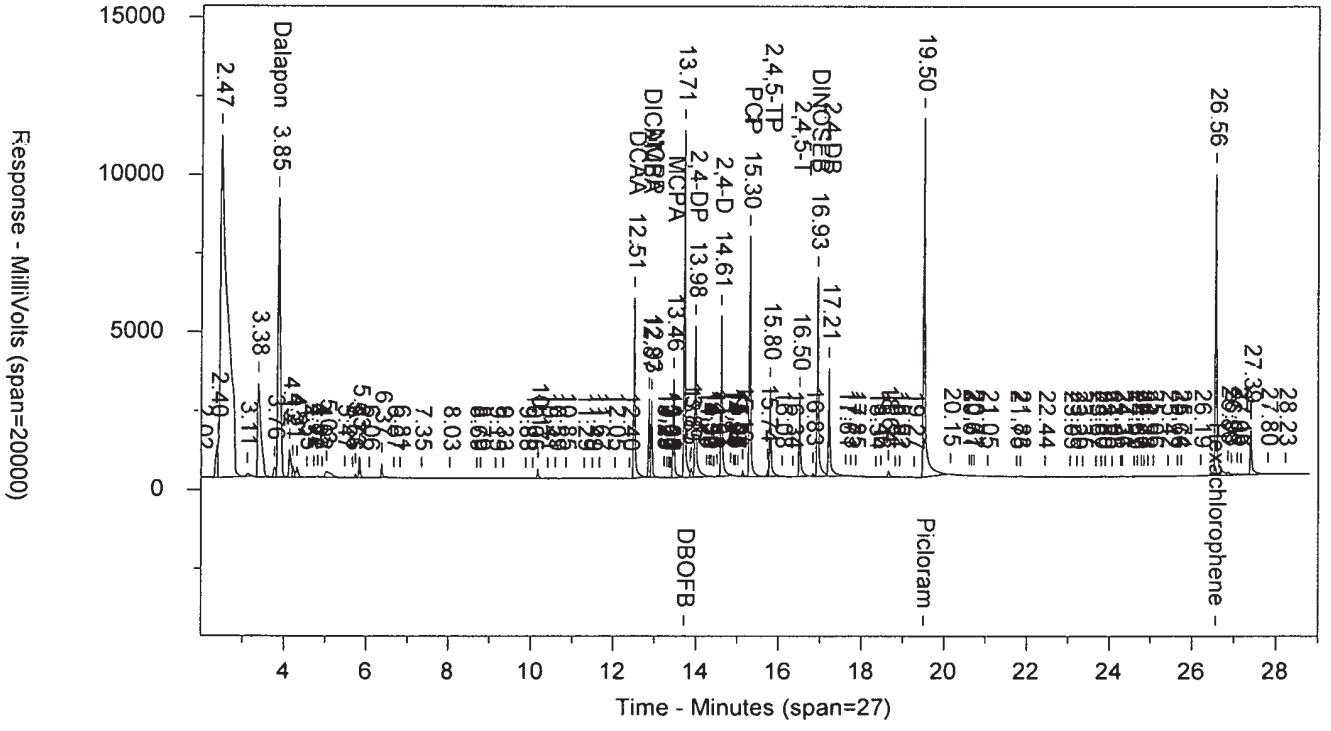
Files:
Area File: 15herb18304001.009.RAW
Area File: 15herb18304001B.009.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 10/31/2018 8:30:11 PM
File Reported On: 11/1/2018 at 9:30:16 AM

HERB41824E AAHERB4AA ICAL 1830299999 10407 SW-846 801

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.009.RAW

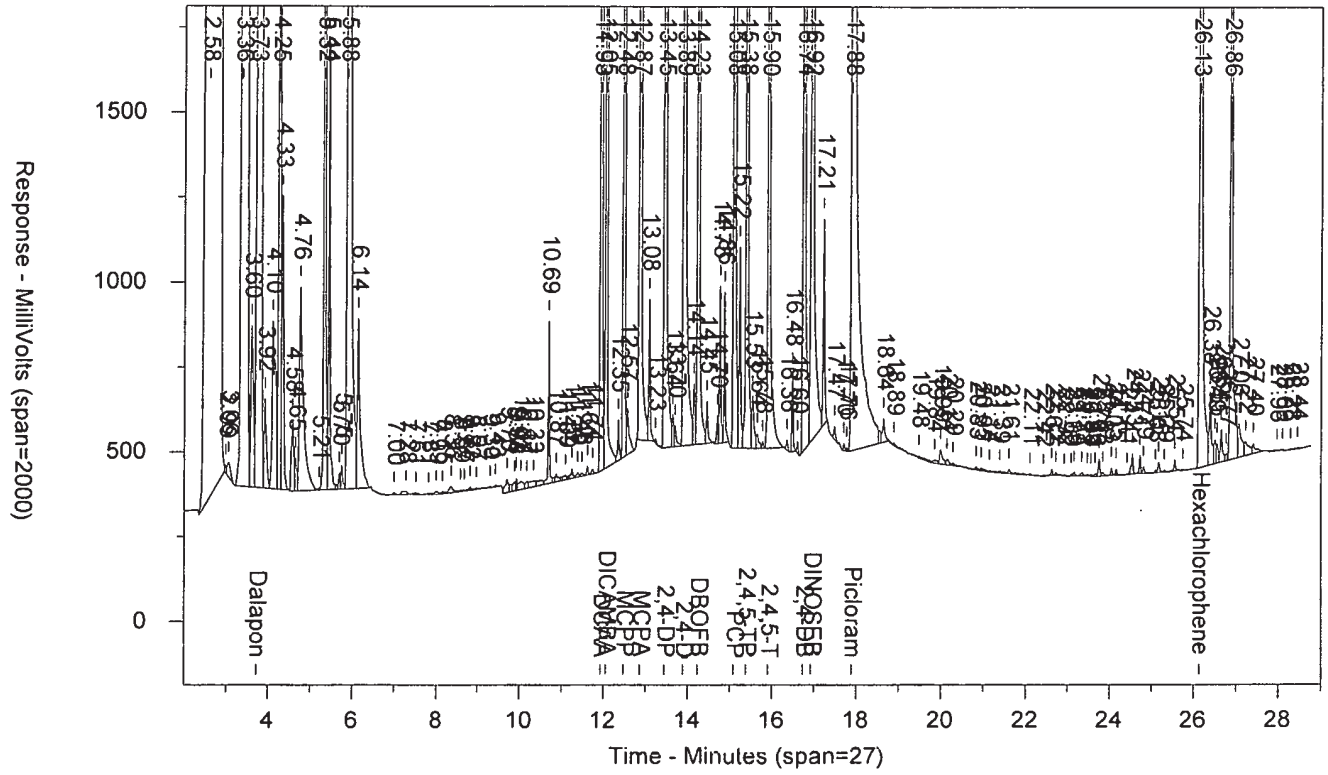


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.009.RAW

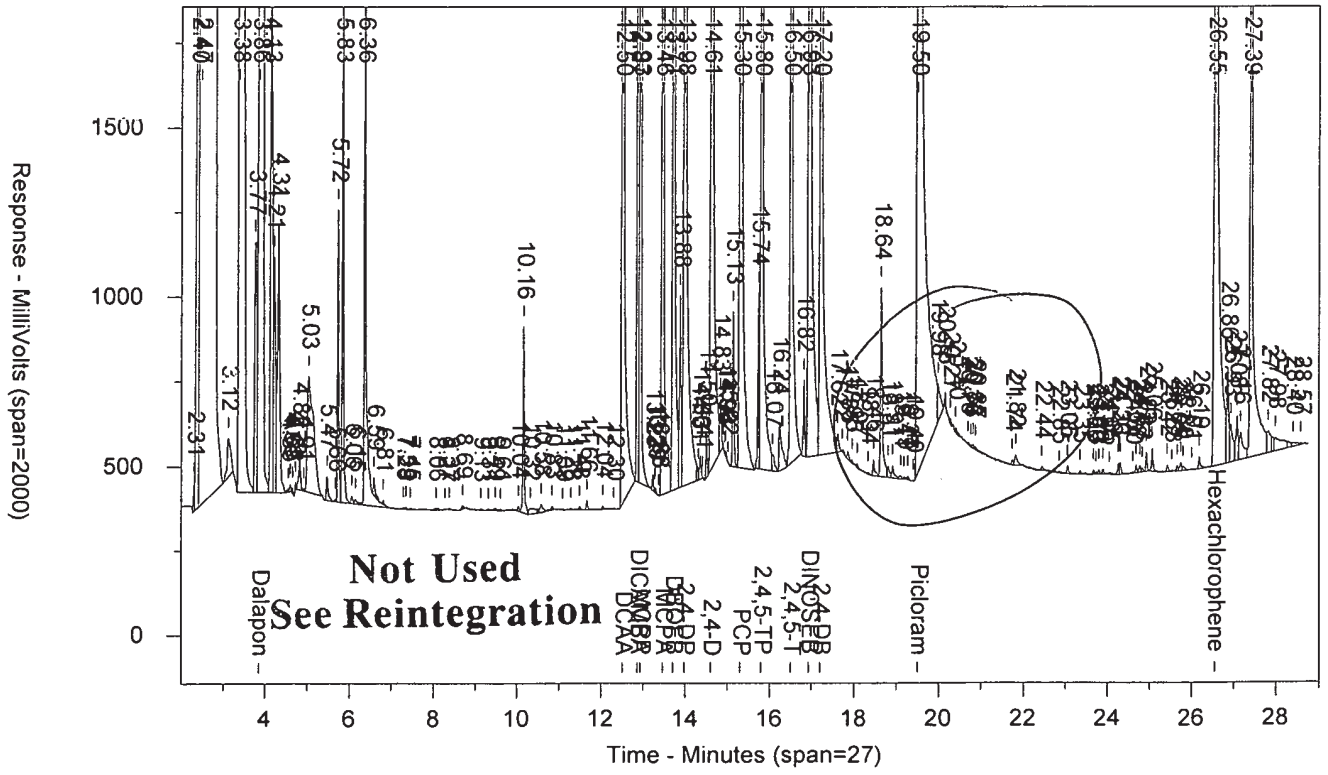


HERB51824E AAHERB5AA ICAL 1830299999 10407 SW-846 8015A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.010.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.010.RAW



LANCASTER LABORATORIES

Sample Number: HERB51824E AAHERB5AA ICAL 1830299999 10407 SW-846 8015A
Injected On: 10/31/2018 8:34:23 PM Sample Weight: 1
Instrument ID: CP15-19850 Dilution Factor: 1
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

Analyst: 13378

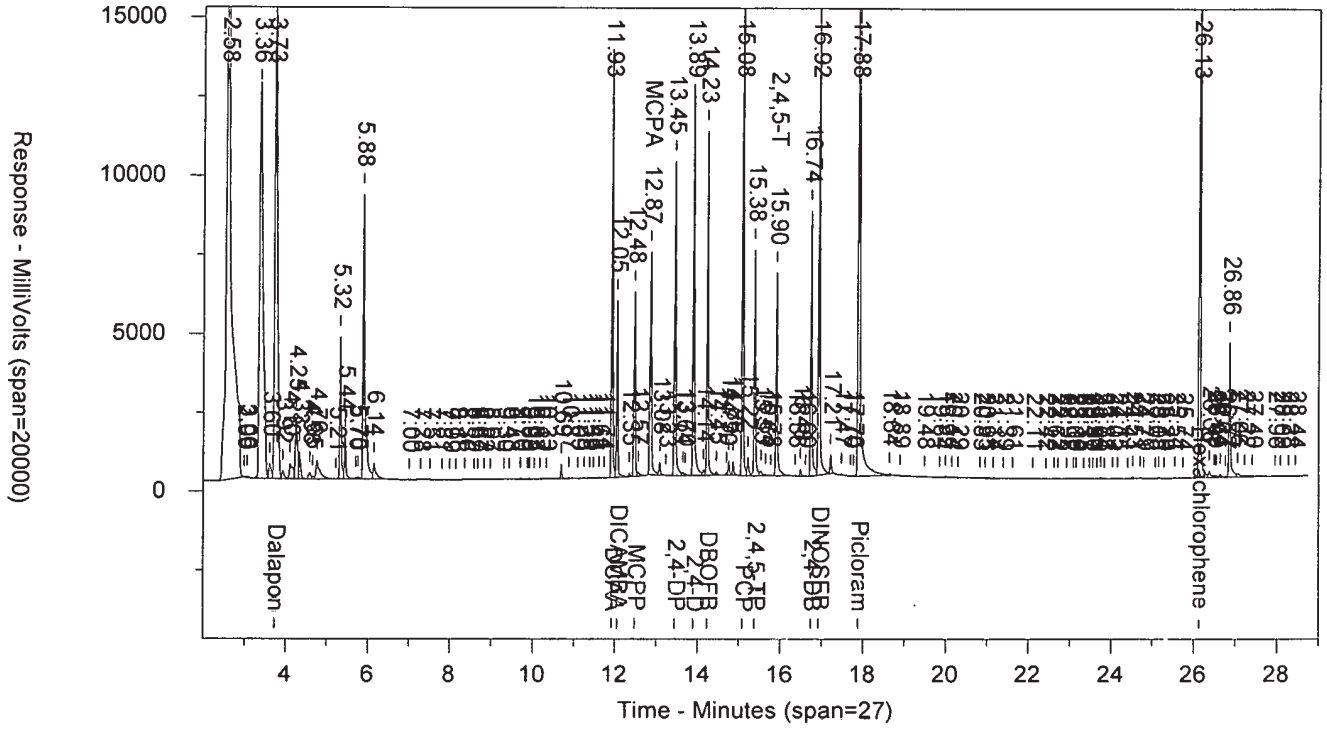
RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.728	16215280	1893.653	Dalapon	3.857	22139280	1886.55	Dalapon
11.927	13577030	875.306	DCAA	12.504	14502930	935.72	DCAA
12.054	5635526	91.222	DICAMBA	12.867	5933390	92.341	DICAMBA
12.48	5890508	63367.5	MCPP	12.932	6058388	95916.18	MCPP
12.865	7100900	61143.84	MCPA	13.462	7870239	90040.71	MCPA
13.447	9974529	809.979	2,4-DP	13.978	11438600	847.173	2,4-DP
14.229	10932930	1	DBOFB	13.71	10733270	1	DBOFB
13.893	12231290	782.635	2,4-D	14.605	12916850	820.02	2,4-D
15.085	18642170	97.325	PCP	15.298	19050820	96.516	PCP
15.381	7194175	97.083	2,4,5-TP	15.797	7167274	96.357	2,4,5-TP
15.904	6470386	97.312	2,4,5-T	16.499	6329542	94.543	2,4,5-T
16.735	8436519	914.741	2,4-DB	17.203	8806290	929.471	2,4-DB
16.924	15630650	474.27	DINOSEB	16.929	15565330	483.324	DINOSEB
17.885	27992260	468.64	Picloram	19.501	29498940	482.161	Picloram
26.133	23222440	379.812	Hexachlorophene	26.554	23219530	382.92	Hexachloropher

Files:
Area File: 15herb18304001.010.RAW
Area File: 15herb18304001B.010.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 10/31/2018 9:03:12 PM
File Reported On: 11/1/2018 at 9:30:22 AM

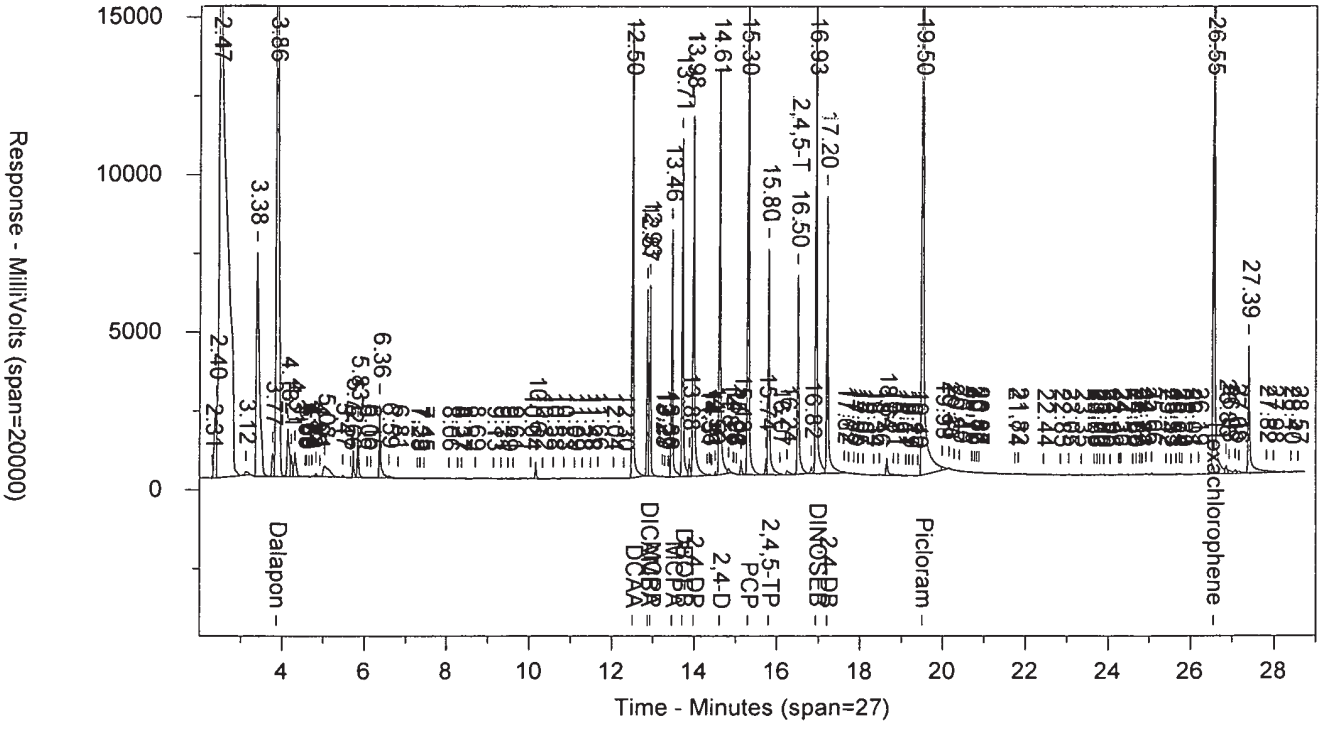
Not Used
See Reintegration

HERB51824E AAHERB5AA ICAL 1830299999 10407 SW-846 801

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.010.RAW

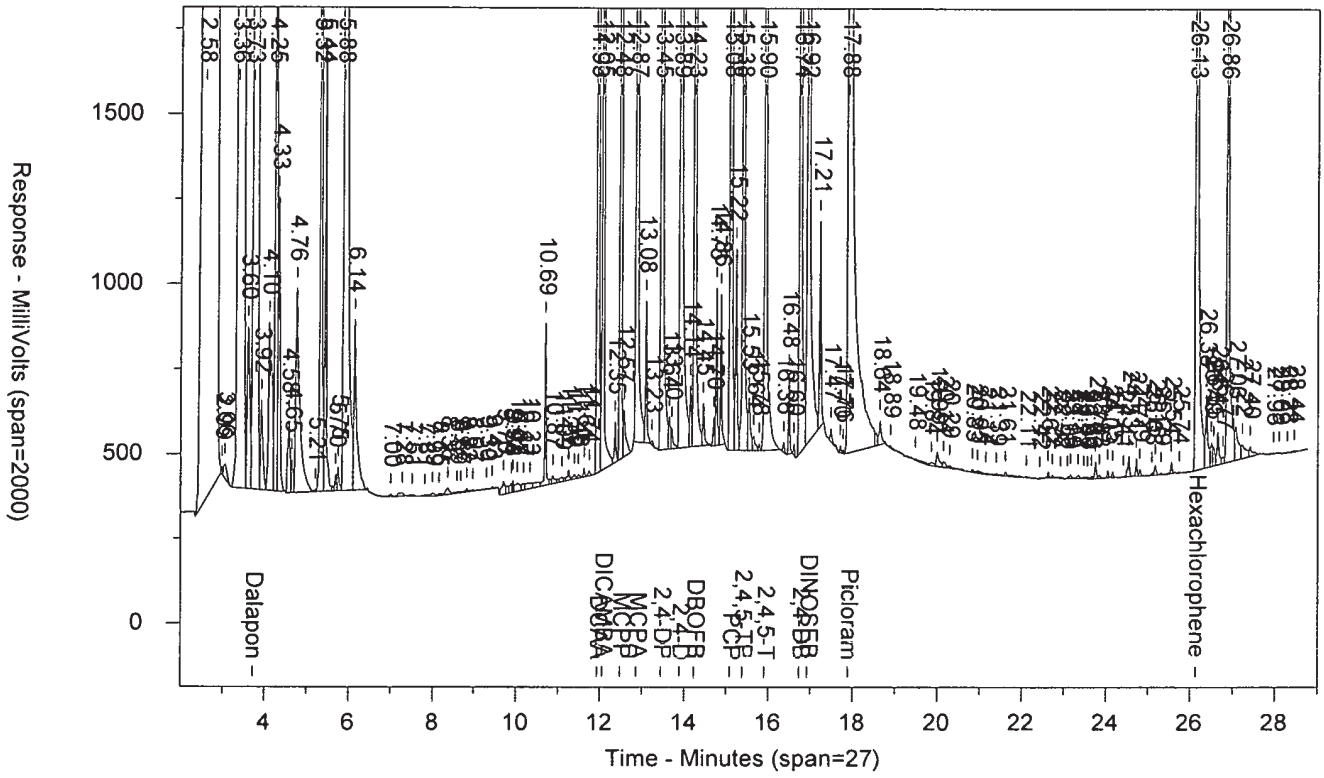


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.010.RAW

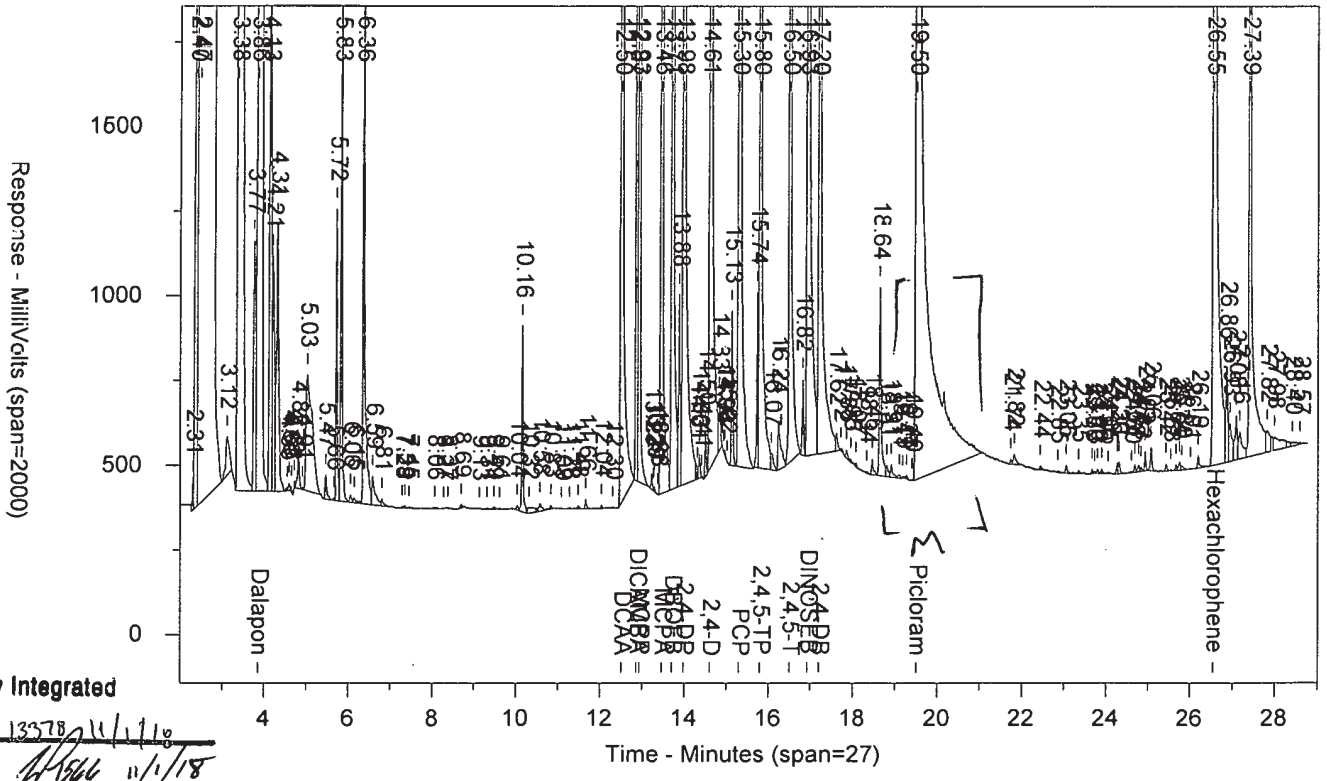


HERB51824E AAHERB5AA ICAL 1830299999 10407 SW-846 8015A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.010.BND



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.010.BND



M = Manually Integrated

Analyst RU 13378 11/1/18

Approved by [signature] 11/1/18

Circle Reason 1 (2) 3 4

1 = Missed Peak

2 = Improper Baseline

3 = RT Update

4 = Other _____

LANCASTER LABORATORIES

Sample Number: HERB51824E AAHERB5AA ICAL 1830299999 10407 SW-846 8015A
Injected On: 10/31/2018 8:34:23 PM Sample Weight: 1
Instrument ID: CP15-19850 Dilution Factor: 1
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

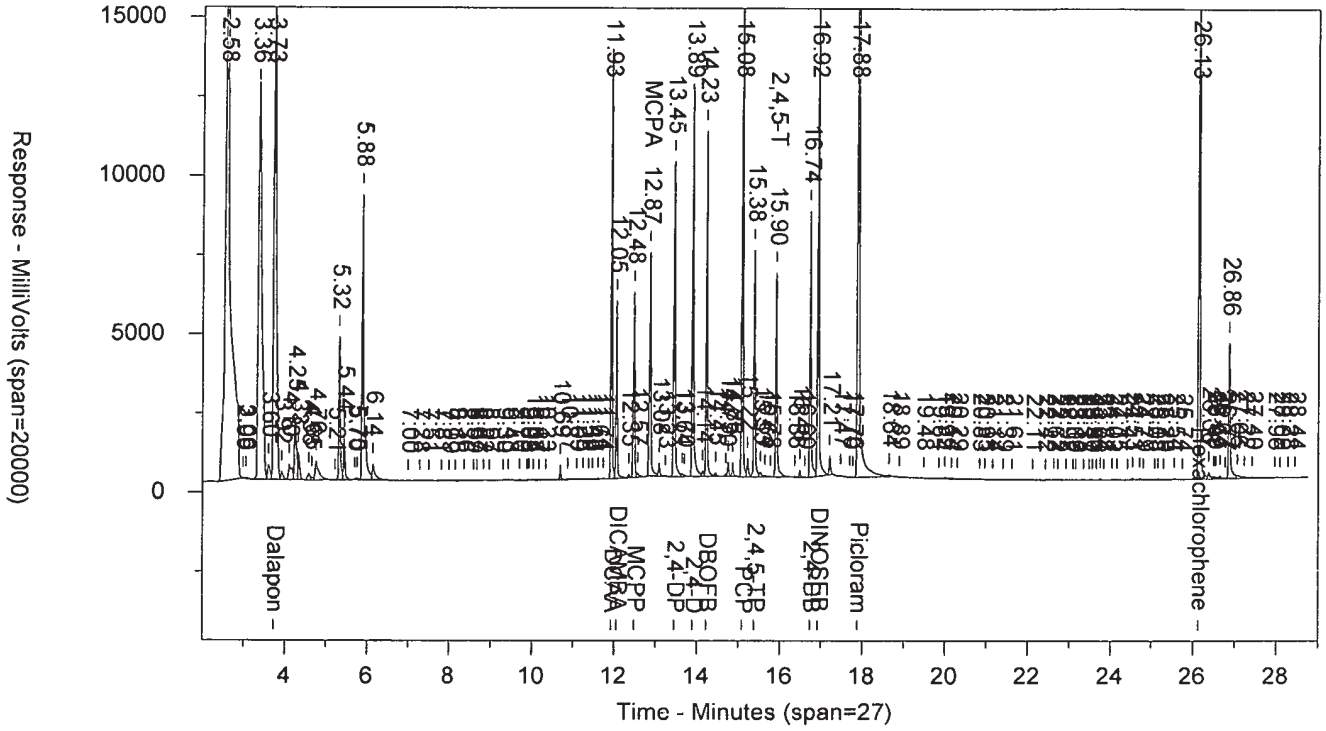
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.728	16215280	1893.653	Dalapon	3.857	22139280	1972.308	Dalapon
11.927	13577030	875.306	DCAA	12.504	14502930	980.687	DCAA
12.054	5635526	91.222	DICAMBA	12.867	5933390	96.562	DICAMBA
12.48	5890508	63367.5	MCPP	12.932	6058388	99181.66	MCPP
12.865	7100900	61143.84	MCPA	13.462	7870239	93683.16	MCPA
13.447	9974529	809.979	2,4-DP	13.978	11438600	884.552	2,4-DP
14.229	10932930	1	DBOFB	13.71	10733270	1	DBOFB
13.893	12231290	782.635	2,4-D	14.605	12916850	872.169	2,4-D
15.085	18642170	97.325	PCP	15.298	19050820	100.49	PCP
15.381	7194175	97.083	2,4,5-TP	15.797	7167274	102.445	2,4,5-TP
15.904	6470386	97.312	2,4,5-T	16.499	6329542	102.4	2,4,5-T
16.735	8436519	914.741	2,4-DB	17.203	8806290	1004.984	2,4-DB
16.924	15630650	474.27	DINOSEB	16.929	15565330	489.121	DINOSEB
17.885	27992260	468.64	Picloram	19.501	29516710	528.462	Picloram
26.133	23222440	379.812	Hexachlorophene	26.554	23219530	401.132	Hexachloropher

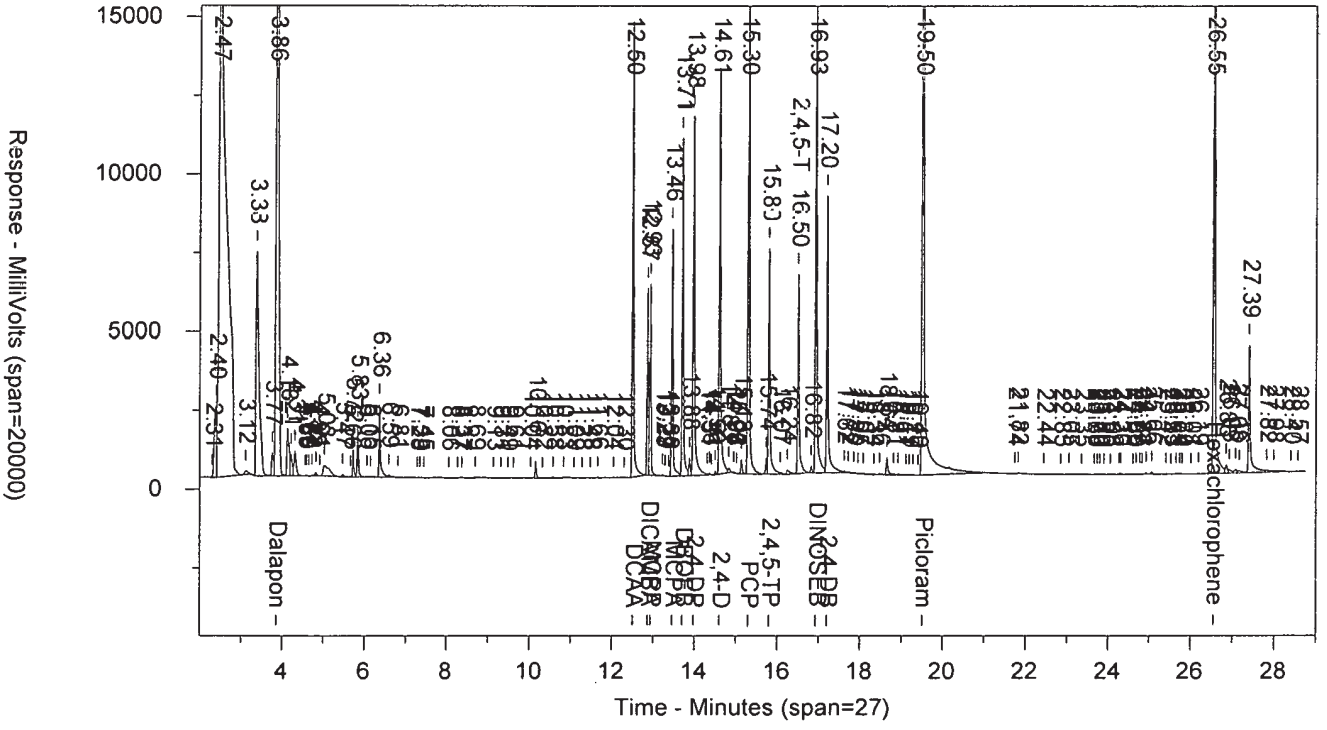
Files:
Area File: 15herb18304001.010.BND
Area File: 15herb18304001B.010.BND
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/1/2018 9:30:20 AM
File Reported On: 11/1/2018 at 10:16:46 AM

HERB51824E AAHERB5AA ICAL 1830299999 10407 SW-846 801

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.010.BND

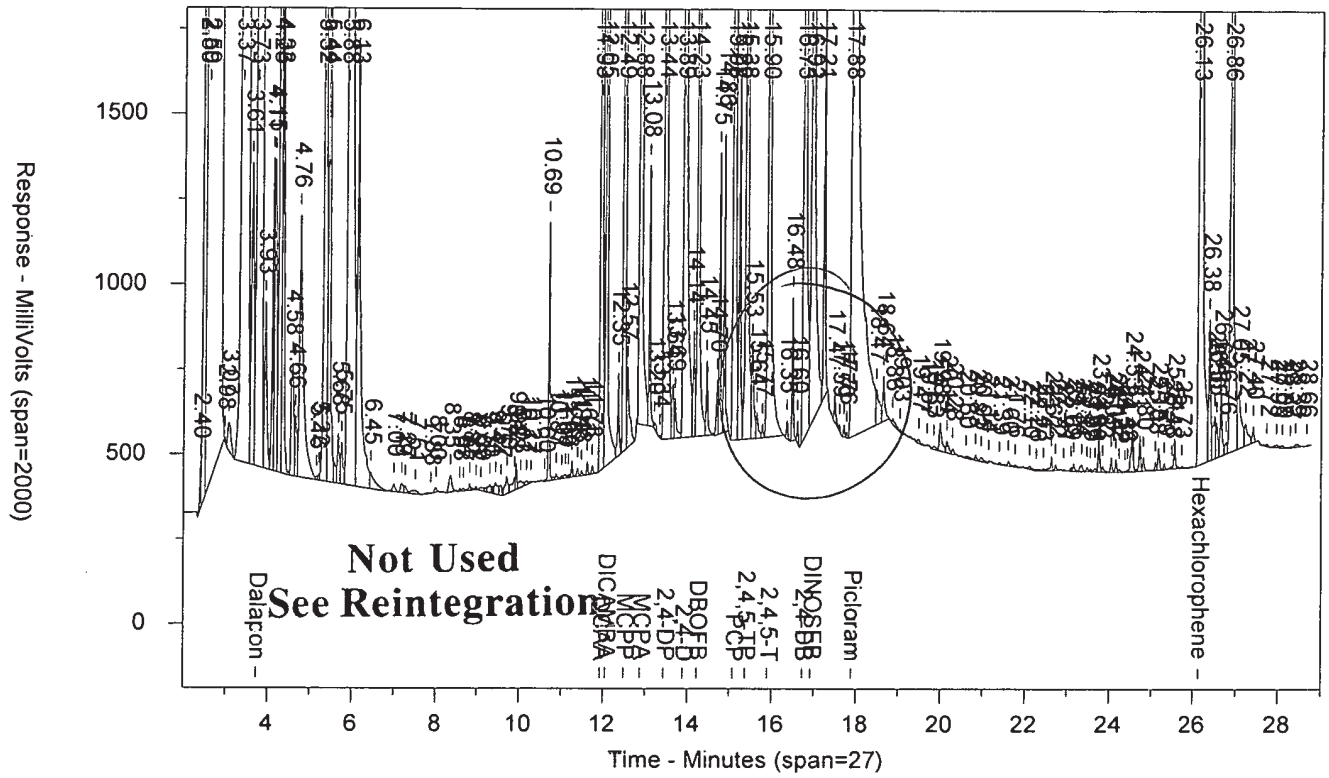


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.010.BND

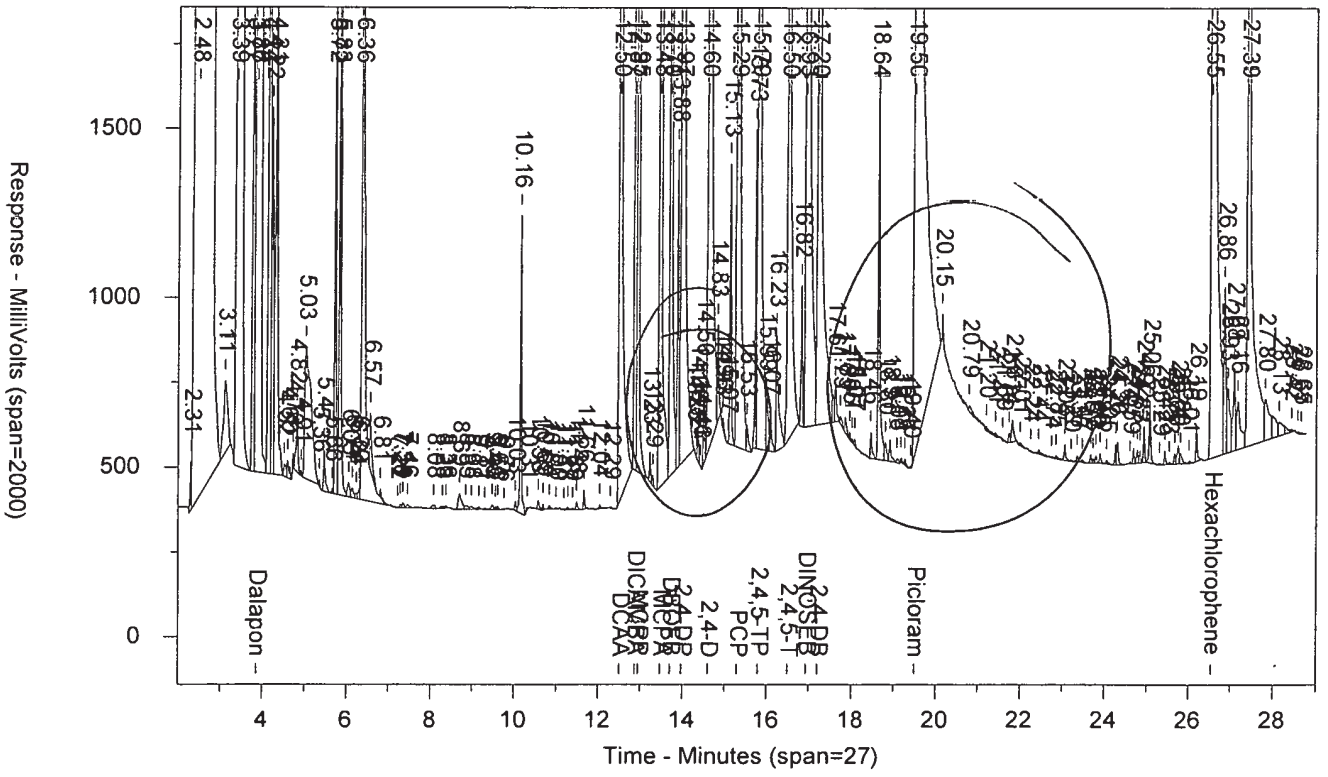


HERB61824E AAHERB6AA ICAL 1830299999 10407 SW-846 8015A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.011.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.011.RAW



LANCASTER LABORATORIES

Sample Number: HERB61824E AAHERB6AA ICAL 1830299999 10407 SW-846 8015A
Injected On: 10/31/2018 9:07:29 PM Sample Weight: 1
Instrument ID: CP15-19850 Dilution Factor: 1
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

Analyst: 13378

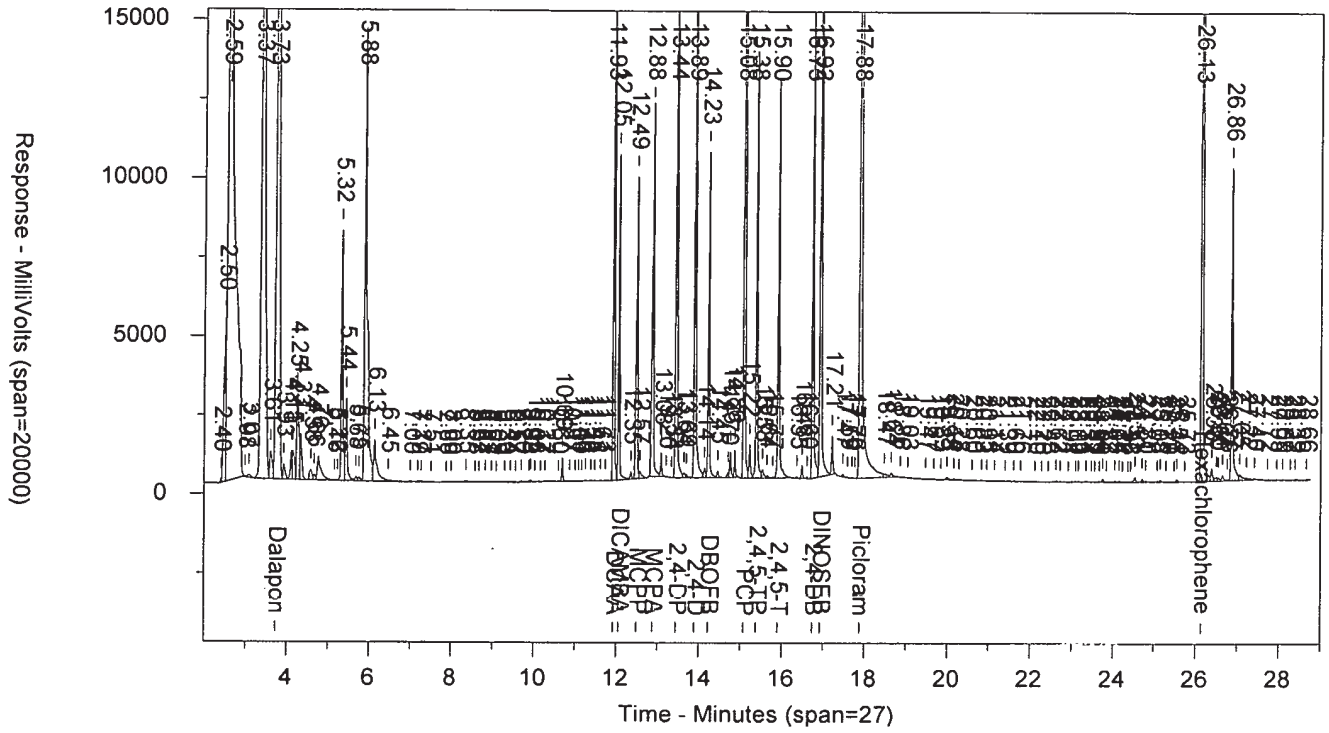
RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.73	31237820	3946.291	Dalapon	3.858	41389060	3568.115	Dalapon
11.927	26603140	1860.51	DCAA	12.504	28239020	1843.23	DCAA
12.054	10329070	180.491	DICAMBA	12.868	11277660	177.361	DICAMBA
12.492	9569284	110830.4	MCPP	12.945	11095830	176882.2	MCPP
12.879	11839410	109573.6	MCPA	13.475	14070400	162308.6	MCPA
13.441	16860660	1490.894	2,4-DP	13.974	21155710	1587.717	2,4-DP
14.226	10324720	1	DBOFB	13.705	10770070	1	DBOFB
13.891	23225720	1622.502	2,4-D	14.603	25162240	1631.939	2,4-D
15.081	34386240	192.968	PCP	15.294	36619600	187.367	PCP
15.378	13515920	198.53	2,4,5-TP	15.795	13528090	185.112	2,4,5-TP
15.903	12575230	208.107	2,4,5-T	16.498	12470300	191.809	2,4,5-T
16.733	16867390	2017.079	2,4-DB	17.202	17454690	1901.733	2,4-DB
16.923	27550030	893.439	DINOSEB	16.928	29114230	903.289	DINOSEB
17.882	54858690	1026.063	Picloram	19.502	59887510	1013.51	Picloram
26.132	46109350	819.744	Hexachlorophene	26.554	47842620	799.998	Hexachlorophen

Files:
Area File: 15herb18304001.011.RAW
Area File: 15herb18304001B.011.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 10/31/2018 9:36:16 PM
File Reported On: 11/1/2018 at 9:30:28 AM

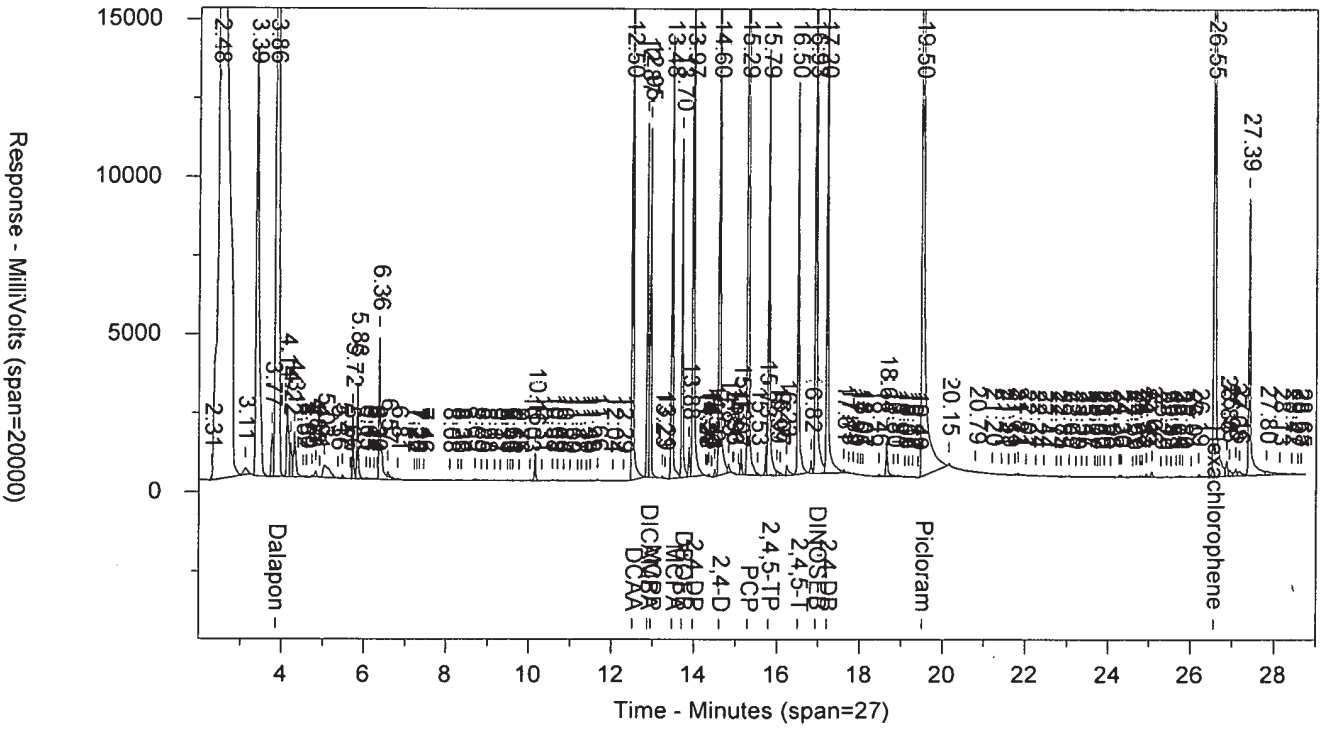
Not Used
See Reintegration

HERB61824E AAHERB6AA ICAL 1830299999 10407 SW-846 801

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.011.RAW

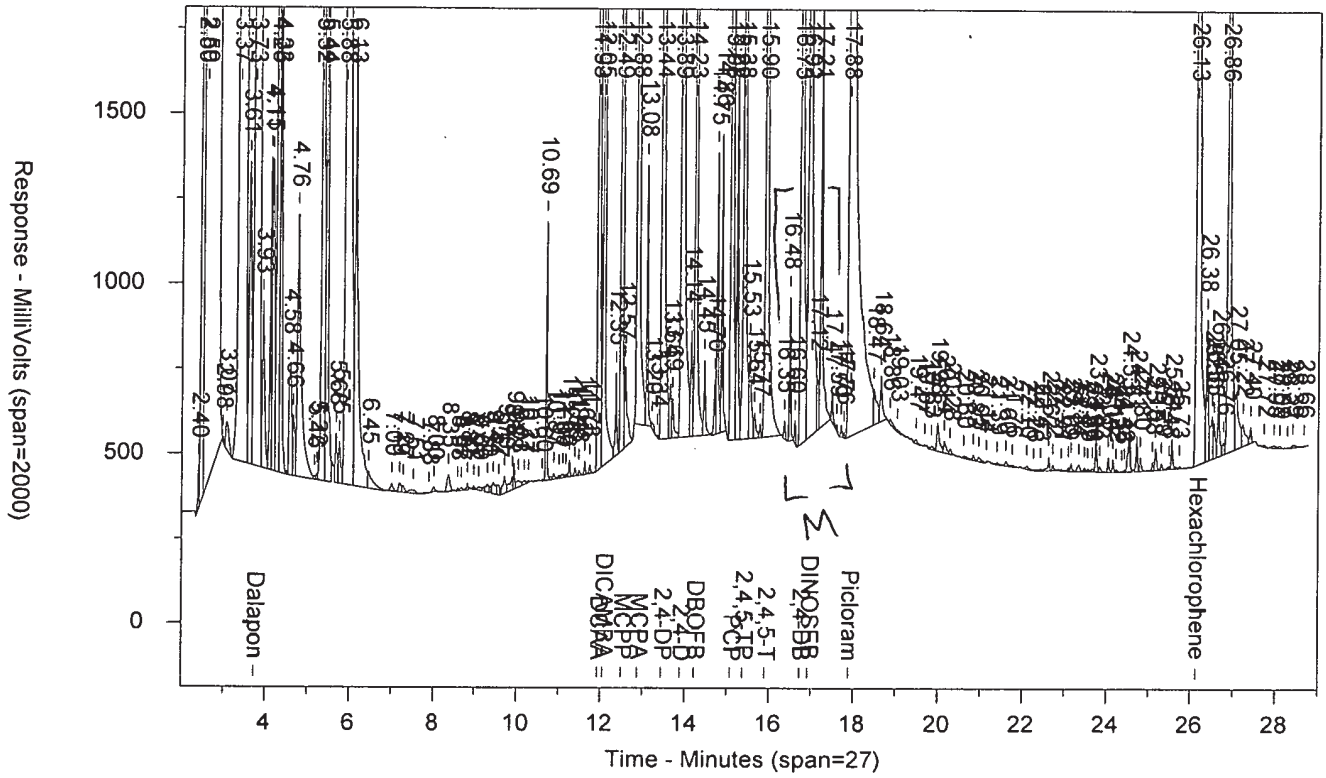


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.011.RAW

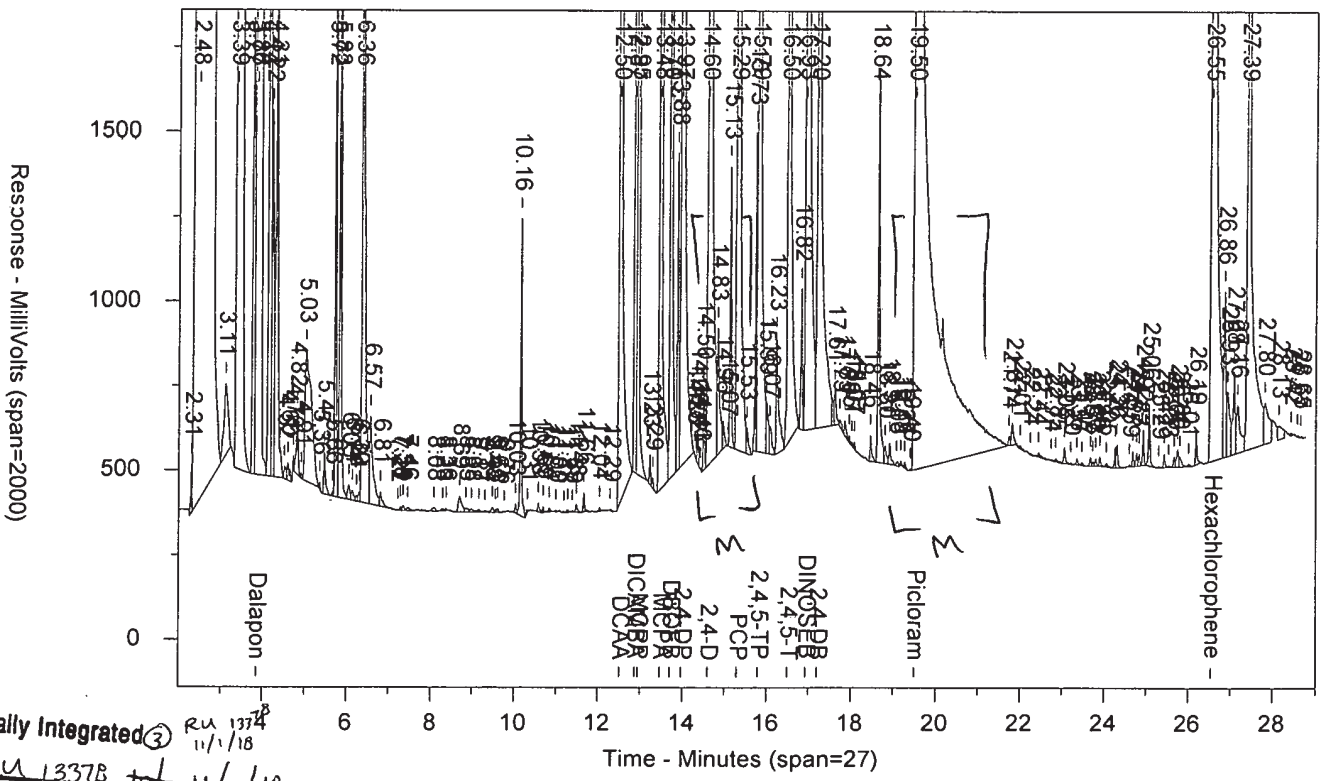


HERB61824E AAHERB6AA ICAL 1830299999 10407 SW-846 8015A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.011.BND



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.011.BND



M = Manually Integrated (3) RU 13378 11/1/18

Analyst RU 13378 tot 11/1/18

Approved by [signature] 11/1/18

Circle Reason 1 2 3 4

1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

LANCASTER LABORATORIES

Sample Number: HERB61824E AAHERB6AA ICAL 1830299999 10407 SW-846 8015A
Injected On: 10/31/2018 9:07:29 PM Sample Weight: 1
Instrument ID: CP15-19850 Dilution Factor: 1
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

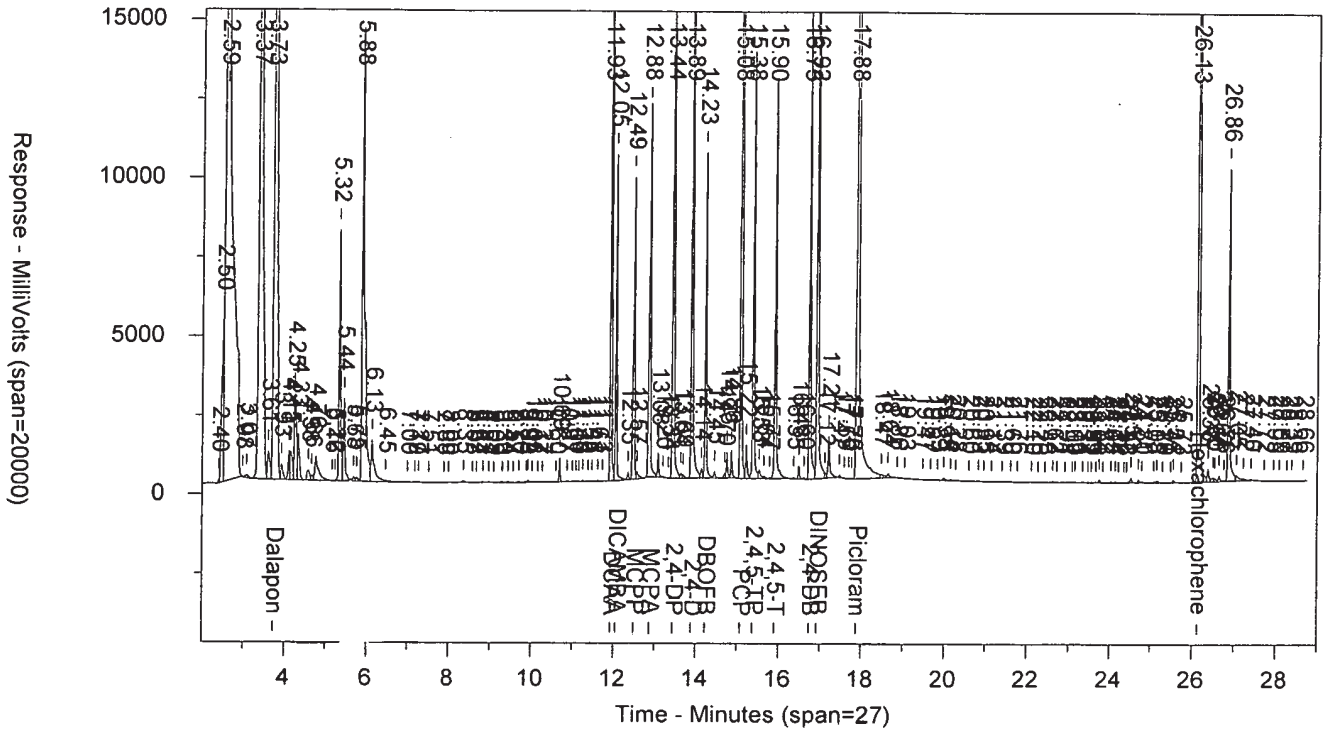
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.73	31237820	4046.221	Dalapon	3.858	41389060	3674.603	Dalapon
11.927	26603140	1912.936	DCAA	12.504	28239020	1902.996	DCAA
12.054	10329070	184.887	DICAMBA	12.868	11277660	182.91	DICAMBA
12.492	9569284	178820.6	MCPP	12.945	11095830	181028.7	MCPP
12.879	11839410	184160.1	MCPA	13.475	14070400	166914.3	MCPA
13.441	16860660	1533.814	2,4-DP	13.974	21155710	1630.392	2,4-DP
14.226	10324720	1	DBOFB	13.705	10770070	1	DBOFB
13.891	23225720	1692.958	2,4-D	14.603	25196450	1695.497	2,4-D
15.081	34386240	198.213	PCP	15.294	36619600	192.502	PCP
15.378	13515920	205.813	2,4,5-TP	15.795	13528090	192.703	2,4,5-TP
15.903	12575230	216.941	2,4,5-T	16.498	12470300	201.057	2,4,5-T
16.733	16879370	2099.167	2,4-DB	17.202	17454690	1985.144	2,4-DB
16.923	27591620	914.955	DINOSEB	16.928	29114230	911.753	DINOSEB
17.882	54858690	1091.562	Picloram	19.502	59921330	1069.156	Picloram
26.132	46109350	841.886	Hexachlorophene	26.554	47842620	823.687	Hexachlorophen

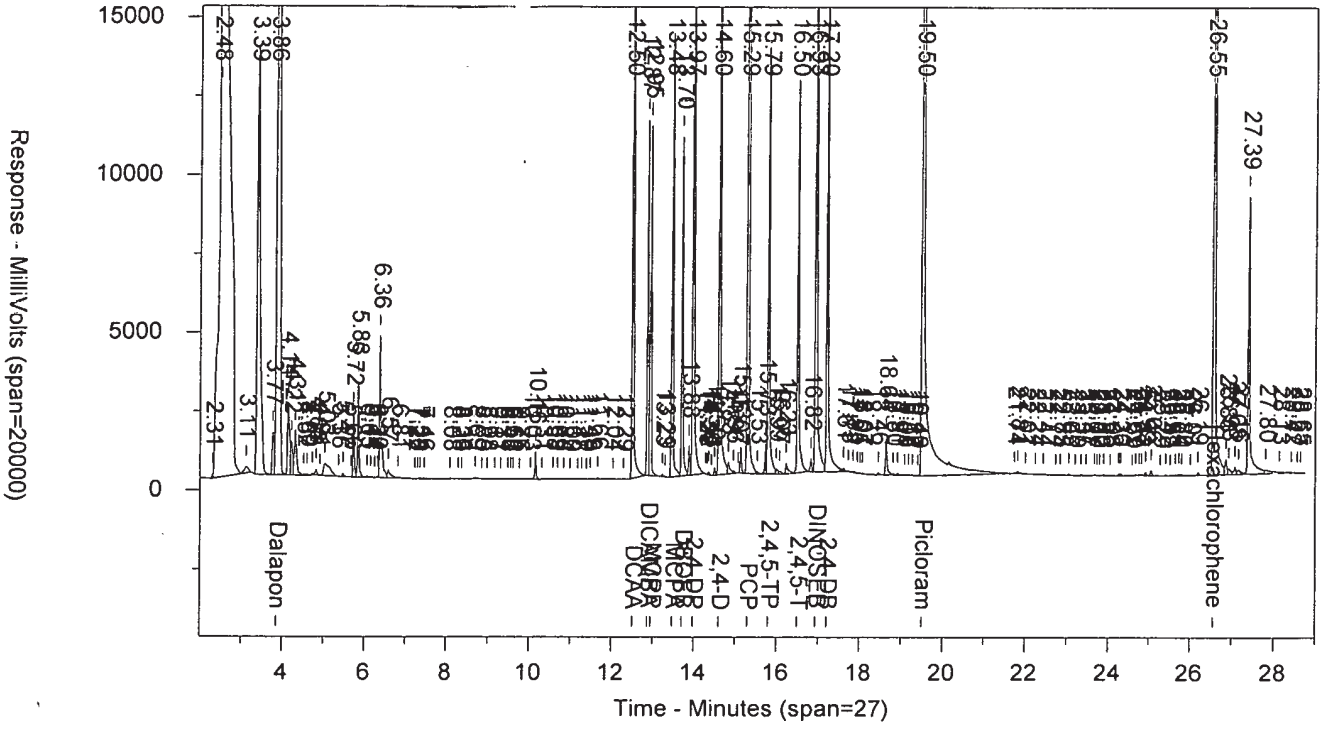
Files:
Area File: 15herb18304001.011.BND
Area File: 15herb18304001B.011.BND
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/1/2018 10:10:31 AM
File Reported On: 11/1/2018 at 10:16:52 AM

HERB61824E AAHERB6AA ICAL 1830299999 10407 SW-846 801

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.011.BND

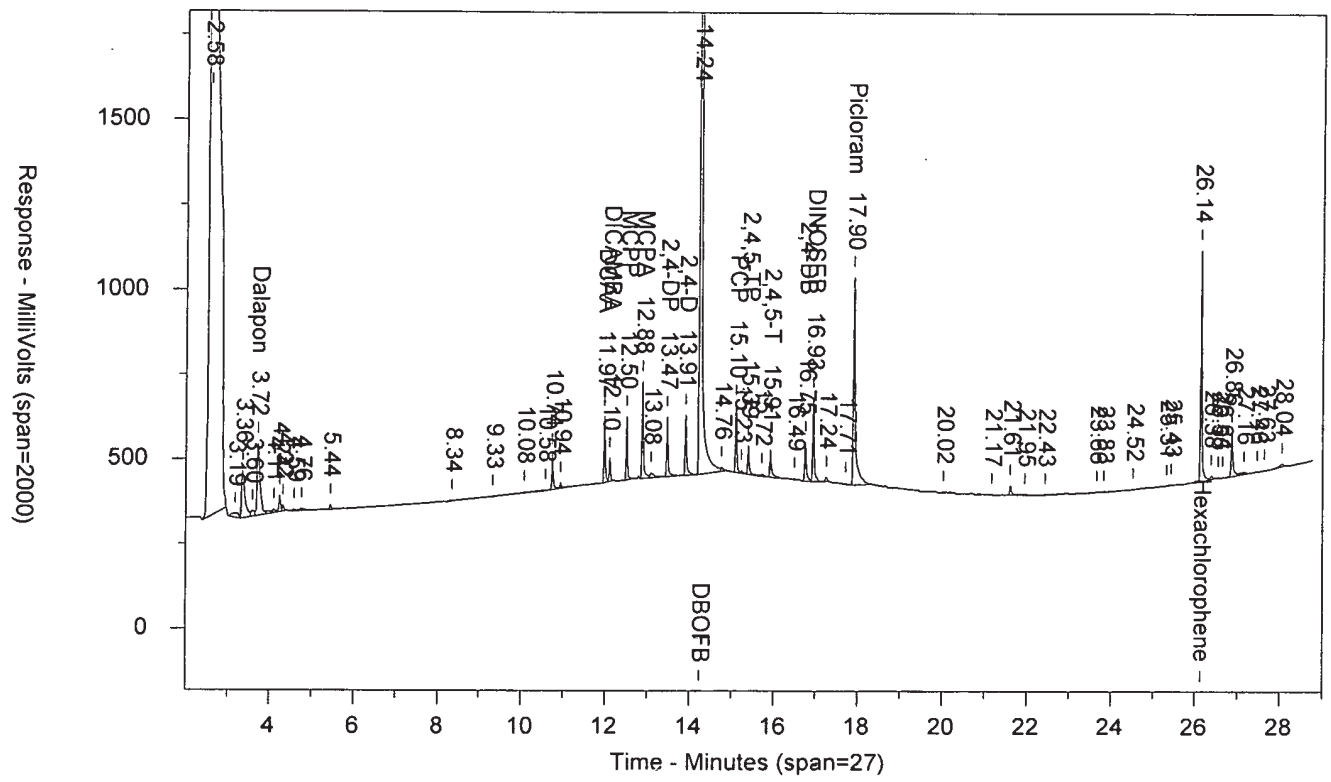


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.011.BND

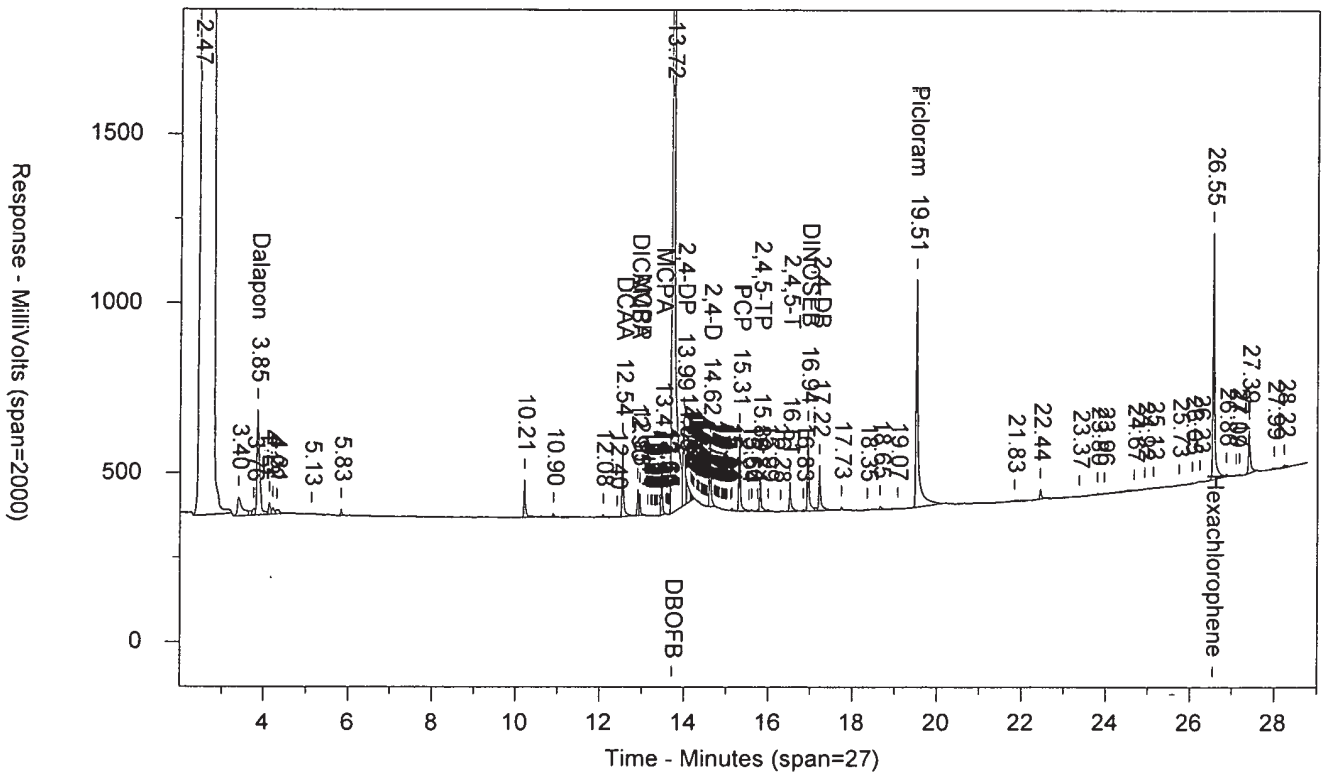


MDHEX1824E AAMDHEXAA ICAL 1830299999 10407 SW-846 8015/

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.012.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.012.RAW



LANCASTER LABORATORIES

Sample Number: MDHEX1824E AAMDHEXAA ICAL 1830299999 10407 SW-846 8015A
Injected On: 10/31/2018 9:40:35 PM Sample Weight: 1
Instrument ID: CP15-19850 Dilution Factor: 1
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

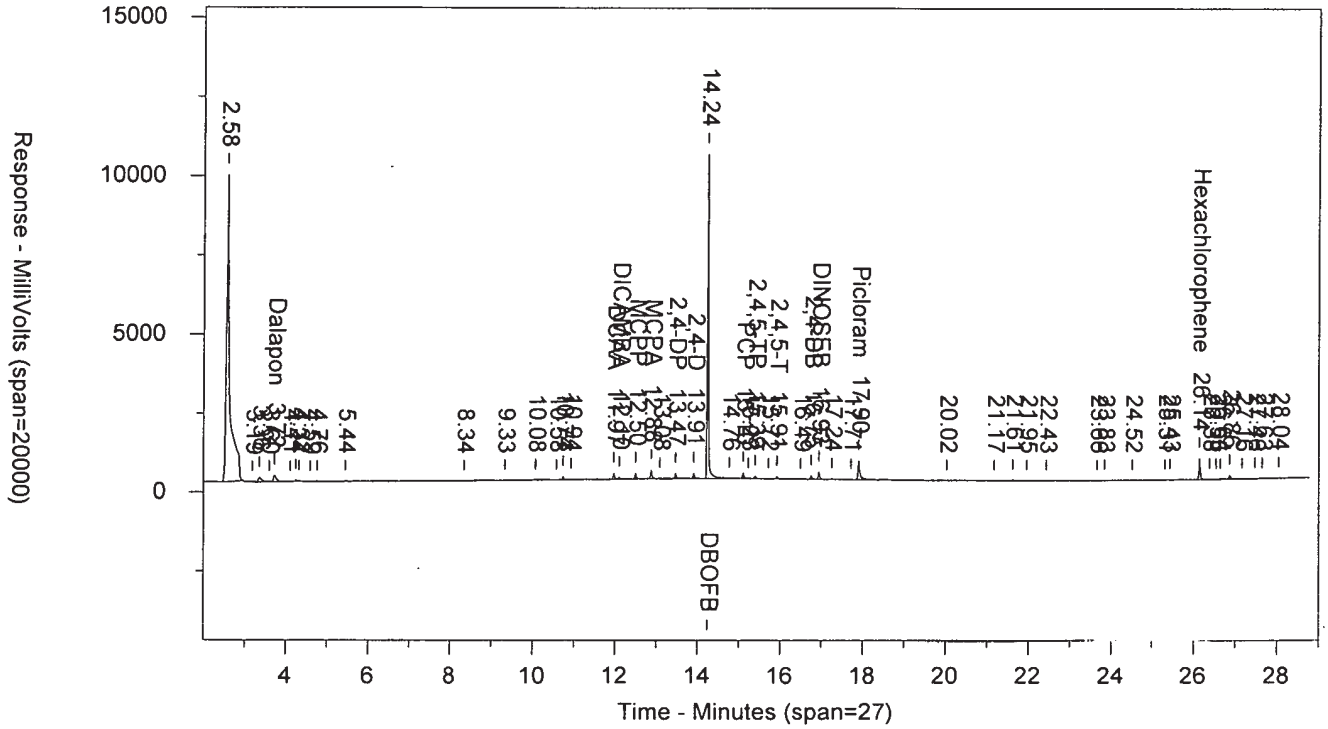
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.724	213103	27.744	Dalapon	3.854	310864	28.232	Dalapon
11.971	196530	14.204	DCAA	12.537	215005	14.821	DCAA
12.099	69358	1.248	DICAMBA	12.898	78828	1.308	DICAMBA
12.498	188428	-9042.412	MCPP	12.946	65748	1097.269	MCPP
12.877	286940	-8789.521	MCPA	13.47	140147	1700.647	MCPA
13.465	177636	16.242	2,4-DP	13.993	258124	20.349	2,4-DP
14.236	10272130	1	DBOFB	13.716	10528740	1	DBOFB
13.905	178380	13.069	2,4-D	14.615	188232	12.954	2,4-D
15.099	198728	1.151	PCP	15.309	227553	1.224	PCP
15.389	84763	1.297	2,4,5-TP	15.803	96961	1.413	2,4,5-TP
15.913	82356	1.428	2,4,5-T	16.506	87010	1.435	2,4,5-T
16.75	117280	14.658	2,4-DB	17.216	134689	15.669	2,4-DB
16.934	247547	8.249	DINOSEB	16.94	233763	7.488	DINOSEB
17.897	613381	12.267	Picloram	19.509	672706	12.275	Picloram
26.137	682844	12.532	Hexachlorophene	26.555	729938	12.855	Hexachlorophen

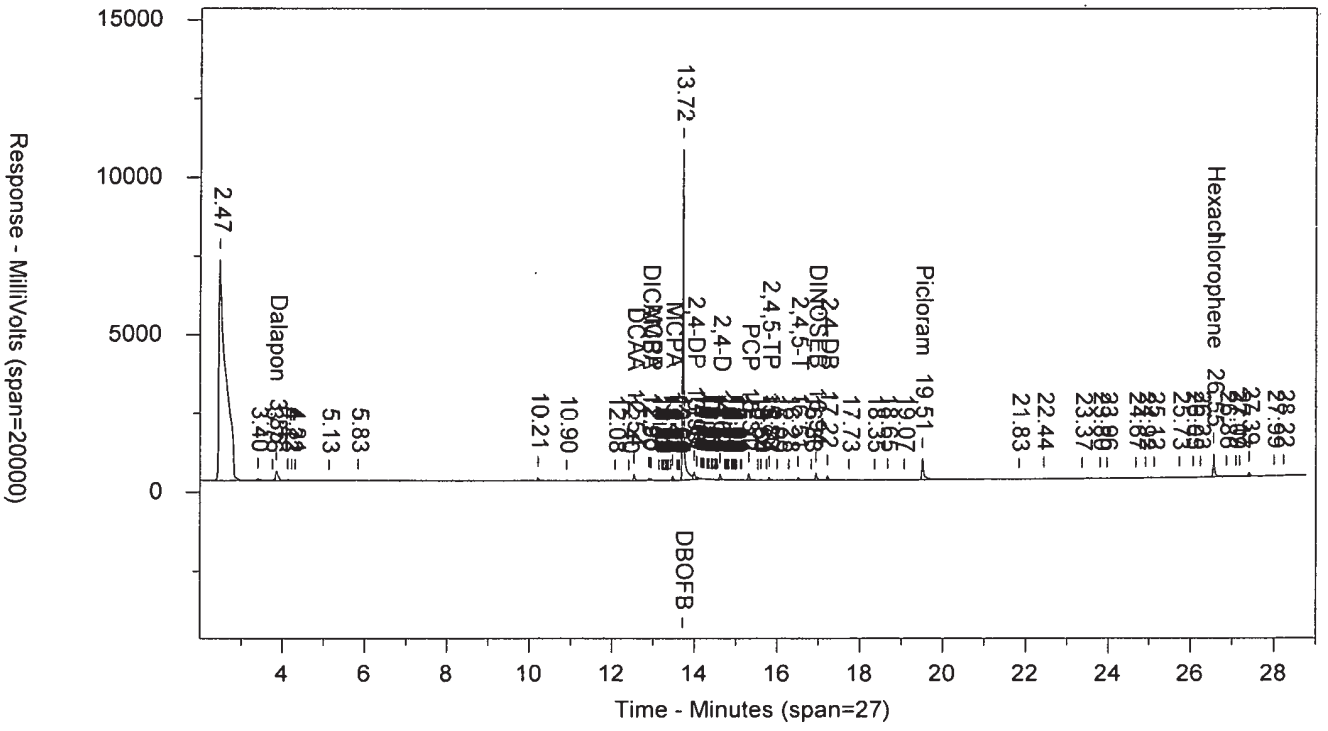
Files:
Area File: 15herb18304001.012.RAW
Area File: 15herb18304001B.012.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 10/31/2018 10:09:22 PM
File Reported On: 11/1/2018 at 10:35:13 AM

MDHEX1824E AAMDHEXAA ICAL 1830299999 10407 SW-846 8(

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.012.RAW

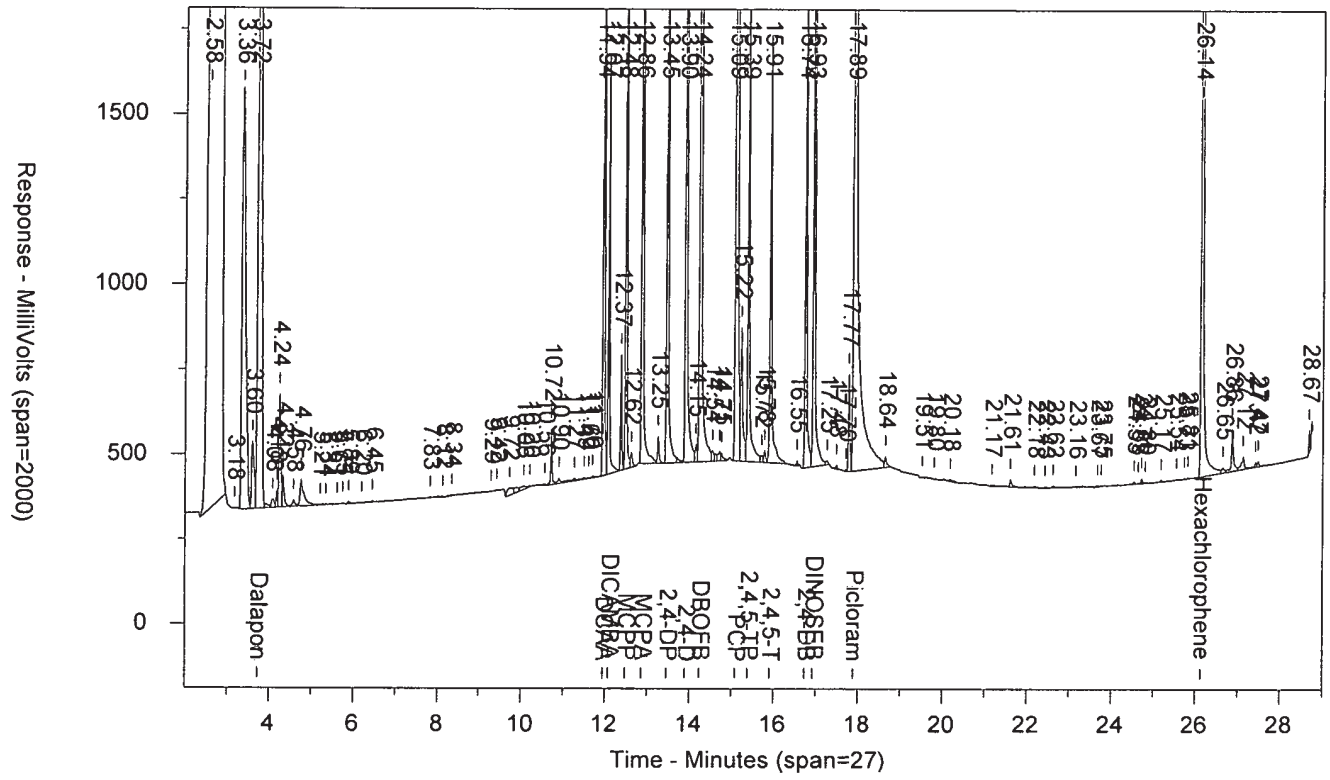


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.012.RAW

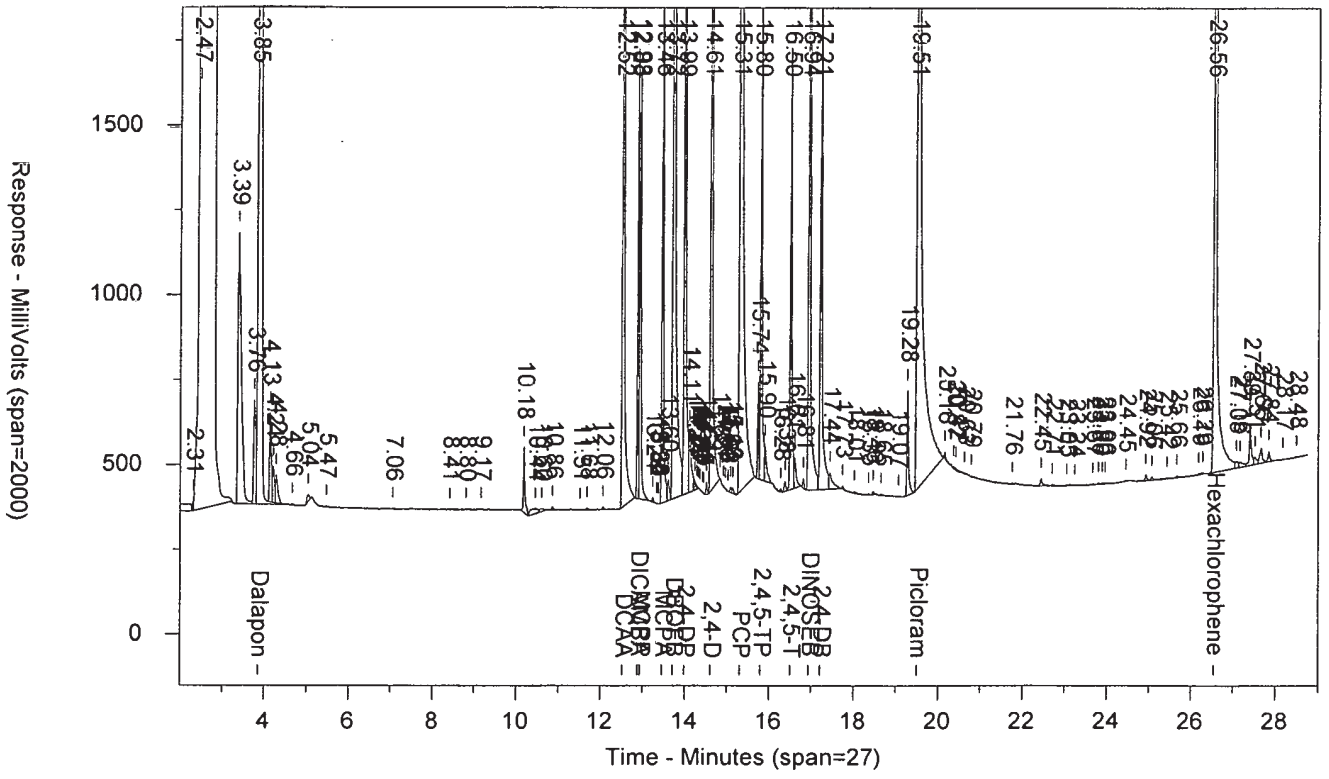


ICHBX1824G AAICHBXAA CCAL 1830299999 10407 SW-846 8015A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.013.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.013.RAW



LANCASTER LABORATORIES

Sample Number: ICHBX1824G AAICHBXAA CCAL 1830299999 10407 SW-846 8015A
Injected On: 10/31/2018 10:13:35 PM Sample Weight: 1
Instrument ID: CP15-19850 Dilution Factor: 1
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

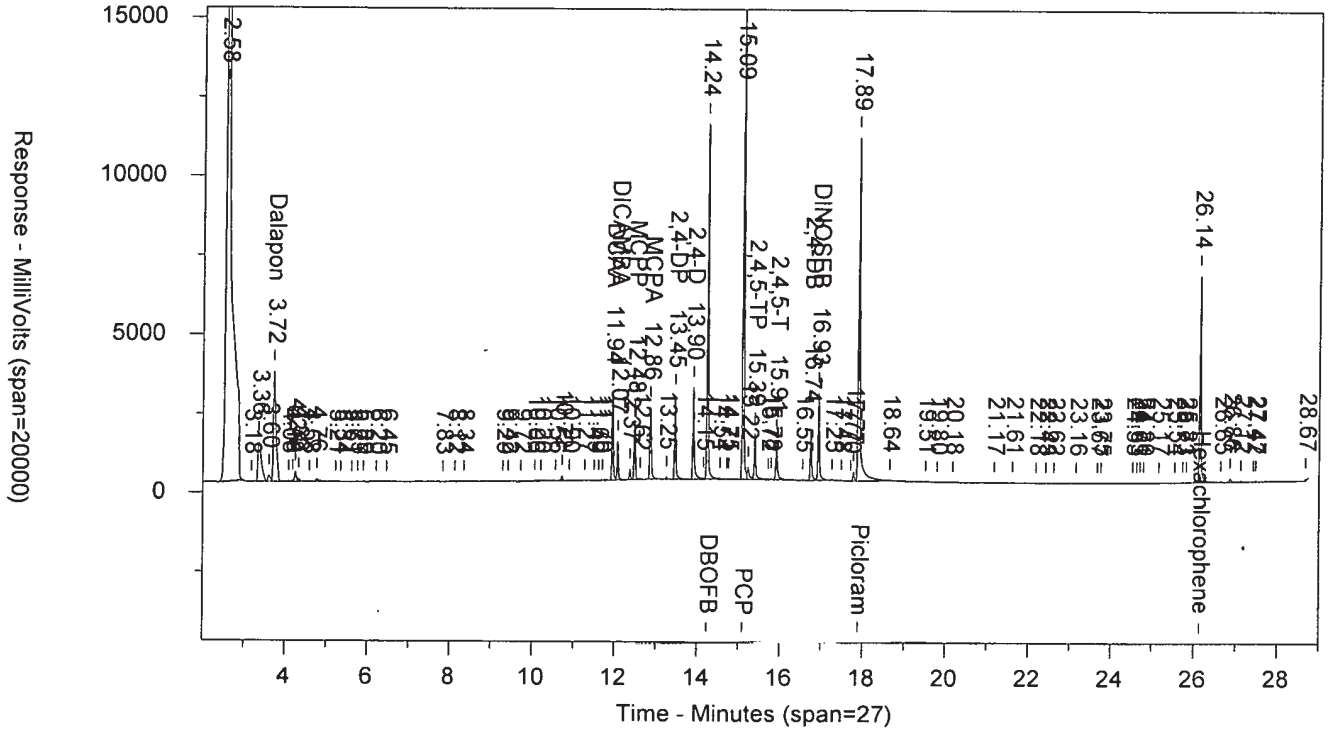
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.724	3484956	415.233	Dalapon	3.855	4969726	418.962	Dalapon
11.944	2820565	186.564	DCAA	12.518	3035387	194.232	DCAA
12.07	1230845	20.266	DICAMBA	12.879	1326542	20.429	DICAMBA
12.479	1870406	21623.53	MCPP	12.932	1258913	19502.99	MCPP
12.863	2273579	21327.76	MCPA	13.458	1656741	18662.05	MCPA
13.455	2671381	214.128	2,4-DP	13.985	2798496	204.789	2,4-DP
14.235	11224140	1	DBOFB	13.715	11342300	1	DBOFB
13.898	2919491	195.753	2,4-D	14.61	2981738	190.48	2,4-D
15.093	17630100	93.482	PCP	15.306	17516720	87.436	PCP
15.386	1462964	20.492	2,4,5-TP	15.8	1489461	20.146	2,4,5-TP
15.91	1258346	19.969	2,4,5-T	16.503	1302423	19.939	2,4,5-T
16.742	1610705	184.238	2,4-DB	17.21	1679637	181.39	2,4-DB
16.932	2764359	84.303	DINOSEB	16.936	2771244	82.407	DINOSEB
17.888	10858720	198.75	Picloram	19.505	11258260	190.704	Picloram
26.136	6538899	109.823	Hexachlorophene	26.556	6833608	111.716	Hexachlorophen

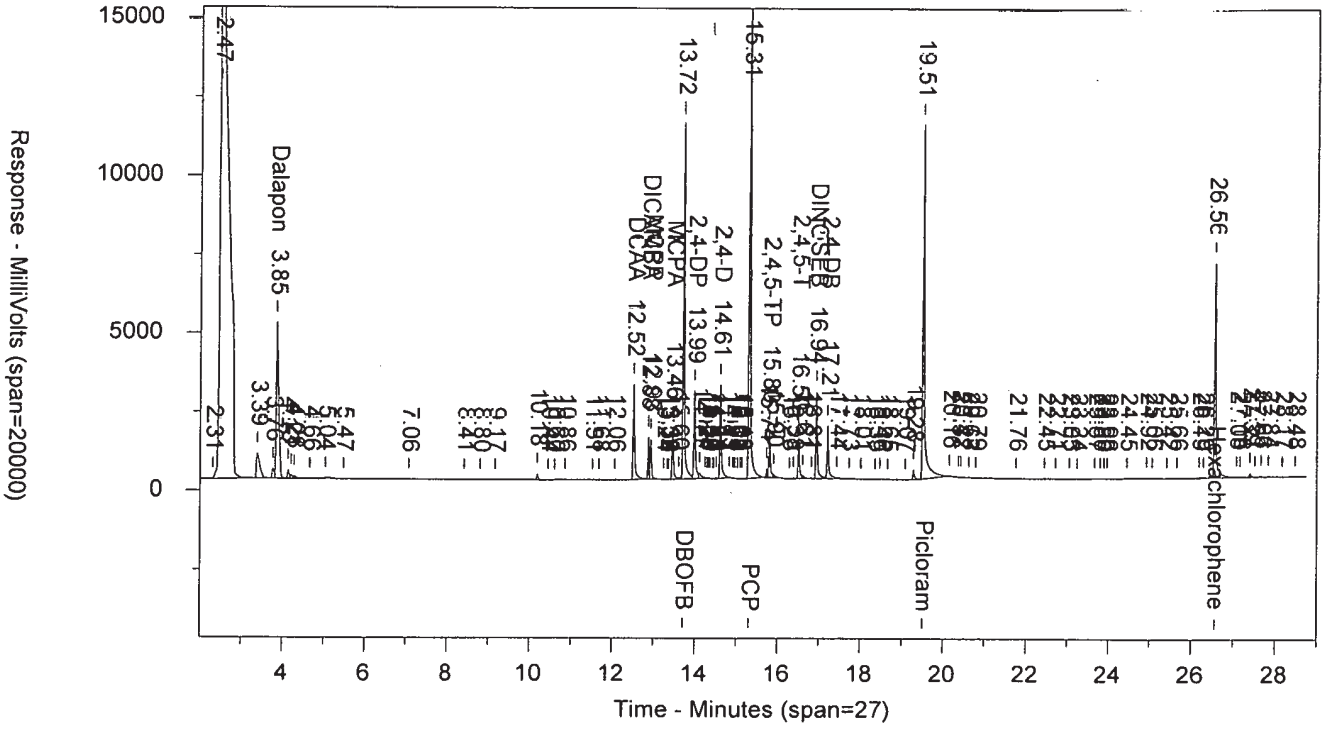
Files:
Area File: 15herb18304001.013.RAW
Area File: 15herb18304001B.013.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 10/31/2018 10:42:23 PM
File Reported On: 11/1/2018 at 10:55:24 AM

ICHBX1824G AAICHBXAA CCAL 1830299999 10407 SW-846 801

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001.013.RAW

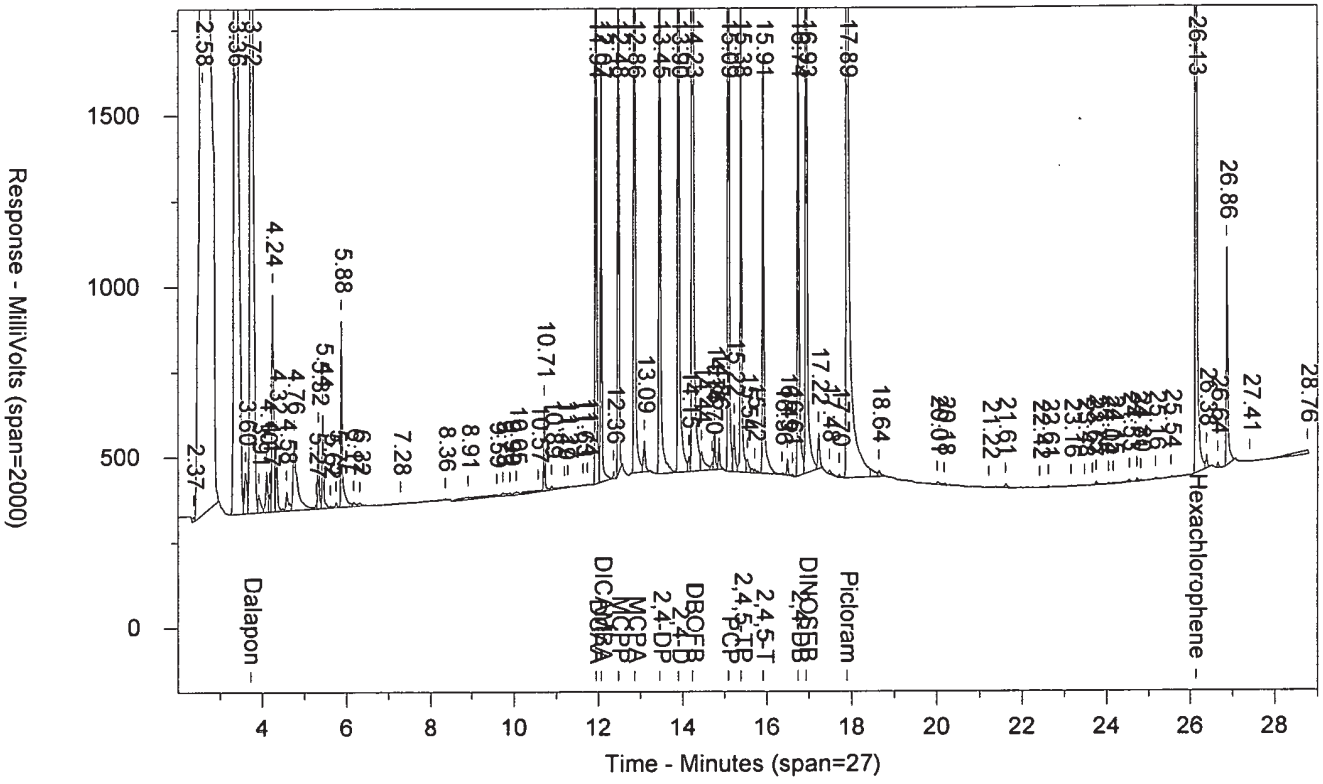


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304001B.013.RAW

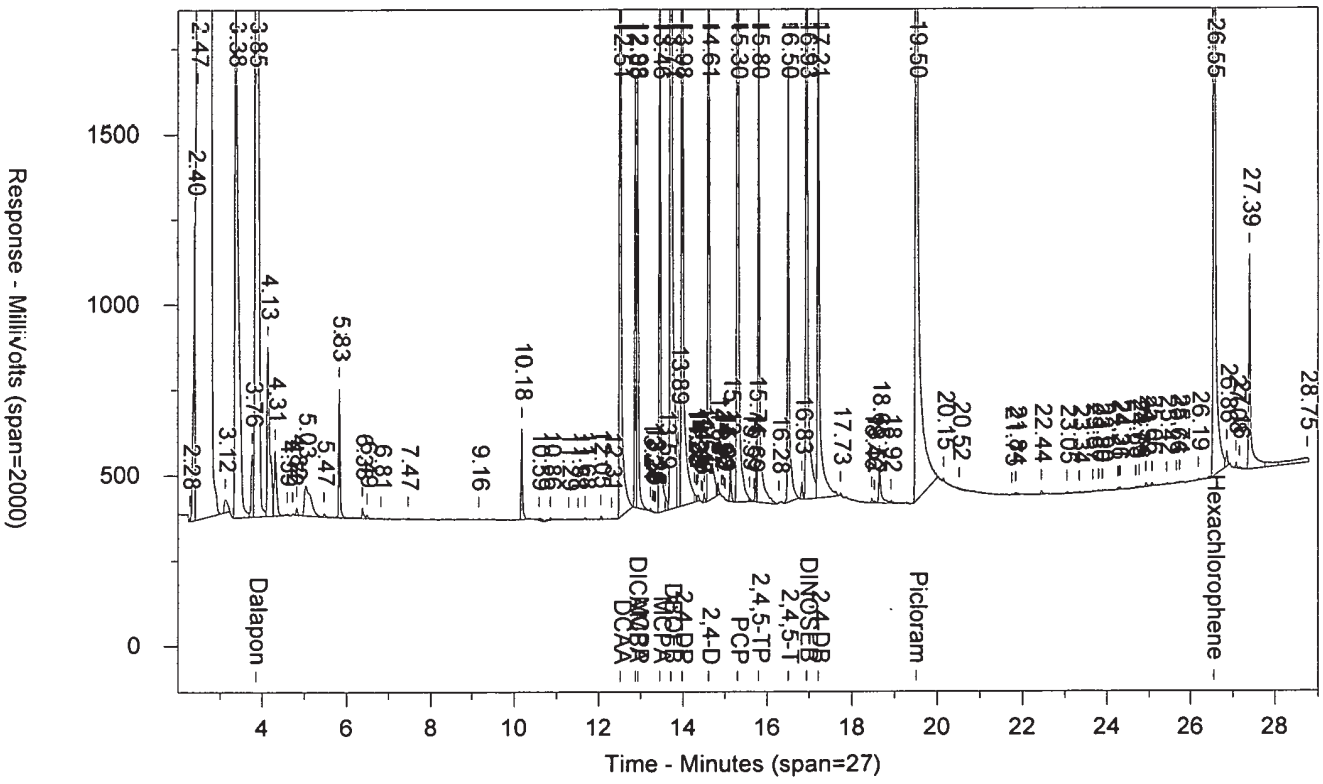


HERB31824F UHHERB3UH CCAL 1830499999 10407 SW-846 8151/

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.006.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.006.RAW



LANCASTER LABORATORIES

Sample Number: HERB31824F UHHERB3UH CCAL 1830499999 10407 SW-846 8151A
Injected On: 11/1/2018 6:03:36 PM Sample Weight: 1
Instrument ID: CP15-19850 Dilution Factor: 1
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

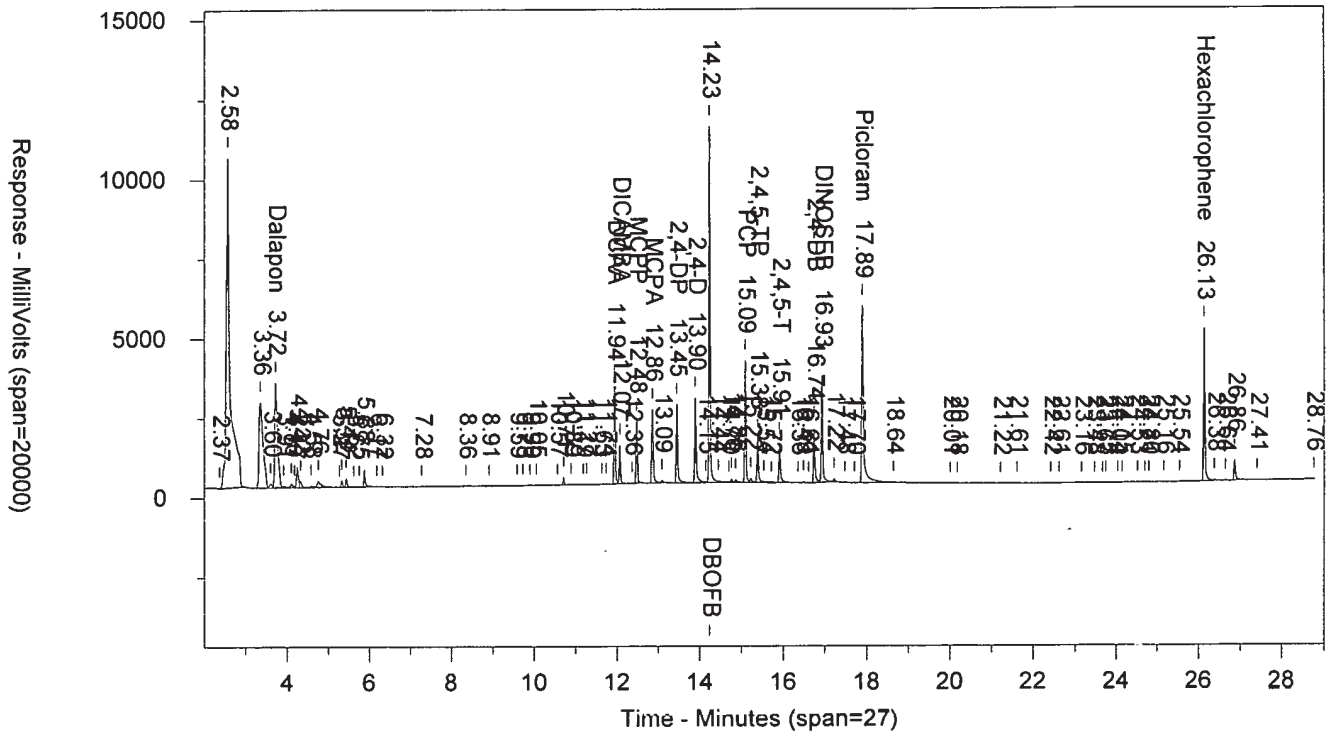
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.724	3300811	394.204	Dalapon	3.854	4724419	403.122	Dalapon
11.941	3008387	199.449	DCAA	12.515	3091738	200.242	DCAA
12.068	1225344	20.223	DICAMBA	12.876	1284765	20.027	DICAMBA
12.477	1933132	22861.76	MCPP	12.929	1300815	20397.04	MCPP
12.861	2310514	21977.63	MCPA	13.456	1776370	20252.76	MCPA
13.454	2472340	198.633	2,4-DP	13.983	2710751	200.779	2,4-DP
14.233	11198160	1	DBOFB	13.714	11206110	1	DBOFB
13.896	2665503	179.138	2,4-D	14.608	2731040	176.585	2,4-D
15.092	3832548	20.369	PCP	15.303	4075206	20.589	PCP
15.385	1438172	20.192	2,4,5-TP	15.798	1483780	20.314	2,4,5-TP
15.908	1226851	19.514	2,4,5-T	16.501	1282452	19.872	2,4,5-T
16.741	1731443	198.507	2,4-DB	17.208	1807384	197.558	2,4-DB
16.929	3360577	102.723	DINOSEB	16.935	3388160	101.976	DINOSEB
17.889	5571903	102.22	Picloram	19.504	5962906	102.233	Picloram
26.134	4818540	81.117	Hexachlorophene	26.552	5152464	85.256	Hexachlorophe

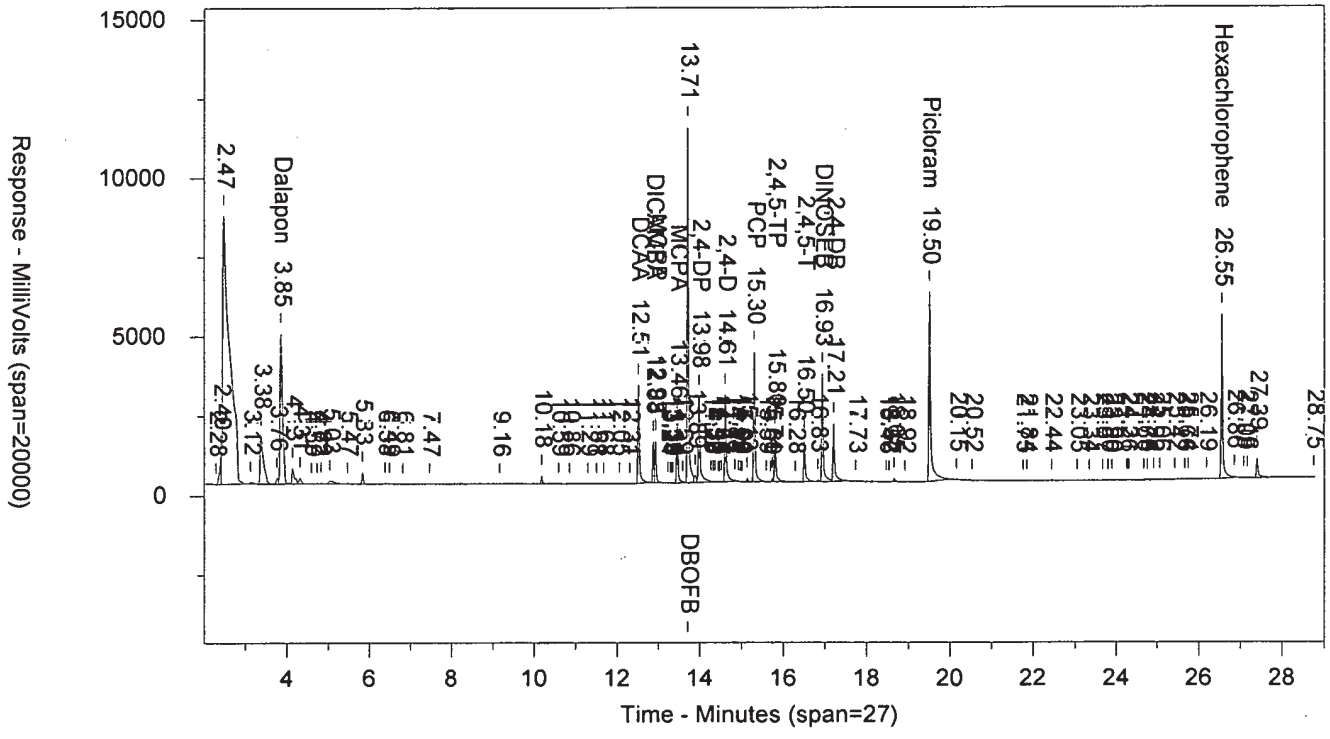
Files:
Area File: 15herb18304002.006.RAW
Area File: 15herb18304002B.006.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/1/2018 6:32:24 PM
File Reported On: 11/2/2018 at 1:17:12 PM

HERB31824F UHHERB3UH CCAL 1830499999 10407 SW-846 8

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.006.RAW

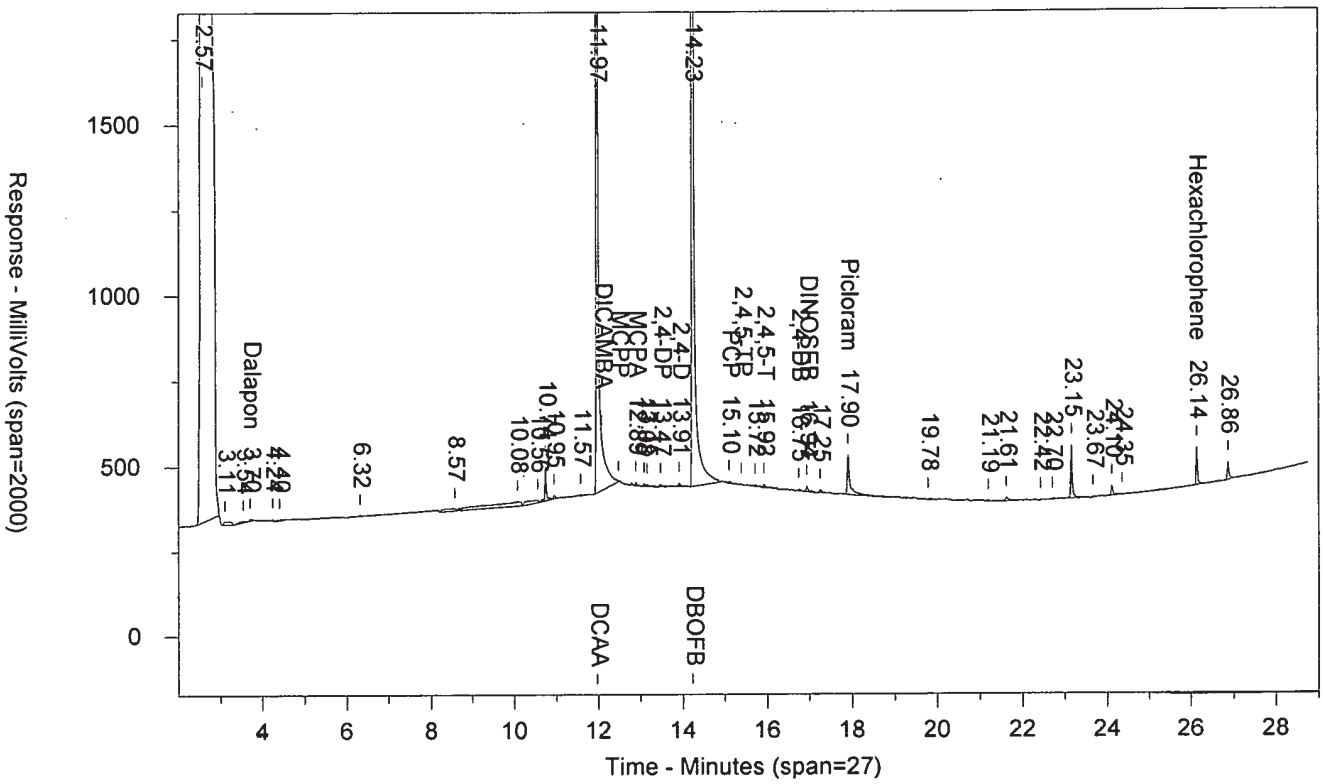


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.006.RAW

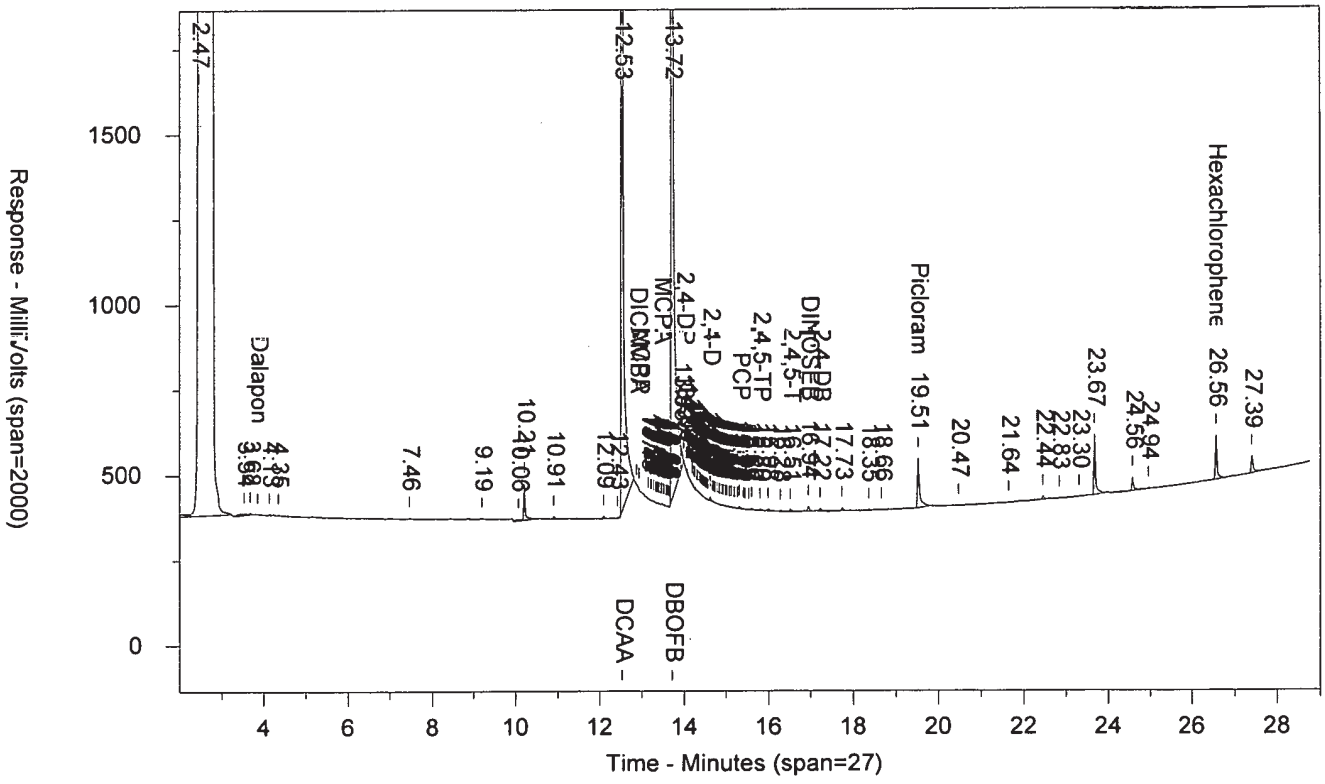


HIBLKX1824B RQHIBLKRQ MISC 1830499999 10407 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.007.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.007.RAW



LANCASTER LABORATORIES

Sample Number: HIBLKX1824B RQHIBLKRQ MISC 1830499999 10407 SW-846 8151A
Injected On: 11/1/2018 6:36:36 PM Sample Weight: 1000
Instrument ID: CP15-19850 Dilution Factor: 10
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

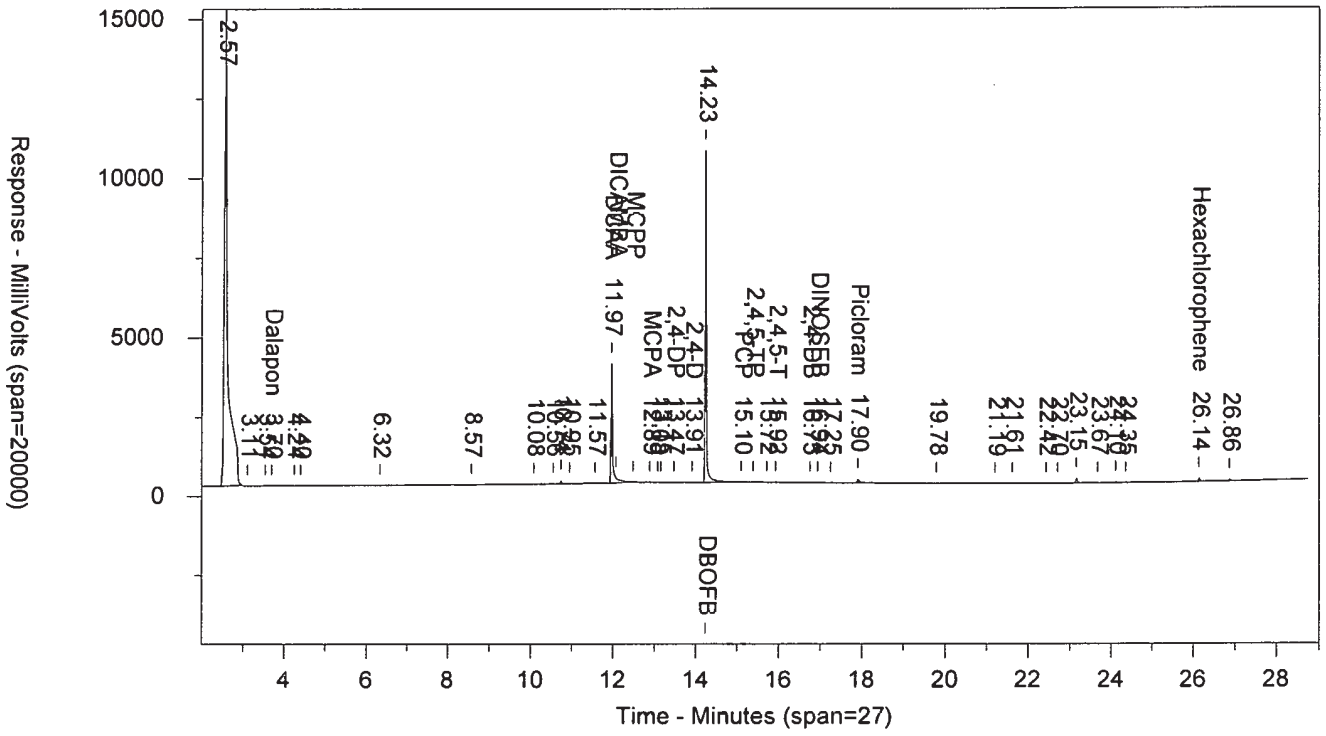
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.7	5948	.008	Dalapon		0		Dalapon
11.966	3773492	2.68	DCAA	12.532	3697180	2.491	DCAA
12.887	11916	-134.106	MCPA	13.463	1350	.16	MCPA
13.47	8068	.007	2,4-DP	13.989	9155	.007	2,4-DP
14.235	10453330	.001	DBOFB	13.715	10772730	.001	DBOFB
13.91	11183	.008	2,4-D	14.619	11049	.007	2,4-D
15.1	6512		PCP	15.311	8152		PCP
	0		2,4,5-TP	15.799	4811	.001	2,4,5-TP
15.919	10396	.002	2,4,5-T	16.511	6503	.001	2,4,5-T
16.749	5880	.007	2,4-DB	17.217	8622	.01	2,4-DB
16.936	17159	.006	DINOSEB	16.941	15655	.005	DINOSEB
17.901	117249	.023	Picloram	19.511	145710	.026	Picloram
26.135	111395	.02	Hexachlorophene	26.556	130851	.023	Hexachlorophe

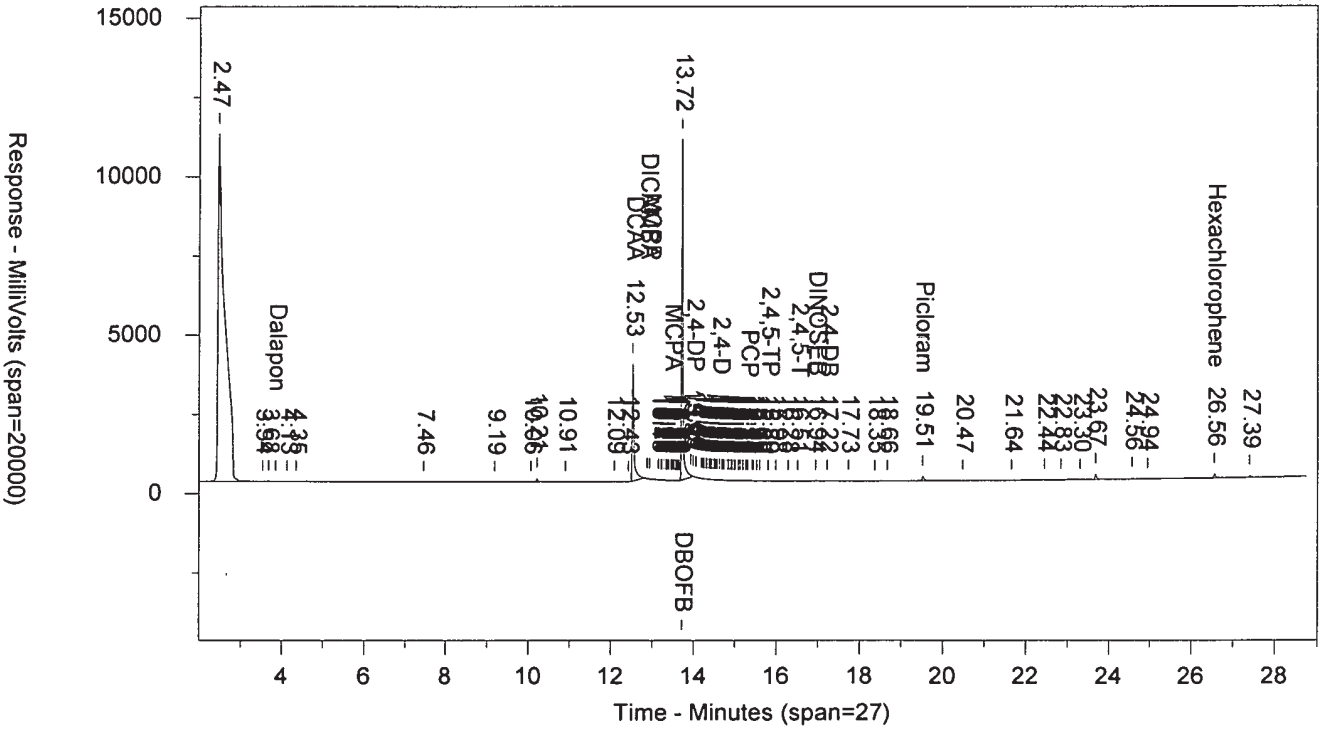
Files:
Area File: 15herb18304002.007.RAW
Area File: 15herb18304002B.007.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/1/2018 7:05:25 PM
File Reported On: 11/2/2018 at 1:17:27 PM

HIBLKX1824B RQHIBLKRQ MISC 1830499999 10407 SW-846 81

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.007.RAW

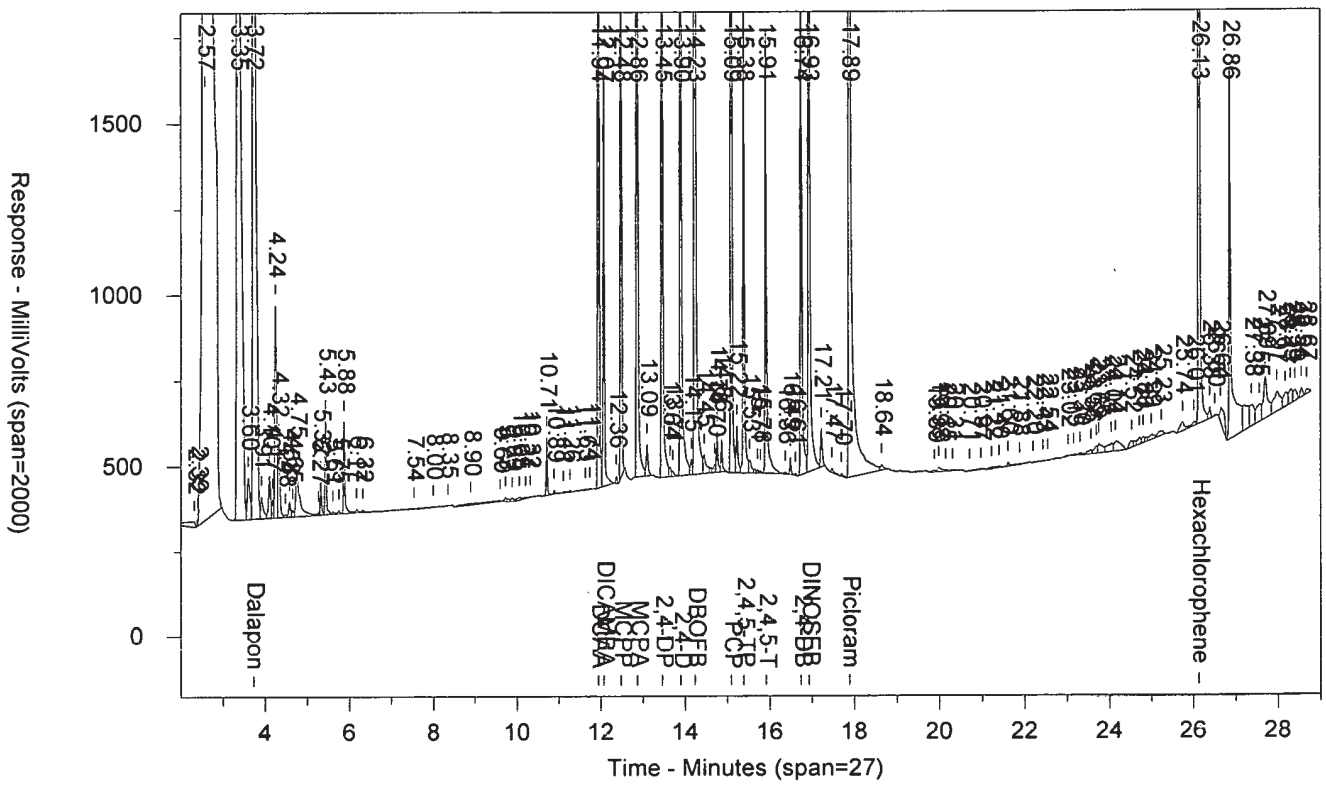


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.007.RAW

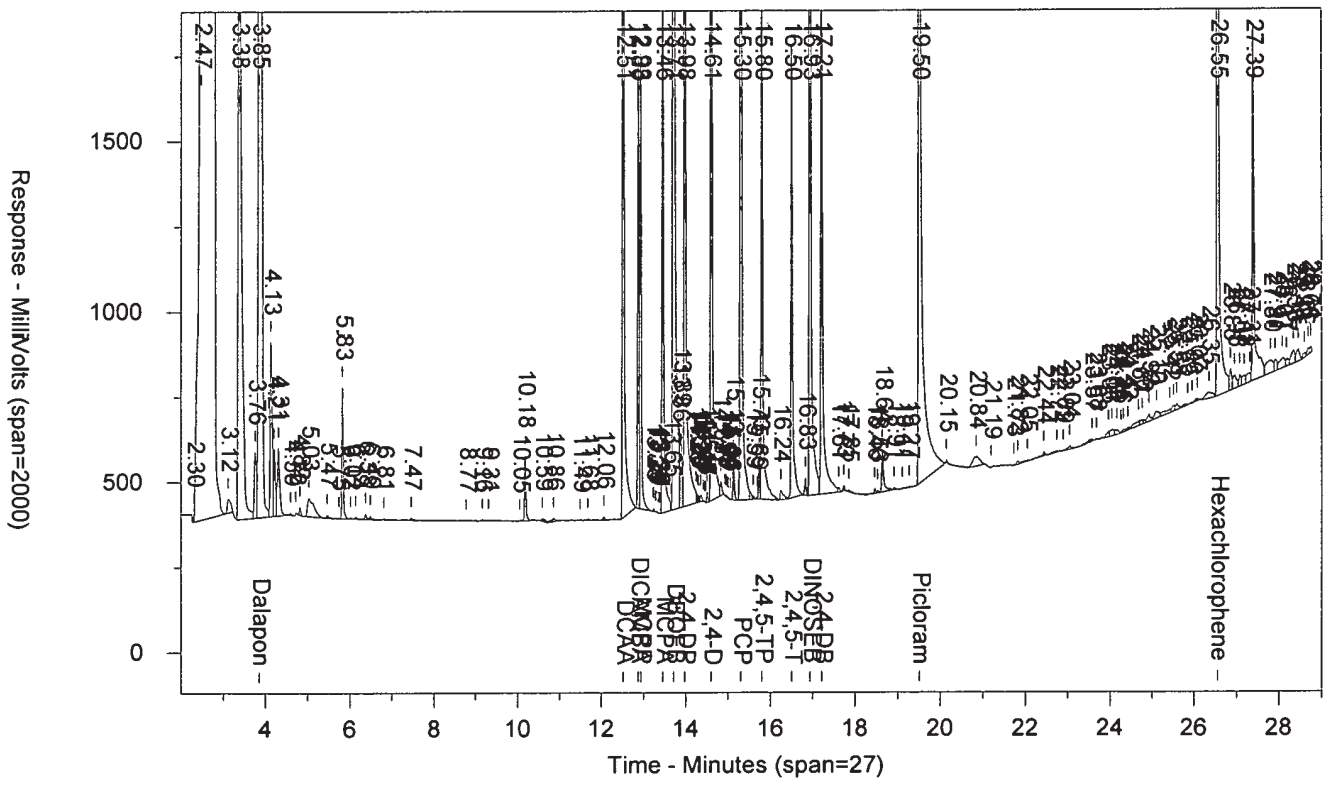


HERB31824F UIHERB3UI CCAL 1830499999 10407 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.016.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.016.RAW



LANCASTER LABORATORIES

Sample Number: HERB31824F UIHERB3UI CCAL 1830499999 10407 SW-846 8151A
Injected On: 11/1/2018 11:34:44 PM Sample Weight: 1
Instrument ID: CP15-19850 Dilution Factor: 1
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

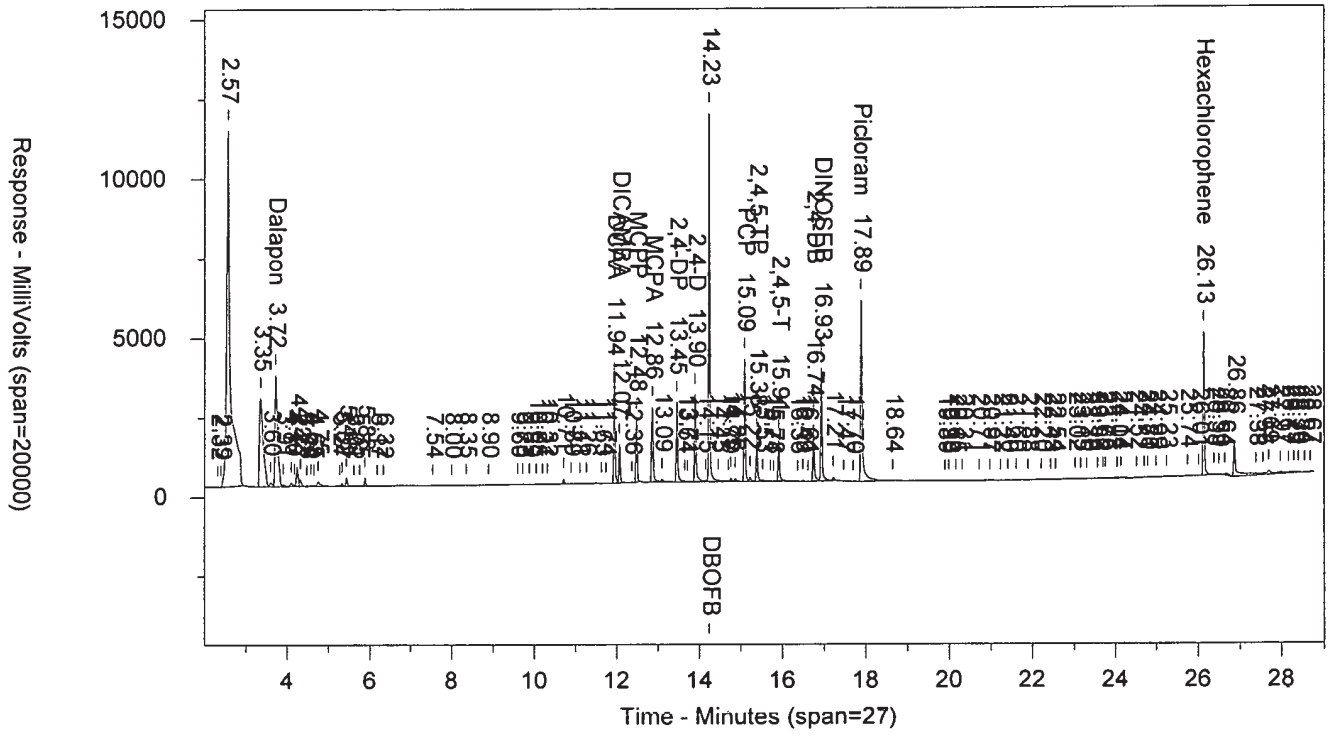
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.722	3504353	405.064	Dalapon	3.853	4953212	404.063	Dalapon
11.941	3139001	201.422	DCAA	12.514	3206077	198.518	DCAA
12.068	1219618	19.481	DICAMBA	12.875	1321194	19.689	DICAMBA
12.478	1969852	22371.01	MCPP	12.929	1335210	20015.87	MCPP
12.86	2368893	21704.42	MCPA	13.456	1833120	19980.9	MCPA
13.453	2511139	195.267	2,4-DP	13.982	2807945	198.834	2,4-DP
14.233	11569940	1	DBOFB	13.712	11721460	1	DBOFB
13.895	2750081	178.883	2,4-D	14.606	2795319	172.795	2,4-D
15.092	3849678	19.802	PCP	15.303	4151376	20.052	PCP
15.383	1473673	20.025	2,4,5-TP	15.797	1552260	20.317	2,4,5-TP
15.908	1298401	19.989	2,4,5-T	16.5	1330811	19.715	2,4,5-T
16.74	1797990	199.513	2,4-DB	17.206	1946590	203.419	2,4-DB
16.927	3555274	105.183	DINOSEB	16.932	3500999	100.74	DINOSEB
17.885	5703832	101.278	Picloram	19.501	6351613	104.11	Picloram
26.131	4522275	73.683	Hexachlorophene	26.553	4600637	72.778	Hexachlorophe

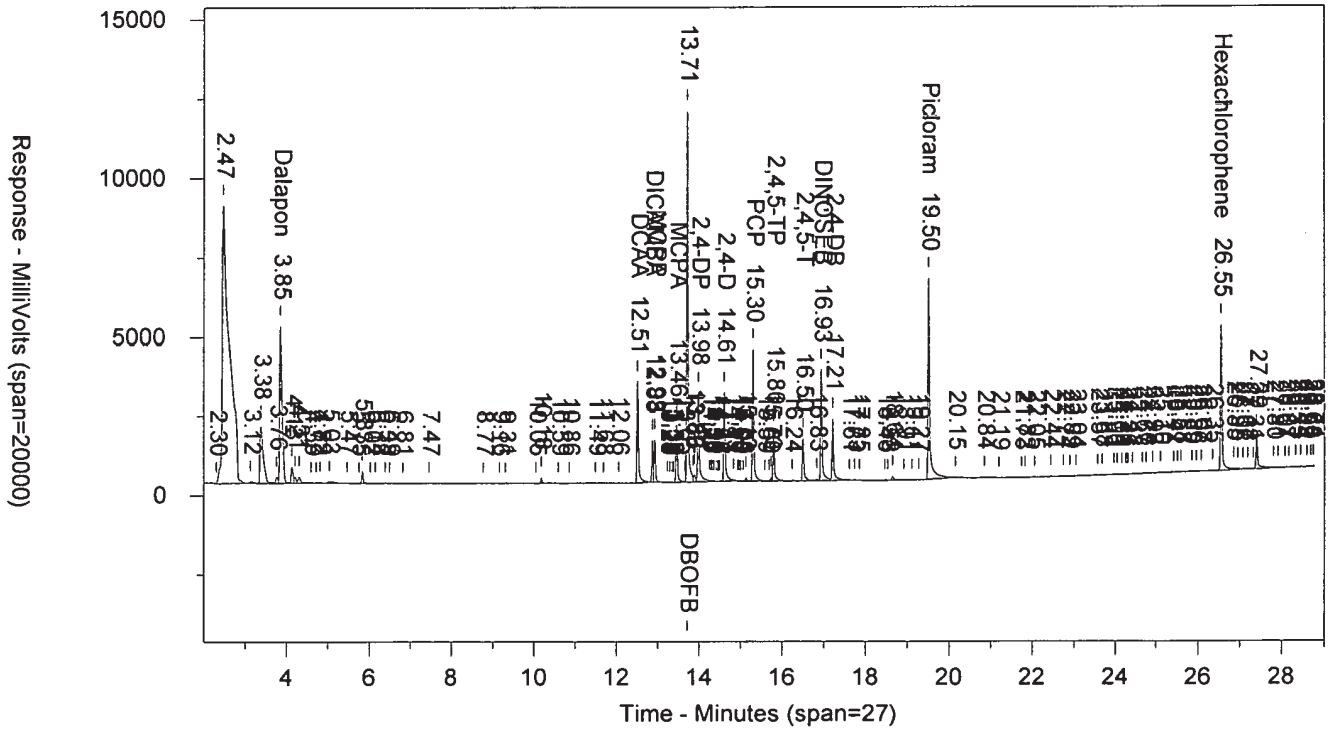
Files:
Area File: 15herb18304002.016.RAW
Area File: 15herb18304002B.016.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/2/2018 12:03:31 AM
File Reported On: 11/2/2018 at 1:20:05 PM

HERB31824F UIHERB3UI CCAL 1830499999 10407 SW-846 815

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.016.RAW

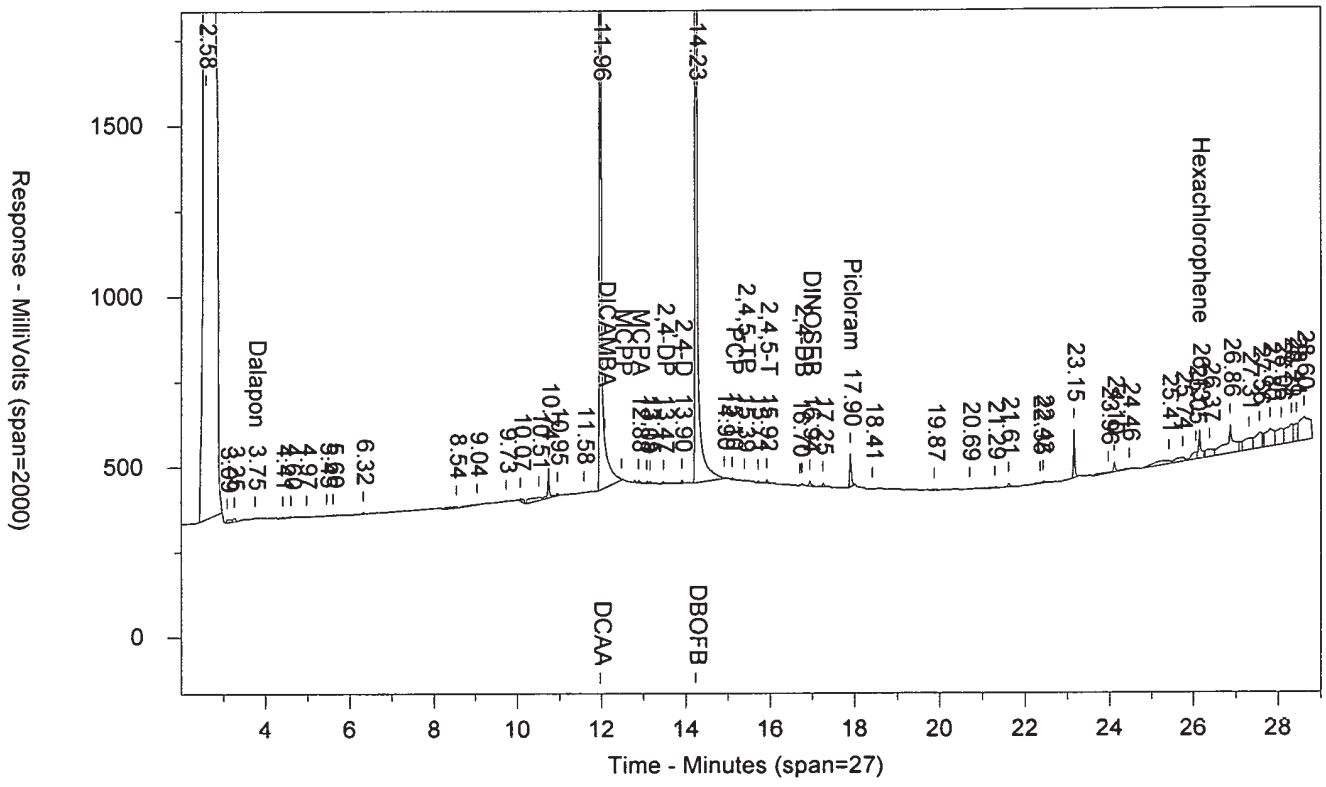


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.016.RAW

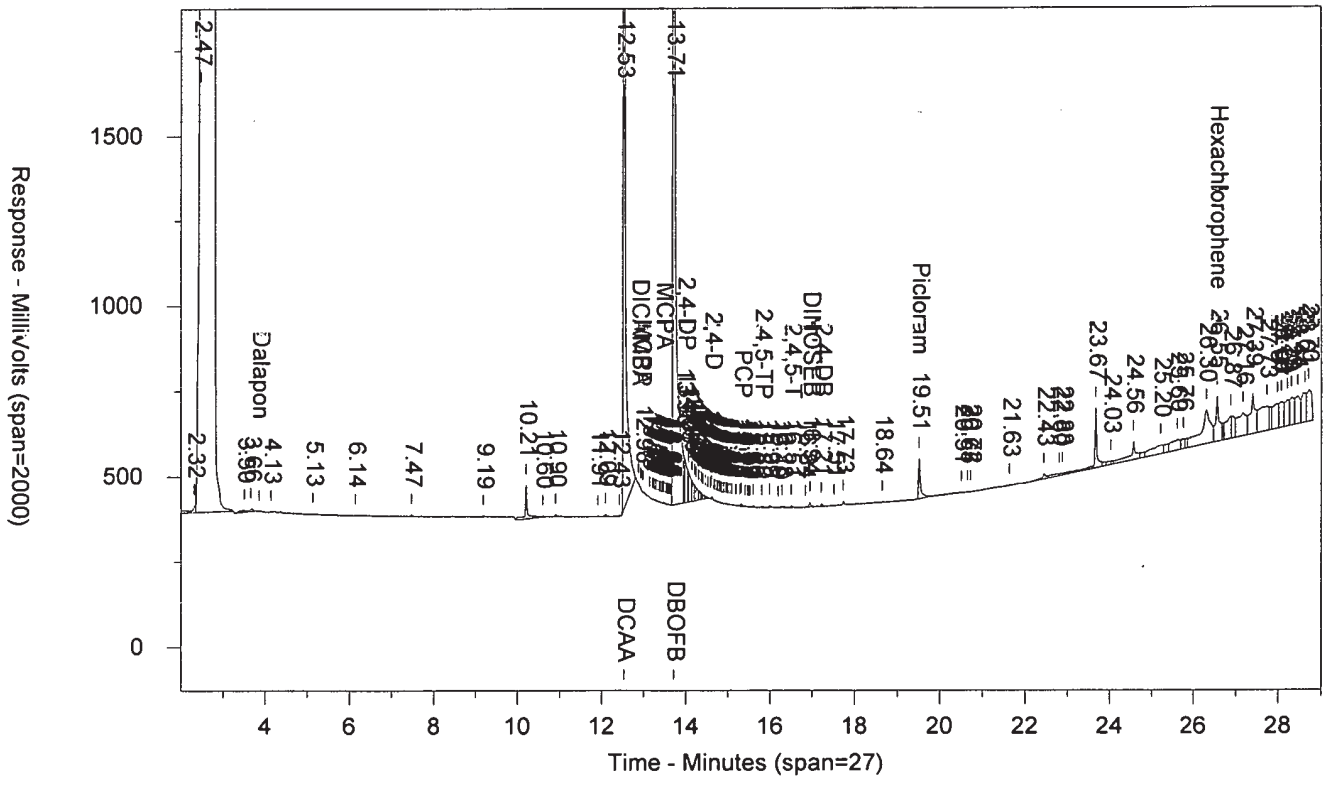


HIBLKX1824B RRHIBLKRR MISC 1830499999 10407 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.017.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.017.RAW



LANCASTER LABORATORIES

Sample Number: HIBLKX1824B RRHIBLKRR MISC 1830499999 10407 SW-846 8151A
Injected On: 11/2/2018 12:07:51 AM Sample Weight: 1000
Instrument ID: CP15-19850 Dilution Factor: 10
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

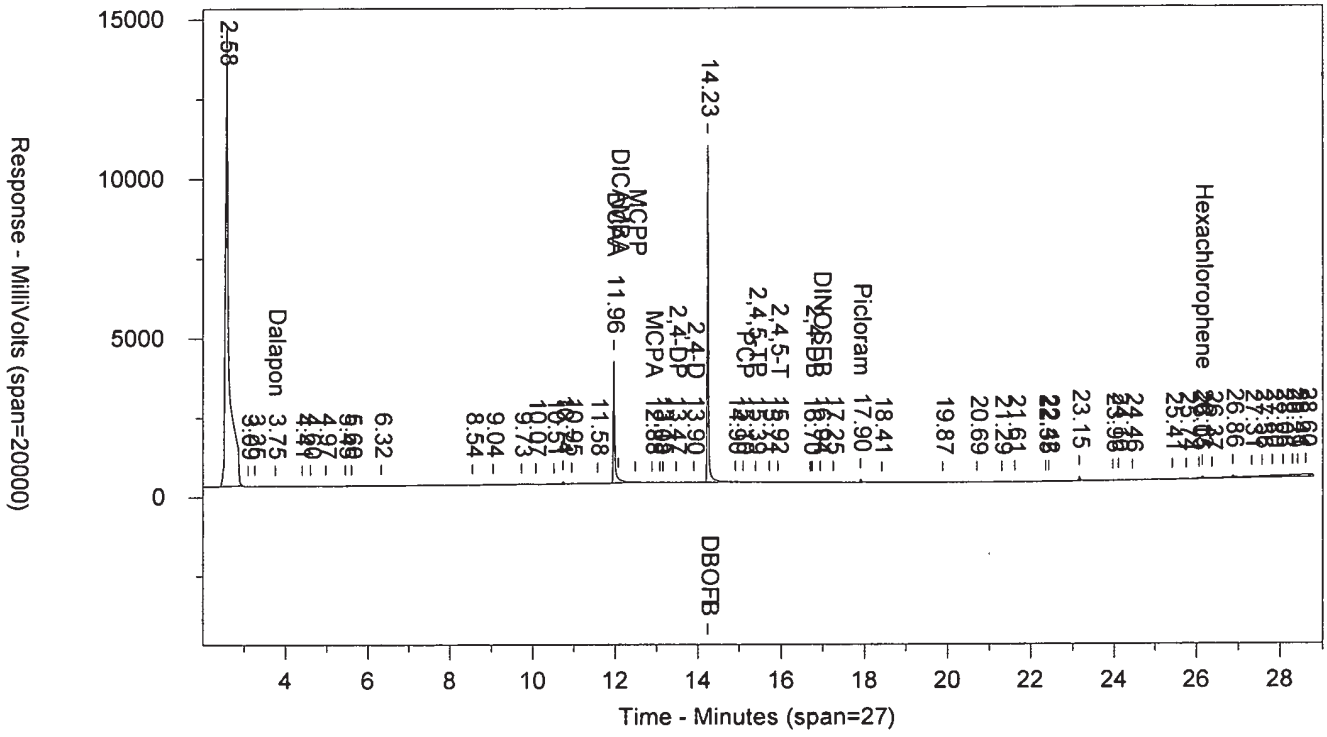
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.751	3271	.004	Dalapon		0		Dalapon
11.964	3850422	2.696	DCAA	12.53	3854088	2.544	DCAA
12.882	9560	-134.517	MCPA	13.459	1348	.157	MCPA
13.47	7512	.006	2,4-DP	13.975	129527	.098	2,4-DP
14.234	10604760	.001	DBOFB	13.714	10993350	.001	DBOFB
13.904	10457	.007	2,4-D	14.61	7715	.005	2,4-D
15.097	6086		PCP	15.306	6706		PCP
15.388	4197	.001	2,4,5-TP	15.802	4617	.001	2,4,5-TP
15.916	10632	.002	2,4,5-T	16.505	6543	.001	2,4,5-T
16.935	16753	.005	DINOSEB	16.94	14305	.004	DINOSEB
	0		2,4-DB	17.212	8944	.01	2,4-DB
17.896	97389	.019	Picloram	19.505	118258	.021	Picloram
26.135	84365	.015	Hexachlorophene	26.551	132055	.022	Hexachlorophe

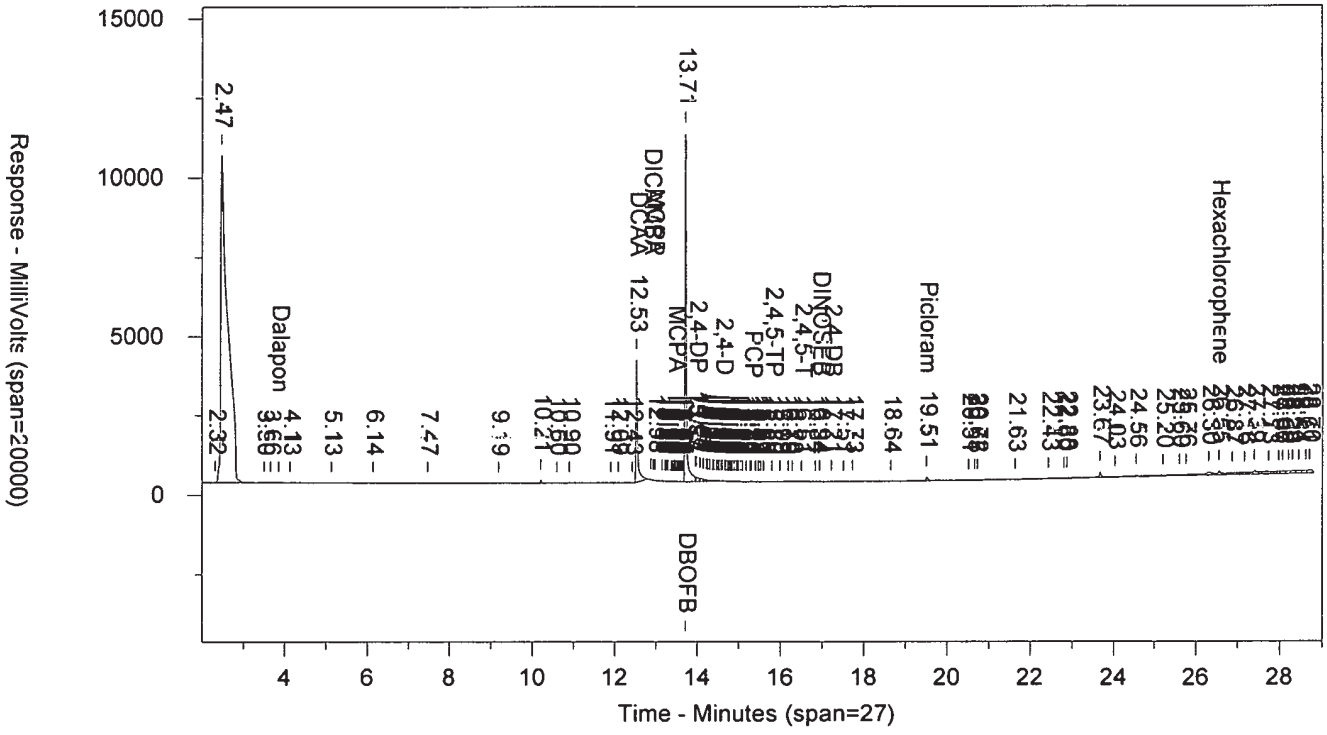
Files:
Area File: 15herb18304002.017.RAW
Area File: 15herb18304002B.017.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/2/2018 12:36:43 AM
File Reported On: 11/2/2018 at 1:20:22 PM

HIBLKX1824B RRHIBLKRR MISC 1830499999 10407 SW-846 81

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.017.RAW

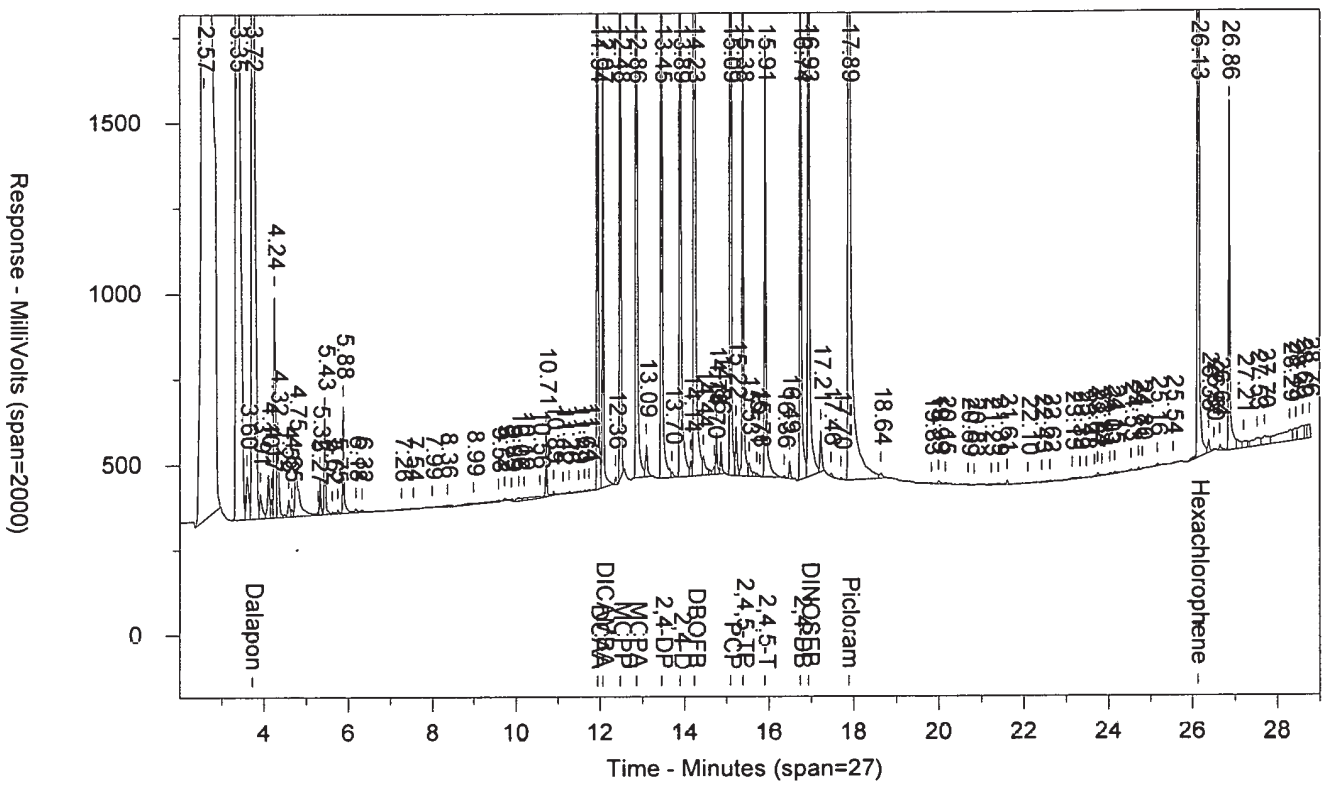


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.017.RAW

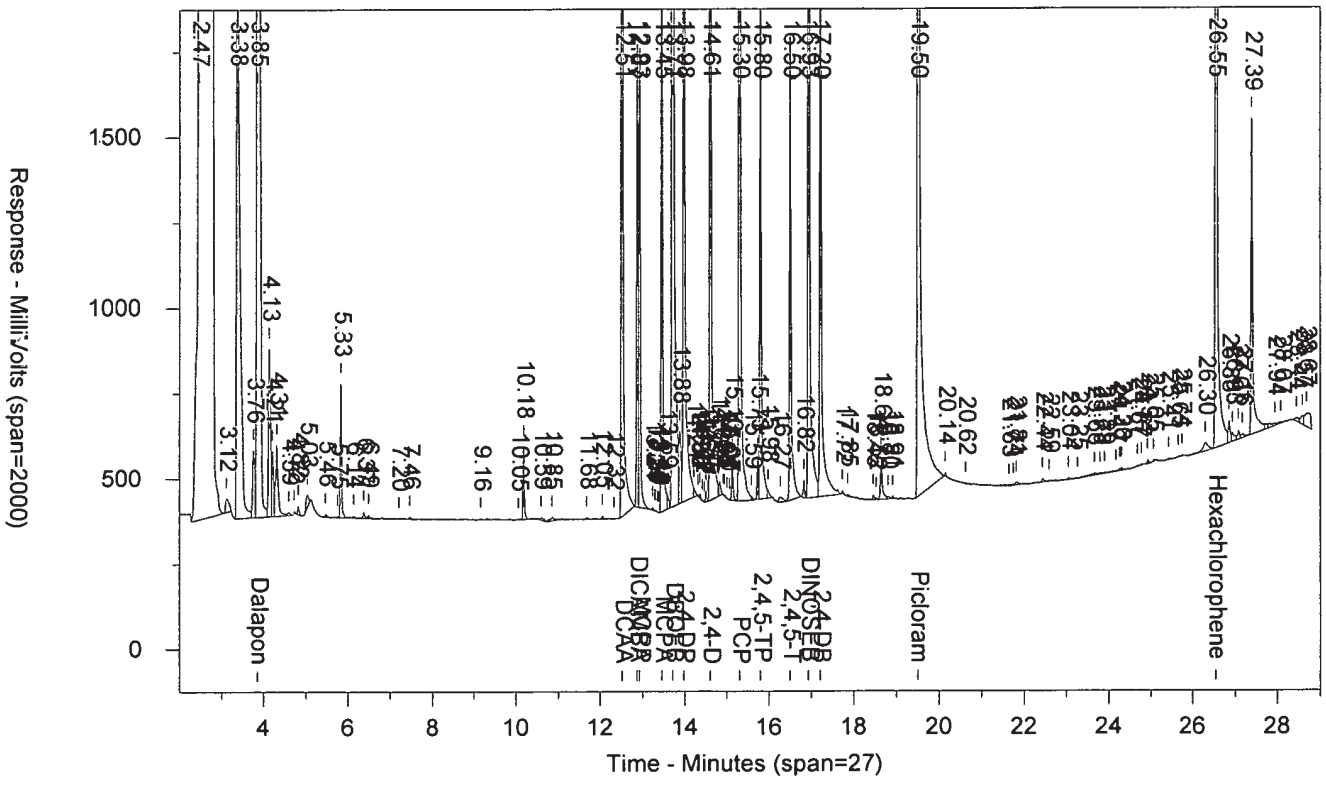


HERB31824F UJHERB3UJ CCAL 1830499999 10407 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.027.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.027.RAW



LANCASTER LABORATORIES

Sample Number: HERB31824F UJHERB3UJ CCAL 1830499999 10407 SW-846 8151A
Injected On: 11/2/2018 5:39:06 AM Sample Weight: 1
Instrument ID: CP15-19850 Dilution Factor: 1
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

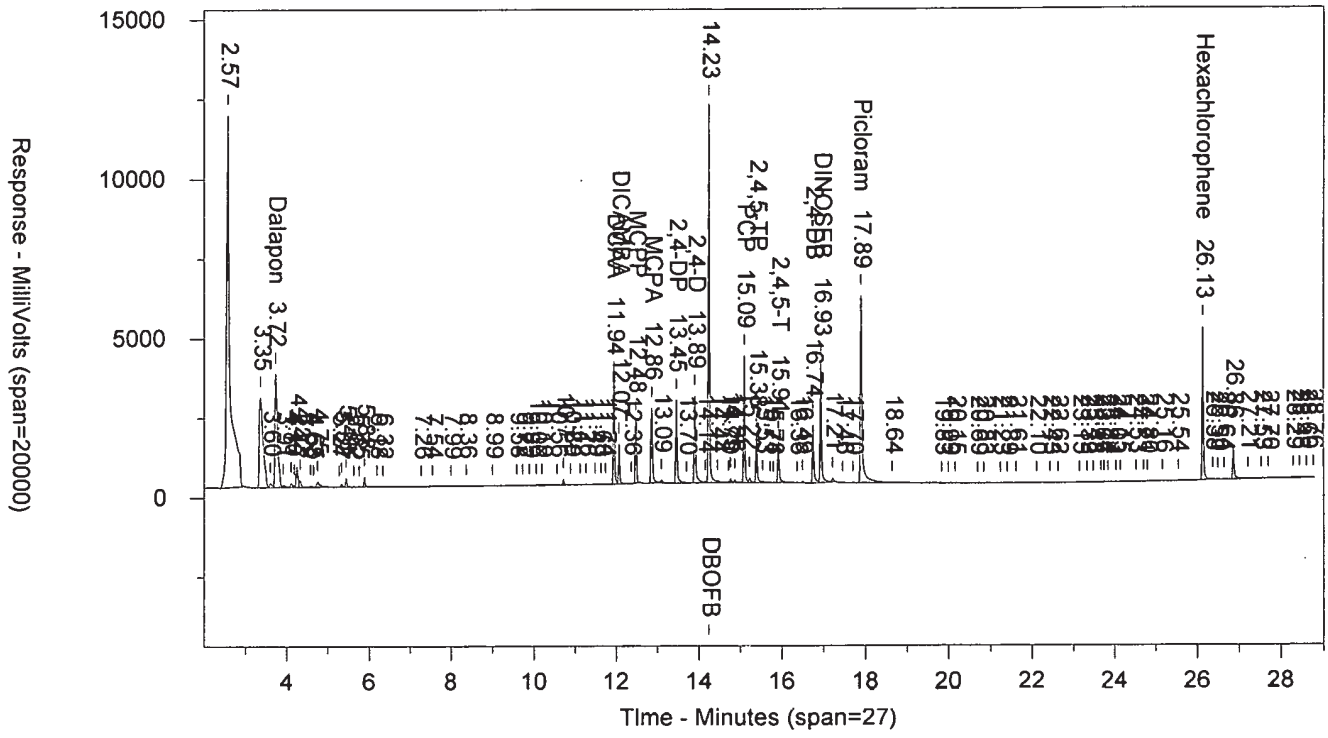
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.722	3560719	400.496	Dalapon	3.852	5024771	404.761	Dalapon
11.941	3180681	198.6	DCAA	12.513	3256672	199.122	DCAA
12.067	1247068	19.383	DICAMBA	12.874	1356171	19.957	DICAMBA
12.477	1948436	21050.42	MCPP	12.927	1345917	19923.39	MCPP
12.859	2354352	20542.54	MCPA	13.453	1823951	19631.68	MCPA
13.453	2605622	197.158	2,4-DP	13.98	2894987	202.427	2,4-DP
14.231	11890140	1	DBOFB	13.712	11870290	1	DBOFB
13.894	2725108	172.485	2,4-D	14.605	2834497	173.02	2,4-D
15.092	3984186	19.942	PCP	15.301	4271021	20.371	PCP
15.382	1470885	19.449	2,4,5-TP	15.795	1580403	20.426	2,4,5-TP
15.906	1290903	19.338	2,4,5-T	16.498	1366925	19.996	2,4,5-T
16.739	1814026	195.872	2,4-DB	17.204	1978783	204.19	2,4-DB
16.926	3718599	107.052	DINOSEB	16.93	3522205	100.079	DINOSEB
17.885	5867500	101.379	Picloram	19.499	6321485	102.317	Picloram
26.131	4792740	75.987	Hexachlorophene	26.55	5285835	82.569	Hexachlorophe

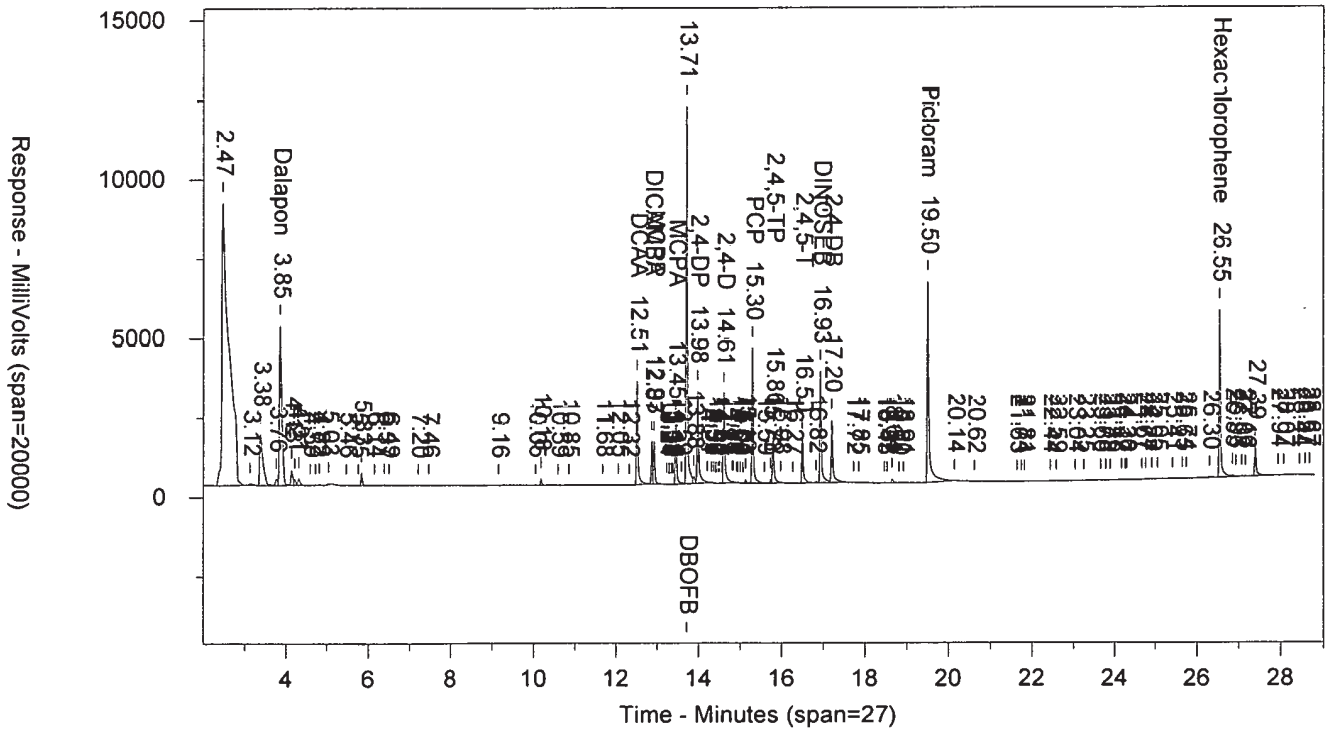
Files:
Area File: 15herb18304002.027.RAW
Area File: 15herb18304002B.027.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/2/2018 6:07:59 AM
File Reported On: 11/2/2018 at 1:24:01 PM

HERB31824F UJHERB3UJ CCAL 1830499999 10407 SW-846 81

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.027.RAW

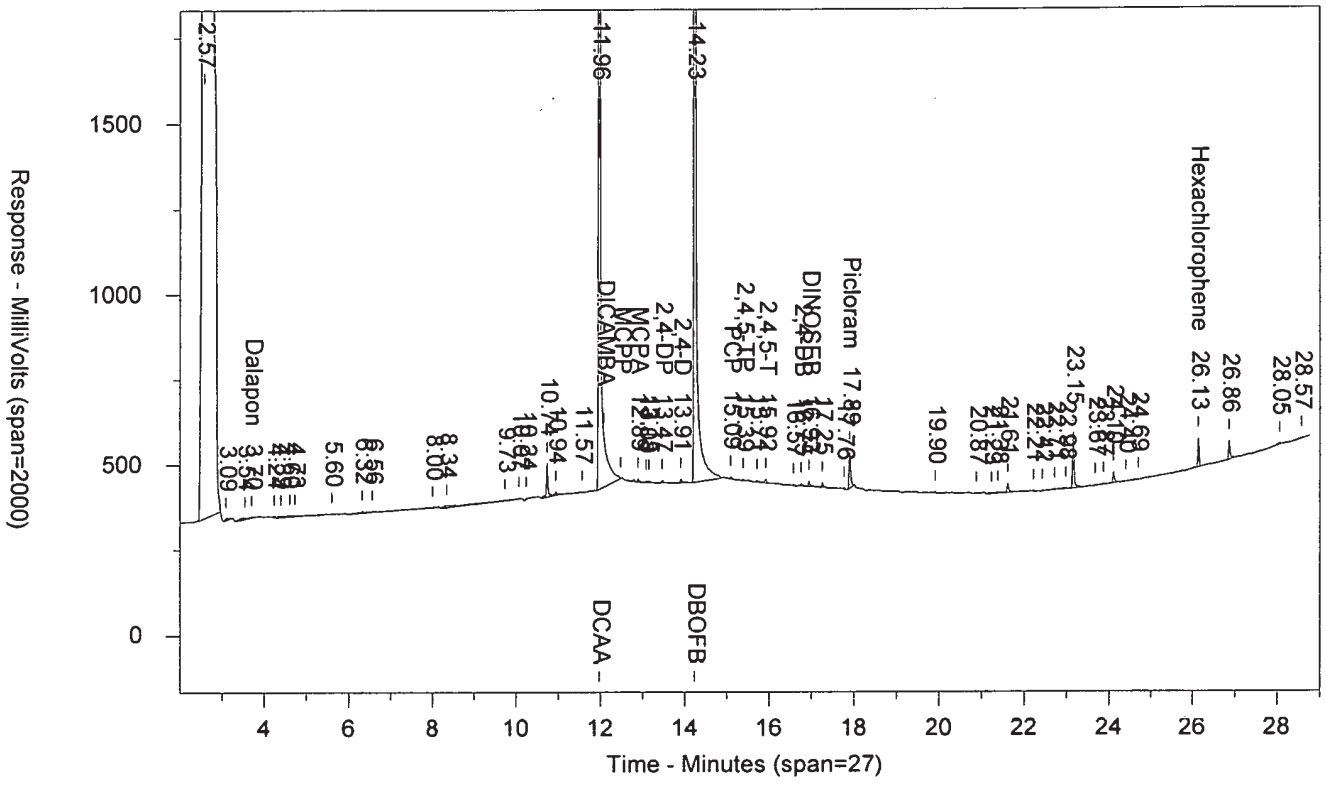


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.027.RAW

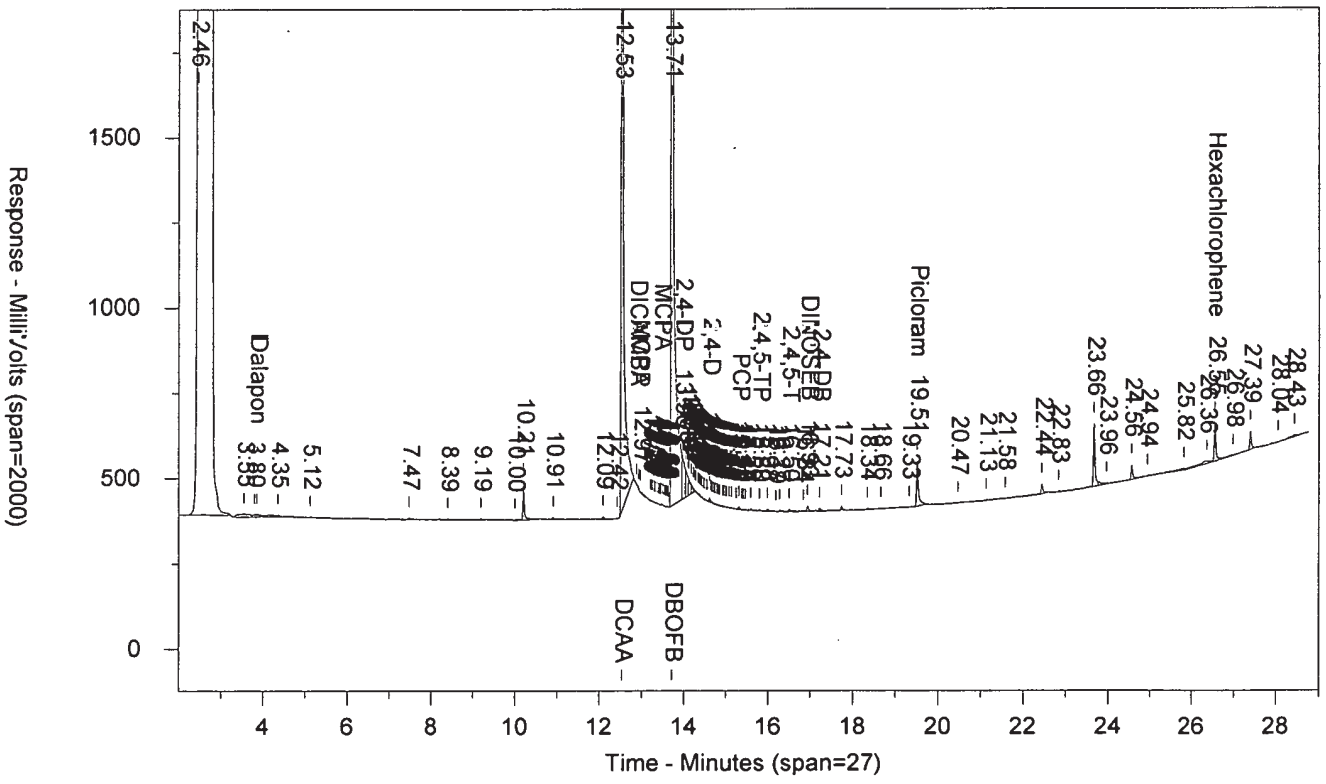


HIBLKX1824B RSHIBLKRS MISC 1830499999 10407 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.028.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.028.RAW



LANCASTER LABORATORIES

Sample Number: HIBLKX1824B RSHIBLKRS MISC 1830499999 10407 SW-846 8151A
Injected On: 11/2/2018 6:12:10 AM Sample Weight: 1000
Instrument ID: CP15-19850 Dilution Factor: 10
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

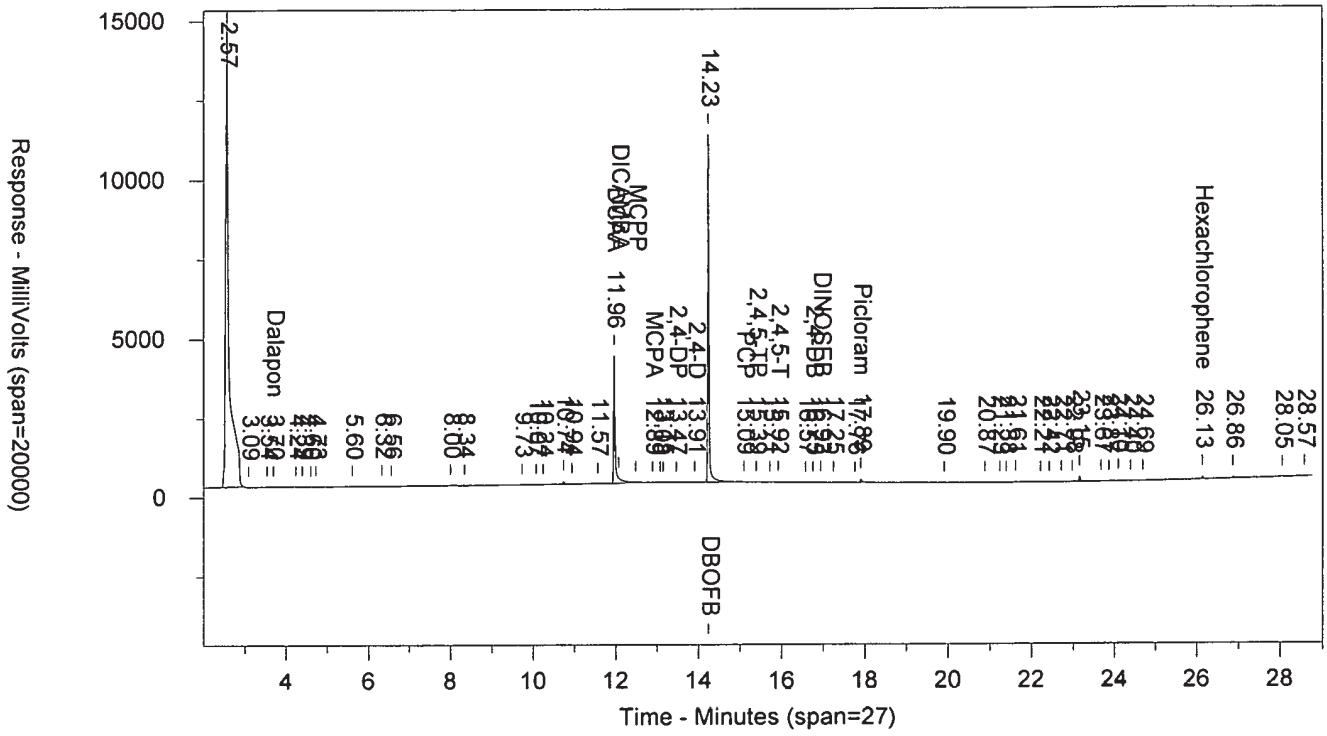
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.699	4100	.005	Dalapon		0		Dalapon
11.964	4024228	2.727	DCAA	12.531	3951985	2.553	DCAA
12.889	11377	-134.281	MCPA	13.459	2344	.267	MCPA
13.467	8167	.007	2,4-DP	13.959	129734	.096	2,4-DP
14.233	10957520	.001	DBOFB	13.714	11235380	.001	DBOFB
13.907	11897	.008	2,4-D	14.608	11387	.007	2,4-D
15.092	6778		PCP	15.308	8092		PCP
15.387	4951	.001	2,4,5-TP	15.799	4420	.001	2,4,5-TP
15.917	11942	.002	2,4,5-T	16.503	7051	.001	2,4,5-T
16.753	7360	.009	2,4-DB	17.213	9666	.011	2,4-DB
16.933	16583	.005	DINOSEB	16.934	15883	.005	DINOSEB
17.895	105527	.02	Picloram	19.506	132998	.023	Picloram
26.132	85847	.015	Hexachlorophene	26.552	110316	.018	Hexachlorophe

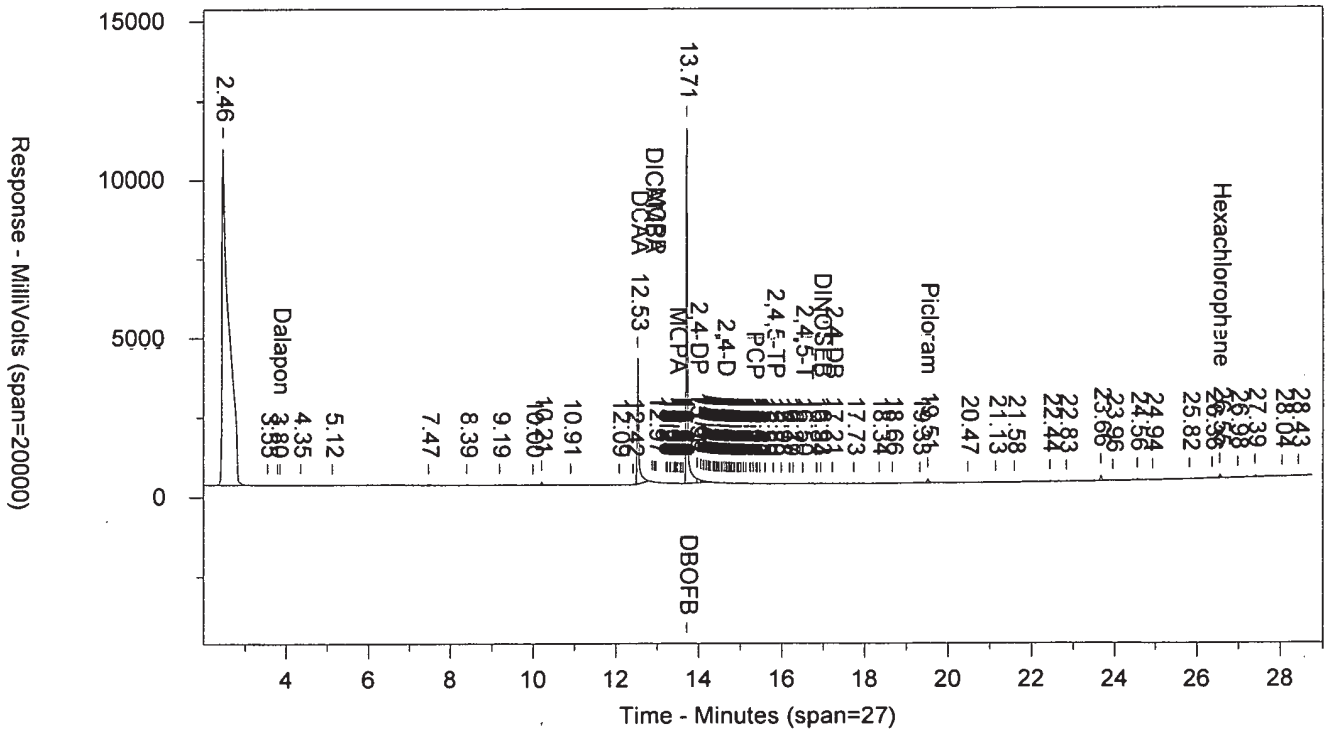
Files:
Area File: 15herb18304002.028.RAW
Area File: 15herb18304002B.028.RAW
Method A: 15HERB.MET
Method B; 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/2/2018 6:40:58 AM
File Reported On: 11/2/2018 at 1:24:23 PM

HIBLKX1824B RSHIBLKRS MISC 1830499999 10407 SW-846 81

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.028.RAW

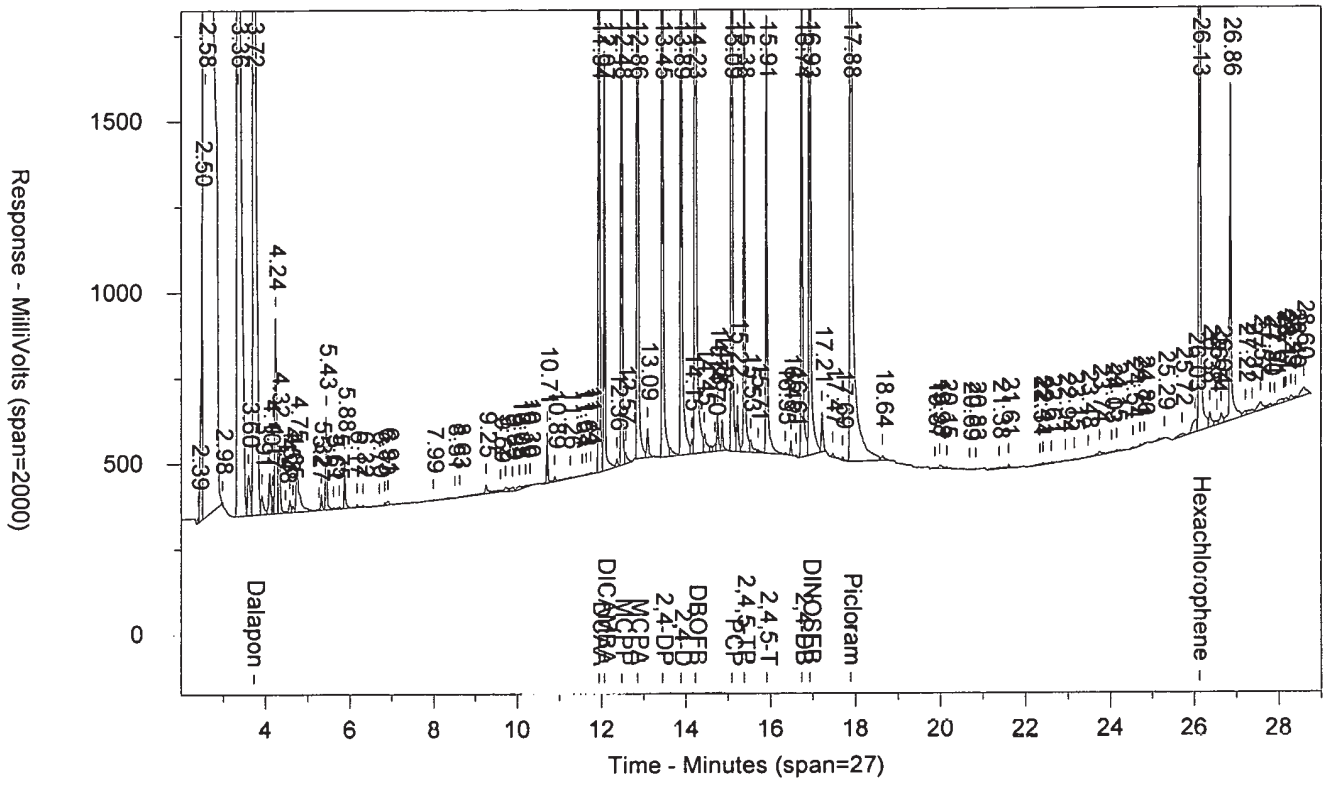


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.028.RAW

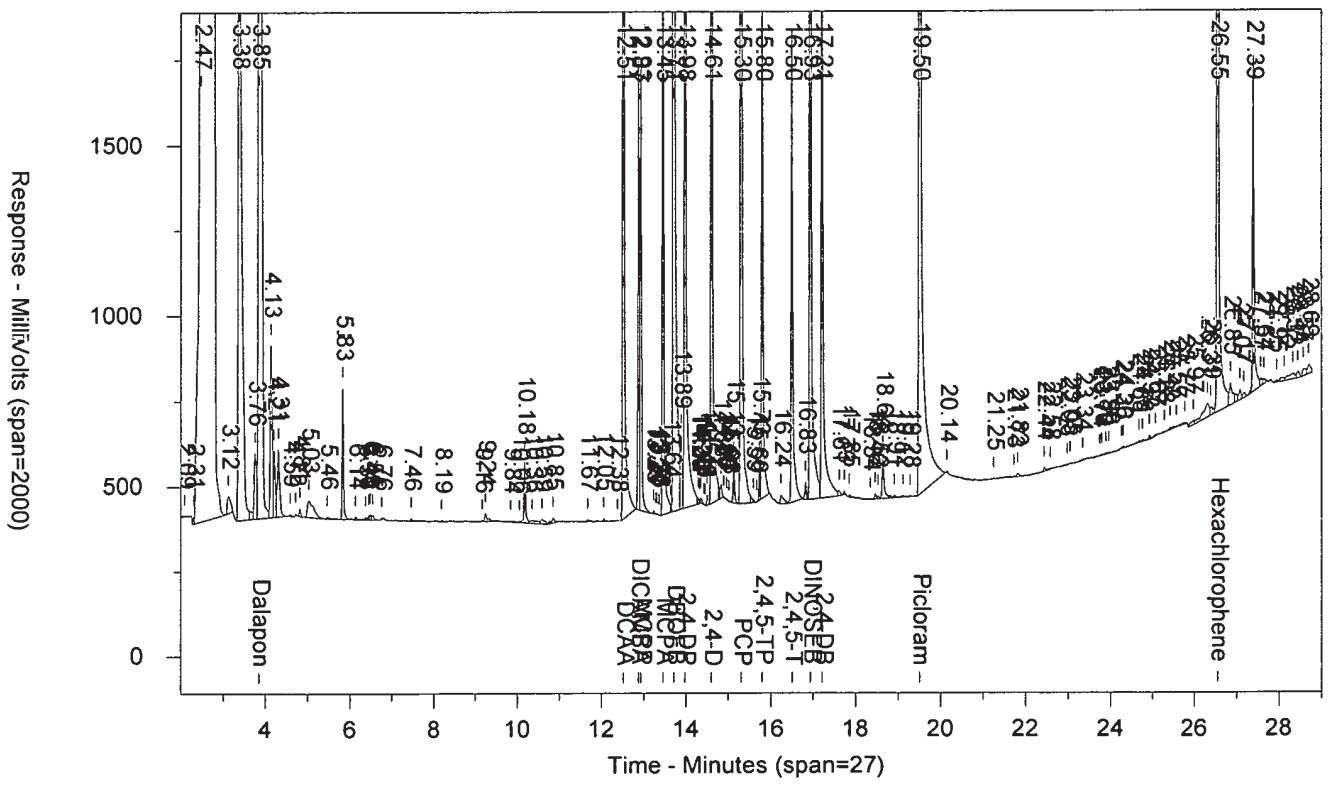


HERB31824F UKHERB3UK CCAL 1830499999 10407 SW-846 8151/

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.039.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.039.RAW



LANCASTER LABORATORIES

Sample Number: HERB31824F UKHERB3UK CCAL 1830499999 10407 SW-846 8151A
Injected On: 11/2/2018 12:16:14 PM Sample Weight: 1
Instrument ID: CP15-19850 Dilution Factor: 1
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

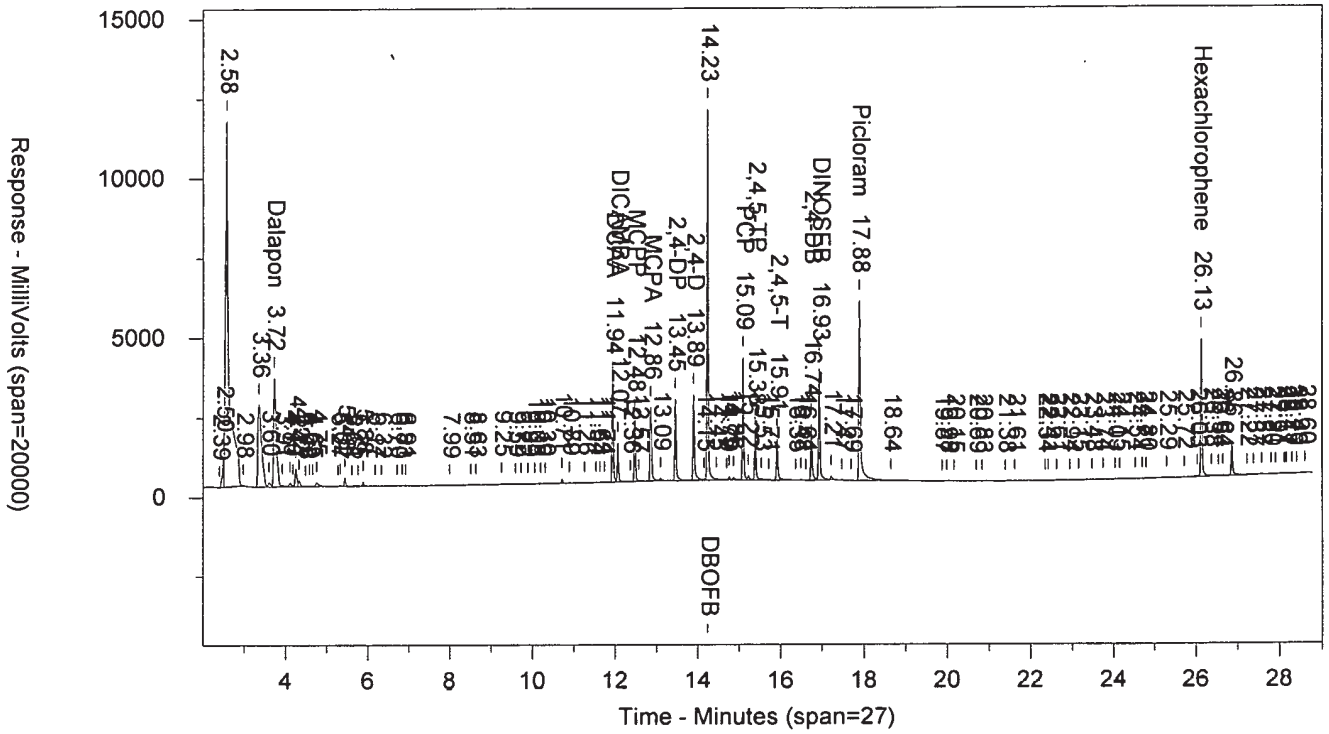
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.722	3415691	392.607	Dalapon	3.853	4926375	395.024	Dalapon
11.939	3141986	200.485	DCAA	12.513	3179346	193.507	DCAA
12.065	1225096	19.459	DICAMBA	12.875	1327922	19.452	DICAMBA
12.475	1937531	21599.55	MCPP	12.928	1309145	19290.67	MCPP
12.858	2309150	20621.25	MCPA	13.455	1809477	19387.06	MCPA
13.451	2553421	197.444	2,4-DP	13.981	2755063	191.764	2,4-DP
14.23	11635040	1	DBOFB	13.712	11924690	1	DBOFB
13.893	2694713	174.301	2,4-D	14.606	2855030	173.478	2,4-D
15.09	3838758	19.636	PCP	15.302	4077325	19.358	PCP
15.381	1458866	19.713	2,4,5-TP	15.796	1502753	19.334	2,4,5-TP
15.907	1278895	19.578	2,4,5-T	16.5	1381285	20.114	2,4,5-T
16.737	1743225	192.354	2,4-DB	17.206	1930382	198.287	2,4-DB
16.926	3494238	102.798	DINOSEB	16.933	3636968	102.869	DINOSEB
17.883	5631653	99.437	Picloram	19.5	6076624	97.905	Picloram
26.129	4321749	70.022	Hexachlorophene	26.552	4739710	73.701	Hexachlorophe

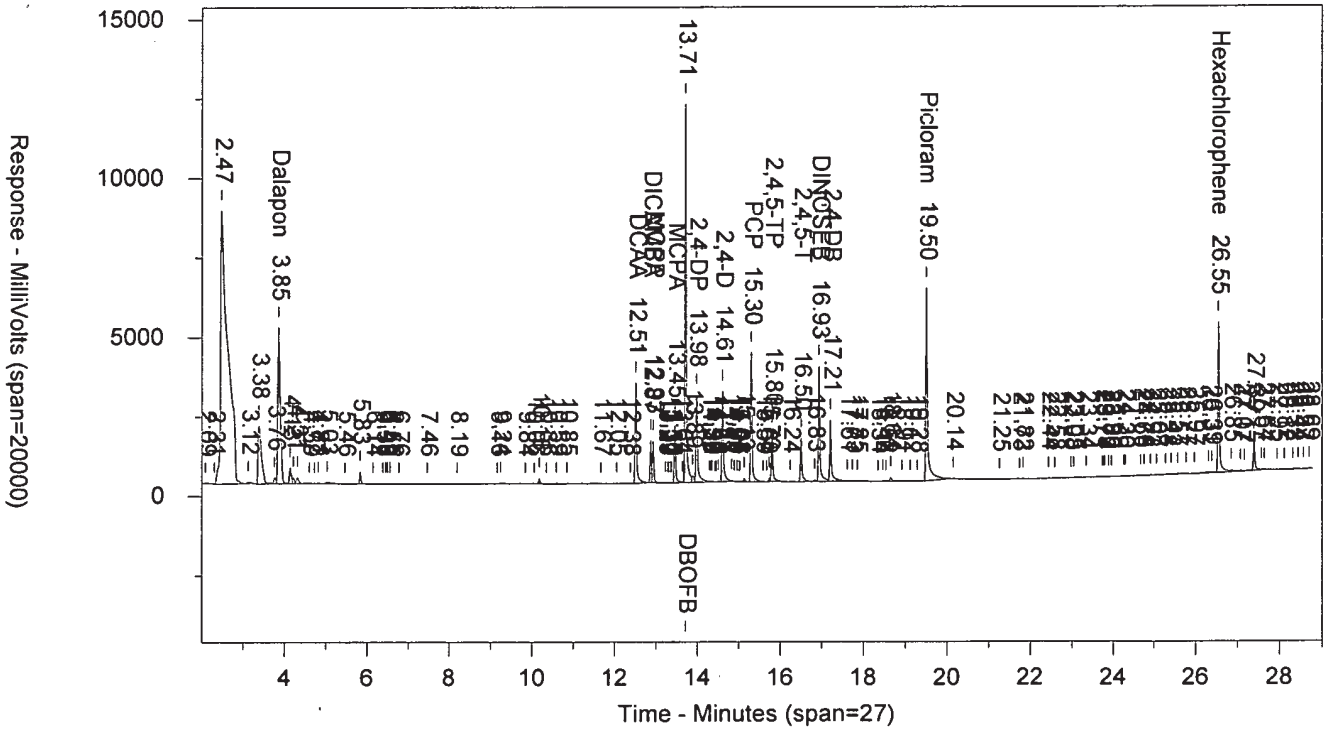
Files:
Area File: 15herb18304002.039.RAW
Area File: 15herb18304002B.039.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/2/2018 12:45:02 PM
File Reported On: 11/2/2018 at 1:28:09 PM

HERB31824F UKHERB3UK CCAL 1830499999 10407 SW-846 8

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.039.RAW

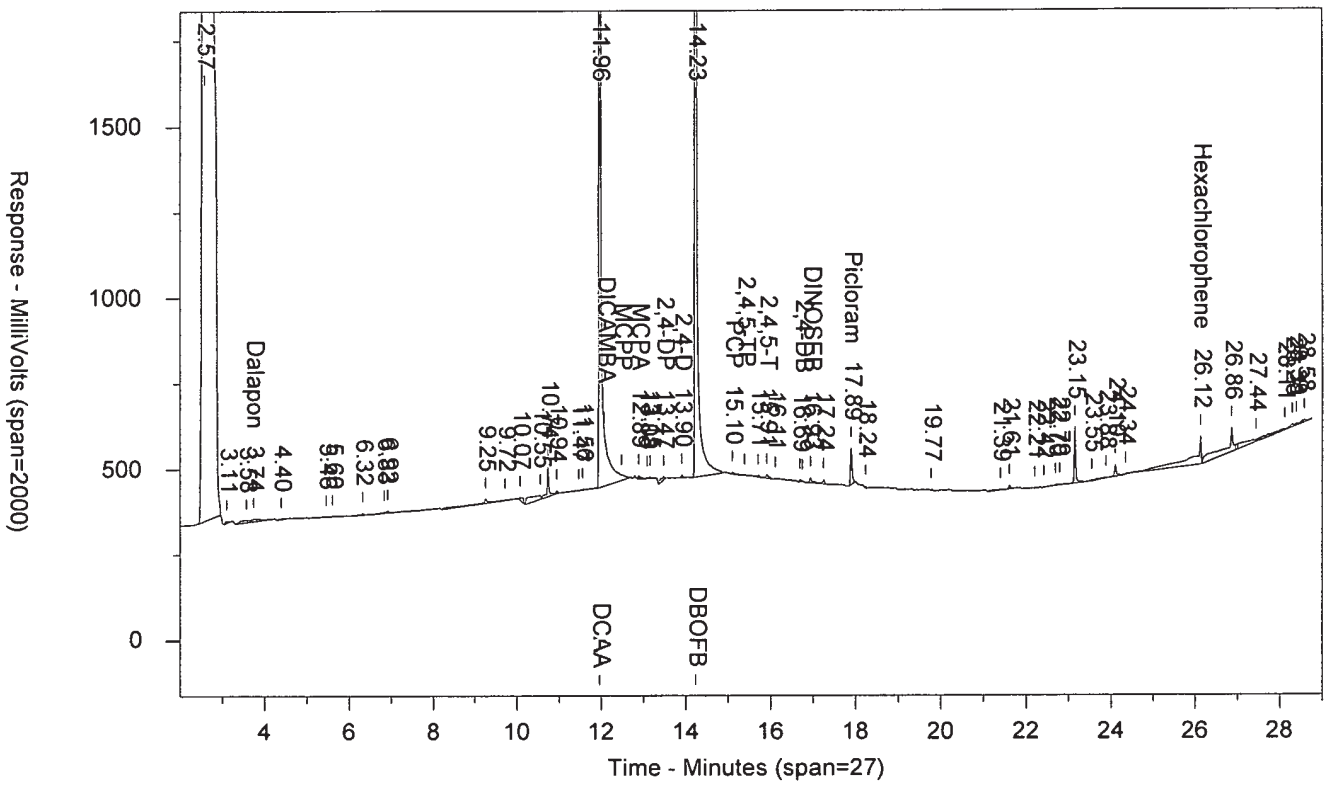


\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.039.RAW

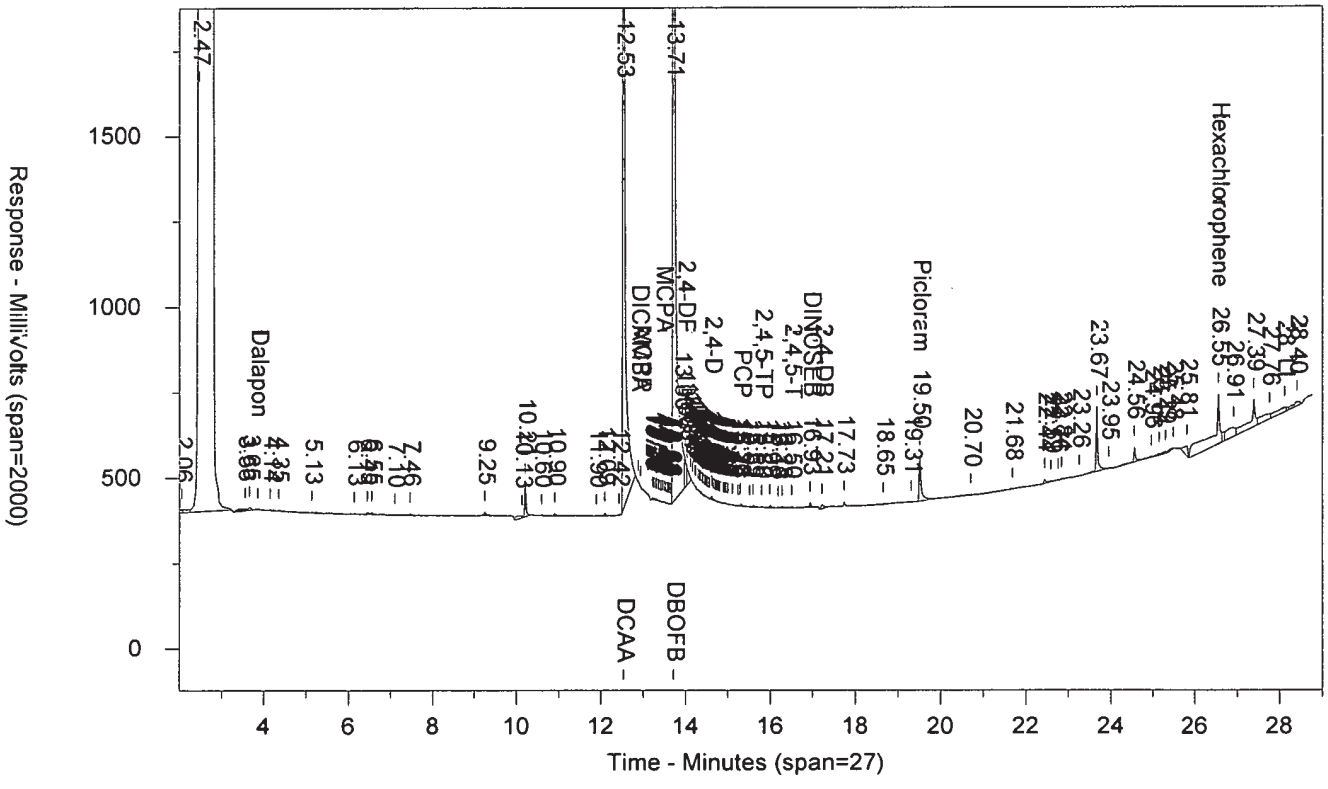


HIBLKX1824B RTHIBLKRT MISC 1830499999 10407 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.040.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.040.RAW



LANCASTER LABORATORIES

Sample Number: HIBLKX1824B RTHIBLKRT MISC 1830499999 10407 SW-846 8151A
Injected On: 11/2/2018 12:49:15 PM Sample Weight: 1000
Instrument ID: CP15-19850 Dilution Factor: 10
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

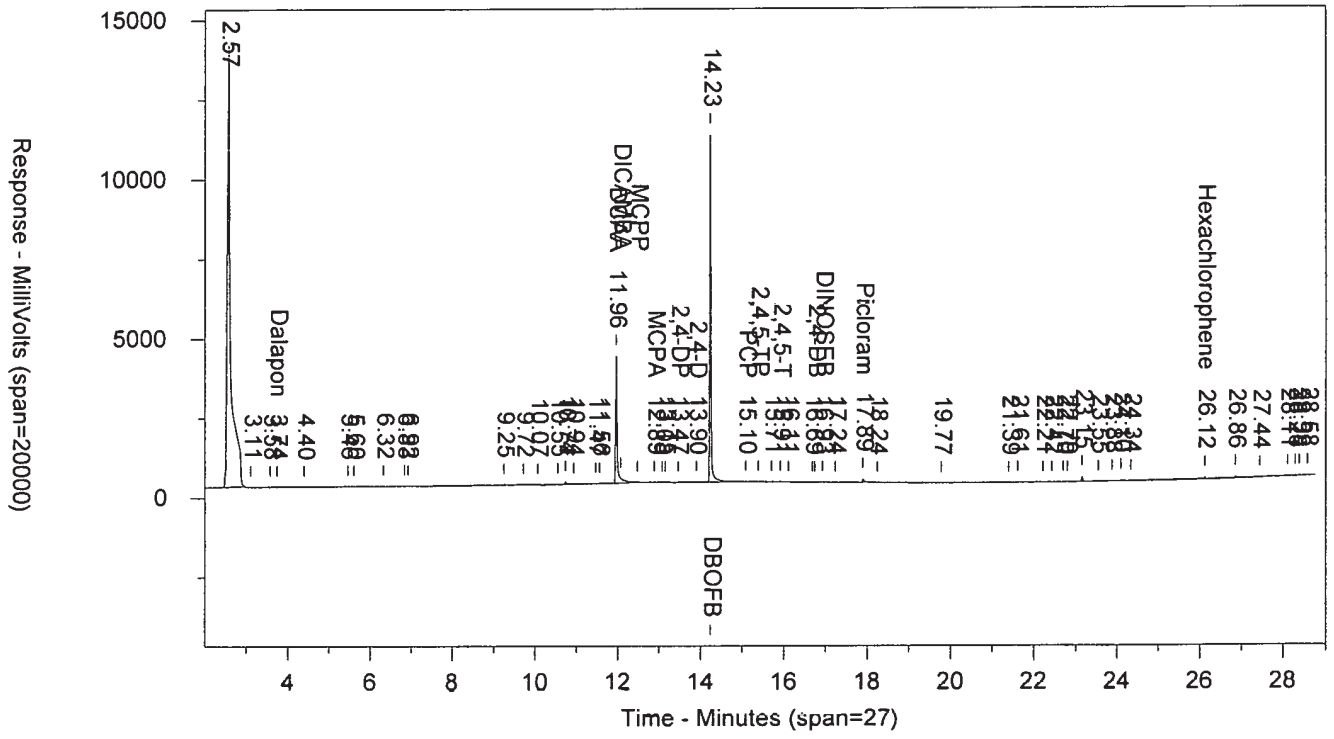
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.739	9106	.011	Dalapon		0		Dalapon
11.963	4007105	2.724	DCAA	12.53	3954655	2.479	DCAA
12.885	10911	-134.348	MCPA	13.458	2043	.225	MCPA
13.469	10677	.009	2,4-DP	13.98	89116	.064	2,4-DP
14.232	10920680	.001	DBOFB	13.713	11579710	.001	DBOFB
13.903	9690	.007	2,4-D	14.615	9794	.006	2,4-D
15.096	6389		PCP	15.305	6677		PCP
	0		2,4,5-TP	15.799	3955	.001	2,4,5-TP
15.912	12439	.002	2,4,5-T	16.502	5444	.001	2,4,5-T
16.933	15572	.005	DINOSEB	16.933	13559	.004	DINOSEB
	0		2,4-DB	17.211	12026	.013	2,4-DB
17.891	107087	.02	Picloram	19.504	131901	.022	Picloram
26.125	81407	.014	Hexachlorophene	26.55	146584	.023	Hexachlorophei

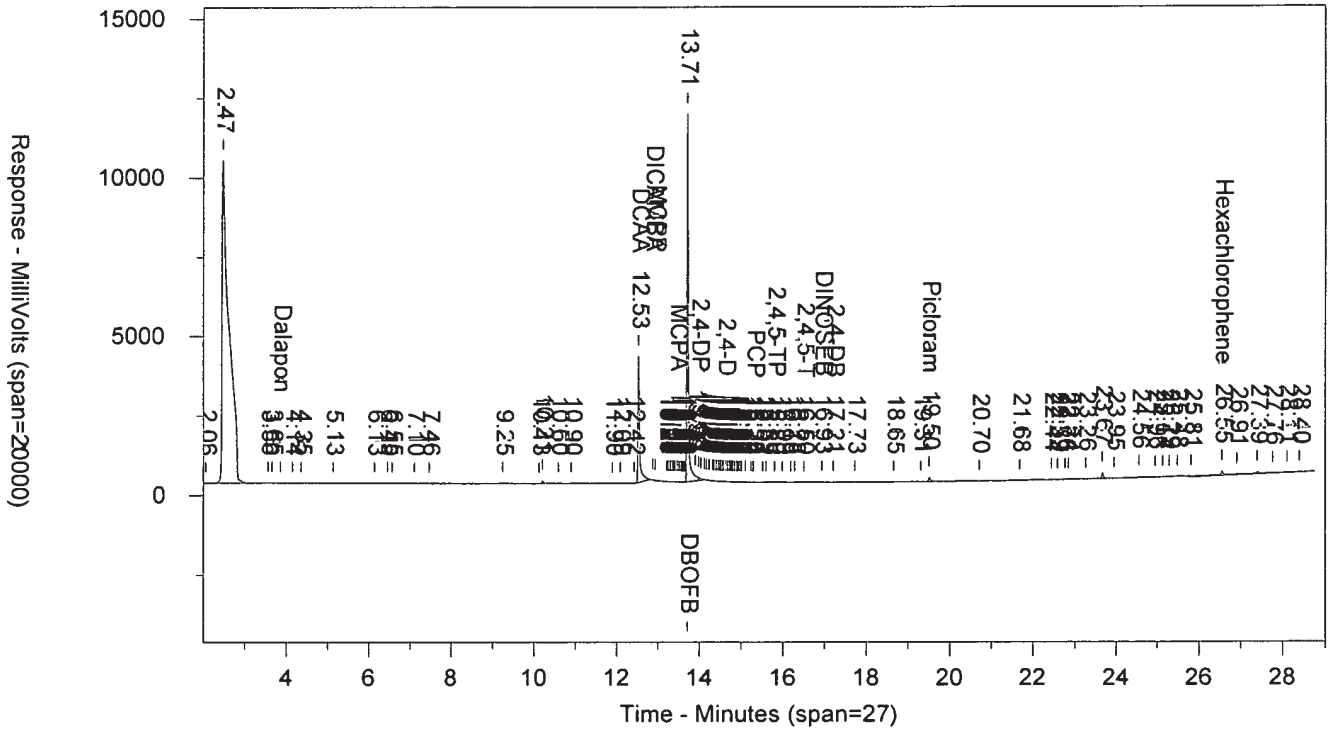
Files:
Area File: 15herb18304002.040.RAW
Area File: 15herb18304002B.040.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/2/2018 1:18:03 PM
File Reported On: 11/7/2018 at 8:01:22 AM

HIBLKX1824B RTHIBLKRT MISC 1830499999 10407 SW-846 815

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.040.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.040.RAW



Raw QC Data

Herbicides

eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: BLANKA 10/30/18 F PBLK10303 BLK Sample ID: AB **Batchnumber: 183030010A**
Sample Amount: 30 g Total Volume: 10 ml Analyst: 120 SDG: State:
Analyses: 10401

Analysis Report (A)

Injected on Nov 01, 2018 19:09:38
Instrument 19850A
Result file 15HERB18304002.008.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 89% (34 - 127) Conc: 59.3964

Analysis Report (B)

Injected on Nov 01, 2018 19:09:38
Instrument 19850B
Result file 15HERB18304002B.008.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 84% (34 - 127) Conc: 55.8809

Single Component Data

Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.71	3.76	1138496	49.81089
2,4-DCAA	11.91	11.95	11.97	2445505	59.3964
MCPP (Mecoprop)	12.45	12.49	12.51	127899	0
2,4-DP (Dichloroprop)	13.43	13.44	13.49	17199	0.50622
2,4-D	13.87	13.89	13.93	19107	0.470432
Pentachlorophenol	15.06	15.09	15.12	28481	0.055453
2,4,5-T	15.88	15.90	15.94	23824	0.138826
Dinoseb	16.90	16.92	16.96	75265	0.842828
Picloram	17.86	17.87	17.92	27268	0.183265
Hexachlorophene	26.10	26.13	26.16	12239	0.075483

Compound	Min	RT	Max	Height	Amount
2,4-DCAA	12.49	12.52	12.55	2506680	55.8809
MCPA	13.43	13.47	13.49	1206	4.734526
2,4-DP (Dichloroprop)	13.96	14.00	14.01	60689	1.547204
2,4-D	14.58	14.61	14.64	286305	6.371878
Pentachlorophenol	15.28	15.30	15.34	32321	0.056207
Picloram	19.48	19.50	19.54	61501	0.362936
Hexachlorophene	26.52	26.55	26.58	15455	0.088024

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
Dalapon			<44	<88	<90			
2,4-DCAA	A	59.3964	3.335	6.67	6.67		6.10	
2,4-DCAA-D1	A	59.3964	3.335	6.67	6.67			
2,4-DCAA-D2	B	55.8809	3.335	6.67	6.67			
Dicamba			<4	<8	<12			
MCPP (Mecoprop)			<3800	<7600	<7700			
MCPA			<760	<1520	<2500			
2,4-DP (Dichloroprop)			<9	<18	<20			
2,4-D			<12	<24	<36			
Pentachlorophenol			<0.33	<0.66	<1.7			
2,4,5-TP			<0.75	<1.5	<1.7			
2,4,5-T			<0.82	<1.64	<1.7			
2,4-DB			<9.8	<20	<21			
Dinoseb			<9	<18	<24			
Picloram			<20	<40	<41			
Hexachlorophene					<24			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Michelle D. Hamilton
Group Leader

NOV 02 2018

Reviewed and digitally signed by Richard A Shober on 11/2/2018 14:49:42

eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: BLANKA 10/30/18 F PBLK10303 BLK Sample ID: AB **Batchnumber: 183030010A**
Sample Amount: 30 g Total Volume: 10 ml Analyst: 120 SDG: State:

Analyses: 10401

Analysis Report (A)

Injected on Nov 01, 2018 19:09:38
Instrument 19850A
Result file 15HERB18304002.008.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 89% (27 - 122) Conc: 59.3964

Analysis Report (B)

Injected on Nov 01, 2018 19:09:38
Instrument 19850B
Result file 15HERB18304002B.008.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 84% (27 - 122) Conc: 55.8809

Single Component Data

Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.71	3.76	1138496	49.81089
2,4-DCAA	11.91	11.95	11.97	2445505	59.3964
MCPP (Mecoprop)	12.45	12.49	12.51	127899	0
2,4-DP (Dichloroprop)	13.43	13.44	13.49	17199	0.50622
2,4-D	13.87	13.89	13.93	19107	0.470432
Pentachlorophenol	15.06	15.09	15.12	28481	0.055453
2,4,5-T	15.88	15.90	15.94	23824	0.138826
Dinoseb	16.90	16.92	16.96	75265	0.842828
Picloram	17.86	17.87	17.92	27268	0.183265
Hexachlorophene	26.10	26.13	26.16	12239	0.075483

Compound	Min	RT	Max	Height	Amount
2,4-DCAA	12.49	12.52	12.55	2506680	55.8809
MCPA	13.43	13.47	13.49	1206	4.734526
2,4-DP (Dichloroprop)	13.96	14.00	14.01	60689	1.547204
2,4-D	14.58	14.61	14.64	286305	6.371878
Pentachlorophenol	15.28	15.30	15.34	32321	0.056207
Picloram	19.48	19.50	19.54	61501	0.362936
Hexachlorophene	26.52	26.55	26.58	15455	0.088024

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
Dalapon			<44	<88	<90			
2,4-DCAA	A	59.3964	3.335	6.67	6.67		6.10	
2,4-DCAA-D1	A	59.3964	3.335	6.67	6.67			
2,4-DCAA-D2	B	55.8809	3.335	6.67	6.67			
Dicamba			<4	<8	<12			
MCPP (Mecoprop)			<3800	<7600	<7700			
MCPA			<760	<1520	<2500			
2,4-DP (Dichloroprop)			<9	<18	<20			
2,4-D			<12	<24	<36			
Pentachlorophenol			<0.33	<0.66	<1.7			
2,4,5-TP			<0.75	<1.5	<1.7			
2,4,5-T			<0.82	<1.64	<1.7			
2,4-DB			<9.8	<20	<21			
Dinoseb			<9	<18	<24			
Picloram			<20	<40	<41			
Hexachlorophene					<24			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Michele D. Hamilton
Group Leader

NOV 02 2018

Reviewed and digitally signed by Richard A Shober on 11/2/2018 14:49:45

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: **BLANKA** 10/30/18 F PBLK10303 ID: AB **Batchnumber: 183030010A**
Sample Amount: 30 g Total Volume: 10 ml Analyst: 13378 SDG: State:
Analyses: 10401

Analysis Report (A)

Injected on : Nov 01, 2018 19:09:38
Instrument : CP15--19850A
Result file : 15HERB18304002.008.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 89% (34-127) Conc.: 59.3964

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.71	3.76	1138496	49.810890
DCAA	11.91	11.95	11.97	2445505	59.396400
MCPP	12.45	12.49	12.51	127899	-3413.299000
2,4-DP	13.43	13.44	13.49	17199	0.506220
2,4-D	13.87	13.89	13.93	19107	0.470432
DBOFB	14.21	14.23	14.26	10189030	0.033333
PCP	15.06	15.09	15.12	28481	0.055453
2,4,5-T	15.88	15.90	15.94	23824	0.138826
DINOSEB	16.90	16.92	16.96	75265	0.842828
Picloram	17.86	17.87	17.92	27268	0.183265
Hexachlorophene	26.10	26.13	26.16	12239	0.075483

Analysis Report (B)

Injected on : Nov 01, 2018 19:09:38
Instrument : CP15--19850B
Result file : 15HERB18304002B.008.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 84% (34-127) Conc.: 55.8809

Peak name	Min	R.T.	Max	Height	Amount
DCAA	12.49	12.52	12.55	2506680	55.880900
MCPA	13.43	13.47	13.49	1206	4.734526
DBOFB	13.69	13.71	13.75	10852280	0.033333
2,4-DP	13.96	14.00	14.01	60689	1.547204
2,4-D	14.58	14.61	14.64	286305	6.371878
PCP	15.28	15.30	15.34	32321	0.056207
Picloram	19.48	19.50	19.54	61501	0.362936
Hexachlorophene	26.52	26.55	26.58	15455	0.088024

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Dalapon			<90	<44			
☐ DCAA	A	59.396400				6.10	
☑ DICAMBA			<12	<4			
☑ MCPP			<7700	<3800			
☑ MCPA			<2500	<760			
☑ 2,4-DP			<20	<9			
☑ 2,4-D			<36	<12			
☐ DBOFB	A	0.033333				0.00	
☑ PCP			<1.7	<0.33			
☑ 2,4,5-TP			<1.7	<0.75			
☑ 2,4,5-T			<1.7	<0.82			
☑ 2,4-DB			<21	<9.8			
☑ DINOSEB			<24	<9			
☑ Picloram			<41	<20			
☑ Hexachlorophene			<24	<8			

Units: ug/kg

Reviewed by: RMASH
Date: 11/2/18

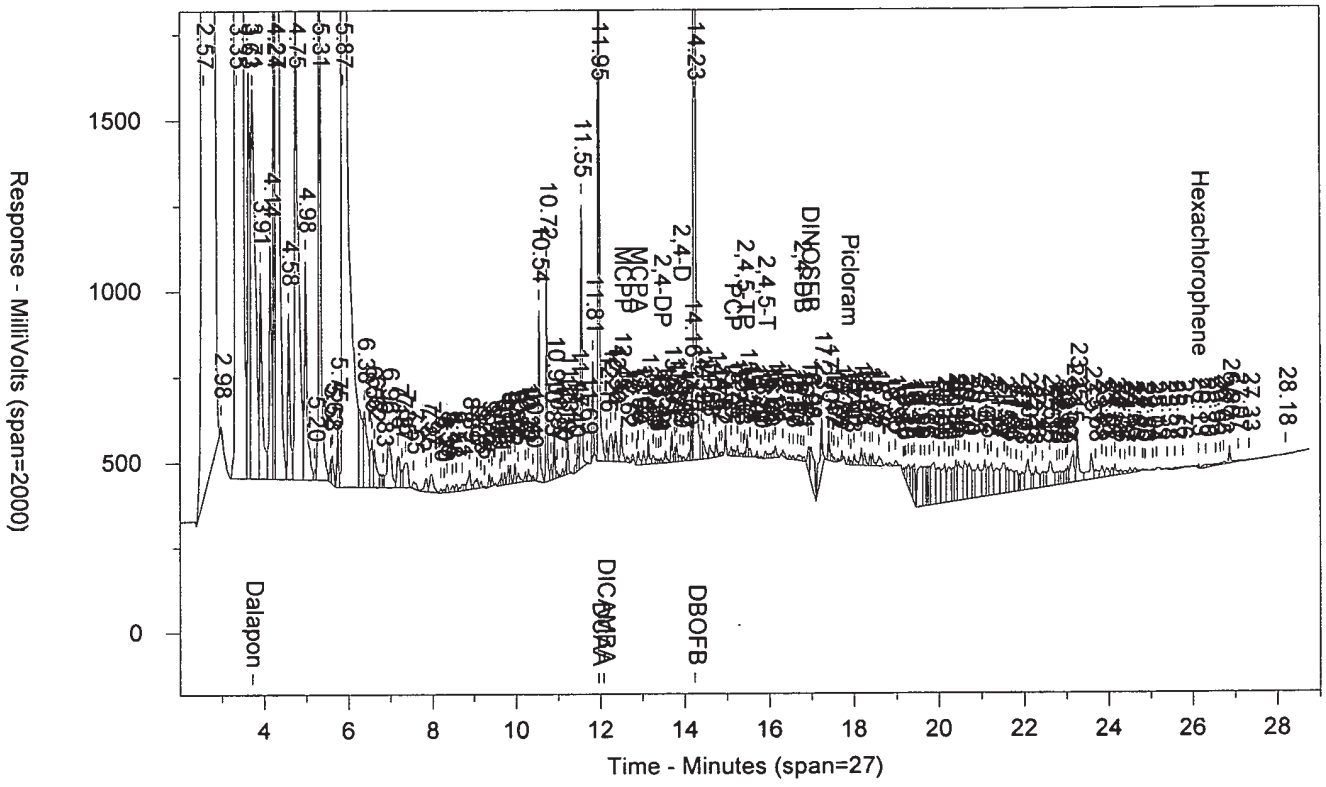
Verified by: Michelle D. Hamilton
Group Leader
Date: NOV 02 2018

%RPD = High - Low Amount divided by the Average times 100
** %Difference > 40, lower amount found reported
* Recovery outside QC Limits

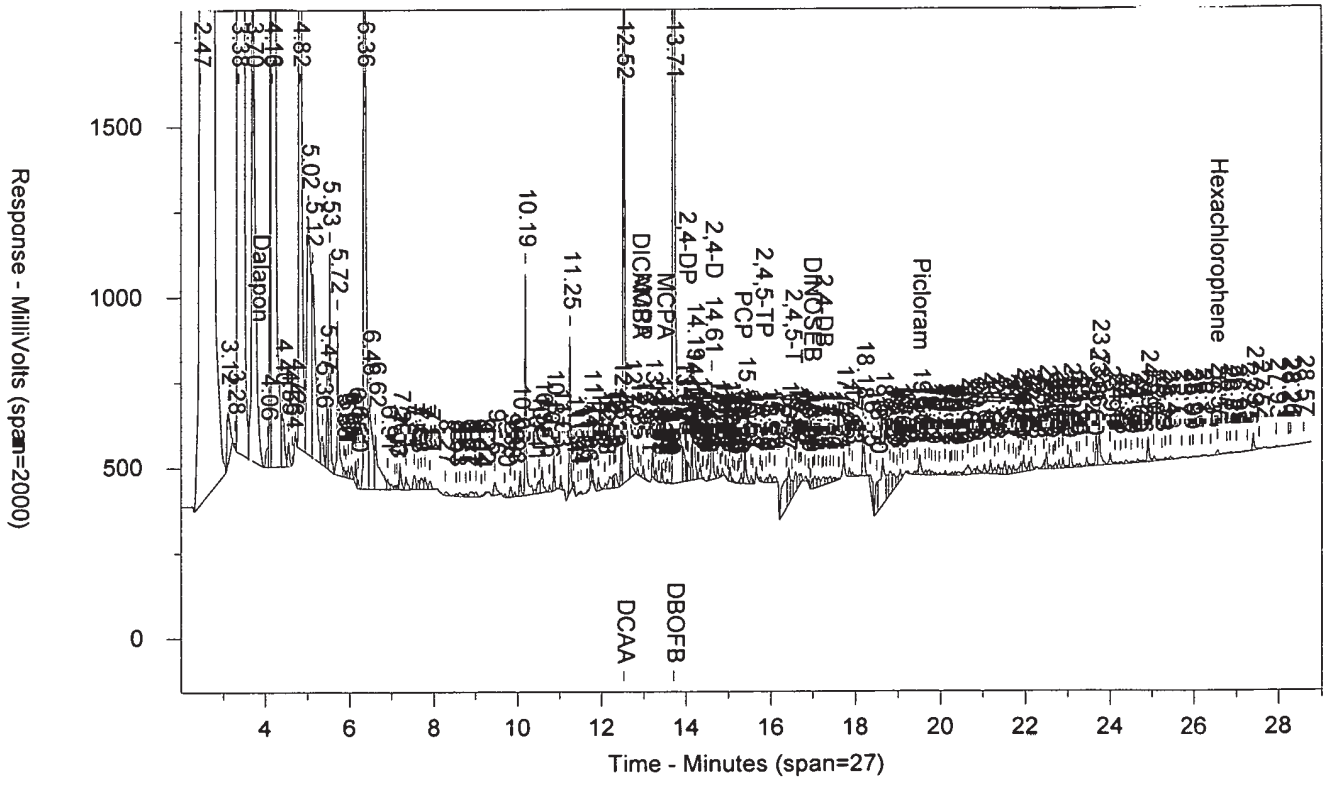
Higher Amount Found unless RPD > 40

BLANKA 10/30/18 F ABPBLK10303 BLK 183030010A 10401 SW-846 8151

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.008.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.008.RAW



LANCASTER LABORATORIES

Sample Number: BLANKA 10/30/18 F ABPBLK10303 BLK 183030010A 10401 SW-846 8151A
Injected On: 11/1/2018 7:09:38 PM Sample Weight: 30
Instrument ID: CP15-19850 Dilution Factor: 10
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

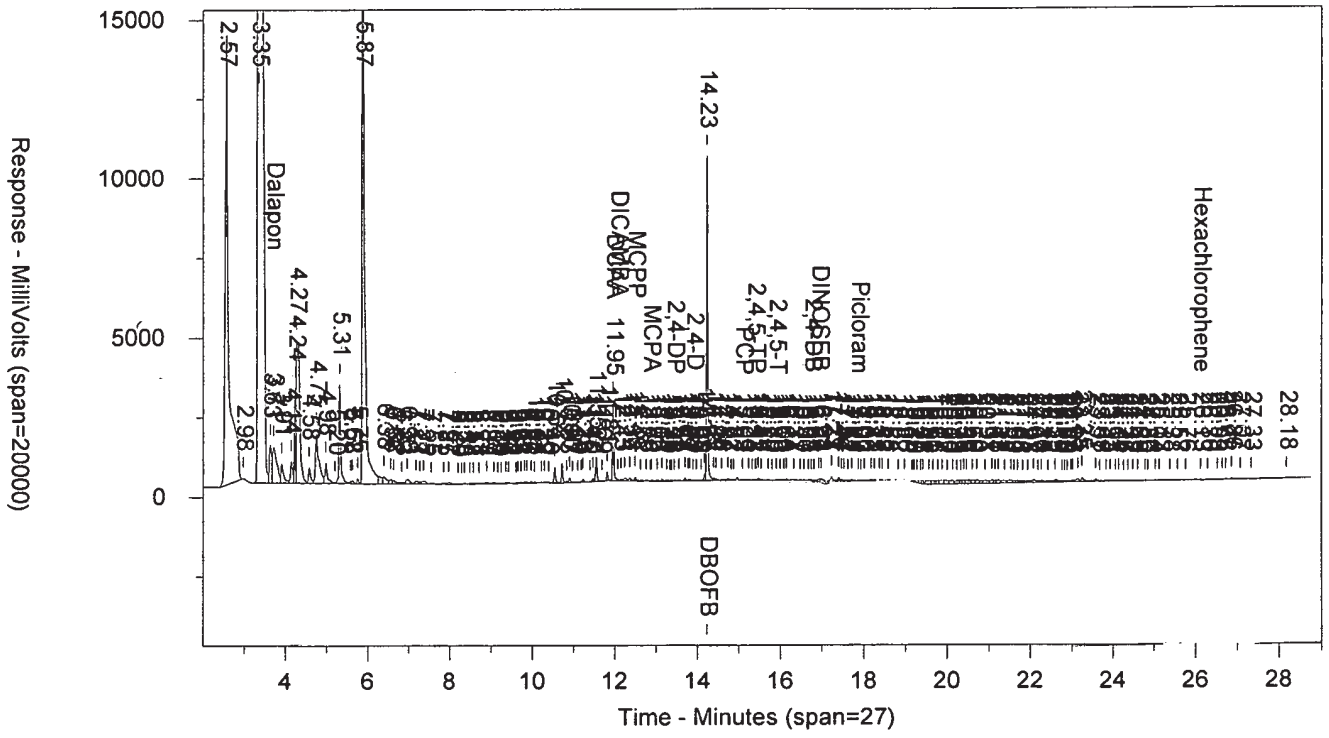
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.714	1138496	49.811	Dalapon		0		Dalapon
11.955	2445505	59.396	DCAA	12.525	2506680	55.881	DCAA
12.492	127899	-3413.299	MCPP		0		MCPP
13.435	17199	.506	2,4-DP	13.999	60689	1.547	2,4-DP
	0		MCPA	13.473	1206	4.735	MCPA
14.229	10189030	.033	DBOFB	13.709	10852280	.033	DBOFB
13.893	19107	.47	2,4-D	14.61	286305	6.372	2,4-D
15.093	20481	.055	PCP	15.302	32321	.056	PCP
15.898	23824	.139	2,4,5-T		0		2,4,5-T
16.921	75265	.843	DINOSEB		0		DINOSEB
17.868	27268	.183	Picloram	19.501	61501	.363	Picloram
26.127	12239	.075	Hexachlorophene	26.549	15455	.088	Hexachlorophe

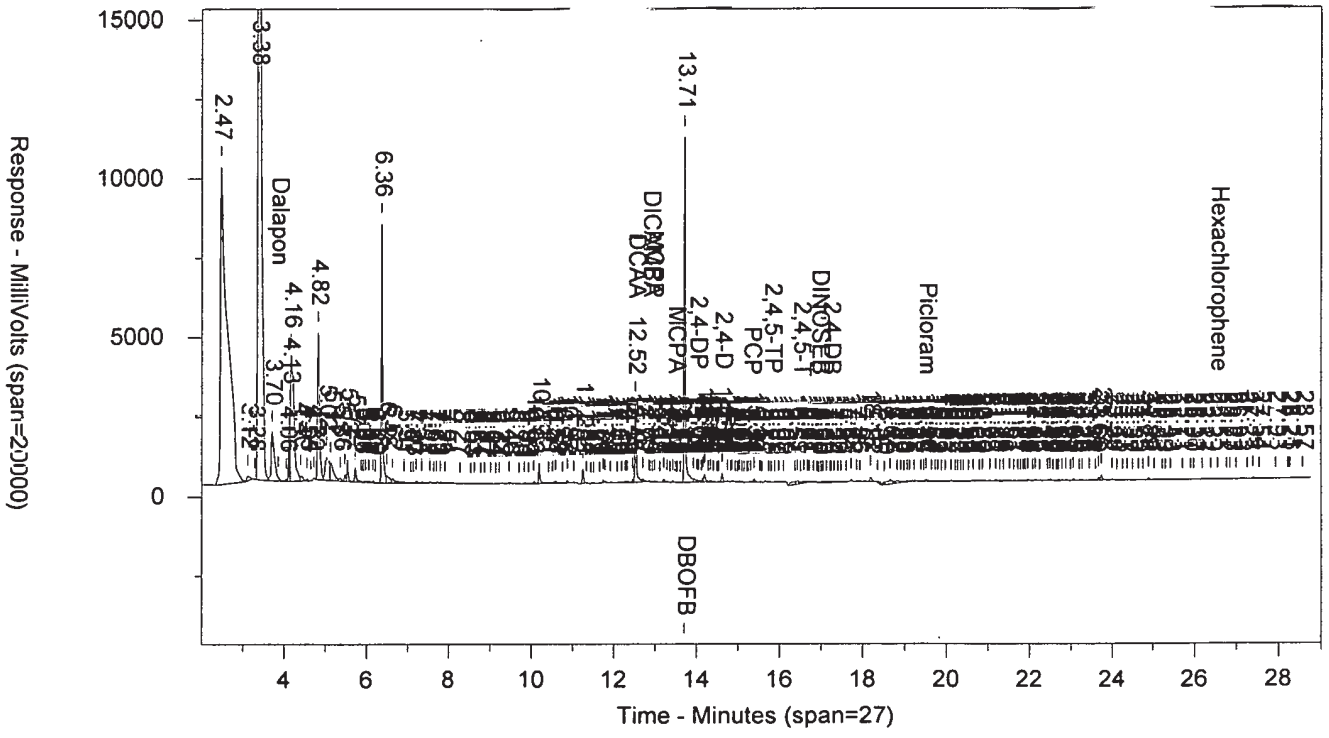
Files:
Area File: 15herb18304002.008.RAW
Area File: 15herb18304002B.008.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/1/2018 7:38:27 PM
File Reported On: 11/2/2018 at 1:17:43 PM

BLANKA 10/30/18 F ABPBLK10303 BLK 183030010A 10401 SW-846 8

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.008.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.008.RAW



eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: 9867763 MS F DF5 T1003 MS Sample ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.39 g Total Volume: 50 ml Analyst: 120 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on Nov 01, 2018 23:01:36
Instrument 19850A
Result file 15HERB18304002.015.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 101% (34 - 127) Conc: 66.54527

Analysis Report (B)

Injected on Nov 01, 2018 23:01:36
Instrument 19850B
Result file 15HERB18304002B.015.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 116% (34 - 127) Conc: 76.41484

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.72	3.76	1106049	223.5297	Dalapon	3.83	3.85	3.89	876289	115.2284
2,4-DCAA	11.91	11.95	11.97	593140	66.54527	2,4-DCAA	12.49	12.52	12.55	765600	76.41484
Dicamba	12.04	12.08	12.10	321498	8.978777	Dicamba	12.85	12.88	12.91	300546	7.219659
MCPP (Mecoprop)	12.45	12.48	12.51	777491	3177.632	MCPP (Mecoprop)	12.90	12.93	12.96	301373	7282.488
MCPA	12.83	12.86	12.89	856975	0	MCPA	13.43	13.46	13.49	557080	9787.965
2,4-DP (Dichloroprop)	13.43	13.45	13.49	730622	99.33368	2,4-DP (Dichloroprop)	13.96	13.98	14.01	803883	91.75815
2,4-D	13.87	13.89	13.93	801397	91.14159	2,4-D	14.58	14.60	14.64	911574	90.83274
Pentachlorophenol	15.06	15.09	15.12	3938080	35.418	Pentachlorophenol	15.28	15.30	15.34	4788348	37.28161
2,4,5-TP	15.36	15.38	15.42	254709	6.0515	2,4,5-TP	15.77	15.79	15.83	418367	8.826666
2,4,5-T	15.88	15.90	15.94	355832	9.577744	2,4,5-T	16.47	16.49	16.53	406924	9.717218
2,4-DB	16.71	16.75	16.77	1310634	254.2791	Dinoseb	16.91	16.92	16.97	205738	9.542734
Dinoseb	16.90	16.92	16.96	262654	13.58623	2,4-DB	17.18	17.20	17.24	563264	94.88096
Picloram	17.86	17.88	17.92	2532855	78.6331	Picloram	19.48	19.50	19.54	2602029	68.74957
Hexachlorophene	26.10	26.13	26.16	1546904	44.06763	Hexachlorophene	26.52	26.55	26.58	1832361	46.72465

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
Dalapon			<217.1767	<434.3534	<441.2251			
2,4-DCAA	B	76.41484	16.461	32.922	32.922		13.81	
2,4-DCAA-D1	A	66.54527	16.461	32.922	32.922			
2,4-DCAA-D2	B	76.41484	16.461	32.922	32.922			
Dicamba			<19.7433	<39.4867	<59.23			
MCPP (Mecoprop)			<18756.1689	<37512.3379	<38005.9213			
MCPA			<3751.2338	<7502.4676	<12339.5848			
2,4-DP (Dichloroprop)	A	99.33368	44.4225	88.845	98.7167		7.93	
2,4-D	A	91.14159	59.23	<118.46	<177.69	J	0.34	
Pentachlorophenol	B	37.28161	1.6288	3.2577	8.3909		5.13	
2,4,5-TP	B	8.826666	3.7019	7.4038	8.3909		37.31	
2,4,5-T	B	9.717218	4.0474	8.0948	8.3909		1.45	
2,4-DB	B	94.88096	48.3712	<98.7167	<103.6525	JP	91.30	
Dinoseb			<44.4225	<88.845	<118.46			
Picloram			<98.7167	<197.4334	<202.3692			
Hexachlorophene	B	46.72465			<118.46	J	5.85	

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Michie D. Hamilton
Michie D. Hamilton
Group Leader

NOV 02 2018

Reviewed and digitally signed by Richard A Shober on 11/2/2018 14:50:18

eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: 9867763 MS F DF5 T1003 MS Sample ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.39 g Total Volume: 50 ml Analyst: 120 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on Nov 01, 2018 23:01:36
Instrument 19850A
Result file 15HERB18304002.015.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 101% (27 - 122) Conc: 66.54527

Analysis Report (B)

Injected on Nov 01, 2018 23:01:36
Instrument 19850B
Result file 15HERB18304002B.015.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 116% (27 - 122) Conc: 76.41484

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.72	3.76	1106049	223.5297	Dalapon	3.83	3.85	3.89	876289	115.2284
2,4-DCAA	11.91	11.95	11.97	593140	66.54527	2,4-DCAA	12.49	12.52	12.55	765600	76.41484
Dicamba	12.04	12.08	12.10	321498	8.978777	Dicamba	12.85	12.88	12.91	300546	7.219659
MCPP (Mecoprop)	12.45	12.48	12.51	777491	3177.632	MCPP (Mecoprop)	12.90	12.93	12.96	301373	7282.488
MCPA	12.83	12.86	12.89	856975	0	MCPA	13.43	13.46	13.49	557080	9787.965
2,4-DP (Dichloroprop)	13.43	13.45	13.49	730622	99.33368	2,4-DP (Dichloroprop)	13.96	13.98	14.01	803883	91.75815
2,4-D	13.87	13.89	13.93	801397	91.14159	2,4-D	14.58	14.60	14.64	911574	90.83274
Pentachlorophenol	15.06	15.09	15.12	3938080	35.418	Pentachlorophenol	15.28	15.30	15.34	4788348	37.28161
2,4,5-TP	15.36	15.38	15.42	254709	6.0515	2,4,5-TP	15.77	15.79	15.83	418367	8.826666
2,4,5-T	15.88	15.90	15.94	355832	9.577744	2,4,5-T	16.47	16.49	16.53	406924	9.717218
2,4-DB	16.71	16.75	16.77	1310634	254.2791	Dinoseb	16.91	16.92	16.97	205738	9.542734
Dinoseb	16.90	16.92	16.96	262654	13.58623	2,4-DB	17.18	17.20	17.24	563264	94.88096
Picloram	17.86	17.88	17.92	2532855	78.6331	Picloram	19.48	19.50	19.54	2602029	68.74957
Hexachlorophene	26.10	26.13	26.16	1546904	44.06763	Hexachlorophene	26.52	26.55	26.58	1832361	46.72465

Single Component Summary

	Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☑	Dalapon			<217.1767	<434.3534	<444.2251	D2		
☐	2,4-DCAA	B	76.41484	16.461	32.922	32.922		13.81	
☑	2,4-DCAA-D1	A	66.54527	16.461	32.922	32.922			
☑	2,4-DCAA-D2	B	76.41484	16.461	32.922	32.922			
☑	Dicamba			<19.7433	<39.4867	<59.23	D2		
☑	MCPP (Mecoprop)			<18756.1689	<37512.3379	<38005.9213	D1		
☑	MCPA			<3751.2338	<7502.4676	<12339.5848	D1		
☑	2,4-DP (Dichloroprop)	A	99.33368	44.4225	88.845	98.7167	D1	7.93	
☑	2,4-D	A	91.14159	59.23	<118.46	<177.69	JD1	0.34	
☐	Pentachlorophenol	B	37.28161	1.6288	3.2577	8.3909		5.13	
☑	2,4,5-TP	B	8.826666	3.7019	7.4038	8.3909	D2	37.31	
☑	2,4,5-T	B	9.717218	4.0474	8.0948	8.3909	D2	1.45	
☑	2,4-DB	B	94.88096	48.3712	<98.7167	<103.6525	JPD2	91.30	
☑	Dinoseb			<44.4225	<88.845	<118.46	D2		
☐	Picloram			<98.7167	<197.4334	<202.3692			
☐	Hexachlorophene	B	46.72465			<118.46	J	5.85	

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Michele D. Hamilton
Group Leader

NOV 02 2018

Reviewed and digitally signed by Richard A Shober on 11/2/2018 14:50:20

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: **9867763** MS F DF5 T1003 ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.39 g Total Volume: 50 ml Analyst: 13378 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on : Nov 01, 2018 23:01:36
Instrument : CP15--19850A
Result file : 15HERB18304002.015.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 101% (27-122) Conc.: 66.54527

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.72	3.76	1106049	223.529700
DCAA	11.91	11.95	11.97	593140	66.545270
DICAMBA	12.04	12.08	12.10	321498	8.978777
MCPP	12.45	12.48	12.51	777491	3177.632000
MCPA	12.83	12.86	12.89	856975	-52.610160
2,4-DP	13.43	13.45	13.49	730622	99.333680
2,4-D	13.87	13.89	13.93	801397	91.141590
DBOFB	14.21	14.23	14.26	10887430	0.032906
PCP	15.06	15.09	15.12	3938080	35.418000
2,4,5-TP	15.36	15.38	15.42	254709	6.051500
2,4,5-T	15.88	15.90	15.94	355832	9.577744
2,4-DB	16.71	16.75	16.77	1310634	254.279100
DINOSEB	16.90	16.92	16.96	262654	13.586230
Picloram	17.86	17.88	17.92	2532855	78.633100
Hexachlorophene	26.10	26.13	26.16	1546904	44.067630

Analysis Report (B)

Injected on : Nov 01, 2018 23:01:36
Instrument : CP15--19850B
Result file : 15HERB18304002B.015.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 116% (27-122) Conc.: 76.41484

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.83	3.85	3.89	876289	115.228400
DCAA	12.49	12.52	12.55	765600	76.414840
DICAMBA	12.85	12.88	12.91	300546	7.219659
MCPP	12.90	12.93	12.96	301373	7282.488000
MCPA	13.43	13.46	13.49	557080	9787.965000
DBOFB	13.69	13.70	13.75	11963830	0.032906
2,4-DP	13.96	13.98	14.01	803883	91.758150
2,4-D	14.58	14.60	14.64	911574	90.832740
PCP	15.28	15.30	15.34	4788348	37.281610
2,4,5-TP	15.77	15.79	15.83	418367	8.826666
2,4,5-T	16.47	16.49	16.53	406924	9.717218
DINOSEB	16.91	16.92	16.97	205738	9.542734
2,4-DB	17.18	17.20	17.24	563264	94.880960
Picloram	19.48	19.50	19.54	2602029	68.749570
Hexachlorophene	26.52	26.55	26.58	1832361	46.724650

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Dalapon			<444.2251	<217.1767			
☐ DCAA	B	76.414840				13.81	
☑ DICAMBA			<59.23	<19.7433			
☑ MCPP			38005.9249	18756.1707			
☑ MCPA			<12339.586	<3751.2341			
☑ 2,4-DP	A	99.333680	98.7167	44.4225		7.93	
☑ 2,4-D	A	91.141590	<177.69	59.23	J	0.34	
☐ DBOFB	A	0.032906				0.00	
☐ PCP	B	37.281610	8.3909	1.6288		5.13	
☑ 2,4,5-TP	B	8.826666	8.3909	3.7019		37.31	
☑ 2,4,5-T	B	9.717218	8.3909	4.0474		1.45	
☑ 2,4-DB	B	94.880960	<103.6525	48.3712	J	91.30	**
☑ DINOSEB			<118.46	<44.4225			
☐ Picloram			<202.3692	<98.7167			
☐ Hexachlorophene	B	46.724650	<118.46	39.4867	J	5.85	

Units: ug/kg

Reviewed by: RJD Date: 11/2

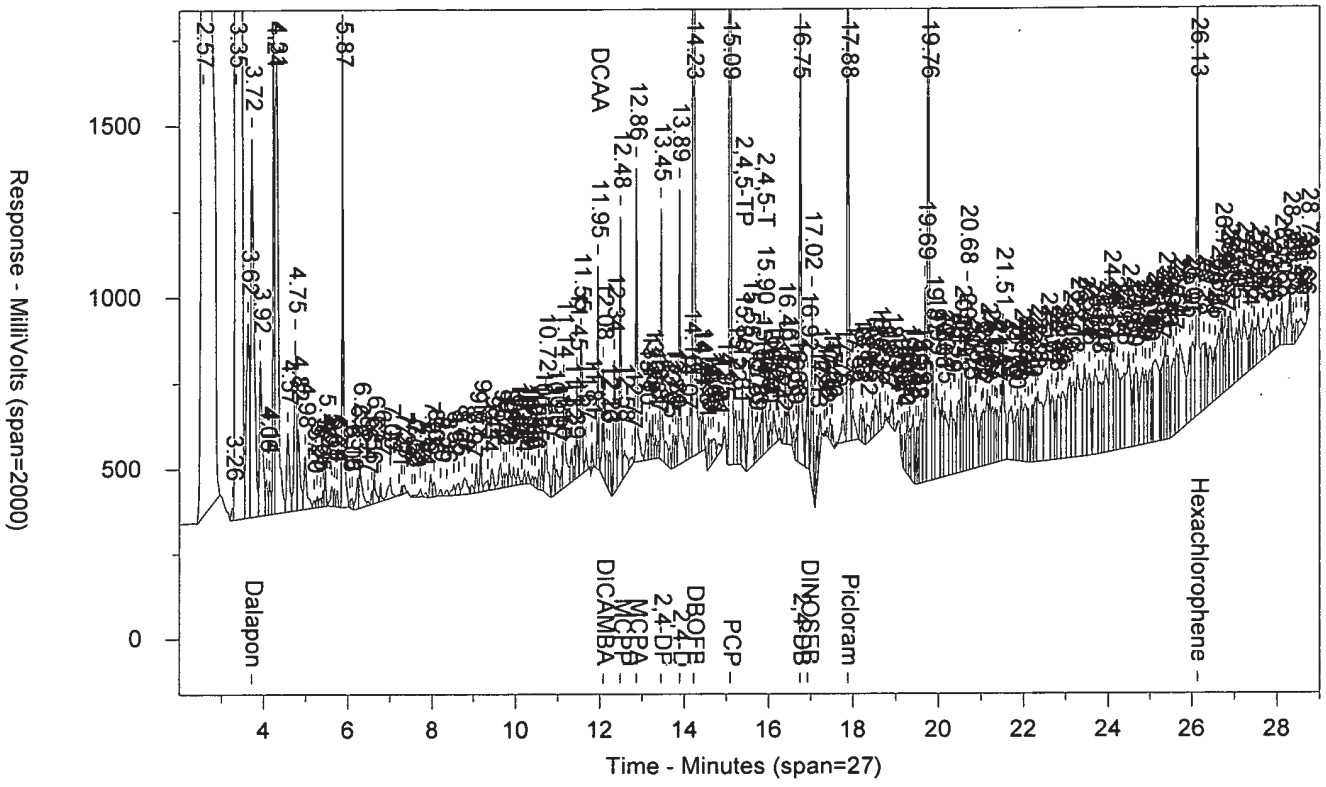
Verified by: Michele D. Hamilton Michele D. Hamilton, Group Leader Date: NOV 02 2018

DILUTION FOR COLORED EXTRACT

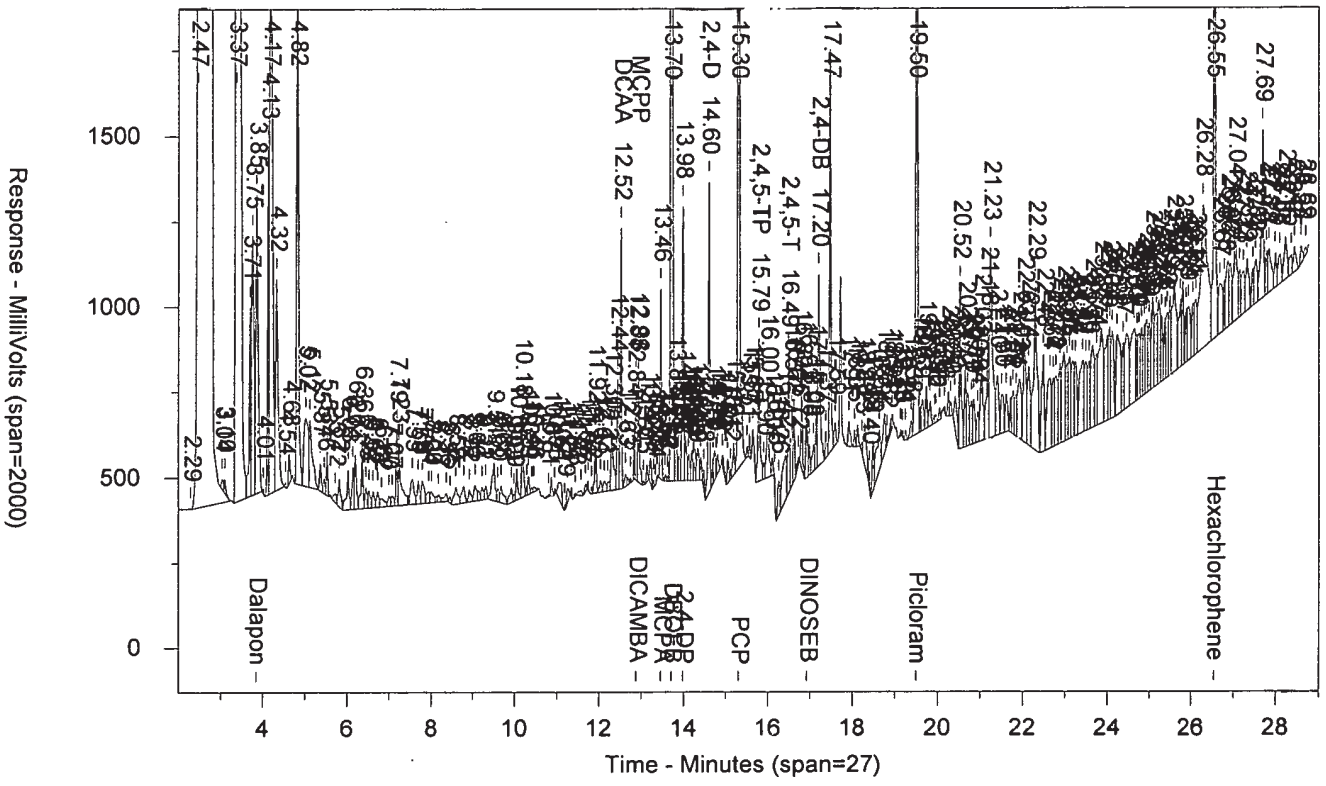
%RPD = High - Low Amount divided by the Average times 100 Higher Amount Found unless RPD > 40
** %Difference > 40, lower amount found reported
* Recovery outside QC Limits

9867763MS F DF5 ACT1003 MS 183030010A 10401 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.015.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.015.RAW



LANCASTER LABORATORIES

Sample Number: 9867763MS F DF5 ACT1003 MS 183030010A 10401 SW-846 8151A
Injected On: 11/1/2018 11:01:36 PM Sample Weight: 30.39
Instrument ID: CP15-19850 Dilution Factor: 50
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

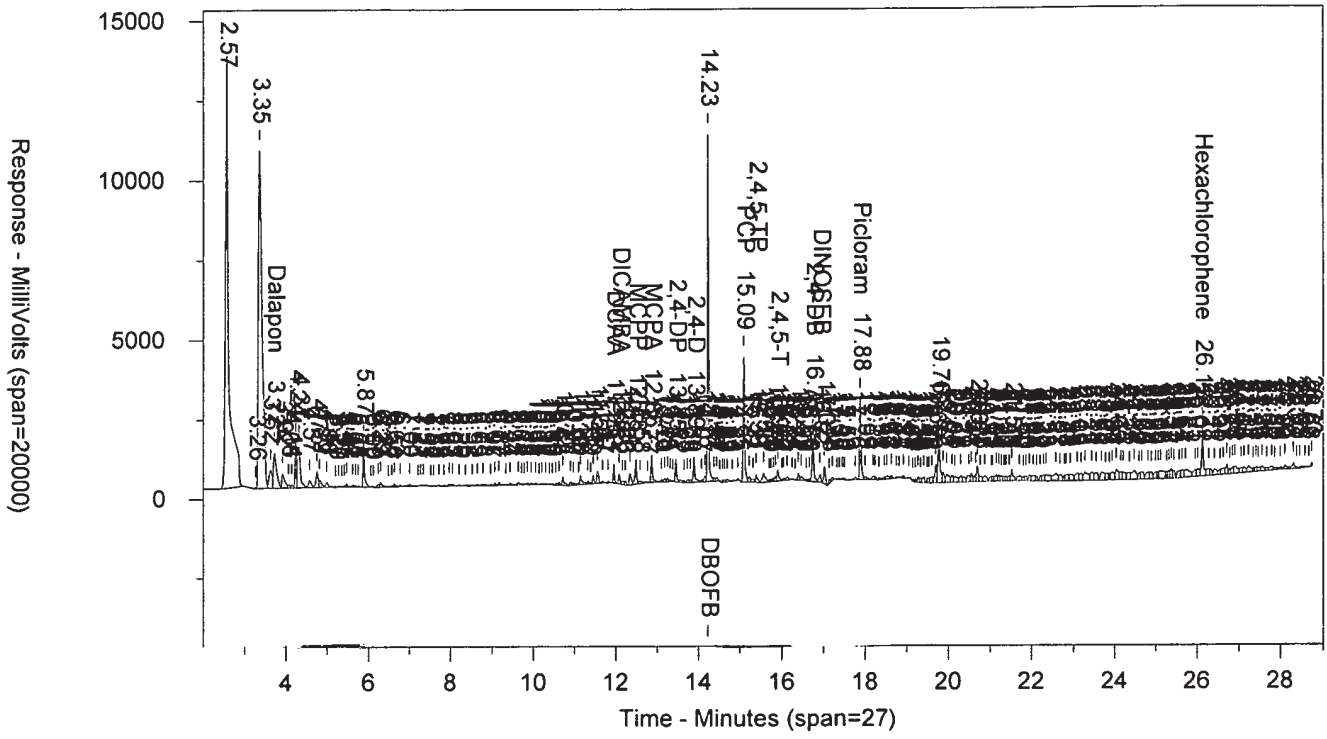
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.717	1106049	223.53	Dalapon	3.85	876289	115.228	Dalapon
11.951	593140	66.545	DCAA	12.521	765600	76.415	DCAA
12.078	321498	8.979	DICAMBA	12.882	300546	7.22	DICAMBA
12.484	777491	3177.632	MCPP	12.934	301373	7282.488	MCPP
12.863	856975	-52.61	MCPA	13.458	557080	9787.965	MCPA
13.451	730622	99.334	2,4-DP	13.981	803883	91.758	2,4-DP
14.226	10887430	.033	DBOFB	13.703	11963830	.033	DBOFB
13.889	801397	91.142	2,4-D	14.602	911574	99.833	2,4 D
15.089	3938080	35.418	PCP	15.3	4788348	37.282	PCP
15.379	254709	6.052	2,4,5-TP	15.787	418367	8.827	2,4,5-TP
15.897	355832	9.578	2,4,5-T	16.491	406924	9.717	2,4,5-T
16.747	1310634	254.279	2,4-DB	17.198	563264	94.881	2,4-DB
16.918	262654	13.586	DINOSEB	16.918	205738	9.543	DINOSEB
17.876	2532855	78.633	Picloram	19.495	2602029	68.75	Picloram
26.127	1546904	44.068	Hexachlorophene	26.547	1832361	46.725	Hexachlorophe

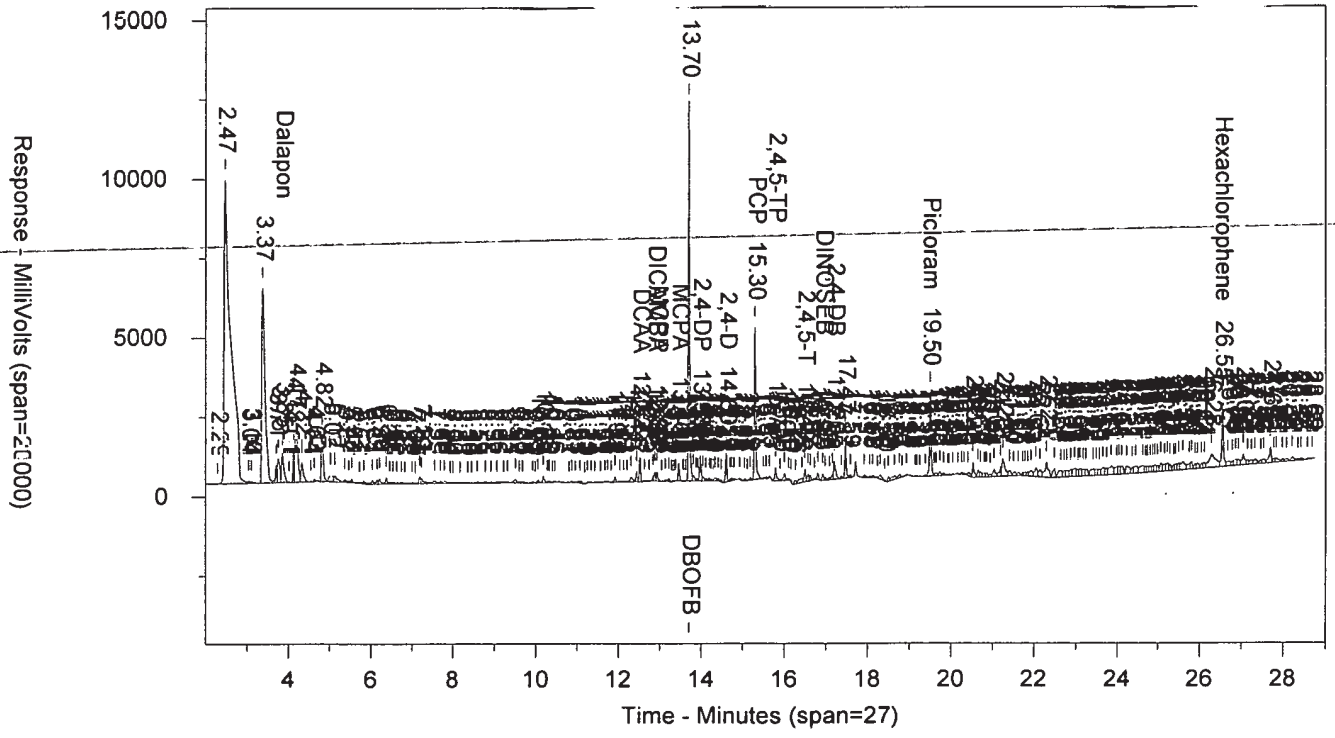
Files:
Area File: 15herb18304002.015.RAW
Area File: 15herb18304002B.015.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/1/2018 11:30:23 PM
File Reported On: 11/2/2018 at 1:19:45 PM

9867763MS F DF5 ACT1003 MS 183030010A 10401 SW-846 815

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.015.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.015.RAW



eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: 9867764 MSD F DF5 T1003 MSD Sample ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.2 g Total Volume: 50 ml Analyst: 120 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on Nov 02, 2018 01:47:13
Instrument 19850A
Result file 15HERB18304002.020.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 104% (34 - 127) Conc: 69.00028

Analysis Report (B)

Injected on Nov 02, 2018 01:47:13
Instrument 19850B
Result file 15HERB18304002B.020.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 118% (34 - 127) Conc: 78.4189

Single Component Data

Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.72	3.76	1093177	219.1969
2,4-DCAA	11.91	11.95	11.97	619881	69.00028
Dicamba	12.04	12.08	12.10	333288	9.235084
MCPP (Mecoprop)	12.45	12.48	12.51	806788	3762.702
MCPA	12.83	12.86	12.89	863251	0
2,4-DP (Dichloroprop)	13.43	13.45	13.49	744399	100.4137
2,4-D	13.87	13.89	13.93	847385	95.61648
Pentachlorophenol	15.06	15.09	15.12	3870340	34.53597
2,4,5-TP	15.36	15.38	15.42	261018	6.152797
2,4,5-T	15.88	15.90	15.94	353046	9.428273
2,4-DB	16.71	16.75	16.77	1345726	259.0412
Dinoseb	16.90	16.92	16.96	289138	14.83897
Picloram	17.86	17.87	17.92	2585537	79.63957
Hexachlorophene	26.10	26.12	26.16	1549411	43.79315

Compound	Min	RT	Max	Height	Amount
Dalapon	3.83	3.85	3.89	921297	121.9608
2,4-DCAA	12.49	12.52	12.55	780435	78.4189
Dicamba	12.85	12.88	12.91	311012	7.521266
MCPP (Mecoprop)	12.90	12.93	12.96	318922	7758.329
MCPA	13.43	13.46	13.49	569414	10071.89
2,4-DP (Dichloroprop)	13.96	13.98	14.01	788107	90.5619
2,4-D	14.58	14.60	14.64	901500	90.43254
Pentachlorophenol	15.28	15.30	15.34	4688596	36.75024
2,4,5-TP	15.77	15.79	15.83	414992	8.814301
2,4,5-T	16.47	16.49	16.53	417204	10.02965
Dinoseb	16.91	16.92	16.97	236271	11.03261
2,4-DB	17.18	17.20	17.24	554007	93.94869
Picloram	19.48	19.50	19.54	2812266	74.80363
Hexachlorophene	26.52	26.55	26.58	1836772	47.15183

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
Dalapon			<218.543	<437.0861	<447.0199			
2,4-DCAA	B	78.4189	16.5646	33.1291	33.1291		12.78	
2,4-DCAA-D1	A	69.00028	16.5646	33.1291	33.1291			
2,4-DCAA-D2	B	78.4189	16.5646	33.1291	33.1291			
Dicamba			<19.8675	<39.7351	<59.6026			
MCPP (Mecoprop)			<18874.1724	<37748.3448	<38245.0336			
MCPA			<3774.8345	<7549.669	<12417.2187			
2,4-DP (Dichloroprop)	A	100.4137	44.702	89.404	99.3377		10.32	
2,4-D	A	95.61648	59.6026	<119.2053	<178.8079	J	5.57	
Pentachlorophenol	B	36.75024	1.6391	3.2781	8.4437		6.21	
2,4,5-TP	B	8.814301	3.7252	7.4503	8.4437		35.56	
2,4,5-T	B	10.02965	4.0728	8.1457	8.4437		6.18	
2,4-DB	B	93.94869	48.6755	<99.3377	<104.3046	JP	93.54	
Dinoseb			<44.702	<89.404	<119.2053			
Picloram			<99.3377	<198.6755	<203.6424			
Hexachlorophene	B	47.15183			<119.2053	J	7.39	

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Michele D. Hamilton
Group Leader

NOV 02 2018

Reviewed and digitally signed by Richard A Shober on 11/2/2018 14:50:22

eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: 9867764 MSD F DF5 T1003 MSD Sample ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.2 g Total Volume: 50 ml Analyst: 120 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on Nov 02, 2018 01:47:13
Instrument 19850A
Result file 15HERB18304002.020.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 104% (27 - 122) Conc: 69.00028

Analysis Report (B)

Injected on Nov 02, 2018 01:47:13
Instrument 19850B
Result file 15HERB18304002B.020.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 118% (27 - 122) Conc: 78.4189

Single Component Data

Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.72	3.76	1093177	219.1969
2,4-DCAA	11.91	11.95	11.97	619881	69.00028
Dicamba	12.04	12.08	12.10	333288	9.235084
MCPP (Mecoprop)	12.45	12.48	12.51	806788	3762.702
MCPA	12.83	12.86	12.89	863251	0
2,4-DP (Dichloroprop)	13.43	13.45	13.49	744399	100.4137
2,4-D	13.87	13.89	13.93	847385	95.61648
Pentachlorophenol	15.06	15.09	15.12	3870340	34.53597
2,4,5-TP	15.36	15.38	15.42	261018	6.152797
2,4,5-T	15.88	15.90	15.94	353046	9.428273
2,4-DB	16.71	16.75	16.77	1345726	259.0412
Dinoseb	16.90	16.92	16.96	289138	14.83897
Picloram	17.86	17.87	17.92	2585537	79.63957
Hexachlorophene	26.10	26.12	26.16	1549411	43.79315

Compound	Min	RT	Max	Height	Amount
Dalapon	3.83	3.85	3.89	921297	121.9608
2,4-DCAA	12.49	12.52	12.55	780435	78.4189
Dicamba	12.85	12.88	12.91	311012	7.521266
MCPP (Mecoprop)	12.90	12.93	12.96	318922	7758.329
MCPA	13.43	13.46	13.49	569414	10071.89
2,4-DP (Dichloroprop)	13.96	13.98	14.01	788107	90.5619
2,4-D	14.58	14.60	14.64	901500	90.43254
Pentachlorophenol	15.28	15.30	15.34	4688596	36.75024
2,4,5-TP	15.77	15.79	15.83	414992	8.814301
2,4,5-T	16.47	16.49	16.53	417204	10.02965
Dinoseb	16.91	16.92	16.97	236271	11.03261
2,4-DB	17.18	17.20	17.24	554007	93.94869
Picloram	19.48	19.50	19.54	2812266	74.80363
Hexachlorophene	26.52	26.55	26.58	1836772	47.15183

Single Component Summary

	Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☑	Dalapon			<218.543	<437.0861	<447.0199	D2		
☐	2,4-DCAA	B	78.4189	16.5646	33.1291	33.1291		12.78	
☑	2,4-DCAA-D1	A	69.00028	16.5646	33.1291	33.1291			
☑	2,4-DCAA-D2	B	78.4189	16.5646	33.1291	33.1291			
☑	Dicamba			<19.8675	<39.7351	<59.6026	D2		
☑	MCPP (Mecoprop)			<18874.1724	<37748.3448	<38245.0336	D1		
☑	MCPA			<3774.8345	<7549.669	<12417.2187	D1		
☑	2,4-DP (Dichloroprop)	A	100.4137	44.702	89.404	99.3377	D1	10.32	
☑	2,4-D	A	95.61648	59.6026	<119.2053	<178.8079	JD1	5.57	
☐	Pentachlorophenol	B	36.75024	1.6391	3.2781	8.4437		6.21	
☑	2,4,5-TP	B	8.814301	3.7252	7.4503	8.4437	D2	35.56	
☑	2,4,5-T	B	10.02965	4.0728	8.1457	8.4437	D2	6.18	
☑	2,4-DB	B	93.94869	48.6755	<99.3377	<104.3046	JPD2	93.54	
☑	Dinoseb			<44.702	<89.404	<119.2053	D2		
☐	Picloram			<99.3377	<198.6755	<203.6424			
☐	Hexachlorophene	B	47.15183			<119.2053	J	7.39	

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Michele D. Hamilton
Group Leader

NOV 02 2018

Reviewed and digitally signed by Richard A Shober on 11/2/2018 14:50:25

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: **9867764** MSD F DF5 T1003 ID: AC **Batchnumber: 183030010A**
Sample Amount: 30.2 g Total Volume: 50 ml Analyst: 13378 SDG: TID10 State: NY
Analyses: 10401

Analysis Report (A)

Injected on : Nov 02, 2018 01:47:13
Instrument : CP15--19850A
Result file : 15HERB18304002.020.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 104% (27-122) Conc.: 69.00028

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.72	3.76	1093177	219.196900
DCAA	11.91	11.95	11.97	619881	69.000280
DICAMBA	12.04	12.08	12.10	333288	9.235084
MCPP	12.45	12.48	12.51	806788	3762.702000
MCPA	12.83	12.86	12.89	863251	-206.218400
2,4-DP	13.43	13.45	13.49	744399	100.413700
2,4-D	13.87	13.89	13.93	847385	95.616480
DBOFB	14.21	14.22	14.26	11042460	0.033113
PCP	15.06	15.09	15.12	3870340	34.535970
2,4,5-TP	15.36	15.38	15.42	261018	6.152797
2,4,5-T	15.88	15.90	15.94	353046	9.428273
2,4-DB	16.71	16.75	16.77	1345726	259.041200
DINOSEB	16.90	16.92	16.96	289138	14.838970
Picloram	17.86	17.87	17.92	2585537	79.639570
Hexachlorophene	26.10	26.12	26.16	1549411	43.793150

Analysis Report (B)

Injected on : Nov 02, 2018 01:47:13
Instrument : CP15--19850B
Result file : 15HERB18304002B.020.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 118% (27-122) Conc.: 78.4189

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.83	3.85	3.89	921297	121.960800
DCAA	12.49	12.52	12.55	780435	78.418900
DICAMBA	12.85	12.88	12.91	311012	7.521266
MCPP	12.90	12.93	12.96	318922	7758.329000
MCPA	13.43	13.46	13.49	569414	10071.890000
DBOFB	13.69	13.70	13.75	11958750	0.033113
2,4-DP	13.96	13.98	14.01	788107	90.561900
2,4-D	14.58	14.60	14.64	901500	90.432540
PCP	15.28	15.30	15.34	4688596	36.750240
2,4,5-TP	15.77	15.79	15.83	414992	8.814301
2,4,5-T	16.47	16.49	16.53	417204	10.029650
DINOSEB	16.91	16.92	16.97	236271	11.032610
2,4-DB	17.18	17.20	17.24	554007	93.948690
Picloram	19.48	19.50	19.54	2812266	74.803630
Hexachlorophene	26.52	26.55	26.58	1836772	47.151830

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Dalapon			<447.0199	<218.543			
☐ DCAA	B	78.418900				12.78	
☑ DICAMBA			<59.6026	<19.8675			
☑ MCPP			38245.0336	18874.1724			
☑ MCPA			12417.2187	<3774.8345			
☑ 2,4-DP	A	100.413700	99.3377	44.702		10.32	
☑ 2,4-D	A	95.616480	<178.8079	59.6026	J	5.57	
☐ DBOFB	A	0.033113				0.00	
☐ PCP	B	36.750240	8.4437	1.6391		6.21	
☑ 2,4,5-TP	B	8.814301	8.4437	3.7252		35.56	
☑ 2,4,5-T	B	10.029650	8.4437	4.0728		6.18	
☑ 2,4-DB	B	93.948690	<104.3046	48.6755	J	93.54	**
☑ DINOSEB			<119.2053	<44.702			
☐ Picloram			<203.6424	<99.3377			
☐ Hexachlorophene	B	47.151830	<119.2053	39.7351	J	7.39	

Units: ug/kg

Reviewed by: RLD&K
Date: 11/2/18

Verified by: Michele D. Hamilton
Michele D. Hamilton
Group Leader
Date: NOV 02 2018

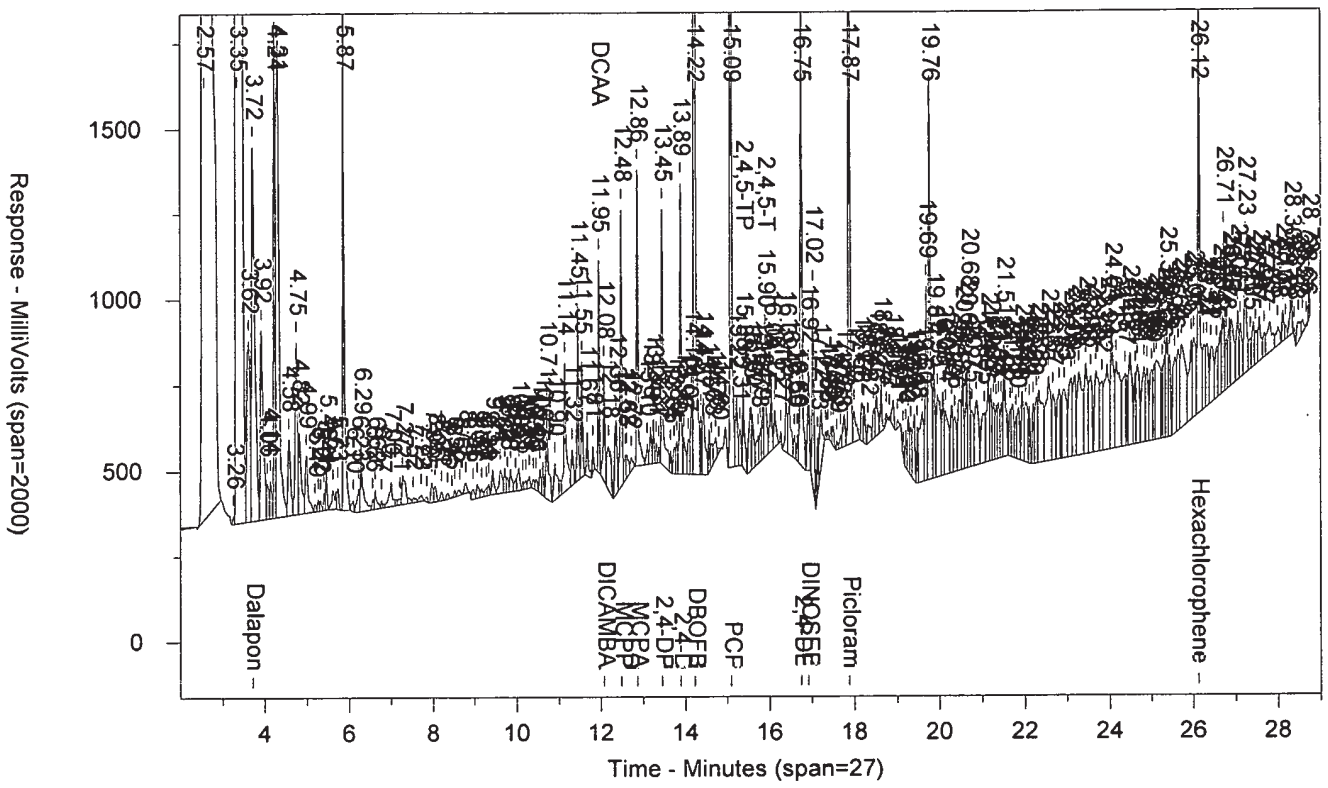
DILUTION FOR COLORED EXTRACT

%RPD = High - Low Amount divided by the Average times 100
** %Difference > 40, lower amount found reported
* Recovery outside QC Limits

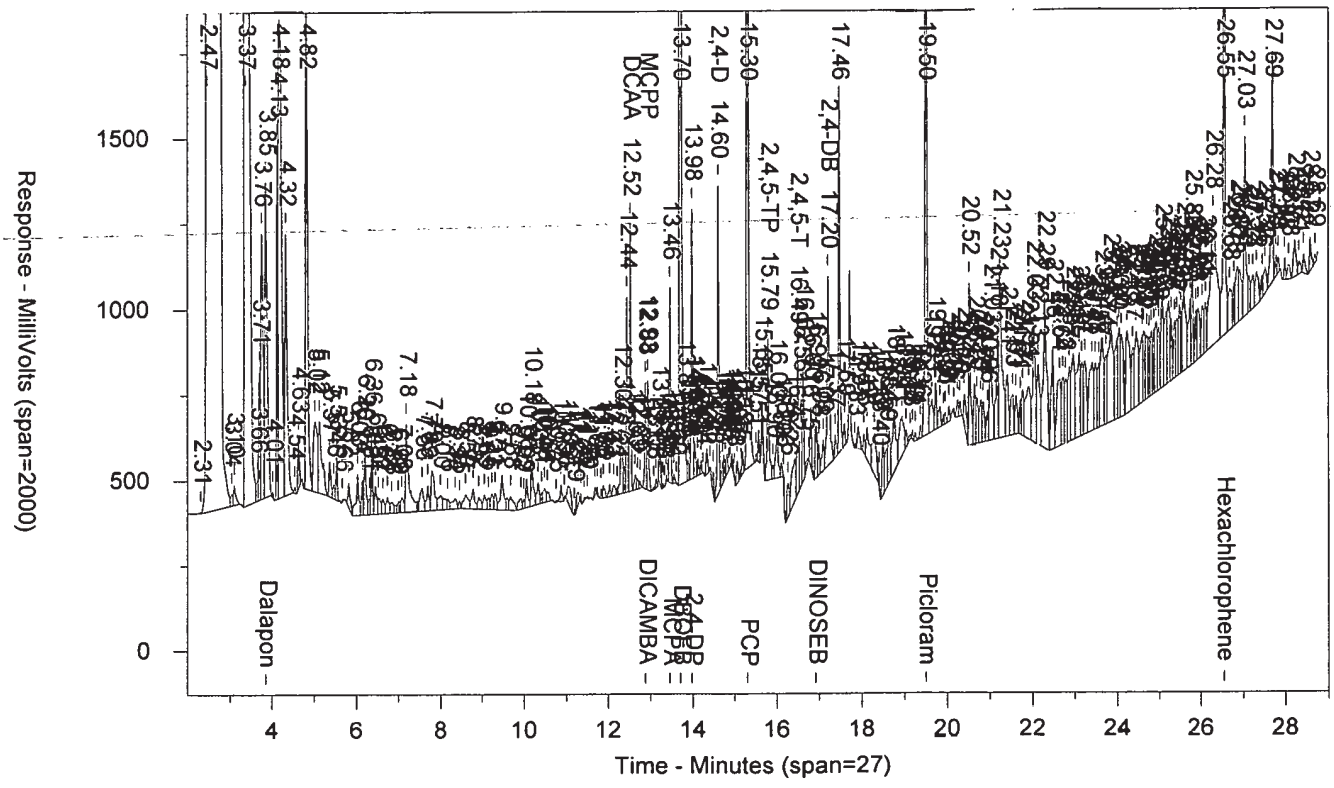
Higher Amount Found unless RPD > 40

9867764MSD F DF5 ACT1003 MSD 183030010A 10401 SW-846 8151A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.020.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.020.RAW



LANCASTER LABORATORIES

Sample Number: 9867764MSD F DF5 ACT1003 MSD 183030010A 10401 SW-846 8151A
Injected On: 11/2/2018 1:47:13 AM Sample Weight: 30.2
Instrument ID: CP15-19850 Dilution Factor: 50
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

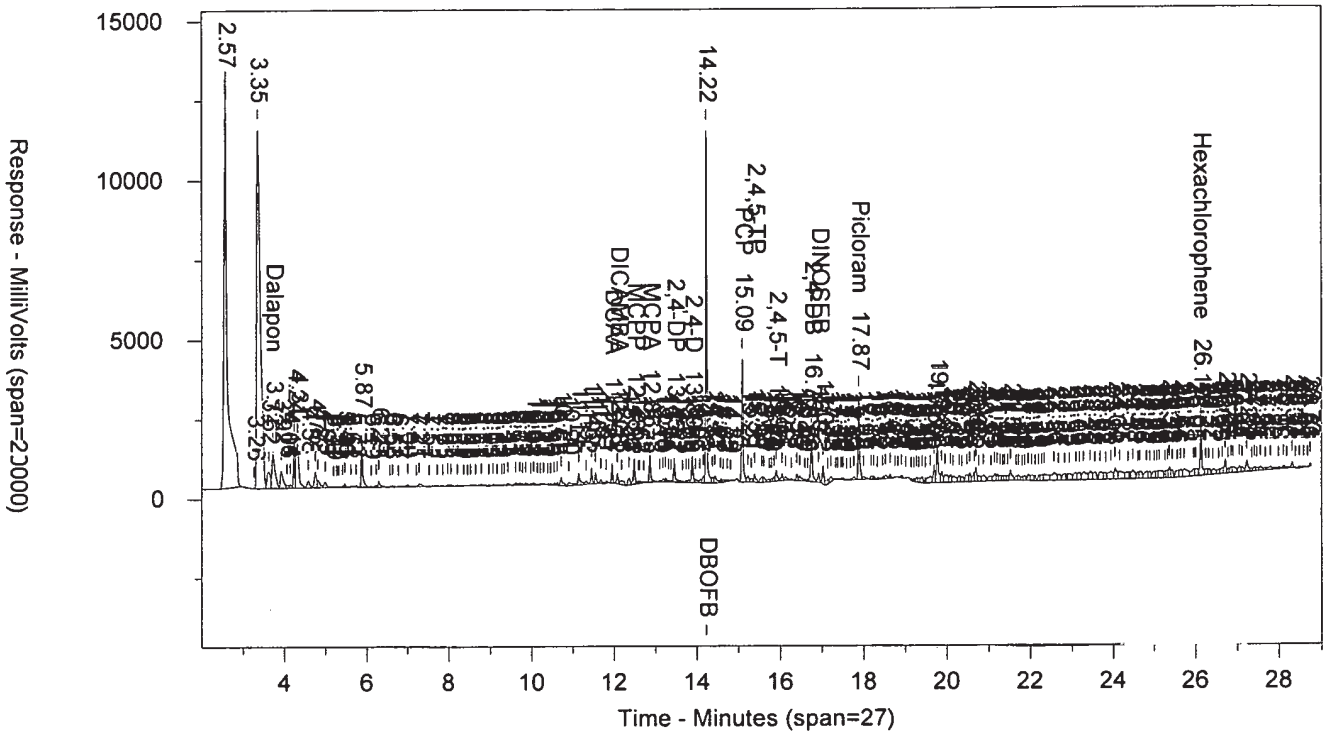
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.72	1093177	219.197	Dalapon	3.851	921297	121.961	Dalapon
11.95	619881	69	DCAA	12.52	780435	78.419	DCAA
12.077	333288	9.235	DICAMBA	12.881	311012	7.521	DICAMBA
12.482	806788	3762.702	MCPP	12.933	318922	7758.329	MCPP
12.863	863251	-206.218	MCPA	13.458	569414	10071.89	MCPA
13.45	744399	100.414	2,4-DP	13.98	788107	90.562	2,4-DP
14.224	11042460	.033	DBOFB	13.704	11958750	.033	DBOFB
13.888	847385	95.616	2,4-D	14.601	901500	90.433	2,4-D
15.080	3070340	34.500	PCP	15.0	4088597	30.75	PCP
15.378	261018	6.153	2,4,5-TP	15.786	414992	8.814	2,4,5-TP
15.896	353046	9.428	2,4,5-T	16.491	417204	10.03	2,4,5-T
16.745	1345726	259.041	2,4-DB	17.197	554007	93.949	2,4-DB
16.916	289138	14.839	DINOSEB	16.915	236271	11.033	DINOSEB
17.875	2585537	79.64	Picloram	19.496	2812266	74.804	Picloram
26.124	1549411	43.793	Hexachlorophene	26.545	1836772	47.152	Hexachlorophe

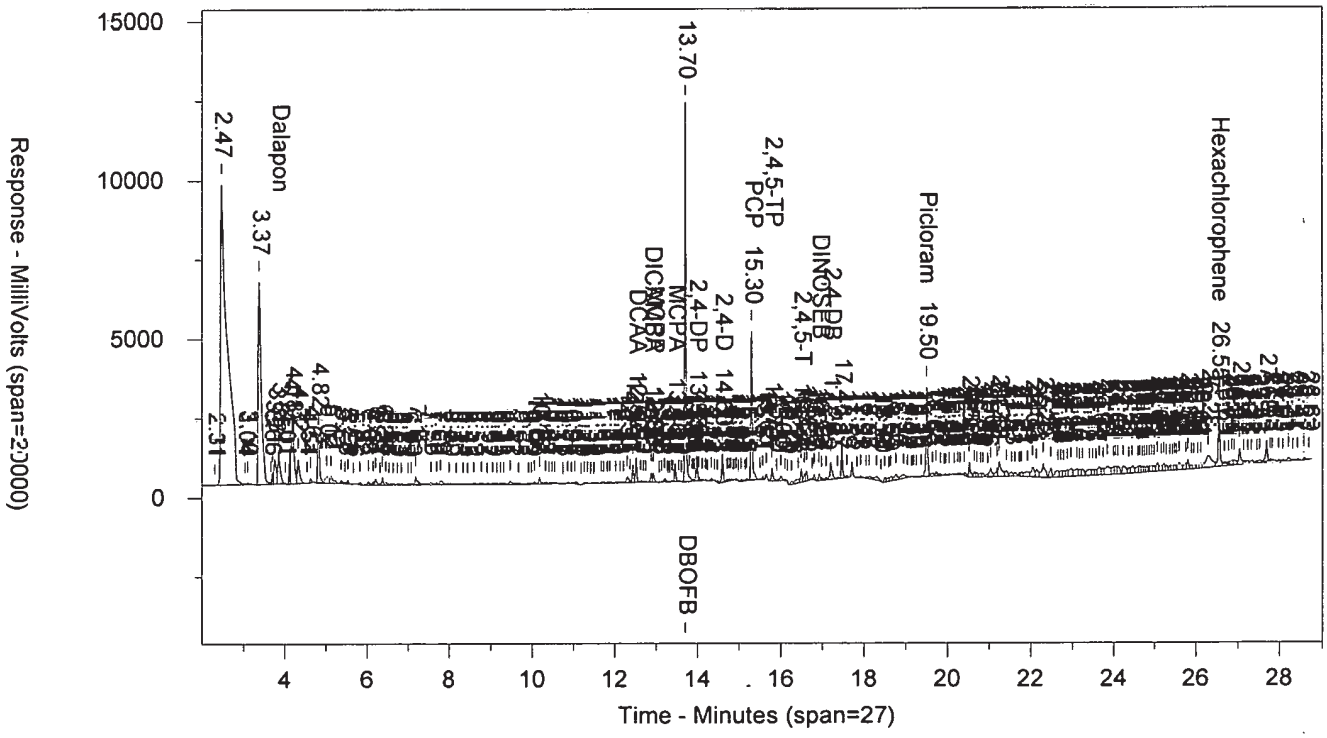
Files:
Area File: 15herb18304002.020.RAW
Area File: 15herb18304002B.020.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/2/2018 2:16:00 AM
File Reported On: 11/2/2018 at 1:21:28 PM

9867764MSD F DF5 ACT1003 MSD 183030010A 10401 SW-846 81

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.020.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.020.RAW



eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: LCSA 10/30/18 F LCS10303 LCS Sample ID: AB **Batchnumber: 183030010A**
Sample Amount: 30 g Total Volume: 10 ml Analyst: 120 SDG: State:
Analyses: 10401

Analysis Report (A)

Injected on Nov 01, 2018 19:42:52
Instrument 19850A
Result file 15HERB18304002.009.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 95% (34 - 127) Conc: 63.50301

Analysis Report (B)

Injected on Nov 01, 2018 19:42:52
Instrument 19850B
Result file 15HERB18304002B.009.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 97% (34 - 127) Conc: 64.66614

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.72	3.76	3747767	171.6505	Dalapon	3.83	3.85	3.89	3552652	109.4348
2,4-DCAA	11.91	11.94	11.97	2497602	63.50301	2,4-DCAA	12.49	12.51	12.55	2765734	64.66614
Dicamba	12.04	12.07	12.10	1240140	7.849104	Dicamba	12.85	12.87	12.91	1363894	7.67498
MCPP (Mecoprop)	12.45	12.48	12.51	2053280	10262.49	MCPP (Mecoprop)	12.90	12.93	12.96	1375239	7784.744
MCPA	12.83	12.86	12.89	2267129	8855.012	MCPA	13.43	13.46	13.49	1756215	7228.417
2,4-DP (Dichloroprop)	13.43	13.45	13.49	2770226	85.35532	2,4-DP (Dichloroprop)	13.96	13.98	14.01	2981721	79.72778
2,4-D	13.87	13.89	13.93	3264883	84.14883	2,4-D	14.58	14.60	14.64	3645792	85.10071
Pentachlorophenol	15.06	15.09	15.12	14602510	29.76311	Pentachlorophenol	15.28	15.30	15.34	15544370	28.35129
2,4,5-TP	15.36	15.37	15.42	1710482	9.209785	2,4,5-TP	15.77	15.79	15.83	1730285	8.551607
2,4,5-T	15.88	15.90	15.94	1465849	8.941679	2,4,5-T	16.47	16.50	16.53	1547798	8.658326
2,4-DB	16.71	16.74	16.77	1954714	85.9456	Dinoseb	16.91	16.93	16.97	487421	5.296077
Dinoseb	16.90	16.92	16.96	660383	7.741457	2,4-DB	17.18	17.20	17.24	2066991	81.56363
Picloram	17.86	17.88	17.92	11277040	79.34167	Picloram	19.48	19.50	19.54	12451130	77.06504
Hexachlorophene	26.10	26.13	26.16	4640360	29.95845	Hexachlorophene	26.52	26.55	26.58	5116291	30.56194

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
Dalapon	A	171.6505	44	88	90	P^	44.27	
2,4-DCAA	B	64.66614	3.335	6.67	6.67		1.81	
2,4-DCAA-D1	A	63.50301	3.335	6.67	6.67			
2,4-DCAA-D2	B	64.66614	3.335	6.67	6.67			
Dicamba	A	7.849104	4	<8	<12	J	2.24	
MCPP (Mecoprop)	A	10262.49	3800	7600	7700		27.46	
MCPA	A	8855.012	760	1520	2500		20.23	
2,4-DP (Dichloroprop)	A	85.35532	9	18	20		6.82	
2,4-D	B	85.10071	12	24	36		1.12	
Pentachlorophenol	A	29.76311	0.33	0.66	1.7		4.86	
2,4,5-TP	A	9.209785	0.75	1.5	1.7		7.41	
2,4,5-T	A	8.941679	0.82	1.64	1.7		3.22	
2,4-DB	A	85.9456	9.8	20	21		5.23	
Dinoseb	A	7.741457	<9	<18	<24		37.51	
Picloram	A	79.34167	20	40	41		2.91	
Hexachlorophene	B	30.56194			24		1.99	

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Michele D. Hamilton
Group Leader

NOV 02 2018

Reviewed and digitally signed by Richard A Shober on 11/2/2018 14:49:52

eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: LCSA 10/30/18 F LCS10303 LCS Sample ID: AB **Batchnumber: 183030010A**
Sample Amount: 30 g Total Volume: 10 ml Analyst: 120 SDG: State:
Analyses: 10401

Analysis Report (A)

Injected on Nov 01, 2018 19:42:52
Instrument 19850A
Result file 15HERB18304002.009.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 95% (27 - 122) Conc: 63.50301

Analysis Report (B)

Injected on Nov 01, 2018 19:42:52
Instrument 19850B
Result file 15HERB18304002B.009.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 97% (27 - 122) Conc: 64.66614

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.72	3.76	3747767	171.6505	Dalapon	3.83	3.85	3.89	3552652	109.4348
2,4-DCAA	11.91	11.94	11.97	2497602	63.50301	2,4-DCAA	12.49	12.51	12.55	2765734	64.66614
Dicamba	12.04	12.07	12.10	1240140	7.849104	Dicamba	12.85	12.87	12.91	1363894	7.67498
MCPP (Mecoprop)	12.45	12.48	12.51	2053280	10262.49	MCPP (Mecoprop)	12.90	12.93	12.96	1375239	7784.744
MCPA	12.83	12.86	12.89	2267129	8855.012	MCPA	13.43	13.46	13.49	1756215	7228.417
2,4-DP (Dichloroprop)	13.43	13.45	13.49	2770226	85.35532	2,4-DP (Dichloroprop)	13.96	13.98	14.01	2981721	79.72778
2,4-D	13.87	13.89	13.93	3264883	84.14883	2,4-D	14.58	14.60	14.64	3645792	85.10071
Pentachlorophenol	15.06	15.09	15.12	14602510	29.76311	Pentachlorophenol	15.28	15.30	15.34	15544370	28.35129
2,4,5-TP	15.36	15.37	15.42	1710482	9.209785	2,4,5-TP	15.77	15.79	15.83	1730285	8.551607
2,4,5-T	15.88	15.90	15.94	1465849	8.941679	2,4,5-T	16.47	16.50	16.53	1547798	8.658326
2,4-DB	16.71	16.74	16.77	1954714	85.9456	Dinoseb	16.91	16.93	16.97	487421	5.296077
Dinoseb	16.90	16.92	16.96	660383	7.741457	2,4-DB	17.18	17.20	17.24	2066991	81.56363
Picloram	17.86	17.88	17.92	11277040	79.34167	Picloram	19.48	19.50	19.54	12451130	77.06504
Hexachlorophene	26.10	26.13	26.16	4640360	29.95845	Hexachlorophene	26.52	26.55	26.58	5116291	30.56194

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
Dalapon	A	171.6505	44	88	90	P^	44.27	
2,4-DCAA	B	64.66614	3.335	6.67	6.67		1.81	
2,4-DCAA-D1	A	63.50301	3.335	6.67	6.67			
2,4-DCAA-D2	B	64.66614	3.335	6.67	6.67			
Dicamba	A	7.849104	4	<8	<12	J	2.24	
MCPP (Mecoprop)	A	10262.49	3800	7600	7700		27.46	
MCPA	A	8855.012	760	1520	2500		20.23	
2,4-DP (Dichloroprop)	A	85.35532	9	18	20		6.82	
2,4-D	B	85.10071	12	24	36		1.12	
Pentachlorophenol	A	29.76311	0.33	0.66	1.7		4.86	
2,4,5-TP	A	9.209785	0.75	1.5	1.7		7.41	
2,4,5-T	A	8.941679	0.82	1.64	1.7		3.22	
2,4-DB	A	85.9456	9.8	20	21		5.23	
Dinoseb	A	7.741457	<9	<18	<24		37.51	
Picloram	A	79.34167	20	40	41		2.91	
Hexachlorophene	B	30.56194			24		1.99	

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Michele D. Hamilton
Group Leader

NOV 02 2018

Reviewed and digitally signed by Richard A Shober on 11/2/2018 14:50:10

Eurofins Lancaster Laboratories Single Component Data Summary

Sample Name: **LCSA** 10/30/18 F LCS10303 ID: AB **Batchnumber: 183030010A**
Sample Amount: 30 g Total Volume: 10 ml Analyst: 13378 SDG: State:
Analyses: 10401

Analysis Report (A)

Injected on : Nov 01, 2018 19:42:52
Instrument : CP15--19850A
Result file : 15HERB18304002.009.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 95% (34-127) Conc.: 63.50301

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.72	3.76	3747767	171.650500
DCAA	11.91	11.94	11.97	2497602	63.503010
DICAMBA	12.04	12.07	12.10	1240140	7.849104
MCPP	12.45	12.48	12.51	2053280	10262.490000
MCPA	12.83	12.86	12.89	2267129	8855.012000
2,4-DP	13.43	13.45	13.49	2770226	85.355320
2,4-D	13.87	13.89	13.93	3264883	84.148830
DBOFB	14.21	14.23	14.26	9733149	0.033333
PCP	15.06	15.09	15.12	14602510	29.763110
2,4,5-TP	15.36	15.37	15.42	1710482	9.209785
2,4,5-T	15.88	15.90	15.94	1465849	8.941679
2,4-DB	16.71	16.74	16.77	1954714	85.945600
DINOSEB	16.90	16.92	16.96	660383	7.741457
Picloram	17.86	17.88	17.92	11277040	79.341670
Hexachlorophene	26.10	26.13	26.16	4640360	29.958450

Analysis Report (B)

Injected on : Nov 01, 2018 19:42:52
Instrument : CP15--19850B
Result file : 15HERB18304002B.009.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 97% (34-127) Conc.: 64.66614

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.83	3.85	3.89	3552652	109.434800
DCAA	12.49	12.51	12.55	2765734	64.666140
DICAMBA	12.85	12.87	12.91	1363894	7.674980
MCPP	12.90	12.93	12.96	1375239	7784.744000
MCPA	13.43	13.46	13.49	1756215	7228.417000
DBOFB	13.69	13.71	13.75	10347110	0.033333
2,4-DP	13.96	13.98	14.01	2981721	79.727780
2,4-D	14.58	14.60	14.64	3645792	85.100710
PCP	15.28	15.30	15.34	15544370	28.351290
2,4,5-TP	15.77	15.79	15.83	1730285	8.551607
2,4,5-T	16.47	16.50	16.53	1547798	8.658326
DINOSEB	16.91	16.93	16.97	487421	5.296077
2,4-DB	17.18	17.20	17.24	2066991	81.563630
Picloram	19.48	19.50	19.54	12451130	77.065040
Hexachlorophene	26.52	26.55	26.58	5116291	30.561940

Summary Report

Compound Name	Column	Amount Found	LOQ	DL	Qualifiers	%RPD	Comments
☑ Dalapon	B	109.434800	90	44		44.27	**
☑ DCAA	B	64.666140	6.67	3.335		1.81	
☑ DICAMBA	A	7.849104	<12	4	J	2.24	
☑ MCPP	A	10262.490000	7700	3800		27.46	
☑ MCPA	A	8855.012000	2500	760		20.23	
☑ 2,4-DP	A	85.355320	20	9		6.82	
☑ 2,4-D	B	85.100710	36	12		1.12	
☐ DBOFB	A	0.033333				0.00	
☑ PCP	A	29.763110	1.7	0.33		4.86	
☑ 2,4,5-TP	A	9.209785	1.7	0.75		7.41	
☑ 2,4,5-T	A	8.941679	1.7	0.82		3.22	
☑ 2,4-DB	A	85.945600	21	9.8		5.23	
☑ DINOSEB	A	7.74	<24	<9			
☑ Picloram	A	79.341670	41	20		2.91	
☐ Hexachlorophene	B	30.561940	24			1.99	

Units: ug/kg

Reviewed by: _____
Date: 11/2/18

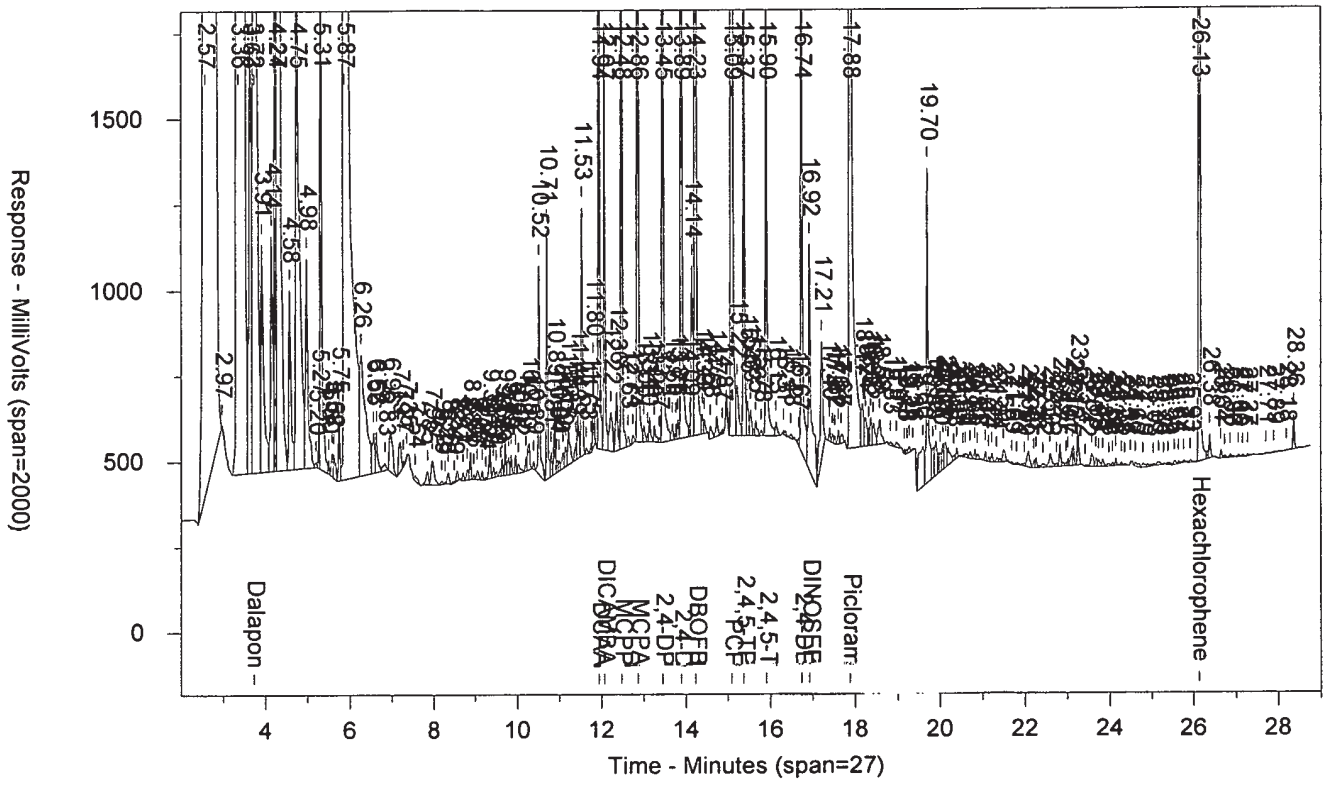
Verified by: _____
Michelle D. Hamilton
Group Leader
Date: NOV 02 2018

%RPD = High - Low Amount divided by the Average times 100
** %Difference > 40, lower amount found reported
* Recovery outside QC Limits

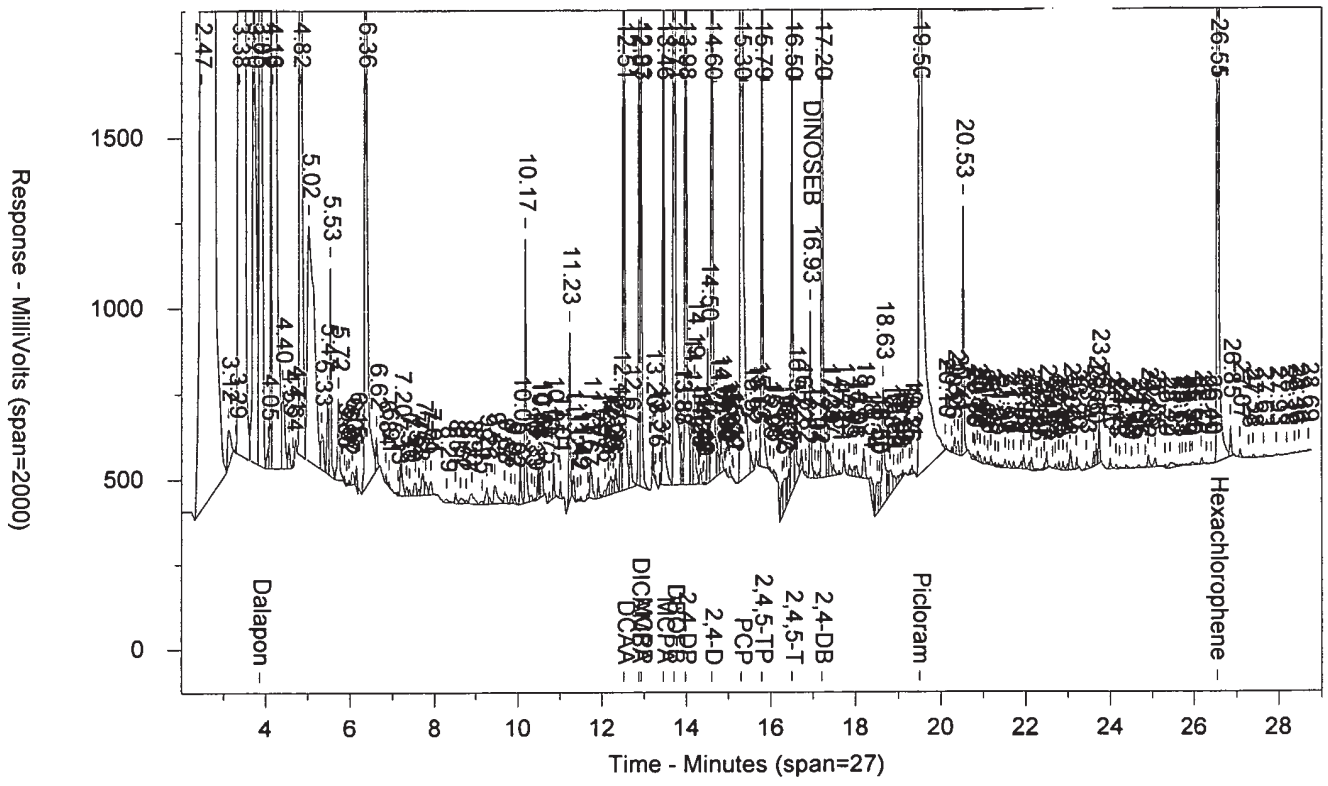
Higher Amount Found unless RPD > 40

LCSA 10/30/18 F ABLCS10303 LCS 183030010A 10401 SW-846 8151A

—— \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.009.RAW



—— \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.009.RAW



LANCASTER LABORATORIES

Sample Number: LCSA 10/30/18 F ABLCS10303 LCS 183030010A 10401 SW-846 8151A
Injected On: 11/1/2018 7:42:52 PM Sample Weight: 30
Instrument ID: CP15-19850 Dilution Factor: 10
Oven Parameters: 50 hold 0.5 min; to 100 @ 25c/min; to 310 @ 12c/min, hold 2 min.
Column A ID: ZB-XLB-HT 30m x 0.32mm x 0.25um
Column B ID: ZB35 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 4
Calibration Type: internal
Quantitation: Height

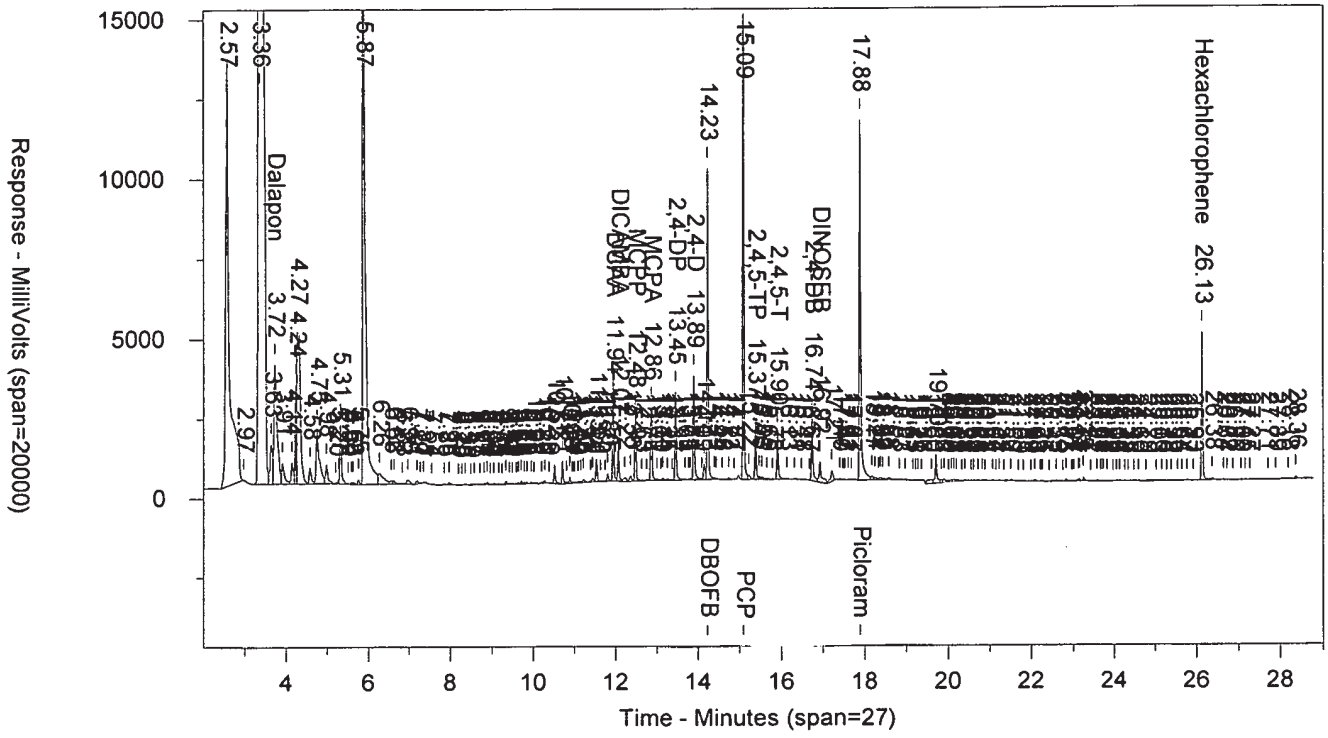
Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.722	3747767	171.651	Dalapon	3.853	3552652	109.435	Dalapon
11.939	2497602	63.503	DCAA	12.513	2765734	64.666	DCAA
12.066	1240140	7.849	DICAMBA	12.874	1363894	7.675	DICAMBA
12.477	2053280	10262.49	MCPP	12.928	1375239	7784.744	MCPP
12.861	2267129	8855.012	MCPA	13.456	1756215	7228.417	MCPA
13.45	2770227	85.355	2,4-DP	13.98	2981721	79.728	2,4-DP
14.229	9733149	.033	DBOFB	13.707	10347110	.033	DBOFB
13.891	3264883	84.149	2,4-D	14.605	3645793	85.101	2,4-D
15.09	1480251U	29.763	PCP	15.3	15544370	28.351	PCP
15.374	1710483	9.21	2,4,5-TP	15.79	1730285	8.552	2,4,5-TP
15.901	1465849	8.942	2,4,5-T	16.496	1547798	8.658	2,4,5-T
16.735	1954714	85.946	2,4-DB	17.202	2066991	81.564	2,4-DB
16.922	660383	7.741	DINOSEB	16.927	487421	5.296	DINOSEB
17.879	11277040	79.342	Picloram	19.498	12451130	77.065	Picloram
26.131	4640360	29.958	Hexachlorophene	26.55	5116291	30.562	Hexachlorophe

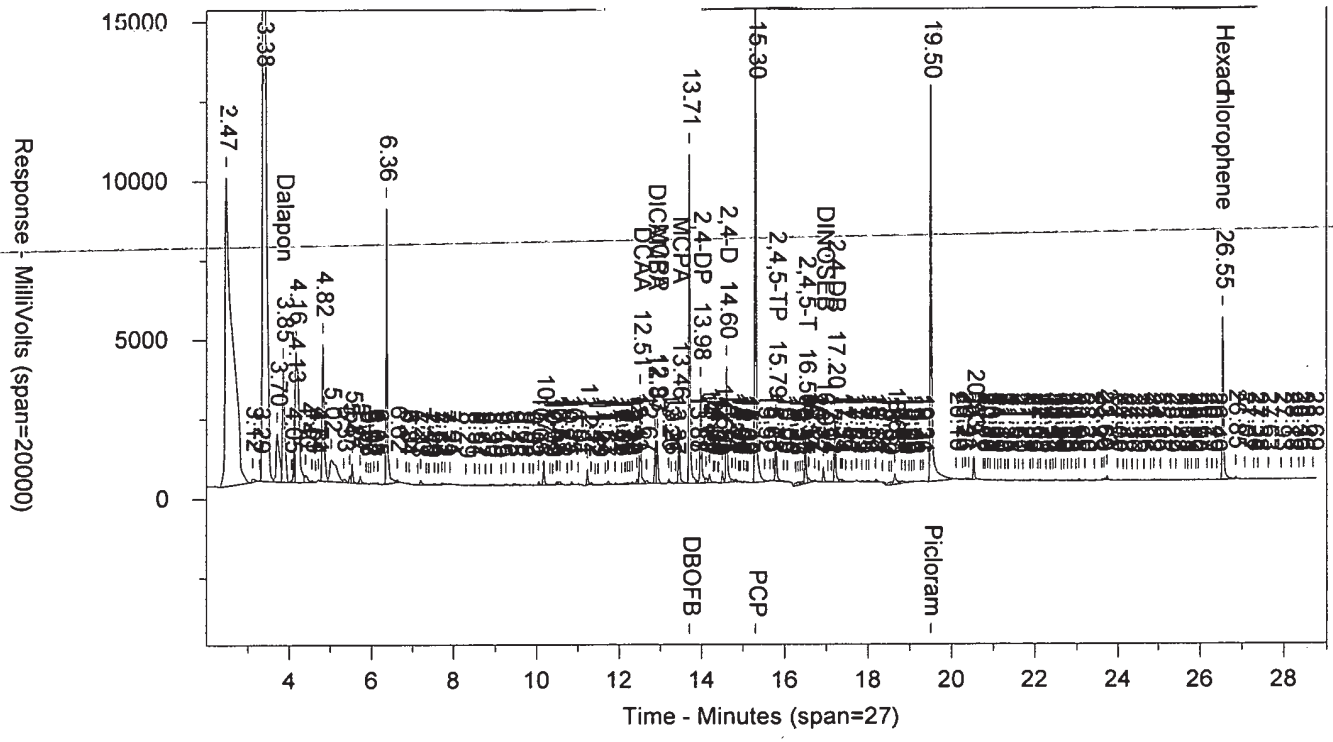
Files:
Area File: 15herb18304002.009.RAW
Area File: 15herb18304002B.009.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB1830401b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/1/2018 8:11:39 PM
File Reported On: 11/2/2018 at 2:20:04 PM

LCSA 10/30/18 F ABLCS10303 LCS 183030010A 10401 SW-846 815

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002.009.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15\15herb18304002B.009.RAW



Extraction/Distillation/Digestion Logs

Herbicides

Organic Extraction Batchlog Assigned to: 9121 Bradley VanLeuven Reviewed by: RU 13378 Start Date: 10/30/18 Start time: 20:00

183030010A

Tech 1: BV 9121 Tech 2: DS 2894

Dept: 24 Prep Analysis: 04181 Herbicide Soil Extraction Herbicide soils 8151A Master

QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 2	BC	Comments
9867763MS	T1003	30.39	IS1828824A SS1828124A	0.1 1.0	MS1828224A	1.0	10.0	✓	✓	302A	sandy brown soil
9867764MSD	T1003	30.20	IS1828824A SS1828124A	0.1 1.0	MS1828224A	↓	10.0	✓	✓	302A	sandy brown soil
BLANKA	PBLK10303	30.6	IS1828824A SS1828124A	0.1 1.0	—	—	10.0	✓	✓	Z	Acidified Na2SO4
LCSA	LCS10303	30.0	IS1828824A SS1828124A	0.1 1.0	MS1828224A	1.0	10.0	✓	✓	Z	↓

Solvent Used	Lot No.
1:1 Methylene Chloride/Acetone	9121103018A
25% Sulfuric Acid	4801693
37% KOH	9121100418A
Diazald Solution	2894103118A
Ethyl Ether	183339
Filter paper	16827493
Hexane	185388
Methanol	181172
Methylene Chloride	187356
Sodium Sulfate(Acid)	2894102218D

N/A DS 2894 10-31-18

Spike Solutions: Witness: N/A

IS1828824A HERB INTERNAL STANDARD
MS1828224A HERB SPIKE
SS1828124A HERB SURROGATE STANDARD

TID10 Page 2752 of 6051

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 2	BC	Comments	Analyses	List	Due Date	Prio
1 9866463	T0904	30.28	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302a	Soil;Rocks;Brown	10401	25790	11/02/2018	N
2 9866464	T0905	30.23	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Organic Matter;Soil;Brown	10401	25790	11/02/2018	N
3 9866465	T0906	30.30	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Organic Matter;Soil;Gritty;Rocks;Grey	10401	25790	11/02/2018	N
4 9866466	T0907	30.02	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Organic Matter;Soil;Brown	10401	25790	11/02/2018	N
5 9866467	T0908	30.39	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Organic Matter;Soil;Rocks;Brown	10401	25790	11/02/2018	N
6 9867761	T1002	30.18	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Soil;Sandy;Brown	10401	25790	11/05/2018	N
7 9867762BKG	T1003	30.08	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Soil;Sandy;Brown	10401	25790	11/05/2018	N

NA DS 2894 10-31-18

Bench#	Bench#	Bench#		
Rack ID:		Work Station	SON HOOD Herb Hood	Micro Temp 100?
Internal Standard		Balance #	17609	

R-VAP ID	C	R-VAP ID	C	R-VAP ID	C			
S-bath ID 5	90 C	S-bath ID 16981	85 C	N-Evap 3	40° C	M-vap	C	183030010A

DF = Dilution Factor FV = Final Volume Page 1 of 2 Documented temps are NIST corrected.

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 2	BC	Comments	Analyses	List	Due Date	Prio
8 9867766	T1004	30.44	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Soil;Sandy;Rocks;Brown	10401	25790	11/05/2018	N
9 9867767	T1005	30.28	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Soil;Wet;Brown	10401	25790	11/05/2018	N
10 9869111	E7801 ③ ~~30.17~~ 30.49 AV 9121 10/30/18		IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓ ③	~~302a~~ 302B	Soil;Gritty;Wet;Rocks;Brown;Fuel Odor AV 9121 10/30/18	10401	1886	11/05/2018	P
11 9870251	T1102	30.19	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Soil;Gritty;Rocks;Red	10401	25790	11/06/2018	N
12 9870252	T1103	30.14	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Soil;Gritty;Rocks;Black	10401	25790	11/06/2018	N
13 9870253	T1104	30.18	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Soil;Gritty;Rocks;Black	10401	25790	11/06/2018	N
14 9870254	T1105	30.15	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Soil;Gritty;Rocks;Black	10401	25790	11/06/2018	N
15 9872060	12T02	30.00	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302a	Soil;Rocks;Black	10401	25790	11/07/2018	N
16 9872061	12T03	30.02	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Soil;Rocks;Black	10401	25790	11/07/2018	N
17 9872062	12T04	30.41	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Soil;Gritty;Rocks;Black	10401	25790	11/07/2018	N
18 9872063	12T05	30.19	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Soil;Rocks;Brown	10401	25790	11/07/2018	N
19 9872064	12T06	30.22	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Organic Matter;Soil;Rocks;Black	10401	25790	11/07/2018	N
20 9872065	12T07	30.10	IS1828824A SS1828124A	0.1 1.0	10.0	✓	✓	302A	Soil;Brown	10401	25790	11/07/2018	N

TID10 Page 2763 of 6051

N/A DS 10-31-18

Bench#	Bench#	Bench#		
Rack ID:		Work Station	SON HOOD Hesh Hood	Micro Temp 100?
Internal Standard		Balance #	17609	

~~R-VAP ID~~	~~C~~	~~R-VAP ID~~	C	R-VAP ID	~~C~~
S-bath ID 5	90 C	S-bath ID 16951	85 C	N-Evap 3	40°C

M-vap	C	183030010A

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Prep-Process Worksheet

Florisil
Prep: 04181 Herbicide Soil Extraction
Batch: 183030010A

Verified: _____
Start Date: 10-31-18
Start Time: 13:00
Tech 1: DS 28944
Tech 2: _____

Sample #	Aliquot (mL)	Final Volume (mL)	D.F. Aliq	D.F. F.V.	Comments
9867763MS	2.0	2.0			
9867764MSD	↓	↓			
BLANKA					
LCSA	↓	↓			

	Sample #	QC	Aliquot (mL)	Final Volume (mL)	D.F. Aliq	D.F. F.V.	Comments	Analyses
1	9866463		2.0	2.0				10401
2	9866464		↓	↓				10401
3	9866465							10401
4	9866466							10401
5	9866467							10401
6	9867761							10401
7	9867762							10401
8	9867766							10401
9	9867767							10401
10	9869111							10401
11	9870251							10401
12	9870252							10401
13	9870253							10401
14	9870254							10401
15	9872060							10401
16	9872061							10401
17	9872062							10401
18	9872063							10401
19	9872064							10401
20	9872065		↓	↓				10401

Additional Comment: _____

DF = Dilution Factor FV = Final Volume

Solvent Used	Lot No.	Solvent Used	Lot No.
		Florisil	6362355-17
		50% Ether/Hexane	289410311BB

S-Evap/bath ✓ C | S-Evap/bath ✓ C | N-Evap3 40° C

NA DS28944
10-31-18

The documented temperatures are NIST corrected.